

MICROFILMED  
OCT 21 1982

# STATE OF OHIO

MICROFILMED  
JUN 5 1982

The Federal Road Division 2  
Designation appearing in the  
upper right hand corner throughout  
this Plan shall be considered  
to read FHWA Region 5.

FHWA REGION	STATE	PROJECT
5	OHIO	RF-198 (12)

1  
346

TRUMBULL COUNTY  
TRU-82-13.26  
LIMITED ACCESS

NOTE:  
PROJECT DESIGNATION TRU-82-13.47  
APPEARING THROUGHOUT THIS PLAN SHALL  
BE CONSIDERED TO READ TRU-82-13.26.

RF-198(12)

-1977 SPECIFICATION-

# DEPARTMENT OF TRANSPORTATION

## TRU-82-13.26

### BAZETTA & HOWLAND TOWNSHIPS

### TRUMBULL COUNTY

#### LEGEND OF SYMBOLS

EXIST. LIMITED ACCESS LINE	---	LA	---
PROP. LIMITED ACCESS LINE	---	LA	---
TEMPORARY # WORK AGREEMENT LINE	---		---
EXIST. RIGHT OF WAY LINE	---		---
PROP. RIGHT OF WAY LINE	---	R/W	---
PROPERTY LINES	---		---
CENTER LINES	---		---
EXIST. TREES OR STUMPS	⊙		
EXIST. FENCE LINES	---		---
EXIST. GUARD RAIL	---		---
PROP. GUARD RAIL	---		---
EXIST. GAS MAIN	G		G
EXIST. WATER MAIN	W		W
PROP. WATER MAIN	W		W
EXIST. WATER VALVE # HYDRANT	⊙	HYD.	⊙
PROP. WATER VALVE # HYDRANT	⊙	HYD.	⊙
EXIST. SANITARY SEWER	S		S
UNDERGROUND TELEPHONE LINE	T		T
EXIST. DITCHES # SWALES	---		---
PROPOSED DITCHES	---		---
PROP. PARALLEL CHANNELS	---		---
PROP. JUTE MATTING	---		---
PROP. PAVED GUTTER	---		---
EXIST. STORM SEWER	---		---
PROP. STORM SEWER	---		---
EXIST. MANHOLES, C.D. # INLETS	⊙	MH	⊙
PROP. MANHOLES, C.D. # INLETS	⊙	MH	⊙

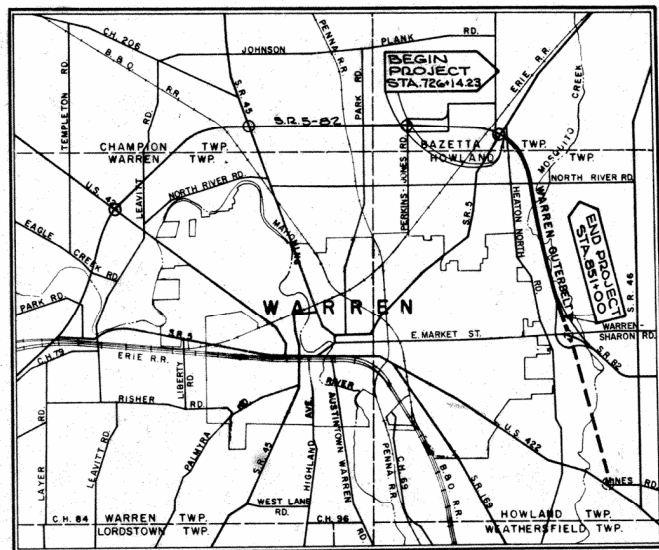
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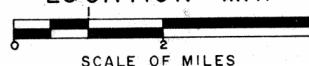
*Sheets 307, 313 & 314  
revised 10-6-77 EBL*

*Sheets 285, 291, 295,  
296, 301, 302, 303  
revised 1-9-78 EBL*

The following sheets  
have been omitted from  
this project: 165, 192, 224, 228-231,  
234-240, 245-249, 254-258, 266, 267,  
269, 270



#### -LOCATION MAP-



Portion to be improved  
State Roads  
Other Roads  
Future Improvement

Plan	0 25 50 100
Profile Horiz.	0 25 50 100
Profile Vert.	0 5 10 20

Supplemental Prints of St'd. Construction Drawings	Supplemental Specifications
BP-1 G-1-G5 F-2 5-1-76 HL-3 7-27-73 AS-1-72 6-30-72	896 10-7-75
BP-2 12-6-76 F-3 5-1-76 HL-4 1-21-76 BR-1-67 10-15-71	865, 973 1-11-74
BP-3 12-6-76 MH-1 6-12-75 HW-A 1-11-70 RB-1-55 2-2-59	808 4-3-76
BP-4 12-6-76 F-3 5-1-76 L-1 6-1-73 SD-1-69 6-12-69	839 11-25-70
BP-5 8-11-75 F-G 5-1-76 MC-1 6-13-69 TC-31,20,10,32 8-27-74	950 10-15-74
BP-6 G-1-G5 GR-7 12-6-76 MC-3 6-1-73 HL-19 1-21-76	844 11-8-74
BP-7 12-6-76 GR-2B 12-6-76 MC-A 7-26-76 TC-165 10-1-74	948 2-19-74
GR-4A 7-26-76 GR-3 12-6-76 MC-B 6-12-75 TC-12,30 10-1-74	1001 1-3-77
BP-9 12-6-76 GR-4 12-6-76 MC-7 10-15-76 TC-2110 10-1-74	836 3-12-75
CB-2-2A&B G-1-G5 GR-5 1-1-71 MC-8 6-12-75 TC-71,10 12-1-75	838 1-13-77
CB-5 9-1-69 GR-6 1-1-71 MH-3 6-12-75 TC-32,10,10,32 8-27-74	927 1-1-71
CB-6 G-1-G5 BP-10 1-3-75 MH-5 6-12-75 TC-51,10 6-2-75	951 10-11-75
CB-8 9-1-69 HL-1 9-6-73 TC-6,10 12-1-75 TC-51,11 6-2-75	949 3-12-75
F-1 5-1-76 HL-2 7-27-73 TC-15,115 10-1-74 TC-1624 10-1-74	

This improvement is especially designed for through traffic and has been declared a Limited Access highway or freeway by action of the director of Transportation in accordance with the provisions of SEC.5511.02 of the revised code of Ohio.

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this project.

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

I hereby approve these plans and declare that the making of this project 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 the plans and estimates.

Approved William M. Goldman  
Date 2/25/77 DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

Approved Robert B. Pfenj  
Date 2-1-77 ENGINEER, BUREAU OF BRIDGES

Approved \_\_\_\_\_  
Date \_\_\_\_\_ ENGINEER, BUREAU OF LOCATION & DESIGN

Approved John B. Ellis  
Date 3-14-77 ASSISTANT DEPUTY DIRECTOR FOR HIGHWAY DESIGN

Approved David S. Kelly  
Date 3-14-77 ASSISTANT DEPUTY DIRECTOR FOR REAL ESTATE

Approved Arnold E. Dote  
Date 3-14-77 ASSISTANT DEPUTY DIRECTOR FOR PROGRAM DEVELOPMENT

Approved R. E. Balth  
Date 3-14-77 CHIEF ENGINEER, DESIGN

Approved L. D. Hickman  
Date 3-14-77 CHIEF ENGINEER, CONSTRUCTION

Approved George E. Melton  
Date 3-14-77 CHIEF ENGINEER, OPERATIONS

Approved \_\_\_\_\_  
Date 3-14-77 ASSIST. DIRECTOR, DEPARTMENT OF TRANSPORTATION

Approved Edward J. Wier  
Date 3-14-77 DIRECTOR, DEPARTMENT OF TRANSPORTATION

DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

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

DIVISION ADMINISTRATOR \_\_\_\_\_ DATE \_\_\_\_\_

Glaus Pyle and Schomer  
Akron, Ohio Youngstown, Ohio

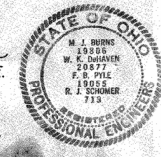
File No. TRU-82-13.26

Date of Letting \_\_\_\_\_ 19 \_\_\_\_\_

Contract No. \_\_\_\_\_

W.K. DeHaven  
W. K. DEHAVEN, P.E.  
REG. PROF. ENGINEER  
NO. 20877

March 8, 1977  
DATE

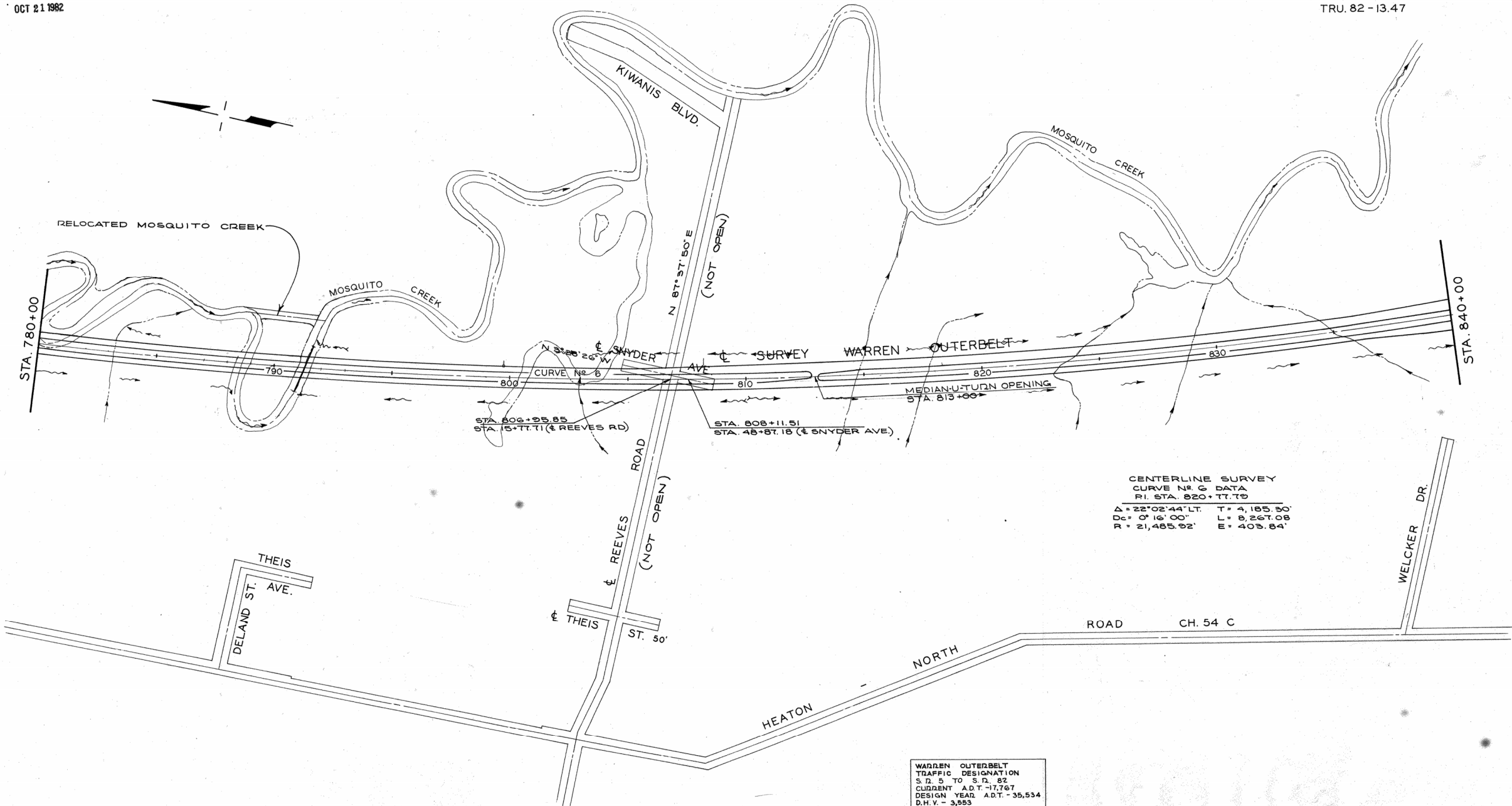


MICROFILMED  
OCT 21 1982

FED. RD.	STATE	PROJECT	
2	OHIO	STATE	

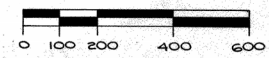
3  
346

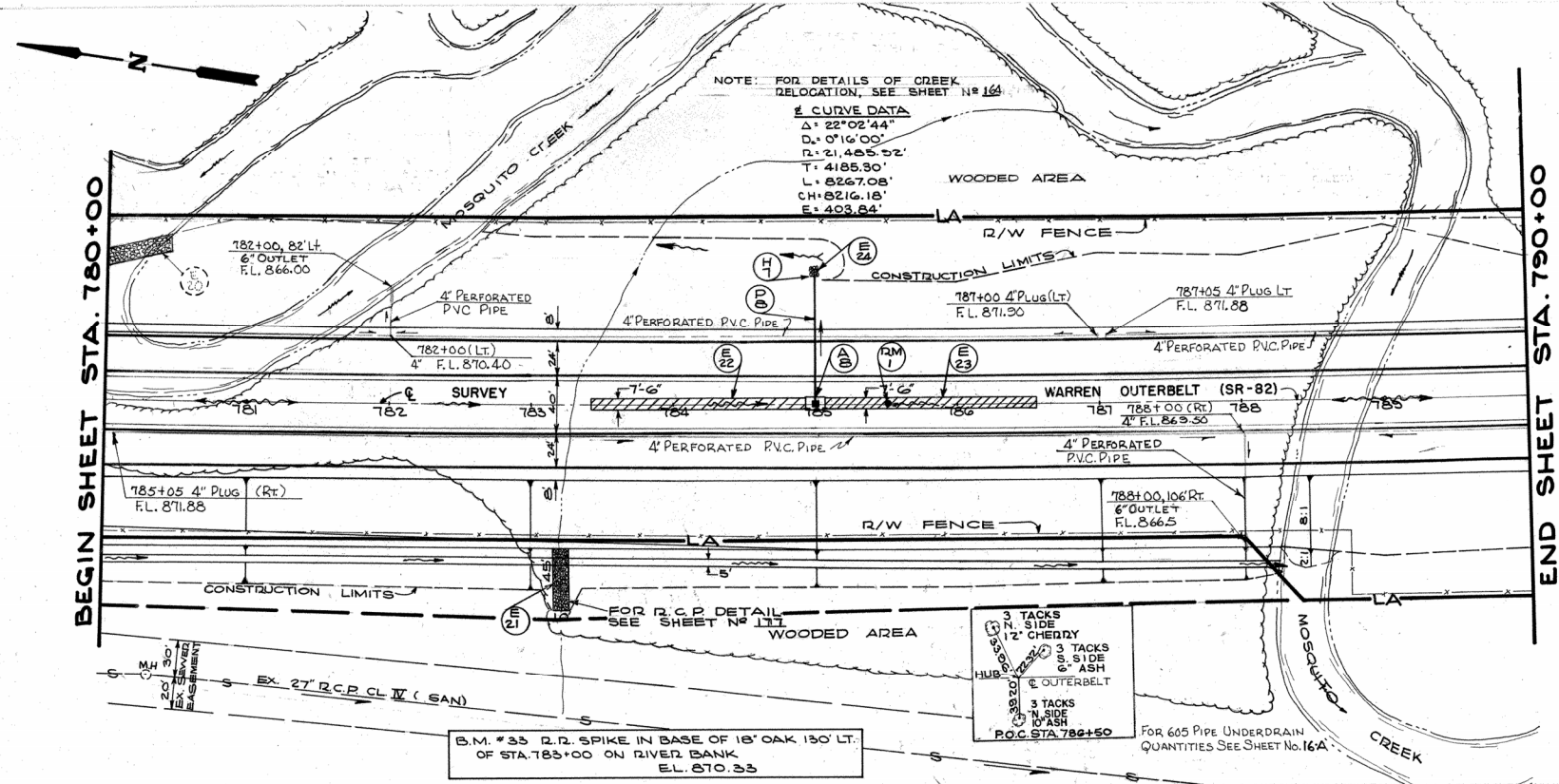
TRU. 82-13.47



CENTERLINE SURVEY  
CURVE NO. 6 DATA  
P.I. STA. 820+77.73  
 $\Delta = 22^{\circ}02'44''$  LT.  $T = 4,185.50'$   
 $D_c = 0'16'00''$   $L = 8,267.08'$   
 $R = 21,485.92'$   $E = 403.84'$

WARREN OUTERBELT  
TRAFFIC DESIGNATION  
S.D. 5 TO S.D. 82  
CURRENT A.D.T. - 17,767  
DESIGN YEAR A.D.T. - 35,534  
D.H.V. - 3,553  
D - 60% - 40%  
T - 10%  
V - 70 MPH





ITEM 601- ROCK CHANNEL PROTECTION

CODE	STATION		SIDE	L x W x T x 1/2	TYPE B	CU. YDS.
	FROM	TO				
E-21	783+15	783+25	RT.	45 x 10 x 20 x 1/27		33.0
E-24	784+97	785+03	LT.	6 x 4 x 2.0 x 1/27		2.0
SHEET TOTAL						35.0

ITEM 602- CONCRETE MASONRY - CU. YDS.

CODE	STATION	SIDE	STD. HW-4 HEADWALL		
			12"		
H-7	785+00	LT.	20		
SHEET TOTAL					20

ITEM 603- CONDUIT - LIN. FT.

CODE	STATION		SIDE	TYPE	B	
	FROM	TO				
P-8	785+00	785+00	LT.	12"	90	
SHEET TOTAL						90

ITEM 604- CATCH BASIN - EACH

CODE	STATION	SIDE	STD. N° 8	
A-B	785+00	E.	1	
SHEET TOTAL				1

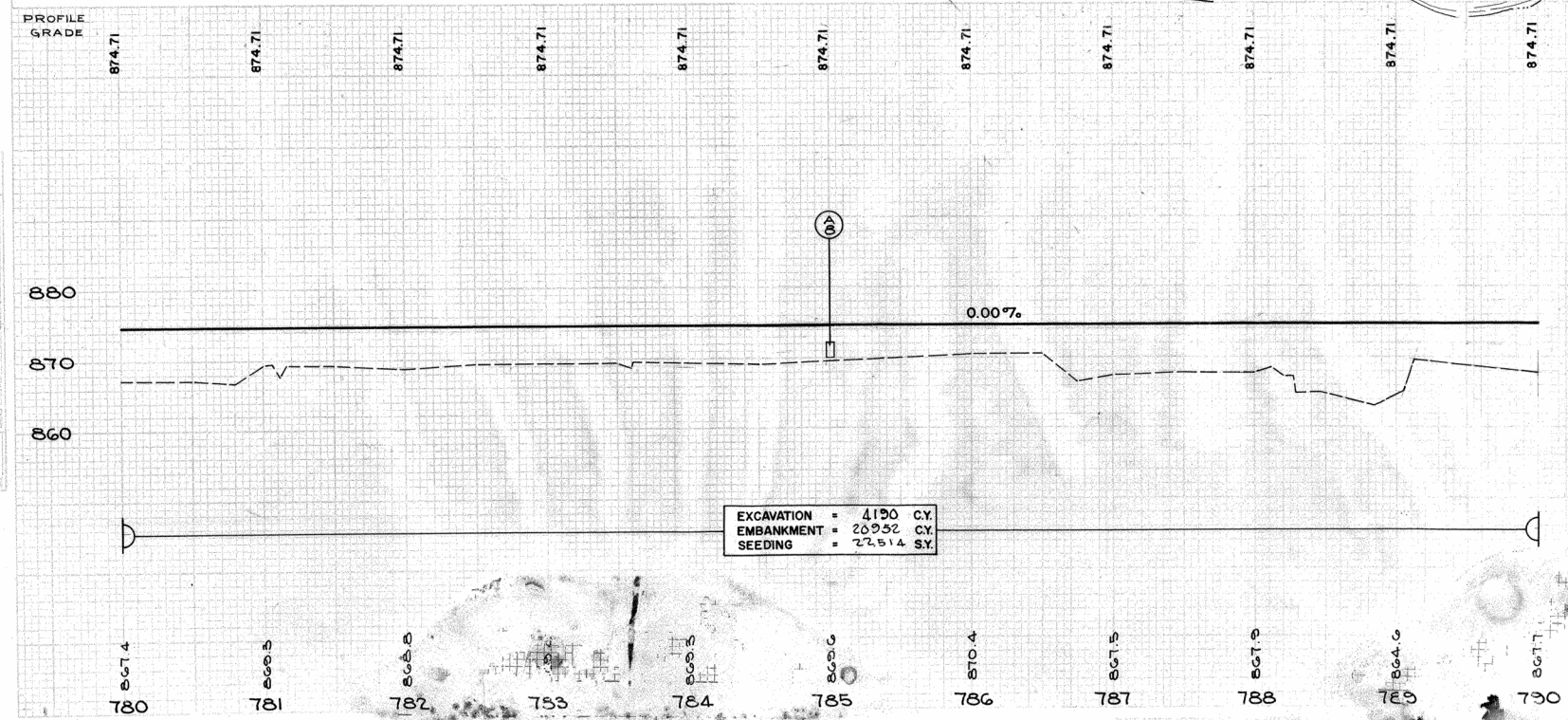
ITEM 604- REFERENCE MONUMENT

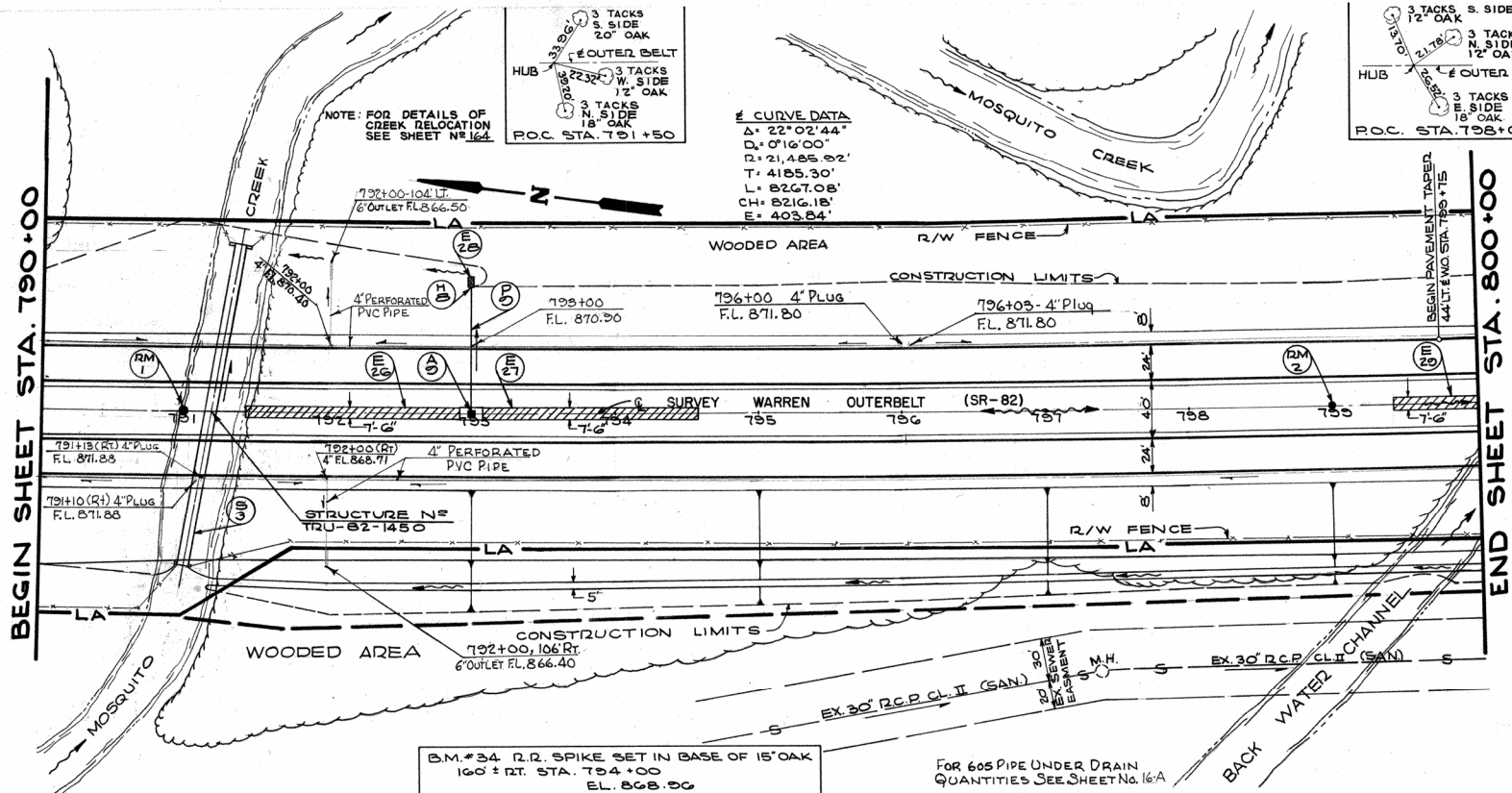
CODE	STATION	LOCATION	EACH	
RM-1	785+50	E.	1	
SHEET TOTAL				1

ITEM 667- JUTE MATTING -

CODE	STATION		SIDE	L x W x 1/2	SQ. YDS.	
	FROM	TO				
E-22	783+43	784+93	E.	150 x 7.5 x 1/2	125	
E-23	785+07	786+57	E.	150 x 7.5 x 1/2	125	
SHEET TOTAL						250

Revised K.S. 7-14-76  
 CALC. BY R.R.C. DATE 7/17/69  
 C.ECK BY J.J.E. DATE 9/11/70





ITEM 601- ROCK CHANNEL PROTECTION

CODE	STATION FROM	STATION TO	SIDE	L x W x T x 1/27	TYPE B CU. YDS.
E-28	792+98	793+02	LT.	8*4*20*1/27	2
SHEET TOTAL					2

ITEM 602- CONCRETE MASONRY- CU. YDS.

CODE	STATION	SIDE	STD. HW-4 HEADWALL 12"	
H-8	793+00	LT.	20	
SHEET TOTAL				20

ITEM 603- CONDUIT - LIN. FT.

CODE	STATION FROM	STATION TO	SIDE	TYPE B 12"	
P-9	793+00	793+00	LT.	87	
SHEET TOTAL					87

ITEM 604- CATCH BASIN - EACH

CODE	STATION	SIDE	STD. NO. 8	
A-9	793+00	E	1	
SHEET TOTAL				1

ITEM 604- REFERENCE MONUMENT

CODE	STATION	LOCATION	EACH	
RM-1	791+00	E	1	
RM-2	799+00	E	1	
SHEET TOTAL				2

ITEM 667- JUTE MATTING -

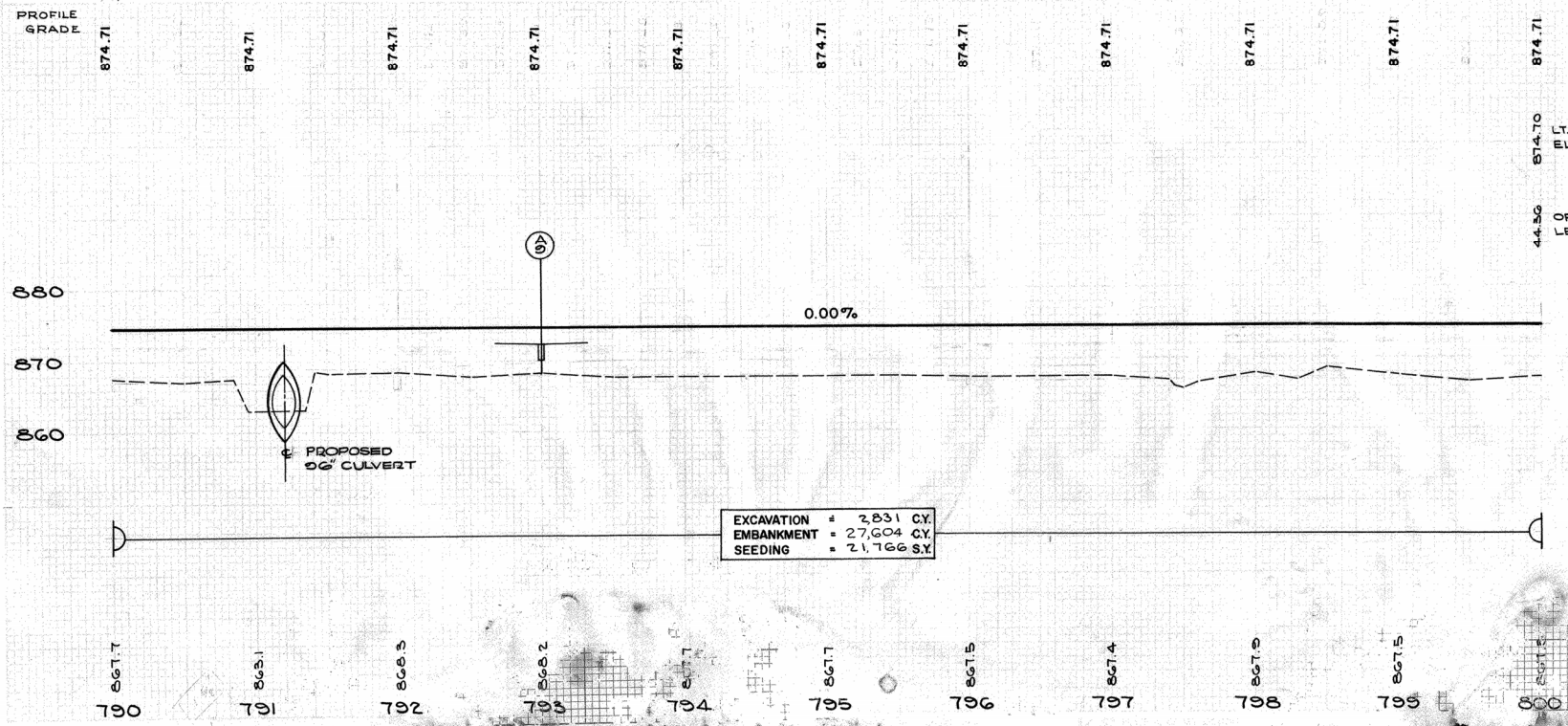
CODE	STATION FROM	STATION TO	SIDE	L x W x 1/9	SQ. YDS.	
E-26	791+43	792+93	E	150*7.5*1/9	125	
E-27	793+07	794+57	E	150*7.5*1/9	125	
E-28	799+43	800+00	E	57*7.5*1/9	48	
SHEET TOTAL						298

STRUCTURES UNDER 20 FT. SPAN

CODE	STATION	SIZE	DETAIL SHT. NO.	TYPE HEADWALLS
S-3	791+20	36*12	180	HW-4



Revised K.S. 7-14-76  
CALC. BY R.R.C. DATE 7/17/68  
CHKD BY J.J.E. DATE 9/11/70



EXCAVATION = 2,831 CY.  
EMBANKMENT = 27,604 CY.  
SEEDING = 21,766 S.Y.

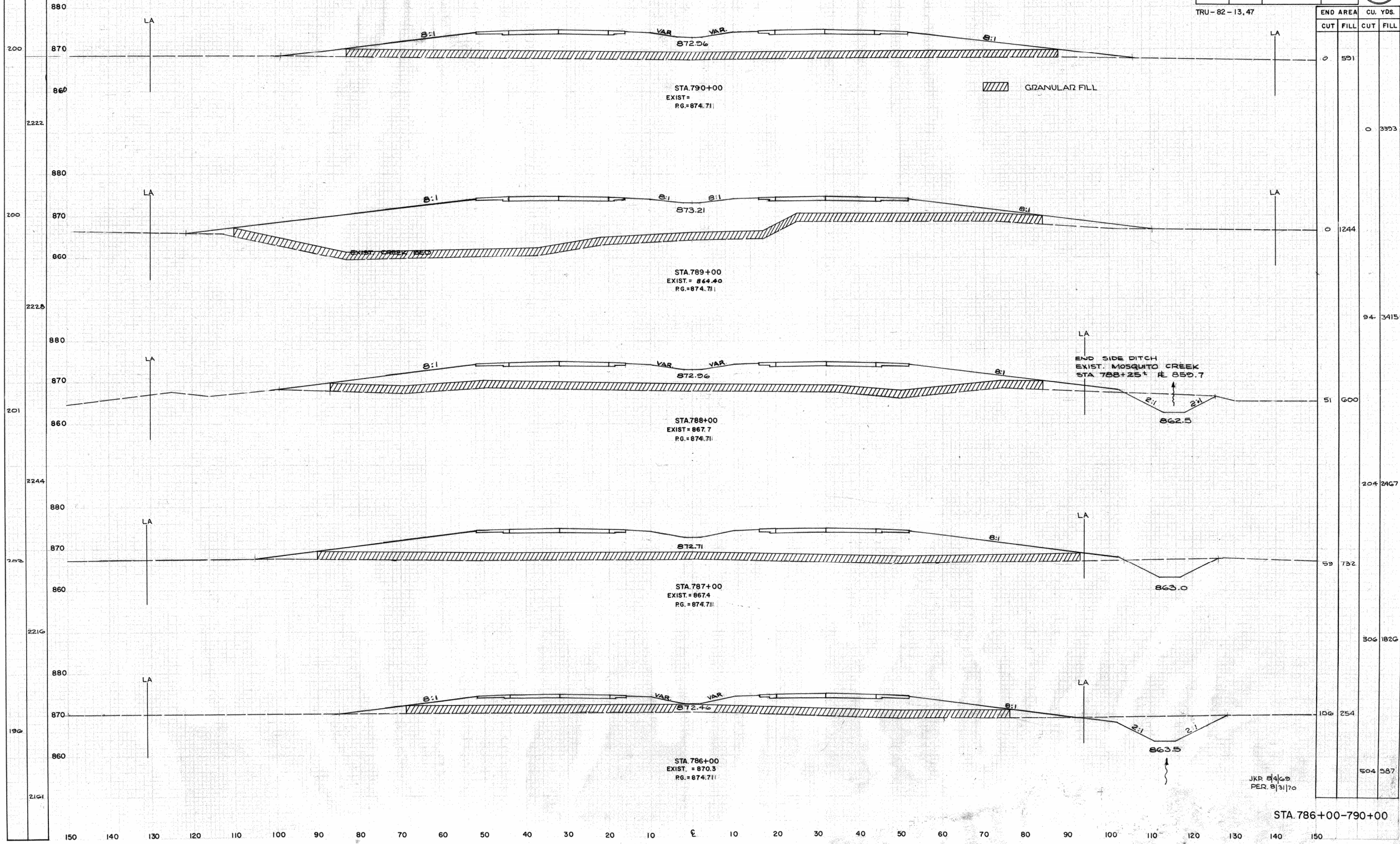
STA. 790+00 to 800+00

SEEDING  
END SQ.  
WIDTH YDS.

FED. RD	STATE	PROJECT	
2	OHIO	STATE	

50  
346

TRU-82-13, 47



JKD 8/1/68  
PER. 8/31/70

STA. 786+00-790+00

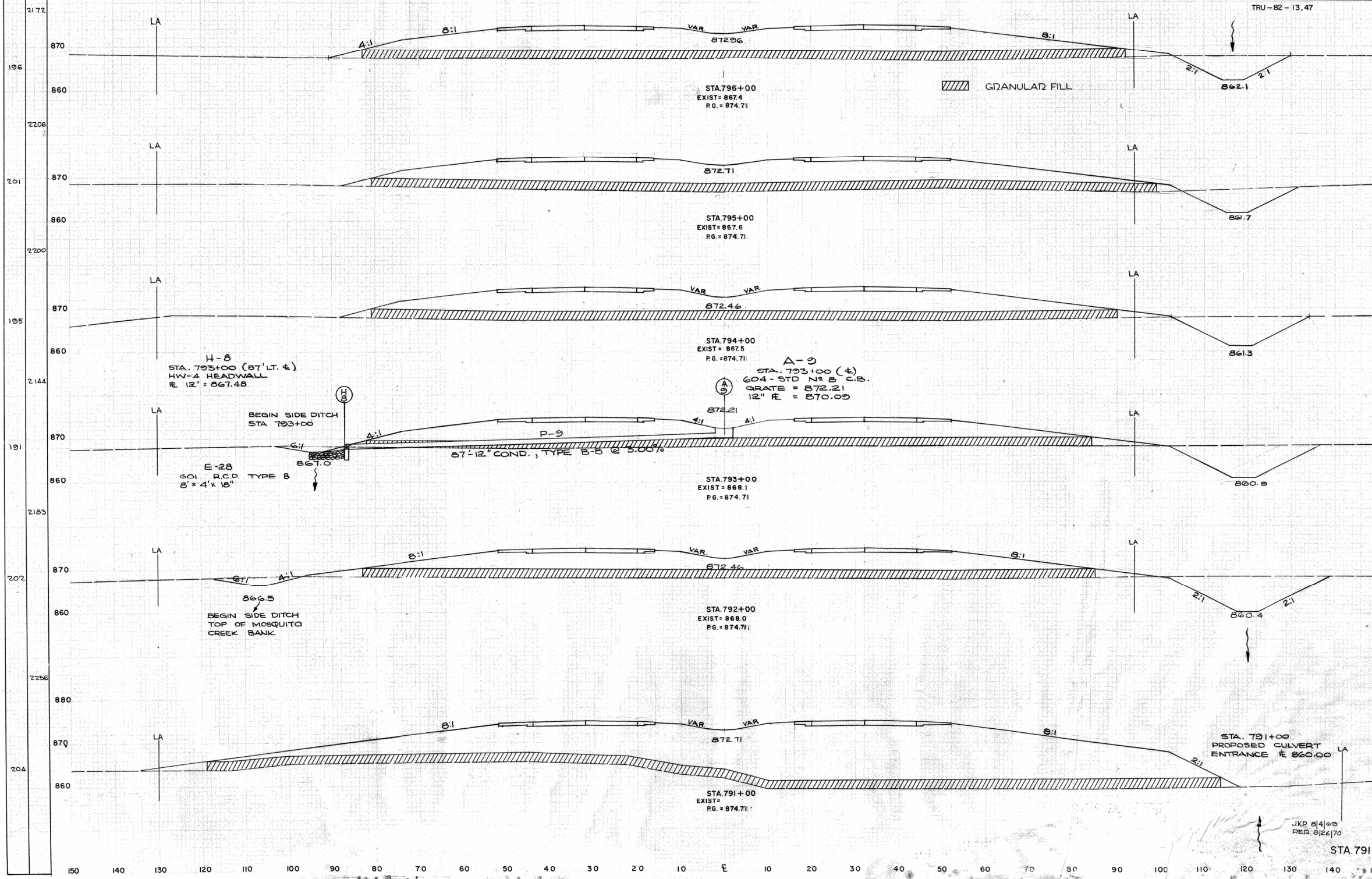
SEEDING  
END SQ.  
WIDTH YDS.

FED. RD	STATE	PROJECT	
2	OHIO	STATE	

51  
346

TRU-82-13.47

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
81	680	302	2496
82	668	370	2385
118	620	489	2117
146	523	620	1941
193	525	355	4226
0	1757	0	4348



H-8  
STA. 793+00 (87' LT. 4)  
HW-4 HEADWALL  
E 12" = 867.48

E-28  
60" R.C.P. TYPE B  
8' 4" x 15"

BEGIN SIDE DITCH  
STA 793+00

BEGIN SIDE DITCH  
TOP OF MOSQUITO  
CREEK BANK

STA. 796+00  
EXIST = 867.4  
P.G. = 874.71

STA. 795+00  
EXIST = 867.6  
P.G. = 874.71

STA. 794+00  
EXIST = 867.5  
P.G. = 874.71

A-9

STA. 793+00 (4)  
60" STD N° 8 C.B.  
GRATE = 872.21  
12" E = 870.09

STA. 793+00  
EXIST = 868.1  
P.G. = 874.71

STA. 792+00  
EXIST = 868.0  
P.G. = 874.71

STA. 791+00  
EXIST =  
P.G. = 874.71

STA. 791+00  
PROPOSED CULVERT  
ENTRANCE E 860.00

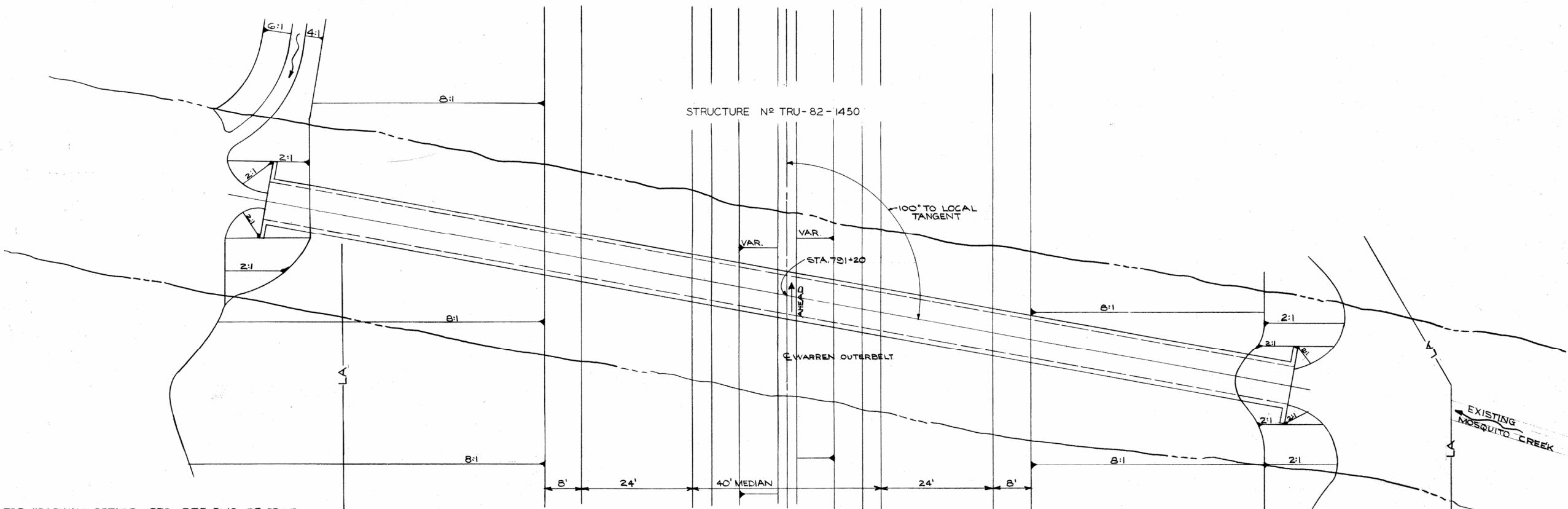
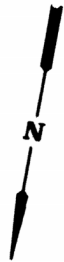
JKD 8/4/88  
PER 8/26/70

STA 791+00-796+00

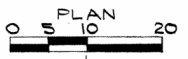
FED. RD.	STATE	PROJECT	
2	OHIO		

180  
346

TRU-82-13.47

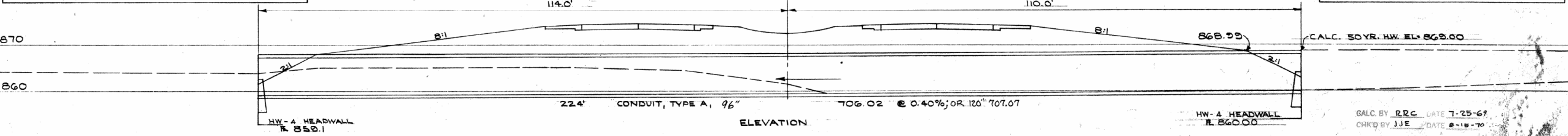


FOR HEADWALL DETAILS SEE STD DWG. SP 53  
 ESTIMATED QUANTITIES  
 603- CONDUIT, TYPE A, 96" 706.02, OR 224 L.F.  
 120" 707.07  
 602- CONCRETE MASONRY 16.8 C.Y.



AREA: 551 ACRES  
 Q<sub>50</sub> = 544 C.F.S.

**CULVERT DATA**  
 TYPE: STANDARD PIPE CULVERT  
 SIZE: 96" DIA. OR 120" DIA. x 224' LONG  
 SKEW: 10° LEFT FORWARD  
 WORK REQUIRED: CONSTRUCT NEW 96" OR 120" PIPE CULVERT AS SHOWN



CALC. BY RRC DATE 7-25-67  
 CHKD BY JJE DATE 8-15-70

CULVERT DETAILS STA. 731+20