MICROFILMED
MAR 25 1987

S-1174(2)

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	S-1174(2)	

1/55

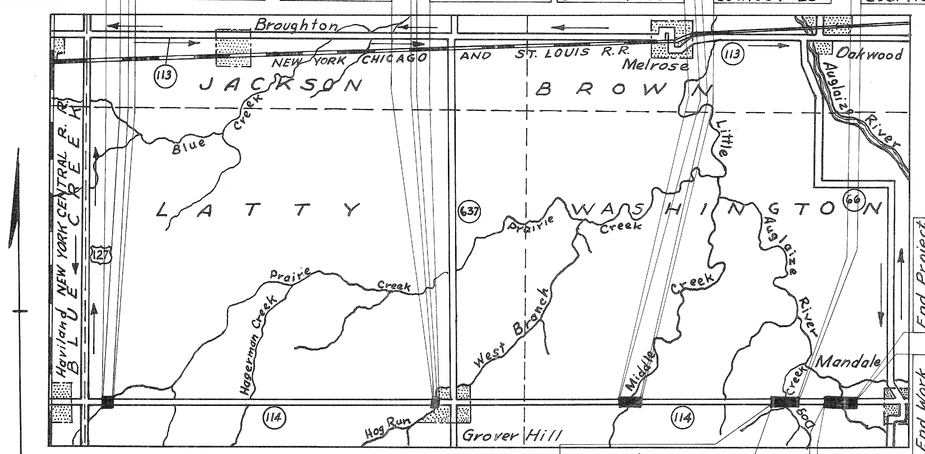
PAULDING COUNTY
PAU-114-(12.41-17.28)

Project designation PAU-114-(12.41-22.40) appearing throughout this plan shall be considered to read PAU-114-(12.41-17.28)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
PAU-114-(12.41 - 17.28)
PAULDING COUNTY
LATTY & WASHINGTON TOWNSHIPS
VILLAGE OF GROVER HILL

Begin Project	Suspend Project	Resume Project	Suspend Project	Resume Project	Suspend Project	Suspend Project
Sta. 655+00	Sta. 657+00	Sta. 885+20.70	Sta. 887+00	Sta. 1025+00	Sta. 1038+45	Sta. 1157+65

Begin Work	Suspend Work	Resume Work	Suspend Work	Resume Work	Suspend Work	Suspend Work
Sta. 654+00	Sta. 658+00	Sta. 884+50	Sta. 887+75	Sta. 1024+00	Sta. 1039+25	Sta. 1158+75



DELIVERY POINT: CLOVERDALE

AVERAGE HAUL = 7 MILES

Resume Work	Resume Project	Resume Project	Resume Work
Sta. 1139+25	Sta. 1140+25	Sta. 1182+75	Sta. 1181+50

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
FENCE LINE
CENTER LINE
POLE LINE
STEAM RAILROAD
GUARD RAIL, PROPOSED
GUARD RAIL, EXISTING
DRAIN PIPE, PROPOSED
DRAIN PIPE, EXISTING
PROPERTY LINE — x P/L x — P/L

INDEX OF SHEETS

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LINE DATA

Begin Project Sta. 655+00, Suspend Project Sta. 657+00 = 200 Lin. Ft.
Resume Project Sta. 885+20.7, Suspend Project Sta. 887+00 = 1793 Lin. Ft.
Resume Project Sta. 1025+00, Suspend Project Sta. 1038+45 = 1345 Lin. Ft.
Resume Project Sta. 1140+25, Suspend Project Sta. 1157+65 = 1740 Lin. Ft.
Resume Project Sta. 1182+75, End Project Sta. 1201+57 = 1882 Lin. Ft.
Additions or Deductions None
Gross Length of Project = Net Length of Project = 5346.3 Lin. Ft. or 1.012 Mi.

Begin Work Sta. 654+00, Suspend Work Sta. 658+00 = 400 Lin. Ft.
Resume Work Sta. 884+50, Suspend Work Sta. 887+75 = 325 Lin. Ft.
Resume Work Sta. 1024+00, Suspend Work Sta. 1039+25 = 1525 Lin. Ft.
Resume Work Sta. 1139+25, Suspend Work Sta. 1158+75 = 1950 Lin. Ft.
Resume Work Sta. 1181+50, End Work Sta. 1202+50 = 2100 Lin. Ft.
Additions or Deductions None
Gross Length of Work = Net Length of Work = 6300 Lin. Ft. or 1.193 Mi.

LOCATION PLAN

SCALE 1" = 1 MILE

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
DETOURS

SCALES

PLAN	1 INCH = 50 FEET
PROFILE (HORIZONTAL)	1 INCH = 50 FEET
PROFILE (VERTICAL)	1 INCH = 5 FEET
CROSS SECTIONS	1 INCH = 5 FEET

The Standard Specifications of the State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal shall govern this improvement.

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

I hereby approve these plans and declare that the making of this improvement will require the closing of the highway to traffic, except as noted on sheet 3, and that detours will be provided as indicated on the plans.

Approved [signature]
Date: 5-4-56 Division Deputy Director

Approved [signature]
Date: 5-4-56 Deputy Director of Planning and Programming

Approved [signature]
Date: 5-2-56 Engineer of Location and Design

Approved Richard Orth [signature]
Date: 4-27-56 Engineer of Bridges

Approved [signature]
Date: 5-4-56 Deputy Director of Design and Construction

Approved [signature]
Date: 5-7-56 First Assistant Director

Approved [signature]
Date: 5-8-56 Director of Highways

R/L Revised from Change Order

FILE No.	PAULDING COUNTY SEC. PAU-114-(12.41-17.28) DATE OF LETTING: CONTRACT No.

STANDARD DRAWINGS

DRAWING	DATE	DRAWING	DATE	DRAWING	DATE
CS-1-54 (2 Shts)	12-1-54	I-1, 2, 3, 4 & 5	2-20-45	L-1	4-1-50
A-1-54	12-1-54	I-15, No. 1	8-1-55		
P-1-54	12-1-54	I-15, No. 2	12-1-54		
AS-1-54	12-1-54	G-7.07	4-2-56		
L-3	4-1-50	RI-1	1-3-55		
L-3-A	4-1-50	DR-1	1-3-55		

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
L-209.12	7-17-54		
B-119 Rev'd.	12-14-55		

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DISTRICT ENGINEER DATE

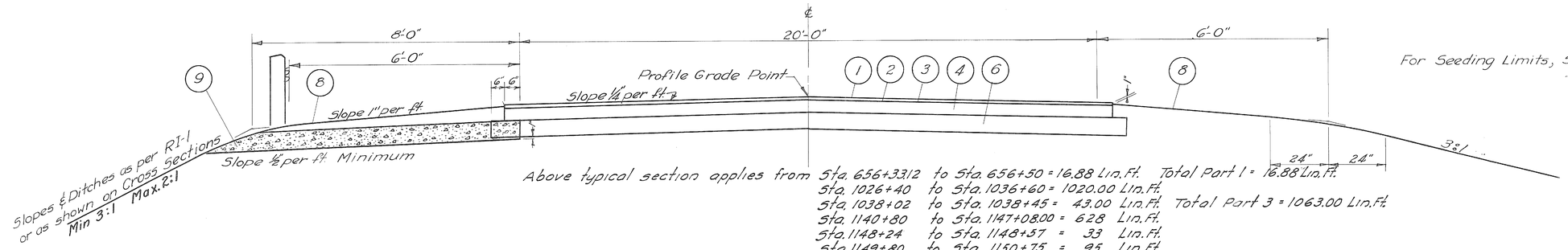
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

2 / 55

PAULDING COUNTY
PAU-114-(12.41-22.40)

TYPICAL SECTION

TYPE T-32 ON B-119



For Seeding Limits, See General Notes

Above typical section applies from Sta. 656+33.12 to Sta. 656+50 = 16.88 Lin. Ft. Total Part 1 = 16.88 Lin. Ft.
Sta. 1026+40 to Sta. 1036+60 = 1020.00 Lin. Ft.
Sta. 1038+02 to Sta. 1038+45 = 43.00 Lin. Ft. Total Part 3 = 1063.00 Lin. Ft.
Sta. 1140+80 to Sta. 1147+08.00 = 628 Lin. Ft.
Sta. 1148+24 to Sta. 1148+57 = 33 Lin. Ft.
Sta. 1149+80 to Sta. 1150+75 = 95 Lin. Ft.
Sta. 1151+21 to Sta. 1157+65 = 644 Lin. Ft. Total Part 4 = 1400 Lin. Ft.
Sta. 1182+75 to Sta. 1187+78.74 = 503.74 Lin. Ft.
Sta. 1189+27.26 to Sta. 1201+57 = 1229.74 Lin. Ft. Total Part 5 = 1733.48 Lin. Ft.

1. Item T-32 Seal Coat Bituminous Material and Aggregate for Seal, using Bituminous Material (See Note "A") applied at the rate of 0.25 Gal. per Sq. Yd. and 0.0080 Cu. Yd. No. 6 Cover Aggregate per Sq. Yd.
2. Item T-32 Road Mix Bituminous Material and Aggregate for Road Mix and Choke, using Bituminous Material (See Note "B") applied at the rate of 0.90 Gal. per Sq. Yd. and 0.056 Cu. Yd. No. 46 Aggregate per Sq. Yd. and 0.004 Cu. Yd. No. 9 Choke Aggregate per Sq. Yd. Method "B" or "C."
3. Item T-30 Bituminous Prime Coat, using Bituminous Material (See Note "C") applied at the rate of 0.35 Gal. per Sq. Yd.
4. Item B-119 5" Crushed Aggregate Base Course.
5. Item B-119 2" to 7" Variable Crushed Aggregate Base
6. Item I-22 6" Subbase
7. Item I-22 2" to 6" Variable Subbase
8. Item L-9 Seeding and Protecting
9. Item I-9 Std No. 2 Stone Underdrains

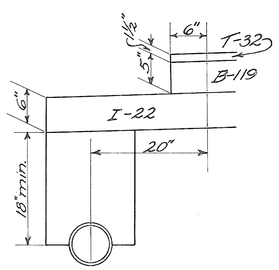
Note "A" Bituminous Material Sec. M-5.7 RT 9-10, Sec M 5.3 MC-4-5, Sec. M-5.2 RC-3-4, or Sec. 5.5 Emulsion RS-2

Note "B" Bituminous Material Sec. M-5.7 RT-8-9, Sec. M-5.3 MC-4-5, Sec M-5.2 RC-2-3, or Sec. M-5.12 CBAE 2-3.

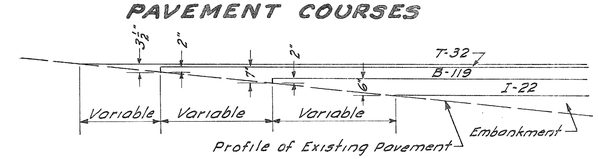
Note "C" Bituminous Material Sec. M-5.3 MC-0-1, Sec M-5.7 RT-2-3 or Sec. M-5.2 RC-1-2

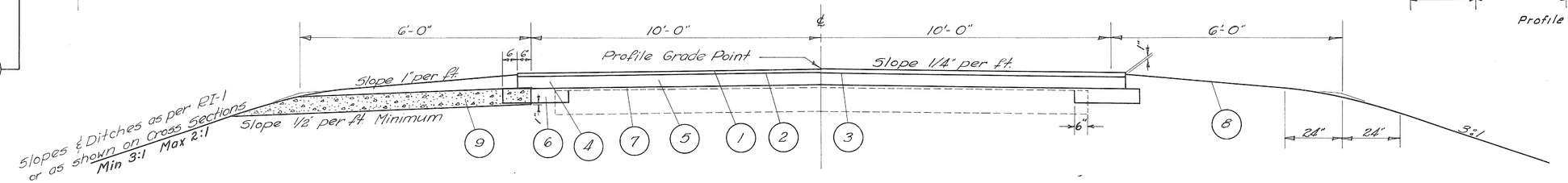
DETAIL of I-4 UNDERDRAINS

Sta. 1148+30 to Sta. 1151+50



DETAIL OF VARIABLE DEPTH PAVEMENT COURSES





Above typical section applies from Sta. 655+00.00 to Sta. 655+42.88 = 42.88 Lin. Ft.
Sta. 656+50.00 to Sta. 657+00.00 = 50.00 Lin. Ft. Total Part 1 = 92.88 Lin. Ft.
Sta. 886+43.30 to Sta. 887+00.00 = 56.70 Lin. Ft. Total Part 2 = 56.70 Lin. Ft.
Sta. 1025+00.00 to Sta. 1026+40.00 = 140.00 Lin. Ft. Total Part 3 = 140.00 Lin. Ft.
Sta. 1140+25 to Sta. 1140+80 = 55.00 Lin. Ft.
Sta. 1148+57 to Sta. 1149+80 = 123.00 Lin. Ft.
Sta. 1150+75 to Sta. 1151+21 = 46.00 Lin. Ft. Total Part 4 = 224.00 Lin. Ft.

GENERAL NOTES

DESIGN SPEED - A design speed of 50 MPH was used on this project.

FIELD OFFICE - The Contractor shall provide a suitable field office in accordance with Sec. S-0.01 having a minimum floor area of 150 sq. ft. The Contractor shall have a telephone installed and maintained during the construction of this project.

UTILITIES - All work required for the adjustment of public or private utilities will be done by, and at the expense of, their respective owners.

EXISTING GUARD RAIL - Existing guard rail will be removed by others, includes railing on Br. Nos. PAU-114-1677, PAU-114-1964, PAU-114-2173

EXISTING PAVEMENT REMOVAL - The removal of existing pavement is included in Item E-1 for payment.

STONE UNDERDRAINS - I-9, Stone Underdrains shall be placed as determined by the Engineer. Quantities are figured for 50 ft. intervals on each side of pavement. In the final finishing of slopes and ditches, care shall be exercised to assure that the exposed ends of I-9 underdrains shall be left free of cover that would impede free drainage.

RIPRAP - All riprap shall be Class "E" concrete as per Item I-10, Riprap Type "A"

SEEDING QUANTITIES - Quantities for seeding are calculated for the soil areas within the construction limits as shown on the cross sections and payment shall not be made for seeding beyond these limits. Areas outside construction limits where the Engineer determines that the existing grass areas have been disturbed by construction operations shall be seeded in accordance with Section 6-7.09 at the contractors expense.

SEED MIXTURE - Item L-9, shall be followed except the following seed mixture shall be used at the rate of 3 lbs. per 1000 sq. ft.

35 % Kentucky Blue Grass — 20% Fancy Red Top.
35 % Chewings Red Fescue — 10% Perennial Rye Grass.

A rotary type mixer shall not be used in the area 3 feet each way from the centerline of the ditch.

TREE & BRUSH REMOVAL - Payment for removal of trees and brush in channel of Br. No. PAU-114-1964 is included in price bid for Item S-22, Removal of Portions of Existing Structures.

DRIVEWAYS - All driveways shown on these plans shall be Type 1 Std. Drwg. DR-1
Field Drive 6" of B-119, Private Drive 5" of B-119 and T-32 Surface. (See Note on Sheet No 4.)

REMOVAL OF TREES AND STUMPS - Trees or stumps shall be removed or preserved as indicated on the plans by the following symbols:
Trees or stumps to be removed
Trees to be preserved

MAINTAINING LOCAL TRAFFIC: The completed crushed aggregate base course, Item B-119, may be used for the maintenance of local traffic on this project. Any damage which is done to the base, subbase or subgrade by local traffic shall be repaired by reshaping, recompacting and by the addition of extra B-119 material, if necessary. Reshaping and recompacting operations shall be done at no additional cost to the State.

CONSTRUCTION & DETOUR PROCEDURE
The Contractor shall arrange his work so that the detour period will be held to an absolute minimum. The highway shall not be closed to traffic between the dates of December 1st and March 31st. The detour period shall be limited to a total of nine months which may occur in two separate periods. Construction operations shall be limited to that section between USR 127 and S.R. 637 or between S.R. 637 and S.R. 66 at one time.
Work, once having been started on any or all structures in one section, shall proceed uninterruptedly until all Structure, Roadway and Paving items are completed sufficiently to handle two-way traffic before starting work in the other section.
The Contractor may elect to begin work in either section first.

GENERAL SUMMARY

ITEM	Part 1	Part 2	Part 3	Part 4	Part 5	TOTAL	UNIT	DESCRIPTION
Federal Code						4231		ROADWAY
E-1	182	70	281	4486	1747	6766	Cu.Yd.	Roadway Excavation, as per plan.
E-1	106	67	2547	3333	4112	10,165	Sq.Yd.	Compacted Subgrade.
E-4	91		6068	2646	9154	17,959	Cu.Yd.	Borrow.
E-9	1		2	5	5	13	Each	Removal of Trees and Stumps.
E-11	3	2	36	43	63	147	M.Gal.	Water.
I-15	104.52	77.30	551.00	78.00	612.96	1423.78	Lin.Ft.	Guard Rail Steel Beam Type (Deep).
L-9	0.12	0.06	0.67	1.05	1.16	3.06	Ton	Commercial Fertilizer (10-6-4).
L-9	1221	661	7307	11,468	12,723	33,380	Sq.Yd.	Seeding and Protecting, as per plan.
L-10	77	44	145	148	177	591	Sq.Yd.	Sodding.
T-10						100	Cu.Yd.	Traffic compacted surface course for maintaining local traffic
M-10						2	Ton	Calcium Chloride or Calcium Magnesium Chloride Furnished & Applied for Maintaining local Traffic
								DRAINAGE
E-12	54	43	16		55	168	Lin.Ft.	Pipe Removed 15" and Under.
E-12		8			12	20	Lin.Ft.	Pipe Removed over 15".
I-1	138		64	142	146	490	Lin.Ft.	15" Pipe for Driveways, Sec. M-6.4(a).
I-2				21		21	Lin.Ft.	12" Class "A" Storm Sewers
I-3				32		32	Lin.Ft.	6" Roadway Drainage.
I-3	16	20		10	44	90	Lin.Ft.	8" Outlets for Roadway Drainage. Sec. M-6.4 (c).
I-3	26	24				50	Lin.Ft.	10" Outlets for Roadway Drainage. Sec. M-6.4 (c).
I-3			76			76	Lin.Ft.	12" Outlets for Roadway Drainage. Sec. M-6.4 (c).
I-3		8				8	Lin.Ft.	18" Outlets for Roadway Drainage. Sec. M-6.4 (c).
I-3	30					30	Lin.Ft.	21" Outlets for Roadway Drainage. Sec. M-6.4 (c).
I-4				320		320	Lin.Ft.	6" Underdrains.
I-5				1		1	Each	6" Pipe Special for Roadway Drainage.
I-9	28	54	508	630	666	1886	Lin.Ft.	Stone Underdrains, No. 2.
I-10	57	70	17	57	63	264	Sq.Yd.	Riprap, Type "A", as per plan.
I-16				2		2	Each	Catch Basins Abandoned.
S-22			Lump		Lump	Lump	Lump	Removal of Portions of Existing Structures, as per plan.
								PAVEMENT
I-7	67	67	67	67	67	335	Sq.Yd.	Reinforced Concrete Approach Slabs (T=10").
I-22	31	20	444	671	701	1867	Cu.Yd.	Subbase.
B-119	61	14	431	638	688	1832	Cu.Yd.	Crushed Aggregate Base Course.
T-30	57	36	1069	1606	1628	4396	Gal.	Bituminous Prime Coat Sec. M-5.3, MC-0-1, Sec. M-5.7, RT-2-3 or Sec. M-5.2, RC-1-2
T-32	757	531	2960	4285	4251	12,784	Gal.	Road Mix Bituminous Material, Sec. M-5.7, RT-8-9, Sec. M-5.3, MC-4-5, Sec. M-5.2 RC-2-3, or Sec. M-5.12 CBAE 2-3
T-32	177	111	822	1175	1181	3466	Gal.	Seal Coat Bituminous Material, Sec. M-5.7 RT 9-10, Sec. M-5.3 MC-4-5, Sec. M-5.2 RC-3-4 or Sec. 5.5 Emulsion RS-2
T-32	47	33	184	267	264	795	Cu.Yd.	Aggregate for Road Mix, No. 46.
T-32	3	2	13	19	19	56	Cu.Yd.	Aggregate for Choke, No. 9.
T-32	6	4	26	38	38	112	Cu.Yd.	Aggregate for Seal Coat, No. 6.
								STRUCTURES OVER 20' SPAN
								Br. PAU-114-1242, for estimated quantities see sheet No. 36
								Br. PAU-114-1677, for estimated quantities see sheet No. 39
								Br. PAU-114-1964, for estimated quantities see sheet No. 43
								Br. PAU-114-2173, for estimated quantities see sheet No. 47
								Br. PAU-114-2250, for estimated quantities see sheet No. 50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

PAULDING COUNTY
PAU-114-(12.41-22.40)

PAVEMENT COMPUTATIONS

	T-32 Seal Coat: Bit. Material 0.25 Gal. per Sq.Yd.	T-32 Seal Coat: Aggregate 0.008 Cu.Yd. per Sq.Yd.	T-32 Road Mix: Bit. Material 0.90 Gal. per Sq.Yd.	T-32 Road Mix: Aggregate 0.056 Cu.Yd. per Sq.Yd.	T-32 Road Mix: Choke 0.004 Cu.Yd. per Sq.Yd.	T-30 Bituminous Prime Coat 0.35 Gal. per Sq.Yd.	B-119 Crushed Aggregate Base 2"-7"	B-119 Crushed Aggregate Base 5"	I-22 Subbase 2"-6"	I-22 Subbase 6"	I-9 Stone Under-drains	E-11 Water 5 Gal. per Cu.Yd.	E-1 Compacted Subgrade	L-9 Fertilizer Sq.Yds. X (9÷1000) X (20÷2000)	I-7 Reinforced Concrete Approach Slabs
	Gals.	Cu. Yds.	Gals.	Cu. Yds.	Cu. Yds.	Gals.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Lin. Ft.	M. Gals.	Sq. Yds.	Tons	Sq. Yds.
Part 1 of 5															
New Construction 16.88 Lin.Ft.	9.85	0.32	35.45	2.21	0.16	13.79		5.47		6.57		.06	39.39		
Widening 92.88 Lin.Ft.	54.18	1.73	315.10	19.61	1.40	21.39		8.49		11.90	28	.10			
Transitions (1-P & 2-P)	113.00	3.62	406.80	25.31	1.81	21.60		10.80		12.20		.12			
Side Approaches							35.80					.18			
Approach Slabs													66.67		66.67
Water Emb. + 20% 494 Cu.Yds.												2.47			
Fertilizer (Seed+Sodding 12.98 Sq.Yds.)														0.12	
Total Part 1 of 5	177.03	5.67	757.35	47.13	3.37	56.78	60.56			30.67	28	2.93	106.06	0.12	66.67
Part 2 of 5															
Widening 56.70 Lin.Ft.	33.08	1.06	313.91	19.53	1.39	13.23		5.25		7.35	18	.06			
Transitions (3-P & 4-P)	77.75	2.49	216.90	13.50	0.96	22.80		9.01		12.93	36	.11			
Approach Slabs													66.67		66.67
Water (Emb. +20% 256 Cu.Yds.)												1.28			
Fertilizer (Seed+Sodding 7.05 Sq.Yds.)														0.06	
Total Part 2 of 5	110.83	3.55	530.81	33.03	2.35	36.03		14.26		20.28	54	2.45	66.67	0.06	66.67
Part 3 of 5															
New Construction 1063.00 Lin.Ft.	620.08	19.84	2232.30	138.90	9.92	868.12		344.49		413.39	418	3.79			
Widening 140.00 Lin.Ft.	81.67	2.61	294.00	18.29	1.31	106.67	31.58			12.96	54	.22	2480.33		
Transitions (5-P & 6-P)	96.83	3.10	348.57	21.69	1.55	61.20		20.30		18.00	36	.19			
Side Approaches	23.68	0.76	85.23	5.30	0.38	33.10	34.30					.17			
Approach Slabs													66.67		66.67
Water (Emb. +20% 6260 Cu.Yds.)												31.30			
Fertilizer (Seed.+Sodding 74.52 Sq.Yds.)														0.67	
Total Part 3 of 5	822.26	26.31	2960.10	184.18	13.16	1069.09	430.67			444.35	508	35.67	2547.00	0.67	66.67
Part 4 of 5															
New Construction 1400.00 Lin.Ft.	816.67	26.13	2940.00	182.93	13.07	1143.33		453.70		544.44	504	4.99	3266.67		
Widening 224.00 Lin.Ft.	130.66	4.19	526.13	32.75	2.33	182.93	72.59		42.33		54	.57			
Transitions (7-P & 9-P)	116.75	3.74	420.30	26.15	1.87	124.60		32.30		27.70	72	.30			
Intersection (8-P)	92.00	2.94	331.20	20.61	1.47	129.00		45.00		55.00		.50			
Side Approaches	18.65	.60	67.14	4.18	.30	26.20	34.70					.17			
Approach Slabs													66.67		66.67
Extension over I-4										3.00		.02			
Water (Emb. + 20% 7198 Cu.Yds.)												35.99			
Fertilizer (Seed & Sodding 11.616 Sq.Yds.)														1.05	
Total Part 4 of 5	1174.73	37.60	4284.77	266.62	19.04	1606.06	638.29		671.47		630	42.54	3333.34	1.05	66.67
Part 5 of 5															
New Construction 1733.48 Lin.Ft.	1011.20	32.36	3640.31	226.51	16.18	1415.68		561.78		674.13	594	6.18	4044.79		
Transitions (10-P & 11-P)	115.73	3.70	416.61	25.92	1.85	139.30		47.90		26.90	72	.37			
Side Approaches	53.83	1.72	193.77	12.06	.86	72.70	78.20					.49			
Approach Slabs													66.67		66.67
Water (Emb. + 20% 11,255 Cu.Yds.)												56.28			
Fertilizer (Seed.+Sodding 12,900 Sq.Yds.)														1.16	
Total Part 5 of 5	1180.76	37.78	4250.69	264.49	18.89	1627.68	687.88			701.03	666	63.32	4111.46	1.16	66.67

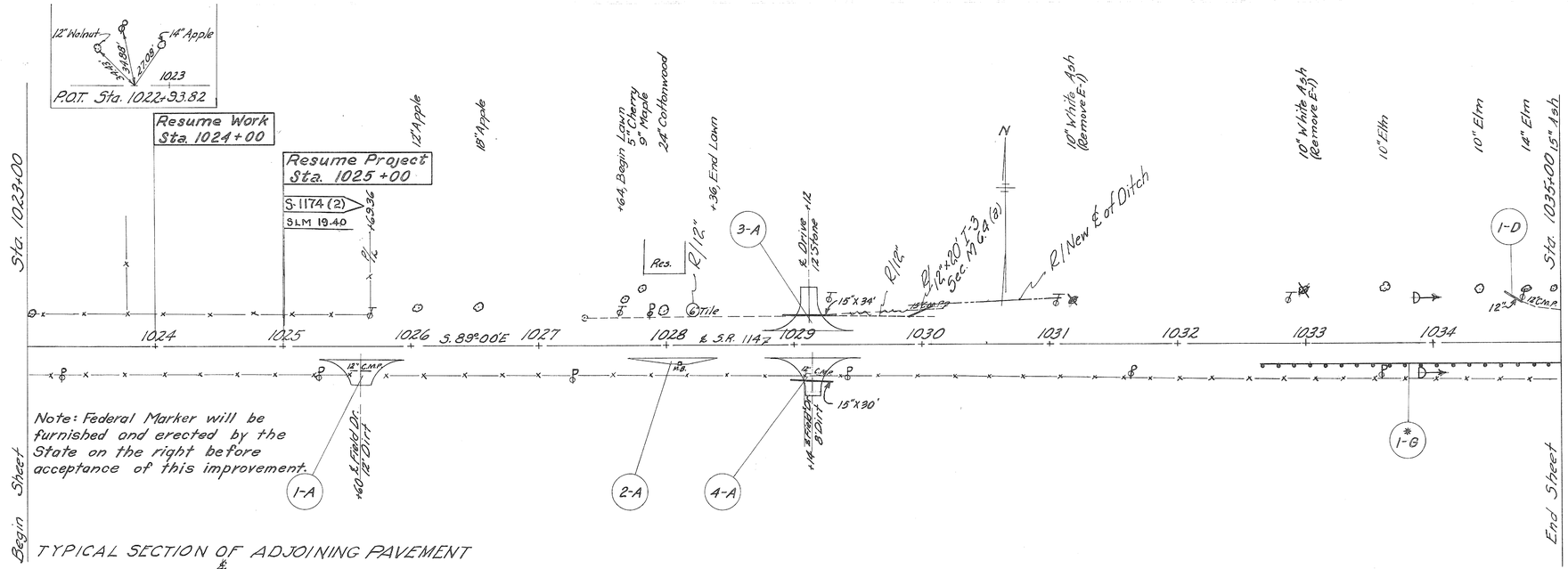
GENERAL NOTES CONTINUED

FROM SHEET No 3.

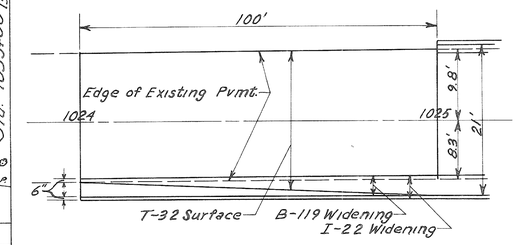
SUBGRADE COMPACTION (DRIVES & MAIL-BOX TURNOUTS)

The subgrade under B-119 Material used on Drives and Mail-Box Turnouts shall be compacted for a depth of six inches (6") to the density requirements of Table III, Item E-1. Payment for subgrade compaction as specified above shall be included in the Unit Price Bid for Item E-1, "Roadway Excavation".

PAULDING COUNTY
PAU-114-(12.4)-22.40)
STRUCT. NO. PAU-114-196.4
PART 3 OF 5



Note: Federal Marker will be furnished and erected by the State on the right before acceptance of this improvement.



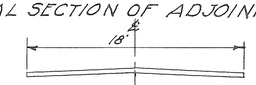
TRANSITION No. 5-P

Item I-22, Subbase	6.1 cu.yd.
Item B-119, Crushed Aggregate Base	4.2 cu.yd.
Item T-30, Bituminous Prime Coat	10.7 gal.
Item T-32, Seal Coat Bit. Matl. & Aggregate	2.14 sq.yd.
Item T-32, Road Mix Bit. Matl., Aggregate & Choke	2.14 sq.yd.

SIDE APPROACHES "A"

Ref. No.	Station	Side	I-1 Pipe for Driveways Lin. Ft. 15"		B-119 Crushed Aggr. Base Cu. Yd. 5"	6"	T-30 Bituminous Prime Coat Gal.	T-32 Bit. Road Mix & Seal Coat Sq. Yd.	E-12 Pipe Removed Lin. Ft. 12"	
1-A	1025+60	Rt.				9.4				
2-A	1028+09	Rt.			2.6		6.4	18.4		
3-A	1029+12	Lt.	34		10.6		26.7	76.3		
4-A	1029+14	Rt.	30			11.7			16	
Total			64		34.3		33.1	94.7	16	

TYPICAL SECTION OF ADJOINING PAVEMENT



T-32 or T-34 on Traffic Bound Base

B.M. #1, Spike in 12" Walnut	B.M. #2, Spike in ℄
Sta. 1022+70, 22' Lt.	Sta. 1029+41, 24' Rt.
Elev. 723.53	Elev. 719.70

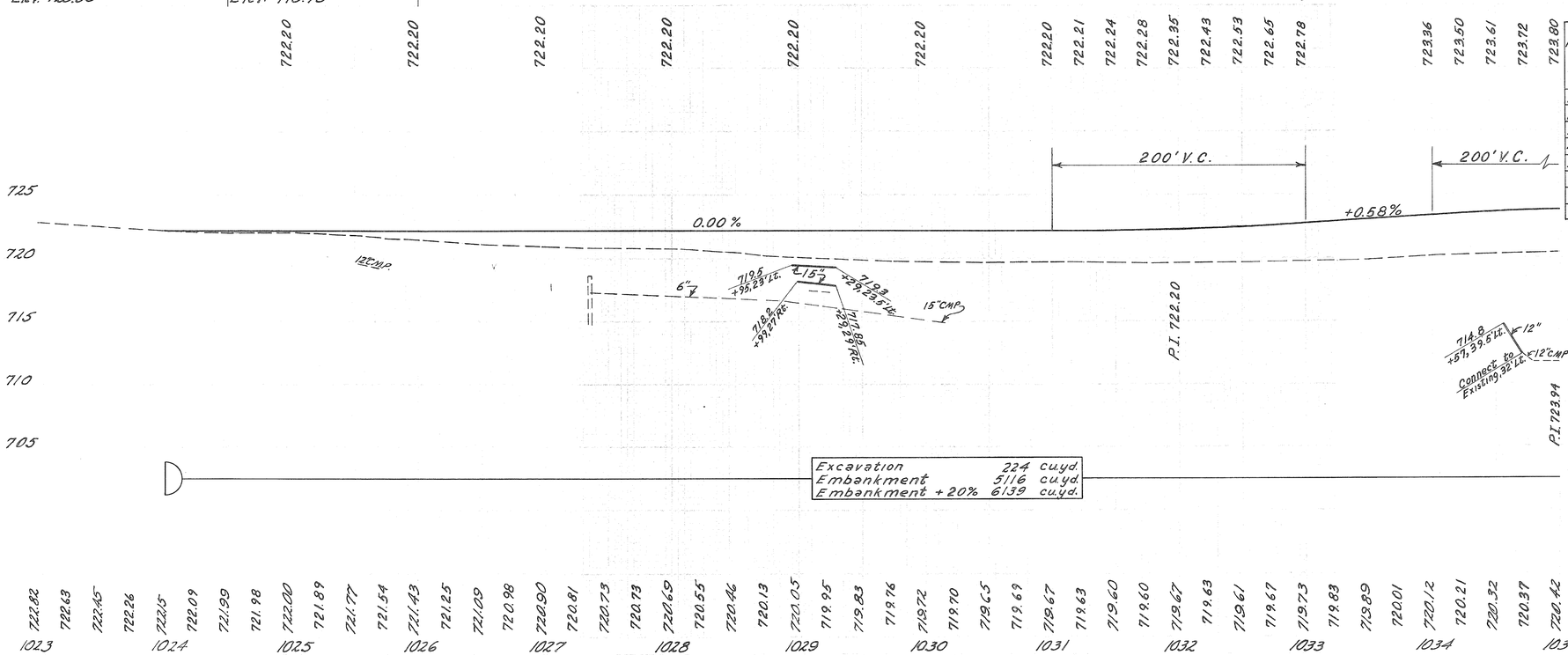
Note: Alignment is tangent and grade is -0.8% 1000' beyond beginning of sheet.

*Note: Guard Rail 1-G carried on following sheet, No. 14

ROADWAY DRAINAGE "D"

Ref. No.	Station From	Station To	Side	I-3 Roadway Drainage Lin. Ft. Outlet for 12"		I-10 Riprap Sq. Yd.	5-22 Removal of Portions of Exist. Struc. Lump
1-D	1034+57	1034+71	Lt.	16			
2-D	1036+65	1036+92	Lt.	32			
3-D	1036+75	1037+00	Rt.			17	
4-D	1037+67	1037+94	Rt.	28			
5-D	1036	+71	Rt.				Lump (Abut)
Total				76		17	Lump

R/+93 — R/40'



Excavation	224	cu.yd.
Embankment	5116	cu.yd.
Embankment +20%	6139	cu.yd.

Sta. 1023+00 to Sta. 1035+00, Part 3

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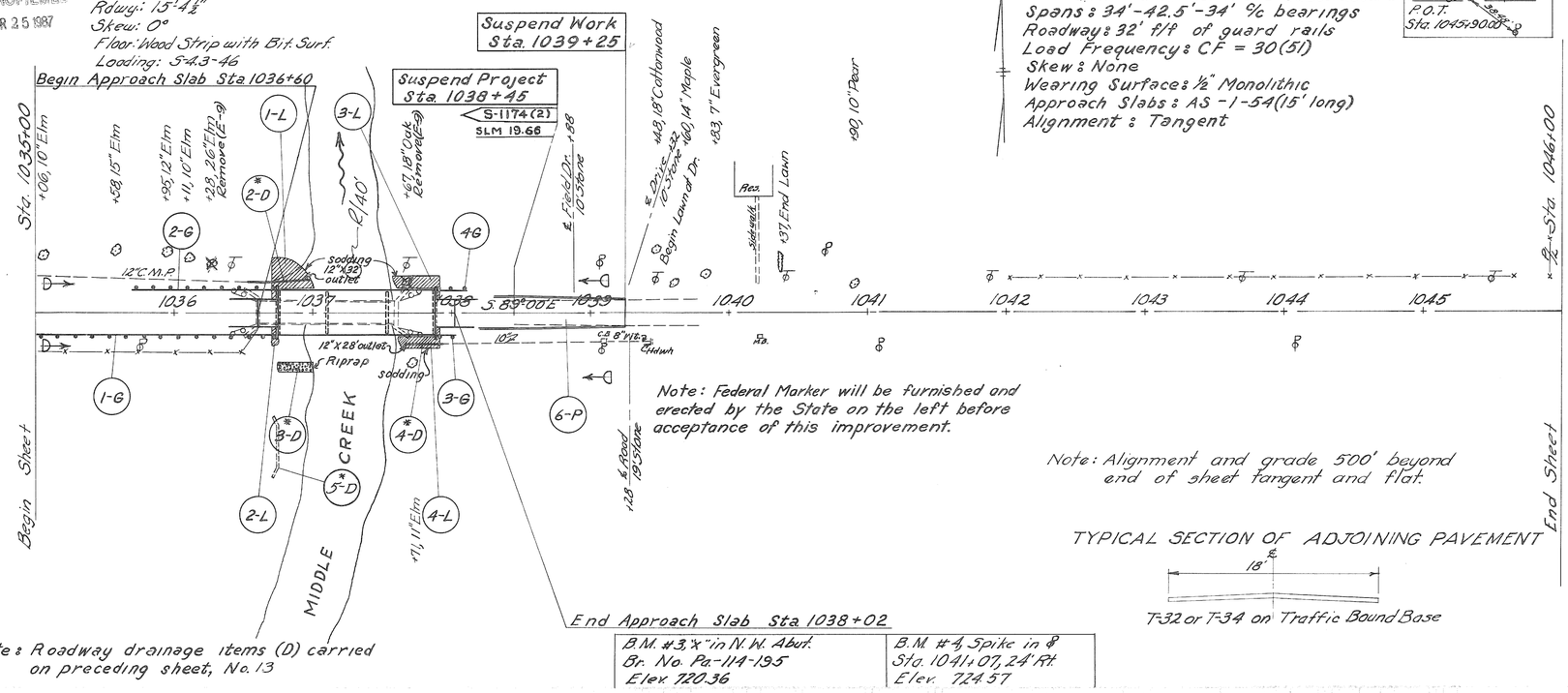
EXISTING STRUCTURE DATA

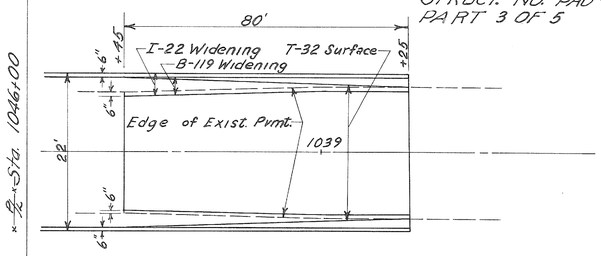
Type: High Truss
Span: 97'-0"
Rdwy: 15'-4 1/2"
Skew: 0°
Floor: Wood Strip with Bit. Surf.
Loading: S-4.3-46

PROPOSED STRUCTURE

Type: Continuous reinf. concrete slab with reinf. concrete substructure
Spans: 34'-42.5'-34' % bearings
Roadway: 32' f/f of guard rails
Load Frequency: CF = 30(51)
Skew: None
Wearing Surface: 1/2" Monolithic
Approach Slabs: AS-1-54(15' long)
Alignment: Tangent



PAULDING COUNTY
PAU-114-(12.41-22.40)
STRUCT. NO. PAU-114-1964
PART 3 OF 5



TRANSITION No. 6-P

Item I-22, Subbase	11.9 cu.yd.
Item B-119, Crushed Aggregate Base	16.1 cu.yd.
Item T-30, Bituminous Prime Coat	50.5 gal.
Item T-32, Seal Coat Bit. Matl. and Aggregate	173.3 sq.yd.
Item T-32, Road Mix Bit. Matl., Aggregate & Choke	173.3 sq.yd.

TYPICAL SECTION OF ADJOINING PAVEMENT

T-32 or T-34 on Traffic Bound Base

SODDING "L"

Ref. No.	Location	Side	L-10 Sodding Sq.Yd.
1-L	N.W. corner Br.	Lt.	75
2-L	S.W. corner Br.	Rt.	4
3-L	N.E. corner Br.	Lt.	35
4-L	S.E. corner Br.	Rt.	31
Total			145

GUARD RAIL "G"

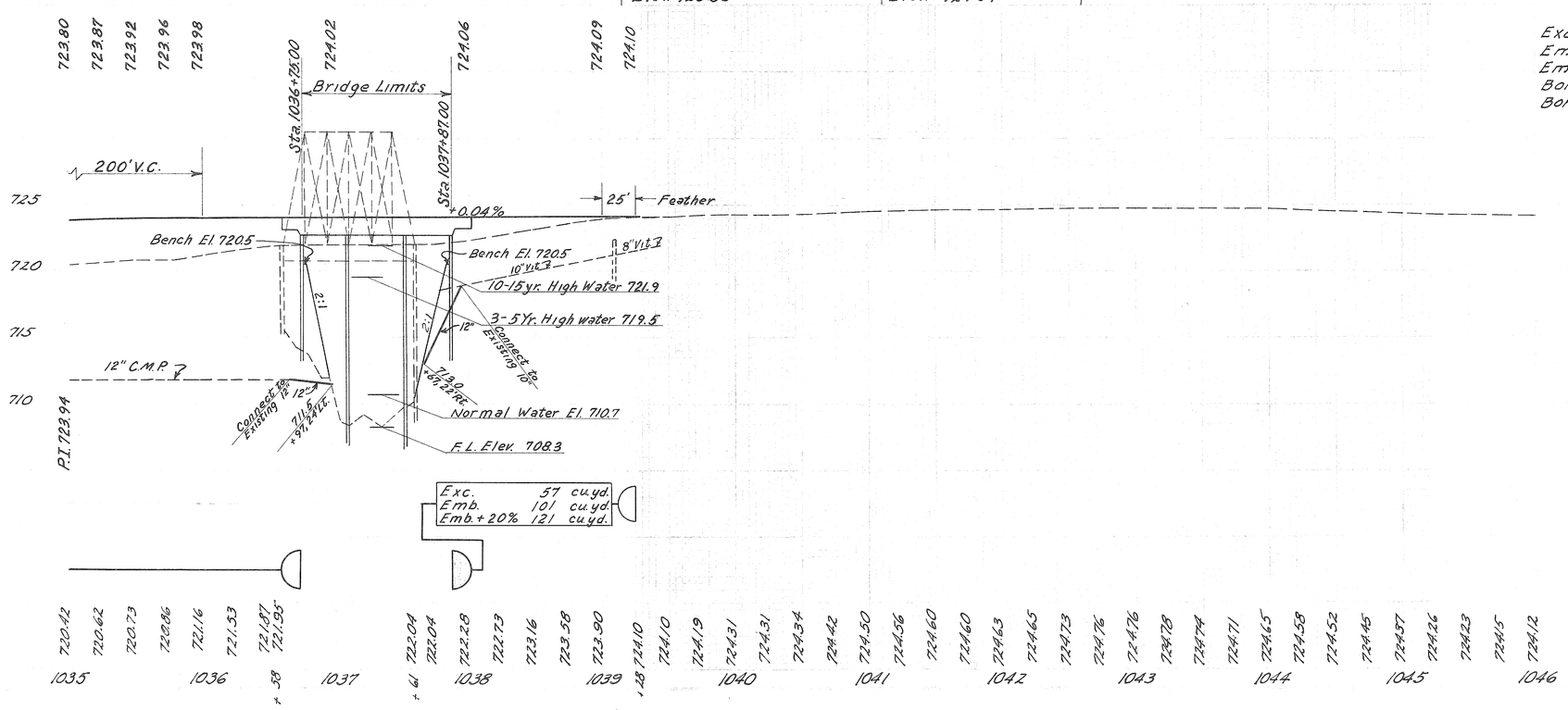
Ref. No.	Station From	Station To	Side	I-15 Guard Rail Steel Beam Type (Deep) Lin. Ft.
1-G	1032+65.22	1036+75.00	Rt.	409.78
2-G	1035+71.78	1036+75.00	Lt.	103.22
3-G	1037+87.00	1038+02.72	Rt.	15.72
4-G	1037+87.00	1038+09.28	Lt.	22.28
Total				551.00

SEEDING

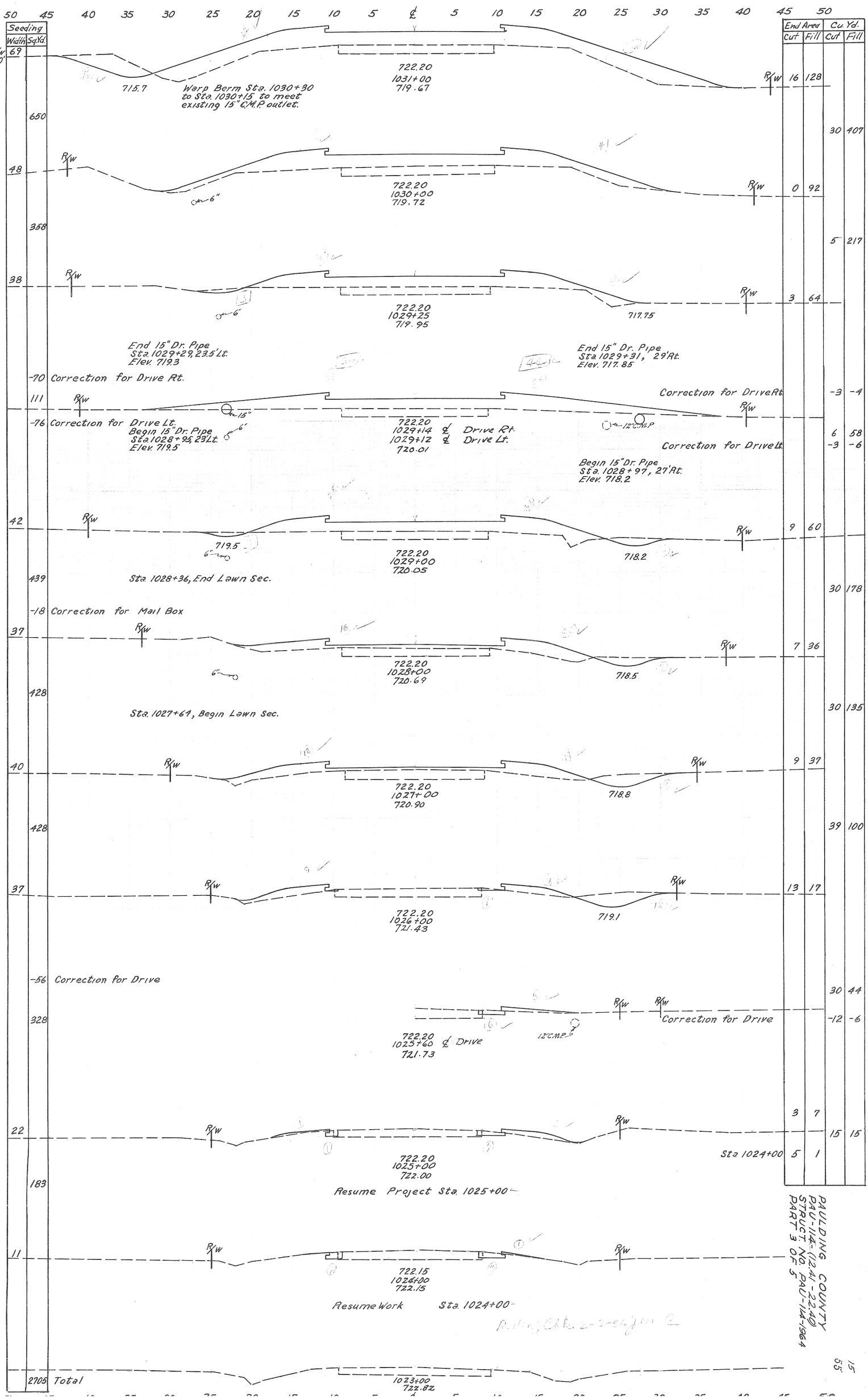
Sheet No.	L-9 Seeding & Protecting Sq. Yds.
15	2705
16	4207
17	557
Riprap	-17
Sodding	-145
Total	7307

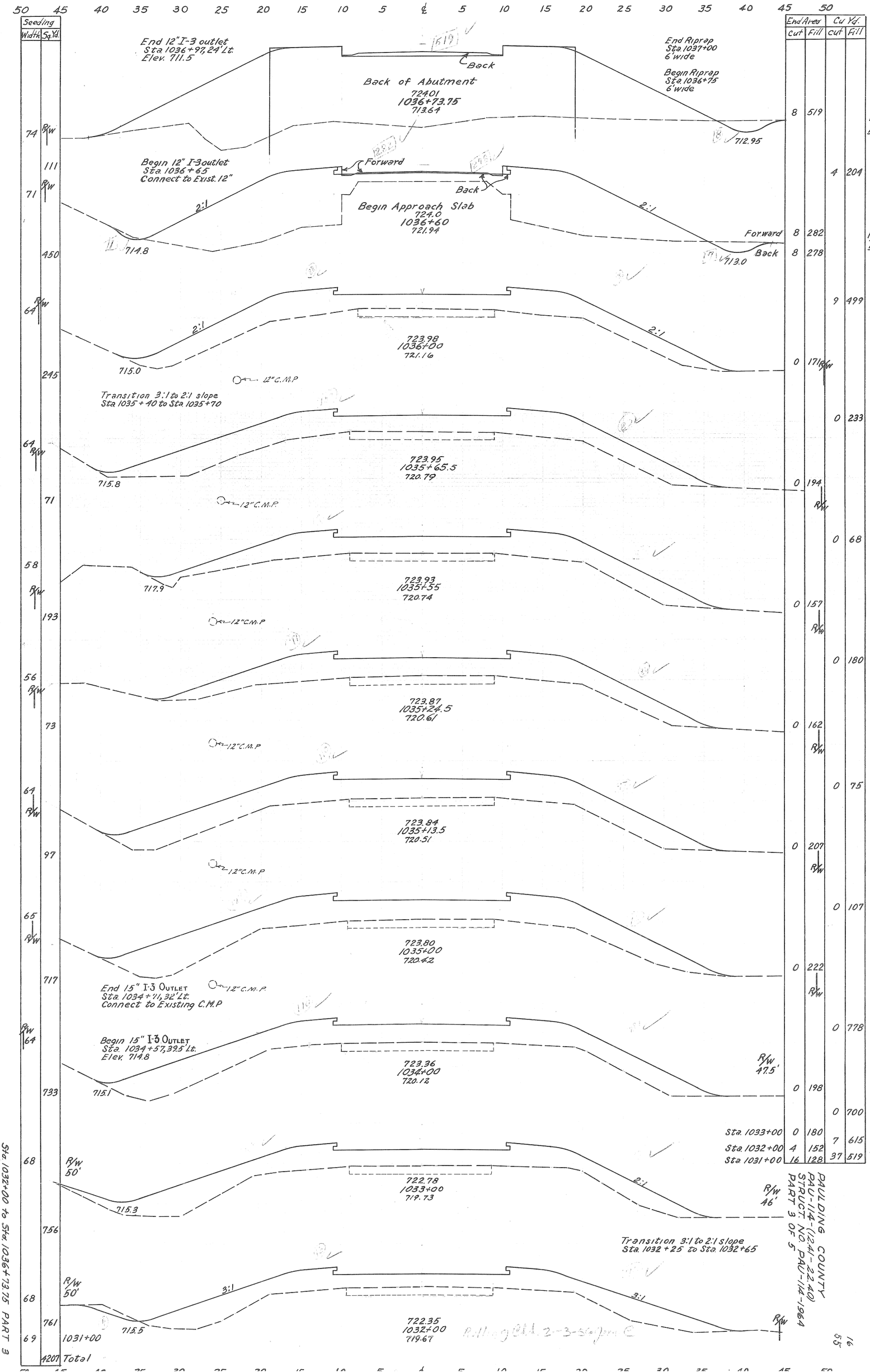
EARTHWORK

Excavation (224+57)	281 Cu. Yds.
Embankment (5116+101)	5217 Cu. Yds.
Embankment +20% (6139+121)	6260 Cu. Yds.
Borrow (6260-281)	5979 Cu. Yds.
Borrow (Channel Sections)	89 Cu. Yds.
Total Borrow	6068 Cu. Yds.



Sta. 1035+00 to Sta. 1046+00, Part 3


50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50
Seeding
Width Sq.Yd.
End Area
Cu. Yd.
Cut Fill Cut Fill
R/W 50'
69
715.7
Warp Berm Sta. 1030+30 to Sta. 1030+15 to meet existing 15" C.M.P. outlet.
722.20
1031+00
719.67
R/W
16 128
650
30 407
48
R/W
6"
722.20
1030+00
719.72
0 92
358
5 217
38
6"
722.20
1029+25
719.95
717.75
3 64
End 15" Dr. Pipe
Sta. 1029+29, 23.5' Lt.
Elev. 719.3
End 15" Dr. Pipe
Sta 1029+31, 29' Rt.
Elev. 717.85
-70 Correction for Drive Rt.
111
Correction for Drive Rt.
-3 -4
-76 Correction for Drive Lt.
Begin 15" Dr. Pipe
Sta 1028+95, 29' Lt.
Elev. 719.5
15"
6"
722.20
1029+14 ℄ Drive Rt.
1029+12 ℄ Drive Lt.
720.01
12" C.M.P.
Correction for Drive Lt.
6 58
-3 -6
Begin 15" Dr. Pipe
Sta. 1028+97, 27' Rt.
Elev. 718.2
42
719.5
6"
722.20
1029+00
720.05
718.2
9 60
439
Sta. 1028+36, End Lawn Sec.
30 178
-18 Correction for Mail Box
37
6"
722.20
1028+00
720.69
718.5
7 36
428
Sta. 1027+64, Begin Lawn Sec.
30 135
40
722.20
1027+00
720.90
718.8
9 37
428
39 100
37
722.20
1026+00
721.43
719.1
13 17
-56 Correction for Drive
30 44
328
Correction for Drive
-12 -6
722.20
1025+60 ℄ Drive
721.73
12" C.M.P.
3 7
22
722.20
1025+00
722.00
Sta 1024+00
5 1
15 15
183
Resume Project Sta. 1025+00
11
722.15
1024+00
722.15
Resume Work Sta. 1024+00
2705 Total
1023+00
722.82
Sta 1023+00 to Sta. 1031+00, PART 3
PAULDING COUNTY
PAU-114-(12.4)-22.4Q
STRUCT. NO. PAU-114-1964
PART 3 OF 5
15
55


50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50
Seeding
Width Sq. Yd.
End 12" I-3 outlet
Sta 1036+97, 24' Lt.
Elev. 711.5
Back
Back of Abutment
724.01
1036+73.75
713.64
End Riprap
Sta 1037+00
6' wide
Begin Riprap
Sta 1036+75
6' wide
712.95
R/W 50'
Begin 12" I-3 outlet
Sta. 1036+65
Connect to Exist. 12"
Forward
Back
Begin Approach Slab
724.0
1036+60
721.94
2:1
714.8
713.0
Forward
Back
723.98
1036+00
721.16
715.0
12" C.M.P
Transition 3:1 to 2:1 slope
Sta 1035+40 to Sta 1035+70
723.95
1035+65.5
720.79
715.8
12" C.M.P.
723.93
1035+55
720.74
717.9
12" C.M.P
723.87
1035+24.5
720.61
12" C.M.P
723.84
1035+13.5
720.51
12" C.M.P
723.80
1035+00
720.42
End 15" I-3 Outlet
Sta. 1034+11, 32' Lt.
Connect to Existing C.M.P
12" C.M.P.
Begin 15" I-3 Outlet
Sta. 1034+57, 39.5' Lt.
Elev. 714.8
723.36
1032+00
720.12
715.1
R/W 47.5'
722.78
1033+00
719.73
715.3
R/W 46'
Transition 3:1 to 2:1 slope
Sta. 1032+25 to Sta. 1032+65
3:1
722.35
1032+00
719.67
715.5
1031+00
4207 Total
End Areas
Cut Fill
Cu Yd.
Cut Fill
Sta. 1033+00 0 180
Sta. 1032+00 4 152 7 615
Sta. 1031+00 16 128 37 519
Sta. 1032+00 to Sta. 1036+73.75 PART 3
PAULDING COUNTY
PAU-114-(12.41-22.40)
STRUCT. NO. PAU-114-1964
PART 3 OF 5
16
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PAULDING COUNTY
PAU-114-(12.41-22.40)
STRUCT. NO. PAU-114-196A
PART 3 OF 5

	End Area Cut	End Area Fill	Cu. Yd. Cut	Cu. Yd. Fill
	5	0	5	1
	5	1	5	1
	6	15	74	
	15	40	41	
	15	44	6	26
	7	58		

	Seeding Width Sq.Yd.
	0
	10
	7
	-31
	283
	45
	55
	39
	240
Total	557

1043+00
724.76

1042+00
724.63

1041+00
724.50

1040+00
724.31

1039+28
724.10

1039+25

Suspend Work Sta. 1039+25

724.09
1039+00
723.90

724.09
1038+88
723.75

Suspend Project Sta 1038+45

Ahead
1038+76
Back

Forward
Back

Forward
1037+88.25

RW 50'

RW

℄ Profile Dr. Rt.

10' Vit.

℄ Profile Dr. Lt.

Correction for Drive

721.45

Forward

Back

End Approach Slab
724.06
1038+02
722.32

721.7

End 12" T-3 outlet
Sta. 1037+94.22 Rt.
Connect to Existing 10"

721.4

Forward

Back of Abutment
724.05
1037+88.25
722.03

721.65

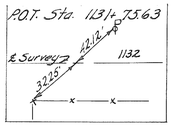
Begin 12" T-3 outlet
Sta. 1037+67.22 Rt.
Elev. 713.0

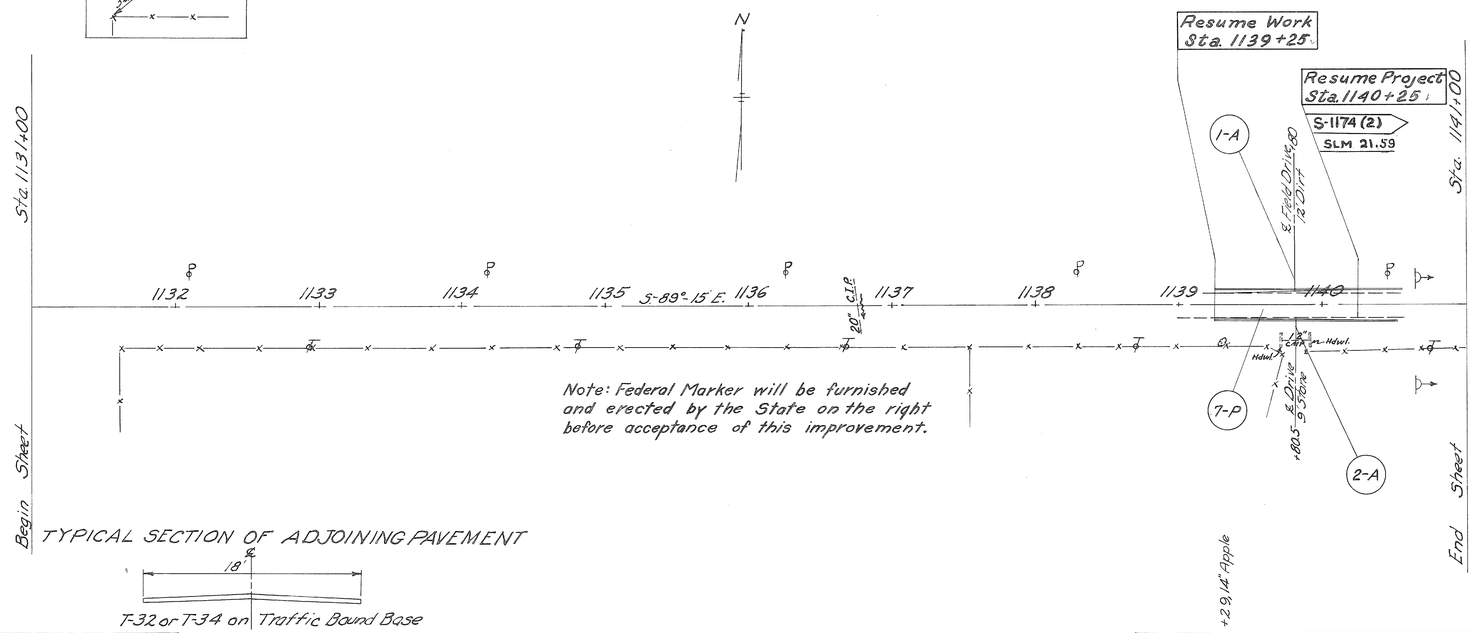
Add for Seeding Channel

PAULDING COUNTY
PAU-114-(12.41-22.40)
Br. No. PAU-114-1964
Br. No. PAU-114-2173

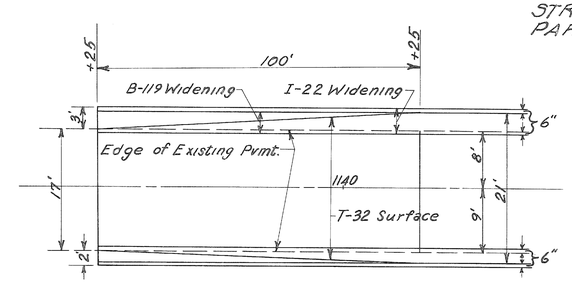
Channel Sections Parts 3 & 4

PAULDING COUNTY
PAU-114-(12.41 - 22.40)
STRUCT. NO. PAU-114-2173
PART 4 OF 5





Note: Federal Marker will be furnished and erected by the State on the right before acceptance of this improvement.



TRANSITION No. 7-P

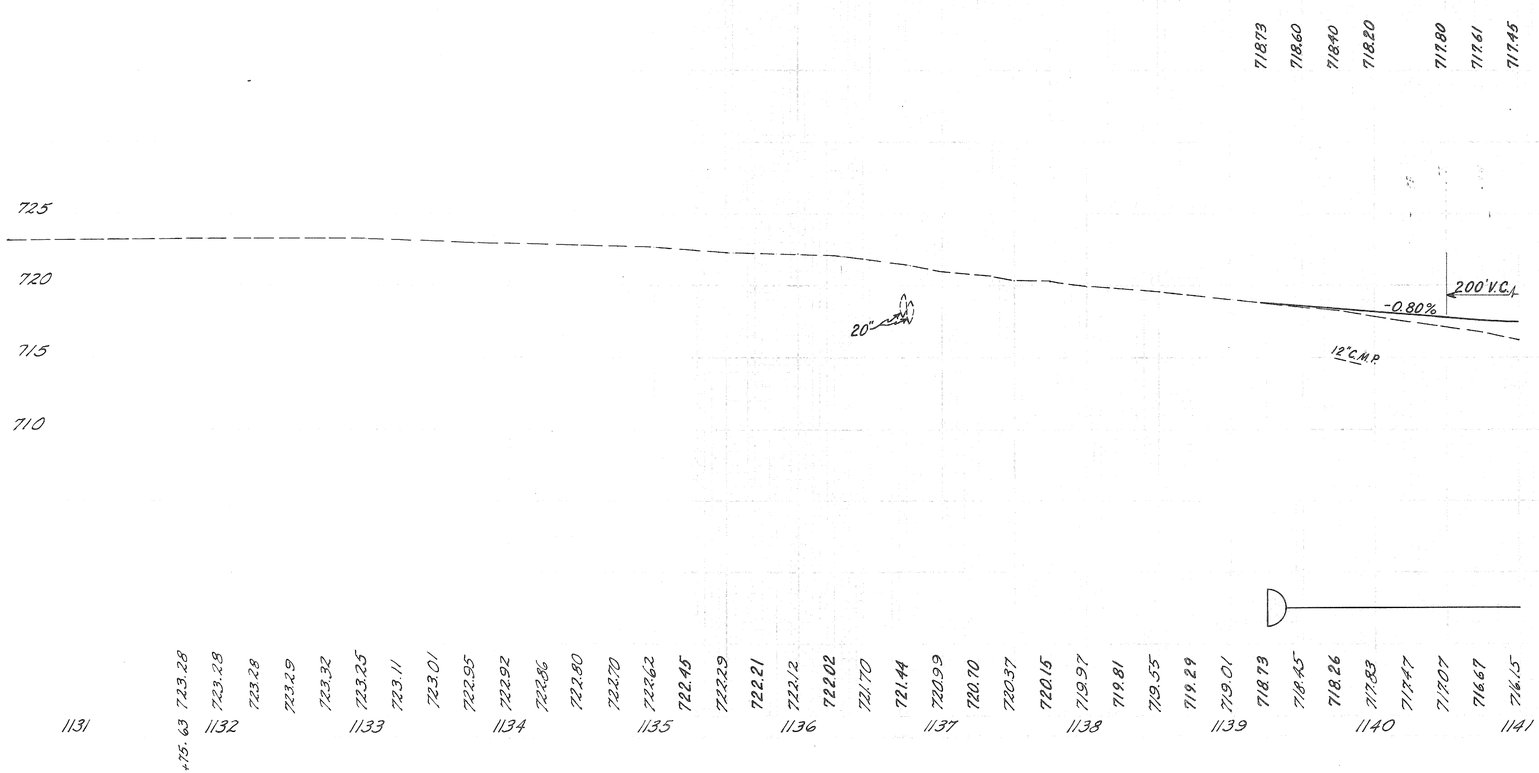
Item I-22,	Subbase	11.1 cu.yd.
Item B-119,	Crushed Aggregate Base	13.9. cu.yd.
Item T-30,	Bituminous Prime Coat	50.6 gal.
Item T-32,	Road Mix Bit. Matl, Choke & Aggr.	237.8 sq.yd.
Item T-32,	Seal Coat Bit. Matl, & Aggr.	237.8 sq.yd.

TYPICAL SECTION OF ADJOINING PAVEMENT

B.M. #1, Spike in Hickory.
Sta. 1131+65, 75' Rt.
Elev. 724.11

B.M. #2, Spike in Apple Tree
Sta. 1140+45, 75' Rt.
Elev. 720.94

Note: Side approach items carried on following sheet, No. 20.



Sta. 1131+00 to Sta. 1141+00, Part 4

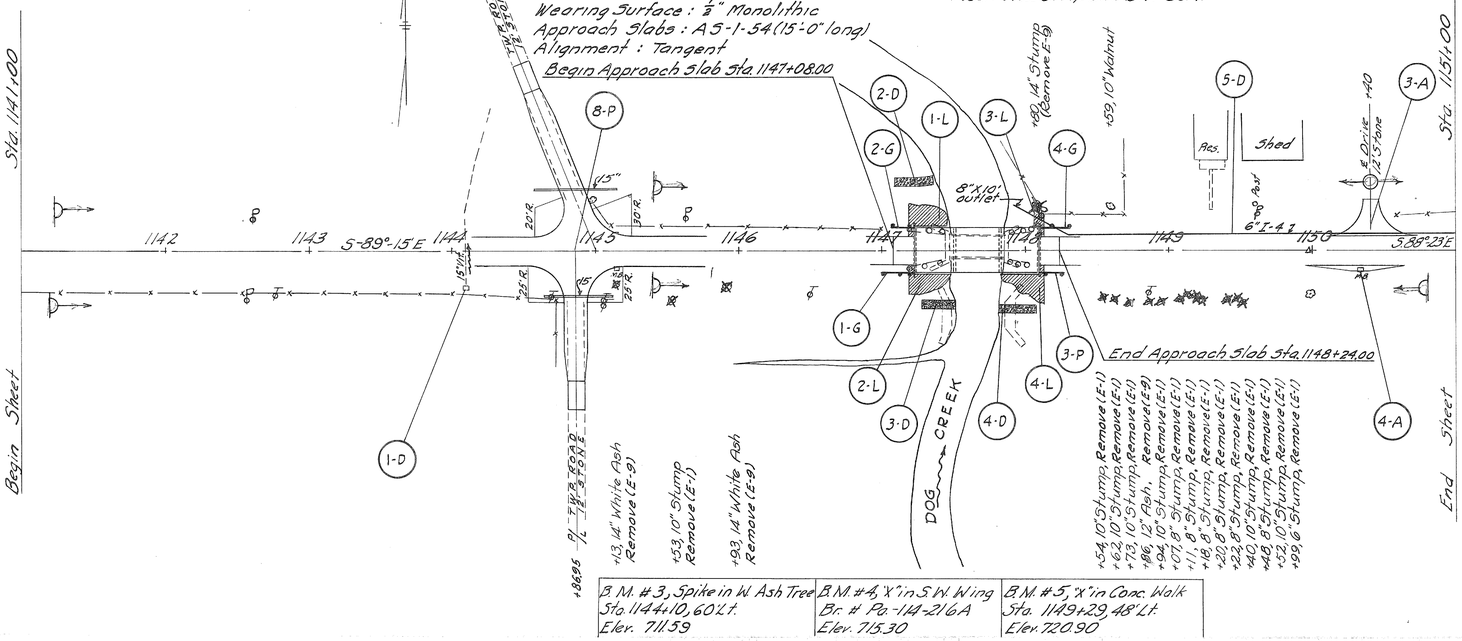
MICROFILMED
MAR 25 1987

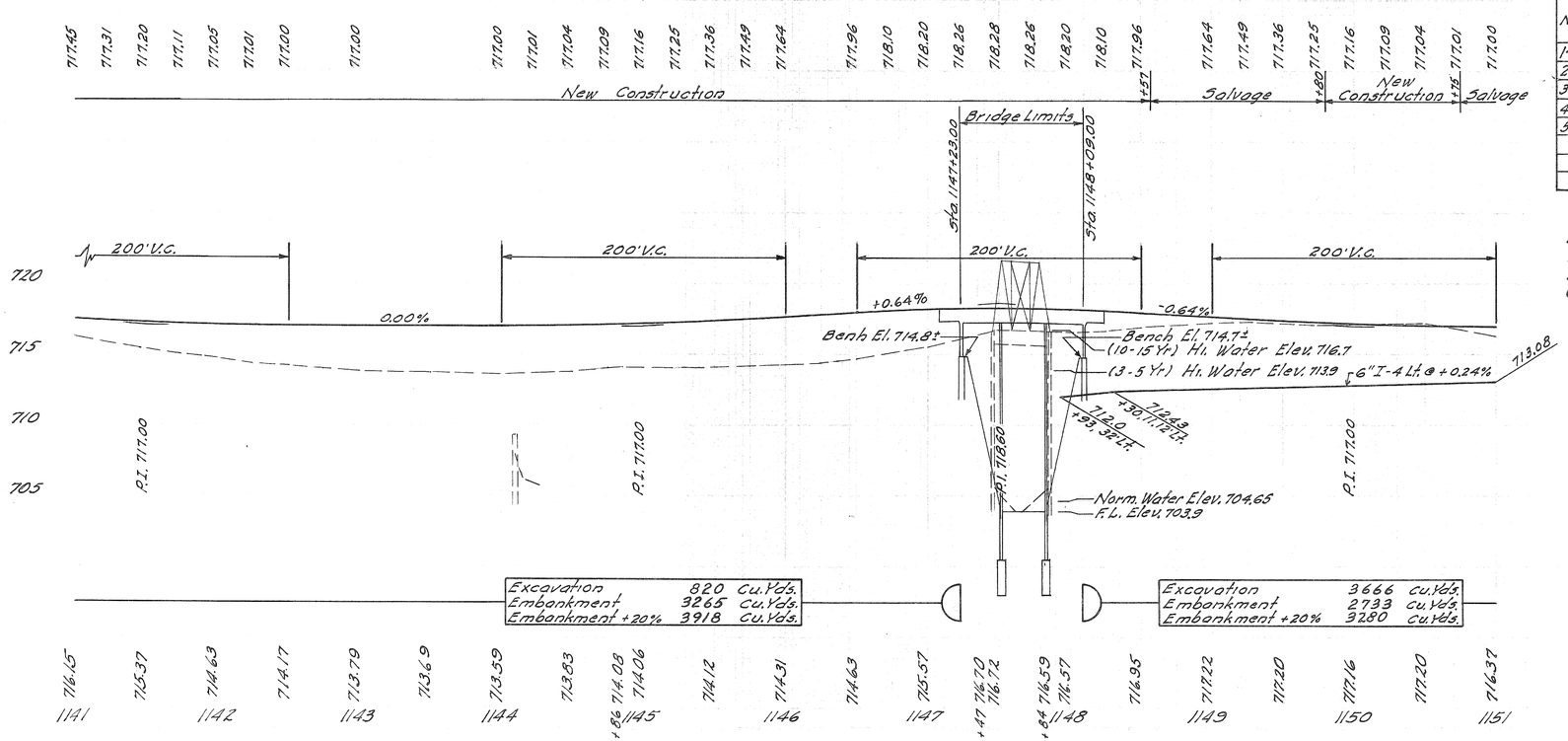
PAULDING COUNTY
PAU-114-(12.41-22.40)
STRUCT. NO. PAU-114-2173
PART 4 OF 5

PROPOSED STRUCTURE
Type: Cont. reinf. concrete slab with capped pile & reinf. conc. substructure
Spans: 26'-32.5'-26' ℄ brgs.
Roadway: 32'-0" f/f guard rails
Load Frequency: CF-30 (51)
Skew: None
Wearing Surface: ½" Monolithic
Approach Slabs: AS-1-54 (15'-0" long)
Alignment: Tangent
Begin Approach Slab Sta. 1147+08.00

EXISTING BRIDGE DATA
Type: Low Truss
Span: 36'-5"
Width: 15'-5½"
Skew: 0°
Loading: S-104-46
Floor: Wood Strip with Bit. Surf.

PI, Δ = 0°52' Rt.
℄ Survey 43.41 6.50 11.50
Sta. 1149+97.50





Excavation	820	Cu. Yds.
Embankment	3265	Cu. Yds.
Embankment +20%	3918	Cu. Yds.

Excavation	3666	Cu. Yds.
Embankment	2733	Cu. Yds.
Embankment +20%	3280	Cu. Yds.

ROADWAY DRAINAGE "D"

Ref. No.	Location	Side	I-2 Storm Sewers Lin. Ft. 12"		I-3 Rdwy. Drng. Lin. Ft. 6"	I-3 Rdwy. Drng. Outlets 8"		I-4 6" Under-drains Lin. Ft.	I-5 Pipe Specials for I-3 6"x30° Bend Each	I-10 Riprap Sq. Yds.	I-16 Catch Basins Abandoned Each
1-D	1144+10	Rt.									1
2-D	N.W. corner Br.	Lt.								18	
3-D	S.W. corner Br.	Rt.								17	
4-D	S.E. corner Br.	Rt.								19	
5-D	1147+93 to 1151+50	Lt.			32	10		320	1		
6-D	1151+98	Rt.	9							1.5	
7-D	1152+18	Lt.	12							1.5	1
	From 8-P									5.8	
	Total		21		32	10		320	1	62.8	2

SODDING "L"

Ref. No.	Location	Side	L-10 Sodding Sq. Yds.
1-L	N.W. corner Br.	Lt.	50
2-L	S.W. corner Br.	Rt.	40
3-L	N.E. corner Br.	Lt.	8
4-L	S.E. corner Br.	Rt.	50
	Total		148

GUARD RAIL "G"

Ref. No.	Station From	Station To	Side	I-15 Guard Rail Steel Beam Type (Deep) Lin. Ft.
1-G	1147+00.23	1147+23.00	Rt.	22.77
2-G	1147+06.78	1147+23.00	Lt.	16.22
3-G	1148+09.00	1148+25.23	Rt	16.23
4-G	1148+09.00	1148+31.78	Lt.	22.78
	Total			78.00

SEEDING

Sheet No	L-10 Seeding & Protecting Sq. Yd.
2.2	415
2.3	3098
2.4	2965
2.5	4606
2.6	595
Riprap	-63
Sodding	-148
Total	11,468

SIDE APPROACHES "A"

Ref. No.	Station	Side	I-1 Pipe for Driveways Lin. Ft. 15"		T-30 Bituminous Prime Coat Gals.	T-32 Bituminous Road Mix Surface Sq. Yds.	B-119 Crushed Aggr. Base Cu. Yds. 5"	6"
1-A	1139+80	Lt.						5
2-A	1139+80.5	Rt.						5
3-A	1150+40	Lt.			19.7	56.2	9.2	
4-A	1150+33	Rt.			6.5	18.4	2.6	
5-A	1156+26	Rt.	36					12.9
	From 8-P		106					
	Total		142		26.2	74.6	34.7	

EARTHWORK

Excavation (820 + 3666)	4486	cu. yd.
Embankment (3265 + 2733)	5998	cu. yd.
Embankment +20% (3918 + 3280)	7198	cu. yd.
Channel Exc. to be used in Emb.	66	cu. yd.
Total Excavation (4486 + 66)	4552	cu. yd.
Borrow = (7198 − 4552)	2646	cu. yd.

MICROFILMED
MAR 25 1987

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-1174 (2)	

42/55

PAULDING COUNTY
PAU-114-(12.41-22.40)

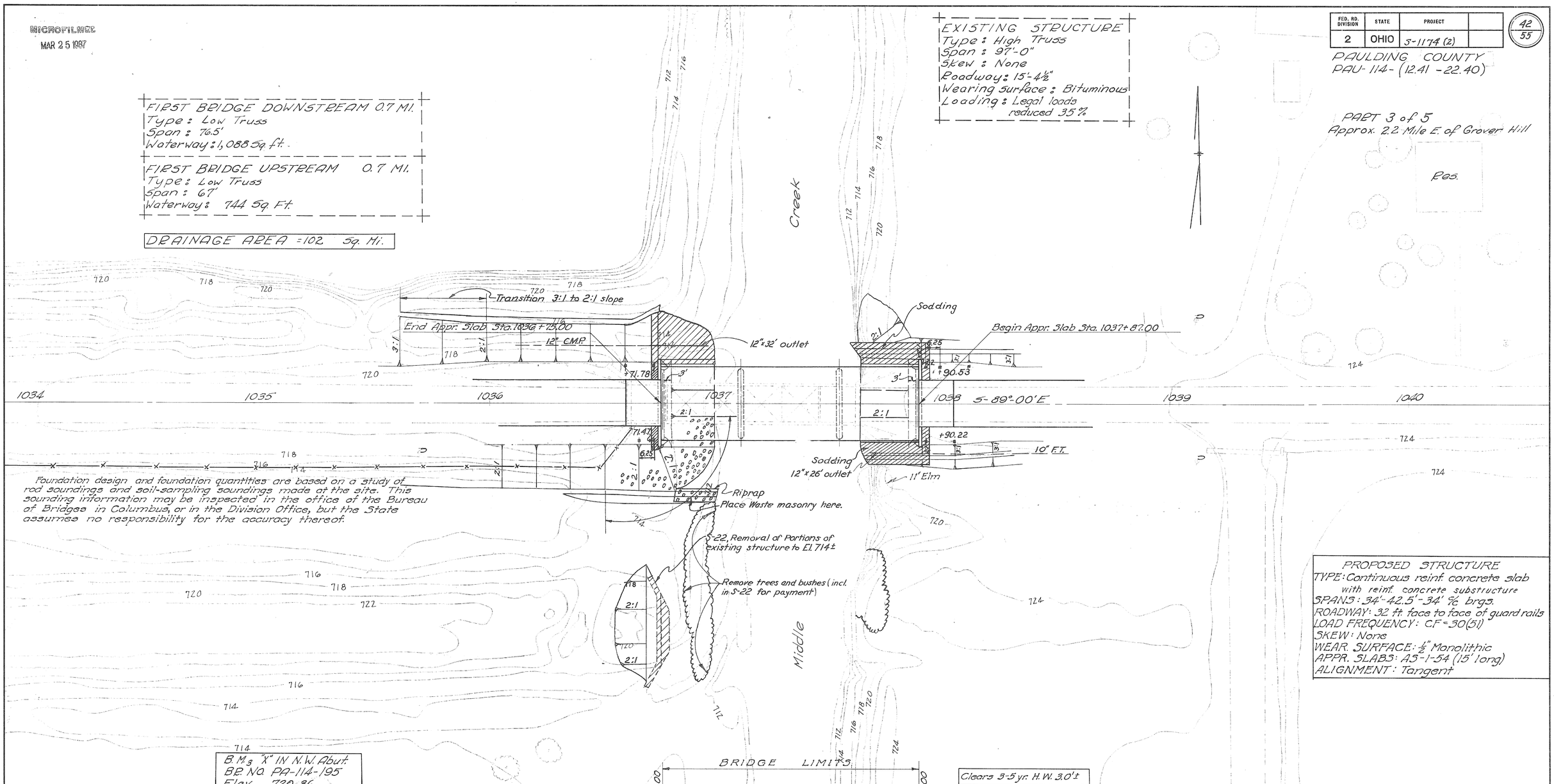
PART 3 of 5
Approx. 2.2 Mile E. of Grover Hill

FIRST BRIDGE DOWNSTREAM 0.7 MI.
Type: Low Truss
Span: 76.5'
Waterway: 1,088 Sq. ft.

FIRST BRIDGE UPSTREAM 0.7 MI.
Type: Low Truss
Span: 67'
Waterway: 744 Sq. Ft.

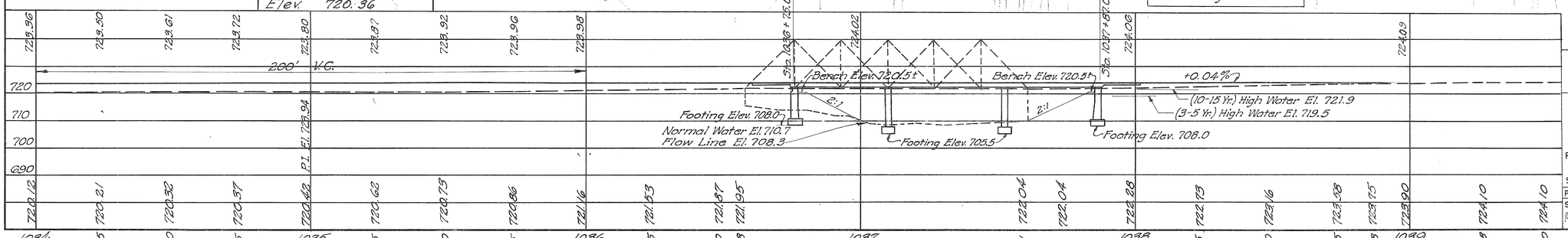
DRAINAGE AREA = 102 Sq. Mi.

EXISTING STRUCTURE
Type: High Truss
Span: 97'-0"
Skew: None
Roadway: 15'-4½"
Wearing surface: Bituminous
Loading: Legal loads reduced 35%



PROPOSED STRUCTURE
TYPE: Continuous reinf. concrete slab with reinf. concrete substructure
SPANS: 34'-42.5'-34' % brgs.
ROADWAY: 32 ft. face to face of guard rails
LOAD FREQUENCY: CF=30(51)
SKEW: None
WEAR SURFACE: ½" Monolithic
APPR. SLABS: AS-1-54 (15' long)
ALIGNMENT: Tangent

B.M. 3 "X" IN N.W. Abut.
BP. NO. PA-114-195
Elev. 720.36



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. PAU-114-1964
OVER MIDDLE CREEK
PAULDING CO. S.R. 114
STA. 1036+75.00 / 1037+87.00

SCALE 1"=20'

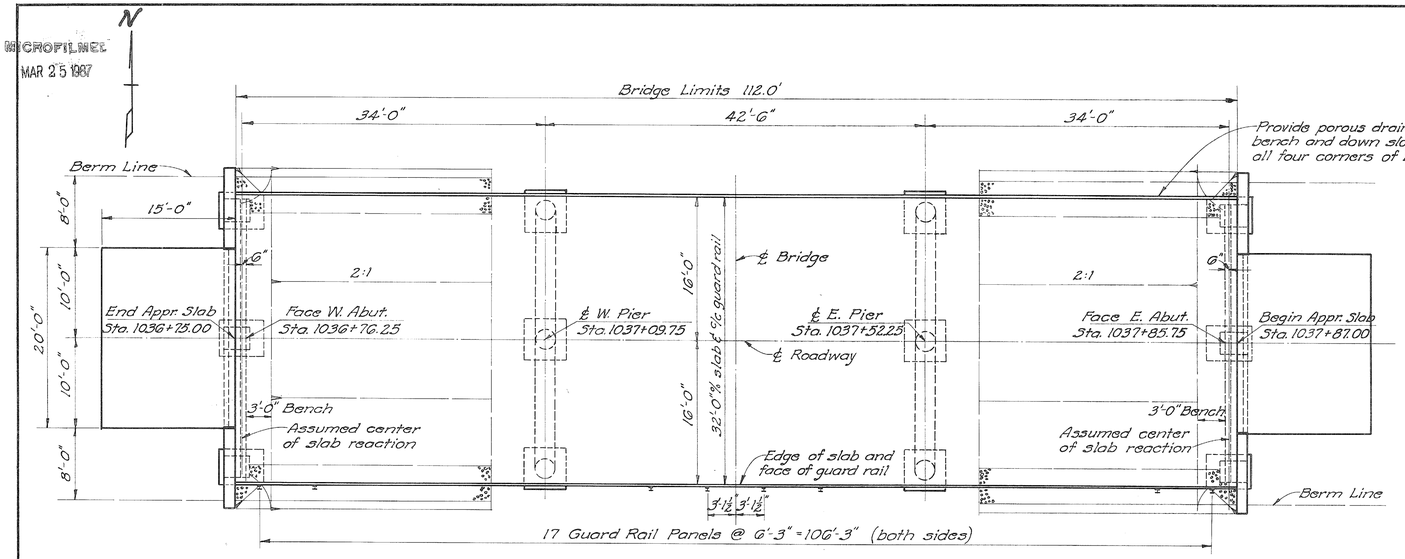
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	J.S.P.	J.S.P.	J.H.B.	C.F.B.

BFG A.J.F. 12-22-55

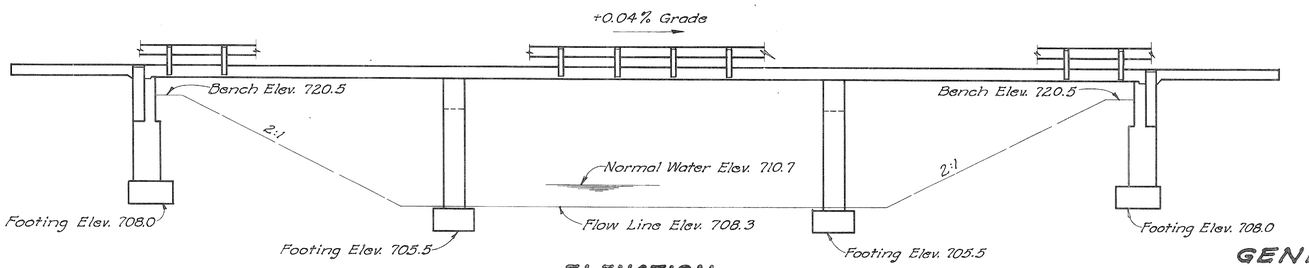
MICROFILMED
MAR 25 1987

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

PAULDING COUNTY
PAU-114-(12.41 - 22.40)
PART 3 OF 5



GENERAL PLAN

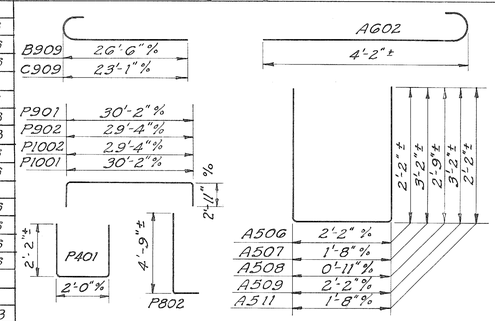


ELEVATION

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.
Superstructure				
F1009	56	25'-2"	6281	S
G1009	28	13'-2"	1586	S
H1009	28	8'-10"	1064	S
A909	90	39'-2"	11,985	S
B909	28	27'-7"	2626	B
C909	30	24'-2"	2465	B
D909	14	24'-10"	1182	S
E909	15	18'-6"	944	S
J601	30	23'-9"	1070	S
K601	15	21'-6"	484	S
M601	119	31'-6"	5630	S
N601	70	31'-6"	3312	S
Piers				
P1001	6	35'-5"	914	B
P1002	4	34'-7"	595	B
P901	6	35'-5"	723	B
P902	4	34'-7"	470	B
P801	48	14'-0"	1794	S
P802	48	5'-8"	726	B
P401	80	6'-1"	325	B

Bending Diagrams



BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size.

Mark	No.	Length	Weight	Shp.
Abutments				
A1001	8	30'-8"	1056	S
A801	8	20'-1"	429	S
A802	4	30'-8"	328	S
AG01	72	9'-0"	973	S
AG02	72	4'-10"	523	B
A501	24	5'-10"	146	S
A502	8	19'-8"	164	S
A503	8	30'-8"	256	S
A505	16	8'-8"	145	S
A506	64	6'-9"	417	B
A507	28	7'-9"	226	B
A508	16	6'-3"	104	B
A509	16	8'-9"	138	B
A510	16	5'-0"	83	S
A511	36	5'-9"	216	B
Replacement Bars				
RE1000	1	7'-3"	31	S
RE900	2	6'-10"	46	S
RE800	1	6'-6"	17	S
RE600	1	5'-11"	9	S
RE500	1	5'-7"	6	S
RE400	1	5'-3"	4	S
RE401	1	5'-3"	4	B

SPIRAL REINFORCING LIST

Mark	No.	Gage Dia. % Spiral	Length	Pitch	No. Turns	Weight
SP401	6	24"	19'-6" ±	4½"	39	112.7

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The "No. of Turns" shown in the steel list for the spiral bars is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.
Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.
1½ closed coils shall be provided at the ends of each spiral unit.
Three steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CS-1-54, revised 12-1-54.

GALVANIZING of all members which are specified to be galvanized shall be as called for in Sec. M-7.4(d).

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

POROUS DRAINS, extending from face of abutment to Elev. 711.0, shall be provided at all four corners of the bridge. The drains shall be 4 ft. wide and one foot thick.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic, the existing structure shall be removed. The east abutment shall be removed to elevation of proposed ground; the west abutment shall be removed to 3 ft. below proposed pavement grade. Suitable waste masonry shall be used in spill-thru slope and in embankment fill at southwest corner of bridge. The remainder of the removed materials shall become the property of the Contractor.

EXCAVATION QUANTITY includes the removal of fill material between top of earth bench and the bottom of abutment cross beam.

FOOTINGS shall extend a minimum of 3" into solid rock, or to the elevation shown, whichever is lower.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Supers.	Pier	Abut.	Gen'l.	As Built	
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump		
E-2	130	Cu. Yd.	Unclassified excavation			130			
E-2	15	Cu. Yd.	Rock excavation		13	2			
E-3	23 1/10	Cu. Yd.	Channel Excavation				23 1/10	C-7, -24	20.7
S-1	172	Cu. Yd.	Class "C" concrete, superstructure	172					
S-1	73	Cu. Yd.	Class "C" concrete, piers and abutments above footings		31	42			
S-1	21	Cu. Yd.	Class "E" concrete, footings		12	9			
S-4	50,624	Lb.	Reinforcing steel	38,629	6,674	5204	117	C-7, -117	50,507
S-14	224	Lin. Ft.	Railing (Type 1-15.13 with galvanized steel posts and bolts)	224					
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	13	Cu. Yd.	Porous backfill			13			
S-29	15	Cu. Yd.	Porous drains on embankment slopes				15		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION, NOTES, QUANTITIES & STEEL LIST

BRIDGE NO. PAU-114-1964
OVER MIDDLE CREEK

PAULDING COUNTY STA. 1036 + 75.00
STA. 1037 + 87.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.C.W.	J.C.W.	J.D.J.	Rej	BFG. G.P.R.	12-22-55	

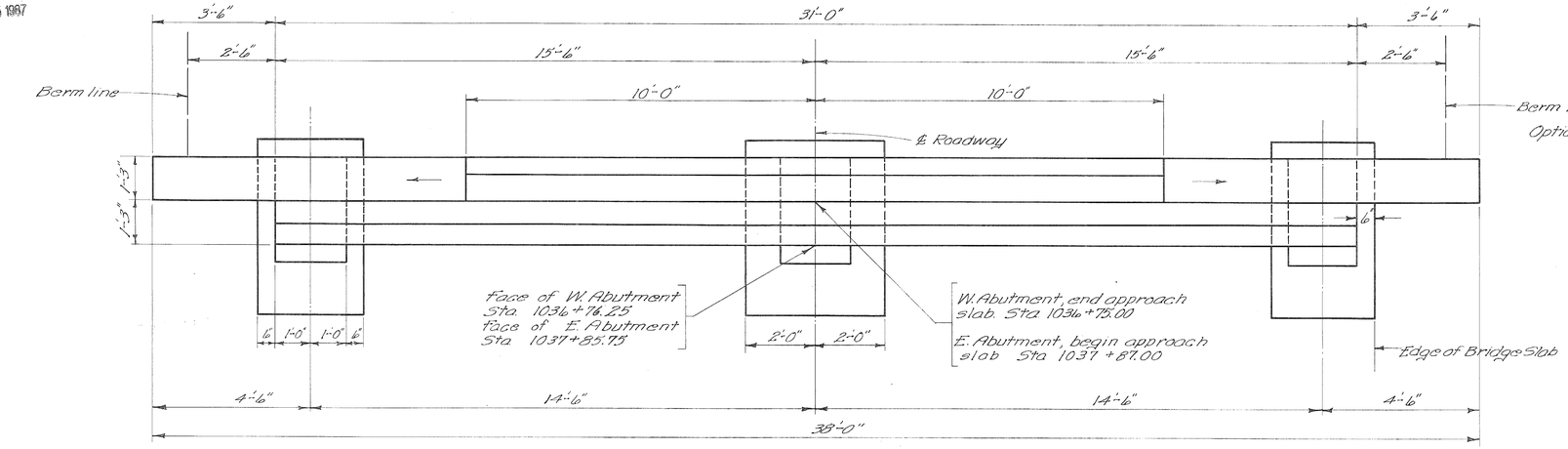
11-3-58 Revised as-built JEP

MICROFILMED
MAR 25 1997

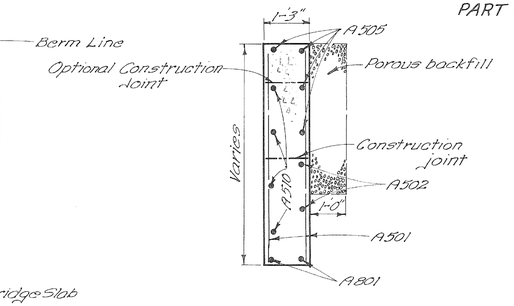
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

44
55

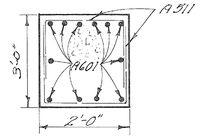
PAULDING COUNTY
PAU-114-(12.41 - 22.40)
PART 3 OF 5



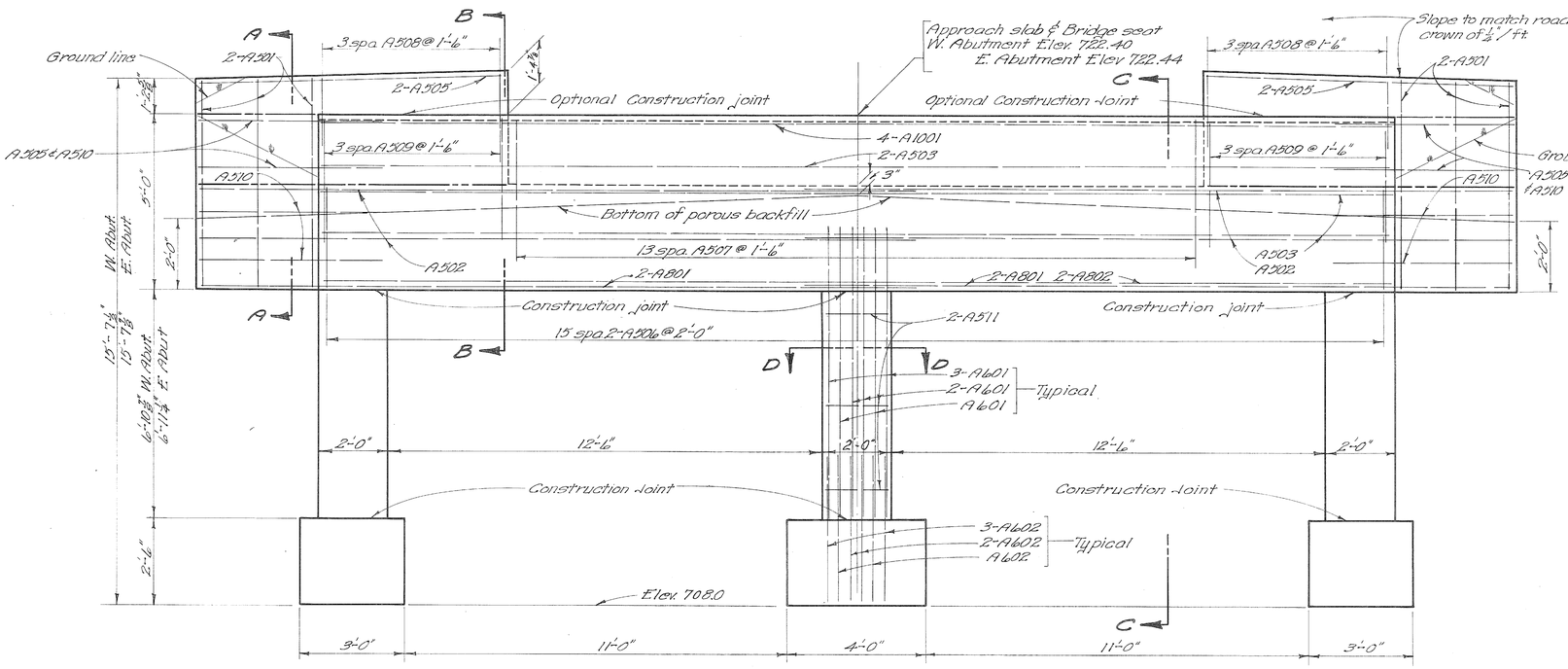
PLAN



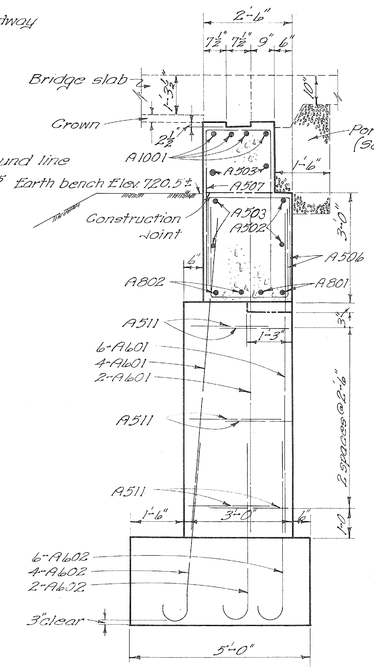
SECTION A-A



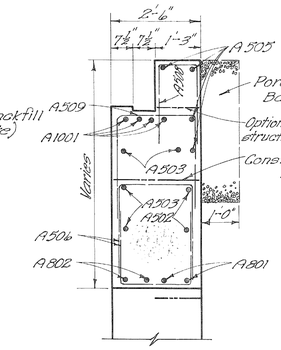
SECTION D-D



ELEVATION



SECTION C-C



SECTION B-B

REINFORCING STEEL shall be 2" clear from face of concrete unless otherwise shown.

EARTH EMBANKMENT shall be placed to full height of earth bench after pedestals have been placed. Excavation shall then be made for crossbeam.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for construction of the pedestals and crossbeam, shall be considered as paid for in the bid price per cu.yd paid for porous backfill.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS

BRIDGE No. PAU-114-1964
OVER MIDDLE CREEK

PAULDING COUNTY Sta. 1036+75.00
Sta. 1037+87.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.C.W.	J.C.W.	R.H.B.	R.G.	BFG	12-22-55	

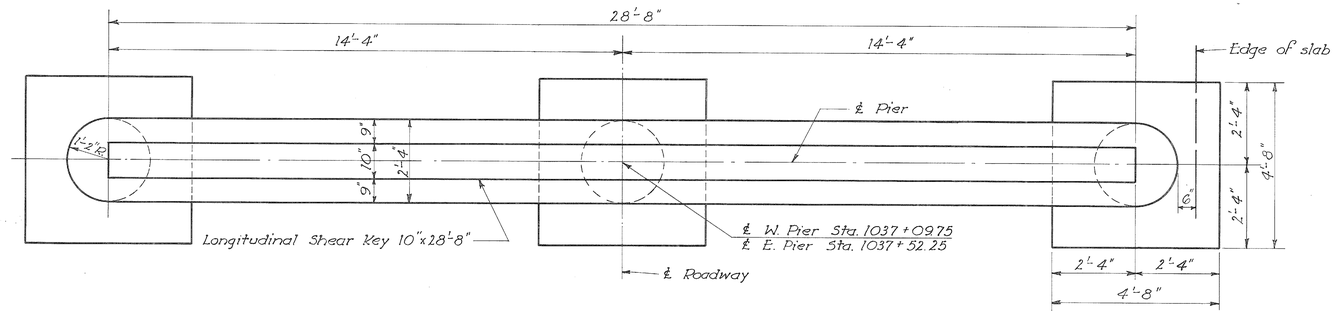
MICROFILMED
MAR 25 1987

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

45/55

PAULDING COUNTY
PAU-114-(12.41-22.40)
PART 3 OF 5

N



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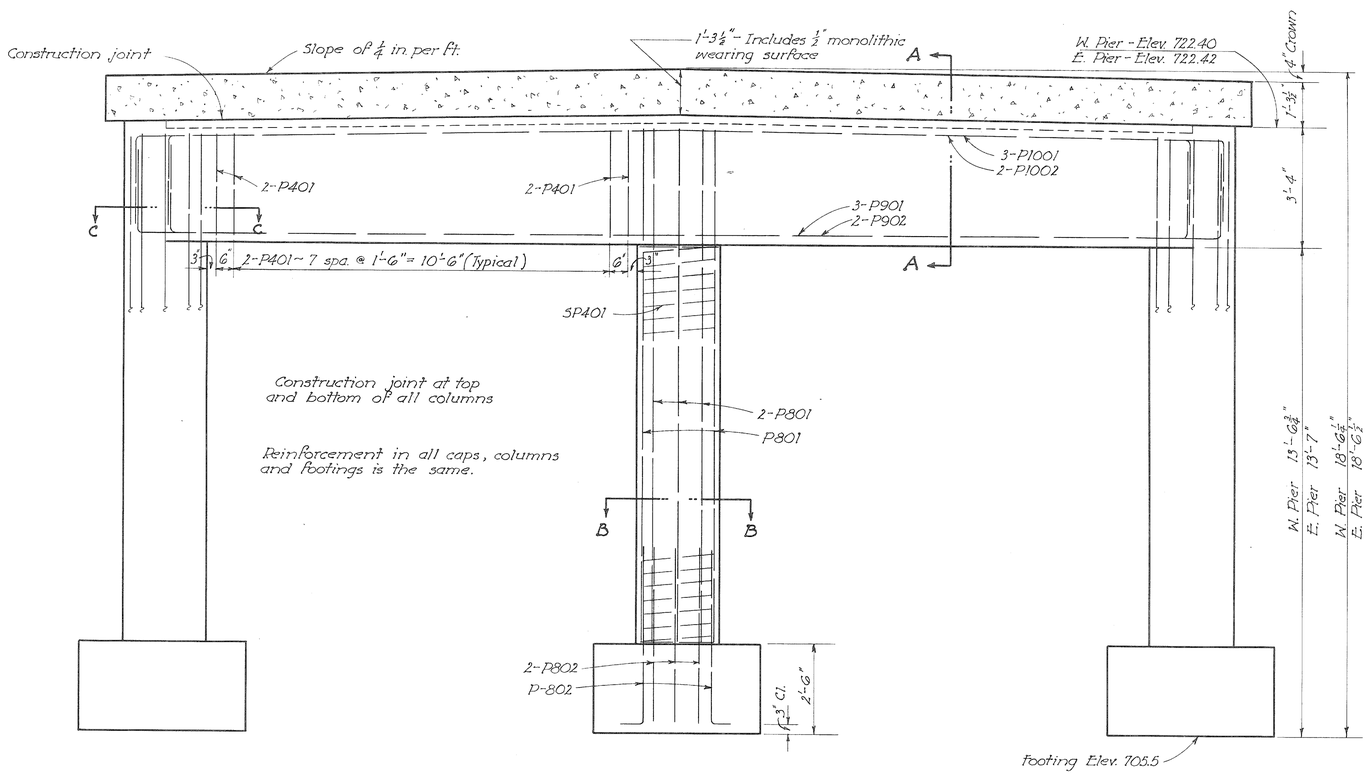
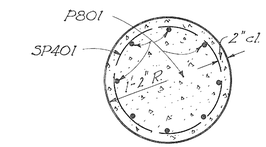
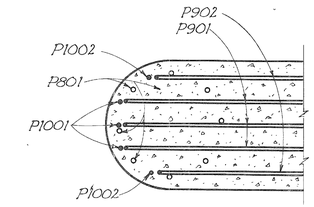


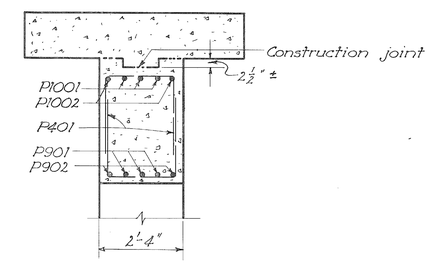
~ ELEVATION ~



SECTION B-B



SECTION C-C



SECTION A-A

Clearance between steel and face of concrete surface shall be 2" unless otherwise shown.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS

BRIDGE NO. PAU-114-1964
OVER MIDDLE CREEK

PAULDING CO. STA. 1036+75.00
1037+87.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.C.W.	J.C.W.	Grassell	Kay	BFG	12-22-55	

MICROFILMED
MAR 25 1987

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-1174(2)	

46/55

PAULDING COUNTY
PAU-114-(12.41-22.40)

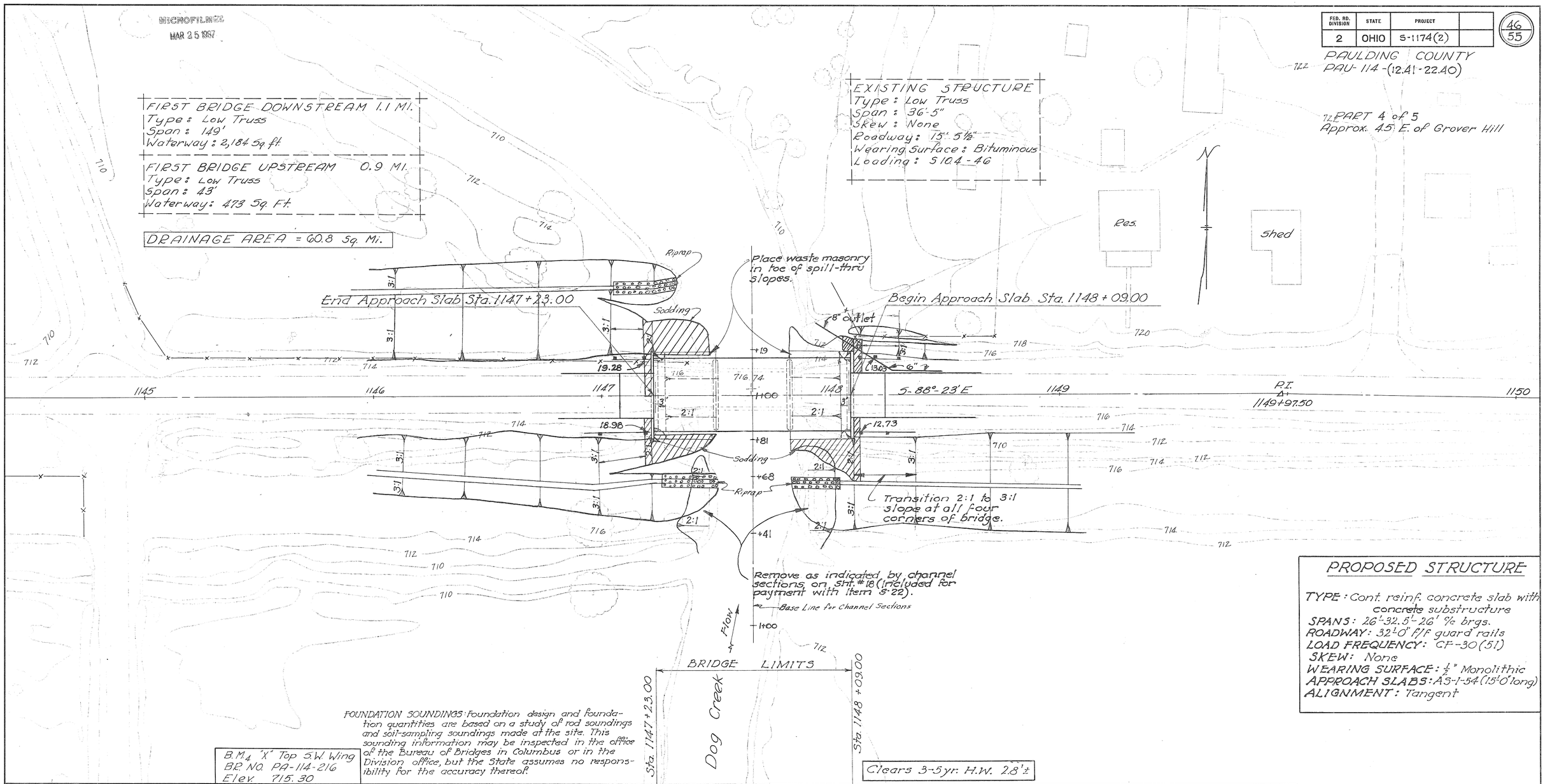
PART 4 of 5
Approx. 4.5' E. of Grover Hill

FIRST BRIDGE DOWNSTREAM 1.1 MI.
Type: Low Truss
Span: 149'
Waterway: 2,184 Sq ft

FIRST BRIDGE UPSTREAM 0.9 MI.
Type: Low Truss
Span: 43'
Waterway: 473 Sq. Ft.

DRAINAGE AREA = 60.8 Sq. Mi.

EXISTING STRUCTURE
Type: Low Truss
Span: 36'-5"
Skew: None
Roadway: 15'-5½"
Wearing Surface: Bituminous
Loading: S10.4-46

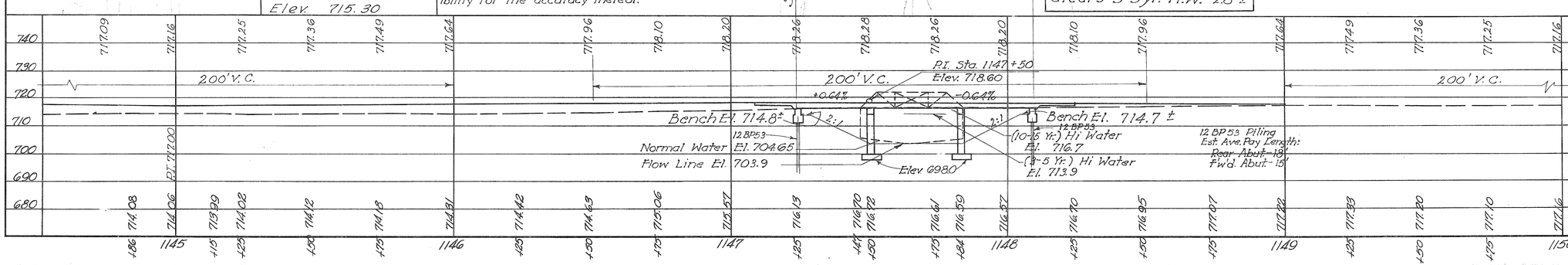


FOUNDATION SOUNDINGS: foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State assumes no responsibility for the accuracy thereof.

B.M.4 "X" Top S.W. Wing
B.P. NO. PA-114-216
Elev. 715.30

PROPOSED STRUCTURE

TYPE: Cont. reinf. concrete slab with concrete substructure
SPANS: 26'-32.5'-26' c/c brgs.
ROADWAY: 32'-0" f/f guard rails
LOAD FREQUENCY: CF-30(51)
SKEW: None
WEARING SURFACE: ½" Monolithic
APPROACH SLABS: AS-1-54 (15'-0" long)
ALIGNMENT: Tangent



STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. PAU-114-2173
OVER DOG CREEK
PAULDING CO. S.R. 114
STA. 1147+23.00
1148+09.00

SCALE 1" = 20'

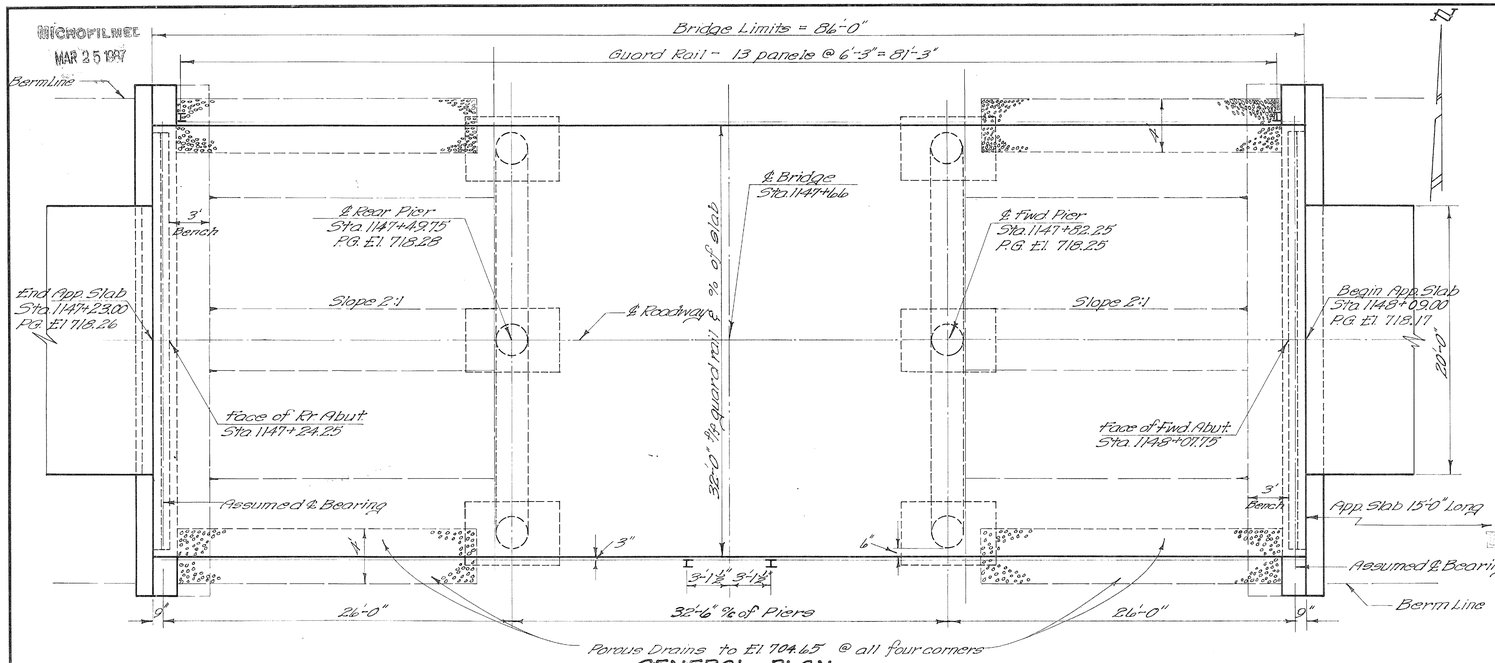
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	C.E.J.	C.E.J.	J.A.P.	CFB

BFG a.j.f. 12-22-55

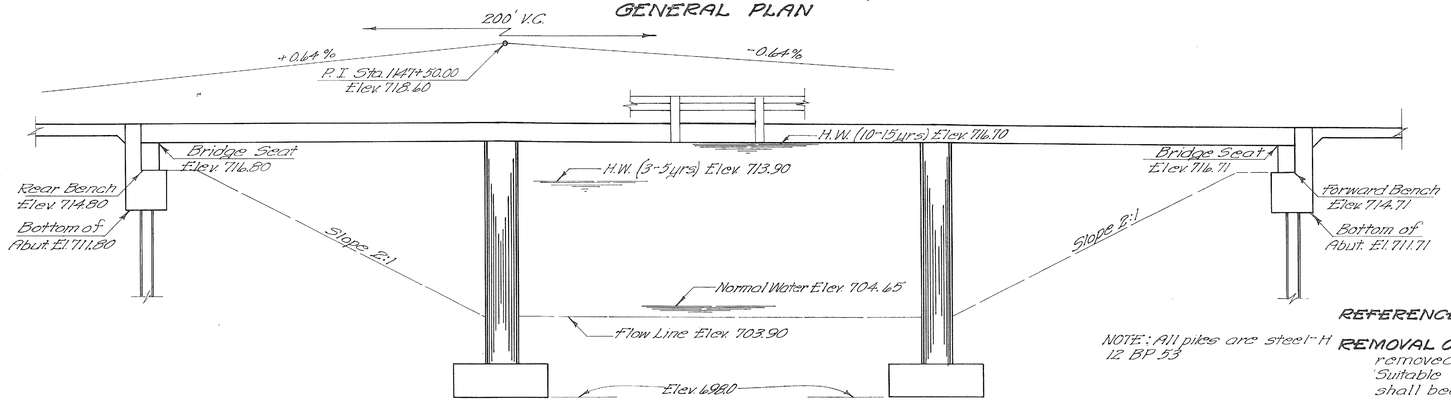
MICROFILMED
MAR 25 1997

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

PAULDING COUNTY
PAU-114-(12.41-22.40), PART 4 OF 5



GENERAL PLAN



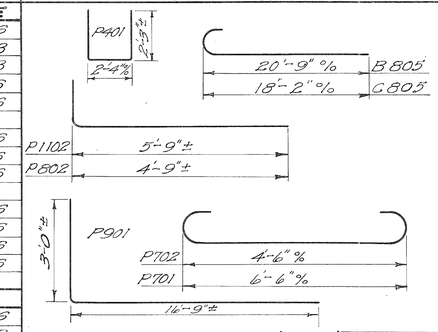
ELEVATION

NOTE: All piles are steel-H 12 BP 53

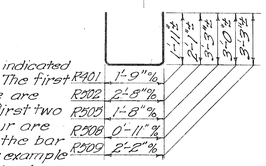
REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp
SUPERSTRUCTURE				
A805	84	30'-3"	4785	S
B805	28	21'-10"	1632	B
C805	26	19'-3"	1336	B
D805	14	20'-10"	779	S
E805	13	15'-8"	544	S
F905	56	20'-10"	3967	S
G905	28	10'-8"	1015	S
H905	26	8'-2"	722	S
J601	28	17'-9"	746	S
K601	14	16'-2"	340	S
M601	75	31'-6"	3549	S
N601	57	31'-6"	2697	S
PIERS				
P1101	64	16'-1"	5469	S
P1102	64	16'-7"	2239	B
P901	56 / 56	19'-6"	3448 / 4424	B
P801	24	16'-1"	1031	S
P802	24	5'-8"	363	B
P701	30	8'-2"	501	B
P702	30	6'-2"	378	B
P501	4	28'-4"	118	S
P401	56	6'-5"	240	B

Bending Diagram



BAR SIZE is indicated in the bar mark. The first digit where three are used and the first two digits where four are used, indicate the bar size number. For example R 801 is a No. 8 size bar.



Mark	No	Length	Weight	Shp
ABUTMENTS				
R1001	16	16'-11"	1165	S
R801	16	20'-1"	858	S
R501	16	10'-7"	327	S
R502	116	6'-7"	797	B
R503	8	16'-1"	135	S
R504	24	5'-4"	134	S
R505	28	7'-11"	231	B
R506	8	8'-8"	72	S
R507	16	4'-11"	82	S
R508	16	6'-8"	111	B
R509	16	8'-5"	140	B
R401	48	5'-5"	174	B
REPLACEMENT BARS				
RE1100	1	7'-6"	40	S
RE1000	1	7'-2"	31	S
RE900	1	6'-10"	23	S
RE800	1	6'-6"	17	S
RE700	1	6'-2"	13	S
RE600	1	5'-11"	9	S
RE500	1	5'-7"	6	S
RE400	1	5'-3"	4	S

SPIRAL REINFORCING

Mark	No.	Core Diam. & Spiral	Length	Pitch	% of Pulse	Weight
SP401	6	28"	12'-9½"±	4½"	37	1433

SPIRAL REINFORCING BARS

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The "No. of Turns" shown in the steel list for the spiral bars is the "Length" divided by the "Pitch" plus 3 turns (total number of closed coils) expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations, but shall in other respects conform to Item S-4.

1½ closed coils shall be provided at the ends of each spiral unit.

four steel channel, tee or angle spacers, weighing approximately 0.68 lb per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-54 and A-1-54, revised 12-1-54.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic the existing structure shall be removed. Abutments shall be removed to proposed ground line and where necessary for new construction. Suitable waste masonry shall be placed in toe of spill-thru slopes. The remainder of the removed materials shall become the property of the Contractor.

POROUS DRAINS extending from face of abutment to Elev. 705 shall be provided at all four corners of the bridge. The drains shall be 4 ft. wide and one foot thick.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete, superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

GALVANIZING of all members which are specified to be galvanized, shall be as called for in Sec. M-7.4(d).

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

PIER FOOTINGS shall extend a minimum of 3" into solid rock or to the elevation shown, whichever is lower.

PILES shall be driven to firm contact with rock which shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is at least 40 tons per pile if a 7000 ft. lb. steam hammer is used, or 30 tons if a steam hammer or drop hammer of 15000 ft. lb. or greater energy is used and if the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report. If the energy rating of the hammer is between these values the required formula capacity shall be determined by interpolation. (The design load is 25 tons per pile) The length of penetration of every pile shall be at least 80% of the estimated overage pay length of the piles in the pertinent abutment as indicated on the plans unless a lesser penetration is approved by the Director.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superstr.	Abuts.	Piers	Gen.	As Built	
E-2	Lump	Sum	Cofferdams, cribs & sheeting			Lump			
E-2	144	Cu.yd.	Unclassified excavation		54	90			
E-3	~~600~~ 602	Cu.Yd.	Channel excavation				~~600~~ 602	C-7, +2	602
S-1	108	Cu.yd.	Class "C" concrete superstructure	108					
S-1	37	Cu.yd.	Class "C" concrete, pier caps and columns			37			
S-1	20	Cu.yd.	Class "E" concrete, pier footings			20			
S-1	37	Cu.yd.	Class "E" concrete, abutments		37				
S-4	~~41,974~~ 43,558	lb	Reinforcing steel	24,112	4,226	~~13,496~~ 15,080	~~145~~	C-7, +128 / C-7, -143	43,558
S-14	172	Lin.ft.	Railing (Type I-13.13 with galvanized steel posts & bolts)	172					
S-16	Lump	Sum	First test pile.				Lump		
S-18	~~200~~ 157	Lin.ft.	Steel piles, 12 BP 53		~~200~~ 157			C-7, -43	157
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	15	Cu.yd.	Porous Backfill		15				
S-29	16	Cu.yd.	Porous drains on embankment slopes				16		
							Lump		

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

GENERAL PLAN & ELEVATION, NOTES
ESTIMATED QUANTITIES
REINFORCING STEEL LIST
BRIDGE No. PAU-114-2173
OVER DOG CREEK
PAULDING COUNTY STA. 1147+23.00
STA. 1148+09.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
REJ	REJ	RHP	JEM	BFG	12-22-55	

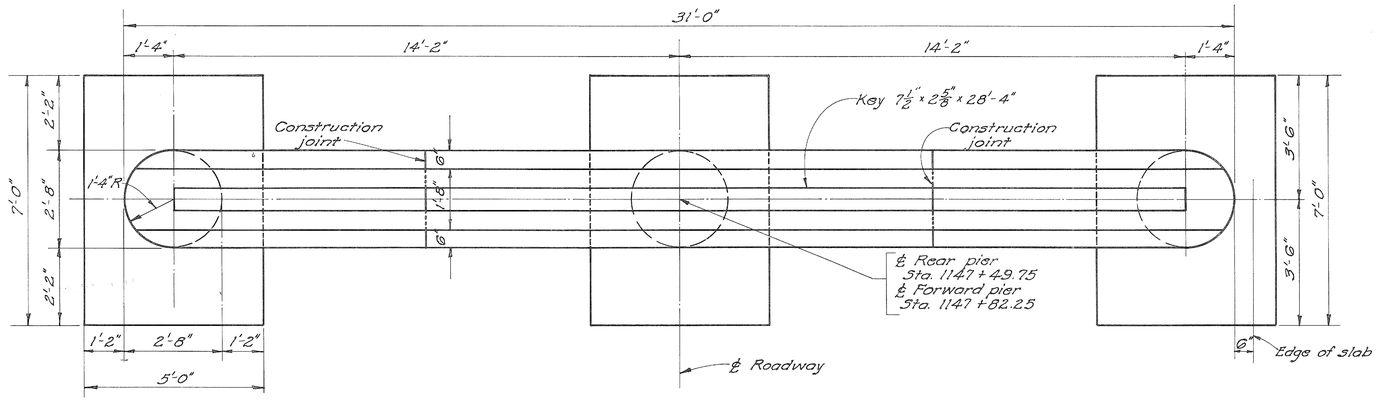
11-3-58 Revised As-Built JEP

MICROFILMED
MAR 25 1997

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

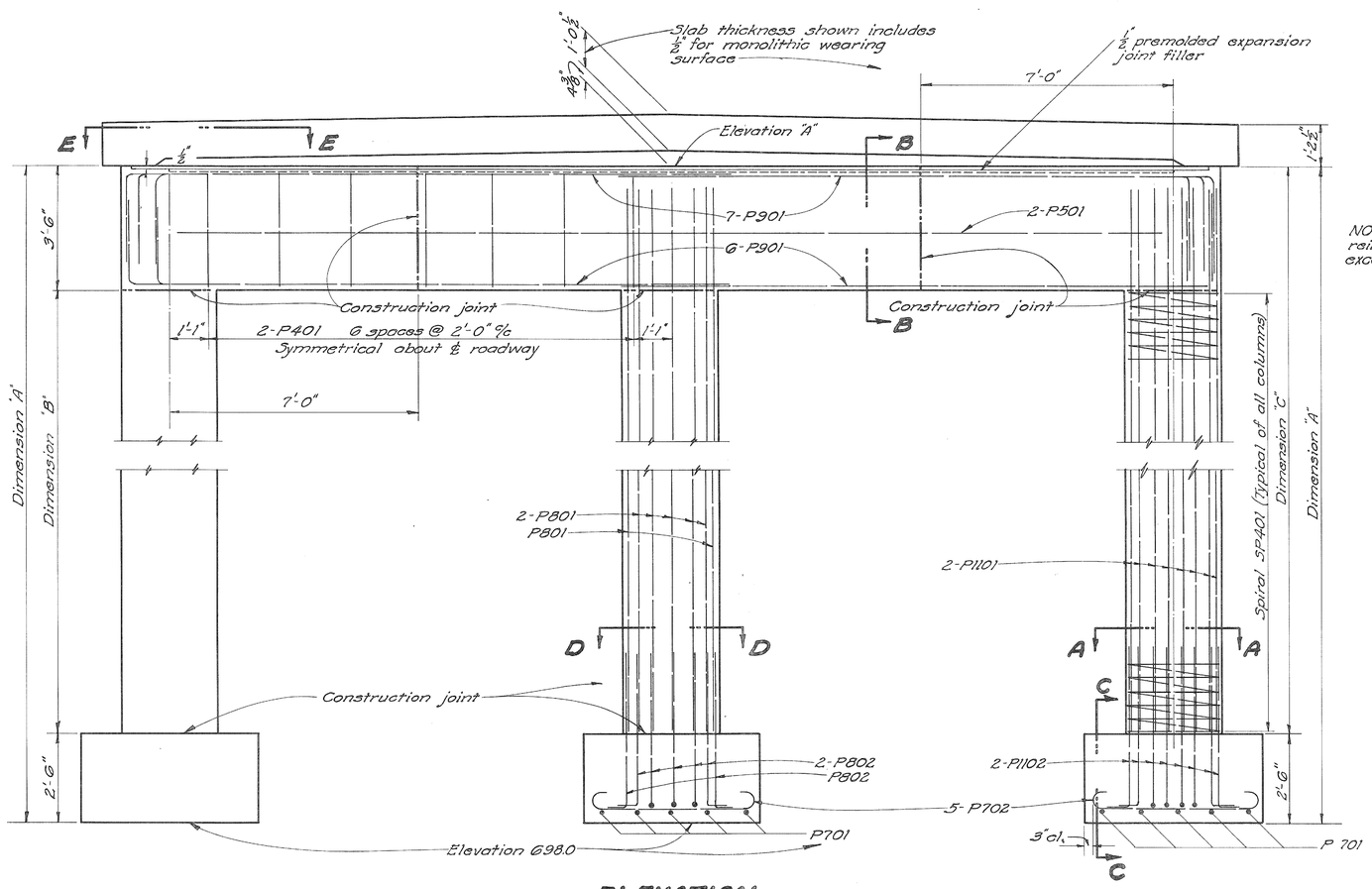
48
55

PAULDING COUNTY
PAU-114-(12.41-22.40), PART 4 OF 5

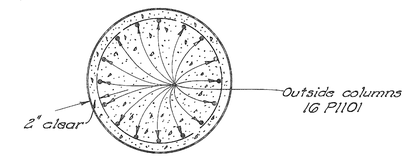


NOTE: All footings are same size

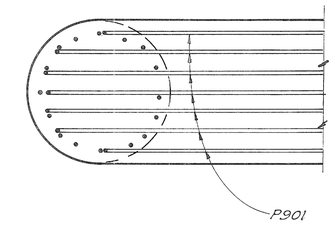
PLAN



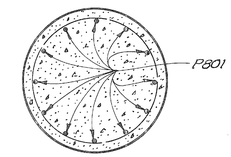
ELEVATION



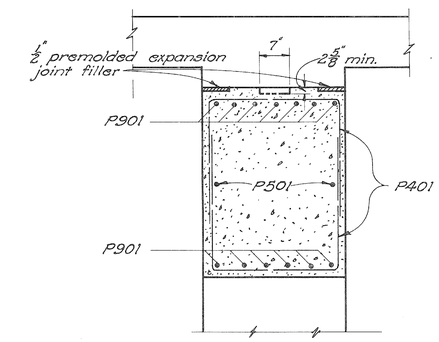
SECTION A-A



VIEW E-E

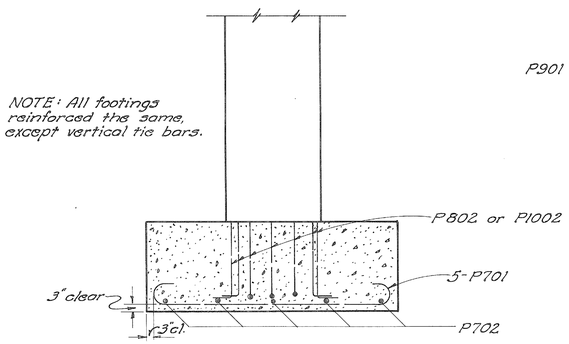


SECTION D-D



SECTION B-B

NOTE: All footings reinforced the same, except vertical tie bars.



SECTION C-C

LOCATION	Dim. "A"	Dim. "B"	Dim. "C"	Elev. "A"
Rear pier	18'-9 7/16"	12'-9⅜"	16'-3 5/16"	716.82
Forward pier	18'-9½	12'-9½"	16'-3½"	716.79

REINFORCING STEEL shall be 2" clear from face of concrete unless otherwise shown.

CONCRETE shall be Class "C" for pier caps and columns and Class "E" for footings.

FOOTINGS shall extend a minimum of 3" into solid rock, or to the elevation shown, whichever is lower.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS

BRIDGE NO. PAU-114-2173
OVER DOG CREEK

PAULDING COUNTY — STA. 1147 + 23.00, STA. 1148 + 09.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.J.	R.E.J.	JDJ	JEM	BFG	12-22-55	