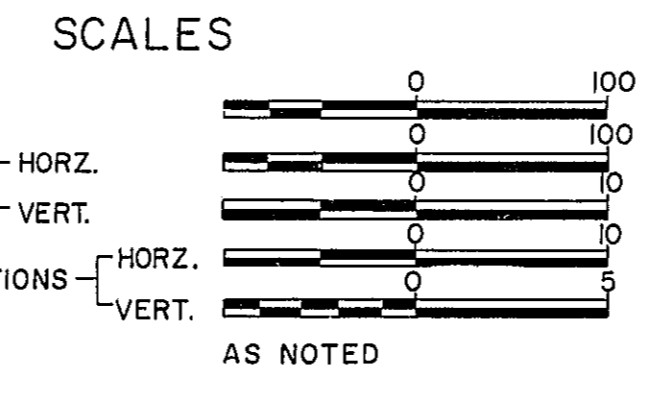


INDEX OF SHEETS

1	TITLE SHEET
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7	PLAN & PROFILE SHEET - F.A.I. 55
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26 - 30	CROSS SECTIONS - T.R. 37 & CONNECTOR
31 - 32	CROSS SECTIONS - F.A.I. 55
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	STANDARDS 1686-3 AND 2153-8
	STANDARD 2228-1
	STANDARD 2230-5
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	STANDARD 2235-3
	STANDARD 2262
	STANDARD 2298-2
	STANDARD 2299-1
	STANDARD 2300
	STANDARD 2302-1
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	STANDARD 2314-1
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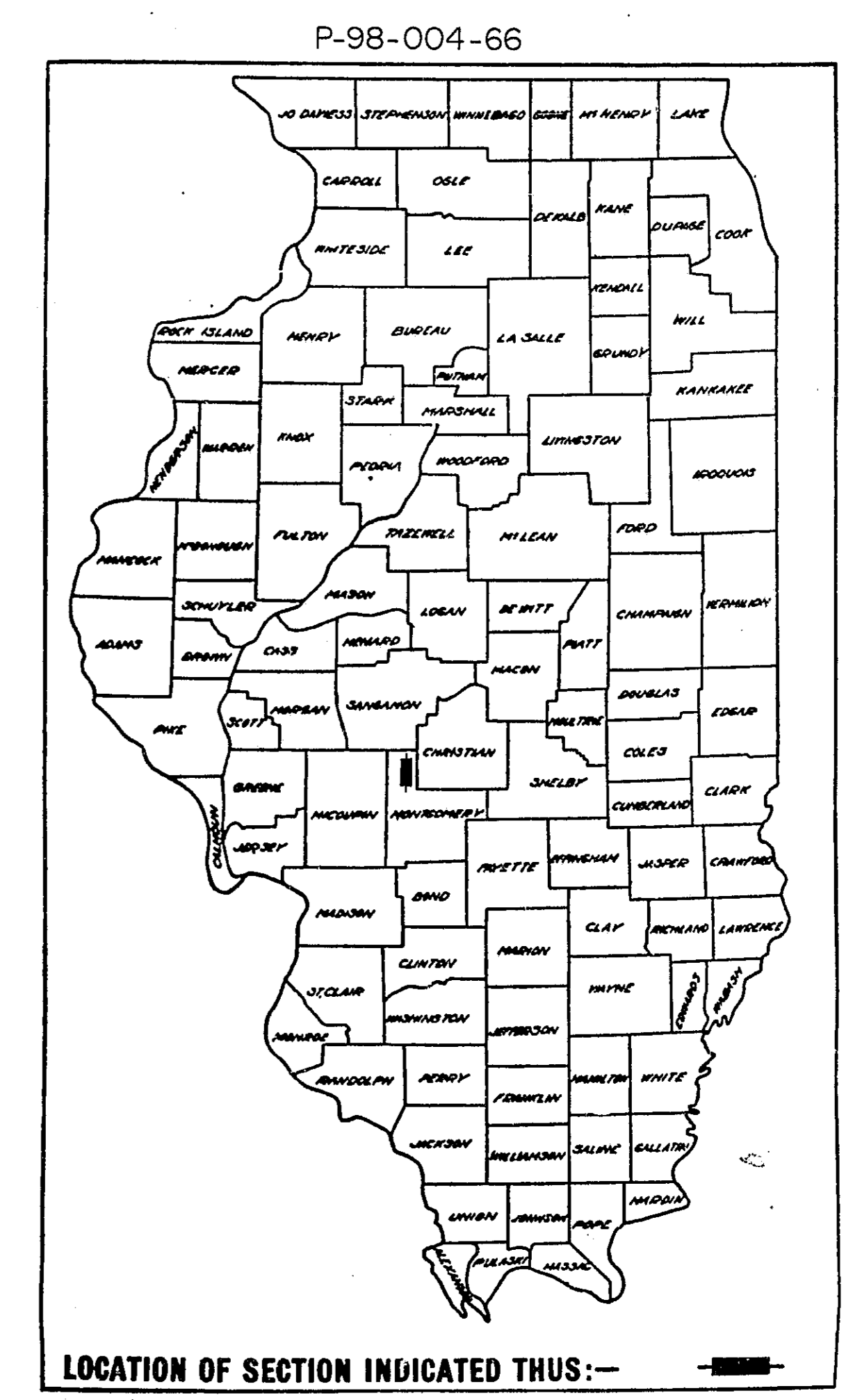
**STATE OF ILLINOIS**  
**DEPARTMENT OF PUBLIC WORKS AND BUILDINGS**  
**DIVISION OF HIGHWAYS**  
**PLANS FOR PROPOSED**  
**FEDERAL AID INTERSTATE HIGHWAY**  
**ROUTE 55**

PROJECT I-55-2(3)69  
SECTION 68-4HB-1



MONTGOMERY COUNTY  
ROADWAY CONSTRUCTION  
C-96-071-70

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 55	68-4HB-1	MONT.	32	1
S. P. R. REG. NO. 1		ILLINOIS PROJECT	I-55-2(3)69	



**DESIGN DESIGNATION**

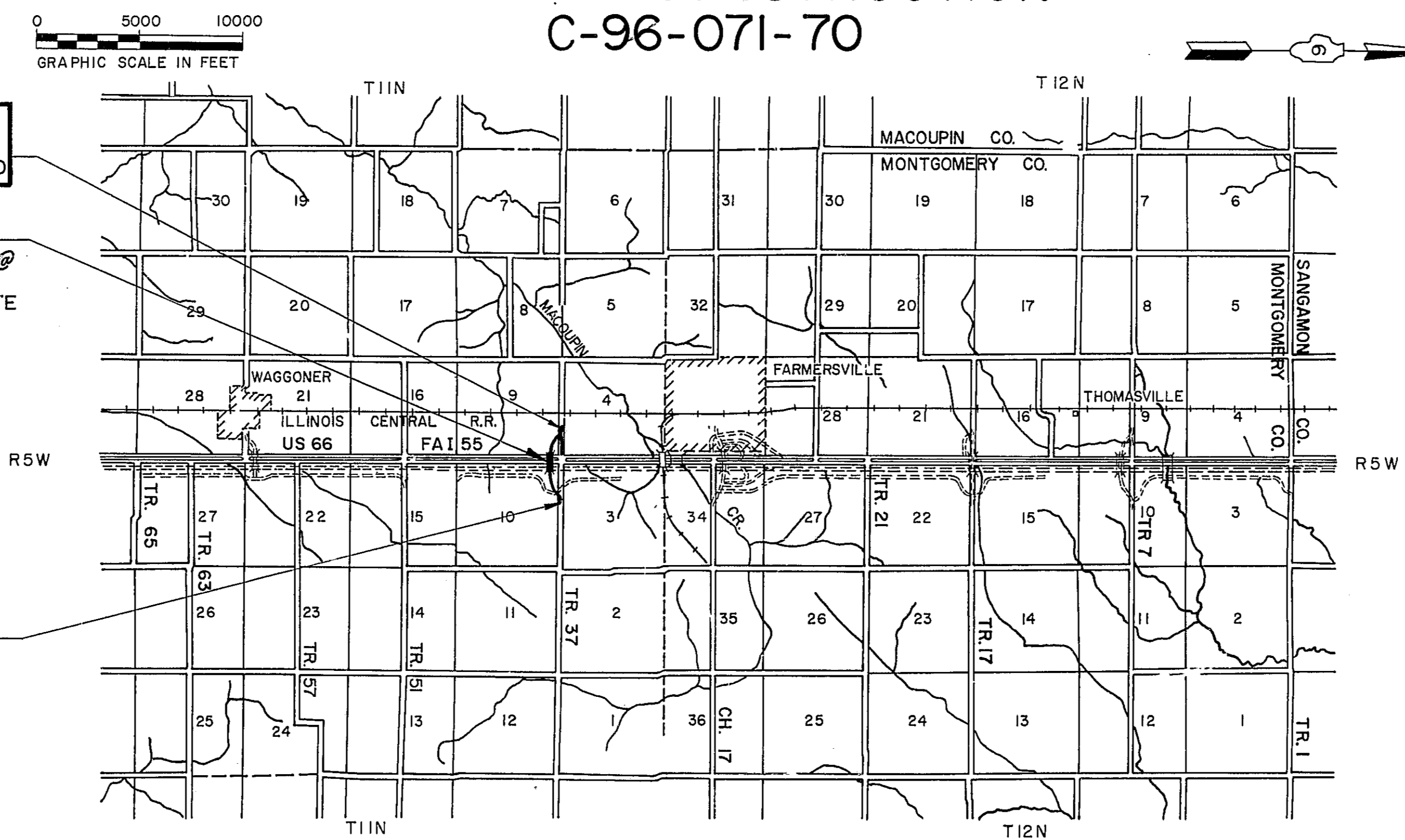
T.R. 37  
140(79) F-0.0036 (B-15)  
MAXIMUM GRADE = +4.80 %  
LENGTH OF MAXIMUM GRADE = 1150 FT.  
MINIMUM HORIZONTAL RADIUS = 819.51 FT.  
MINIMUM STOPPING SIGHT DISTANCE = 450 FT.

F.A.I. 55  
3184(90) A-I TRUNK-5.56 (C.R.C.-20)  
MAXIMUM GRADE ADJACENT TO STRUCTURE = +0.164 %  
LENGTH OF MAXIMUM GRADE = 1150 FT.  
MINIMUM HORIZONTAL RADIUS = INFINITE LENGTH  
MINIMUM STOPPING SIGHT DISTANCE = 850 FT.

SECTION 68-4HB-1 INCLUDES THE CONSTRUCTION OF A STEEL PLATE GIRDER BRIDGE CONSISTING OF 3 SPANS @ 88'-6", 101'-1", 99'-6", WITH VAULTED APPROACH ABUTMENTS WITH PRE-CAST, PRE-STRESSED CONCRETE BEAMS WITH SPANS OF 28'-6 1/2" AND LOCATED AT STA. 1131+45.27. T.R. 37 TOTAL BRIDGE OMISSION IS 345'-2".

PROJ. I-55-2(3)69  
SECTION 68-4HB-1  
BEGINS STA. 35+00

PROJ. I-55-2(3)69  
SECTION 68-4HB-1  
ENDS STA. 64+00



NET LENGTH OF SECTION 68-4HB-1 = 2900 00 FT. = 0.549 MILES  
NET LENGTH OF PROJECT I-55-2(3)69 = 0 FT. = 0 MILES  
NET LENGTH OF F.A.I. 55 = 0 FT. = 0 MILES

ROADWAY PLANS PREPARED BY  
**WESTENHOFF AND NOVICK, INC.**  
CONSULTING ENGINEERS  
CHICAGO, ILLINOIS  
SUBMITTED *Howard S. Newman*  
ILLINOIS P.E. # 19417

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

SUBMITTED: 10-26-70

EXAMINED: 10-26-70  
*William S. Newman*  
DIRECTOR

PASSED: 10-26-70  
*W.C. Bauman*  
ENGINEER OF DESIGN

APPROVED: 10-26-70  
*Richard J. Bauman*  
CHIEF HIGHWAY ENGINEER

APPROVED: 10-26-70  
*W.M. F. Collins*  
DIRECTOR

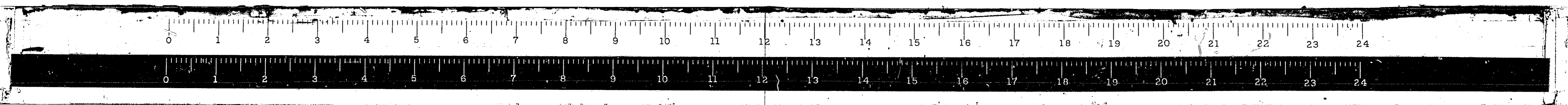
DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: \_\_\_\_\_

DIVISION ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_

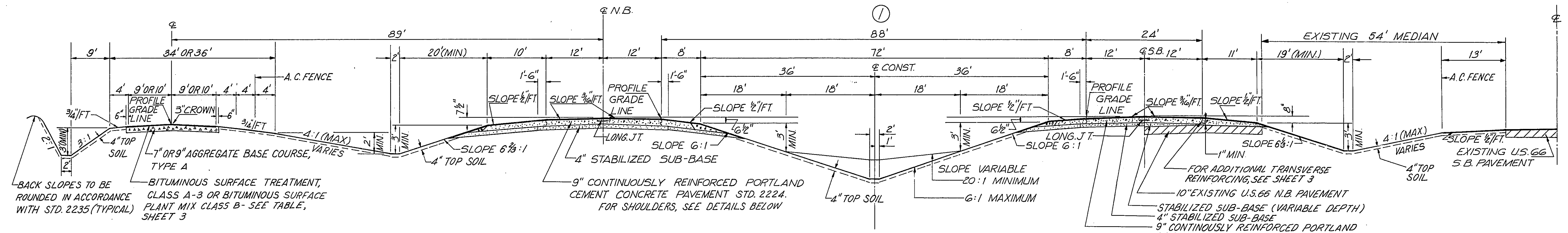
CONTINUED ON SHEET 2

MONTGOMERY COUNTY SECTION 68-4HB-1 F. A. ROUTE I-55



**THIS SHEET FOR INFORMATION ONLY**

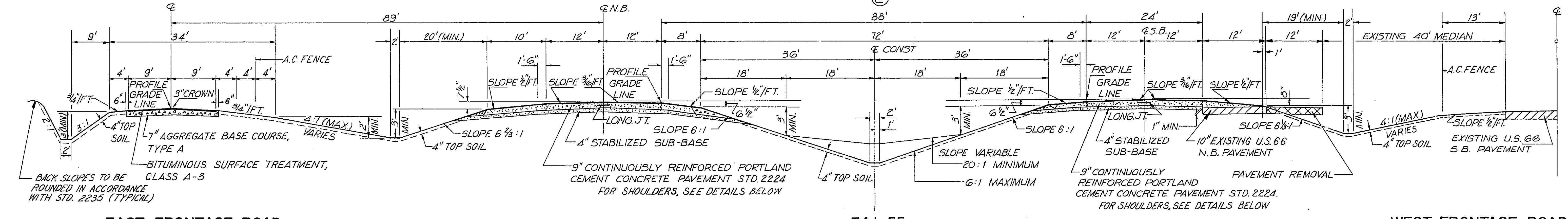
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI.55	69-418-1	MONT.	32	2
FED ROAD DIST NO 4 ILLINOIS PROJ.				



**EAST FRONTAGE ROAD**  
 STA. 110+19.95 TO STA. 1124+92.82 & SERVICE DRIVE #2  
 TRANSITION FROM SEC. ① AT STA. 1124+92.82 TO SEC. ② AT STA. 1126+00.82 & SERVICE DRIVE #2  
 STA. 1138+69.37 TO STA. 1181+36.96 & SERVICE DRIVE #3  
 TRANSITION FROM SEC. ① AT STA. 1181+36.96 TO SEC. ③ AT STA. 1182+15.72 & SERVICE DRIVE #3  
 STA. 1212+01.34 TO STA. 1275+38.71  
 TRANSITION FROM SEC. ① AT STA. 1275+38.71 TO SEC. ② AT STA. 1276+63.71  
 STA. 1297+16.15 TO STA. 1342+26.08

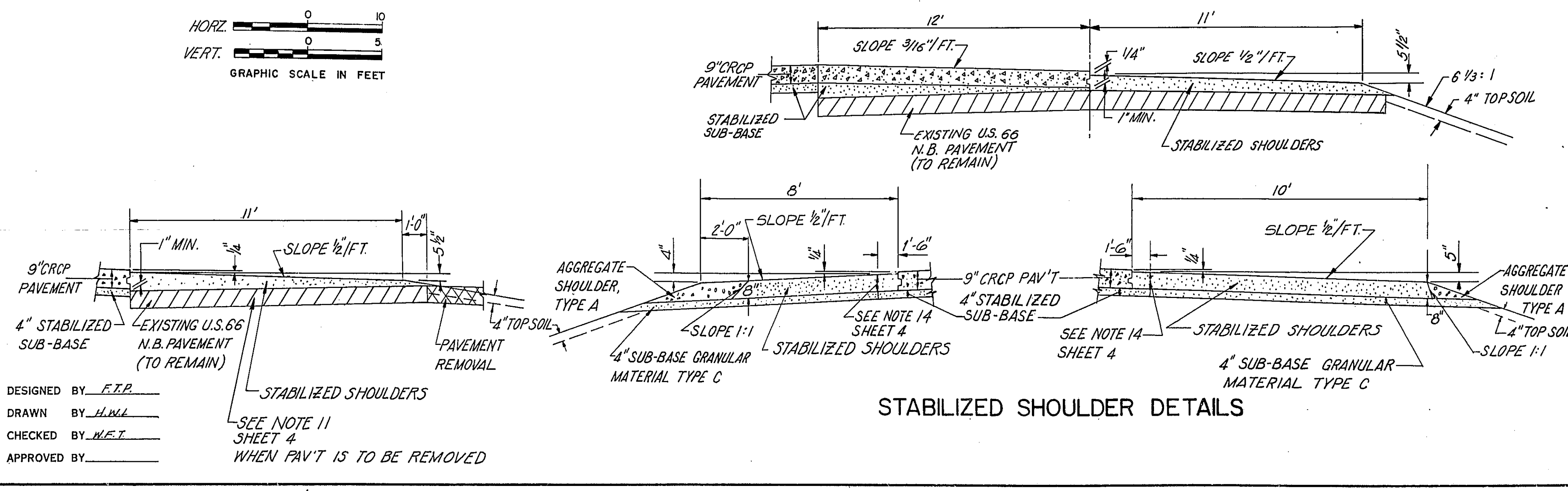
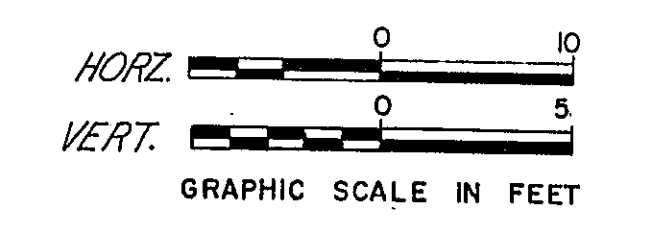
**WEST FRONTAGE ROAD**  
 STA. 1110+19.95 TO STA. 1342+26.08

**PAV'T ANALYSIS DATA FOR F.A.I.-55**  
 STRUCTURAL DESIGN TRAFFIC: YEAR 1980 P.C.=14,840 S.U.=1,320 M.U.=3,960  
 CLASS I ROADS AND STREETS  
 MINIMUM SOILS SUPPORT: CBR=2 (STA. 1052+50 TO STA. 1342+26.08)  
 PER CENT OF S.D.T. IN DESIGN LANE: U<sub>p</sub>=32, U<sub>s</sub>=45, U<sub>m</sub>=45  
 T.F.=15.56



**EAST FRONTAGE ROAD**  
 STA. 1101+88.00 TO STA. 1110+19.95

**WEST FRONTAGE ROAD**  
 STA. 1052+50 TO STA. 1079+06.19  
 TRANSITION FROM SEC. ② AT STA. 1079+06.19 TO SEC. ① AT STA. 1110+19.95



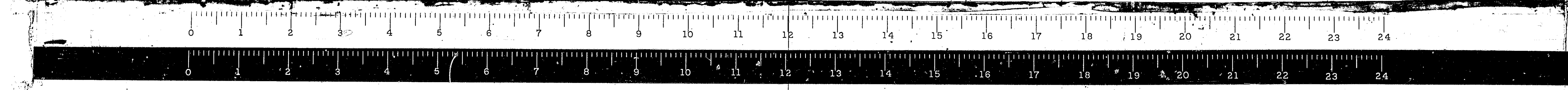
- GENERAL NOTES:**
1. THE NOMINAL THICKNESSES FOR SUBBASE GRANULAR MATERIAL, BASE AND SURFACE COURSES ARE SHOWN ON THE TYPICAL SECTIONS, STANDARDS, SCHEDULES OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESS OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90 PER CENT OF THE NOMINAL THICKNESS AT ANY LOCATION.
  2. THE THICKNESS OF BITUMINOUS MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
  3. IN AREAS WHERE THE NEW PAVEMENT IS TOTALLY OFFSET FROM THE PRESENT NORTHBOUND LANE, THE EDGE OF THE EXISTING PAVEMENT IS TO BE USED AS A FORM LINE REGARDLESS OF THE NEW PAVEMENT'S ALIGNMENT.
  4. CONCRETE FOUNDATIONS, CONCRETE SLABS, EXISTING CULVERTS, HEADWALLS TO BE REMOVED, ETC. SHALL BE CONSIDERED AS INCIDENTAL TO EARTH EXCAVATION IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS.
  5. WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR

- SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THIS LOCATION.
6. THE CROWN SHALL BE REMOVED FROM ALL PAVEMENTS BUILT WITH SUPERELEVATION. THE CROWN SHALL BE REMOVED OR INCORPORATED IN THE LENGTH OF SUPERELEVATION ATTAINMENT.
  7. SEE STD. NO. 2224 & 2225 FOR PAVEMENT & REINFORCEMENT DETAILS.
  8. ALL EXISTING MEDIAN CROSS OVERS SHALL BE REMOVED. WORK CONSIDERED INCIDENTAL TO EARTH EXCAVATION
  9. SEE ADDITIONAL NOTES ON SHEET 4.

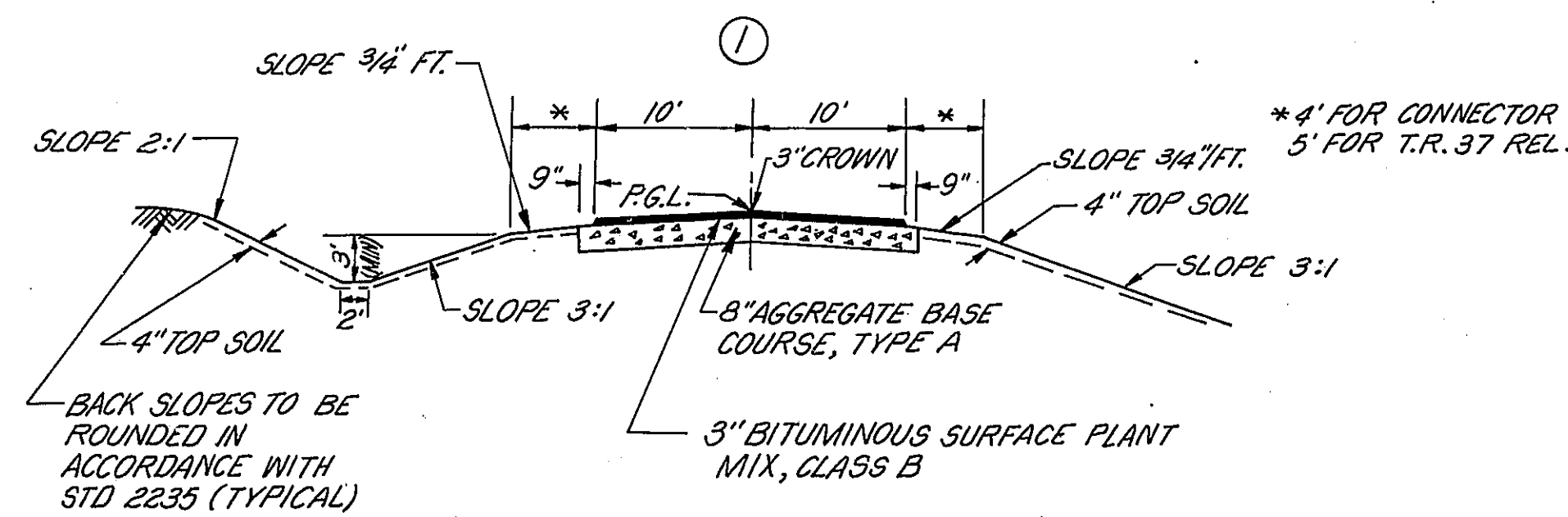
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

**TYPICAL SECTIONS**

WESTENHOFF AND NOVICK, INC.  
 CONSULTING ENGINEERS

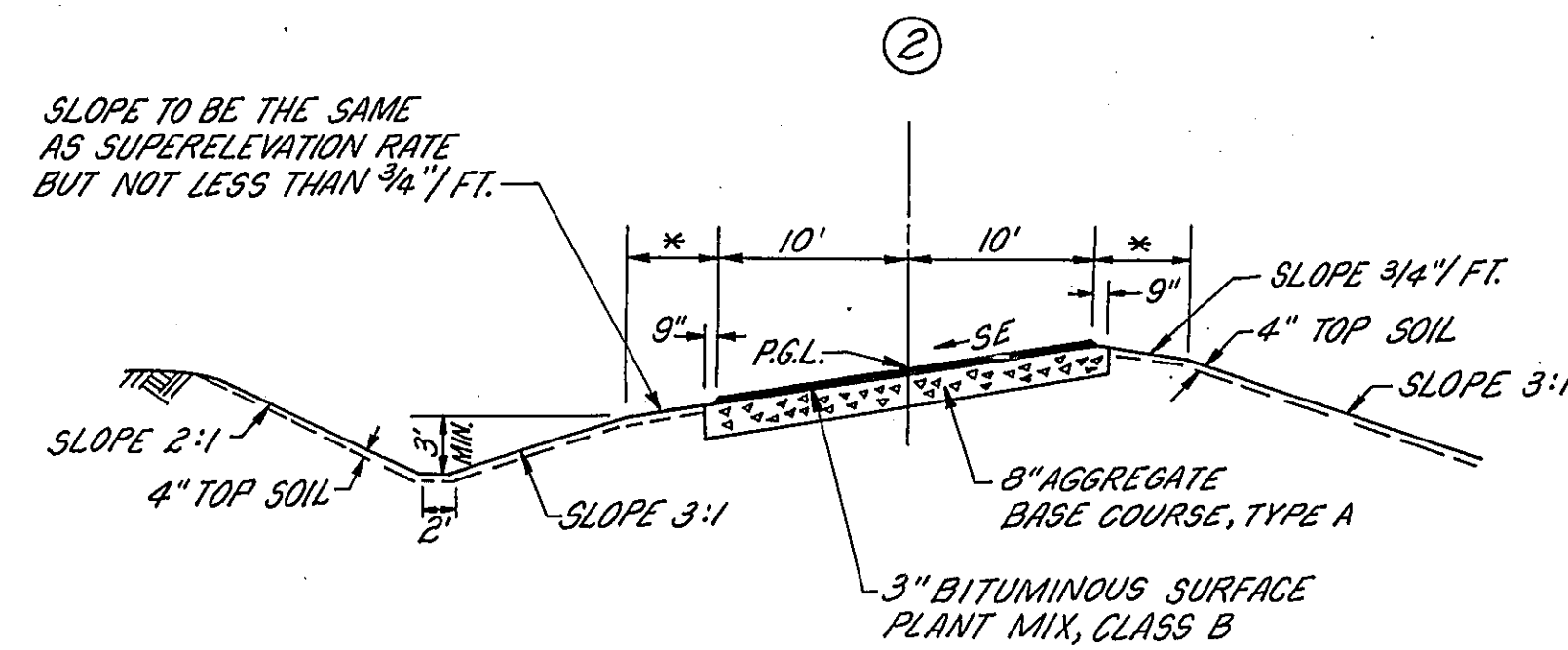


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 55	68-48B-1	MONT.	32	3
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				



**TOWN ROAD 37-NORMAL**

STA. 35+00 TO STA. 35+26.10  
 TRANSITION FROM SEC. ① AT STA. 35+26.10 TO SEC. ② AT STA. 36+31.10  
 STA. 41+01.72 TO STA. 41+31.10  
 TRANSITION FROM SEC. ① AT STA. 41+31.10 TO SEC. ② AT STA. 42+56.10  
 STA. 47+18.40 TO STA. 48+03.63  
 STA. 48+03.63 TO STA. 51+48.79 BRIDGE OMISSION (SEE SHEET 3 - FOR BRIDGE TYPICAL SECTION)  
 STA. 51+48.79 TO STA. 52+13.05  
 TRANSITION FROM SEC. ① AT STA. 52+13.05 TO SEC. ② AT STA. 53+38.05  
 STA. 57+78.86 TO STA. 58+03.24  
 TRANSITION FROM SEC. ① AT STA. 58+03.24 TO SEC. ② AT STA. 59+28.24  
 STA. 63+72.43 TO STA. 64+00  
 STA. 0+11.55 TO STA. 1+03.91 @ CONNECTOR  
 TRANSITION FROM SEC. ① AT STA. 1+03.91 TO SEC. ② AT STA. 2+13.91 @ CONNECTOR  
 STA. 4+24.20 TO STA. 7+62.99 @ CONNECTOR



**TOWN ROAD 37-SE LEFT**

STA. 42+56.10 TO STA. 45+92.40  
 TRANSITION FROM SEC. ② AT STA. 45+92.40 TO SEC. ① AT STA. 47+18.40  
 STA. 53+38.05 TO STA. 56+53.86  
 TRANSITION FROM SEC. ② AT STA. 56+53.86 TO SEC. ① AT STA. 57+78.86

**TOWN ROAD 37-SE RIGHT**

STA. 36+31.10 TO STA. 39+76.72  
 TRANSITION FROM SEC. ③ AT STA. 39+76.72 TO SEC. ① AT STA. 41+01.72  
 STA. 59+28.24 TO STA. 62+47.43  
 TRANSITION FROM SEC. ③ AT STA. 62+47.43 TO SEC. ① AT STA. 63+72.43  
 STA. 2+13.91 TO STA. 3+16.20 @ CONNECTOR  
 TRANSITION FROM SEC. ③ AT STA. 3+16.20 TO SEC. ① AT STA. 4+24.20 @ CONNECTOR

DESIGNED BY F.T.P.  
 DRAWN BY S.D.D.  
 CHECKED BY H.S.N.  
 APPROVED BY \_\_\_\_\_

**PAV'T ANALYSIS DATA FOR T.R.37**

STRUCTURAL DESIGN TRAFFIC: YEAR 1979 RC:100 U.S. 39 M.U. 1  
 CLASS II ROADS AND STREETS  
 MINIMUM SOILS SUPPORT: CBR=2.0 (STA. 35+00 TO 64+00)  
 PER CENT OF S.D.T. IN DESIGN LANE Up=50, Us=50, Um=50  
 T.F. = 0.0036

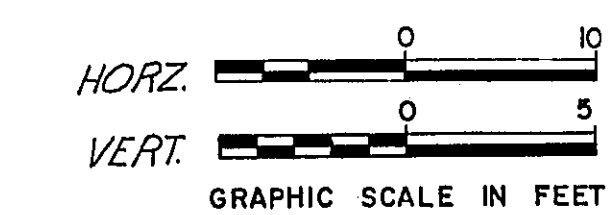
**PAV'T ANALYSIS DATA FOR T.R.37 CONNECTOR**

STRUCTURAL DESIGN TRAFFIC: YEAR 1979 RC:89 U.S. 35 M.U. 1  
 CLASS III ROADS AND STREETS  
 MINIMUM SOILS SUPPORT: CBR=2.0 (STA. 0+11.55 TO 7+62.99)  
 PER CENT OF S.D.T. IN DESIGN LANE Up=50, Us=50, Um=50  
 T.F. = 0.0033

**GENERAL NOTES:**

1. THE NOMINAL THICKNESSES FOR BASE AND SURFACE COURSE ARE SHOWN ON THE TYPICAL SECTIONS, STANDARDS, SCHEDULES OR SPECIAL DETAILS. THE CONSTRUCTED THICKNESS OF THE ABOVE ITEMS SHALL NOT BE LESS THAN 90 PER CENT OF THE NOMINAL THICKNESS AT ANY LOCATION.
2. CONCRETE FOUNDATIONS, CONCRETE SLABS, EXISTING CULVERTS, HEADWALLS TO BE REMOVED, ETC. SHALL BE CONSIDERED AS INCIDENTAL TO EARTH EXCAVATION IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS. CULVERTS THAT ARE REMOVED TO BECOME PROPERTY OF CONTRACTOR.
3. WHERE SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THIS LOCATION.
4. THE CROWN SHALL BE REMOVED FROM ALL PAVEMENTS BUILT WITH SUPERELEVATION. THE CROWN SHALL BE REMOVED OR INCORPORATED IN THE LENGTH OF SUPERELEVATION ATTAINMENT.
5. THE TWO PROJECT SIGNS (STD 2153) ARE TO BE LOCATED AS SHOWN ON SHEET 6.
6. THE REVISION NUMBER INDICATED FOR THE STANDARDS SHOWN IN THE INDEX OF SHEETS ON THE TITLE SHEET SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.

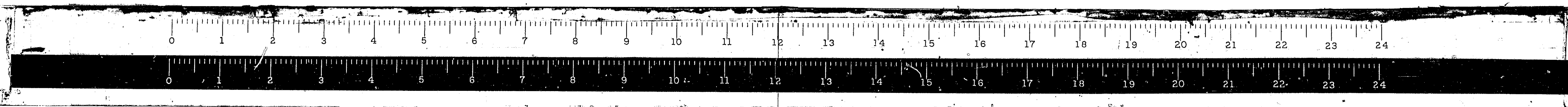
EXAMINED	<i>Sept. 21 1970</i>	1970
	<i>H.A. Watson</i>	DISTRICT TRAFFIC ENGINEER
EXAMINED	<i>SEPT. 22 1970</i>	1970
	<i>R.E. Nichols</i>	DISTRICT MAINTENANCE ENGINEER
EXAMINED	<i>Sept 29 1970</i>	1970
	<i>[Signature]</i>	DISTRICT CONSTRUCTION ENGINEER
EXAMINED	<i>Sept 29 1970</i>	1970
	<i>[Signature]</i>	DISTRICT DESIGN ENGINEER



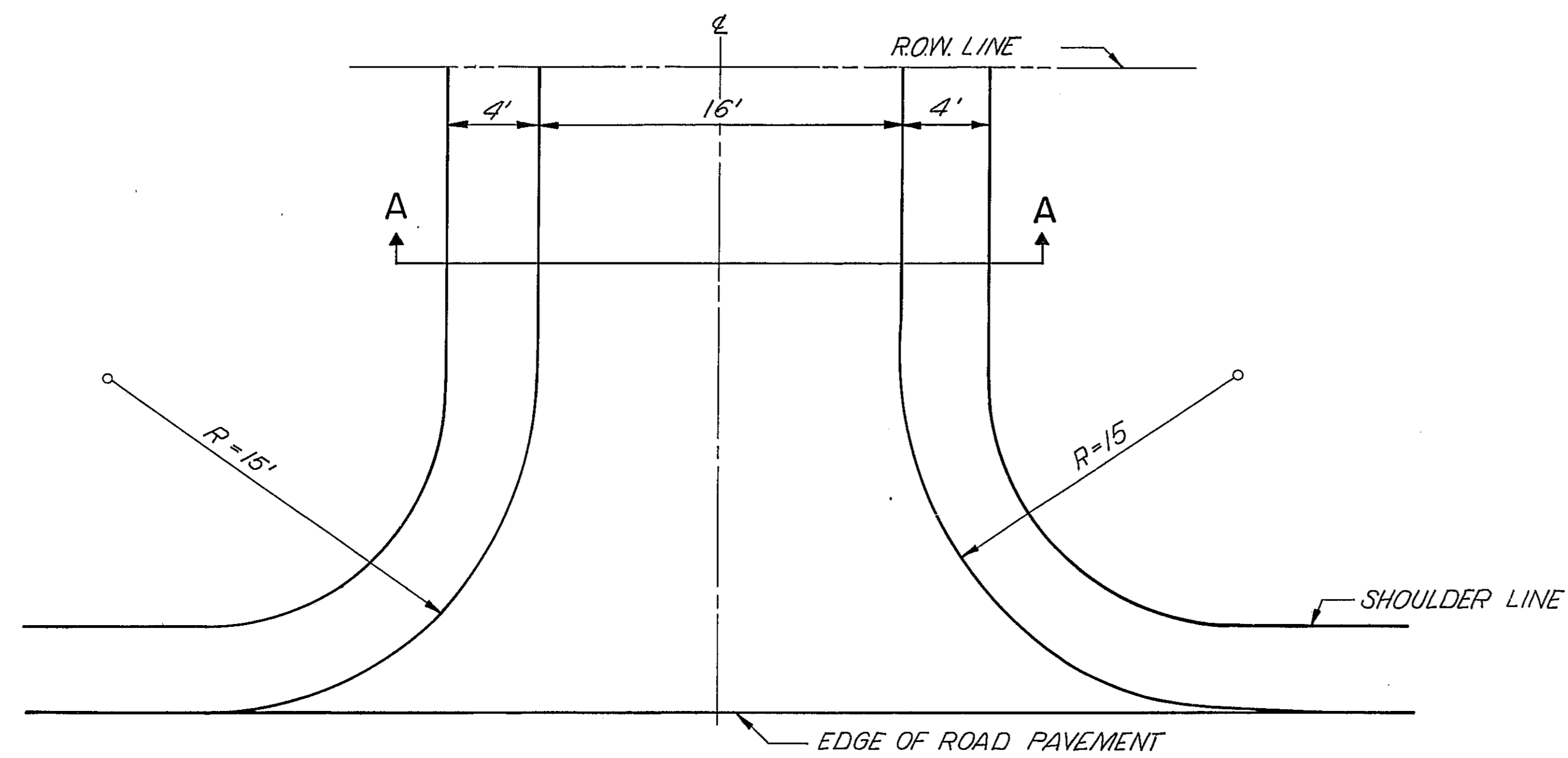
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

**TYPICAL SECTIONS**

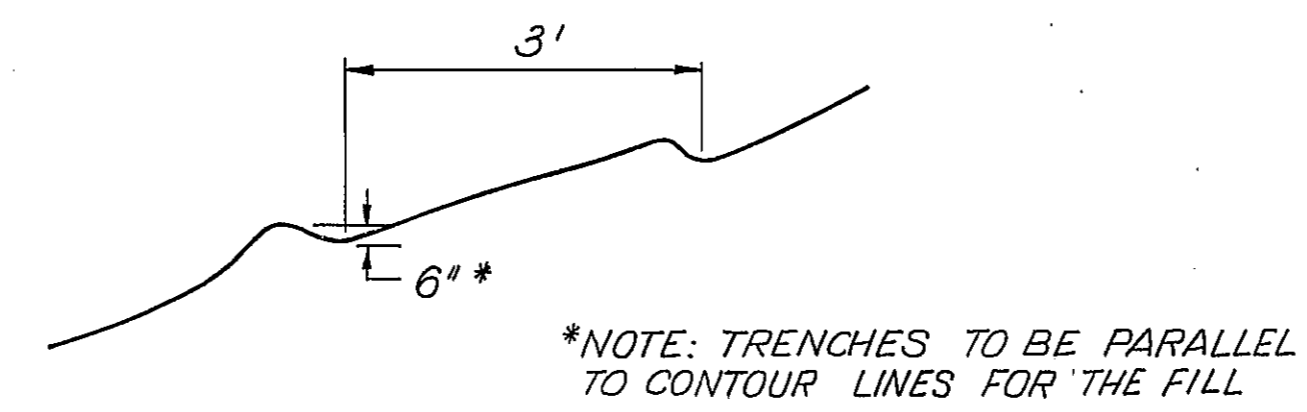
WESTENHOFF AND NOVICK, INC.  
 CONSULTING ENGINEERS



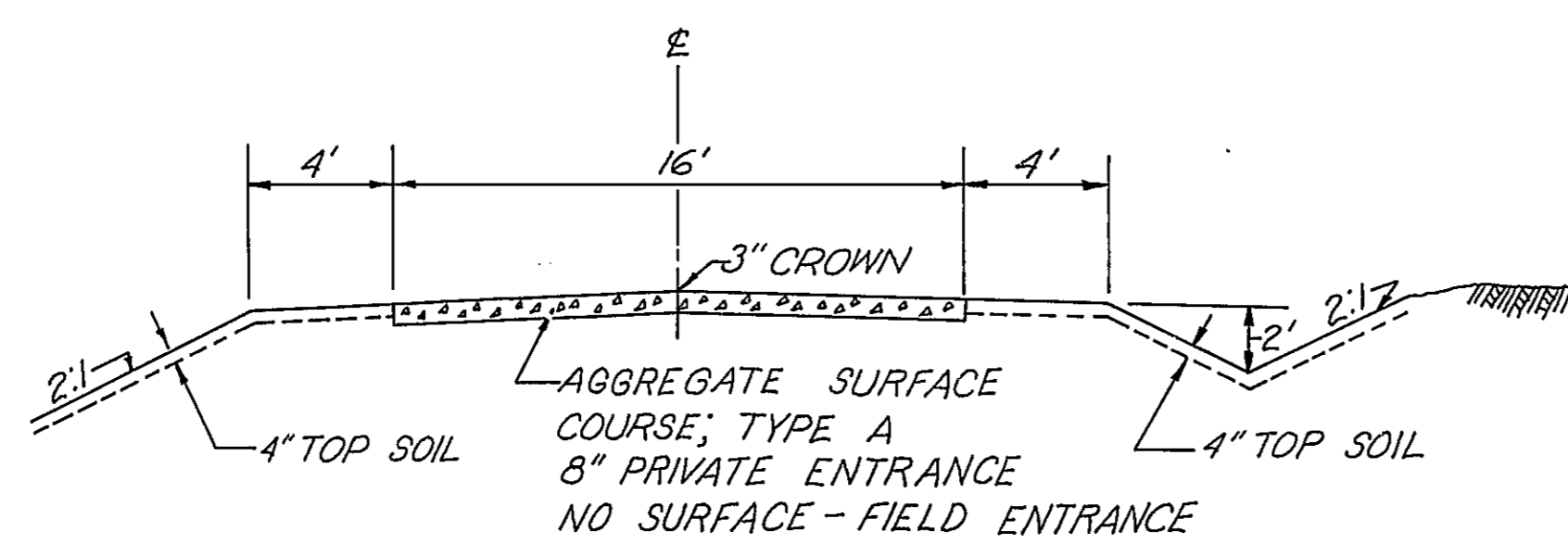
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.1.53	68-4HB/1	MONT	32	4
FED. ROAD DIST. NO. 4 ILLINOIS			PROJ.	



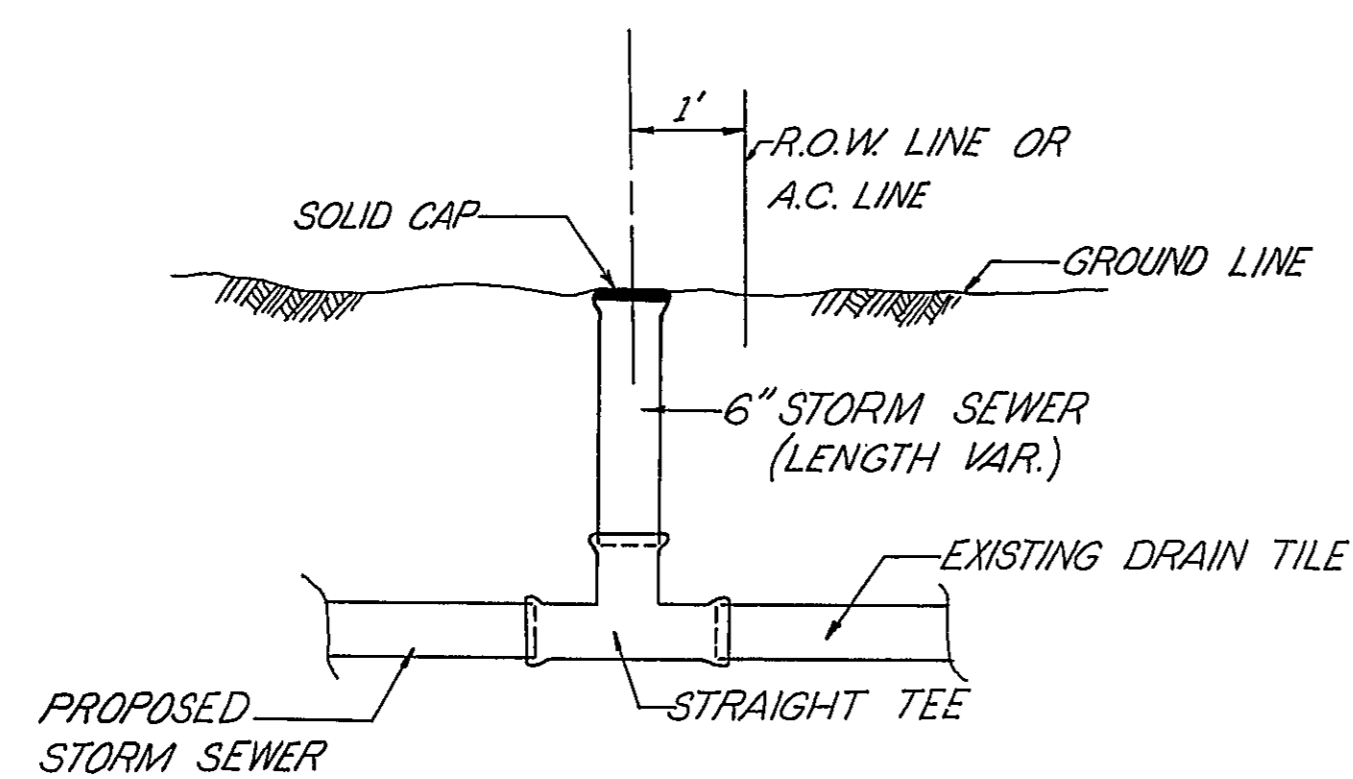
PRIVATE ENTRANCE & FIELD ENTRANCE  
SCALE: 1" = 5'



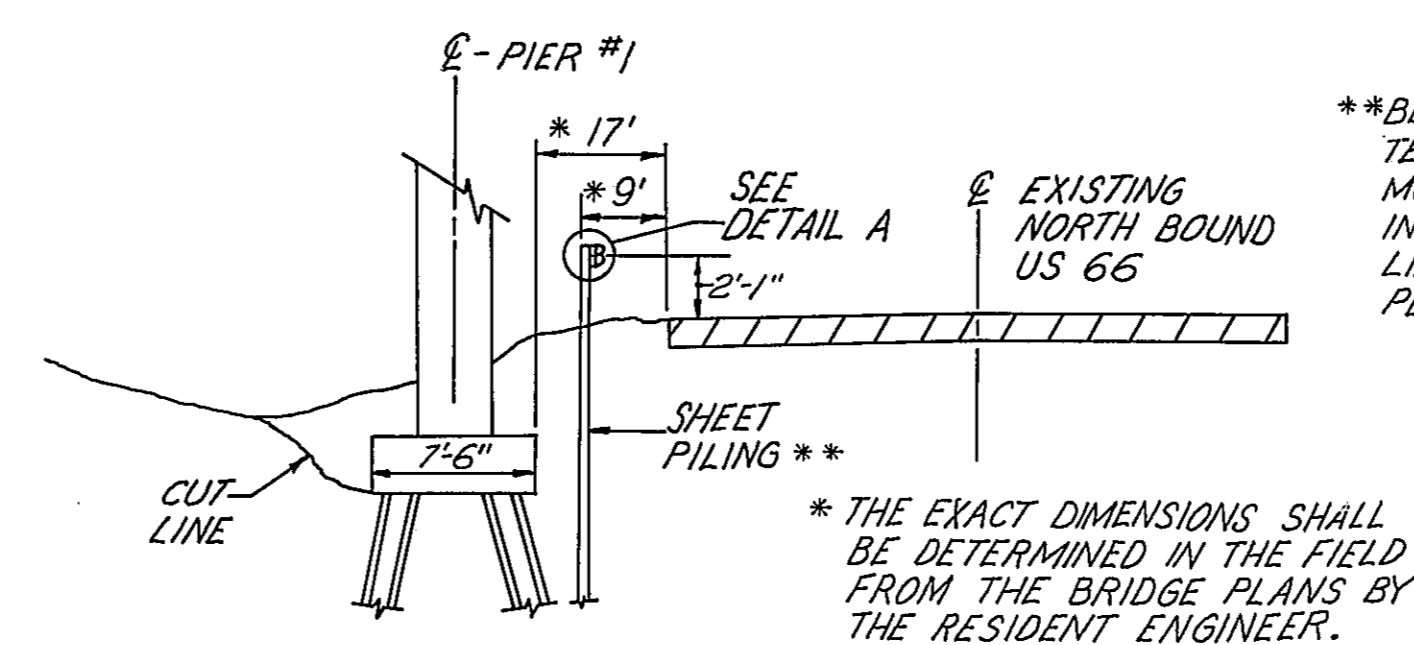
PLOWING METHOD FOR CLASS III SEEDING  
SCALE: NONE



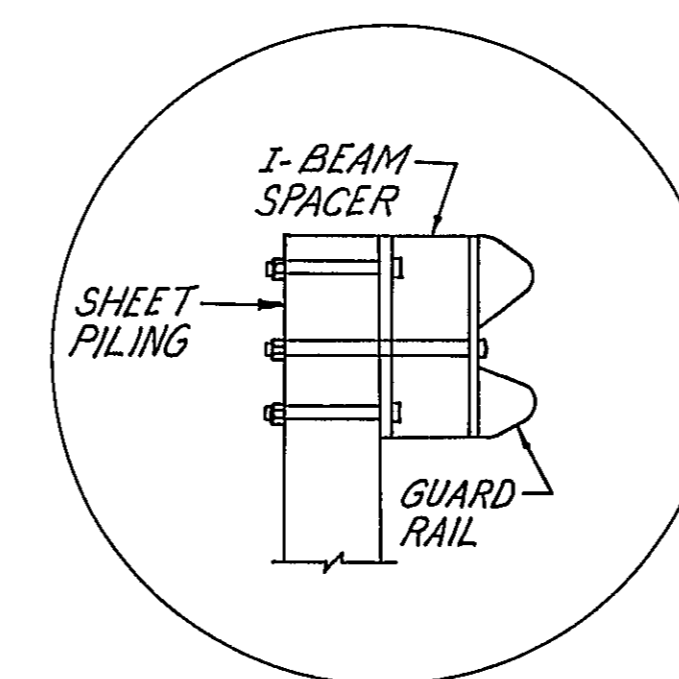
SECTION A-A



INSPECTION WELL  
SCALE: NONE



TEMPORARY PIER GUARD RAIL



DETAIL A  
SCALE: NONE

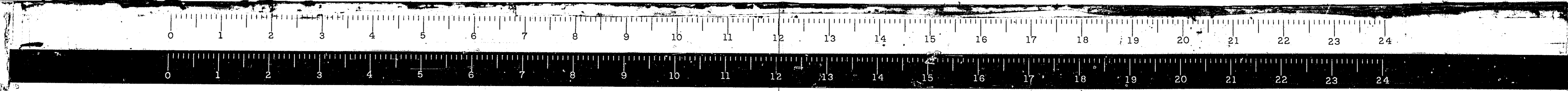
- SPECIAL SYMBOLS
- M.L. MATCH LINE
  - T.G. TOP OF GRATE
  - ▲ PERMANENT SURVEY MARKER
  - W.F. WOVEN WIRE FENCE

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

TYPICAL SECTIONS

WESTENHOFF AND NOVICK, INC.  
CONSULTING ENGINEERS

DESIGNED BY F.T.P.  
DRAWN BY M.O.  
CHECKED BY W.F.T.  
APPROVED BY \_\_\_\_\_



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI.33	68-AHB-1	MONT.	32	5
FED. ROAD DIST NO. 4 ILLINOIS PROJ.				

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE
201002	TREE REMOVAL (OVER 15 INCH DIAMETER)	IN DIA	30	4251
202001	EARTH EXCAVATION	CU YD	2,827	X771
204001	BORROW EXCAVATION	CU YD	67,335	
X21601	TOP SOIL EXCAVATION	CU YD	2,746	
X21602	TOP SOIL PLACEMENT	SQ YD	22,481	
301001	AGGREGATE BASE COURSE, TYPE A	TON	3,678	
405001	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2,825	
405003	BITUMINOUS MIXTURE COMPLETE	TON	1,264	
502001	CLASS A EXCAVATION FOR STRUCTURES	CU YD	130	130
503004	PROTECTIVE COAT	SQ YD	1,280	1,280
504003	CLASS X CONCRETE	CU YD	562.1	562.1
505008	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN.	LIN FT	164.3	164.3
507025	STUD SHEAR CONNECTORS	EACH	1,944	1,944
507030	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1
508005	ALUMINUM RAILING	LIN FT	682	682
511005	PIPE CULVERTS, TYPE 1A, 18"	LIN FT	78	78
511025	PIPE CULVERTS, TYPE 1 15"	LIN FT	62	62
511028	PIPE CULVERTS, TYPE 1 24"	LIN FT	38	38
511171	PIPE CULVERTS, TYPE 3A, 48"	LIN FT	92	92
511251	PIPE CULVERTS, TYPE 4A, 48"	LIN FT	98	98
511830	CULVERT END SECTIONS 18"	EACH	4	4
511837	CULVERT END SECTIONS 48"	EACH	2	2
512001	REINFORCEMENT BARS	POUND	109,950	109,950
513021	FURNISHING CONCRETE PILES	LIN FT	1,677	1,677
513027	DRIVING CONCRETE PILES	LIN FT	1,677	1,677
513041	TEST PILE CONCRETE	EACH	2	2
514001	NAME PLATES	EACH	1	1
603030	STORM SEWERS, TYPE 2 12"	LIN FT	230	230
618001	SLOPE WALL 4 INCH	SO YD	208	208
628001	STEEL PLATE BEAM GUARD RAIL, SINGLE RAIL	LIN FT	1,225	1,225
X62801	TERMINAL SECTION, SINGLE RAIL	EACH	4	4
639001	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	34	34
642002	SEEDING, CLASS II	ACRE	4.4	4.4
642003	SEEDING, CLASS III	ACRE	2.5	2.5
642004	NITROGEN FERTILIZER NUTRIENT	POUND	690	690
642005	PHOSPHORUS FERTILIZER NUTRIENT	POUND	470	470
642006	POTASSIUM FERTILIZER NUTRIENT	POUND	470	470
642007	AGRICULTURAL GROUND LIMESTONE	TON	13.8	13.8
643001	MULCH	TON	13.8	13.8
646001	ENGINEER'S FIELD OFFICE, TYPE A	EACH	1	1
210029	BRIDGE SEAT SEALANT	L SUM	1	1
210227	EXPLORATION TRENCH (52 IN DEPTH)	LIN FT	100	100
XZ1008	TRAFFIC CONTROL AND PROTECTION, STANDARD 2315	C. DAYS	2	2
XZ1100	TRAINEES	HOUR	1000	1000

PAVEMENT QUANTITIES

STATION	LENGTH (FEET)	8" AGGREGATE BASE COURSE, TYPE A WIDTH (FEET)	TONS	BITUMINOUS MATERIALS PRIME COAT WIDTH (FEET)	GALLONS	3" BITUMINOUS MIX COMPLETE WIDTH (FEET)	TONS
<u>TR-37 REL.</u>							
35+00 - 36+00	100	19.5-21.5	105	19.5-21.5	78	18-20	36
36+00 - 48+03.63	1203.63	21.5	1311	21.5	1007	20	450
48+03.63 - 51+48.79	BRIDGE OMISSION						
51+48.79 - 63+00	1151.21	21.5	1252	21.5	963	20	430
63+00 - 64+00	100	21.5-19.5	105	21.5-19.5	78	20-18	36
<u>TR-37 CONNECTOR</u>							
0+11.55 - 7+62.99	751.44	21.5	818	21.5	629	20	281
RETURNS		VARIES	87	VARIES	70	VARIES	31
TOTALS			3678		2825		1,264

RIGHT OF WAY MARKERS

ROADWAY	STATION	OFFSET & SIDE
T.R. 37	35+00	22.5' LT
	35+80.27	22.5' RT
	35+80.27	33.19' RT
	36+00	40' LT
	37+00	40' LT
	38+00	40' RT
	38+00	46.16' LT
	40+00	40' RT
	41+70	40' LT
	44+00	75' RT
	44+00	60' LT
	46+35	100' RT
	48+13	105' LT
	48+13	105' RT
	51+56	95.27' LT
	51+71	84.73' RT
	53+50	180' RT
	54+50	60' LT
	56+20	50' LT
	56+20	60' RT
	57+15	40' RT
	59+50	35' RT
	59+60	48.30' LT
	60+50	61.12' LT
	61+50	40' RT
	62+60	40' LT
	63+41.43	22.5' RT
	63+41.43	29.42' RT
	64+00	22.5' LT
T.R. 37 CONN.	2+65.26	36.51' LT
	2+70	35' RT
	2+80	40' LT
	6+75.98	48.39' LT
	6+79.80	50' RT
TOTAL		34

STEEL PLATE BEAM GUARD RAIL

SIDE	STATION TO STATION	LENGTH (FT.)
TR-37 REL LT	44+36 - 47+98.5	362.5
RT	44+36 - 47+98.5	362.5
LT	51+54 - 54+04	250
RT	51+54 - 54+04	250
TOTAL		1,225

TERMINAL SECTION, SINGLE RAIL

SIDE	STATION TO STATION	EACH
TR-37 REL LT	44+11 - 44+36	1
RT	44+11 - 44+36	1
LT	54+04 - 54+29	1
RT	54+04 - 54+29	1
TOTAL		4

TREE REMOVAL QUANTITIES

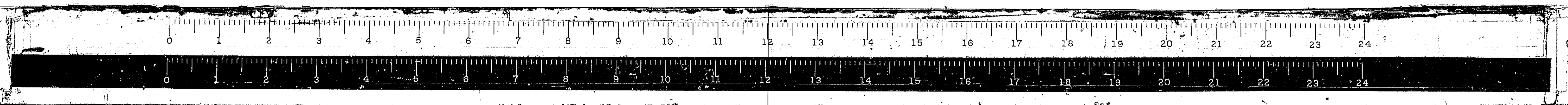
LOCATION	OFFSET	OVER 15 IN. DIA.
TR-37 REL 50+10	42' RT	30 STUMP
TOTAL		30

DESIGNED BY F.P.P.  
 DRAWN BY S.D.D.  
 CHECKED BY W.F.T.  
 APPROVED BY \_\_\_\_\_

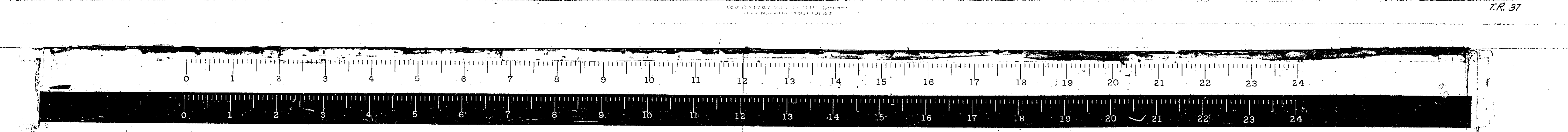
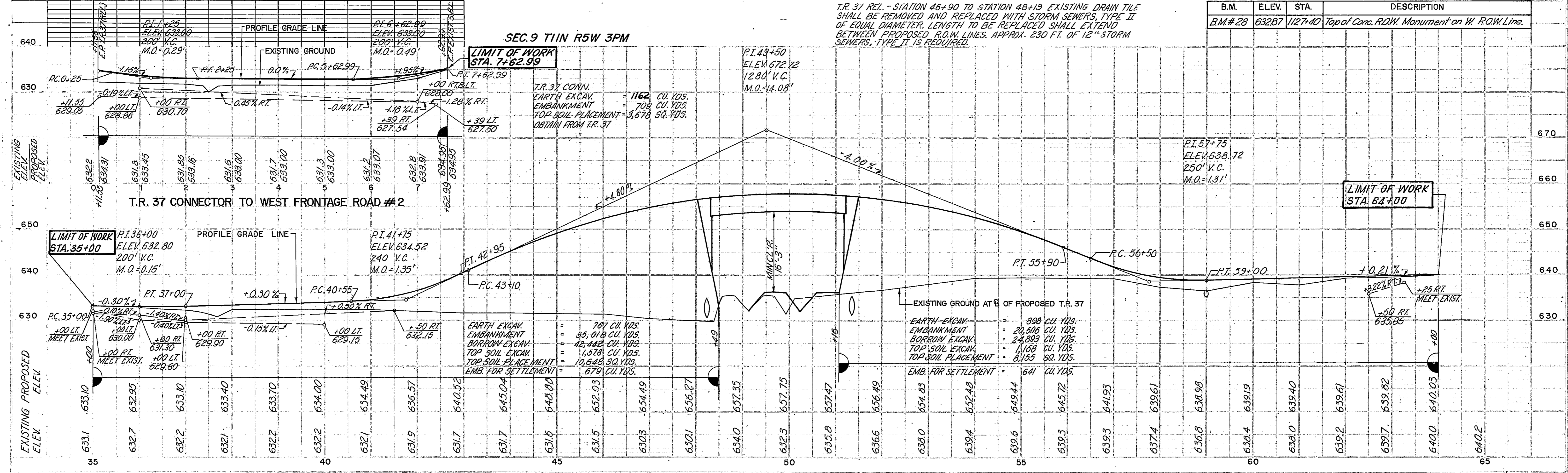
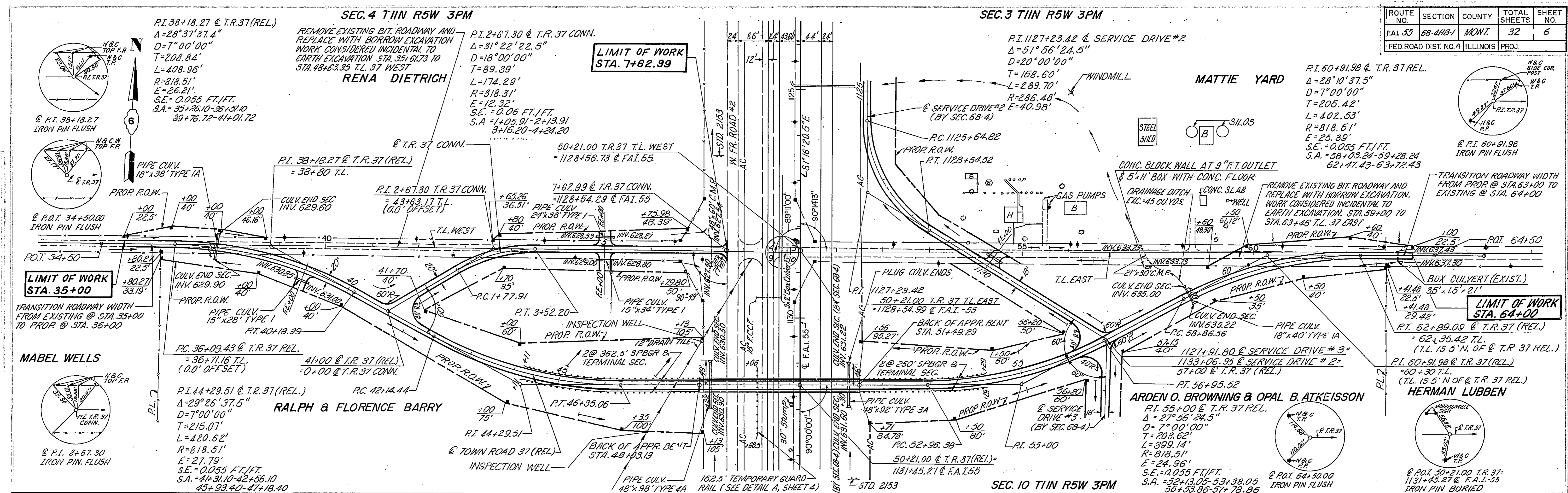
STATE OF ILLINOIS  
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
 DIVISION OF HIGHWAYS

SUMMARY AND SCHEDULES  
 OF QUANTITIES

WESTENHOFF AND NOVICK, INC.  
 CONSULTING ENGINEERS  
 Revd XZ1100 11-20-70



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 33	68-4HB1	MONT.	32	6
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				

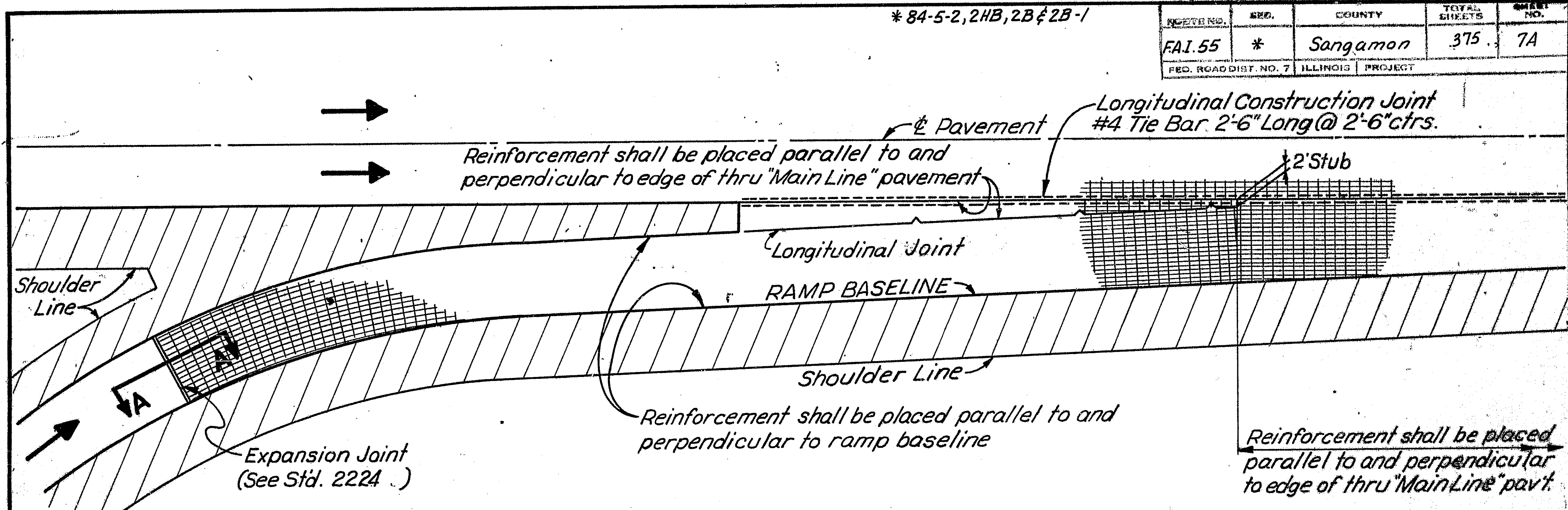


T.R. 37

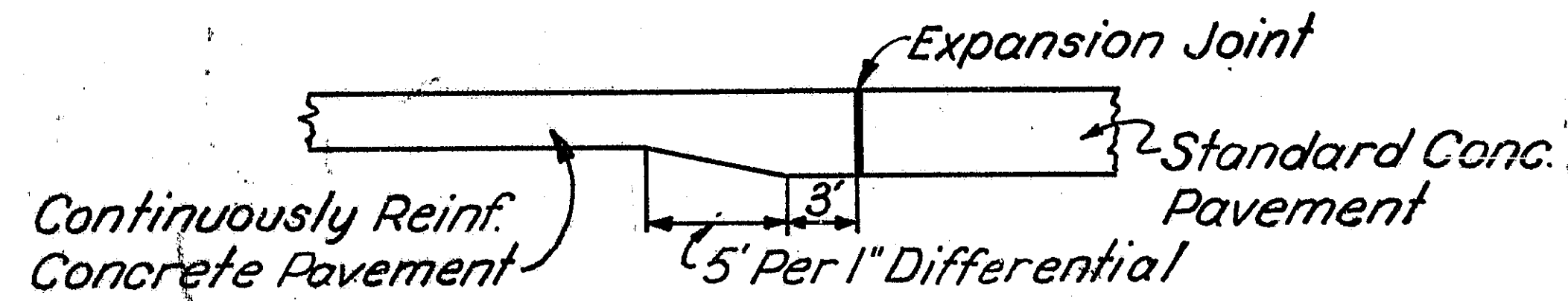


\* 84-5-2, 2HB, 2B & 2B-1

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 55	*	Sangamon	375	7A
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		

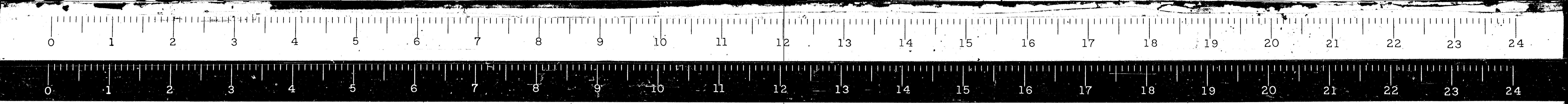


Note:  
On "Typical Ramp Exit Terminals", that portion of pavement between the longitudinal Joint and the Recovery Taper, the reinforcement shall be placed parallel to and perpendicular to ramp baseline.



**SECTION A-A**

**TYPICAL PLACEMENT OF REINFORCEMENT AND DETAILS OF EXPANSION JOINT FOR RAMP TERMINALS**

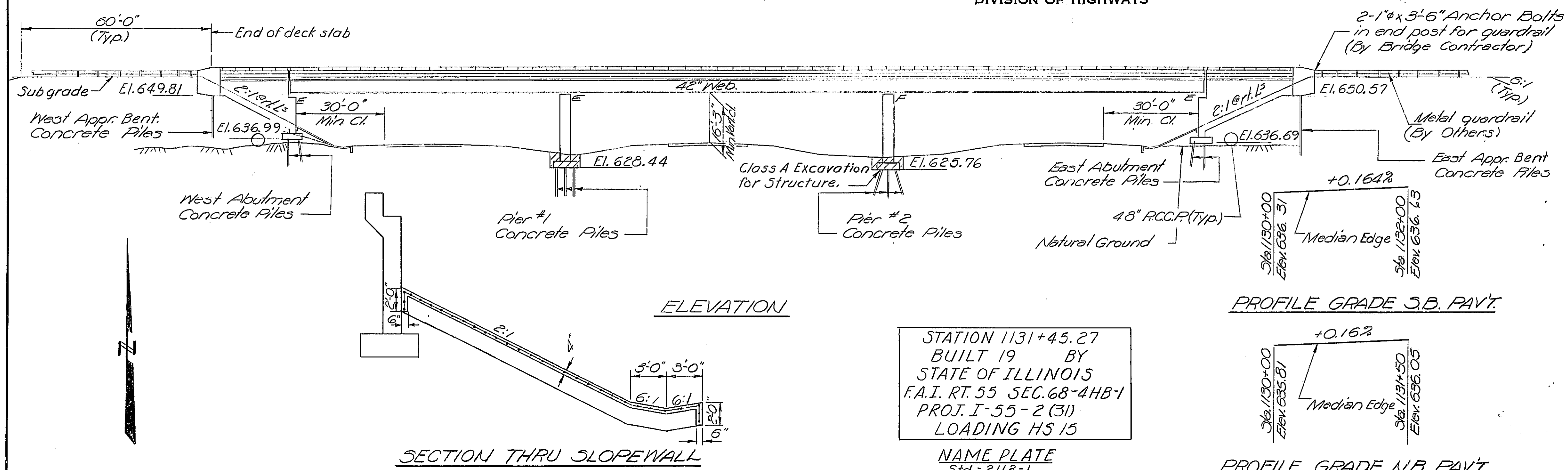




BM #28 Top of Conc. R.O.W. Marker on West R.O.W. @ Sta 1127+40 Elevation 632.87

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A.I. RT. 55	28-4HB	Montgomery	32	8	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: 155-2(3)169			



SECTION THRU SLOPEWALL

STATION 1131+45.27  
BUILT 19 BY  
STATE OF ILLINOIS  
F.A.I. RT. 55 SEC. 68-4HB-1  
PROJ. I-55-2(31)  
LOADING HS 15

NAME PLATE  
Sta. 2113-1

PROFILE GRADE J.B. PAVT

PROFILE GRADE N.B. PAVT

PROFILE RELOCATED T.R. 37

**GENERAL NOTES**

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Fasteners shall be High Strength bolts. Bolts 3/8" Ø; open holes 15/16" Ø; unless otherwise noted.

Calculated weight of Structural Steel = 241390 lbs.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58# per 100 sq. ft.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

The Contractor shall drive Two Concrete test piles in a permanent location One of West Abut. and One of Pier #2 as directed by the Engineer before ordering the remainder of piles.

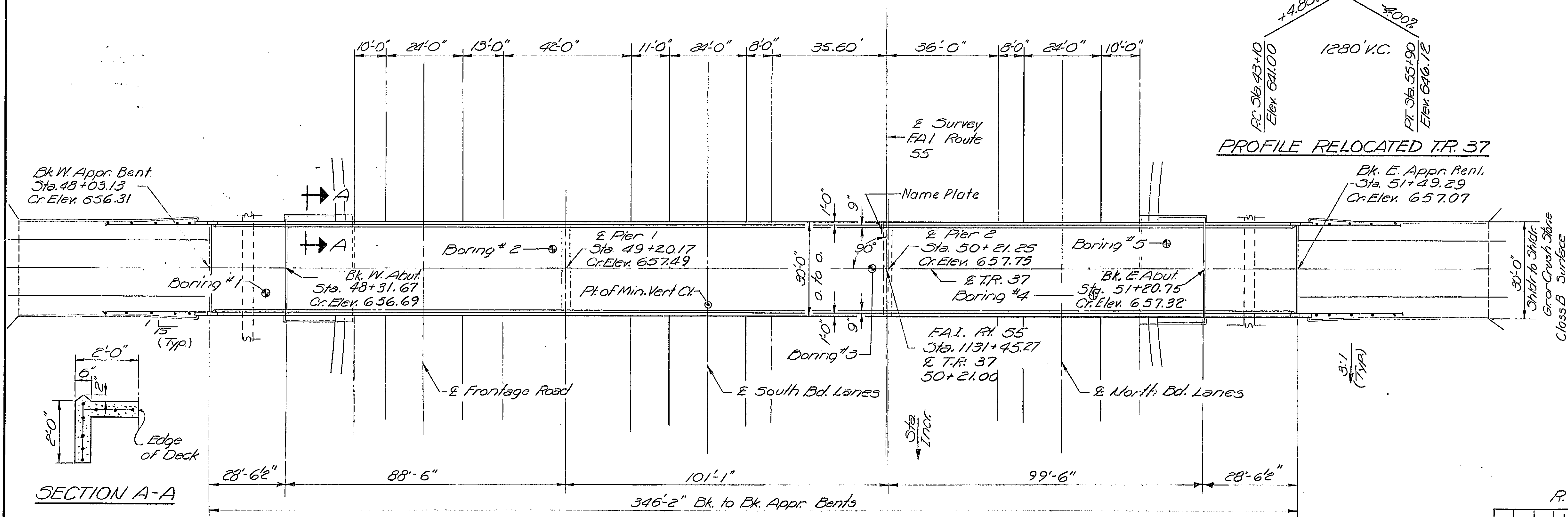
An alternate strand pattern using Extra High Strength Prestressing strand (270 KSI) is permitted.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

Class A Excavation for structures includes excavation for slope wall.

Concrete piles at Approach Bents shall be driven in holes precored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.

The Contractor is cautioned against overdriving and damaging the concrete piles.



SECTION A-A

PLAN

DESIGN STRESSES

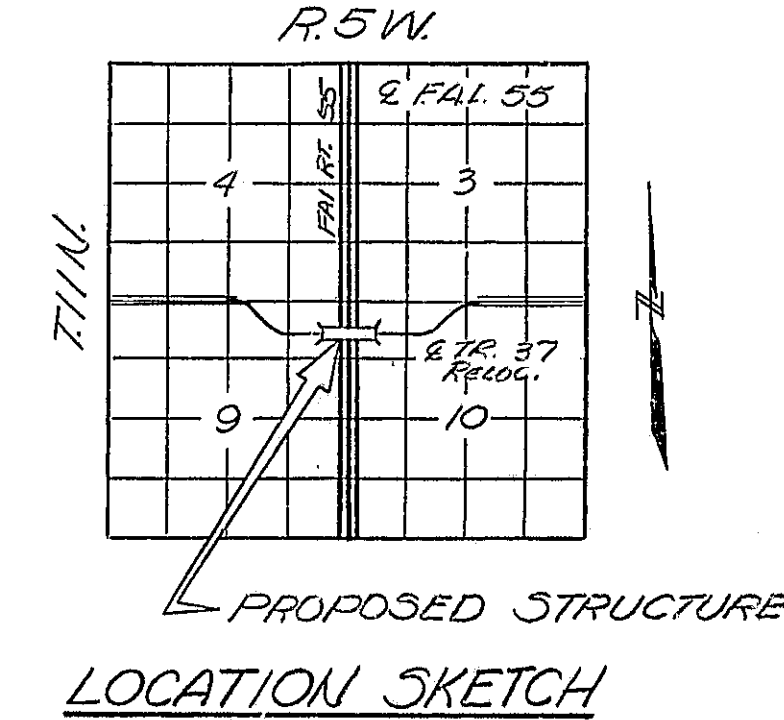
PRECAST PRESTRESSED UNITS	FIELD UNITS
$f'_c = 5000$ psi.	$f_c = 1200$ psi. (Deck Slab)
$f_{ci} = 4000$ psi.	$f_c = 1400$ psi. (Curb, Parapet, Sub)
$f_s = 243,000$ psi. (Strands)	$f_s = 20000$ psi. (Reinf.)
$f_{si} = 173,600$ psi. (Strands)	$f_s = 20000$ psi. (Struct.)
	$f_c = 75$ psi. (Figs.)
	$n = 10$
	Allowable % Deflection 1/200

LOADING HS 15-44

**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub	Total
Class A Excavation for Struct.	Cu. Yds.		130	130
Protective Coat	Sq. Yds.	1280		1280
Class X Concrete	Cu. Yds.	324.7	237.4	562.1
Structural Steel	L.S.			L.S.
Stud Shear Connectors	Each	1944		1944
Aluminum Rolling	Lin. Ft.	682		682
Reinforcement Bars	Lbs.	74330	35620	109950
Concrete Piles	Lin. Ft.		1677	1677
Test Piles (Concrete)	Each		2	2
Name Plates	Each		1	1
Slope Wall (4")	Sq. Yds.		208	208
Bridge Seat Sealant	L.S.			L.S.
Precast Prestressed Concrete T-Beams (36")	Lin. Ft.	164.3		164.3

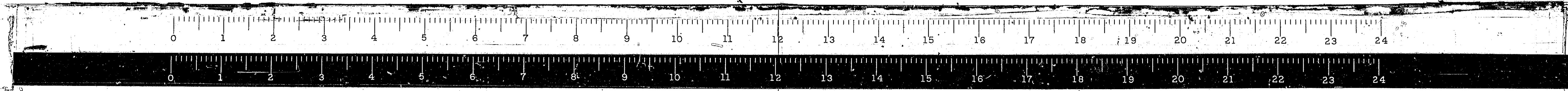
\* Applied @ Abutments only



GENERAL PLAN & ELEVATION  
T.R. 37 OVER F.A.I. RT. 55  
PROJ. I-55-2(31)69  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STA. 1131+45.27

DESIGNED D.A. Ryan  
CHECKED Rao G.K.  
DRAWN B.R.R.  
CHECKED Rao G.K.

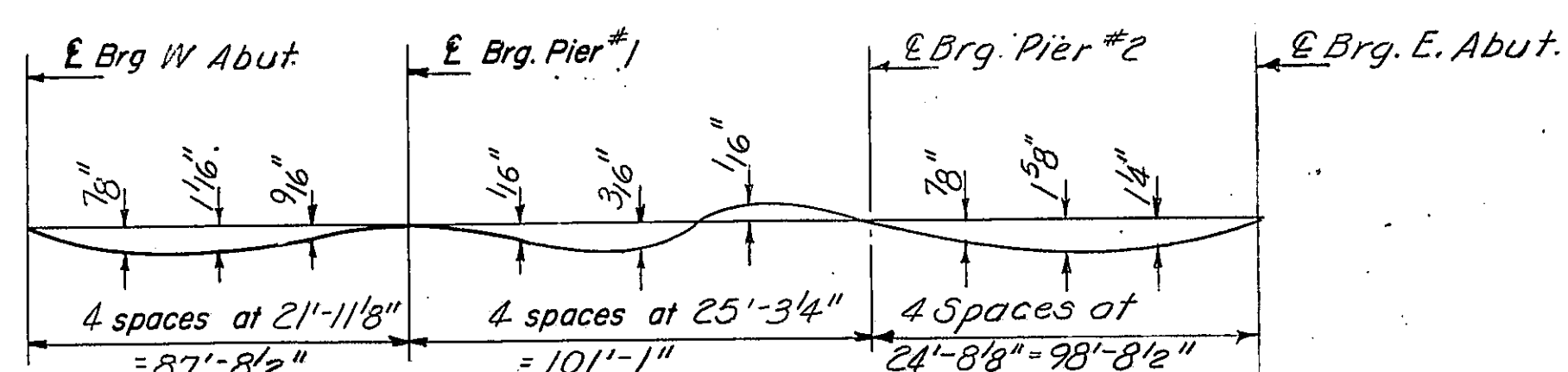
APRIL 24 1970  
EXAMINED [Signature]  
PASSED [Signature]  
APPROVED [Signature]



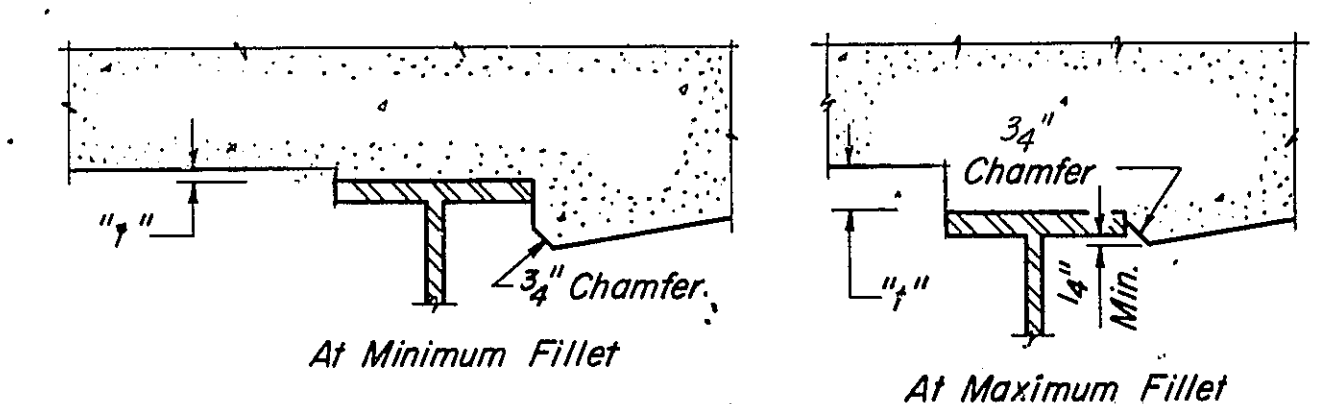
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1-1	55	Montgomery	32	9

18 SHEETS



**DEAD LOAD DEFLECTION DIAGRAM (Main Spans)**  
(Includes weight of concrete only)  
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.  
**FILLET HEIGHTS (Main Spans)**

**MAIN SPANS**

**WEST APPROACH**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West App. Bent	4803.130	6.375	656.277	656.277
E Brg. W. App. Bent	4804.380	6.375	656.295	656.295
a	4814.380	6.375	656.431	656.431
b	4824.380	6.375	656.561	656.561
E Brg. W. App.	4830.920	6.375	656.642	656.642
Bk. West App. Bent	4803.130	0.0	656.311	656.311
E Brg. W. App. Bent	4804.380	0.0	656.329	656.329
a	4814.380	0.0	656.465	656.465
b	4824.380	0.0	656.595	656.595
E Brg. W. App.	4830.920	0.0	656.676	656.676

**Girders 1 & 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	4831.670	12.000	656.569	656.569
E Brg. West Abut.	4832.460	12.000	656.578	656.578
A	4842.460	12.000	656.656	656.725
B	4852.460	12.000	656.806	656.872
C	4862.460	12.000	656.910	656.985
D	4872.460	12.000	657.005	657.073
E	4882.460	12.000	657.096	657.174
F	4892.460	12.000	657.179	657.237
G	4902.460	12.000	657.255	657.292
H	4912.460	12.000	657.325	657.361
E Brg. Pier #1	4920.170	12.000	657.373	657.373
I	4930.170	12.000	657.430	657.432
J	4940.170	12.000	657.481	657.493
K	4950.170	12.000	657.524	657.529
L	4960.170	12.000	657.560	657.570
M	4970.170	12.000	657.590	657.604
N	4980.170	12.000	657.613	657.619
O	4990.170	12.000	657.629	657.627
P	5000.170	12.000	657.637	657.632
Q	5010.170	12.000	657.640	657.637
R	5020.170	12.000	657.635	657.634
E Brg. Pier #2	5021.250	12.000	657.634	657.634
S	5031.250	12.000	657.621	657.650
T	5041.250	12.000	657.602	657.660
U	5051.250	12.000	657.576	657.660
V	5061.250	12.000	657.543	657.652
W	5071.250	12.000	657.503	657.635
X	5081.250	12.000	657.456	657.618
Y	5091.250	12.000	657.402	657.513
Z	5101.250	12.000	657.342	657.422
AA	5111.250	12.000	657.274	657.312
E Brg. East Abut.	5119.960	12.000	657.210	657.210
Bk. East Abut.	5120.750	12.000	657.204	657.204

**Girders 2 & 3**

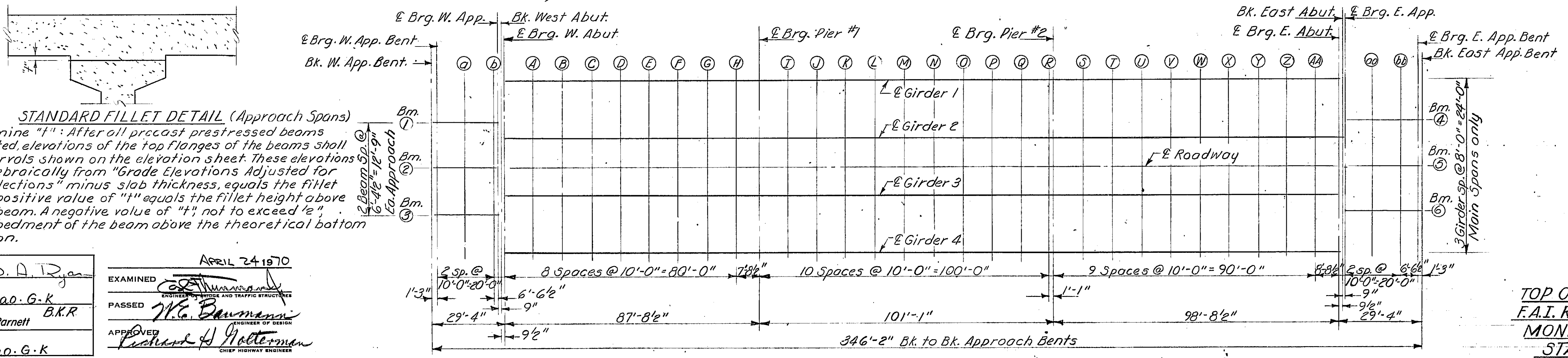
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	4831.670	4.000	656.672	656.672
E Brg. West Abut.	4832.460	4.000	656.682	656.682
A	4842.460	4.000	656.759	656.832
B	4852.460	4.000	656.909	656.976
C	4862.460	4.000	657.013	657.092
D	4872.460	4.000	657.110	657.197
E	4882.460	4.000	657.200	657.277
F	4892.460	4.000	657.283	657.340
G	4902.460	4.000	657.359	657.396
H	4912.460	4.000	657.428	657.444
E Brg. Pier #1	4920.170	4.000	657.477	657.477
I	4930.170	4.000	657.534	657.535
J	4940.170	4.000	657.584	657.586
K	4950.170	4.000	657.627	657.632
L	4960.170	4.000	657.664	657.673
M	4970.170	4.000	657.693	657.708
N	4980.170	4.000	657.716	657.723
O	4990.170	4.000	657.732	657.730
P	5000.170	4.000	657.741	657.735
Q	5010.170	4.000	657.743	657.740
R	5020.170	4.000	657.738	657.738
E Brg. Pier #2	5021.250	4.000	657.737	657.737
S	5031.250	4.000	657.725	657.754
T	5041.250	4.000	657.705	657.763
U	5051.250	4.000	657.679	657.764
V	5061.250	4.000	657.646	657.756
W	5071.250	4.000	657.606	657.739
X	5081.250	4.000	657.560	657.681
Y	5091.250	4.000	657.506	657.616
Z	5101.250	4.000	657.445	657.526
AA	5111.250	4.000	657.375	657.413
E Brg. East Abut.	5119.960	4.000	657.314	657.314
Bk. East Abut.	5120.750	4.000	657.307	657.307

**Roadway**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	4831.670	0.0	656.685	656.685
E Brg. West Abut.	4832.460	0.0	656.695	656.695
A	4842.460	0.0	656.812	656.845
B	4852.460	0.0	656.923	656.989
C	4862.460	0.0	657.026	657.105
D	4872.460	0.0	657.123	657.210
E	4882.460	0.0	657.213	657.290
F	4892.460	0.0	657.296	657.353
G	4902.460	0.0	657.372	657.409
H	4912.460	0.0	657.441	657.457
E Brg. Pier #1	4920.170	0.0	657.490	657.490
I	4930.170	0.0	657.547	657.548
J	4940.170	0.0	657.597	657.599
K	4950.170	0.0	657.641	657.646
L	4960.170	0.0	657.677	657.687
M	4970.170	0.0	657.707	657.721
N	4980.170	0.0	657.729	657.736
O	4990.170	0.0	657.745	657.743
P	5000.170	0.0	657.754	657.749
Q	5010.170	0.0	657.756	657.753
R	5020.170	0.0	657.751	657.751
E Brg. Pier #2	5021.250	0.0	657.750	657.750
S	5031.250	0.0	657.738	657.767
T	5041.250	0.0	657.719	657.776
U	5051.250	0.0	657.693	657.777
V	5061.250	0.0	657.660	657.769
W	5071.250	0.0	657.620	657.752
X	5081.250	0.0	657.573	657.694
Y	5091.250	0.0	657.519	657.630
Z	5101.250	0.0	657.459	657.539
AA	5111.250	0.0	657.391	657.429
E Brg. East Abut.	5119.960	0.0	657.327	657.327
Bk. East Abut.	5120.750	0.0	657.321	657.321

**EAST APPROACH**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
E Brg. E. App.	5121.500	6.375	657.281	657.281
aa	5131.500	6.375	657.200	657.200
bb	5141.500	6.375	657.112	657.112
E Brg. E. App. Bent	5148.040	6.375	657.050	657.050
Bk. East App. Bent	5149.290	6.375	657.038	657.038
E Brg. E. App.	5121.500	0.0	657.315	657.315
aa	5131.500	0.0	657.234	657.234
bb	5141.500	0.0	657.143	657.143
E Brg. E. App. Bent	5148.040	0.0	657.084	657.084
Bk. East App. Bent	5149.290	0.0	657.072	657.072

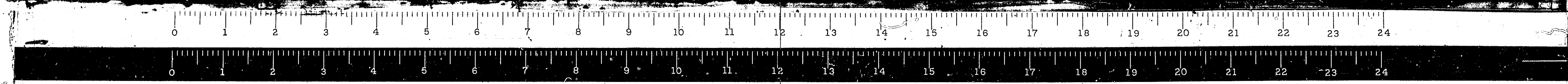


**STANDARD FILLET DETAIL (Approach Spans)**  
To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown on the elevation sheet. These elevations subtracted algebraically from "Grade Elevations Adjusted for Dead Load Deflections" minus slab thickness, equals the fillet heights "t". A positive value of "t" equals the fillet height above the top of the beam. A negative value of "t" not to exceed "e" equals the embedment of the beam above the theoretical bottom of slab elevation.

DESIGNED D. A. Ryan	EXAMINED APRIL 24 1970
CHECKED Rao. G. K.	PASSED
DRAWN P.G. Barnett	APPROVED
CHECKED Rao. G. K.	

E-S 8-1-65

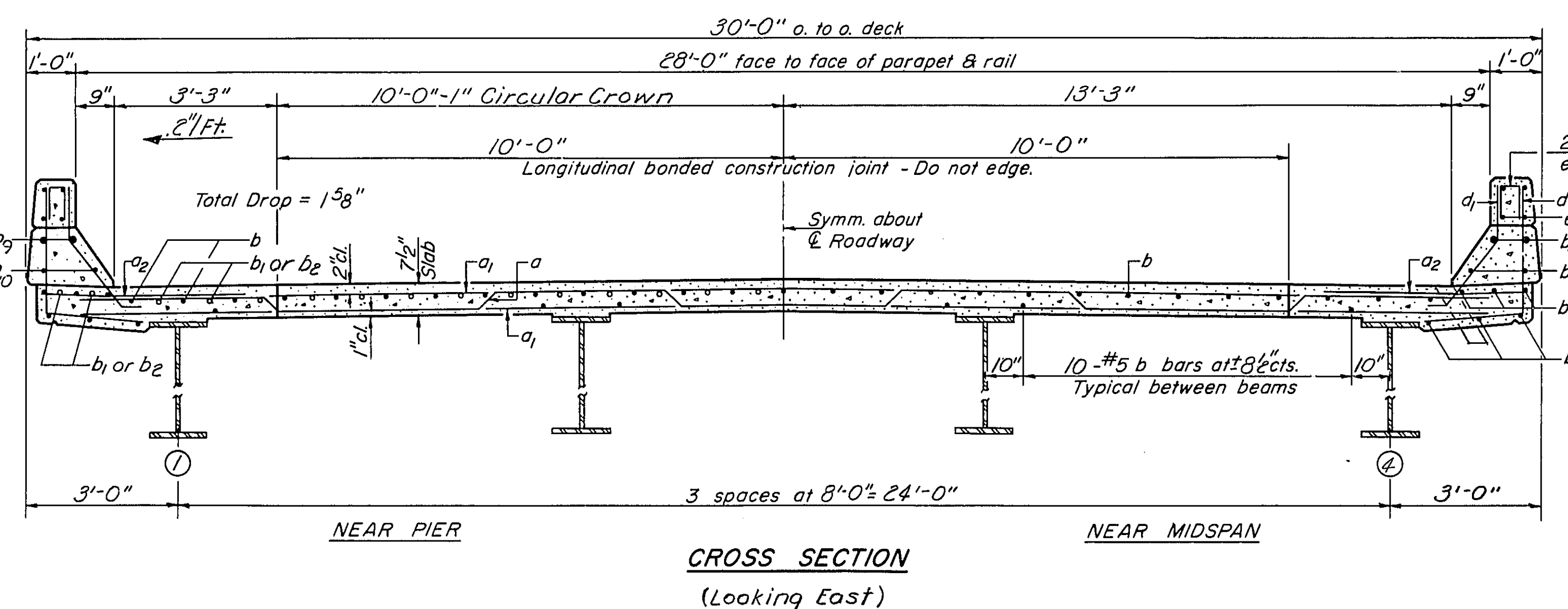
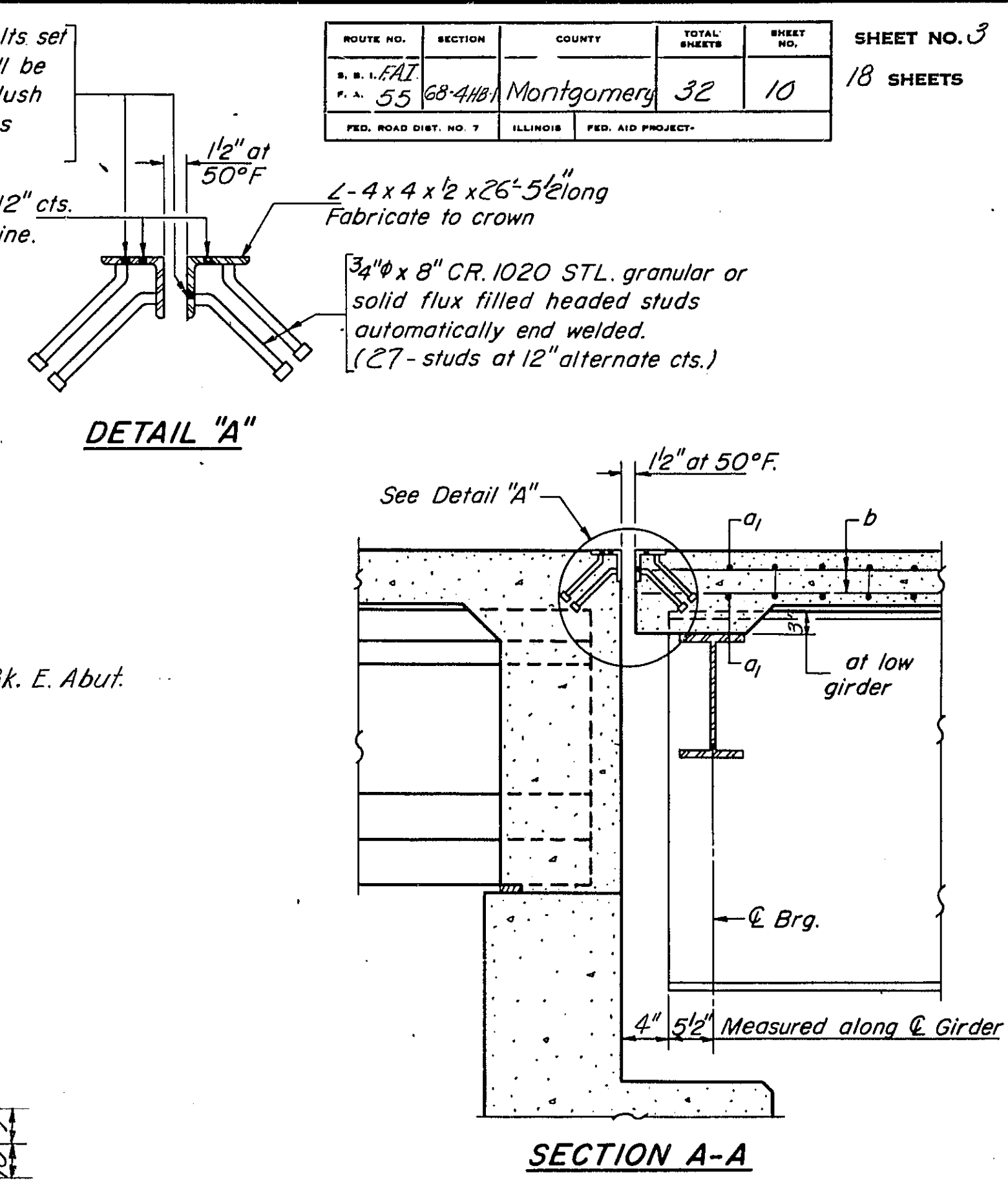
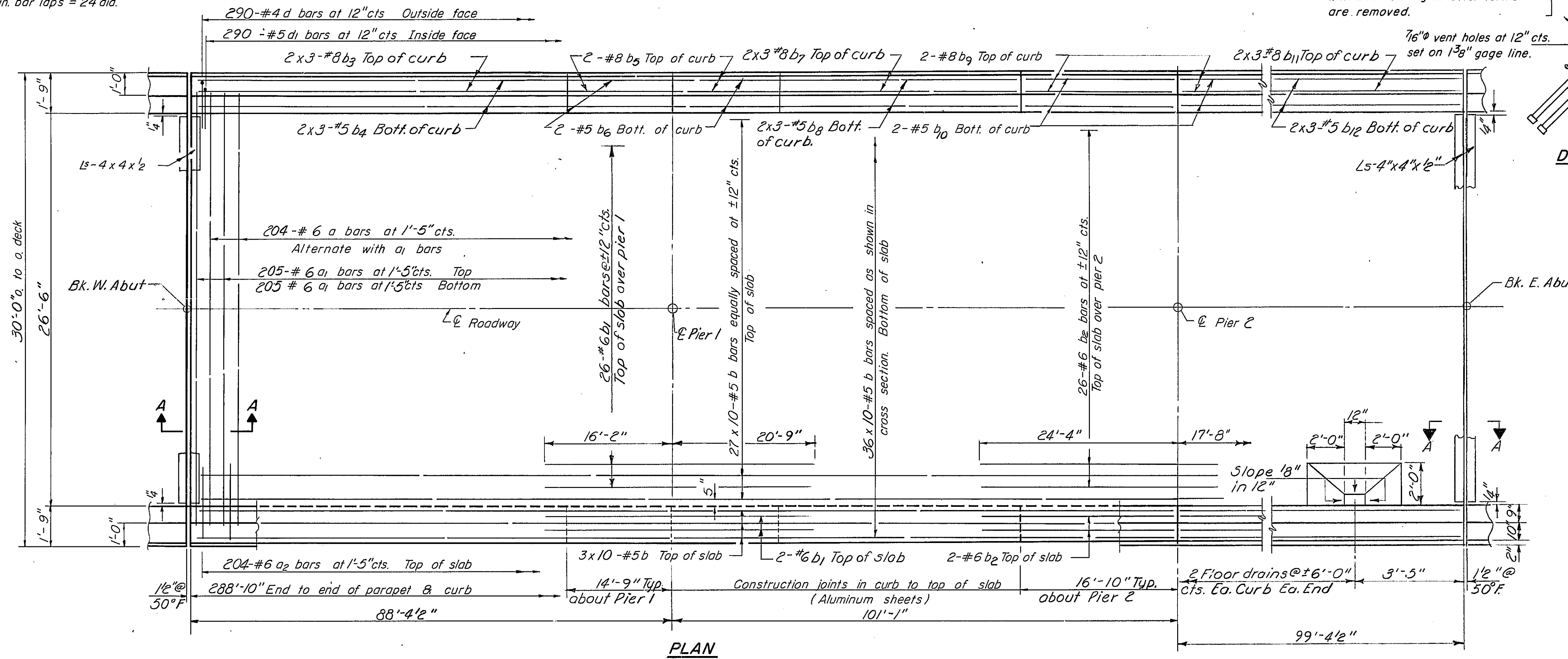
TOP OF SLAB ELEVATIONS  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27



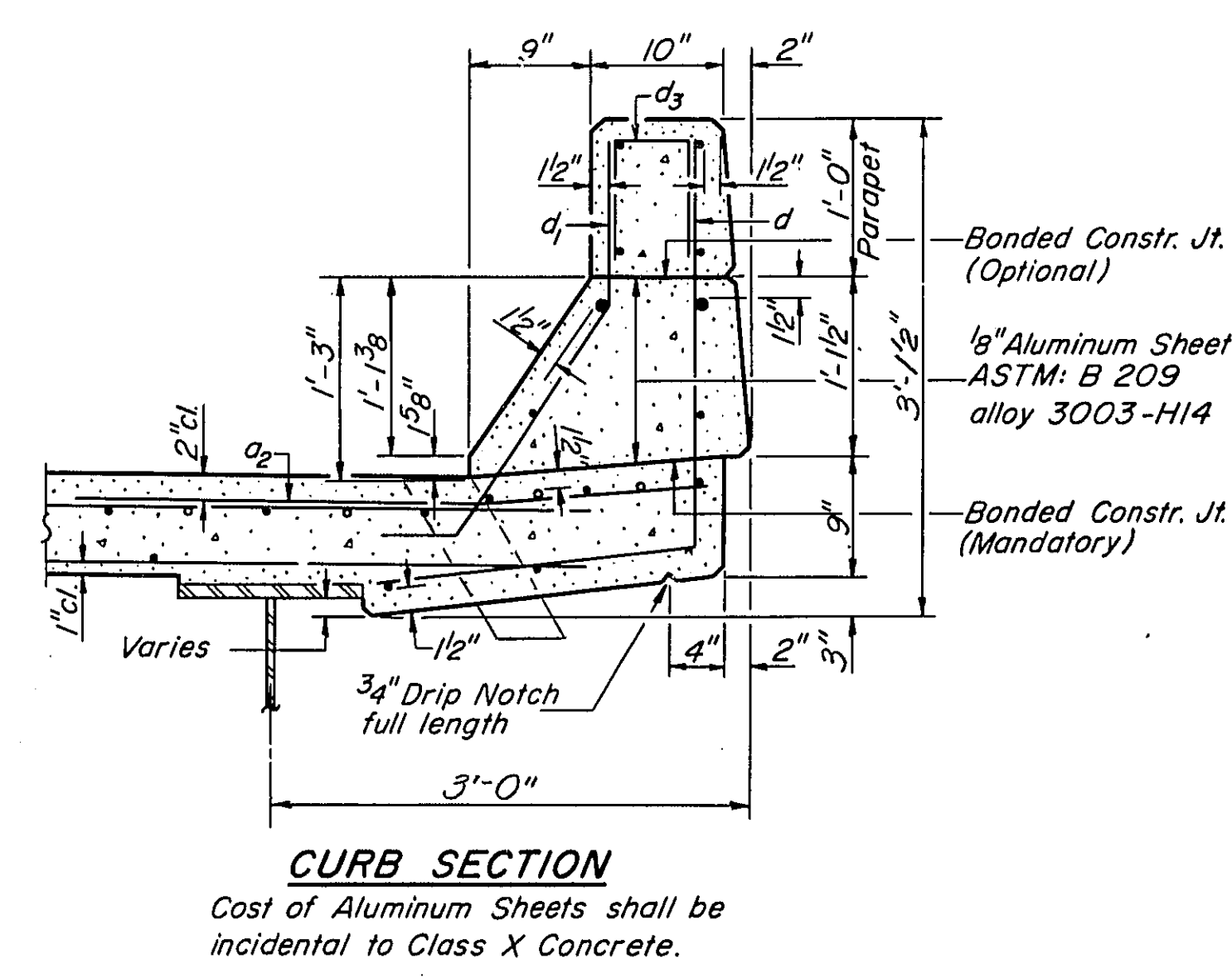
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
55	68-41B	Montgomery	32	10	18 SHEETS

NOTE:  
Bars indicated thus 20 x 3-#5 etc.  
indicates 20 lines of bars with 3  
lengths per line.  
Min. bar laps = 24 dia.



NOTE: For placement of bars d<sub>2</sub> and e<sub>1</sub> thru e<sub>3</sub> see sheet #3



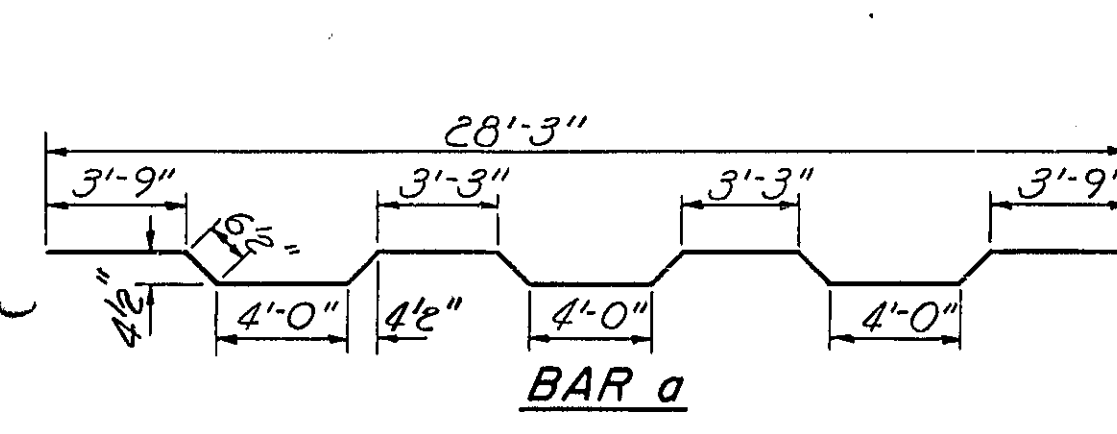
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a	204	#6	29'-3"	
a <sub>1</sub>	410	#6	28'-3"	
a <sub>2</sub>	408	#6	4'-0"	
b	690	#5	30'-0"	
b <sub>1</sub>	30	#6	36'-11"	
b <sub>2</sub>	30	#6	42'-0"	
b <sub>3</sub>	12	#8	23'-9"	
b <sub>4</sub>	12	#5	23'-6"	
b <sub>5</sub>	8	#8	14'-6"	
b <sub>6</sub>	8	#5	14'-6"	
b <sub>7</sub>	12	#8	24'-6"	
b <sub>8</sub>	12	#5	24'-0"	
b <sub>9</sub>	8	#8	16'-7"	
b <sub>10</sub>	8	#5	16'-7"	
b <sub>11</sub>	12	#8	28'-9"	
b <sub>12</sub>	12	#5	28'-6"	
d	580	#4	4'-5"	
d <sub>1</sub>	580	#5	3'-3"	

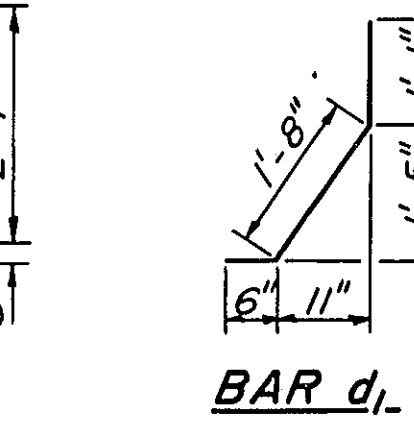
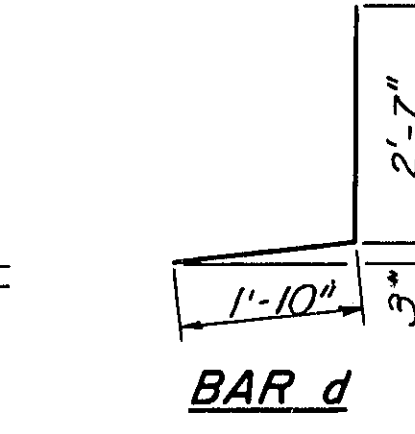
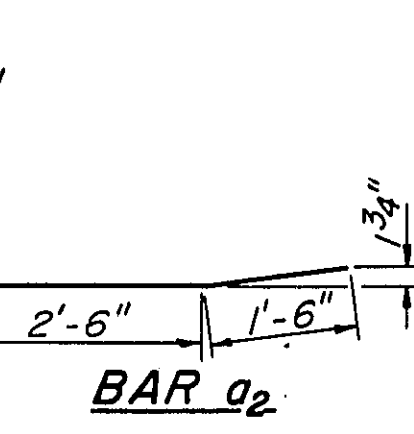
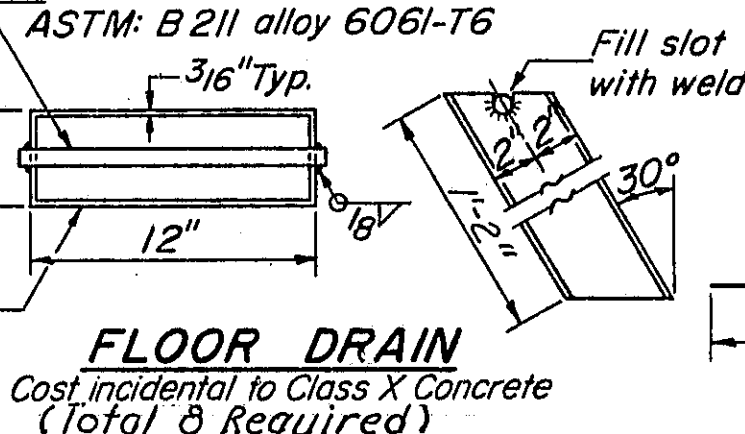
Reinforcement Bars Lbs. 62060  
Class X Concrete Cu. Yds. 242.5  
Stud Shear Connectors Each 1944

DESIGNED *D.A.R.*  
CHECKED *Rao.G.K.*  
DRAWN *Bev Robinson*  
CHECKED *Rao.G.K.*

EXAMINED *[Signature]*  
PASSED *[Signature]*  
APPROVED *[Signature]*



Aluminum Sheets Welded  
ASTM: B209 alloy 6061-T6  
or Aluminum Extrusions  
ASTM: B221 alloy 6061-T6



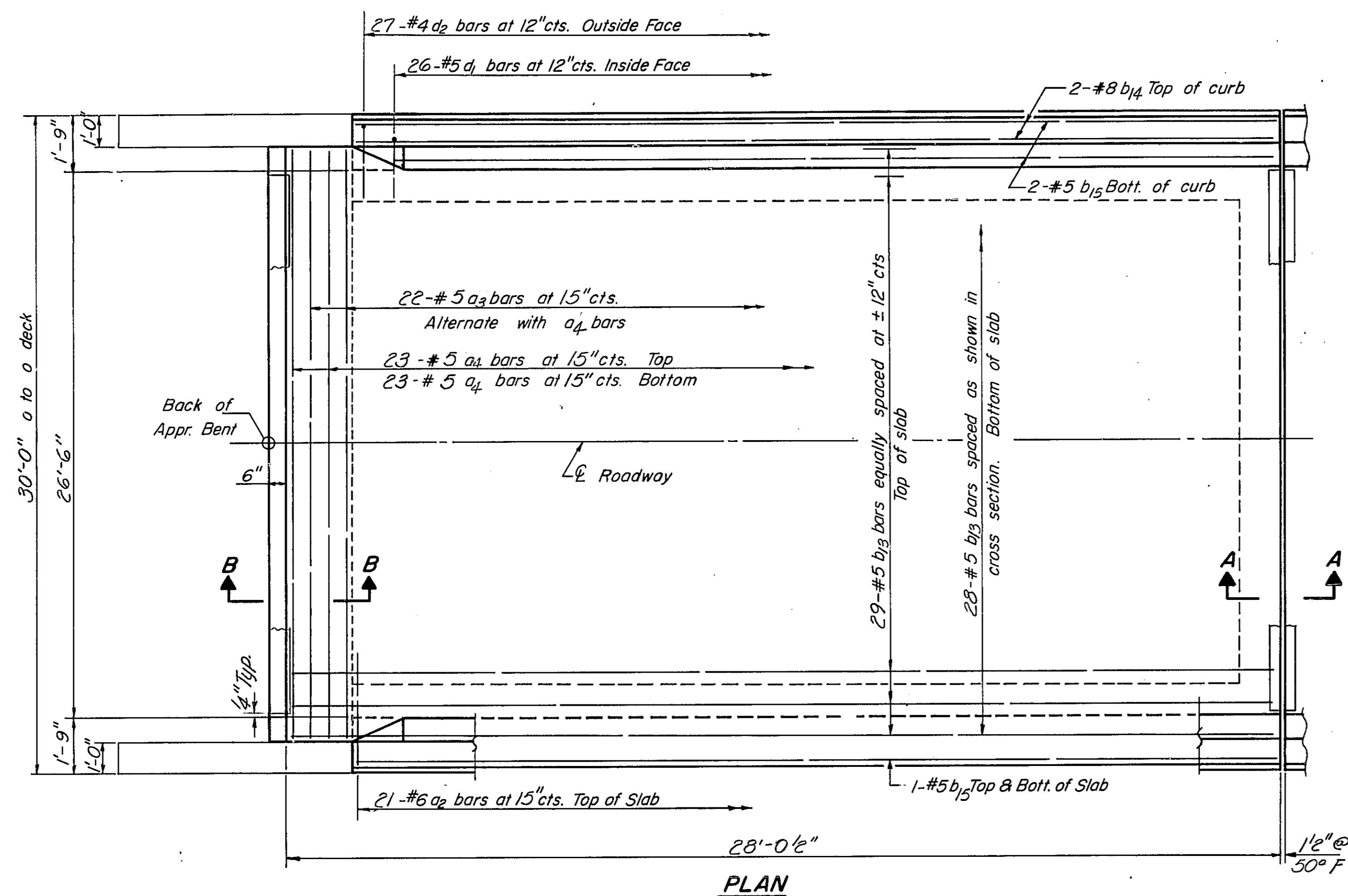
Parapet Reinforcement and Class X Concrete are billed on sheet #5

MAIN SPANS  
SUPERSTRUCTURE  
F.A.I. RT. 55 SEC. 68-41B-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

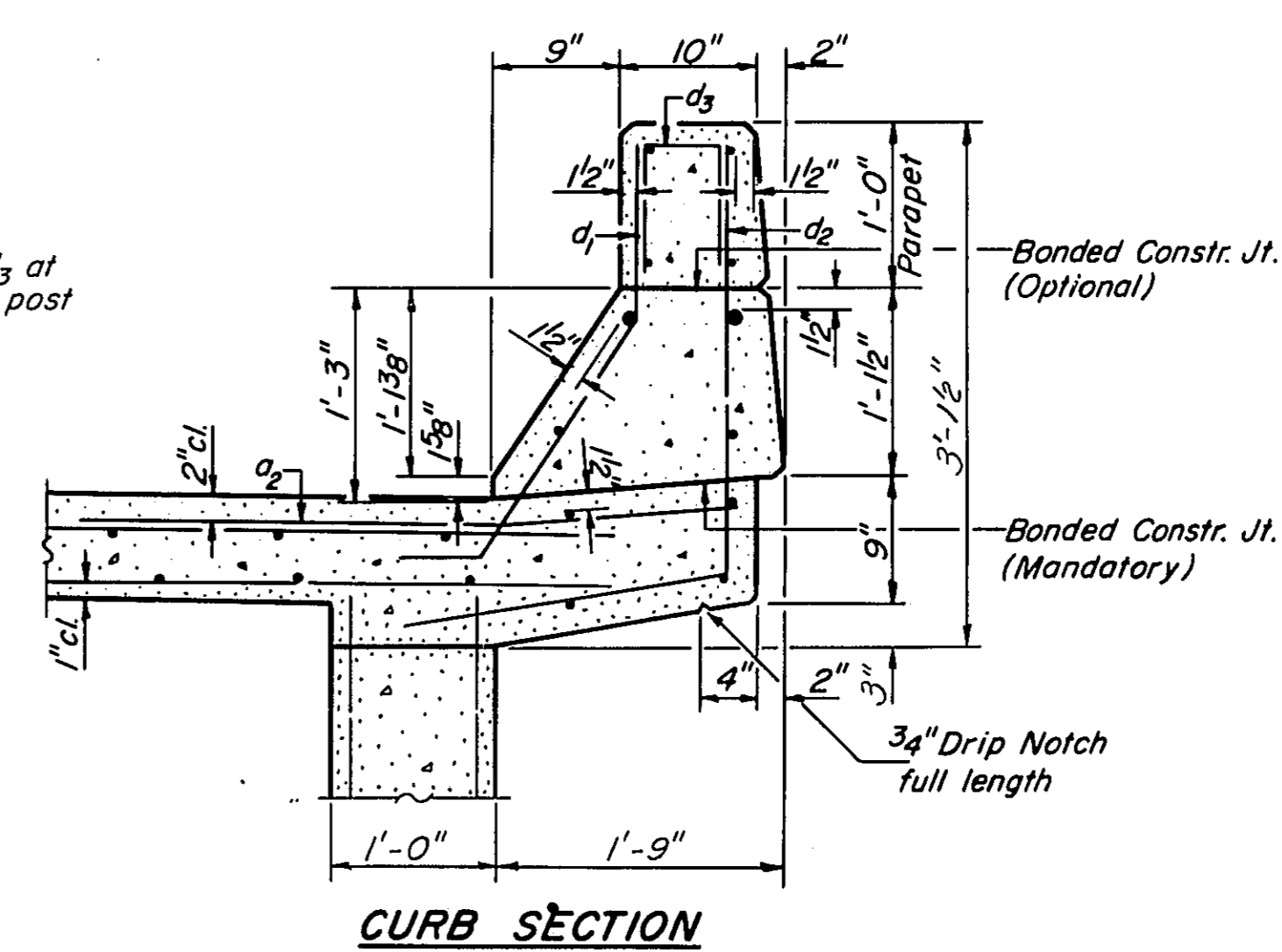
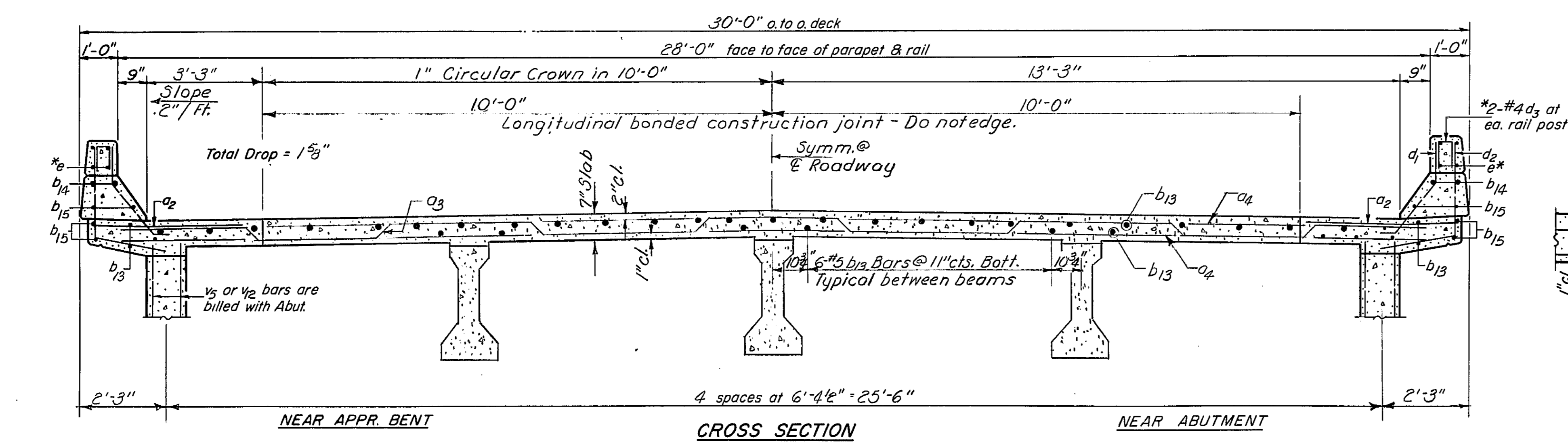
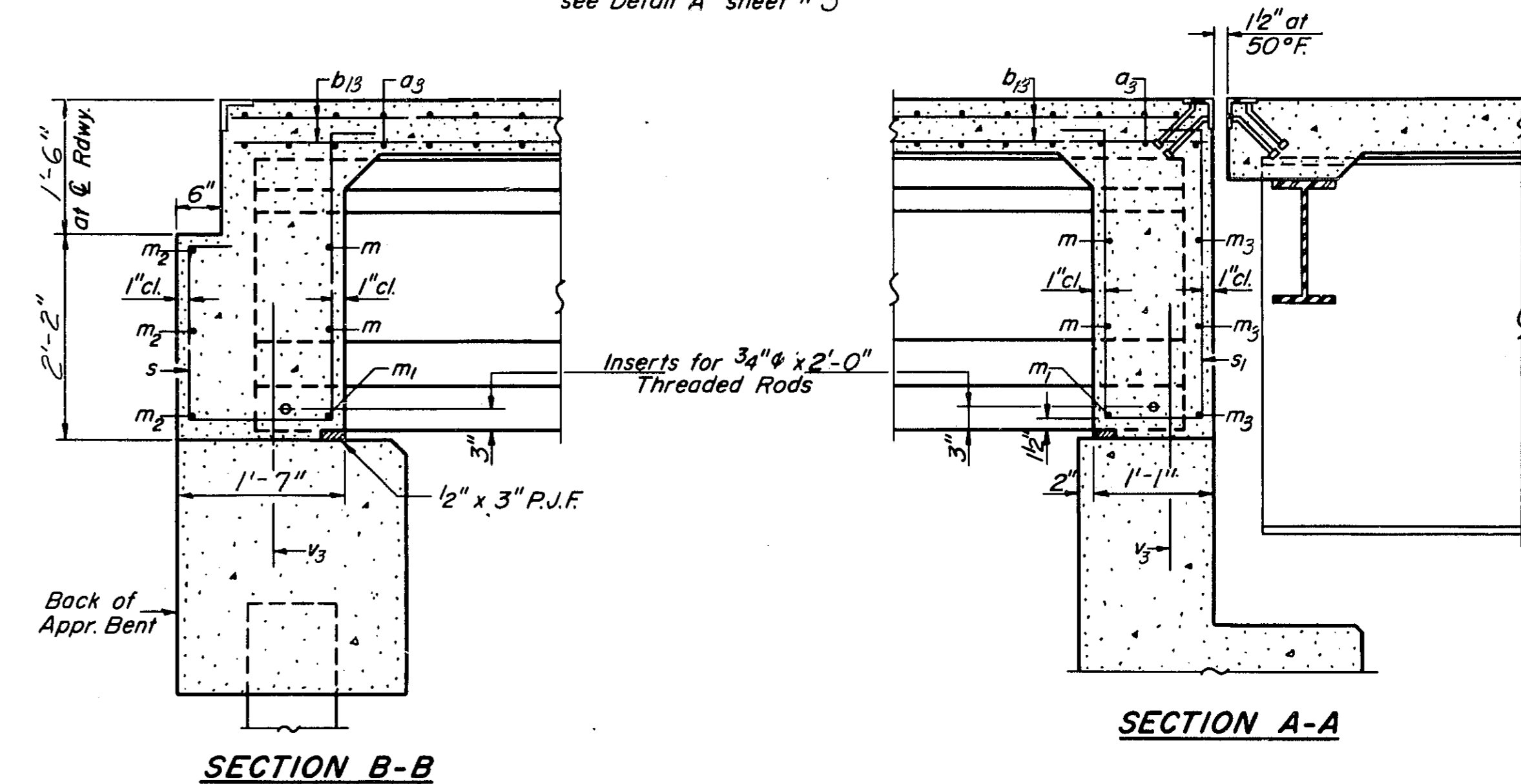
S-4-0 4-22-68

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
53	68-4184	Montgomery	32	11
18 SHEETS				



NOTE: For details of expansion angles see Detail 'A' sheet #3



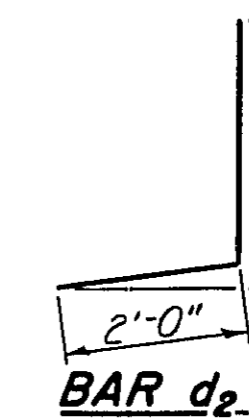
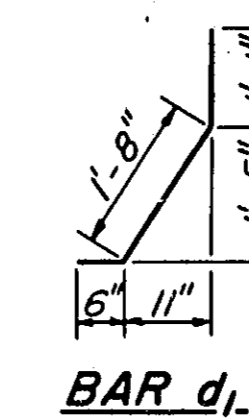
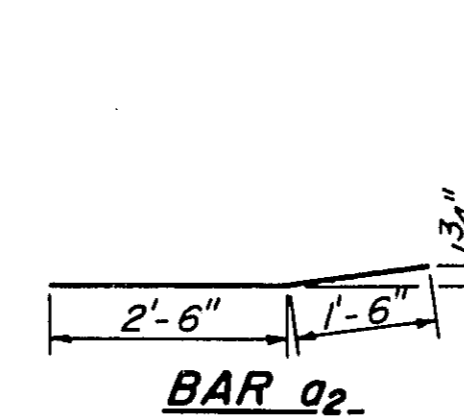
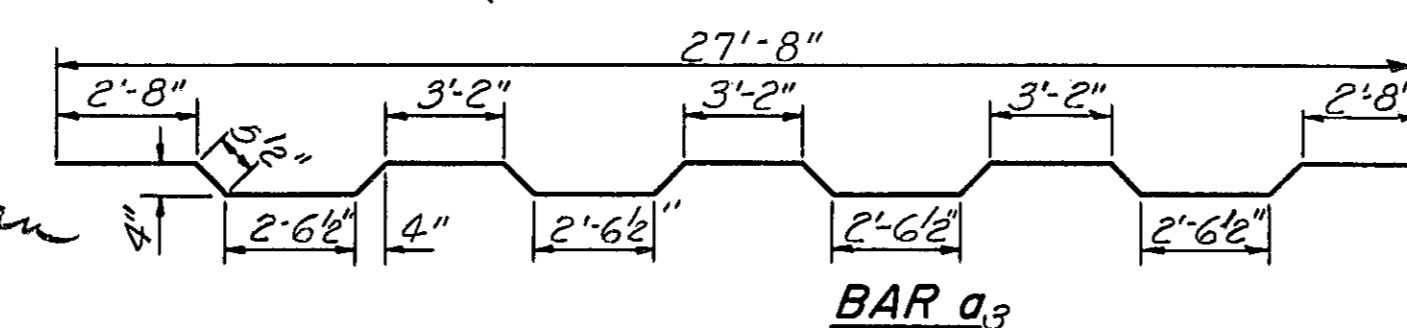
**TWO APPR. SPANS  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a2	84	#6	4'-0"	—
a3	44	#5	28'-8"	—
a4	92	#5	27'-8"	—
b13	114	#5	27'-9"	—
b14	8	#8	25'-9"	—
b15	16	#5	25'-9"	—
d1	104	#5	3'-3"	—
d2	108	#4	4'-7"	—
m	32	#4	5'-1"	—
m1	16	#5	4'-7"	—
m2	6	#5	27'-6"	—
m3	6	#5	24'-3"	—
s	32	#4	7'-5"	—
s1	32	#4	8'-9"	—
Reinforcement Bars		Lbs.	10280	
Class X Concrete		Cu. Yds.	60.2	

\*Parapet Reinforcement and Class X Concrete are billed on sheet #5  
For placement and details of bars m thru m3 and s thru s1, see sheet #10

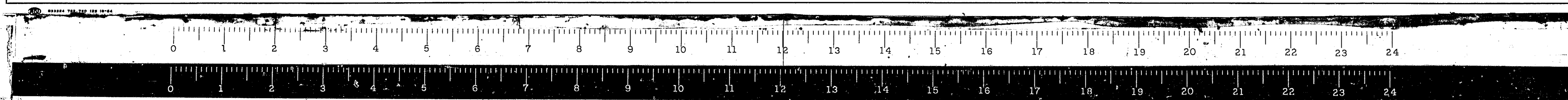
DESIGNED D.A. Ryan  
CHECKED Rap.G.K.  
DRAWN Bev Robinson  
CHECKED Rap.G.K.

EXAMINED April 24 1970  
PASSED W.E. Zimmerman  
APPROVED Richard H. Hollerman



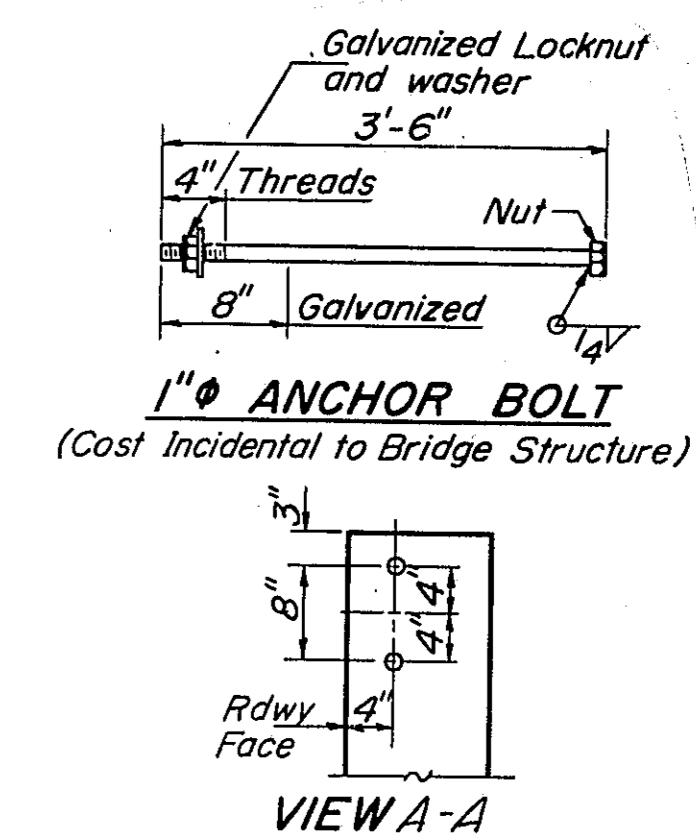
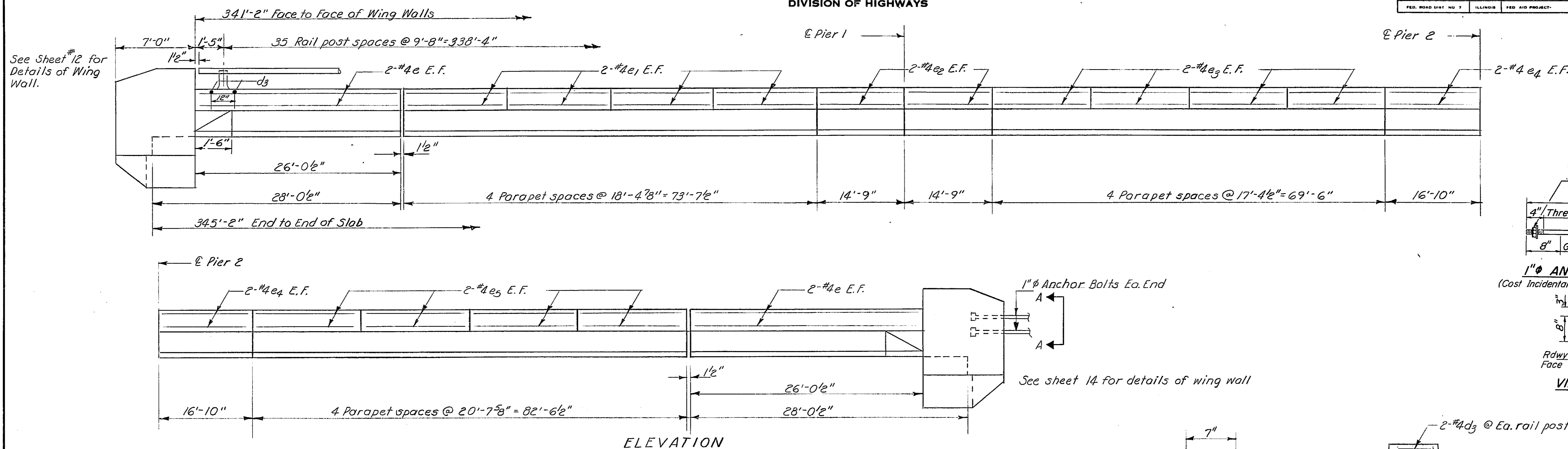
APPROACH SPANS  
SUPERSTRUCTURE  
F.A.I. RT. 55 SEC. 68-4 HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

SA-586-0 3-17-69

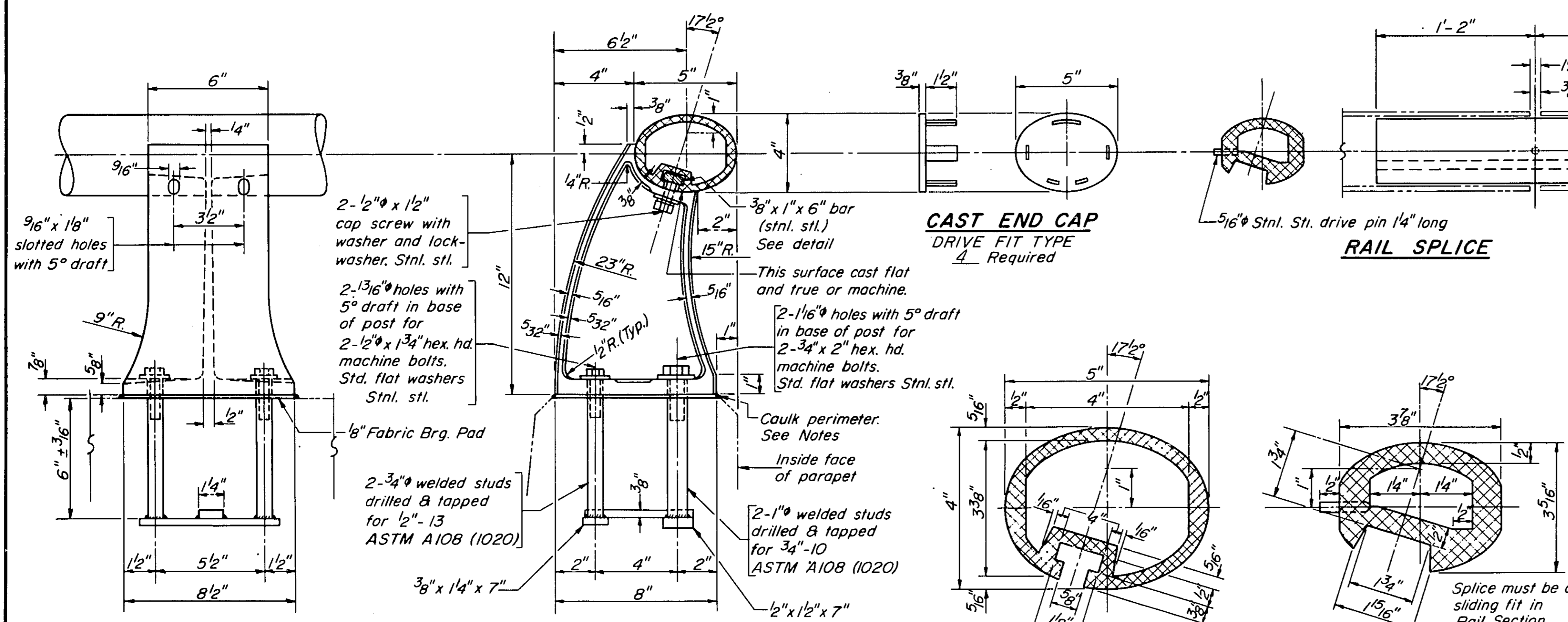


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

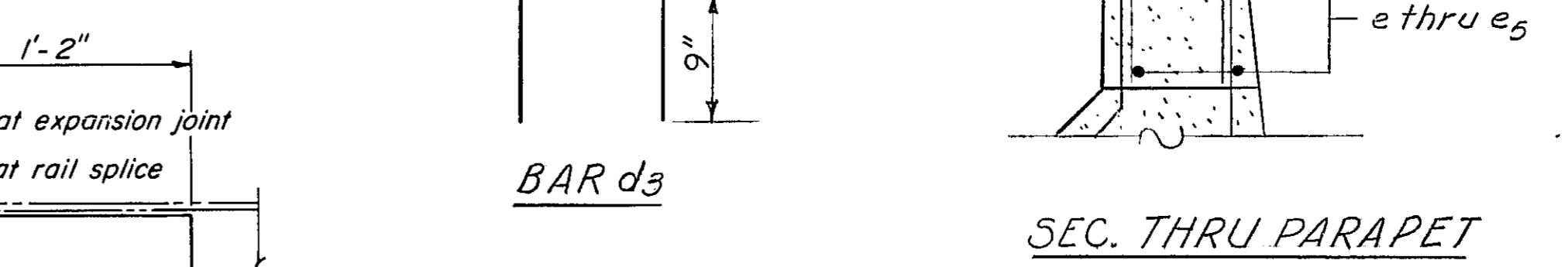
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
55	68-41B	Montgomery	32	12	18 SHEETS



ELEVATION



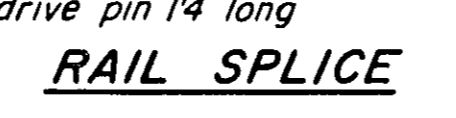
RAIL POST DETAILS



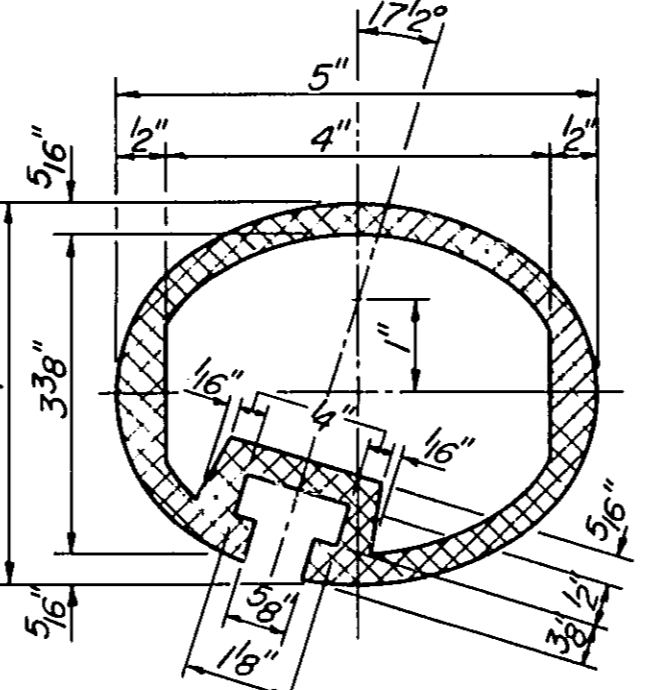
SEC. THRU PARAPET



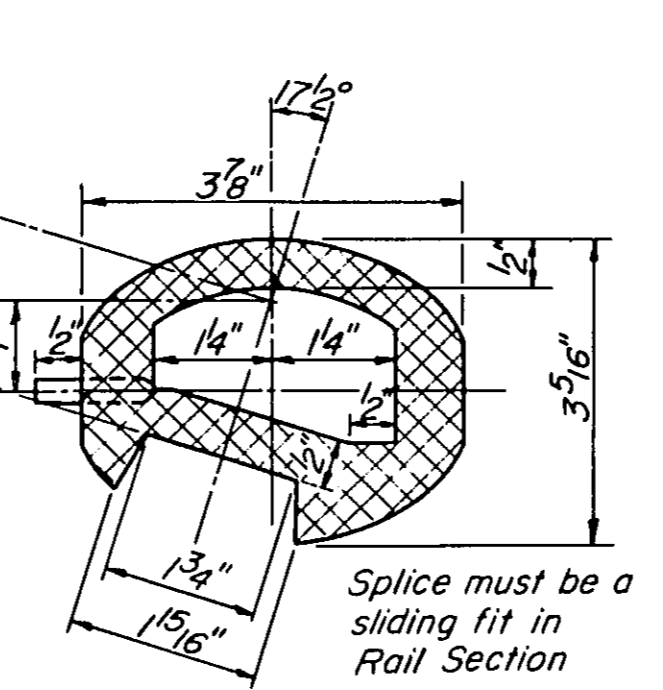
CAST END CAP DRIVE FIT TYPE 4 Required



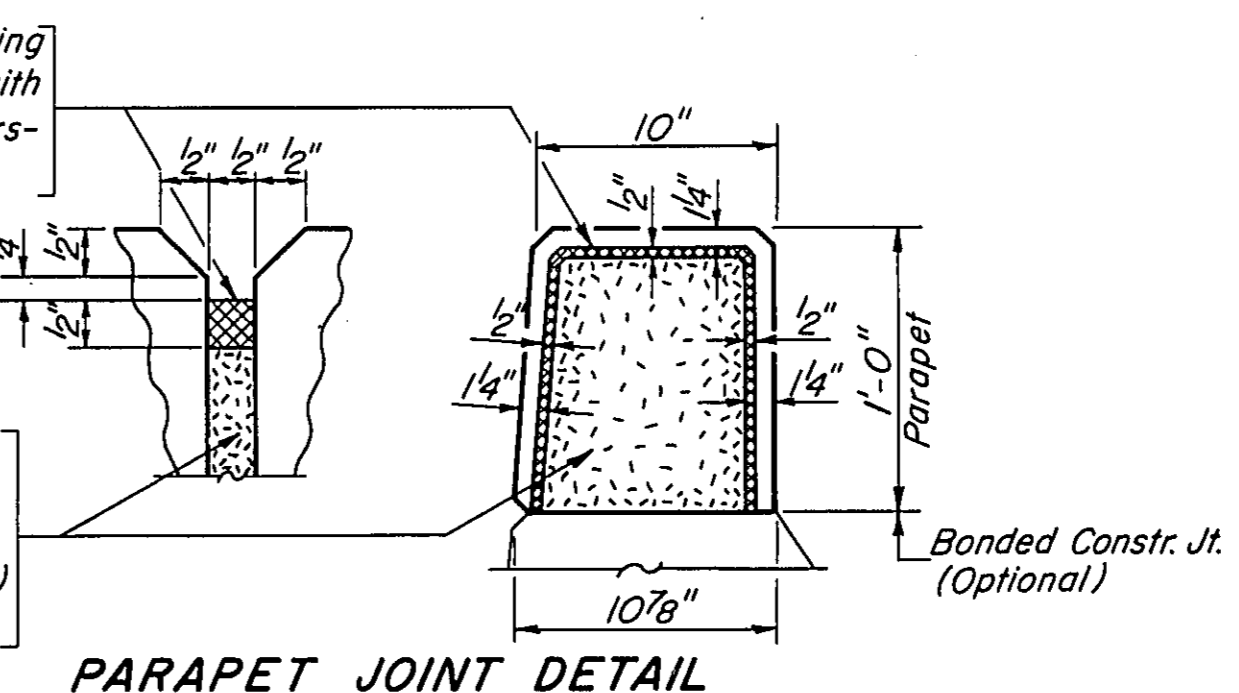
RAIL SPLICE



SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE



PARAPET JOINT DETAIL

NOTES:  
All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.  
All joints in rail shall be spliced per detail.  
Provide 1-1/8" and 2-1/8" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.  
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.  
Aluminum alloy rail shall conform to ASTM B 221 alloy 6061-T6 or 6351-T5 with min. yield 35 ksi, min. tensile 38 ksi, and elongation of 10% in 2 inches.

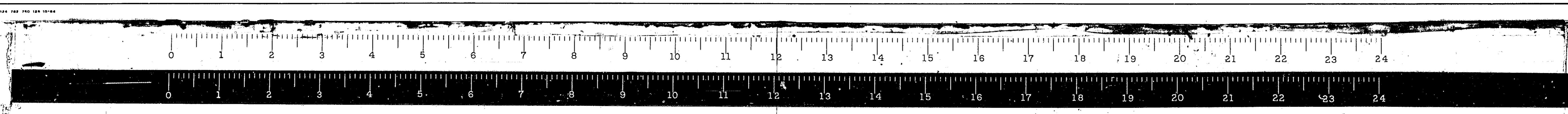
PARAPETS & RAILS  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e	16	#4	25'-9"	
e1	32	#4	18'-11"	
e2	16	#4	14'-6"	
e3	32	#4	17'-11"	
e4	16	#4	16'-7"	
e5	32	#4	20'-4"	
d3	144	#4	2'-11"	
Reinforcement Bars			Lbs.	1990
Class X Concrete			Cu. Yds.	22.0
Aluminum Railing			Lin. Ft.	632

ALUMINUM RAILING  
F.A.I. RT. 55 SEC. 68-41B-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

DESIGNED DA Ryo  
CHECKED Rao. G.K.  
DRAWN Bev Robinson  
CHECKED Rao. G.K.  
APRIL 24 1970  
EXAMINED [Signature]  
PASSED [Signature]  
APPROVED [Signature]

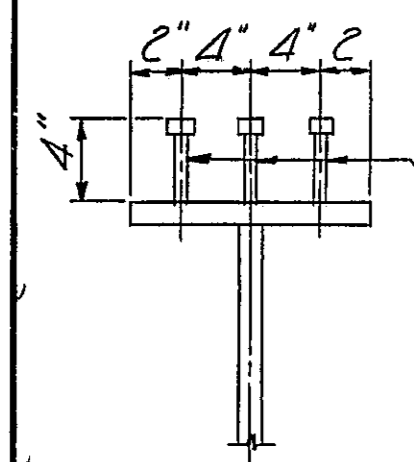
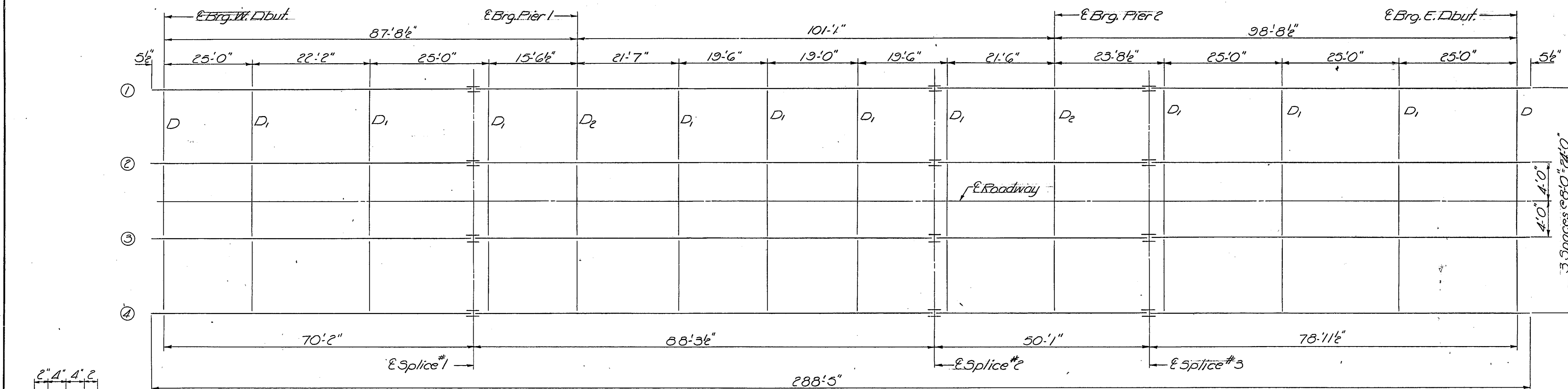
R-17 4-22-68 9-18-69



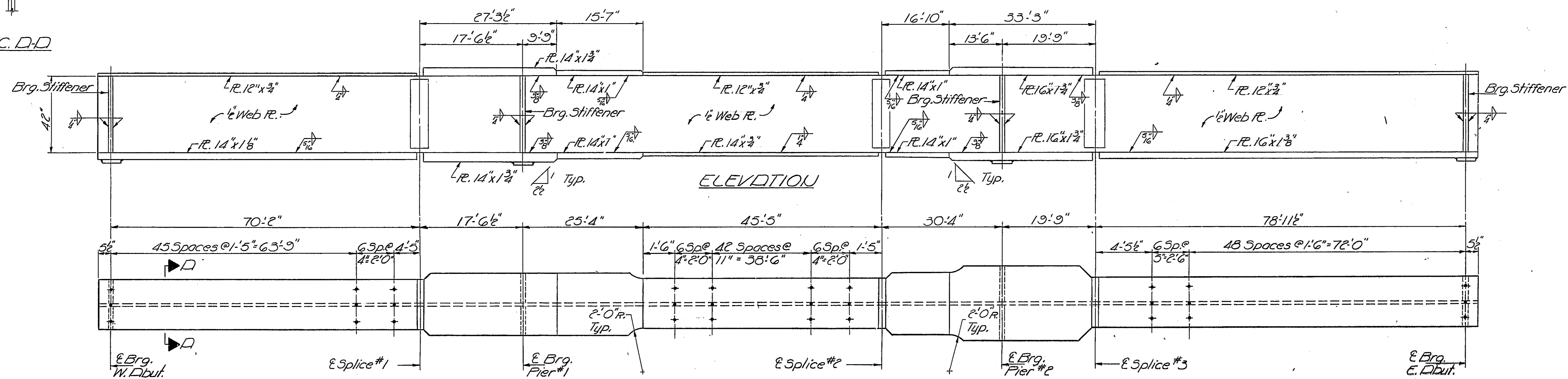
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. 1 FAI	53	Montgomery	32	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 6  
18 SHEETS



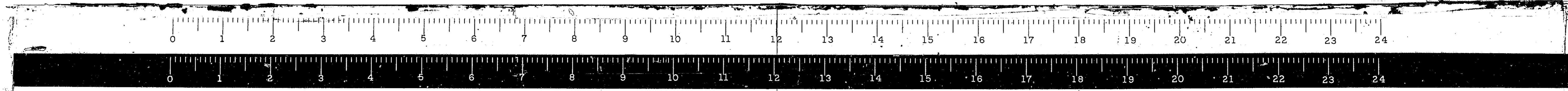
SEC. D-D



PLAN  
Showing Stud Spacing

DESIGNED D.A.R.	APRIL 24 1970
CHECKED Rao.G.K.	EXAMINED [Signature]
DRAWN J.D.	PASSED [Signature]
CHECKED Rao.G.K.	APPROVED [Signature]

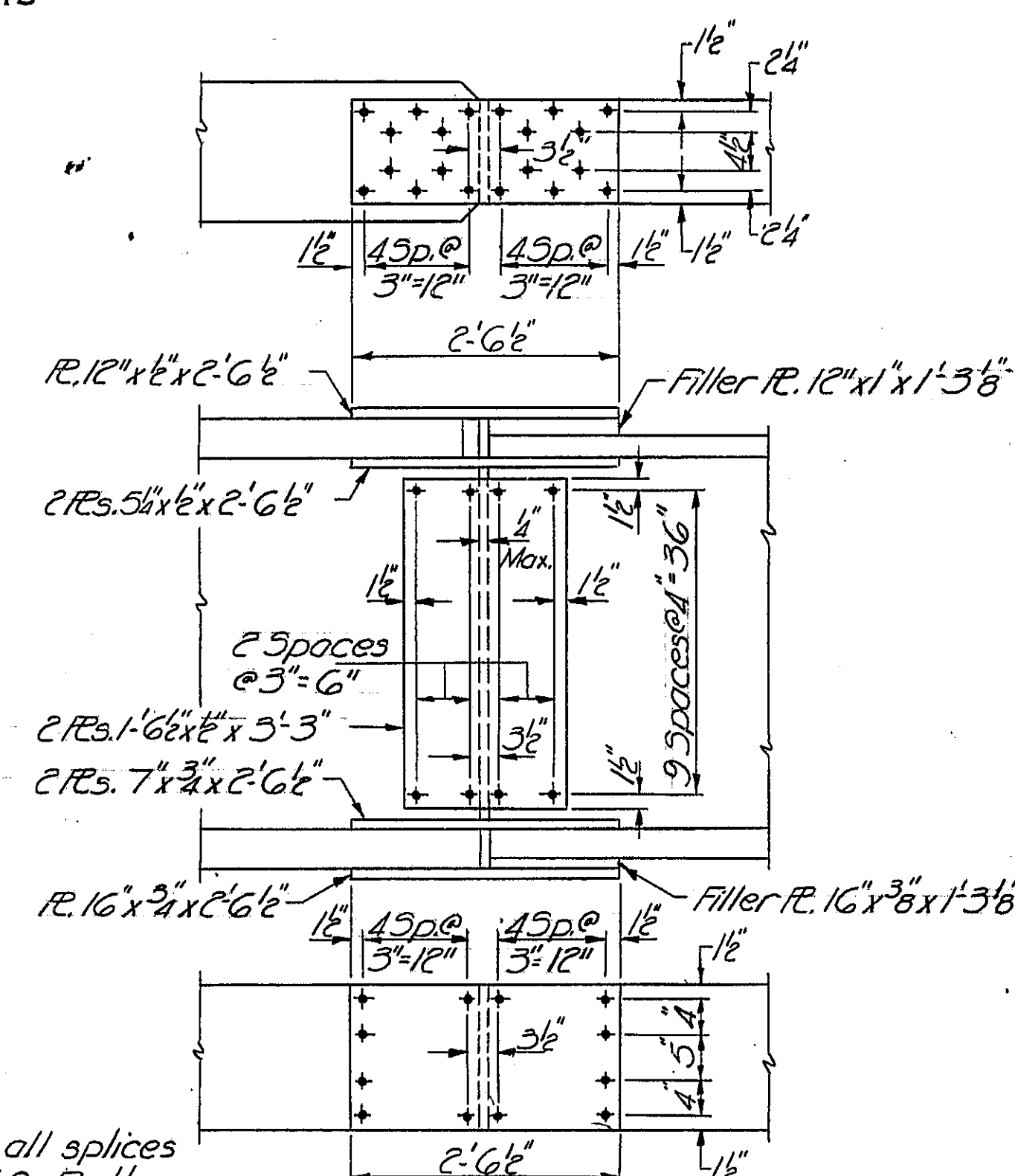
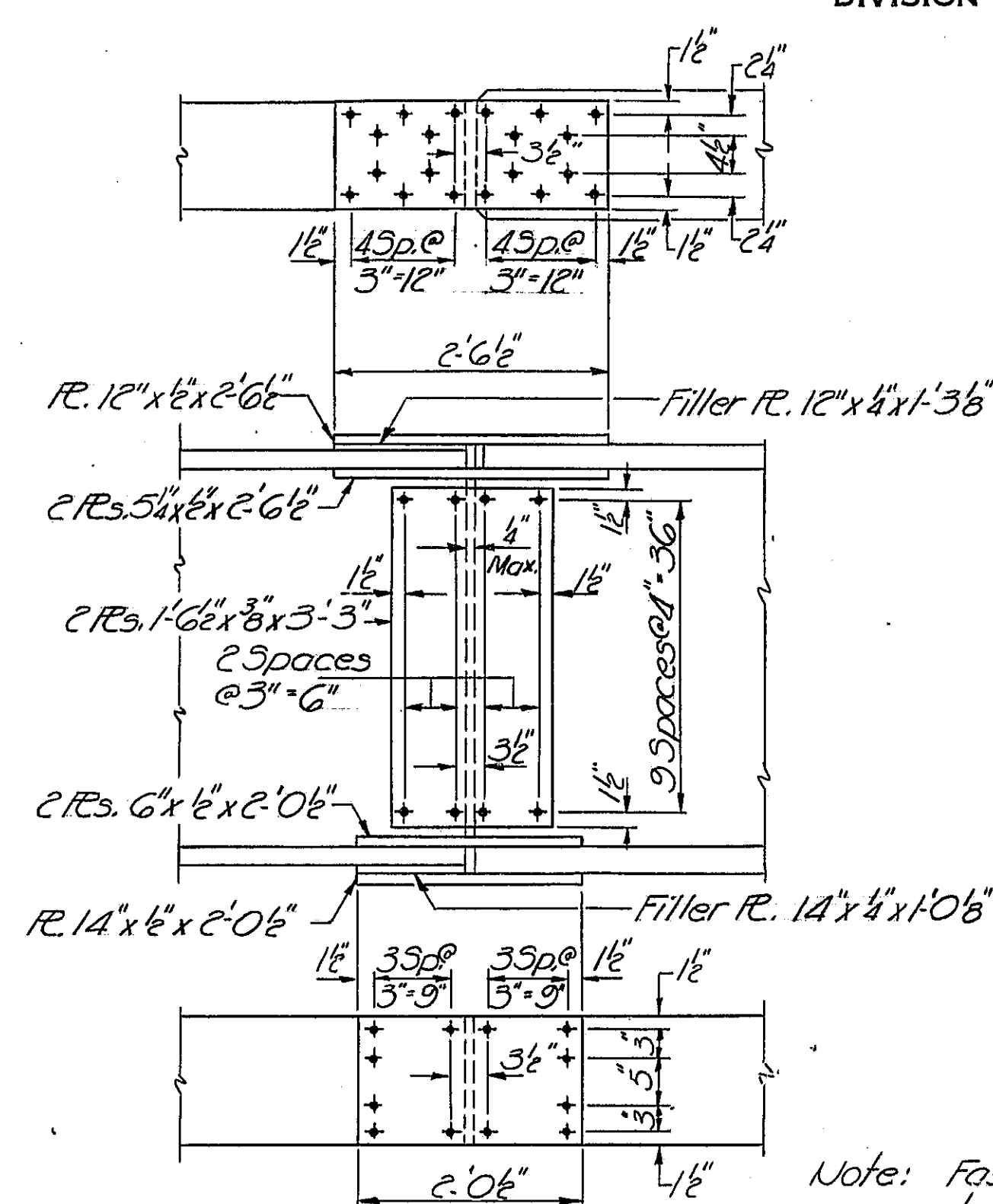
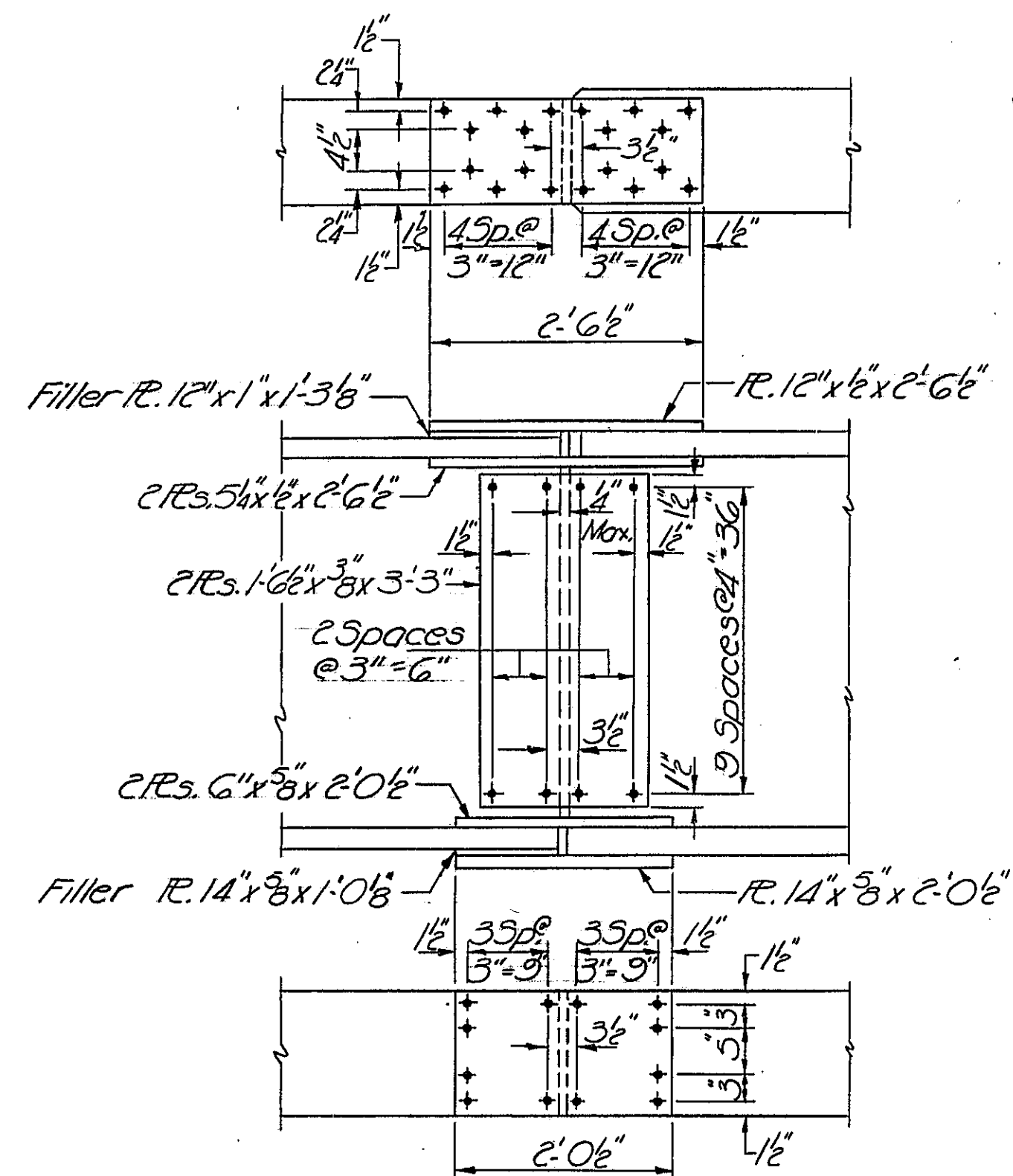
STRUCTURAL STEEL  
E.D.L.R. 53 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STD. 11.31-45.27



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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	68-4HB-1	Montgomery	32	14
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 7  
18 SHEETS

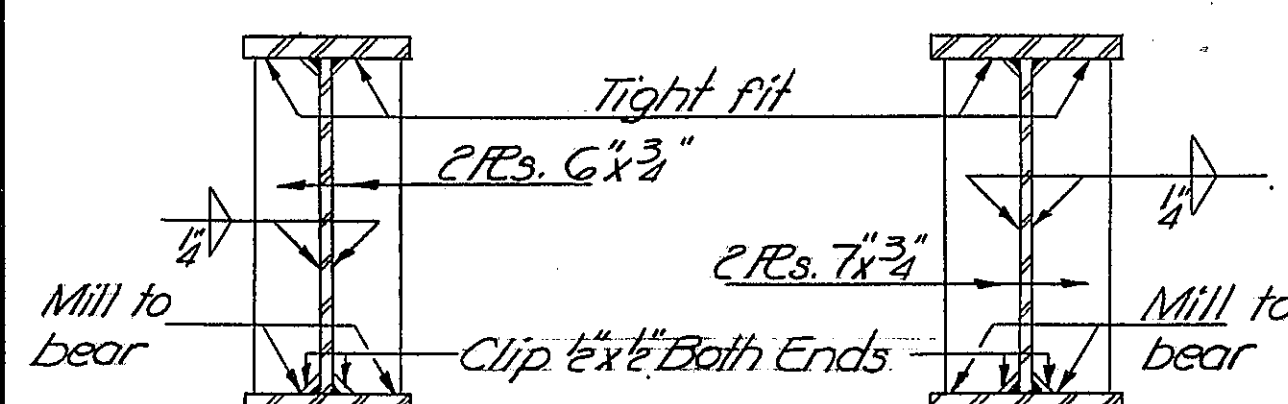


Note: Fasteners for all splices shall be 7/8" H.S. Bolts.

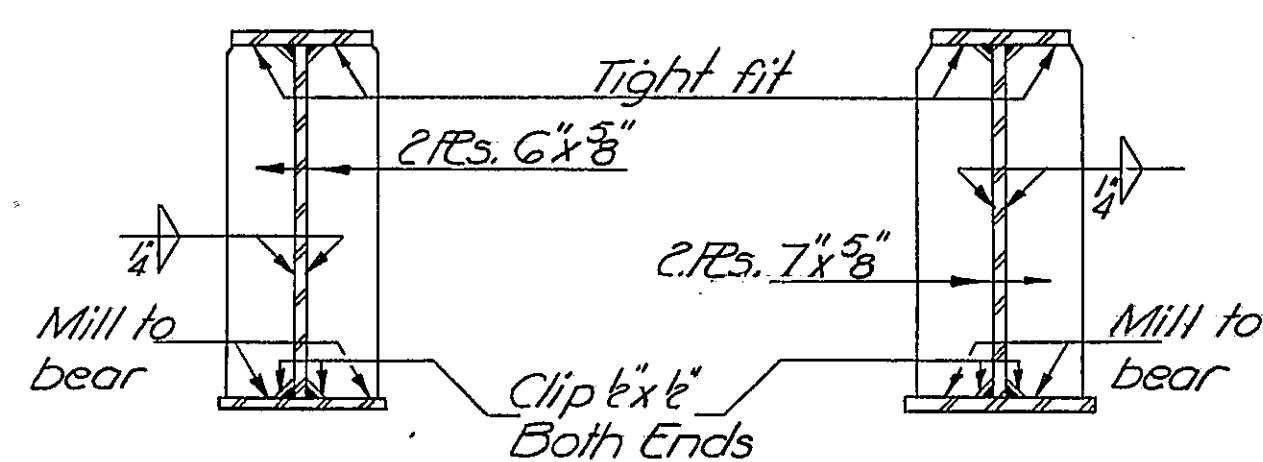
\* TOP OF WEB ELEVATIONS

Location	Girder	164	263
E. Brg. W. Abut.		655.89	655.99
E. Field Splice #1		656.49	656.59
E. Brg. Pier #1		656.53	656.63
E. Field Splice #2		656.88	656.98
E. Brg. Pier #2		656.83	656.93
E. Field Splice #3		656.86	656.96
E. Brg. E. Abut.		656.52	656.62

\* For Fabrication only

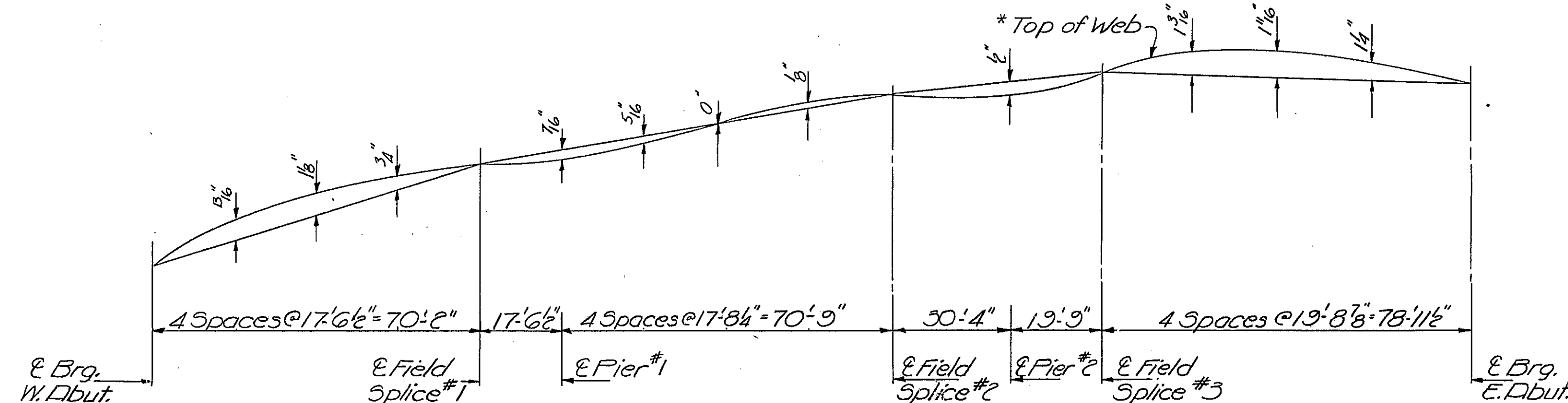


PIER #1  
BEDDING STIFFENERS



WEST ABUT.  
BEDDING STIFFENERS

DESIGNED	D.A. Ryan	EXAMINED	APRIL 24 1970
CHECKED	Rao. G.K.	PASSED	<i>[Signature]</i>
DRAWN	J.D.	APPROVED	<i>[Signature]</i>
CHECKED	Rao. G.K.	CHIEF HIGHWAY ENGINEER	



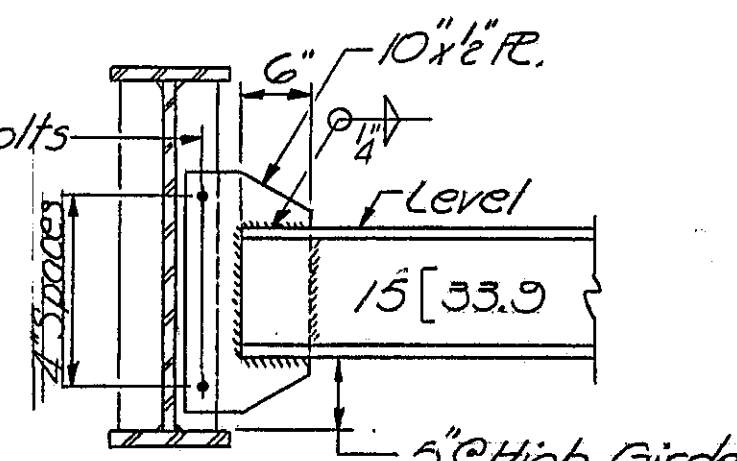
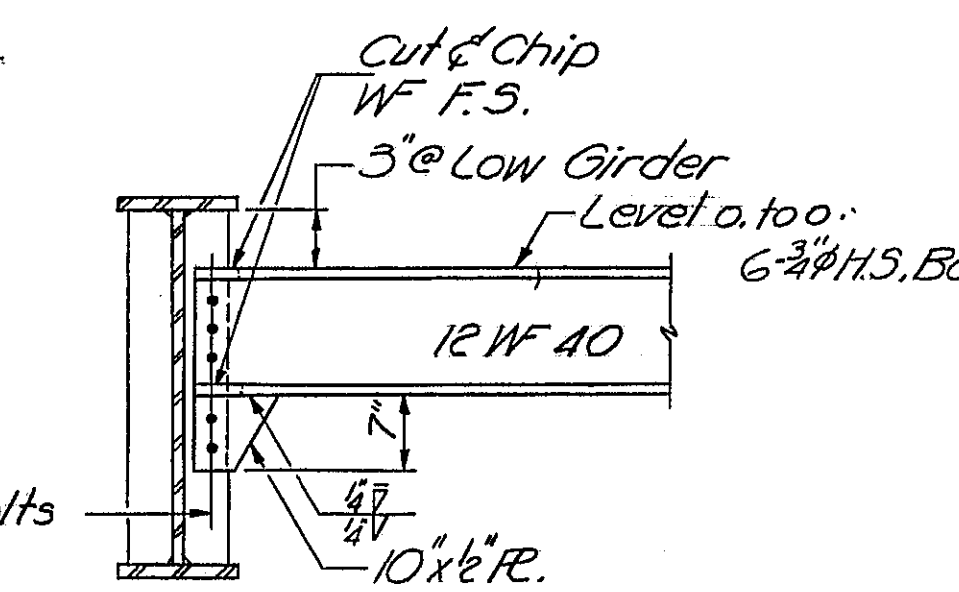
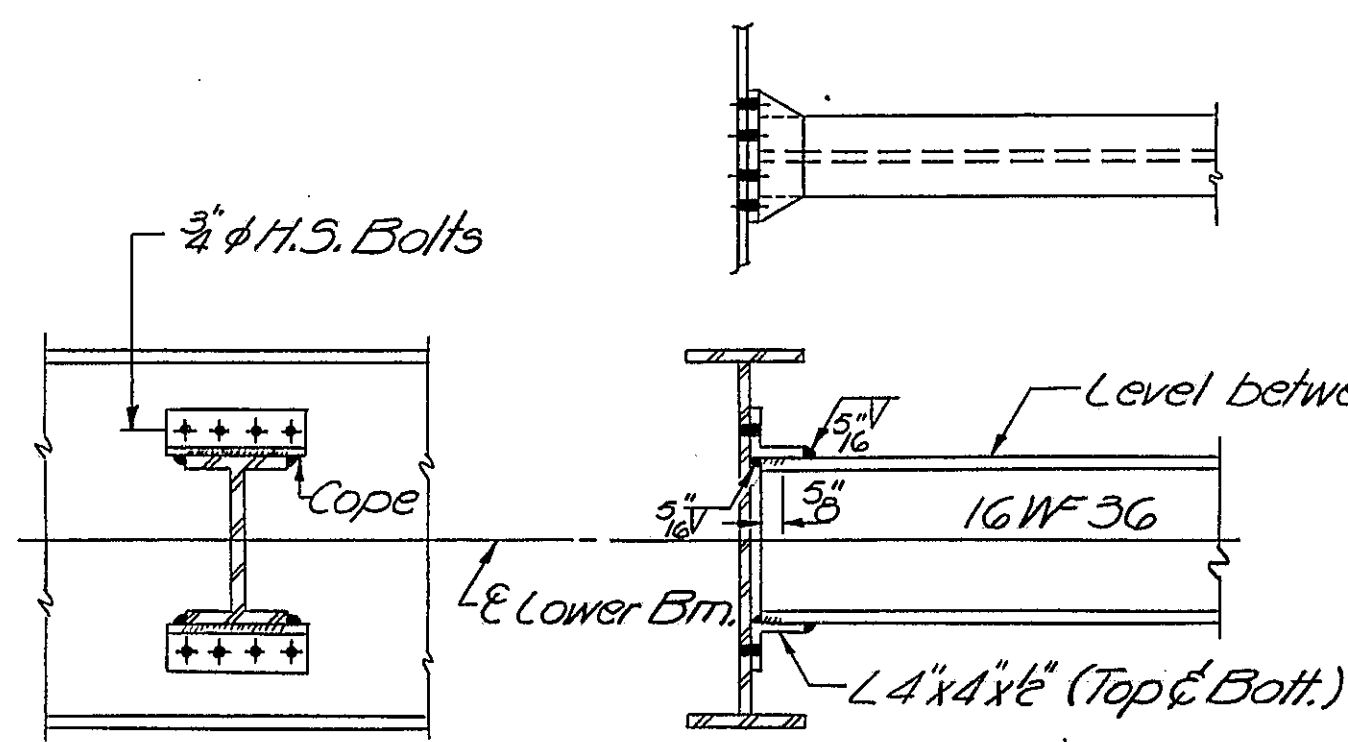
INTERIOR GIRDER REACTION TABLE

Reaction (K)	West Abut.	Pier #1	Pier #2	East Abut.
R <sub>w</sub>	44.69	136.24	152.46	58.04
R <sub>e</sub>	34.31	52.56	55.07	34.69
Imp.	8.06	11.94	12.23	7.77
R <sub>total</sub>	87.06	200.74	219.76	94.70

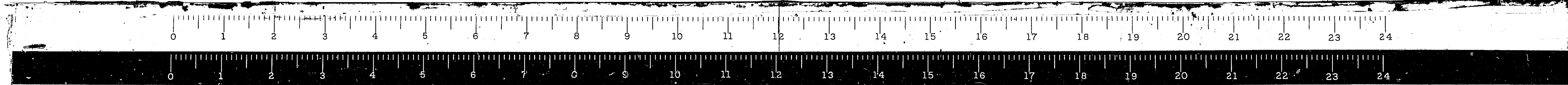
INTERIOR GIRDER MOMENT TABLE

	0.45p1	Pier 1	0.55p2	Pier 2	0.65p3
I <sub>s</sub> (in <sup>4</sup> )	14048	26534	11974	22884	15288
I <sub>c</sub> (in <sup>4</sup> )	35142	28478	785	42282	42282
S <sub>s</sub> (in <sup>3</sup> )	743	1166	531	1314	946
S <sub>c</sub> (in <sup>3</sup> )	1006	785	1273		
M <sub>s</sub> (ft-k)	0.972	1330	0.972	1345	1003
M <sub>c</sub> (ft-k)	534	1196	210	1493	711
I <sub>s</sub> & (ksi)	8.62	12.31	4.74	13.64	9.01
S <sub>s</sub> & (ksi)	0.358	0.358	1.44	0.358	0.358
M <sub>s</sub> & (ksi)	215		144	283	
M <sub>c</sub> & (ksi)	601	475	531	533	694
M <sub>imp</sub> (ksi)	136	108	120	120	157
Total (ksi)	952	583	795	653	1134
I <sub>s</sub> & (ksi)	11.36	6.00	12.18	5.96	10.69
I <sub>s</sub> Total (ksi)	19.98	18.31	16.92	19.60	19.70
V <sub>R</sub> (K)	38.53	48.31	39.44	45.34	33.61

I<sub>s</sub> and S<sub>s</sub> are the moment of inertia and section modulus of the steel section.  
I<sub>c</sub> and S<sub>c</sub> are the moment of inertia and section modulus of the composite section used in computing I<sub>s</sub>.  
V<sub>R</sub> is the maximum V + impact shear range.



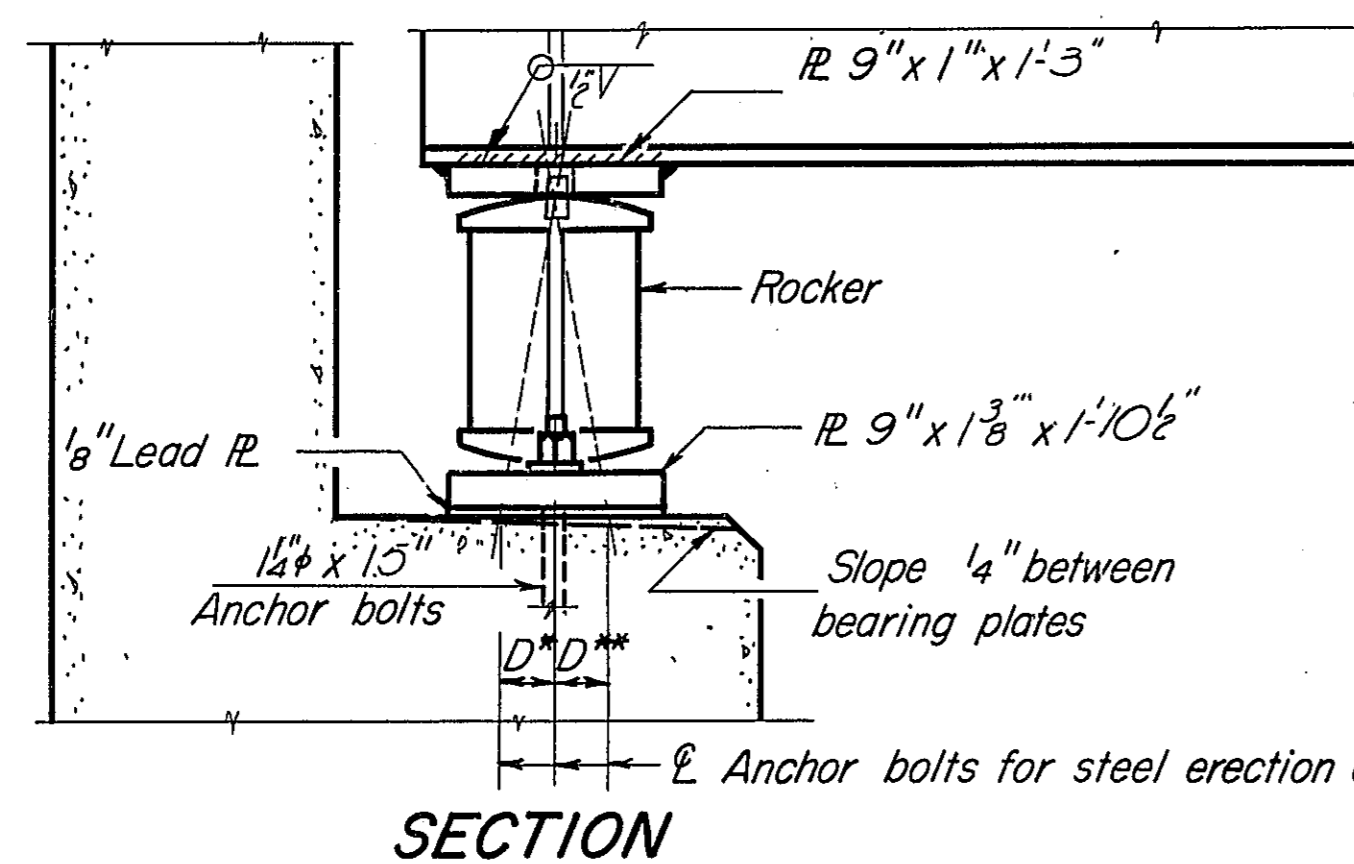
STRUCTURAL STEEL DETAILS  
FDL RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STD. 1131-45.27



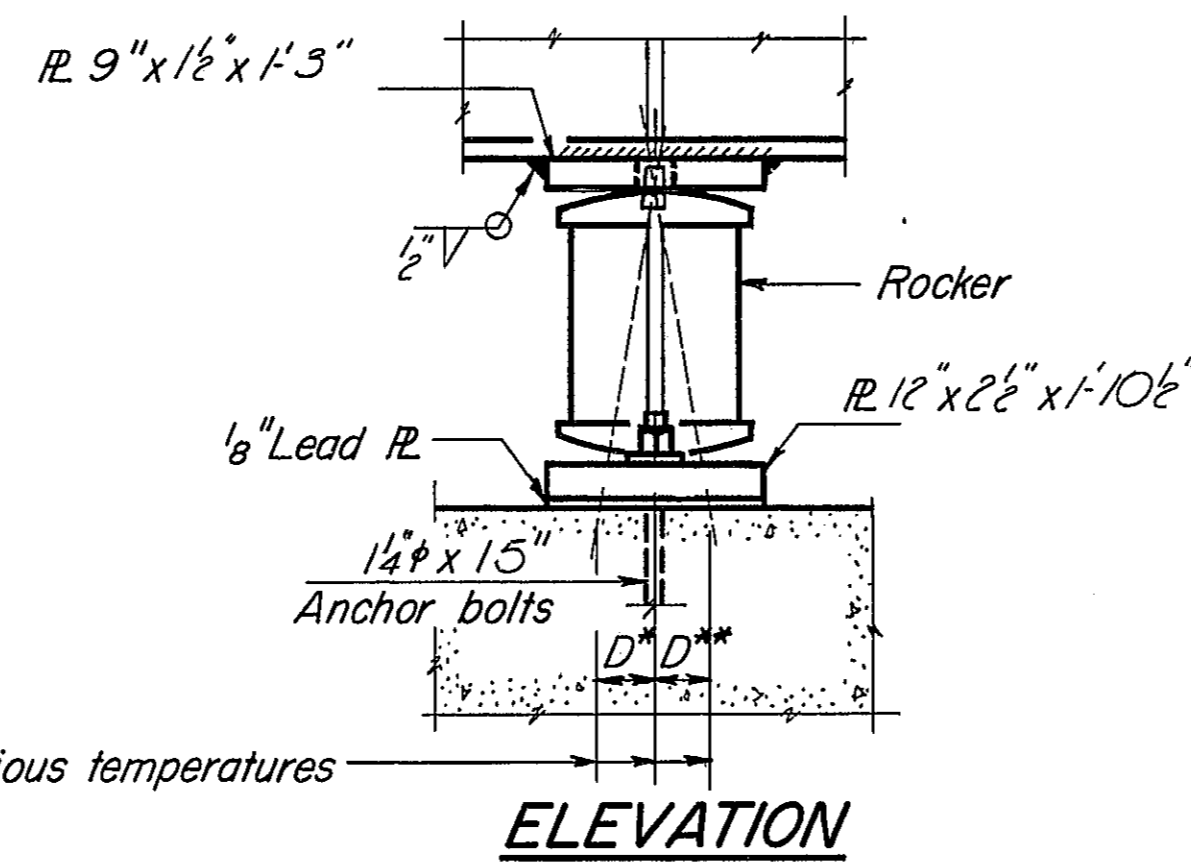
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
53	68-41B-1	Montgomery	32	15
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

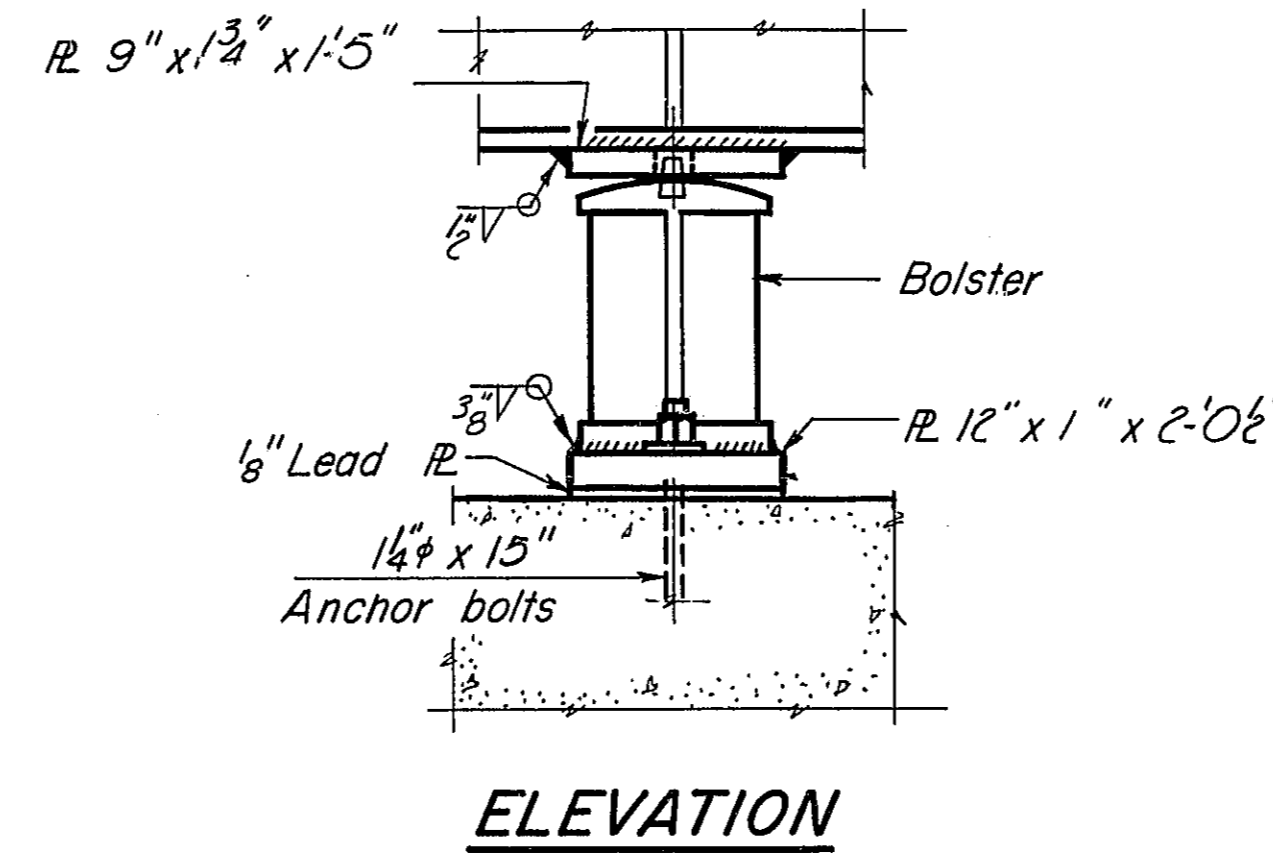
SHEET NO. 8  
18 SHEETS



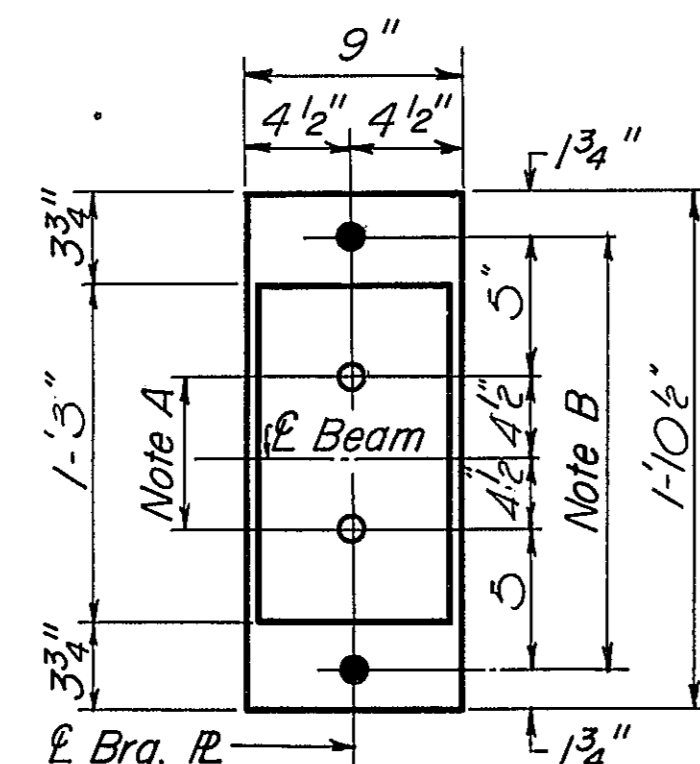
SECTION



ELEVATION

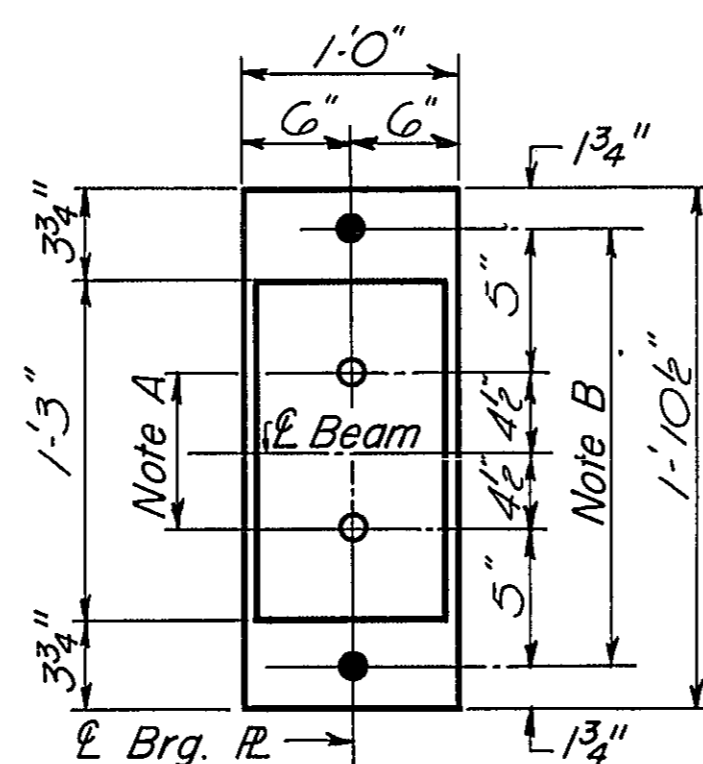


ELEVATION



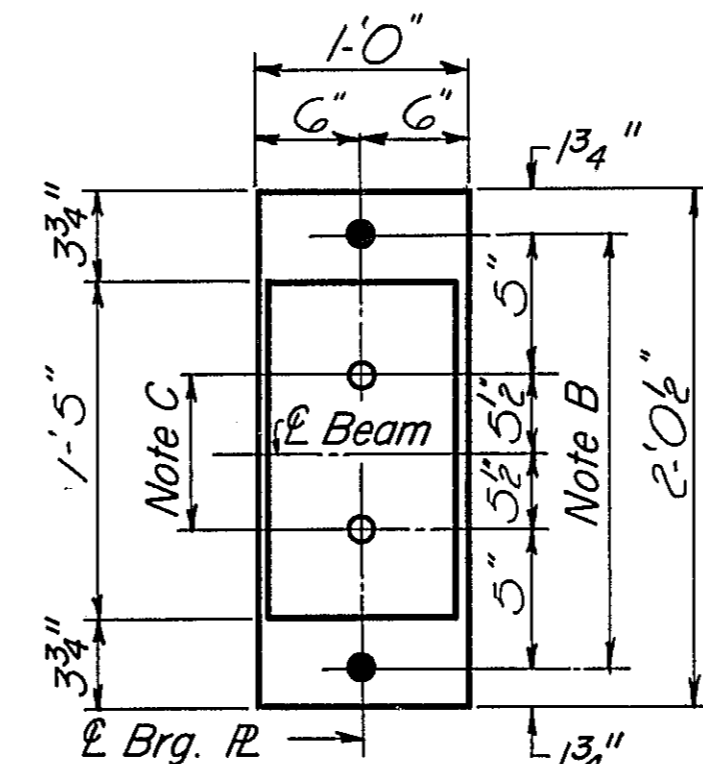
PLAN

AT WEST ABUTMENT



PLAN

AT PIER #1



PLAN

AT PIER #2

BEARING ASSEMBLY DETAILS

NOTE A  
1 3/8" Holes - 1" deep in top flange for pintles. Thread or press fit pintles into bottom flange.

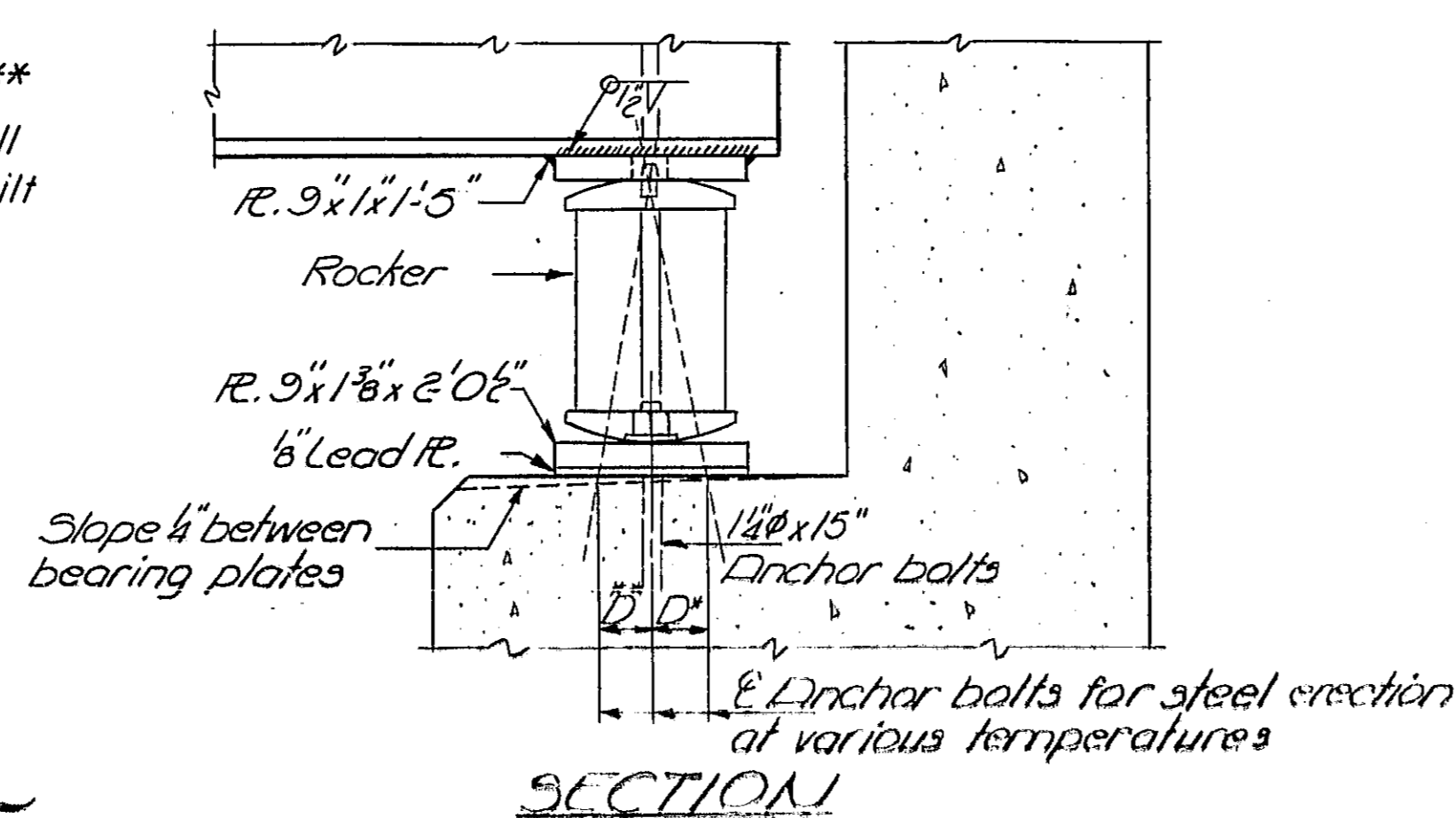
NOTE B  
1 3/8" Holes for 1 1/4" anchor bolts. 2 1/2" x 2 1/2" x 5/16" flange washers under nut.

NOTE C  
1 3/8" Holes 1" deep in top flange only for 1 1/4" pintles.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

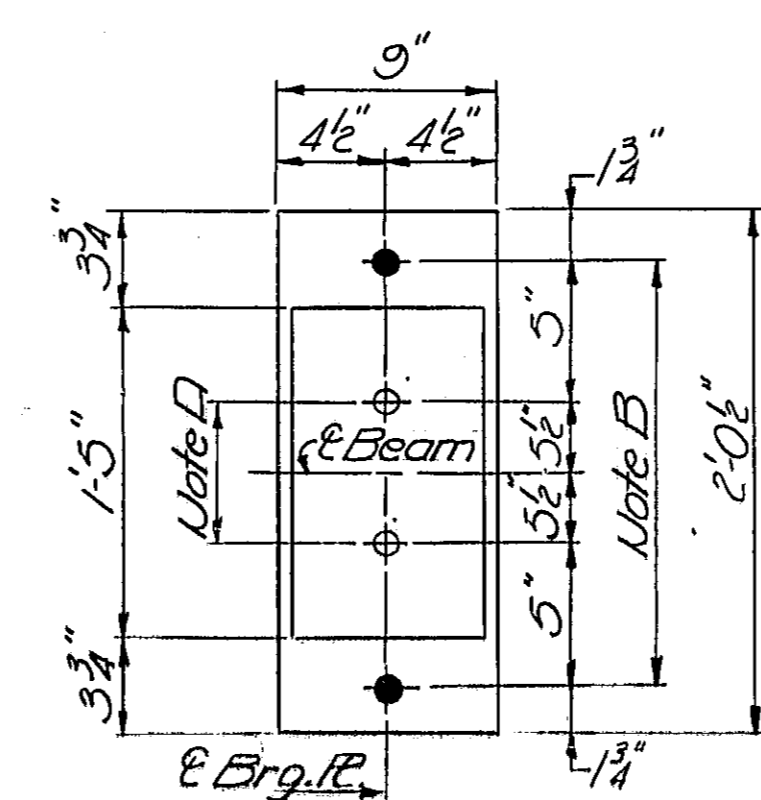
- a) D\* (Side of brg. away from fixed brg.)  
D\* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.  
D\*\* (Side of brg. toward fixed brg.)  
D\*\* = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

- b) After beams have been erected and dimensions D\* or D\*\* determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

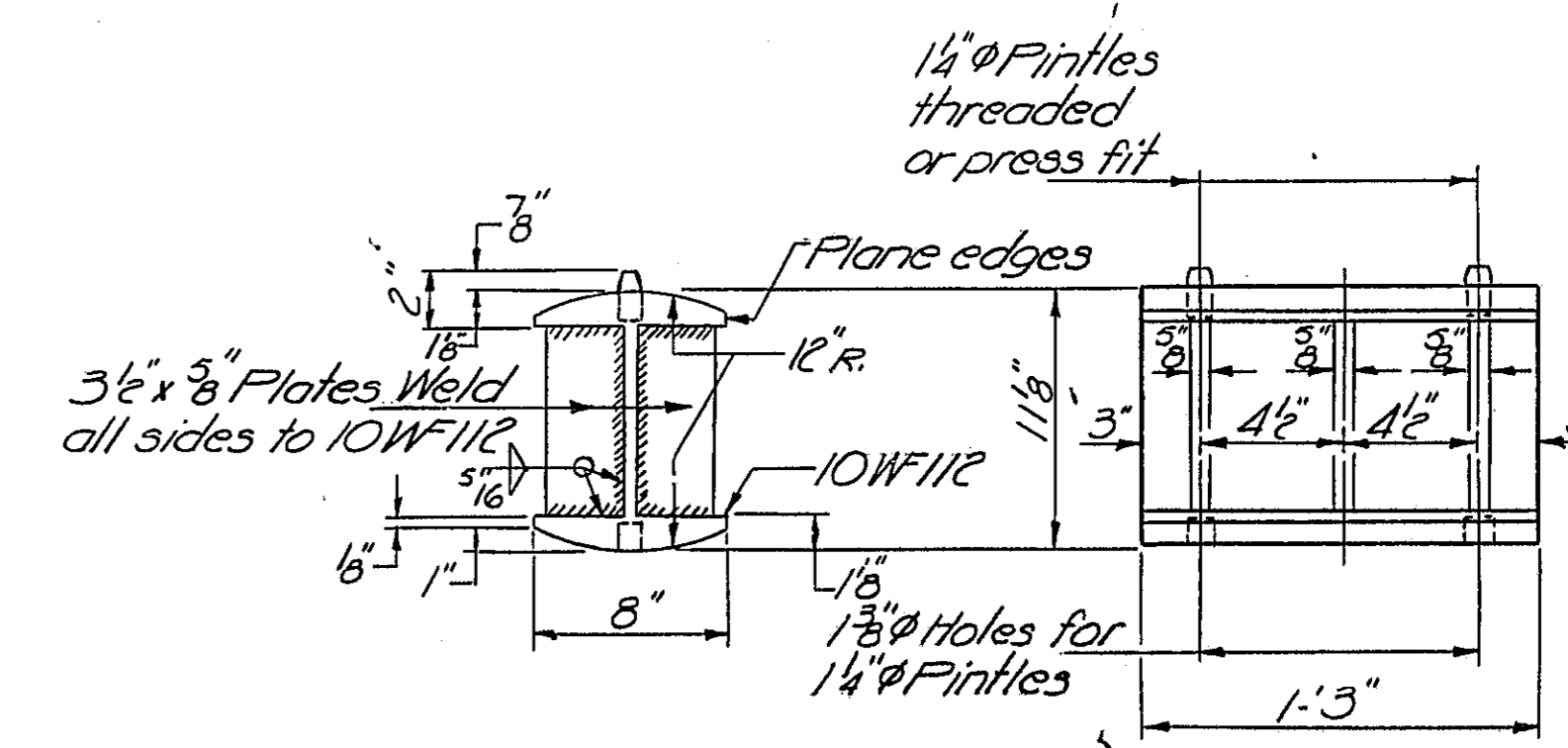


SECTION

AT EAST ABUTMENT



PLAN



ROCKER AT PIER #1

BEDDING DETAILS  
F.D.I. 61-55 SEC. 68-41B-1  
MONTGOMERY COUNTY  
3/11/131+45.27

DESIGNED	D.A. Rao
CHECKED	Rao, G.K.
DRAWN	J.D.
CHECKED	Rao, G.K.

EXAMINED	APRIL 24 1965
PASSED	Richard J. Holterman
APPROVED	Richard J. Holterman

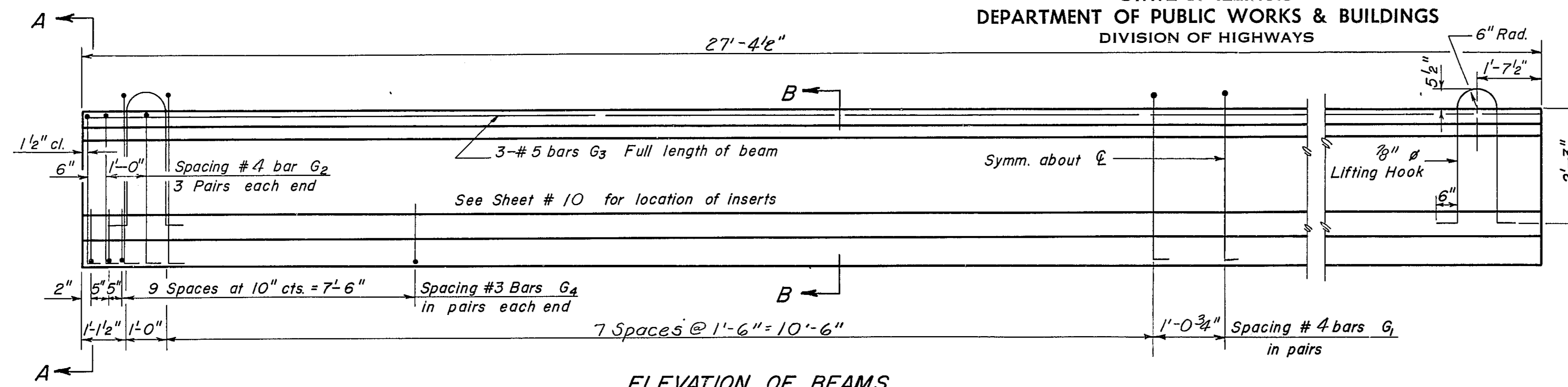
I-2-B 9 1 65



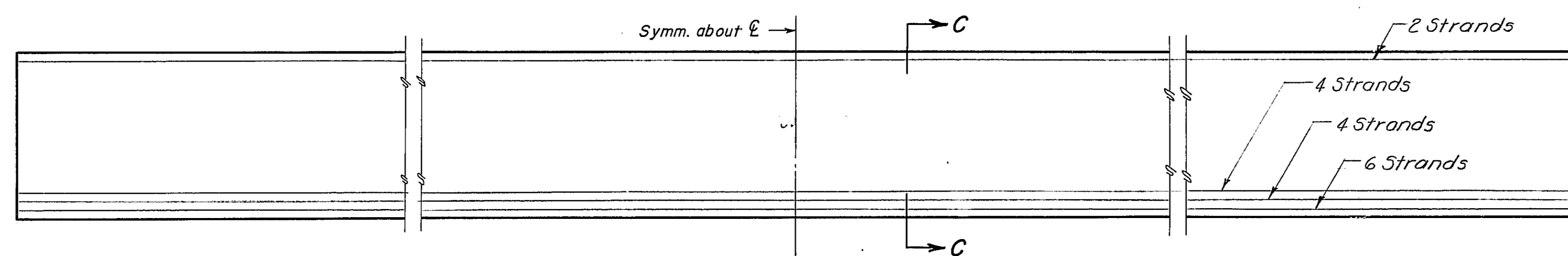
STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
35	68-4HB-1	Montgomery	32	16
ILLINOIS			FED. AID PROJECT:	

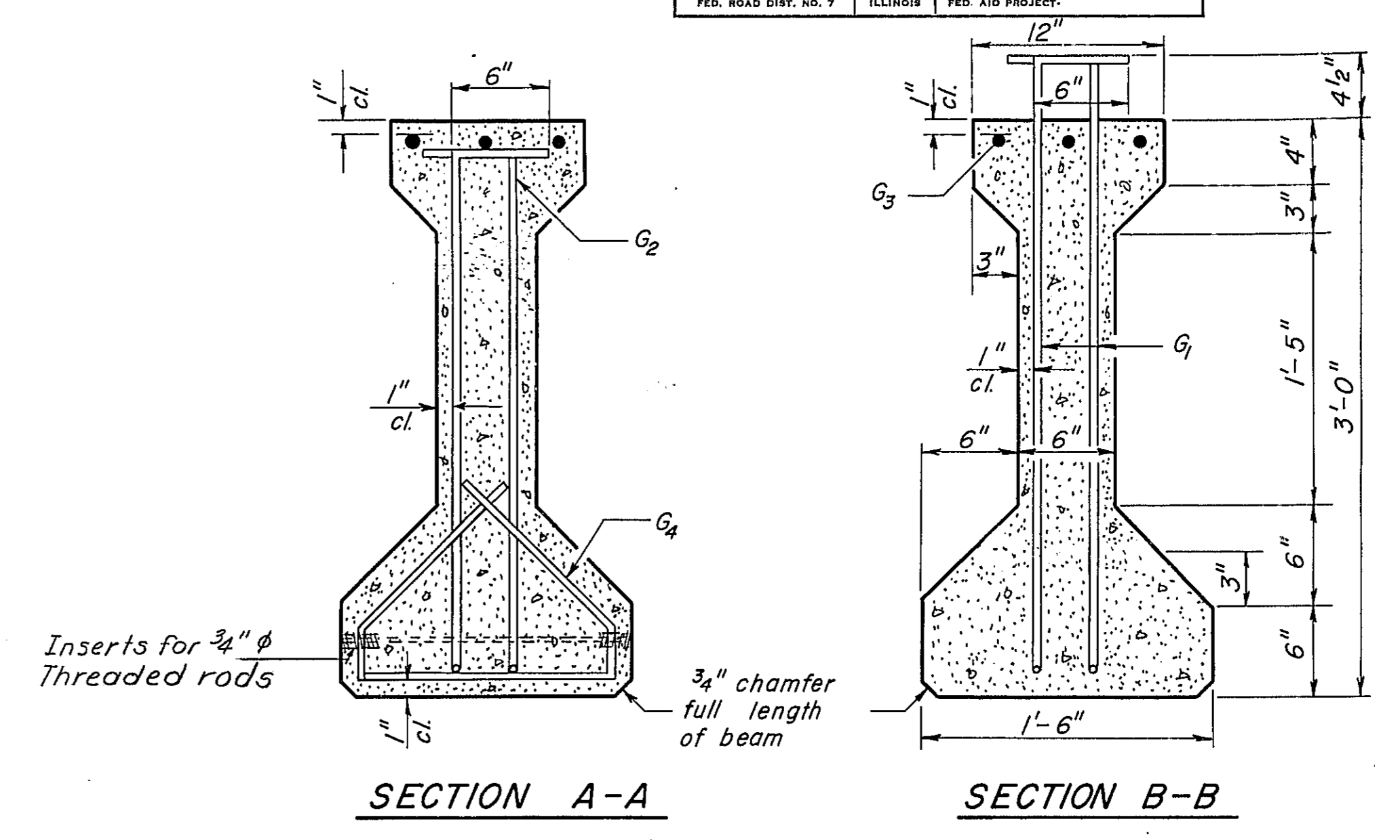
SHEET NO. 9  
18 SHEETS



ELEVATION OF BEAMS  
Showing Reinforcement & Dimensions

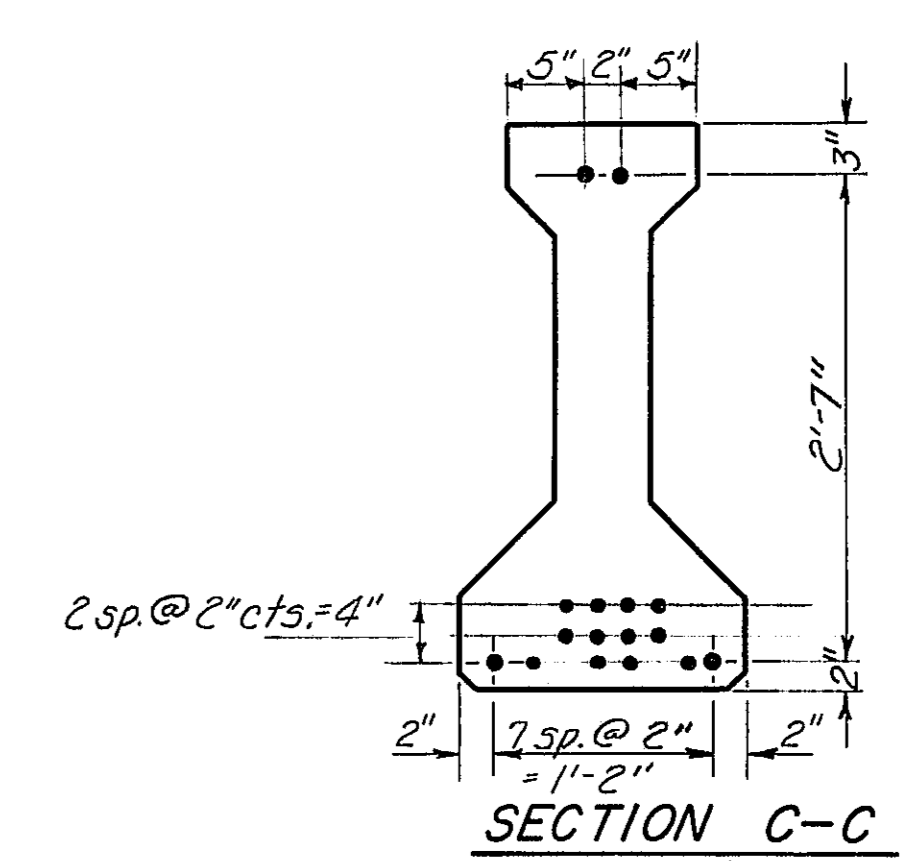


ELEVATION OF BEAMS  
Showing Prestressing Steel

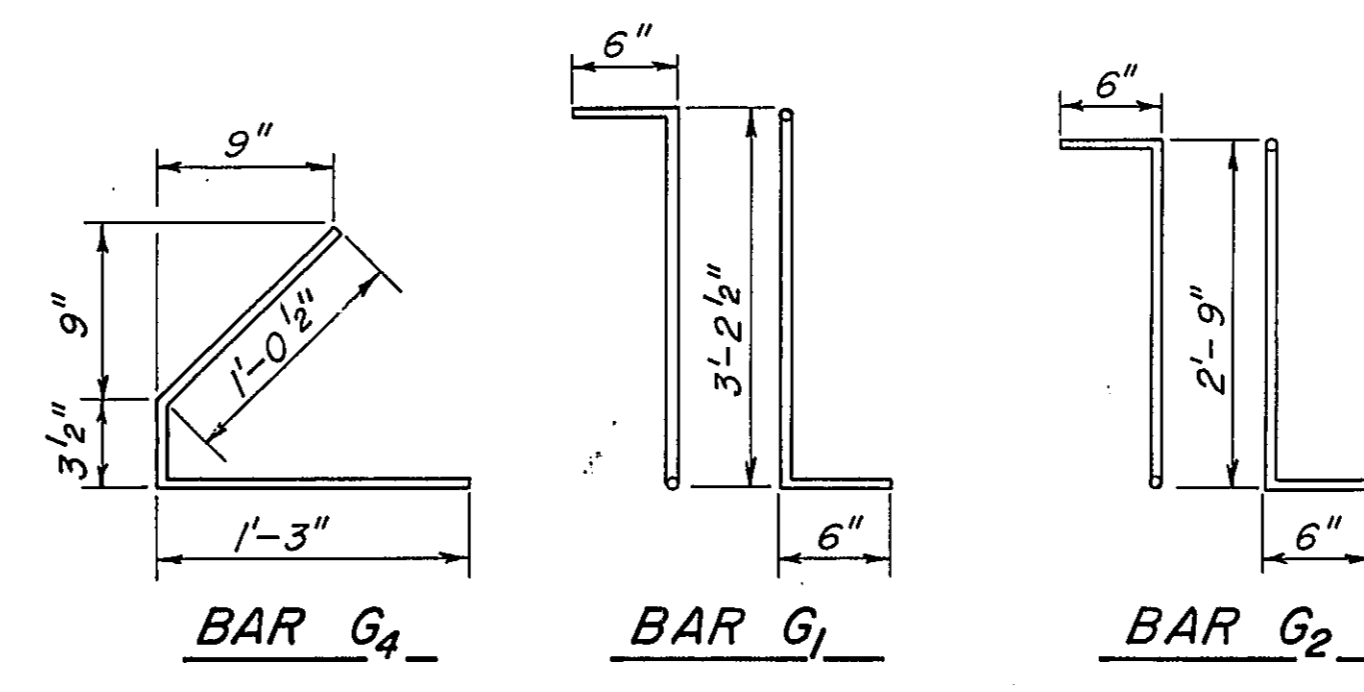


SECTION A-A

SECTION B-B



SECTION C-C



\* BAR LIST

Bar	No.	Size	Length	Shape
G1	38	#4	4'-2 1/2"	TL
G2	12	#4	3'-9"	TL
G3	3	#5	27'-0"	L
G4	48	#3	2'-7"	L

\* For one beam only.

NOTES

All inserts and threaded rods for inserts, reinforcing and Prestressing Steel, and other items which are cast into the Precast Concrete I-Beams shall be included in the contract unit price per lineal foot of "Furnishing And Erecting Precast Prestressed Concrete I-Beams, 36 In."

BILL OF MATERIAL

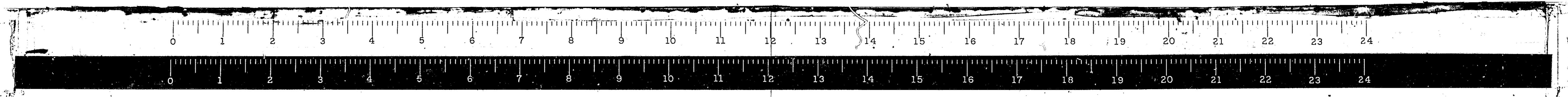
Item	Unit	Total
Furnishing & Erecting Precast Prestressed Concrete I-Beams, 36"	Lin. Ft.	164.3

Prestressing Steel shall have a nominal diameter of 1/8".  
Inserts for 3/4" # threaded rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.  
Steel for lifting hooks shall be A.S.T.M. A-306 Grade 70-80

APPROACH BEAMS  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

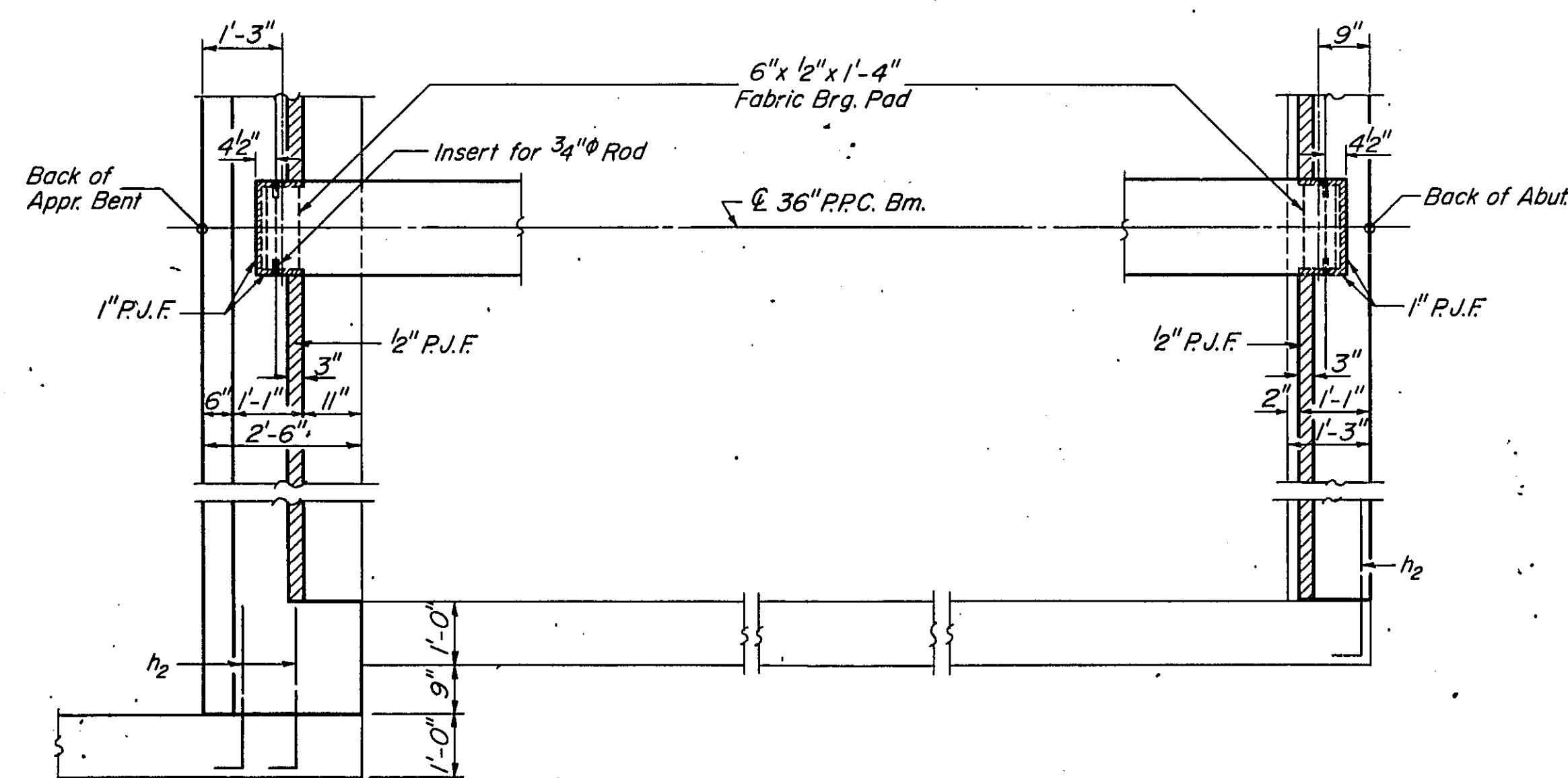
DESIGNED D.A.R. [Signature]  
CHECKED Rad. G.K.  
DRAWN T.B. Fuller BKR  
CHECKED Rad. G.K.  
EXAMINED [Signature]  
PASSED [Signature]  
APPROVED [Signature]

PI-4-36 S 8-1-63 Rev. 1-2-64 Rev. 1-27-66 Rev. 5-20-68



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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
F.A.I.	68-418	Montgomery	32	17	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

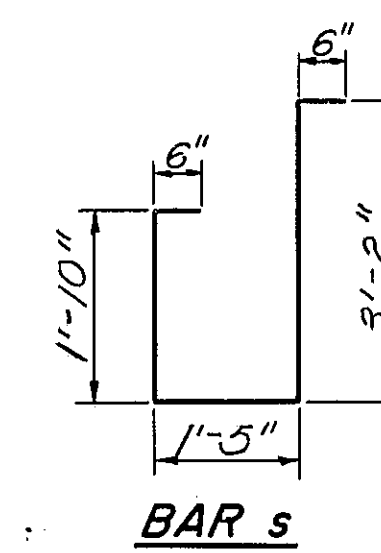


PARTIAL PLAN

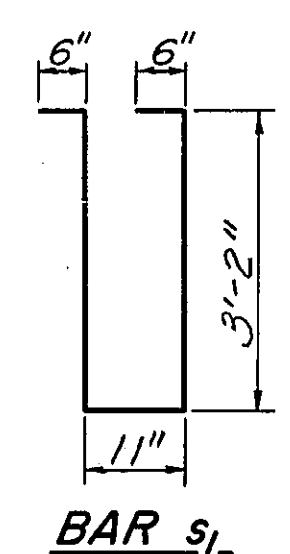
DESIGNED	D. A. Ryan
CHECKED	Rao. G. K.
DRAWN	Bev Robinson
CHECKED	Rao. G. K.

EXAMINED	April 24 1970
PASSED	W. C. Baumann
APPROVED	Richard H. Hollerman

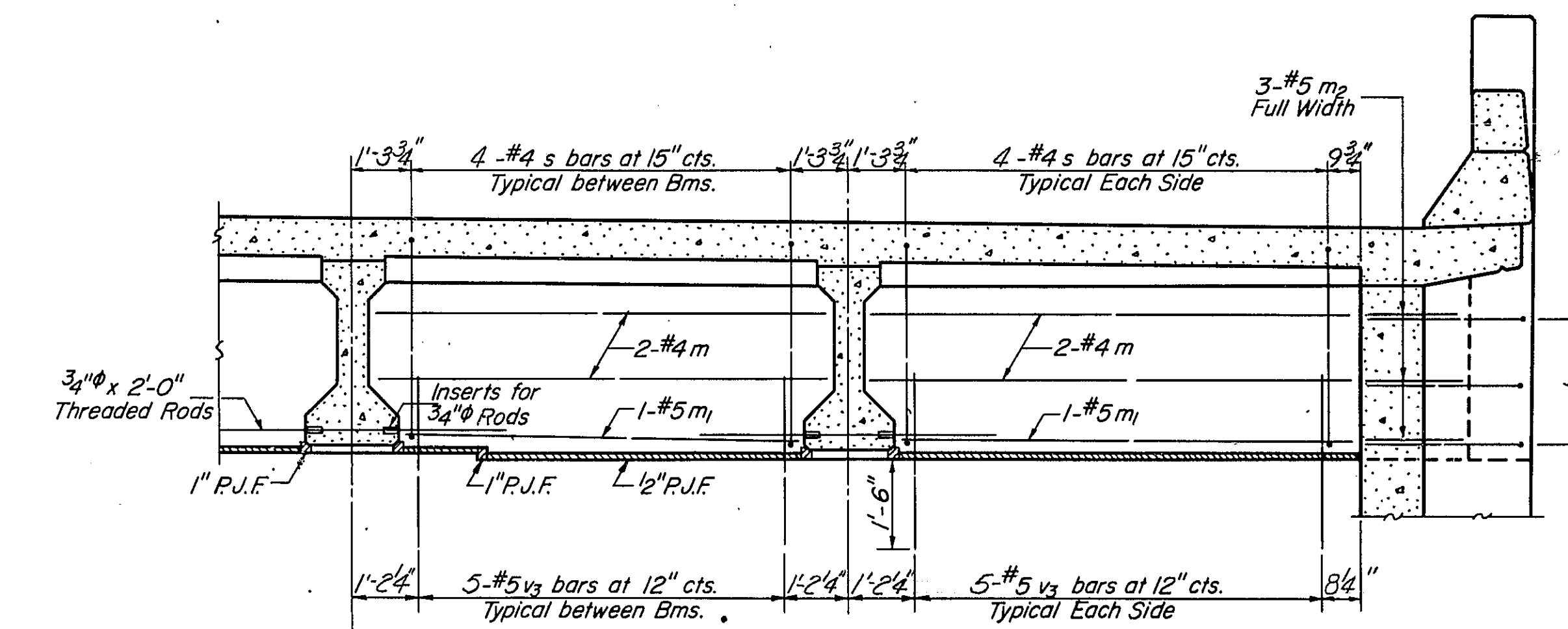
SB-O 3-17-69



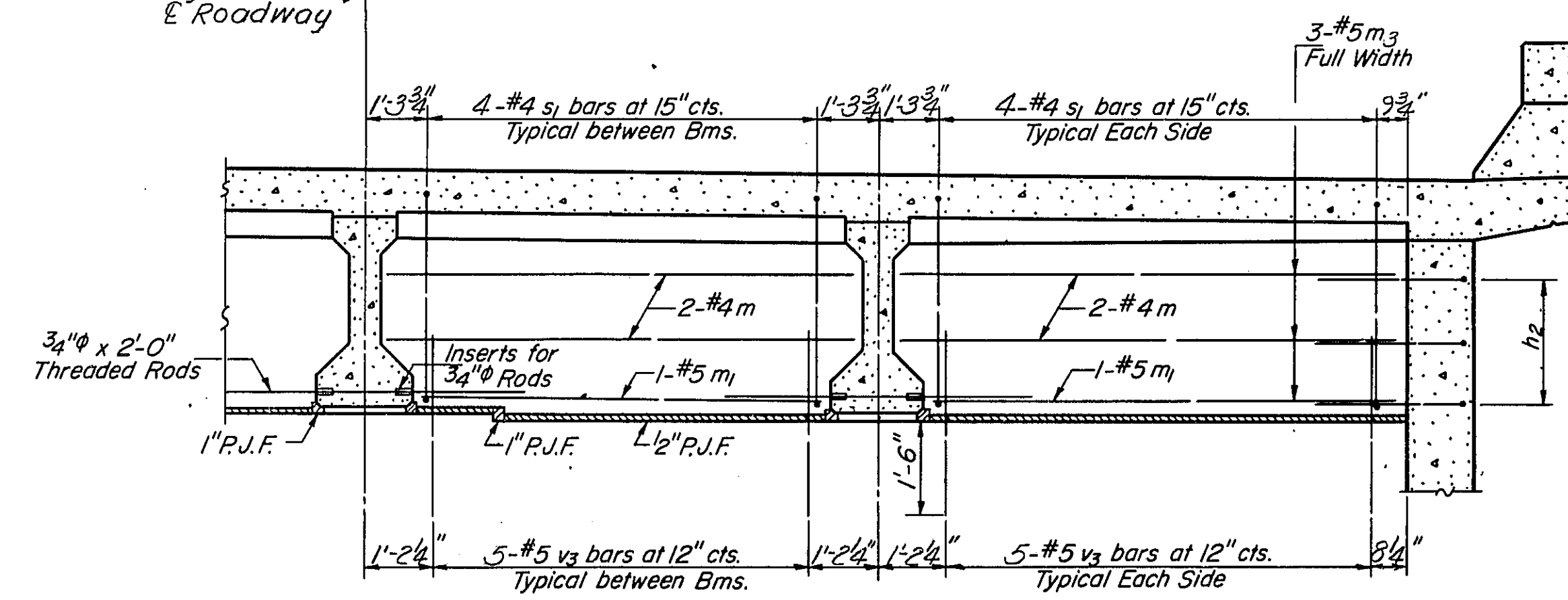
BAR s



BAR s1



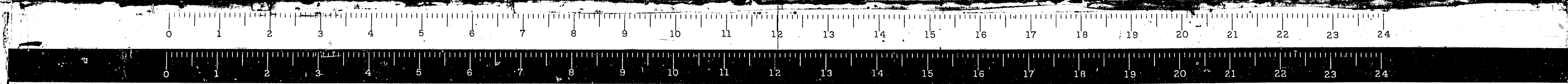
DIAPHRAGM AT APPROACH BENT



DIAPHRAGM AT ABUTMENT

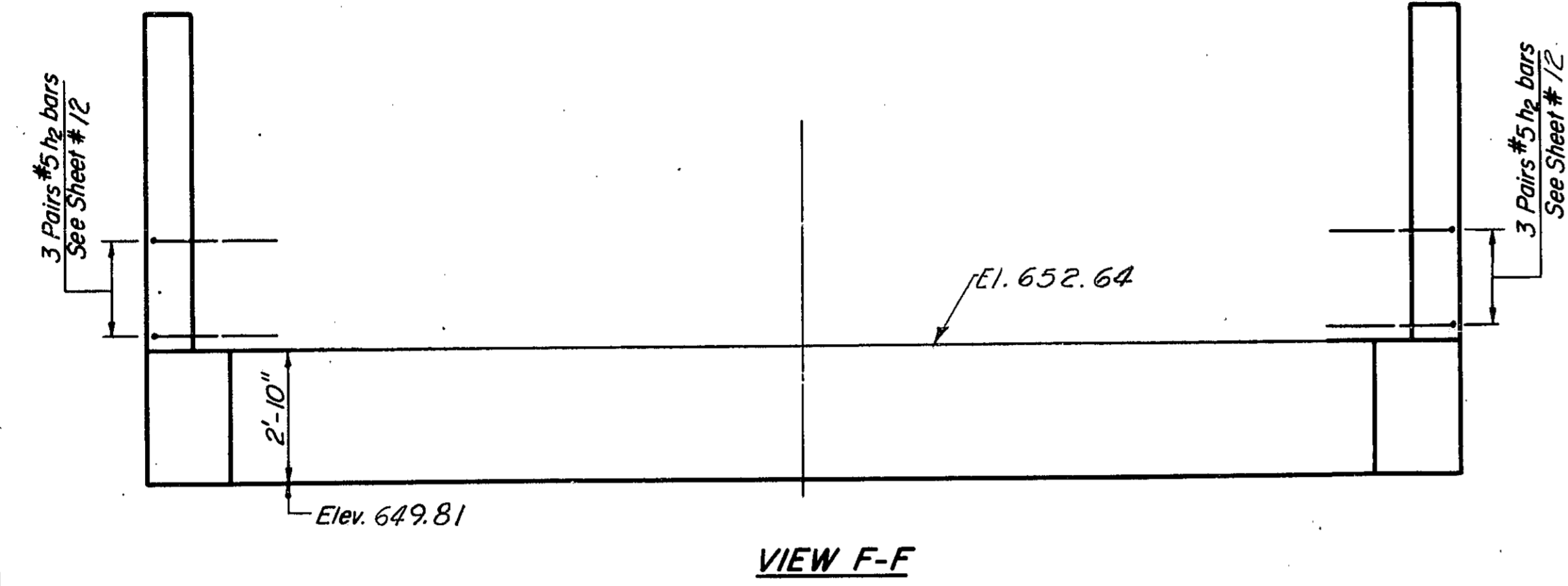
NOTES:  
Bars s thru s1 and m thru m3 are billed with Approach Slab Bill of Material on sheet #4.  
Bars h2 & h3 are billed with Abutment Bill of Material on sheets #11 & 13.  
See sheet #4 for sections thru abutment and approach bent diaphragms.

APPROACH DETAILS  
F.A.I. RT. 55 SEC. 68-4 HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

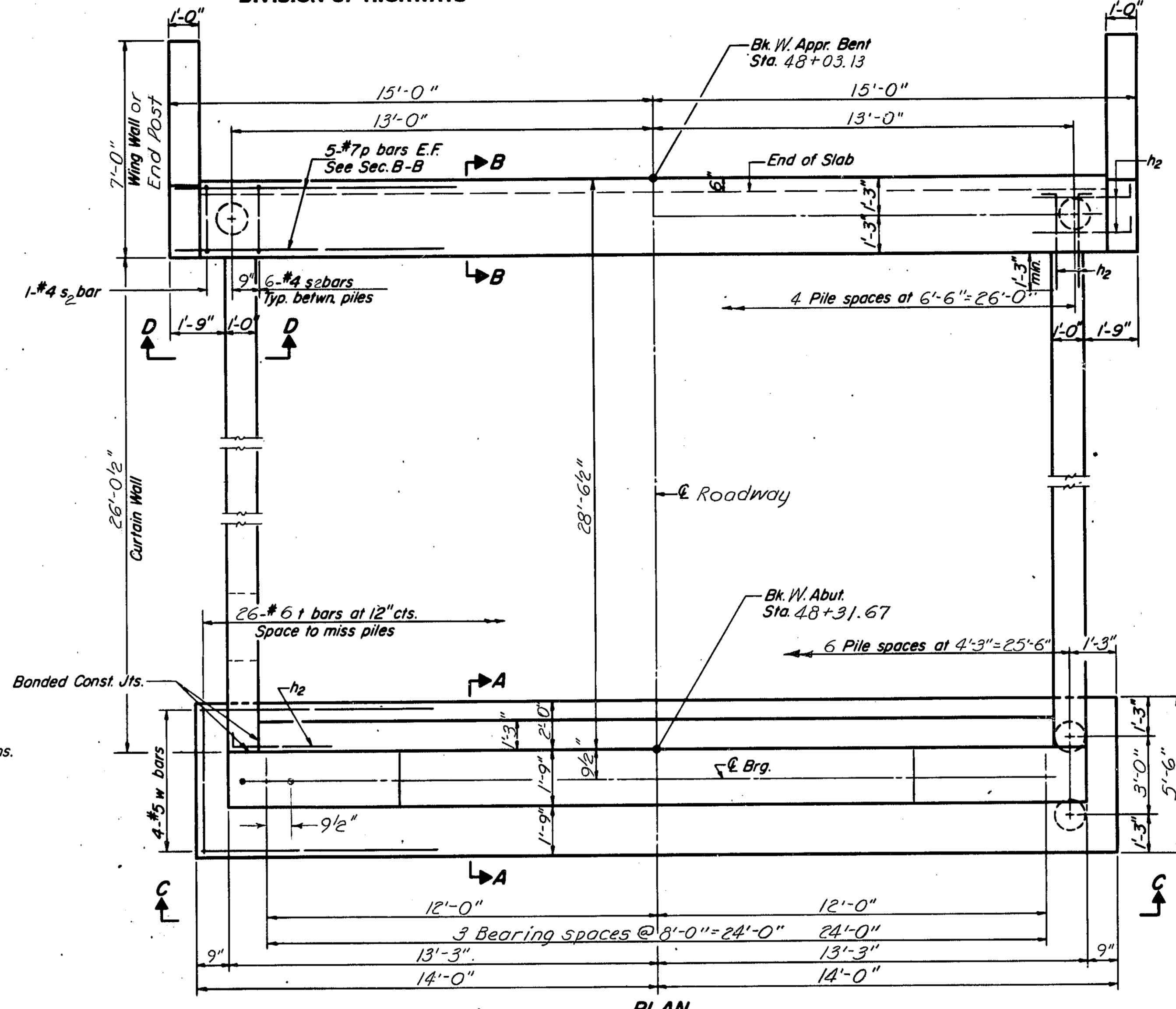


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

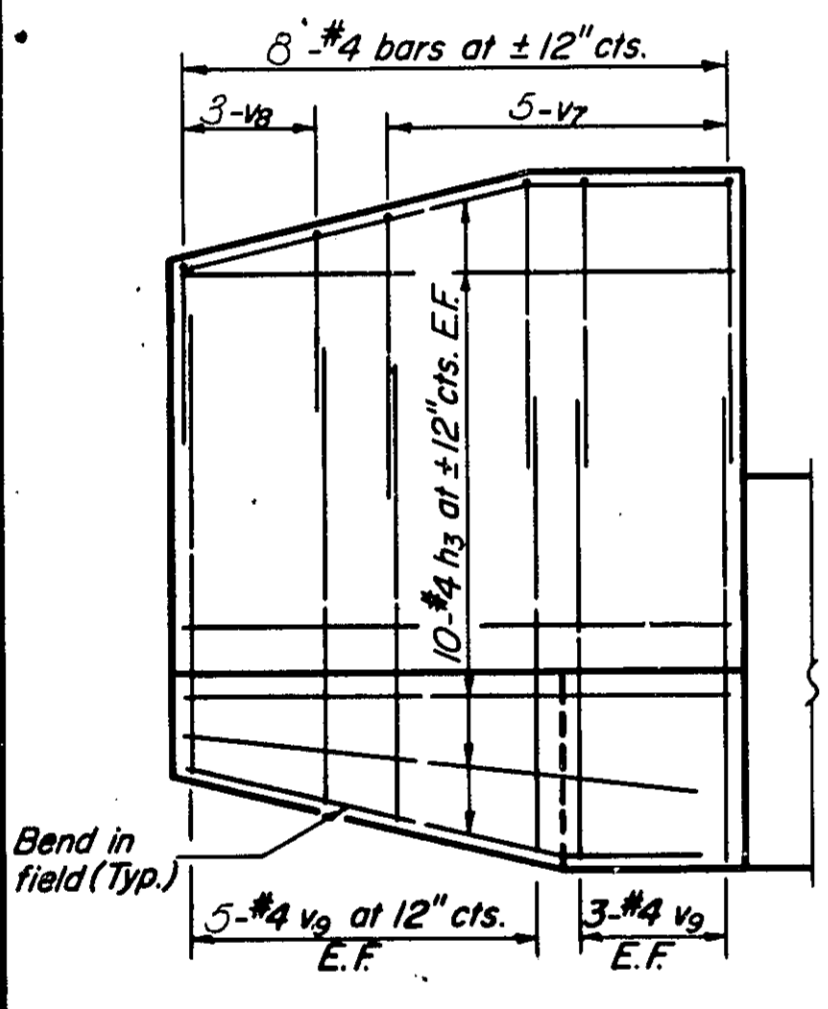
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 11
55	68-4HB	Montgomery	32	18
SHEET NO. 11		18 SHEETS		



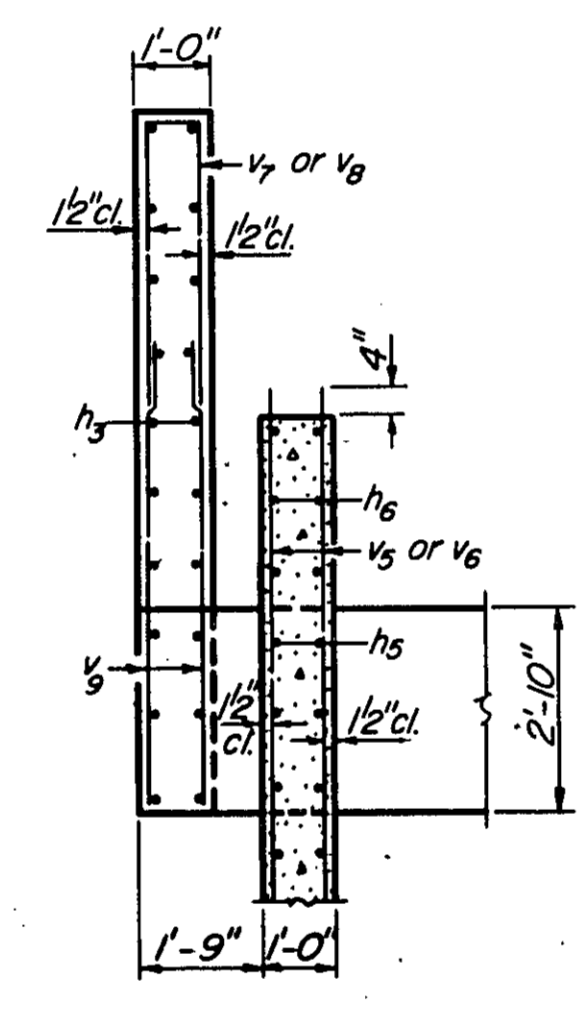
VIEW F-F



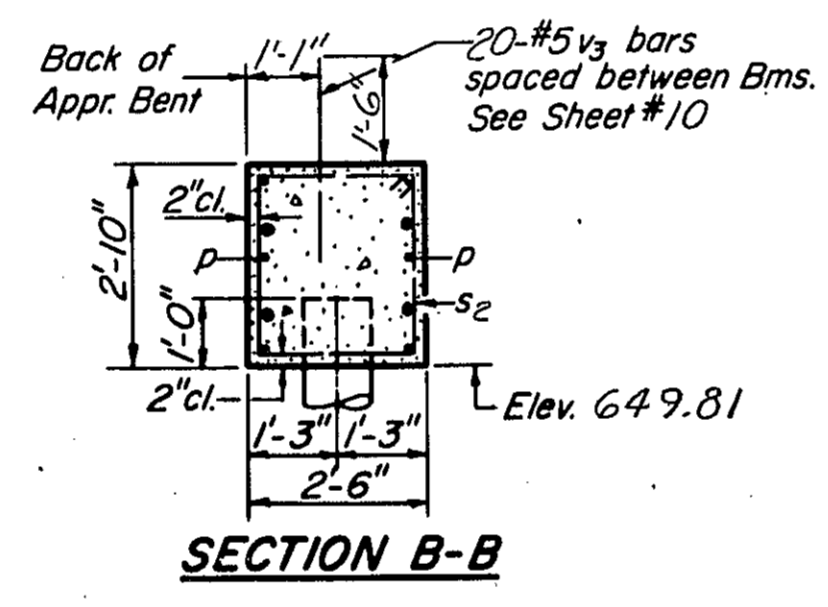
PLAN



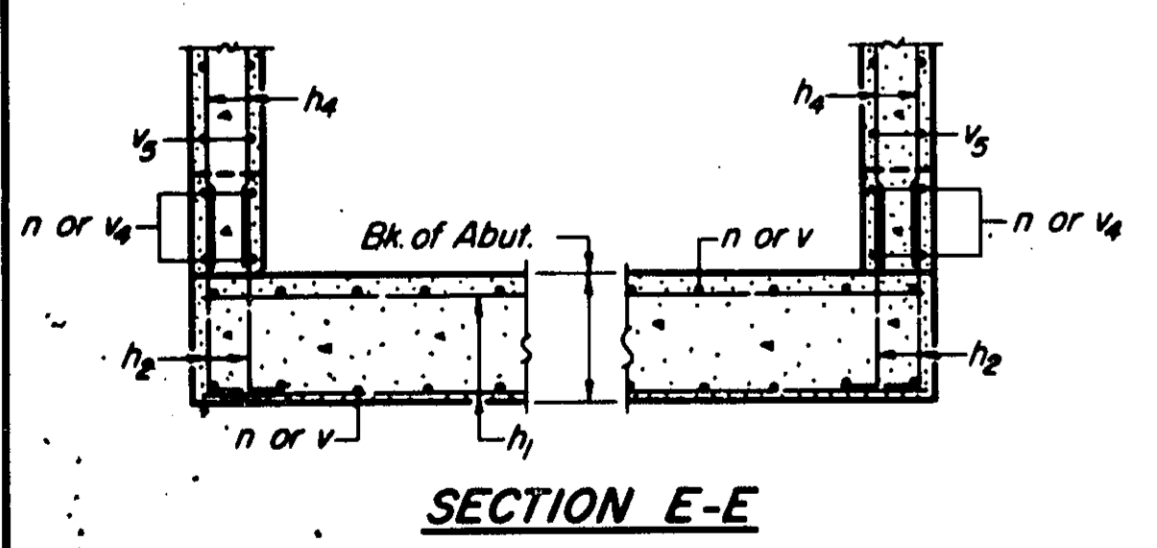
WING WALL REINFORCEMENT



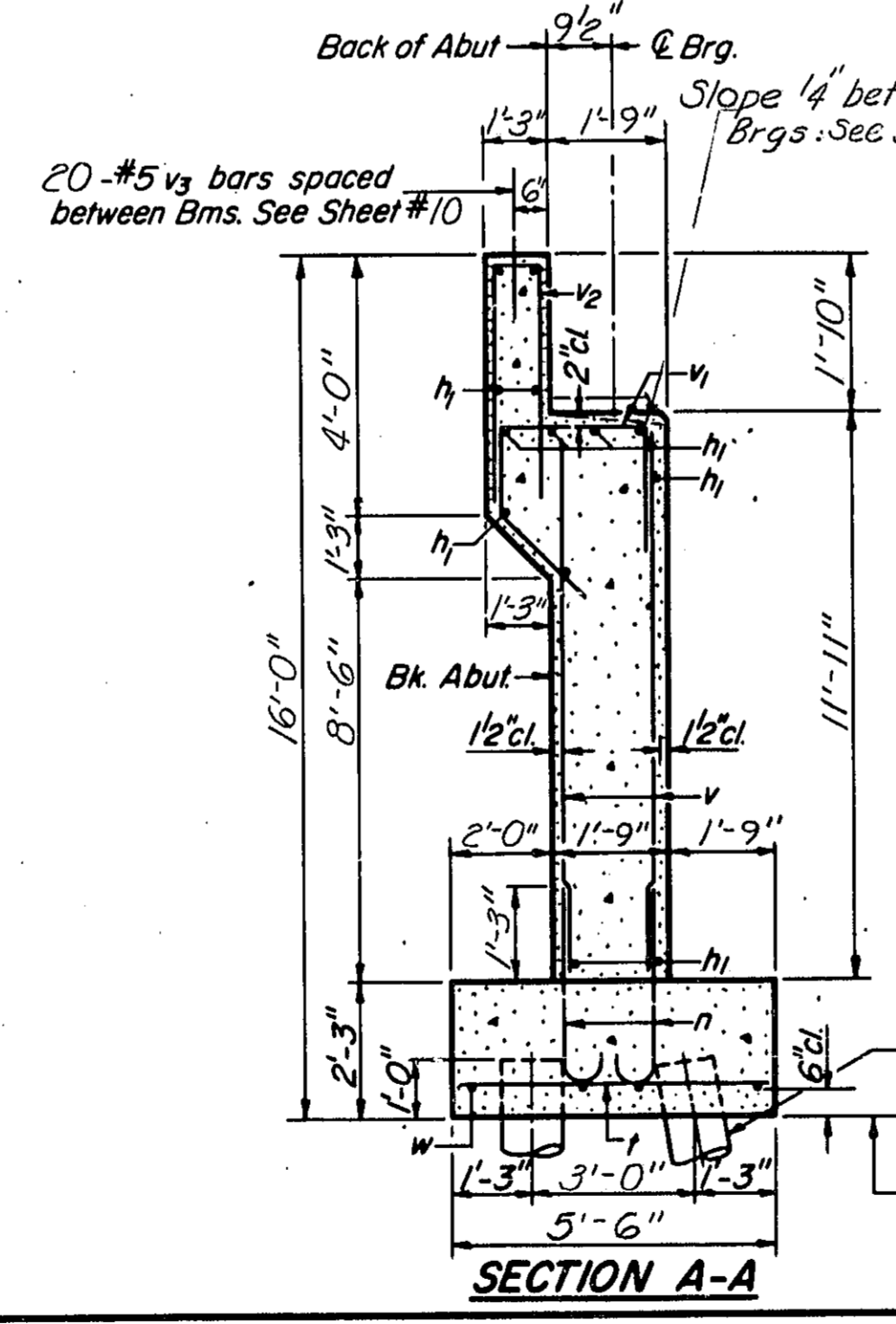
SECTION D-D



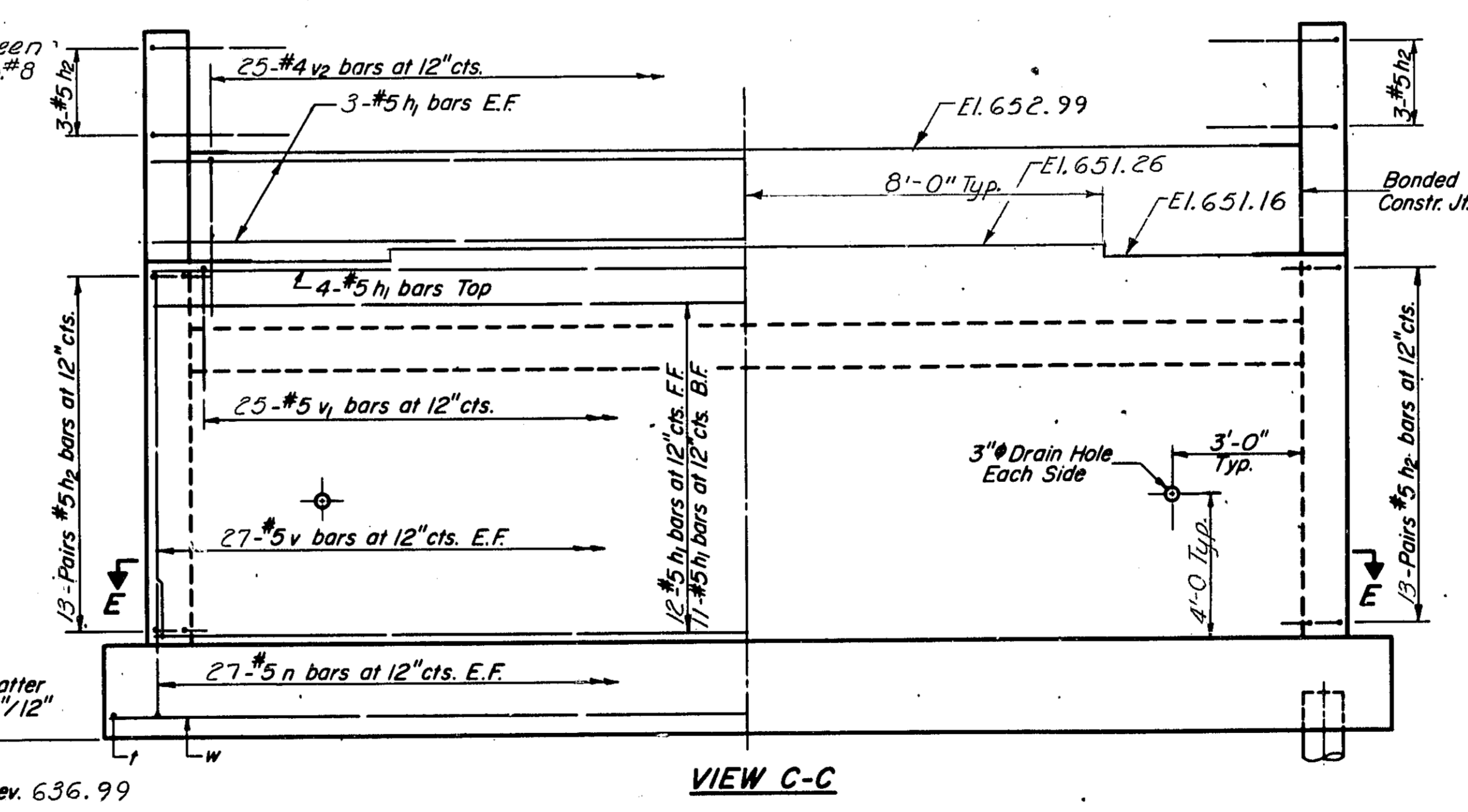
SECTION B-B



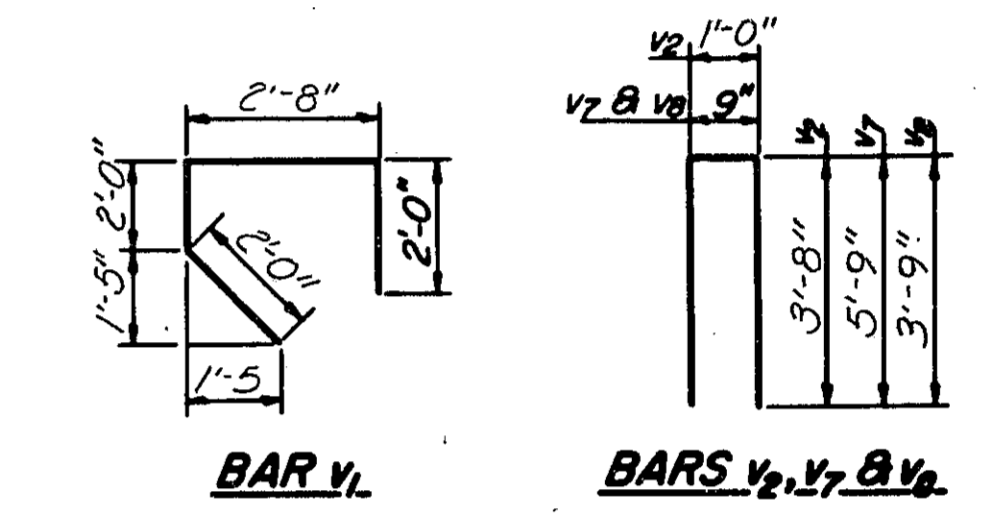
SECTION E-E



SECTION A-A



VIEW C-C



BAR V

BARS v2, v7, B v6

BILL OF MATERIAL

Bar	No	Size	Length	Shape
h1	33	#5	26'-3"	
h2	82	#5	3'-9"	J
h3	40	#4	6'-9"	
h4	18	#5	19'-7"	
h5	12	#5	25'-9"	
h6	12	#5	27'-9"	
h7	4	#6	18'-3"	
n	66	#5	3'-7"	U
p	10	#7	29'-9"	
se	26	#4	10'-1"	D
t	26	#6	5'-3"	
v	54	#5	11'-7"	
v2	25	#5	8'-8"	J
v3	25	#5	8'-4"	J
v4	12	#5	3'-0"	
v5	12	#5	16'-8"	
v6	32	#5	20'-3"	
v7	40	#5	3'-9"	
v8	10	#4	12'-3"	J
v9	6	#4	8'-3"	J
v9	32	#4	5'-0"	
w	4	#5	27'-9"	
Reinforcement Bars			Lbs.	6490
Class X Concrete			Cu Yds.	67.0
Concrete piles			Lin. Ft.	551
Test piles (Concrete)			Each	1

BAR h2

BAR s2

BAR n

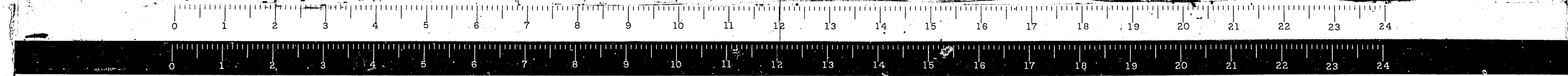
DESIGNED *D.A. Raja*  
CHECKED *Rao.G.K.*  
DRAWN *Bev Robinson*  
CHECKED *Rao.G.K.*

APPROVED *Richard H. Hollerman*

APRIL 24 1970

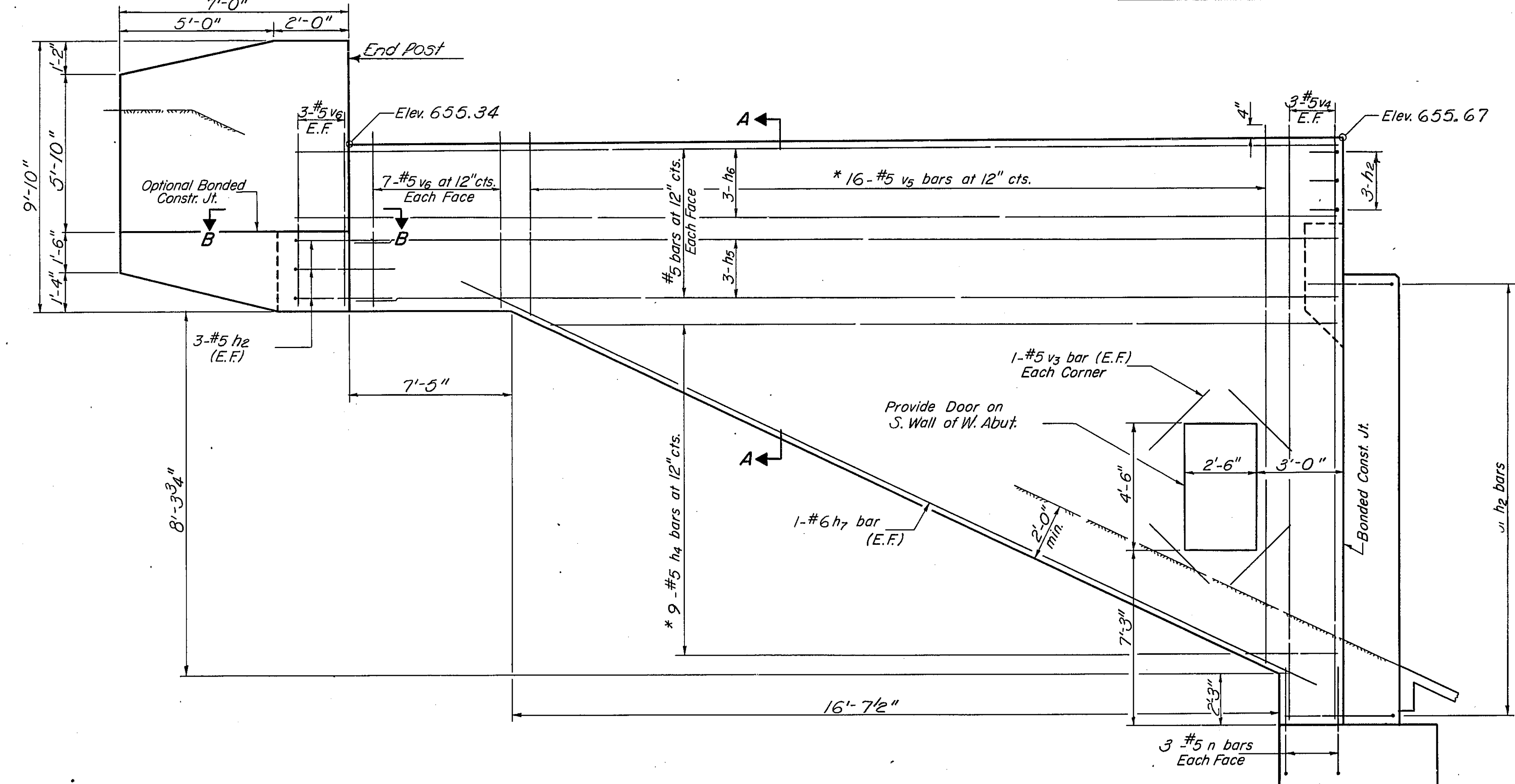
VA-O 3-17-69

WEST ABUTMENT  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27



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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
55	68-4HB	Montgomery	32	19	16 SHEETS



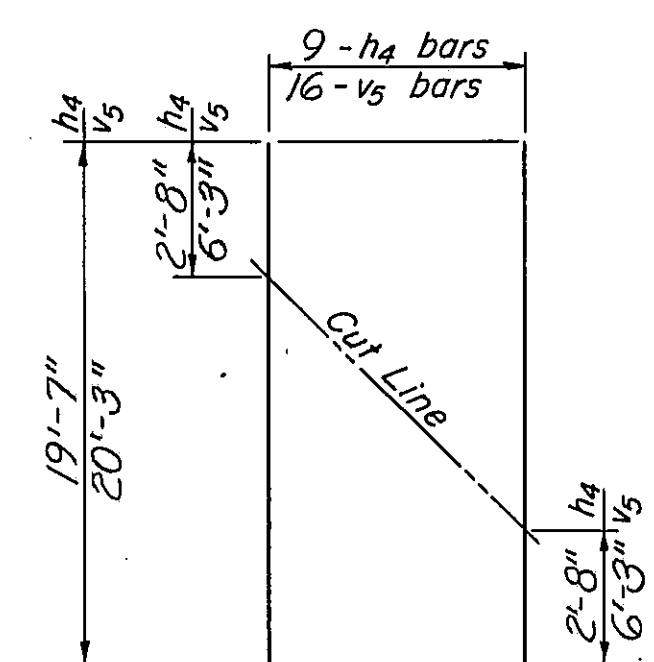
SIDE ELEVATION

**APPR. BENT - PILE DATA**

Type Concrete  
Capacity 45 Tons  
Est. Length 40'  
No. Req'd. 5

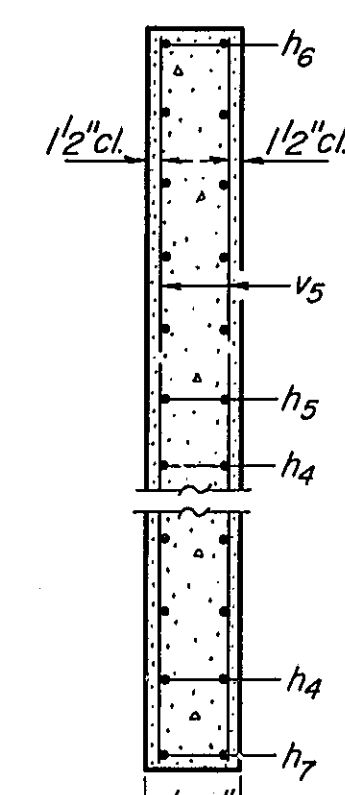
**ABUT - PILE DATA**

Type Concrete  
Capacity 45 Tons  
Est. Length 27'  
No. Req'd. 13 + 1 test pile

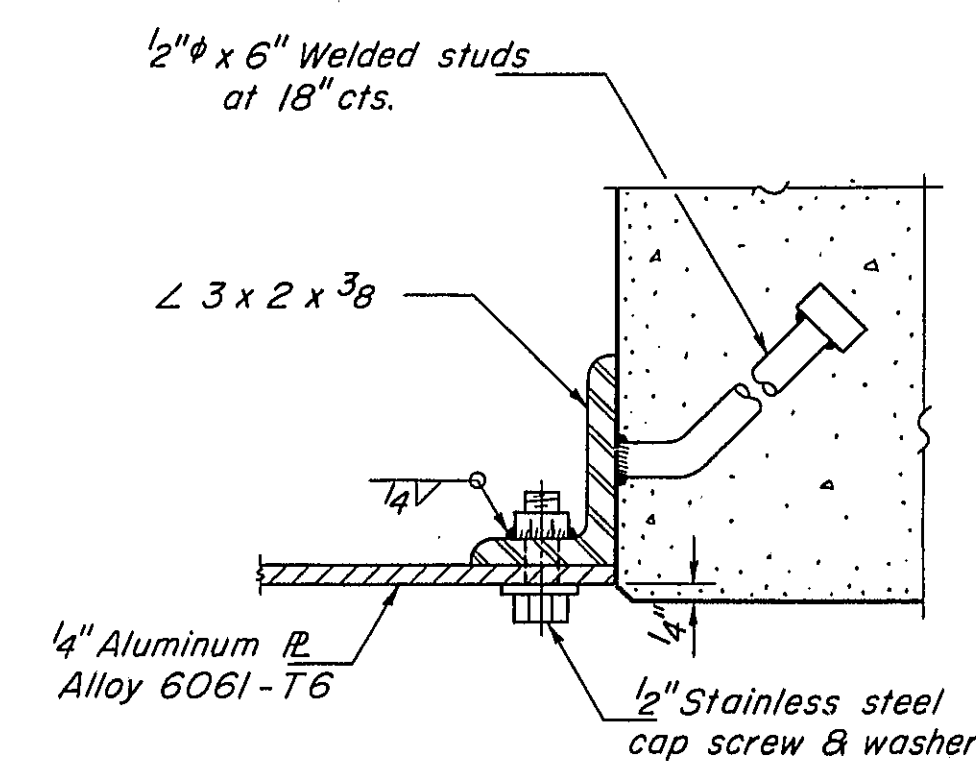


FIELD CUTTING DIAGRAM

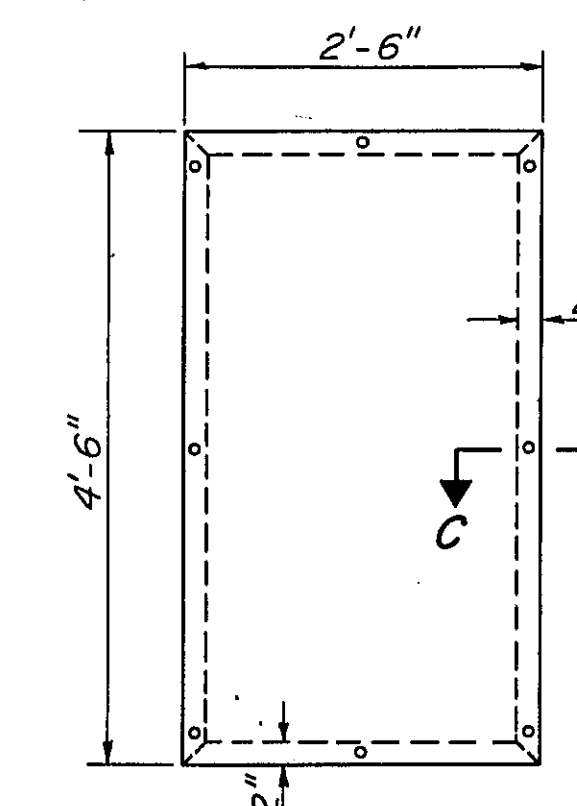
\* Order #4 & #5 bars full length.  
Cut to fit as shown and use  
remainder of bars in other face.



SECTION A-A



SECTION C-C



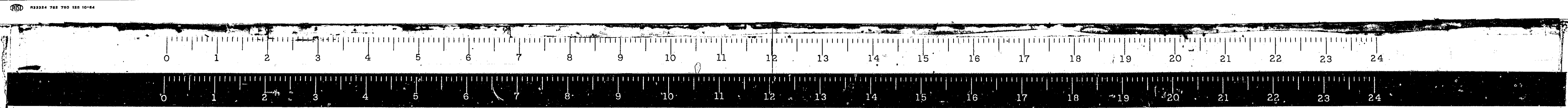
DOOR ELEVATION  
(Cost of door and frame are incidental)

WEST ABUTMENT  
CURTAIN WALLS  
F.A.I. RT. 55, SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

DESIGNED	D. A. Ryan
CHECKED	Rao. G. K.
DRAWN	Bev Robinson
CHECKED	Rao. G. K.

EXAMINED  
PASSED  
APPROVED  
April 24 1970  
Richard H. Gallman  
CHIEF HIGHWAY ENGINEER

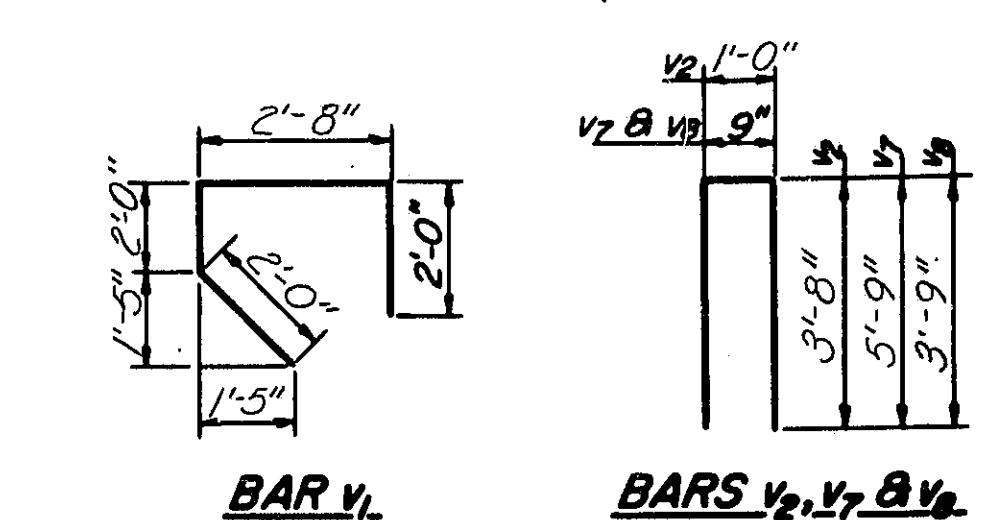
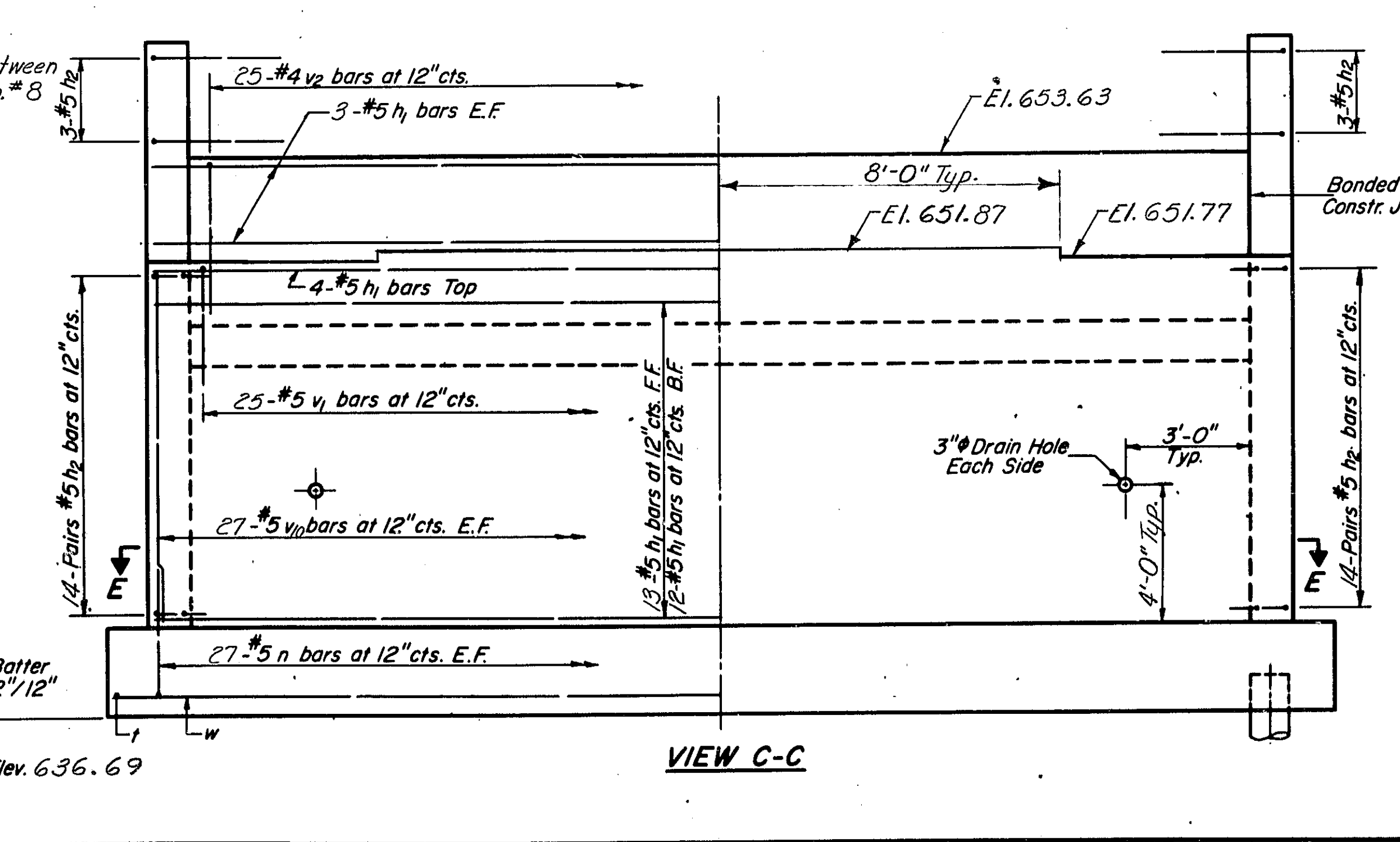
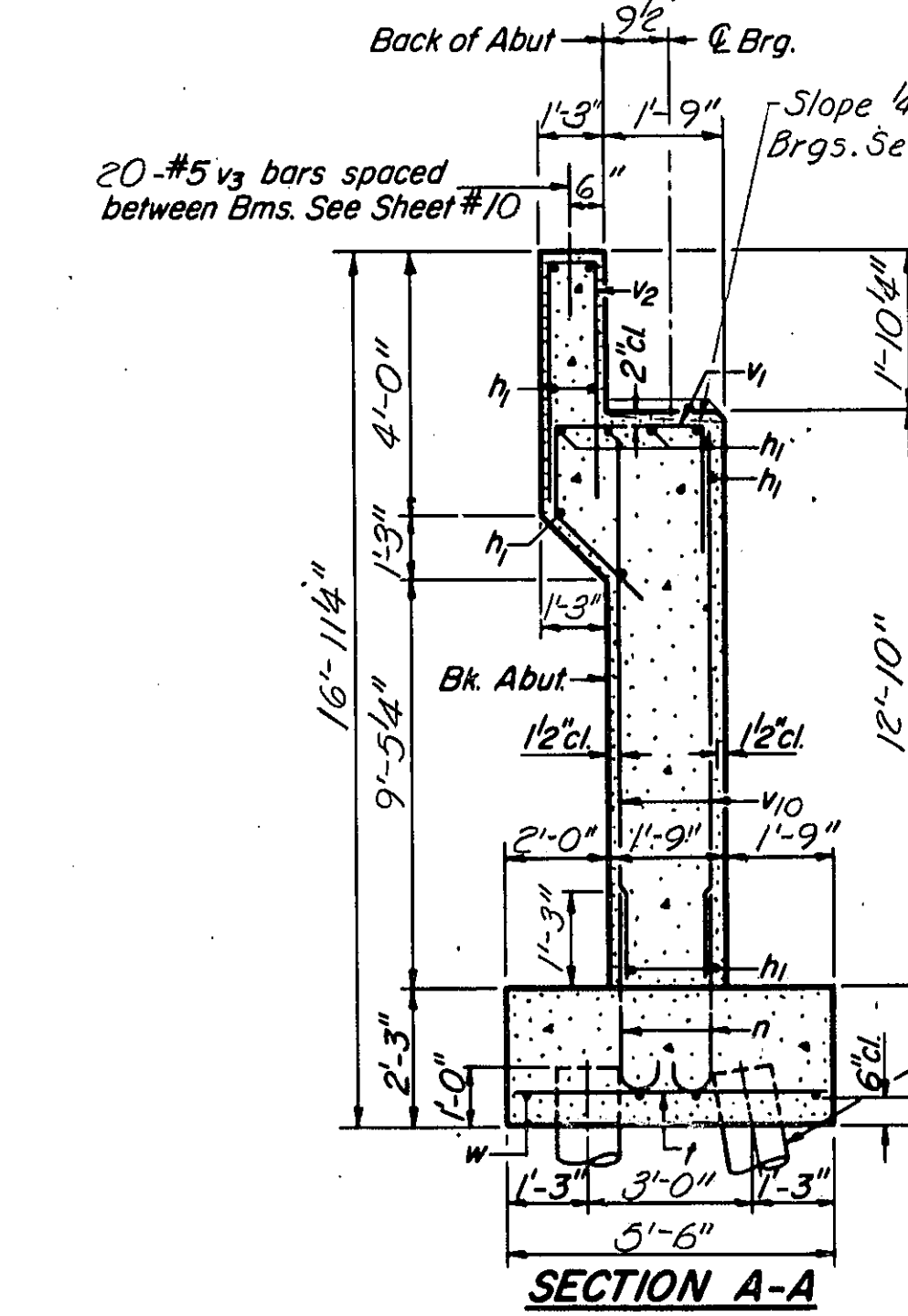
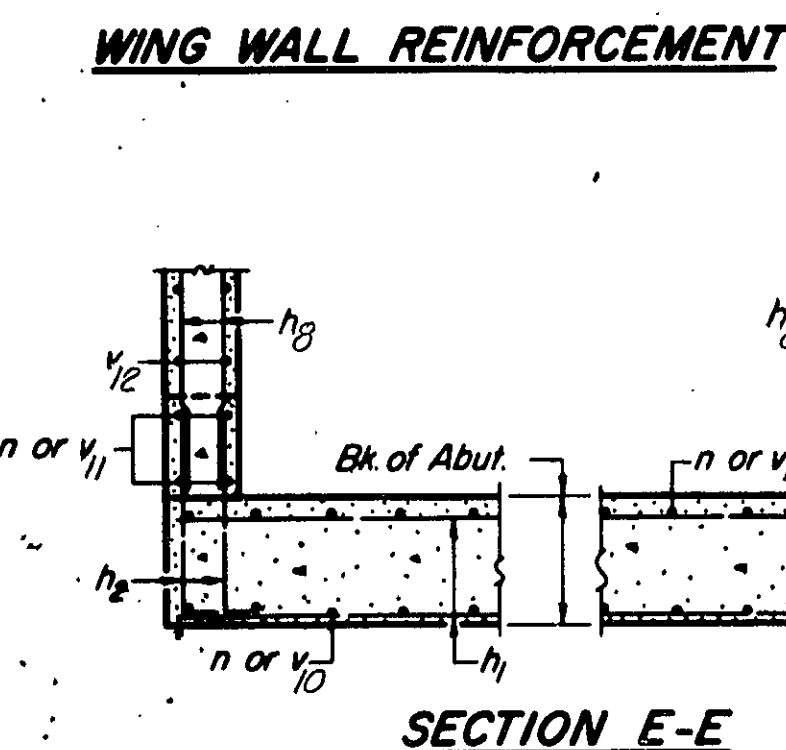
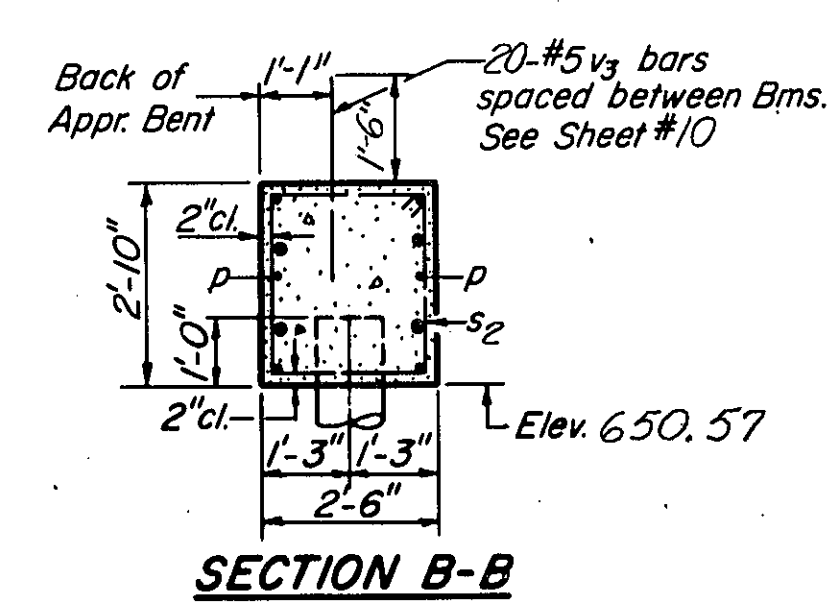
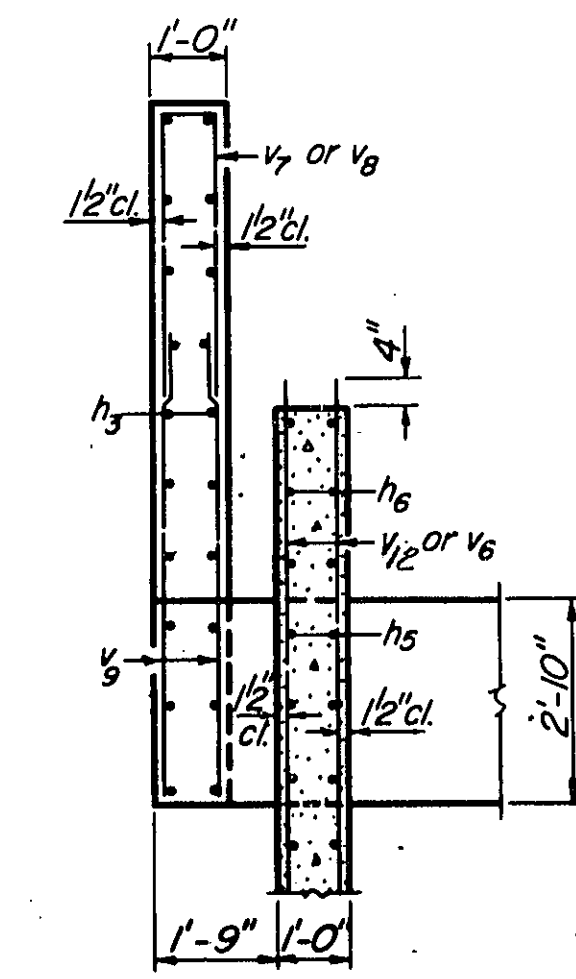
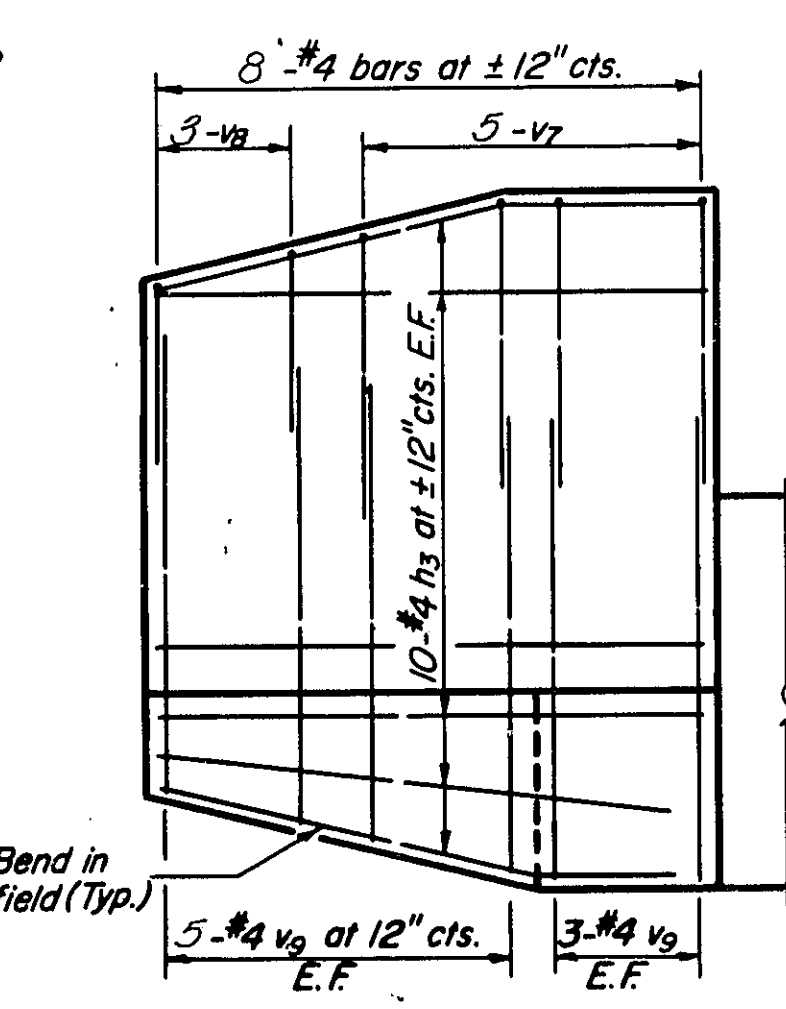
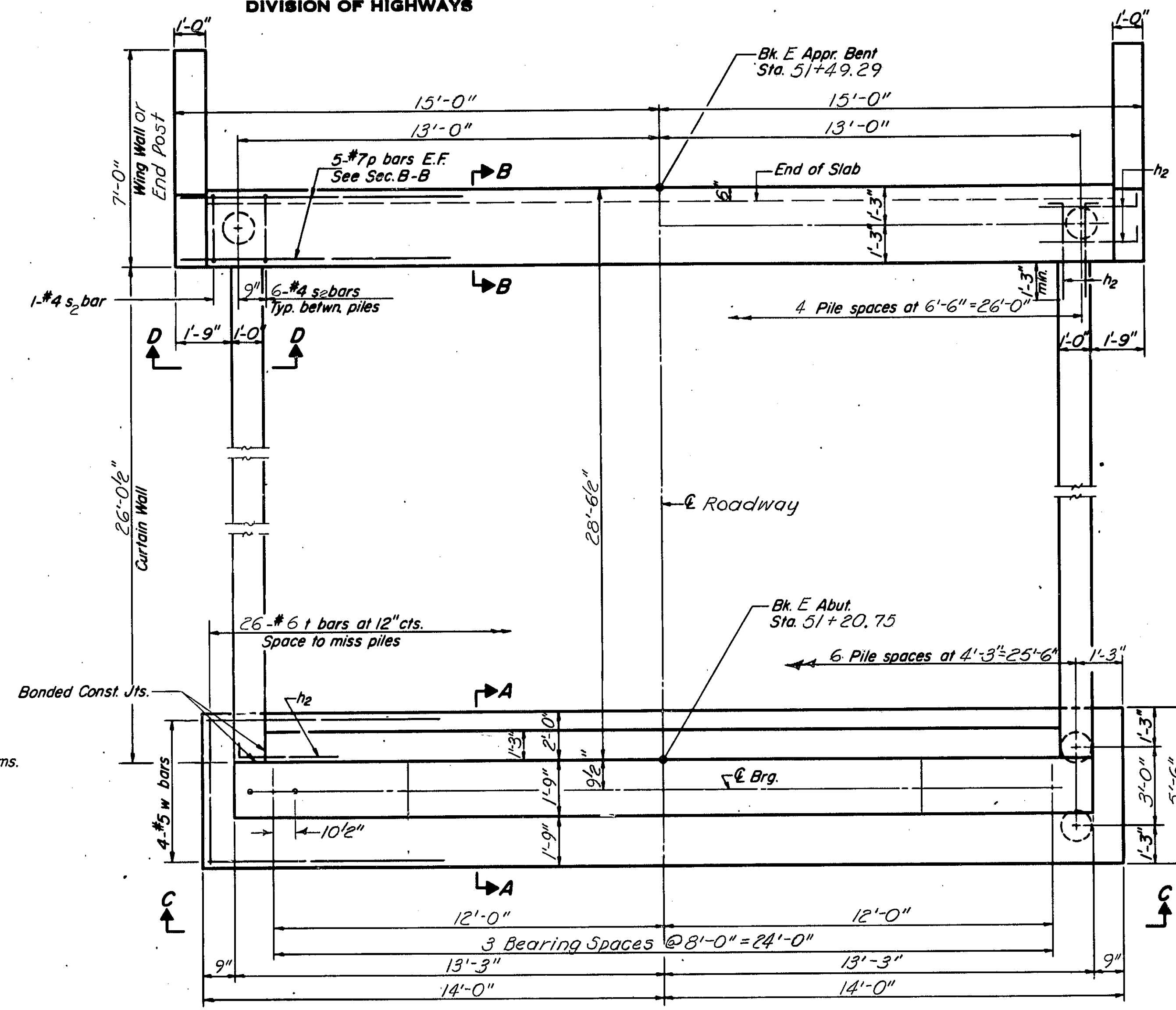
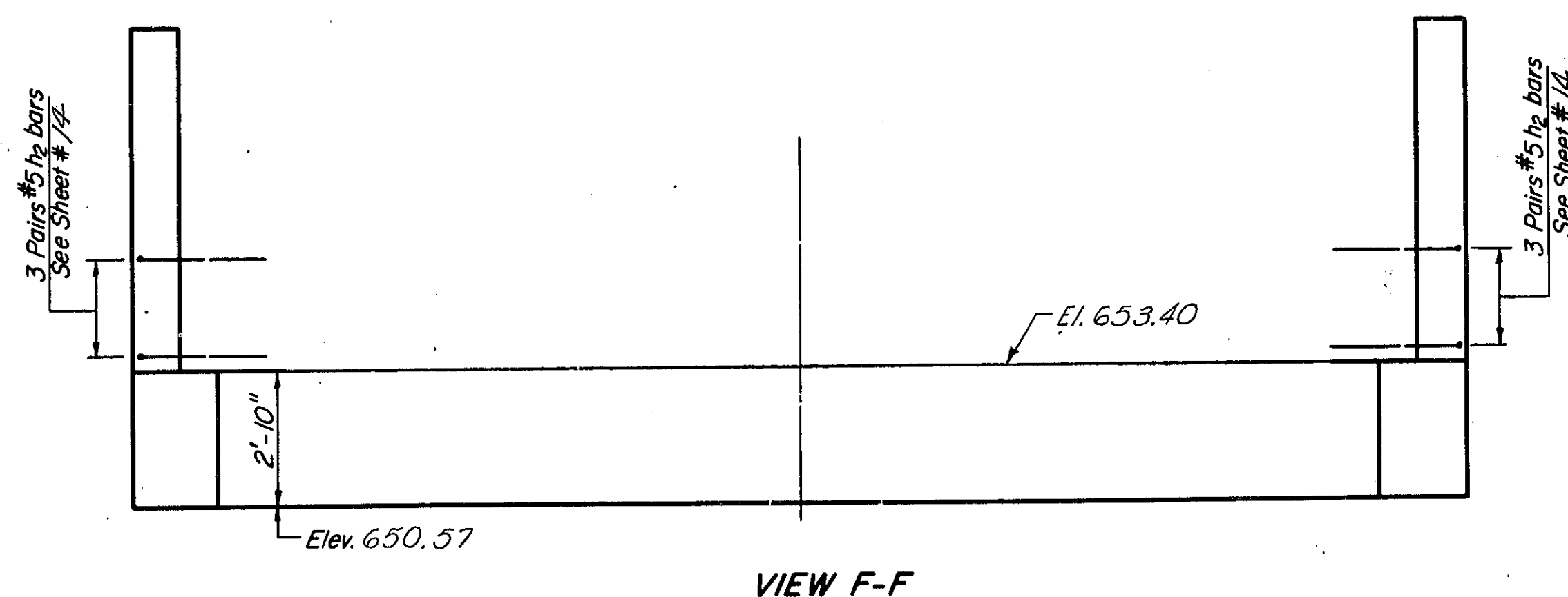
VA-W 3-17-69



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

ROUTE NO.	DISTRICT	COUNTY	SHEET NO.	SHEETS
55	68-418-1	Montgomery	32	20
FBI. ROAD DIST. NO. 7		ALIGNED	FBI. AS PROJECTED	

SHEET NO. 13  
18 SHEETS



**BILL OF MATERIAL**

Bar	No	Size	Length	Shape
h1	35	#5	26'-3"	—
h2	86	#5	3'-9"	—
h3	40	#4	6'-9"	—
h4	12	#5	25'-9"	—
h5	12	#5	27'-9"	—
h6	16	#5	21'-8"	—
h9	4	#6	23'-0"	—
n	66	#5	3'-7"	—
p	10	#7	29'-9"	—
s2	26	#4	10'-1"	—
t	26	#6	5'-3"	—
v1	25	#5	8'-8"	—
v2	25	#5	8'-4"	—
v3	48	#5	3'-0"	—
v4	32	#5	5'-9"	—
v5	10	#4	12'-3"	—
v6	6	#4	8'-3"	—
v9	32	#4	5'-0"	—
v10	34	#5	12'-6"	—
v11	12	#5	17'-7"	—
v12	36	#5	21'-2"	—
w	4	#5	27'-9"	—
Reinforcement Bars			Lbs.	6720
Class X Concrete			Cu Yds.	70.0
Concrete piles			Lin. Ft.	574

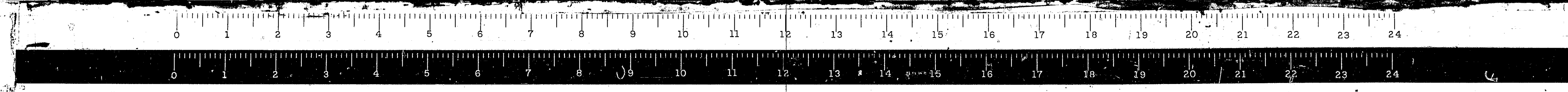
DESIGNED *DARJA*  
CHECKED *Rao-G.k*  
DRAWN *Bev Robinson*  
CHECKED *Rao-G.k*

EXAMINED *[Signature]*  
PASSED *[Signature]*  
APPROVED *[Signature]*

APRIL 24 1970

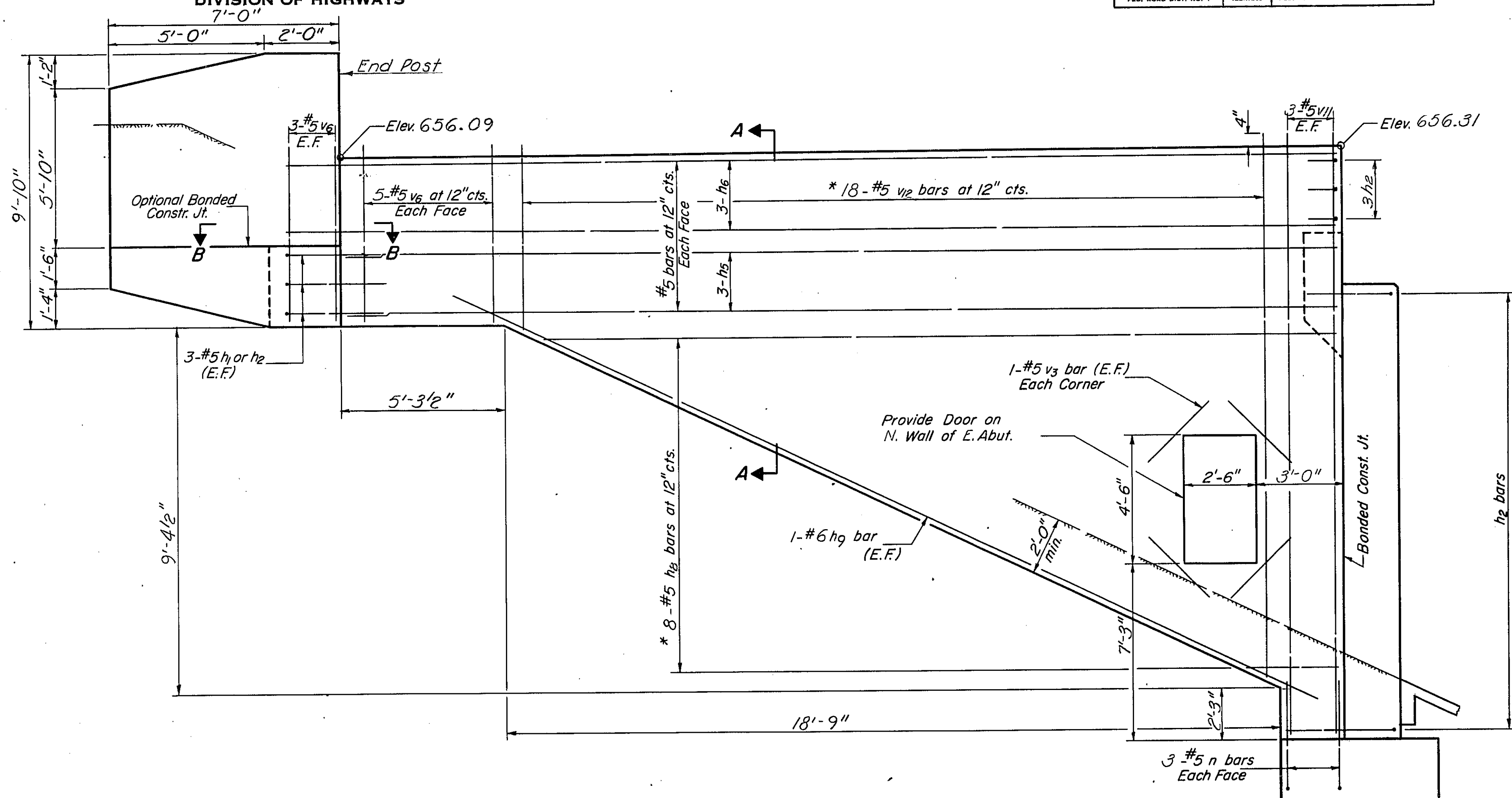
VA-O 3-17-69

EAST ABUTMENT  
E.A.I. RT. 55 SEC. 68-4 HD-1  
MONTGOMERY COUNTY  
STATION 1131+45.27



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

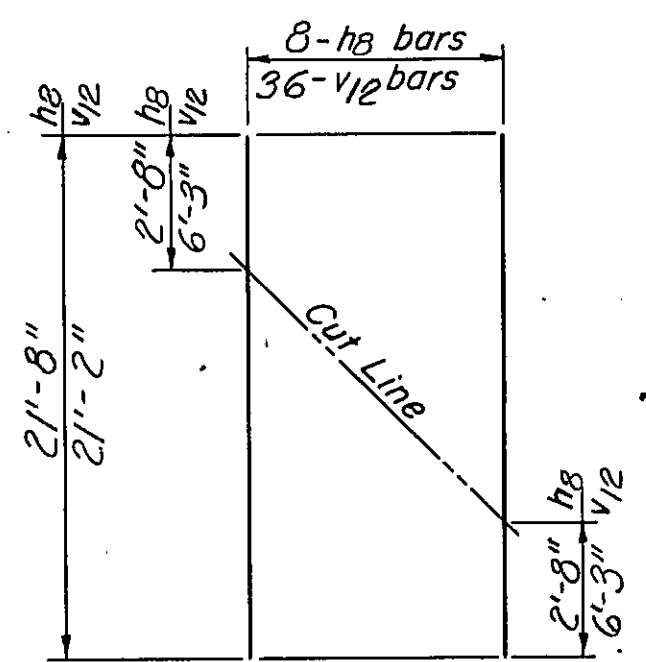
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
F.A.I. 55	68-418	Montgomery	32	21	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



SIDE ELEVATION

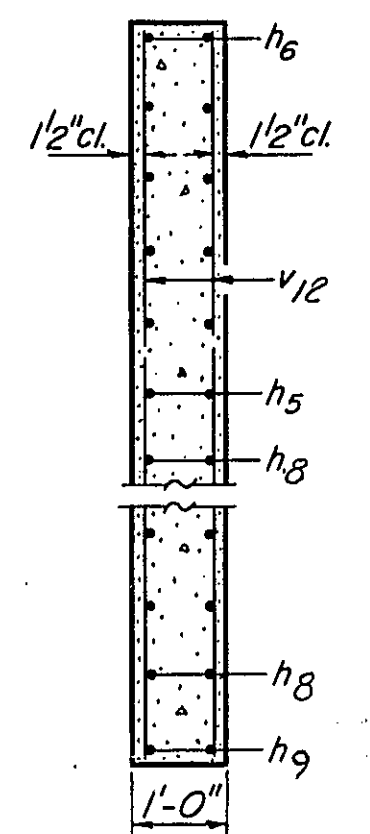
**APPR. BENT - PILE DATA**  
Type Concrete  
Capacity 45 Ton  
Est. Length 26'  
No. Req'd. 5

**ABUT. - PILE DATA**  
Type Concrete  
Capacity 45 Ton  
Est. Length 26'  
No. Req'd. 14

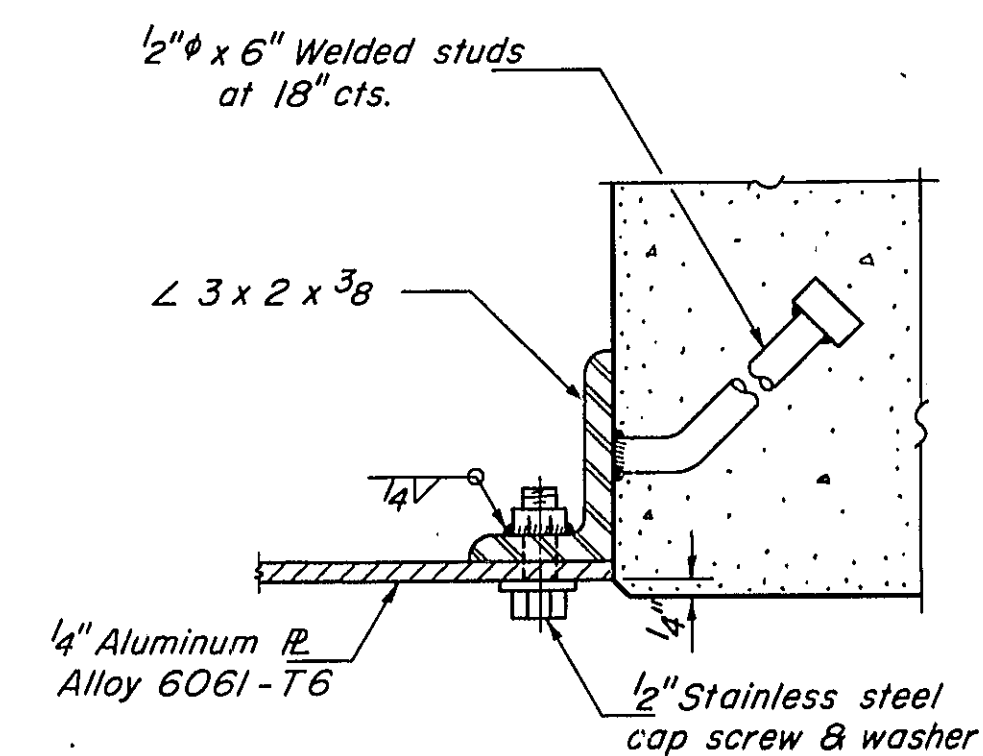


FIELD CUTTING DIAGRAM

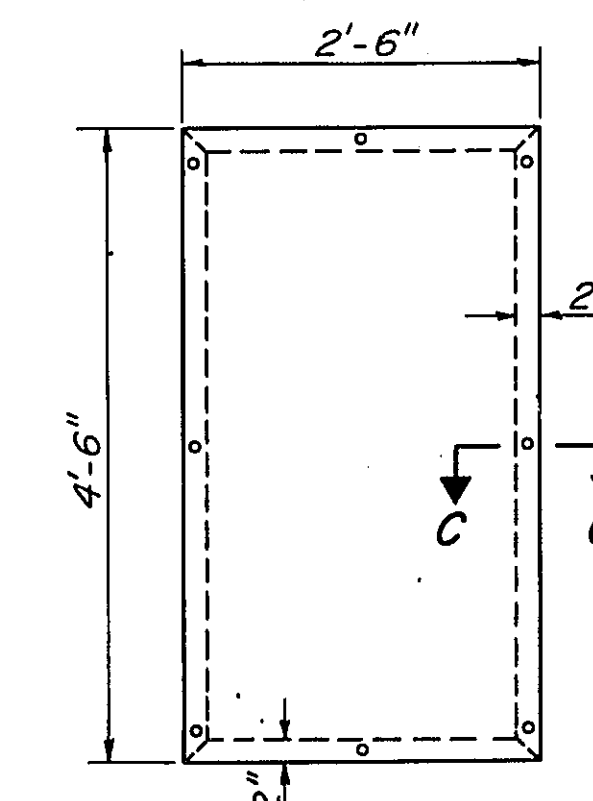
\* Order h8 & V/2 bars full length.  
Cut to fit as shown and use remainder of bars in other face.



SECTION A-A



SECTION C-C



DOOR ELEVATION

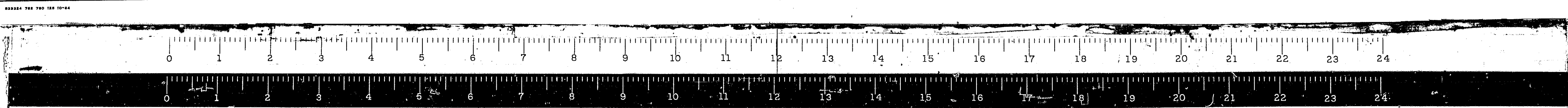
(Cost of door and frame are incidental)

EAST ABUTMENT  
CURTAIN WALLS  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

DESIGNED *D.A. Ryan*  
CHECKED *Rao. G. k.*  
DRAWN *Bev Robinson*  
CHECKED *Rao. G. k.*

APRIL 24 1970  
EXAMINED *[Signature]*  
PASSED *[Signature]*  
APPROVED *[Signature]*  
CHIEF HIGHWAY ENGINEER

VA-W 3-17-69

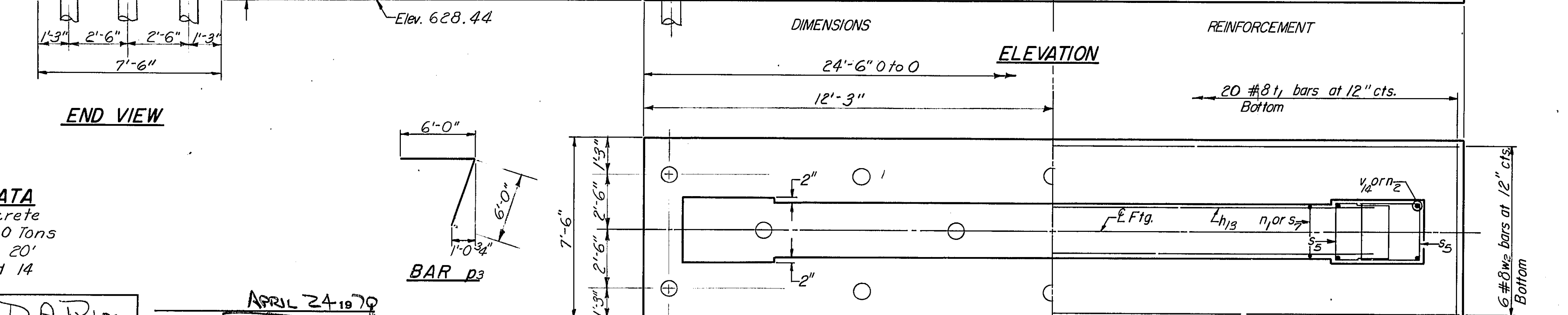
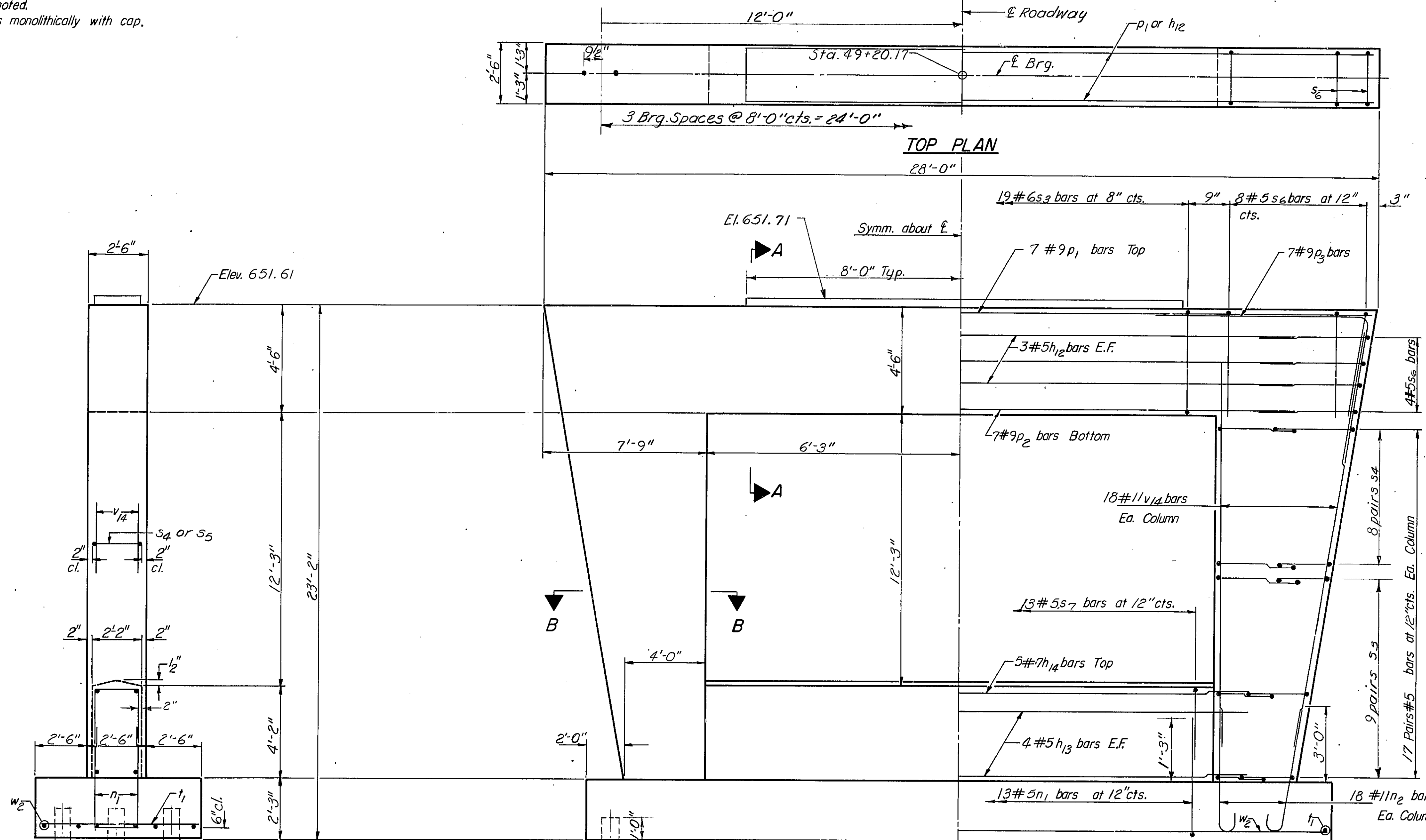


**NOTES:**

Space reinforcement in cap to miss anchor bolts.  
All edges shall have standard  $\frac{3}{4}$  chamfers  
except as noted.  
Pour steps monolithically with cap.

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15
141	68-41B	Montgomery	32	22	18 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					



END VIEW

ELEVATION

FOOTING PLAN

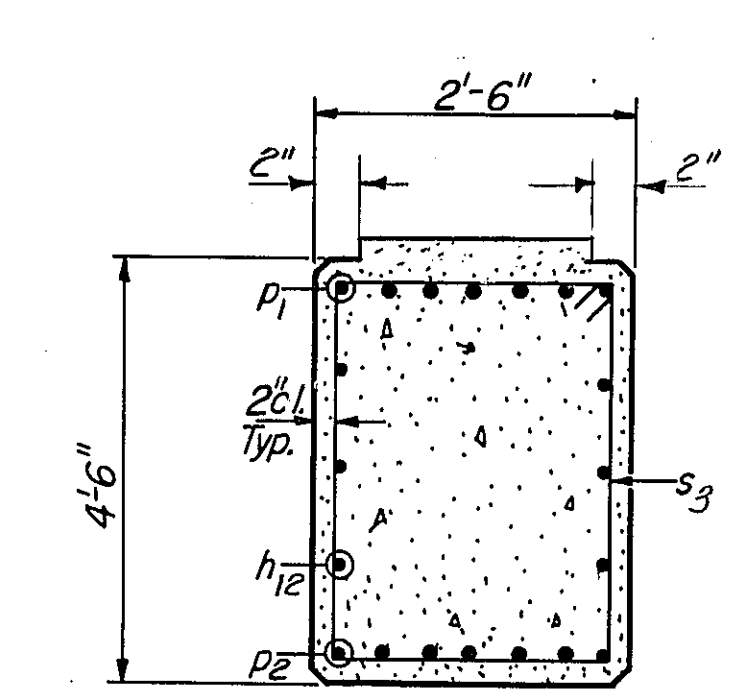
**PILE DATA**  
Type Concrete  
Capacity 40 Tons  
Est. Length 20'  
No. Required 14

DESIGNED *D.A. Ryan*  
CHECKED *Rao. G.K.*  
DRAWN *Bev Robinson*  
CHECKED *Rao. G.K.*

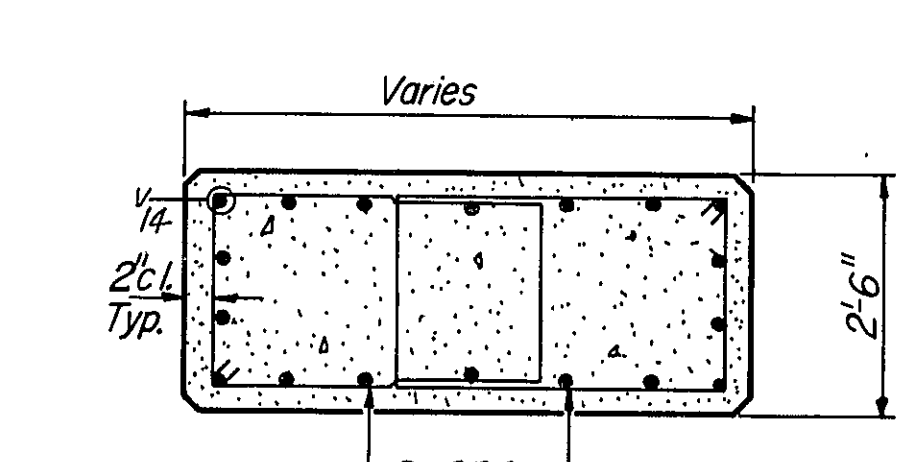
EXAMINED *[Signature]*  
PASSED *[Signature]*  
APPROVED *[Signature]*

APRIL 24 1970

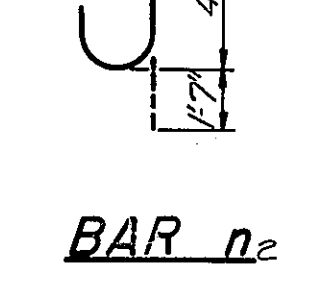
P-11 11-18-69



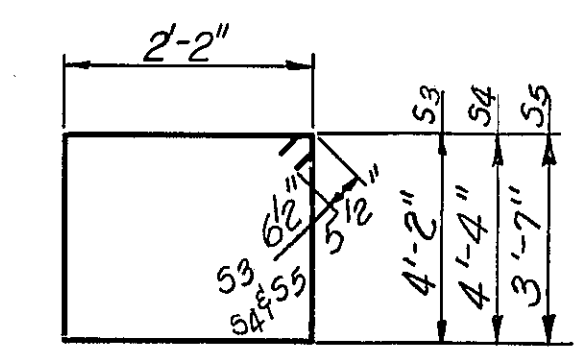
SECTION A-A



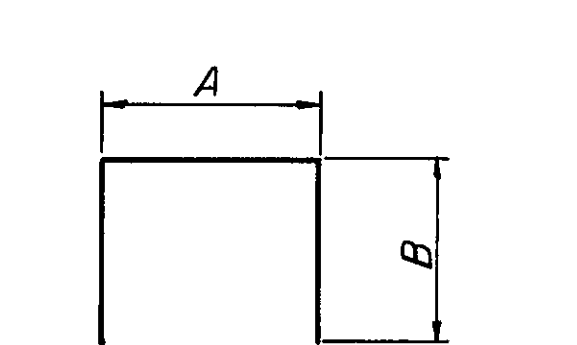
SECTION B-B



BAR n2



BARS s3 through s7



BARS n1, s6 & s7

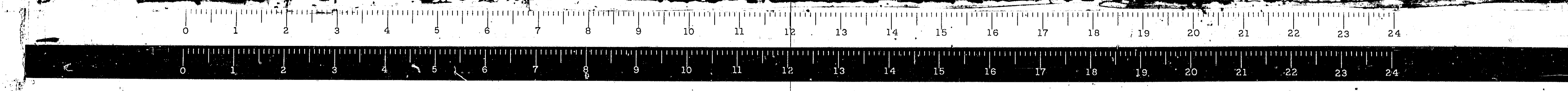
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h12	6	#5	21'-9"	U
h13	8	#5	16'-0"	U
h14	5	#7	17'-0"	U
n1	13	#5	8'-0"	U
n2	36	#11	6'-4"	U
p1	7	#9	27'-8"	U
p2	7	#9	22'-6"	U
p3	14	#9	12'-0"	U
s3	19	#6	13'-9"	U
s4	32	#5	13'-11"	U
s5	36	#5	12'-5"	U
s6	24	#5	10'-6"	U
s7	13	#5	9'-6"	U
t1	20	#8	7'-3"	U
v14	36	#11	20'-6"	U
w2	6	#8	24'-3"	U
Class X Concrete Cu. Yds. 46.9				
Reinforcement Bars Lbs. 9940				
Concrete Piles Lin. Ft. 280				

**ABB DIMENSIONS**

Bar	A	B
n1	1'-10"	3'-1 1/2"
s6	2'-2"	4'-2"
s7	1'-10"	3'-0"

PIER #1  
F.A.I. RT. 55 SEC. 68-41B-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

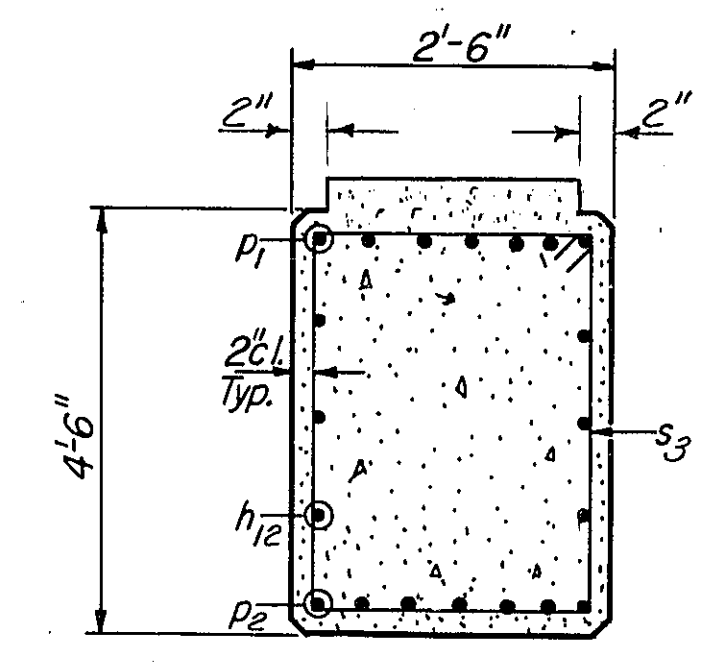
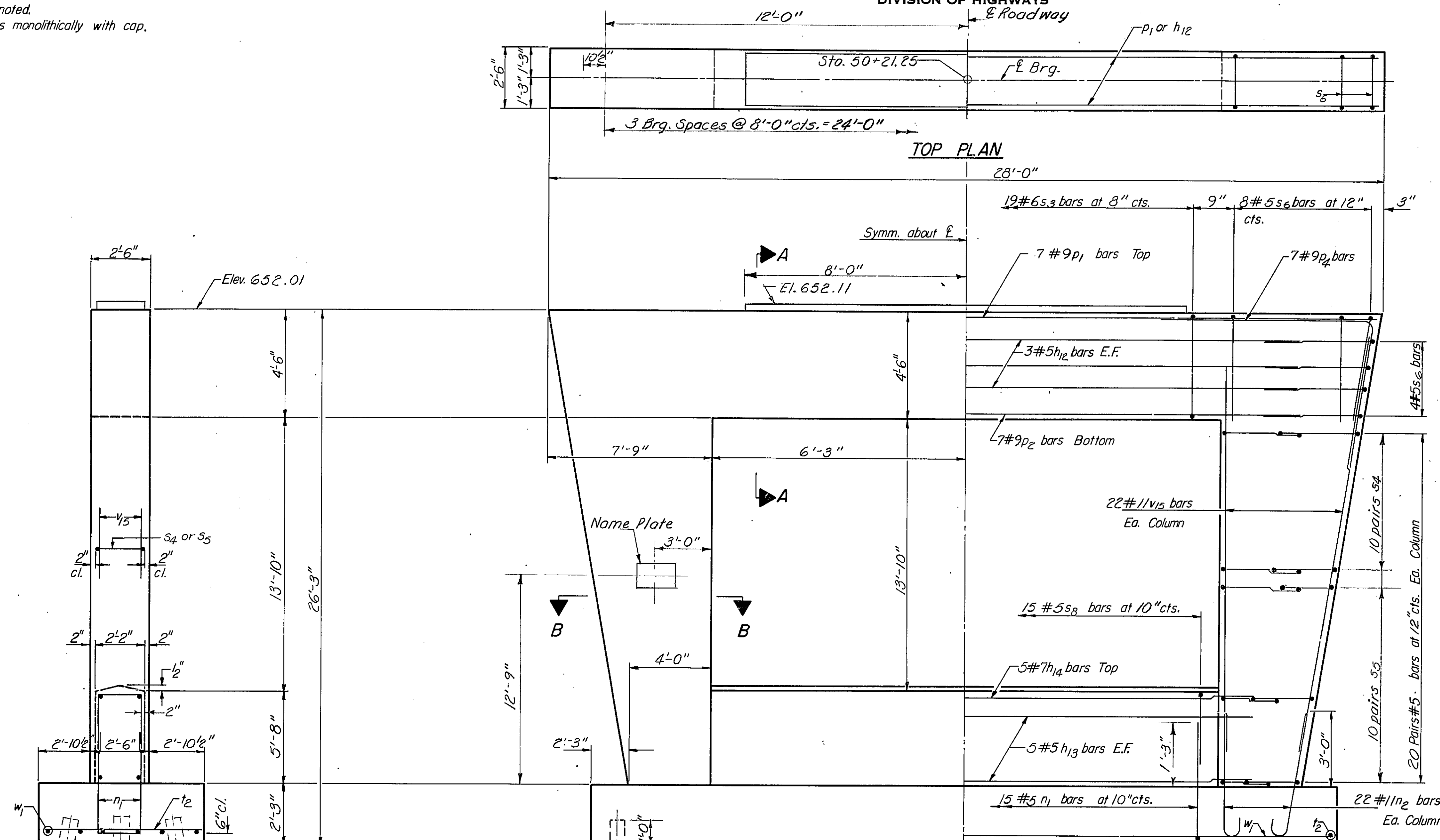


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

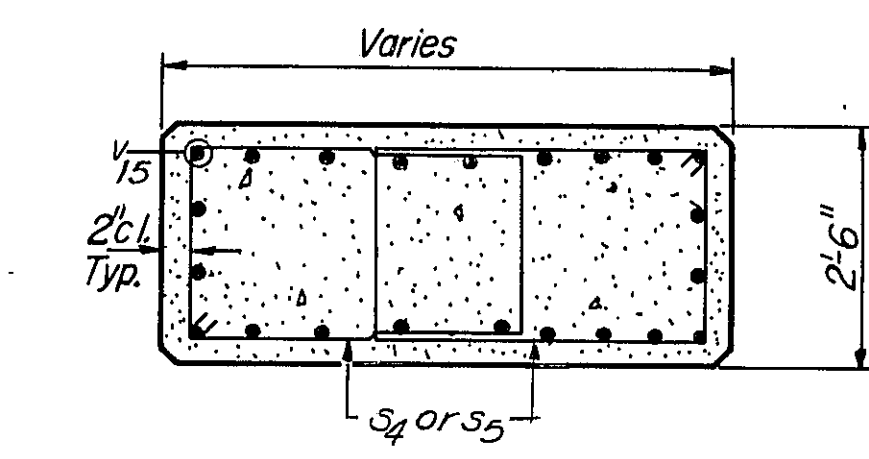
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16
F-17	68-418	Montgomery	32	23	18 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

**NOTES:**

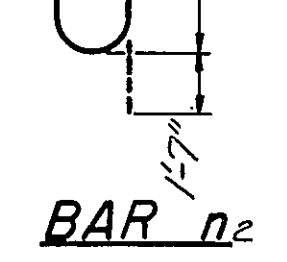
Space reinforcement in cap to miss anchor bolts.  
All edges shall have standard 3/4 chamfers  
except as noted.  
Pour steps monolithically with cap.



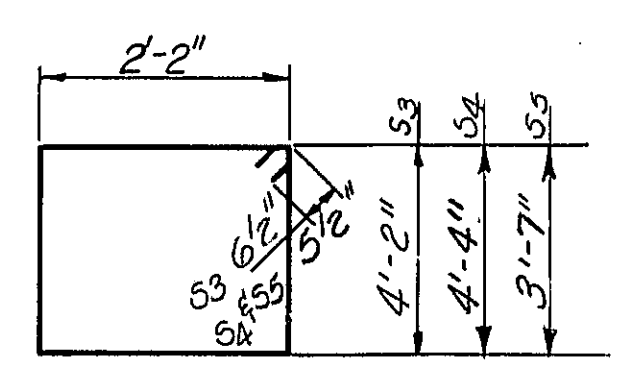
SECTION A-A



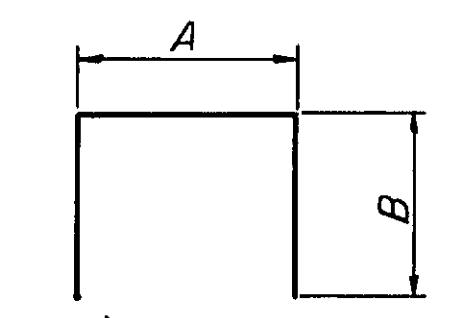
SECTION B-B



BAR D2



BARS s3 thru s5



BARS n1, s6 & s2

**ABB DIMENSIONS**

Bar	A	B
n1	1'-10"	3'-1"
s6	2'-2"	4'-2"
s8	1'-10"	5'-5"

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h12	6	#5	21'-9"	
h13	10	#5	16'-0"	
h14	5	#7	17'-0"	
n1	15	#5	8'-0"	U
n2	44	#11	6'-4"	U
p1	7	#9	27'-8"	
p2	7	#9	22'-6"	
p4	14	#9	12'-6"	7
s3	19	#6	19'-9"	□
s4	40	#5	13'-11"	□
s5	40	#5	12'-5"	□
s6	24	#5	10'-6"	□
s8	15	#5	12'-8"	□
t2	22	#10	8'-0"	
v15	44	#11	23'-6"	
w1	6	#8	24'-9"	
Class X Concrete		Cu. Yds.	53.5	
Reinforcement Bars		Lbs.	12470	
Concrete piles		Lin. Ft.	272	
Test piles (Concrete)		Each	1	
Name Plate			1	

**PILE DATA**  
Type Concrete  
Capacity 40 Tons  
Est. Length 17'  
No. Required 16 + 1 test pile

DESIGNED *D. A. Ryan*  
CHECKED *Rao. G. k.*  
DRAWN *Bev Robinson*  
CHECKED *Rao. G. k.*

APPROVED *Richard H. Goltzman*  
CHIEF ENGINEER

EXAMINED *[Signature]*  
PASSED *[Signature]*

APRIL 24 1970

P-11 11-18-69

**DIMENSIONS**

25'-0" O to O  
12'-6"

**ELEVATION**  
(Looking East)

22#10t2 bars at 9" cts. Bottom

**REINFORCEMENT**

1'-3" Alt. pile spaces @ 2'-3" = 22'-6"

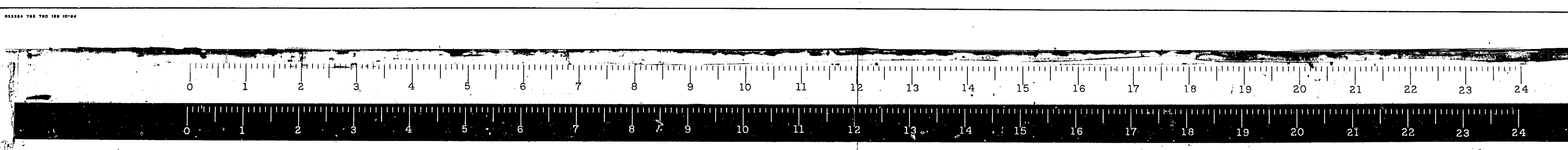
**PILE LAYOUT & DIMENSIONS**

6#8w. bars at 12" cts. Bottom

**REINFORCEMENT**

22#10t2 bars at 9" cts. Bottom

**FOOTING PLAN**





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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	68-4HB	Montgomery	32	17
F.A.I. RT. 55		ILLINOIS		FED. AID PROJECT

Surface Water El. \_\_\_\_\_  
Groundwater El. at Completion \_\_\_\_\_  
After 24 Hours 630.2

Boring No. 1  
Station 18+22  
Offset 8' RIGHT OF CL.

Elevation	N	Qu / L.L.	w (%)
630.7	0		
629.7	6	0.5 B	30
628.7	5	0.7 B	24
628.9	5	0.7 B	23
628.1	19	1.7 S	15
628.4	29	1.9 S	9
615.7	39	5.4 S	14
616.7	57	7.0 S	11
607.7	100	9.2 S	9
605.2	100	8.0 S	8

Surface Water El. \_\_\_\_\_  
Groundwater El. at Completion \_\_\_\_\_  
After 24 Hours 621.9

Boring No. 2  
Station 40+16  
Offset 14' LEFT OF CL.

Elevation	N	Qu / L.L.	w (%)
628.4	0		
628.9	3	0.2 B	26
628.4	6	0.8 B	37
628.4	6	0.8 S	16
620.4	44	5.5 S	9
610.4	75	8.0 S	9
610.4	100	8.0 S	10
604.4	100	8.0 S	10
604.4	51	5.0 S	10
604.4	44	5.8 S	16
596.4	31	5.0 S	11

Surface Water El. \_\_\_\_\_  
Groundwater El. at Completion \_\_\_\_\_  
After 24 Hours \_\_\_\_\_

Boring No. 3  
Station 50+16  
Offset 0'

Elevation	N	Qu / L.L.	w (%)
630.8	0		
629.8	3	0.8 B	22
628.3	5	1.1 B	22
628.8	6	0.5 B	22
628.3	75	2.7 S	9
614.8	100	9.5 S	6
609.8	100	7.5 S	9
609.8	100	5.5 S	9
606.3	100	2.5 S	23
603.6	100	2.1 S	14

Surface Water El. \_\_\_\_\_  
Groundwater El. at Completion \_\_\_\_\_  
After 24 Hours \_\_\_\_\_

Boring No. 4  
Station 50+21  
Offset 11' RIGHT OF CL.

Elevation	N	Qu / L.L.	w (%)
635.1	0		
628.1	5	N.R.	
628.1	6	0.9 B	24
628.1	6	0.9 B	22
628.1	4	0.3 B	18
616.1	41	N.R.	
616.1	20	1.3 S	16
609.8	100	4.1 S	11
609.8	100	8.8 S	11
606.1	100	7.7 S	10
604.6	100	2.0 S	15

Surface Water El. \_\_\_\_\_  
Groundwater El. at Completion \_\_\_\_\_  
After 24 Hours \_\_\_\_\_

Boring No. 5  
Station 61+0  
Offset 11' RIGHT OF CL.

Elevation	N	Qu / L.L.	w (%)
635.7	0		
626.2	6	0.5 B	30
626.2	4	N.R.	
626.2	6	0.9 B	25
626.2	5	0.6 B	26
626.2	3	0.2 B	20
615.7	64	2.2 S	11
616.1	23	N.R.	
616.1	53	7.7 S	11
600.0	100	8.1 S	11
600.0	100	2.5 S	10
600.0	100	7.0 S	8
605.2	100	2.5 S	12

DESIGNED *D.A. Ryan*  
CHECKED *Rao. G.K.*  
DRAWN *Bev Robinson*  
CHECKED *Rao. G.K.*

EXAMINED *[Signature]*  
PASSED *[Signature]*  
APPROVED *[Signature]*

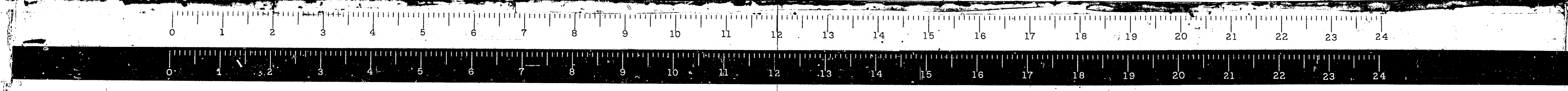
APRIL 24 1970

N-Standard Penetration Test - Blows per foot to drive 2"  
O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu-Unconfined Compressive Strength - 1/sf  
w-Water Content - percentage of oven dry weight - %

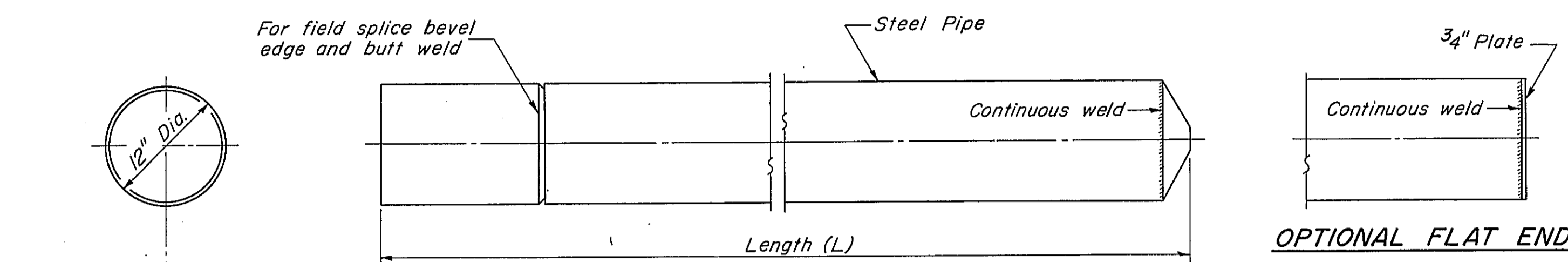
Type failure  
B-Bulge Failure  
S-Shear Failure  
E-Estimated Value  
P-Penetrometer

BORING DATA  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STATION 1131+45.27

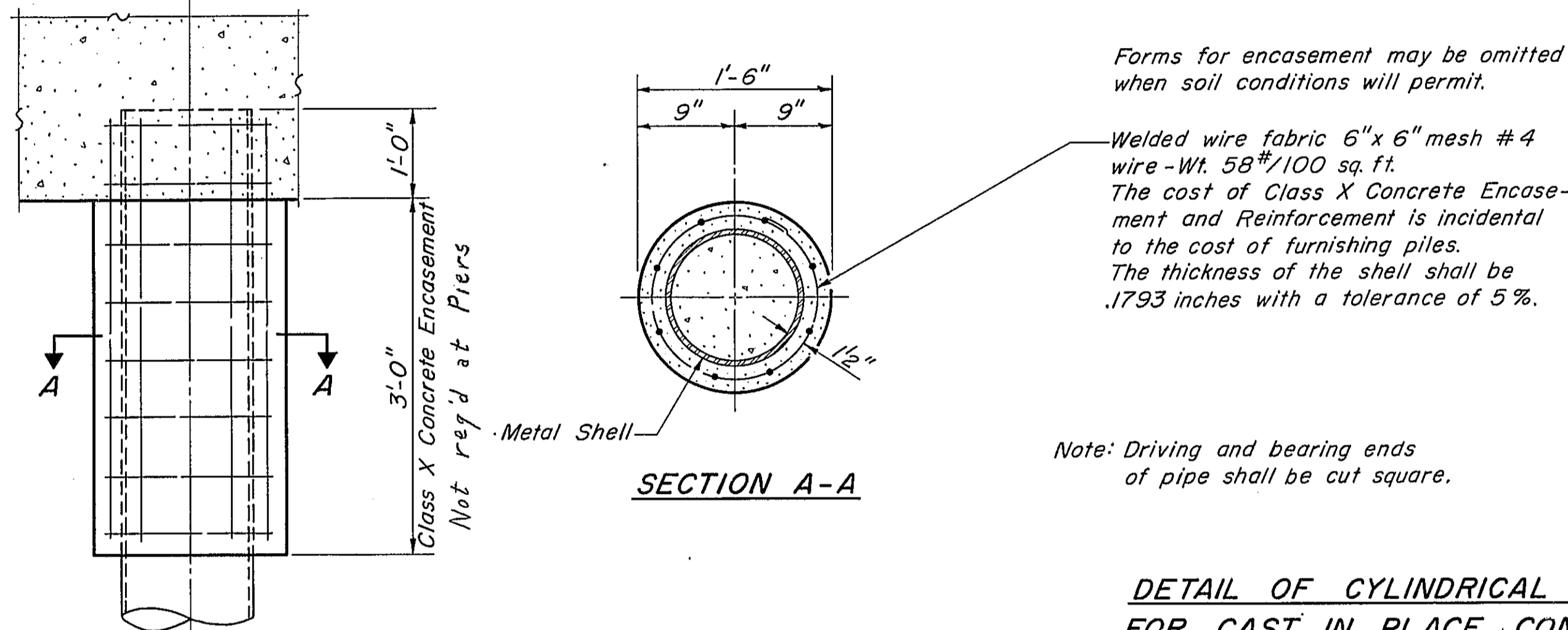


STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS

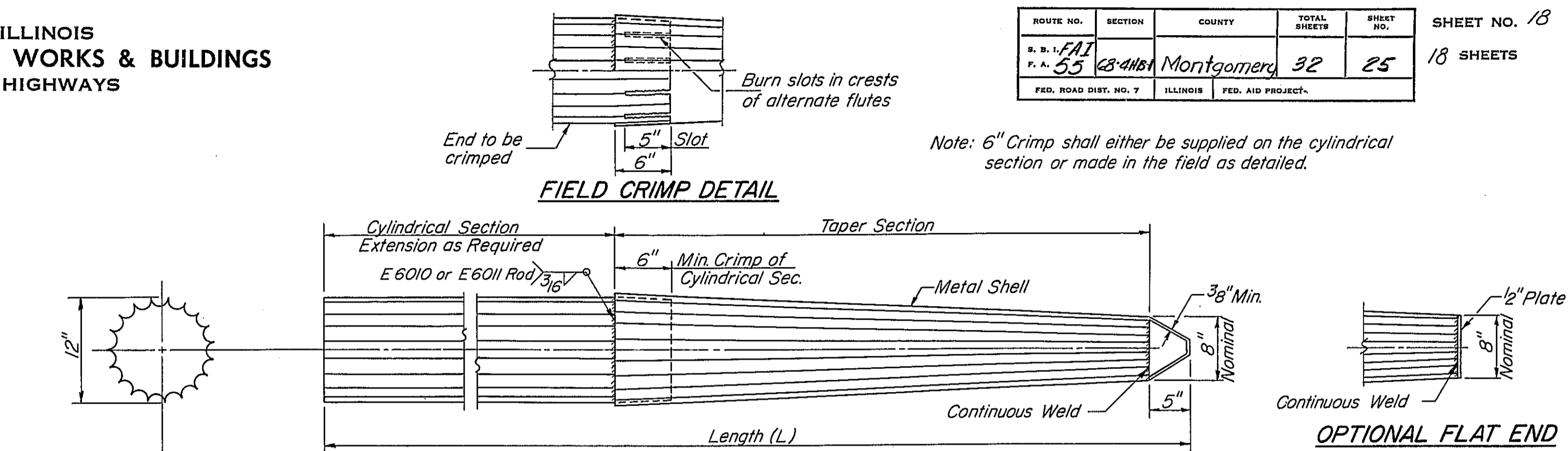
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. /8
55	68-4HB	Montgomery	32	25	18 SHEETS
FED. ROAD DIST. NO. 7			ILLINOIS FED. AID PROJECT		



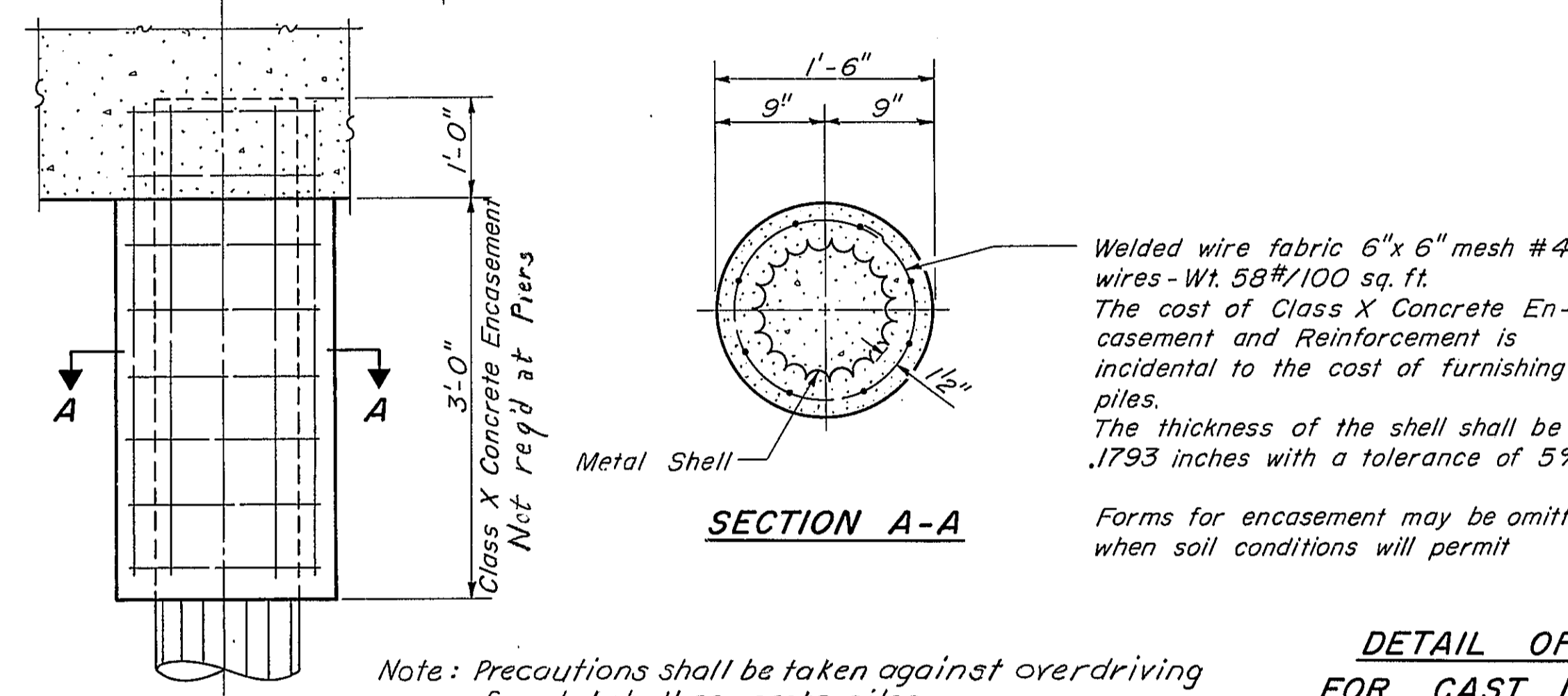
OPTIONAL FLAT END



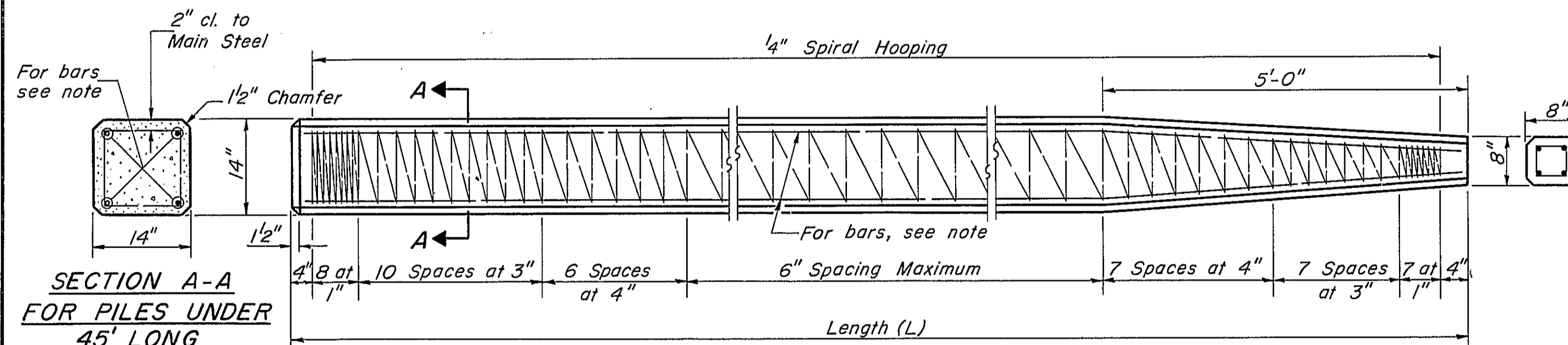
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



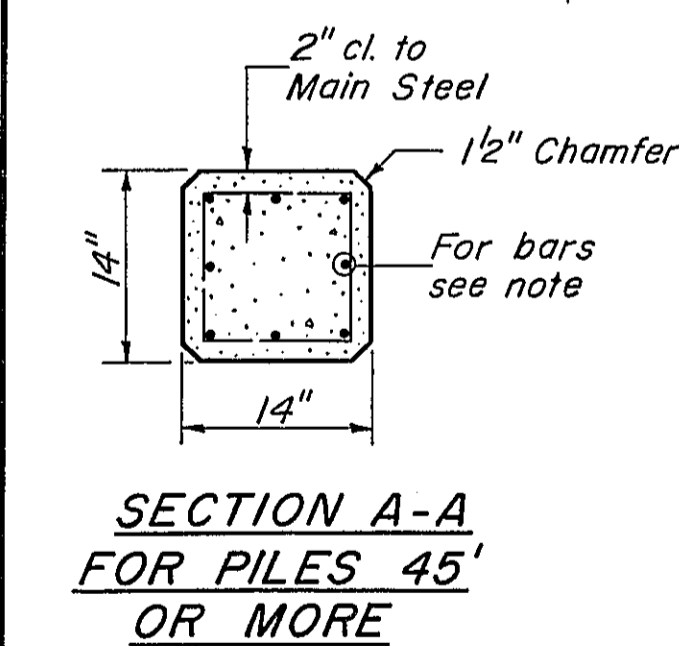
ALLOWABLE TAPER SECTIONS



DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG



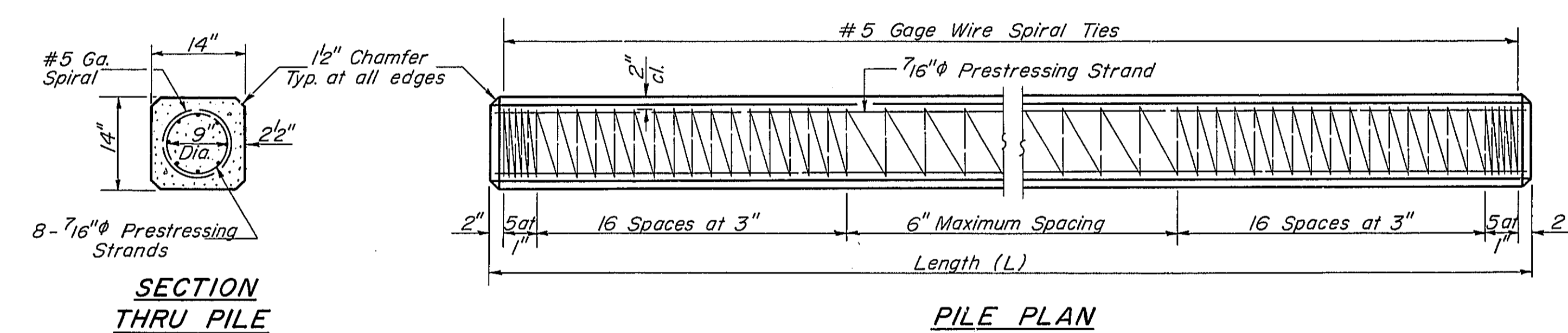
SECTION A-A FOR PILES 45' OR MORE

Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21 L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12 L from each end and at mid-point of pile.

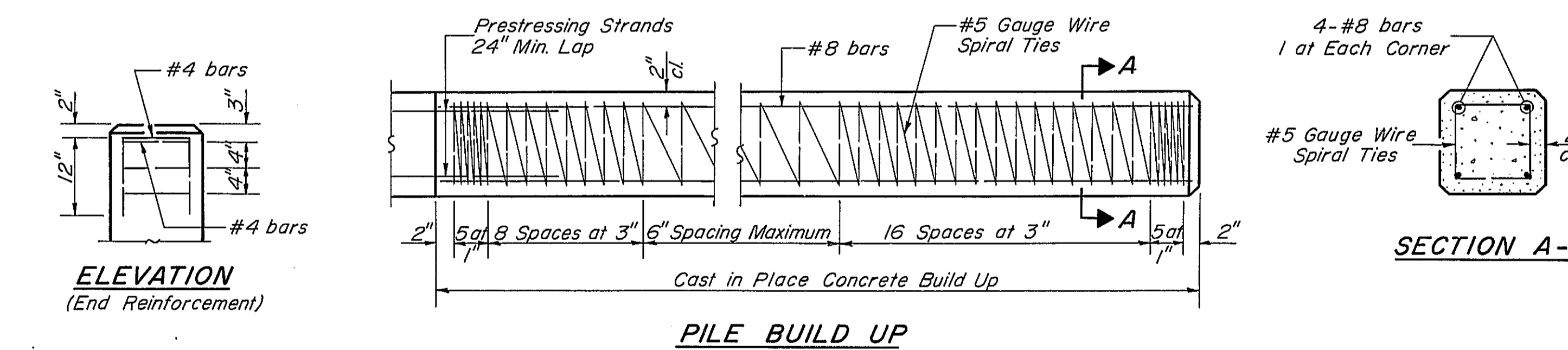
For pile lengths see sheets 12, 14, 15 + 16

DETAIL OF PRECAST CONCRETE PILES



SECTION THRU PILE

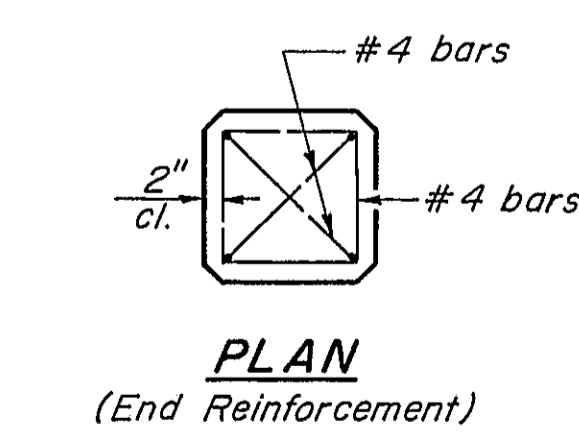
PILE PLAN



ELEVATION (End Reinforcement)

PILE BUILD UP

SECTION A-A



PLAN (End Reinforcement)

DESIGN STRESSES

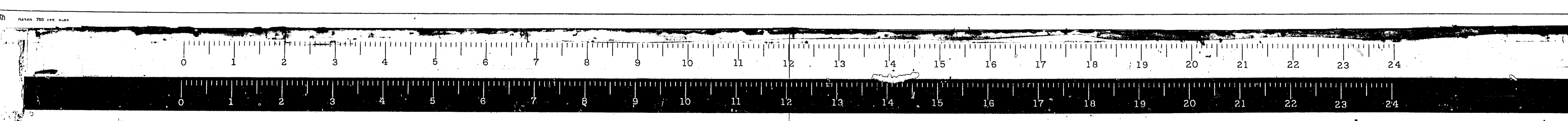
$f_c' = 5,000$  psi  
 $f_d' = 4,000$  psi  
 $f_s' = 268,000$  psi (31,000 lbs.)  
 $f_s' = 188,000$  psi (21,700 lbs.)

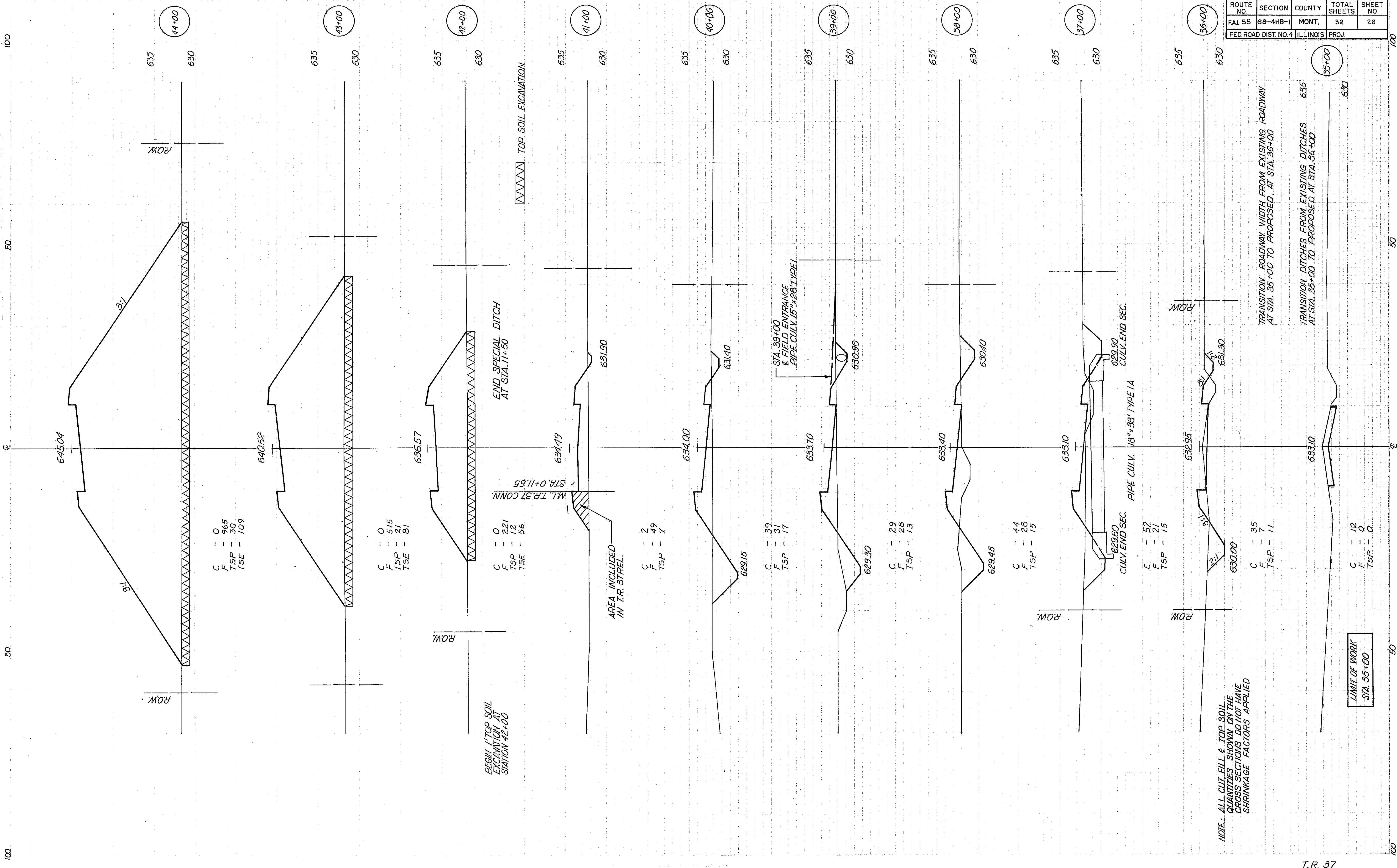
Note: Prestressing steel shall be non-galvanized extra high strength stress-relieved 7 wire strand. The nominal diameter shall be 7/16 and the minimum nominal cross-sectional area shall be 0.1155 square inch.  
Handling: For pile lengths up to 65', use two slings placed at a distance of 0.21 L from each end. For piles longer than 65', use three slings placed at a distance of 0.12 L from each end at midpoint of pile.

PILE DETAILS  
F.A.I. RT. 55 SEC. 68-4HB-1  
MONTGOMERY COUNTY  
STA. 1131+45.27

X-2 2-14-69

DESIGNED D.A.R. [Signature]  
CHECKED Rao G.K.  
DRAWN Bev Robinson  
CHECKED Rao G.K.  
EXAMINED [Signature] APRIL 24 1970  
PASSED [Signature]  
APPROVED [Signature]



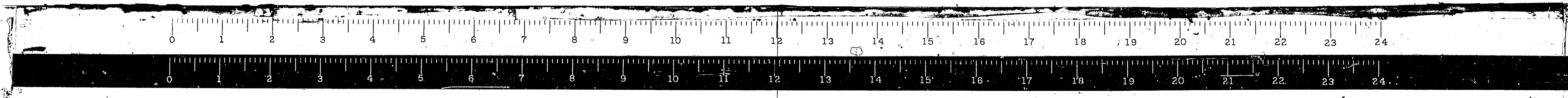


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IAL 55	88-4HB-1	MONT.	32	26
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				

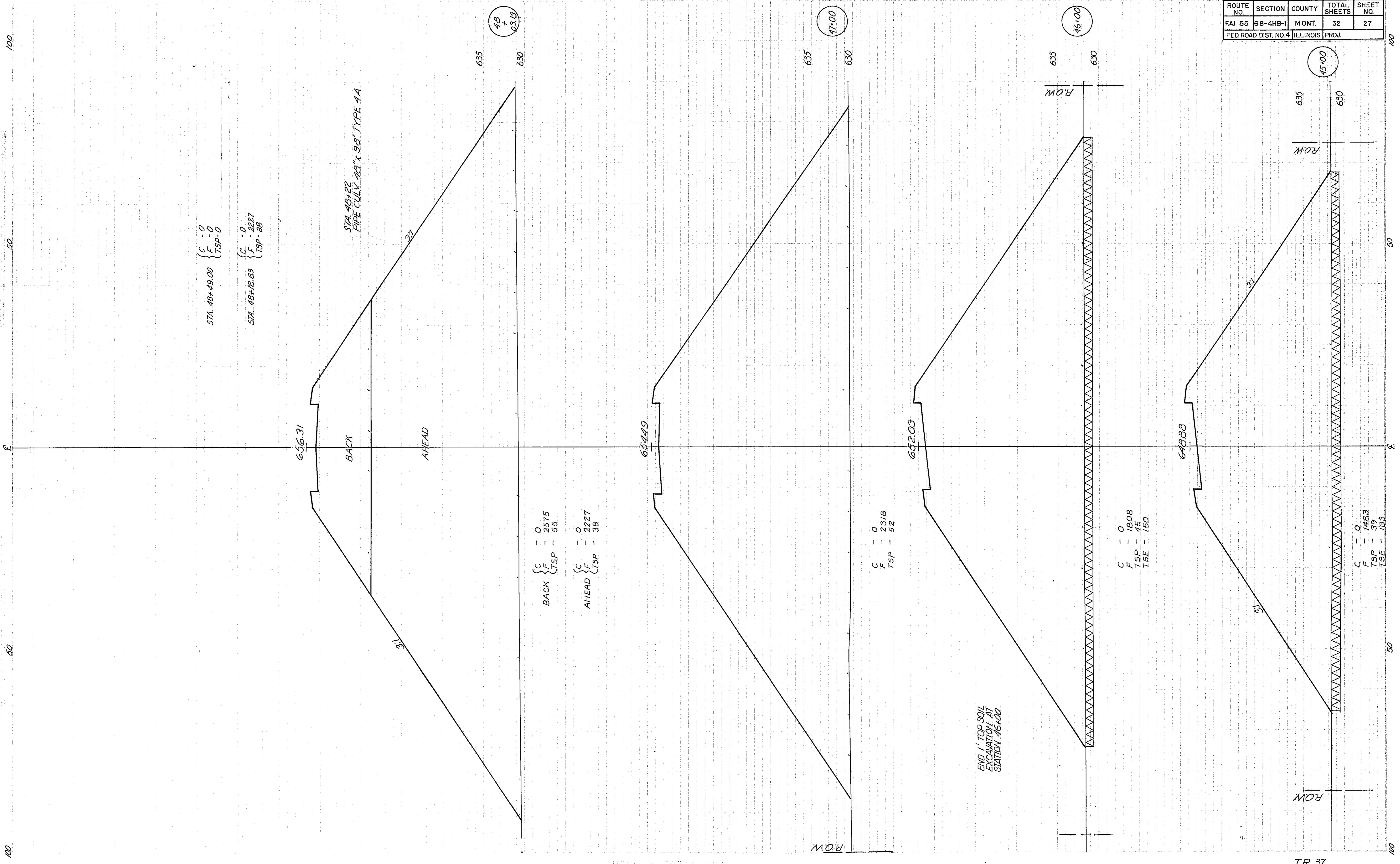
NOTE: ALL CUT, FILL & TOP SOIL QUANTITIES SHOWN ON THE CROSS SECTIONS DO NOT HAVE SHRINKAGE FACTORS APPLIED

LIMIT OF WORK STA. 35+00

T.R. 37



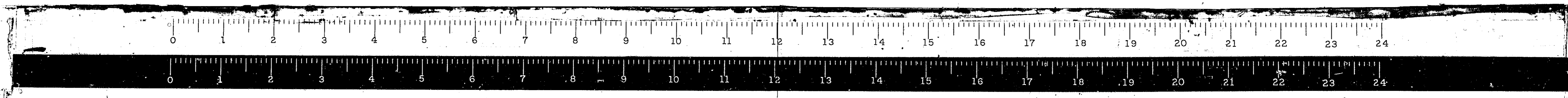
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 55	68-4B-1	MONT.	32	27
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				

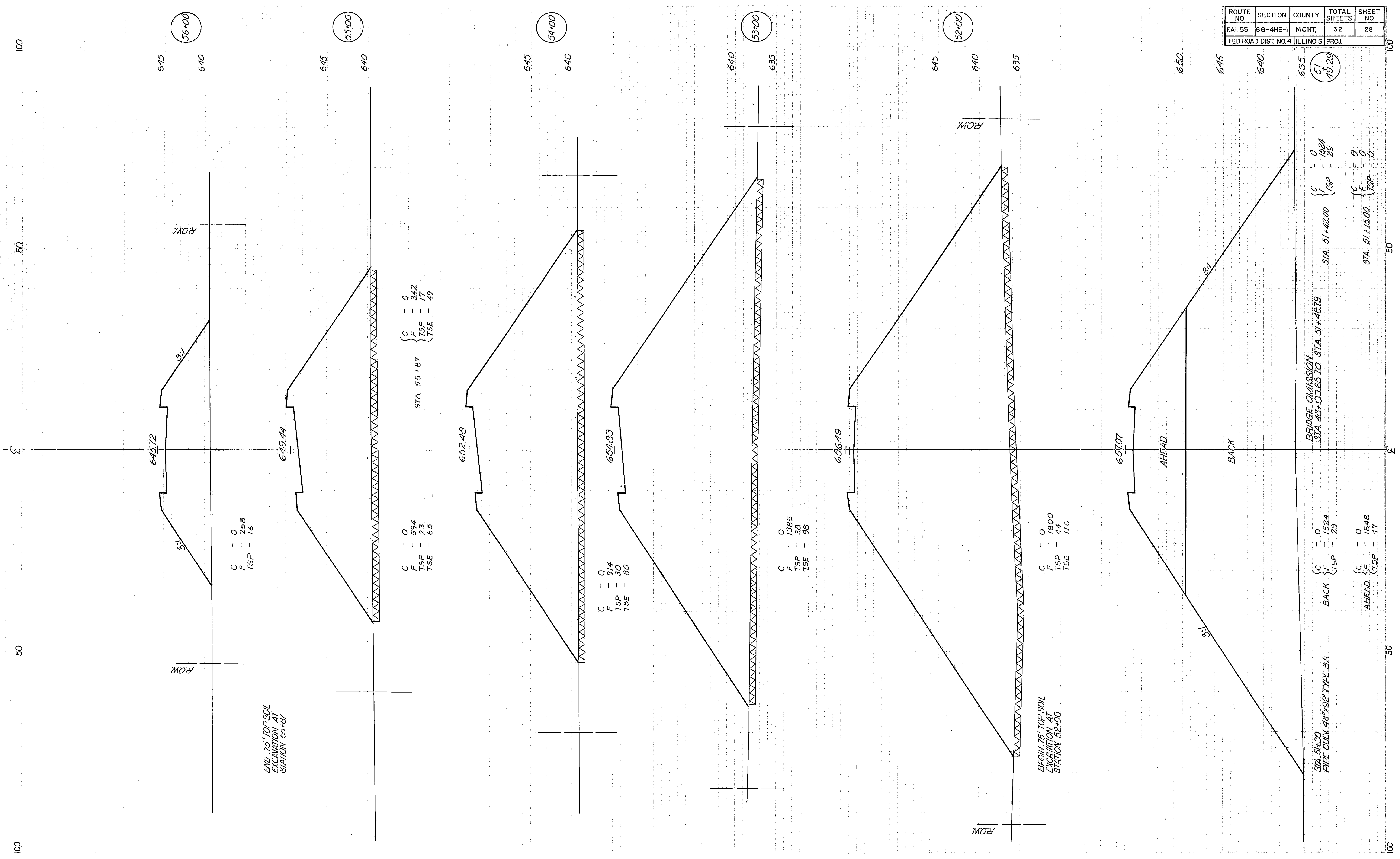


100 90 80

100

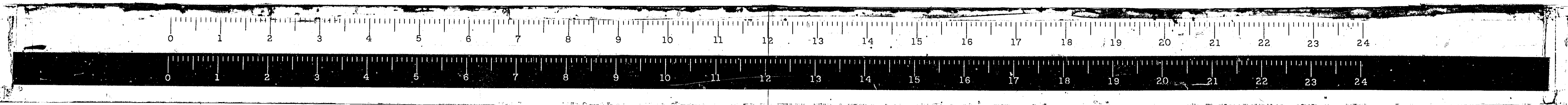
T.R. 37



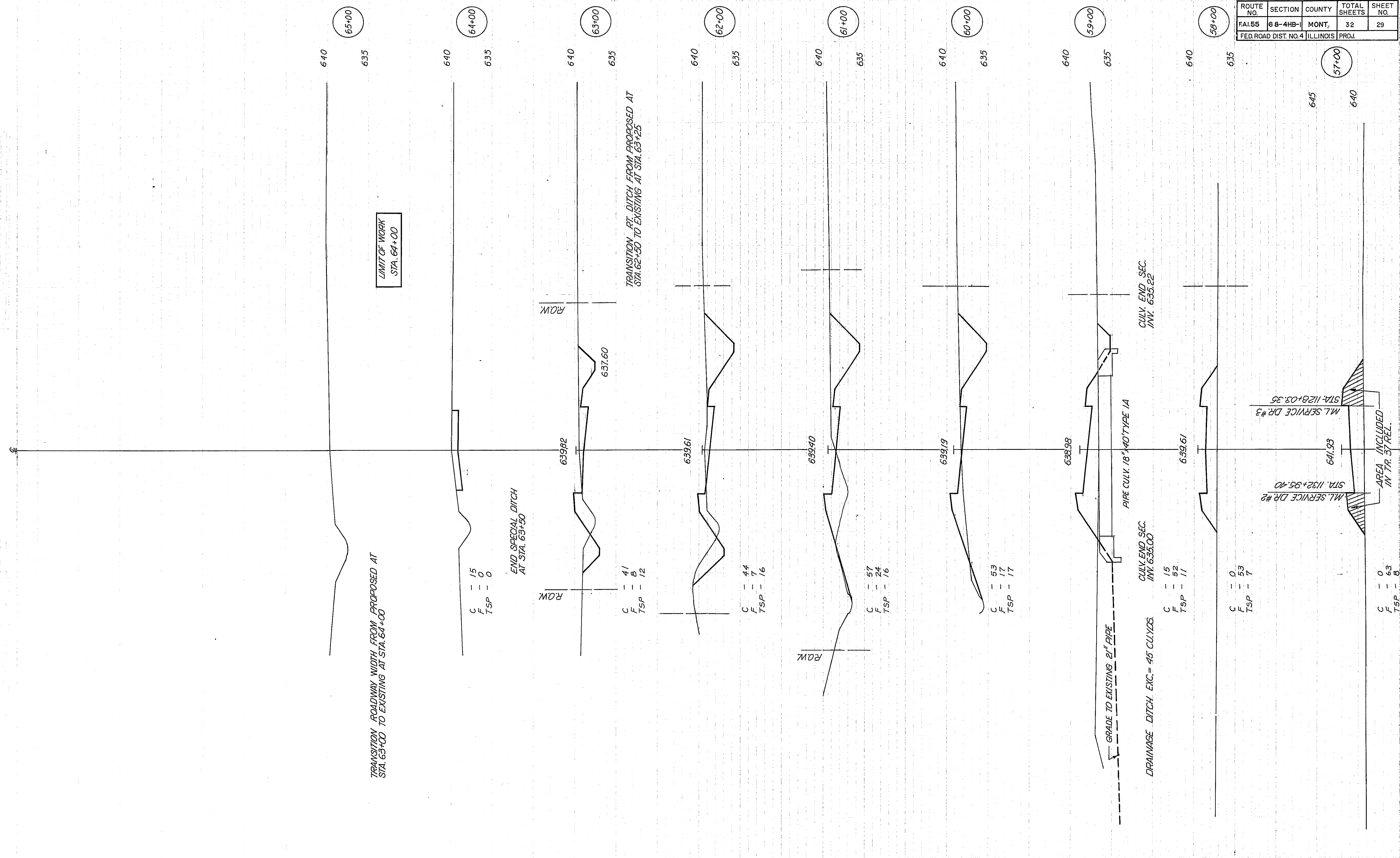


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 55	88-4B-11	MONT.	32	28
FED. ROAD DIST. NO. 4		ILLINOIS PROJ.		

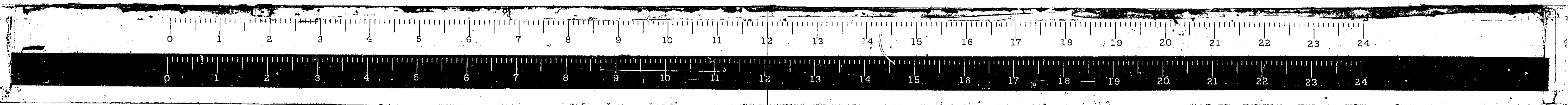
T.R. 37



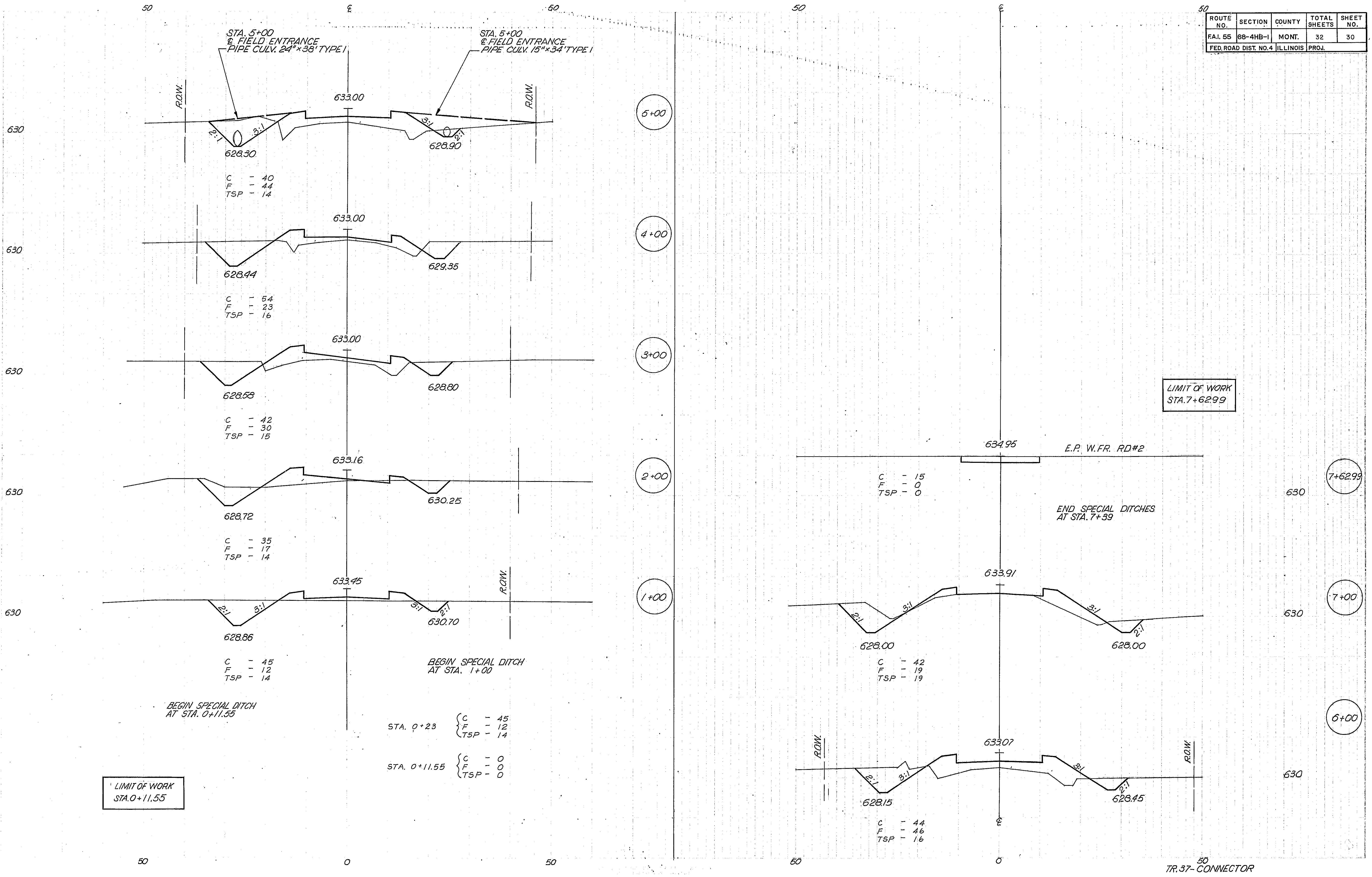
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA155	6B-4HB-1	MONT.	32	29
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				



T.R. 37



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 55	68-4B-1	MONT.	32	30
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				



LIMIT OF WORK  
STA. 0+11.55

LIMIT OF WORK  
STA. 7+62.99

STA. 0+23 { C - 45  
              { F - 12  
              { TSP - 14

STA. 0+11.55 { C - 0  
                  { F - 0  
                  { TSP - 0

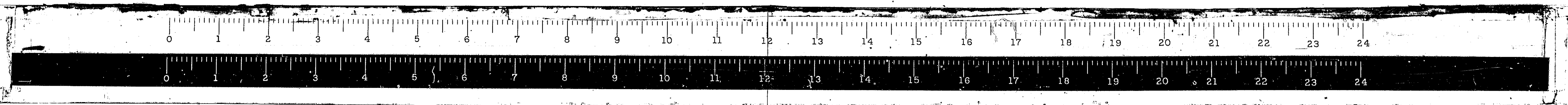
BEGIN SPECIAL DITCH  
AT STA. 1+00

BEGIN SPECIAL DITCH  
AT STA. 0+11.55

E.P. W.FR. RD#2

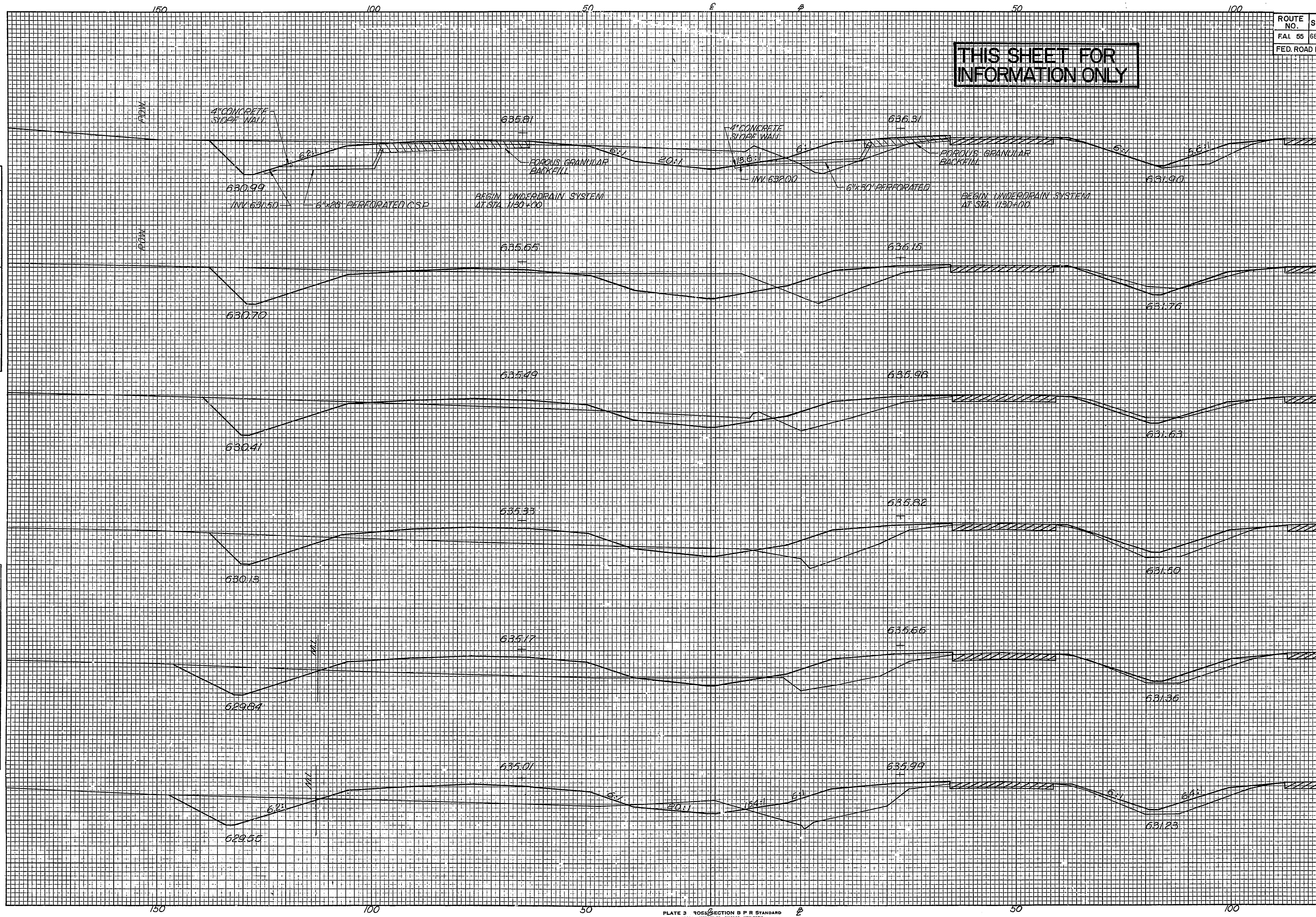
END SPECIAL DITCHES  
AT STA. 7+39

TR. 37-CONNECTOR



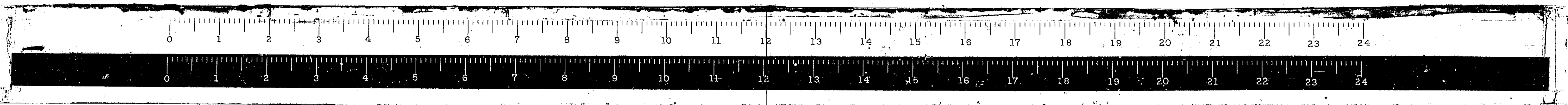
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 55	68-4HB-1	MONT.	32	31
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				

**THIS SHEET FOR INFORMATION ONLY**



DATE	BY	REVISION

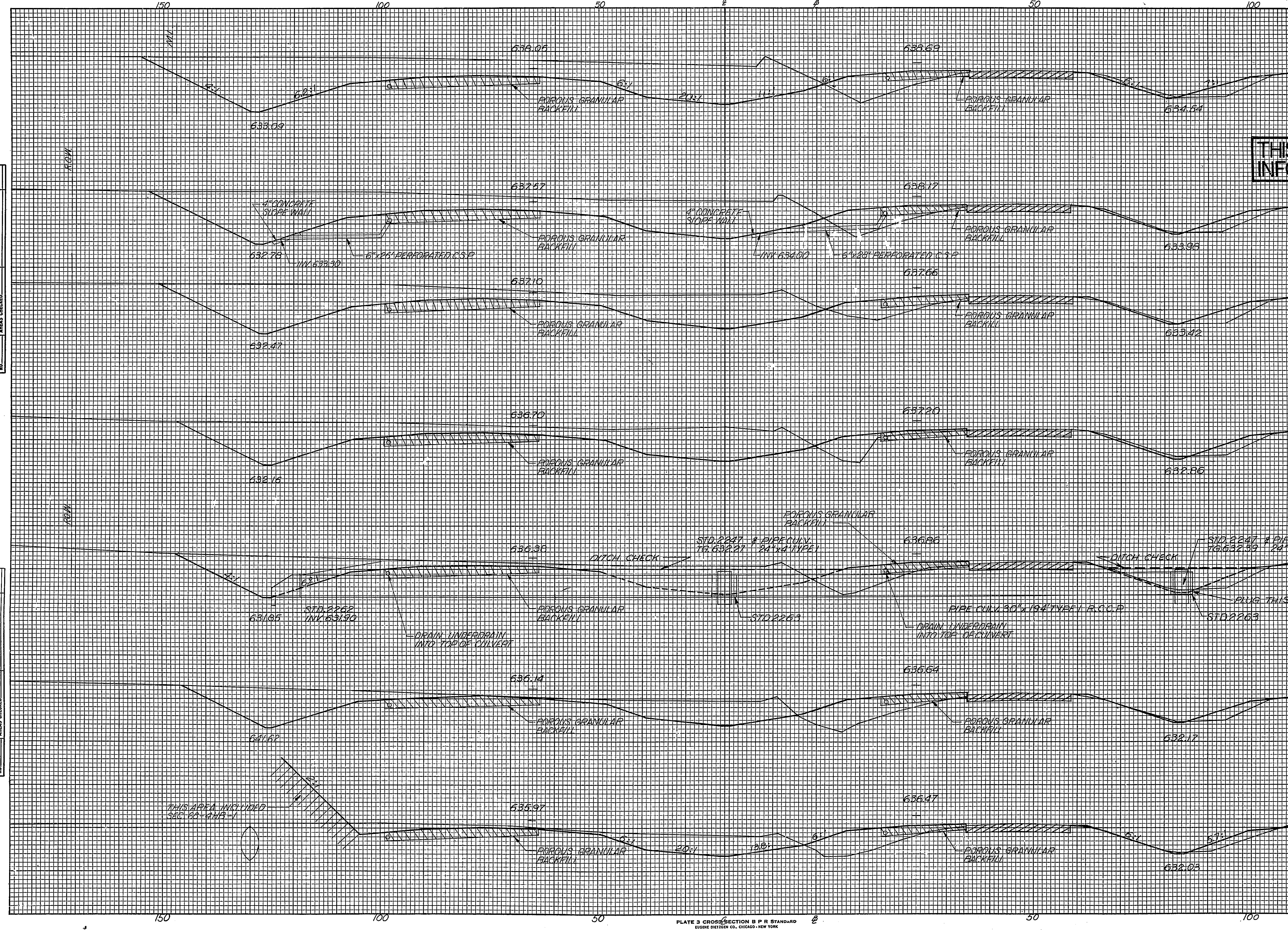
DATE	BY	REVISION





ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-55	68-4HB-1	MONT.	32	32
FED. ROAD DIST. NO. 4 ILLINOIS PROJ.				

THIS SHEET FOR INFORMATION ONLY



DATE	BY	REVISION

DATE	BY	REVISION

PLATE 3 CROSS SECTION B P R STANDARD  
ENGINE DESIGN CO. CHICAGO, NEW YORK

FAI-55

