

APR 30 1985

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
ROS-50-19.33

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	State

1
6

ROSS COUNTY
ROS-50-19.33

DEC 7 1964
GROUND PHOTOGRAPH

BRIDGE OVER NORTH FORK OF PAINT CREEK
SCIOTO TOWNSHIP

ROSS COUNTY

STRUCTURE IMPROVEMENT - BRIDGE MAJOR REPAIR

CONVENTIONAL SIGNS

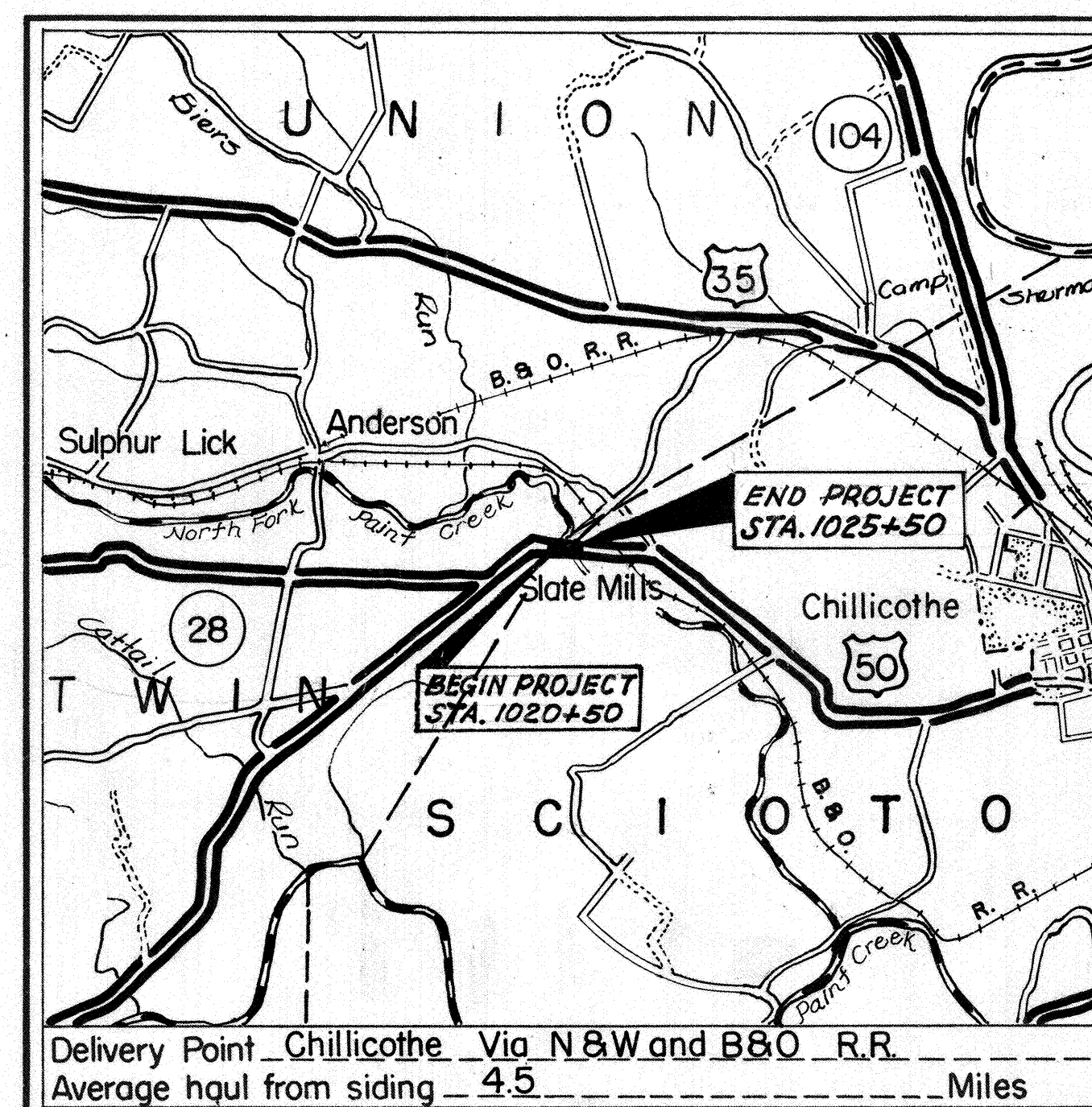
State Line	
County Line	
Township Line	
Section Line	
Center Line	
Corporation Line	
Limited Access and Right-of-Way	
Limited Access Only	LA
Right-of-Way Only	RW
Existing Right-of-Way	
Fence Line	X X X X X X X X X X
Guard Rail (existing)	o o o o o o o o o o
Guard Rail (proposed)	.
Steam Railroad	
Power Poles	P P P P P P P P P P
Telephone Poles	
Trees or Stumps (existing)	o o o o o o o o o o
Trees or Stumps (to be removed)	X X X X X X X X X X

INDEX OF SHEETS

Title Sheet	1
Plan & Profile	2
Structure Details	3-5
Notes & Estimated Quantities	6

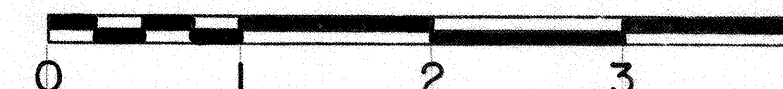
LINE DATA

Begin Project	Sta. 1020+50
End Project	Sta. 1025+50
Net Length of Project	500 Lin. Ft. or 0.095 Miles
Begin Work	Sta. 1020+00
End Work	Sta. 1025+50
Net Length of Work	550 Lin. Ft. or 0.104 Miles



LOCATION MAP

SCALE OF MILES



Portion to be improved
State Roads
Other Roads

SCALES

Structure Details - Scales Shown

1963 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications listed in the proposal shall govern this improvement.

The right of way for this improvement will be provided by the State of Ohio.

I hereby approve these plans and declare that the making of this improvement will not require the closing of the highway to traffic and that provisions for the maintenance and safety of traffic will be as set forth on these plans and estimates.

Approved Deputy Director
Date 2-19-63 Division Deputy Director

Approved Engineer of Bridges
Date 2-5-63 Engineer of Bridges

Approved Engineer of Location & Design
Date 3-5-63 Engineer of Location & Design

Approved Deputy Director of Planning & Programming
Date 4-18-63 Deputy Director of Planning & Programming

Approved Deputy Director of Design & Construction
Date 3-5-63 Deputy Director of Design & Construction

Approved Deputy Director of Right-of-Way
Date 3-6-63 Deputy Director of Right-of-Way

Approved First Assistant Director
Date 3-6-63 First Assistant Director

Approved Director of Highways
Date 4-8-63 Director of Highways

DEC 7 1964
GROUND PHOTOGRAPH

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

File No.	Ross County	ROS-50-19.33
Date of Letting		19
Contract No.		

Supplemental Prints of Standard Construction Drawings	
G-7.07	6-2-56
AS-1-54	7-5-62
I-15 N22A	8-17-60
L-3	4-1-50
T-35	1-2-56
L-3A	4-1-50
I-15 N21	11-15-60

Supplemental Specifications	
S-407	Rev. 12-21-62
S-101	7-12-62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
R.L.K	R.L.K.	R.L.K.	M.P.B		

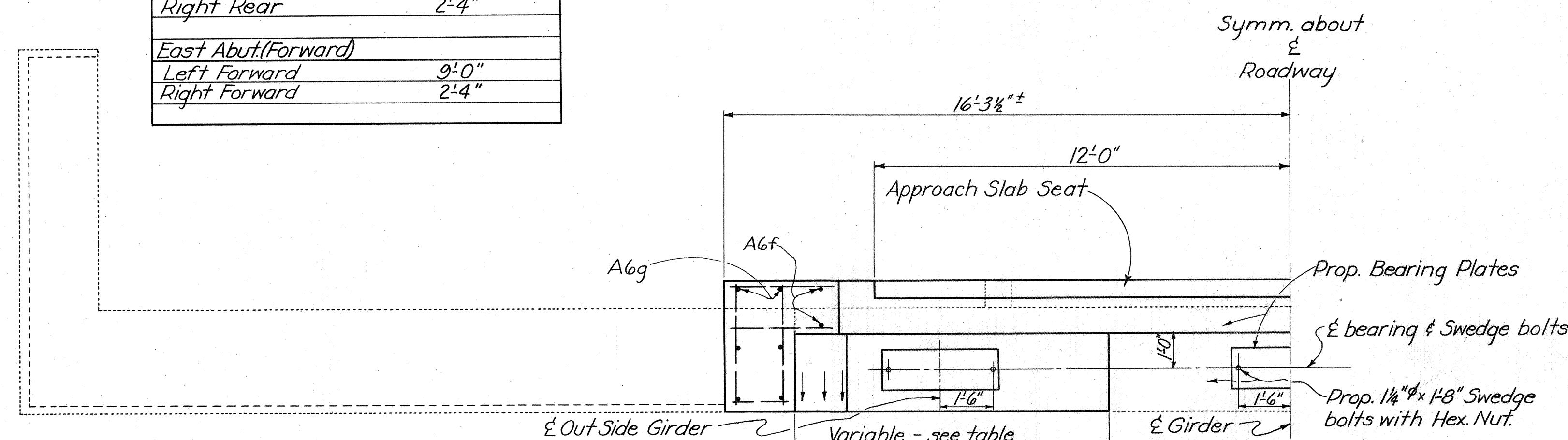
MICROFILMED
APR 30 1985

Girder Seat Removal & Replacement	
Location	Length
West Abut. (Rear)	
Left Rear	2'-6"
Right Rear	2'-4"
East Abut. (Forward)	
Left Forward	9'-0"
Right Forward	2'-4"

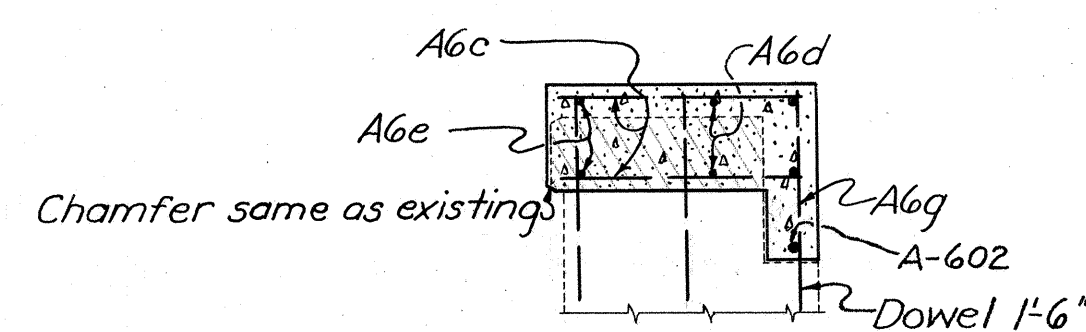
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

3
6

ROSS COUNTY
ROS-50-19.33

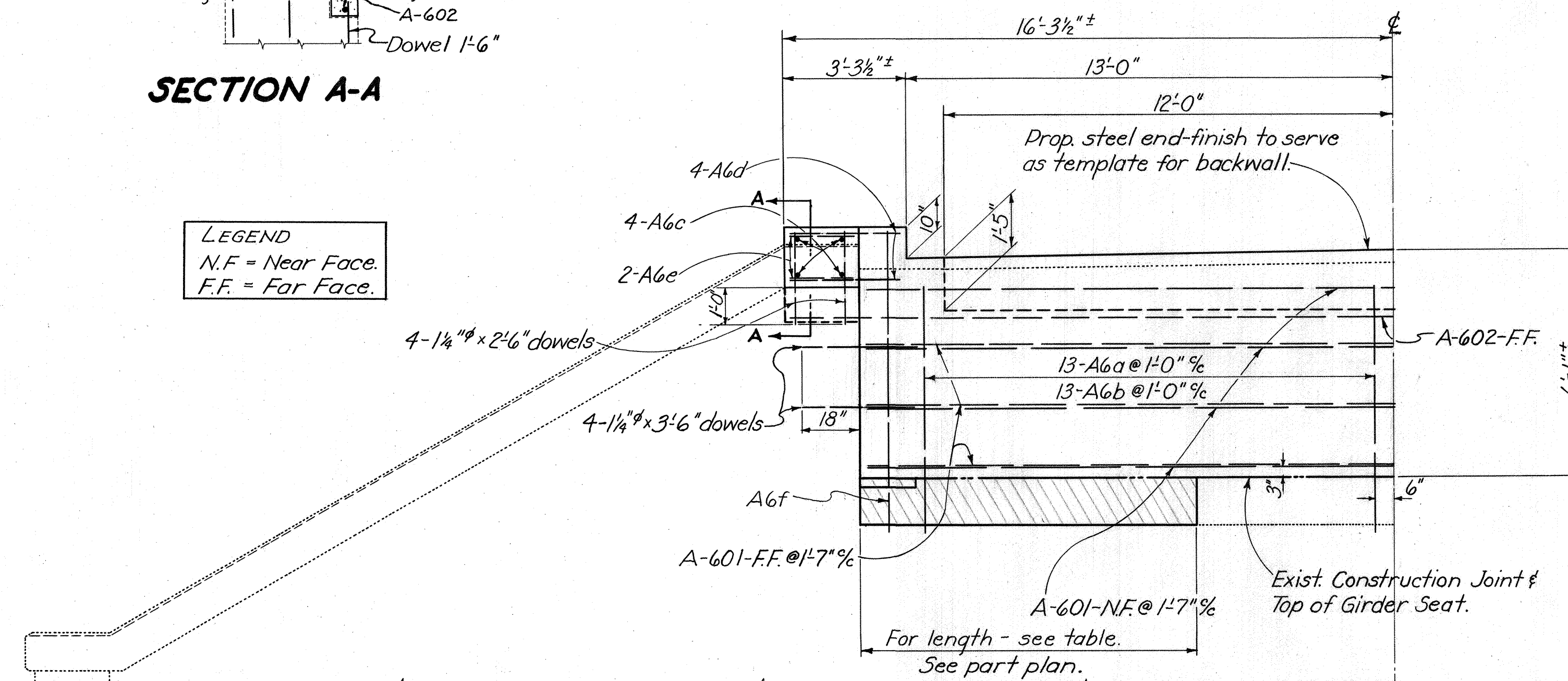


HALF PLAN OF ABUTMENT

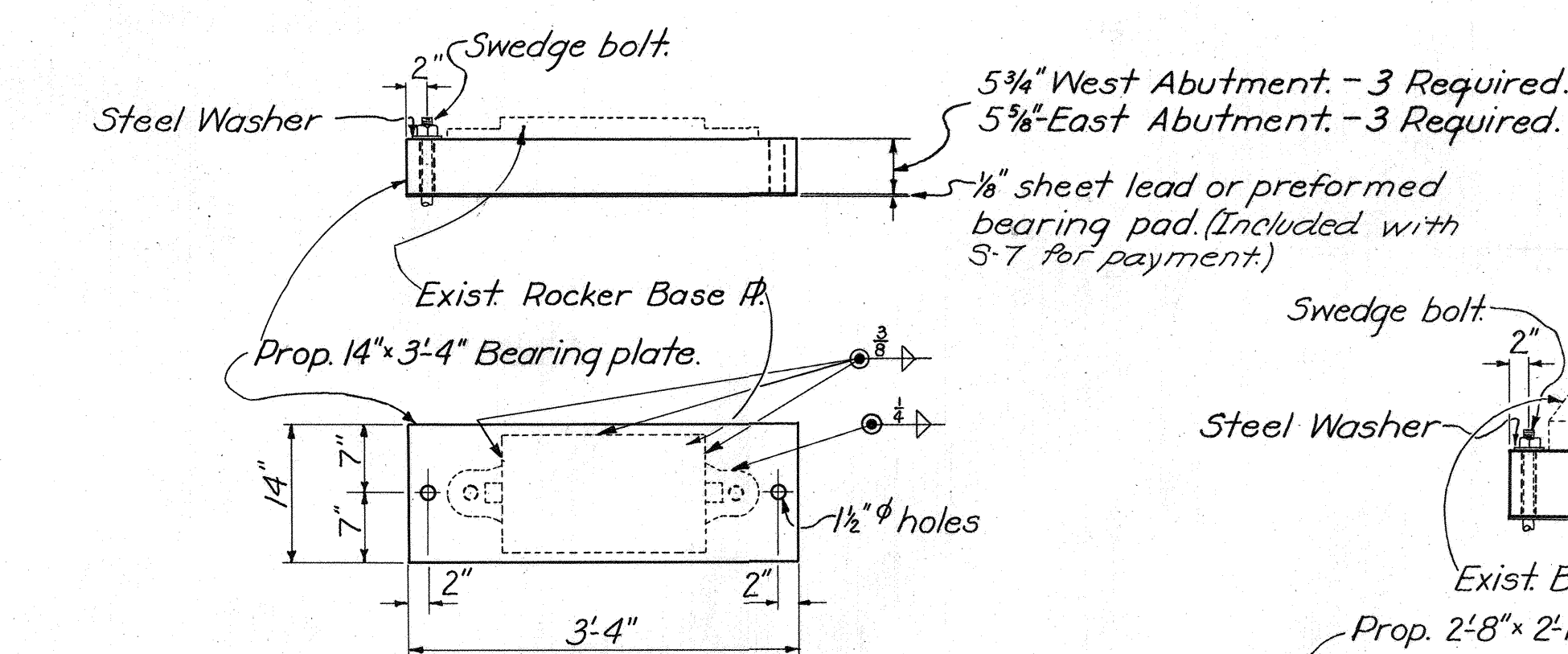


SECTION A-A

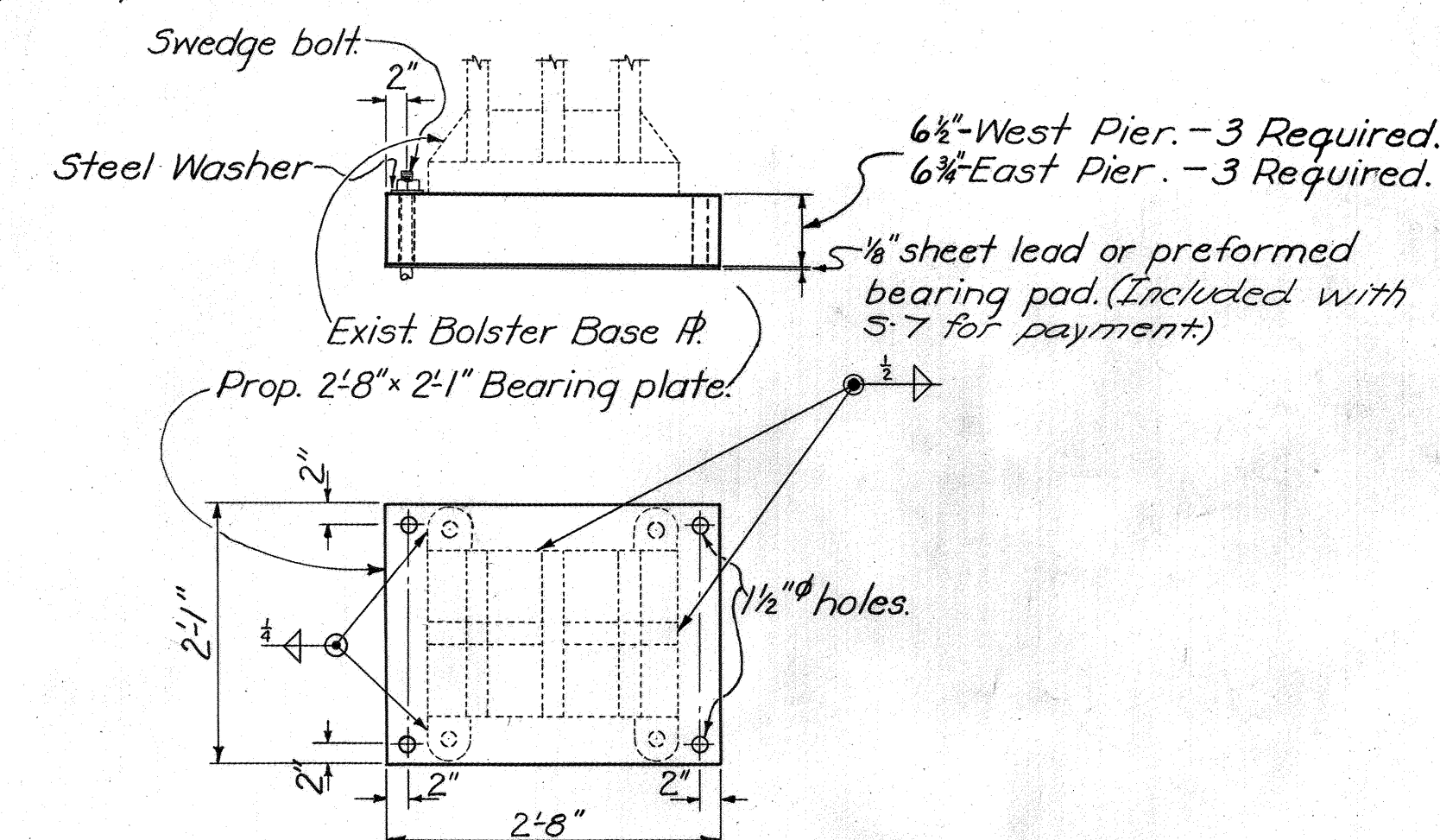
LEGEND
N.F. = Near Face.
F.F. = Far Face.



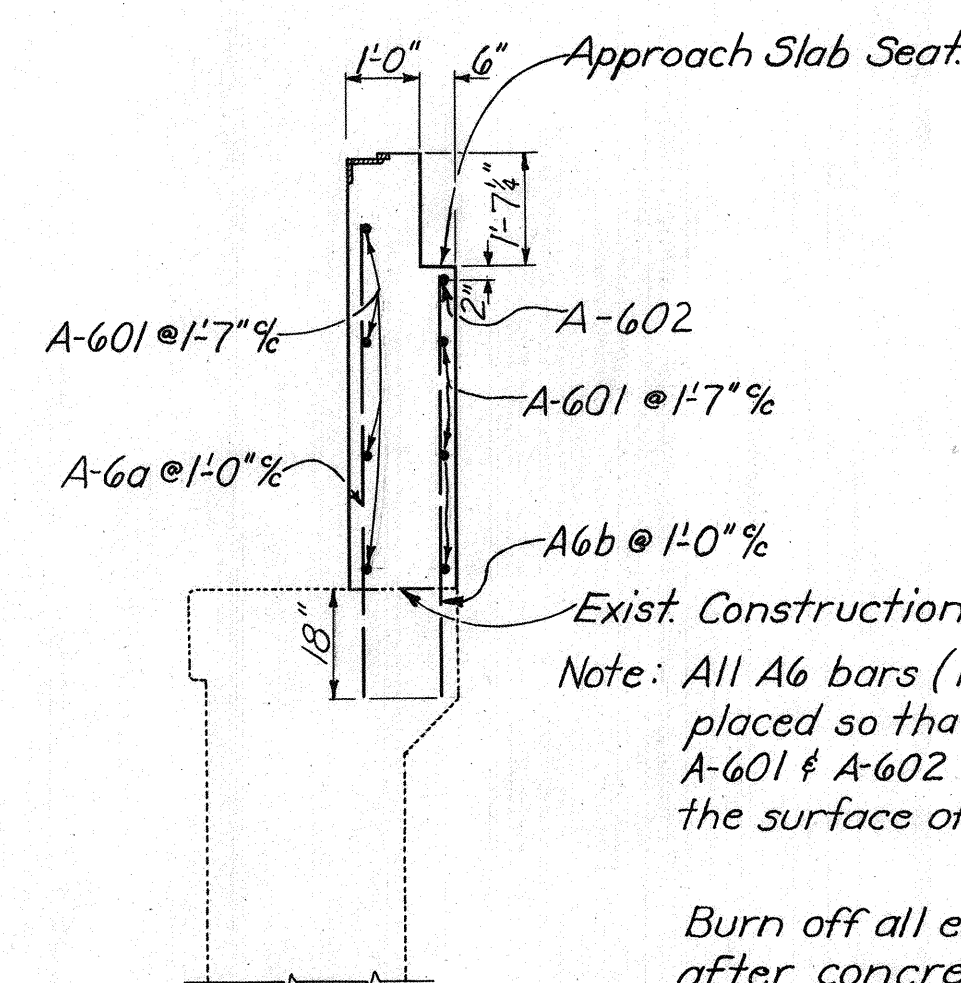
ELEVATION



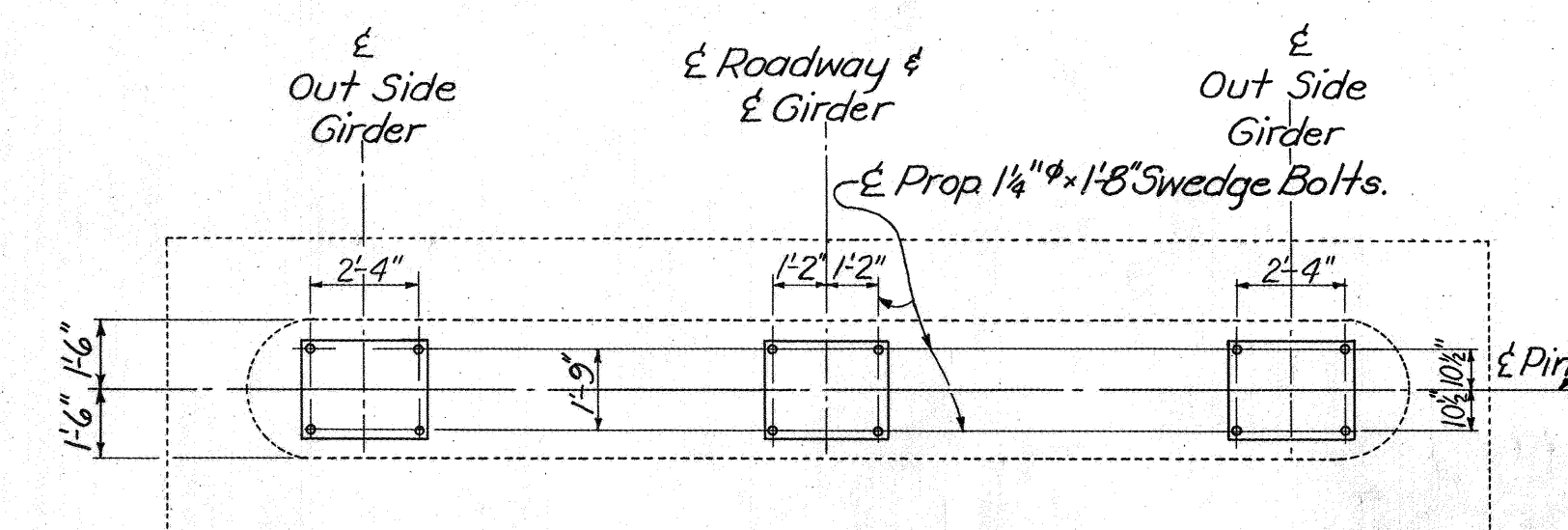
ABUTMENT BEARING PLATE



PIER BEARING PLATE



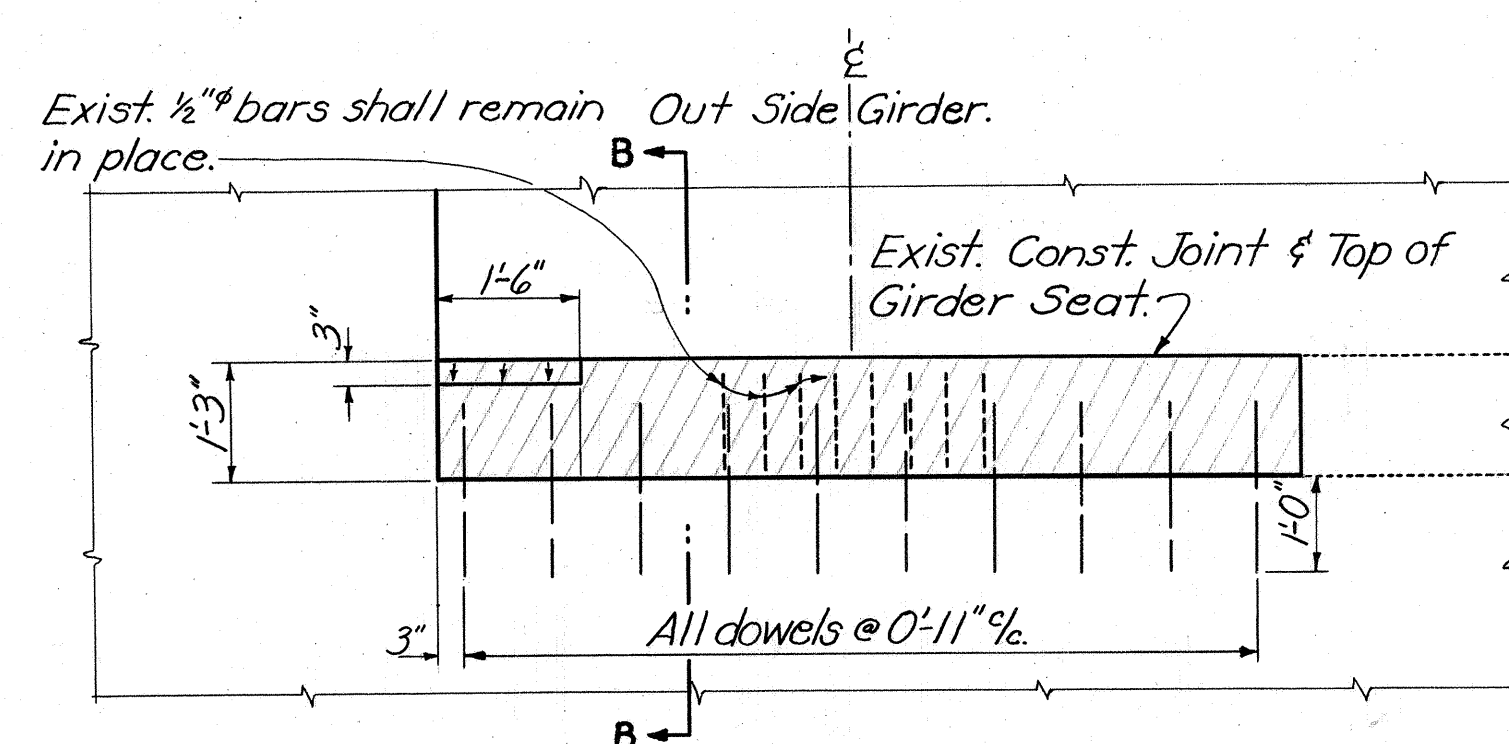
SECTION AT E



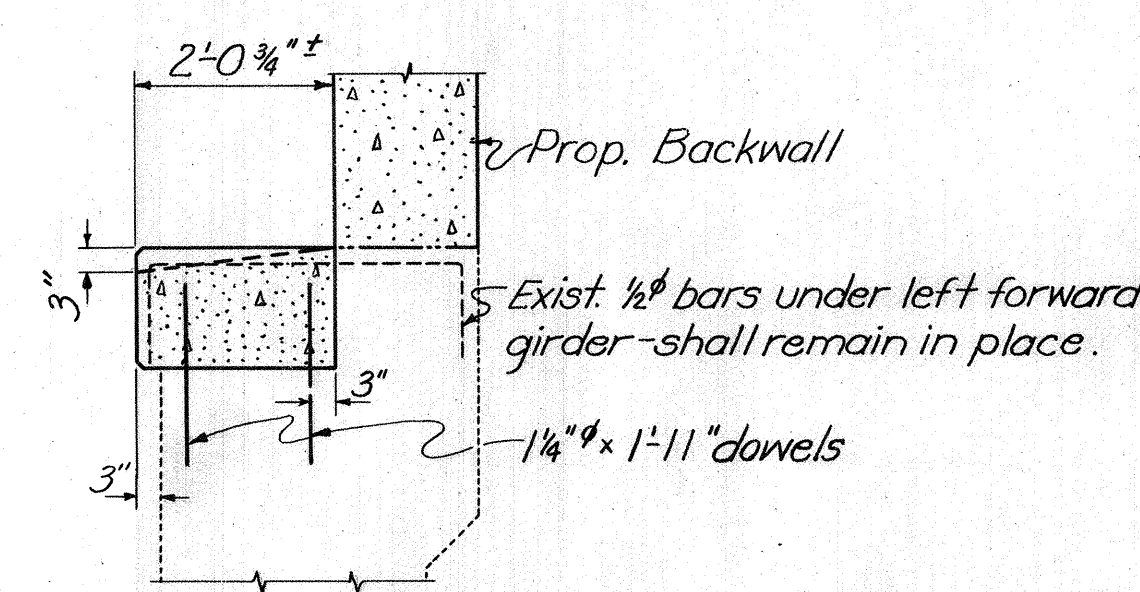
PLAN - PIER

Note: All 1 1/4" x 1'-8" swedge bolts shall be doweled 1'-0" into existing masonry, and their dowel holes shall be paid for under Item S-23.

Payment for the swedge bolts shall be included in the price bid for Item S-7, Structural Steel.

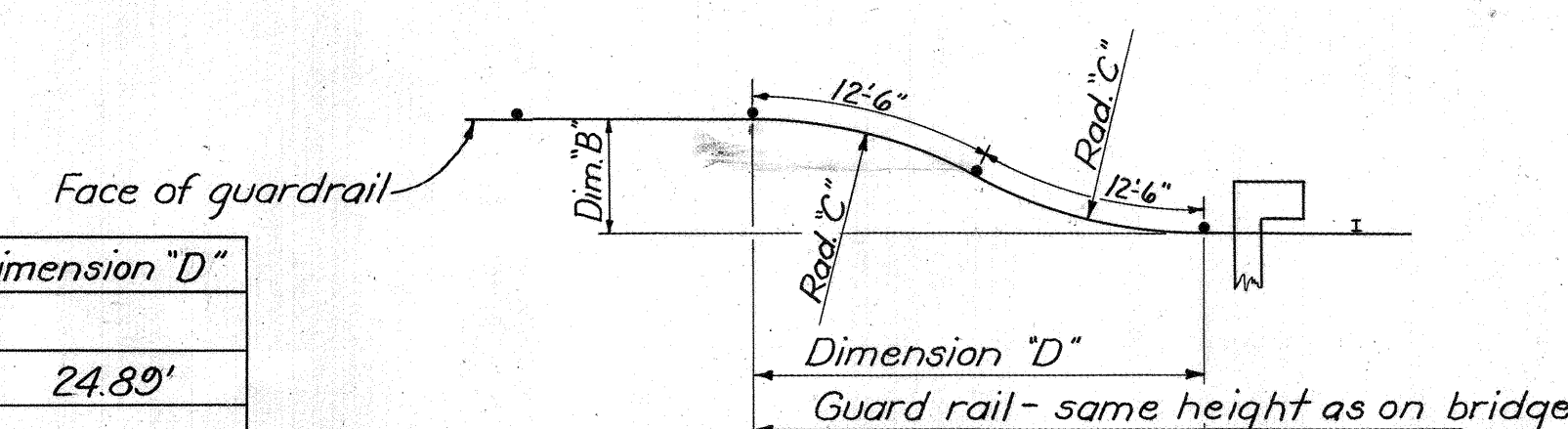


PART PLAN - GIRDER SEAT REPLACEMENT



SECTION B-B

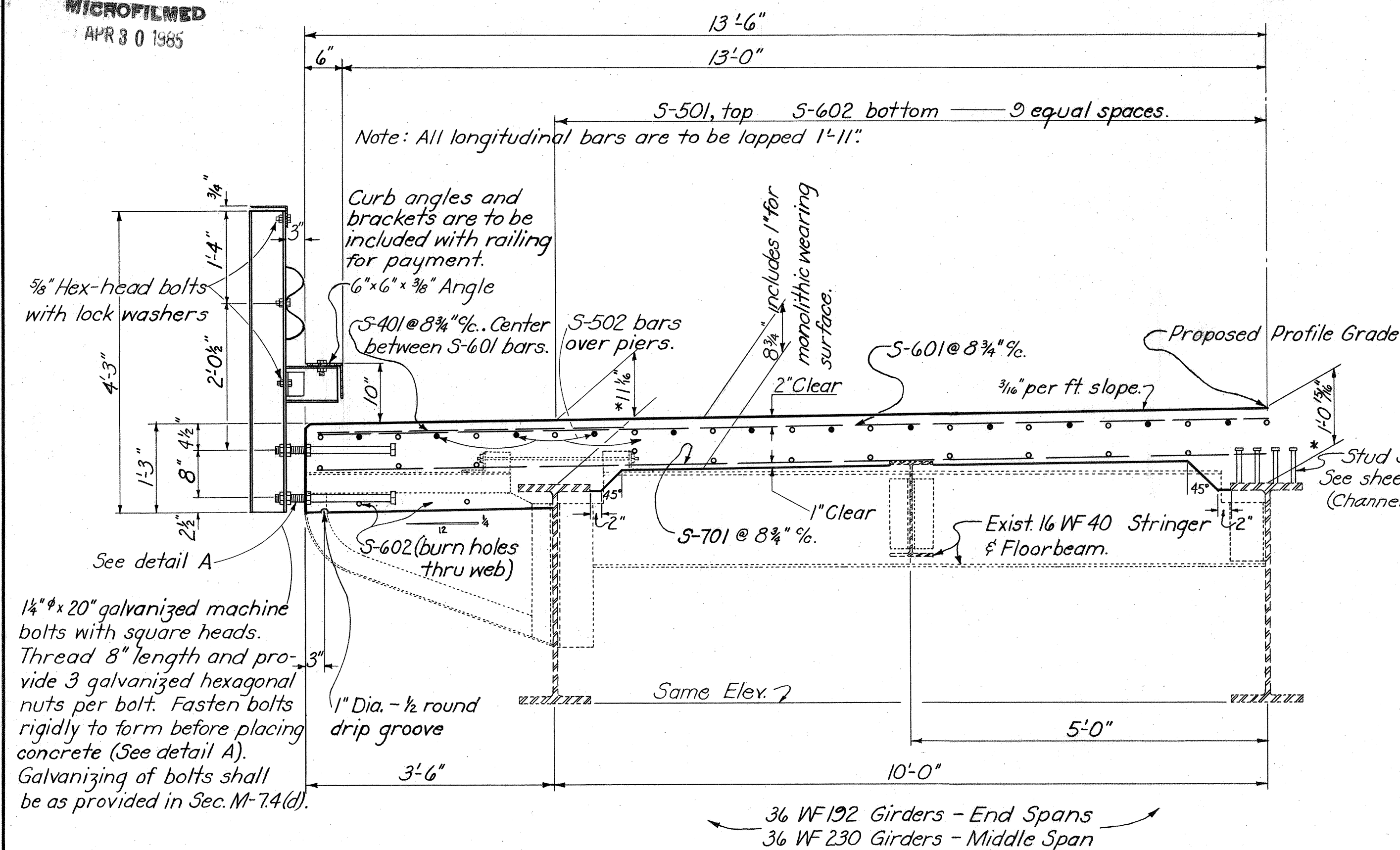
Dimension "B"	Radius "C"	Dimension "D"
West End		
2'-0"	78.13'	24.89'
East End		
6'-0"	25.50'	24.01'



GUARD RAIL FLARING DETAILS

ABUTMENT DETAILS
FOR BRIDGE REPAIR
BRIDGE N^o ROS-50-1935
OVER NORTH FORK OF PAINT CR.
ROSS COUNTY

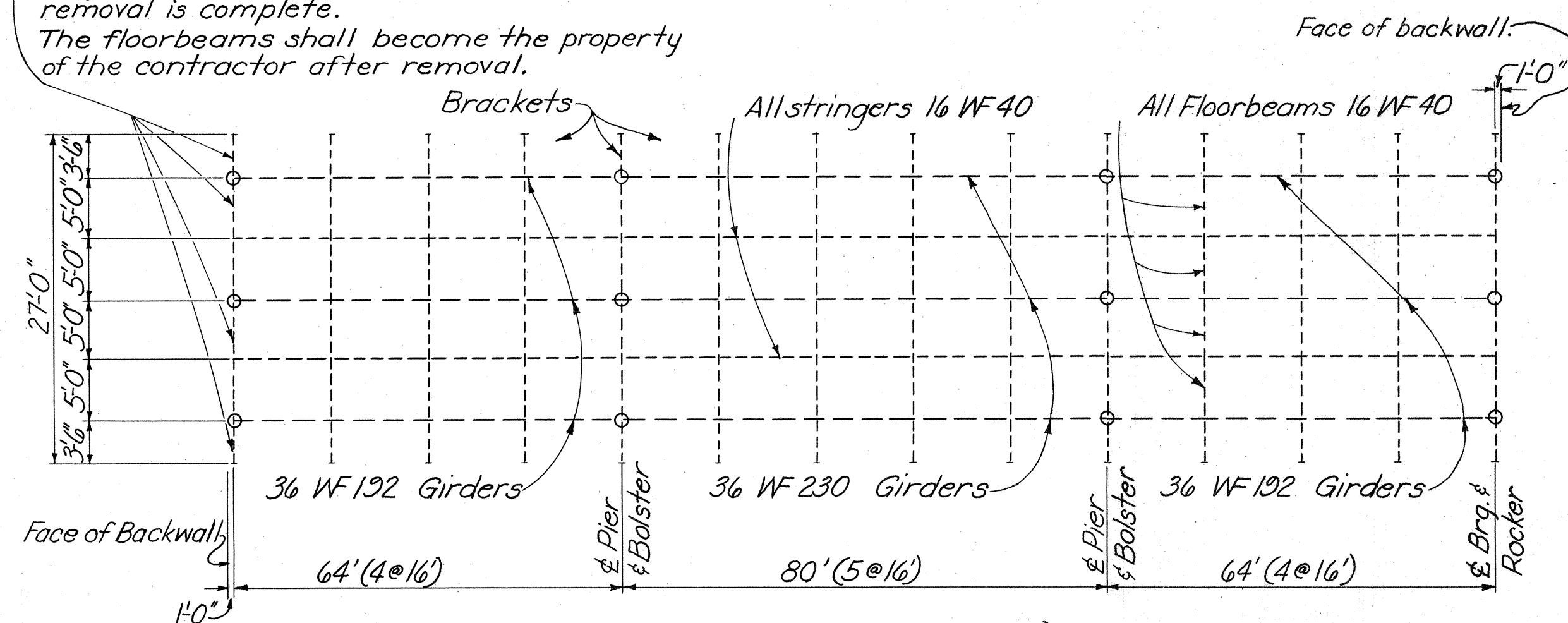
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.L.K.	R.L.K.	R.L.K.	M.P.B.			



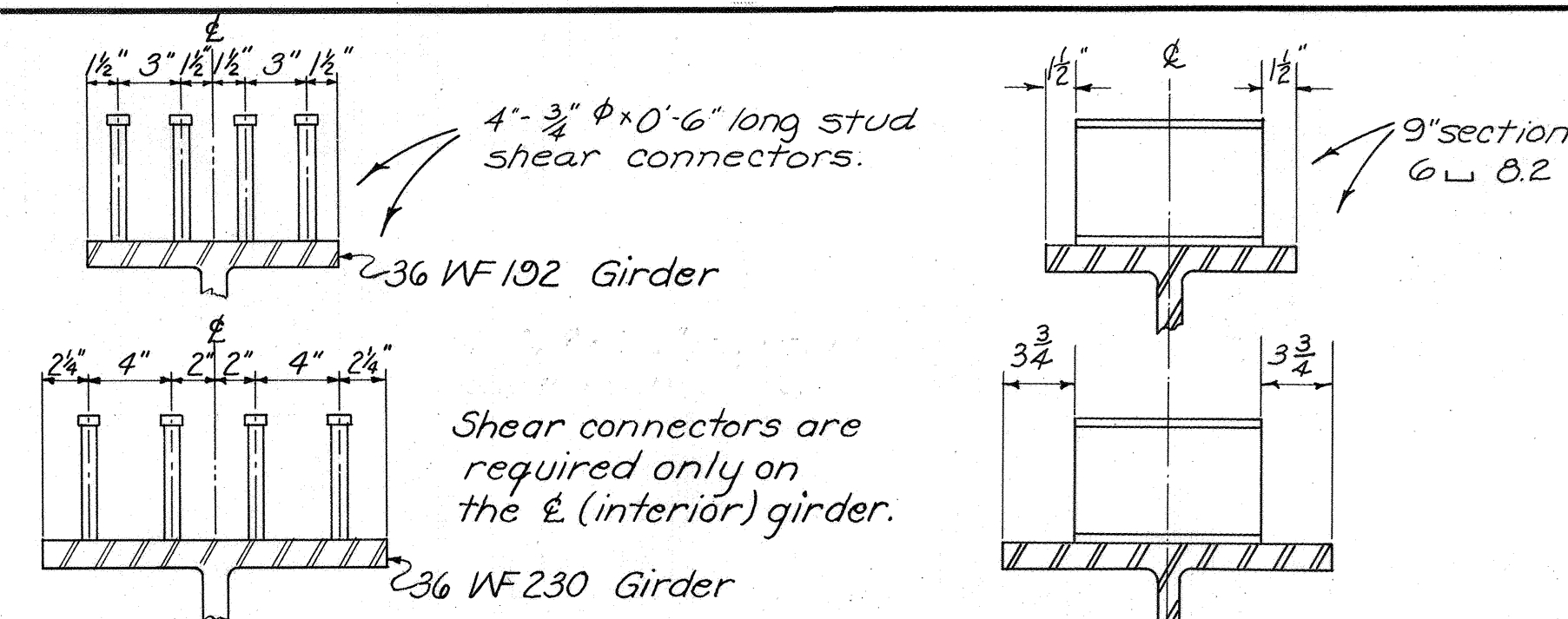
HALF TYPICAL ROADWAY SECTION

* Note: This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

Note: Remove existing end floorbeams and brackets. Install new floorbeams and shorten existing stringers as detailed on sheet no. 5. Plug rivet holes in all girders when floor beam removal is complete. The floorbeams shall become the property of the contractor after removal.

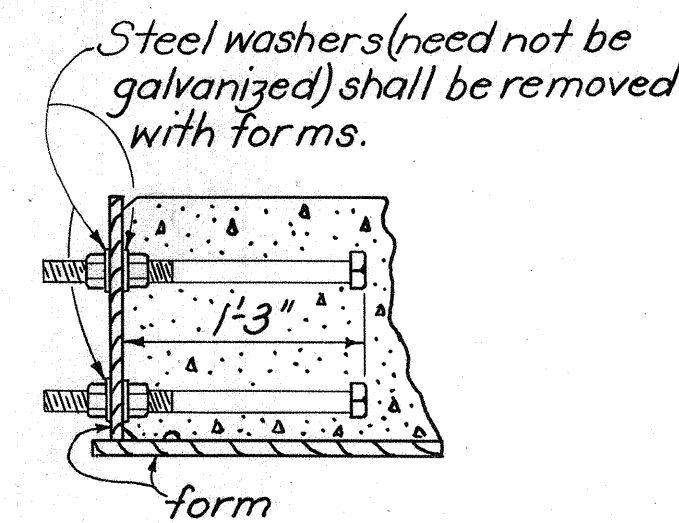


LAYOUT OF EXISTING STRUCTURAL STEEL

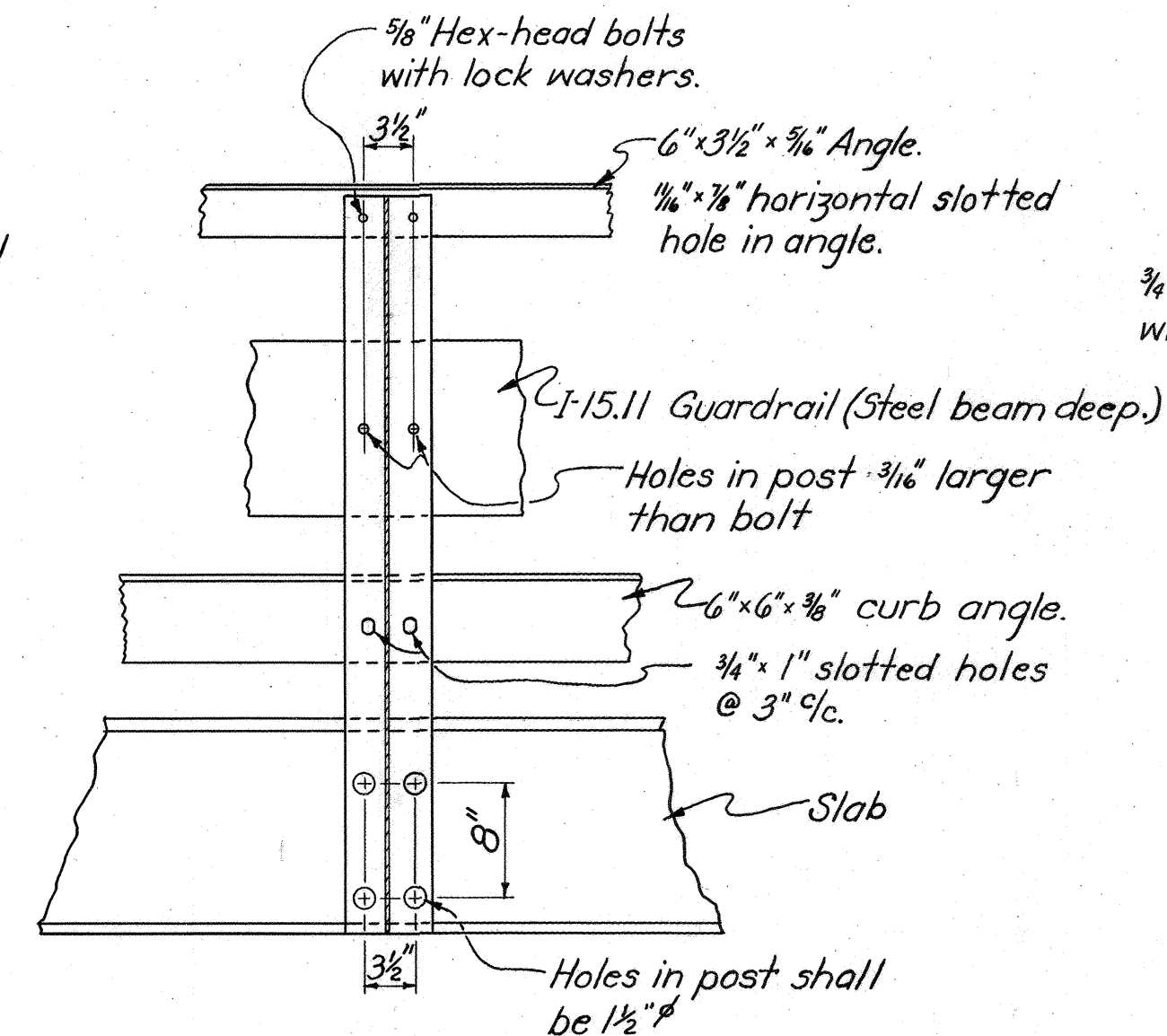


SHEAR CONNECTORS

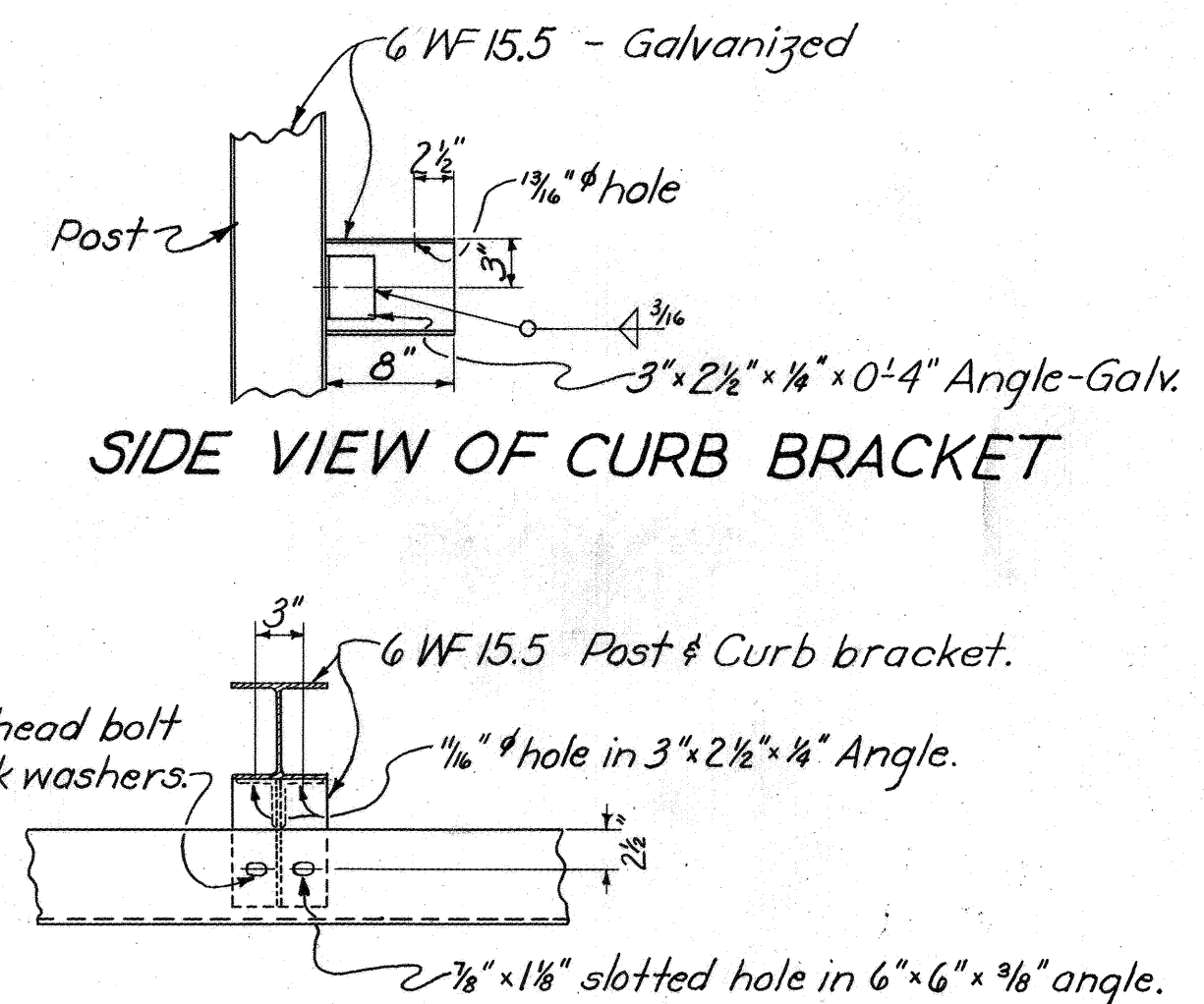
(Either studs or channels may be used)



DETAIL-A

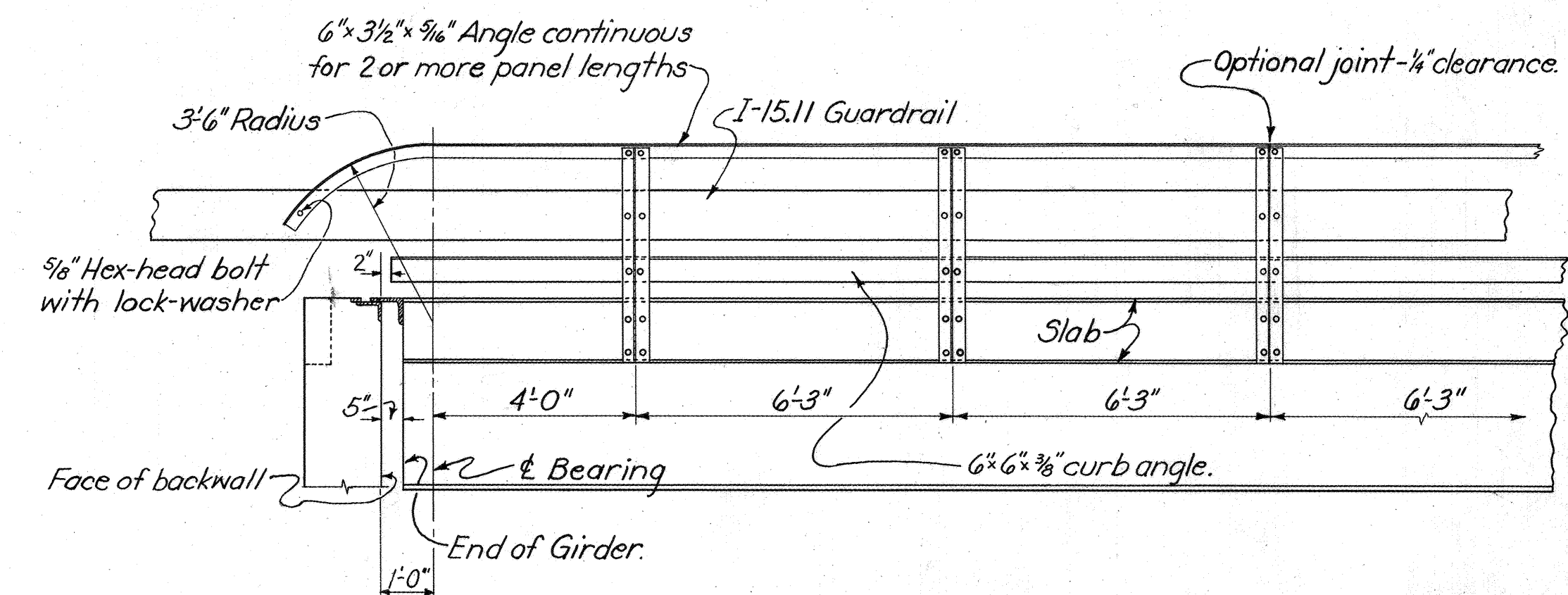


ELEVATION OF RAILING POST



PLAN

REINFORCING STEEL LIST					
Mark	Size	N ^o	Weight	Shape	Length
A-601	¾"φ	14	594	St.	28'3"
A-602	"	2	97	"	32'3"
S-401	½"φ	286	860	St.	4'6"
S-501	⅝"φ	150	5710	"	36'-6"
S-502	"	48	1602	"	32'-0"
S-601	¾"φ	287	11495	"	26'-8"
S-602	"	156	8552	"	36'-6"
S-701	7⁄8"φ	287	15644	"	26'-8"
A6o	¾"φ	52	521	St.	6'8"
A6b	"	52	456	"	
A6c	"	16	80	"	3'4"
A6d	"	16	70	"	2'-11"
A6e	"	8	20	"	1'-8"
A6f	"	8	96	"	8'-0"
A6g	"	8	46	"	3'-10"
Dowels	1½"φ	16	297	St.	3'-6"
Dowels	1¼"φ	38	387	St.	1'-11"
Dowels	1¼"φ	16	213	"	2'-6"
Replacement Bars					
RE-4	½"φ	1		St.	5'-3"
RE-5	⅝"φ	1		St.	5'-7"
RE-6	¾"φ	3		St.	5'-11"
RE-7	¾"φ	1		St.	6'-4"



RAILING DETAILS

Note: Wheel guard angle shall be 2" clear from the face of backwall.

Curb angle shall be continuous for 2 or more panel lengths.

*SUPERSTRUCTURE DETAILS
FOR BRIDGE REPAIR
BRIDGE No. 203-50-1935
OVER NORTH FORK OF PAINT CR.
ROSS COUNTY*

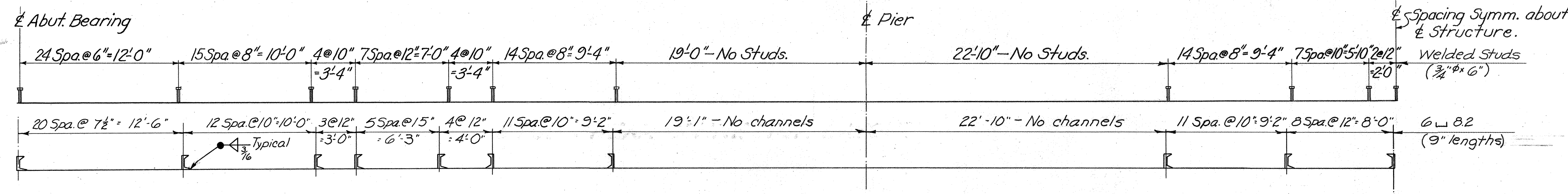
DESIGNED R.L.K.	DRAWN R.L.K.	TRACED R.L.K.	CHECKED M.P.B.	REVIEWED DATE	REVISED
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MICROFILMED
APR 30 1965

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

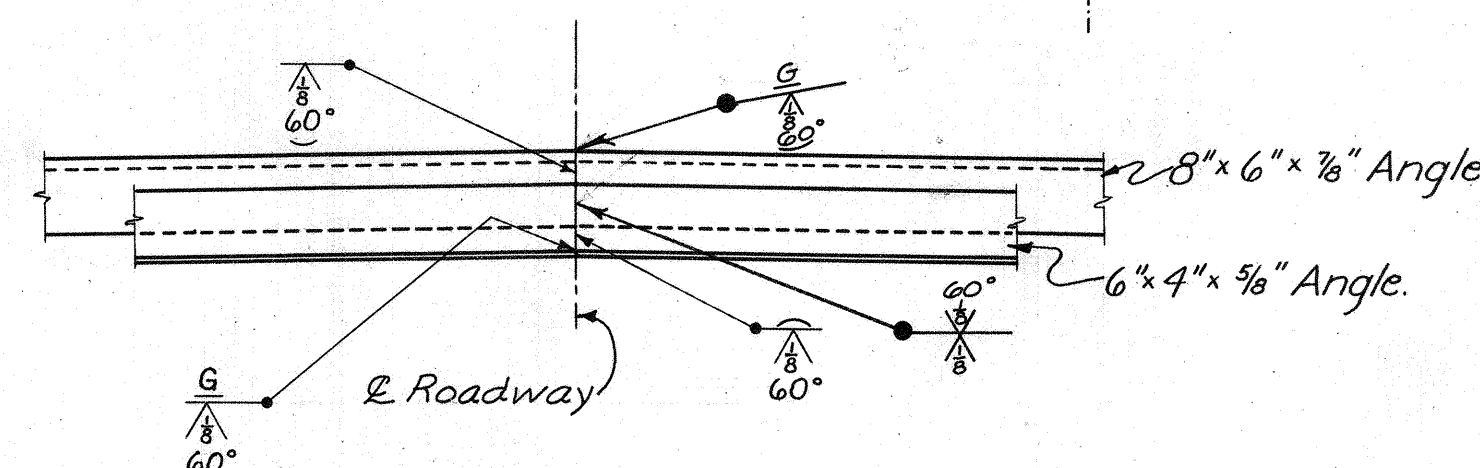
5
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ROSS COUNTY
ROS-50-1933



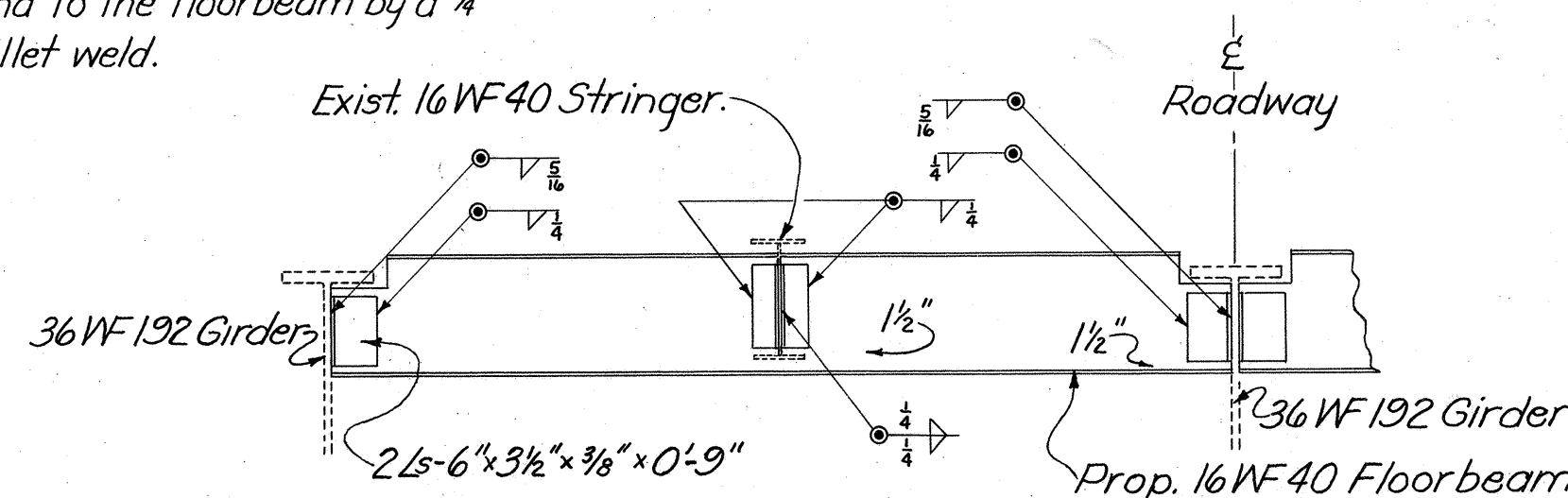
SHEAR CONNECTOR LAYOUT

Either studs or channels may be used
Approx. 740 3/4" x 6" studs or 151 6" x 8.2
9" long are required.

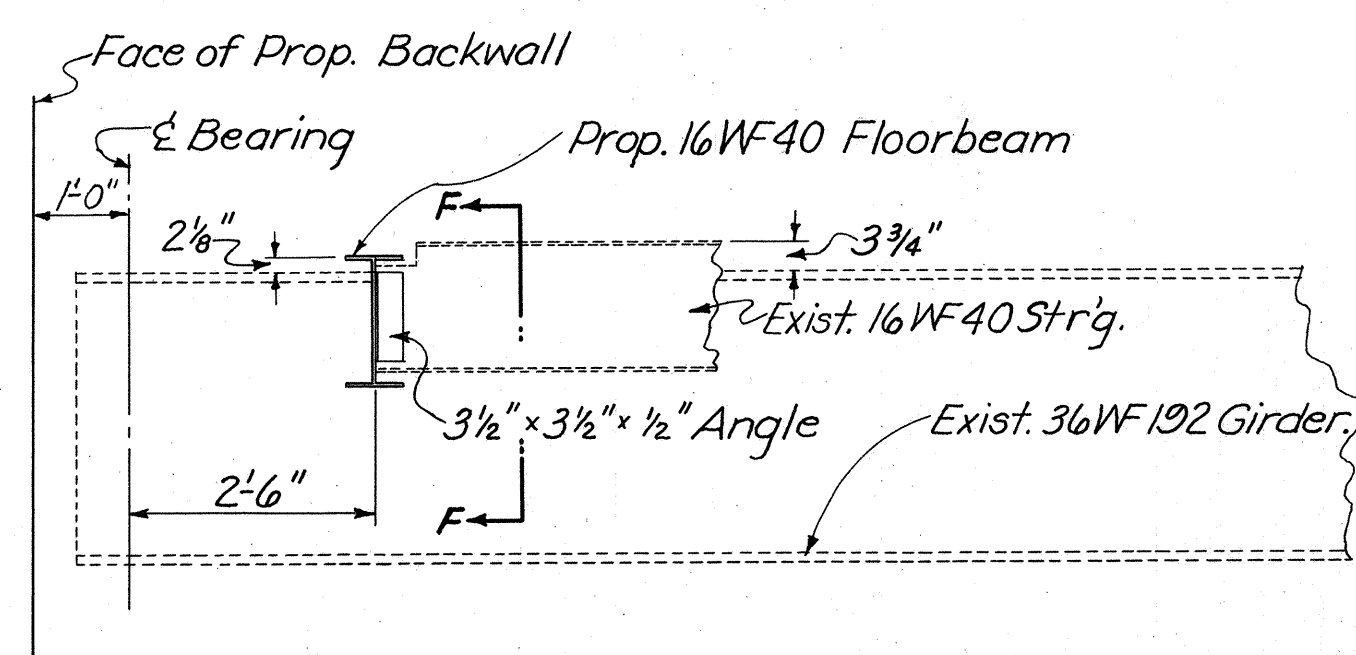


WELDED BUTT JOINT IN SUPERSTRUCTURE END DAM ANGLES AT ROADWAY

Note: 6" x 3 1/2" angle shall be welded
to the girder by a 5/16" fillet weld
and to the floorbeam by a 1/4"
fillet weld.

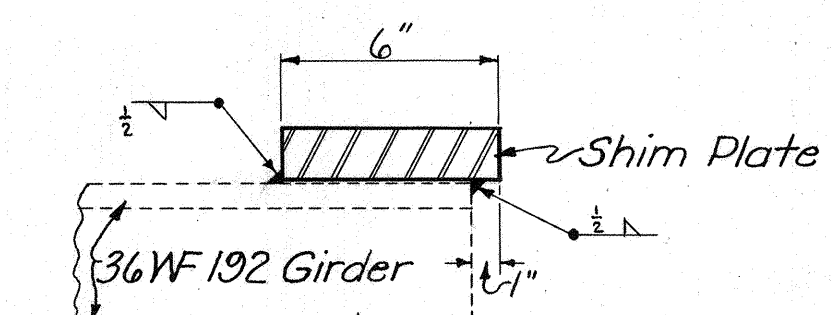


SECTION F-F



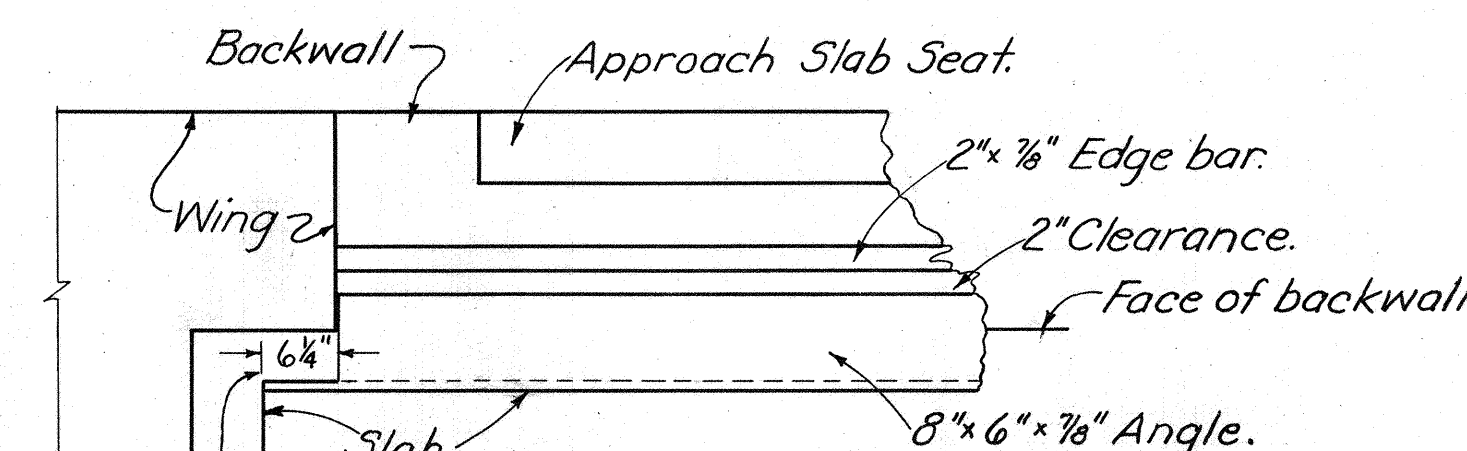
SIDE VIEW-PROPOSED FLOORBEAM

Note: Plug existing rivet holes,
after bracket and floor-
beam removal is complete,
in all girders.



SECTION E-E

Cut-off outstanding leg
back to the fillet.



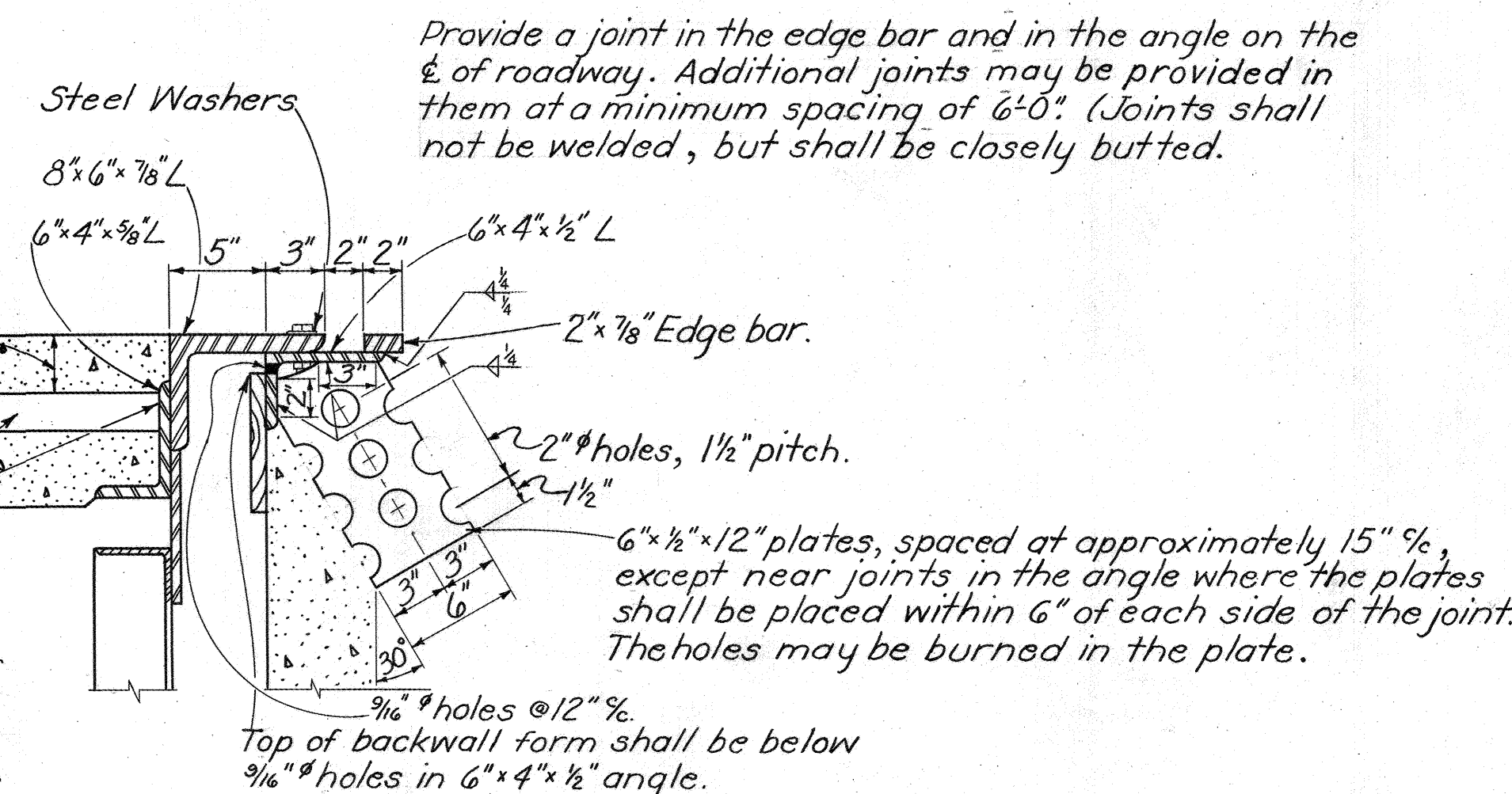
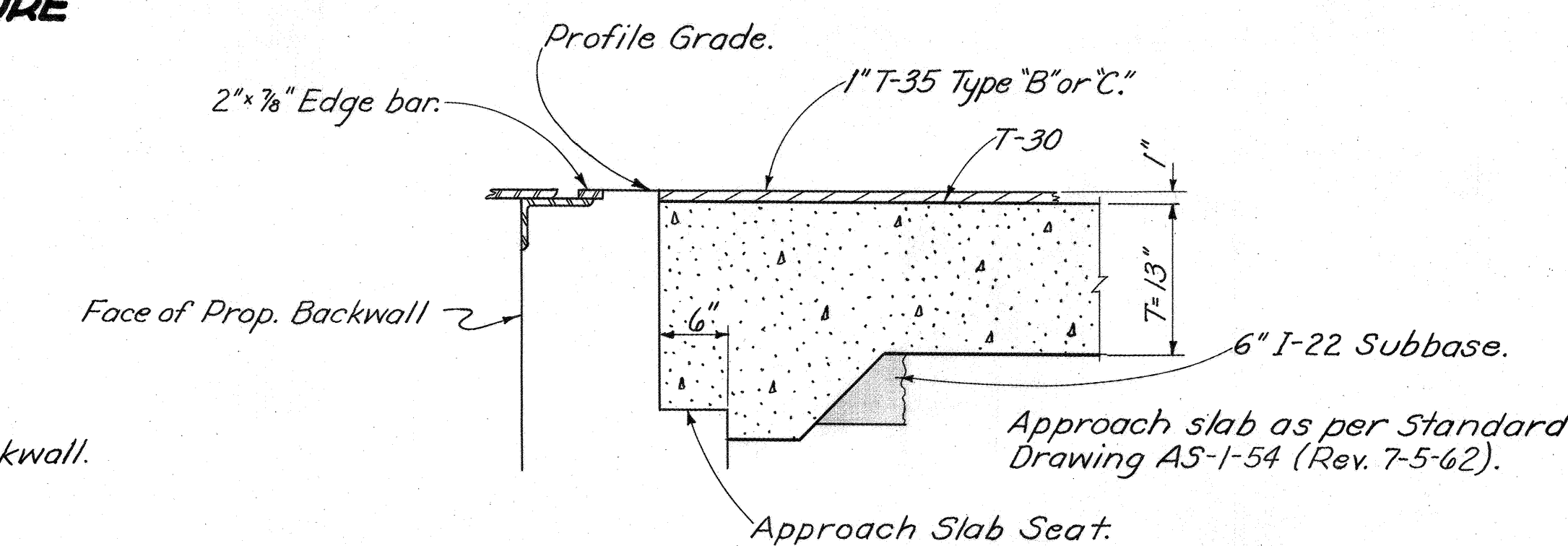
PART PLAN OF END FINISH AND END DAM AT OUTSIDE OF SLAB

3/8" x 2" bolts at not more than 2'-0" o.c., with
nuts tack-welded to underside of lower
angle, 1 1/8" holes in upper angle. Center
3/8" bolts in 1 1/8" holes. Apply flake graphite
between washers and angle. Turn bolt
tight and release one-half turn. Remove
bolts as soon as concrete has reason-
ably set, preferably within two hours, to
avoid effect of temperature expansion
or contraction of superstructure.
Fill holes with bituminous material.

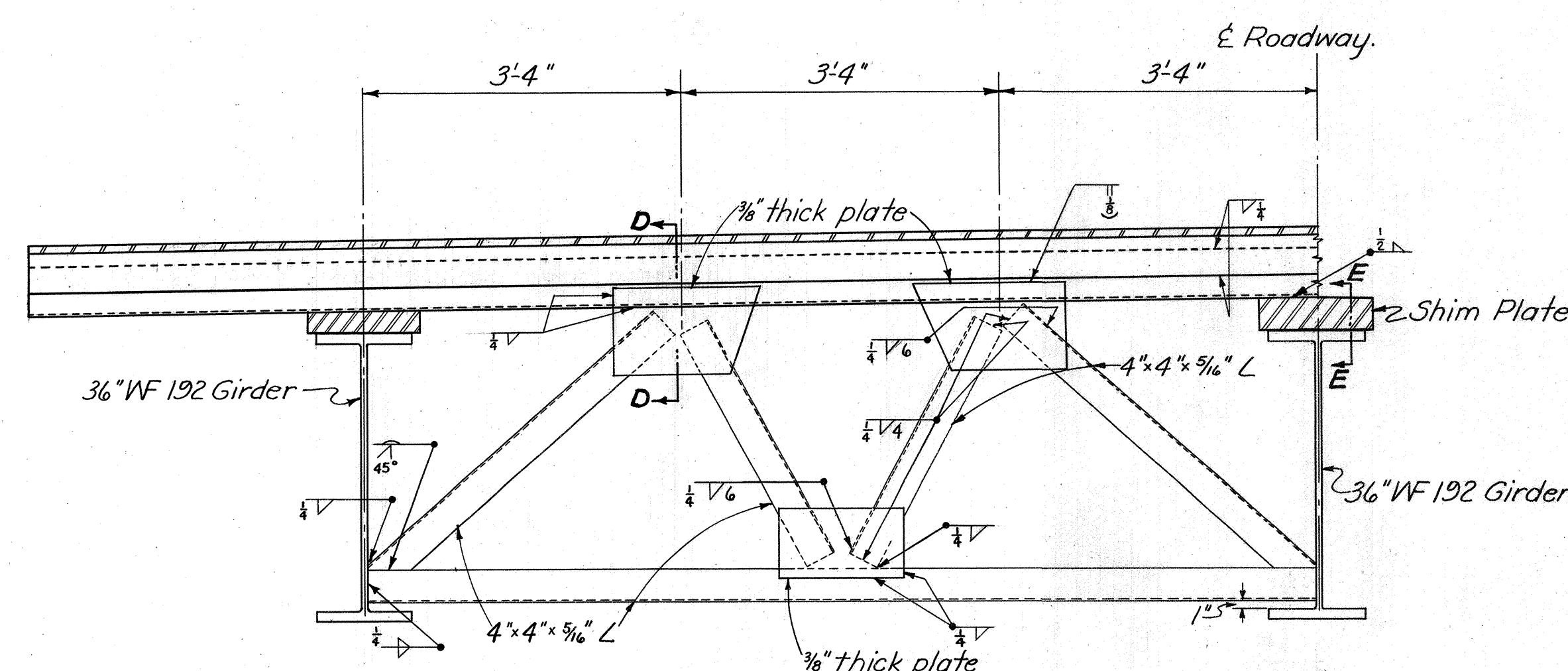
Not less than 1 1/8" + M.W.S.
nor more than 2" + M.W.S.

Anchor bars 2" x 1/2" x 1'-6" placed
parallel with longitudinal
reinforcing steel at 15" o.c.

Omit shop coat on all portions of
end dam. Portions in contact
with steel or with concrete shall
not be painted. All other portions
shall be cleaned and given the
shop coat in the field as well as the
two field coats.



SECTION D-D



END DIAPHRAGM

STRUCTURAL DETAILS
FOR BRIDGE REPAIR
BRIDGE N^o ROS-50-1935
OVER NORTH FORK OF PAINT CR.
ROSS COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.L.K.	R.L.K.	R.L.K.	M.P.B.			

ROSS COUNTY
ROS-50-19.33

REFERENCE:

Detailed drawings of the existing bridge no. ROS-50-1935 (formerly bridge no. ROS-50-194) may be inspected in the office of the Bureau of Bridges in Columbus or the Division Office in Chillicothe.

DIMENSIONS:

The contractor shall verify all dimensions of the existing structure in the field before ordering structural steel, etc. required for this construction.

PROPOSED WORK:

The work proposed is outlined in detail on the plan and under the portion of the notes called "PROPOSED WORK."

WELDING:

All welding shall be class A except as otherwise shown.

FIELD OFFICE:

The contractor shall provide a 150sq.ft. ^{minimum} field office in accordance with Sec. S-0.01(b), Structures General. The contractor shall install and maintain telephone service in the office during construction of this project.

APPROACH SLAB:

Approach slabs shall be 25'-0" long and according to standard drawing AS-1-54, revised 7-5-62.

LOAD FREQUENCY:

Structure is designed for CF-400.

PAINTING NEW STRUCTURAL STEEL:

New structural steel shall be painted according to the requirements of Item S-8.05.

ITEM I-22 SUBBASE:

Any excavation required to place the 6" subbase under the approach slabs shall be included in the unit price bid per cu. yd. for Item I-22, Subbase as per plan.

CLEANING AND PAINTING EXISTING STRUCTURAL STEEL:

This item shall consist of cleaning and painting all existing structural steel.
Clean all areas where rusting has occurred, where paint is thin or has been damaged; such surfaces shall be sand blast cleaned supplemented by hand cleaning as required. All other requirements regarding cleaning as outlined in Item S-8 shall be met.
All existing structural steel shall be painted with two(2) Field Prime Coats of Red Lead, Sec. M-9.9 or Semi-Quick Drying Red Lead, Sec. M-9.10 and two(2) Field Coats of Aluminum Paint, Sec. M-9.12, Type I and II.

CONCRETE DECK PLACING:

In order to facilitate water curing of the concrete of the deck slab, the placing of concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

RAILING:

The handrail and curb angle shall be painted in accordance with Sec. S-8.05.
Posts, curb brackets and 1/4"x 20" post anchor bolts shall be galvanized as provided in Sec. M-7.4(d), and shall not be painted.
Item I-15 Guard Rails shall be painted as follows:
Wood posts as per Sec. I-15.07.
Steel railing as per Sec. I-15.07

The tabulated railing quantity is for the length of railing between the bridge limits. The price per linear foot of railing includes payment for guardrail, handrail, posts, anchor bolts, curb angle, brackets, bolts, galvanizing and painting and it also includes payment for the curved portions of the handrail which projects beyond the above stated limits.

TRAFFIC: Two-way traffic shall be maintained at all times.

The contractors attention is directed to the following sections of the Construction and Material Specifications:

- Item I-3 & Sec. G-4.05 Maintenance of traffic.
G-7.07 Barricades, danger and warning signs.
G-7.06 Public convenience and safety.
T-35.23 Protection of completed courses.
B-35.25

TEMPORARY RUNAROUND, BRIDGE AND APPROACHES:

The temporary run-around bridge load frequency shall be CF-130, with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. The temporary structure shall conform to the requirements of Sec. S-15 and shall provide a minimum of two (2) 50 foot clear spans in addition to lesser approach spans required for total waterway area. The approaches and bridge shall conform to the line and grade shown on the plan.
The bridge shall have a roadway width of 22 feet.
The approach embankment shall be 28 feet out to out of shoulders.
The approach surface shall be class "B" and shall have a minimum width of 22 feet.
To provide clearance for the temporary run-around approaches a portion of the existing guardrail shall be carefully removed and stored. After the run-around embankment has been removed the guardrail shall be re-erected.
Payment for this work shall be included in the price bid for Item I-15, Guard Rail, Removed and Rebuilt.
The temporary run-around, bridge and approaches, when no longer needed to maintain traffic, shall be removed and disposed of by the contractor.
The bituminous material may be disposed of as bank protection as directed by the Engineer.
The temporary bridge shall become the property of the contractor.
After the above mentioned removals have been completed, the right-of-way, temporary and existing, shall be restored to the original slope and elevation.

SEEDING AND PROTECTING:

The area to be seeded shall be bounded by the following limits: 6'-0", measured perpendicular, from the back edge of the proposed backwall down the roadway embankment slope to the inside edge of the turnback wings.

The seed mixture shall meet the requirements of Sec. L-9.11.

Commercial fertilizer shall be 12-12-12 and applied at the rate of 20 # per 1000 square feet.

The bid price for Item L-9, Seeding shall include the cost of furnishing and applying the commercial fertilizer.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE:

Portions of existing structure to be removed are indicated in the "PROPOSED WORK" notes and shown on the plans.
Care shall taken to insure neat cuts on the masonry to be removed and to protect all portions of the existing masonry which is to remain in place.
Existing masonry that has been removed shall be placed under the structure as bank protection as directed by the Engineer.

REMOVAL OF EXISTING PAVEMENT:

The existing pavement, within limits shown on the plan, shall be removed. Care shall be exercised in this removal so that the adjoining pavement is not damaged.
Any pavement damaged beyond the limits set forth in this plan shall be replaced by the contractor at his own expense.
All of the above shall be disposed of as bank protection and placed as directed by the Engineer. The removal of this item is shown in square yards and paid for as Item E-8, Removal of Existing Pavement.

JACKING AND ADJUSTING BEARING ASSEMBLIES:

The superstructure shall be jacked up at the piers and abutments simultaneously.
The rocker and bolster assemblies shall be sand-blast cleaned and new bolts shall be installed as required by the Engineer.
A sufficient number of jacks, etc. shall be provided to properly raise and support the superstructure.
The operation of jacking and adjusting the bearing assemblies shall be completed before any concrete is placed.
Payment for jacking, cleaning and adjusting bearing assemblies shall be included in the lump sum bid for "JACKING AND ADJUSTING BEARING ASSEMBLIES."

SUPPLEMENTAL SPECIFICATIONS:

Reference shall be made to Supplemental Specifications S-407, dated 4-19-62 and S-101, dated 7-12-62.

ESTIMATED QUANTITIES

Item	Total	Unit	Description
ROADWAY AND PAVEMENT			
E-8	134	Sq.Yd.	Removal of Existing Pavement
E-11	1	M.Gal.	Water
I-15	114.57	Lin.Ft.	Guard Rail, Steel Beam Standard Type (Deep), As Per Plan
I-15	300	Lin.Ft.	Guard Rail, Removed and Rebuilt.
I-15	106.25	Lin.Ft.	Guard Rail, Removed and Stored
L-9	62	Sq.Yd.	Seeding and Protecting, as per plan.
I-7	134	Sq.Yd.	Reinforced Concrete Approach Slabs (T-13)
I-22	23	Cu.Yd.	Subbase, as per plan.
T-35	21	Cu.Yd.	Asphaltic Concrete Surface Course (70-85), Type "B" or "C"
B-35	15	Cu.Yd.	Asphaltic Concrete Base Course (70-85) using T-35 Type "B" or "C" composition.
T-30	80	Gal.	Bituminous Tack Coat, Sec. M-5.5, MS-2 or RS-1, or Sec. M-5.2, RC-1 or 2, as per Sec. T-30.02.
I-3	Lump	Lump	Maintaining Traffic
BRIDGE NO. ROS-50-1935			
E-2	15	Cu.Yd.	Excavation for Structure, Unclassified.
S-1	189	Cu.Yd.	Concrete for Structures, Class "C", Superstructure
S-1	22	Cu.Yd.	Concrete for Structures, Class "E", abutments
S-4	46740	Lbs.	Reinforcing Steel
S-7	22385	Lbs.	Structural Steel
S-8	22385	Lbs.	Field Painting of New Structural Steel.
S-8	Lump	Sum	Cleaning and Painting Existing Structural Steel.
S-14	424	Lin.Ft.	Railing, as per plan.
S-15	Lump	Sum	Temporary Run-around, Bridge and Approaches.
S-22	Lump	Sum	Removal of Portions of Existing Structure.
S-23	294	Lin.Ft.	Dowel Holes
Special	Lump	Sum	Jacking and Adjusting Bearing Assemblies.
S-407	Lump	Sum	Welded Shear Connectors
S-101	189	Each	Water-reducing, set retarding admixture.

For additional notes see sheet no. 2

NOTES & ESTIMATED QUANTITIES
FOR BRIDGE REPAIR
BRIDGE NO. ROS-50-1935
OVER NORTH FORK OF PAINT CR.
ROSS COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RLK.	RLK.	RLK.	M.P.B.			