FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO	S-9 (10) S-1372 (1)	

1/30

TRU-46-(22.07) (23.17) (26.17)
TRU-87- 9.07

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

S-9 (10)
S-1372 (1)

TRU-46-(22.07)(23.17) (26.17) TRU-87-9.07

GREENE & BLOOMFIELD TOWNSHIPS
TRUMBULL COUNTY
COLEBROOK TOWNSHIP, ASHTABULA COUNTY

APR 21 1964
GROUND PHOTOLAY

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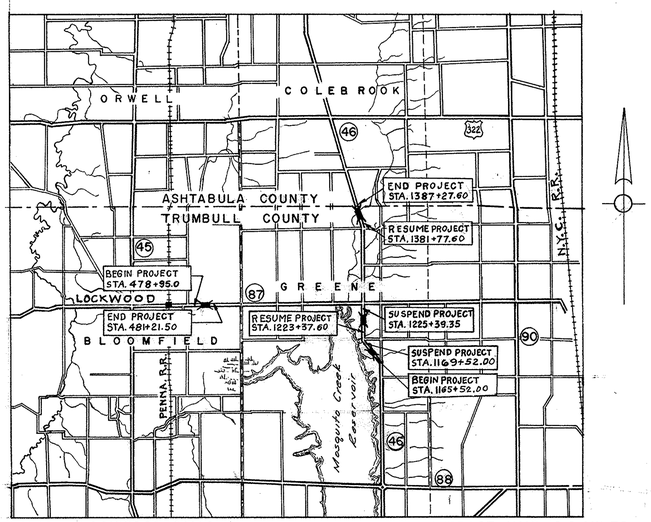
CONVENTIONAL SIGNS

CENTER LINE
CORPORATION LINE
FENCE LINE
GUARD RAIL (existing / proposed)
RAILROAD
COUNTY LINE
TOWNSHIP LINE
POWER POLES
TELEPHONE POLES
TREES (EXISTING)
TREES (TOBE REMOVED)



DELIVERY POINT - LOCKWOOD, OHIO. AVERAGE HAUL 6.0 MILES

LOCATION MAP

SCALE IN MILES
0 1 2 3 4 5 6

STATE HIGHWAYS
OTHER HIGHWAYS
PORTION TO BE IMPROVED

SCALES

	ORIGINAL	GRAPHIC
PLAN	1" = 50'	0 20 40 60 80 100
PROFILE - HORIZONTAL	1" = 50'	0 10 20
PROFILE - VERTICAL	1" = 10'	0 5 10 15 20
CROSS SECTIONS	1" = 10'	

1961 SPECIFICATIONS

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 NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED Carl L. Campbell
DATE 2-17-61 DIVISION DEPUTY DIRECTOR

APPROVED Guy E. Keeper
DATE 3-27-61 DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED D.H. Sherman
DATE 3-20-61 ENGINEER OF BRIDGES

APPROVED W. Furman
DATE 3-23-61 ENGINEER OF LOCATION & DESIGN

APPROVED C.W. McCughey
DATE 3-23-61 DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION

APPROVED W.H. Bm
DATE 3-22-61 DEPUTY DIRECTOR OF RIGHT-OF-WAY

APPROVED L.R. Berry
DATE 3-28-61 FIRST ASSISTANT DIRECTOR

APPROVED B.A. Preston
DATE 3-28-61 DIRECTOR OF HIGHWAYS

LINE DATA

		LENGTH
BEGIN WORK TRU-46-(22.07)	STA. 1163+52.00	
SUSPEND WORK	STA. 1171+52.00	800.00 L.F
RESUME WORK TRU-46-(23.17)	STA. 1221+71.74	
SUSPEND WORK	STA. 1227+53.79	582.05 L.F
RESUME WORK TRU-46-(26.17)	STA. 1379+77.60	
ASHTABULA CO. LINE	STA. 1387+35.75 = STA. 0+00	
END WORK	STA. 1+91.85	950.00 L.F
TOTAL WORK - S-1372 (1)		2332.05 L.F. OR 0.441 MI.
BEGIN WORK TRU-87-9.07	STA. 476+92.42	
END WORK	STA. 483+24.08	631.66 L.F.
TOTAL WORK - S-9 (10)		631.66 L.F. OR 0.119 MI.
BEGIN PROJECT TRU-46-(22.07)	STA. 1165+52.00	
SUSPEND PROJECT	STA. 1169+52.00	400.00 L.F.
RESUME PROJECT TRU-46-(23.17)	STA. 1223+37.60	
SUSPEND PROJECT	STA. 1225+39.35	201.75 L.F.
RESUME PROJECT TRU-46-(26.17)	STA. 1381+77.60	
END PROJECT	STA. 1387+27.60	550.00 L.F.
TOTAL PROJECT - S-1372 (1)		1151.75 L.F. OR 0.218 MI.
BEGIN PROJECT TRU-87-9.07	STA. 478+95.00	
END PROJECT	STA. 481+21.50	226.50 L.F.
TOTAL PROJECT - S-9 (10)		226.50 L.F. OR 0.042 MI.
GRAND TOTAL - WORK, S-1372 (1), 2332.05 L.F. + S-9 (10), 631.66 L.F. =		2963.71 L.F. OR 0.561 MI.
GRAND TOTAL - PROJECT S-1372 (1), 1151.75 L.F. + S-9 (10), 226.50 L.F. =		1378.25 L.F. OR 0.261 MI.

FILE NO.	TRUMBULL COUNTY TRU-46-(22.07)(23.17)(26.17) TRU-87-9.07
	DATE OF LETTING _____ 196__
	CONTRACT NO. _____

SUPPLEMENTAL SPECIFICATIONS		SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
		DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
NUMBER	DATE	DR-1	1-3-55	L-3	4-1-50		
None		I-1	11-15-60	L-3-A	4-1-50		
		G-7.07	6-1-56	AS-1-54	12-1-54		
		RI-1	7-15-58	CS-1-54 (Sh. 1 & 2)	7-16-56		
		T-35	1-2-56	A-1-54	12-1-54		
		I-15 No 1	11-15-60	P-1-54	2-2-59		
		I-15 No 2-A	8-17-60	SP 53	11-25-58		
		L-1	4-1-50				

APR 21 1964
GROUND PHOTOLAY

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED-

_____ DIVISION ENGINEER

_____ DATE

UTILITIES

North Bloomfield Telephone Co., North Bloomfield, O.
Ohio Edison Company, Youngstown, O.

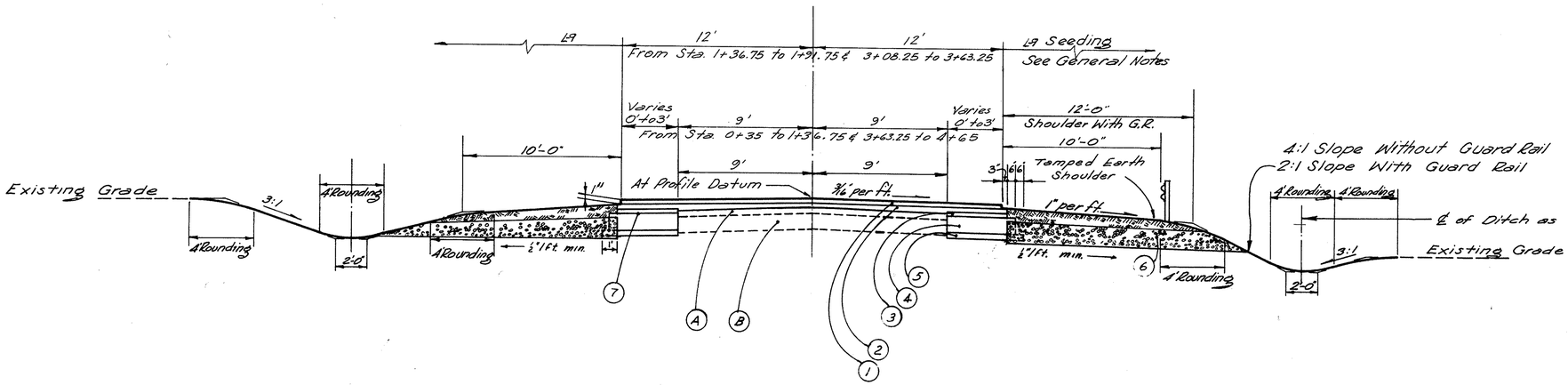
TYPICAL SECTION
TYPE T-35

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

2/30

TRU-46-(22.07) (23.17) (26.17)
TRU-87- 9.07

DESIGN SPEED 60 M.P.H.



TYPICAL SALVAGE & WIDENING SECTION
Sta. 0+35 to 4+65

LEGEND

- (1) T-35 - 1¼" Asphaltic Concrete Surface Course 'Type C' (70-85)
- (2) B-35-1¼" Min. Asphaltic Concrete Leveling Course (70-85)
- (3) B-35-1½" Asphaltic Concrete Leveling Course (70-85)
- (4) B-19-8" Aggregate Base Course
- (5) I-22-4" Subbase
- (6) I-9 - Stone Underdrains No. 2
- (7) T-30 - Bituminous Prime Coat Sec. M-5.7, Rt.-2 or Rt.-3 Applied at the rate of 0.40 gal. per sq. yd.
- (A) Exist. T-32 or T-34
- (B) Exist. 6" Water bound Macadam

• Thicknesses shown are "designed" thicknesses as described in Section T-35.01 and Section B-35.01.

NOTE:
FOR DETAILS NOT SHOWN SEE STANDARD DWG. R-1-1.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

TYPICAL SECTION
For
TRU-87-9.07

Scale ¼" = 1'-0"

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE

P.F. NO. 455-D

UTILITIES

Eastern Telephone Service Co., Cortland, O.
Ohio Edison Company, Youngstown, O.

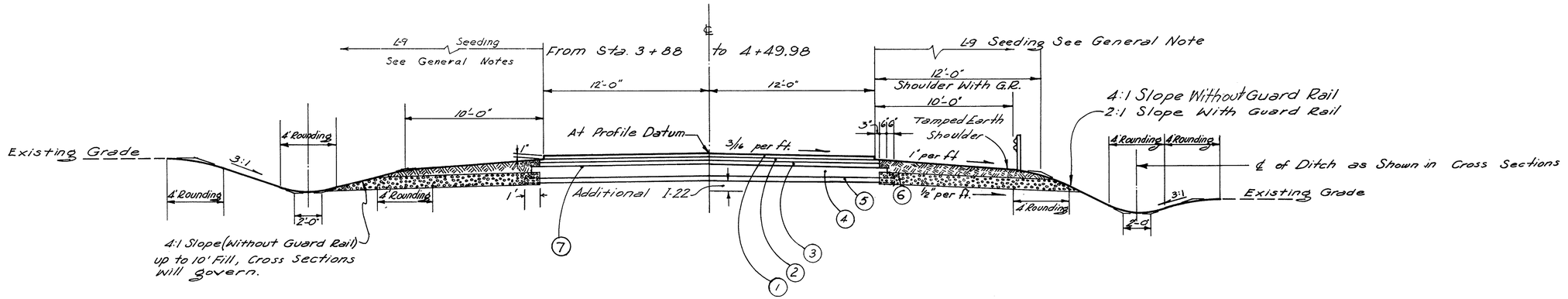
TYPICAL SECTIONS
TYPE T-35

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

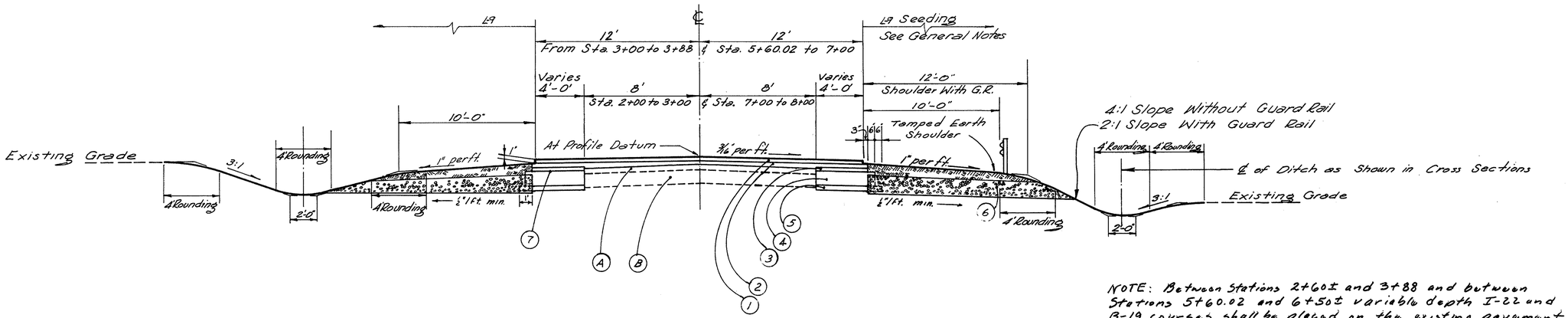
3/30

TRU-46-(22.07) (23.17) (26.17)
TRU-87- 9.07

DESIGN SPEED 60 M.P.H.

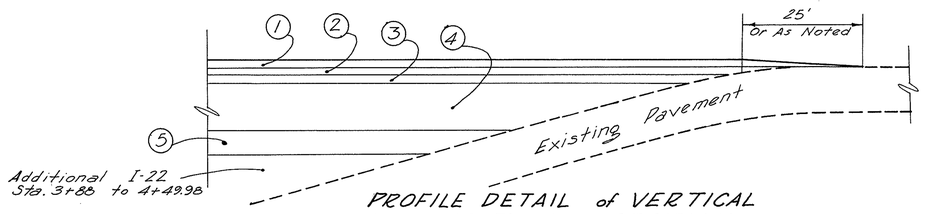


TYPICAL NORMAL SECTION



TYPICAL SALVAGE & WIDENING SECTION

NOTE: Between Stations 2+60± and 3+88 and between Stations 5+60.02 and 6+50± variable depth I-22 and B-19 courses shall be placed on the existing pavement as directed by the Engineer and as indicated on the vertical transition profile detail shown on this sheet.



PROFILE DETAIL of VERTICAL TRANSITION SECTION

LEGEND

- ●(1) T-35 - 1¼" Asphaltic Concrete Surface Course 'Type C' (70-85)
- ●(2) B-35-1¼" Asphaltic Concrete Leveling Course (70-85) (1¼" Min. on existing Pavement)
- ●(3) B-35-1½" Asphaltic Concrete Leveling Course (70-85)
- (4) B-19 - 8" Aggregate Base Course
- (5) I-22 - 4" Subbase
- (6) I-9 - Stone Underdrains No. 2
- (7) T-30 - Bituminous Prime Coat Sec. M-5.1, Rt-2 or Rt-3 Applied at the rate of 0.40 gal. per sq. yd.
- (A) Exist 3" T-32 or T-34
- (B) Exist 8" Water bound Macadam

● Thicknesses shown are "designed" thicknesses as described in Section T-35.01 and Section B-35.01.

FOR DETAILS NOT SHOWN SEE STANDARD DWG. R-I-1.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

TYPICAL SECTIONS For TRU-46-22.07

Scale ¼" = 1'-0"

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE

P.F. NO. 455-A

UTILITIES

Eastern Telephone Service Co. Cortland, O.
Ohio Edison Company, Youngstown, O.

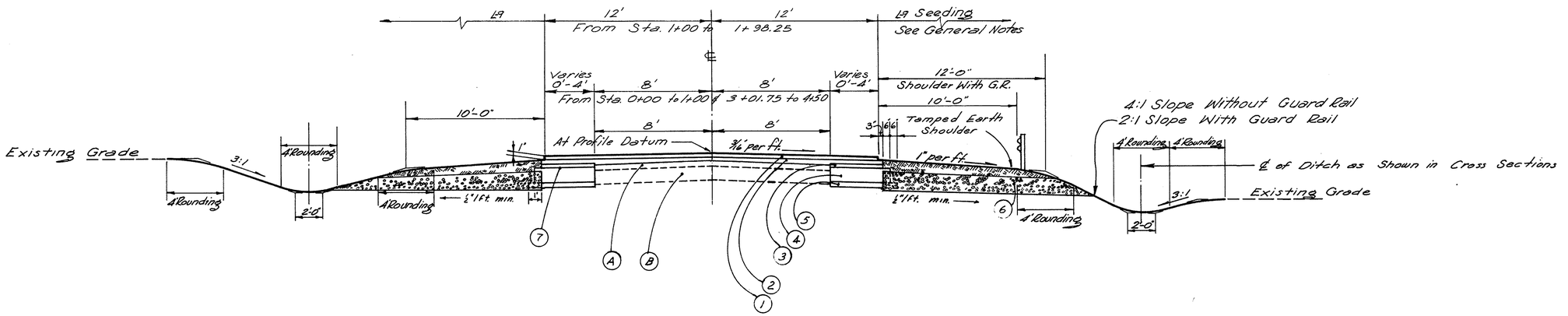
TYPICAL SECTION
TYPE T-35

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

4/30

TRU-46-(22.07) (23.17) (26.17)
TRU-87- 9.07

DESIGN SPEED 60 M.P.H.



TYPICAL SALVAGE & WIDENING SECTION

LEGEND

- ● (1) T-35 - 1¼" Asphaltic Concrete Surface Course 'Type C' (70-85)
- (2) B-35-1¼" Min. Asphaltic Concrete Leveling Course (70-85)
- ● (3) B-35-1½" Asphaltic Concrete Leveling Course (70-85)
- (4) B-19-8" Aggregate Base Course
- (5) I-22-4" Subbase
- (6) I-9 - Stone Underdrains No. 2
- (7) T-30 - Bituminous Prime Coat Sec. M-5.1, Rt-2 or Rt-3 Applied at the rate of 0.40 gal. per sq. yd.
- (A) Exist. 37-32 or T-34
- (B) Exist. 8" Water bound Macadam

● Thicknesses shown are "designed" thicknesses as described in Section T-35.01 and Section B-35.01.

FOR DETAILS NOT SHOWN SEE STANDARD DWG. R-1-1.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

TYPICAL SECTION
For
TRU-46-23.17

Scale ¼" = 1'-0"

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE

P.F. NO. 455-B

UTILITIES

Orwell Telephone Co., Orwell, O.
Ohio Edison Company, Youngstown, O.

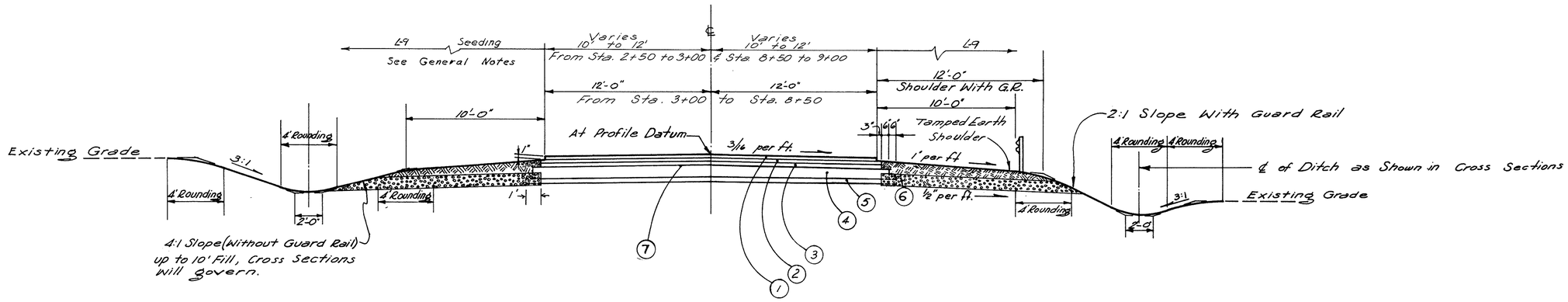
TYPICAL SECTIONS
TYPE T-35

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

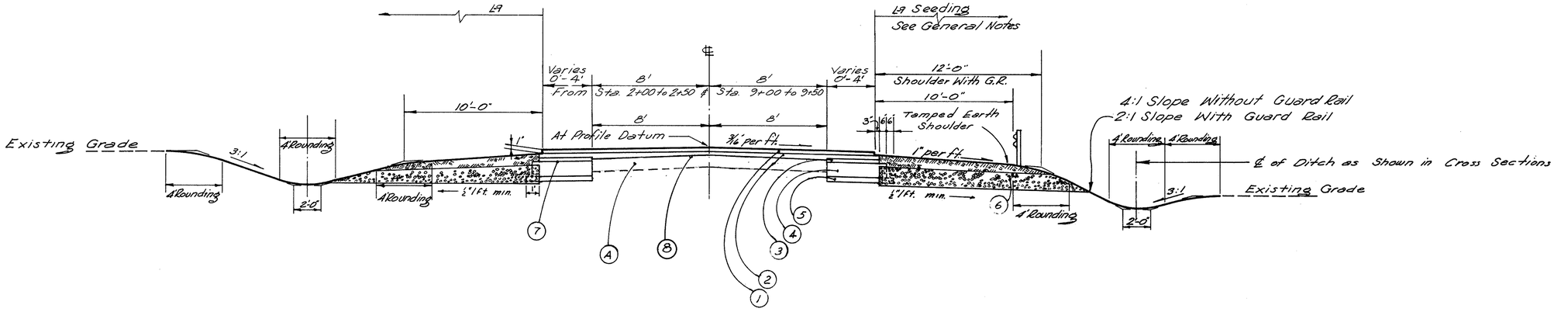
5
30

TRU-46-(22.07) (23.17) (26.17)
TRU-87- 9.07

DESIGN SPEED 60 M.P.H.



TYPICAL NORMAL SECTION
Sta. 2+50 to 9+00



TYPICAL SALVAGE & WIDENING SECTION
Sta. 2+00 to 2+50 & Sta. 9+00 to 9+50

LEGEND

- (1) T-35 - 1¼" Asphaltic Concrete Surface Course Type "C" (70-85)
- (2) B-35 - 1¼" Asphaltic Concrete Leveling Course (70-85) (1¼" Min. on Existing Pavement.)
- (3) B-35 - 1½" Asphaltic Concrete Leveling Course (70-85)
- (4) B-19 - 8" Aggregate Base Course
- (5) I-22 - 4" Subbase
- (6) I-9 - Stone Underdrains No. 2
- (7) T-30 - Bituminous Prime Coat Sec. M-5.1, Rt-2 or Rt-3 Applied at the rate of 0.40 gal. per sq. yd.
- (8) T-30 - Bituminous Tack Coat Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-1 or RC-2, as per Sec. T-30.02 Applied at the rate of 0.10 gal. per sq. yd.
- (A) Existing 8" Reinforced Concrete Pavement.

FOR DETAILS NOT SHOWN SEE STANDARD DWG. R-I-1.

• Thicknesses shown are "designed" thicknesses as described in Section T-35.01 and Section B-35.01.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

TYPICAL SECTIONS
For
TRU-46-26.17

Scale ¼" = 1'-0"

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE

P.F. NO. 455-C

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

6/30

TRU - 46 - (22.07) (23.17) (26.17)
TRU - 87 - 9.07

GENERAL NOTES

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE IN ACCORDANCE WITH SECTION S-0.01 (b) HAVING A MINIMUM FLOOR SPACE OF 200 SQUARE FEET. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT.

UTILITIES

ANY AND ALL WORK FOR REMOVING, RELOCATING AND CONSTRUCTION OF NEW FACILITIES FOR PRIVATE OR PUBLIC UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THE RESPECTIVE OWNERS, UNLESS OTHERWISE NOTED ON THE PLANS.

BERMS AND SLOPES

BERMS AND SLOPES SHALL BE FINISHED IN ACCORDANCE WITH THE STANDARD DRAWING R1-1 EXCEPT WHERE OTHERWISE SHOWN ON THE CROSS SECTIONS. ALL TRANSITIONS FROM CUT TO FILL SLOPES SHALL BE BLENDED WITH THE SURROUNDING TERRAIN AS DIRECTED BY THE ENGINEER.

DRIVES

DRIVEWAYS SHALL BE LOCATED AS SHOWN ON THE PLANS. FIELD DRIVES SHALL BE PAVED WITH SIX INCHES OF B-19 MATERIAL. RESIDENTIAL DRIVES AND MAIL BOX TURNOUTS SHALL BE PAVED WITH 5" OF B-19 AND 2" OF T-35 SURFACE. QUANTITIES ARE AS ESTIMATED ON THE PLANS.

PROPERTY MARKERS

ALL IRON PINS OR MARKERS WITHIN THE LIMITS OF THE PROJECT SHALL BE SAVED AND ADJUSTED TO THE NEW GRADE AS DIRECTED BY THE ENGINEER. COST OF ADJUSTING OR RESETTING MARKERS SHALL BE INCLUDED IN THE PRICE BID FOR E-1 ROADWAY EXCAVATION, METHOD "B".

DESIGN SPEED:
THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 60 MILES PER HOUR.

ESTIMATED QUANTITIES
SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ACCESS

ACCESS TO ALL PROPERTIES ABUTTING THIS PROJECT SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR. ESTIMATED QUANTITIES OF 30 C. Y. OF T-10 AGGREGATE AND 0.6 TONS OF M-10 ARE INCLUDED IN THE GENERAL SUMMARY FOR MAINTAINING ACCESS TO THESE PROPERTIES DURING THE CONSTRUCTION OF THIS PROJECT.

TREES AND STUMPS

ALL TREES AND STUMPS WHICH ARE WITHIN THE CONSTRUCTION LIMITS AND ARE 12" OR MORE AS MEASURED PER ITEM E-9.01 SHALL BE REMOVED AND PAID FOR UNDER ITEM E-9 LUMP IF MARKED FOR REMOVAL BY THE ENGINEER. THIS NUMBER MAY VARY FROM THOSE TREES SO MARKED ON THE PLAN.

TREE AND STUMP REMOVAL SCHEDULE

SIZE	12-18"	18-24"	24-30"	30-36"	36-42"	42-48"
TREES	17	10	3	3		4
STUMPS	2	1				

GUARD RAIL CONNECTIONS

A SUITABLE CONNECTION IS TO BE MADE BETWEEN EXISTING AND PROPOSED GUARD RAIL AT THE DIRECTION OF THE ENGINEER. THE LENGTHS OF THE INDIVIDUAL PANELS AT THESE CONNECTIONS MAY BE LESS THAN THE STANDARD LENGTHS.

ITEM 1-15 GUARD RAIL REMOVED AND STORED

THIS ITEM SHALL INCLUDE STORAGE ONLY OF THE RAIL ELEMENTS AND INCIDENTAL HARDWARE. THE POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF BY HIM.

STONE UNDERDRAINS

I-9 STONE UNDERDRAINS NO. 2 AS INDICATED ON THE TYPICAL SECTIONS SHALL BE PLACED ON EACH SIDE AT 50 FT. INTERVALS OR AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITIES REQUIRED = 1344 LIN.FT. CARRIED TO THE GENERAL SUMMARY.

SEEDING AND PROTECTING

QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TWO FEET (2') OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS. THE SEED MIXTURE FOR THE PROJECT SHALL BE AS FOLLOWS:

65 PER CENT KENTUCKY 31 FESCUE 5 PER CENT RED TOP
25 PER CENT KENTUCKY BLUE GRASS 5 PER CENT ALSIKE

DRAINAGE CONNECTIONS

24' OF 6" CLASS F-1 PIPE TO BE USED AT THE DIRECTION OF THE ENGINEER IN CASE FIELD DRAINS OR HOUSE DRAINS ARE INTERCEPTED DURING CONSTRUCTION AS CARRIED ON THE GENERAL SUMMARY.

NON-RIGID PAVEMENT REMOVAL

REMOVAL AND DISPOSAL OF EXISTING NON-RIGID PAVEMENT, UNLESS OTHERWISE NOTED ON THESE PLANS, SHALL BE MEASURED AND PAID FOR AS ITEM E-1, ROADWAY EXCAVATION, METHOD "B".

TRAFFIC

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.
ITEM S-15 TEMPORARY RUN-AROUND, BRIDGE AND APPROACHES, USING 20' WIDE PAVEMENT, SHALL BE PROVIDED AT EACH PROPOSED STRUCTURE LOCATION.
THE ALIGNMENT AND PROFILE OF THE TEMPORARY RUN-AROUNDS SHALL BE AS SHOWN ON THE PLANS.
THE CROSS SECTIONS ON SHEETS 12-A, 13-A, 14-A, AND 15-A INDICATE TEMPORARY RUN-AROUND PAVEMENT 24' WIDE, ON 30' ROADWAY. THESE DIMENSIONS SHALL BE DISREGARDED.
ALL TEMPORARY RUN-AROUND PAVEMENT FOR THIS PROJECT SHALL BE 20' WIDE ON 26' ROADWAY.
THE RUNAROUND PAVEMENT TYPE SHALL BE AS SHOWN ON THE STRUCTURE DETAIL SHEETS.
THE DURATION OF USE OF THE AGGREGATE SURFACED RUNAROUND FOR SEC. TRU-46-26.17 SHALL BE HELD TO AN ABSOLUTE MINIMUM AND, IN NO CASE, SHALL EXCEED 45 CONSECUTIVE CALENDAR DAYS. DURING THIS PERIOD STRUCTURE TRU-46-2621 AND PROPOSED ADJACENT PAVEMENT SHALL BE SUFFICIENTLY COMPLETED TO MAINTAIN TWO-WAY TRAFFIC.
AGGREGATE AND CHLORIDE SHALL BE APPLIED WHERE AND AS DIRECTED AND WILL BE PAID FOR AT THE RESPECTIVE UNIT PRICES BID FOR ITEMS T-10 AND M-10.
THE FOLLOWING ESTIMATED QUANTITIES FOR THE RUNAROUND AT SEC. TRU-46-26.17 HAVE BEEN CARRIED DIRECTLY TO THE GENERAL SUMMARY:

ITEM S-15	TEMP. RUNAROUND BRIDGE AND APPROACHES	LUMP
ITEM T-10	AGGREGATE	350 C.Y.
ITEM M-10	CHLORIDE	17 Tons

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

17/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07

S-9(10)	S-1372(1)	S-9(10)	S-1372(1)	S-9(10)	S-1372(1)			SUB-TOTALS S-9(10)	SUB-TOTALS S-1372(1)	ITEM	QUANTITY	UNIT	ROADWAY
SHEET 6		SHEET 7		SHEET 8	SHEET 9	SHEET 10	SHEET 11						
				453	915	274	747	453	1936	E-1	2389	CU. YDS.	ROADWAY EXCAVATION METHOD "B", AS PER PLAN
		134	2001					134	2001	E-1	2135	SQ. YDS.	COMPACTED SUBGRADE
			8093						8093	E-4	8093	CU. YDS.	BORROW
	Lump								Lump	S-15	LUMP	LUMP	TEMPORARY RUNAROUND, BRIDGE AND APPROACHES, AS PER PLAN
			356						356	E-8	356	SQ. YDS.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT
					LUMP		LUMP		LUMP	E-9	LUMP	LUMP	REMOVAL OF TREES AND STUMPS
		3	45					3	45	E-11	48	M.GAL.	WATER
				239				239		I-15	239	LIN. FT.	GUARD RAIL REMOVED AND DISPOSED OF
					364		88		452	I-15	452	LIN. FT.	GUARD RAIL REMOVED AND STORED, AS PER PLAN
				217.00	417.42	118.00	637.50	217.00	1172.92	I-15	1389.92	LIN. FT.	GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP), AS PER PLAN
				1989	3774	2131	5125	1989	11,030	L-9	13,019	SQ. YD.	SEEDING AND PROTECTING, AS PER PLAN
		0.18	1.04					0.18	1.04	L-9	1.22	TONS	COMMERCIAL FERTILIZER (12-12-12)
		0.90	5.20					0.90	5.20	L-9	6.10	TONS	AGRICULTURAL LIMING MATERIAL
					264		271		535	L-10	535	SQ. YDS.	SODDING
0.3	17.3							0.3	17.3	M-10	17.6	TONS	CALCIUM CHLORIDE FURNISHED AND APPLIED FOR MAINTAINING TRAFFIC
15	865							15	865	T-10	880	CU. YD	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC
						1			1	E-10	1	EACH	REMOVAL OF 10'x10' SHOP BUILDING, PARCEL NO. 20-A OF HINAGE
				116				116		E-12	116	LIN. FT.	PIPE REMOVED OVER 15"
				28			134	28	134	I-1	162	LIN. FT.	12" PIPE, CLASS F-1
					36				36	I-1	36	LIN. FT.	15" PIPE, CLASS F-1
				66				66		I-1	66	LIN. FT.	18" PIPE, CLASS F-1
				88				88		I-1	88	LIN. FT.	36" PIPE, CLASS F-1
12	12							12	12	I-1	24	LIN. FT.	6" PIPE, CLASS F-1
						278			278	I-1	278	LIN. FT.	12" PIPE, CLASS H-2
300	1044							300	1044	I-9	1344	LIN. FT.	STONE UNDERDRAINS, NO. 2
				32	25	224	51	32	300	E-12	332	LIN. FT.	PIPE REMOVED 15" AND UNDER
													PAVEMENT
				33	48	28	71	33	147	T-35	180	CU. YD.	ASPHALTIC CONCRETE SURFACE COURSE TYPE "C" (70-85)
				46	82	65	150	46	297	B-35	343	CU. YD.	ASPHALTIC CONCRETE LEVELING COURSE (70-85)
				122	200	69	459	122	728	B-19	850	CU. YD.	AGGREGATE BASE COURSE
				26	73	34	214	26	321	I-22	347	CU. YD.	SUBBASE
				110	396	91	756	110	1243	T-30	1353	GAL.	BITUMINOUS PRIME COAT: SEC. M-5.7, RT-2 or RT-3
							18		18	T-30	18	GAL.	BITUMINOUS TACK COAT: SEC. M-5.5, MS-2 or RS-1 or SEC. M-5.2 RC-1 or RC-2, AS PER SECTION T-30.02
				134	134	134		134	268	I-7	402	SQ. YD.	REINFORCED CONCRETE APPROACH SLABS (T=13")

GENERAL SUMMARY TYPE CODE 6201

NOTE: DRAINAGE QUANTITIES CONTINUED ON SHEET 27

STRUCTURES OVER 20' SPAN

ESTIMATED QUANTITIES FOR BR. Nº TRU-87-0909 ON SHEET Nº 24
ESTIMATED QUANTITIES FOR BR. Nº TRU-46-2211 ON SHEET Nº 17
ESTIMATED QUANTITIES FOR BR. Nº TRU-46-2319 ON SHEET Nº 21

CALCULATIONS

E-8 REMOVAL AND DISPOSAL OF EXISTING REINFORCED CONCRETE PAVEMENT

TRU-26.17 STA. 2+50 TO STA. 3+50 & 8+00 TO 9+00 = 200 L.F.
200 x 16 ÷ 9 = 355.56 S.Y.
TO GENERAL SUMMARY 356 SQ.YD.- S-1372(1)

ITEM E-1, COMPACTED SUBGRADE	ROADWAY PAVEMENT	APPROACH SLABS	TOTAL
S-9(10)- 9.07		134 S.Y.	134 S.Y.
TOTAL- S-9(10)			134 S.Y.
S-1372(1)- 22.07		134 S.Y.	134 S.Y.
23.17		134 S.Y.	134 S.Y.
26.17	1733 S.Y.		1733 S.Y.
TOTAL- S-1372(1)			2001 S.Y.

EARTHWORK

TRU-87-9.07	EMBANKMENT + 30% = 448+135-	SH. 8	583 CU.YDS.		
	CHAN. EMB. +80% 12+10	SH. 25	22 CU.YDS.	605 CU.YDS.	
	E-1 EXCAVATION	SH. 8	453 CU.YDS.		
	SUITABLE E-3 EXCAVATION- EST.	SH. 25	152 CU.YDS.	605 CU.YDS.	
				0	
TRU-46-22.07	EMBANKMENT + 30% = 1625+488	SH. 9	2113 CU.YDS.		
	CHAN. EMB. +80% 342+274	SH. 19	616 CU.YDS.	2729 CU.YDS.	
	E-1 EXCAVATION	SH. 9	915 CU.YDS.		
	SUITABLE E-3 EXCAVATION- EST.	SH. 19	71 CU.YDS.	986 CU.YDS.	
	DEFICIENT EXCAVATION			1743 CU.YDS.	
TRU-46-23.17	EMBANKMENT + 30% = 446+134	SH. 10	580 CU.YDS.		
	CHAN. EMB. +80% 13+10	SH. 22	23 CU.YDS.	603 CU.YDS.	
	E-1 EXCAVATION	SH. 10	274 CU.YDS.		
	SUITABLE E-3 EXCAVATION- EST.	SH. 22	329 CU.YDS.	603 CU.YDS.	
				0	
TRU-46-26.17	EMBANKMENT + 30% - 5584+1675	SH. 11	7259 CU.YDS.	7259 CU.YDS.	
	E-1 EXCAVATION	SH. 11	747		
	SUITABLE E-3 EXCAVATION- EST.	SH. 27	162 CU.YDS.	909 CU.YDS.	
	DEFICIENT EXCAVATION			6350 CU.YDS.	

DEFICIENT EXCAVATION- BORROW
TRU-46-22.07 - 1743 CU. YDS.
TRU-46-26.17 - 6350 CU. YDS.
TOTAL 8093 CU. YDS. ITEM E-4 BORROW- S-1372(1)

E-11 WATER

	EMBANKMENT	B-19	I-22	TOTAL	USE
S-9 (10)	448 C.Y.	+ 122 C.Y. = 570 x 5 ÷ 1000 = 2.85-	26x10÷1000= 0.26	3.11	3 M. GAL.
S-1372 (1)	7655 C.Y.	+ 728 C.Y. = 8383 x 5 ÷ 1000 = 41.92-	321x10÷1000 3.21	45.13	45 M. GAL.

L-9 COMMERCIAL FERTILIZER (12-12-12)

FERTILIZER @ 20 LBS. PER 1000 S.F. OF L-9 & L-10
FROM RECAP L-9 + L-10 = 13,554 SQ.YDS.
13,554 x 9 x 20 ÷ 1000 ÷ 2000 = 1.22 TONS (TO GENERAL SUMMARY)

ESTIMATED-
S-9 (10) 0.18 TONS
S-1372(1) 1.04 TONS

L-9 AGRICULTURAL LIMING MATERIALS

LIME @ 100 LBS. PER 1000 SQ. FT. OF L-9 & L-10
FROM RECAP L-9 + L-10 = 13,554 SQ.YDS.
13,554 x 9 x 100 ÷ 1000 ÷ 2000 = 6.10 TONS (TO GENERAL SUMMARY)

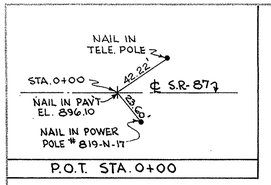
ESTIMATED-
S-9 (10) 0.90 TONS
S-1372(1) 5.20 TONS

Rev. 3-28-61 R.E.C.

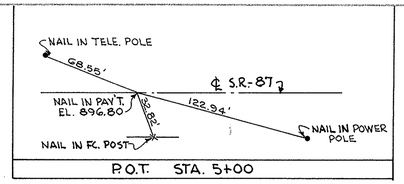
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

8/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07



P.O.T. STA. 0+00



P.O.T. STA. 5+00

Marker will be furnished and erected on the left by State forces prior to acceptance of this improvement.

NOTE:
SEE SHEETS 23, 24 FOR BRIDGE DETAILS
BRIDGE N° TRU-87-0909
& SHEET 25 FOR CHANNEL X-SECTIONS

S-9 (10)

BRIDGE DATA - TRU-87-0909

	EXISTING	PROPOSED
TYPE	Conc. Beam	Cont. R.C. Slab - Capped Pile Abuts. - R.C. Piers
SPANS	29'-6" Clear	20' - 25' - 20' ctr. to ctr. Bears.
ROADWAY	23'-4" f/f Curbs	44' f/f of guard rail
LOADING		C.F. 130 (57)
SKEW	None	None
SUBSTRUCTURE	Conc. Gravity	
WEARING SURFACE		3/4" Monolithic Conc.
APPROACH SLABS		AS-1-54 (25' Long)
ALIGNMENT	tangent	tangent.
CONDITION	poor	

BEGIN WORK
STA. -(0+65.83) =
STA. 476+92.42

END WORK
STA. 5+65.83 =
STA. 483+24.08

℄ Shown is ℄ of Survey, Base Line of R/W, ℄ of Proposed Pavement.

BEGIN SHEET STA. -5+00

END SHEET STA. 10+00

Begin Pav't Taper Sta. 0+35

END PAV'T TAPER STA. 1+36.75

BEGIN PAV'T TAPER STA. 3+63.25

END PAV'T TAPER STA. 4+65

SNYDER'S DITCH

Hay

Pasture

Weeds

Apple

Curve N°1 Curve N°2 Curve N°3 Curve N°4

TEMPORARY RUN-AROUND

℄ SR 87 S 85° 00" E (66')

Temporary Run-Around Curve Data

D = 38°-11'-50"
Δ = 33°-33'-26"
R = 150
T = 45.23'
Lc = 86.60'
Larc = 87.85'

Curves N° 1, 2, 3, and 4

S-9 (10)
BEGIN PROJECT
STA. 1+36.75 =
STA. 478+95.0
S.L.M. = 9.07

S-9 (10)
END PROJECT
STA. 3+63.25 =
STA. 481+21.5
S.L.M. = 9.11

NOTES:
For dumped rock quantities see Sheet 24 for Bridge N° TRU-87-09.09.

SAME GRADE AS EXISTING PAVEMENT.

Marker will be furnished and erected on the right by State forces prior to acceptance of this improvement.

APPROACH SLABS

Station From	Station To	I-7 1'-3" S.Y.	E-1 Compacted Subgrade S.Y.
1+91.75	2+16.75	66.7	66.7
2+83.25	3+08.25	66.7	66.7
Totals		133.4	133.4
		Use 134	134

I-15 GUARD RAIL

Station From	Station To	Side	I-15 L.F.	Removed & Disposed of L.F.
0+37.5	1+50	R	112.5	
0+37.5	2+30	R		192.5
1+87.5	3+12.5	R	125	
1+87.5	2+87.5	L	112.50	
2+05	2+30	L		25
2+69	2+77	L		8
2+69	2+82	R		13
Deduct for Prop. Bridge		L&R	-133.0	
Totals			217.00	238.5
				Use 239

PIPE - CLASS "F-1"

Station From	Station To	Side	12" L.F.	18" L.F.	36" L.F.
1+50	1+90	R			40
3+10	3+58	R			48
3+58	3+92	L		34	
1+47	1+75	L	28		
2+80	3+12	L		32	
Total			28	66	88

E-12 L.F.

Station From	Station To	Side	Pipe Removed 15" & Under	Pipe Removed Over 15"
1+53	1+69	L	16	
1+90	2+15	R		46
2+70	3+01	L		31
2+86	3+25	R		39
3+66	3+82	L	16	
Total			32	116

DRIVEWAY & MAIL BOX APPROACHES

Station	Side	B-19 Aggregate Base Course - C.Y.	T-35 Asphaltic Concrete Surface Course - C.Y.	T-30 Bit. Prime Coat @ .4 lb/s.y. Gal.
1+61	L	13.2		
1+70	R	15.4		
3+34	R	15.6		
3+73.5	L	14.6	5.9	41.7
2+96	L	16.6		
Totals		76	6	42

9'-0" ℄ 9'-0"
6" ± Water Bound Macadam Bituminus Treated
0

TYPICAL SECTION
ADJOINING PAVEMENT

T.B.M. #1 ▫ PAINTED WHITE ON TOP OF SE WING WALL OF EX. BRIDGE
ELEVATION 897.00

T.B.M. #2 WEST BOLT OF PUMP HEAD 55' LT. OF STA. 3+90
ELEVATION 897.73

-5+00 -4+00 -3+00 -2+00 -1+00 0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00

MEET EXISTING PAV'T. MEET EXISTING PAV'T.
VERTICAL TRANSITION VERTICAL TRANSITION
EXISTING ℄ PROFILE PROPOSED ℄ PROFILE
+0.13 %
BRIDGE LIMITS 66.50'
STA 2+16.75 STA 2+83.25

900 890 880

895.60 895.42 895.25 895.62 895.84 896.10 896.24 896.29 896.36 896.44 896.51 896.55 896.49 896.57 896.74 896.80 896.93 897.28 897.60 898.01 898.01

Excavation 453 c.y.
Embankment 448 c.y.
Seeding 1,989 s.y.

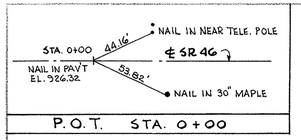
SUMMARY of QUANTITIES

Description	T-35 Cu.Yd. Asphaltic Conc. Surface Course	B-35 Cu.Yd. Asphaltic Conc. Leveling Course	B-19 Cu.Yd. Aggregate Base Course	I-22 Cu.Yd. Subbase	T-30 Gal. Bituminous Prime Coat
Resurfaced Areas	26.63	45.03	43.20	25.11	63.44
* End App. Slabs	.36	.83	2.53	1.22	4.36
Total	27	46	46	26	68

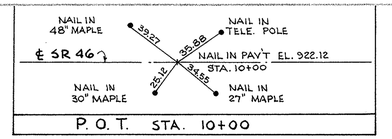
* Portions of existing pavement will be removed for placing forms used in building Approach Slabs. Estimated quantities have been added to replace said portions of existing pavement.

PLATE I - PLAN-PROFILE B.P.R. STANDARD THE PROGRESS PRINT CO., Chicago 324-1

PLAN-PROFILE STA. -5+00 TO STA. 10+00 TRU-87-9.07



P.O.T. STA. 0+00



P.O.T. STA. 10+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

9/30

TRU-46-(2207)(23.17)(26.17)
TRU-87-9.07

BRIDGE DATA - TRU-46-2211

	EXISTING	PROPOSED
TYPE	Conc. beam	Cont reinf. conc. slab with capped pile substructure
SPANS	22'-6" Clear	18'-22.5'-18'
ROADWAY	23'-0" % deck	44' t/f of guard rails
LOAD FREQUENCY		CF-130 (57)
SKEW	none	12°00' R.F.
SUB STRUCTURE	stone ℄ conc. gravity	
WEARING SURFACE		1½" Monolithic Concrete
APPROACH SLABS		AS-1-54 (25' long)
ALIGNMENT	tangent	tangent
CONDITION	poor	

BEGIN SHEET STA. -3+00

END SHEET STA. 13+00

℄ Shown is ℄ of Survey, Baseline of R/W, and ℄ of proposed Pavement.

BEGIN WORK STA. 1+00 = STA. 1163+52.0

SAME GRADE AS EXISTING PAVEMENT

BEGIN PAVT TAPER Sta 2+00

END PAVT TAPER Sta 3+00

MUD CREEK BRANCH

NOTE: See Sheet 16, 17, 18 For Bridge Details Br. № TRU-46-2211 & SHEET 19 FOR CHANNEL X-SECTIONS

S-1372(1)

Marker will be furnished and erected on the left by State forces prior to acceptance of this improvement.

TEMPORARY RUN-AROUND

BEGIN PAVT TAPER Sta 7+00

END PAVT TAPER Sta 8+00

SUSPEND WORK STA. 9+00 = STA. 1171+52.0

CURVE #1 · CURVE #2 · CURVE #3 · CURVE #4

℄ S.R. 46 N 34°-53' W (66')

Temporary Run-Around Curve Data
Curves № 1, 2, 3, 4
P = 38°-11'-30"
Δ = 36°-52'-12"
R = 150'
T = 50.00'
Lc = 96.87'
Larc = 96.53'

S-1372(1) BEGIN PROJECT STA. 3+00 = STA. 1165+52.0 SLM = 22.07

S-1372(1) SUSPEND PROJECT STA. 7+00 = STA. 1169+52.0 SLM = 22.15

NOTE: For Dumped Rock Quantities See Sheet 17 for Br. № TRU-46-2211

S-1372(1)

Marker will be furnished and erected on the right by State forces prior to acceptance of this improvement.

8'-0" 8'-0"
3" Bituminous Treated Surface
8"± Water Bound Macadam

TYPICAL SECTION ADJOINING PAVEMENT

T. B. M. # 1 : NAIL IN TRUNK OF 30" MAPLE 24' RT. OF STA. 1+72 ELEVATION 927.17

T. B. M. # 2 : NAIL IN ROOT OF 48" MAPLE 33' RT. OF STA. 6+57 ELEVATION 923.47

L-10 SODDING

Station From	Station To	Side	Length Width	Sodding Sq. Yd.
3+00	4+00	L	100' x 6'	67
3+00	4+50	R	150' x 6'	100
5+30	6+00	L	70' x 6'	47
5+43	6+18	R	75 x 6'	50
Total				264

E-12

Station From	Station To	Side	Pipe Removal 15" and under
6+21	6+46	R	25 L.F.
Total			25 L.F.

APPROACH SLABS

Station From	Station To	I-7 T=13" S.Y.
4+49.98	4+74.98	66.7
5+35.02	5+60.02	66.7
Total		133.4
Use		134

PIPE CLASS F-1

Station From	Station To	Side	15" L.F.
6+18	6+54	R	36
Total			36

TYPE 2 DRIVEWAYS & MAIL BOX APPROACHES

Station	Side	B-19 AGGREGATE BASE COURSE CU. YD.	T-35 ASPHALTIC CONC. SURFACE COURSE CU. YD.	T-30 BIT. PRIME COAT @ .4/S.Y. GAL.
6+22	L	4.32	1.75	12.33
6+22	R	12.80	5.18	36.58
Total		17	7	49

I-15 GUARD RAIL

Station From	Station To	Side	I-15 L.F.	I-15 Rem. & Store
3+28.44	5+90.94	L	262.50	
3+31.55	6+06.55	R	275.00	
3+67.	4+38	L		116
4+04	4+83	R		79
5+17	6+08	L		91
5+17	5+95	R		78
Deduct for Prop. Bridge		L & R.	-120.08	
Totals			417.42	364

SUMMARY of QUANTITIES

T-35 Cu.Yd. Asphaltic Conc. Surface Course	B-35 Cu.Yd. Asphaltic Conc. Leveling Course	B-19 Cu.Yd. Aggregate Base Course	I-22 Cu.Yd. Subbase	T-30 Gal. Bituminous Prime Coat
41	82	183	73	347

EXCAVATION 915 Cu.Yd.
EMBANKMENT 1625 Cu.Yd.
SEEDING 3774 Sq.Yd.

VERTICAL TRANSITION · MEET EXIST. PAVT. · V.P.C. STA. 2+00 · V.P.I. STA. 4+74.98 · V.P.I. STA. 5+00 · EL. 918.38 · STA. 5+35.02 · V.P.T. STA. 8+00 · BRIDGE LIMITS 60.04' · 60.0' V.C. · PROPOSED ℄ PROFILE · EXISTING ℄ PROFILE · -1.60 % · +0.86 %

930 920 910

-3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13

928.11 928.27 928.10 927.84 927.41 926.93 926.32 925.64 924.71 923.92 923.18 922.35 921.20 920.39 919.57 919.27 919.29 919.09 918.44 920.00 920.37 920.63 920.95 921.39 921.60 921.97 922.12 921.92 921.70 921.59 921.52 921.48 921.12

PLATE I—PLAN-PROFILE B. P. R. STANDARD
THE FREDERICK POST CO., Chicago 264-1

PLAN-PROFILE STA. -3+00 TO STA. 13+00 TRU-46-22.07

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

10/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07

NAIL IN 30" MAPLE
95.64'
℄ S.R. 46
75.07'
STA 0+00
NAIL IN ℄
99.81'
NAIL IN TELE POLE
NAIL IN TELE POLE
P.O.T. STA. 0+00

NAIL IN POWER POLE
57.46'
℄ S.R. 46
STA 5+00
NAIL IN ℄
35.52'
NAIL IN TELEPHONE POLE
P.O.T. STA. 5+00

NOTE: See Sheets 20, 21 & 22 for Bridge Details & Channel Cross-Sections Br. No TRU-46-2319

Marker will be furnished and erected on the left by State forces prior to acceptance of this improvement.

S-1372 (1)
RESUME PROJECT
STA. 1+00 =
STA. 1223+37.60
SLM = 23.17

S-1372 (1)
SUSPEND PROJECT
STA. 3+01.75 =
STA. 1225+39.35
SLM = 23.21

RESUME WORK
STA. -0+65.86 =
STA. 1221+71.74

SUSPEND WORK
STA. 5+16.19 =
STA. 1227+53.79

BEGIN SHEET STA. -5+00

END SHEET STA. 10+00

℄ Shown is ℄ of Survey, Base line of R/W and ℄ of proposed pavement

Corn Field

Garden

BEGIN PAVT TAPER Sta 0+00

BEGIN PAVT TAPER Sta 3+01.75

END PAVT TAPER Sta 4+50

BR. of MILD CREEK

2 St. Maple Frame House #8 Maple

Abandon 12" CMP

FL. 12" 919.70

30" Maple Sta 1+00

FL. 12" 919.30

FL. 12" 917.40

12" C.M.P.

Frame Shed

Frame Barn

Run-around

℄ Temporary

Same Grade as Existing Land

Weeds & Pasture

Beans

CURVE #1

CURVE #2

CURVE #3

Sta 0+23.14 R = 150'

Sta 5+16.19 R = 150'

R = 150'

S-1372 (1)

0+93.86 150'

2+16.76 150'

SR. 46 N 0°-10' E (66')

APPROACH SLABS

Station		T-13" SY.
From	To	
1+98.25	2+23.25	66.75
2+76.75	3+01.75	66.7
Total		133.4

Use 134

3" Bituminus Treated Surface
8"± Water Bound Macadam

TYPICAL SECTION ADJOINING PAVEMENT

BRIDGE DATA-TRU-46-2319

	EXISTING	PROPOSED
TYPE	Conc. Beam	Continuous Concrete Slab
SPANS	17'-8" Clear	16' - 20' - 16' c/c Brgs.
ROADWAY	18'-8" f/f of Railing	44' f/f of guard rail
LOADING		C.F. 130 (57)
SKEW	None	None
SUB STRUCTURE	Conc. Gravity	
WEARING SURFACE		3/4" Monolithic Conc.
APPROACH SLABS		AS-1-54 (25' Long)
ALIGNMENT	Tangent	Tangent.
CONDITION	poor	

T.B.M. #1 NAIL IN EAST ROOT OF MAPLE TREE AT STA. 1+00 ± 33' LT. ELEVATION 922.96

Marker will be furnished and erected on the right by State forces prior to acceptance of this improvement.

TEMPORARY RUN-AROUND CURVE DATA

CURVE #1	CURVE #2	CURVE #3
D = 38°-11'-50"	D = 38°-11'-50"	D = 38°-11'-50"
Δ = 53°-00'-00"	Δ = 76°-00'-00"	Δ = 23°-00'-00"
R = 150'	R = 150'	R = 150'
T = 74.19'	T = 117.19'	T = 30.52'
L_c = 133.86'	L_c = 184.70'	L_c = 59.81'
L_{arc} = 138.75	L_{arc} = 198.97	L_{arc} = 60.21'

NOTE: For Dumped Rock Quantities See sheet 21. For Br. No TRU-46-2319

T.B.M. #2 NAIL IN POWER POLE #476-N 24 STATION 5+50 ± 33' LT. ELEVATION 922.39.

-(5+00) -(4+00) -(3+00) -(2+00) -(1+00) 0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00

MEET EXISTING PAVT

VERTICAL TRANSITION

28'

50'

STA. 0+00

STA. 2+23.25

Bridge Limits 53.50'

STA. 2+76.75

STA. 4+50

930 920 910

Existing ℄ Profile

-0.30% Grade

Proposed ℄ Profile

12" R.C.P.

12" C.M.P.

924.55 924.45 924.24 924.01 923.79 922.98 922.62 922.56 922.66 922.52 922.62 921.94 921.60 921.60 921.68 921.96 922.74 923.79 924.66 925.25 925.81

SUMMARY of QUANTITIES

Description	T-35 Cu.Yd. Asphaltic Conc. Surface Course	B-35 Cu. Yd. Asphaltic Conc. Leveling Course	B-19 Cu.Yd. Aggregate Base Course	I-22 Cu.Yd. Subbase	T-30 Gal. Bituminous Prime Coat
Resurfaced Areas	27.12	63.86	** 66.79	32.33	86.77
* End App. Slabs	.36	.83	2.53	1.22	4.36
Total This Str.	28	65	69	34	91

* Portions of existing pavement will be removed for placing forms used in building Approach Slabs. Estimated quantities have been added to replace said portions of existing pavement.

** B-19 has been added for feathering berm to meet grade in front of barn Sta 1+50 Lt. & replace area disturbed by new pipe.

EXCAVATION	274 Cu.Yd.
EMBANKMENT	446 Cu.Yd.
SEEDING	2131 Sq.Yd.

I-15 Guard Rail

Station From	Station To	Side	I-15 Lin. Ft.
1+93.75	3+06.25	L	112.5
1+93.75	3+06.25	R	112.5
Deduct for prop. bridge			-107.0
Total			118.0

I-1 PIPE CLASS H-2

Station From	Station To	Side	12" Lin. Ft.
0+75	2+31	L	156
1+09	2+31	R	122
Total			278

E-12

Station From	Station To	Side	Pipe Removed 15" & Under
0+48	2+09	L	161
1+33	1+96	R	63
			224 L.F.

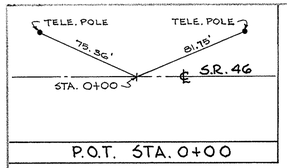
PLAN-PROFILE STA. -5+00 TO STA. 10+00-TRU-46-23.17

PLATE I—PLAN-PROFILE B.P.R. STANDARD
THE FREDERICK POST CO., Chicago 2261

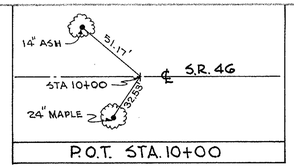
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

11/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87- 9.07



P.O.T. STA. 0+00



P.O.T. STA. 10+00

NOTE: See Sheet 26,27 For Culvert Details TRU-46-2621 & SHEET 28 FOR CHANNEL X-SECTIONS

S-1372 (1)
RESUME PROJECT
STA. 3+00 =
STA. 1381+77.60
S.L.M. = 26.17

S-1372 (1)
END PROJECT
STA. 8+50
STA. 1387+27.60
S.L.M. = 26.27

Marker will be furnished and erected on the left by State forces prior to acceptance of this improvement

S-1372 (1)

TRUMBULL COUNTY
ASHTABULA COUNTY

BEGIN SHEET STA. -3+00

END SHEET STA. 13+00

℄ Shown is ℄ of Survey, Base Line of R/W, and ℄ of proposed Pavement

RESUME WORK
STA. 1+00 =
STA. 1379+77.60

END WORK
STA. 10+50 =
STA. 1491.85

Pasture

BRANCH OF MOSQUITO CREEK

SAME GRADE AS EXISTING PAV'T.

TEMPORARY RUN-AROUND

PASTURE & BRUSH

Curve No 1 R=150'

Curve No 2 R=150'

Curve No 3 R=150'

Curve No 4 R=150'

FIELD DRIVE Sta. 2+26

FIELD DRIVE Sta. 8+55

RESS. DRIVE 3+09

HOUSE

CORN FIELD

PASTURE

Sod

N 18°29' W

℄ SR 46 (GG')

TEMPORARY RUN-AROUND CURVE DATA
Curves 1, 2, 3, & 4
D = 38°-11'-50"
Δ = 41°-24'-35"
R = 150'
T = 56.69'
Lc = 106.07'
Larc = 108.41'

Marker will be furnished and erected on the right by State forces prior to acceptance of this improvement.

8'-0" | 8'-0"
8" Reinforced Concrete Pavement

TYPICAL SECTION ADJOINING PAVEMENT

BEGIN PAV'T TAPER STA. 2+00

END PAV'T TAPER STA. 3+00

BEGIN PAV'T TAPER STA. 8+50

END PAV'T TAPER STA. 9+50

S-1372 (1)

T.B.M. #1 NAIL IN WEST SIDE POLE #473-N-25 AT STA. 2+00± 63' RT. ELEVATION 964.84

T. B.M. #2 NAIL IN NW SIDE POLE #473-N-28 AT STA. 6+57, 45' RT. ELEVATION 956.40

B.M. □ ON NE CORNER OF HEADWALL ON CULVERT № ATB-46-0009 ± MARKED ELE 962.9 ON TELE. POLE WEST SIDE OF ROAD.

BRIDGE DATA - STRUC. NO. TRU-46-2621

	EXISTING	PROPOSED
TYPE	Conc. Slab	14'-3"x8'-11" Sec. Corr. Met. Pipe Arch Struc.
SPANS	14'-0" Clear	Length 86'0"
ROADWAY	19'-6" f/t of Curbs	44' f/t of guard rail
LOADING	—	H-20
SKEW	none	none
SUB STRUCTURE	Conc. Gravity	
WEARING SURFACE		none
SLOPE		0.64%
ALIGNMENT	tangent	tangent
CONDITION	poor	

COUNTY LINE STA. 8+58.15 = ATB STA. 0+00
TRU STA. 1387+35.75 = ATB STA. 0+00

PIPE CLASS F-1

Station From	Station To	Side	12" Lin. Ft.
2+00	2+48	L	48
2+86	3+30	R	44
8+38	8+80	L	42
Total			134

E-12

Station From	Station To	Side	Pipe Removed 15" and under L.F.
2+04	2+20	L	16
3+00	3+18	R	18
8+48	8+65	L	17
Total			51

L-10 SODDING

Station From	Station To	Side	Length x Width	Sodding Sq. Yd.
3+50	4+10	L	60'x6'	40
3+50	4+50	R	100'x6	67
5+14	7+00	L	186'x6	124
6+40	7+00	R	60'x6	40
Total				271

SUMMARY of QUANTITIES

Description	T-35 Cu.Yd. Asphaltic Conc. Surface Course	B-35 Cu. Yd. Asphaltic Conc. Leveling Course	B-19 Cu.Yd. Aggregate Base Course	I-22 Cu.Yd. Subbase	T-30 Gal. Bituminous Prime Coat	T-30 Gal. Bituminous Tack Coat
Resurfaced.	6.67	15.76	8.68	5.50	11.11	17.78
New Pavement	57.04	133.96	406.34	208.08	698.88	
Total This Sht.	64	150	415	214	710	18

EXCAVATION	747	Cu.Yd.
EMBANKMENT	5584	Cu.Yd.
SEEDING	5125	Sq.Yd.

TYPE 2 DRIVEWAYS & MAIL BOX APPROACHES

Station	Side	B-19 Aggregate Base Course Cu. Yd.	T-35 Asphaltic Conc. Surface Course Cu. Yd.	T-30 Bit. Prime Coat @ 4/Sx. Gals
2+20	R	4.32	1.75	12.33
2+26	L	13.63		
3+09	R	11.64	4.71	33.24
8+58	L	13.63		
Totals		44.	7	46

I-15 GUARD RAIL

Station From	Station To	Side	I-15 L. F	I-15 Rem. & Store
4+64	4+92	R		28
4+76	4+92	L		16
5+08	5+24	R		16
5+08	5+36	L		28
3+75	7+25	R	350	
3+87.5	6+75	L	287.5	
Totals			637.5	88

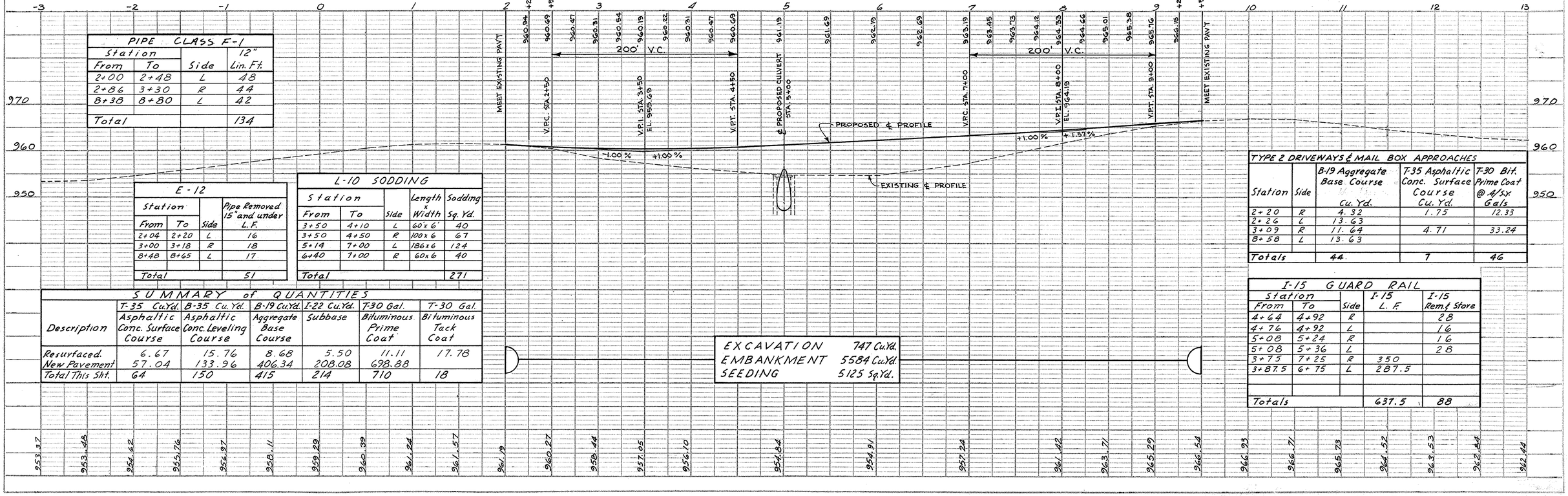


PLATE I—PLAN-PROFILE R. P. R. STANDARD
THE FREDERICK POST CO., Chicago 254-1

PLAN-PROFILE STA. -3+00 TO STA. 13+00 TRU-46-26.17

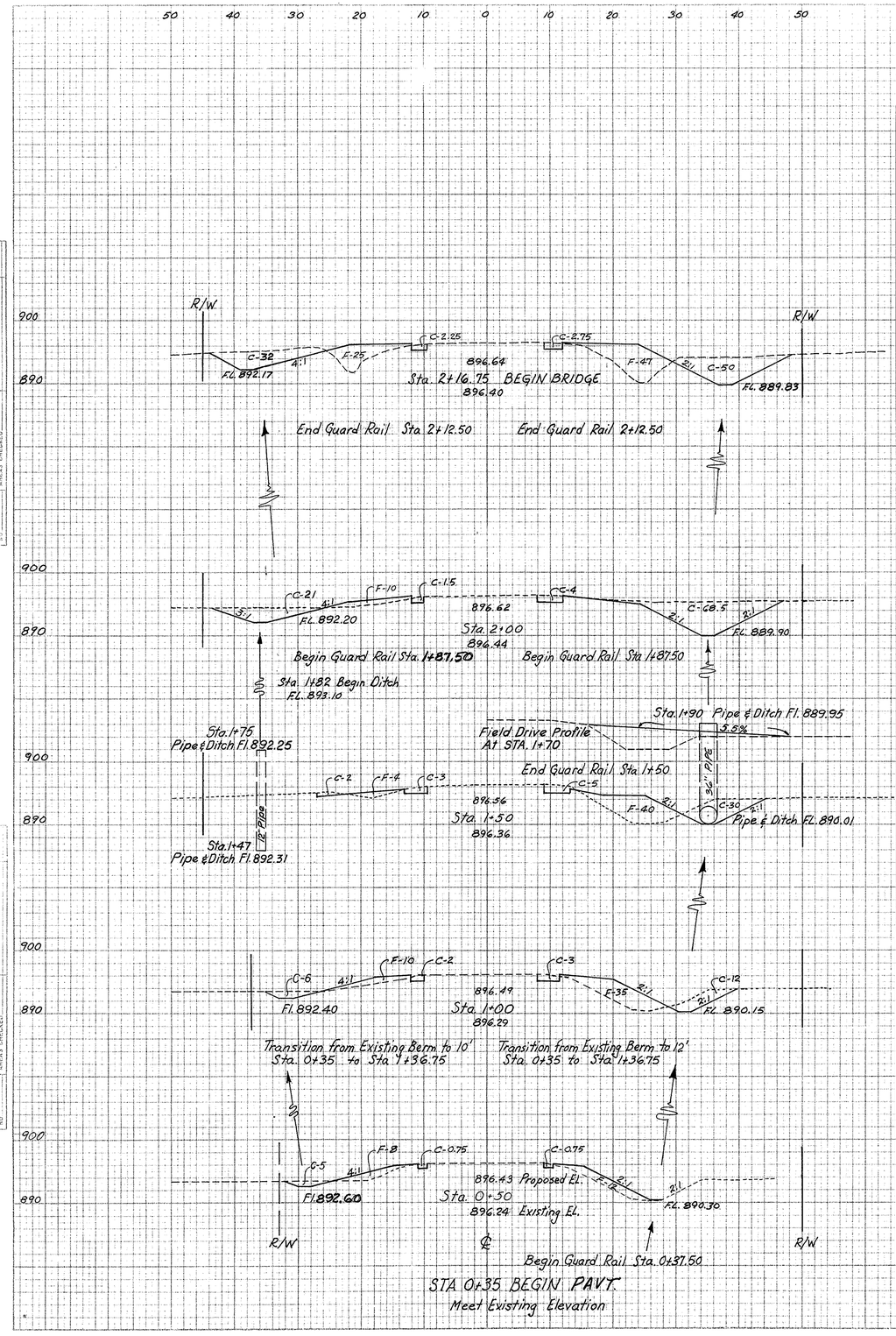
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

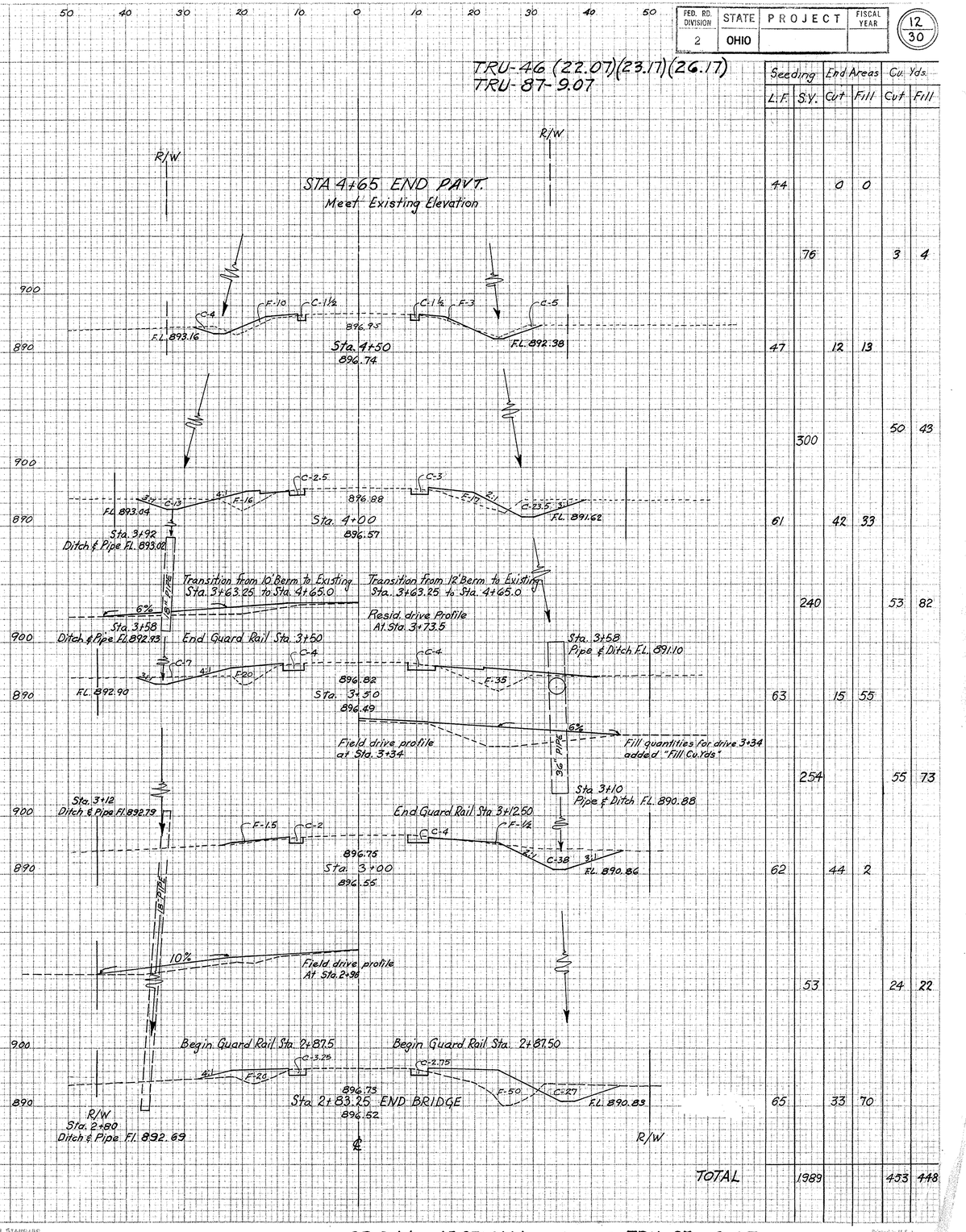
12
30

TRU-46 (22.07)(23.17)(26.17)
TRU-87-9.07

Seeding		End Areas		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Cut	Fill
44		0	0		
	76			3	4
47		12	13		
				50	43
	300				
61		42	33		
	240			53	82
63		15	55		
	254			55	73
62		44	2		
	53			24	22
65		33	70		
TOTAL	1989			453	448

Seeding		End Areas		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Cut	Fill
71		87	72		
132				56	25
71		95	10		
202				125	50
63		40	44		
342				58	83
60		23	45		
308				27	60
51		6.5	20		
82				2	6
47		0	0		





CROSS SECTIONS TRU-87-9.07

PLATE 3 CROSS SECTION S.P.R. STANDARD
ZIPSER ENGINEER CO., CHICAGO - NEW YORK

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The IMPERIAL Printing Co.

Printed in U.S.A.
The IMPERIAL Printing Co.

ORIGINAL SURVEY
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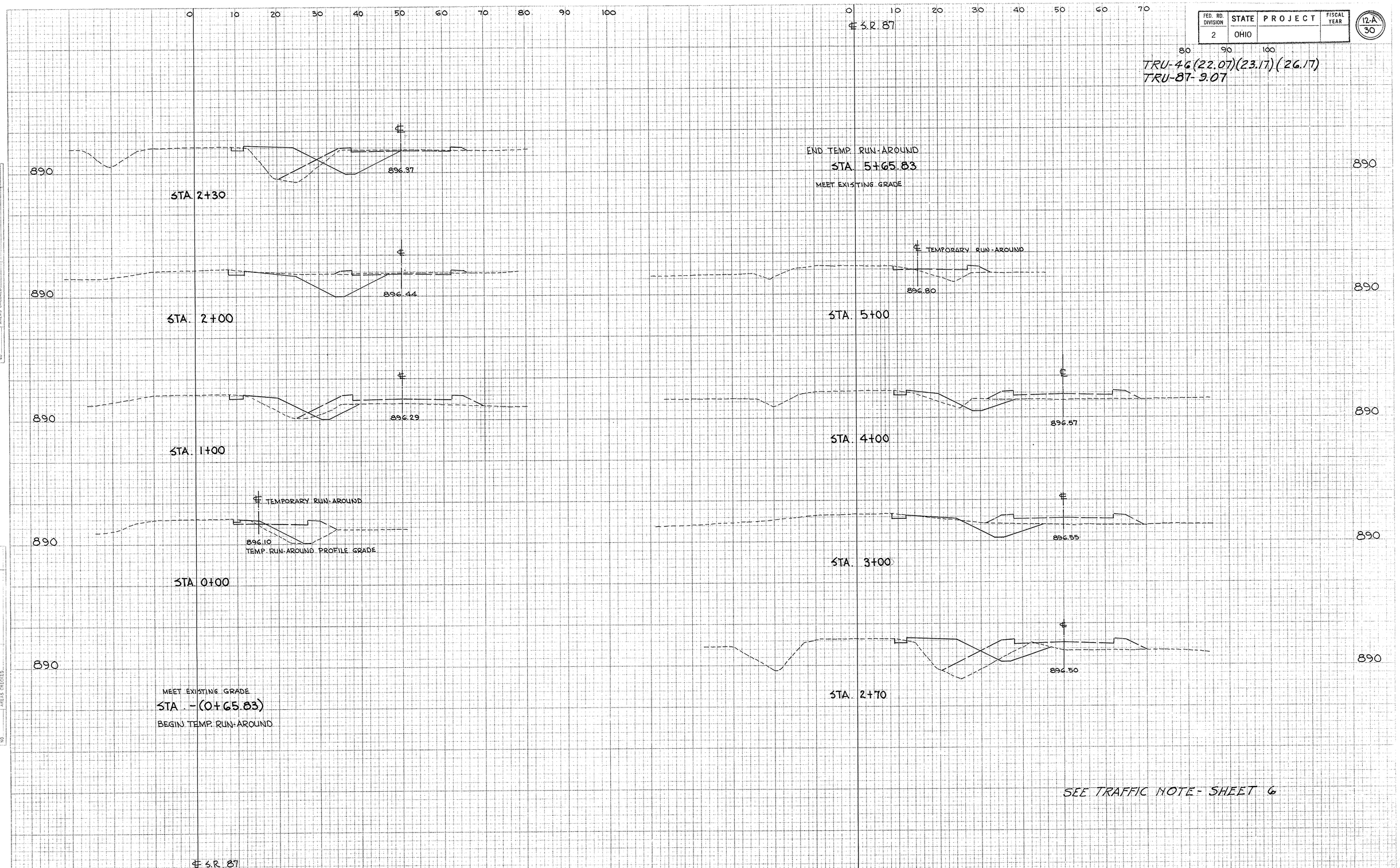
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

FINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NOTE BOOK
NO.
BY
DATE

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

12-A
30

TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07



SEE TRAFFIC NOTE - SHEET 6

FINAL SURVEY: NOTE BOOK NO. / SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED / BY / DATE

ORIGINAL SURVEY: NOTE BOOK NO. / SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED / BY / DATE

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PLATE 3 CROSS SECTION B P R STANDARD

CROSS-SECTIONS TEMP. RUN-AROUND TRU-87-9.07

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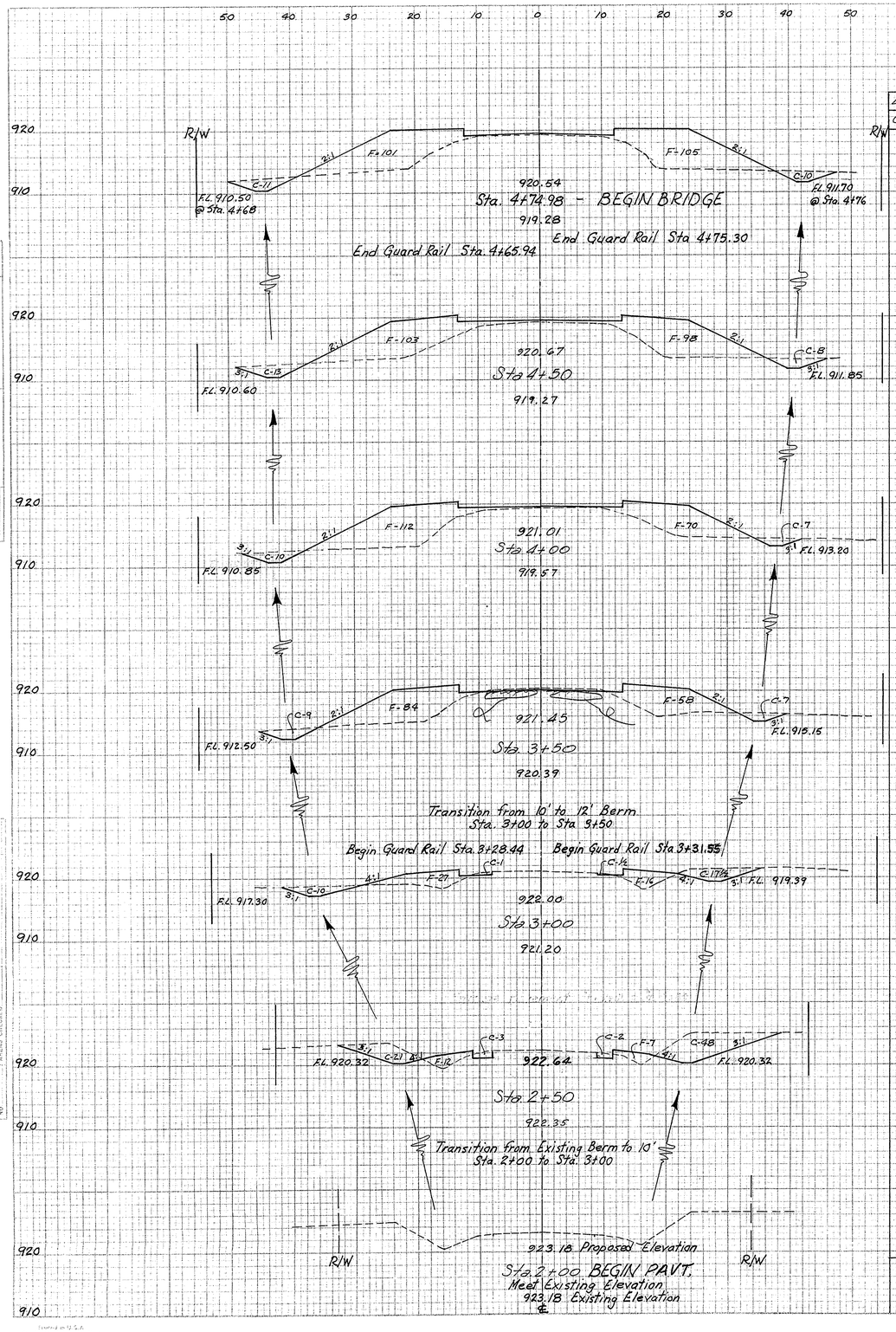
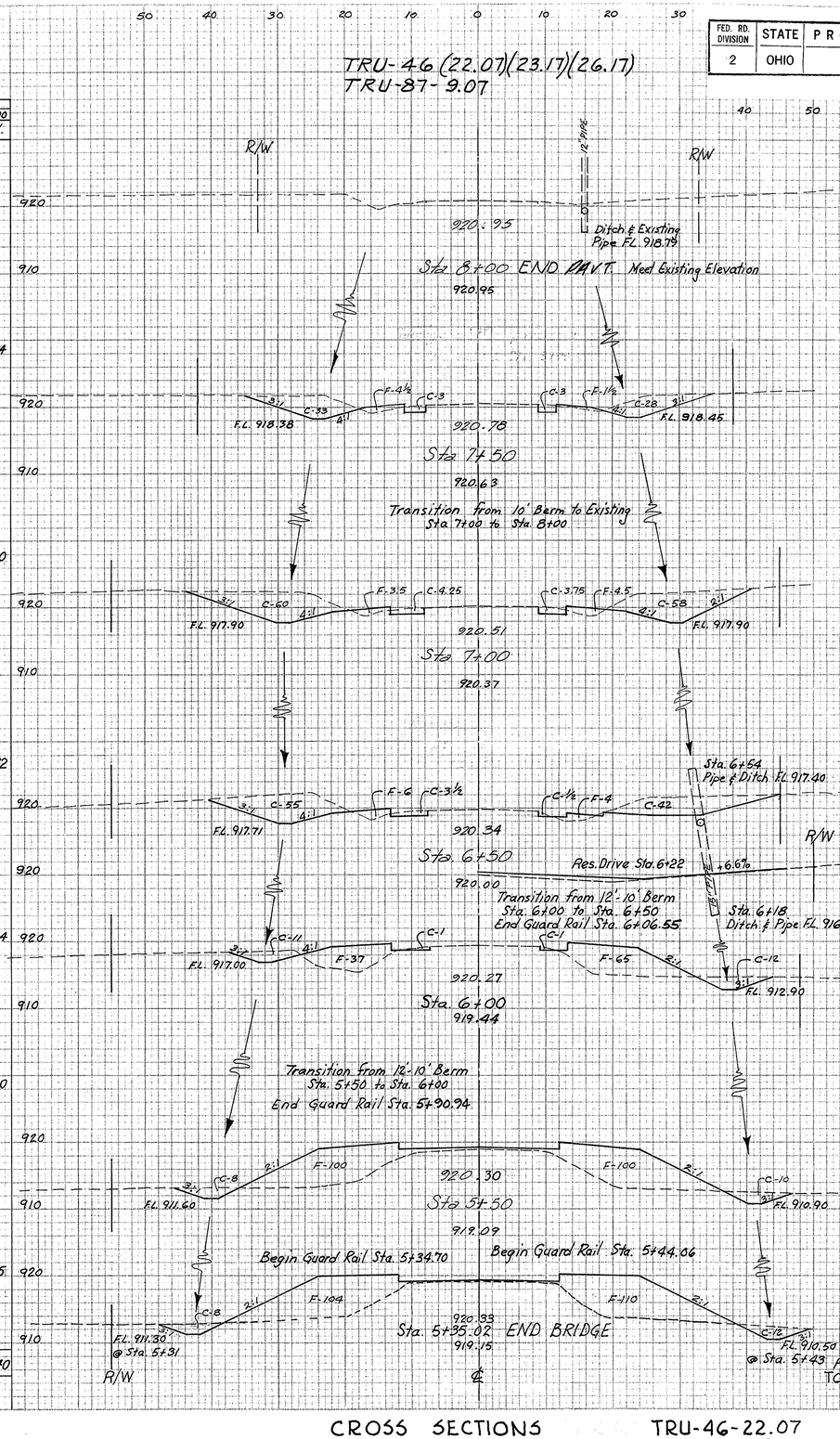
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

13
30

TRU-46 (22.07)(23.17)(26.17)
TRU-87-9.07



End Areas Cut	End Areas Fill	Cu. Yds. Cut	Cu. Yds. Fill	SEEDING 2+00-4+74.98 L.F.	SEEDING 2+00-4+74.98 S.Y.	SEEDING 5+35.02-8+00 L.F.	SEEDING 5+35.02-8+00 S.Y.
21	206				84		
							32
20	189				228		
							244
21	201				79		
							56
35	356				428		
							350
17	182				74		
							69
31	300				400		
							372
16	142				69		
							65
42	172				378		
							244
29	43				66		
							65
97	57				350		
							400
74	19				59		
							78
69	18				250		
							135
0	0				32		84
SUBTOTALS					2034		1740
TOTAL					3774		



End Areas Cut	End Areas Fill	Cu. Yds. Cut	Cu. Yds. Fill
0	0		
		62	6
67	6		
		179	13
126	8		
		211	17
		101	10
		118	104
25	102		
		40	278
18	200		
		11	115
20	214		
TOTAL		915	1625

PLATE 3 CROSS SECTION B P R STANDARD
ENGENE GRIFFITHS CO. CHICAGO-NEW YORK

CROSS SECTIONS TRU-46-22.07

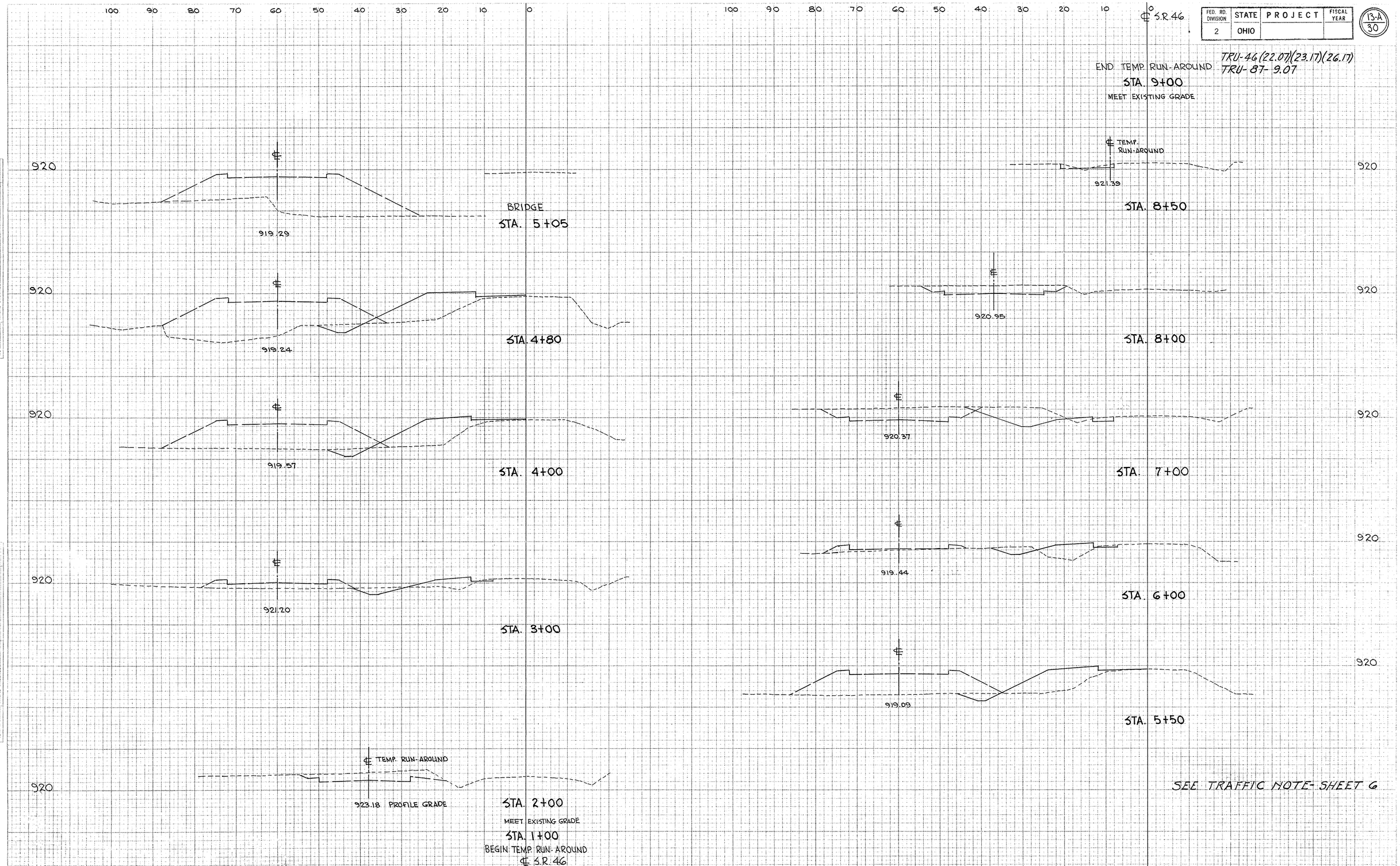
Printed in U.S.A.
On Hoffman Tracing Cloth

ORIGINAL SURVEY
FINAL SURVEY
NOTE BOOK
SURVEYED BY
PLOTTED BY
REVISED
TEMPLATE
AREAS
AREAS CHECKED
NO
DATE
BY

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

13-A
30

TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07



SEE TRAFFIC NOTE-SHEET 6

FINAL SURVEY — NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — BY — DATE

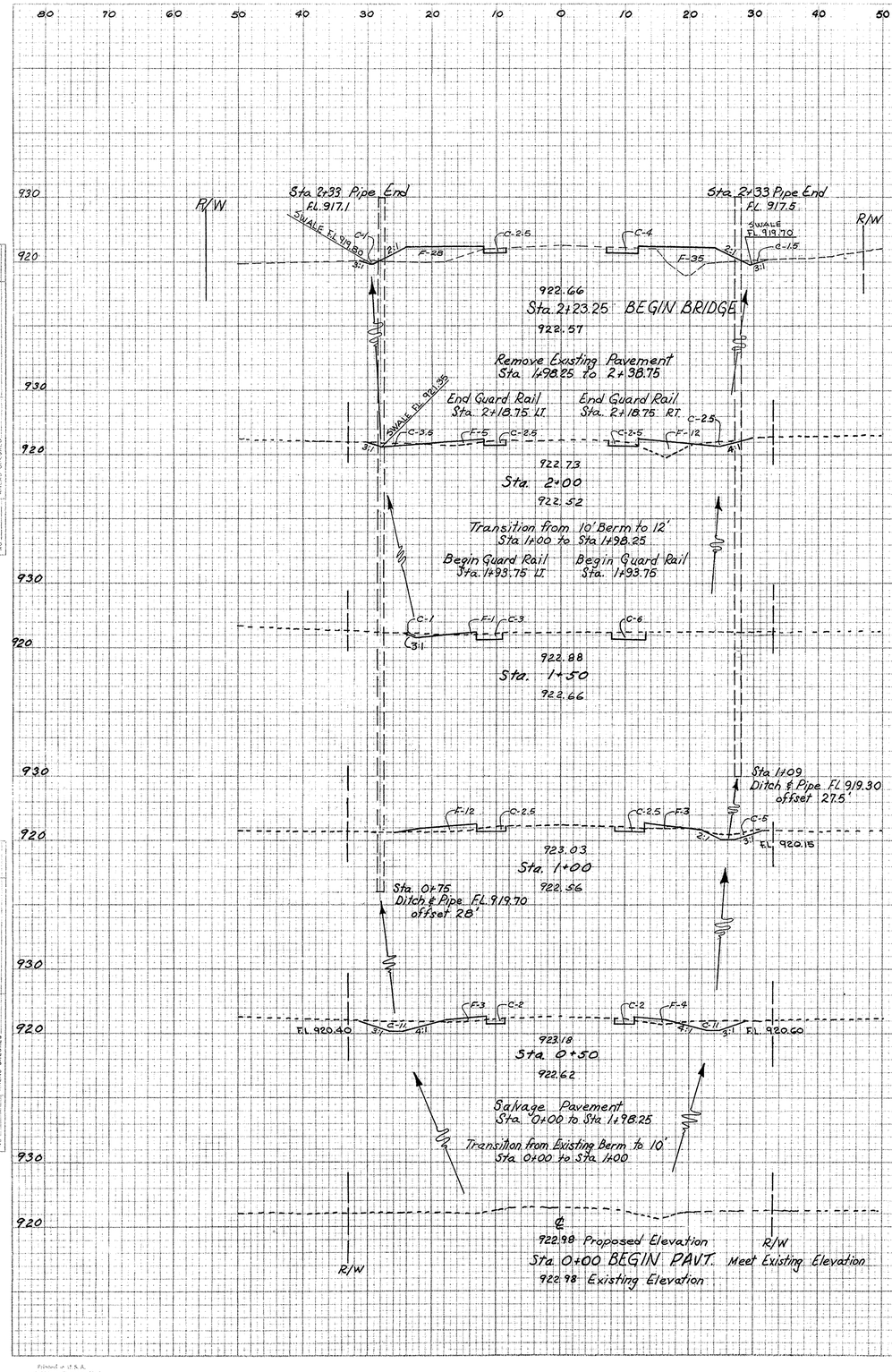
PLATE 3 CROSS SECTION B P R STANDARD

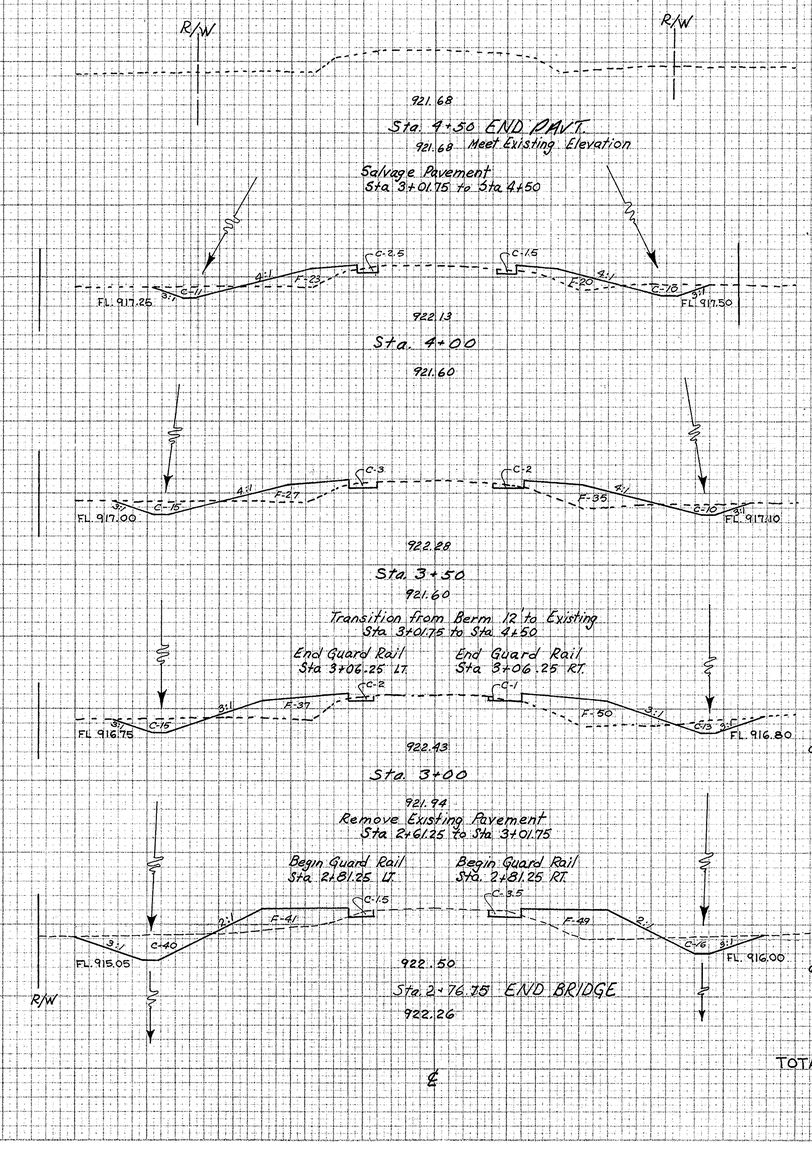
CROSS-SECTIONS TEMP. RUN-AROUND TRU-46-22.07

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

14/30

TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07





Seeding		End Areas		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Cut	Fill
49		9	63		
	119			9	34
42		11	17		
	145			20	17
42		10	1		
80		19	15		
43		10	15		
	239			33	20
46		26	7		
	250			24	7
44		0	0		

Seeding		End Areas		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Cut	Fill
32		0	0		
	267			21	40
65		25	43		
	394			51	97
77		30	62		
	428			57	139
77		31	87		
	209			40	77
85		61	90		
TOTALS	2131			274	446

DATE
BY
DESIGNED
DRAWN
TRACED
CHECKED

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPICAL SECT.
AREAS
AREAS CHECKED

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
TYPICAL SECT.
AREAS
AREAS CHECKED

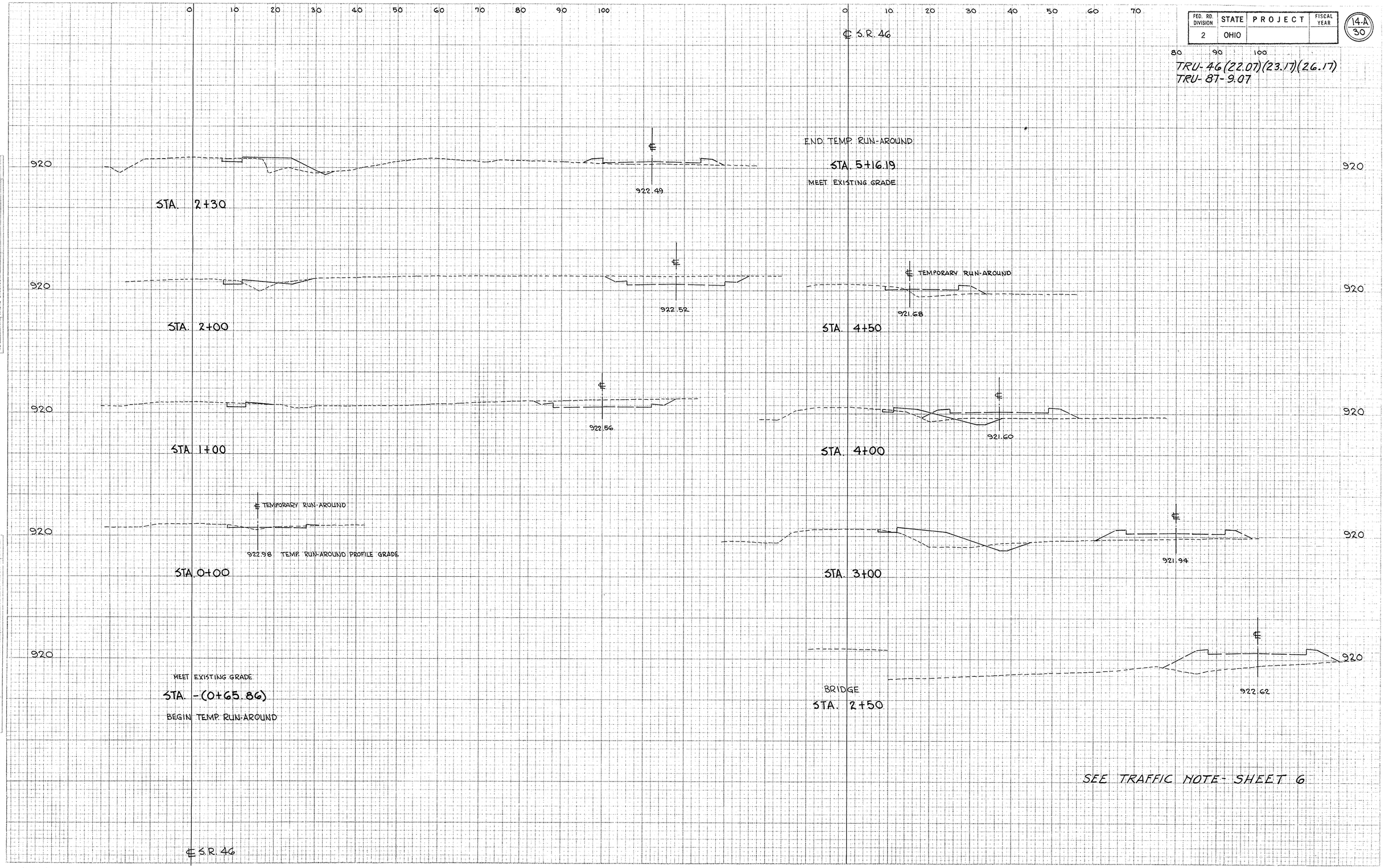
PLATE 3 CROSS SECTION S.P.N. STANDARD
FIGURE APPEARS ON CHECKED MYLARS

CROSS SECTIONS TRU-46-23.17

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

14-A
30

TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07



SEE TRAFFIC NOTE- SHEET 6

CROSS-SECTIONS TEMP. RUN-AROUND TRU-46-23.17

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

15
30

Existing Bridge End Sta. 5+08.25
F-210
F.L. 948.12
961.19
Sta. 5+00 & Proposed Pipe Arch Culvert (14'-3"x8'-11")
954.84
Existing Bridge Begin Sta. 4+91.75
F-409
960.05
Sta. 4+86.37
955.00
F.L. 947.84
F.L. 948.45
F-370
960.27
Sta. 4+50
955.18
F.L. 948.30
F.L. 949.6
F-251
960.31
Sta. 4+00
950.10
F.L. 948.60
F.L. 951.60
Begin Guard Rail Left Sta. 3+87.5
Begin Guard Rail Right Sta. 3+75
F-145
960.23
Sta. 3+75
956.58
F.L. 954.50
F.L. 955.30
Transition from 10' to 12' Berm Sta. 3+50 - Sta. 4+00
F-101
960.19
Sta. 3+50
957.05
F.L. 957.50
F.L. 956.90
F-11 (Back)
Sta. 3+32 Pipe & Ditch F.L. 957.08
3%
Resid Drive Profile at Sta. 3+09
F-21
960.31
Sta. 3+00
958.49
F.L. 957.65
F.L. 957.20
Remove Existing Pavement Sta. 2+50 to Sta. 3+50
Sta. 2+86 Ditch & Pipe F.L. 957.26
F-7
960.69
Sta. 2+50
960.27
Sta. 2+48 Pipe & Ditch F.L. 957.80
Transition from Existing to 10' Berm Sta. 2+00 - Sta. 3+00
Sta. 2+25 Begin Ditch F.L. 958.72
1.0%
Field drive Profile at Sta. 2+26
Sta. 2+07, F.L. 12" 958.00
Sta. 2+00, F.L. 12" 959.40
961.19 PROPOSED ELEVATION
961.19 EXISTING ELEVATION
Sta. 2+00 BEGIN PAVT. Meet Existing Elevation
R/W

Seeding L.F.	Seeding S.Y.	End Areas Cut	End Areas Fill	Cu. Yds. Cut	Cu. Yds. Fill
				0	184
40		0	210		
				78	0 155
63		0	405 AHEAD		
93		27	409 BACK		
				370	36 525
90		26	370		
				405	43 575
80		20	251		
				207	20 184
69		24	145		
				138	25 114
59		29	112 AHEAD 101 BACK		
				248	58 133
60		33	32		
				333	107 40
60		82	11 AHEAD 78 BACK		
				210	72 10
46		0	0		

Sta. 9+50 END PAVT. Meet Existing Elevation
F-3.5
C-8
C-2
C-3
C-2
F-23
C-27
F.L. 962.60
F.L. 963.36
965.76
Sta. 9+00
965.89
FIELD DRIVE PROFILE At Sta. 8+58
TRU-46 (22.07)(23.17)(26.17)
TRU-87 - 9.07
2%
Sta. 8+80 - 30' Lt. Pipe & Ditch FL 961.40
Transition from 10' to Existing Berm Sta. 8+50 to Sta. 9+50
C-1
F-21.5
F-10
C-12
F-10.5
F.L. 962.41
965.01
Sta. 8+50
963.71
Sta. 8+73B - 33' Lt. Pipe & Ditch FL 961.20
Remove existing Pavement Sta. 8+00 - 9+00
C-33
F-12.5
C-10
F-11 (AHEAD)
F.L. 961.08
F.L. 959.50
964.33
Sta. 8+00
961.42
C-7
F.L. 960.90
F-193
C-10
F.L. 957.50
963.73
Sta. 7+50
959.20
Transition from 12' to 10' Berm Right Sta. 7+00 to Sta. 7+50
End Guard Rail Right Sta. 7+25
C-6
F.L. 960.30
F-277
C-14
F.L. 955.25
963.19
End Guard Rail Left Sta. 6+75
Sta. 7+00
957.24
Transition from 12' to 10' Berm Left Sta. 6+50 to Sta. 7+00
F-370
C-11
C-9
F.L. 955.50
F.L. 951.10
962.19
Sta. 6+50
955.74
F-420
C-8
C-10
F.L. 951.10
F.L. 950.0
961.69
Sta. 6+00
954.91
F-421
C-8.5
C-12.5
F.L. 950.17
F.L. 949.50
961.19
Sta. 5+50
954.71
F-495
C-18
C-8
F.L. 947.84
F.L. 948.45
961.33
Sta. 5+14.13
954.95
R/W

Seeding L.F.	Seeding S.Y.	End Areas Cut	End Areas Fill	Cu. Yds. Cut	Cu. Yds. Fill
38	336	0	0		
47	185	AHEAD 39		36	6
50		42 BACK	6		
				60	45
		23	42		
	331			61	165
69		43	AHEAD 136 125 BACK		
	381			56	294
68		17	193		
	389			34	435
72		20	277		
	373			37	600
77		20	370		
	450			35	730
85		18	420		
	351			36	779
86		21	421		
	359			31	610
94		20	495 AHEAD		
63		0	492 BACK		
81	5125			747	5584

TOTALS

ORIGINAL SURVEY NOTE BOOK NO. DATE BY
FINAL SURVEY NOTE BOOK NO. SURVEYED PLOTTED TEMPLATE AREAS AREAS CHECKED DATE BY

PLATE 3 CROSS SECTION U P R Standard
ENGINEERING CO., CHICAGO - NOV 1946

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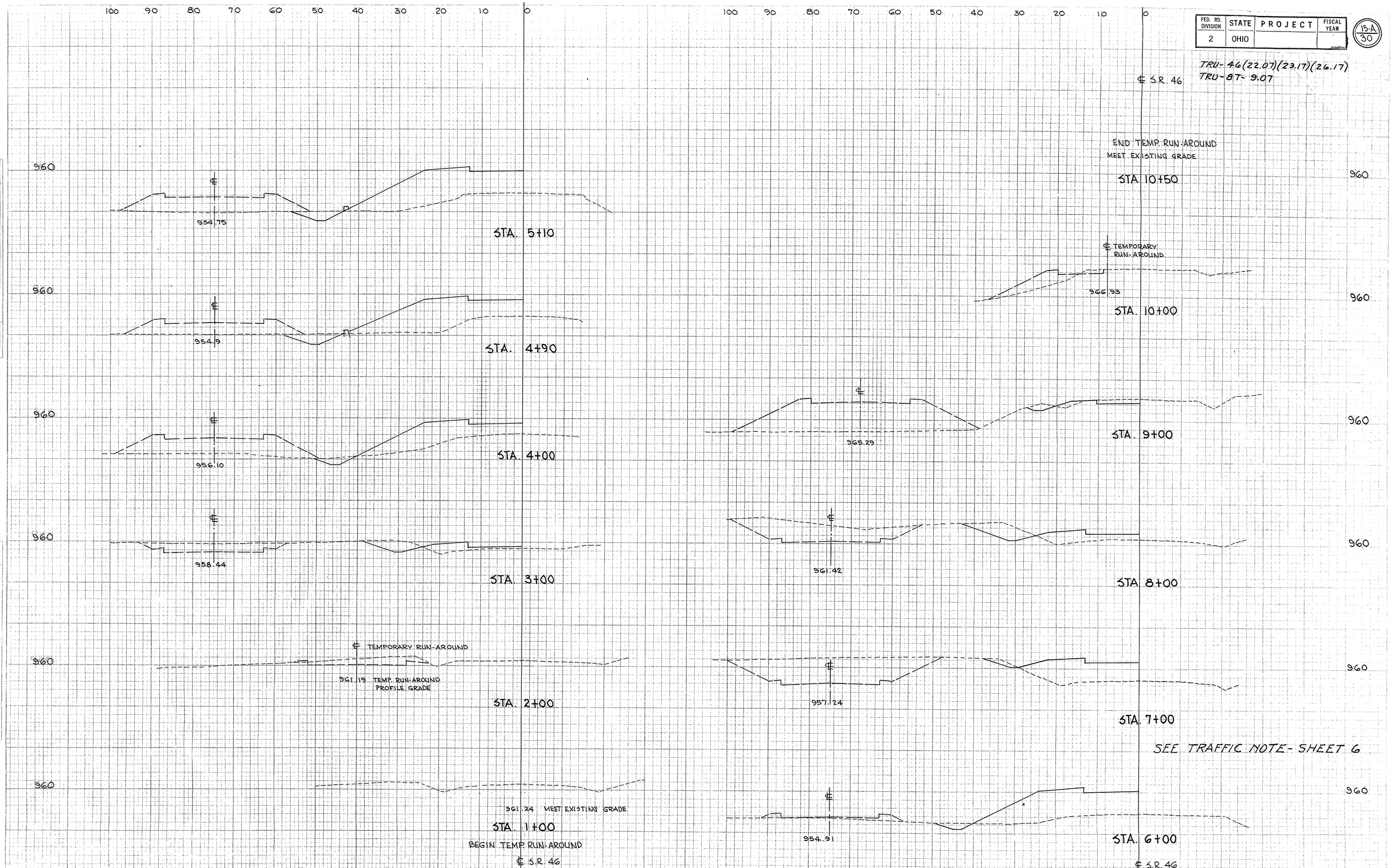
CROSS SECTIONS TRU-46-26.17

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

15-A
30

TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07

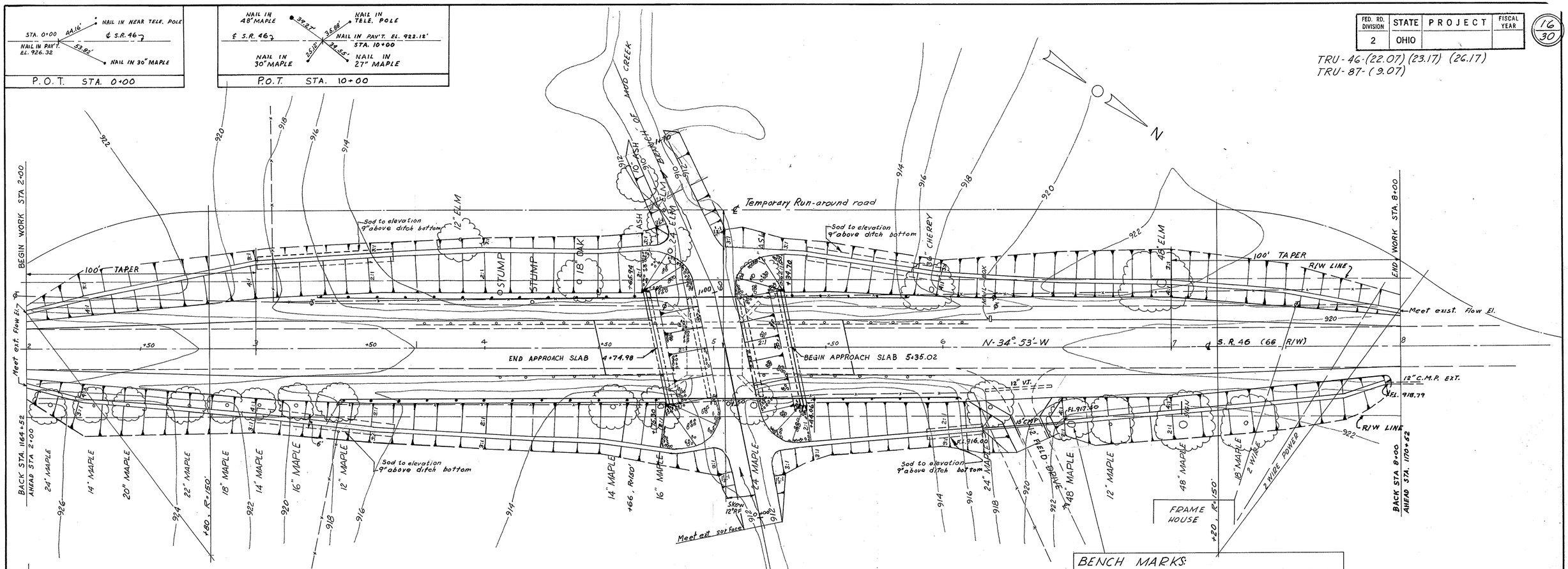


CROSS-SECTIONS TEMP. RUN-AROUND TRU-46-26.17

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

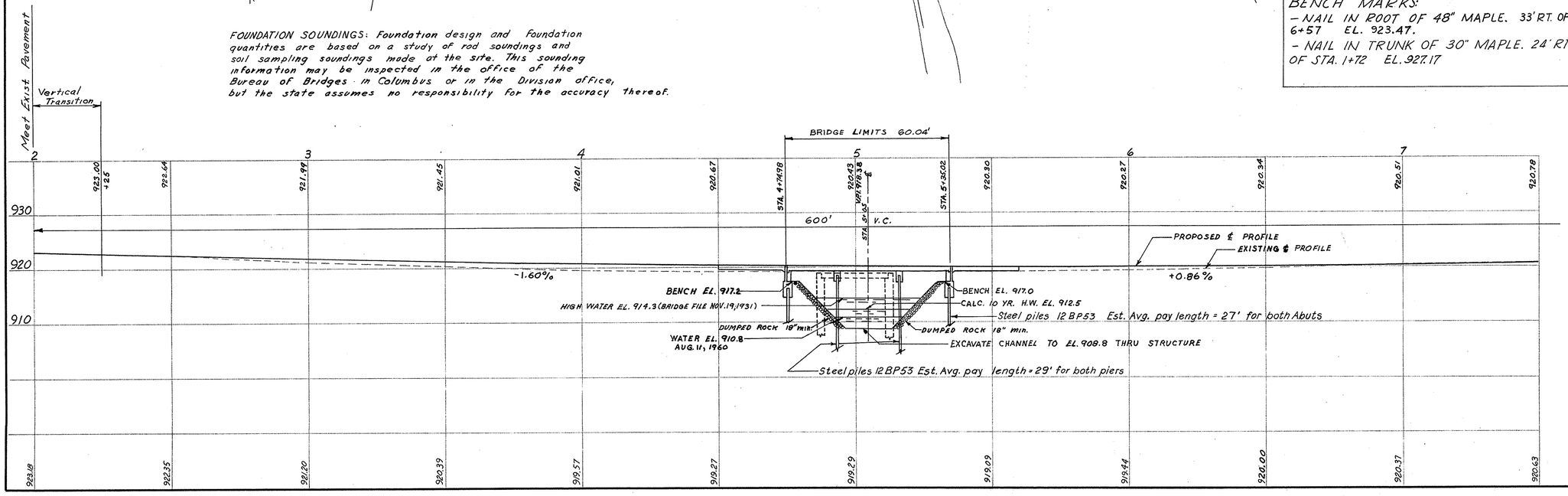
16/30

TRU-46-(22.07) (23.17) (26.17)
TRU-87-(9.07)



BENCH MARKS:
- NAIL IN ROOT OF 48" MAPLE. 33' RT. OF STA. 6+57 EL. 923.47.
- NAIL IN TRUNK OF 30" MAPLE. 24' RT. OF STA. 1+72 EL. 927.17

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.



DRAINAGE AREA 2.34 SQ. MI.

EXISTING STRUCTURE

TYPE: Conc. beam
SPAN: 22'-6" Clear
ROADWAY 23'-0" % deck
SKEW: none
SUBSTRUCTURE: Stone & conc. gravity
ALIGNMENT: tangent
CONDITION: poor

PROPOSED STRUCTURE

TYPE: Cont. reinf. conc. slab with capped pile substructure
SPANS: 18'-22.5'-18'
ROADWAY: 44' f/f of guard rails
LOAD FREQUENCY: CF-130(57)
SKEW: 12°-00' R.F.
WEARING SURFACE: 3/4" Monolithic Concrete
APPROACH SLABS AS-1-54 (25' long)
ALIGNMENT: tangent

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE CLEVELAND 3, OHIO

SITE PLAN

BRIDGE NO. TRU-46-2211
OVER BRANCH OF MUD CREEK
TRUMBULL CO. S.R. 46
STA. 4+74.98 to STA. 5+35.02

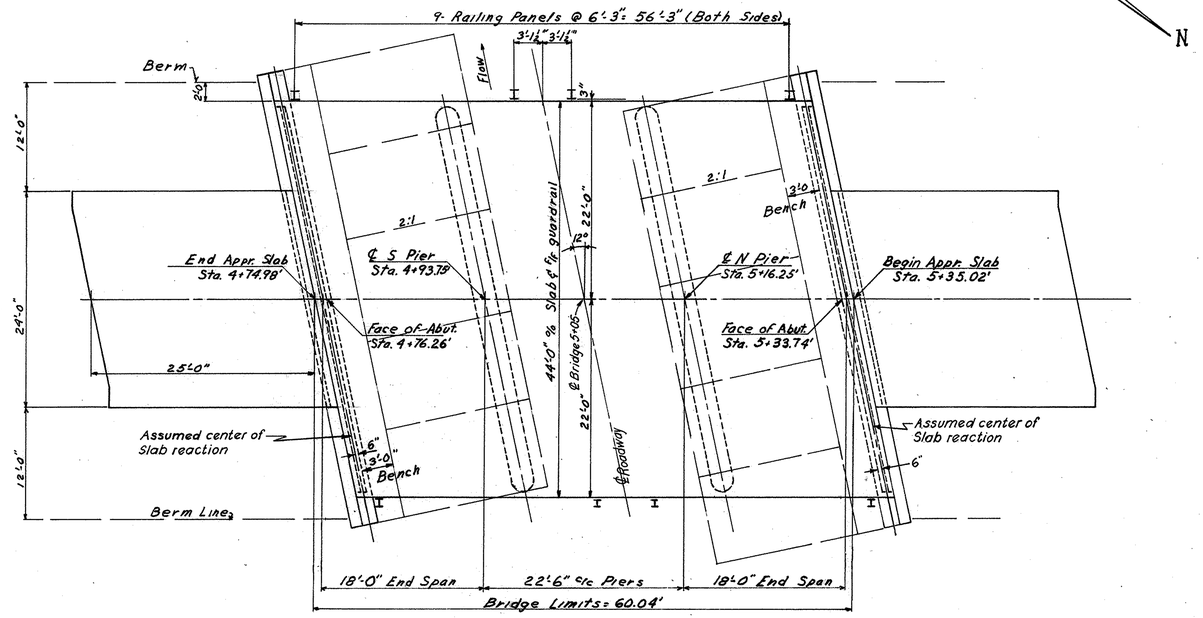
SCALE 1" = 20' DATE

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
R.H., ADY	NLS	JGC	C.J.W.	E.A.W.	

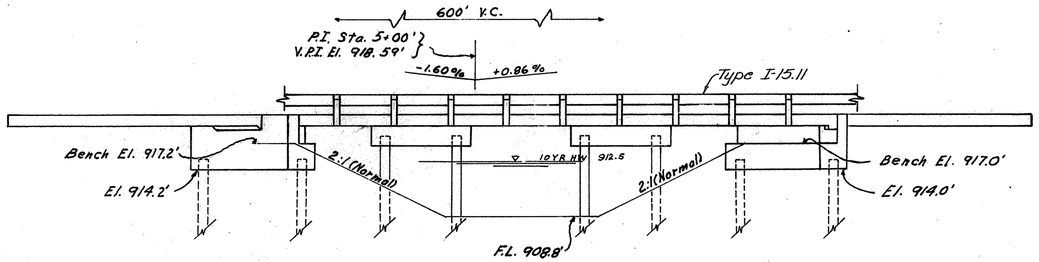
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

17/30

TRU-46-(22.07X23.17X26.17)
TRU-87-9.07



~ PLAN ~



~ ELEVATION ~

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Piers	Abuts.	Gen'l.
E-2	96	Cu. Yds.	Unclassified excavation			96	
E-3	142	Cu. Yds.	Channel excavation			142	
S-1	111	Cu. Yds.	Class "C" Concrete, superstructure & pier caps	92	19		
S-1	53	Cu. Yds.	Class "E" Concrete, Abutments			53	
S-4	33,061	Lbs.	Reinforcing Steel	23,398	3,943	5,720	
S-14	120.08	Lin. Ft.	Railing (Type I-15.11 with galvanized steel posts & bolts)	120.08			
S-15	Lump	Sum	Temporary Run-around Bridge & Class "B" pavement approaches				Lump
S-16	Lump	Sum	First Test Pile				Lump
S-18	900	Lin. Ft.	Steel pile 12BP53		470	430	
S-24	Lump	Sum	Removal of Existing Structure				Lump
S-29	16	Cu. Yds.	Porous Backfill				16
I-10	269	Cu. Yds.	Dumped Rock Channel Protection				269

~ GENERAL NOTES ~

REFERENCE shall be made to Standard Drawings A-1-54 revised 12-1-54, P-1-54 revised 2-2-59, and CS-1-54 revised 7-16-56 AS-1-54 revised 12-1-54

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic, the existing structure shall be removed. The substructure shall be removed to 6" below proposed ground surface and to whatever extent is necessary to avoid interference with the new construction, including pile driving. Suitable waste masonry may be incorporated in Item I-10.07 "Dumped Rock Channel Protection. The remainder of the removed materials shall become the property of the Contractor.

SLAB THICKNESS of concrete deck is 11¼" which includes ¾" monolithic wearing surface.

TEMPORARY RUN-AROUND BRIDGE AND APPROACHES: Load Frequency for bridge, CF=30 with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures.
Class "B" surface course shall be used on approaches.

EXCAVATION QUANTITY for the abutments, in addition to that outlined in Sec. E-2.09, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. E-2.09 and by the Finished slope of the cut.

MACHINE FINISH: At the option of the contractor, the top of the bridge deck slab may be machined finished.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating.
For abutment piles 20 tons per pile using a 7000-11,000-15,000 ft-lb hammer or greater for pier piles 23 tons per pile using a 7000-11,000-15,000 ft-lb hammer or greater.
The design load is 20 tons per pile for the abutment piles and 23 tons per pile for the pier piles.

PIER PILE ENCASEMENT as shown on Std. Dwg. P-1-54 is not required. The painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

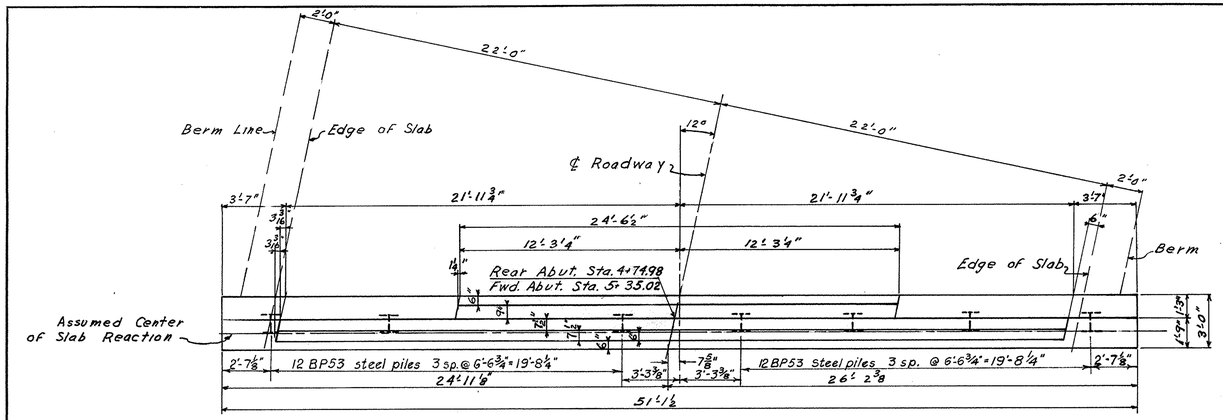
GENERAL PLAN & ELEVATION
ESTIMATED QUANTITIES & NOTES
BRIDGE NO. TRU-46-2211
OVER BRANCH OF MUD CREEK
TRUMBULL CO. S.R. 46
STA. 4+74.98
5+35.02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
JJC	CJW	L.M.	E.A.W			10/7/60

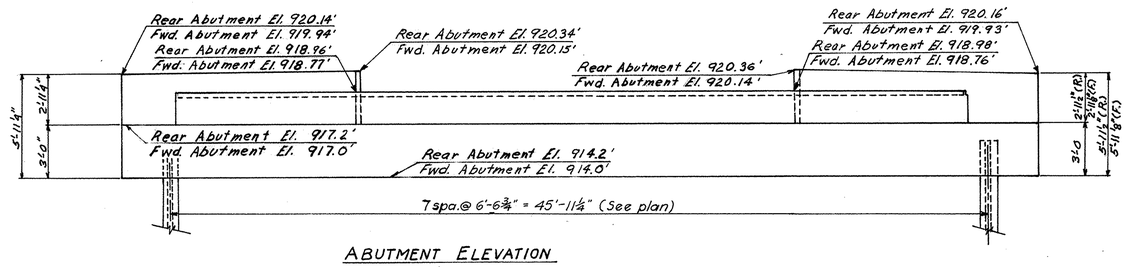
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

18/30

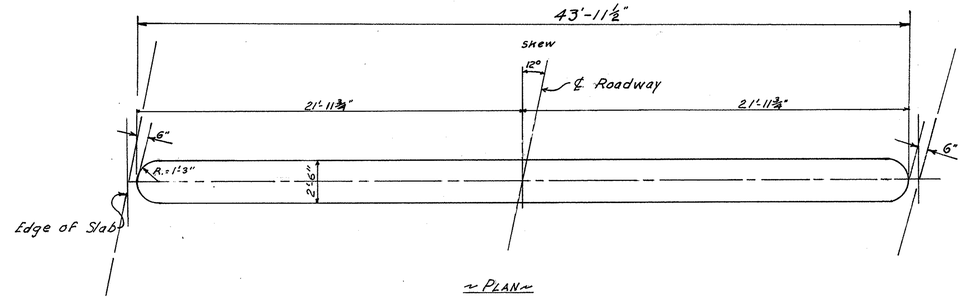
TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07



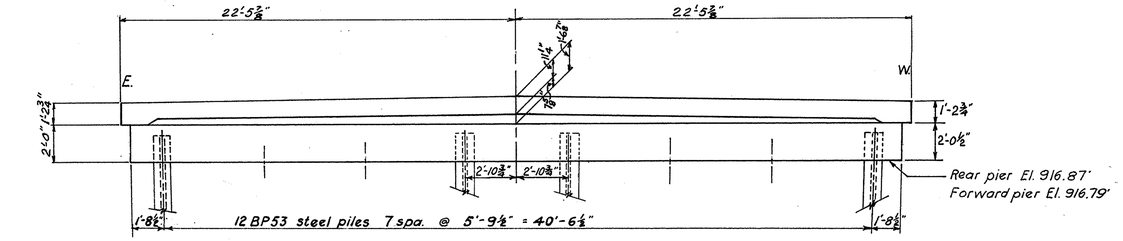
~ PLAN ~



ABUTMENT ELEVATION



~ PLAN ~

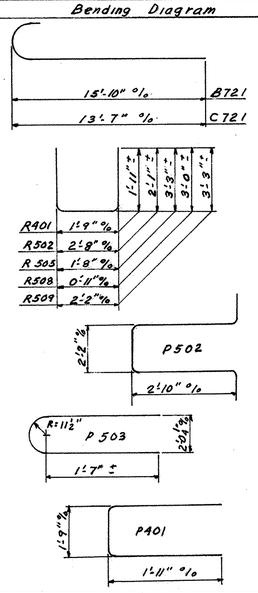


SECTIONAL ELEVATION
Looking South

STEEL LIST

Mark	No.	Length	Weight	Shp.
Superstructure				
F821	78	17'-2"	3575	S
G821	38	9'-11"	1006	S
H821	38	8'-11"	905	S
A721	132	21'-5"	5778	S
B721	42	16'-8"	1431	B
C721	44	19'-5"	1297	B
D721	21	16'-6"	708	S
E721	22	12'-0"	540	S
J601	40	12'-1"	726	S
K601	20	10'-3"	308	S
M601	116	23'-3"	4051	S
N601	88	23'-3"	3073	S
Piers				
P1001	16	23'-10"	1640	S
P901	16	22'-1"	1201	S
P501	8	21'-6"	179	S
P502	68	9'-0"	638	B
P503	8	6'-4"	53	B
P401	64	5'-5"	232	B

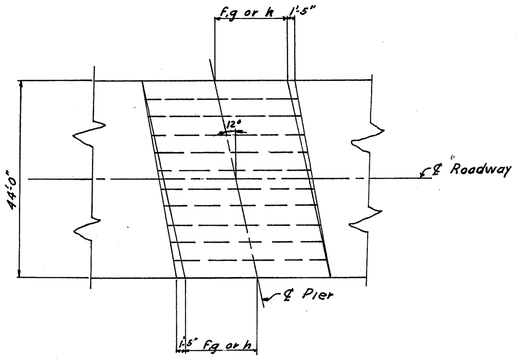
Bending Diagram



Mark	No.	Length	Weight	Shp.
Abutments				
R1001	16	23'-5"	1612	S
R801	16	26'-8"	1136	S
R501	16	26'-2"	437	S
R502	156	6'-7"	1071	B
R503	8	22'-7"	188	S
R504	24	5'-4"	134	S
R505	34	7'-11"	281	B
R506	8	12'-7"	105	S
R507	16	5'-0"	83	S
R508	28	6'-8"	195	B
R509	28	8'-5"	246	B
R401	64	5'-5"	232	B
Replacement Bars				
RE1000	1	7'-2"	*	S
RE900	1	6'-10"	*	S
RE800	1	6'-6"	*	S
RE700	1	6'-2"	*	S
RE600	1	5'-11"	*	S
RE500	1	5'-7"	*	S
RE400	1	5'-3"	*	S

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two where four are used, indicate the bar size number. For example: F 821 is a Nº 8 Size bar and R 1001 is a Nº 10 size.

*REPLACEMENT BARS. If reinforcing bars are fabricated from stock which has previously been tested and approved by The Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.



PLACEMENT DIAGRAM
FOR F, G & H BARS

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

PIER & ABUTMENT DETAILS, PLACEMENT DIAGRAM FOR F,G,& H BARS, & STEEL LIST

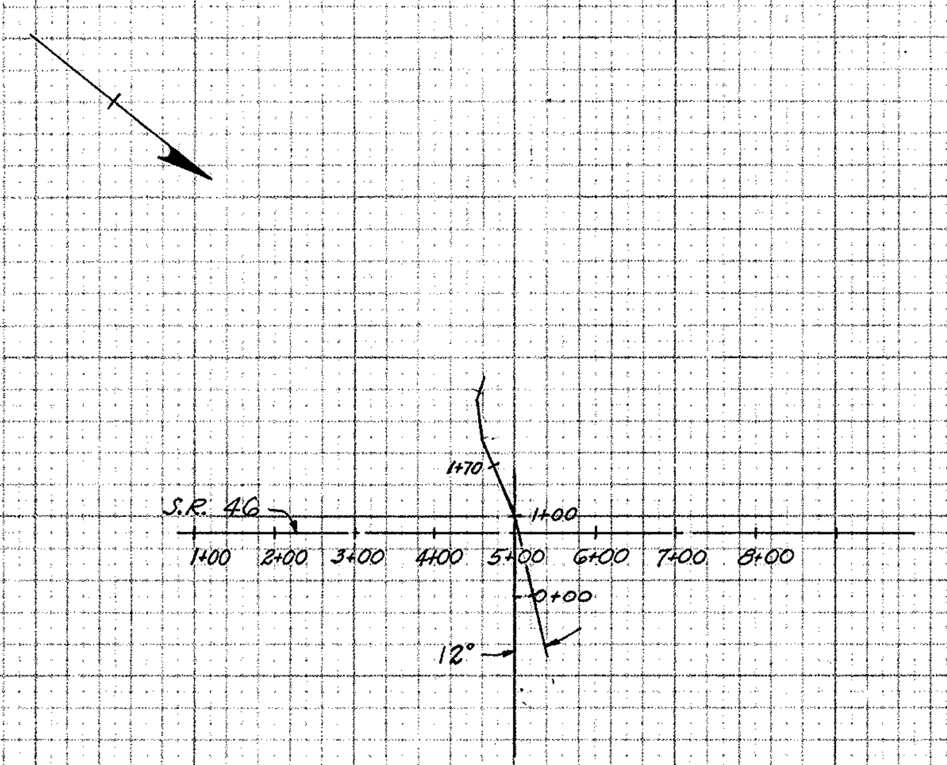
BRIDGE No. TRU-46-2211
OVER BRANCH OF MUD CREEK
TRUMBULL CO. S.R. 46
STA. 4+74.98
5+35.02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
JGC	CJW	L.M.	E.A.W			

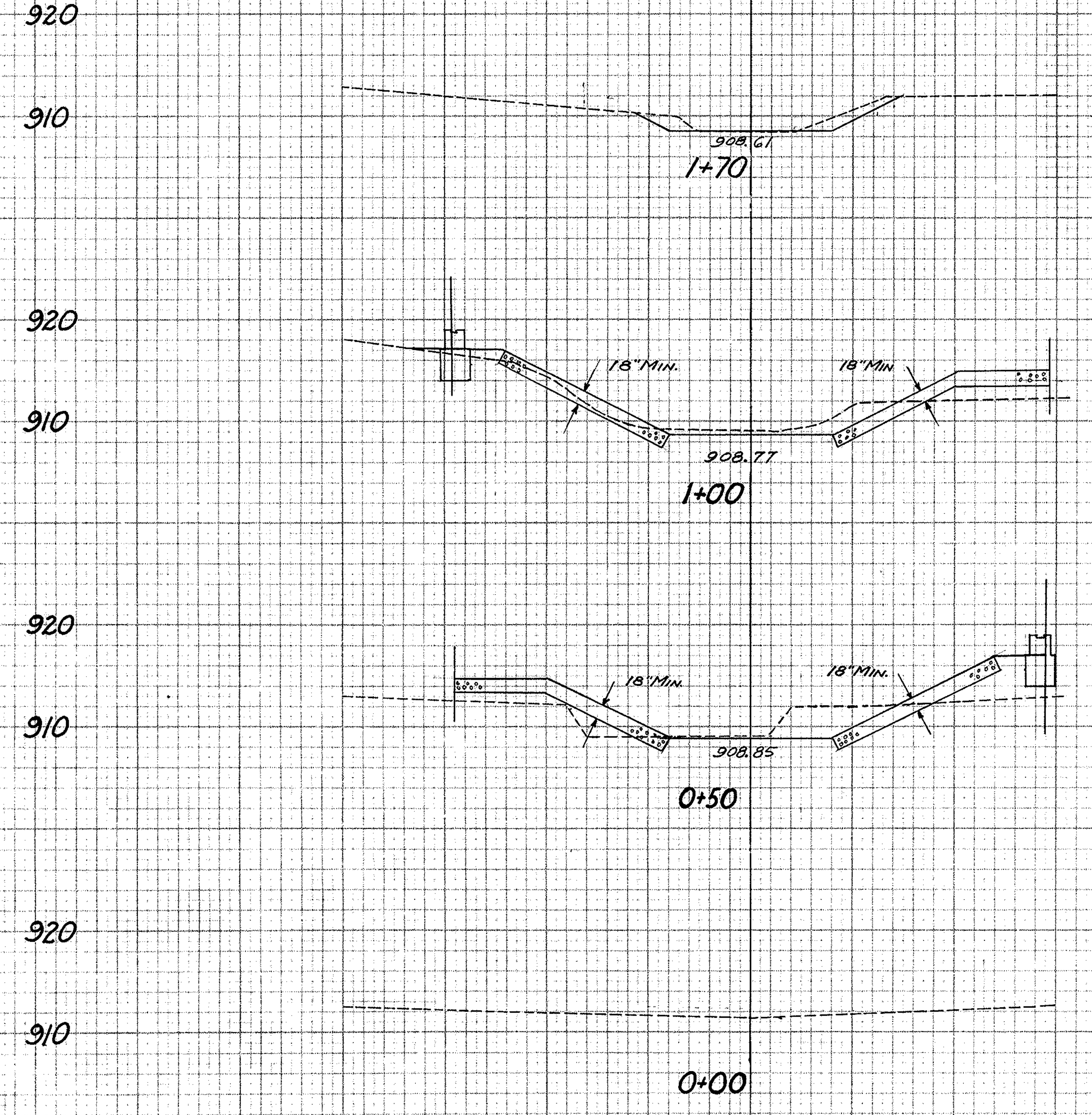
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07

NOTE: Line shown as ℄ stream is approximately the existing channel.



40 30 20 10 ℄ 10 20 30 40



	End Area		Cu. Yd.	
Station	Cut	Fill	Cut	Fill
1+70	15.0	0		
			72	117
1+00	24.0	63.0		
			46	189
0+50	26.0	39.0		
			24	36
0+00	0	0		
Totals			142	342

FINAL SURVEY — NOTE BOOK NO. — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK NO. — SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED — BY — DATE

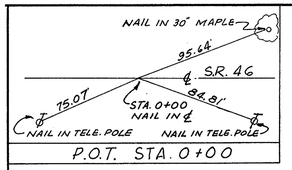
CHANNEL CROSS SECTIONS EAST & WEST OF BRIDGE No. TRU-46-2211

Printed in U.S.A. On IMPERIAL Tracing Cloth
PLATE 3 CROSS SECTION B P R STANDARD
EUGENE DIETZGEN CO. CHICAGO - NEW YORK
Printed in U.S.A. On IMPERIAL Tracing Cloth

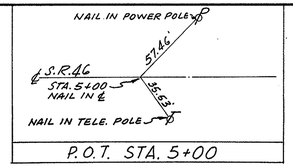
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

20 / 30

TRU-46-(22.07) (23.17) (26.17)
TRU-87-(9.07)



P.O.T. STA. 0+00



P.O.T. STA. 5+00

NOTE: Existing ℄ channel down stream of Bridge to be cleaned for a distance STA 5+00 To provide free outlet @ approx. 0.20%

N

Romeo Rice

B.M. "A"
NAIL IN EAST ROOT OF MAPLE TREE STA 1+00± 33 FT. LT. ELEV. 922.96

BRANCH OF MUD CREEK

H.J. & B.F. Sprague

BACK STA. 1222+02 AHEAD STA. 0+00

BACK STA. 5+00 AHEAD STA. 1227+02

STA. 2+50 ℄ S.R. 46 = STA. 1+00 ℄ CHANNEL

CORN FIELD GARDEN LAWN

2 STORY FRAME HOUSE PORCH PORCH

GRAPE VINES STUMP LIL. JACS

T.V. ANTENNA T.V. SHED B.M.

T.V. LINE & WIRE

Ext. Right of way line

Ditch El. 918.60±

℄ OF RIGHT-OF-WAY (66')

Right of way line

RT. 46

0+00 1+00 2+00 3+00 4+00 5+00

End Approach Slab 2+23.25

Begin Approach Slab 2+76.75

12'-50" ℄ Bridge

Ext. Ditch El. 921.2±

Ext. Ditch El. 921.4

8" CLAY TILE

12" C.M.P.

C.C.M.P. M-64(h)

Fl. 12" 919.70

Fl. 12" 919.30

Top Inv. 920.39 Inv. 920.08

Fl. 915.10

Fl. 916.05

Fl. 915.19

Fl. 12" 918.16

Fl. 916.00

DITCH

5 STRAND BARBED WIRE FENCE

WEEDS PASTURE

BEANS

1 STORY FRAME SHED

2 STORY FRAME BARN

1 STORY GRAINERY FRAME SET ON POSTS

WOOD FENCE

Temporary Run-around

Note:
Structure & Pavement, within limits of 24' Pavement width, shall be centered on existing Right-of-Way.

Romeo Rice

B.M. "B"
NAIL IN POWER POLE #476-N-24
STA. 5+50± 33' LT.
ELEV. 922.39

Curve #1
D = 38°11'-50"
Δ = 53°00'-00"
R = 150'
T = 74.79'
Lc = 138.86'
L ARC. = 138.78'
Ext. = 17.61'

R.C. Sta. -(0+65.86)+
Temp Runaround Sta. 0+00
R=150'
+00 Meet Existing Pavement
Begin Taper

Curve #2
D = 38°11'50"
Δ = 76°00'-00"
R = 150'
T = 117.19'
Lc = 184.70'
L ARC. = 198.97'
EXT. = 40.35'

R.C.
P.T.

Curve #3
D = 38°11'-50"
Δ = 23°00'-00"
R = 150'
T = 30.52'
Lc = 59.91'
Larc. = 60.21'
Ext. = 3.07'

PT. STA. 5+16.19
R=150'
+50 Meet Existing Pavement
End Taper

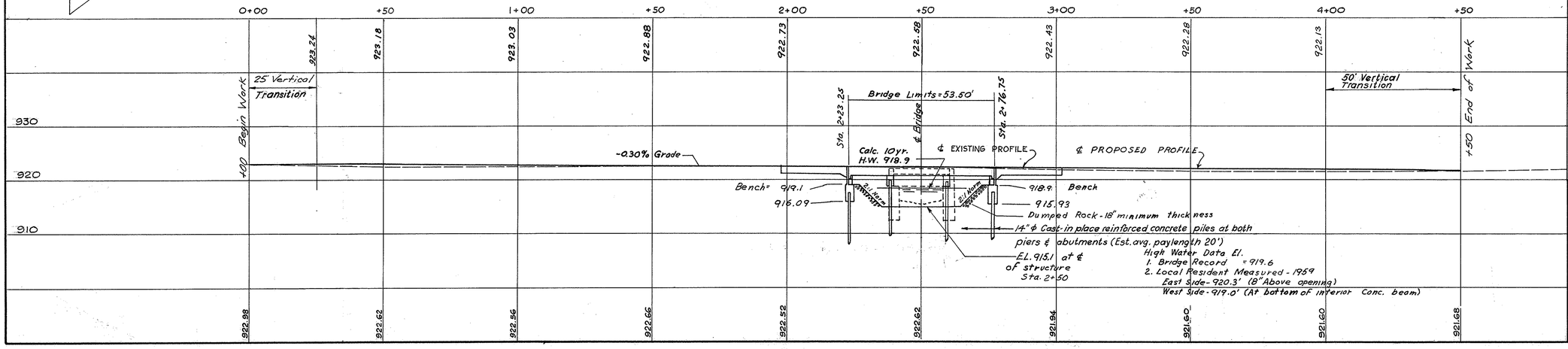
FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made of the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

DRAINAGE AREA = 2.24 SQ. MI.

EXISTING STRUCTURE
TYPE - CONCRETE BEAM
SPAN - 17'-8" CLEAR
ROADWAY - 18'-8" f/f of RAILING
SKEW: NONE
SUBSTRUCTURE - CONCRETE GRAVITY
ALIGNMENT - TANGENT
CONDITION - POOR

PROPOSED STRUCTURE
TYPE: CONTINUOUS CONCRETE SLAB

SPANS: 16'-20'-16'.
ROADWAY: 44'-0" f/f of GUARD RAIL
LOAD FREQUENCY: CF 130 (57)
SKEW: NONE
WEARING SURFACE = 3/4" MONOLITHIC CONC.
APPROACH SLABS: AS-1-54 (25' LONG)
ALIGNMENT: TANGENT



PACE ASSOCIATES of OHIO
4500 EUCLID AVE. CLEVELAND 3, OHIO

SITE PLAN

BRIDGE NO. TRU-46-2319
OVER BRANCH of MUD CREEK
TRUMBULL CO. S.R. 46.
STA. 2+23.25 to STA. 2+76.75

SCALE 1"=20'

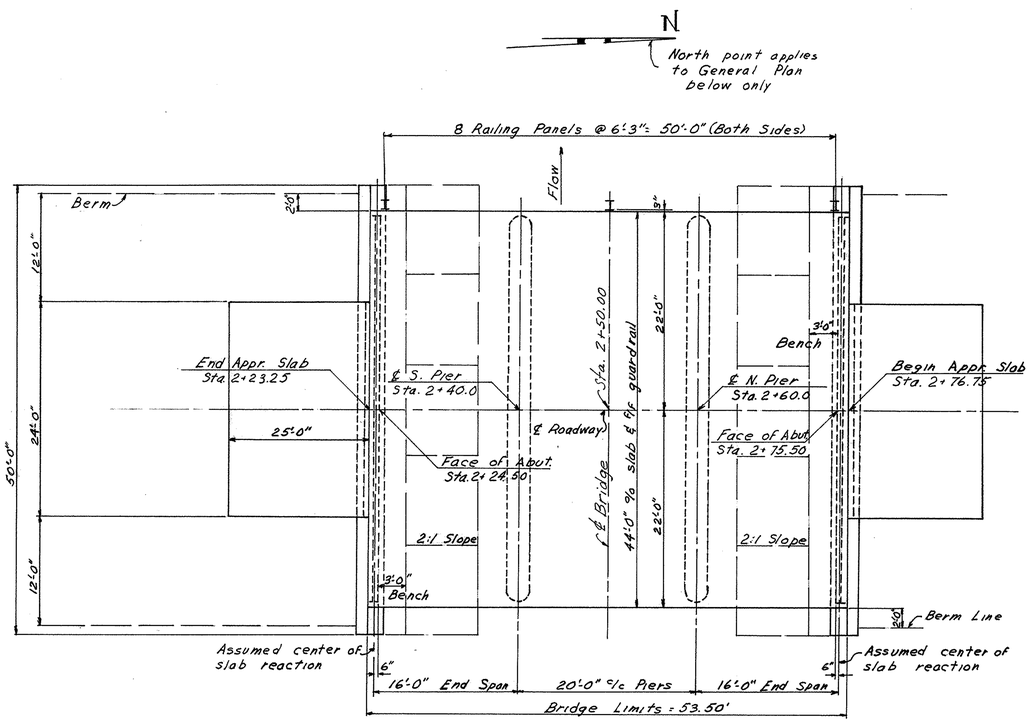
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
BGC	C.W	C.W	E.A.W.			

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

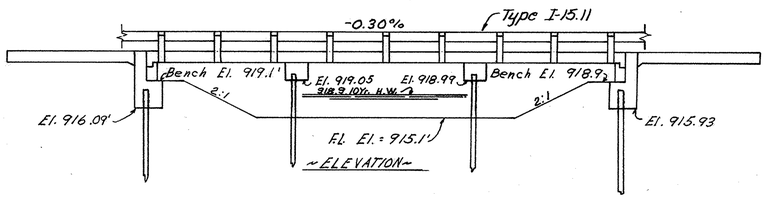
21/30

TRU-46-(22.07)(23.17)(26.17)

TRU-87-9.07



~PLAN~

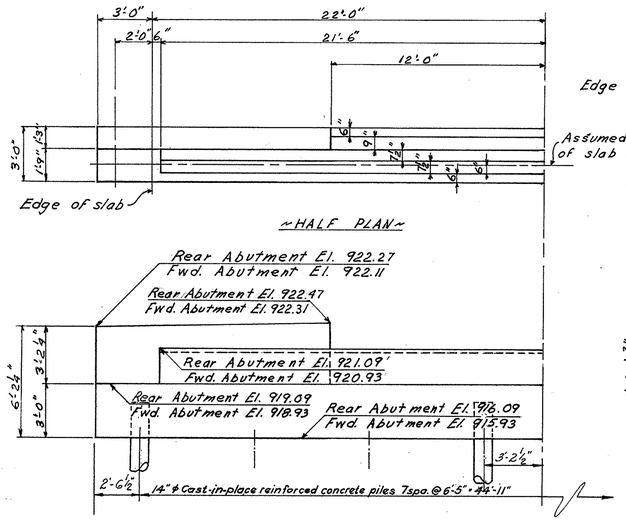


~ELEVATION~

ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super.	Piers	Abuts.	Gen'l.		
E-2	.99	Cu. Yds.	Unclassified Excavation			.99			
E-3	959	Cu. Yds.	Channel Excavation				959		
S-1	99	Cu. Yds.	Class "C" Concrete, superstructure & pier caps	80	19				
S-1	52	Cu. Yds.	Class "E" Concrete, Abutments			52			
S-4	29813	Lbs.	Reinforcing Steel	19,680	4475	5,658			
S-14	107	Lin. Ft.	Railing (Type I-15.11 with galv. steel posts & bolts)	107					
S-15	Lump	Sum	Temporary Run-Around Bridge & Approaches				Lump		
S-16	Lump	Sum	First Test Pile				Lump		
S-18	640	Lin. Ft.	14"ϕ Cast-in-place reinforced concrete piles		320	320			
S-24	Lump	Sum	Removal of existing structure				Lump		
S-29	16	Cu. Yds.	Porous Backfill				16		
I-10	72	Cu. Yds.	Dumped Rock Channel Protection			63	9		

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, A720 is a No. 7 size bar and P1001 is a No. 10 size.

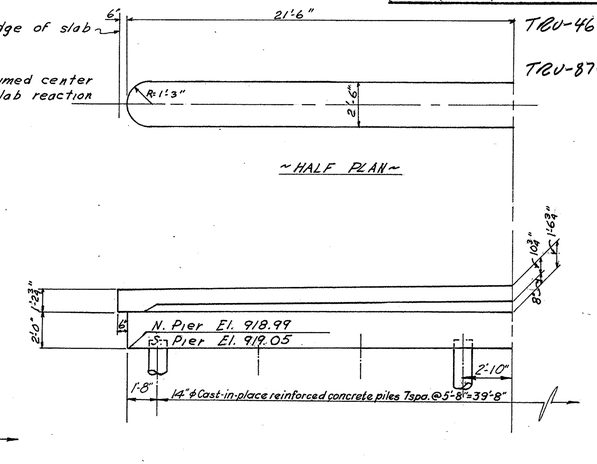
*REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.



~HALF PLAN~

~HALF ELEVATION~

~ABUTMENT DETAILS~



~HALF ELEVATION~

~PIER DETAILS~

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all the pier piles. If the encasement is omitted the pile casings shall have a thickness of metal not less than No. 7 gauge, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

~GENERAL NOTES~

REFERENCE shall be made to Standard Drawings A-1-54 revised 12-1-54, P-1-54 revised 2-2-59, and CS-1-54 revised 7-16-56.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic, the existing structure shall be removed to 6" below proposed ground surface and to whatever extent is necessary to avoid interference with the new construction, including pile driving. Suitable waste masonry may be incorporated in Item I-10.07 "Dumped Rock Channel Protection." The remainder of the removed materials shall become the property of the contractor.

MACHINE FINISH: At the option of the contractor, the top of the bridge deck slab may be machine finished.

SLAB THICKNESS of concrete deck is 10¾" which includes ¾" monolithic wearing surface.

TEMPORARY RUN-AROUND BRIDGE AND APPROACHES: Load Frequency for bridge, CF=30 with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. The surface course on the approaches shall be Class "B".

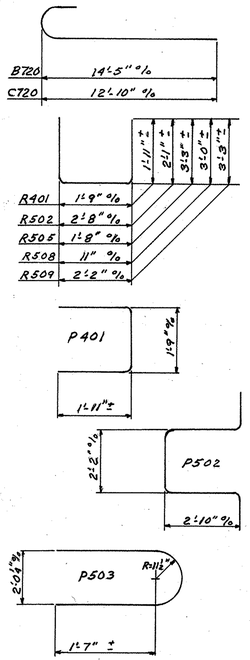
EXCAVATION QUANTITY for the abutments, in addition to that outlined in Sec. E-2.09, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. E-2.09 and by the finished slope of the cut.

PILES shall be driven to a minimum bearing capacity of 19 tons per pile for the abutments and 21 tons per pile for the piers.

STEEL LIST

Mark	No.	Length	Weight	Shp.
Superstructure				
A720	123	19'-3"	4,840	S
B720	40	15'-3"	1,247	B
C720	40	13'-8"	1,116	B
D720	20	15'-6"	634	S
E720	20	11'-0"	450	S
F820	72	14'-0"	2,691	S
G820	36	8'-6"	817	S
H820	32	7'-6"	641	S
J601	36	11'-5"	618	S
K601	18	10'-0"	270	S
M601	104	22'-9"	3,554	S
N601	82	22'-9"	2,802	S
Piers				
P1001	8	43'-6"	1,497	S
P901	8	40'-6"	1,102	S
P701	96	4'-0"	784	S
P501	4	40'-6"	169	S
P502	68	9'-0"	638	B
P503	8	6'-9"	53	B
P401	64	5'-5"	232	B

Bending Diagram



Mark	No.	Length	Weight	Shp.
Abutments				
R1001	16	22'-11"	1,578	S
R801	16	26'-1"	1,140	S
R501	16	25'-7"	427	S
R502	156	6'-7"	1071	B
R503	8	22'-1"	184	S
R504	24	5'-4"	133	S
R505	32	7'-11"	264	B
R506	8	12'-9"	106	S
R507	16	4'-11"	82	S
R508	28	6'-8"	195	B
R509	28	8'-5"	246	B
R401	64	5'-5"	232	B
REPLACEMENT BARS				
RE1000	1	7'-2"	*	S
RE900	1	6'-10"	*	S
RE800	1	6'-6"	*	S
RE700	1	6'-2"	*	S
RE600	1	5'-11"	*	S
RE500	1	5'-7"	*	S
RE400	1	5'-3"	*	S

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

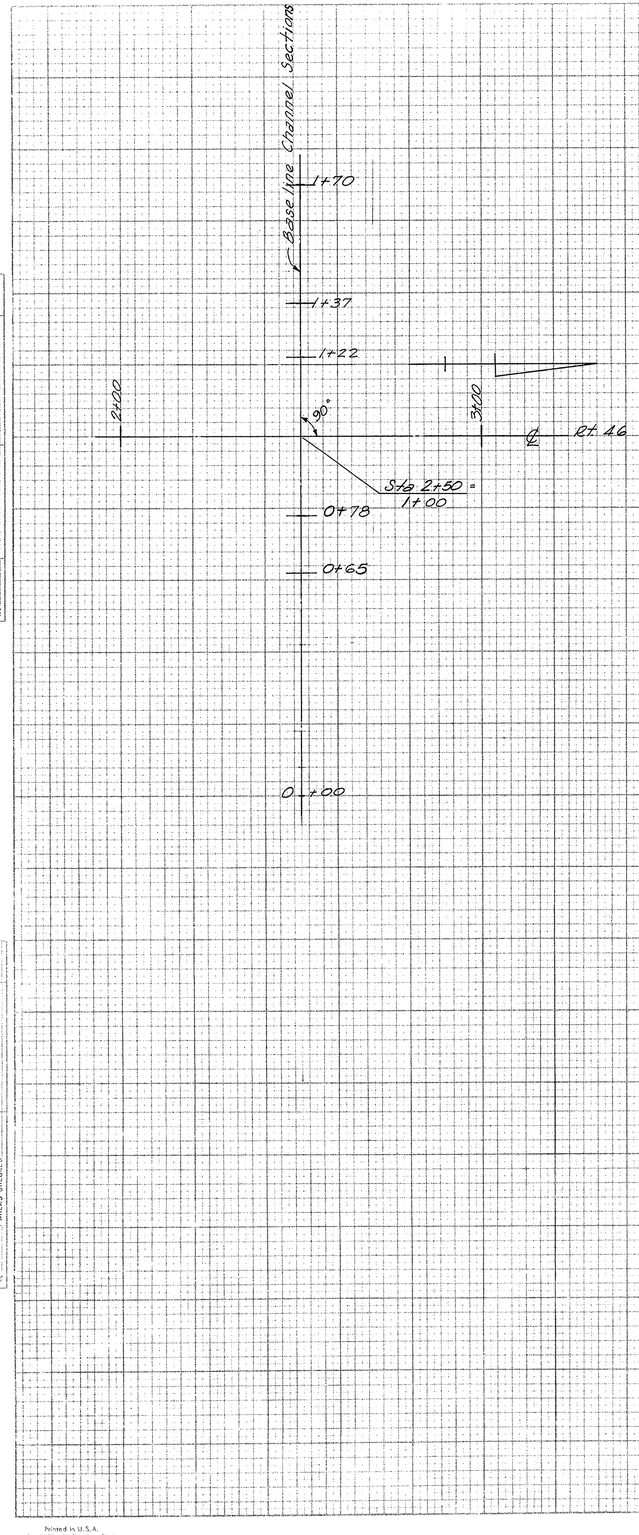
GENERAL PLAN & ELEVATION
ESTIMATED QUANTITIES, NOTES & STEEL LIST; PIER & ABUTMENT DETAILS
BRIDGE No. TRU-46-2319
OVER BRANCH OF MUD CREEK
TRUMBULL CO. S.R. 46
STA. 2+23.25
2+76.75

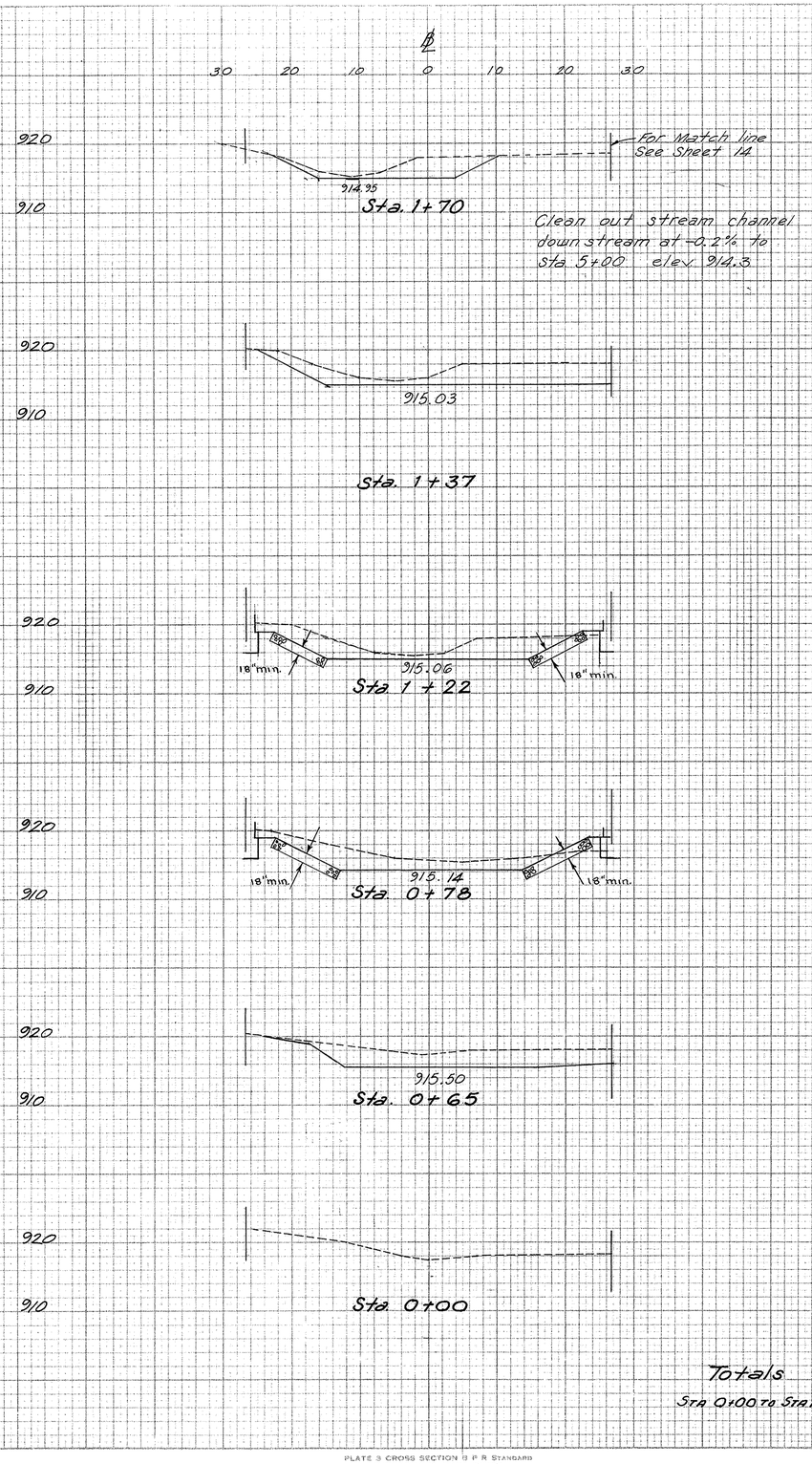
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
E.A.W	C.W	C.W	DJC			

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

22
30

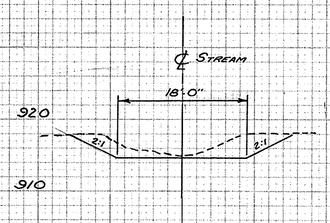
TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07





End Area		Cu. Yd.	
Cut	Fill	Cut	Fill
46	0		
		114	0
140	0		
		64	1
90	1.5		
		130	9
70	10		
		41	3
100	0		
		120	0
0	0		
Totals		469	13

Sta 0+00 to Sta 1+70



Estimated Quantity E-3 Channel Excavation for Clean Out
Sta 1+70 to Sta 5+00 490 C.Y.

ORIGINAL SURVEY | NOTE BOOK | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

FINAL SURVEY | NOTE BOOK | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NO. | BY | DATE

PLATE 3 CROSS SECTION B P R STANDARD
ENGINEERING DIVISION CS. CHICAGO - NEW YORK

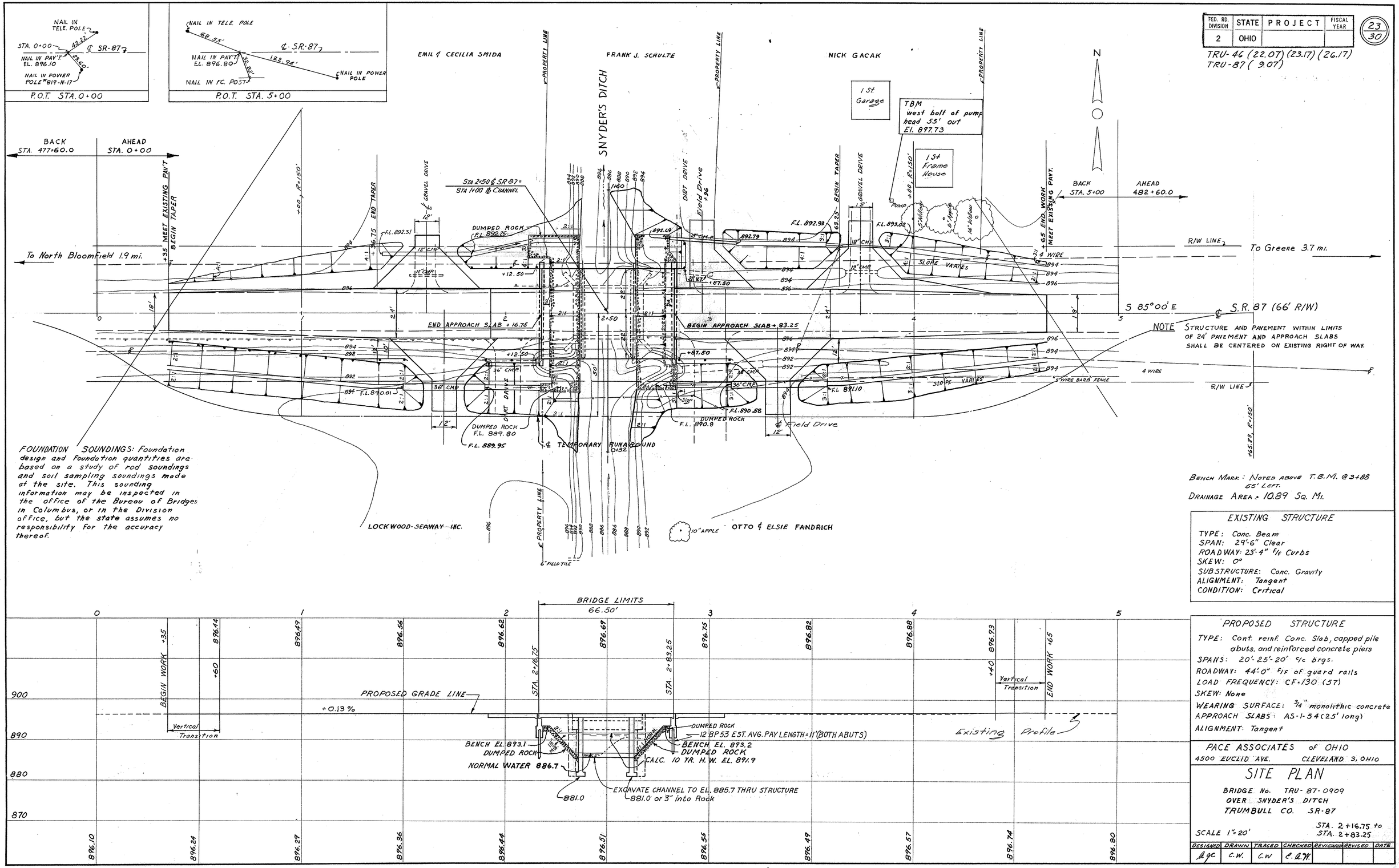
CHANNEL CROSS SECTIONS for BRIDGE TRU-46-2319

Printed in U.S.A.
The IMPERIAL Printing Co.

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

23/30

TRU-46 (22.07) (23.17) (26.17)
TRU-87 (9.07)



BENCH MARK: NOTED ABOVE T.B.M. @ 3+88 55' LEFT.
DRAINAGE AREA = 10.89 SQ. MI.

EXISTING STRUCTURE

TYPE: Conc. Beam
SPAN: 29'-6" Clear
ROADWAY: 23'-4" f/f Curbs
SKEW: 0°
SUBSTRUCTURE: Conc. Gravity
ALIGNMENT: Tangent
CONDITION: Critical

PROPOSED STRUCTURE

TYPE: Cont. reinf. Conc. Slab, capped pile abuts. and reinforced concrete piers
SPANS: 20'-25'-20' c/c brgs.
ROADWAY: 44'-0" f/f of guard rails
LOAD FREQUENCY: CF-130 (57)
SKEW: None
WEARING SURFACE: 3/4" monolithic concrete
APPROACH SLABS: AS-1-54 (25' long)
ALIGNMENT: Tangent

PACE ASSOCIATES of OHIO
4500 EUCLID AVE. CLEVELAND 3, OHIO

SITE PLAN

BRIDGE No. TRU-87-0909
OVER SNYDER'S DITCH
TRUMBULL CO. SR-87

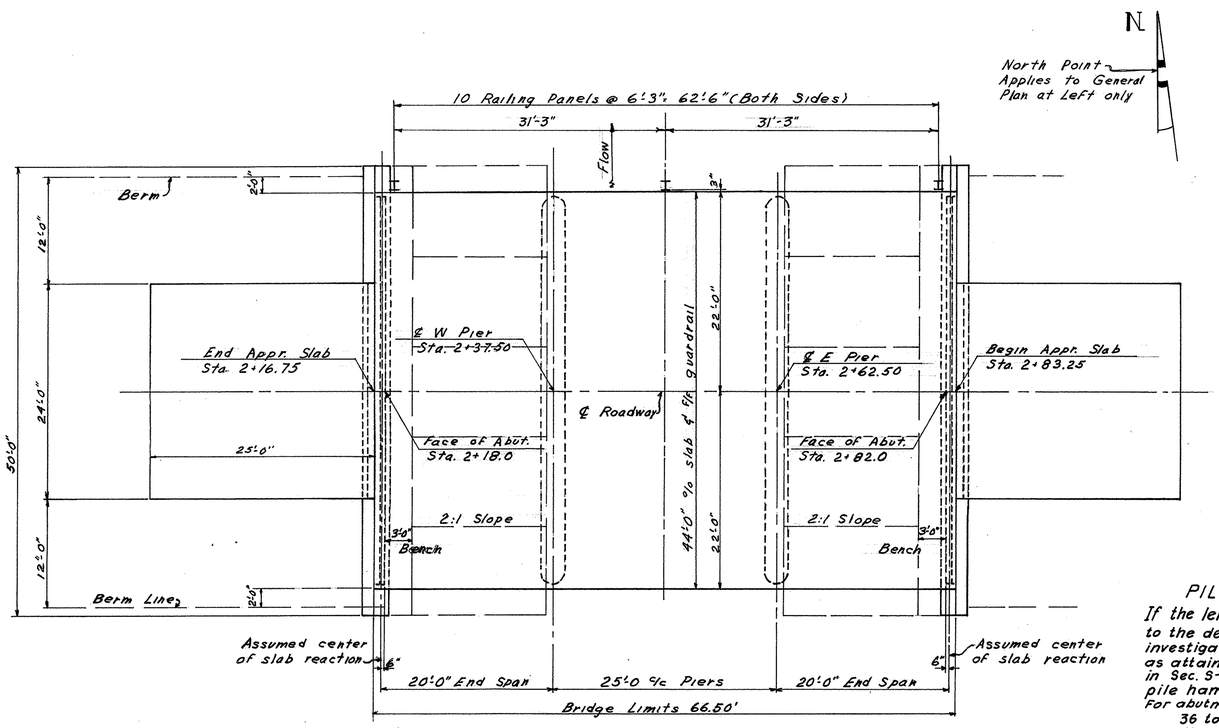
SCALE 1" = 20'
STA. 2+16.75 to STA. 2+83.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
Agc	C.W.	C.W.	C.A.W.			

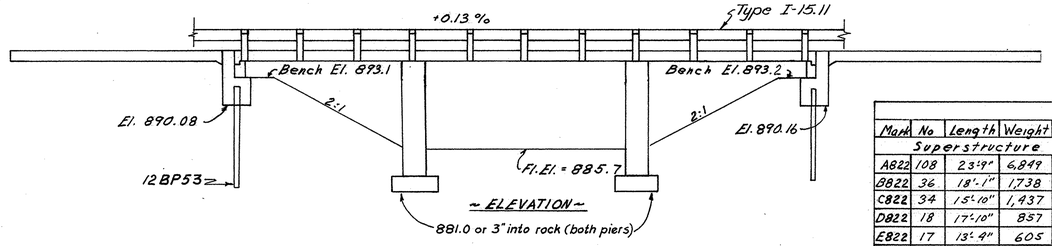
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

24
30

TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07

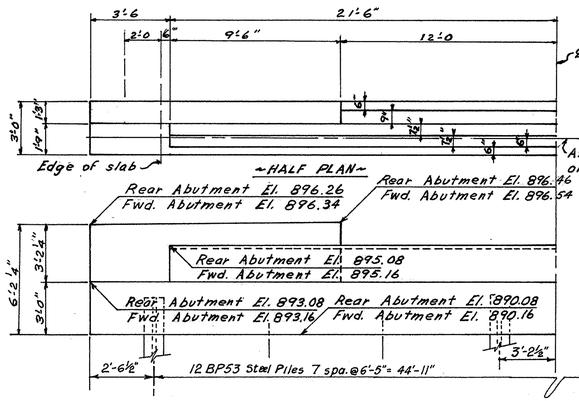


~ PLAN ~



~ ELEVATION ~

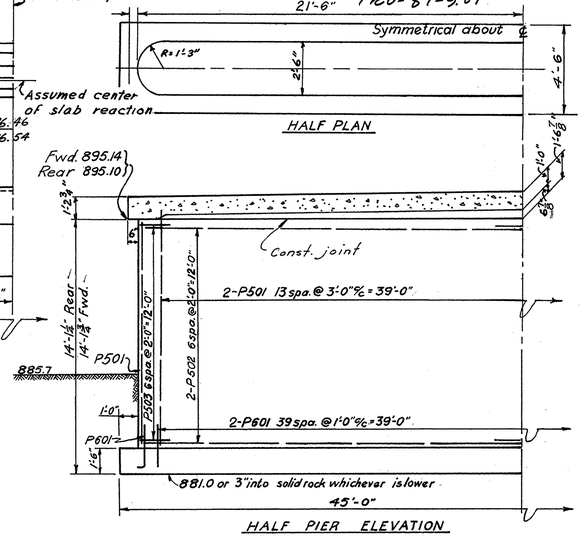
881.0 or 3" into rock (both piers)



~ HALF PLAN ~

~ HALF ELEVATION ~

~ ABUTMENT DETAILS ~



HALF PIER ELEVATION

PILES shall be driven to firm contact with rock If the length of penetration is approximately equal to the depth of rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating.

For abutment piles:

36 tons per pile using a 7000 ft-lb hammer
30 tons per pile using a 11000 ft-lb hammer
28 tons per pile using a 15000 ft-lb hammer or greater

If the energy rating of hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 21 tons per pile for the abutment piles.

General Notes

REFERENCE shall be made to Standard Drawings A-1-54 revised 12-1-54, and CS-1-54 revised 7-16-56

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic, the existing structure shall be removed to 6" below proposed ground surface and to whatever extent is necessary to avoid interference with the new construction, including pile driving. Suitable waste masonry may be incorporated in Item I-10.07 "Dumped Rock Channel Protection." The remainder of the removed materials shall become the property of the contractor.

MACHINE FINISH: At the option of the contractor, the top of the bridge deck slab may be machine finished.

SLAB THICKNESS of concrete deck is 12" which includes 3/4" monolithic wearing surface.

TEMPORARY RUN-AROUND BRIDGE AND APPROACHES: Load Frequency for bridge, CF=30 with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. The surface course on the approaches shall be class "B".

EXCAVATION QUANTITY for the abutments in addition to that outlined in Sec. E-209, includes the removal of material bounded by the proposed bench, by the front vertical plane described in Sec. E-209 and by the finished slope of the cut.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two where four are used, indicate the bar size number. For example A 822 is a № 8 size bar and R 1001 is a № 10 size.

***REPLACEMENT BARS. If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.**

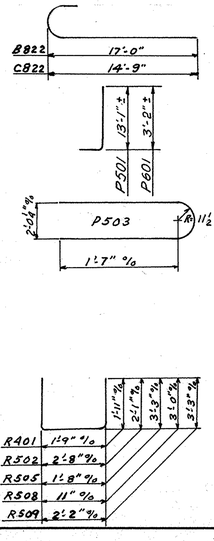
ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Piers	Abuts.	Gen'l.
E-2	204	Cu. Yds.	Unclassified Excavation		107	97	
E-3	524	Cu. Yds.	Channel Excavation				524
S-1	116	Cu. Yds.	Class "C" Concrete, superstructure	116			
S-1	122	Cu. Yds.	Class "E" Concrete, piers, walls & footings		122		
S-1	52	Cu. Yds.	Class "E" Concrete, abutments			52	
S-4	35307	Lbs.	Reinforcing Steel	26,372	3305	5.630	
S-14	133	Lin. Ft.	Railing (Type I-15.11 with galv. steel posts & bolts)	133			
S-15	Lump	Sum	Temporary Run-Around Bridge & Class "B" pavement approaches				Lump
S-16	Lump	Sum	First Test, Pile				Lump
S-18	180	Lin. Ft.	Steel piles 12 BP53			180	
S-24	Lump	Sum	Removal of Existing Structure				Lump
S-29	16	Cu. Yds.	Porous Backfill			16	
I-10	164	Cu. Yds.	Dumped Rock Channel Protection				164
E-2	Lump	Sum	Cofferdams, cribs and sheeting				Lump

STEEL LIST

Mark	No	Length	Weight	Shp.
Superstructure				
A822	108	23'-9"	6,849	S
B822	36	18'-1"	1,738	B
C822	34	15'-10"	1,437	B
D822	18	17'-10"	857	S
E822	17	13'-9"	605	S
F822	86	17'-1"	3,922	S
G822	42	8'-6"	953	S
H822	42	7'-6"	841	S
J601	42	13'-1"	825	S
K601	21	13'-6"	426	S
M601	128	23'-9"	4566	S
N601	94	23'-9"	33.53	S
Piers				
P601	164	3'-10"	944	B
P501	60	14'-1"	881	B
P502	56	22'-2"	1295	S
P503	28	6'-4"	185	B

Bending Diagram



Mark	No	Length	Weight	Shp.
Abutments				
R1001	16	22'-11"	1,578	S
R801	16	26'-1"	1,114	S
R501	16	25'-7"	427	S
R502	156	6'-7"	1,071	B
R503	8	22'-1"	184	S
R504	24	5'-4"	133	S
R505	32	7'-11"	264	B
R506	8	12'-6"	104	S
R507	16	4'-11"	82	S
R508	28	6'-8"	195	B
R509	28	8'-5"	246	B
R401	64	5'-5"	232	B
Replacement Bars				
RE1001	1	7'-2"	*	S
RE900	1	6'-10"	*	S
RE800	1	6'-6"	*	S
RE600	1	5'-11"	*	S
RE500	1	5'-7"	*	S
RE400	1	5'-3"	*	S

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

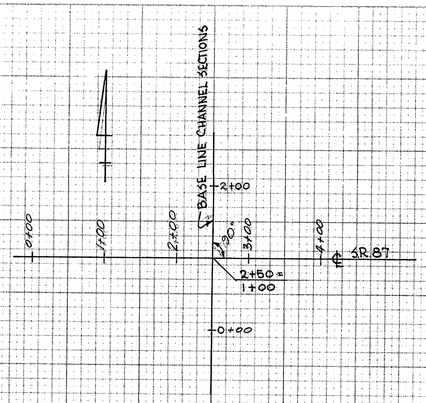
GENERAL PLAN & ELEVATION
ESTIMATED QUANTITIES; NOTES & STEEL LIST; PIER & ABUTMENT DETAILS
BRIDGE No. TRU.-87-0909
OVER SNYDER'S DITCH
TRUMBULL Co. S.R. 87.
STA. 2+16.75
2+83.25

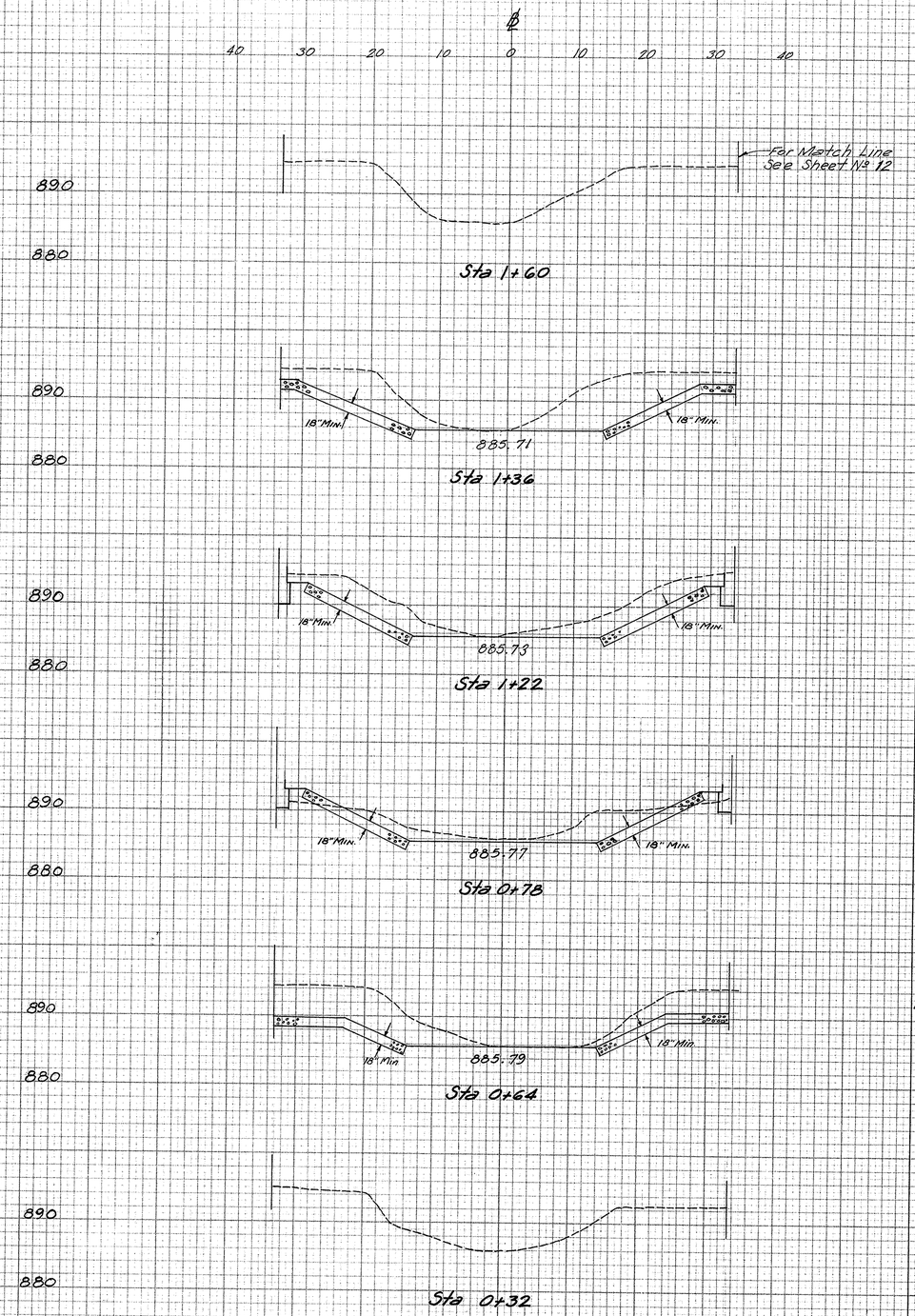
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
	C.W.	L.M.	E.A.W.			

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

25/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87-9.07





	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	0	0		
			95	0
	214	0		
			90	0
	134	0		
			168	6
	71	21		
			65	6
	178	0		
			106	0
	0	0		
Totals			524	12

FINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

ORIGINAL SURVEY — NOTE BOOK — NO. — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

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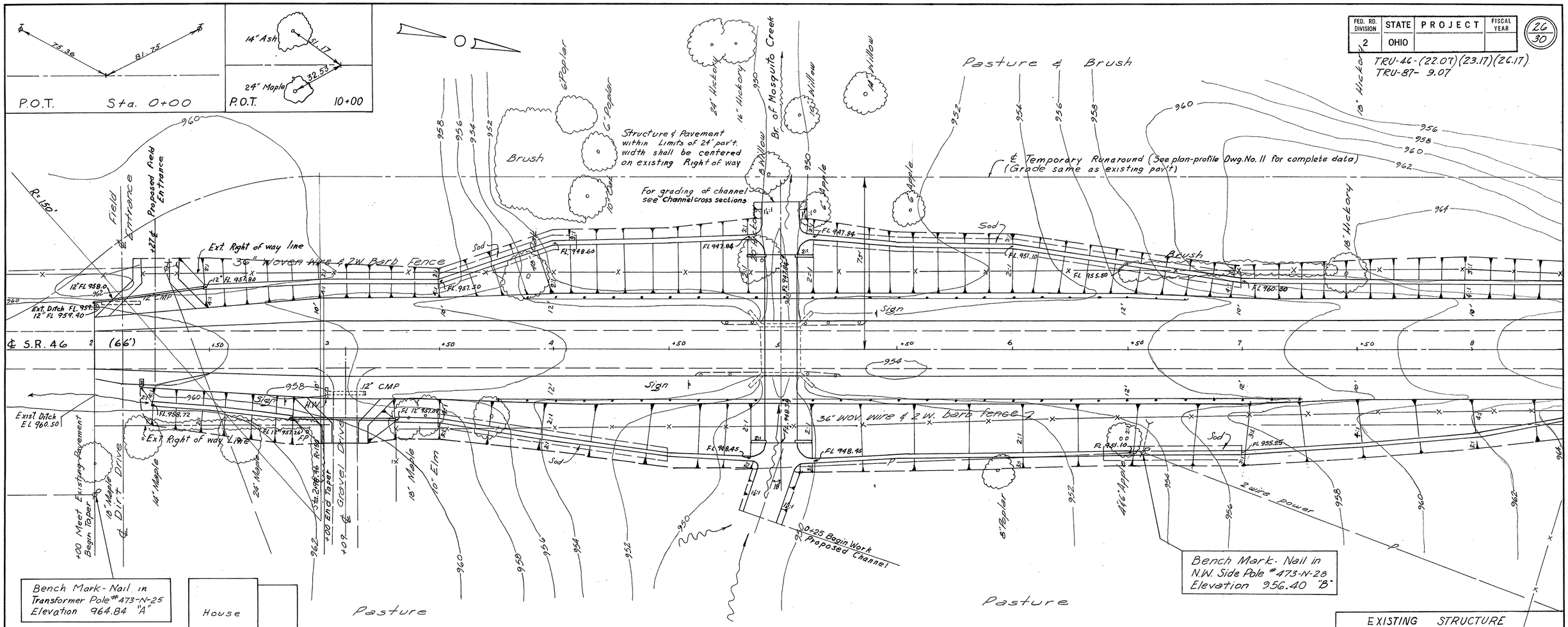
PLATE 3 CROSS SECTION B P R STANDARD
ENGINE DIETZGEN CO., CHICAGO - NEW YORK

CHANNEL CROSS SECTIONS TRU 87-0209

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

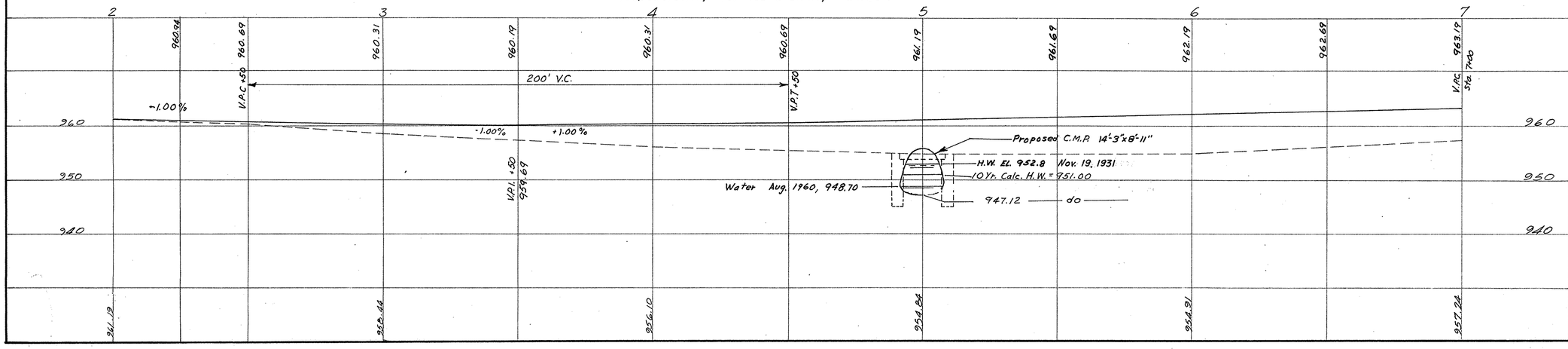
26/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87- 9.07



FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil sampling soundings 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.

Drainage Area = 1.77 sq. Mi.



EXISTING STRUCTURE

TYPE - CONCRETE SLAB
SPAN - 14'-0" CLEAR
ROADWAY - 19'-6" f/f of Curbs
SKEW - NONE
SUBSTRUCTURE - CONC. GRAVITY
ALIGNMENT - TANGENT
CONDITION - POOR

PROPOSED STRUCTURE

TYPE - 14'-3"x8'-11" SECTIONAL CORRUGATED METAL PIPE-ARCH STRUCTURE
LENGTH - 86'
ROADWAY - 44' f/f of GUARD RAIL
LOADING - H-20
SKEW - NONE
WEARING SURFACE - NONE
SLOPE - 0.64%
ALIGNMENT - TANGENT

PACE ASSOCIATES of OHIO
4500 Euclid Ave. Cleveland 3, Ohio

SITE PLAN

BRIDGE No. TRU.-46-2621
OVER MOSQUITO CREEK
TRUMBULL CO. S.R. 46

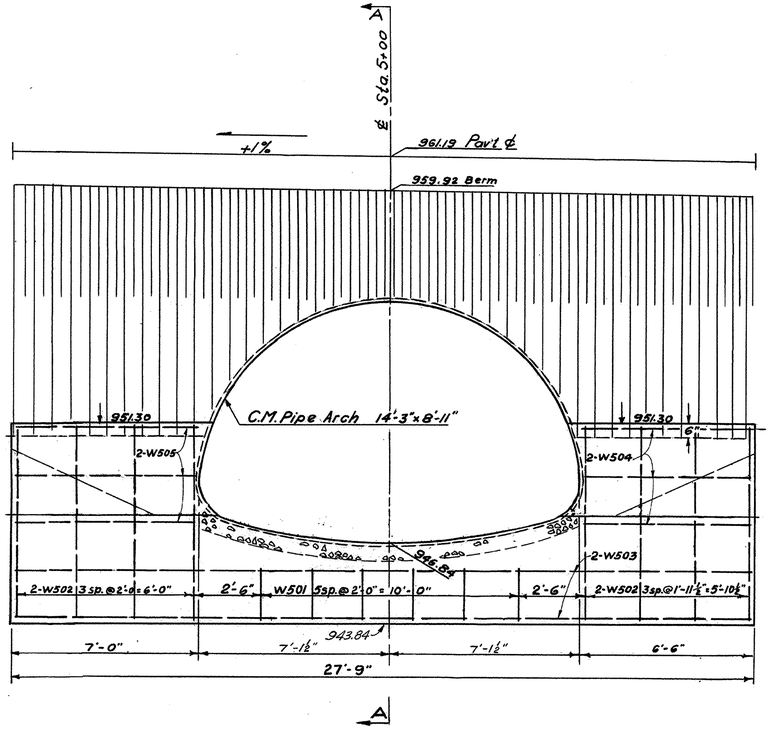
SCALE 1" = 20' STA. 5+00

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
RH ADY AJC	ADY	LN	LN	AJC	

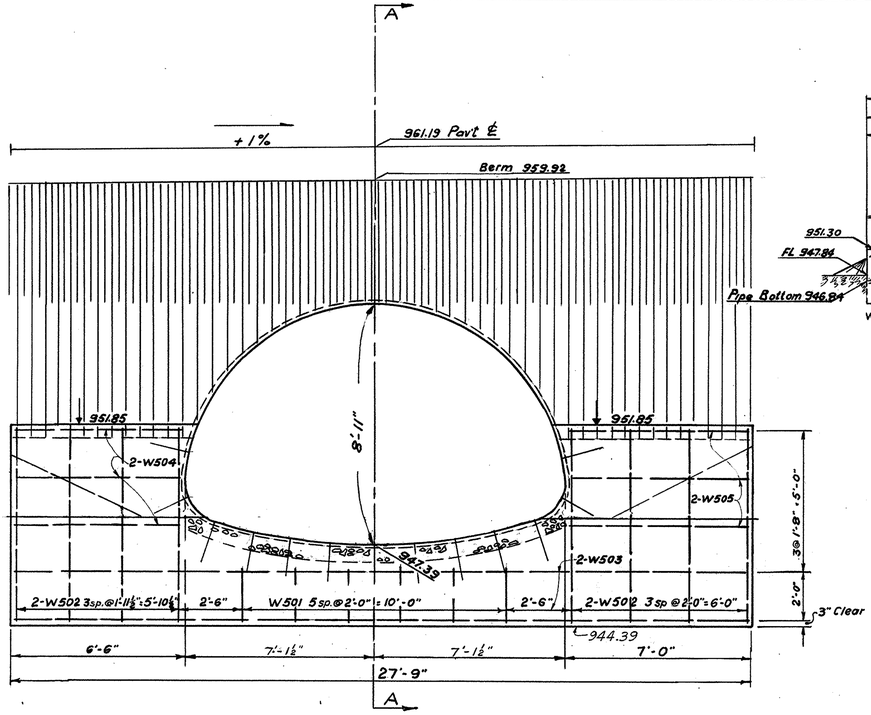
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

27/30

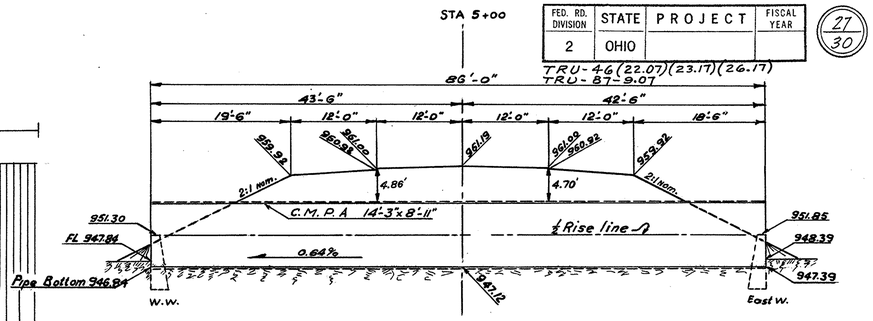
TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07



SECTIONAL PLATE PIPE-ARCH CULVERT
WEST END WALL VIEW



SECTIONAL PLATE PIPE-ARCH CULVERT
EAST END WALL VIEW



SECTION A-A

General Notes

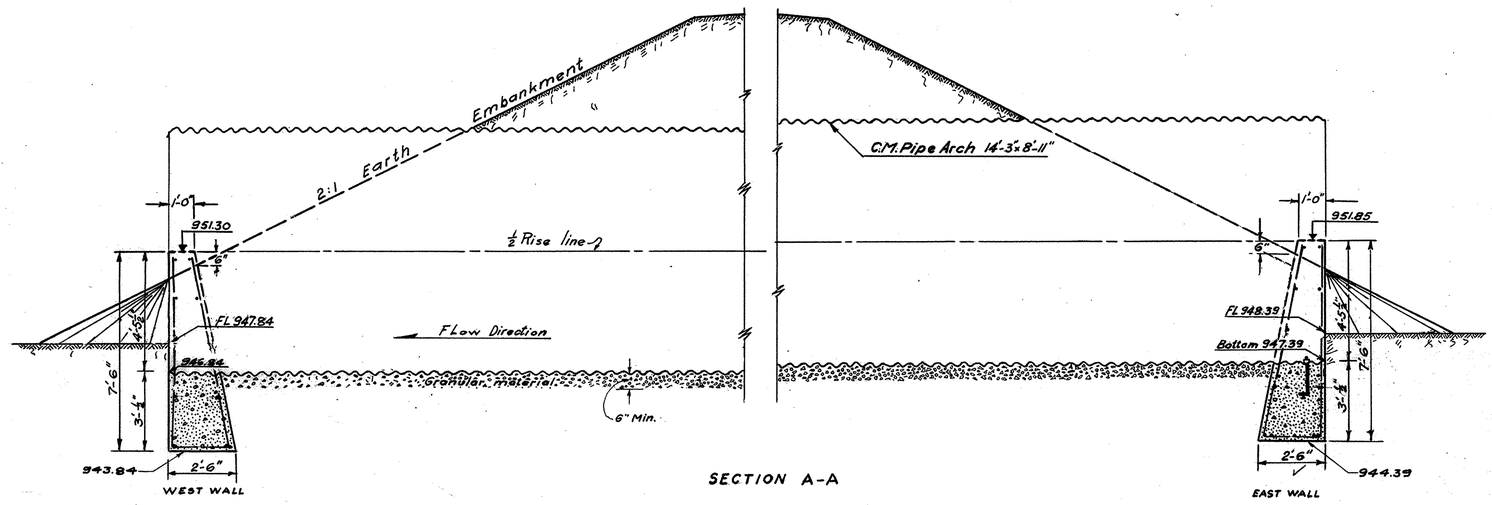
REFERENCE shall be made to Standard Drawing SP-53

REMOVAL OF EXISTING STRUCTURE When no longer needed to maintain traffic, the existing structure shall be removed to whatever extent is necessary to avoid interference with the new construction Suitable waste masonry may be incorporated in Item I-10 "Dumped Rock Channel Protection" The remainder of the removed materials shall become the property of the contractor.

TEMPORARY RUN-AROUND BRIDGE: Load frequency for Bridge CF-30 with unit stresses increased 25% as per the provisions for temporary bridges in the Design Specifications for Highway Structures. The approach pavement shall be aggregate stabilized with calcium chloride.

ANCHOR BOLTS @ approximately 1'-6" centers shall be provided to anchor inlet end of culvert.

See Sheet 6 for additional details pertaining to the temporary runaround at this structure.



SECTION A-A

GENERAL SUMMARY (DRAINAGE)
CONTINUED FROM SHEET 7

ESTIMATED QUANTITIES S-137Z(1)

Item	Total	Unit	Description	End Walls	Pipe Arch Culvert	General
E-3	325	cu.yds	Channel Excavation			325
I-2	21.0	cu.yds	Masonry, Class "C"	21.0		
S-24	Lump	Sum	Removal of Existing Structure			Lump
I-1	86	Lin.ft.	Sectional Corrugated Metal Pipe-Arch Struc. 14'-3"x8'-11"		86	
			Sec. M-6.4(g) Gage 7-5, for Class G-1 Pipe			

STEEL LIST

Mark	No.	Length	Weight	Shp.	Bending Diagram
End Walls					
W501	12	6'-9"	84	B	7" W501 2'-6½" 2-0¾"
W502	32	7'-0"	234	S	
W503	8	27'-3"	227	S	
W504	12	6'-0"	75	S	
W505	12	6'-6"	81	S	

PACE ASSOCIATES OF OHIO
4500 EUCLID AVE. CLEVELAND 3 OHIO

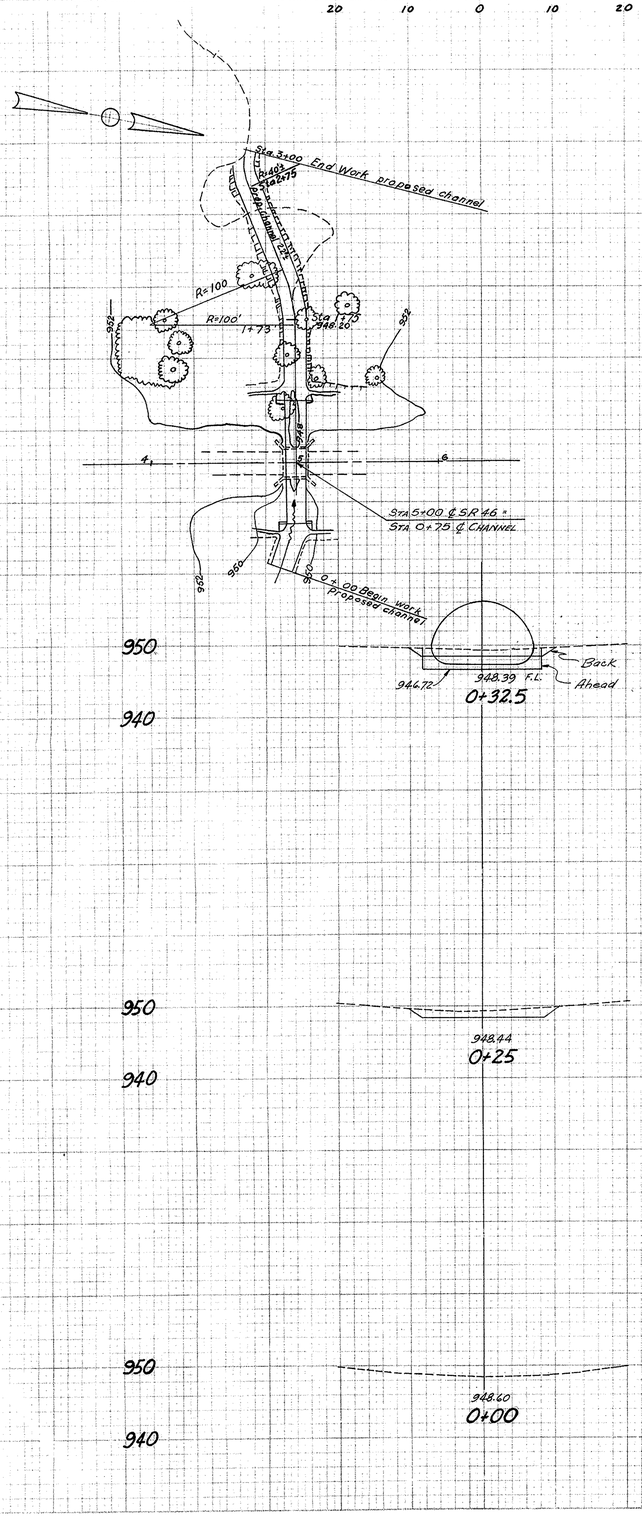
DETAILS, ESTIMATED QUANTITIES, STEEL LIST, GENERAL NOTES.
CORRUGATED METAL PIPE ARCH CULVERT NO. TRU-46-26.21
OVER BRANCH of MOSQUITO CREEK
TRUMBULL CO. SR 46
STA. 5+00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED	DATE
L.N.	L.N	L.M.	AJC			

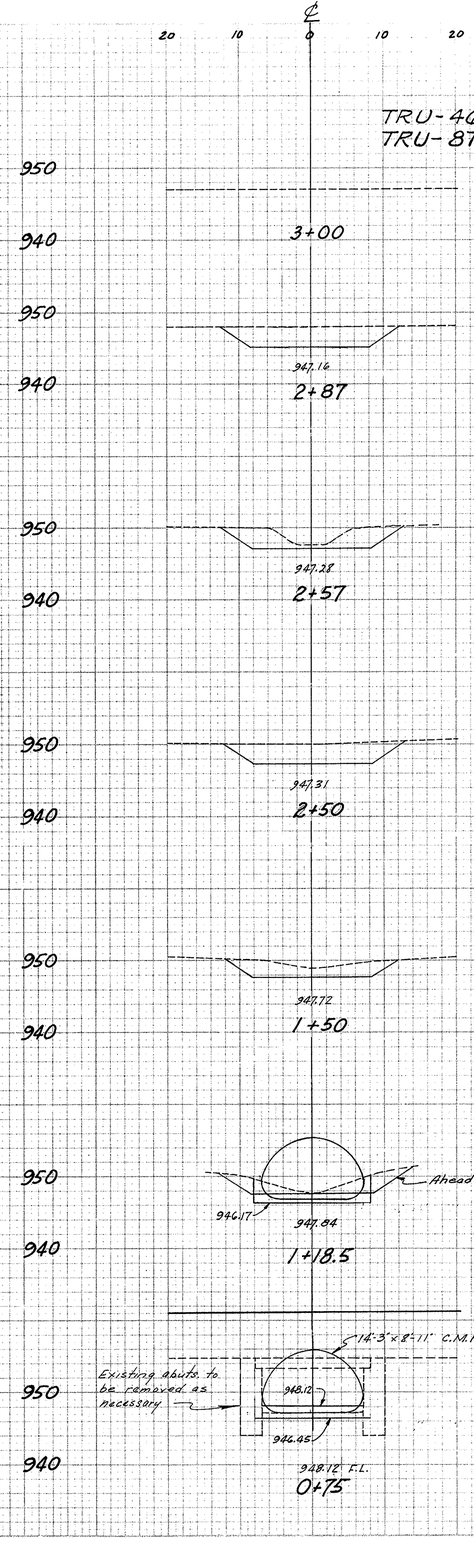
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

28
30

TRU-46(22.07)(23.17)(26.17)
TRU-87-9.07



End Area Cut	End Area Fill	Cu. Yd. Cut	Cu. Yd. Fill
		21	
		6	
		20	
		10	
		0	



Excavation for structure shall be included in the unit price bid for the Pipe Arch Structure

End Area Cut	End Area Fill	Cu. Yd. Cut	Cu. Yd. Fill
0			
		15	
62			
		60	
46			
		14	
57			
		176	
38			
		44	
37			
		325	

TOTAL E-3

PLATE 3 CROSS SECTION B.P.R. STANDARD
EUGENE DIETZGEN CO. CHICAGO NEW YORK

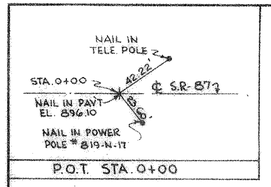
CHANNEL CROSS SECTIONS EAST AND WEST OF BRIDGE NO. TRU-46-2621

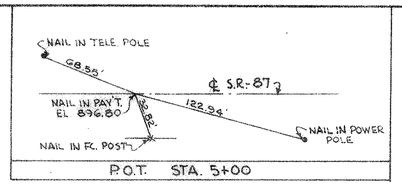
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

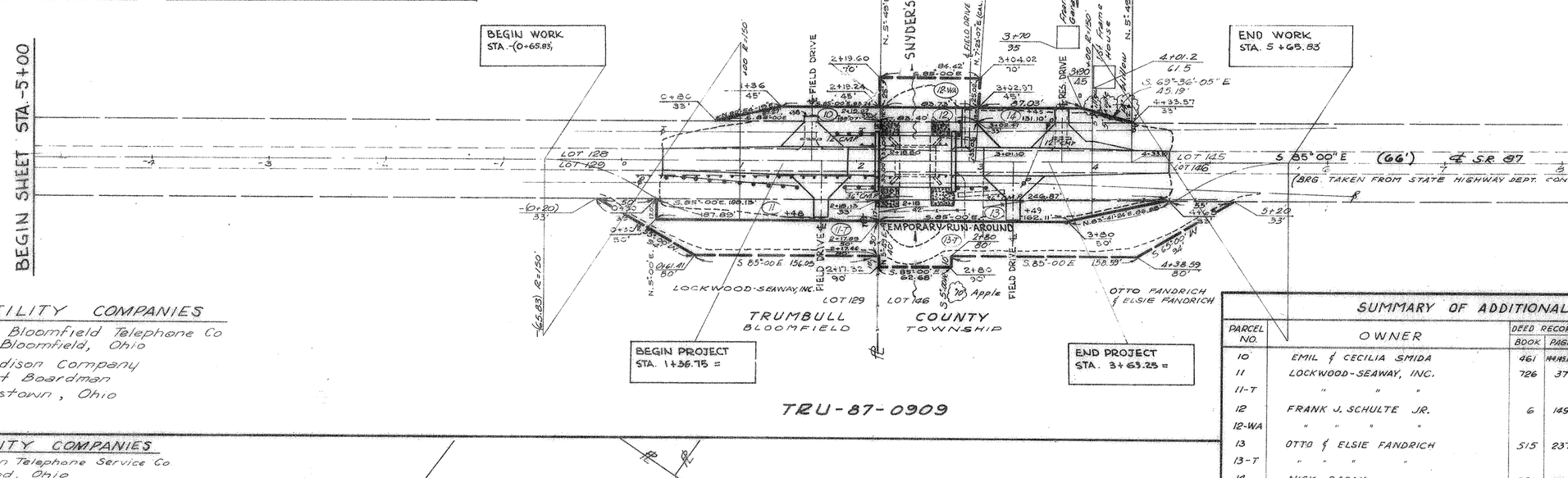
29/30

TRU-46-(22.07)(23.17)(26.17)
TRU-87- 9.07

RIGHT OF WAY SHEET 1/2







TRU-87-0909

UTILITY COMPANIES

North Bloomfield Telephone Co
North Bloomfield, Ohio

Ohio Edison Company
25 East Boardman
Youngstown, Ohio

SUMMARY OF ADDITIONAL RIGHT-OF-WAY REQUIRED

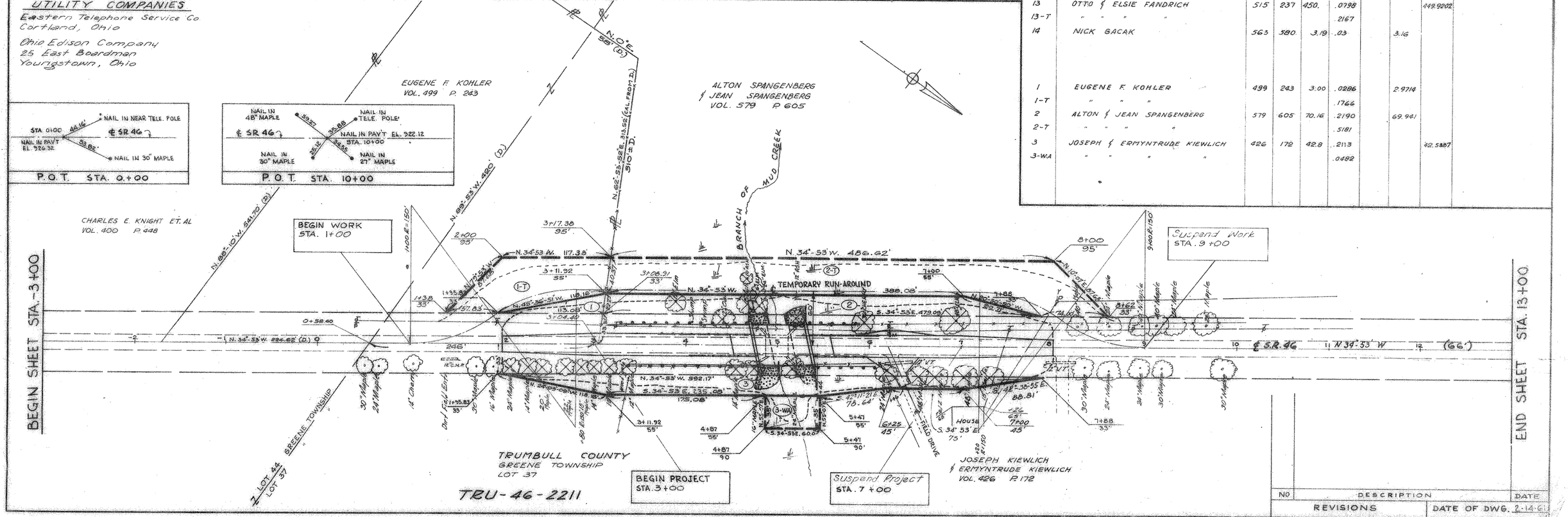
Total No. of Owners 8

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	REMARKS
10	EMIL & CECILIA SMIDA	461	144,145,162	22.44	.0306		22.4094		
11	LOCKWOOD-SEAWAY, INC.	726	37	311.315	.0734			311.2416	
11-T	" " "				.1393				
12	FRANK J. SCHULTE JR.	6	149	270.444	.023		270.421		
12-WA	" " " "				.0483				
13	OTTO & ELSIE FANDRICH	515	237	450.	.0798			449.9202	
13-T	" " " "				.2167				
14	NICK GACAK	563	580	3.19	.03		3.16		
1	EUGENE F. KOHLER	499	243	3.00	.0286		2.9714		
1-T	" " "				.1766				
2	ALTON & JEAN SPANGENBERG	579	605	70.16	.2190		69.941		
2-T	" " " "				.5181				
3	JOSEPH & ERMYNTRUDE KIEWLICH	426	172	42.8	.2113			42.5887	
3-WA	" " " "				.0482				

UTILITY COMPANIES

Eastern Telephone Service Co
Cortland, Ohio

Ohio Edison Company
25 East Boardman
Youngstown, Ohio



TRU-46-2211

NO	DESCRIPTION	DATE
	REVISIONS	DATE OF DWG. 2-14-61

RIGHT-OF-WAY (TRU-87-0909) - (TRU-46-2211)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

30 / 30

TRU-46-(22.07)(23.17)(26.17)
TRU-87- 9.07

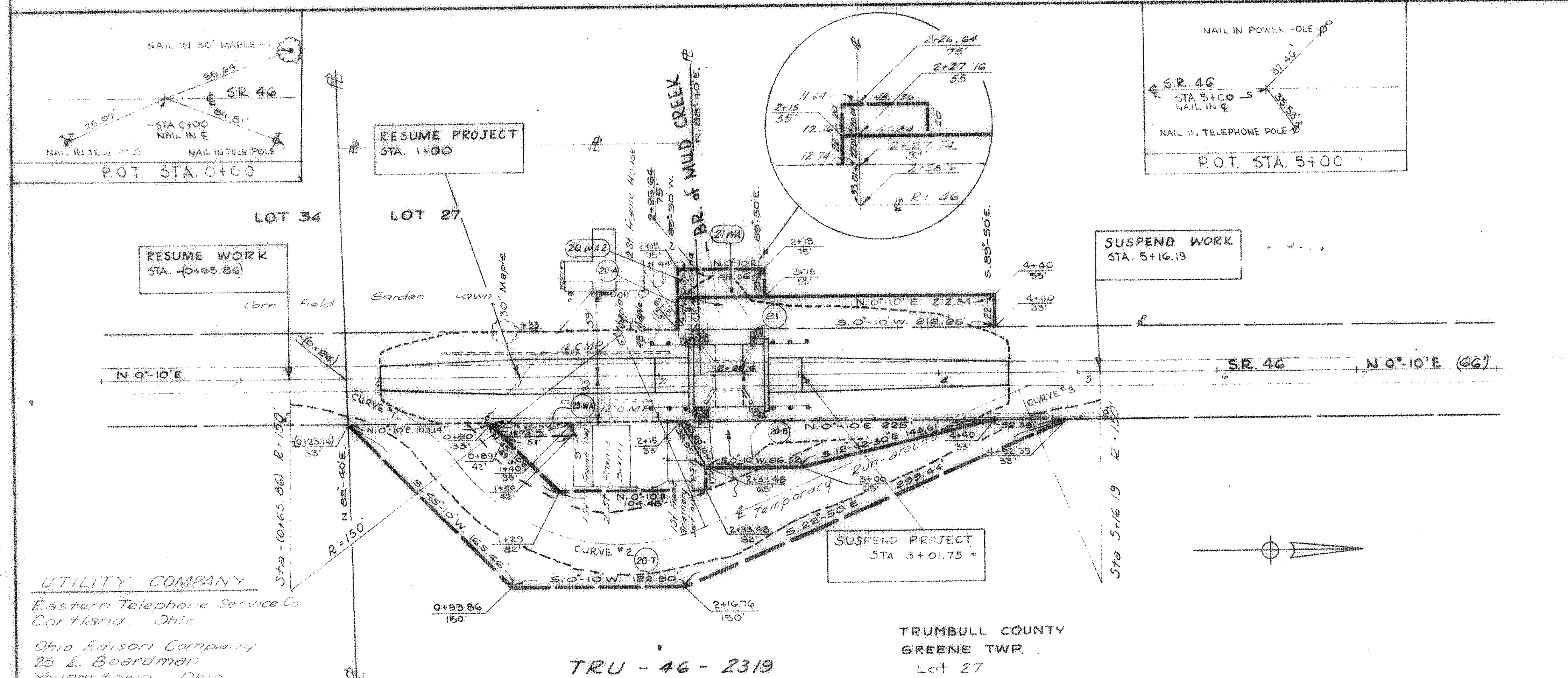
RIGHT OF WAY SHEET 2/2

UTILITY COMPANIES

Orwell Telephone Company
70 S. Maple
Orwell, Ohio

Ohio Edison Company
25 E. Boardman
Youngstown, Ohio

TRU-46-2621



UTILITY COMPANY

Eastern Telephone Service Co
Cortland, Ohio

Ohio Edison Company
25 E. Boardman
Youngstown, Ohio

TRU-46-2319

SUMMARY OF ADDITIONAL RIGHT-OF-WAY REQUIRED

Total No. of Owners 6

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS	RESIDUE LEFT	RESIDUE RIGHT	REMARKS
20-A	ROMEO R RICE - EXECUTOR	497	625	.92	.0063	YES	.9137		
20-B				18.00	.1071	-		17.8929	
20-WA-1					.0115	-			
20-WA-2					.0055	-			
20-T					.612				
21	HARLEY J. SPRAGUE & BERTHA F. SPRAGUE	621	177	65.5	.1073	-	65.4027		
21 WA					.0221				
30	CLAUDE TAYLOR	384	290	162.05	.3357				
30-T					.8676				
30-X					.3564				
31	FLORIEN SCHUELLER & ANNA SCHUELLER	444	160	30.00	.338				
31-WA					.0344				
32	GEORGE V. ZIFKO & SOPHIE MISTAK ZIFKO	535	31	40.	.0161				
32-T					17				
33	GEORGE J. KURILEC JR. & ANN KURILEC	584	238	30.41	.0313				

NO	DESCRIPTION	DATE
REVISIONS		DATE OF DWG. 2-14-6[illegible]

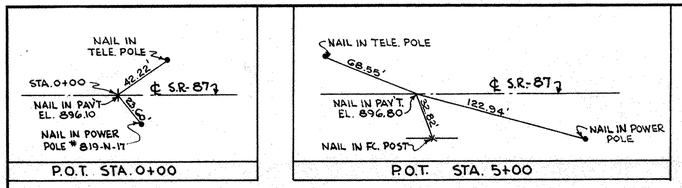
RIGHT-OF-WAY (TRU-46-2319) - (TRU-46-2621)

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

29/30

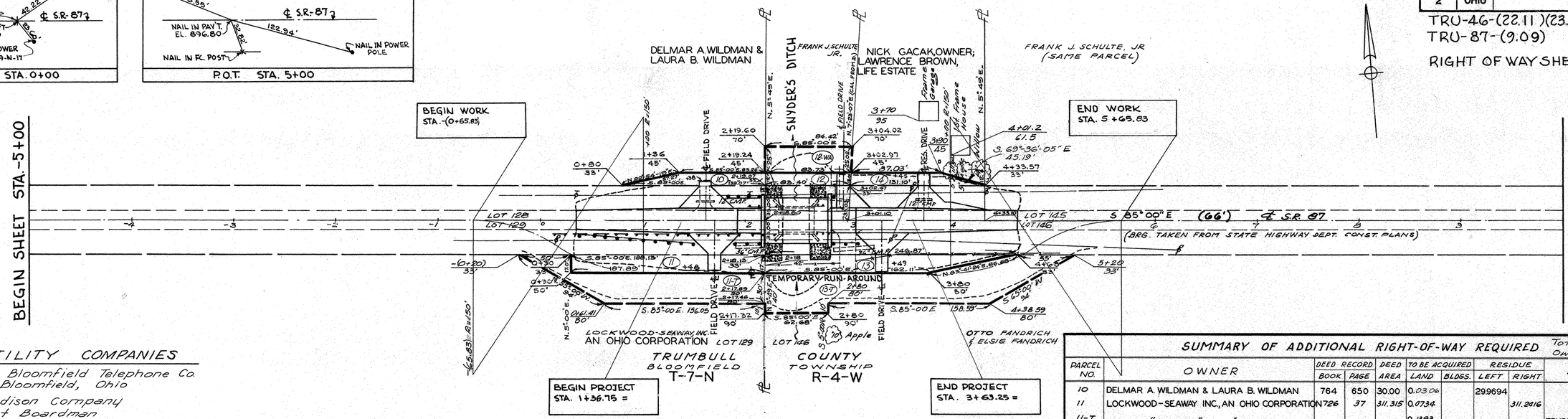
TRU-46-(22.11)(23.19)(26.21)
TRU-87-(9.09)

RIGHT OF WAY SHEET 1/2



TRUMBULL COUNTY
BLOOMFIELD TOWNSHIP
T-7-N R-4-W

LOT-128 LOT-145



UTILITY COMPANIES

North Bloomfield Telephone Co.
North Bloomfield, Ohio

Ohio Edison Company
25 East Boardman
Youngstown, Ohio

SUMMARY OF ADDITIONAL RIGHT-OF-WAY REQUIRED — Total No. of Owners 8

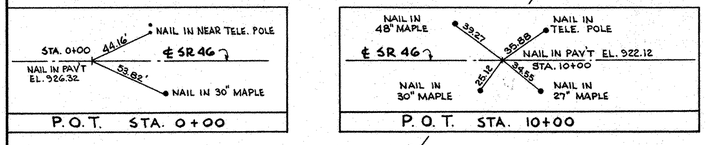
PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	REMARKS
10	DELMAR A. WILDMAN & LAURA B. WILDMAN	764	650	30.00	0.03.06		299694		
11	LOCKWOOD-SEAWAY INC., AN OHIO CORPORATION	726	37	311.315	0.0734			311.2416	
11-T	" " "				0.1393				TEMPORARY RUNAROUND
12	FRANK J. SCHULTE JR.	6	149	180.41	0.023		180.387		
12-WA	" " " "								
13	OTTO FANDRICH & ELSIE FANDRICH	515	237	450.	0.0798			449.9202	
13-T	" " " "				0.2167				TEMPORARY RUNAROUND
14	NICK GACAK, OWNER; LAWRENCE BROWN, LIFE ESTATE	563	580	3.19	0.03		3.16		
1	EUGENE F. KOHLER & GENEVIEVE R. KOHLER	499 493	243 3	3.00	0.0286		2.9714		
1-T	" " " " " "				0.1766				TEMPORARY RUNAROUND
2	ALTON SPANGENBERG & JEAN SPANGENBERG	579	605	70.16	0.2190		69.941		
2-T	" " " "				0.5181				TEMPORARY RUNAROUND
3	JOSEPH KIEWLICH & ERMYNTRUDE KIEWLICH	426 535 673	172 17 504	67.87	0.1854		67.6846		
3-WA-1 3-WA-2	" " " " "								

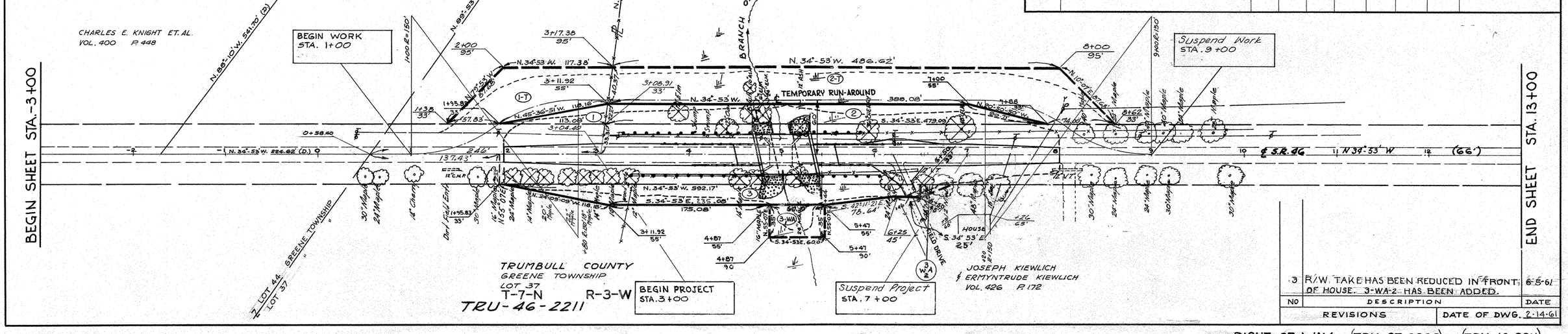
UTILITY COMPANIES

Eastern Telephone Service Co.
Cortland, Ohio

Ohio Edison Company
25 East Boardman
Youngstown, Ohio

TRUMBULL COUNTY
GREENE TOWNSHIP
T-7-N R-3-W





NO	REVISIONS	DATE OF DWG. 2-14-61
	DESCRIPTION	DATE
3	R/W. TAKE HAS BEEN REDUCED IN FRONT OF HOUSE. 3-WA-2 HAS BEEN ADDED.	6-5-61

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

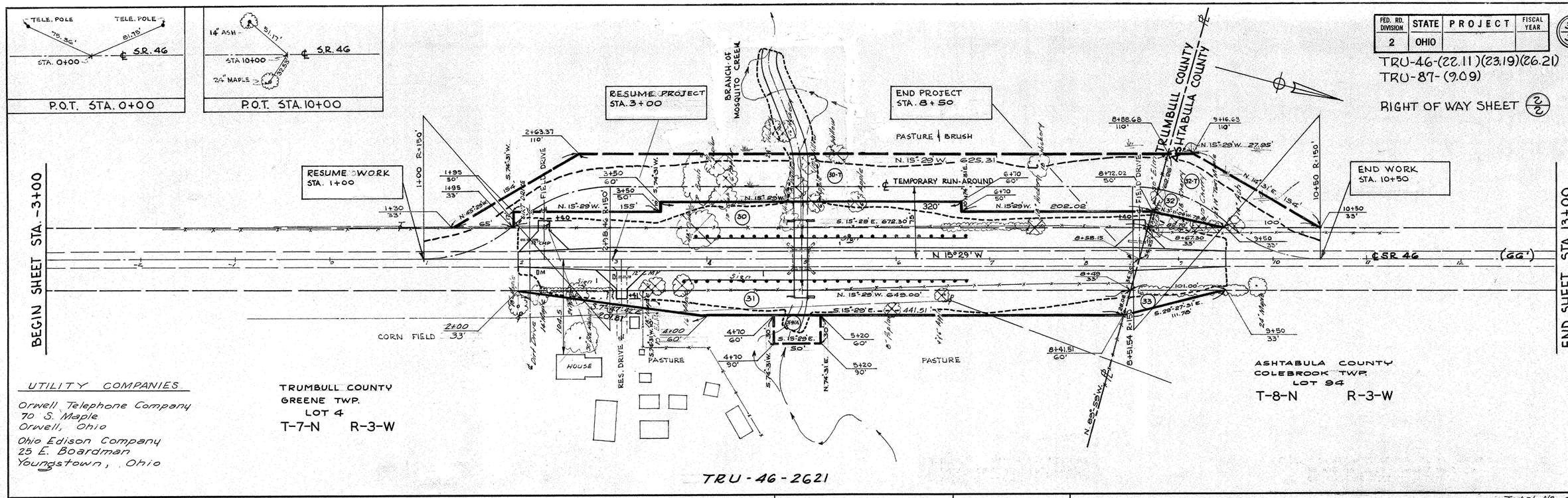
30/30

TRU-46-(22.11)(23.19)(26.21)
TRU-87-(9.09)

RIGHT OF WAY SHEET 2/2

P.O.T. STA. 0+00

P.O.T. STA. 10+00



UTILITY COMPANIES

Orwell Telephone Company
70 S. Maple
Orwell, Ohio

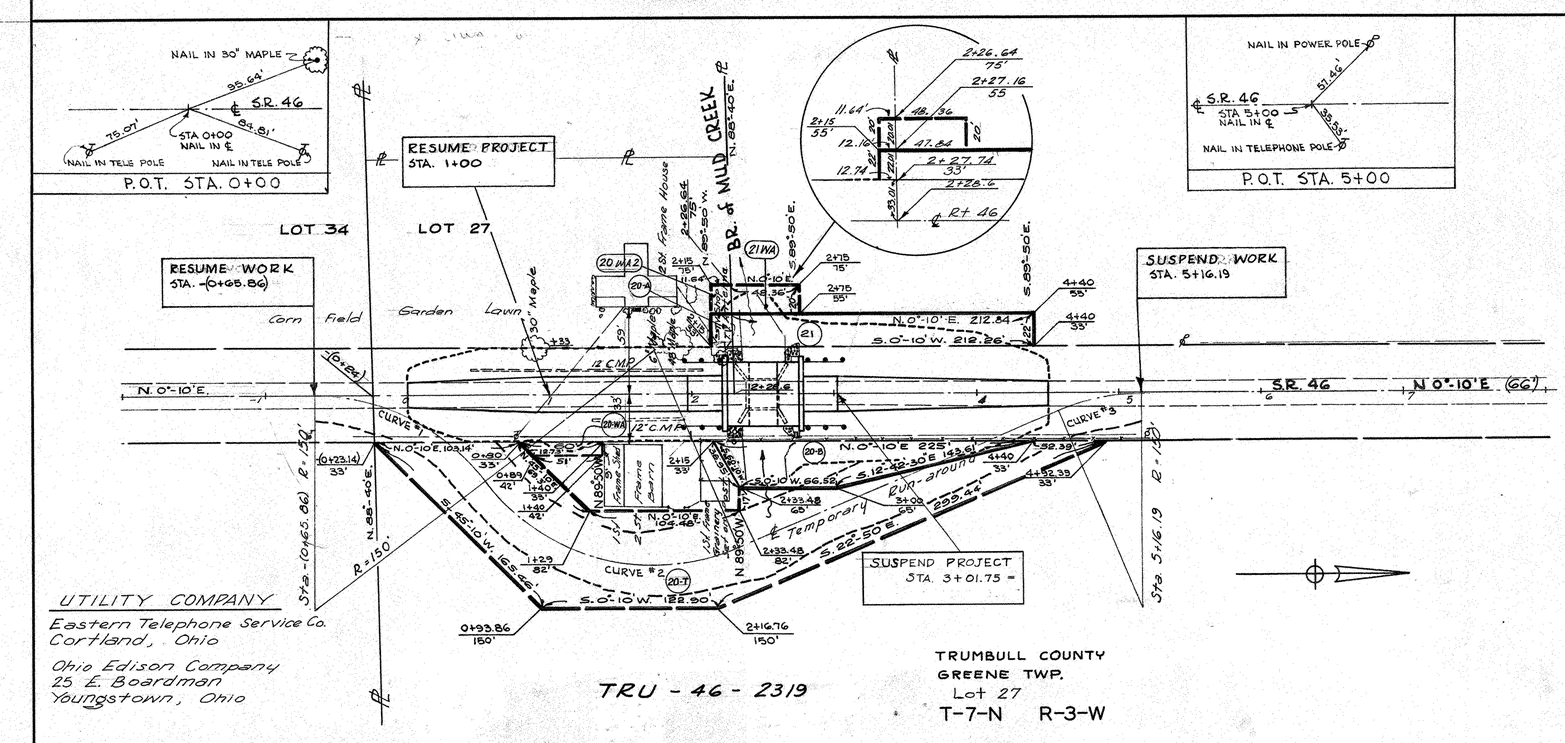
Ohio Edison Company
25 E. Boardman
Youngstown, Ohio

TRUMBULL COUNTY
GREENE TWP.
LOT 4
T-7-N R-3-W

TRU-46-2621

P.O.T. STA. 0+00

P.O.T. STA. 5+00



UTILITY COMPANY

Eastern Telephone Service Co.
Cortland, Ohio

Ohio Edison Company
25 E. Boardman
Youngstown, Ohio

TRU-46-2319

TRUMBULL COUNTY
GREENE TWP.
Lot 27
T-7-N R-3-W

SUMMARY OF ADDITIONAL RIGHT-OF-WAY REQUIRED — Total No of Owners - 6

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS	RESIDUE LEFT	RESIDUE RIGHT	REMARKS
20-A	ROMEO R. RICE	497	625	18.62	.0063	YES	.9137		
20-B					.1071	-		17.8929	
20-WA						-			
20-WA-2						-			
20-T					.612	-			
21	HARLEY J. SPRAGUE & BERTHA F. SPRAGUE	621	177	65.51	.1073	-	65.4027		
21 WA									
30	CLAUDE TAYLOR	384	290	162.05	.3367				
30-T					.8676				
31	FLORIEN SCHUELLER & ANNA SCHUELLER	444	160	30.00	.338				
31-WA									
32	GEORGE V. ZIFKO & SOPHIE MISTAK ZIFKO	535	31	90.0	.0161				
32-T					.17				TEMPORARY RUNAROUND
33	GEORGE J. KURILEC JR. & ANN KURILEC	584	328	30.61	.0313				

NO.	DESCRIPTION	DATE
30-X	Deleted	5-24-61

REVISIONS — DATE OF DWG. 2-14-61

RIGHT-OF-WAY (319) (TRU-46-26