

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 5332	08-00076-00-BR	DEKALB	47	1
ILLINOIS				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
MAJOR BRIDGE PROGRAM

SECTION 08-00076-00-BR
DEKALB COUNTY
PROJECT NO. BRS-0037(048)
FAU 5332 (C.H. 33)
C-93-010-10
CONTRACT NO. 87435



CLASSIFICATION: MINOR ARTERIAL (URBAN)
DESIGN VOLUME:
CURRENT ADT: 4850 (2013)
DESIGN SPEED: 45 M.P.H.
DESIGN POLICY: RECONSTRUCTION GUIDELINES
OF THE BLR&S MANUAL

TOLL FREE JOINT UTILITY LOCATING
INFORMATION FOR EXCAVATORS (J.U.L.I.E.)
TELEPHONE NUMBER 1-800-892-0123

APPROVED	<i>December 26</i>	2014
	<i>[Signature]</i>	
	COUNTY ENGINEER	
PASSED	<i>1-8</i>	2015
	<i>[Signature]</i>	
	DISTRICT 3 ENGINEER OF LOCAL ROADS AND STREETS	
RELEASED FOR BID	<i>1-8</i>	2015
BASED ON LIMITED	<i>[Signature]</i>	
REVIEW	DEPUTY DIRECTOR OF HIGHWAYS, REGION TWO ENGINEER	
	STATE OF ILLINOIS	
	DEPARTMENT OF TRANSPORTATION	

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OF THE STATE OF ILLINOIS

SHEET NO.	TITLE
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES & GENERAL NOTES
3.	TYPICAL CROSS SECTIONS
4.-5.	PLAN AND PROFILE SHEETS
6.	ENTRANCE DETAILS
7.	SHOULDER AND GUARDRAIL DETAIL
8.-33.	BRIDGE PLANS
34.-41.	STATION CROSS SECTIONS
42.-43.	EROSION CONTROL PLAN
44-47	EXISTING BRIDGE PLANS

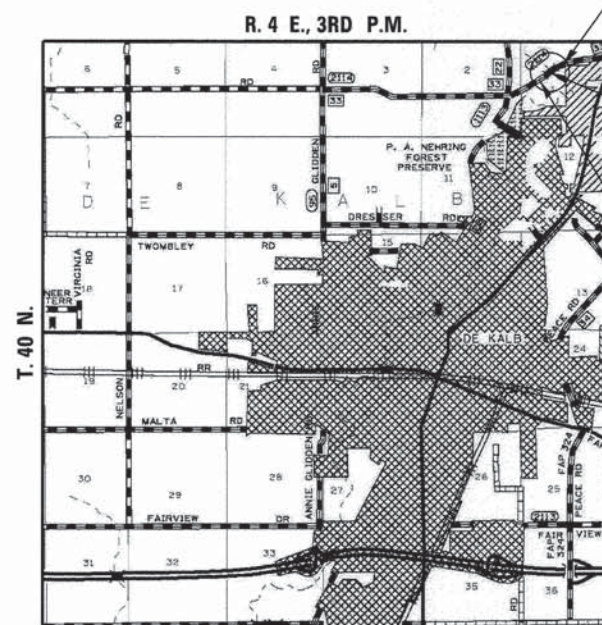
STANDARDS	
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
542306-02	PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-04	TRAFFIC CONTROL DEVICES
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
728001-01	TELESCOPING STEEL SIGN SUPPORT
729001-01	APPLICATIONS OF TYPES A AND B METAL POSTS (FOR SIGNS AND MARKERS)
780001-05	TYPICAL PAVEMENT MARKINGS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

SCALES



Revised 4/13/15

CONTRACT NO. 87435



LOCATION PLAN

GROSS LENGTH OF SECTION = 1350.00 FEET = 0.256 MILES
NET LENGTH OF SECTION = 1350.00 FEET = 0.256 MILES



IMPROVEMENT ENDS
STA. 535 + 00.00

STA. 529 + 38.50 - SPECIAL BRIDGE DESIGN
FOUR SPAN CONTINUOUS STEEL COMPOSITE
WIDE FLANGE BEAM ON INTEGRAL PILE BENT
SPILL-THRU ABUTMENTS AND PILE BENT PIERS.
SPANS 45'-0", 68'-0", 68'-0", 45'-0";
228'-6 1/2" BK.-BK. ABUTS.; 53'-0" O.-O. DECK;
10° SKEW (RT.)
EXISTING S.N. 019-3037
PROPOSED S.N. 019-3072

IMPROVEMENT BEGINS
STA. 521 + 50.00



Alan R. Kon (12-23-14)
ILLINOIS PROFESSIONAL NO. 39751
EXPIRES 11-30-15

4440 ASH GROVE
SPRINGFIELD, IL 62711
(217) 793-8600
www.fehr-graham.com

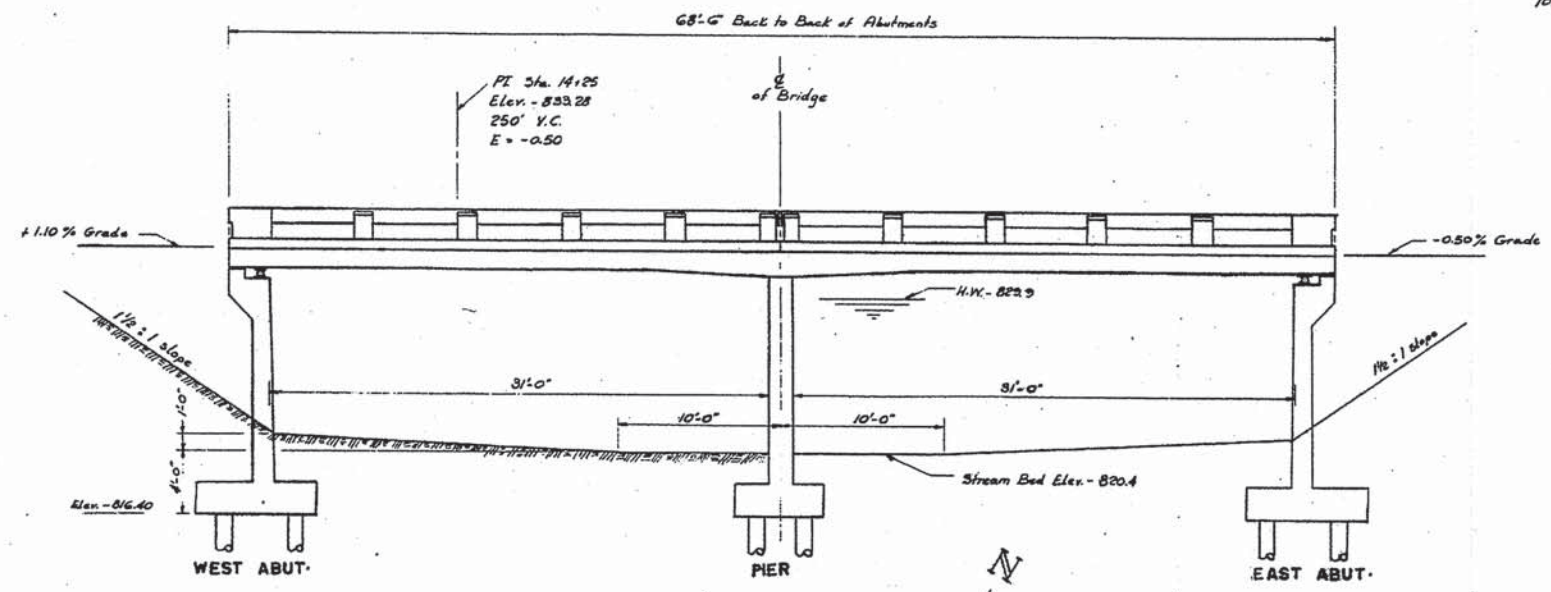
FEHR-GRAHAM & ASSOCIATES, LLC
ENGINEERING AND SCIENCE CONSULTANTS
PROFESSOR, S. ROCKFORD, IL; ROCKFORD, IL; ROCKFORD, IL; SPRINGFIELD, IL

Existing Steel Truss Bridge and Masonry Bridge Abutments to be removed by Bridge Contractor. See General Notes for disposition.

B.M. #2 Spt. 4 W. in Root of K- Maple
101' Lt. Sta. 4+90 Elev. - 831.85

B.M. #3 Spt. 4 W. in Root of 36" Oak
77' Lt. Sta. 17+02 Elev. - 831.82

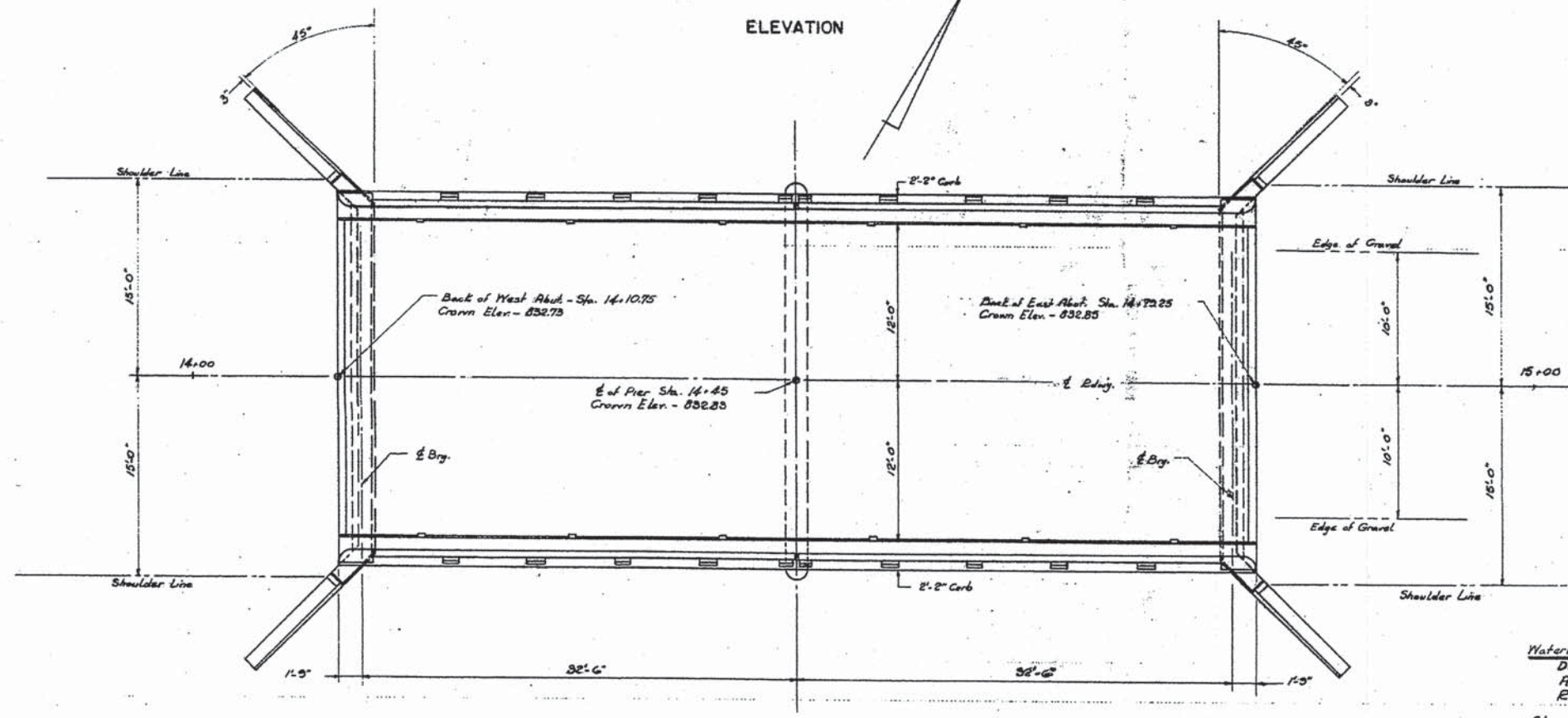
SHEET 44
CONTRACT
87435



GENERAL NOTES

Class X Concrete shall be used throughout except as noted.
Handrail Concrete shall be used in Hand rail.
The concrete floor slab shall be poured in one continuous operation.
The concrete floor slab shall be finished in accordance with article 613c of the Standard Specifications.
Inspection of Structural Steel shall be made by the Illinois Division of Highways before painting.
Structural Steel to be given one shop coat of red lead paint and two field coats of aluminum paint.
All paint shall be furnished by the Contractor.
Structural grade reinforcement will not be permitted.
Cast in place concrete shall be included in the Contract unit price for Handrail Concrete.
Reinforcing shall not be poured until full support has been removed.
Contractor shall drive two test piles as directed by the Engineer before ordering the remainder of piling.
All rollers, bearing plates, lead plates, and anchor bolts, shall be finished, painted, and set in accordance with Article 543d of the Standard Specifications. The bracing will be paid for at the Contract unit price for Structural Steel.
Before constructing the abutments and pier, the Contractor shall excavate the new channel in the vicinity of the bridge as shown on the cross sections to such an extent that no damage will be done to the structure during subsequent channel excavation.
Base of all Abutments and Pier shall be in accordance with Section 6 of the Standard Specifications.
The existing steel truss bridge and masonry abutments shall be removed by the Bridge Contractor. The existing steel floor and longitudinal stringers shall be removed by the Bridge Contractor intact and shall be stock piled along the R.O.W. line and shall remain the property of De Kalb Township. The Bridge Contractor shall cut the salvaged steel truss members into suitable lengths for handling and shall stock pile the members so cut in orderly piles along the R.O.W. line separate from the floor stringers and wood flooring. All salvaged steel shall remain the property of De Kalb Township. The existing masonry abutments removed by the Contractor may be used in the approach fill or may be disposed of outside of the R.O.W. in a manner satisfactory to the Engineer in advance provided by the Contractor. The bridge Contractor shall notify the De Kalb Township Commissioner of his intent to dismantle the existing bridge at least 10 days prior to his commencing the dismantling. The above work shall be paid for at the unit price bid for "Removal of Existing Structure".
Test Piles shall be driven in a permanent location.

ELEVATION



PLAN

Scale 3/16" = 1'-0"

Note:
Bridge is symmetrical about both the
E of Pier, & E of Bridge

TOTAL BILL OF MATERIALS

ITEM	UNITS	SUPER	SUB	TOTAL
CLASS X CONCRETE	CU. YDS.	91.7	150.0	241.7
HANDRAIL CONCRETE	CU. YDS.	3.5		3.5
REINFORCEMENT BARS	LBS.	20,860	10,550	31,410
STRUCTURAL STEEL	LBS.	1,670		1,670
FUR. UNTREATED WD. PILES (12") 12' LG.	LIN. FT.		840	840
DRIV. UNTREATED WD. PILES (12") 12' LG.	LIN. FT.		840	840
TEST PILE	EACH		2	2
NAME PLATE	EACH	1		1
REMOVAL OF EXISTING STRUCTURE	EACH			1

Waterway Data
Drainage Area = 59,000 Acres
Assumed "C" (Talbot) = 0.15
Req'd. Eff. Opening = 567 sq. ft.

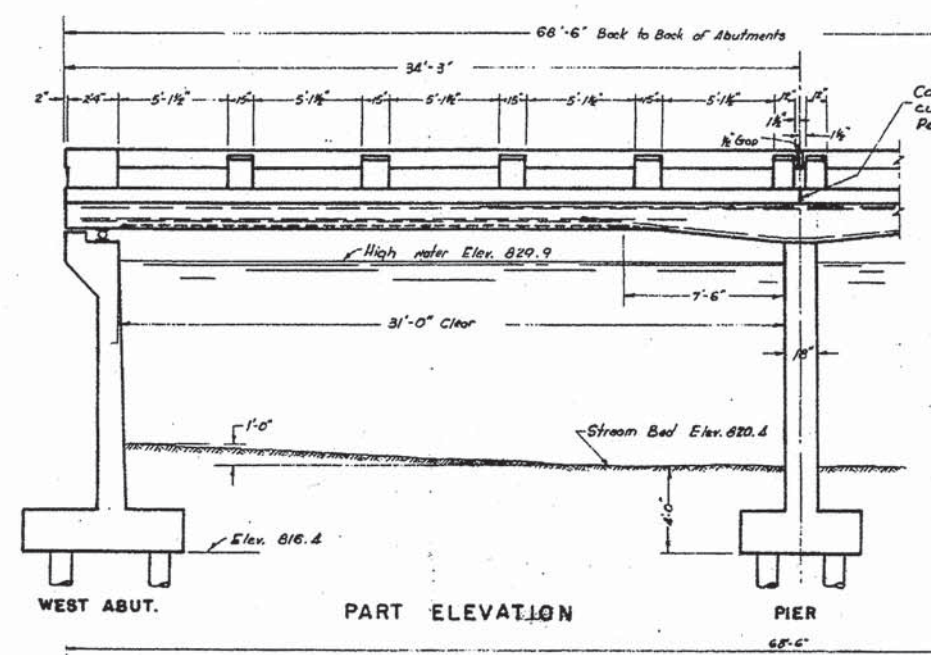
Stresses
S₁ = 18,000 #/sq" Structural
S₂ = 20,000 #/sq" Reinforcement
S₃ = 1,200 #/sq" Superstructure
S₄ = 800 #/sq" Substructure
n = 10

H-15 Loading

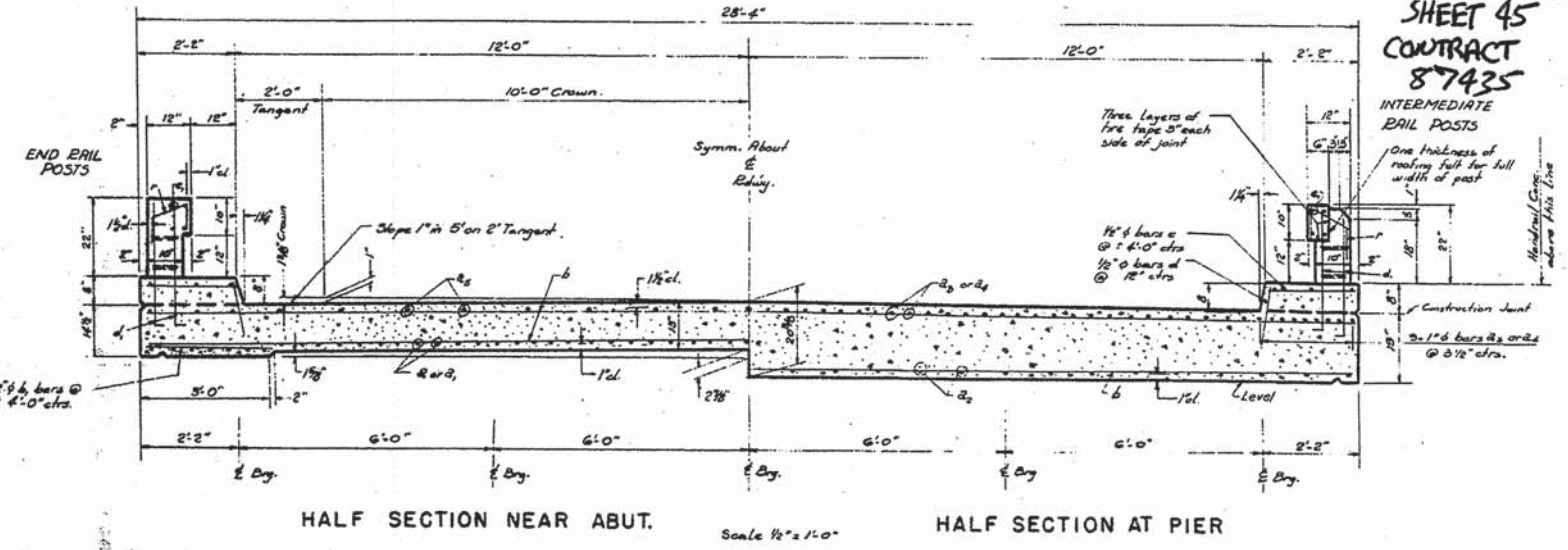
Added 4/13/15

KISHWAUKEE AIRPORT BRIDGE
OVER
KISHWAUKEE RIVER (SOUTH BRANCH)
DE KALB TOWNSHIP
DE KALB COUNTY

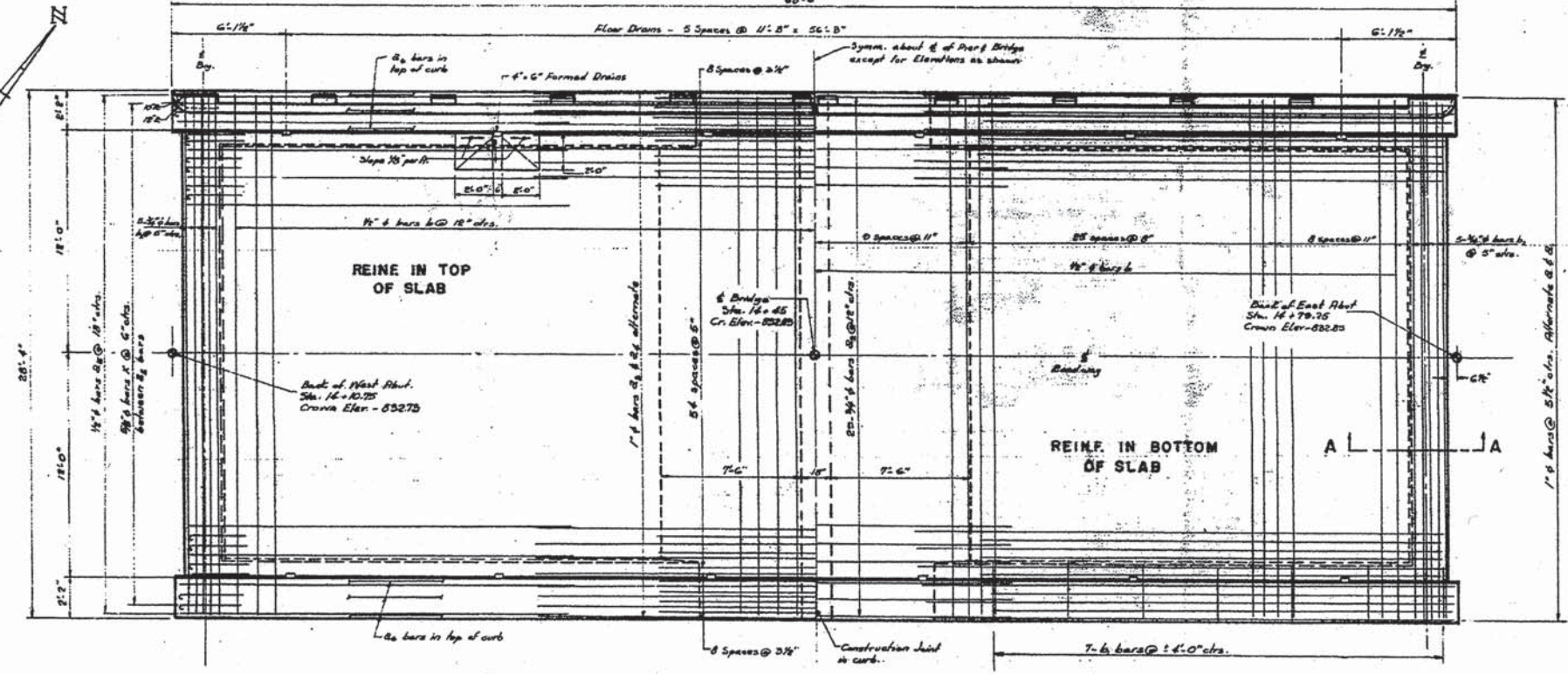
Drawn By: R.H.E.	C. K. WILLET	May, 1950
Checked By: R.H.E.	CONSULTING ENGINEERS	REVISED MAY 23, 1950 R.W.
Designed By: R.H.	DIXON ILLINOIS	SHEET NO 13 OF 17 SHEETS



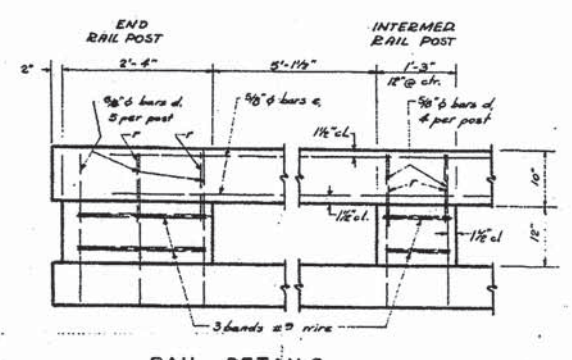
PART ELEVATION



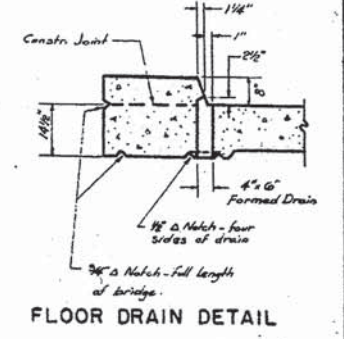
HALF SECTION NEAR ABUT. HALF SECTION AT PIER
 Scale 1/2" = 1'-0"



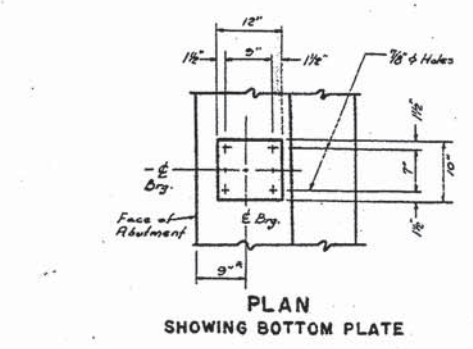
PLAN
 Scale 1/4" = 1'-0"



RAIL DETAILS
 Scale 3/4" = 1'-0"



FLOOR DRAIN DETAIL



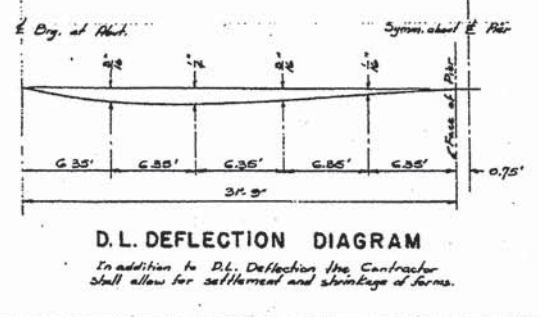
PLAN SHOWING BOTTOM PLATE

BILL OF MATERIAL - SUPERSTRUCTURE

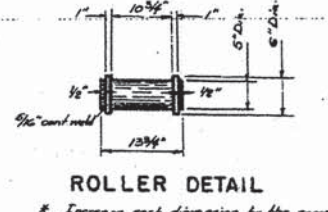
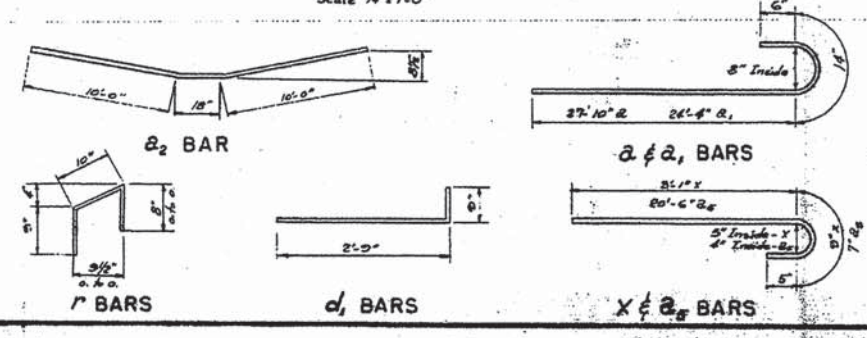
BAR NO	SIZE	LENGTH	SHAPE
a	64	1" x 6"	29'-6"
a ₁	62	1" x 6"	26'-0"
a ₂	29	3/4" x 6"	21'-6"
a ₃	37	1" x 6"	30'-0"
a ₄	36	1" x 6"	17'-0"
a ₅	40	1/2" x 6"	21'-6"
a ₆	24	1/2" x 6"	18'-0"
b	146	1/2" x 6"	28'-0"
b ₁	28	1/2" x 6"	2'-3"
d	138	1/2" x 6"	1'-0"
d ₁	100	5/8" x 6"	3'-6"
e	36	1/2" x 6"	2'-0"
e ₁	32	3/8" x 6"	17'-6"
f	48	1/2" x 6"	2'-3"
x	76	3/8" x 6"	4'-3"
b ₂	20	1/4" x 6"	28'-0"

Class X Concrete	Cu. Yds.	31.7
Handrail Concrete	Cu. Yds.	3.5
Reinforcement Bars	Lbs.	20,860
Structural Steel	Lbs.	1,670
Name Plate	Each	1
Removal of Exist. Structures	Each	1

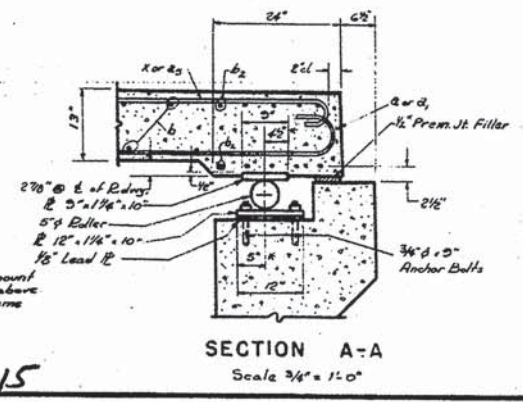
KISHWAUKEE AIRPORT BRIDGE OVER KISHWAUKEE RIVER (SO. BRANCH) DEKALB TOWNSHIP DEKALB, COUNTY



D.L. DEFLECTION DIAGRAM
 In addition to D.L. Deflection the Contractor shall allow for settlement and shrinkage of forms.

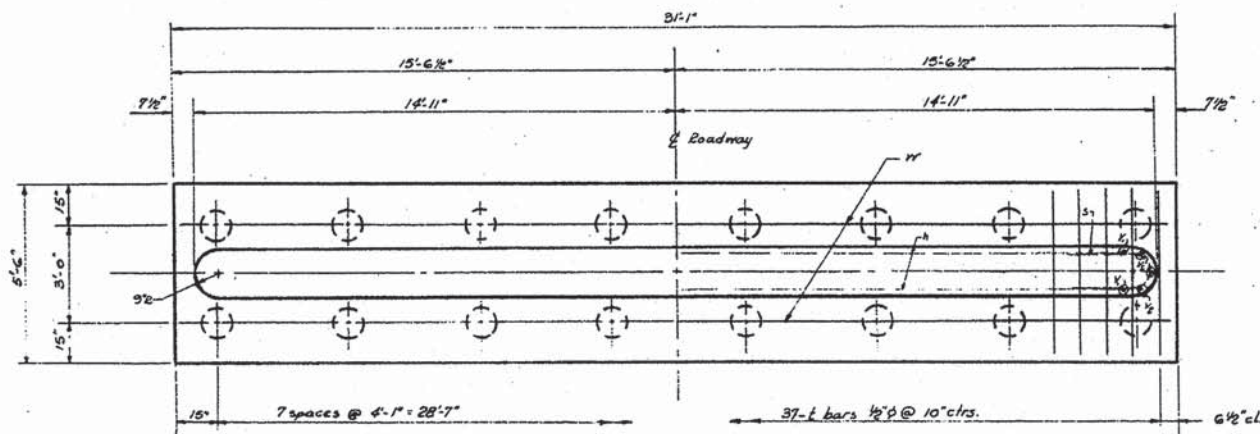


ROLLER DETAIL
 * Increase each dimension by the same amount if abutment has moved > 1/2" temperature is above 50° F. Decrease each dimension by the same amount if temp. is below 50° F.

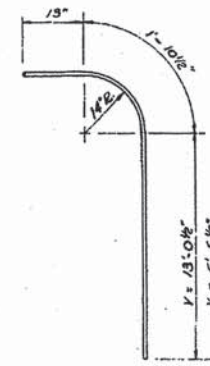


SECTION A-A
 Scale 3/4" = 1'-0"

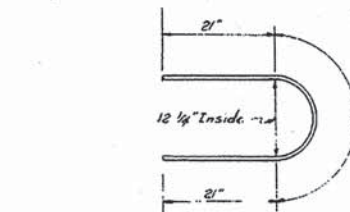
Added 4/13/15



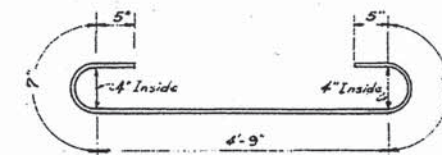
PLAN
Scale 3/8" = 1'-0"



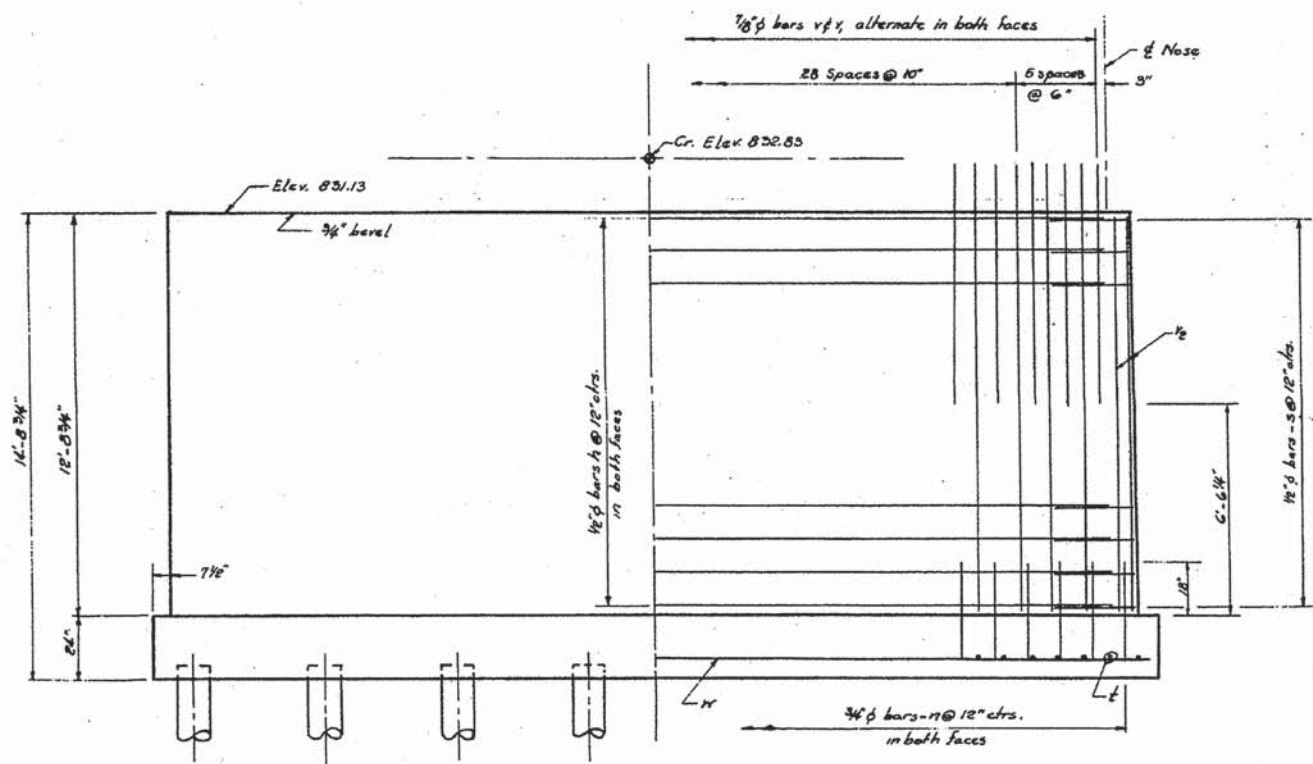
V & V1 BARS



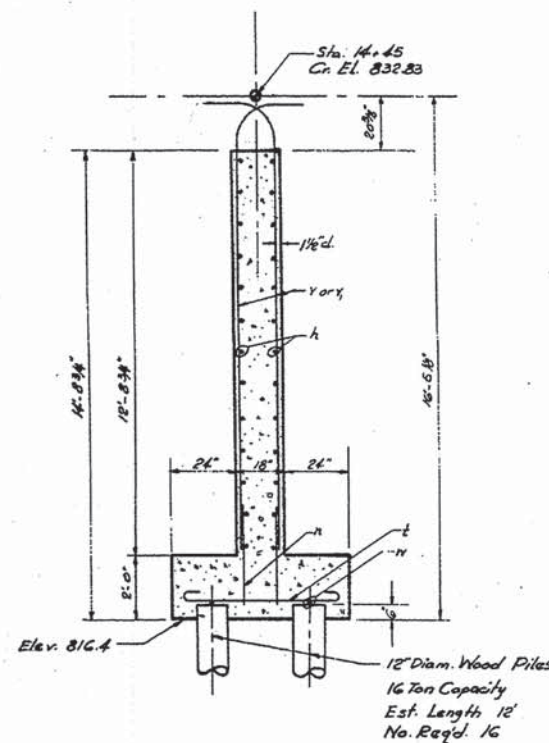
S BAR



T BAR



ELEVATION



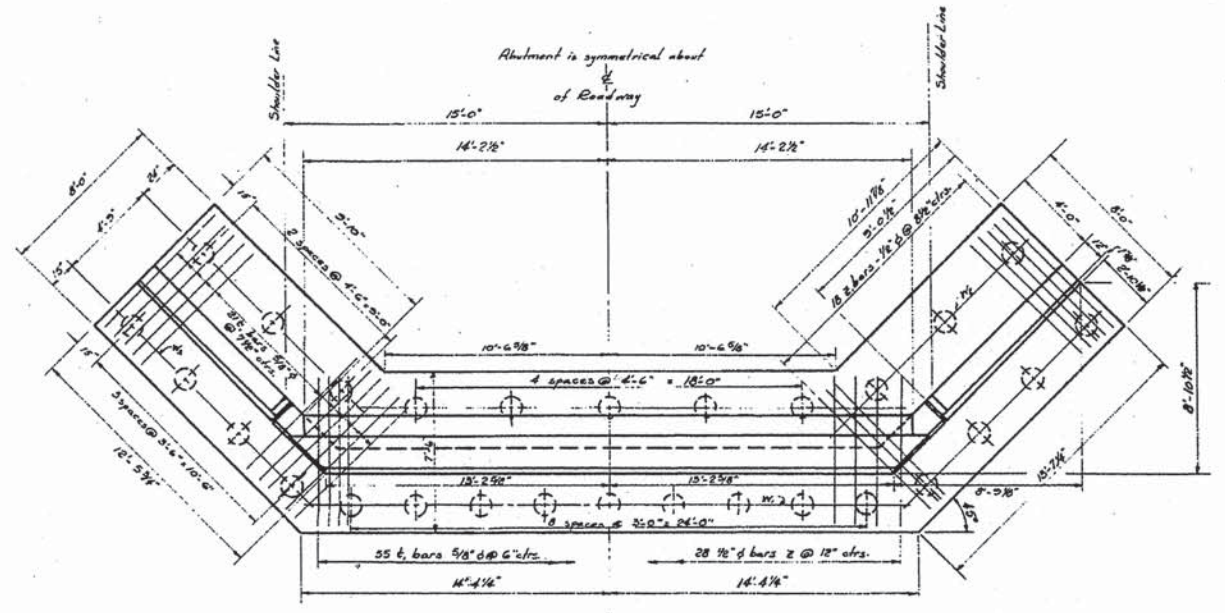
SECTION THRU PIER

BILL OF MATERIAL - PIER

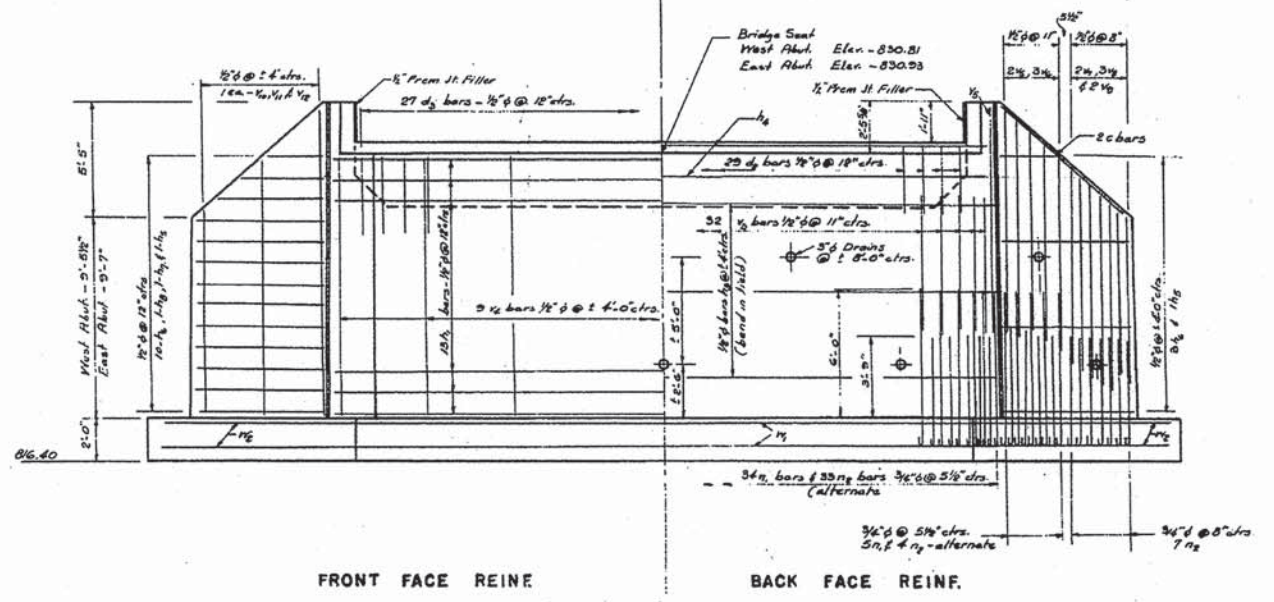
BAR	NO.	SIZE	LENGTH	SHAPE
v	38	3/8"	16'-0"	U
v1	40	3/8"	9'-6"	U
v2	6	1/2"	12'-3"	U
h	26	1/2"	28'-3"	—
n	60	3/4"	3'-0"	—
s	26	1/2"	5'-3"	U
t	37	1/2"	6'-9"	U
w	2	1/2"	29'-9"	—
Class X Concrete				Cu. Yds. 33.4
Reinforcement Bars				Lbs. 3,130
Fur. Untreat. Wood Piles (12") 12' Lg. Lin Ft.				152
Driv. Untreat. Wood Piles (12") 12' Lg. Lin Ft.				192

KISHWAUKEE AIRPORT BRIDGE
OVER
KISHWAUKEE RIVER, (SO. BRANCH)
DE KALB TOWNSHIP
DE KALB COUNTY, ILLINOIS

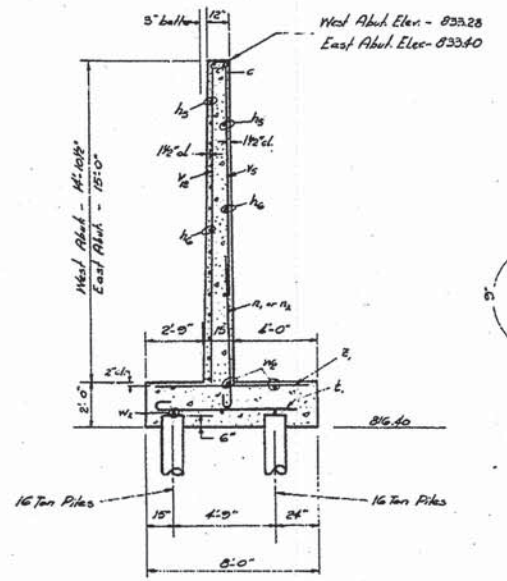
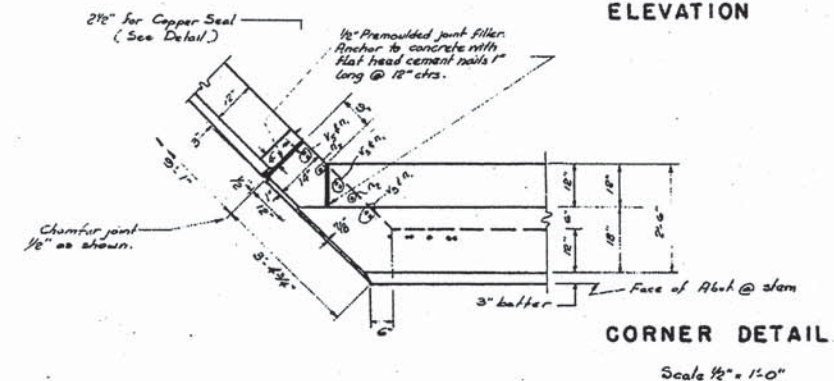
△ Added 4/13/15



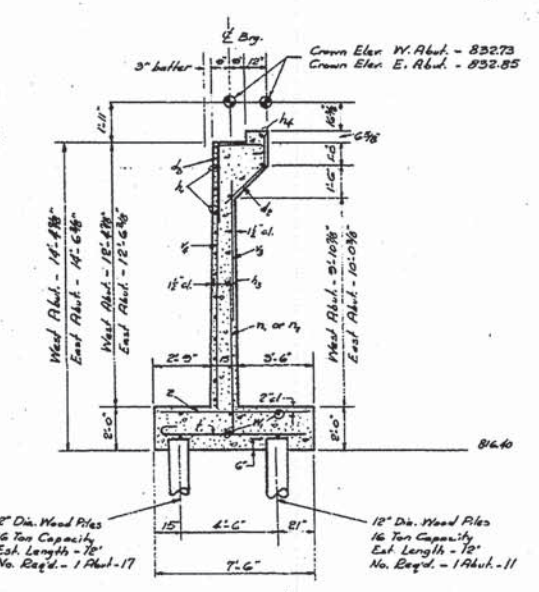
PLAN
Scale 1/4" = 1'-0"



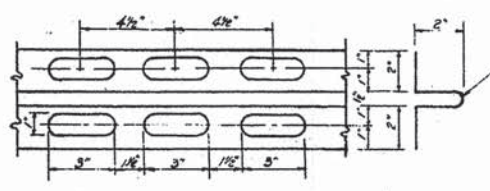
ELEVATION



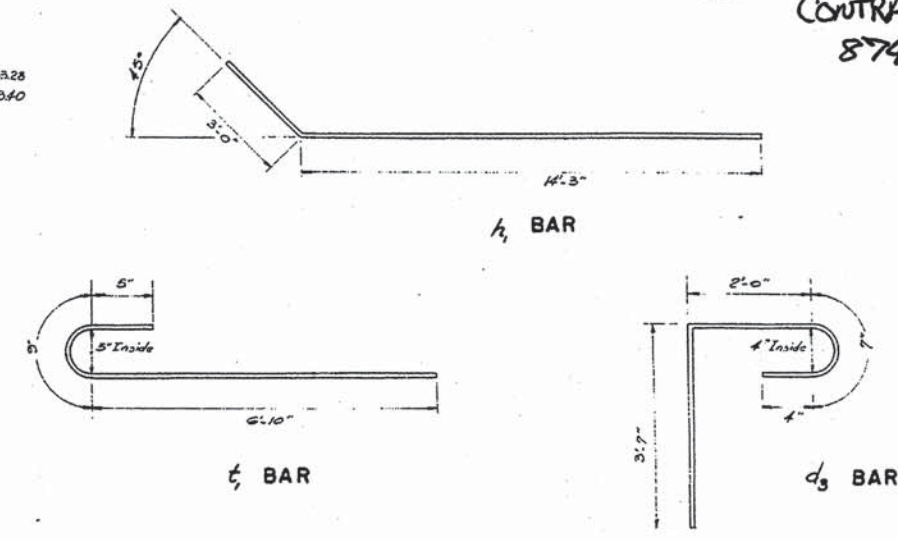
SECTION THRU WING WALL



SECTION THRU ABUTMENT



Copper seal to be 16 oz. cold rolled
annealed copper with perforated flanges.
Splices if necessary shall be soldered
or brazed. Cost to be included in contract
unit price bid for "Class X Concrete."



BILL OF MATERIALS - I ABUT.

BAR	NO	SIZE	LENGTH	SHAPE	
c	4	1/2" dia	10'-3"	—	
d ₁	20	1/2" dia	4'-3"	—	
d ₂	27	1/2" dia	6'-6"	—	
h ₁	26	1/2" dia	17'-3"	—	
h ₂	6	1/2" dia	16'-6"	—	
h ₃	2	1/2" dia	28'-0"	—	
h ₄	4	1/2" dia	4'-6"	—	
h ₅	26	1/2" dia	8'-3"	—	
h ₆	2	1/2" dia	6'-0"	—	
h ₇	2	1/2" dia	7'-6"	—	
h ₈	32	1/2" dia	7'-0"	—	
h ₉	9	1/2" dia	18'-3"	—	
h ₁₀	6	1/2" dia	11'-0"	—	
h ₁₁	6	1/2" dia	9'-9"	—	
h ₁₂	4	1/2" dia	10'-3"	—	
h ₁₃	6	1/2" dia	5'-6"	—	
h ₁₄	4	1/2" dia	8'-3"	—	
h ₁₅	2	1/2" dia	14'-9"	—	
h ₁₆	2	1/2" dia	18'-6"	—	
h ₁₇	2	1/2" dia	10'-0"	—	
h ₁₈	44	3/4" dia	8'-9"	—	
h ₁₉	55	3/4" dia	6'-6"	—	
h ₂₀	97	3/8" dia	8'-0"	—	
h ₂₁	6	1/2" dia	28'-0"	—	
h ₂₂	12	1/2" dia	18'-0"	—	
h ₂₃	28	1/2" dia	7'-0"	—	
h ₂₄	36	1/2" dia	7'-6"	—	
Class X Concrete				Cu. Yds.	58.3*
Reinforcement Bars				Lbs.	3710
Fur Untreated Wood Piles 12' Lg.				Lin. Ft.	324
Driv. Untreated Wood Piles 12' Lg.				Lin. Ft.	324
Test Pile				Each	1

* Note:
Average Quantity of East &
West Abutments.

KISHWAUKEE AIRPORT BRIDGE
OVER
KISHWAUKEE RIVER (SOUTH BRANCH)
DEKALB TOWNSHIP
DEKALB COUNTY

△ Added 4/13/15