FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	FG-229(1)	POST WAR.

1/27

FG-229(1)

HARRISON COUNTY
S.H.26 SEC. R (PT)

HAS - 22 - 24.97

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
STEUBENVILLE-CAMBRIDGE ROAD
S.H.26 SEC. R (PT)
HARRISON COUNTY
RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH N.Y.C. R.R.
GREEN TOWNSHIP

CONVENTIONAL SIGNS

CORPORATION LINE	
CENTER LINE	
PROPERTY LINE	
FENCE LINE	
RAILROADS	
POLE LINES	Telephone Power

INDEX OF SHEETS

TITLE SHEET	SHEET	1
TYPICAL SECTION	"	2
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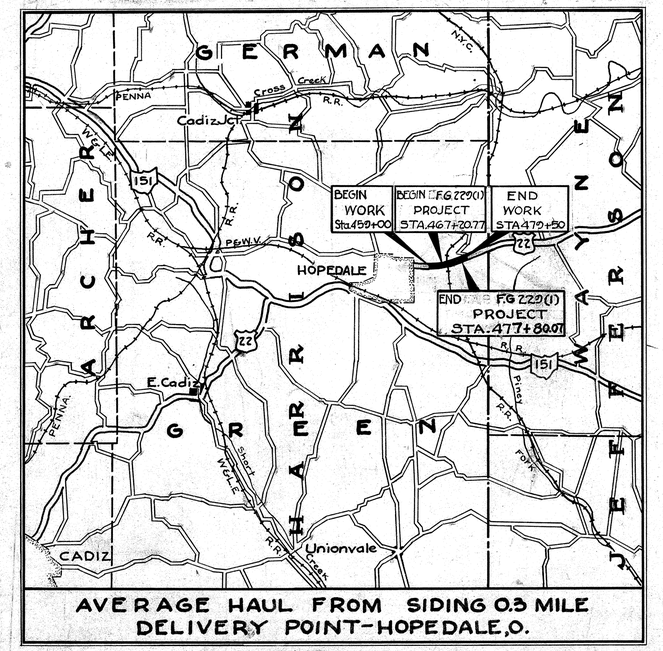
CROSS SECTIONS	"	13-17
ROAD APPROACH	"	18
STRUCTURES 20' SPAN & UNDER	"	19-22
STRUCTURES OVER 20' SPAN	"	23-26
APPROACH SLAB DETAIL		27
RAILROAD FORCE ACCOUNT WORK		27 A

LINE DATA

BEGIN	FG 229 (1) PROJECT	STA. 467+20.77
END	FG 229 (1) PROJECT	STA. 477+80.07
NO ADDITIONS OR DEDUCTIONS		
NET LENGTH	FG 229 (1)	1059.30 LIN. FT. or 0.200 MI.
BEGIN WORK & SEC. R (PT)		STA. 459+00
END WORK & SEC. R (PT)		STA 479+50
NO ADDITIONS OR DEDUCTIONS		
NET LENGTH OF WORK		2050.0 LIN. FT. or 0.388 MI.

SCALES

PLAN	1" = 50'
PROFILE (HORIZONTAL)	1" = 50'
PROFILE (VERTICAL)	1" = 10'
CROSS SECTIONS	1" = 10'



AVERAGE HAUL FROM SIDING 0.3 MILE
DELIVERY POINT-HOPEDALE, O.

LOCATION PLAN
Scale 1" = 1 Mile

PORTION TO BE IMPROVED	
FEDERAL HIGHWAYS	
STATE HIGHWAYS	
OTHER ROADS	

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

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

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

Approved Dawson W. Smith
Date 2/14/49 Resident Deputy Director

Approved _____
Date _____ Asst. to Chief Engineer

Approved _____
Date _____ Chief Engineer, Bureau of Maintenance

Approved Richard Barth
Date 2-14-49 Chief Engineer, Bureau of Bridges & R.R. Crossings

Approved George J. Thormyer
Date 2/17/49 Chief Engineer, Bureau of Location & Design

Approved S. O. Lingell
Date 2/17/49 Asst. Director & Chief Engineer

Approved
Date 2/17/49 Director of Highways

Print
Approved E. A. Dougherty
Date 10-8-48 Chief Engineer, New York Central Railroad Co.

RECOMMENDED FOR APPROVAL DATE _____

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE _____

DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

CONSTRUCTION BUREAU
NOV 21 1956
GROUND PHOTOLAB

STANDARD DRAWINGS

1-18-46	A.S.-44-F	2-1-47	G-8.07
2-1-47	B-T-71 R	10-1-47	B-T-50-70-71E Nº1
3-1-30	S-27 P.C.1	2-1-47	I-15 Nº 5
3-15-48	S-27 P.C.2	2-1-47	I-15 Nº 6
2-20-45	S-27 P.C.3	2-1-47	I-15 Nº 7
2-20-45	I-1, 2, 3, 4 & 5	2-1-47	I-15 Nº 9
2-1-47	I-15 Nº 4	12-5-45	CSB-45 Sheets Nº 1 & 2
2-1-47	I-15 Nº 3	2-1-47	I-14 G
3-1-47	I-15 Nº 1	2-1-47	L-3
2-1-47	I-15 Nº 2	6-1-48	PJ Nº 2

SUPPLEMENTAL SPECIFICATIONS

T-110	Rev. 8-3-36	
M-110.23	Rev. 1-3-47	

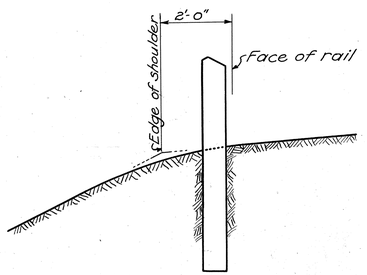
FILE Nº	HARRISON COUNTY S.H. 26 SEC. R (PT)
	Date of Letting ——→ 194
	Contract Nº

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

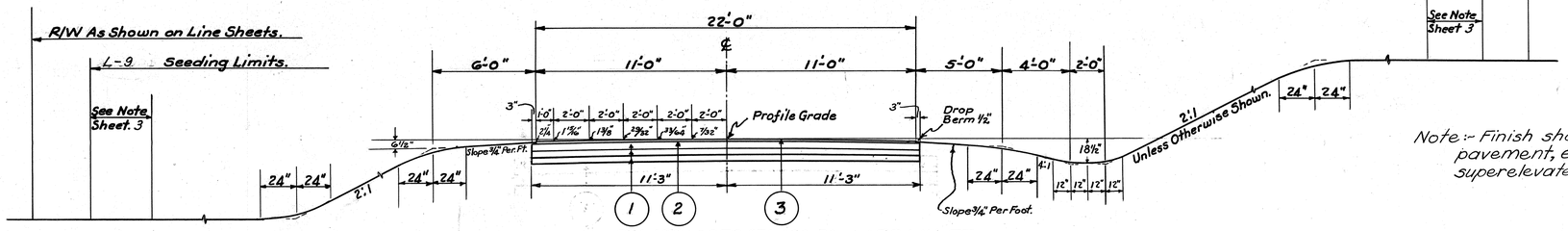
2 / 27

HARRISON COUNTY
S.H. 26 SEC. R (PT).

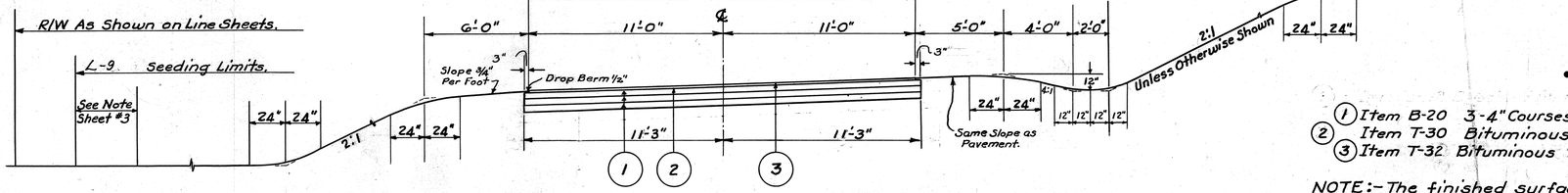
TYPICAL SECTIONS
TYPE T-32
SCALE 1/4"=1'-0"



GUARD RAIL DETAIL
For Location, See Alignment & Cross Section Sheets.

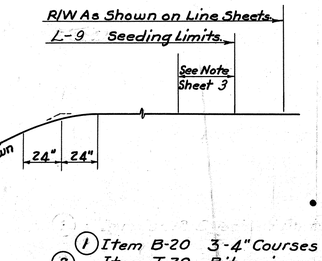


STA 459+00 TO STA 460+50 = 150 LIN. FT.



STA 460+50 TO STA 466+00 = 550.0 LIN. FT.

Note:- Finish shoulders ½" below edge of pavement, except on high side of superelevated sections.

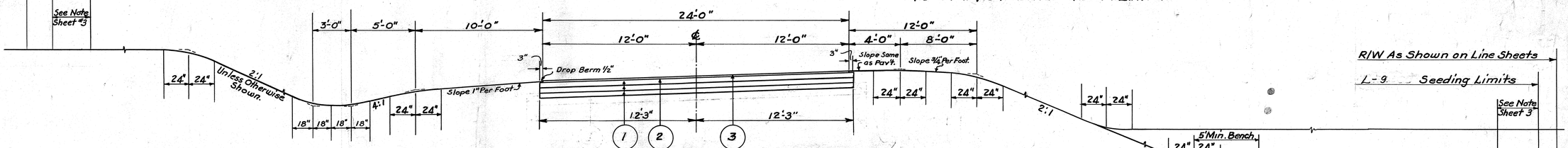


• KEY •

(1) Item B-20 3-4" Courses Water Bound Macadam Base Course.
(2) Item T-30 Bituminous Prime Coat. M-5.7 RT-2 or 3
(3) Item T-32 Bituminous Road Mix Surface Course

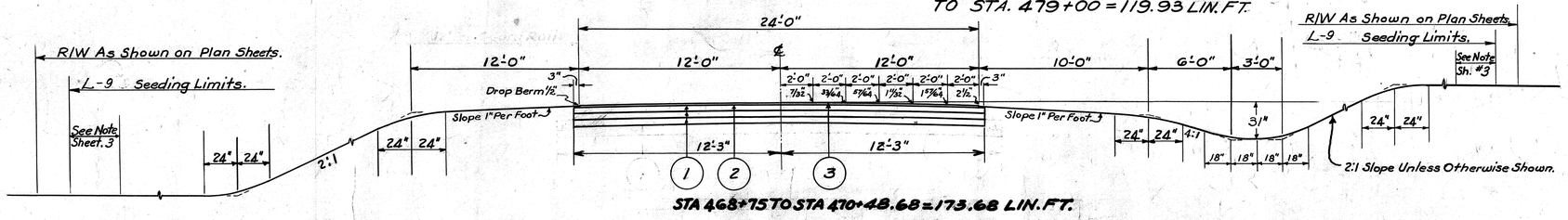
NOTE:- The finished surface of the "Waterbound Macadam Base Course" shall be 1" below profile grade.

SUPERELEVATED TRANSITION FROM 22' TO 24' PAV'T., STA. 466+00 TO STA. 467+20.77 = 120.77 LIN. FT.



STA. 467+20.77 TO STA 468+75 = 154.23 LIN. FT.
STA 473+08.2 TO STA 477+80.07 = 471.87 LIN. FT.

SUPERELEVATED TRANSITION FROM 24' TO 22' PAV'T., STA. 477+80.07 TO STA. 479+00 = 119.93 LIN. FT.



STA 468+75 TO STA 470+48.68 = 173.68 LIN. FT.

APPROACH PAV'T. STA. 470+48.68 TO STA. 470+66.60 = 17.92 LIN. FT.
BRIDGE & APPROACH SLABS STA. 470+66.60 TO STA. 473+08.20

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
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HARRISON COUNTY
S.H.26 SEC. R (PT)

GENERAL NOTES

SUPERELEVATION:~ Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in that portion between the beginning of the transition and the point where the superelevation equals twice the crown.

TREES:~ No trees shall be removed unless specifically marked for removal by the Engineer.

PIPE:~ All existing pipe marked "Remove and Store", shall be neatly stored within the right of way and left at the disposal of the States forces.

FERTILIZER:~ Fertilizer of 10-6-4 formula shall be used on all seeded and sodded areas at the rate of 20 lbs. per 1000 sq. ft.

AGRICULTURAL GROUND LIMESTONE:~ Agricultural ground limestone shall be applied at the rate of 100 lbs. per 1000 sq. ft. for all seeding and sodding areas. The limestone shall be of a fineness that 99% will pass a 10 mesh sieve, with 40% passing a 100 mesh sieve; and with a minimum total neutralizing power of 95%.

COMPACTION:~ Compaction will not be required on the top four (4) inches of the area to be seeded.

SEEDING AND PROTECTING, TYPE "A":~ Quantities for seeding, Item L-9 are calculated for the soil areas between lines ten (10) feet outside the work limits as shown on the cross sections, or to the R/W line if such line is less than ten (10) feet from the work limits.

All areas outside these limits where vegetative growth has been injuriously disturbed or destroyed by the Contractor, shall be restored and seeded in accordance with the provisions of Item L-9 by the contractor at his own expense.

SILT:~ Excavated material and borrow of which the grain size of 50% or more is between 0.074 m.m. and 0.005 m.m. (State Highway Testing Laboratory method of testing) shall be placed at least 3 feet below the pavement when used in embankment.

EMBANKMENT:~ In lieu of the requirements for full width construction under E-1.05 the embankment, where traffic is maintained, may be placed in part width construction.

UTILITY ADJUSTMENT:~ Any and all work required for Public or Private Utilities will be done by the respective owners and the contractor shall co-operate with the utility companies by arranging his work in such a manner that needless conflicts will be avoided.

SEPARATION OF QUANTITIES FOR APPROACH SLABS:~

E-4 Borrow	1540	Cu.Yds.
I-15 Guard Rail, Steel Beam Type (Deep)	96	Lin.Ft.
L-9 Seeding	550	Sq.Yds.
L-9 Commercial Fertilizer	.05	Ton.
L-9 Agricultural Ground Limestone	.25	Ton.
I-7 Reinforced Concrete Approach Slabs	104	Sq.Yds.
T-35 Asphaltic Con. Surface Course Type "A"	11.7	Cu.Yds.
B-71 9" Reinforced Portland Cement Conc. Base Course	77	Sq.Yds.
I-12 Concrete Curb, Type 1 As Per Plan.	32	Lin.Ft.
E-11 Water	8	M Gals.
T-30 Bituminous Tack Coat. Sec. M-5.5 MS-2	18	Gal.

The above items are included in roadway items of the General Summary. They are shown here for inclusion with the reinforced concrete pavement type estimate to be submitted to Public Roads Administration.

COMPACTION OF SUBGRADE:~ In lieu of the provisions of Section E-1.08 Subgrade and for Compaction of Subgrade in Cuts, on this project subgrade to a depth of at least 6 inches below the pavement, both in cut and on fill, shall be compacted at a moisture content within 1½ per cent of the optimum to the pertinent density shown in the following table. Where necessary to secure this compaction in cut, the upper 6 inches shall be removed and the underlying soil brought to approximately the optimum moisture and then compacted to a density such that the upper 6 inches of subgrade when replaced can be compacted to the density specified below.

Maximum Laboratory Dry Weight (Pounds Per Cubic Foot)		Minimum Subgrade Compaction Requirements (Per Cent of Laboratory Maximum Dry Weight)
95.0	102.9	106
103.0	109.9	104
110.0	119.9	102
120.0+		100

Excavation thus removed will be paid for as Item E-1, Roadway excavation. An estimated quantity of 450 Cu. Yds. is included in the quantities for this purpose.

SCALPING:~ Material removed by scalping operations shall be used in the finishing of berms, slopes and ditches. Depth of this material shall be approximately two (2) inches. The actual area to be covered will depend on the amount of material obtained. Payment for this work shall be included in Item E-1.

BITUMINOUS PRIME COAT:~ Bituminous prime coat, section M-5.7 RT 2 or 3 shall be applied at the rate of 0.35 gallon per square yard. of Waterbound Macadam Pavement.

T-32 SURFACE COURSE:~ The quantity of bituminous material estimated for the bituminous road mix has been calculated for use with slag aggregate. If the contractor elects to use stone or gravel aggregate, bituminous material for the road mix surface course shall be applied at the rate of 0.65 to 0.75 gal. per sq.yd. which will require a total quantity of 3121 gals. Payment will be made on final measurement.

GUARD RAIL:~ Extreme care shall be exercised in staking guard rail so that the location of the begining or ending of any particular run shall meet the physical features such as bridges, drives, road approaches, etc.

TRAFFIC NOTE:~ The contractor shall maintain traffic at all times on this project outlined herewith or as may be directed by the Engineer.

Two way traffic shall be maintained on the portions of the existing paving lying outside the limits of the new construction The portions of existing pavement being used for traffic lanes shall be kept free of stored materials, equipment, employees automobiles and other obstructions. Existing pavement outside construction limits listed for removal and on which traffic is to be maintained shall remain in place until traffic is routed over the new pavement.

In all cases where the new construction limits include the existing pavement or berms the cuts, fills or connecting ramps shall be built in such a manner as to provide for two way traffic lanes with a surface not less than twenty (20) feet in width and embankment need not be constructed full cross section width.

Two way traffic shall be maintained at all times unless special permission is granted by the Engineer. in writing for one way traffic between specified stations for a definite period of time. In event one-way traffic is permitted the surfacing material shall not be less than twelve (12) feet in width. Watchmen shall be posted at each end of the one-way traffic zone and maintained twenty-four (24) hours daily. All temporary traffic lanes shall be surfaced with T-110 material, treated with calcium chloride and the surface maintained daily to the satisfaction of the Engineer. When it becomes necessary to relocate temporary traffic lanes the T-110 material shall be salvaged and re-used on each succeeding location where practicable. The unit price bid per cu. yd. of T-110 Traffic Compacted Surface Course, shall include the operation of salvaging the material for re-use and the final removal and disposal to an elevation at least four (4) inches below the finished berm or slope line when no longer needed for temporary traffic lanes. The necessary temporary guard rail and barricades shall be erected at dangerous points along narrow cuts and fills, which are to be used as temporary route where directed by the Engineer, for the protection of traffic during construction. Existing guard rail specified for removal and storage, may be used for temporary guard rail, when directed by the Engineer and shall be salvaged and re-used when traffic lanes are relocated. If existing guard rail is used the posts shall be set to the depth and spacing intended for that type of rail. In the event existing guard rail is not used, all temporary guard rail shall be built to conform to the detail shown on Sheet № 4 of these plans.

Upon completion of the project, all existing guard rail shall be removed and stored on the right of way (or removed from the project if furnished by the contractor), where and as directed by the Engineer and left at the disposal of the States Forces.

The contractor will be required to maintain trucks or tractors in the vicinity of all temporary traffic lanes at all times to render the necessary assistance in the movement of traffic.

The lump sum bid for maintaining traffic including lights signs, barricades and watchmen twenty-four (24) hours service shall include payment for all the foregoing labor, materials and equipment necessary to complete this item, except calcium chloride and the T-110 aggregate for traffic lanes, which items are included in the estimate as seperate items.

The following quantities of materials for use on temporary traffic lanes, as indicated above, have been estimated and are to be placed as directed by the Engineer:-

Item M-10 Calcium Chloride 20 Tons.
Item T-110 Traffic Compacted Surface Course 1017 Cu.Yds.

***ITEM SPECIAL, EXISTING WELL ABANDONED:~** This item shall consist of removing and storing existing platform and pump. The well shall be backfilled to existing ground line with stone removed from existing pavement. This item shall be paid for at the contract unit price bid per each "Item Special, Existing Well Abandoned", which price and payment shall constitute full compensation for all labor, materials, equipment, tools and incidentals required to complete the item.*

TYPICAL DETAILS

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F.G.-229(1)	1946

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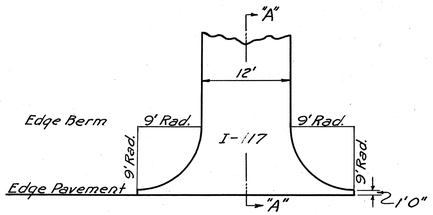
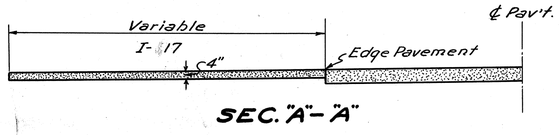
HARRISON COUNTY
S.H. 26 – SEC. R(PT)

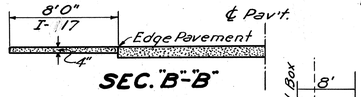
PRIVATE DRIVES



NORMAL

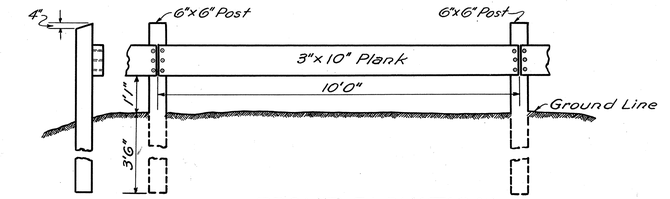


SEC. "A"-"A"



SEC. "B"-"B"

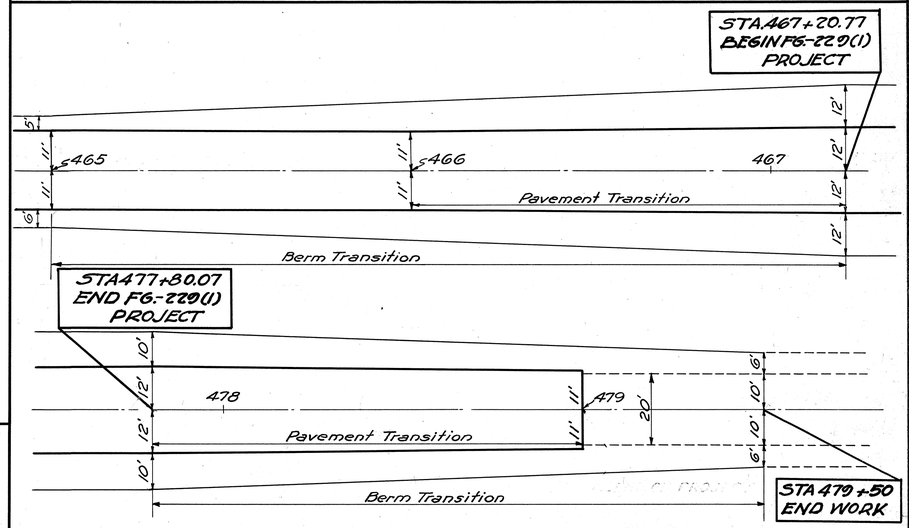
DETAIL OF MAIL BOX APPROACH



SIDE ELEVATION

FRONT ELEVATION

DETAIL OF TEMPORARY GUARD RAIL



DETAIL OF PAVEMENT & BERM TRANSITIONS

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

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HARRISON COUNTY
S.H. 26 – SEC. "R-(PT.)"

STRUCTURES 20'SPAN AND UNDER – S

REF. Nº	STATION	DETAILED ON SHEET Nº	REMOVALS: DISPOSE OF PIPE 15" & UNDER	REMOVALS: DISPOSE OF PIPE OVER 15"	REMOVALS: STORE PIPE 15" & UNDER	REMOVALS: STORE PIPE OVER 15"	REMOVALS: DISPOSAL PORTIONS OF EXIST. STRUCT'S.	EXCAVATION: STRUCTURES.	EXCAVATION: CHANNEL	CONCRETE: CLASS "C"	CONCRETE: CLASS "E"	REIN-FORCING STEEL	DOWEL HOLES	PIPE – LIN.FT.: 12"	PIPE – LIN.FT.: 15"	PIPE FOR DRIVEWAYS LIN. FT	RIPRAP TYPE "A" GROUT FILLED	PAVED GUTTER TYPE B
			LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	LBS.	LIN.FT.			12"	SQ.YDS.	LIN.FT.
1-S	459+65.5	19		3	9	7		10		0.3		13	6	16		13	7.0	
2-S	467+91		38.5		17.3		1.9											
3-S	0-131(APPR)	20						2			1.4				63		17.0	
4-S	468+65	21						45	1		2.8				133		20.0	
5-S	472+78		31.5				2.8											
6-S	473+08	22						84	20	1.9	1.4	24			127		28.2	70
7-S	471+65				64.0													
8-S	471+80				58.5													
TOTAL TO RECAP					148.8											13		
TOTAL TO SUMMARY			70	3		7	4.7	141	21	2.2	5.6	37	6	16	323		72.2	70

APPROACHES – A

TOTAL SHEET Nº	REMOVE & STORE 15" PIPE & UNDER	PIPE FOR DRIVEWAYS LIN. FT.		I-117 AGGREGATE
	LIN. FT.	12"	15"	CU. YDS.
9			44	19
10	26	28	38	11
18				158
TOTAL TO RECAP	26	28		
TOTAL TO SUMMARY			82	*188

*188 + 15% (for compaction) = 216 Cu.Yd. Total Carried To Summary.

GUARD RAIL – G

TOTAL SHEET Nº	REMOVE AND STORE	NEW: ROADWAY	NEW: APPROACH
	LIN. FT.	LIN. FT.	LIN. FT.
9		438.44	
10	64	711.56	
18			208
TOTAL	64	1150.00	208

TREE REMOVAL

TOTAL SHEET Nº	TREES
	EACH
9	–
10	19
TOTAL	19

PAVED GUTTER PG

TOTAL SHEET Nº	TYPE "A"
	LIN. FT.
9	–
10	70
TOTAL	70

EROSION CONTROL

TOTAL SHEET Nº	L-9 SEEDING	FERTI-LIZER	GROUND AGRICUL-TURAL LIMESTONE	SODDING
	SQ.YDS.	LBS.	LBS.	SQ.YDS.
9	8235	1482	7412	
10	9562	1722	8606	
18	2465	444	2218	
		18	90	100
TOTAL	20,262	3666	18326	*100

* To be used at the direction of the Engineer.

EXCAVATION & EMBANKMENT

STATION FROM	STATION TO	ROADWAY EXCAVATION	ROADWAY EMBANKMENT	EMBANK-MENT+20%
459+00	468+22	3350	2792	3350
468+22	479+50	4650	16438	19726
468+00-RD.APPR.-RT.		279	1,172	1406
Subgrade Compaction		450	450	540
TOTAL TO SUMMARY		8729	20852	25022

Borrow 25022 – 8729 = 16,293 Cu. Yds.

APPROACH PAVEMENT-AP

TOTAL SHEET Nº	B-71 REINFD PORTLAND CEMENT CONC. BASE COURSE	T-30 BIT. TACK COAT	T-35 ASPHALTIC CONCRETE SUR. COURSE TYPE "A"	TYPE 1 CURB AS PER PLAN
	SQ.YDS.	GALS.	CU.YDS.	LIN.FT.
27	77	8	5.2	32
TOTAL TO RECAP		8	5.2	
TOTAL TO SUMMARY	77			32

APPROACH SLABS-AS

TOTAL SHEET Nº	I-7 REINFORCED CONCRETE	T-30 BIT. TACK COAT	T-35 ASPHALTIC CONCRETE SUR. COURSE TYPE "A"
	SQ.YDS.	GALS.	CU. YDS.
27	104	10	6.5
TOTAL TO RECAP		10	6.5
TOTAL TO SUMMARY	104		

EXISTING WELL ABANDONED

Item Special

Sheet Number	Each
10	1

RECAP TABLE

FROM TABLE	REMOVE & STORE PIPE 15" & UNDER LIN. FT.	PIPE FOR DRIVEWAYS 12" LIN. FT.	T-30 BIT. TACK COAT GALS.	T-35 ASPHALTIC CONCRETE SUR. COURSE TYPE "A" CU.YDS.
S	148.8	13		
A	26.	28		
AP			8	5.2
AS			10	6.5
PG				
TOTAL	174.8	41	18	11.7

PAVEMENT CALCULATIONS

TYPE B-20

22'-6" WIDTH
Sta. 459+00.0 to Sta. 466+00.0 = 700.00 Lin. Ft.
Area – (700 × 22.5 ÷ 9) = 1750.0 Sq. Yds.

23'-6" AVERAGE WIDTH
Sta. 466+00.0 to Sta. 467+20.77 = 120.77 Lin. Ft.
Sta. 477+80.07 to Sta. 479+00.0 = 119.93 Lin. Ft.
Total = 240.70 Lin. Ft.
Area – (240.70 × 23.5 ÷ 9) = 628.5 Sq. Yds.

24'-6" WIDTH
Sta. 467+20.77 to Sta. 470+48.68 = 327.91 Lin. Ft.
Sta. 473+08.2 to Sta. 477+80.07 = 471.87 Lin. Ft.
Total = 799.78 Lin. Ft.
Area – (799.78 × 24.5 ÷ 9) = 2177.2 Sq. Yds.
TOTAL AREA B-20 PAV'T. – (1750.0 + 628.5 + 2177.2) = 4555.7 Sq. Yds.

T-30 BITUMINOUS PRIME COAT – Sec. M-5.7 RT-2 or 3
4556 × 0.35 = 1595 Gals.

TYPE T-32

22' WIDTH
Sta. 459+00 to Sta. 466+00 = 700.00 Lin. Ft.
Area – (700 × 22 ÷ 9) = 1711 Sq. Yds.

23' AVERAGE WIDTH
Sta. 466+00 to Sta. 467+20.77 = 120.77 Lin. Ft.
Sta. 477+80.07 to Sta. 479+00 = 119.93 Lin. Ft.
Total = 240.70 Lin. Ft.
Area – (240.70 × 23 ÷ 9) = 615 Sq. Yds.

24' WIDTH
Sta. 467+20.77 to Sta. 470+48.68 = 327.91'
Sta. 473+08.2 to Sta. 477+80.07 = 471.87'
Total = 799.78
Area (799.78 × 24 ÷ 9) = 2133 Sq. Yds.
TOTAL AREA T-32 PAV'T. – (1711 + 615 + 2133) = 4459 Sq. Yds.

T-32 BITUMINOUS ROAD MIX SURFACE COURSE
RT-9 Bituminous Material for Road Mix
(4450 × 0.70) × 1.20 (for slag) = 3746 Gals.
No. 46 Aggregate for Road Mix
4450 × 0.0292 = 130 Cu.Yds.
RT-9 Bituminous Material for Seal Coat
4450 × 0.25 = 1115 Gals.
No. 9 Aggregate for Choke
4459 × 0.00375 = 17 Cu.Yds.
No. 6 Aggregate for Seal Coat
4459 × 0.00775 = 34 Cu.Yds.

WATER CALCULATIONS

Total Embankment = 20402 Cu.Yds.
20,402 × 5 ÷ 1000 = 102 M-Gal's.

SUMMARY OF QUANTITIES

ITEM Nº	QUANTITIES	UNIT	DESCRIPTION
	CODE TYPE - 3210		
			~ROADWAY~
E - 1	8729	CU. YDS.	ROADWAY EXCAVATION
E - 3	21	CU. YDS.	CHANNEL EXCAVATION
E - 4	16293	CU. YDS.	BORROW
E - 9	LUMP	LUMP SUM	REMOVAL OF TREES AND STUMPS
E - 11	102	M-GAL'S.	WATER
E - 12	1748	LIN. FT.	PIPE REMOVED AND STORED - 15" AND UNDER
E - 12	7	LIN. FT.	PIPE REMOVED AND STORED - OVER 15"
E - 12	70	LIN. FT.	PIPE REMOVED AND DISPOSED OF - 15" AND UNDER
E - 12	3	LIN. FT.	PIPE REMOVED AND DISPOSED OF - OVER 15"
I - 1	41	LIN. FT.	12" PIPE FOR DRIVEWAYS
I - 1	82	LIN. FT.	15" PIPE FOR DRIVEWAYS
I - 10	72.2	SQ. YDS.	RIPRAP TYPE "A" GROUT FILLED
I - 14	70	LIN. FT.	CONCRETE PAVED GUTTER TYPE "A" AS PER PLAN
I - 14	70	LIN. FT.	CONCRETE PAVED GUTTER TYPE "B" AS PER PLAN
I - 15	1,150	LIN. FT.	GUARD RAIL, STEEL BEAM TYPE (DEEP)
I - 15	208	LIN. FT.	GUARD RAIL, WOVEN WIRE TYPE - 3 TAPES STANDARD STRENGTH OR WIRE CABLE TYPE, 3 CABLES
I - 15	64	LIN. FT.	GUARD RAIL REMOVED AND STORED
I - 17	216	CU. YDS.	SIDE APPROACHES, MAIL BOX TURNOUTS AND BERM MATERIAL
L - 9	20,262	SQ. YDS.	SEEDING AND PROTECTING, TYPE "A"
L - 9	1.83	TONS.	COMMERCIAL FERTILIZER (10-6-4 FORMULA)
L - 9	9.16	TONS	AGRICULTURAL GROUND LIMESTONE
L - 10	100	SQ. YDS.	SODDING
M - 10	20	TONS	CALCIUM CHLORIDE FOR MAINTAINING TRAFFIC (ESTIMATED)
T - 110	1,017	CU. YDS.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC (ESTIMATED)
Special	1	Each	EXISTING WELL ABANDONED
			~PAVEMENT~
B - 20	4556	SQ. YDS.	WATERBOUND MACADAM BASE COURSE - 3 - 4" COURSES
T - 30	18	GAL'S.	BITUMINOUS TACK COAT - SEC. M-5.5 M5-2
T - 30	1,595	GAL'S.	BITUMINOUS PRIME COAT - SEC. M-5.7 RT 2 or 3
T - 32	3,746	GAL'S.	ROAD MIX BITUMINOUS MATERIAL, SEC. M-5.7 RT-9
T - 32	130	CU. YDS.	Nº 46 AGGREGATE FOR ROAD MIX
T - 32	1,115	GAL'S.	SEAL COAT BITUMINOUS MATERIAL, SEC. M-5.7 RT-9
T - 32	17	CU. YDS.	Nº 9 AGGREGATE FOR CHOKE
T - 32	34	CU. YDS.	Nº 6 AGGREGATE FOR SEAL COAT
I - 12	32	LIN. FT.	CONCRETE CURB TYPE 1 AS PER PLAN
I - 7	104	SQ. YDS.	REINFORCED CONCRETE APPROACH SLABS
B - 71	77	SQ. YDS.	9" REINFORCED PORTLAND CEMENT CONCRETE BASE COURSE
T - 35	11.7	CU. YDS.	ASPHALTIC CONCRETE SURFACE COURSE TYPE "A" or "C" (70-80 or 85-100)
			~STRUCTURES 20' SPAN AND UNDER~
E - 2	141	CU. YDS.	EXCAVATION FOR STRUCTURES
S - 1	2.2	CU. YDS.	CONCRETE FOR STRUCTURES CLASS "C"
S - 1	5.6	CU. YDS.	CONCRETE FOR STRUCTURES CLASS "E"
S - 4	37	LBS.	REINFORCING STEEL
S - 22	47	CU. YDS.	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
S - 23	6	LIN. FT.	DOWEL HOLES
S - 27	16	LIN. FT.	12" PIPE FOR ROADWAY CULVERTS
S - 27	323	LIN. FT.	15" PIPE FOR ROADWAY CULVERTS

STRUCTURE OVER 20 FT. SPAN
FOR ESTIMATED QUANTITIES SEE SHEET Nº 24

RAILROAD FORCE ACCOUNT WORK
See Sheet Nº 27A

Note :- For separation of quantities for pavement types, see sheet Nº 3.

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

HARRISON COUNTY
S.H. 26 - SEC. "R" (PT.)

6
27

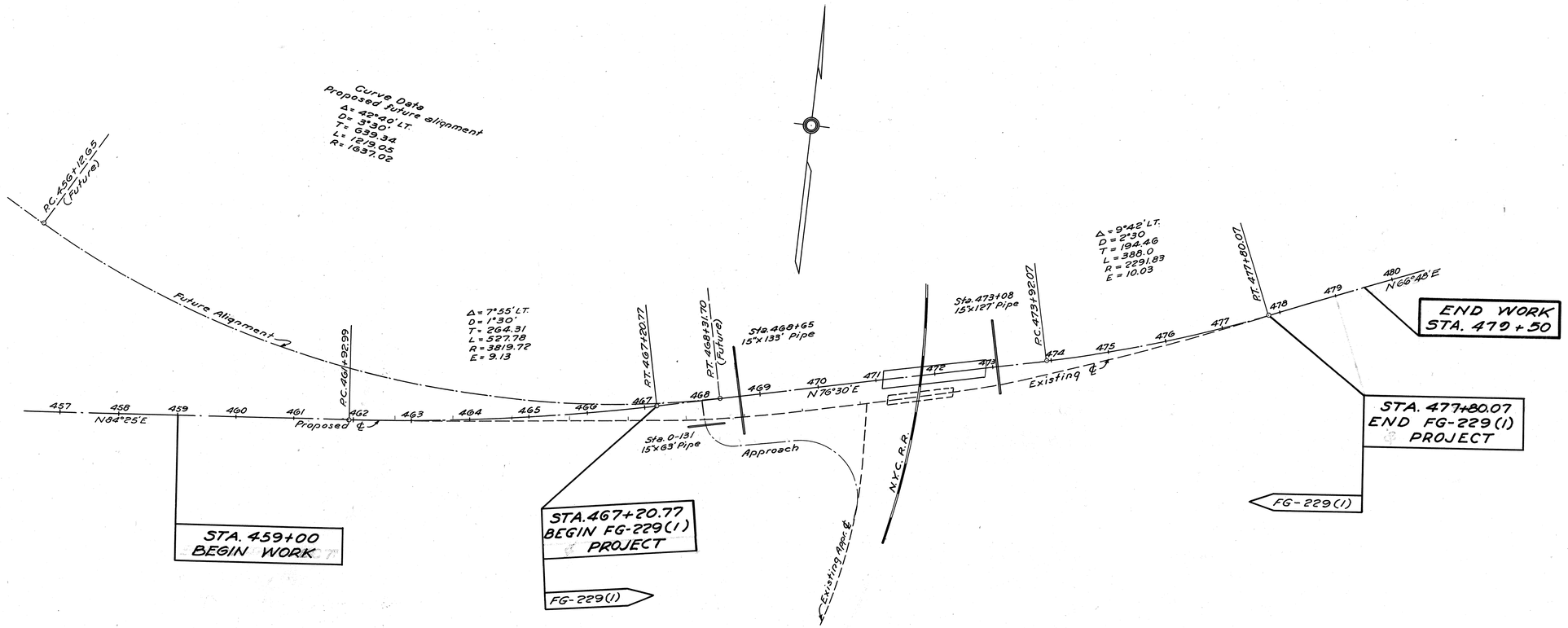
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

7
27

HARRISON COUNTY
S.H. 26 SEC. R(PT)

LAYOUT PLAN
SHOWING NEW ALIGNMENT IN RELATION TO EXISTING PAVEMENT

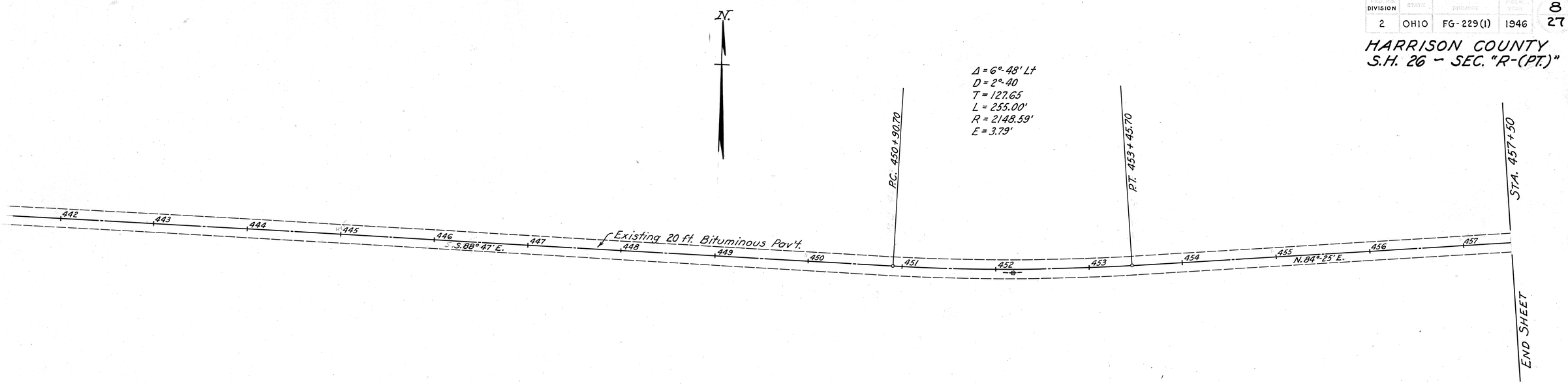
SCALE 1" = 100'

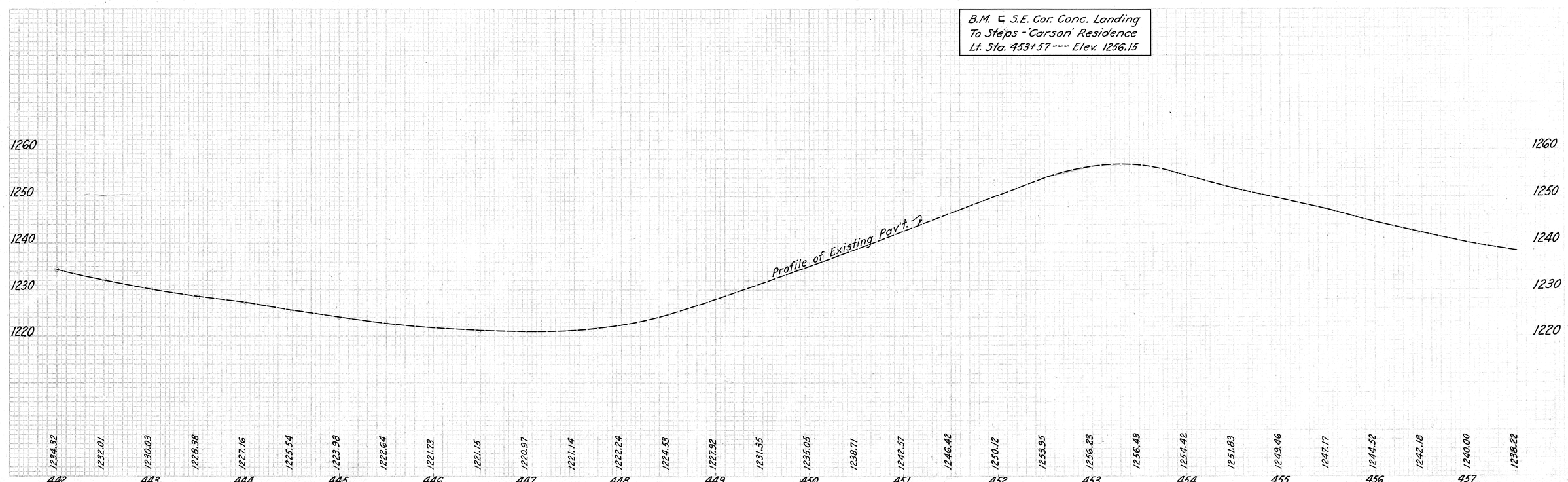


LAYOUT PLAN

FED. AID DIVISION	STATE	PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
2	OHIO	FG-229(1)	1946	8	27

HARRISON COUNTY
S.H. 26 – SEC. "R-(PT.)"



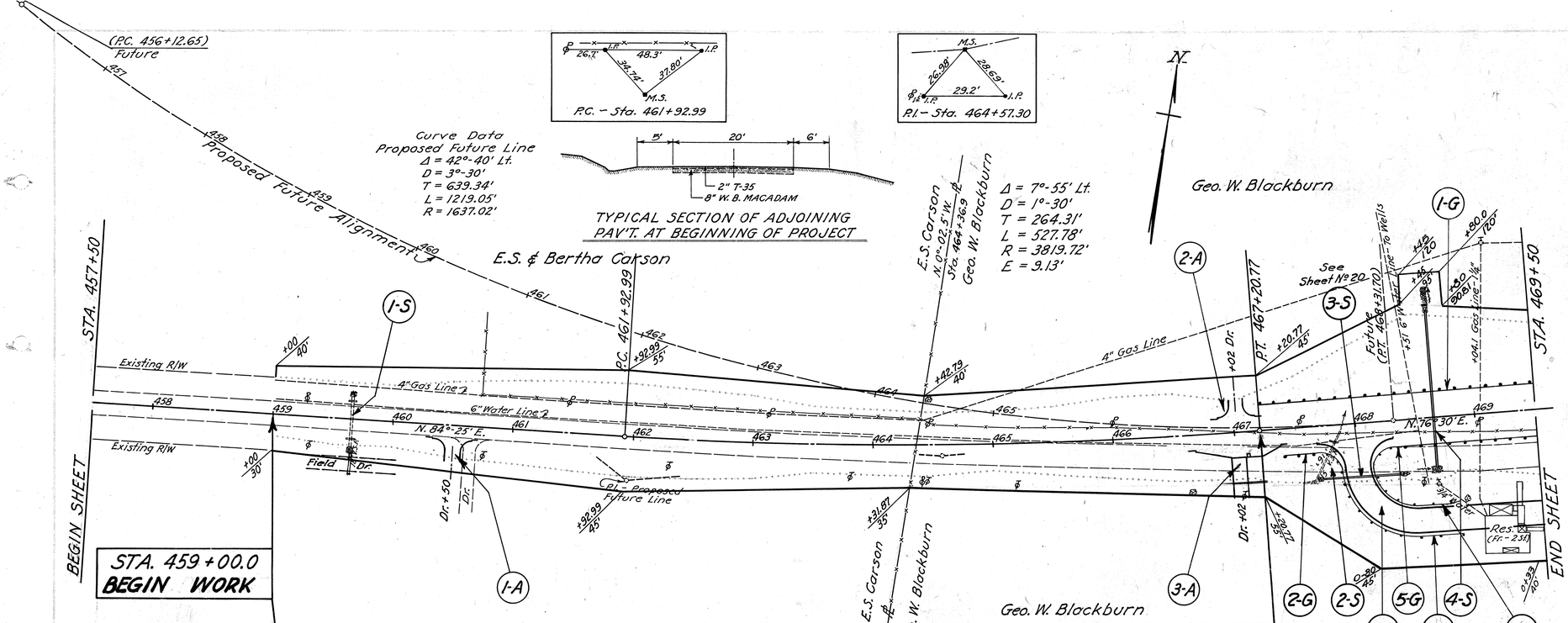


PLAN AND PROFILE STA. 442+00 TO STA. 457+50

HIGHWAY PLAN-PROFILE PLATE 5
THE FRIEDLEY-POST CO., CANTON

DIVISION				
2	OHIO	FG-229(1)	1946	9 / 27

HARRISON COUNTY
S.H. 26 – SEC. "R-(Pt.)"



STRUCTURES – 20' SPAN & UNDER – S

REF. №	STATION	SEE SHEET	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH
1-S	459+63.5	19	C.I.P. CORR. M.P.	8" / 18"	9' / 10'	PIPE	12"	29'-0"
2-S	467+91		V.S.P. CORR. M.P.	12" / 14"	38.5' / 17.5'			
3-S	0-131	20				PIPE	15"	63'-0"
4-S	468+65	21				PIPE	15"	133'-0"

APPROACHES – A

REF. №	STATION	SIDE	SEE SHEET	PIPE – LIN. FT. REMOVE & STORE	PIPE – LIN. FT. NEW	I-17 AGGR. Cu.Yds.
					15"	
1-A	460+50	RT				5
2-A	467+02	RT.				4
3-A	467+02	RT.			44	10
4-A	Approach	RT.	18			
SHEET TOTAL					44	19

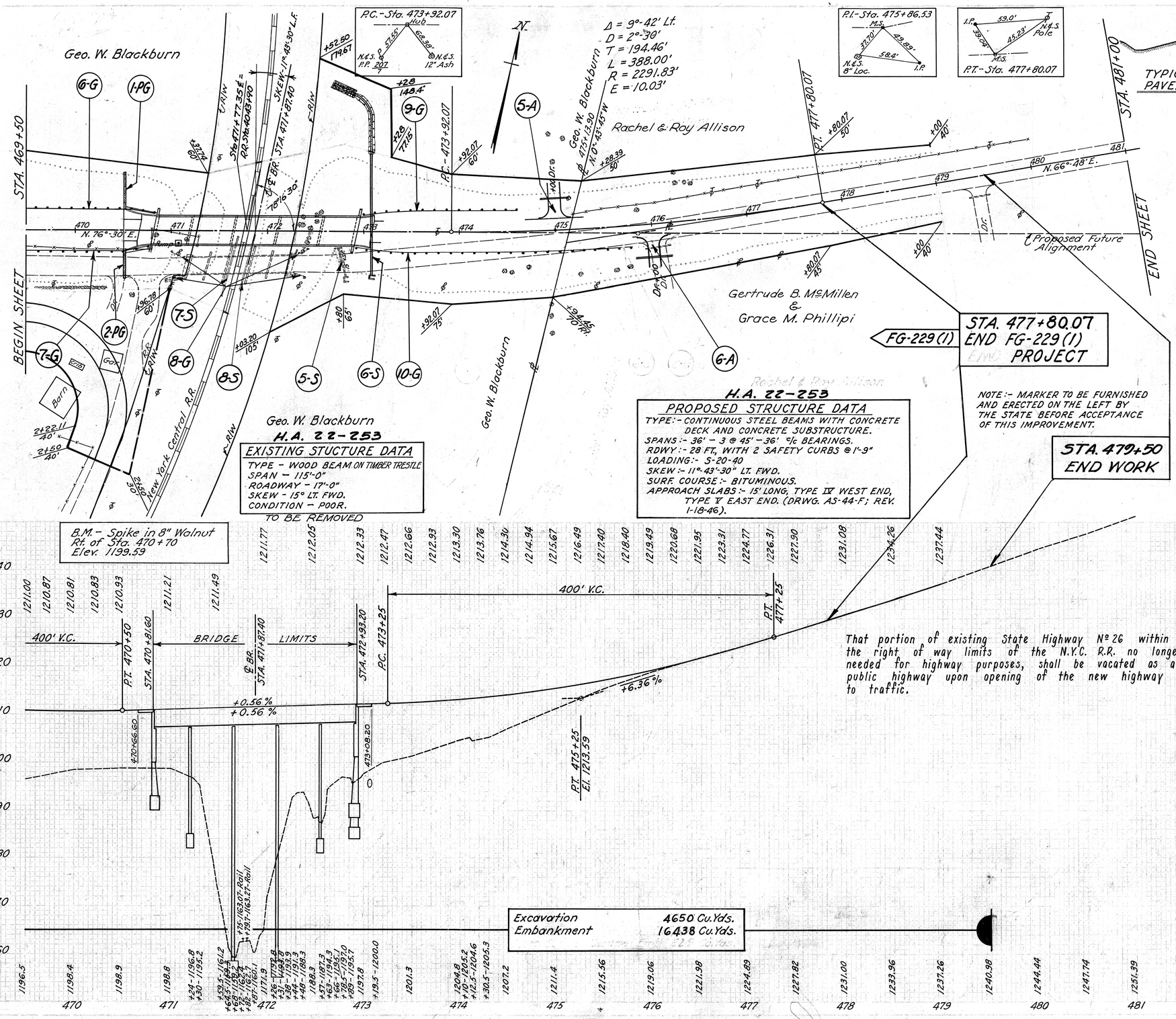
GUARD RAIL – G

REF. №	STATION FROM	STATION TO	SIDE	ROADWAY LIN. FT.	REMOVE & STORE LIN. FT.
1-G	467+21.56	469+50	LT.	228.44	
2-G	467+34.8	467+87	RT.	62.50	
5-G	468+13	469+50	RT.	147.50	
SHEET TOTAL				438.44	

EROSION CONTROL

STATION FROM	STATION TO	SIDE	SEE SHEET	L-3 SEEDING Sq. Yds.	FERTILIZER Lbs.	GROUND AGRICULTURE LIMESTONE Lbs.
459+00	469+50	R. & L.		8235	1482	7412
SHEET TOTAL				8235	1482	7412

PLAN AND PROFILE STA. 457+50 TO STA. 469+50



5' 20' 5'
2" T-35
8" W.B. MACADAM

TYPICAL SECTION OF ADJOINING PAVEMENT AT END OF PROJECT

DIVISION 2 | OHIO | FG-229(1) | 1946 | 10 | 27

HARRISON COUNTY
S.H. 26 - SEC. "R-(Pt.)"

STRUCTURES - 20' SPAN & UNDER - S

REF. Nº	STATION	SEE SHEET	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH
S-5	472+78 RT.		PIPE	15"	31'-6"			
G-S	473+08	22				PIPE	15"	127'-0"
7-S	471+65 Rt		PIPE	15"	64.0'			
8-S	471+80 Rt.		PIPE	15"	58.5'			

APPROACHES - A

REF. Nº	STATION	SIDE	SEE SHEET	PIPE - LIN. FT. REMOVE & STORE 12"	PIPE - LIN. FT. NEW 12"	PIPE - LIN. FT. NEW 15"	I-17 AGGR. Cu. Yds.
S-A	475+00	LT.			28		6
G-A	476+00	RT.		26		38	5
SHEET TOTAL				26	28	38	11

GUARD RAIL - G

REF. Nº	STATION FROM	STATION TO	SIDE	ROADWAY LIN. FT.	REMOVE & STORE LIN. FT.
6-G	469+50	470+83.5	LT.	134.06	
7-G	469+50	470+76.8	RT.	127.50	
8-G	470+93	472+43	R&L.		64
9-G	472+98	474+73.5	LT.	175.00	
10-G	472+91.3	475+64.1	RT.	275.00	
SHEET TOTAL				711.56	64

TREE REMOVAL

STATION FROM	STATION TO	SIDE	TREES - EACH 9"-15"	15"-24"	
469+50	479+00	LT.	5		
469+50	479+00	RT.	13	1	

PAVED GUTTER - PG

REF. Nº	STATION	SIDE	SEE SHEET	TYPE "A" LIN. FT.
1-PG	470+50.1	LT.	27	40
2-PG	470+50.1	RT.	27	30
SHEET TOTAL				70

EROSION CONTROL

STATION FROM	STATION TO	SIDE	SEE SHEET	L-9 SEEDING Sq. Yds.	FERTILIZER LBS.	GROUND AGRICULTURE LIMESTONE LBS.
469+50	479+50	R&L.		9562	1722	8606
SHEET TOTAL				9562	1722	8606

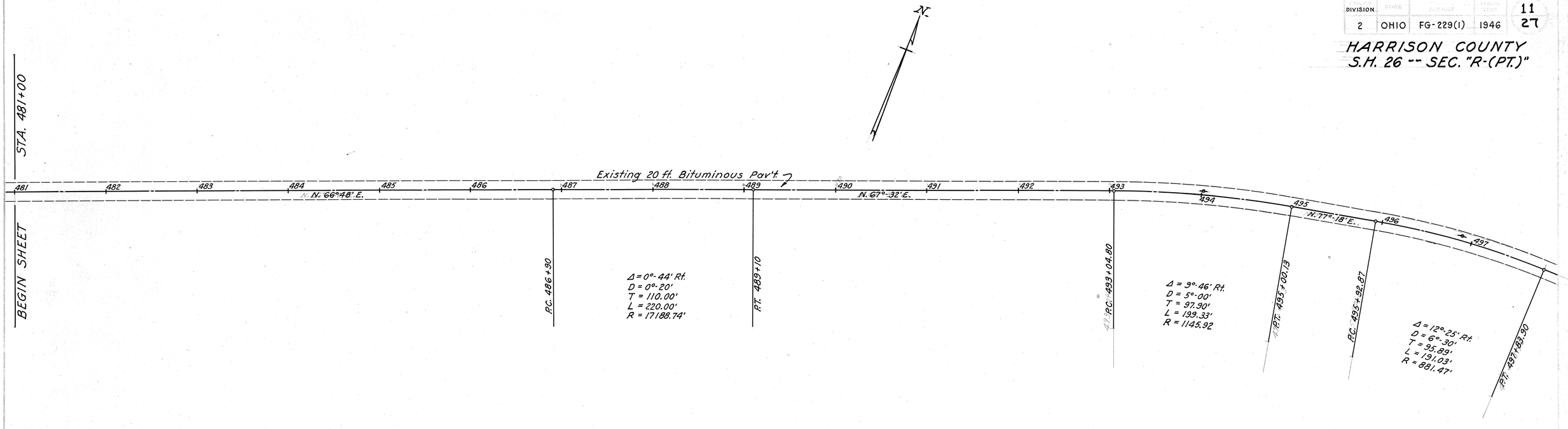
Item Special
EXISTING WELL ABANDONED
(See note on sheet Nº 3)

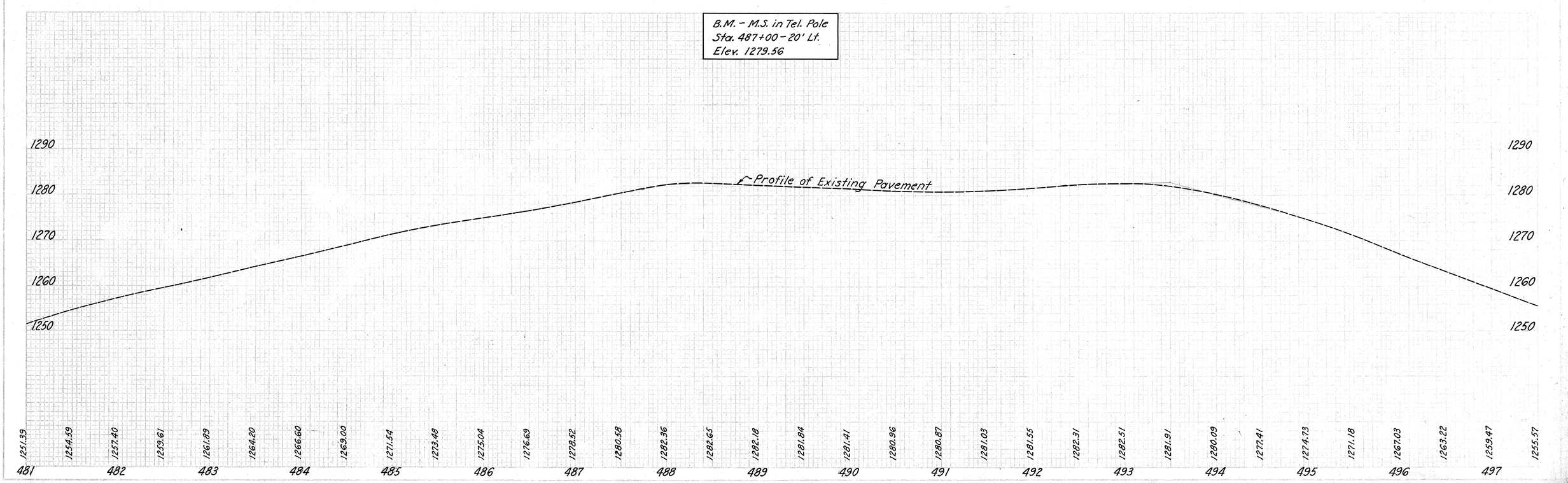
Location	Each
Sta. 471+08 Rt.	1

PLAN AND PROFILE STA. 469+50 TO STA. 481+00

DIVISION	STATE	PROJECT	PHASE YEAR	
2	OHIO	FG-229(1)	1946	11 / 27

HARRISON COUNTY
S.H. 26 -- SEC. "R-(PT.)"





PLAN AND PROFILE STA. 481+00 TO STA. 497+83.9

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

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HARRISON COUNTY
S.H. 26 - SEC. "R-(PT.)"

CURVE TABLES

P.C. 473+92.07			D = 2°-30' L.T.			P.T. 477+80.07		
LEFT						RIGHT		
EDGE OF PAV'T.	WIDTH	DEDUCT CROWN	STATION	℄ PROFILE GRADE ELEV.		ADD SUPER	WIDTH	EDGE OF PAV'T.
1212.12	12'	0.21'	473+00	1212.33		0.00	12'	1212.12
1212.26			+25	1212.47				1212.38
1212.45			+50	1212.66				1212.81
1212.72			+75	1212.93				1213.33
1212.97			+92.07	1213.18		Obtained Graphically		1213.73
1213.09			474+00	1213.30				1213.93
1213.55			+25	1213.76				1214.56
1214.09			+50	1214.30				1215.24
1214.73			+75	1214.94				1215.96
1215.46		0.21'	475+00	1215.67				1216.70
1216.30		0.19'	+25	1216.49				1217.50
1217.21			+50	1217.40				1218.37
1218.21			+75	1218.40		1.14		1219.35
1219.30			476+00	1219.49		1.14		1220.44
1220.49			+25	1220.68				1221.64
1221.76			+50	1221.95				1222.93
1223.12			+75	1223.31				1224.31
1224.58			477+00	1224.77				1225.77
1226.12			+25	1226.31		Obtained Graphically		1227.28
1227.71			+50	1227.90				1228.76
1229.30			+75	1229.49				1230.21
1229.62	12.00		+80.07	1229.81			12.00	1230.50
1230.89	11.84		478+00	1231.08			11.84	1231.62
1232.48	11.63		+25	1232.67			11.63	1233.01
1234.07	11.42		+50	1234.26			11.42	1234.38
1235.66	11.21		+75	1235.85			11.21	1235.78
1237.25	11.00	0.19'	479+00	1237.44		0.00	11.00	1237.25

P.C. 461+92.99			D = 1°-30' L.T.			P.T. 467+20.77		
LEFT						RIGHT		
EDGE OF PAV'T.	WIDTH	DEDUCT CROWN	STATION	℄ PROFILE GRADE ELEV.		ADD SUPER	WIDTH	EDGE OF PAV'T.
1232.58	11'	0.19	460+50	1232.77		0.00	11'	1232.58
1232.38			+75	1232.57				1232.42
1232.18			461+00	1232.37				1232.30
1231.98			+25	1232.17				1232.22
1231.78			+50	1231.97				1232.14
1231.56			+75	1231.75				1232.05
1231.37			+92.99	1231.56		Obtained Graphically		1231.94
1231.29			462+00	1231.48				1231.89
1230.97			+25	1231.16				1231.63
1230.61			+50	1230.80		0.68		1231.29
1230.20			+75	1230.39				1230.88
1229.75			463+00	1229.94				1230.43
1229.25			+25	1229.44				1229.93
1228.71			+50	1228.90				1229.39
1228.12			+75	1228.31				1228.80
1227.48			464+00	1227.67				1228.16
1226.80			+25	1226.99				1227.48
1226.07			+50	1226.26				1226.75
1225.29			+75	1225.48				1225.97
1224.47			465+00	1224.66				1225.15
1223.60			+25	1223.79				1224.28
1222.69			+50	1222.88				1223.37
1221.73			+75	1221.92				1222.41
1220.73	11.00'		466+00	1220.92			11.00'	1221.41
1219.68	11.21		+25	1219.87		0.68	11.21	1220.36
1218.58	11.42	0.19	+50	1218.77			11.42	1219.29
1217.52	11.66		+75	1217.69			11.66	1218.25
1216.51	11.83		467+00	1216.69			11.83	1217.21
1215.72	12.00	Obtained Graphically	+20.77	1215.92		Obtained Graphically	12.00	1216.37
1215.57			+25	1215.77				1216.20
1214.71		0.21	+50	1214.92				1215.26
1213.95			+75	1214.16				1214.34
1213.26			468+00	1213.47				1213.49
1212.65			+25	1212.86				1212.74
1212.12			+50	1212.33				1212.14
1211.67	12'	0.21	+75	1211.88		0.00	12'	1211.67

DIVISION 13
2 OHIO FG-229(1) 1946 27

HARRISON COUNTY
S.H. 26 SEC. R(Pt.)

Seeding Width	Seeding Sq.Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	320			202	0
60		134	0		
	358			285	0
69		174	0		
	400			374	0
75		230	0		
	428			474	0
79		282	0		
	428			477	0
75		233	0		
	400			375	0
69		172	0		
	356			239	0
59		86	0		
	290			119	0
45		42	0		
	264			71	5
50		35	5		
	198			53	5
21		22	0		

1230 — 1228.90 — 463+50 — 1230.6 — C-196

1230 — 1229.94 — 463+00 — 1232.1 — C-174

1230 — 1230.80 — 462+50 — 1233.5 — C-230

1230 — 1231.48 — 462+00 — 1234.5 — C-282

1230 — 1231.97 — 461+50 — 1234.9 — C-233

1230 — 1232.37 — 461+00 — 1234.3 — C-172

1230 — 1232.77 — 460+50 — 1233.8 — C-186

1230 — 1233.17 — 460+00 — 1233.5 — C-42

1230 — 1233.57 — 459+50 — 1233.5 — C-22, F-5

1230 — 1233.97 — 459+00 — 1233.9 — C-22

(1-A) STA. 460+50 RT.- DRIVE
ITEM I-117 AGG. = 5 CU. YDS.

STA. 459+00
BEGIN WORK

1200 — 1212.33 — 468+50 — 1197.9 — F-1272

BEGIN GUARD RAIL ON RT. AT STA. 468+13

END GUARD RAIL ON RT. AT STA. 467+87

BAL. +22

C-15 — EL. 1202.8

(4-A) See Sheet #18

1200 — 1213.47 — 468+00 — 1202.2 — F-820

C-12 — EL. 1205.0

EXCAVATION — 3350 CU. YDS.
EMBANKMENT — 2792 CU. YDS.

BEGIN GUARD RAIL ON RT. AT STA. 467+34.8

1210 — 1214.92 — 467+50 — 1210.6 — F-322

STA. 467+20.77 BEGIN FG-229(1) PROJECT

BEGIN GUARD RAIL ON LT. AT STA. 467+21.5

EL. 1208.0

STA. 467+02 RT - MAIL BOX APPR & DRIVE

(3-A) 15" PIPE = 44 LIN. FT.
ITEM I-117 AGG. = 10 CU. YDS.

1210 — 1216.69 — 467+00 — 1216.4 — C-19, F-100

(2-A) STA. 467+02 LT - DRIVE
ITEM I-117 AGG = 4 CU. YDS.

1220 — 1218.77 — 466+50 — 1215.0 — C-69, F-75

1220 — 1220.92 — 466+00 — 1219.8 — C-85, F-45

1220 — 1222.88 — 465+50 — 1221.8 — C-39, F-20

1220 — 1224.66 — 465+00 — 1224.5 — C-26, C-8, F-6

1230 — 1226.26 — 464+50 — 1227.3 — C-59

1230 — 1221.67 — 464+00 — 1229.1 — C-84

Seeding Width	Seeding Sq.Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
131		15	1272		
	661			14	1070
48				25	1937
				11	867
107		12	820		
	503			19	1057
74		9	322		
				0	104
	356			26	391
54		19	100		
	325			81	162
63		69	75		
	345			143	111
61		85	45		
	322			115	60
55		39	20		
	283			68	24
47		34	6		
	270			86	6
50		59	0		
	292			132	0
55		84	0		

CROSS SECTIONS STA. 459+00 TO STA. 468+50

Seeding & Earthwork under East End of Bridge (See Sheet No. 17)

Seeding & Earthwork under West End of Bridge (See Sheet No. 16)

BRIDGE

End of Guard Rail on Lt. At Sta. 470+83.5

End of Guard Rail on Rt. At Sta. 470+76.80

Begin Guard Rail on Lt. At Sta. 472+98

Begin Guard Rail on Rt. At Sta. 472+91.3

Seeding W.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	1730			2747	824
	571			371	285
100			0		745
	38		0		181
109			0		740
	151		0		768
109			0		836
			0		856
	636		0		1588
120			0		905
	683		0		1859
126			0		1103
	711		0		2223
	130		0		1298
	725		14		2380
100			51		452
	292			44	483
110			44		591
	317			37	598
118			36		700
	333			28	708
122			25		830
	340			17	806
123			12		910
	422			7	1192
116			0		1115

CROSS SECTIONS STA. 469+00 TO STA. 474+25

DIVISION 2 OHIO FG-229(1) 1946 — 15 / 27

HARRISON COUNTY
S.H. 26 SEC R (Pt.)

Seeding W.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
				0	46
	82	98	35		
	112			53	17
	86	142	41		
	365	185	80		
	87	121	73	0	14
	506	202	219		
	95	97	164		
	541	172	483		
	100	89	358		
	292	65	375		

(6-A)
Sta. 476+00 Rt - Drive
15" Pipe = 38 Lin. Ft.
Item I-117 Agg. = 5 Cu.Yds.

1220 — 1219.49 — 476+00 — 1219.1
El. 1216.4

1220 — 1218.95 — 475+88 — 1218.4
El. 1215.6

End Guard Rail on Rt.
At Sta. 475+64.1

1210 — 1217.40 — 475+50 — 1215.5
El. 1213.5

(4-A)
Sta. 475+00 Lt. - Drive
12" Pipe = 28 Lin. Ft.
Item I-117 Agg. = 6 Cu.Yds.

1210 — 1215.67 — 475+00 — 1211.3
El. 1210.2

End of Guard Rail on Lt.
At Sta 474+73.5

1210 — 1214.30 — 474+50 — 1207.2
El. 1207.0

END WORK
STA. 479+50 — END EARTHWORK

1230 — 1237.44 — 479+00 — 1237.3

1230 — 1234.26 — 478+50 — 1234.0
El. 1232.6

1230 — 1231.08 — 478+00 — 1231.0
El. 1230.3

1230 — 1227.90 — 477+50 — 1227.8

STA. 477+80.07
END FG-229(1)
PROJECT

1220 — 1224.77 — 477+00 — 1224.9

1220 — 1221.95 — 476+50 — 1222.0

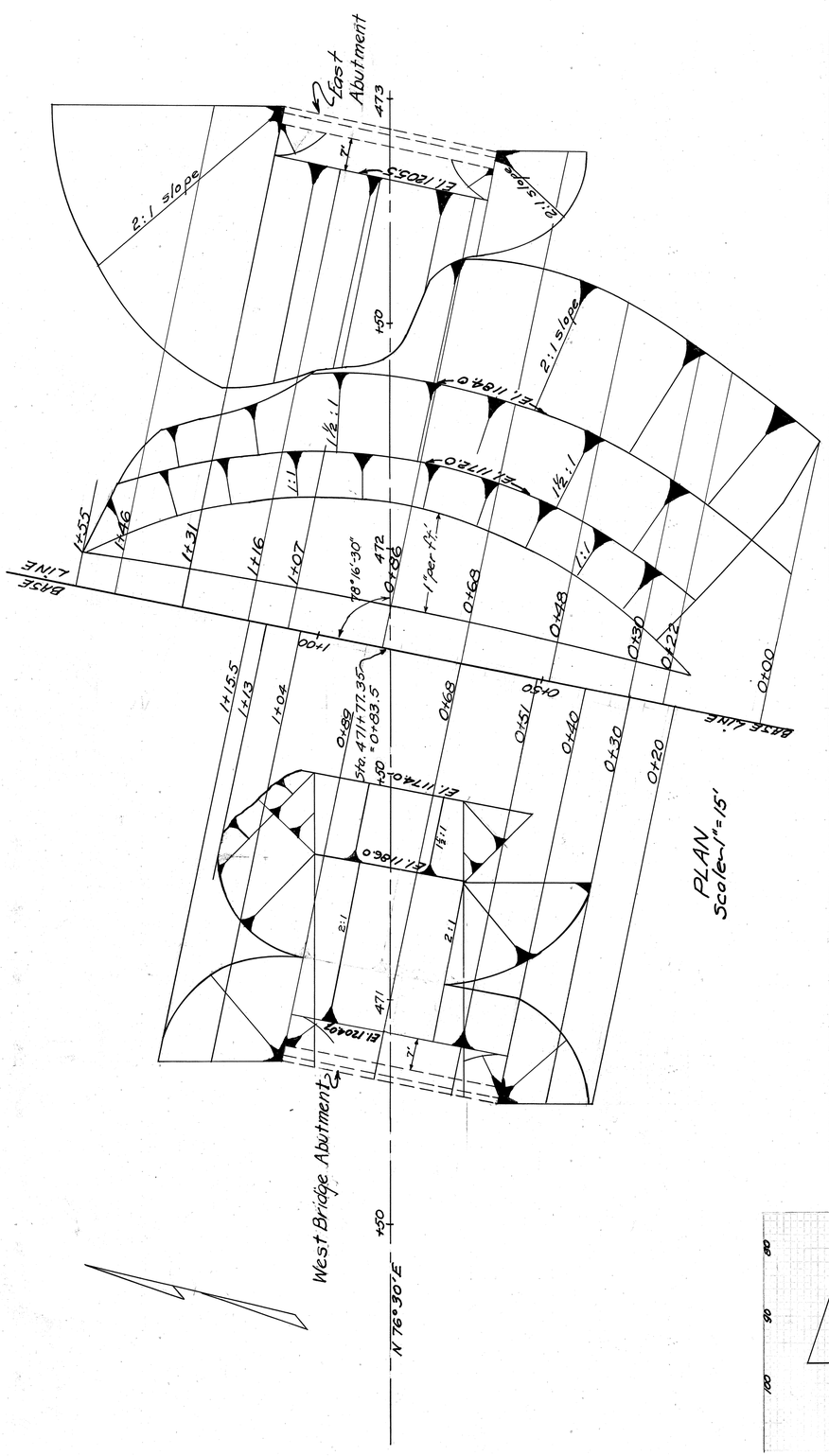
1220 — 1220.82 — 476+28 — 1220.7

1220 — 1220.33 — 476+18 — 1220.2

EXCAVATION 4650 Cu.Yds.
EMBANKMENT 16438 Cu.Yds.

Seeding W.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
0		0	0		
	56			12	6
		13	6	Ahead	
20		35	6	Back	
	222			42	30
60		10	26		
	345			34	42
64		27	19		
	370			63	39
69		41	23		
	389			114	34
70		82	14		
	406			202	32
76		136	21		
	192			115	18
81		147	22		
90				46	12
81		101	43		
	163			66	26

CROSS SECTION STA. 474+50 TO STA. 479+00



PLAN
Scale 1" = 15'

	Sta. 1+15 – End Earthwork	0	38	63	74	168	70	132	70	73
Seeding	End Area	0		72 78	212 137	200 80		75 74		
	Cut									23 40
	Fill		15 16		79 60	160 85		87 49		
	Cu. Yds.									

Excavation	371 Cu. Yds.
Embankment	285 Cu. Yds.
Seeding	571 Sq. Yds

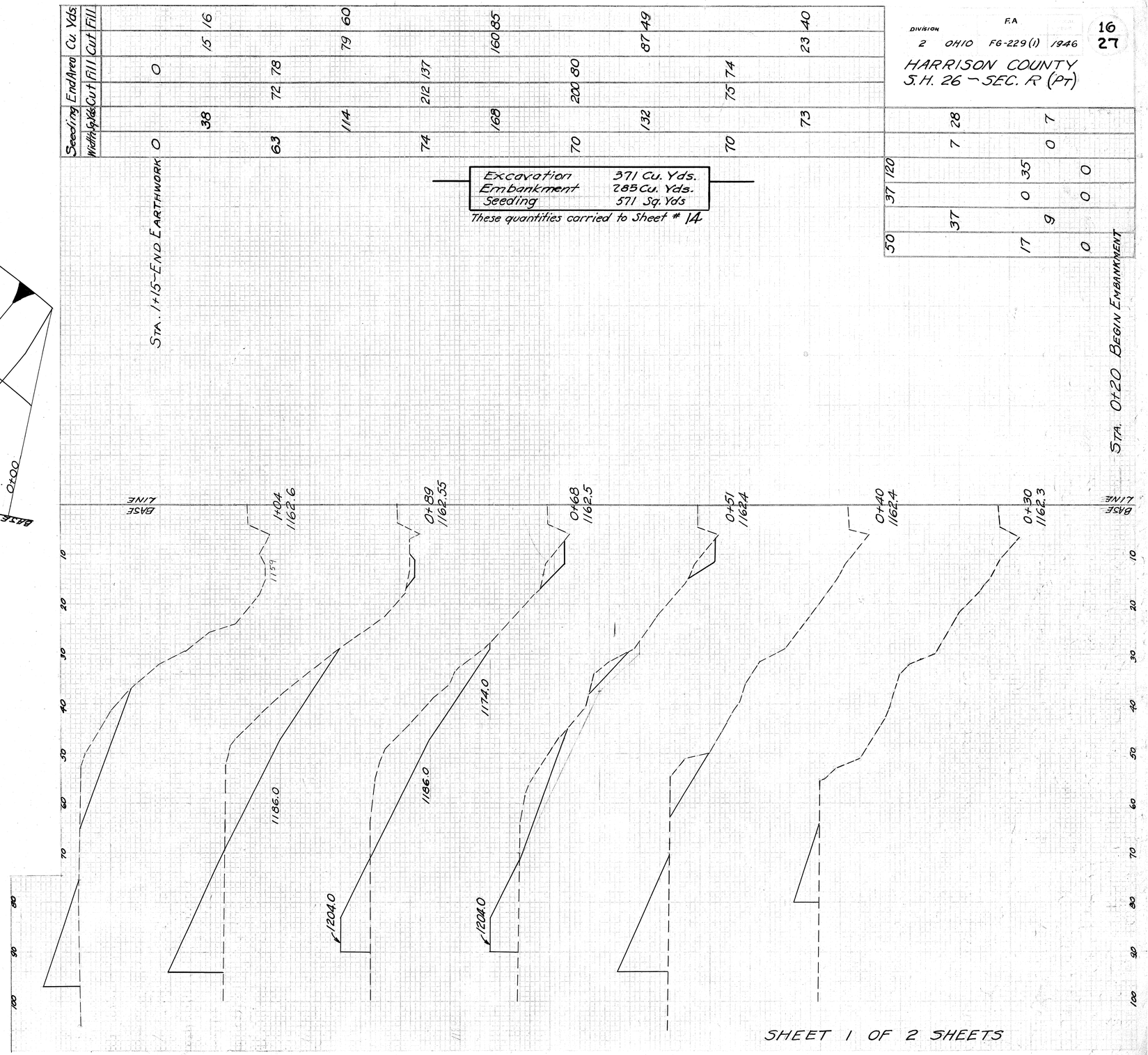
These quantities carried to Sheet # 14

50		37		17	9		0		0	
37	120			0	35		0		0	0
		7	28			0	7			

DIVISION 2 OHIO F.A. F6-229(1) 1946

16
27

HARRISON COUNTY
S.H. 26 – SEC. R (PT)



SHEET 1 OF 2 SHEETS

EARTHWORK AT WEST END OF BRIDGE

DIVISION 2 | F.A. OHIO FG 229(1) 1946 | 17 27

HARRISON COUNTY
S.H. 26 SEC. R (PT)

	Seeding End Area Cu. Yds.	Cut	Fill
Width Yds.	Cut Fill		
0	0		
211	0		
115	82 250	17	153
188	235 400	88	191
110	185 192		
183	431 290	159	90
110	525 250	506	152
111	775 141	506	54
272	743 21	2	
240	0 501		
120	609		
120	335		
59			
92			
0			
149			
87			
163			

397	218	0
91		89
66	88	
76	72	0

Excavation	2747 Cu. Yds.
Embankment	824 Cu. Yds.
Seeding	1730 Sq. Yds.

These Quantities Carried to Sheet #14

Sta. 1+79 - End Embankment

Sta. 1+65 - End Excavation

Sta. 0+63 - Begin Embankment

Sta. 0+00 - Begin Excavation

1205.5

1184.0

1172.0

BASE LINE

1+46 1162.7

1+31 1162.7

1+16 1162.65

1+07 1162.6

0+86 1162.55

0+68 1162.5

0+48 1162.4

0+30 1162.3

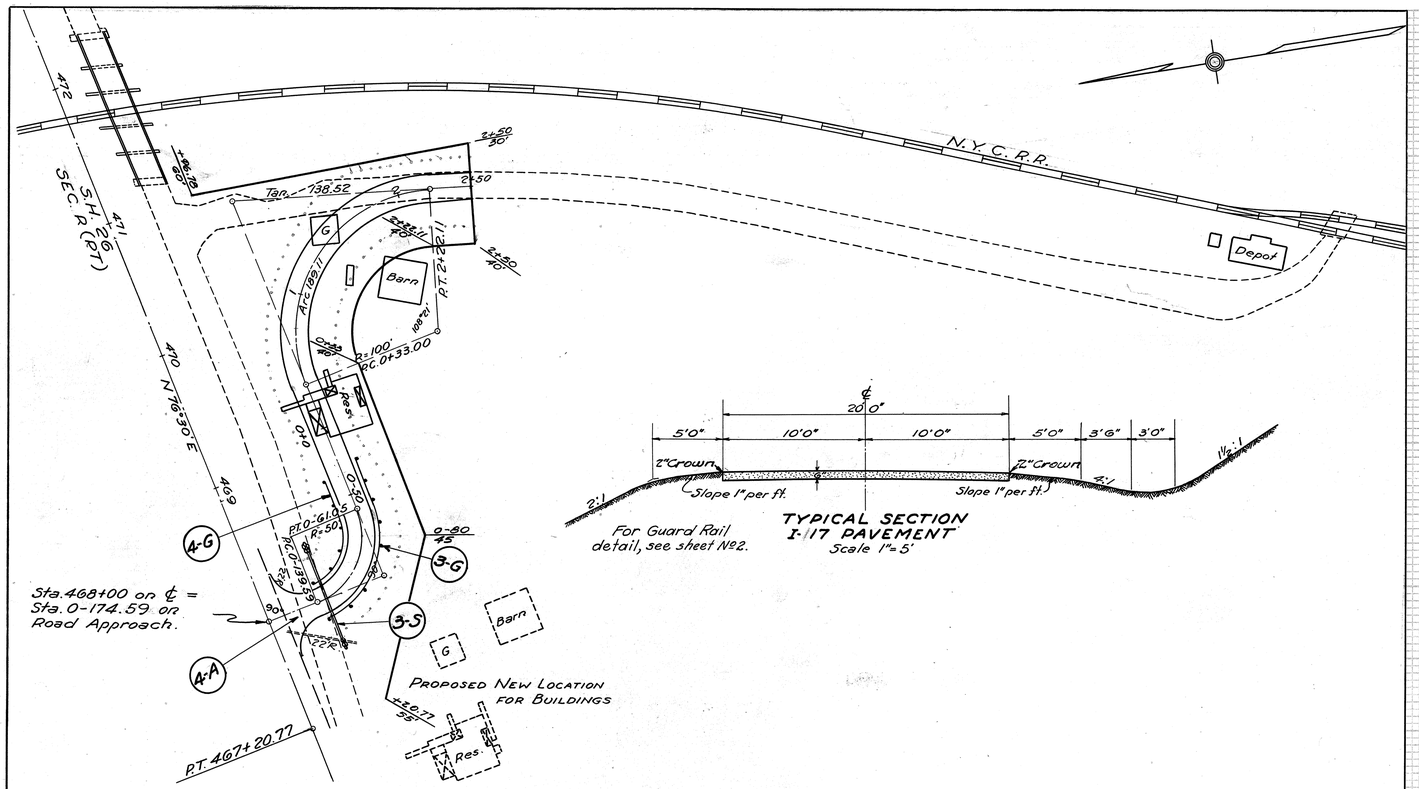
0+22 1162.3

SHEET 2 OF 2 SHEETS

EARTHWORK AT EAST END OF BRIDGE

DIVISION	STATE	PROJECT	
2	OH10	FG-229(1) 1946	18 27

HARRISON COUNTY
S.H. 26 SEC. R (PT)



For Guard Rail detail, see sheet No 2.

TYPICAL SECTION
I-17 PAVEMENT
Scale 1"=5'

STRUCTURES - 20' SPAN & UNDER-S

REF Nº	STATION	SEE SH.	REMOVALS TYPE	REMOVALS SIZE	REMOVALS LENGTH	NEW WORK TYPE	NEW WORK SIZE	NEW WORK LENGTH
3-S	0-131	20				PIPE	15"	63'
TOTAL								63'

EROSION CONTROL

STATION FROM	STATION TO	SIDE	SEE SH.	L-9 SEEDING SQ. YDS.	FERTILIZER LBS.	GROUND AGRICULTURAL LIMESTONE LBS.
0-150	3+00	RT-LT		2465	444	2218
TOTAL				2465	444	2218

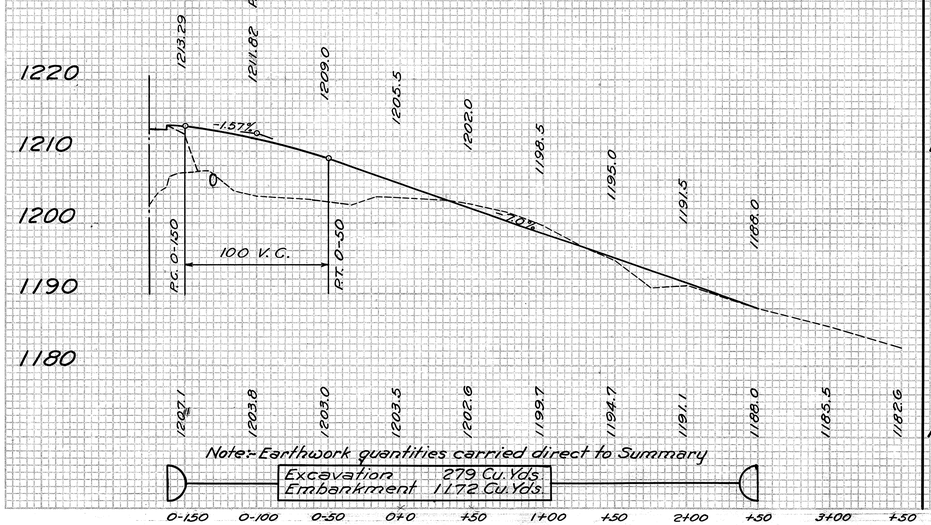
GUARD RAIL - G

REF Nº	STATION FROM	STATION TO	SIDE	APPROACH LIN. FT.	
3-G	0-136	0-26.95	RT.	128	
4-G	0-135.19	0-34.75	LT.	80	
TOTAL				208	

PAVEMENT CALCULATIONS

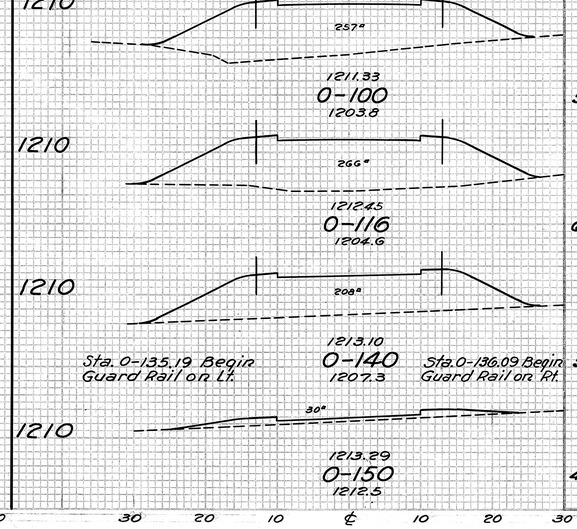
Begin 20' pavement Sta. 0-162.59
End 20' pavement Sta. 2+50
(0-162.59) + 250 = 412.59 Lin. Ft.
412.59 x 20 ÷ 9 = 916.87 Sq. Yds.
Extra pavement for flares 27.97 Sq. Yds.
Total pavement area 944.84 Sq. Yds.
944.84 x 9/56 = 151.47 Use 158. Cu. Yds.
Total I-17 Pavement 158 Cu. Yds.

Note:- Quantities carried direct to Summary

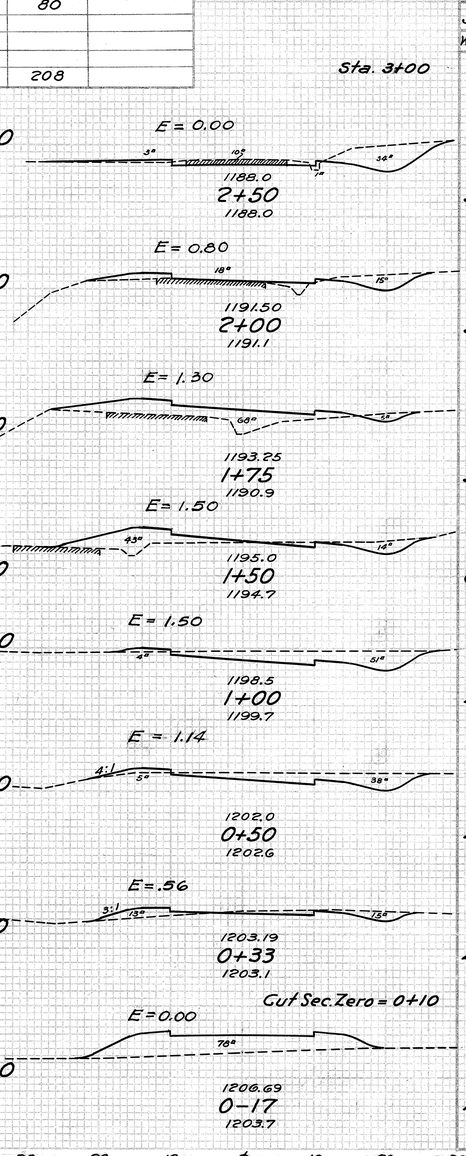


Note:- Earthwork quantities carried direct to Summary

Excavation	279 Cu. Yds.
Embankment	1172 Cu. Yds.



Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill
189		174	
58		206	
314		429	
55		257	
102		155	
60		266	
159		211	
59		208	
60		44	
49		30	



Seeding Width	End Area S.Y.	Cu. Yds. Cut	Cu. Yds. Fill
0		0	0
	164		41 4
59		44	4
	303		55 20
50		15	18
	139		9 40
50		5	68
	153		9 51
60		14	43
	294		60 44
46		51	4
	253		82 8
45		38	5
	85		17 6
45		15	13
			6
		0	
	250		93 86
45			78

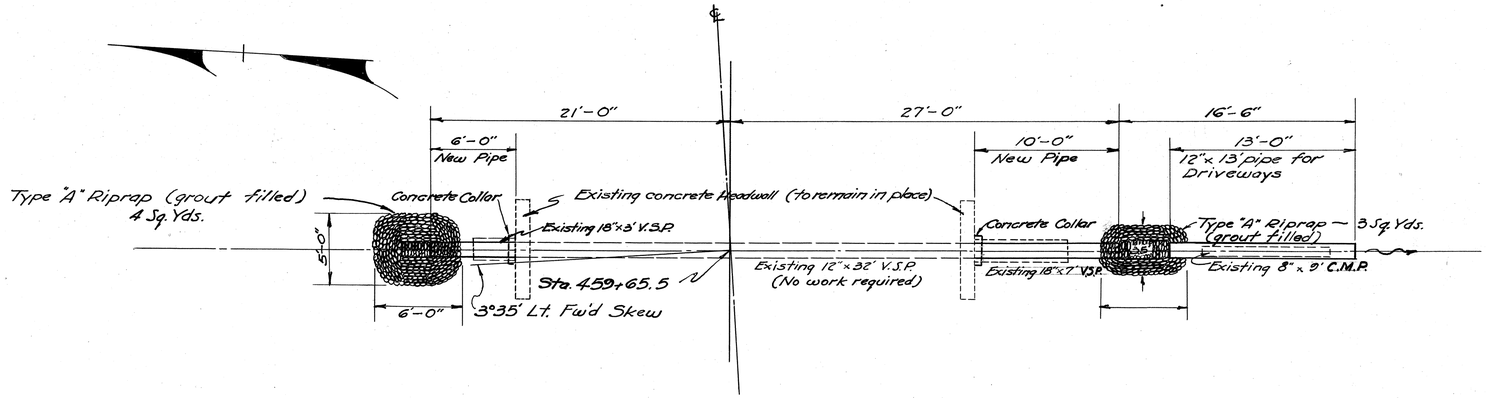
30 20 10 ℄ 10 20 30

4-A - APPROACH RT. STA. 468+00

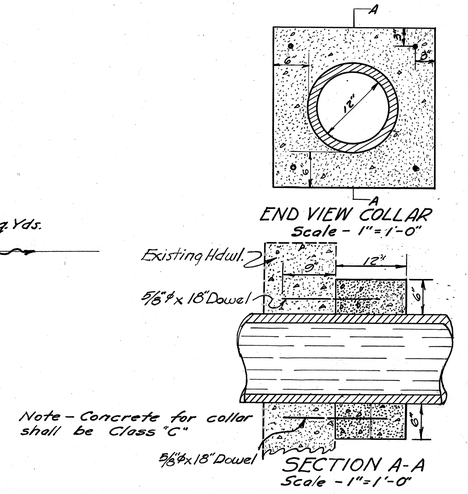
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

19
27

HARRISON COUNTY
S.H.26 SEC. R (PT)



PLAN
Scale - 1"=5'



~STRUCTURE DATA~

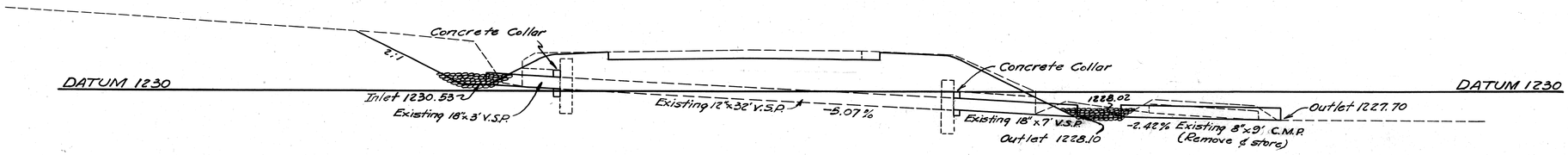
TYPE ; ~ Pipe
SIZE ; ~ 12" x 16'-0"
WORK REQUIRED ; ~ Remove 8" x 9' C.I. Pipe for driveway and replace with 12" x 13' pipe. Build 12" x 6'-0" and 12" x 10'-0" pipe culvert extensions as shown. Build concrete collars at each connection as detailed. Riprap both ends as shown.

~REFERENCE DRAWINGS~

Pipe Culverts S-27 P.C.3

~ESTIMATED QUANTITIES~

Item E-2, Excavation for Structures	10. Cu. Yds.
Item S-27, 12" Pipe for Roadway Culverts	16. Lin. Ft.
Item I-1, 12" Pipe for Driveways	13. Lin. Ft.
Item E-12, 8" Pipe Removed and Stored	9. Lin. Ft.
Item I-10, Type "A" Riprap (Grout filled)	7. Sq. Yds.
Item S-1, Concrete for Structures (Class "C")	.3 Cu. Yds.
Item E-12, 18" Pipe Removed and Disposed of	3. Lin. Ft.
Item E-12, 18" Pipe Removed and Stored	7. Lin Ft.
Item S-4 Dowel Bars (5/8" Reinf. Steel)	13. Lbs.
Item S-23 Dowel Holes	6. Lin. Ft.



CROSS SECTION
Scale 1"= 5'

1233.45
459 +65.5
1233.5

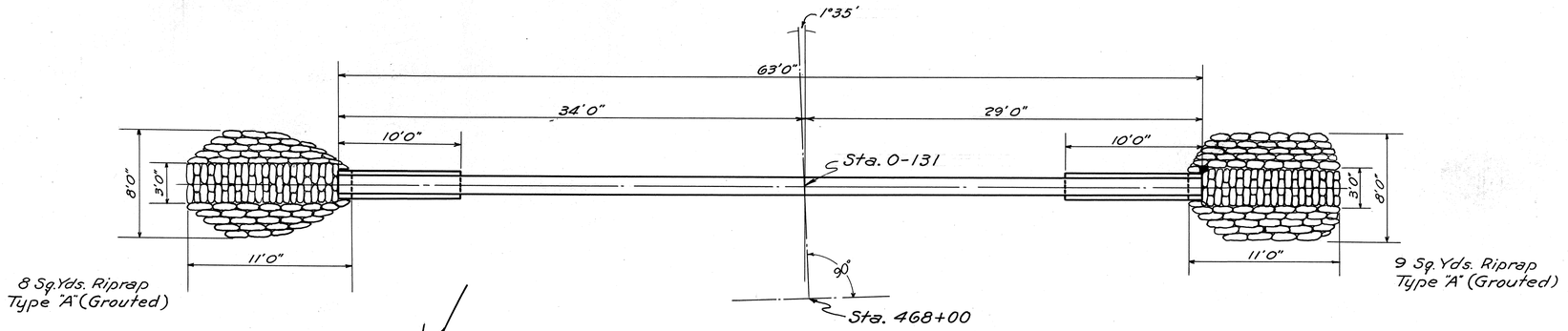
1-S

STA. 459+65.5 PIPE CULVERT
Drainage Area 2.0 Acres

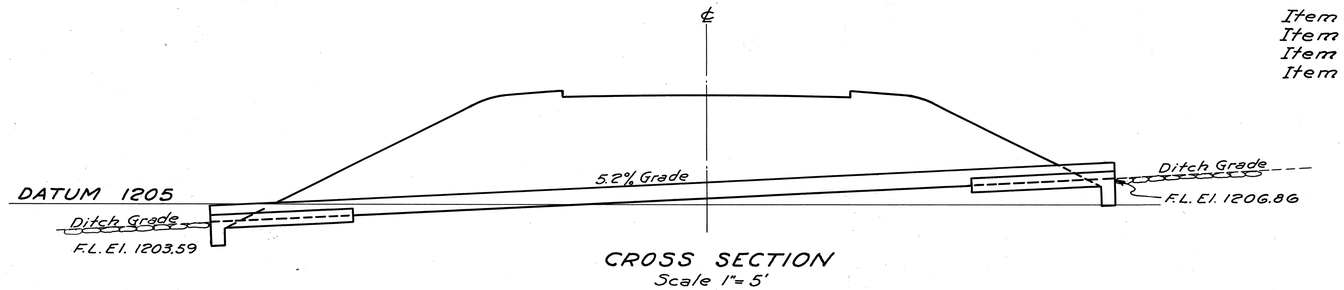
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(J)	1946

20
27

HARRISON COUNTY
S. H. 26 SEC. R(PT)



PLAN
Scale 1"=5'



CROSS SECTION
Scale 1"= 5'

1213.0
0-131
1205.38

STRUCTURE DATA

TYPE:- Pipe
SIZE:- 15"×63'0"
SKEW:- 1°35' Lt. forward
WORK REQUIRED:- Build 15"×63'0" pipe culvert with Standard Cradle and Cut-off Wall at inlet and outlet end. Riprap each end as shown.

REFERENCE DRAWINGS

Pipe culvert ends	S-27 P.C.2
Pipe culverts	S-27 P.C.3

ESTIMATED QUANTITIES

Item E-2	Excavation for Structures	2.0 Cu. Yds.
Item S-27	15" pipe for roadway culverts	63.0 Lin. Ft.
Item S-1	Concrete for Structures (Class "E")	1.4 Cu. Yds.
Item I-10	Riprap Type "A" (Grout filled)	17.0 Sq. Yds.

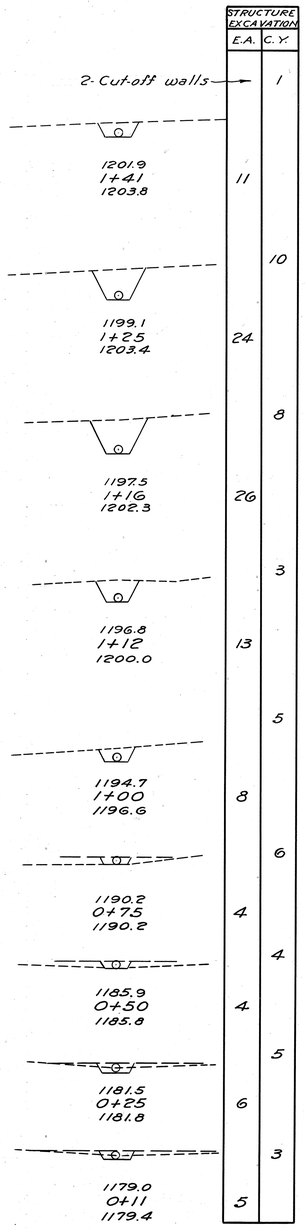
3-S

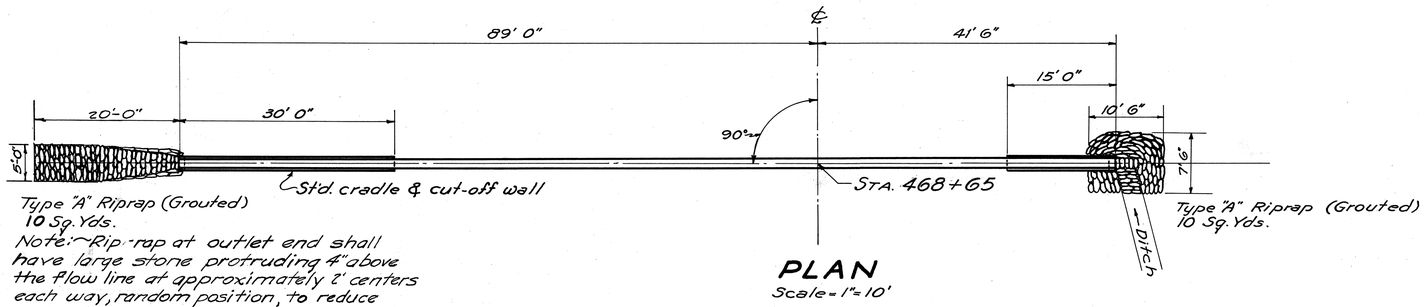
STA. 0-131 ON APPROACH
AT STA. 468+00
DRAINAGE AREA 2.5 AC.

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG-229(1)	1946

21
27

HARRISON COUNTY
S.H. 26 SEC. R(PT)





PLAN
Scale-1"=10'

Type "A" Riprap (Grouted)
10 Sq. Yds.
Note:- Rip-rap at outlet end shall have large stone protruding 4" above the flow line at approximately 2' centers each way, random position, to reduce velocity.

Note:- Rip-rap cut off wall at end of rip-rap gutter. Price to be included in price bid per sq. yd. of rip-rap.

STRUCTURE DATA

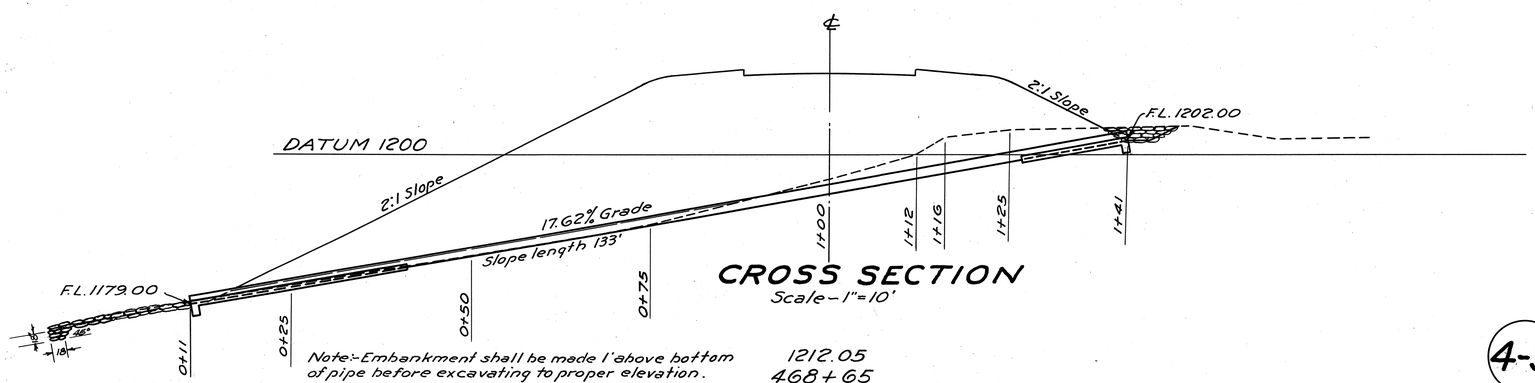
TYPE:- Pipe
SIZE:- 15"x133' 0"
WORK REQUIRED:- Build 15"x133'0" pipe culvert with Std. cradle and cut-off wall at inlet and outlet ends. Excavate outlet channel. Riprap both ends as shown

REFERENCE DRAWINGS

Pipe Culvert Ends	S-27 P.C. 2
Pipe Culverts	S-27 P.C. 3

ESTIMATED QUANTITIES

Item E-2, Excavation for Structures	45 Cu. Yds.
Item E-3, Channel Excavation	1 Cu. Yds.
Item S-27, 15" Pipe for Roadway Culverts	133 Lin. Ft.
Item S-1, Concrete for Structures (Class "E")	2.8 Cu. Yds.
Item I-10, Riprap, Type "A" (Grout filled)	20. Sq. Yds.



CROSS SECTION
Scale-1"=10'

Note:- Embankment shall be made 1' above bottom of pipe before excavating to proper elevation.

1212.05
468+65
1196.6

4-S

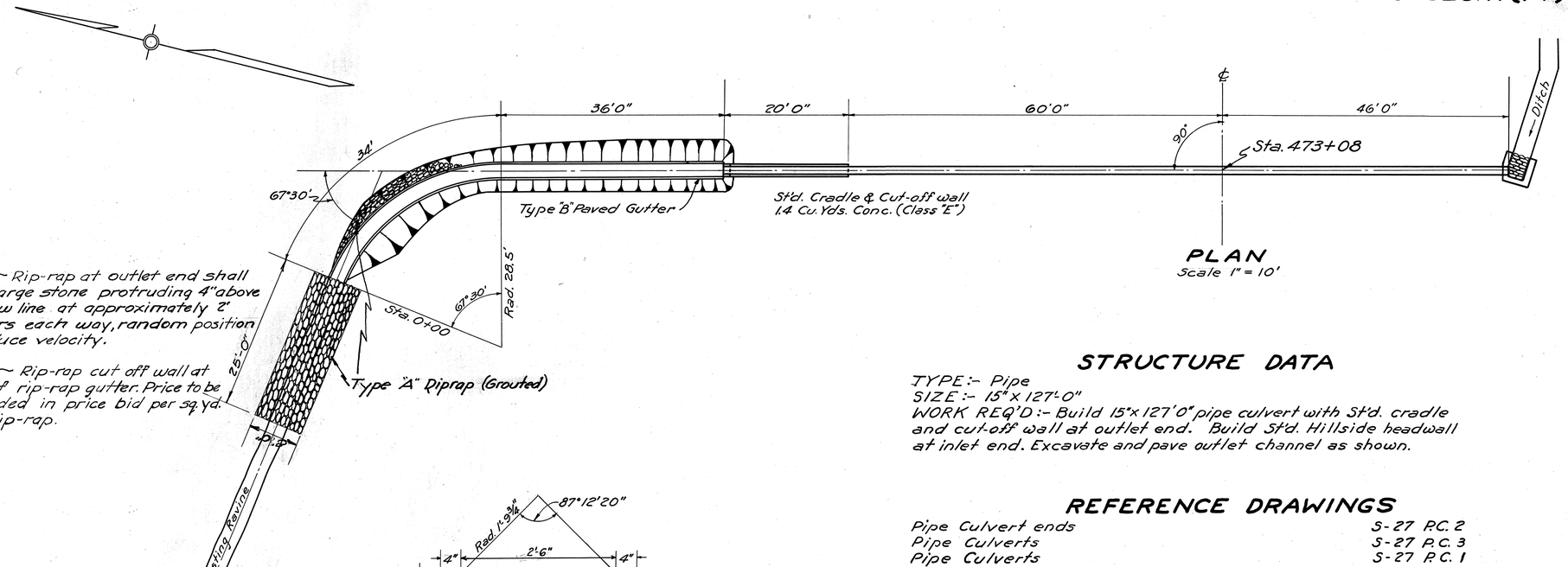
STA. 468+65 PIPE CULVERT
DRAINAGE AREA = 2.5 ACRES

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	F.G.-229(1)	1946

22
27

HARRISON COUNTY
S.H. 26 - SEC. R (PT)

	CHANNEL EXCAVATION		STRUCTURE EXCAVATION	
	E.A.	C.Y.	E.A.	C.Y.
Headwall				5
1199.0 / 1+96 / 1200.8			9	
				9
1197.4 / 1+79 / 1201.0			19	
				16
1195.1 / 1+61 / 1200.4			30	
				8
1193.6 / 1+54 / 1198.7			29	
				21
1191.0 / 1+29 / 1194.7			16	
				13
1187.4 / 1+04 / 1190.1			11	
				9
1183.7 / 0+79 / 1185.8			9	
				3
0+70	9		9	
1180.3 / 0+54 / 1181.7	7	5		
		6		
1176.3 / 0+29 / 1177.4	5			
		6		
1173.5 / 0+11 / 1175.8	16			
		3		
1171.7 / 0+00 / 1171.7	0			



Note:~ Rip-rap at outlet end shall have large stone protruding 4" above the flow line at approximately 2' centers each way, random position to reduce velocity.

Note:~ Rip-rap cut off wall at end of rip-rap gutter. Price to be included in price bid per sq. yd. of rip-rap.

TYPE "B" PAVED GUTTER

Note:- Cut-off wall shall be placed at outlet end of paved gutter to a depth of 1'-2" below bottom of gutter. Price to be included in price bid per lin. ft. of gutter.

STRUCTURE DATA

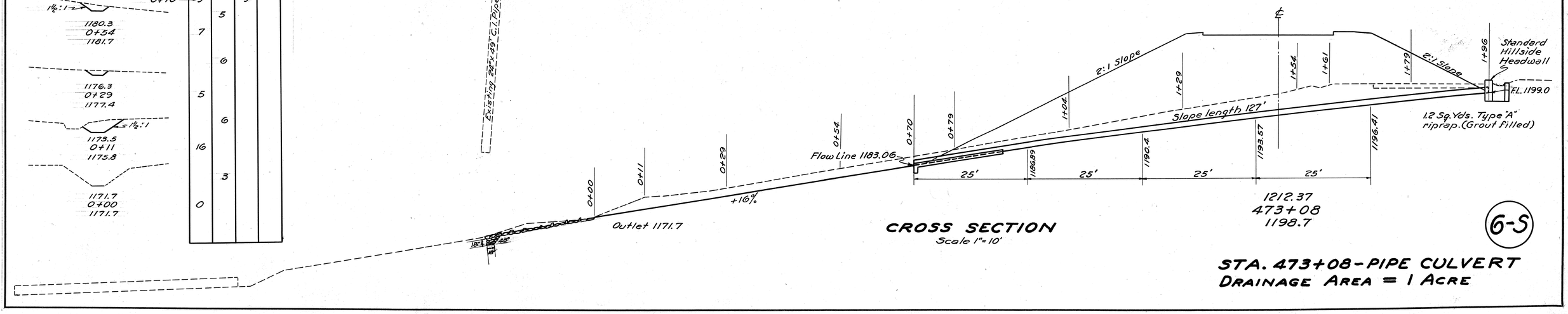
TYPE:- Pipe
SIZE:- 15" x 127'-0"
WORK REQ'D:- Build 15" x 127'-0" pipe culvert with St'd. cradle and cut-off wall at outlet end. Build St'd. Hillside headwall at inlet end. Excavate and pave outlet channel as shown.

REFERENCE DRAWINGS

Pipe Culvert ends	S-27 P.C. 2
Pipe Culverts	S-27 P.C. 3
Pipe Culverts	S-27 P.C. 1

ESTIMATED QUANTITIES

Item E-2, Excavation for Structures	84	Cu. Yds.
Item E-3, Channel Excavation	20	Cu. Yds.
Item S-27, 15" Pipe for Roadway Culverts	127	Lin. Ft.
Item S-1, Concrete for Structures (Class "E")	1.4	Cu. Yds.
Item S-1, Concrete for Structures (Class "C")	1.9	Cu. Yds.
Item S-4, Reinforcing Steel	24	Lbs.
Item I-10, Riprap, Type "A" (Grout filled)	28.2	Sq. Yds.
Item I-14, Paved Gutter, (Type "B")	70	Lin. Ft.



6-S

STA. 473+08 - PIPE CULVERT
DRAINAGE AREA = 1 ACRE

FED. RD. DIV. NO.	STATE	FED. AID	TYPE FUNDS
2	OHIO	FG 229(1)	POST WAR

23
27

HARRISON COUNTY
S.H. 26 SEC. R (PT).
HAS-22-24.97

EXISTING BRIDGE DATA
To Be Removed

TYPE :- Wood Beam on timber trestle
SPAN :- 115'-0"
ROADWAY:- 17'-0"
SKEW :- 15° Lt. Fwd.
CONDITION:- Poor

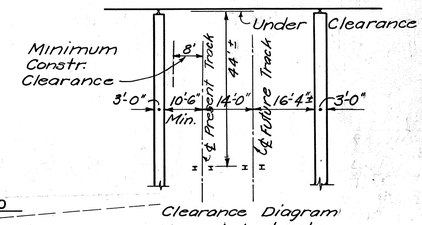
SOUNDING NOTE
Calibrated rod readings indicate that shale or rock suitable for foundations will be encountered at footing elevations

PROPOSED STRUCTURE
TYPE: Continuous steel beams with concrete deck and concrete substructure
SPANS: 36'-3@45'-36' ℄ Bearings
RDWY: 28 Ft. with 2 safety curbs @ 1'-9"
LOADING: 5-20-40
SKEW: 11°43'30" L.F.
SURF. COURSE: Bituminous
APPROACH SLABS: 15' Long, Type IV west end, Type V east end (DWG. A3-44-F Rev. 1-18-46).

℄ Bridge Sta. 471+87.40
℄ Pier Sta. 471+64.90
℄ Pier Sta. 471+19.90
Face of Abut. Sta. 470+84.92
End Appro. Slab Sta. 470+81.60
Begin of Appro. Slab Sta. 470+66.60

℄ Pier Sta. 472+09.90
℄ of Pier Sta. 472+54.90
Face Abut. Sta. 472+89.88
Begin Appro. Slab Sta. 472+93.20
End Appro. Slab Sta. 473+08.20

℄ Survey
Paved Gutters
Wood Platform
Iron Pump
S.R. 22
S.H. 26
To Steubenville
N76°30'E
11°43'30" (Tang to R.R. Curve)
78°16'30"
30°
50'±
45'
Transition 2:1 to existing slope
15" Steel pipes to be removed by contractor and ditch opened.
Transition 2:1 to existing slope
Hedge
Two Story Frame Res.
Corn Crib
Garage
Barn
400' V.C.
400' V.C.
Bridge Limits
Sta. 470+81.60
PT. 470+50
1210.93
1211.21
Sta. 471+87.40
El. 1211.70
1211.77
Sta. 472+93.20
PC 473+25
1212.47
Proposed Grade
Bench El. 1204.0±
+0.56 %
Bench El. 1205.5±
El. 1190
El. 1182
El. 1186±
El. 1174±
El. 1184±
El. 1172±
El. 1181
El. 1188.5± So. leg
El. 1184± No. leg
℄ Exist. Track
℄ Future Track
Provide ditch here
El. 1155±
Slope 1" to Ft.
Future ditch
PROFILE OF PROPOSED ℄



Clearance Diagram
Normal to tracks

FG 229(1)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

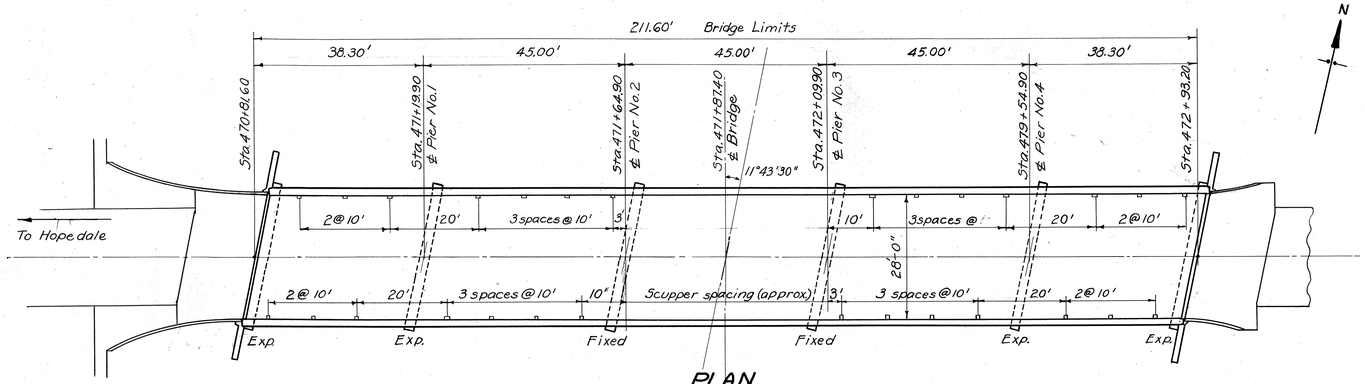
SITE PLAN HAS-22-24.97
S.H. 26 SEC. R (PT).
BRIDGE Nº HA. 22-25.3
OVER THE N.Y.C.R.R.
HARRISON COUNTY GREEN TWP.
STA 471+87.40 SCALE 1"=20' AUG. 1945

EXISTING TOPOG			PROPOSED WORK			
SURVEY	DRAWN	TRACED	DES.	DRAWN	CHECK	REV'D
			G.E.S.	G.E.S.	O.W.A.	4-5-46

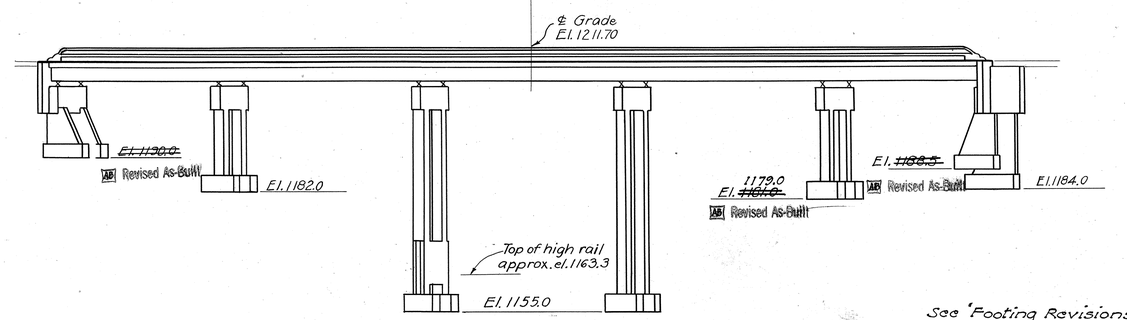
FED. RD. DIV. NO.	STATE	PROJECT	TYPE FUNDS
2	OHIO	FG229(1)	POST WAR

24
27

HARRISON COUNTY
S.H. 26 SEC. R (PT)
HAS-22-24.97



PLAN



ELEVATION

See 'Footing Revisions' for As Built footing elevations, at East & West abutments

ESTIMATED QUANTITIES

Item	Total	Unit	Description	West Abut.	Pier 1	Pier 2	Pier 3	Pier 4	East Abut.	Super-structure	Gen'l.	As Built	
E-2	~~275~~	Cu.yd.	Excavation for Structures, unclassified	~~95~~	~~5~~	~~25~~			~~150~~			C-1, +108	383
E-2	~~166~~	Cu.yd.	Excavation for Structures, shale or rock	~~17~~	~~39~~	~~14~~	~~43~~	~~48~~	~~5~~			C-1, +67	233
E-2	Lump Sum		Cofferdams, Cribs and Sheeting								Lump Sum		
5-1	204	Cu.yd.	Class "C" concrete, Superstructure							204			
5-1	277	Cu.yd.	Class "E" concrete, Piers & Abut. above foot's.	54	24	62	48	26	63				
5-1	~~440~~	Cu.yd.	Class "E" concrete, Footings	~~76~~	~~18~~	~~19~~	~~19~~	~~18~~	~~20~~			C-1, +11.5	121.5
5-4	86,562	Lbs.	Reinforcing steel	4391	4345	8105	7145	4365	5582	52486	143		
5-7	169,000	Lbs.	Structural steel							169,000			
5-8	169,000	Lbs.	Field painting structural steel (3 coats)							169,000			
5-14	425	Lin.ft.	Railing (Steel with concrete end posts)							425			
5-24	Lump Sum		Removal of existing structure								Lump Sum		
T-35	44	Cu.yd.	Asphaltic concrete surface course, Type "A" or "C" (70-80 or 85-100)							44			
5-3	642	Sq.yd.	Type "C" waterproofing for bridge deck							642			
AB 5-29	Lump	Sum	Subdrainage for wearing surface course									C-2	Lump Sum

GENERAL NOTES

STANDARD DRAWINGS CSB-45, sheets 1 & 2, dated 12-5-45, AS-44-F dated 1-18-46, are a part of this contract.

EXISTING BRIDGE, when no longer needed for maintaining traffic, shall be removed to the proposed ground line, shall become the property of the Contractor as part payment for its removal and shall be removed from the site by him. A detail drawing of the existing structure will be furnished the successful bidder upon request.

EXCAVATION quantity includes the removal of fill material between top of earth benches and bottom of abutment crossbeams. Excavation quantity for piers includes removal of material below finished ground line in case of cut, and below natural ground line in case of fill.

FOOTINGS shall extend a minimum of one foot into solid shale or rock.

WELDING shall be Class "A", except the field connections of sidewalk end finish to roadway end finish and of gutters and scuppers may be Class "B".

FIELD PAINT for structural steel shall consist of three coats: one to be paint of kind used for the shop coat followed by two coats of aluminum paint, Sec. M-9.12.

FIELD PAINT for railing shall consist of two coats of aluminum paint, Sec. M 9.12 only.

MAX. UNIT DESIGN STRESSES for this structure are:
Class "C" concrete fc = 1200 n = 8 fs = 18000
Class "E" concrete fc = 900 n = 10 fs = 18000
Structural steel, 18000 basic unit stress

CONSTRUCTION CLEARANCE of 21' vertically above top of rail and 8' horizontally from ℄ of track shall be maintained.

STEEL GUTTER AND SCUPPERS shall not be galvanized as called for on CSB-45.

END FINISH, GUTTERS AND SCUPPERS shall be copper-bearing steel.

SHEETING & BRACING. Before construction is begun, plans of sheeting and bracing adjacent to tracks shall be submitted to the Director of Highways for highway and railroad approval.

AB Revised As-Built
Dec. 7/17/52

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION ESTIMATED QUANTITIES & NOTES

BRIDGE NO. HA-22-253
OVER N.Y.C. R.R.

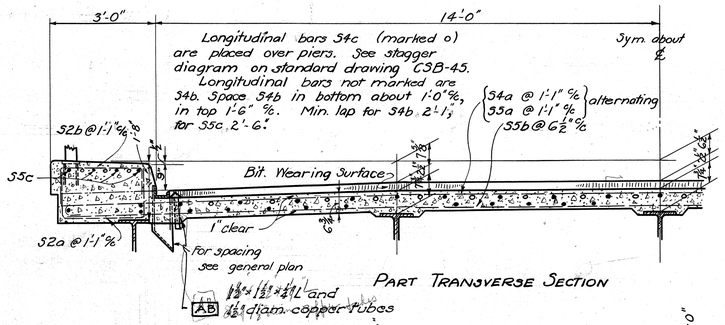
HARRISON CO. S.H. 26
SEC. R STA. 471+87.40
HAS-22-24.97 FG 229(1)

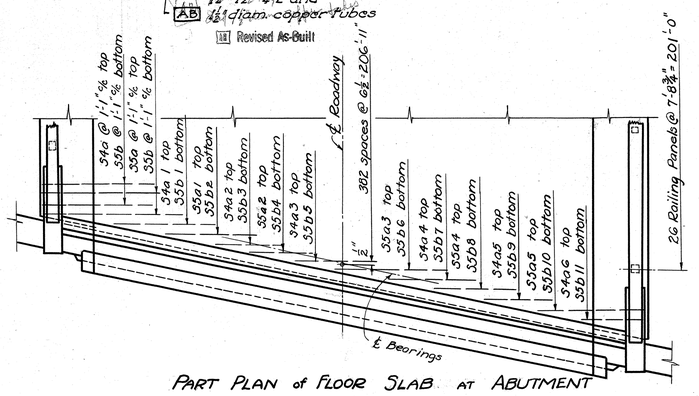
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CHB	⊕	K.E.J.	FRS	WHB	4-3-46	4-13-47, 9-30-48, 10-11-48

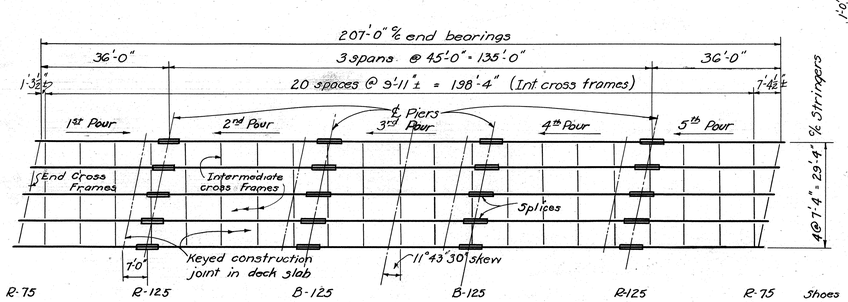
FED. RD. DIV. NO.	STATE	PROJECT	TYPE FUNDS
2	OHIO	FG-229(1)	POST WAR

25
27

HARRISON COUNTY
S.H. 26 SEC. R (PT)
HAS-22-24.97







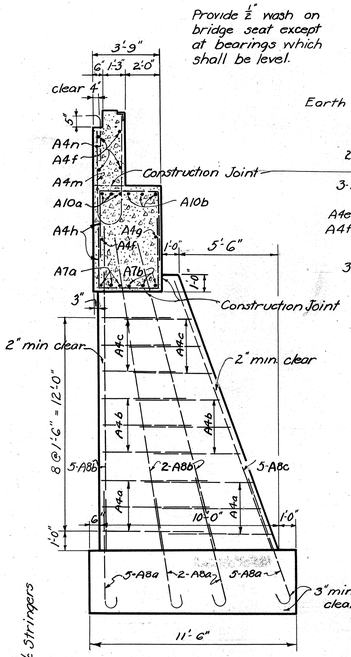
STRUCTURAL PLAN

All stringers 30" WF @ 124# Stringer splices same shown for 30" WF @ 108.

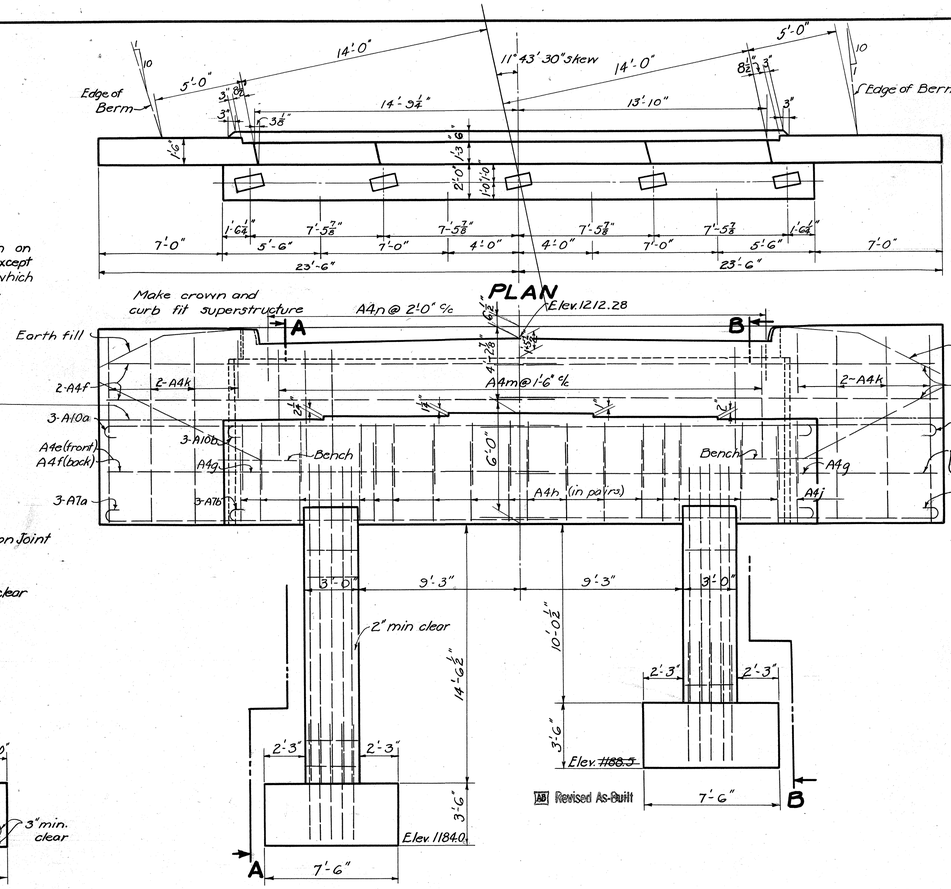
	Curb beams
Deflection due to weight of structural steel	.02 inch.
Deflection due to remaining dead load	.12 inch
Total	.14 inch

Beams need not be cambered but any curved beams shall be placed with convex flange up.

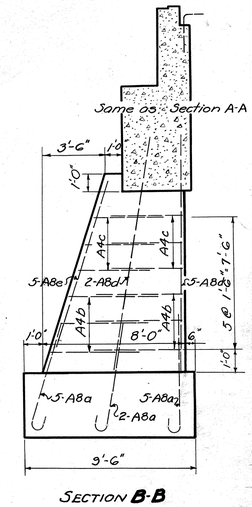
For details of SUPERSTRUCTURE not shown above, see Standard drawing CSB-45, sheets 1 & 2 revised 12-5-45.
Standard drawing CSB-45 is for 3-15-40 Loading. These plans indicate changes in beam sizes and slab for 3-20-40 Loading and revised deck construction joints and sequence of placing deck sections.



SECTION A-A

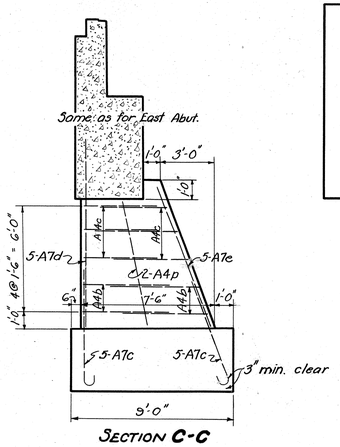


ELEVATION
EAST ABUTMENT

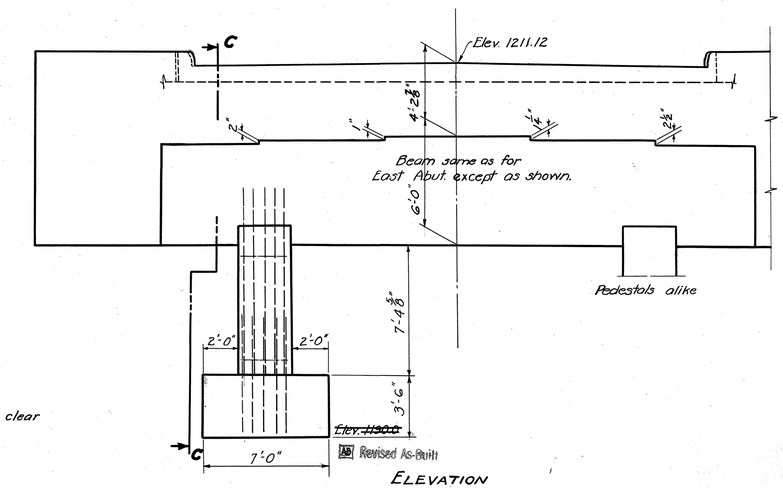


SECTION B-B

See "Footing Revisions" for Revised As-Built Footing elevations for East & West abutments.



SECTION C-C



ELEVATION
WEST ABUTMENT

Concrete above bridge seat construction joint shall not be placed until after concrete deck is in place.
Contractor shall exercise care to have a bearing between upper & lower elements of the end finish while backwall concrete is being placed, and to completely fill the space under the end finish angle with concrete.
After pedestals are placed, all backfill shall be made full height of earth benches and excavation made for cross-beams.
If bottom forms for cross-beams are used, they shall be left in place.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE AND ABUTMENT DETAILS

BRIDGE No. HA-22-253 over N.Y.C. R.R.
HARRISON CO. S.H. 26
SECTION R STA. 471 + 87.40
HAS-22-24.97 FG 229 (1)

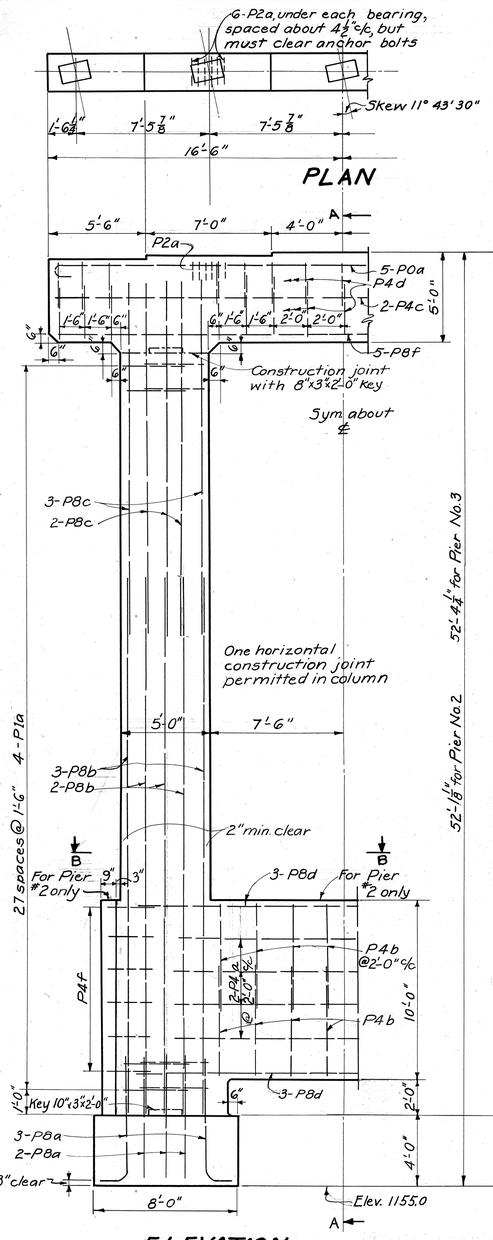
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
MAS	CB	BJM	FHS	OSHO WHC	4-3-46	

Revised As-Built CBJ 7/17/52

FED. RD. DIST. NO.	STATE	FED. PROJECT	TYPE FUNDS
12	OHIO	FG-229(1)	POST WAR

26 / 27

HARRISON COUNTY
S.H. 26 SEC. R HA5-22-24.97

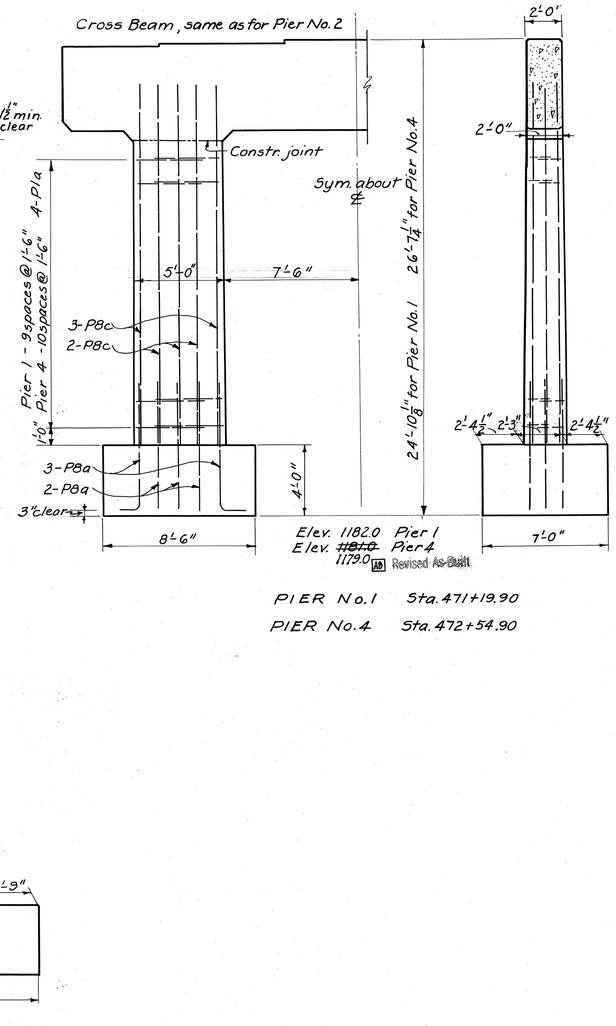


1206.84 Pier No.1
1207.09 Pier No.2
1207.35 Pier No.3
1207.60 Pier No.4

2½" 1¼" 1" 2"

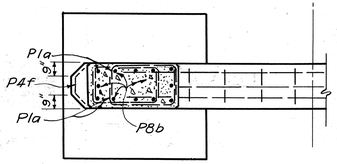
PIER BRIDGE SEAT ELEVATIONS - LOOKING EAST

On bridge seat provide ¼" wash from center line to edges, except at bearings which shall be level.



PIER No.1 Sta. 471+19.90

PIER No.4 Sta. 472+54.90



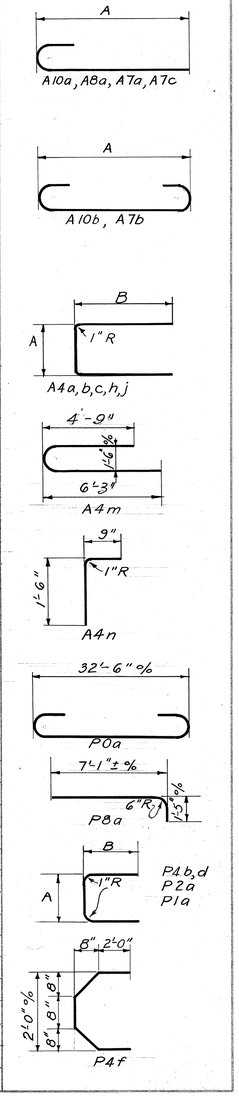
SECTION B-B

PIER No.2 Sta. 471+64.90

PIER No.3 Sta. 472+09.90

Mark	Size	No.	Length	Weight	Sh.	A	B
ABUTMENTS							
A10a	1¼"□	12	26'-6"	1690	B	25'-4"	
A10b	1¼"□	6	33'-9"	1076	B	32'-6"	
A8a	1"□	26	7'-6"	663	B	6'-7"	
A8b	1"□	9	18'-0"	551	S		
A8c	1"□	5	16'-0"	272	S		
A8d	1"□	7	13'-6"	321	S		
A8e	1"□	5	11'-0"	187	S		
A7a	1"℄	12	26'-3"	841	B	25'-4"	
A7b	1"℄	6	34'-6"	553	B	32'-6"	
A7c	1"℄	20	7'-6"	401	B	6'-6"	
A7d	1"℄	10	10'-6"	280	S		
A7e	1"℄	10	8'-6"	227	S		
A4a	5/8"℄	6	13'-6"	84	B	2'-9"	5'-6"
A4b	5/8"℄	20	12'-0"	250	B	2'-9"	4'-9"
A4c	5/8"℄	24	10'-6"	263	B	2'-9"	4'-0"
A4e	5/8"℄	4	10'-0"	42	S		
A4f	5/8"℄	20	24'-6"	511	S		
A4g	5/8"℄	4	17'-6"	73	S		
A4h	5/8"℄	68	10'-3"	730	B	3'-6"	3'-6"
A4j	5/8"℄	4	10'-0"	42	B	3'-3"	3'-6"
A4k	5/8"℄	32	10'-6"	350	S		
A4m	5/8"℄	38	11'-9"	466	B		
A4n	5/8"℄	30	2'-3"	70	B		
A4p	5/8"℄	4	7'-3"	30	S		
PIERS							
P0a	1¼"□	20	34'-9"	3693	B		
P8a	1"□	96	8'-3"	2693	B		
P8b	1"□	48	30'-0"	4896	S		
P8c	1"□	96	20'-0"	6528	S		
P8d	1"□	6	24'-0"	490	S		
P8f	1"□	20	32'-0"	2176	S		
P4a	5/8"℄	8	24'-0"	200	S		
P4b	5/8"℄	16	13'-9"	229	B	2'-0"	6'-0"
P4c	5/8"℄	8	32'-0"	267	S		
P4d	5/8"℄	120	8'-0"	1001	B	1'-8"	3'-3"
P4f	5/8"℄	6	6'-6"	41	B		
P2a	1/2"℄	120	3'-0"	240	B	1'-8"	9"
P1a	5/8"℄	616	6'-6"	1506	B	3'-7"	1'-6"

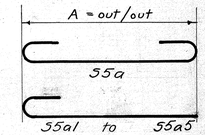
Bending Diagrams

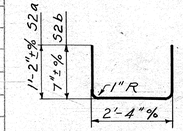


Mark	Size	No.	Length	Weight	Sh.	A
SUPERSTRUCTURE						
55a	3/4"℄	187	34'-6"	9690	B	33'-2"
55a1	3/4"℄	2	27'-0"	81	B	26'-3"
55a2	3/4"℄	2	21'-9"	65	B	21'-0"
55a3	3/4"℄	2	16'-6"	50	B	15'-9"
55a4	3/4"℄	2	11'-3"	34	B	10'-6"
55a5	3/4"℄	2	6'-0"	18	B	5'-3"
55b	3/4"℄	373	33'-0"	18489	S	
55b1	3/4"℄	2	28'-9"	86	S	
55b2	3/4"℄	2	26'-3"	79	S	
55b3	3/4"℄	2	23'-6"	71	S	
55b4	3/4"℄	2	21'-0"	63	S	
55b5	3/4"℄	2	18'-6"	56	S	
55b6	3/4"℄	2	15'-9"	47	S	
55b7	3/4"℄	2	13'-3"	40	S	
55b8	3/4"℄	2	10'-6"	32	S	
55b9	3/4"℄	2	8'-0"	24	S	
55b10	3/4"℄	2	5'-3"	16	S	
55b11	3/4"℄	2	2'-9"	8	S	
55c	3/4"℄	64	28'-3"	2716	S	
54a	5/8"℄	186	33'-0"	6402	S	
54a1	5/8"℄	2	28'-9"	60	S	
54a2	5/8"℄	2	23'-6"	49	S	
54a3	5/8"℄	2	18'-6"	39	S	
54a4	5/8"℄	2	13'-3"	28	S	
54a5	5/8"℄	2	8'-0"	17	S	
54a6	5/8"℄	2	2'-9"	6	S	
54b	5/8"℄	360	27'-9"	10420	S	
54c	5/8"℄	96	18'-0"	1802	S	
52a	1/2"℄	386	4'-6"	1160	B	
52b	1/2"℄	386	3'-3"	838	B	
REPLACEMENT BARS						
Re0	1¼"□	1	10'-3"	54	S	
Re8	1"□	1	8'-0"	27	S	
Re7	1"℄	1	8'-0"	21	S	
Re5	3/4"℄	2	7'-0"	21	S	
Re4	5/8"℄	2	6'-6"	14	S	
Re3	1/2"℄	1	6'-6"	4	S	
Re2	3/8"℄	1	6'-0"	2	S	

Bending Diagrams

Inside radius of bends = 3 bar diameters unless otherwise noted





Revised As-Built C.E.J. 7/17/52

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

PIER DETAILS
REINFORCING STEEL LIST

BRIDGE No. HA-22-253
OVER N.Y.C.R.R.

HARRISON Co. S.H. 26
SECTION R STA. 471+87.40
HA5-22-24.97 FG 229(1)

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CWB	CD	K.E.T.	FHS	CWB WHB	4-3-46	

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	FG 229 (1)	1946

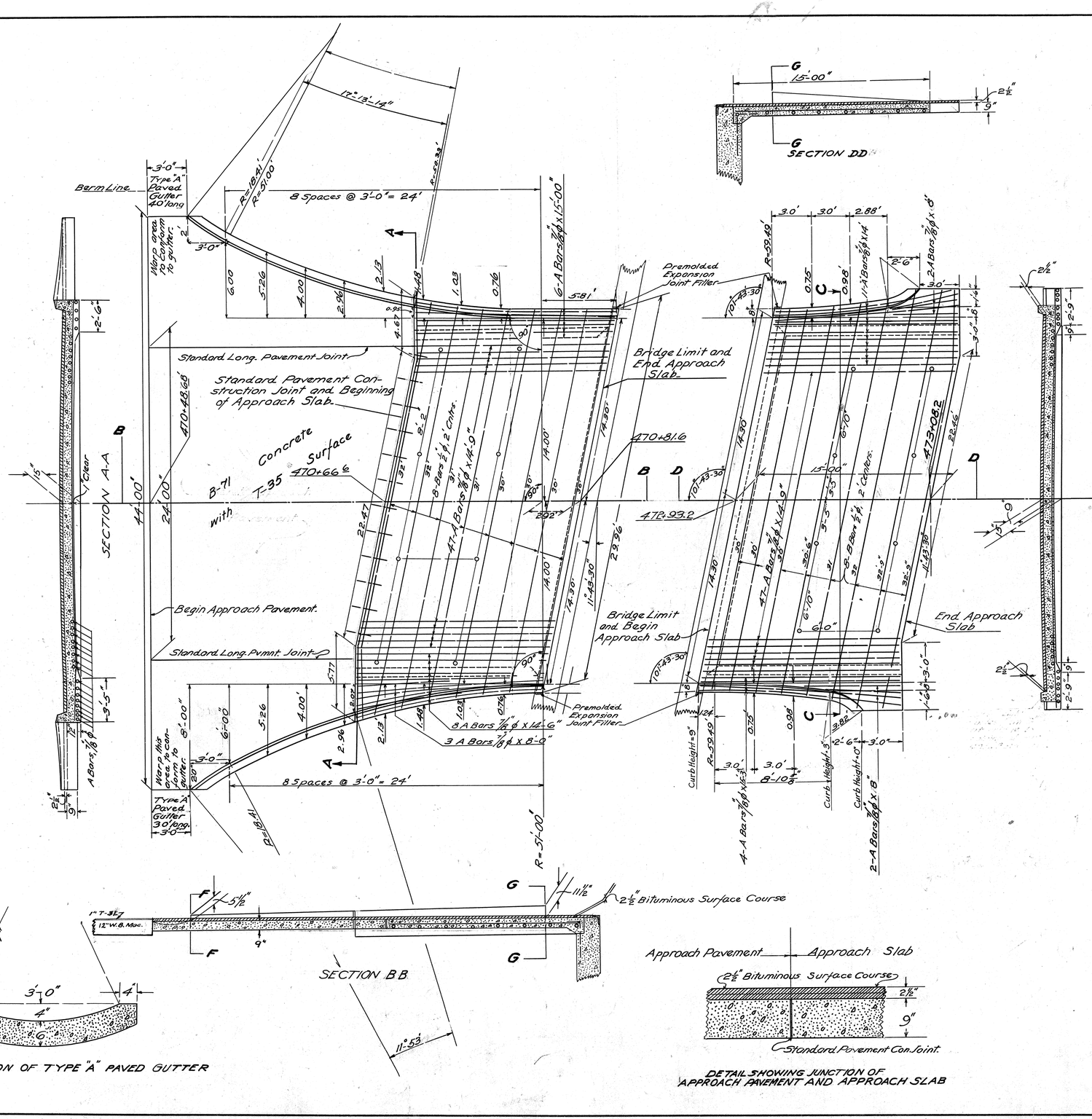
27
27

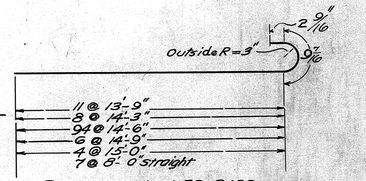
HARRISON COUNTY
S.H. 26 SEC. R (PT)

ITEM	QUANTITY	DESCRIPTION
I-7	104 SQ.YDS.	REINFORCED CONCRETE APPROACH SLABS
B-71	77 " "	REINFORCED PORTLAND CEMENT CONCRETE BASE COURSE
I-12	32 LIN. FT.	TYPE I CURB AS PER PLAN
T-30	18 Gals.	Bituminous Tack Coat, Sec. M-5.5 MS-2 (Appr., slabs and Appr. Pav't.)
T-35	6.5 Cu.Yds.	ASPHALTIC CON. SURF. COURSE, TYPE 'A' FOR APPROACH SLABS.
T-35	5.2 CU.YDS.	ASPHALTIC CON. SURF. COURSE, TYPE 'A' FOR B-71 BASE.

Note:- T-35 Asphaltic Concrete Surface to be placed in two 1¼" courses.

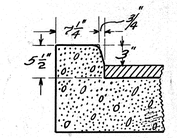
Bituminous Tack Coat shall be placed on appr., slabs and B-71 Base at the rate of 0.1 gal per sq. yd.



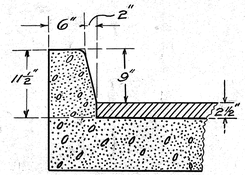


DETAIL OF HOOKED BARS

DETAIL SHOWING JUNCTION OF APPROACH PAVEMENT AND APPROACH SLAB

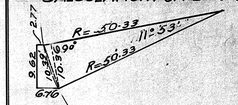


TYPE I CURB SECTION F-F

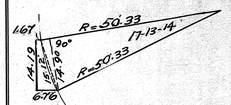


TYPE I CURB SECTION G-G

CALCULATION FOR B-71 CONCRETE BASE COURSE



6.76+7.77 X 9.62 / 2	=	45.84	
10.36 X 50.33 / 2	=	260.71	
		306.55	
10.44 X 50.33 / 2	=	262.72	
		43.83	43.83
8 X 3	=		24.00
8+7 X 3 / 2	=		22.50
15.62 X 3	=		46.86
17.92 X 22	=		394.24



6.76+1.67 X 14.19 / 2	=	60.70	
14.9 X 50.33 / 2	=	374.96	
		435.66	
15.12 X 50.33 / 2	=	380.56	
		55.10	55.10
8 X 3	=		24.00
8+7 X 3 / 2	=		22.50
20.19 X 3	=		60.57
			693.60 = 77.06

TOTAL PAVEMENT AREA = 77 SQ. YDS.

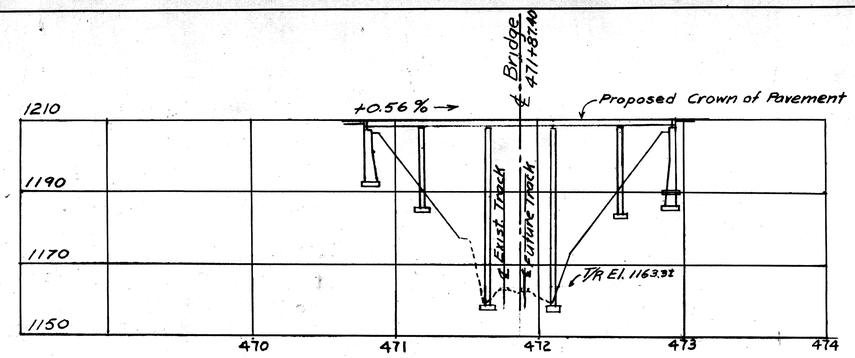
PLAN OF BRIDGE APPROACH SLABS

STANDARD PLAN AS-44-F, TYPES IV & V ALSO APPLY

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	FG 229 (1)	POST WAR

27A
27

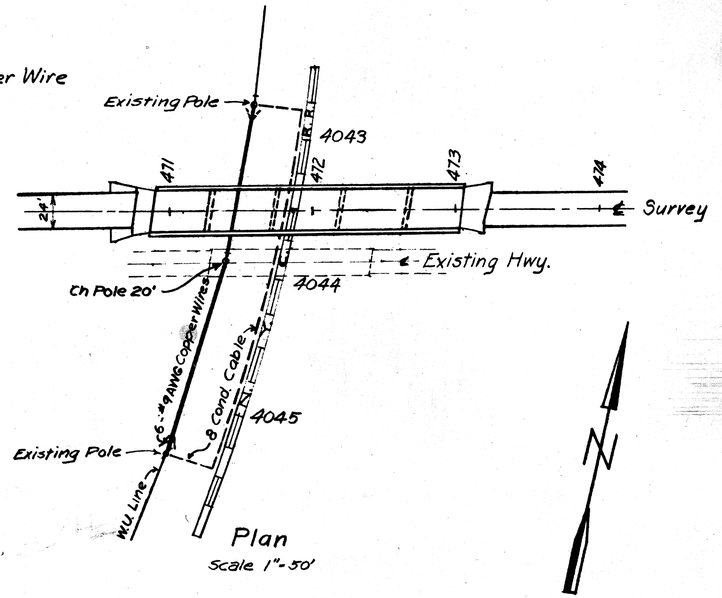
HARRISON COUNTY
S. H. 26 SEC. R (pt.)
HAS-22-24.97



Profile of Proposed Centerline
Scale H 1"=50'
V 1"=20'

Permanent Work

Remove and String 0.28 Mi #9 AWG Copper Wire
Set 1 Ch Pole 20'
Attach 1 Crossarm



Plan
Scale 1"=50'

Temporary Work

Attach and Remove 2 Crossarms
Set and remove 2 guys and Anchors
Lay and remove 350 ft Cable, 8 Condr.

FORCE ACCOUNT WORK
by
THE NEW YORK CENTRAL RAILROAD COMPANY

Construction Engineering and Inspection	Lump sum
Telegraph line changes	Lump sum
Protection of Railroad Traffic	Lump sum
Accounting	Lump sum
Insurance	Lump sum

All labor and the furnishing of materials in connection with line changes as shown on this sheet and called for in the estimate will be performed by the N.Y.C. Railroad force account.

HAS-22-24.97

REVISIONS	N.Y.C. System	Office of Chief Engr.	Chicago, Ill.
Force Account Work added 9-30-48	B.R. No. 76.57 ALLIANCE BR. STA 4043+90		
	RECONSTRUCTION OF OVERHEAD HIGHWAY BRIDGE - S.H. 26 (U.S. 22 RELOCATED)		
	HOPEDALE, OHIO		
	TELEGRAPH LINE CHANGES		
	N.Y.C. R.R. - West	Alliance Branch	Plan No. 3124
	Scale 1"=50'	22 Aug 1946	Val. Sect. 229	File No. 114-112