ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FA 149	15-A 15-B	Marion	65	1
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT	419-C	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

SCALES

PLAN	1 INCH	100 FT.
PROFILE, HOR.	1 INCH	100 FT.
PROFILE, VERT.	1 INCH	10 FT.
CROSS-SECTIONS	1 INCH	5 FT.

F.A. ROUTE 149, SECTION 15-A 15-B -MARION CO.

REGULAR FEDERAL AID PROJECT 419-C

Index to Sheets Sec. 15-A

Sheets No. 1 Title Page.
" " 2 General Cross-sections, Spec. Ditch Checks Type 4, Standard No. 1527.
" " 3 Spec. Ditch Checks Type 2, Standard No. 1527.
" " 4 Plan & Profile Sta. 0+00 to 19+00
" " 5 " " 19+00 " 28+00
" " 6 " " 28+00 " 42+00
" " 7 " " 42+00 " 148+00
" " 8 " " 148+00 " 160+00
" " 9 " " 160+00 " 170+00
" " 10 " " 170+00 " 201+00
" " 11 " " 201+00 " 237+00
" " 12 " " 237+00 " 306+00
" " 13 " " 306+00 " 327+00
" " 14 " " 327+00 " 358+00
" " 15 " " 358+00 " 401+00
" " 16 " " 401+00 " 439+15
" " 17 to 54 Inel. Cross Sections
" " 55 Special Cul. Div. Sta. 24+31: 23°14'; 61°05'; 66°40'.
75+36; 81°45'; 93°38'; 140°39'.
" " 56 " " 170+61; 237°16'; 252°40'; 316°04'.
" " 57 " " 322+62; 342°40'; 343°48'; 371°16'.
" " 58 " " 388°51'; 398°26'; 417°20'; 422°26'.
" " 59 " " 430°48.5'; 1118°; 1166°.
" " 60 Standards 1676-1538.

Section 15-B

Sheets No. 1 Title Page.
" " 62 Plan & Profile Sta. 381+00 to Sta. 401+00. 439+15.
" " 63 " " 401+00 " 439+15.
" " 64 P.S. Special Bridge Design Sta. 388+16.
" " 64 P.S. Special Bridge Design Sta. 435+48.5.

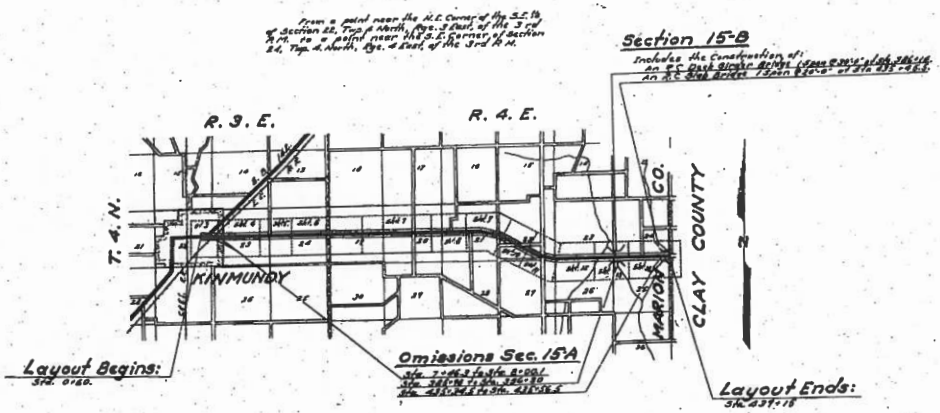
Summary of Quantities Sec. 15-A

225	units	Hedge Relay
10	Cu. Yds.	Rock Excavation for Structures
104,649	Cu. Yds.	Earth Excavation
2,200	Cu. Yds.	Rock Excavation
4,675	Cu. Yds.	Channel Excavation
8,851	Cu. Yds.	Borrow
40	Sq. Ft.	P.C.C. sidewalk 4 inch
48	Sq. Ft.	Sidewalk Removal
1	Each	Pipe Culverts to be moved
68	Cu. Yds.	Crushed Stone Gradation 2 for Sidewalk
46	Lin. Ft.	Storm Sewers (Up to 3 ft Cover) 12 inch
94	Lin. Ft.	Storm Sewers (Up to 3 ft Cover) 20 inch
120	Lin. Ft.	Storm Sewers (Up to 3 ft Cover) 30 inch
1	Each	Catch Basins Type C with Type 2 grate
1	Each	Catch Basins Type 2 to adjust
2	Each	Junction Chambers
141	Each	Drilling & Grouting Anchors
384	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover) 12 inch
1,808	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover) 15 inch
1,908	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover) 18 inch
206	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover)
81.0	Cu. Yds.	Class 2 Concrete
93,180	Lbs.	Reinforcement Bars
12	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover) 21 inch
128	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover) 24 inch
88	Lin. Ft.	Pipe Culverts (Up to 3 ft Cover) 36 inch
158	Lin. Ft.	Pipe Culverts (3 ft to 22 ft Cover) 18 inch
488	Lin. Ft.	Pipe Culverts (3 ft to 22 ft Cover) 24 inch
142	Lin. Ft.	Pipe Culverts (3 ft to 22 ft Cover) 30 inch
68	Lin. Ft.	Pipe Culverts (3 ft to 22 ft Cover) 36 inch
10	Each	Corrugated Metal Pipe Aprons 18 inch
430	Bbls.	Portland Cement

Section 15-B

288	Cu. Yds.	Channel Excavation
72	Cu. Yds.	Hydraulic Concrete
3018	Cu. Yds.	Class 2 Concrete
43,620	Lbs.	Reinforcement Bars
800	Lin. Ft.	Furnishing Untreated Piles up to 30 ft long
800	Lin. Ft.	Driving Piles 10 ft long
2	Each	Removal of Existing Structures
5	Each	Test Piles
60	Each	Hdl. Shoes
4	Each	H Pile Points
507	Bbls.	Portland Cement

LOCATION OF SECTION INDICATED THUS:—



LAYOUT
Approximate Scale 1 inch = 1 mi.
Net Length Included in Layout = 42.7431 mi. = 0.2254 mi.

STATE LINE		RETAINING WALL	
COUNTY LINE		BASE OR SURVEY LINE	
CITY, VILLAGE OR TOWN		LEVEE	
TOWNSHIP LINE		CULVERT	
SECTION LINE		STORM SEWER	
GRANT LINE		TILE DRAIN	
SECTION CORNER		DROP INLET	
FENCE LINE		TROLLEY POLE	
UNFENCED PROPERTY		POWER POLE	
RIGHT OF WAY LINE		TELEPHONE OR TELEGRAPH POLE	
GUARD RAIL		MARSH	
STEAM RAILROAD		HEDGE	
ELECTRIC RAILROAD			

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

SUBMITTED May 16 1927
P. E. Jervis
DISTRICT ENGINEER

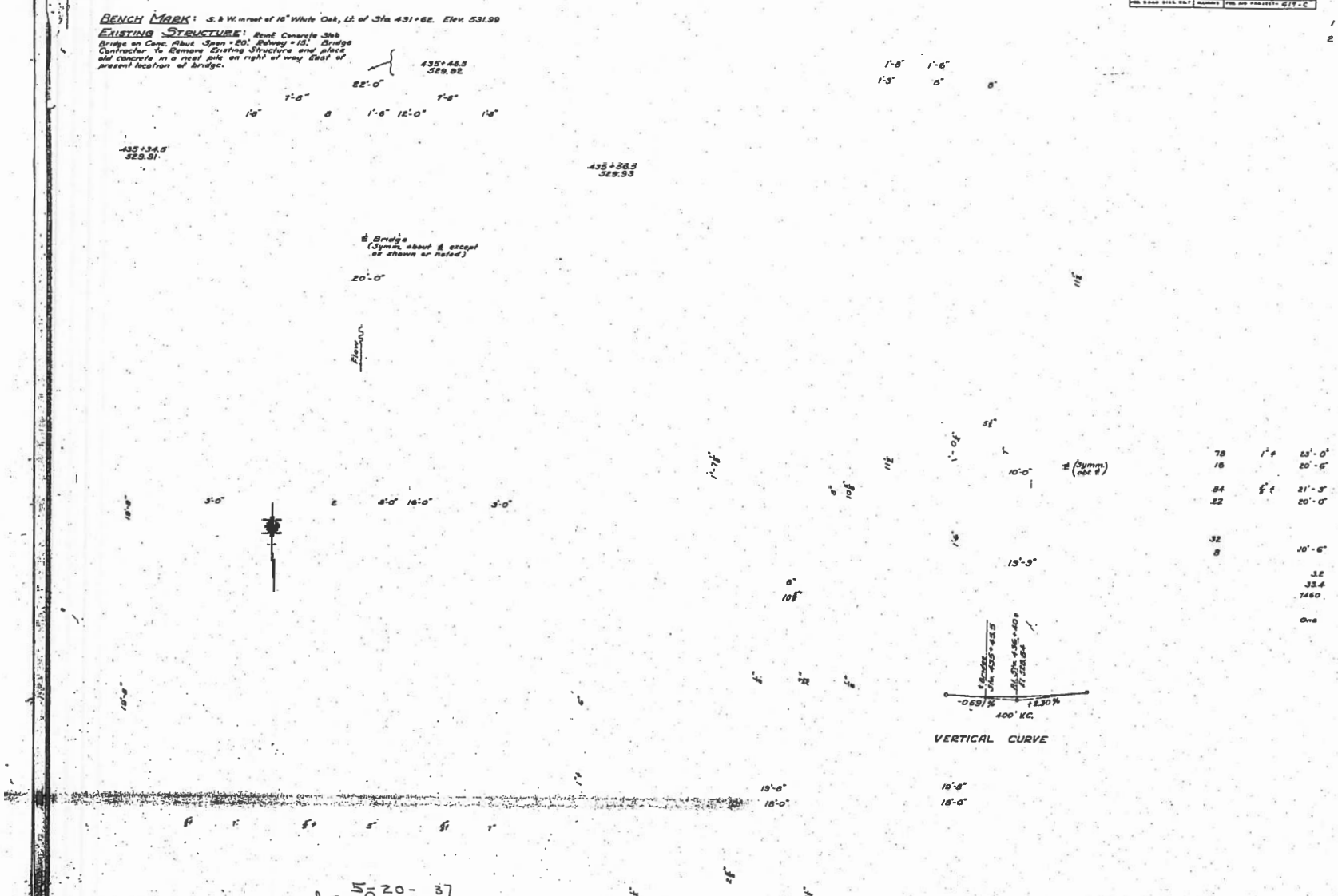
DESIGNED E.D.D. Dufour
TRACED 5-24 1927
H. Peterson
CHECKED
APPROVED 5-24 1927
Chas. Gibson
ACTING SUPERINTENDENT OF DIVISION
APPROVED 5-24 1927
H. E. Smith
DIRECTOR

RECOMMENDED FOR APPROVAL
[redacted]
DISTRICT ENGINEER, Bureau of Public Roads
RECOMMENDED FOR APPROVAL
[redacted]
CHIEF ENGINEER, Bureau of Public Roads
APPROVED
[redacted]
CHIEF, Bureau of Public Roads

7-28
E.S. Jackson

MARION COUNTY SECTION 15-A 15-B ROUTE FA. 149

DESIGNATION ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA. 149	15-B	Marion	65	64
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT- 419-C		



5-20-37

G. F. Burch

McFarman

Just Lichtenstein

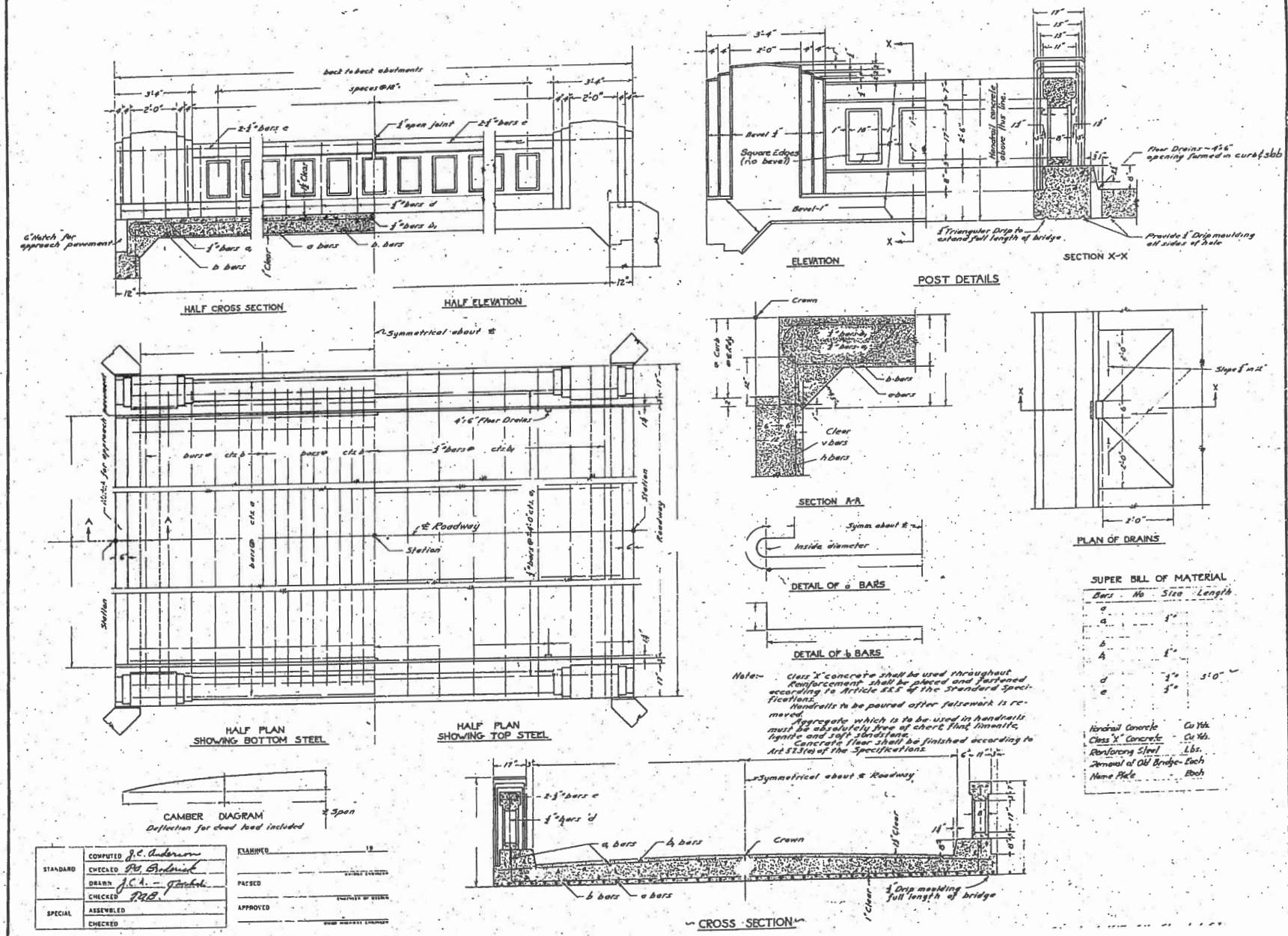
R. E. Brown Hwy. Engr.
J. C. Anderson

DRAINAGE AREA.....1600 ACRES
CHARACTER.....LEVEL, ROLLING, WOODED, & CULTIVATED
ASSUMED "C" TALBOT'S FORMULA.....0.45
OPENING PROVIDED BELOW H.W.....117 SQ. FT.

F.A. PROJ. 419-C.
SUPERSTRUCTURE
F.A. RT. 149 (S.A. 9) SEC. 15-B
MARION CO.
STA. 435+45.5

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET No.
SHEETS



Note:- Class "X" concrete shall be used throughout.
Reinforcement shall be placed and fastened according to Article 55.5 of the Standard Specifications.
Handrails to be poured after falsework is removed.
Aggregate which is to be used in handrails must be absolutely free of chert, flint, limonite, lignite and soft sandstone.
Concrete floor shall be finished according to Art. 57.3(e) of the Specifications.

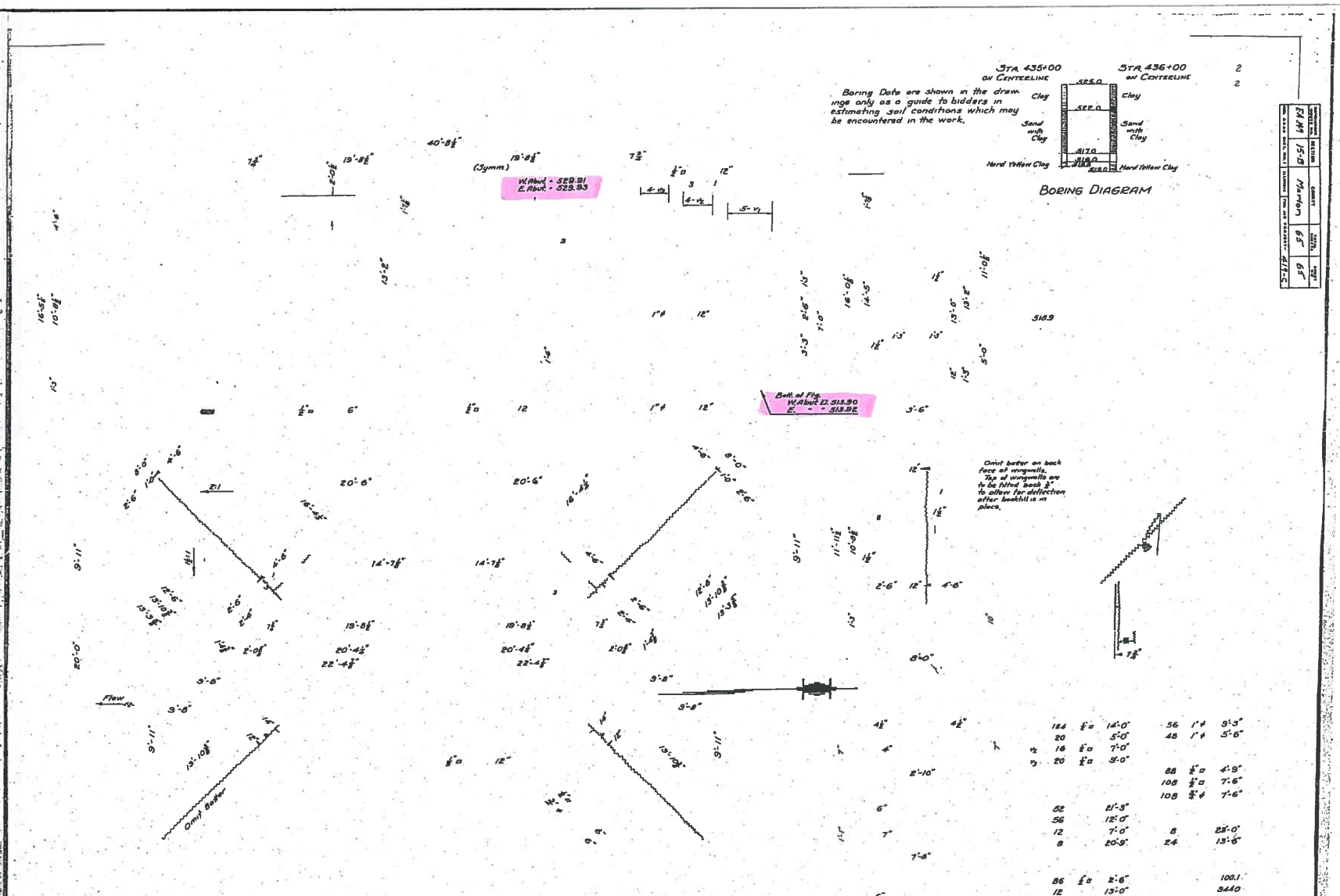
SUPER BILL OF MATERIAL

Bars	No	Size	Length
a			
a_1		½"	
b			
b_1		½"	
d		½"	3'-0"
e		½"	

Handrail Concrete	Cu Yds.
Class "X" Concrete	Cu Yds.
Reinforcing Steel	Lbs.
Removal of Old Bridge	Each
Name Plate	Each

STANDARD	COMPUTED	J.C. Anderson
	CHECKED	P.A. Broderick
	DRAWN	J.C.A. – [illegible]
	CHECKED	T.A.B.
SPECIAL	ASSEMBLED	
	CHECKED	

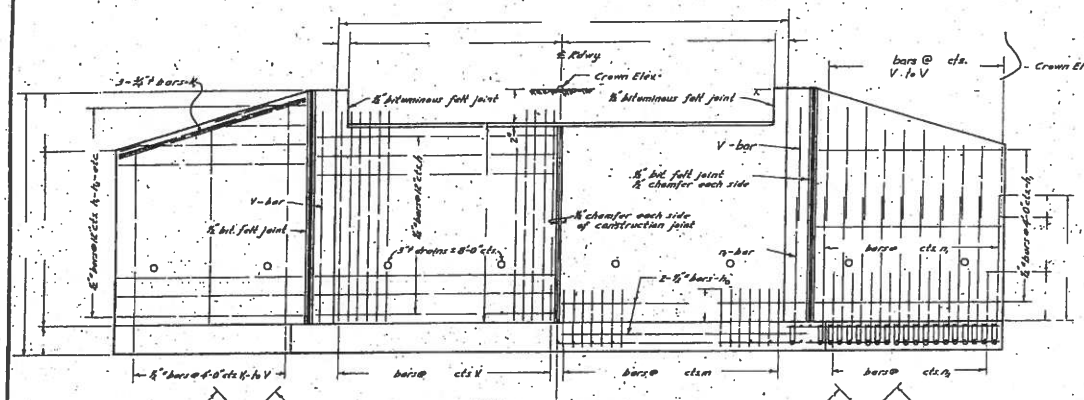
EXAMINED 19
DIVISION ENGINEER
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER



Boring Data are shown in the drawings only as a guide to bidders in estimating soil conditions which may be encountered in the work.
STA. 435+00 ON CENTERLINE
STA. 436+00 ON CENTERLINE
Clay
Sand with Clay
Hard Yellow Clay
BORING DIAGRAM
W. Abut. = 529.91
E. Abut. = 529.93
Batt. of Flg.
W. Abut. El. 513.90
E. " " 513.92
Omit batter on back face of wingwalls. Top of wingwalls are to be tilted back 3/4" to allow for deflection after backfill is in place.
Flow
Omit Batter
5-20-37
A.E. Brown
J.C. Anderson
F.A. PROJ. 419C
SUBSTRUCTURE
F.A. RTE. 149 (S.A.9) SEC. 15-B
MARION CO.
STA. 435+45.5

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS.
DIVISION OF HIGHWAYS

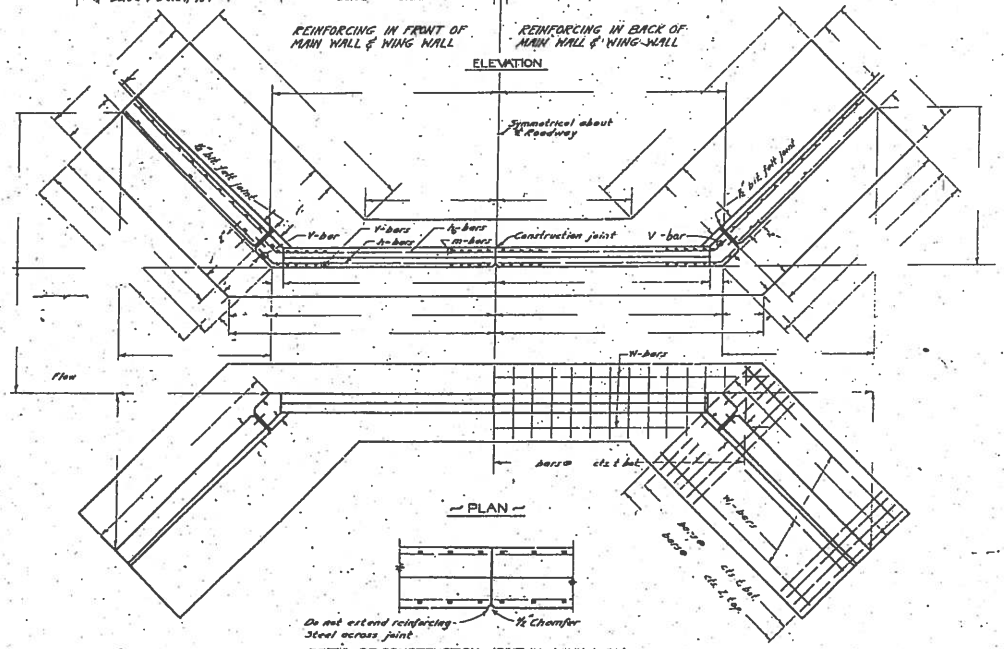
SHEET NO.
SHEETS



REINFORCING IN FRONT OF MAIN WALL & WING WALL

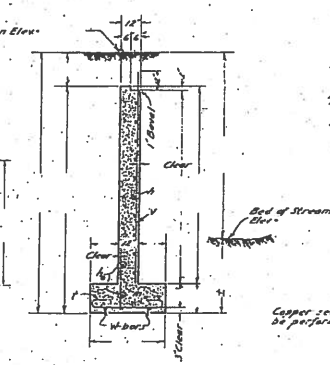
REINFORCING IN BACK OF MAIN WALL & WING WALL

ELEVATION

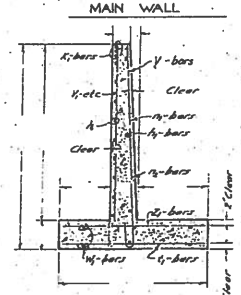


~ PLAN ~

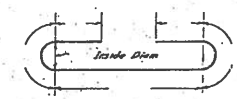
DETAIL OF CONSTRUCTION JOINT IN MAIN WALL



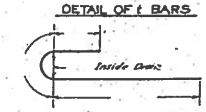
SECTION THROUGH MAIN WALL



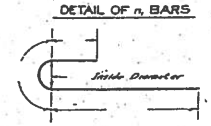
END OF WING



DETAIL OF t BARS

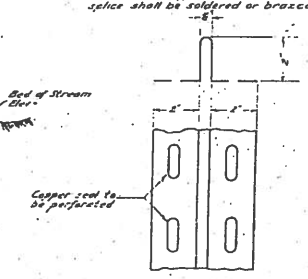


DETAIL OF n_1 BARS

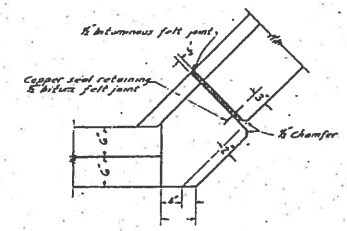


DETAIL OF n_2 BARS

Note.—
Copper seal shall be 16 oz. cold rolled annealed copper with outside legs perforated. Cost of copper seal to be included in unit price bid for Class "X" concrete. If copper seal is not in one piece, splice shall be soldered or brazed.



DETAIL OF COPPER SEAL



DETAIL OF BITUMINOUS FELT JOINT

BILL OF MATERIAL FOR TWO ABUTMENTS

Bars	No.	Size	Length	Bars	No.	Size	Length
V				n_1			
V_1		½"		n_2			
				t			
				t_1			
				t_2			
h		½"					
h_1		½"					
h_2		½"		W		½"	
h_3		½"		W_1		½"	
m				Class "X" Conc. - Cu. Yds.			
K_1		¾"		Reinforcing Steel - Lbs.			

STANDARD	COMPUTED	J.C. Anderson
	CHECKED	P.A. Bendrick
	DRAWN	J.C.A. J. Malenki
	CHECKED	P.A.B.
SPECIAL	ASSEMBLED	
	CHECKED	

EXAMINED _____ 19__
CHIEF ENGINEER

PASSED _____
ENGINEER OF DESIGN

APPROVED _____
CHIEF HIGHWAY ENGINEER

General Notes:—
Class "X" concrete shall be used throughout.
Reinforcement bars shall be placed and fastened according to Article 555 of the Standard Specifications.
No Embankment shall be placed until the entire structure is completed. Embankments shall be carried up simultaneously at both abutments and at no time shall the embankment at one abutment be more than 2 ft. higher than at other abutment.

Standard 1619-AN-Sheet 2 of 2