

May 22, 2019

RE: Notice to Consultants
Request for Qualifications
Consulting Engineering Services
Hudson Drive Bridge No. 105 & Vorhof Drive Bridge No. 106
0.10 miles east of Halls Ferry Road
Federal Project Nos. BRO-B096(004) & BRO-B096(006)
TIP #5204D-19 & 5204F-19
St. Louis County Project Nos. CR-1774 & CR-1775

The St. Louis County Department of Transportation is requesting the services of a well-qualified consulting engineering firm to perform the described professional services for the subject project. Qualifications-Based Selection (QBS), in accordance with RSMo. 8.285 through 8.291, will be used to determine the successful respondent. Note, St. Louis County Revised Ordinance SLCRO 107.071 is not applicable to the selection process for this contract.

General Description of Services Required:

The project involves the rehabilitation and partial superstructure replacement of both the Hudson Drive Bridge No. 105 and the Vorhof Drive Bridge No. 106, both over Black Jack Creek, and both located 0.10 miles east of Halls Ferry Road. Anticipated required elements include, but are not limited to:

- Hydraulics & FEMA No-Rise Certification
- Geotechnical Analysis & Design (as necessary)
- Structural Analysis & Design
- Roadway Design
- Drainage and Water Quality Design and MSD Permitting (as necessary)
- Miscellaneous Pick-Up Survey Work (as necessary)
- Utility Coordination (as necessary)
- Right-of-Way Plans
- Preliminary Plans
- Final Plans
- Job Special Provisions
- Construction Estimates
- Coordination with the Missouri Department of Transportation (MoDOT)

Services to Be Provided by St. Louis County Staff:

- Topographic Surveying
- Property Surveying

- Compilation of Bid Documents
- Compile and Submit Plans, Specifications, and Estimates (P,S, & E)
- Management of the Bidding Process
- Compile and Submit Concurrence in Award Request
- Contract Processing and Execution
- Compile and Submit Construction Notice to Proceed Request
- Construction Engineering
- Materials Testing

The anticipated project schedule is tied to East-West Gateway reasonable progress deadlines and is outlined below. Firms unable to meet these deadlines should not submit a Qualifications Statement.

Qualifications Statements Due:	June 11, 2019
Selection Announced:	June, 2019
Scoping Meeting:	June, 2019
Negotiation:	June, 2019 – July, 2019
Council Authorization/Contract Execution:	August, 2019 - October, 2019
Estimated Notice to Proceed Date:	October 28, 2019
Preliminary Plans Complete:	March, 2020
Right-of-Way Plans Complete:	June, 2020
Final Plans Complete:	March, 2021

Please limit your Qualifications Statement to no more than seven (7) pages. The submittal should include the following:

- A statement describing expressing your firm's interest in the project.
- Key project staff and their qualifications.
- Current workload and availability of key staff throughout the project.
- Project approach
- Details of other similar projects your firm has taken through final design in the recent past. Contact information should be provided for similar projects completed for other agencies.
- DBE Utilization Plan

Firms may submit a copy of their company's general qualifications separately as a single additional document. There is no length limit to this document. This supplemental information is not required and is not guaranteed to be considered in the scoring process. All project specific information should be included in the seven-page Qualifications Statement.

All prime consultants shall be prequalified with MoDOT. It is further required that your firm submit an Affidavit of Compliance with the federal work authorization program along with a copy of your firm's E-Verify Memorandum of Understanding (15CSR 60-15.020) be submitted with your firm's Statement of Qualifications. These items do not count towards the seven-page limit.

Qualifications Statements will be scored based on the following criteria:

- Overall Experience and Technical Competence – **30 points**
 - Project Manager has appropriate qualifications and has successfully managed similar projects (**10 points**)
 - Technical Leads have appropriate qualifications and have successfully performed on similar projects (**10 points**)
 - Project Team, including subconsultants, has experience working together on similar projects (**10 points**)
- Past Record of Performance – **20 points**
 - Prior projects presented are representative of the technical challenges of the project being solicited (**10 points**)
 - Prior projects include federal-aid projects for Missouri Local Public Agencies (**5 points**)
 - Performance on prior projects (**5 points**)
 - Provide project contact information for non-County projects.
 - LPA Federal-Aid Projects Preferred
- Capacity and Capability – **20 points**
 - Statements concerning Project Team availability appear realistic (**5 points**)
 - Record of meeting project schedules (**15 points**)
 - Provide complete project timelines for three recent projects:
 - Projects should be among those discussed in the “Past Record of Performance.” Projects must have been completed (through construction) in the past five (5) years
 - Timelines should include entire project life, from consultant selection through completion of construction. Milestones listed, when applicable, should include:
 - Consultant Selection
 - Consultant Contract was Fully Executed
 - Consultant Notice-to-Proceed
 - Preliminary Plan Approval
 - Right-of-Way Plan Approval
 - A-Date
 - P,S&E Approval
 - Right-of-Way Clearance
 - Bid Opening
 - Award
 - Construction NTP
 - Construction Time Allowed
 - Construction Completed.
 - Explanations should be provided for any milestones that appear to have significant delays.
 - Tabular format is preferred.
- Project Approach – **30 points**
 - Discuss items including, but not limited to:

- Potential technical challenges and proposed solutions
- Opportunities for innovation
- Project-specific utility coordination approach
- Measures to be taken by project team to keep project on schedule

This project is classified as non-complex per the Department's revised QBS policy. Selection will be made based solely on the scoring of Statements of Qualification received and no interviews will be conducted.

A Disadvantaged Business Enterprise (DBE) goal of **18%** has been established for this project. DBE firms must be listed in the MRCC DBE Directory located on MoDOT's website at www.modot.gov, in order to be counted toward participation in any established DBE Goal. St. Louis County encourages DBE firms to submit as prime on any project for which they are qualified. Any sub-consultants needed to complete the professional services requested by St. Louis County must be listed.

If your firm would like to be considered for the consulting services, please e-mail your Qualifications Statement to Pam Thebeau, P.E., Supervisor, Project Managers at PThebeau@stlouisco.com as a PDF file. General qualifications shall also be submitted in PDF format. Any mailed or hand-delivered hard copy submittals will be discarded. All Qualifications Statements must be received by 2:00 p.m., local time, on June 11, 2019 to be considered for this project. Questions regarding this solicitation shall be submitted in writing via e-mail to the project contact above. Phone inquiries will not be accepted. Failure to comply with the requirements of the RFQ may negatively impact the evaluation of the consultant's Statement of Qualifications.

Pertinent project programming files, inspection reports, and existing plans are attached following this Notice.

<i>St. Louis County, Hudson Drive Bridge No. 105 & Vorhof Drive Bridge No. 106 Rehabilitation</i>	
Federal Aid No.:	BRO-B096(004) & BRO-B096(006), TIP #5204D-19 & 5204F-19
Location:	Hudson Drive & Vorhof Drive over Black Jack Creek
Proposed Improvement:	Bridge Rehabilitation
Length:	0.10 miles at each site
Approximate Construction Cost:	Hudson Drive: \$658,100; Vorhof Drive: \$637,300
DBE Goal Determination	18%
Consultant Services Required:	<p>The project involves the rehabilitation of the Hudson Drive Bridge No. 105 and the Vorhof Drive Bridge No. 106, both over Black Jack Creek, located 0.10 miles east of Halls Ferry Road.</p> <ul style="list-style-type: none"> • Hydraulics & FEMA No-Rise Certification • Geotechnical Analysis & Design (as necessary) • Structural Analysis & Design • Roadway Design • Drainage Design and Water Quality Design and MSD Permitting (as necessary) • Miscellaneous Pick-Up Survey Work (as necessary) • Utility Coordination (as necessary) • Right-of-Way Plans • Preliminary Plans • Final Plans • Job Special Provisions • Construction Estimates • Coordination with the Missouri Department of Transportation (MoDOT)
Other Comments:	<p><u>Services to Be Provided by St. Louis County Staff:</u></p> <ul style="list-style-type: none"> • Topographic surveying • Property surveying • Compilation of Bid Documents • Compile and Submit Plans, Specifications, and Estimates (P,S, & E) • Management of the Bidding Process • Compile and Submit Concurrence in Award Request • Contract Processing and Execution • Compile and Submit Construction Notice to Proceed Request • Construction Engineering • Materials Testing
Contact:	<p>Pamela R. Thebeau, P.E. Supervisor, Project Managers St. Louis County Department of Transportation PThebeau@stlouisco.com All questions and submittals via e-mail. Phone inquiries not accepted.</p>
Deadline:	June 11, 2019 at 2:00 p.m.



Off-System Bridge Funding (BRO)

Sponsoring Agency:

Project Title:

Federal Amount Requested:

PROJECT CHECKLIST AND SUBMITTAL REQUIREMENTS

The evaluation and scoring of all projects will be based on the answers provided in the application and the attachments submitted. Submit one electronic copy. Save the electronic copy as a PDF file using the following format:

BRO_[Sponsor]_[Project Name].pdf.

The materials should be submitted in the following order.

Project Application:

☐ **Completed BRO information form**

Attachment A:

☐ **Project location map** – depict the location of the project on a base map such as a town road map, GIS map, aerial photo, or another base map suitable to clearly show the project’s overall location. Provide on an 8 ½ x 11 page.

- ☐ **Detailed cost estimate** – use Estimate of Project Costs excel file provided.
- ☐ **Letter of permission from facility owner** – provide if sponsor does not own roadway.
- ☐ **Letter of support from match source** – provide if individual, business, other local public agency, or other third-party is providing matching funds.

Attachment B:

☐ **Photographs** – attach photo(s) of the current bridge.

☐ **Detailed map** – if applicable, provide a map showing:

- ☐ **Roadway realignment diagram** – if applicable, provide a diagram showing existing and proposed vertical or horizontal realignment of the connecting roadway.
- ☐ **Typical bridge section** – show details of before and after bridge improvements.
- ☐ **Bridge condition** – attach State-issued inspection report or other documentation from State DOT showing bridge condition.
- ☐ **Preventive maintenance activities** – provide documentation from FHWA showing its approval of proposed preventive maintenance plan. Include list showing at least the bridges that are part of the program, ADT, sufficiency rating, maintenance activity, maintenance cost, when the structure is due for replacement, and the cost to replace the structure (in present dollars). Documentation must show that project will extend life of bridges. Required only for preventive maintenance projects.

SPONSOR INFORMATION															
Sponsoring agency:															
Secondary sponsor agency (if applicable):															
Chief Elected Official/Chief Executive Director:															
Name:					Title:										
Street address:															
City:				State:				County:				ZIP code:			
Project contact:															
Name:					Title:										
Agency:															
Street address:															
City:				State:				County:				ZIP code:			
Phone Number:					E-mail address:										
Application contact:															
Name:					Phone Number:										
E-mail address:															
PROJECT INFORMATION															
Project title:															
Project status: <input type="checkbox"/> New project <input type="checkbox"/> Continuation of STP-S/CMAQ/TAP project <input type="checkbox"/> Add to existing non-federally funded project					Is this application request for a piece of a larger project (phase) or the entire length of project? <input type="checkbox"/> Phase <input type="checkbox"/> Full project										
If project is a continuation of another project that was previously programmed in the TIP, provide TIP ID # of existing project and also explain this relationship: 															
If this project is a phase of a full project, how many phases are left to complete the project? Briefly explain each phase (i.e., project limits and general improvements): 															
Has your agency previously competed for funds for this specific project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown															
If yes, when?															
Estimated completion (construction) month/year:															

ROADWAY INFORMATION

Name of street or facility to be improved:

Does the sponsoring agency own and maintain this facility?

☐ Yes ☐ No ☐ Unknown

If no, a letter of support for this project is required from the facility owner.

Project length (miles):

Feature crossed (i.e., Fee Fee Creek):

Federal functional classification of road (per EWG)¹:

Bridge sufficiency rating:

Bridge identification number (federal ID):

	CURRENT:	PROPOSED:
Traffic volumes (AADT):	Year:	Year:
Speed limit of street:		
Bridge width:		
Deck width:		
Number of through lanes:		
Number of turn lanes:		
Two-way left turn lanes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Typical lane width:		
Outside lane width:		
Shoulder width:		
On-street parking allowed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Curb and gutter?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Sidewalks?	<input type="checkbox"/> One-side <input type="checkbox"/> Both sides <input type="checkbox"/> None	<input type="checkbox"/> One-side <input type="checkbox"/> Both sides <input type="checkbox"/> None
Sidewalk width:		
Sidewalk condition:	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> None	n/a
On-road bicycle facility ² ?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Shared-use path or sidepath?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Shared-use path or sidepath width:		
Located on transit route?	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a

PREVENTIVE MAINTENANCE

Note: Complete only if preventive maintenance activity is proposed.

How many bridges are proposed?

How will the maintenance activities extend the life of the bridge structures?

Have the preventive maintenance activities been approved by FHWA?

☐ Yes ☐ No ☐ Unknown

¹ East-West Gateway Functional Classification maps: <http://www.ewgateway.org/transportation-planning/roadway-functional-classification/>.

² On-road bicycle facility includes: bike lanes (separated, buffered, and standard) and shared-lane markings.

LAND ACQUISITION INFORMATION

Status of right-of-way acquisition:

- ☐ All acquired or none needed
☐ In process
☐ Not started

If applicable, list the number of parcels to be acquired (all properties, permanent and/or temporary easements, TSCL, and other rights-of-way):

If any residential or commercial displacements are anticipated, give details on how many and if they are residential and/or commercial:

Right-of-way acquisition by:

Right-of-way condemnation by:

Will the project traverse any public property, such as a public park that has used federal funds (i.e., Land and Water Conservation Funds) in the past?

- ☐ Yes ☐ No ☐ Unknown

UTILITY COORDINATION

Note: Project sponsor must coordinate with utilities prior to construction.

Will the project require the relocation of any utilities?

- ☐ Yes ☐ No ☐ Unknown

If yes, check the appropriate box to select the type of utility. Then give the names of the utility companies.

☐ Electric

☐ Phone

☐ Gas

☐ Water

☐ Cable TV

☐ Storm sewer

☐ Sanitary sewer

☐

☐

Give details concerning potential utility conflicts, problems, or issues:

Utility coordination completed by:

Designed by:

Inspected by:

RAILROAD COORDINATION

Does the project traverse any property owned by a railroad?

☐ Yes ☐ No ☐ Unknown

Is there a railroad within 500' of project limits?

☐ Yes ☐ No ☐ Unknown

Name of railroad:

Number of crossings impacted:

Are the crossings active?

☐ Yes ☐ No

Width of crossing:

What is the crossing type?

- ☐ Timber
☐ Rubberized
☐ Asphalt
☐ Concrete
☐ Other

Describe other:

PROJECT MAINTENANCE

List any regular maintenance tasks anticipated over the next 25 years:

Estimated annual cost to maintain facility and funding source:

AMERICANS WITH DISABILITIES ACT

Under the 1990 Americans with Disabilities Act (ADA), Title II requires public entities with more than 50 employees to complete a self-evaluation and create an effective ADA transition plan³.

Does your local public agency have more than 50 employees?

☐ Yes ☐ No ☐ Unknown

If yes, does your agency have an adopted ADA transition plan?

☐ Yes ☐ No ☐ Unknown

If your agency has an ADA transition plan, when was it adopted?

If ADA transition plan is not adopted, when is it expected to be adopted?

³ FHWA Questions and Answers about ADA/Section 504: https://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.cfm.

PROJECT DESCRIPTION

Provide a brief description of the purpose of the project and the scope of work. Be as specific as possible.

PROJECT DEVELOPMENT SCHEDULE

Note: Many stages can occur concurrently.

Activity Description	Start Date (MM/YYYY)	Finish Date (MM/YYYY)	Time Frame (Months)
Receive notification letter	11/2018	11/2018	1
Execute agreement (project sponsor and DOT)			
Engineering services contract submitted and approved*			
Obtain environmental clearances (106, CE-2, etc.)			
Public meeting/hearing			
Develop and submit preliminary plans			
Preliminary plans approved			
Develop and submit right-of-way plans			
Review and approval of right-of-way plans			
Submit and receive approval for notice to proceed for right-of-way acquisition (A-Date)*			
Right-of-way acquisition			
Utility coordination			
Develop and submit PS&E			
District approval of PS&E/advertise for bids*			
Submit and receive bids for review and approval			
Project implementation/construction			

* Finish date must match fiscal year for each milestone shown in **bold** text.

FINANCIAL PLAN

Note: Fiscal years are federal fiscal years (October 1 through September 30). Federal participation for a phase of work must not exceed 80%.

Activity	Starting Federal Fiscal Year	Total Phase Cost	BRO Funds	Sponsor Share	Sponsor Share Percentage
PE / Planning / Environmental Studies	FY				
Right-of-Way	FY				
Implementation	FY				
Construction Engineering	FY				
TOTAL PROJECT COST					
Identify the source(s) of local matching funds, and the amount for each source:					

SAFETY

Is the bridge structurally deficient or functionally obsolete?

- ☐ Structurally deficient
☐ Functionally obsolete

MULTIMODAL

Describe the existing conditions of the bicycle/pedestrian environment where the proposed facility will be constructed:

Does the proposed project incorporate any of the following bicycle-related improvements?

- ☐ Separated bike lane/cycle track/protected bike lane
☐ Shared-use path/trail
☐ Buffered bike lane
☐ Standard bike lane (not buffered)
☐ Marked shared roadway (shared-lane markings, "sharrow")
☐ Paved shoulder
☐ Other
☐ None

Describe other:

Does the proposed project incorporate any of the following pedestrian-related improvements?

- ☐ New sidewalks
☐ Sidewalk reconstruction
☐ Construction of new curb ramps
☐ Curb ramp reconstruction
☐ Railing or protective screening/concrete barrier
☐ Pedestrian-scale lighting
☐ Other
☐ None

Describe other:

Is the project within ½ mile of a school?

- ☐ Yes ☐ No ☐ Unknown

If yes, identify the school(s):

Is the project within ½ mile of an activity center, employment center, or community resource (i.e., a business district, retail center, medical facility, community center, park)?

☐ Yes ☐ No ☐ Unknown

If yes, identify all activity centers, employment centers, and/or community resources (planned or existing):

INTERMODAL CONNECTIONS

Does the facility have a posted weight limit?

☐ Yes ☐ No ☐ Unknown

If yes, what is the posted weight limit?

Hudson Drive Bridge No. 105 (096B105)
St. Louis County, MO



Current Bridge Length (ft): 68 (single span)
Anticipated Bridge Length (ft): 68 (single span)
Anticipated Out-to-out width (ft): 37

Description	Quantity	Unit	Unit Price	Estimated Cost	Sub-total
Items					
Clearing & Grubbing	1	Lump Sum	\$5,000	\$5,000	
Land Disturbance Permit	1	Lump Sum	\$1,500	\$1,500	
Erosion Control & SWPPP	1	Lump Sum	\$5,000	\$5,000	

\$11,500

Items

Removal of Improvements	1	Lump Sum	\$12,500	\$12,500	
Type 5 Aggregate Base (4" Thick)	160	SY	\$10	\$1,600	
Type "C" Bituminous Concrete (Pavement)	20	Tons	\$150	\$3,000	
Type "X" Bituminous Concrete (Base)	70	Tons	\$125	\$8,750	
Prime-Liquid Asphalt (MC30)	0	Gal.	\$10	\$0	
Tack-Emulsified Asphalt (SS-1H)	15	Gal.	\$7	\$105	
Concrete Approach Pavement	87	SY	\$130	\$11,267	
Thrie Beam Bridge Rail	136	L.F.	\$250	\$34,000	
Crashworthy Guardrail Terminal	4	Each	\$2,750	\$11,000	
Transition Section	4	Each	\$2,500	\$10,000	
Heavy Stone Revetment	292	S.Y.	\$50	\$14,583	
Movable Barricades	4	Each	\$325	\$1,300	
Standard Traffic Control Devices	1	Lump Sum	\$10,000	\$10,000	

\$118,105

Items

Removal of Bridge (Partial)	1	Lump Sum	\$37,740	\$37,740	
Bridge Approach Slab (Bridge)	116	S.Y.	\$220	\$25,422	
Pedestrian Fence on Structure	68	L.F.	\$85	\$5,780	
Bridge Deck Surface Penetration Sealer	2,516	S.F.	\$3	\$7,548	
Substructure Repair (Formed)	74	S.F.	\$600	\$44,400	
Class "B-2" Concrete (Superstructure on Steel)	70	C.Y.	\$438	\$30,576	
Laminated Neoprene Bearing Pads (Steel Structures)	14	Each	\$2,000	\$28,000	
Reinforcing Steel (Epoxy-Coated) (Grade 60)	839	Lbs.	\$2.00	\$1,677	
Intermediate Field Coat (System G) Gray	3,170	S.F.	\$3	\$9,510	
Finish Field Coat (System G) Gray	3,170	S.F.	\$4	\$12,680	
Fabricated Structural Carbon Steel (Plate Girders)	17,680	Lbs.	\$2.25	\$39,780	
Fabricated Structural Low Alloy Steel (Plate Girders)(A-572)	900	Lbs.	\$1.79	\$1,610	
Fabricated Structural Steel Bearings	4	Each	\$2,200	\$8,800	

\$253,524

ous

Misc. (Mobilization, Office, etc.)	1	Lump Sum	\$38,300	\$38,300	
Detours	1	Lump Sum	\$2,500	\$2,500	

\$40,800

TOTAL before contingencies

\$423,929

Contingencies (10% of above)				\$42,400	
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TOTAL with contingencies

\$466,329

RIGHT-OF-WAY COSTS

Appraised ROW	\$20,000
Titles, Appraisals, Condemnation Costs @ 30%	\$6,000
Total	\$26,000

(Includes 10% Contingency, Rounded to Nearest \$1,000)

Utilities (Lump Sum)	\$25,000
Construction Cost	\$467,000
Admin. Eng. & Const. Supv.	\$70,050
Survey & Design Engineering Cost	\$70,050
Right-of-Way Cost	\$26,000
Environmental	\$0
Railroad - See "Miscellaneous"	\$0
Total Cost	\$658,100



Hudson Drive Bridge No. 096B105
Looking East



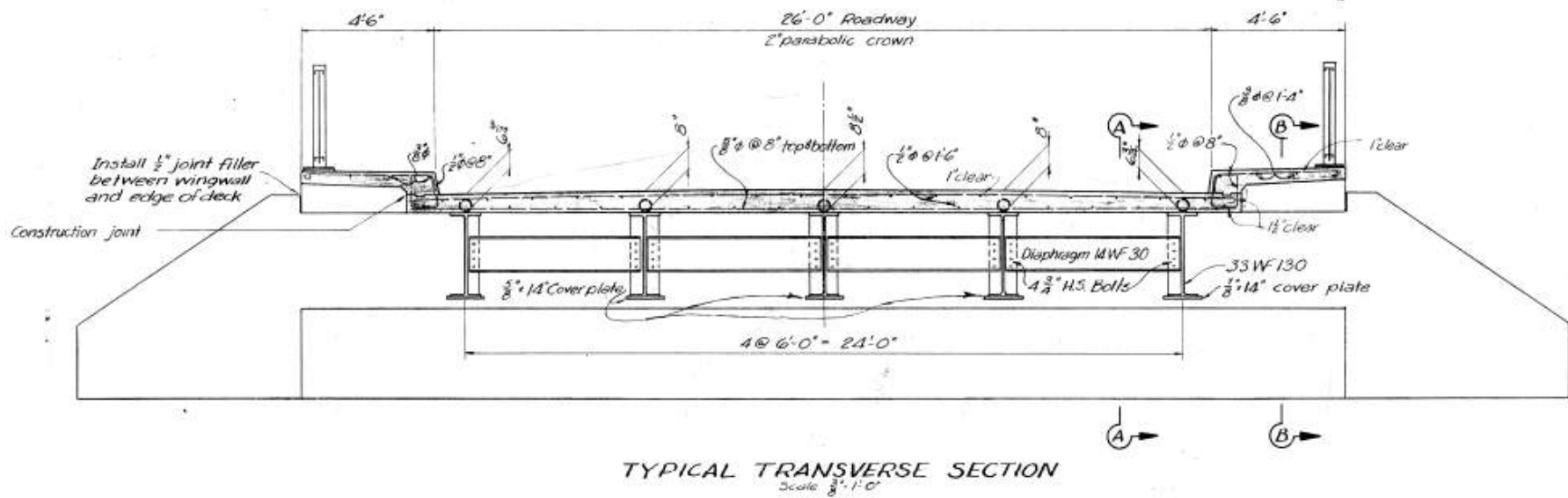
Hudson Drive Bridge No. 096B105
Looking West



Hudson Drive Bridge No. 096B105
Looking South



Hudson Drive Bridge No. 096B105
Looking North



St. Louis County, MO
Hudson Drive Bridge No. 096B105
Existing Bridge Cross Section



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B105

Federal ID : 15528

GENERAL STRUCTURE INFORMATION

[5D] Route :	00000	[41] Structure Status :	P-LOAD POSTED W/RESTRICT
[4] Place Code :	64208 ST. FERDINAND	[9] Location :	S 5 T 46 R 7 E
[6] Features Intersected :	BLACK JACK CR	[22] Owner :	COUNTY
[7] Facility Carried :	HUDSON DR	[26] Functional Classification :	ULOCAL
[16] Latitude :	38 45 34.48 (DMS)	[21] Maintenance Responsibility :	COUNTY
[17] Longitude :	90 15 21.03 (DMS)	[11] Milepoint :	0.50 MILES

AGE AND SERVICE - GEOMETRIC DATA - MATERIAL

[27] Year Built :	1955	[106] Year Reconstructed :	
[49] Structure Length :	68 FT.	[51] Bridge Width :	26 FT. 0 IN.
[32] Approach Roadway Width :	26 FT. 0 IN.	[52] Deck Width :	35 FT. 0 IN.
[42B] Type of Service Under :	WATERWAY	[28A] Lanes On :	2
[19] Detour Length :	0.62 MILES	[28B] Lanes Under :	0

COMPONENTS	# SPANS	PRED	MATERIAL	CONSTRUCTION
MAIN SERIES	1	X	STEEL	WIDE FLANGE GIRDERS
[107] Deck Type :			REINCONC	CIP
[108A] Wearing Surface :			ASPHALT	BITUMSEAL
[108B] Membrane :			NOTAPPLIC	NONE
[108C] Deck Protection :			NOTAPPLIC	NONE

AADT INFORMATION

[29] AADT on Structure :	3,655	[30] Year :	2018	[109] AADT Truck :	2 %
[114] Future AADT :	5,848	[115] Year :	2038	[102] Direction of Traffic :	2-WAY TRAFFIC

STRUCTURE POSTING

FIELD POSTING Problem Code : Problem Direction Code :
Category : S-15 TRUCK WEIGHT LIMIT 56 TONS EXCEPT SINGLE UNIT TANDEM REAR AXLE TRUCKS 45 TONS WEIGHT LIMIT
Ton 1 : 56 Ton 2 : 45 Ton 3 :

APPROVED POSTING
Category : S-15 TRUCK WEIGHT LIMIT 56 TONS EXCEPT SINGLE UNIT TANDEM REAR AXLE TRUCKS 45 TONS WEIGHT LIMIT
Ton 1 : 56 Ton 2 : 45 Ton 3 :

COMPUTER GENERATED DEFICIENCY AND EVALUATION ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

<u>Rated Item</u>	<u>Rating</u>	<u>Rating Date</u>
[Item 67] Structure Evaluation Rating:	5-BETTER THAN MINIMUM	5/23/2012
[Item 68] Deck Geometry Rating:	3-BASICALLY INTOL CORRECT	11/6/2012
[Item 69] Underclearance:	N-NOT APPLICABLE	3/1/2002
Sufficiency Rating:	57.5 %	5/23/2016
Deficiency:	FUNCTIONAL	11/6/2012
Funding Eligibility:	PARTIAL	1/18/2018
Estimated New Structure Length:	92 FT.	1/18/2018
Estimated Structure Cost:	\$240,192	1/18/2018
Estimated Total Project Cost:	\$360,289	1/18/2018
Year of Cost Estimate:	2018	1/18/2018

NOTE: The above structure length and cost estimates are computer generated using algorithms in the TMS system. These algorithms are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B105

Federal ID : 15528

****STRUCTURE GENERAL INSPECTION****

[90] Inspection Type: GENERAL
Inspection Date: 4/24/2018

[91] Designated Frequency: 24
** Calculated Frequency: 13

Inspection Responsibility:
Element Inspection Required: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

General Inspection Comments

Inspector
RYAN GATES
MONICA CHENEY (NTLQ)

Team Leader
X

Organization
SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****UNDERWATER INSPECTION****

Inspection Category: DRY
Inspection Date: 4/24/2018

[92B] Designated Frequency: 60
** Calculated Frequency: 2

Inspection Responsibility:
NBI: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Underwater Inspection Comments

Inspector
RYAN GATES
MONICA CHENEY (NTLQ)

Team Leader
X

Organization
SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****SPECIAL INSPECTION****

Inspection Category: CHANNEL CROSS SECTIONS
Inspection Date: 7/23/2014

[92C] Designated Frequency: 120
** Calculated Frequency:

Inspection Responsibility:
NBI: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Special Inspection Comments

Inspector
DANIEL R VALLEY
JAMES B.W. CARR (NTLQ)

Team Leader

Organization
SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****OTHER SPECIAL INSPECTIONS****

Category	Frequency	Calculated Frequency**	Date	Inspection Responsibility	NBI
----------	-----------	------------------------	------	---------------------------	-----

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B105

Federal ID : 15528

****GENERAL COMMENTS AND CONDITION RATINGS****

General Comments :

(LIVINR1, 04/28/2008)--A SINGLE SPAN STEEL I-BEAM STRUCTURE WITH INTEGRAL REINFORCED CONCRETE END BENTS ON CONCRETE PILING.

[Item 58]--Deck Condition Rating:

5-FAIR CONDITION

Rating Date: 05/01/2012

Deck Rating Comments

(CHENEM2, 03/21/2017)--UNDERSIDE: OUTER BAYS HAVE A FEW TRANSVERSE AND LONGITUDINAL CRACKS WITH EFFLORESCENCE CENTER BAYS BETTER. SPALL IN UNDERSIDE@ WEST ABUTMENT IN 1ST BAY FROM NORTH: 10"X10"X2" WITH EXPOSED REBAR. EXTERIOR OVERHANG TO NORTH HAS NUMEROUS TRANSVERSE CRACKS WITH MOISTURE AND EFFLORESCENCE
(MOBSLCO, 06/07/2018)--TOPSIDE- ASPHALT SURFACE IN SATISFACTORY CONDITION. TRANSVERSE CRACK IN SIDEWALK AT EACH RAIL POST AND SOME LONGITUDINAL CRACKS WITH EFFLORESCENCE. NORTH SIDEWALK IS HEAVILY CRACKED CLOSE TO EDGE AND LIKELY TO SPALL.

[Item 59]--Superstructure Condition Rating:

6-SATISFACTORY CONDITION

Rating Date: 04/29/2010

Superstructure Rating Comments

(CARRJ3, 03/27/2014)--RUST STAINING THROUGH PAINT AT TOP & BOTTOM FLANGES SCATTERED THROUGHOUT. NO APPRECIABLE SECTION LOSS.
(CARRJ3, 03/27/2014)--BEAMS- IN SATISFACTORY CONDITION, SOME MINOR RUST ALONG THE TOP FLANGE IN A FEW LOCATIONS. BEARINGS- HEAVILY RUSTED ON BOTH ABUTMENTS; EAST EXPANSION BEARINGS LIKELY FROZEN.

[Item 60]--Substructure Condition Rating:

5-FAIR CONDITION

Rating Date: 05/01/2012

Compass Direction:

Substructure Rating Comments

(MOBSLCO, 08/13/2018)--DIAGONAL CRACKING IN WEST ABUTMENT. RADIAL CRACKING AT GAS UTILITY LINE IN SOUTHWEST CORNER OF BACK WALL. HAIRLINE VERTICAL CRACKING IN BACK WALLS OF BOTH ABUTMENTS. HORIZONTAL CRACKS UNDER BEAMS 1 AND 2 FROM NORTH ON EAST ABUTMENT. SLOPE PROTECTION SEPARATED FROM EAST ABUTMENT EXPOSING UNDERSIDE OF ENTIRE ABUTMENT WHICH APPEARS TO BE UNDERMINING APPROXIMATELY ONE FOOT.

[Item 61]--Channel Condition Rating:

6-WIDESPREAD MINOR DAMAGE

Rating Date: 04/15/2008

Rating Comments

(MOBSLCO, 08/06/2018)--SLOPES CONCRETED IN PLACE. CHANNEL SLOPES HAVE MODERATE EROSION UP AND DOWNSTREAM.

[Item 62]--Culvert Condition Rating:

N-NOT APPLICABLE

Rating Date: 03/01/2002

Rating Comments

County = ST. LOUIS



Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B105

Federal ID : 15528

****APPRAISAL RATINGS****

[Item 36A]--Bridge Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 05/09/2006

Rating Comments

(CARRJ3, 03/27/2014)--IMPACT DAMAGE TO NORTH RAIL POST 4 FROM WEST WITH SPALL IN SIDEWALK AT BASE OF POST.

[Item 36B]--Transition Railing Appraisal:

NOT REQUIRED-N

Rating Date: 03/27/2014

Rating Comments

[Item 36C]--Approach Railing Appraisal:

NOT REQUIRED-N

Rating Date: 03/27/2014

Rating Comments

[Item 36D]--Rail End Treatment Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 05/12/2016

Rating Comments

[Item 71]--Waterway Adequacy:

ABOVE FLOOD ELEVATIONS

Rating Date: 03/01/2002

Rating Comments

[Item 72]--Approach Roadway Alignment:

8-VERYGOOD

Rating Date: 03/01/2002

Rating Comments

[Item 113]--Scour Assessment:

8-STABLE FOR CALCULATED

Rating Date: 3/1/2002

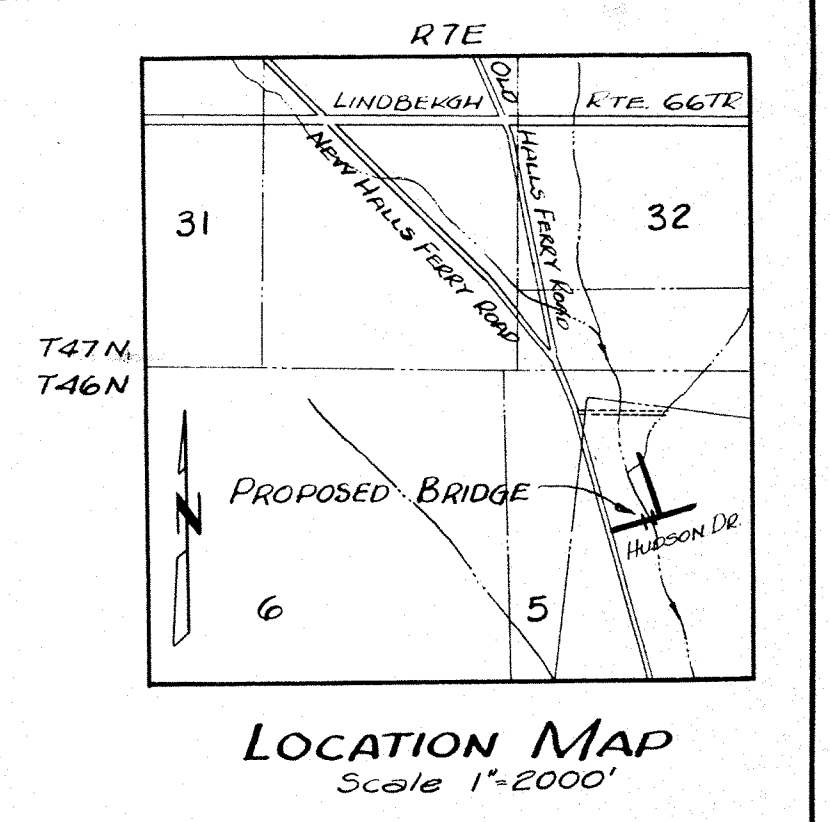
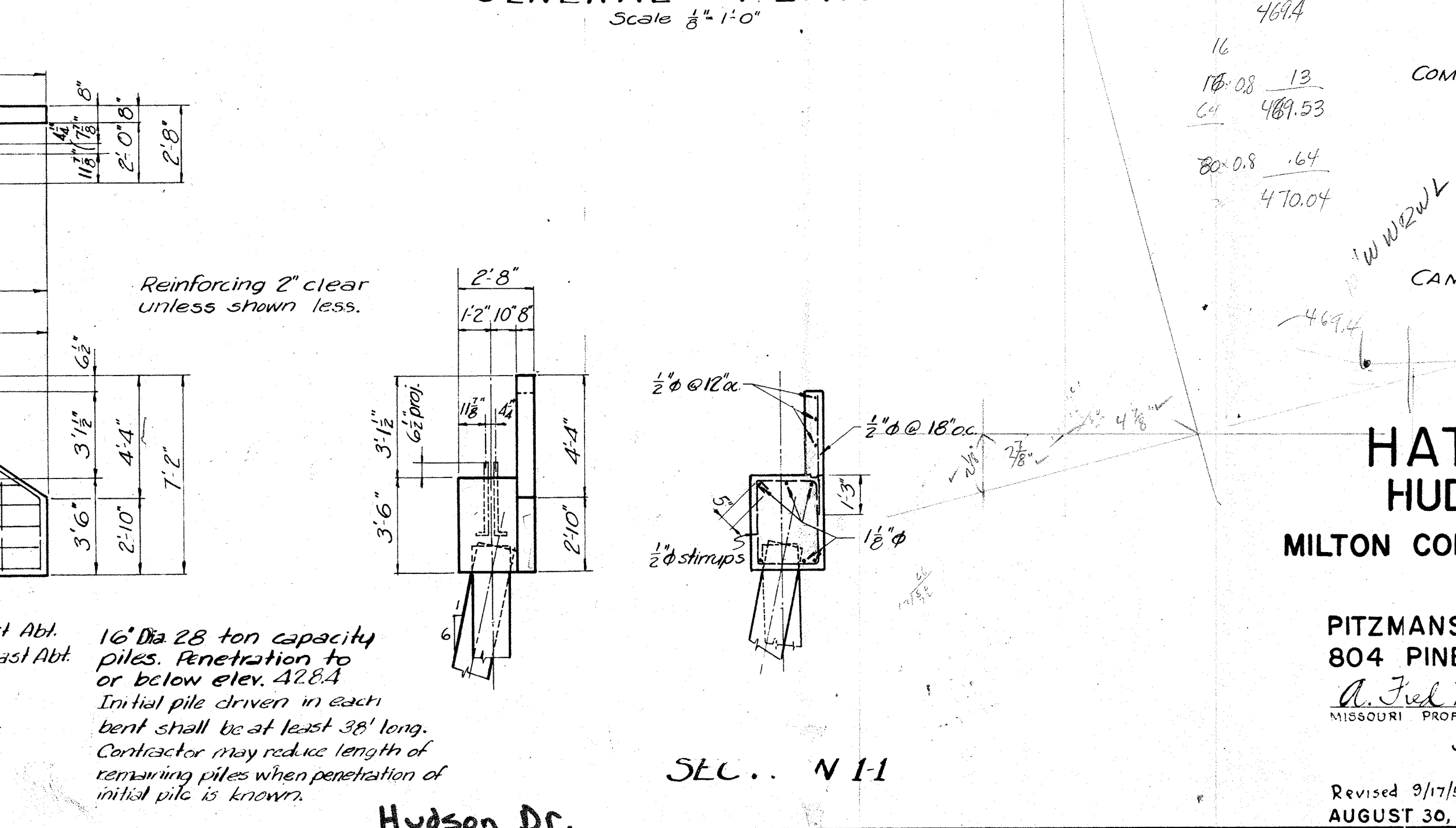
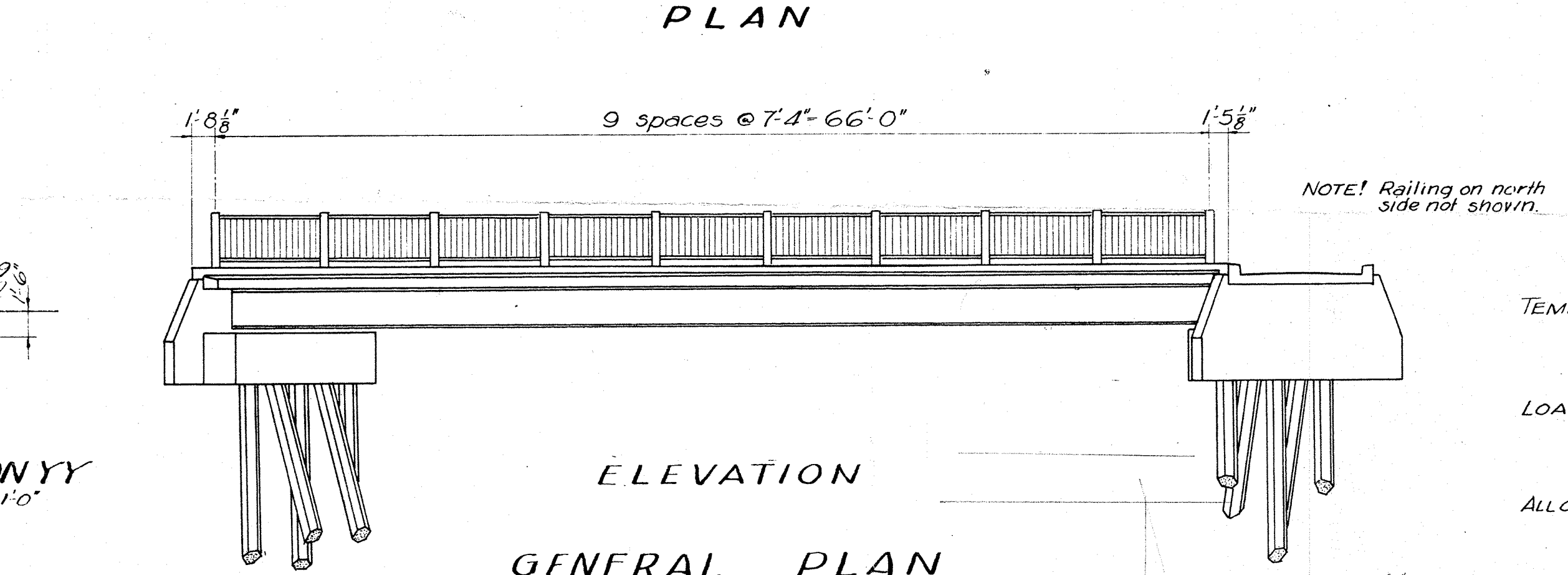
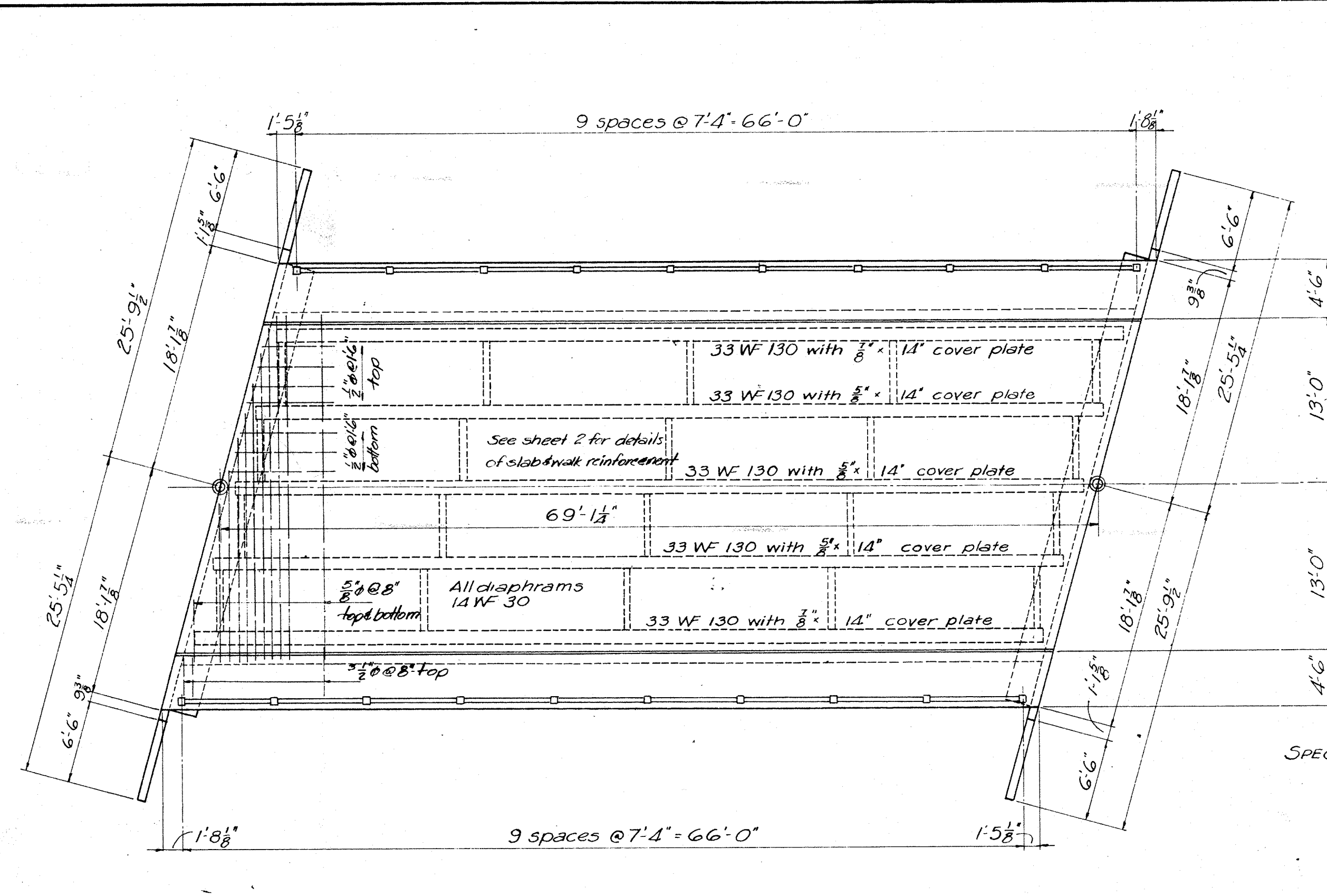
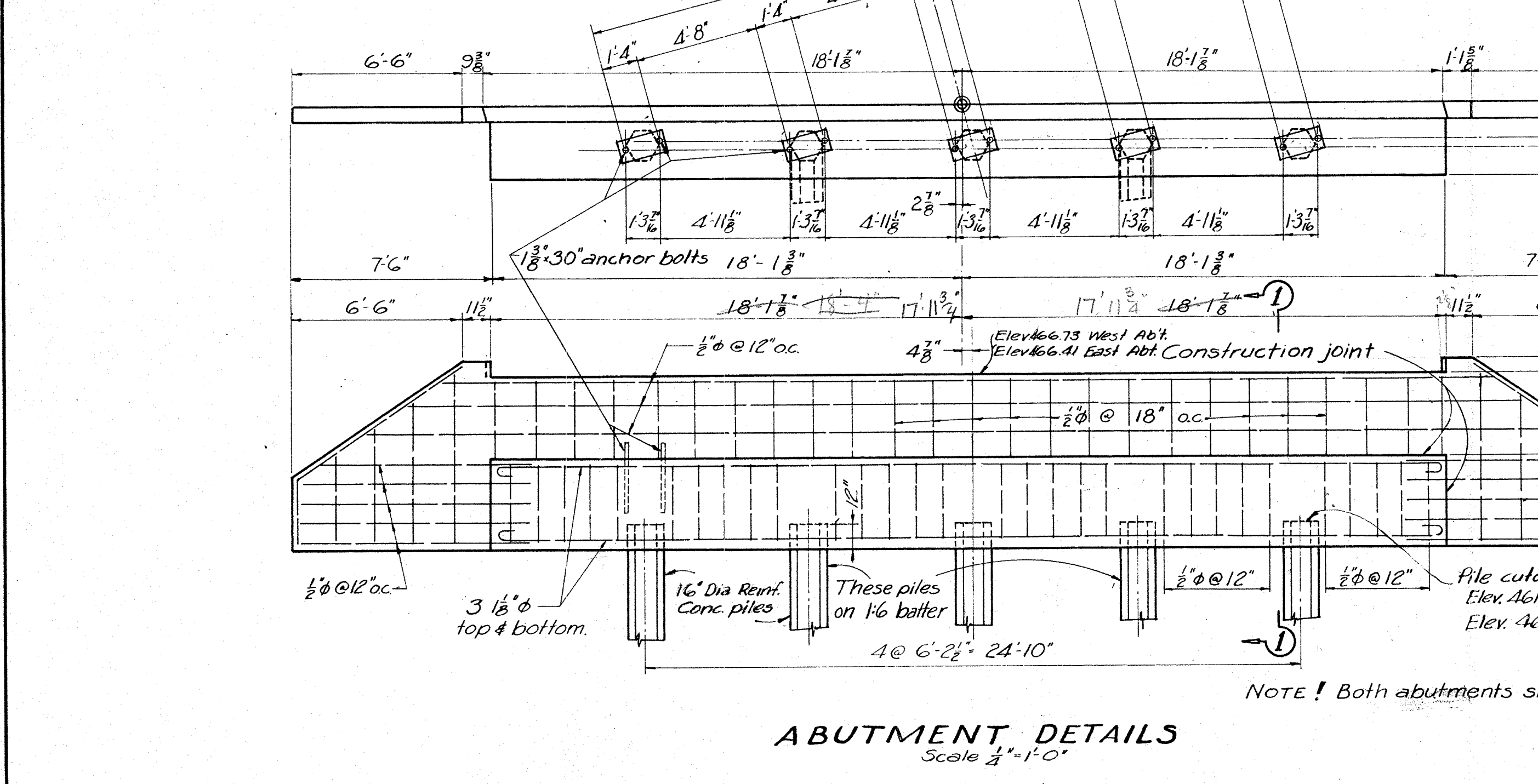
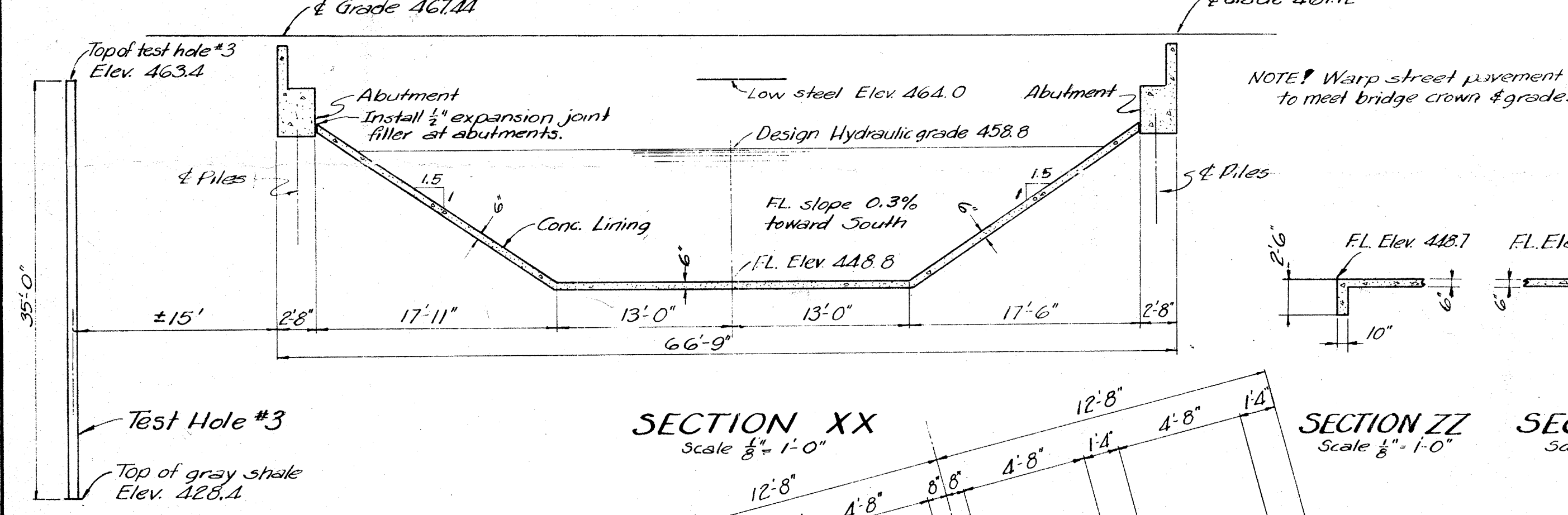
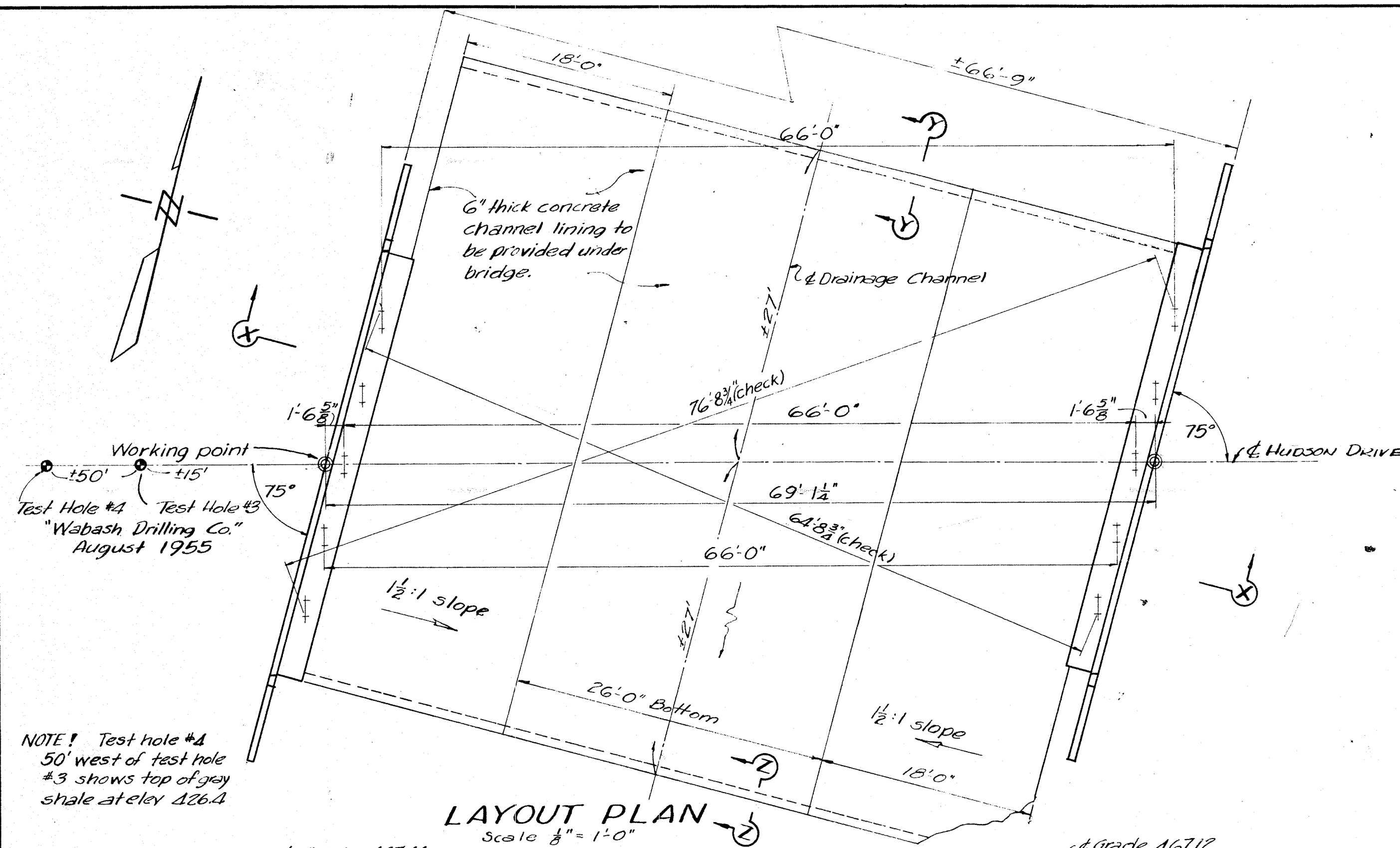
Type of Scour Evaluation:

Rating Comments

(LIVINR1, 04/28/2008)--NO SCOUR.

Work Comments :

County = ST. LOUIS



SPECIFICATIONS AND GENERAL NOTES

All materials, methods and workmanship shall conform to the Standard Specifications of the St. Louis County Highway Engineers Office. Specifications of the American Association of State Highway Officials, the American Institute of Steel Construction and the American Welding Society shall prevail where County Standards are not applicable.

Surfaces of construction joints shall be scored (roughened) to insure bond.

All metal surfaces shall receive one shop or field coat of primer and two coats of aluminum paint. Spiral shear devices and top flanges of beams which will be in contact with concrete shall not be painted.

TEMPORARY SUPPORTS

The steel beams are designed to carry dead load of slab and forms. No falsework is necessary.

LOADING

H20-S16-44 AASHTO Standard Specifications for Highway Bridges - 1953

ALLOWABLE UNIT STRESSES

Concrete	1200 psi.
Steel reinforcement for concrete	20,000 psi.
Structural steel	18,000 psi.
Welds	13,600 psi.

COMPOSITE BEAMS

Slab dead load carried by steel section. Sidewalk, curb & rail dead load carried by composite section - n = 30. Live loads carried by composite section - n = 10. Spiral shear devices designed for dead load plus live load shear.

CAMBER

Camber beams for dead load deflection.

HATHAWAY MANOR
HUDSON DRIVE BRIDGE #105
MILTON CONSTRUCTION AND SUPPLY CO., OWNER

DESIGNED BY
PITZMANS CO. OF SURVEYORS & ENGINEERS
804 PINE ST.
ST. LOUIS, I., MO.

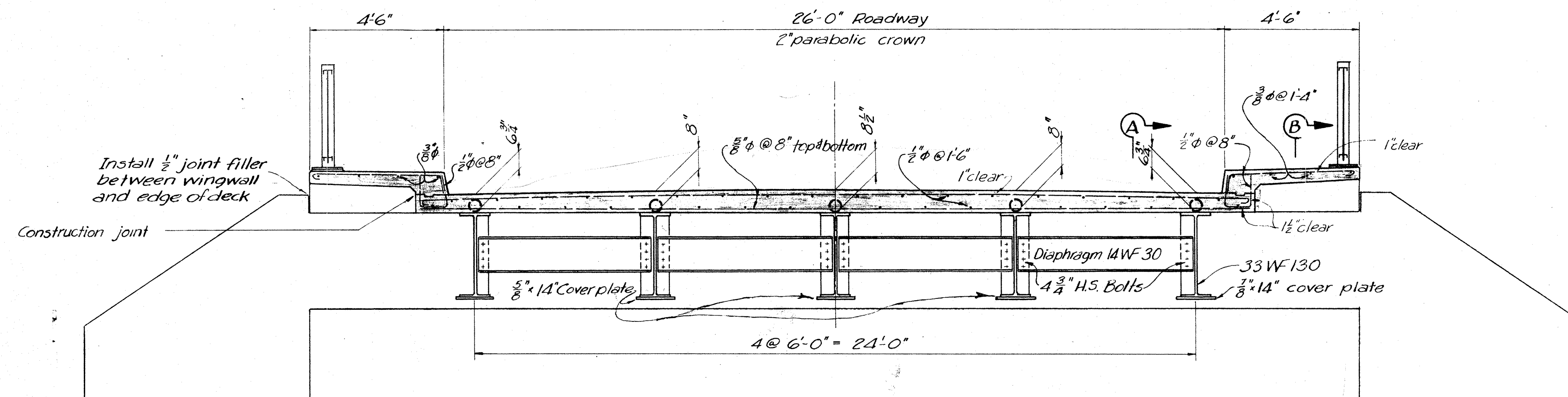
A. Fred Helmkamp
MISSOURI PROF. ENGINEER E-141

JOHN J. BAILEY JR., ASSOCIATE.
MISSOURI PROF. ENGINEER E-4587

Revised 9/17/55
AUGUST 30, 1955.

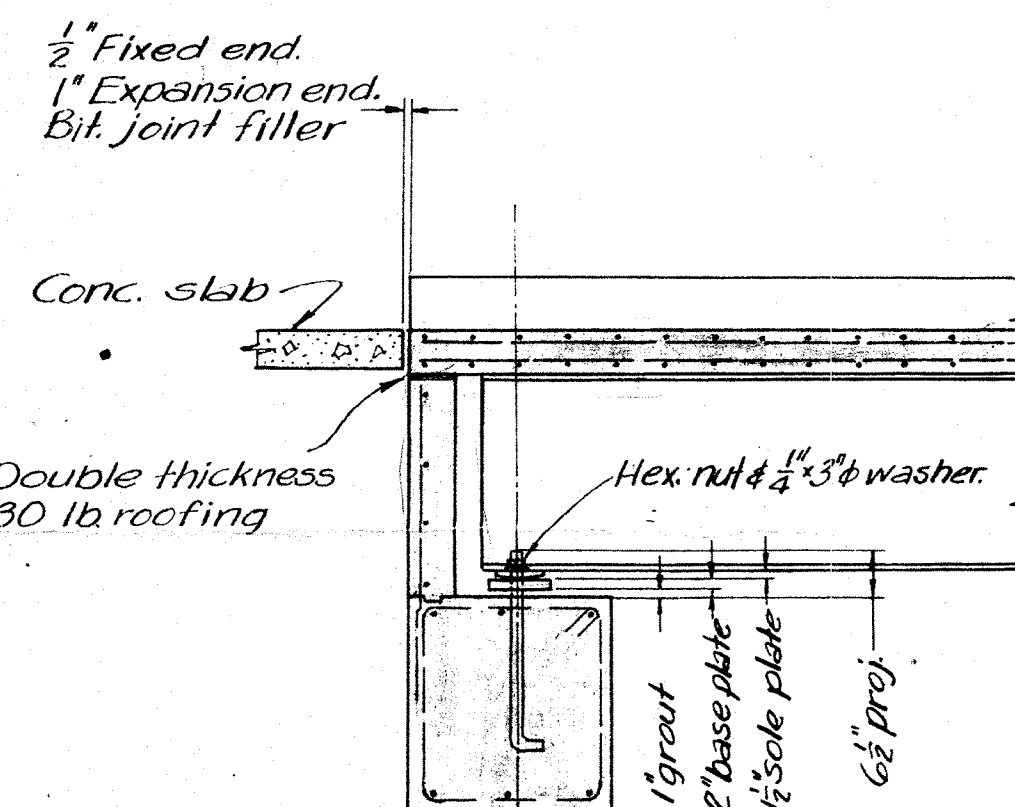
SHEET 1 OF 2

Hudson Dr.
Bridge # 105

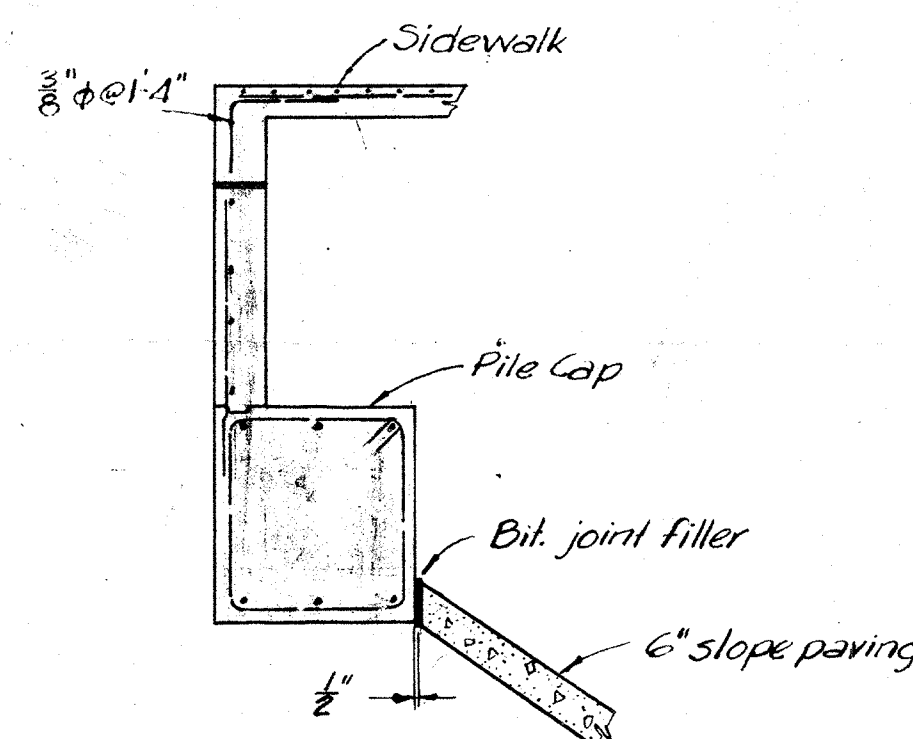


TYPICAL TRANSVERSE SECTION
Scale $\frac{3}{8}$ " = 1'-0"

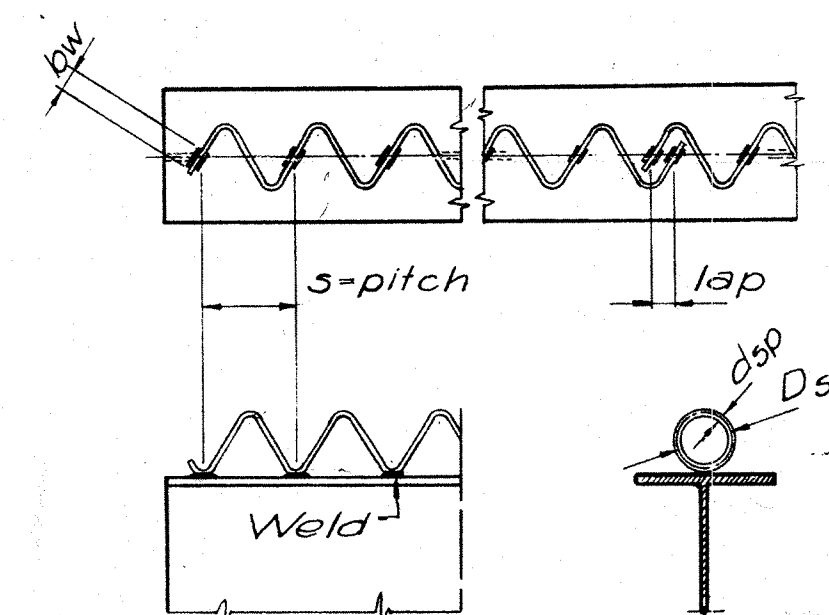
All exposed edges to be chamfered $\frac{3}{8}$ ". Use $\frac{3}{8}$ " chamfer strip to form drip mold.
Provide 1'-3" keyway at all construction joints.



SECTION AA
Scale $\frac{3}{8}$ " = 1'-0"

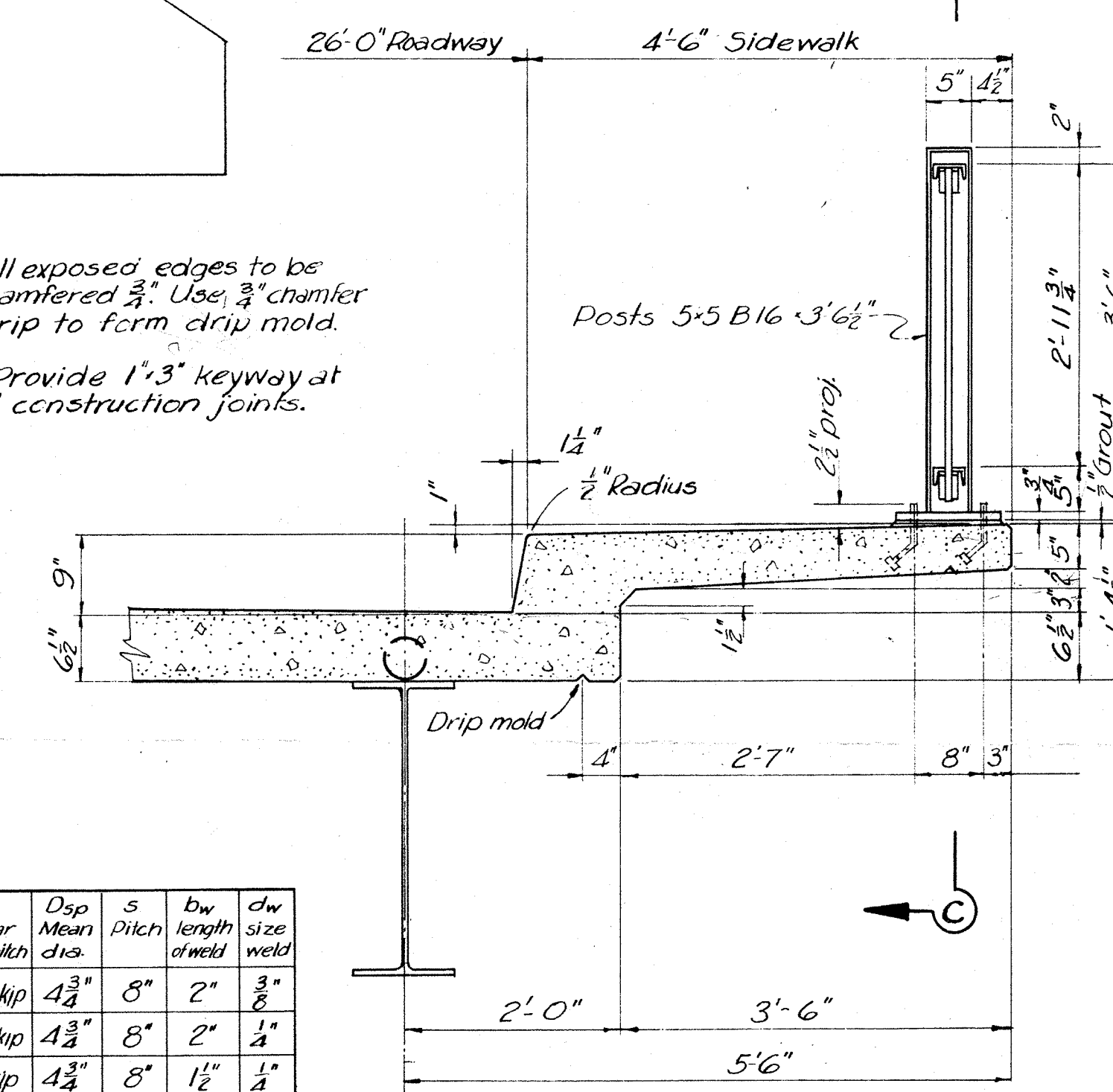


SECTION BB
Scale $\frac{3}{8}$ " = 1'-0"

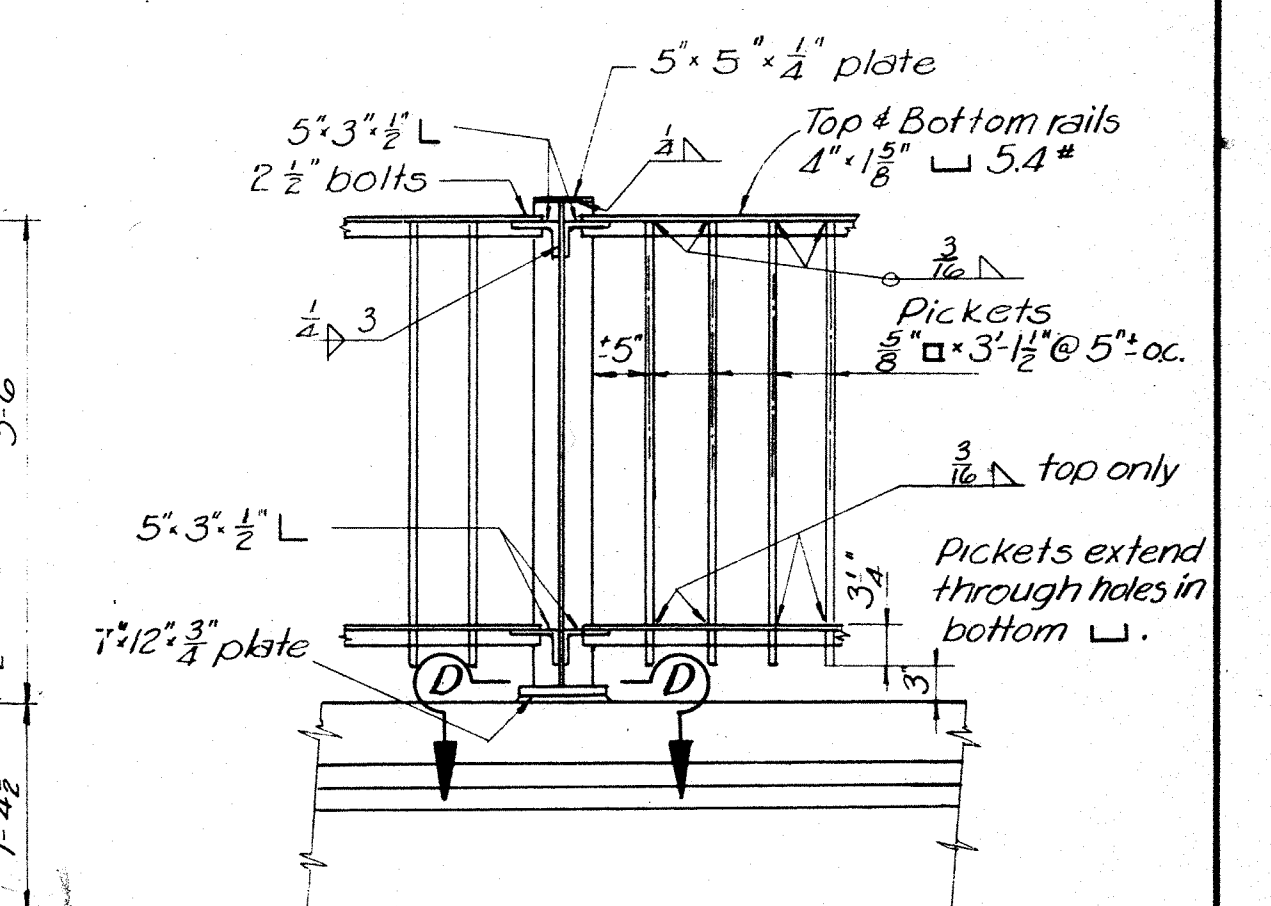


SPIRAL DETAILS
No Scale

Dep Bar dia	Tw Shear per pitch	Dsp Mean dia	S Pitch	Dw length of weld	dwr size	dwr weld
$\frac{3}{4}$ "	159 kip	$4\frac{3}{4}$ "	8"	2"	$\frac{3}{8}$ "	$\frac{3}{8}$ "
$\frac{5}{8}$ "	110 kip	$4\frac{3}{4}$ "	8"	2"	$\frac{1}{4}$ "	$\frac{1}{4}$ "
$\frac{7}{8}$ "	71 kip	$4\frac{3}{4}$ "	8"	1 1/2"	$\frac{1}{4}$ "	$\frac{1}{4}$ "

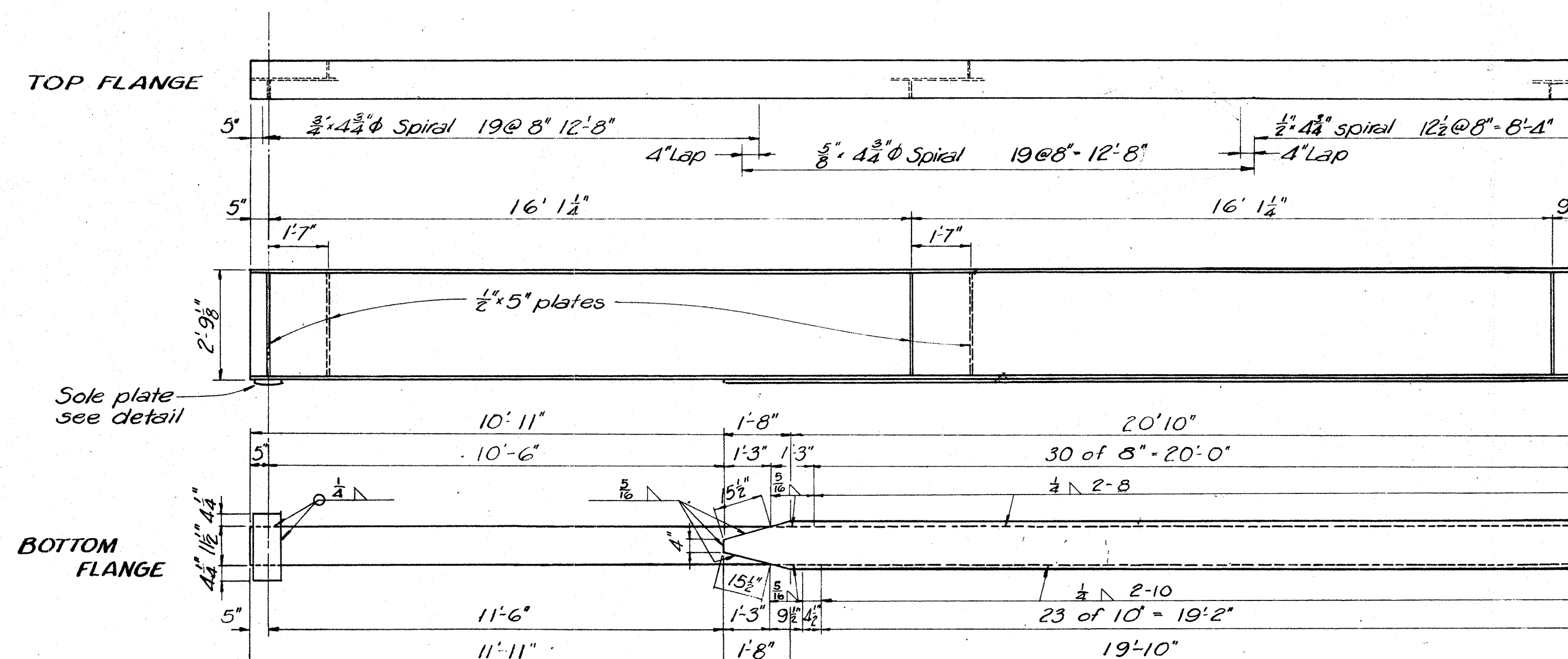


SIDEWALK DETAIL
Scale $\frac{3}{4}$ " = 1'-0"

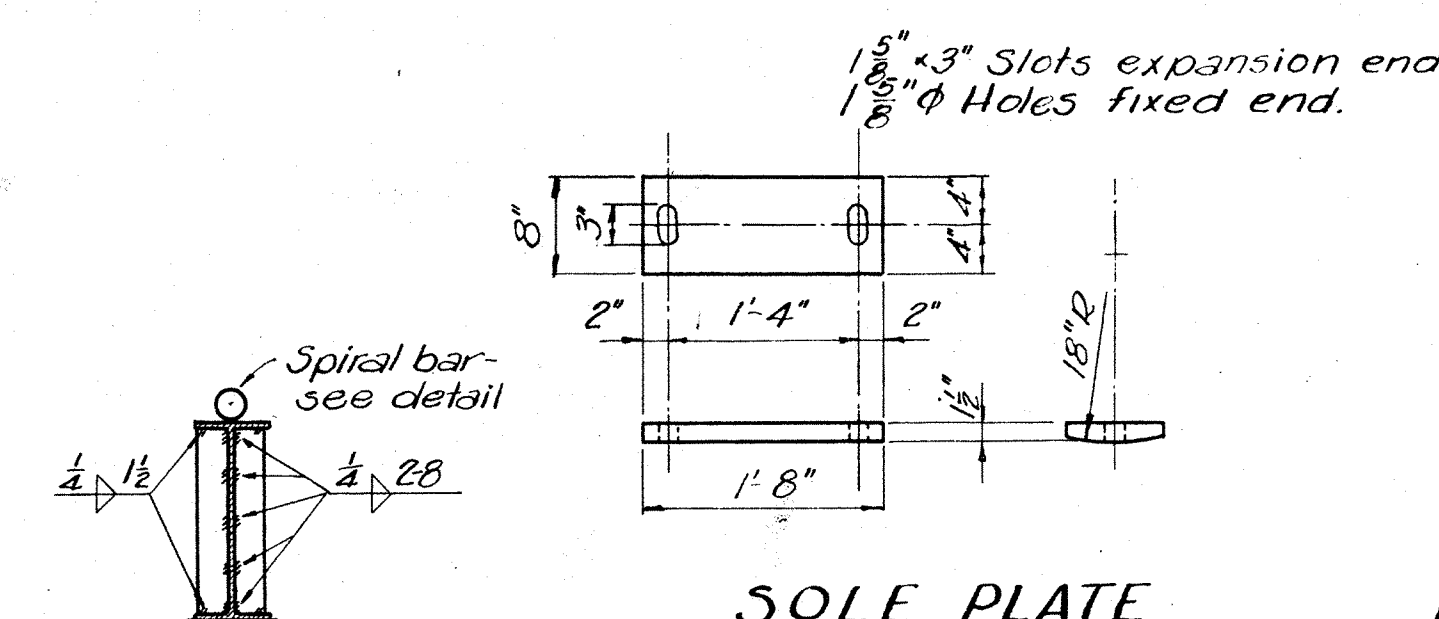


SECTION CC
Scale $\frac{3}{8}$ " = 1'-0"

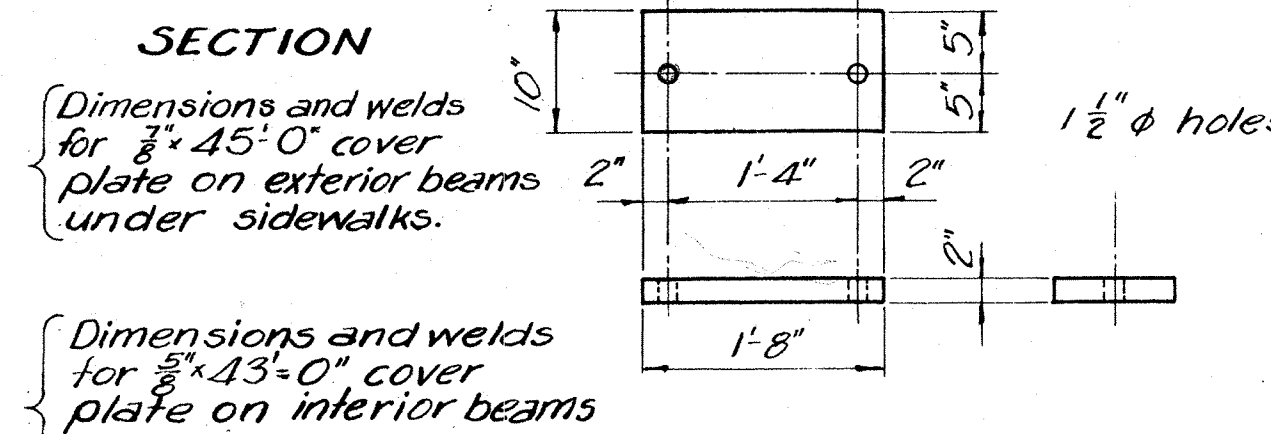
SECTION DD
SHOWING ANCHOR BOLTS
AND HANDRAIL BASE PLATE
Scale $\frac{3}{8}$ " = 1'-0"



DETAILS OF BEAMS
Scale $\frac{3}{8}$ " = 1'-0"



SOLE PLATE
Scale $\frac{3}{8}$ " = 1'-0"



BEARING PLATE
Scale $\frac{3}{8}$ " = 1'-0"

MAIN ANCHOR BOLTS
Scale $\frac{3}{8}$ " = 1'-0"
Each bolt to be supplied with 3" x 3" washer and std. hex. nut.

HATHAWAY MANOR
HUDSON DRIVE BRIDGE
#105

SHEET 2 OF 2

7-1



Off-System Bridge Funding (BRO)

Sponsoring Agency:

Project Title:

Federal Amount Requested:

PROJECT CHECKLIST AND SUBMITTAL REQUIREMENTS

The evaluation and scoring of all projects will be based on the answers provided in the application and the attachments submitted. Submit one electronic copy. Save the electronic copy as a PDF file using the following format:

BRO_[Sponsor]_[Project Name].pdf.

The materials should be submitted in the following order.

Project Application:

☐ **Completed BRO information form**

Attachment A:

☐ **Project location map** – depict the location of the project on a base map such as a town road map, GIS map, aerial photo, or another base map suitable to clearly show the project's overall location. Provide on an 8 ½ x 11 page.

- ☐ **Detailed cost estimate** – use Estimate of Project Costs excel file provided.
- ☐ **Letter of permission from facility owner** – provide if sponsor does not own roadway.
- ☐ **Letter of support from match source** – provide if individual, business, other local public agency, or other third-party is providing matching funds.

Attachment B:

☐ **Photographs** – attach photo(s) of the current bridge.

☐ **Detailed map** – if applicable, provide a map showing:

- ☐ **Roadway realignment diagram** – if applicable, provide a diagram showing existing and proposed vertical or horizontal realignment of the connecting roadway.
- ☐ **Typical bridge section** – show details of before and after bridge improvements.
- ☐ **Bridge condition** – attach State-issued inspection report or other documentation from State DOT showing bridge condition.
- ☐ **Preventive maintenance activities** – provide documentation from FHWA showing its approval of proposed preventive maintenance plan. Include list showing at least the bridges that are part of the program, ADT, sufficiency rating, maintenance activity, maintenance cost, when the structure is due for replacement, and the cost to replace the structure (in present dollars). Documentation must show that project will extend life of bridges. Required only for preventive maintenance projects.

SPONSOR INFORMATION									
Sponsoring agency:									
Secondary sponsor agency (if applicable):									
Chief Elected Official/Chief Executive Director:									
Name:					Title:				
Street address:									
City:		State:		County:		ZIP code:			
Project contact:									
Name:					Title:				
Agency:									
Street address:									
City:		State:		County:		ZIP code:			
Phone Number:					E-mail address:				
Application contact:									
Name:					Phone Number:				
E-mail address:									
PROJECT INFORMATION									
Project title:									
Project status: <input type="checkbox"/> New project <input type="checkbox"/> Continuation of STP-S/CMAQ/TAP project <input type="checkbox"/> Add to existing non-federally funded project					Is this application request for a piece of a larger project (phase) or the entire length of project? <input type="checkbox"/> Phase <input type="checkbox"/> Full project				
If project is a continuation of another project that was previously programmed in the TIP, provide TIP ID # of existing project and also explain this relationship: 									
If this project is a phase of a full project, how many phases are left to complete the project? Briefly explain each phase (i.e., project limits and general improvements): 									
Has your agency previously competed for funds for this specific project? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown									
If yes, when?									
Estimated completion (construction) month/year:									

ROADWAY INFORMATION

Name of street or facility to be improved:

Does the sponsoring agency own and maintain this facility?

☐ Yes ☐ No ☐ Unknown

If no, a letter of support for this project is required from the facility owner.

Project length (miles):

Feature crossed (i.e., Fee Fee Creek):

Federal functional classification of road (per EWG)¹:

Bridge sufficiency rating:

Bridge identification number (federal ID):

	CURRENT:	PROPOSED:
Traffic volumes (AADT):	Year:	Year:
Speed limit of street:		
Bridge width:		
Deck width:		
Number of through lanes:		
Number of turn lanes:		
Two-way left turn lanes?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Typical lane width:		
Outside lane width:		
Shoulder width:		
On-street parking allowed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Curb and gutter?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Sidewalks?	<input type="checkbox"/> One-side <input type="checkbox"/> Both sides <input type="checkbox"/> None	<input type="checkbox"/> One-side <input type="checkbox"/> Both sides <input type="checkbox"/> None
Sidewalk width:		
Sidewalk condition:	<input type="checkbox"/> Poor <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> None	n/a
On-road bicycle facility ² ?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Shared-use path or sidepath?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown
Shared-use path or sidepath width:		
Located on transit route?	<input type="checkbox"/> Yes <input type="checkbox"/> No	n/a

PREVENTIVE MAINTENANCE

Note: Complete only if preventive maintenance activity is proposed.

How many bridges are proposed?

How will the maintenance activities extend the life of the bridge structures?

Have the preventive maintenance activities been approved by FHWA?

☐ Yes ☐ No ☐ Unknown

¹ East-West Gateway Functional Classification maps: <http://www.ewgateway.org/transportation-planning/roadway-functional-classification/>.

² On-road bicycle facility includes: bike lanes (separated, buffered, and standard) and shared-lane markings.

LAND ACQUISITION INFORMATION

Status of right-of-way acquisition:

- ☐ All acquired or none needed
☐ In process
☐ Not started

If applicable, list the number of parcels to be acquired (all properties, permanent and/or temporary easements, TSCL, and other rights-of-way):

If any residential or commercial displacements are anticipated, give details on how many and if they are residential and/or commercial:

Right-of-way acquisition by:

Right-of-way condemnation by:

Will the project traverse any public property, such as a public park that has used federal funds (i.e., Land and Water Conservation Funds) in the past?

- ☐ Yes ☐ No ☐ Unknown

UTILITY COORDINATION

Note: Project sponsor must coordinate with utilities prior to construction.

Will the project require the relocation of any utilities?

- ☐ Yes ☐ No ☐ Unknown

If yes, check the appropriate box to select the type of utility. Then give the names of the utility companies.

☐ Electric

☐ Phone

☐ Gas

☐ Water

☐ Cable TV

☐ Storm sewer

☐ Sanitary sewer

☐

☐

Give details concerning potential utility conflicts, problems, or issues:

Utility coordination completed by:

Designed by:

Inspected by:

RAILROAD COORDINATION

Does the project traverse any property owned by a railroad?

☐ Yes ☐ No ☐ Unknown

Is there a railroad within 500' of project limits?

☐ Yes ☐ No ☐ Unknown

Name of railroad:

Number of crossings impacted:

Are the crossings active?

☐ Yes ☐ No

Width of crossing:

What is the crossing type?

- ☐ Timber
☐ Rubberized
☐ Asphalt
☐ Concrete
☐ Other

Describe other:

PROJECT MAINTENANCE

List any regular maintenance tasks anticipated over the next 25 years:

Estimated annual cost to maintain facility and funding source:

AMERICANS WITH DISABILITIES ACT

Under the 1990 Americans with Disabilities Act (ADA), Title II requires public entities with more than 50 employees to complete a self-evaluation and create an effective ADA transition plan³.

Does your local public agency have more than 50 employees?

☐ Yes ☐ No ☐ Unknown

If yes, does your agency have an adopted ADA transition plan?

☐ Yes ☐ No ☐ Unknown

If your agency has an ADA transition plan, when was it adopted?

If ADA transition plan is not adopted, when is it expected to be adopted?

³ FHWA Questions and Answers about ADA/Section 504: https://www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.cfm.

PROJECT DESCRIPTION

Provide a brief description of the purpose of the project and the scope of work. Be as specific as possible.

PROJECT DEVELOPMENT SCHEDULE

Note: Many stages can occur concurrently.

Activity Description	Start Date (MM/YYYY)	Finish Date (MM/YYYY)	Time Frame (Months)
Receive notification letter	11/2018	11/2018	1
Execute agreement (project sponsor and DOT)			
Engineering services contract submitted and approved*			
Obtain environmental clearances (106, CE-2, etc.)			
Public meeting/hearing			
Develop and submit preliminary plans			
Preliminary plans approved			
Develop and submit right-of-way plans			
Review and approval of right-of-way plans			
Submit and receive approval for notice to proceed for right-of-way acquisition (A-Date)*			
Right-of-way acquisition			
Utility coordination			
Develop and submit PS&E			
District approval of PS&E/advertise for bids*			
Submit and receive bids for review and approval			
Project implementation/construction			

* Finish date must match fiscal year for each milestone shown in **bold** text.

FINANCIAL PLAN

Note: Fiscal years are federal fiscal years (October 1 through September 30). Federal participation for a phase of work must not exceed 80%.

Activity	Starting Federal Fiscal Year	Total Phase Cost	BRO Funds	Sponsor Share	Sponsor Share Percentage
PE / Planning / Environmental Studies	FY				
Right-of-Way	FY				
Implementation	FY				
Construction Engineering	FY				
TOTAL PROJECT COST					
Identify the source(s) of local matching funds, and the amount for each source:					

SAFETY

Is the bridge structurally deficient or functionally obsolete?

- ☐ Structurally deficient
☐ Functionally obsolete

MULTIMODAL

Describe the existing conditions of the bicycle/pedestrian environment where the proposed facility will be constructed:

Does the proposed project incorporate any of the following bicycle-related improvements?

- ☐ Separated bike lane/cycle track/protected bike lane
☐ Shared-use path/trail
☐ Buffered bike lane
☐ Standard bike lane (not buffered)
☐ Marked shared roadway (shared-lane markings, "sharrow")
☐ Paved shoulder
☐ Other
☐ None

Describe other:

Does the proposed project incorporate any of the following pedestrian-related improvements?

- ☐ New sidewalks
☐ Sidewalk reconstruction
☐ Construction of new curb ramps
☐ Curb ramp reconstruction
☐ Railing or protective screening/concrete barrier
☐ Pedestrian-scale lighting
☐ Other
☐ None

Describe other:

Is the project within ½ mile of a school?

- ☐ Yes ☐ No ☐ Unknown

If yes, identify the school(s):

Is the project within ½ mile of an activity center, employment center, or community resource (i.e., a business district, retail center, medical facility, community center, park)?

☐ Yes ☐ No ☐ Unknown

If yes, identify all activity centers, employment centers, and/or community resources (planned or existing):

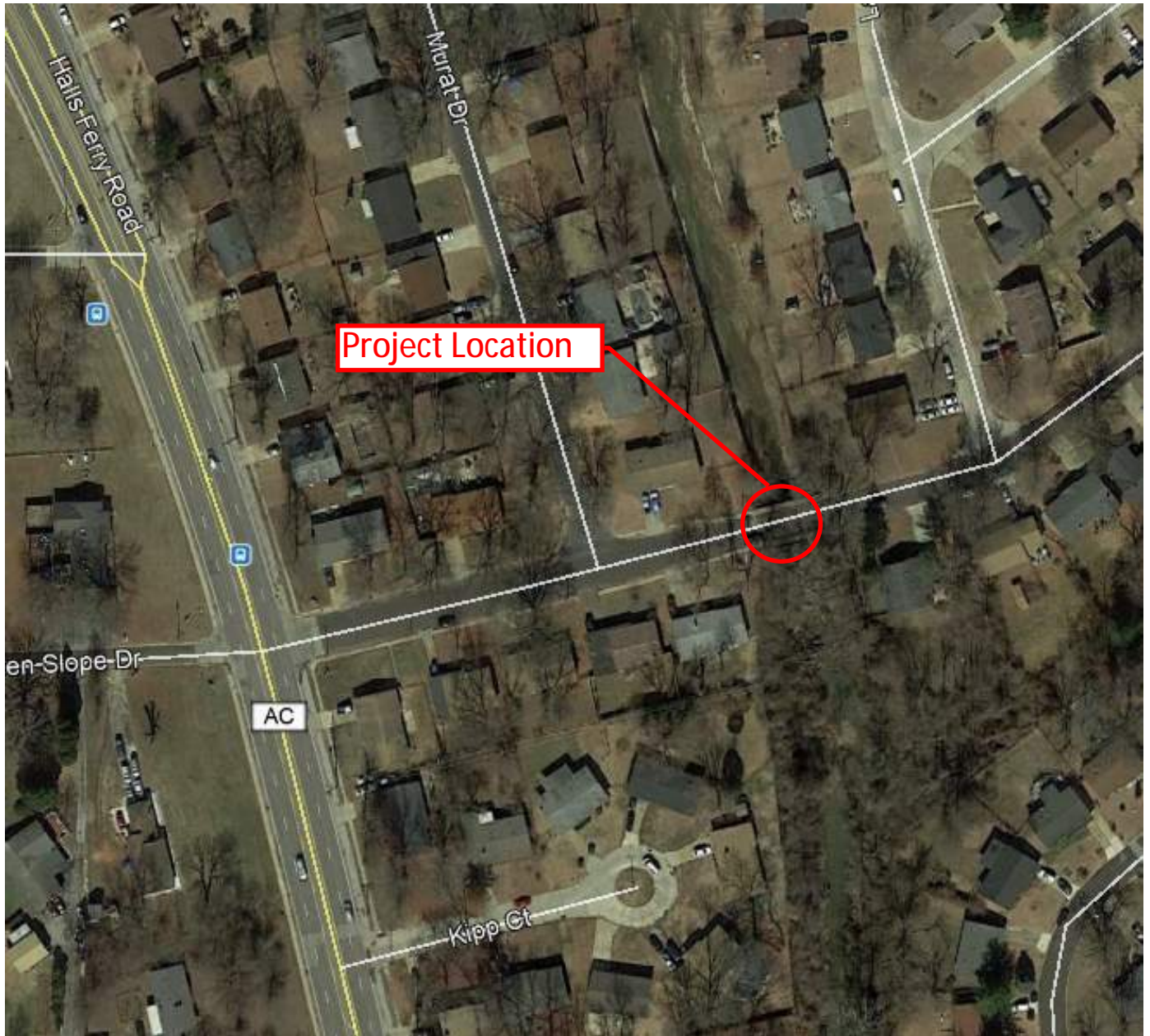
INTERMODAL CONNECTIONS

Does the facility have a posted weight limit?

☐ Yes ☐ No ☐ Unknown

If yes, what is the posted weight limit?

Vorhof Drive Bridge No. 106 (096B106)
St. Louis County, MO



Current Bridge Length (ft): 63 (single span)
Anticipated Bridge Length (ft): 63 (single span)
Anticipated Out-to-out width (ft): 37

Description	Quantity	Unit	Unit Price	Estimated Cost	Sub-total
Items					
Clearing & Grubbing	1	Lump Sum	\$5,000	\$5,000	
Land Disturbance Permit	1	Lump Sum	\$1,500	\$1,500	
Erosion Control & SWPPP	1	Lump Sum	\$5,000	\$5,000	

\$11,500

Items

Removal of Improvements	1	Lump Sum	\$12,500	\$12,500	
Type 5 Aggregate Base (4" Thick)	160	SY	\$10	\$1,600	
Type "C" Bituminous Concrete (Pavement)	20	Tons	\$150	\$3,000	
Type "X" Bituminous Concrete (Base)	70	Tons	\$125	\$8,750	
Prime-Liquid Asphalt (MC30)	0	Gal.	\$10	\$0	
Tack-Emulsified Asphalt (SS-1H)	15	Gal.	\$7	\$105	
Concrete Approach Pavement	87	SY	\$130	\$11,267	
Thrie Beam Bridge Rail	126	L.F.	\$250	\$31,500	
Crashworthy Guardrail Terminal	4	Each	\$2,750	\$11,000	
Transition Section	4	Each	\$2,500	\$10,000	
Heavy Stone Revetment	292	S.Y.	\$50	\$14,583	
Movable Barricades	4	Each	\$325	\$1,300	
Standard Traffic Control Devices	1	Lump Sum	\$10,000	\$10,000	

\$115,605

Items

Removal of Bridge (Partial)	1	Lump Sum	\$34,965	\$34,965	
Bridge Approach Slab (Bridge)	116	S.Y.	\$220	\$25,422	
Pedestrian Fence on Structure	63	L.F.	\$85	\$5,355	
Bridge Deck Surface Penetration Sealer	2,331	S.F.	\$3	\$6,993	
Substructure Repair (Formed)	74	S.F.	\$600	\$44,400	
Class "B-2" Concrete (Superstructure on Steel)	65	C.Y.	\$438	\$28,328	
Laminated Neoprene Bearing Pads (Steel Structures)	14	Each	\$2,000	\$28,000	
Reinforcing Steel (Epoxy-Coated) (Grade 60)	777	Lbs.	\$2.00	\$1,554	
Intermediate Field Coat (System G) Gray	2,970	S.F.	\$3	\$8,910	
Finish Field Coat (System G) Gray	2,970	S.F.	\$4	\$11,880	
Fabricated Structural Carbon Steel (Plate Girders)	16,380	Lbs.	\$2.25	\$36,855	
Fabricated Structural Low Alloy Steel (Plate Girders)(A-572)	900	Lbs.	\$1.79	\$1,610	
Fabricated Structural Steel Bearings	4	Each	\$2,200	\$8,800	

\$243,072

ous

Misc. (Mobilization, Office, etc.)	1	Lump Sum	\$37,000	\$37,000	
Detours	1	Lump Sum	\$2,500	\$2,500	

\$39,500

TOTAL before contingencies

\$409,677

Contingencies (10% of above)				\$41,000	
------------------------------	--	--	--	----------	--

TOTAL with contingencies

\$450,677

RIGHT-OF-WAY COSTS

Appraised ROW	\$20,000
Titles, Appraisals, Condemnation Costs @ 30%	\$6,000
Total	\$26,000

(Includes 10% Contingency, Rounded to Nearest \$1,000)

Utilities (Lump Sum)	\$25,000
Construction Cost	\$451,000
Admin. Eng. & Const. Supv.	\$67,650
Survey & Design Engineering Cost	\$67,650
Right-of-Way Cost	\$26,000
Environmental	\$0
Railroad - See "Miscellaneous"	\$0

Total Cost \$637,300



Vorhof Drive Bridge No. 096B106

Looking East



Vorhof Drive Bridge No. 096B106

Looking West



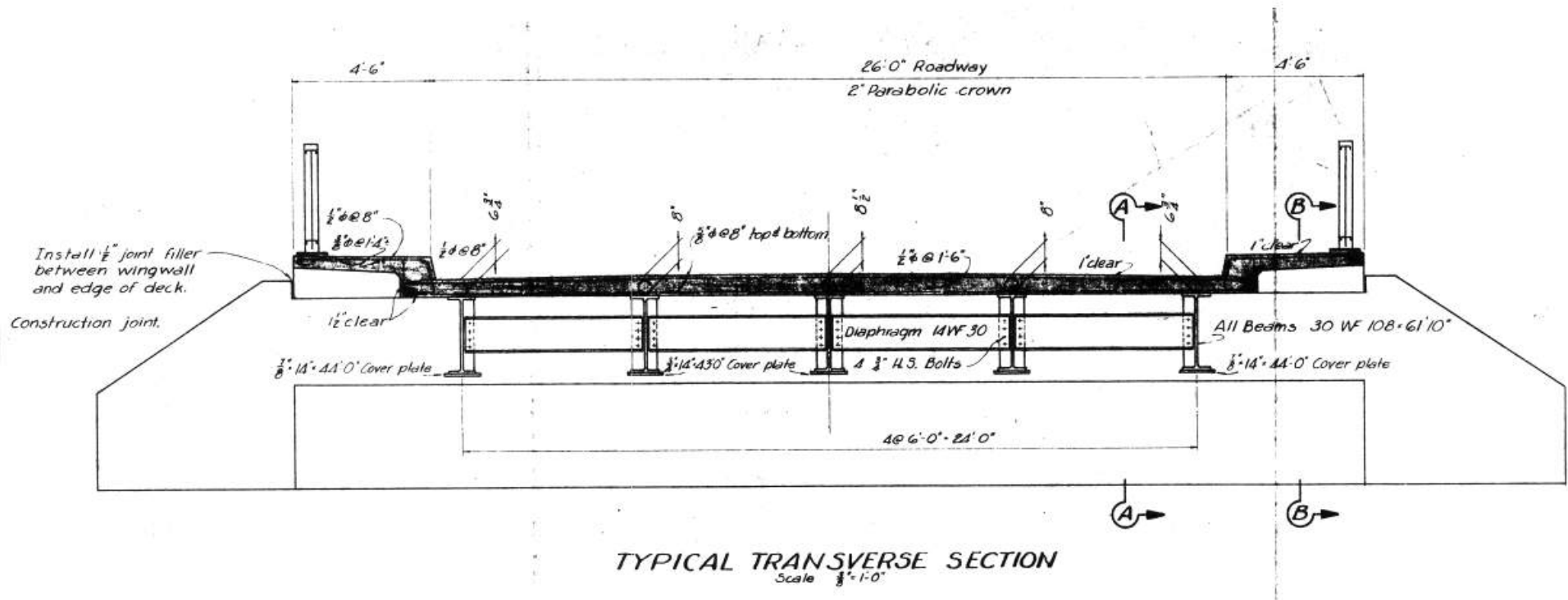
Vorhof Drive Bridge No. 096B106

Looking South

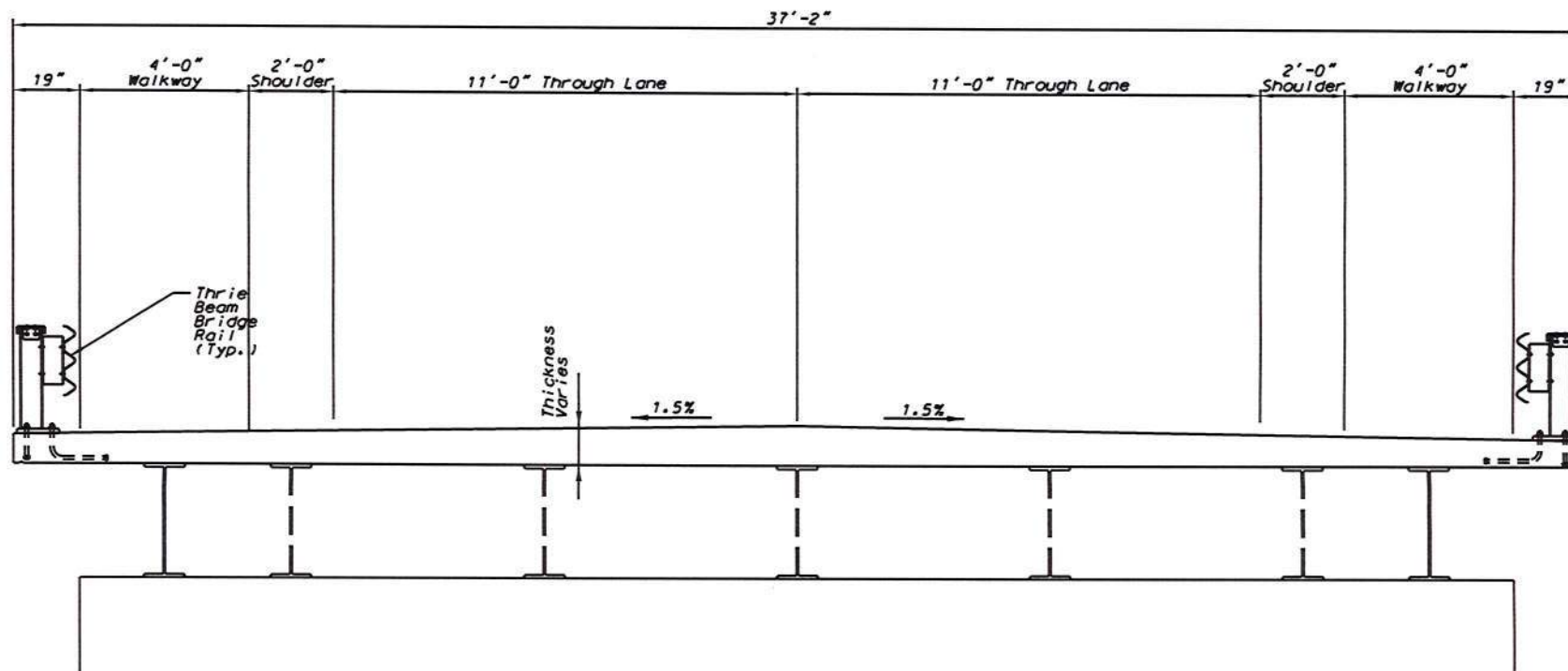


Vorhof Drive Bridge No. 096B106

Looking North



St. Louis County, MO
Vorhof Drive Bridge No. 096B106
Existing Bridge Cross Section



TYPICAL SECTION - VORHOF DRIVE BRIDGE NO. 106

THIS DRAWING IS NOT TO SCALE. FOLLOW DIMENSIONS

BRIDGE SHEET NO. 06

ST. LOUIS COUNTY BRIDGE NO. 106

BRIDGE SHEET NO. 06

COUNTY PROJECT NO. CR-1775

FEDERAL PROJECT NO.

E-R GATEWAY TIP NO.

AGE

Approximate Date

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Missouri Department of Transportation
Bridge Inventory and Inspection System
Non-State Structure Inspection Report

August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B106

Federal ID : 15529

GENERAL STRUCTURE INFORMATION

[5D] Route :	00000	[41] Structure Status :	P-LOAD POSTED W/RESTRICT
[4] Place Code :	64208 ST. FERDINAND	[9] Location :	S 5 T 46 R 7 E
[6] Features Intersected :	BLACK JACK CR	[22] Owner :	COUNTY
[7] Facility Carried :	VORHOF DR	[26] Functional Classification :	ULOCAL
[16] Latitude :	38 45 45.8 (DMS)	[21] Maintenance Responsibility :	COUNTY
[17] Longitude :	90 15 23.23 (DMS)	[11] Milepoint :	0.60 MILES

AGE AND SERVICE - GEOMETRIC DATA - MATERIAL

[27] Year Built :	1956	[106] Year Reconstructed :	
[49] Structure Length :	63 FT.	[51] Bridge Width :	26 FT. 0 IN.
[32] Approach Roadway Width :	25 FT. 0 IN.	[52] Deck Width :	36 FT. 0 IN.
[42B] Type of Service Under :	WATERWAY	[28A] Lanes On :	2
[19] Detour Length :	0.62 MILES	[28B] Lanes Under :	0

COMPONENTS	# SPANS	PRED	MATERIAL	CONSTRUCTION
MAIN SERIES	1	X	STEEL	WIDE FLANGE GIRDERS
[107] Deck Type :			REINCONC	CIP
[108A] Wearing Surface :			ASPHALT	BITUMSEAL
[108B] Membrane :			NOTAPPLIC	NONE
[108C] Deck Protection :			NOTAPPLIC	NONE

AADT INFORMATION

[29] AADT on Structure :	2,921	[30] Year :	2018	[109] AADT Truck :	3 %
[114] Future AADT :	4,674	[115] Year :	2038	[102] Direction of Traffic :	2-WAY TRAFFIC

STRUCTURE POSTING

FIELD POSTING	Problem Code :	Problem Direction Code :
Category : S-15 TRUCK WEIGHT LIMIT 56 TONS EXCEPT SINGLE UNIT TANDEM REAR AXLE TRUCKS 45 TONS WEIGHT LIMIT		
Ton 1 : 56	Ton 2 : 45	Ton 3 :

APPROVED POSTING	
Category : S-15 TRUCK WEIGHT LIMIT 56 TONS EXCEPT SINGLE UNIT TANDEM REAR AXLE TRUCKS 45 TONS WEIGHT LIMIT	
Ton 1 : 56	Ton 2 : 45 Ton 3 :

COMPUTER GENERATED DEFICIENCY AND EVALUATION ITEMS

NOTE: The items listed in this section are updated whenever computer edits are ran on a structure after the inspection updates have been entered in to TMS.

<u>Rated Item</u>	<u>Rating</u>	<u>Rating Date</u>
[Item 67] Structure Evaluation Rating:	5-BETTER THAN MINIMUM	4/4/2014
[Item 68] Deck Geometry Rating:	3-BASICALLY INTOL CORRECT	6/30/2008
[Item 69] Underclearance:	N-NOT APPLICABLE	3/1/2002
Sufficiency Rating:	55.6 %	4/4/2014
Deficiency:	FUNCTIONAL	6/30/2008
Funding Eligibility:	PARTIAL	1/18/2018
Estimated New Structure Length:	89 FT.	1/18/2018
Estimated Structure Cost:	\$232,360	1/18/2018
Estimated Total Project Cost:	\$348,540	1/18/2018
Year of Cost Estimate:	2018	1/18/2018

NOTE: The above structure length and cost estimates are computer generated using algorithms in the TMS system. These algorithms are generalized to use NBI items to come up with a new structure length and width to calculate a new area which is taken times a representative cost per square foot. The actual structure size and cost may vary significantly from these numbers once site specific engineering is done.



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****STRUCTURE GENERAL INSPECTION****

[90] Inspection Type: GENERAL

[91] Designated Frequency: 24

Inspection Responsibility:

Inspection Date: 4/24/2018

** Calculated Frequency: 13

Element Inspection Required: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

General Inspection Comments

Inspector

RYAN GATES
MONICA CHENEY (NTLQ)

Team Leader

X

Organization

SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****UNDERWATER INSPECTION****

Inspection Category: DRY

[92B] Designated Frequency: 60

Inspection Responsibility:

Inspection Date: 4/24/2018

**Calculated Frequency: 25

NBI: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Underwater Inspection Comments

Inspector

RYAN GATES
MONICA CHENEY (NTLQ)

Team Leader

X

Organization

SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****SPECIAL INSPECTION****

Inspection Category: CHANNEL CROSS SECTIONS

[92C] Designated Frequency: 120

Inspection Responsibility:

Inspection Date: 7/23/2014

**Calculated Frequency:

NBI: NO

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.

Special Inspection Comments

Inspector

DANIEL R VALLEY
JAMES B.W. CARR (NTLQ)

Team Leader

Organization

SAINT LOUIS COUNTY
SAINT LOUIS COUNTY

****OTHER SPECIAL INSPECTIONS****

Category

Frequency

Calculated Frequency**

Date

Inspection Responsibility

NBI

** If designated interval is exceeded, then a comment providing justification must be added. Exceeding the interval by more than one month requires Bridge Division approval.



Missouri Department of Transportation
Bridge Inventory and Inspection System
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9:59:17am

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Bridge : 096B106

Federal ID : 15529

****GENERAL COMMENTS AND CONDITION RATINGS****

General Comments :

(LIVINR1, 05/14/2008)--A SINGLE SPAN WIDE FLANGE STEEL I-BEAM STRUCTURE WITH NON-INTEGRAL REINFORCED CONCRETE END BENT ON CONCRETE PILING.

[Item 58]--Deck Condition Rating:

5-FAIR CONDITION

Rating Date: 05/14/2008

Deck Rating Comments

(MOBSLCO, 06/07/2018)--NOTICEABLE BUMP ON EAST SIDE WITH SOME CRACKING. PATCHES HOLDING ON WEST SIDE.

UNDERSIDE: ABRADING OF CONCRETE TYPICAL. SOME EXPOSED REBAR ON BOTH OVERHANGS. DIAGONAL CRACK WITH EFFLORESCENCE IN NW CORNER. A FEW AREAS OF TRANSVERSE CRACKING WITH EFFLORESCENCE IN FIRST INTERIOR BAYS. RUST SPOTS THROUGHOUT.

[Item 59]--Superstructure Condition Rating:

5-FAIR CONDITION

Rating Date: 05/12/2016

Superstructure Rating Comments

(CARRJ3, 04/23/2012)--BEAMS-LIGHT TO MODERATE RUST ON FLANGES OF ALL GIRDERS. MINOR RUST TO DIAPHRAGMS. LIGHT PITTING WITH RUST AT NUMEROUS LOCATIONS. BEARINGS- LIGHT TO MODERATE RUST AT ALL BEARINGS WITH PACK RUST PRESENT. SECTION LOSS TO BEARING PLATES.

[Item 60]--Substructure Condition Rating:

5-FAIR CONDITION

Rating Date: 03/31/2014

Compass Direction:

Substructure Rating Comments

(MOBSLCO, 08/06/2018)--HORIZONTAL CRACKS IN WEST ABUTMENT UNDER CENTER BEAM AND NORTH BEAM AND ALSO SECOND BEAM FROM NORTH.
HORIZONTAL CRACKS UNDER BEAMS ON EAST ABUTMENT; VERTICAL AND DIAGONAL CRACKS SPALLING AT SW CORNER BACKWALL. TRANSVERSE CRACK ALONG ENTIRE EAST ABUTMENT APPROXIMATELY 3 IN. UNDER BEARINGS. NE CORNER OF WING WALL CRACKED UNDER FENCE POST.

[Item 61]--Channel Condition Rating:

6-WIDESPREAD MINOR DAMAGE

Rating Date: 05/05/2010

Rating Comments

(LIVINR1, 05/05/2010)--GROUTED SLOPE REVETMENT SOMEWHAT UNDERMINED. CHANNEL FLOW CENTERED UNDER BRIDGE. ALIGNMENT GOOD. MINOR DEBRIS PRESENT.

[Item 62]--Culvert Condition Rating:

N-NOT APPLICABLE

Rating Date: 03/01/2002

Rating Comments

County = ST. LOUIS



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August 20, 2018
9:59:17am

County : ST. LOUIS

District : SL

Class : NONSTATBR

Bridge : 096B106

Federal ID : 15529

****APPRAISAL RATINGS****

[Item 36A]--Bridge Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 05/08/2006

Rating Comments

[Item 36B]--Transition Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 05/08/2006

Rating Comments

[Item 36C]--Approach Railing Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 05/08/2006

Rating Comments

[Item 36D]--Rail End Treatment Appraisal:

DOESNT MEET CURRNT STND-0

Rating Date: 05/08/2006

Rating Comments

[Item 71]--Waterway Adequacy:

DECK/APPRCH OVERTOP SLIGT

Rating Date: 03/01/2002

Rating Comments

[Item 72]--Approach Roadway Alignment:

8-VERYGOOD

Rating Date: 03/01/2002

Rating Comments

[Item 113]--Scour Assessment:

8-STABLE FOR CALCULATED

Rating Date: 3/1/2002

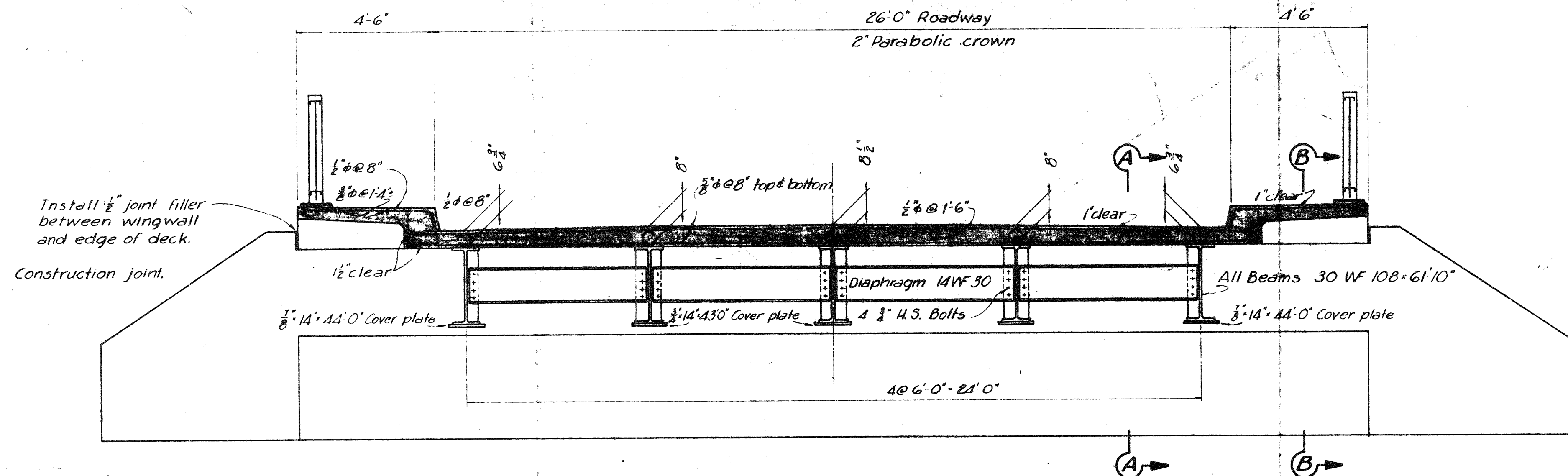
Type of Scour Evaluation:

Rating Comments

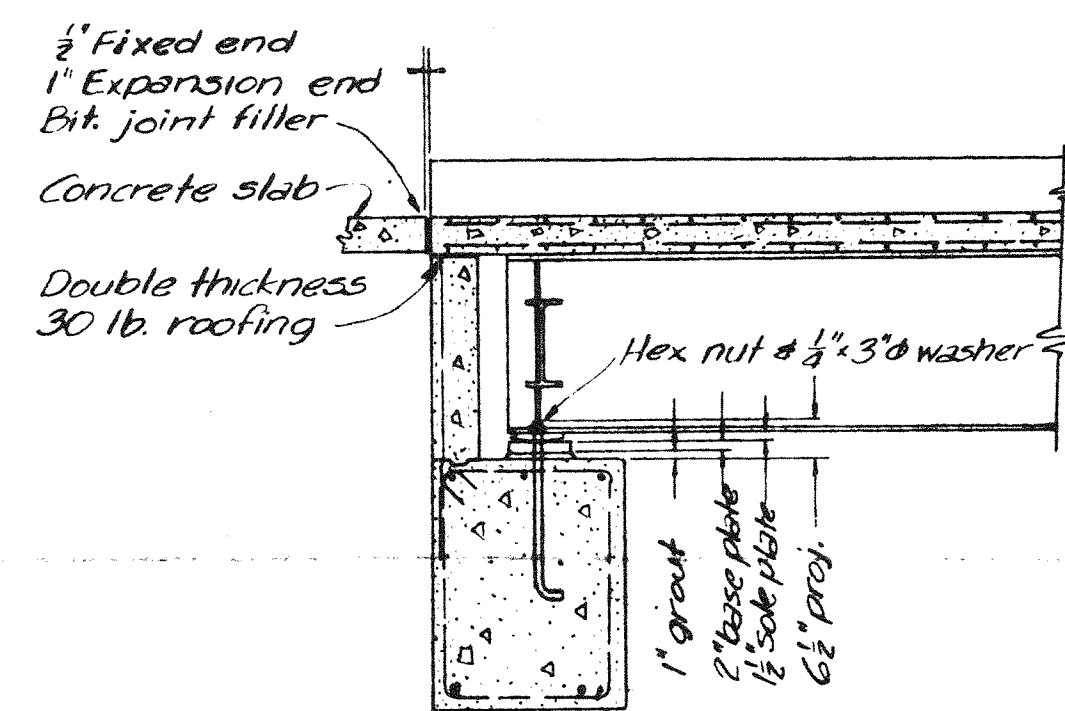
(LIVINR1, 05/14/2008)--NO SCOUR.

Work Comments :

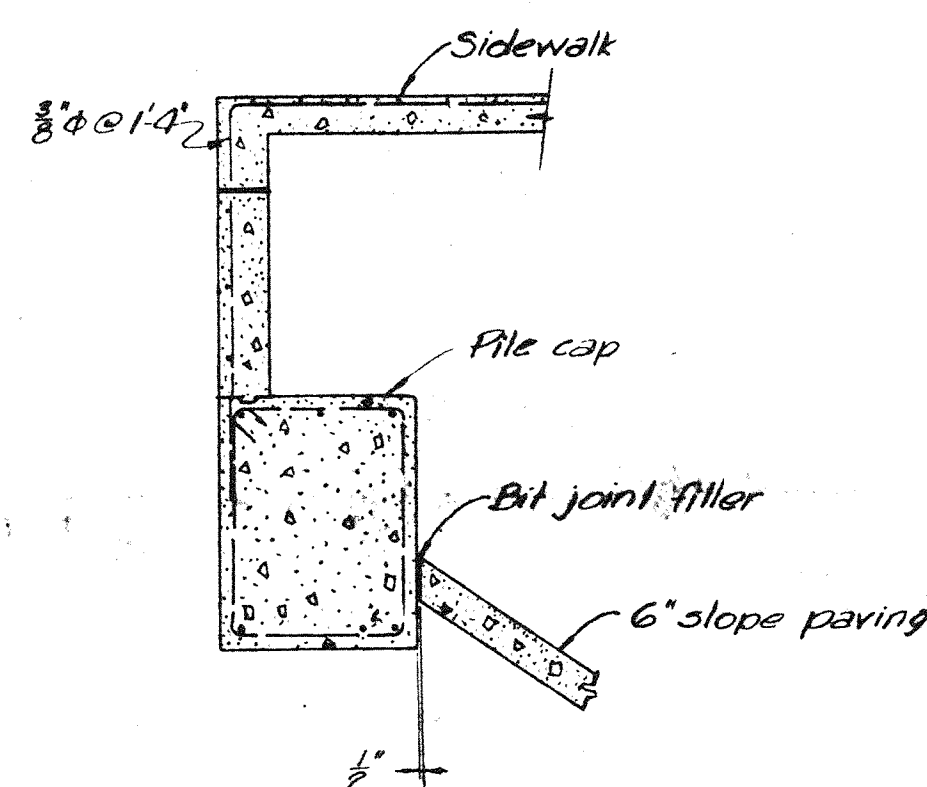
County = ST. LOUIS



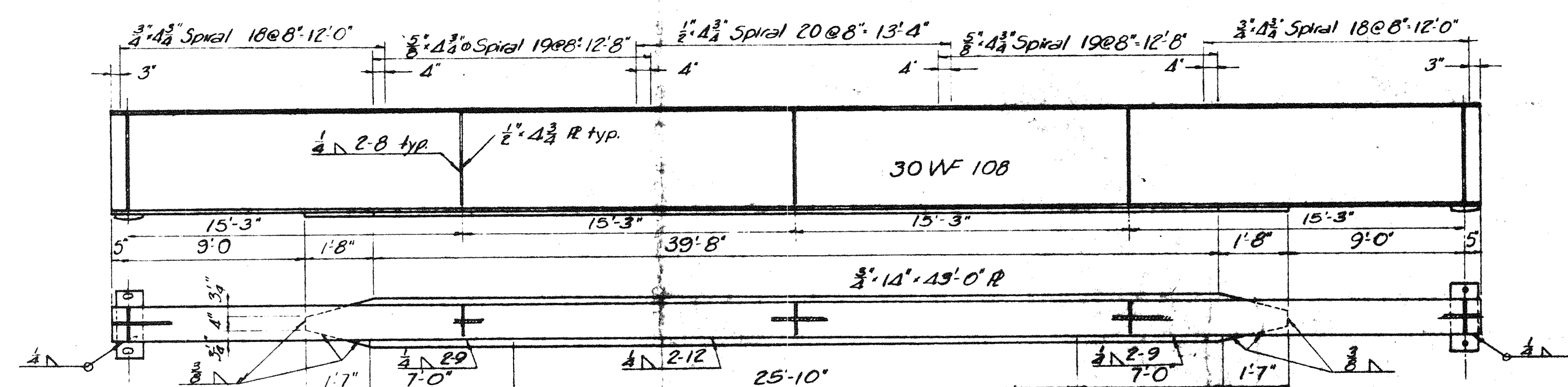
TYPICAL TRANSVERSE SECTION
Scale 3/4" = 1'-0"



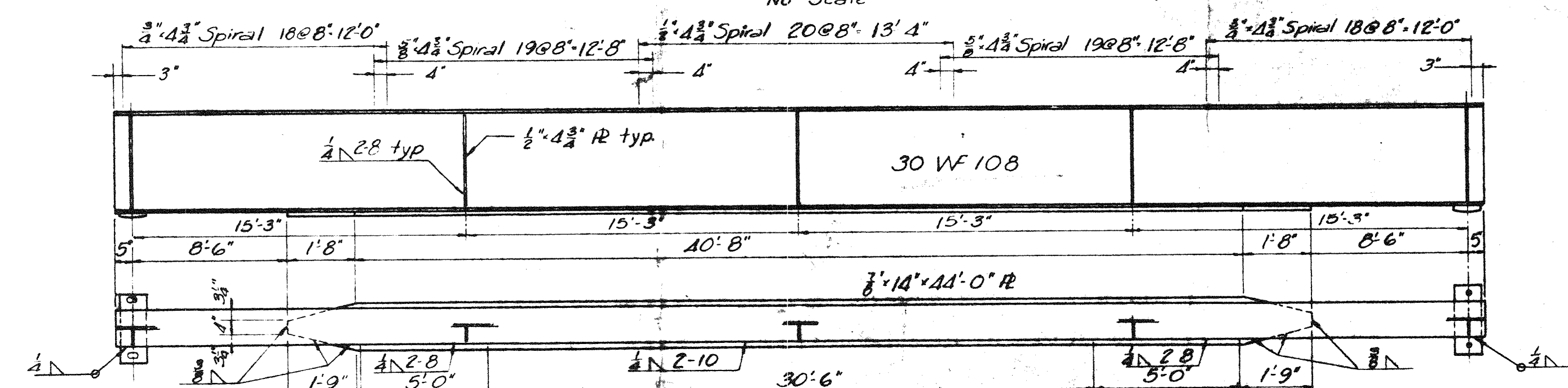
SECTION AA



SECTION BB

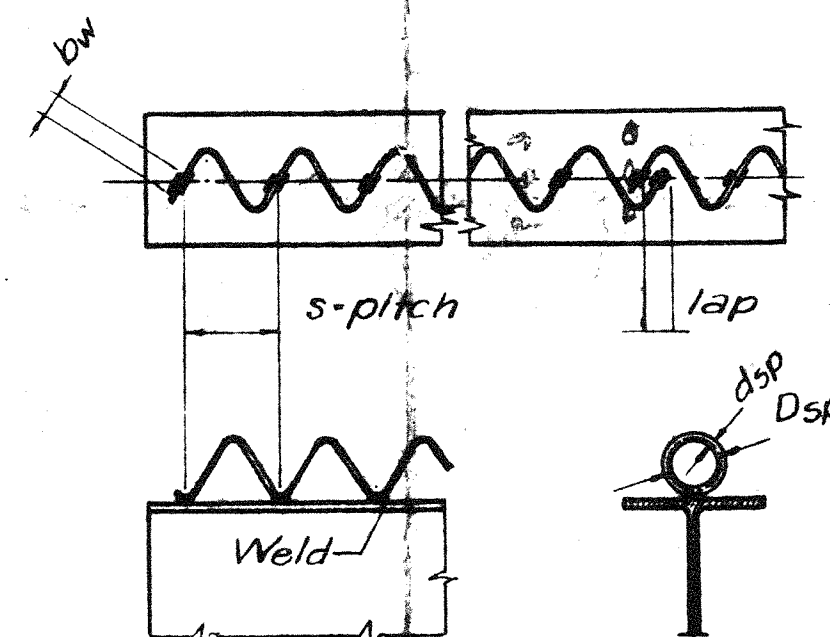


DETAIL OF INTERIOR BEAMS
No Scale



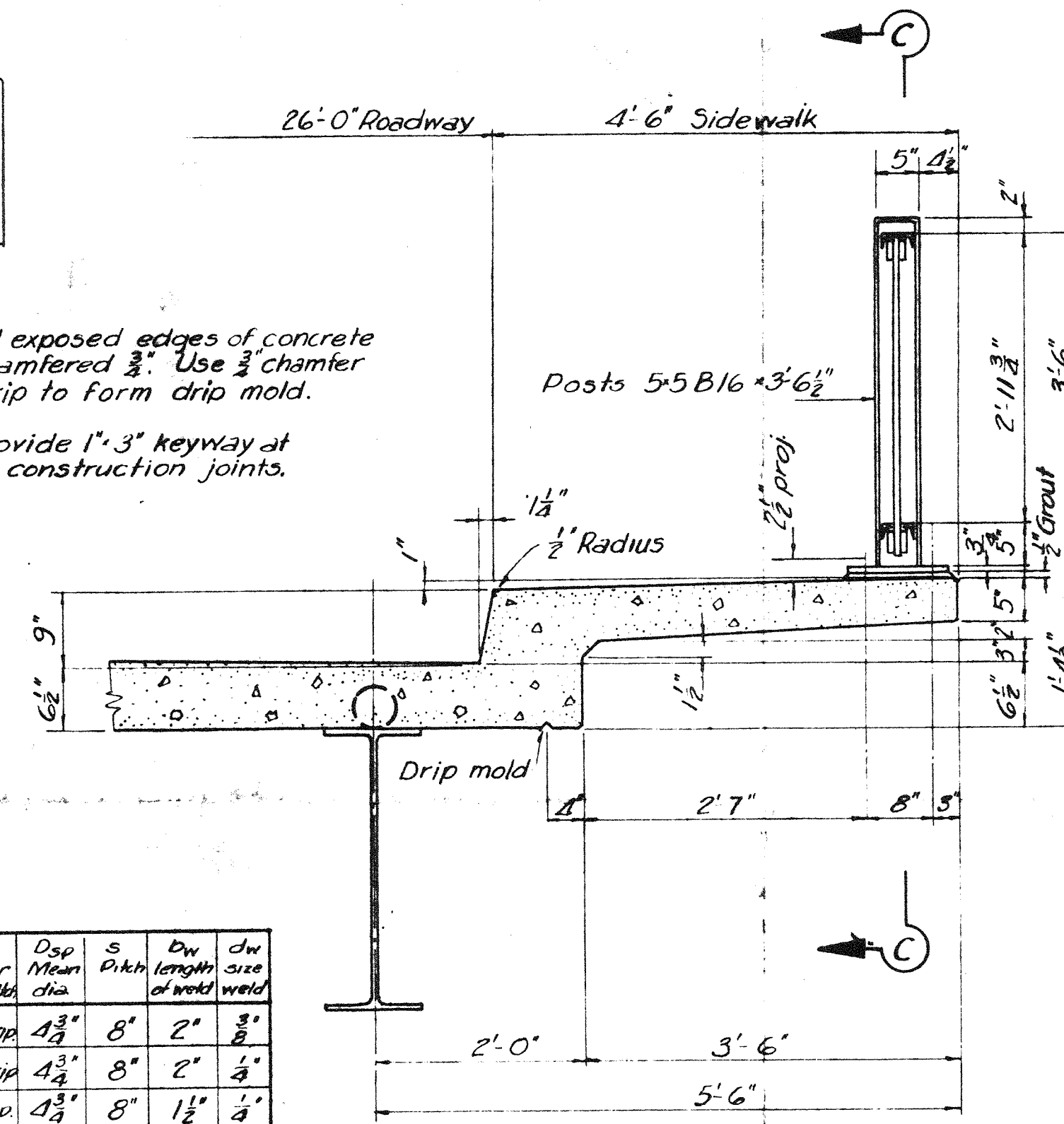
DETAIL OF EXTERIOR BEAMS
No Scale

All exposed edges of concrete chamfered 3/8". Use 3/8" chamfer strip to form drip mold.
Provide 1" x 3" keyway at all construction joints.

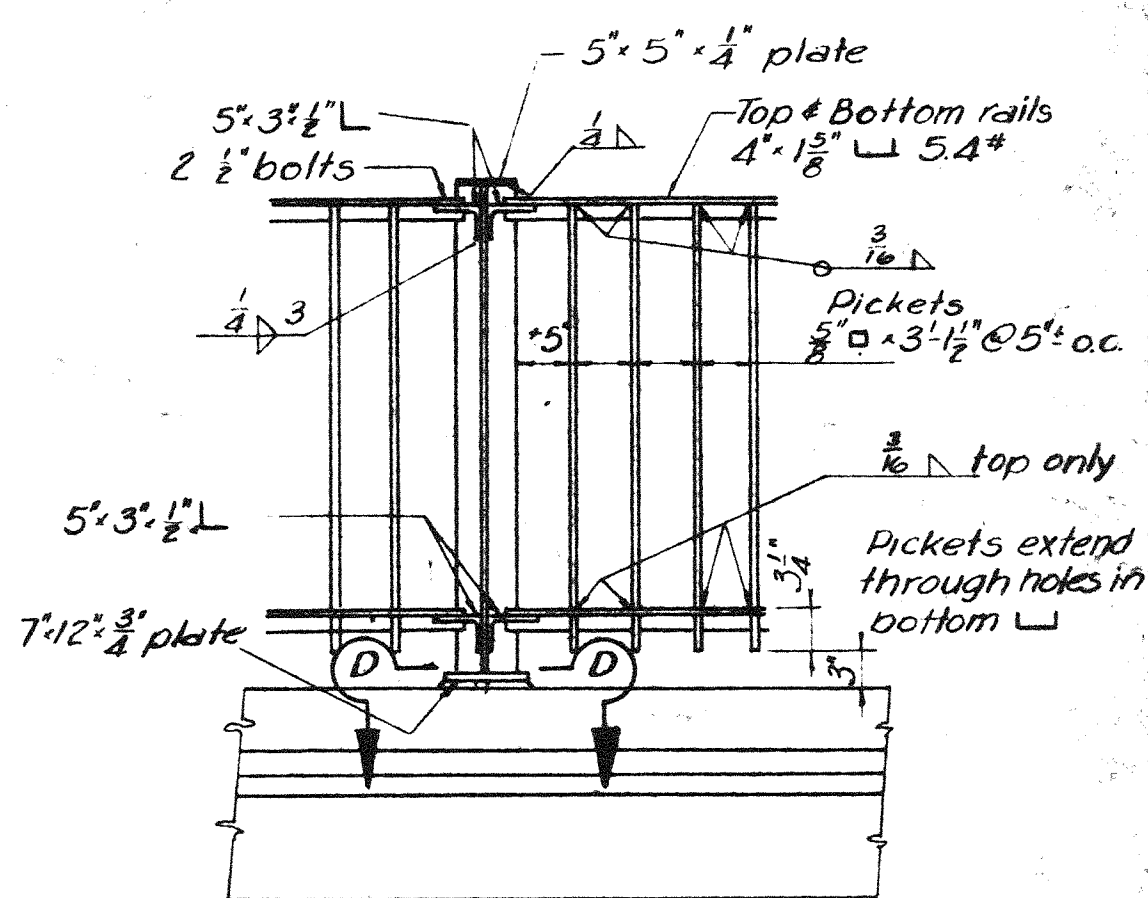


SPIRAL DETAILS
No Scale

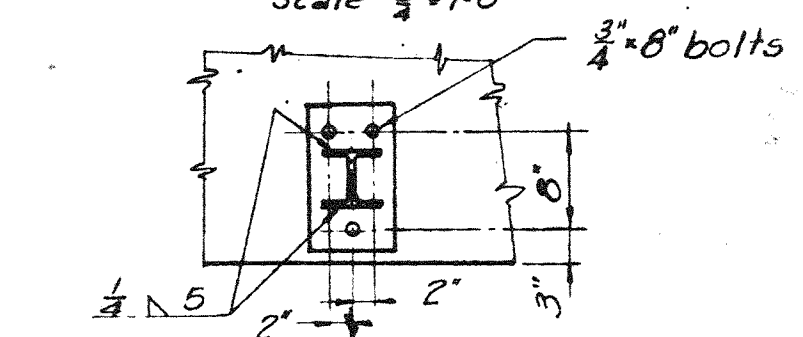
dsp	Fw	Dsp	S	Dw	dw
Bar	Shear	Mean	Pitch	length	size
dia	per pile	dia	"	of weld	
3"	15.9 kips	4 3/4"	8"	2"	3/8"
5"	11.0 kips	4 3/4"	8"	2"	3/8"
1 1/2"	7.1 kips	4 3/4"	8"	1 1/2"	3/8"



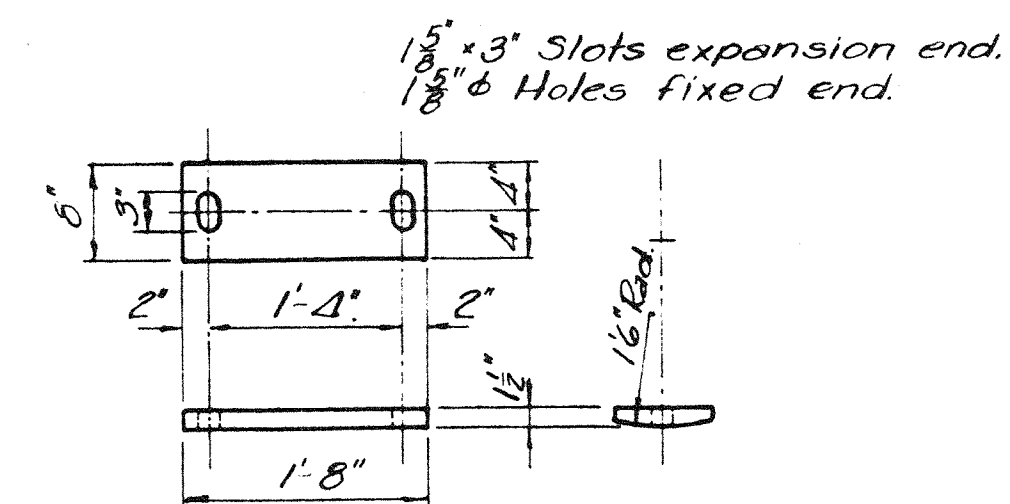
SIDEWALK DETAIL
Scale 3/4" = 1'-0"



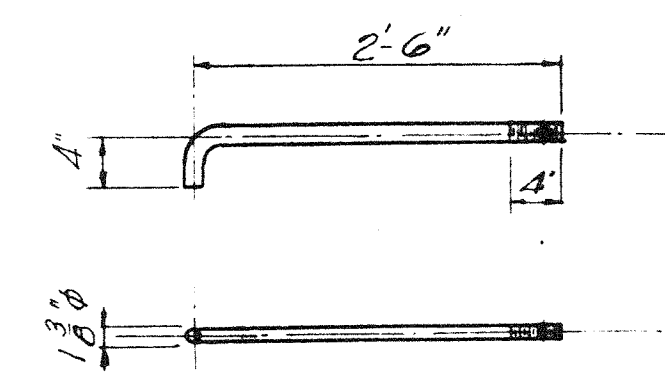
SECTION CC
Scale 3/4" = 1'-0"



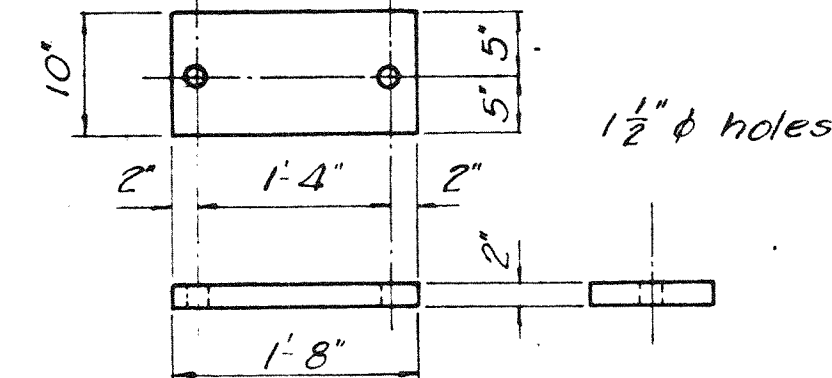
SECTION DD
SHOWING ANCHOR BOLTS
AND HANDRAIL BASE PLATE
Scale 3/4" = 1'-0"



SOLE PLATE
Scale 3/4" = 1'-0"



MAIN ANCHOR BOLTS
Scale 3/4" = 1'-0"
Each bolt to be supplied with 3" x 3" washer and std. hex nut.

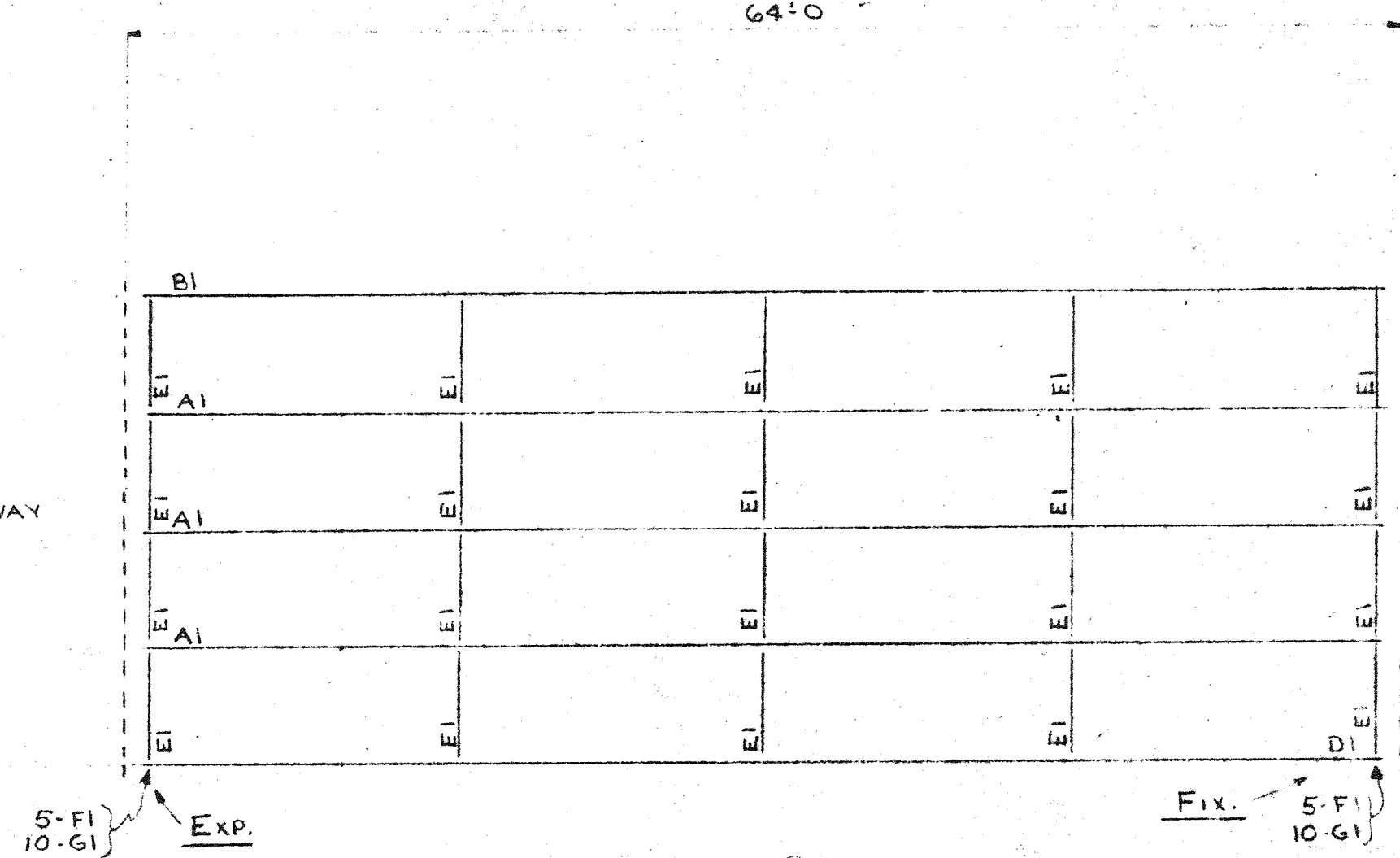


BEARING PLATE
Scale 3/4" = 1'-0"

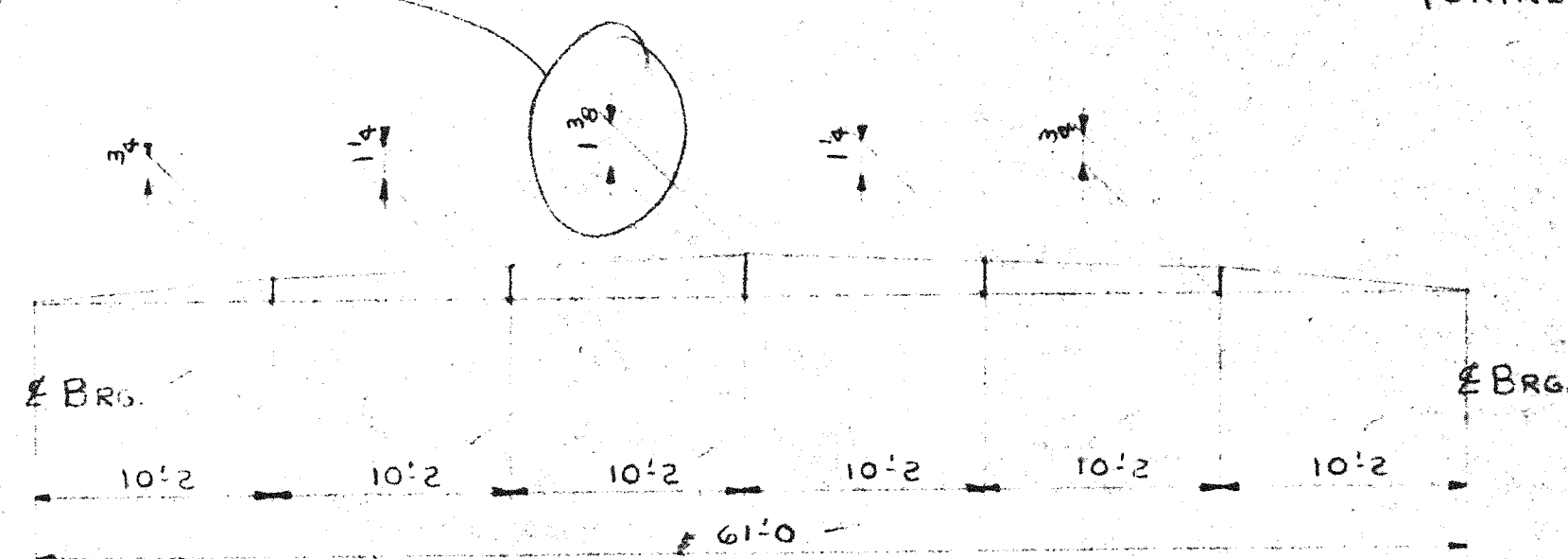


6'0" 6'0" 6'0" 6'0" 6'0" 6'0"

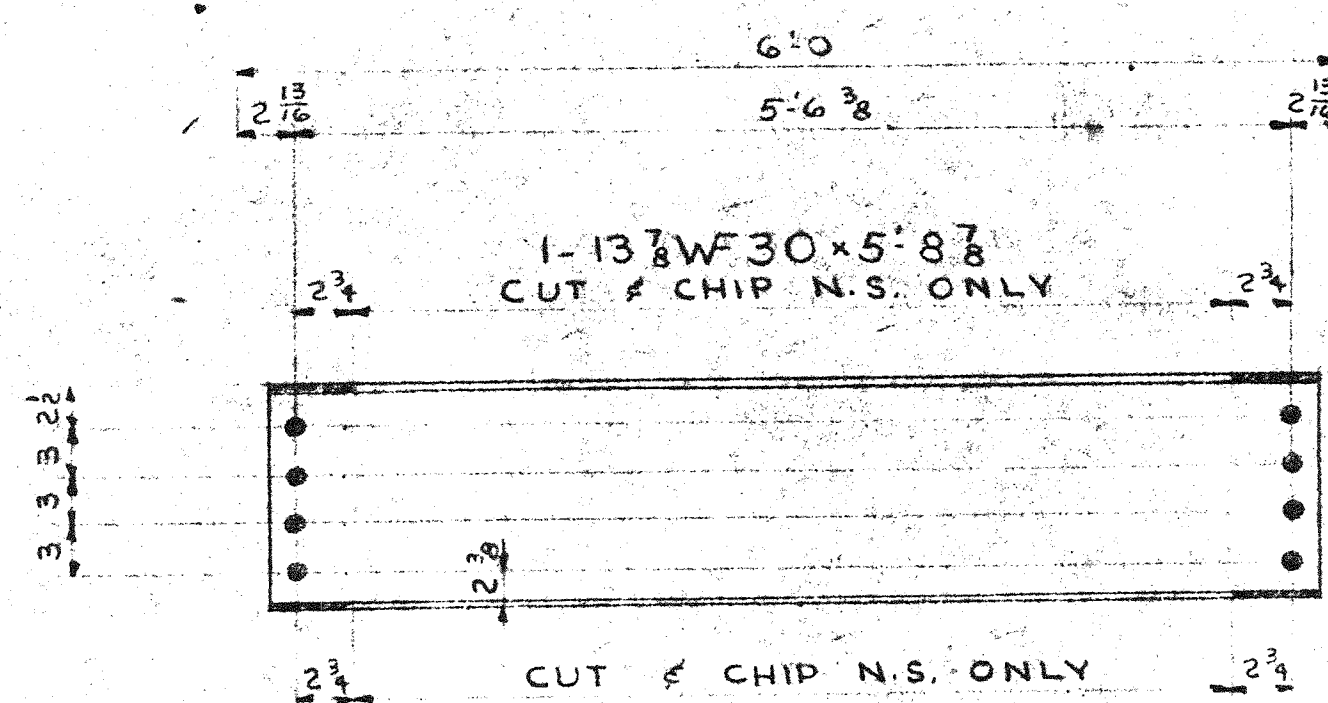
ROADWAY



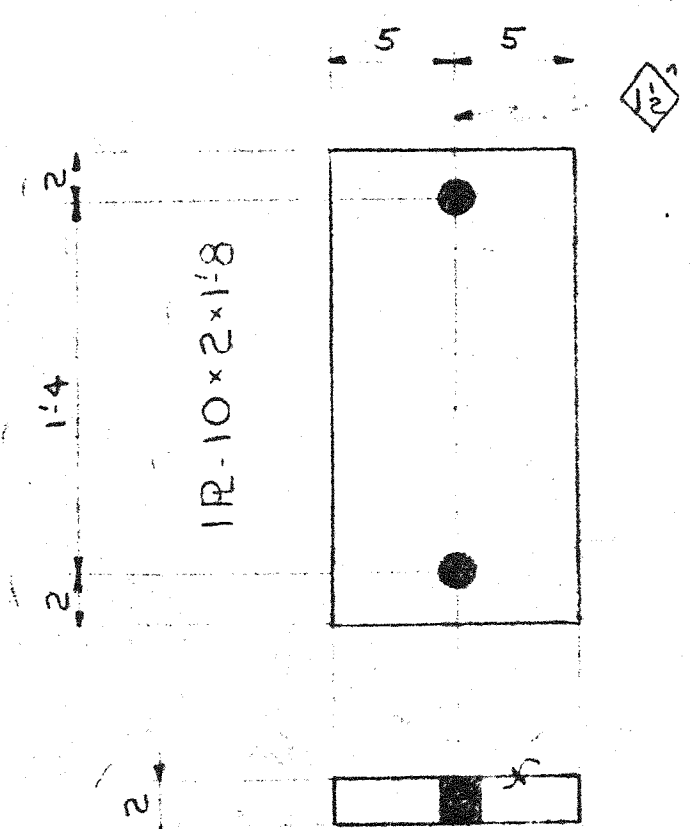
ERECTION PLAN



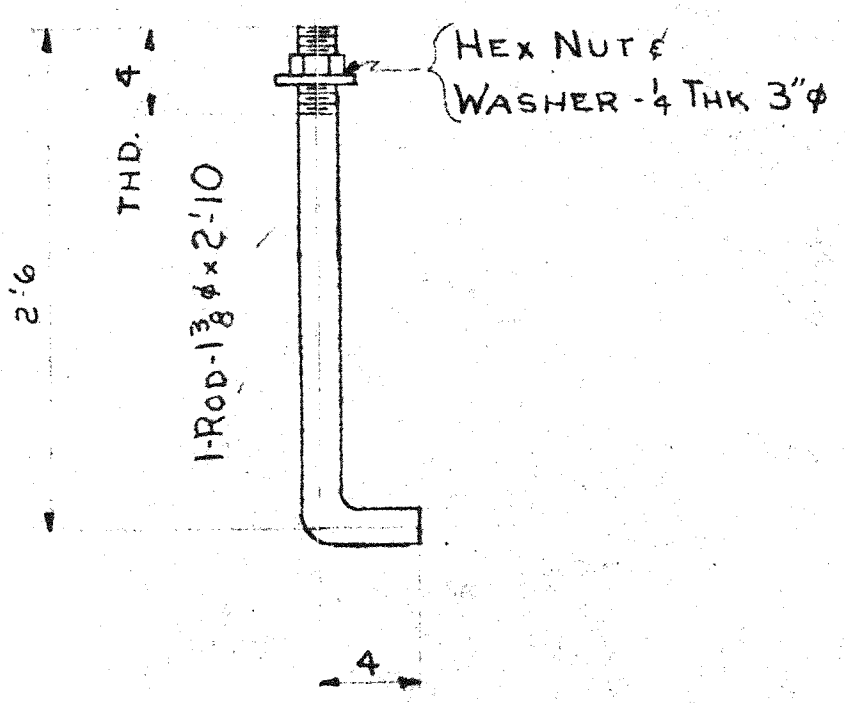
CAMBER DIAGRAM FOR BEAMS A1/B1



20-DIAPHRAGMS-E1



10-BEARING PLATES-F1



20-ANCHORS-G1

NO PAINT

el fl 1/4" x 2'8"

1-BAR 4 3/4 x 1/2 x 2'4 3/8 el (GRIND TO BEAR)

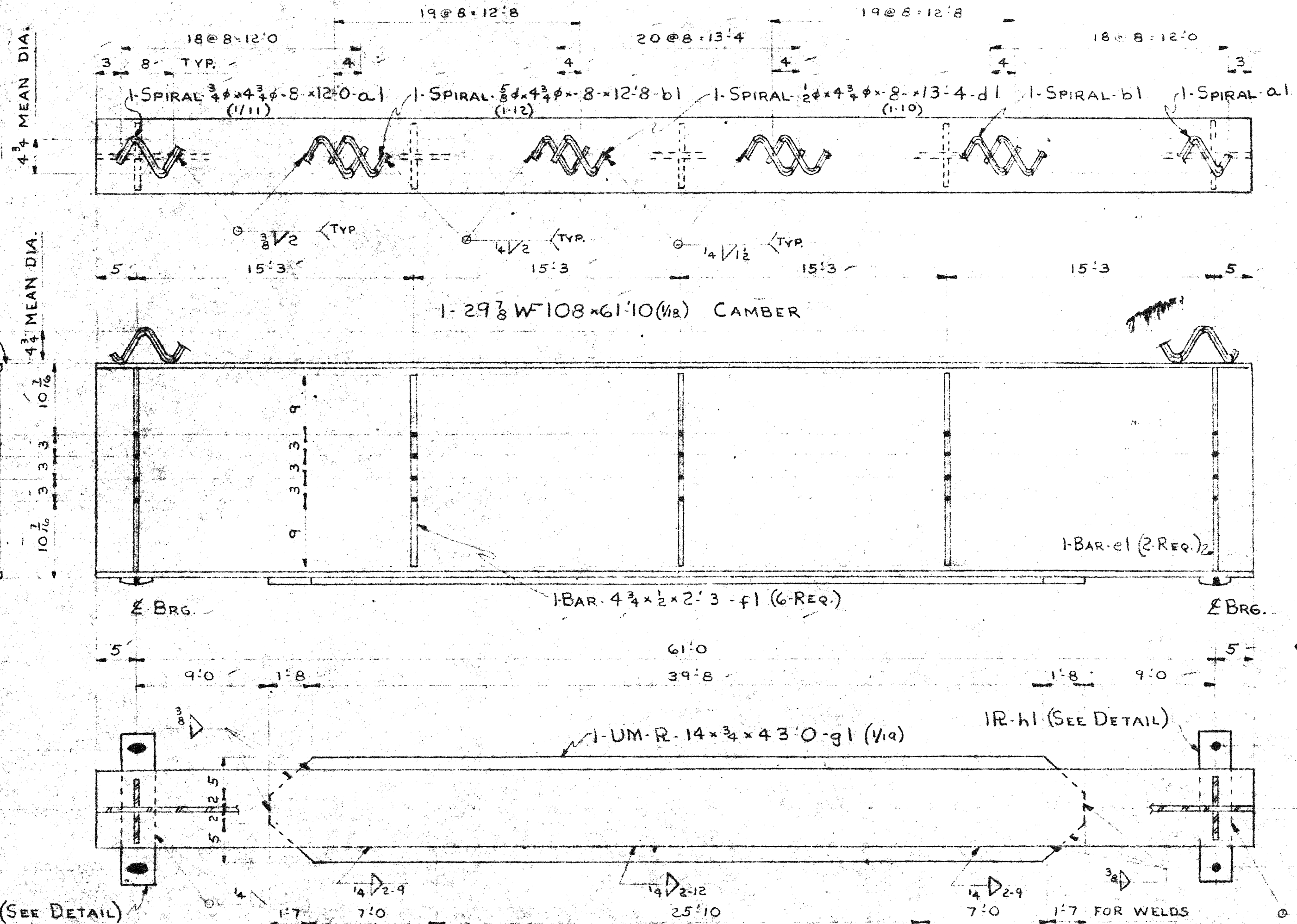
BRG.

1R-K1 (SEE DETAIL)

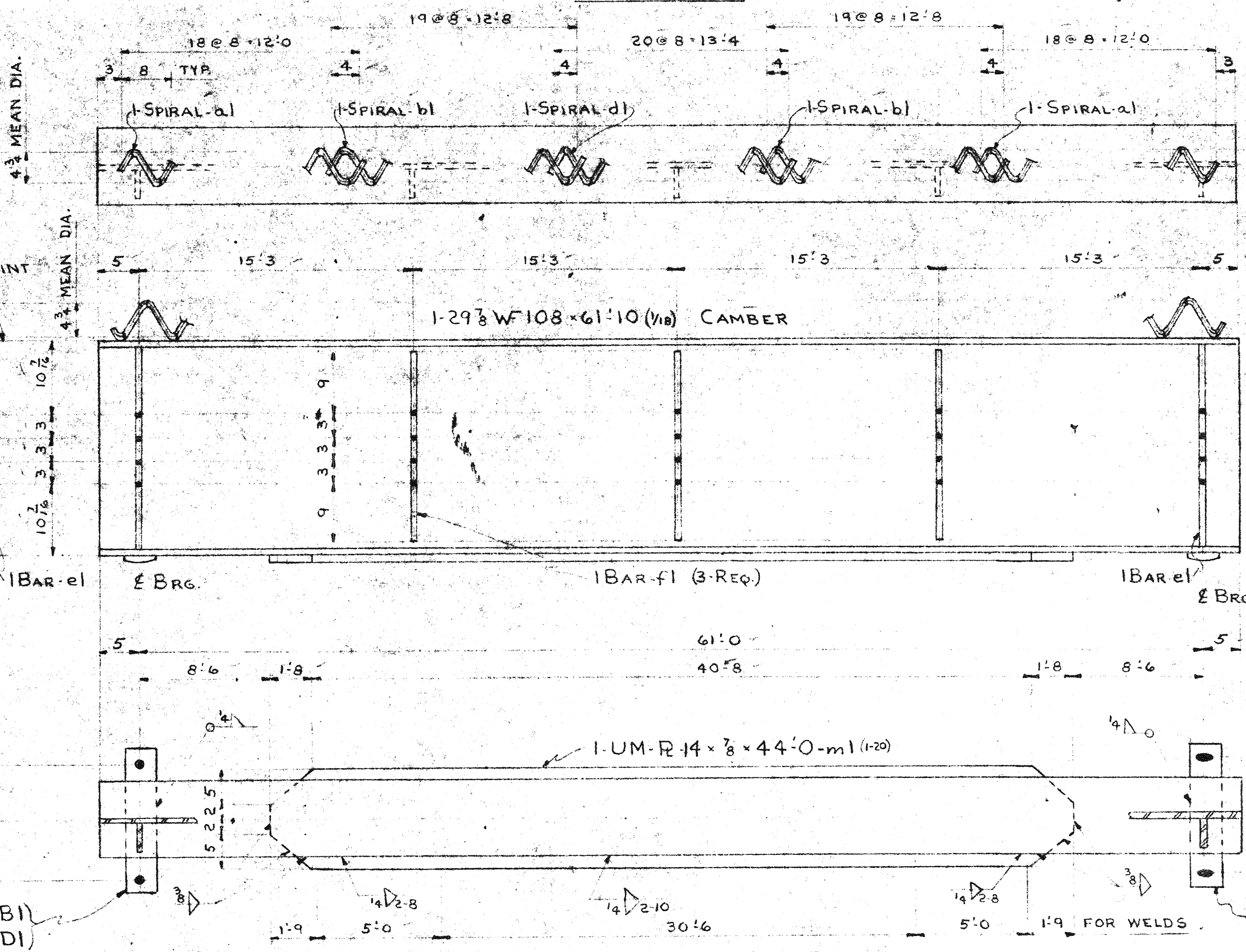
NO PAINT

1-BAR-el

1R-K1 FOR B1
1R-K1 FOR D1

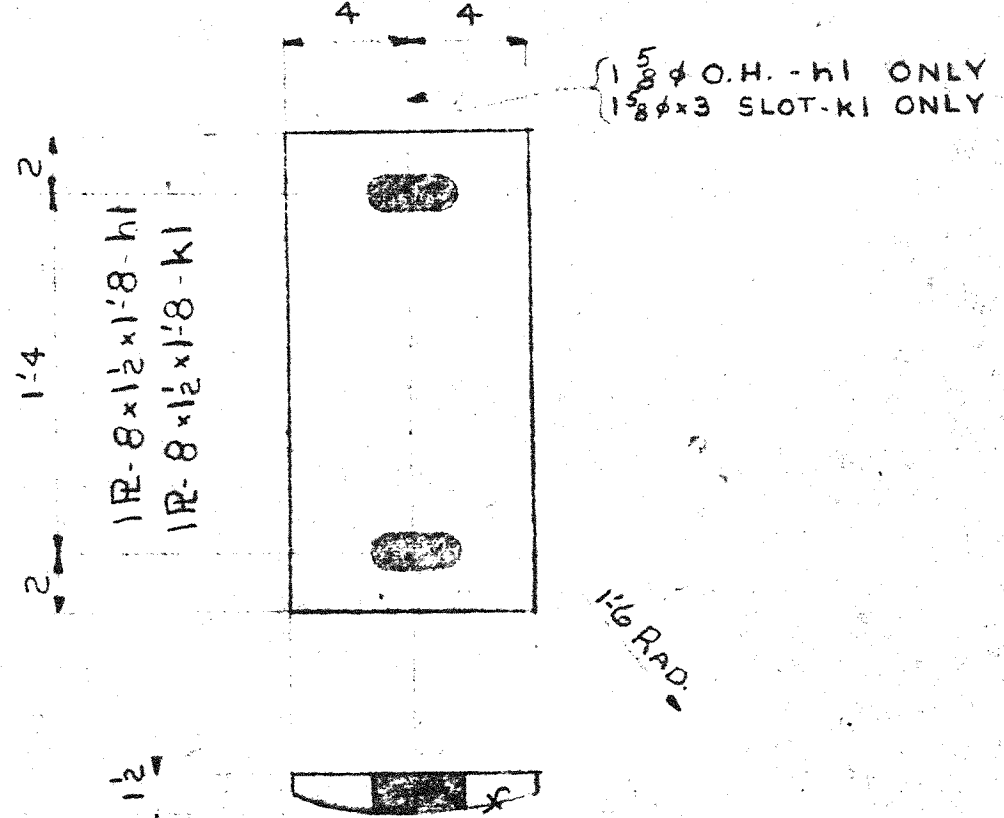


3-BEAMS-A1



ONE-BEAM-B1

ONE-BEAM-D1



DETAIL
FOR R-h1 (FIX END) / K1 (EXP. END)

FIELD BOLT LIST
160 x 4 - 3/4 x 2 1/4 H.T. BOLTS Hex Hd. & Nut (E1 to BEAM)
320 x 8 CARBURIZED WASHERS FOR 3/4 H.T. BOLTS

SHOP NOTE
SQUARE FLANGES 90° BEARING

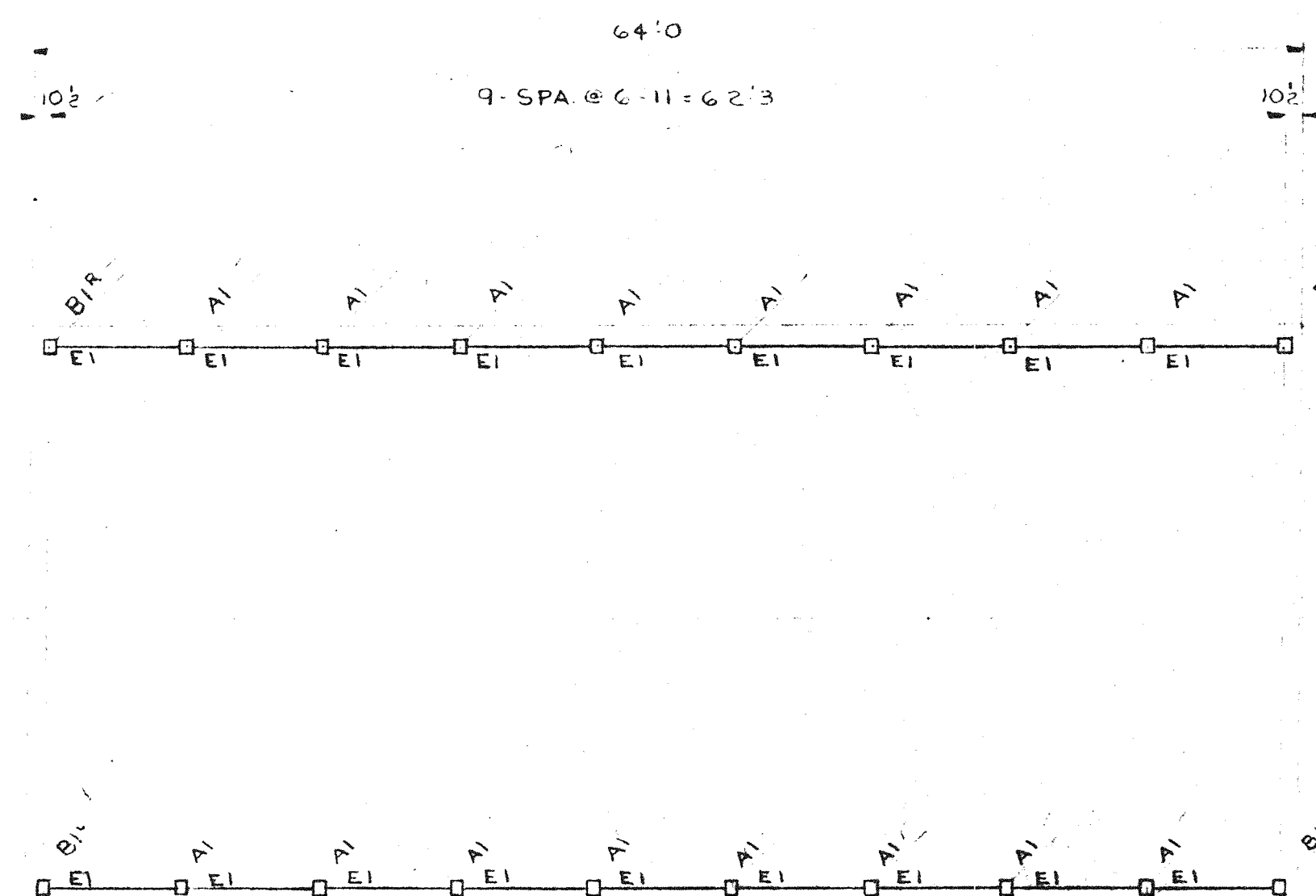
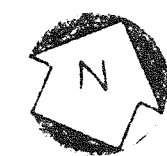
REF. DWG.
PITZMAN'S CO. OF SURVEYORS &
ENGINEERS - SHEET 1 & 2

GENERAL NOTE
Rivets 3/4" except as noted.
O. H. 1/4" except as noted.
End Distance 1/4" unless noted.
Shop Paint 1/2 MAROON
Contact Surfaces NO PAINT
Shop Inspection By
Field Conn's H.T. BOLTS
Field Paint OTHERS
Erected by
Revisions

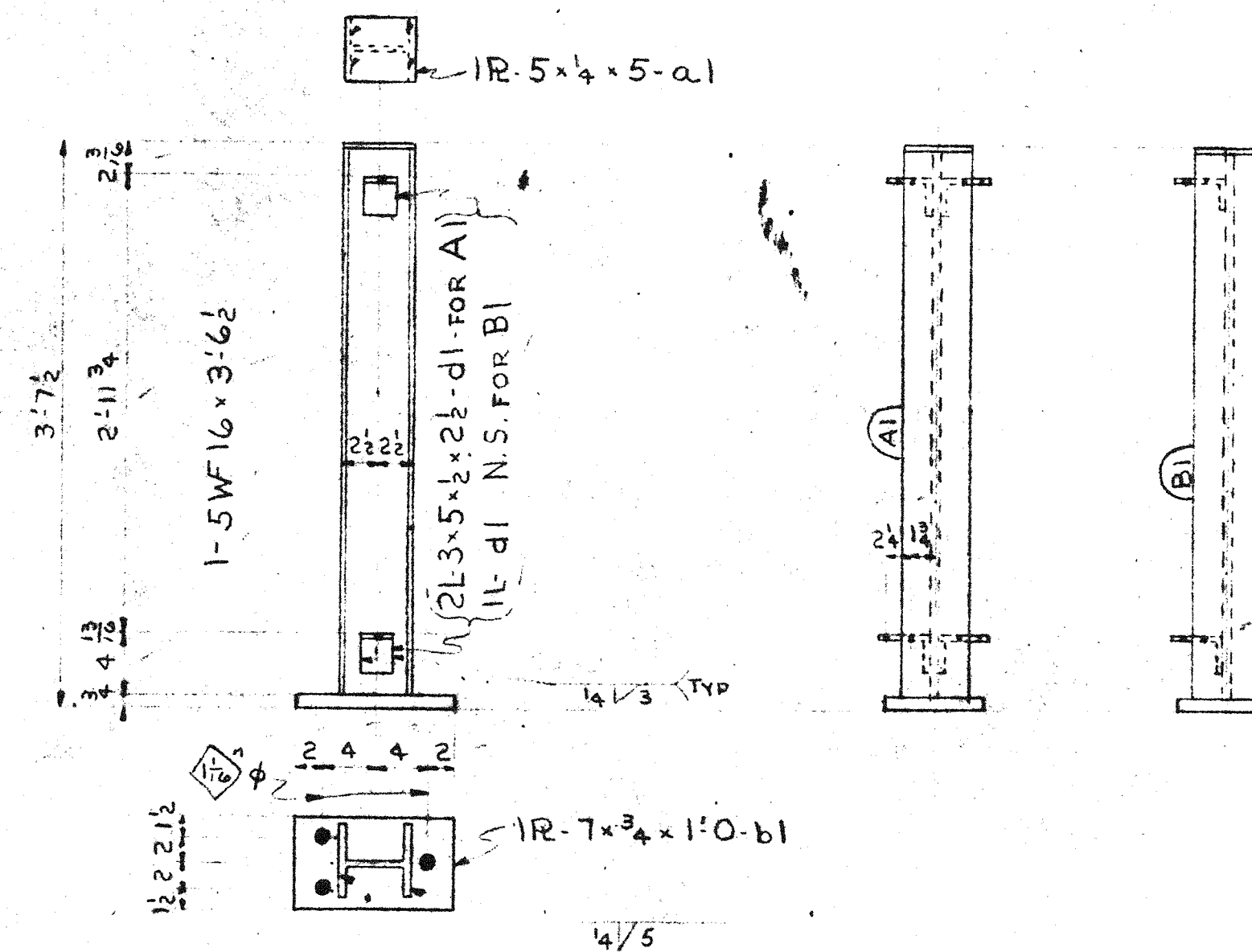
STUPP BROS BRIDGE & IRON CO.
ST. LOUIS, MO.
Purchaser's No. Shop No. 14301
BRIDGE OVER BLACK JACK CREEK
VORHOF DRIVE, HATHAWAY MANOR
ST. LOUIS COUNTY MO. 641106
Drawn By J.G.L. Date 12-6-55 Ch'kd By J.B. Date 12-3-55

Sheet No.	1
Total Sheets	2

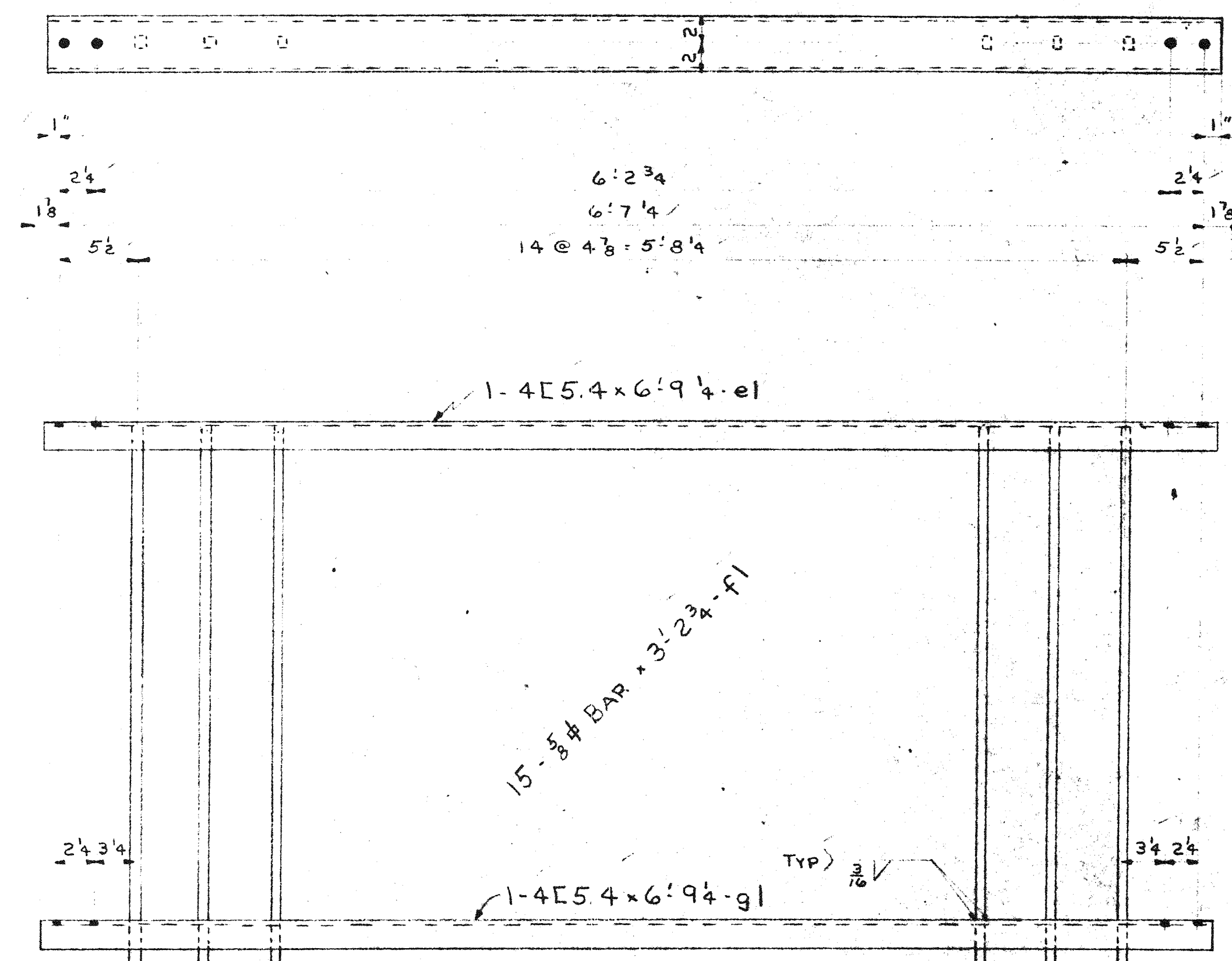
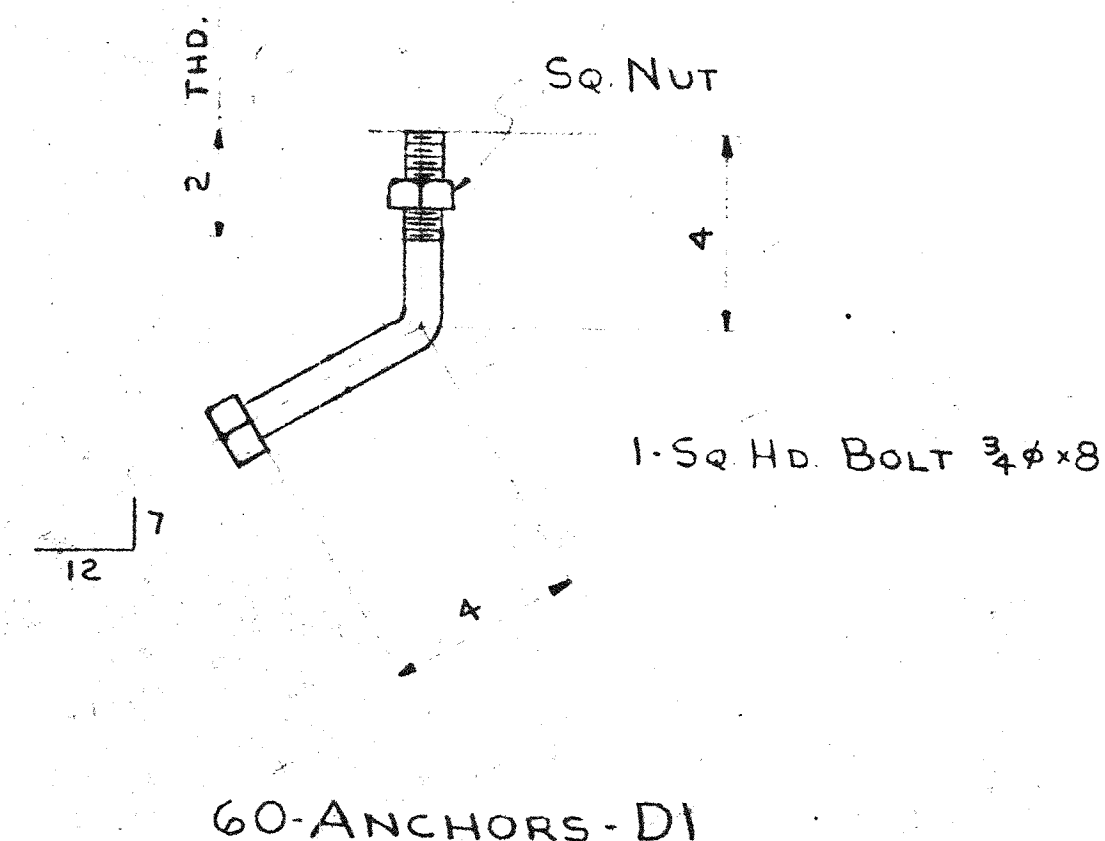
a b c d e f g h i j k l m n o p q r s t u v w x y z aa ab ac ad ae af ag ah ai aj ak al am an ao ap at av aw ax ay az ba bb bc



PLAN OF BRIDGE RAIL



16 Posts - A1
4 do - B1



18-RAILS-E1

FIELD BOLT LIST
144+9 - MACH. BOLTS 1/2\"/>

VORHOF DRIVE
BRIDGE No. 106

S.O.

STUPP BROS. BRIDGE & IRON CO.
ST. LOUIS, MO.

PURCHASER'S NO.	SHOP NO. 14301
BOLTS 1/2	UNLESS NOTED
RIVETS 1/2	UNLESS NOTED
HOLES 9/16	UNLESS NOTED
EDGE DISTANCE 1	SHOP INSPECTION
PAINT 1/2 MAROON	
REVISIONS	
TEEL INSURES STRENGTH AND SECURITY	SHEET NO. 2 TOTAL SHEETS 2