STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CHERRY ROAD

CITY OF MASSILLON
STARK COUNTY

RECONSTRUCTION OF EXISTING SEPARATED CROSSING WITH THE CONSOLIDATED RAIL CORPORATION & THE BALTIMORE & OHIO RAILROAD CO.

M-2E 37(1)

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

1 / 37

STARK COUNTY
CHERRY ROAD

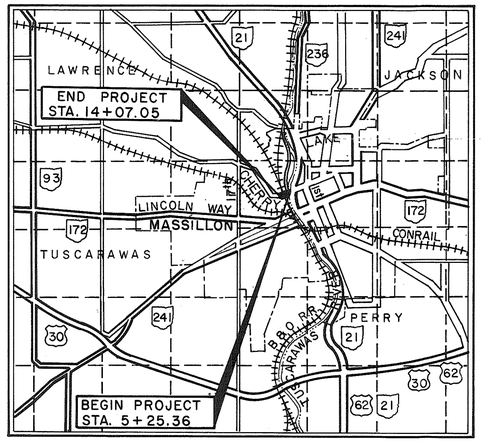
PE-7-20 & PE-7-21

DESIGN DESIGNATION

Current A.D.T. (1979)	= 6000
Design Year A.D.T. (2000)	= 10,000
D.H.V.	= 1,000
D	= 50%
T	= 15%
V	= 35 MPH

CONVENTIONAL SIGNS

Township Line
Section Line
Corporation Line
Fence Line (existing) —x—x—
Center Line
Trees or Stumps (existing)
Trees or Stumps (to be removed)
Telephone Poles
Power Poles
Guard Rail (existing) (proposed)
Railroad
Construction Limits — Constr. Limits
Property Line — ℄
Right-of-Way Line — R/W
Limited Access Line — LA



LOCATION MAP

0 1/2 1 2 3
SCALE IN MILES

INDEX OF SHEETS

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LINE DATA

Begin Project — Sta. 5+25.36
End Project — Sta. 14+07.05
Deductions — -0.06
Length of Project — 881.63 L.F. = 0.166 mi.
Add for Work
Sta. 3+31 to Sta. 5+25.36 — 194.36 L.F.
Sta. 14+07.05 to Sta. 14+71 — 63.95 L.F.
Total — 1,139.94 L.F. = 0.215 mi.

LEGEND

Portion to be improved
State and Federal Routes
Other Roads

SCALES

Plan 0 10 20
Profile Horizontal 0 10 20
Profile Vertical 0 5
Cross Sections 0 5
Pavement Details 0 5

We the Commissioners of Stark County, in formal session hereby approve these plans and certify that the necessary right-of-way is available. We agree to maintain the project in a manner satisfactory to the Director, Ohio Department of Transportation, or his duly authorized representatives and will make ample provisions each year for such maintenance.

Done under authority of sections 5535.01 and 5555.02 et. seq. of the Ohio Revised Code.

BOARD OF COMMISSIONERS — STARK COUNTY

Jerry Petrich
Thomas W. Fonseller

5-7-80
Date

1979 SPECIFICATIONS

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

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

Approved Joseph A. Sturrett
Date 4/30/80 Stark County Engineer

Approved
Date ____ Director of Public Service, City of Massillon

Approved
Date ____ District Deputy Director of Transportation

Approved
Date ____ Engineer, Bureau of Bridges and Structural Design

Approved
Date ____ Chief Engineer, Planning and Design

Approved
Date ____ Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Approved

Division Administrator — Date

PLAN PREPARED BY
ERIKSSON ENGINEERING LTD.
Consulting Engineers
COLUMBUS, OHIO

		Supplemental	Prints of	Standard	Construction	Drawings		Supplemental	
		GR-1	12-6-76			AS-1-72	6-30-72	Specifications	
BP-2	12-6-76	GR-2B	12-6-76	MC-3	6-1-73	SD-1-69 No. 183	6-12-69	836	3-12-75
BP-3	12-6-76	GR-3	12-6-76	MC-4	7-26-76	BR-1-67	10-15-71		
BP-4	12-6-76	GR-4	7-26-76	MC-9		BR-2-67	10-15-71		
BP-5	4-16-79	GR-5	1-1-71	MC-11		RB-1-55	2-02-59		
BP-7	12-6-76								
BP-10	1-3-75								
BP-12	8-11-75								

Project STARK COUNTY - Cherry Road

Date of Letting ____ 19__ Contract No. ____

PE-7-20 and 21

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

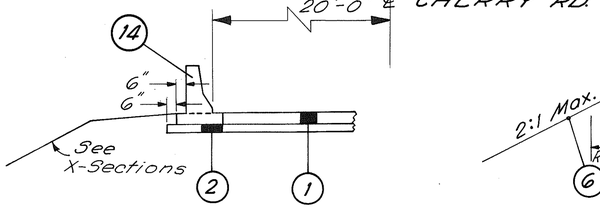
2/37

PE-7-20 & PE-7-21

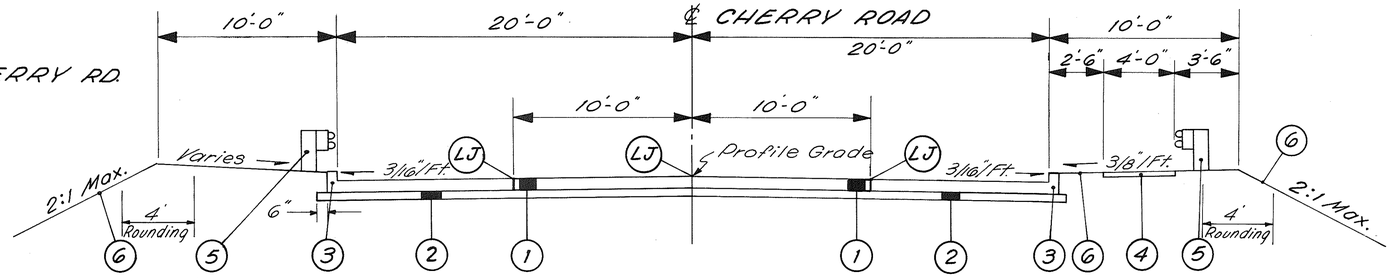
STARK COUNTY
CHERRY ROAD

TYPICAL SECTIONS

TYPE 451



LIMITING STATIONS
9+16.93 to 10+27.19

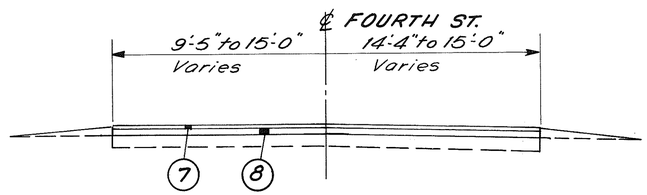


LIMITING STATIONS

5+25.36 to 5+81.84 = 56.48 L.F.

9+31.81 to 10+27.53 Back = 95.72 L.F.
10+27.67 Ahead to 10+28.66 = 0.99 L.F.

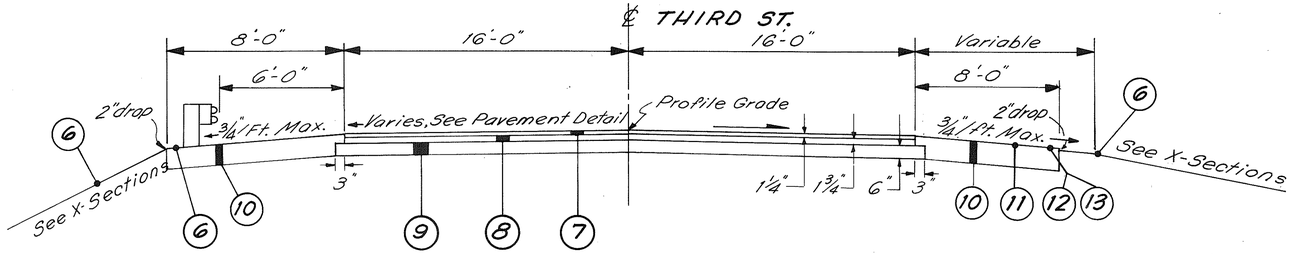
13+21.11 to 14+07.05 = 85.94 L.F.



RESURFACING
LIMITING STATIONS

0+22.34 to 0+48.43 * (Intersection)
0+48.43 to 0+75.00 (Feather)

* Pavement Composition Same as Cherry Road.



LIMITING STATIONS

20+14.45 to 20+63.08 * = 48.63 L.F.
20+63.08 to 22+30.00 = 166.92 L.F.
22+30.00 to 22+60.00 - Feather

* Pavement Composition Same as Cherry Road.

NOTE: Location of guardrail as shown applies to either side of paving.

LEGEND

1. Item 451 9" Reinforced Portland Cement Concrete Pavement
2. Item 310 6" Subbase, Type 1
3. Item 609 Curb, Standard Type 2-A
4. Item 608 4" Concrete Walk
5. Item 606 Guardrail, Type 5
6. Item 659 Seeding and Mulching
7. Item 404 1 1/4" Asphalt Concrete AC-20
8. Item 402 1 3/4" Asphalt Concrete AC-20
9. Item 301 6" Bituminous Aggregate Base AC-20; or RT 11 or RT 12.
- LJ 451 Longitudinal Joint
14. Item 622 Concrete Barrier, Standard Type D
10. Item 304 8" Aggregate Base
11. Item 408 Bituminous Prime Coat: MC-30, MC-70, Primer 20, RT-2 or RT-3 applied at the rate of 0.4 gal./s.y.
12. Item 409 Seal Coat Bituminous Material: MC-800, MC-3000, CBAE 800, RS-1, RS-2, CRS-1, CRS-2, RT-9, RT-10 applied at the rate of 0.3 gal./s.y.
13. Item 409 Seal Coat Cover Aggregate, No. 8 applied at the rate of 0.008 c.y./s.y.

GENERAL SUMMARY

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

STARK COUNTY
CHERRY ROAD

TYPE CODE 7221 unless otherwise noted

SHEET NUMBER

ITEM	4	5	6	7	8	13	18	NORMAL PARTICIPATION	100% COUNTY	ITEM	TOTAL QUANTITY	UNIT	DESCRIPTION
													ROADWAY
201	LUMP							Lump		201	Lump	Lump	Clearing & Grubbing
202			27					27		202	27	SY	Traffic Island Removed
202			561	374	160			1095		202	1095	SF	Walk Removed
202			28					28		202	28	LF	Curb Removed
202			602	612	610			1824		202	1824	SY	Pavement Removed
202			32	302	215	292		846		202	846	LF	Guardrail Removed
203		540						540		203	540	CY	Excavation Not Including Embankment Construction
203		886						886		203	886	CY	Embankment
203		2958						2958		203	2958	SY	Subgrade Compaction
616	50							50		616	50	Tons	Calcium Chloride
616	50							50		616	50	M.Gal.	Water
606			37.5	327.63	187.5	272.5		825.13		606	825.13	LF	Guardrail Type 5
606				2	1			3		606	3	Ea.	Bridge Terminal Assembly Std. Type A
606			1		1	2		4		606	4	Ea.	Anchor Assembly Std. Type A
608			463	214	133			810		608	810	SF	4" Concrete Walk
608			1	2	2			5		608	5	Ea.	Curb Ramps Type 2
608			123					123		608	123	SF	Curb Ramps Type 2
													EROSION CONTROL Type Code Y005
659		2165						2165		659	2165	SY	Seeding & Mulching
659		0.20						0.20		659	0.20	Ton	Commercial Fertilizer (12-12-12)
660				18	14			32		660	32	SY	Sodding
207	500							500		207	500	SY	Temporary Seeding & Mulching
207	30							30		207	30	Ea.	Straw or Hay Bales
207	50							50		207	50	LF	Temporary Slope Drains
207	250							250		207	250	CY	Temporary Benches, Dikes, Dams, and Sediment Basins
659		0.98						0.98		659	0.98	Ton	Agricultural Liming
													DRAINAGE
605					57			57		605	57	LF	6" Shallow Pipe Underdrain 707.01 Type III or 707.12
													UTILITIES
Special							126		126	Special	126	LF	3 Duct O.B.T. Conduit
Special							313		313	Special	313	LF	6 Duct O.B.T. Conduit
Special							Lump		Lump	Special	Lump	Lump	O.B.T. Manhole
													SANITARY Type Code Y060
604					1			1		604	1	Ea.	Manhole Adjusted to Grade
													PAVEMENT
301		101						101		301	101	CY	Bituminous Aggregate Base AC-20; or RT-11 or RT-12
304		66						66		304	66	CY	Aggregate Base
310		273	21	38	19			351		310	351	CY	Subbase Type I
402		34						34		402	34	CY	Asphalt Concrete AC-20
404		24						24		404	24	CY	Asphalt Concrete AC-20
408		119						119		408	119	Gal.	Bituminous Prime Coat: MC-30, MC-70, Primer 20, RT-2 or RT-3
409		89						89		409	89	Gal.	Seal Coat Bituminous Mat.: MC800, MC3000, CBAE 800, RS-1, RS-2, CRS-1, CRS-2,
													RT-9, and RT-10
409		3						3		409	3	CY	Seal Coat Cover Aggregate, No. 8
451		1604						1604		451	1604	SY	9" Reinforced Portland Cement Concrete Pavement
609			178	193	182			553		609	553	LF	Curb Standard Type 2-A
611			122	227	115			464		611	464	SY	Reinforced Concrete Approach Slab (T=15")
622		113						113		622	113	SY	Concrete Barrier, Standard Type D
Special					41			41		Special	41	LF	Pressure Relief Joint, Standard Type A
													For BRIDGE QUANTITIES SEE SHEET 21
614	Lump							LUMP		614	LUMP	LUMP	Maintaining Traffic
619	Lump							LUMP		619	LUMP	LUMP	Field Office
623								LUMP		623	LUMP	LUMP	Construction Layout Stakes
624										624		LUMP	Mobilization

Calc. [illegible] 6-8-79
Chk. [illegible] 6/18/79

GENERAL SUMMARY

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

4/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

GENERAL NOTES

FIELD OFFICE. THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SF OF FLOOR SPACE.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS. THE ROUNDED CORNERS SHOWN ON THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

UNDERGROUND UTILITIES. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

UTILITY OWNERSHIP. THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

SANITARY SEWERS	CITY OF MASSILON CITY HALL MASSILLON, OHIO 44646 (216) 833-1041
WATER LINES	OHIO WATER SERVICE CO. 123 3RD STREET S.E. MASSILLON, OHIO 44646 (216) 833-4156
TELEPHONE	OHIO BELL TELEPHONE CO. 832 McKINLEY AVE., N.W. CANTON, OHIO 44703 (216) 489-2489
ELECTRIC	OHIO EDISON CO. 76 S. MAIN STREET AKRON, OHIO 44308 (216) 384-5234
GAS	EAST OHIO GAS CO. 1717 E. NINTH STREET CLEVELAND, OHIO 44114 (216) 623-4709

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. ESTIMATED QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

REMOVAL OF TREES AND STUMPS. ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED. THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	NO. TREES	NO. STUMPS
18"	0	0
30"	0	0
48"	0	0
60"	0	0

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

LOCATION OF GUARDRAIL. THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT TO ASSURE THAT THE PLANNED INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

SEEDING. QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN TEN (10) FEET OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT-OF-WAY LINE, IF SUCH LINE IS LESS THAN TEN (10) FEET FROM THE WORK LIMITS.

CONTRACTION AND EXPANSION JOINTS. ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL, IN ALL CASES, BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND THE SPECIFICATIONS.

APPROACH SLAB. JACKING HOLES, AS SHOWN AS AS-1-72, SHALL BE OMITTED. THE REINFORCING IN THE TOP OF THE SLAB SHALL BE 3" CLEAR.

INTEGRAL CURB REMOVED. WHERE PAVEMENT REMOVAL IS PROVIDED ON THE PLANS, SAID REMOVAL SHALL ALSO INCLUDE THE REMOVAL OF THE INTEGRAL CURB.

WATER POLUTION, SOIL EROSION AND SILTATION CONTROL. THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR EROSION AND SILTATION CONTROL MEASURES:

ITEM 207	TEMPORARY SEEDING AND MULCHING	500 SY.
ITEM 207	STRAW OR HAY BALES	30 EA.
ITEM 207	TEMPORARY SLOPE DRAIN	50 LF.
ITEM 207	TEMPORARY BENCHES, DIKES, DAMS AND SEDIMENT BASINS	250 CY.

DUST CONTROL. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR DUST CONTROL:

ITEM 616	CALCIUM CHLORIDE	50 TONS
ITEM 616	WATER	50 M GAL.

COOPERATION WITH RAILROADS. THE CONTRACTOR SHALL COOPERATE AT ALL TIMES WITH THE LOCAL OFFICIALS OF THE RAILROAD COMPANY. HE SHALL USE ALL REASONABLE CARE AND DILIGANCE IN THE WORK IN ORDER TO AVOID ACCIDENTS, DAMAGE OR INTERFERENCE WITH THE TRAINS OR OTHER PROPERTY OF THE RAILROAD. THE CONTRACTOR SHALL NOTIFY THE LOCAL OFFICIALS OF THE RAILROAD PRIOR TO STARTING WORK THAT MAY AFFECT RAILROAD PROPERTY AND FACILITIES AND SHALL PAY THE RAILROAD COMPANY THE COST OF FLAGMEN FURNISHED BY THE RAILROAD COMPANY AND MADE NECESSARY BECAUSE OF ANY OF THE CONTRACTORS OPERATIONS OVER OR ADJACENT TO THE TRACKS.

NO SCAFFOLD, PLANKS OR OTHER EQUIPMENT SHALL BE SUSPENDED OR ERECTED ABOVE OR WITHIN 10 FEET OF A RAIL OVER WHICH TRAINS ARE OPERATING WITHOUT PRIOR WRITTEN APPROVAL OF THE CHIEF ENGINEER, OR HIS AUTHORIZED REPRESENTATIVE, OF THE RAILROAD COMPANY.

FAILURE TO NOTIFY THE RAILROAD COMPANY AS NOTED ABOVE SHALL BE CAUSE FOR STOPPING WORK UNTIL ALL PROVISIONS FOR PROTECTING RAILROAD PROPERTY HAVE BEEN PROVIDED.

ITEM-SPECIAL - O.B.T. MANHOLE

THIS WORK SHALL CONSIST OF SITE PREPARATION FOR INSTALLATION OF A MANHOLE BY OHIO BELL TELEPHONE COMPANY. THE WORK SHALL BE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES AND ELEVATIONS AS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER. THE WORK SHALL INCLUDE: EXCAVATING FOR THE MANHOLE; FURNISHING AND PLACING OF GRANULAR BEDDING AS SPECIFIED; CONSTRUCTING AND SUBSEQUENTLY REMOVING ALL NECESSARY SHEETING AND SHORING; AND FURNISHING AND PLACING BACKFILL AROUND THE MANHOLE IN LAYERS NOT EXCEEDING 4 INCHES IN THICKNESS AND THOROUGHLY TAMPED IN PLACE WITH SUITABLE TAMPERS. THE OHIO BELL TELEPHONE COMPANY SHALL FURNISH THE MANHOLE AND HAVE IT PLACED BY THE SUPPLIER.

BASIS OF PAYMENT

ITEM-SPECIAL - O.B.T. MANHOLE - LUMP SUM

ITEM-SPECIAL - PLACING O.B.T. CONDUIT

THIS WORK SHALL CONSIST OF PLACING AND ENCASING 3 DUCT O.B.T. CONDUIT (3-4" PLASTIC DUCTS) AND 6 DUCT O.B.T. CONDUIT (6-4" PLASTIC DUCTS). THE WORK SHALL BE IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES AND ELEVATIONS SHOWN ON THE PLANS OR ESTABLISHED BY THE ENGINEER. THIS WORK SHALL INCLUDE: EXCAVATING FOR THE CONDUIT AND REMOVAL OF ALL MATERIALS NECESSARY FOR PLACING THE CONDUIT; FURNISHING AND PLACING OF CONCRETE ENCASEMENT (5½ SACK MIX WITH PEA GRAVEL AGGREGATE) AS SHOWN ON THE PLANS; INSTALLATION OF PLUGS AND PLACING OF ELECTRIC MARKERS AS SHOWN ON THE PLANS; AND FURNISHING AND PLACING BACKFILL. THE OHIO BELL TELEPHONE COMPANY SHALL FURNISH 4" PLASTIC DUCT, FITTINGS, SPACERS, PLUGS, AND ELECTRIC MARKERS.

BASIS OF PAYMENT

ITEM-SPECIAL - 3 DUCT O.B.T. CONDUIT	LIN.FT.
ITEM-SPECIAL - 6 DUCT O.B.T. CONDUIT	LIN.FT.

CHERRY ROAD: CHERRY ROAD SHALL BE CLOSED TO TRAFFIC BETWEEN SR-21, AND 5TH STREET. CHERRY ROAD TRAFFIC SHALL BE DETOURED OVER SR-21, LAKE AVE. AND EARL RD. SEE DETOUR MAP.

THIRD STREET: THIRD STREET SHALL BE CLOSED BETWEEN CHERRY ROAD AND A POINT 300± FEET NORTH OF CHERRY ROAD. ACCESS TO THE DRIVEWAY LEFT OF STA 22+70 SHALL BE MAINTAINED AT ALL TIMES.

FOURTH STREET: LOCAL ACCESS TO FOURTH STREET SHALL BE MAINTAINED AT ALL TIMES.

SR-21: THE TWO SOUTH BOUND LANES ON SR-21 SHALL BE KEPT OPEN TO TRAFFIC EXCEPT THAT THE RIGHT LANE MAY BE CLOSED DURING THAT PERIOD OF TIME WHEN THE CONTRACTOR IS ACTIVELY REMOVING THE EXISTING CONCRETE PAVEMENT OR PLACING THE NEW CONCRETE PAVEMENT. PRIOR TO THE REMOVAL OF THE EXISTING CONCRETE PAVEMENT, TYPE II BARRICADES OR DUMS SHALL BE PLACED ALONG THE WEST SIDE OF SR-21 THROUGH THE CHERRY ROAD INTERSECTION AT LEAST SIX (6) FEET WEST OF THE EDGE OF PAVEMENT. AFTER THE EXISTING PAVEMENT IS REMOVED AND DURING CURING OF THE NEW CONCRETE PAVEMENT, TYPE II BARRICADES OR DRUMS SHALL BE PLACED ALONG SR-21 THROUGH THE CHERRY ROAD INTERSECTION, NO FARTHER THAN TWO (2) FEET EAST OF THE EDGE OF PAVEMENT.

TYPE II BARRICADES OR DRUMS SHALL ALSO BE PLACED IN THE NORTH BOUND LEFT TURN LANE AT CHERRY ROAD AND THE EXISTING LEFT TURN TRAFFIC SIGNAL HEAD COVERED WHILE CHERRY ROAD IS CLOSED.

LIGHTS AND SIGNS AT ADJACENT ROAD INTERSECTIONS. THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF ITEM 614 ON THIS PROJECT PERFORM THE FOLLOWING:

PROVIDE, ERECT, AND MAINTAIN STANDARD 48" x 30" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS, AND LIGHTS AT THE FOLLOWING LOCATIONS DURING PERIOD IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

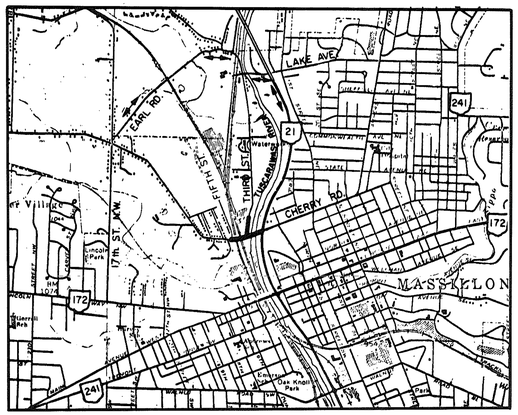
1. CHERRY ROAD JUST EAST OF 17TH STREET
2. THIRD STREET JUST SOUTH OF LAKE AVENUE

SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING LIGHTS, SIGNS, AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

DETOUR SIGNS. DETOUR SIGNS AND SUPPORTS FOR CHERRY ROAD WILL BE PROVIDED BY THE STARK COUNTY ENGINEER AND INSTALLED BY THE CONTRACTOR AT THE FOLLOWING INTERSECTIONS DURING THE PERIOD THAT CHERRY ROAD IS CLOSED TO TRAFFIC:

SR-21 AND LAKE AVENUE
LAKE AVENUE AND THIRD STREET
EARL ROAD AND 17TH STREET

PAYMENT FOR INSTALLING, MAINTAINING AND REMOVING THESE SIGNS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.



DETOUR MAP

PROJECT AREA
DETOUR

GENERAL NOTES

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

5/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

CALCULATIONS

451 REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

CHERRY ROAD

STA. 5+25.36 to STA. 5+81.84 = 511.6 S.Y.
STA. 9+31.21 to STA. 10+03.72 = 328.0 S.Y.
STA. 13+21.11 to STA. 14+07.05 = 389.4 S.Y.
THIRD ST. STA. 20+14.45 to STA. 20+63.08 = 263.3 S.Y.
FOURTH ST. STA. 0+22.34 to STA. 0+48.43 = 111.3 S.Y.
1,603.6 S.Y. = **1,604 S.Y.**

STA. to STA.	203 Excavation	203 Embankment	659 Seeding
CHERRY RD. 4+86 to 6+14	102	13	253
8+97 to 10+30	102	28	478
12+94 to 14+07.05	88	24	388
THIRD ST. 20+50 to 22+30	248	821	1046
TOTAL	540	886	2165

310 SUBBASE

Area from Item 451 = 1,603.6 S.Y.
add for Edge Course
0.5' x 553 L.F. of curb ÷ 9 sf/sy = 30.7 S.Y.
1634.3 S.Y. x 6" ÷ 36"/yd = 272.4 C.Y. = **273 C.Y.**

203 SUBGRADE COMPACTION

Area from Item 451 = 1,604 S.Y.
Area under Approach Slabs = 464 S.Y.
THIRD ST. STA. 20+63.08 to STA. 22+30
= 166.92 L.F. x 48' ÷ 9 sf/sy = 890 S.Y.
2,958 S.Y. = **2,958 S.Y.**

404 ASPHALT CONCRETE AC-20

THIRD ST. from Item 203-594 S.Y. x 1¼" ÷ 36"/yd. = 20.7 C.Y.
Feather 30 L.F. x 32' x ½(1¼") ÷ (9 sf/sy x 36"/yd.) = 1.9 C.Y.
FOURTH ST. Feather 26.57 L.F. x 25.2' Avg.
x ½(1¼") ÷ (9 sf/sy x 36"/yd.) = 1.3 C.Y.
23.9 C.Y. = **24 C.Y.**

402 ASPHALT CONCRETE AC-20

THIRD ST. from Item 203-594 S.Y. x 1¾" ÷ 36"/yd. = 28.9 C.Y.
Feather 30 L.F. x 32' x ½(1¾") ÷ (9 sf/sy x 36"/yd.) = 2.6 C.Y.
FOURTH ST. Feather 26.57 L.F. x 25.2' Avg.
x ½(1¾") ÷ (9 sf/sy x 36"/yd.) = 1.8 C.Y.
33.3 C.Y. = **34 C.Y.**

301 BITUMINOUS AGGREGATE BASE

THIRD ST. from Item 203-594 S.Y. x 6" ÷ 36"/yd. = 99 C.Y.
Add for Edge Course
166.92 L.F. x 2 x 0.25' x 6" ÷ (9 sf/sy x 36"/yd.) = 1.5 C.Y.
100.5 C.Y. = **101 C.Y.**

659 COMMERCIAL FERTILIZER (12-12-12)

From 659 Seeding 2165 S.Y. x 9 sf/sy x $\frac{20\#}{1000\ s.f.}$ x $\frac{1\ Ton}{2000\#}$ = **0.20 Tons**

659 AGGRICULTURAL LIMING

From 659 Seeding 2165 S.Y. x 9 sf/sy x $\frac{100\#}{1000\ s.f.}$ x $\frac{1\ Ton}{2000\#}$ = **0.98 Tons**

304 AGGREGATE BASE

166.92 L.F. x 8' x 2 ÷ 9 sf/sy = 296.7 S.Y.
296.7 S.Y. x 8" ÷ 36"/yd = 65.9 C.Y. = **66 C.Y.**

408 BITUMINOUS PRIME COAT

from Item 304 - 296.7 S.Y. x 0.4 gal/sy = 118.7 gal. = **119 Gal.**

409 SEAL COAT BITUMINOUS MATERIAL

from Item 304 296.7 S.Y. x 0.3 gal/sy = 89.0 gal. = **89 Gal.**

409 SEAL COAT COVER AGGREGATE

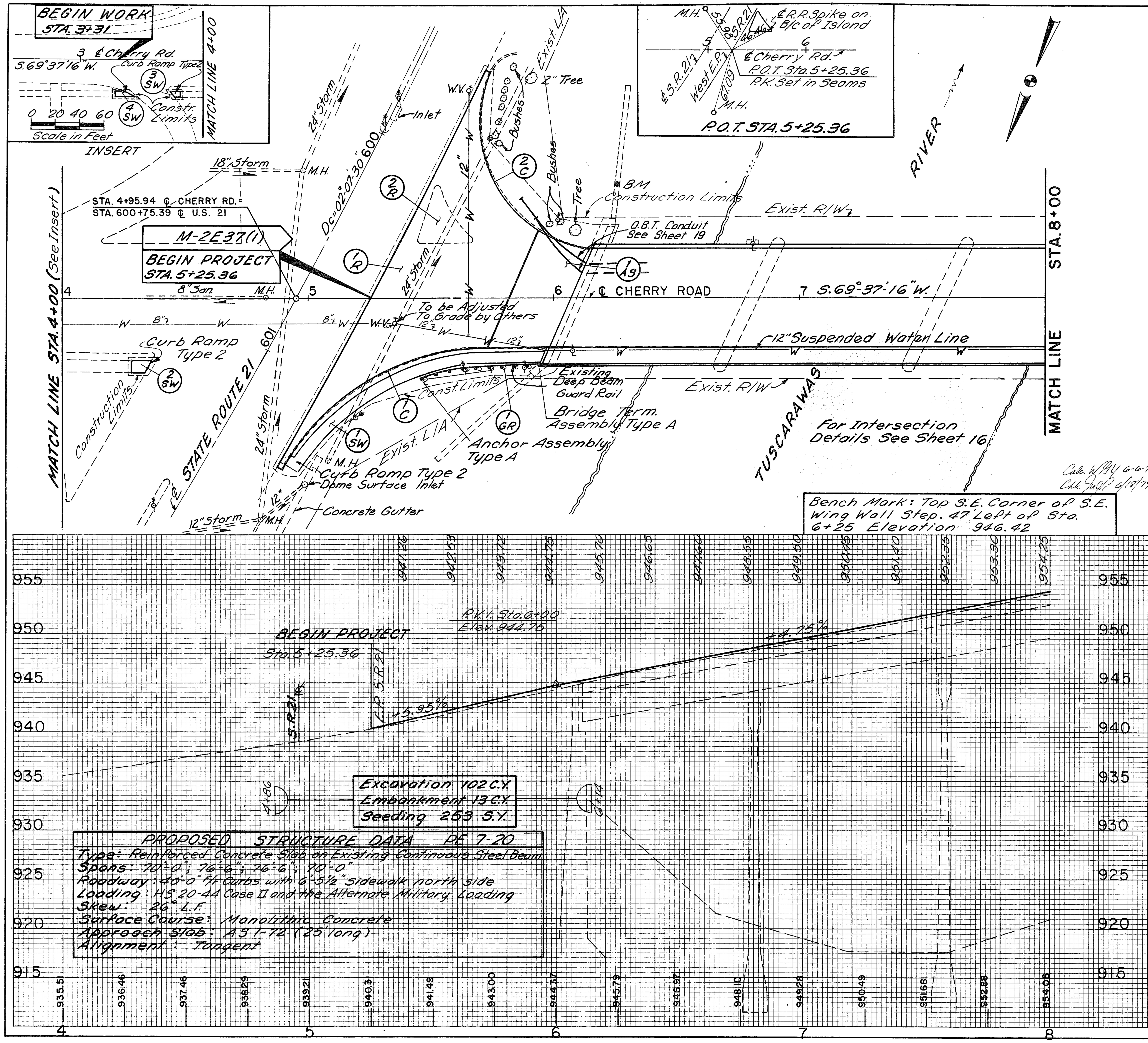
from Item 304 296.7 S.Y. x 0.008 cy/sy = 2.37 C.Y. = **3 C.Y.**

Calc. WJH 6-8-99
Chk. TMP 6/18/99

STARK COUNTY
CHERRY ROAD

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

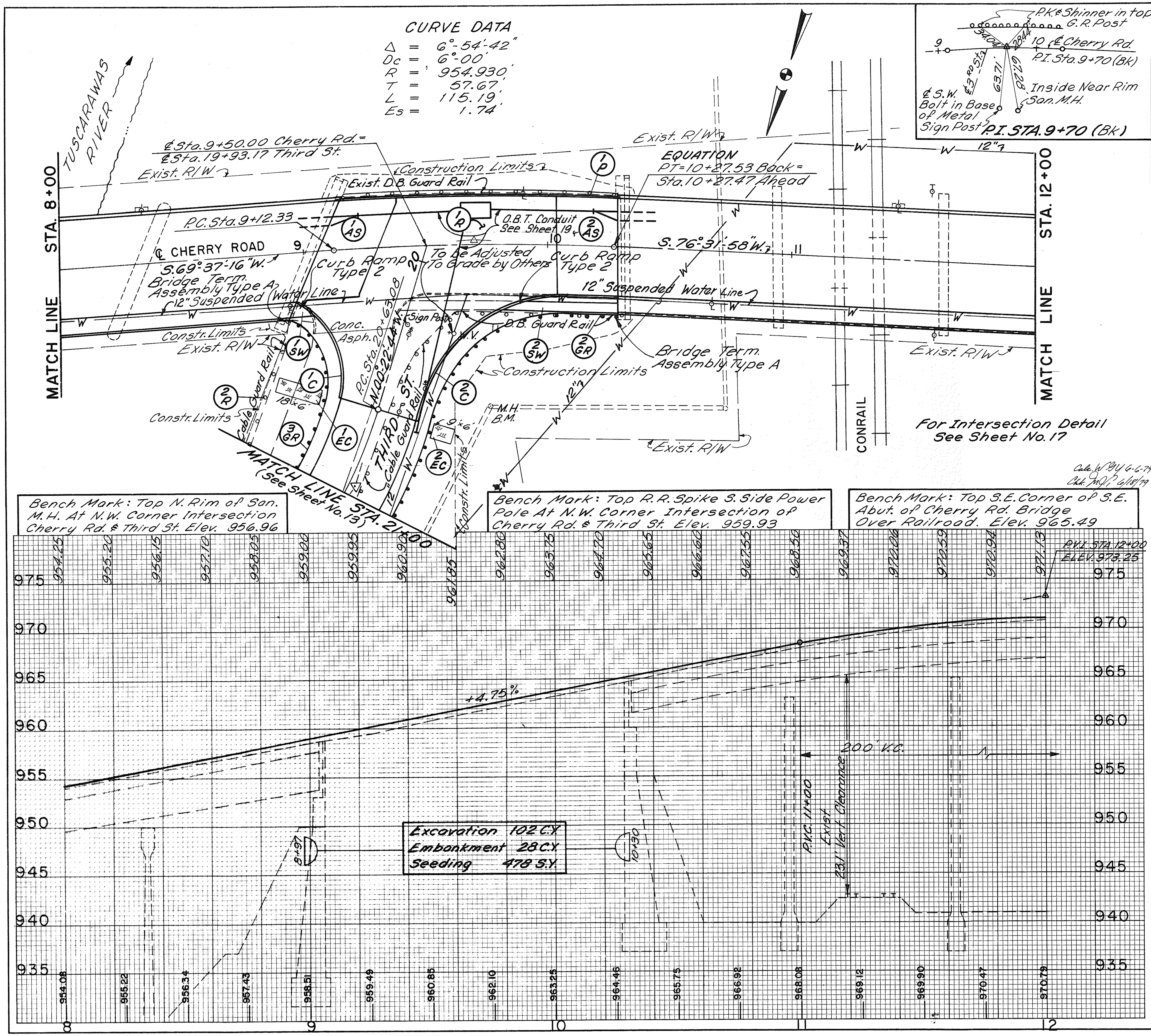
PE-7-20 & PE-7-21



QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Pavement Removed SY	202 Walk Rem. SF		202 Traff. Island Rem. SY	606 G.R. Type 5 LF	606 Anchor Assembly Std. Type A Ea.	202 Curb Removed LF	608 4" Concrete Walk SF	608 Curb Ramp Type 2 Ea.	608 Curb Ramp Type 2 SF	609 Curb Std. Type 2A LF		611 Reinf. Conc. Approach Slab T=15" SY	310 6" Subbase Type I CY	606 Bridge Term. Assem. Type A Ea.
1R	5+25.36~6+06.84	Lt.&Rt.	602														
2R	5+45 ~ 5+67	Lt.				27											
1GR	5+43.38~5+93.38	Rt.					25	1									1
1SW	*601+34~5+95	Rt.		463						463	1						
2SW	4+28 ~ 4+37	Rt.		28					7			35					
1C	*601+39.29~5+73.10	Rt.											103				
2C	*599+57.53~5+95.17	Lt.											75				
1AS	5+81.84~6+06.84	Lt.&Rt.													122	21	
3SW	3+76 ~ 3+85	Rt.		28					8			35					
4SW	3+31 ~ 3+47	Rt.		42					13			53					
	* S.R. 21 Stationing																
TOTALS			602	561		27	25	1	28	463	1	123	178		122	21	1

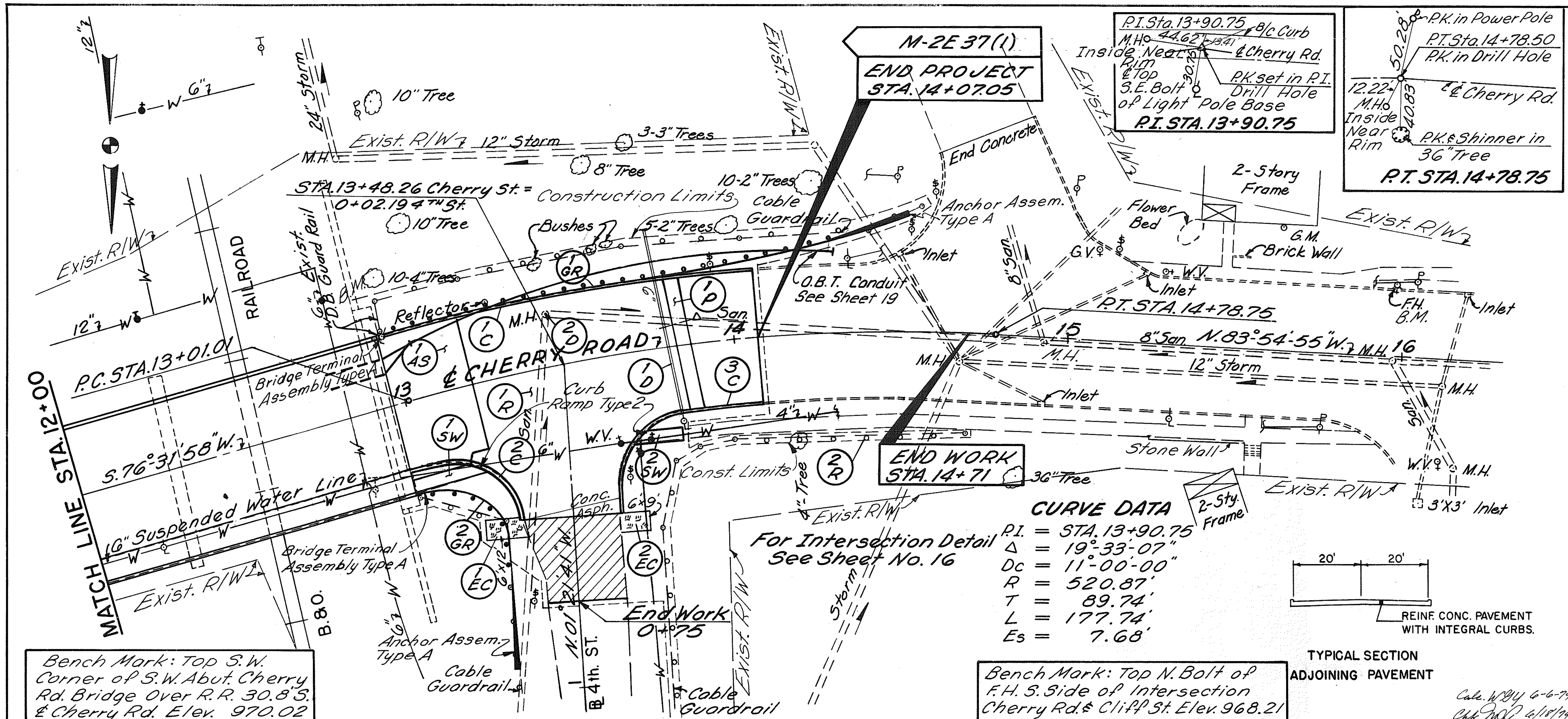
CHERRY ROAD STA. 3+00 to STA. 8+00

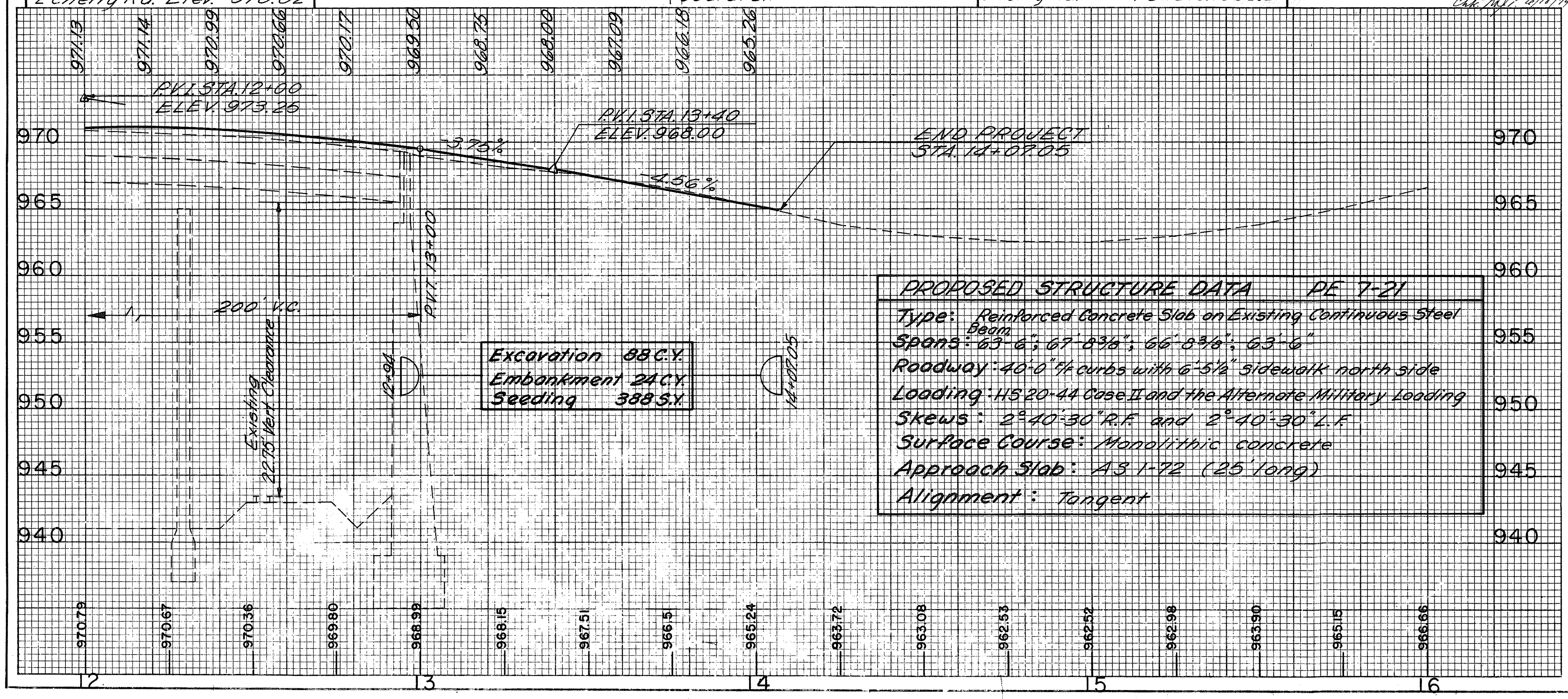


QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Pavement Removed S.Y.		202 Walk Rem. S.F.	606 Bridge Term. Assembly Type A Ea.	606 G.R. Type 5 L.F.	608 4" Conc. Walk S.F.	608 Curb Ramp Ea.	622 Concrete Barrier Std. Type D L.F.	609 Curb Std. Type 2A L.F.	660 Sodding S.Y.	611 Reinf. Conc. Approach Slab T=15" S.Y.	310 6" Subbase Type I C.Y.
1R	9+06.21~10+28.66	Lt.&Rt.	612											
2R														
1GR / 1P	9+16.93~10+27.19	Lt.								113				
2GR	21+00*~10+31.19	Rt.				1	143							
3GR	8+91.43~21+00*	Rt.				1	72							
1SW	8+94~9+05	Rt.			38			40	1					
2SW	9+70~10+29	Rt.			336			174	1					
1C	8+99.58~20+63.08*	Rt.									44			
2C	20+63.08*~10+04.18	Rt.									84			
3C														
1EC	20+65-Third St.	Rt.										12		
2EC	20+65-Third St.	Lt.										6		
1AS	9+06.21~9+31.21	Lt.&Rt.											113	19
2AS	10+03.72~10+28.66	Lt.&Rt.											114	19
TOTALS			612	307	374	2	215	214	2	113	128	18	227	38

* Third St. Stations





QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Pav't Rem. S.Y.	202 G.R. Rem. L.F.	202 Walk Rem. S.F.	604 M.H. Adj. to Grade Ea.	606 Bridge Term. Assem Type A Ea.	606 G.R. Type 5 L.F.	606 Anchor Assem Type A Ea.	605 6" Shall. Pipe Un. drain 707.01 Type III or 707.12 LF	608 4" Conc. Walk S.F.	608 Curb Ramp Type 2 Ea.		609 Curb Std. Type 2A LF	611 Reinf. Conc. Approach Slab T=15" SY	310 6" Sub base Type I C.Y.	660 Sodding S.Y.	Special Pressure Relief Joint Type A L.F.
1GR	12+97.58~14+51	Lt.					1	137.5	1									
2GR	12+92.82~0+93 *	Rt.					1		1									
1SW	12+95~13+18	Rt.			99						85	1						
2SW	13+64~13+81	Rt.			61						48	1						
1C	13+21.27~14+07.05	Lt.												90				
2C	13+13.21~0+48.43 *	Rt.												27				
3C	0+48.43 *~14+07.05	Lt. & Rt.												65				
1EC	0+50.40	Rt.															8	
2EC	0+50.40	Lt.															6	
1AS	12+96.11~13+21.11	Lt. & Rt.													115	19		
1D	13+80	Lt. & Rt.								57								
2D	13+45.9	Lt.				1												
1P	13+85	Lt. & Rt.																41
1R	12+96.11~14+07.05	Lt. & Rt.	610															
2R	1+24~14+71	Lt. & Rt.		178														
*	Fourth St. Station																	
TOTALS			610	215	160	1	2	137.5	1	57	133	2		182	115	19	14	41

CHERRY ROAD STA. 12+00 to STA. 16+00

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

9/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
0		0	0		
	17			3	1
21		9	3		
	84			16	4
39		25	5		
	80			32	5
18		43	5		
	43			32	3
13		25	0		
	29			19	0
0		0	0		

STA. 9+06.21

BRIDGE LIMITS

STA. 6+10.64

BRIDGE

6+14
945
940

944.75
6+00
944.37

12:1

N.W. Face of Wing Wall

943.26
5+75
943.00

E.P. SR 21

941.78
5+50
941.49

E.P. SR 21

940.31
5+25.36
940.31

4+86

BEGIN PROJECT STA. 5+25.36
BEGIN WORK STA. 3+31

945
940

6-4-79

X-SECTIONS CHERRY ROAD STA. 5+25.36 to STA. 6+00

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

10
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
0		0	0		
	12			2	1
40		14	10		
	128			13	10
52		13	10		
	139			18	6
48		25	3		
	100			38	5
24		57	8		
	64			29	5
22		4	2		
	35			2	1
0		0	0		

10+30

964.94
10+25
964.46

963.75
10+00
963.25

962.56
9+75
962.10

961.38
9+50
960.85

960.19
9+25
959.49

8+97

Prop. O.B.T. Conduits

Prop. O.B.T. Conduits

Prop. O.B.T. Manhole

Prop. O.B.T. Conduit

Prop. O.B.T. Conduit

6:1

Varies

1½"/Ft.

See Third St. X-Sections

See Third St. X-Sections

See Third St. X-Sections

End Conc. | Begin Asphalt

X-SECTIONS CHERRY ROAD STA. 9+25 to STA. 10+25

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

11/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
40	128	28	6	37	7
22	167	25	3	31	12
38	13	8	10	1	2
0	0	0	0		

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

970
965
960
955

Prop. O.B.T. Conduit

965.86
13+87
965.98

℄ 963.50
57 L.f. 6" Shallow pipe Underdrain @ 1%

Feathering

Prop. O.B.T. Conduit

967.54
13+50
967.52

End Conc.
Begin Asphalt
End
Begin Tar & Chip

(2/0) See Sheet 8
Exist. San. M.H. Adjust to Grade
Exist. Cover 967.39
Prop. Cover 967.49

Prop. O.B.T. Conduit

969.50
13+00
969.00

12+94

STA. 12+96.11

BRIDGE LIMITS

STA. 10+28.66

Calc. VP 6-4-79
Plot Chk. 6/14/79

X-SECTIONS CHERRY ROAD STA. 13+00 to STA. 13+87

SEEDING	
END WIDTH	SQ. YDS.
48	30
28	50
40	

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37-(1)	

12
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

END AREA		VOLUME	
CUT	FILL	CUT	FILL
15	4	6	1
25	0	13	2
28	6		

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

965 960

STONE WALL

15+25
962.98

15+00
962.51

End Cone.

14+75
962.53

END WORK STA. 14+71

14+50
963.09

964.94

Prop. O.B.T. Conduit

14+07.05
964.94

END PROJECT STA. 14+07.05
MEET EXISTING PAVEMENT

965.26

Prop. O.B.T. Conduit

14+00
965.31

13+87

Code V 10-4-79
Date Surv 6/18/79

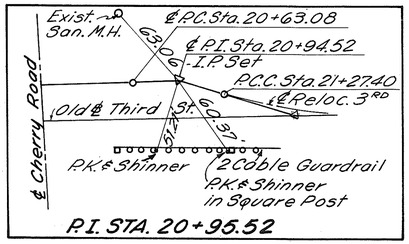
X-SECTIONS CHERRY ROAD STA. 14+00 to STA. 15+25

STARK COUNTY
CHERRY ROAD

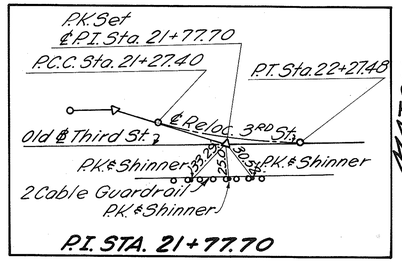
FED. RD. DIVISION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

13
37

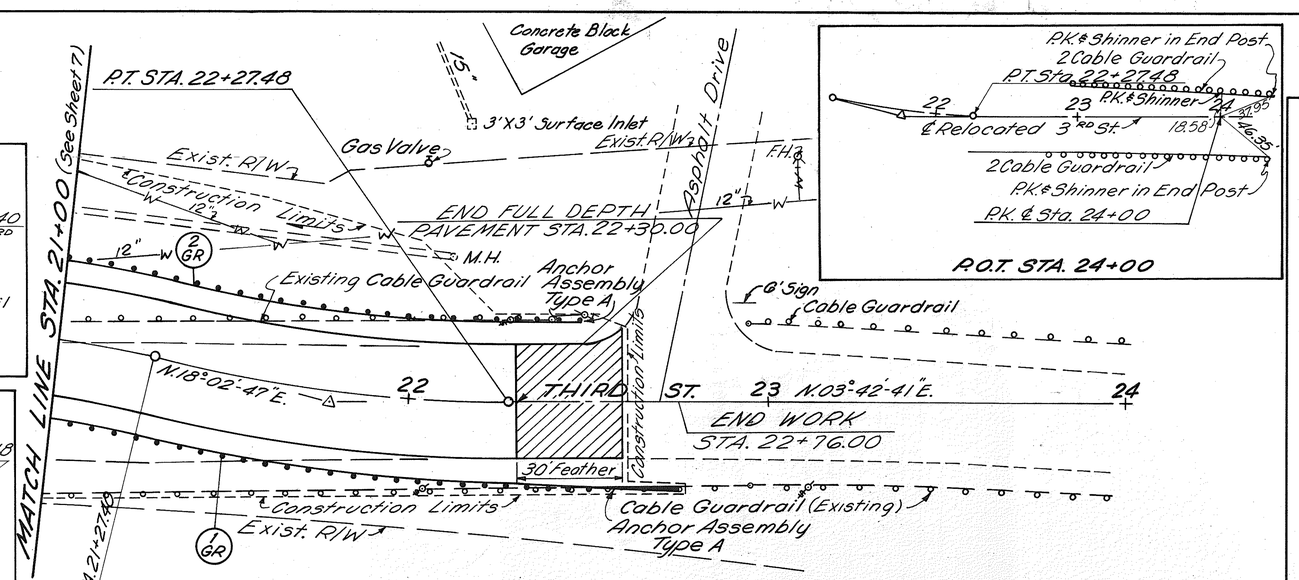
PE-7-20 & PE-7-21



P.I. STA. 20+95.52



P.I. STA. 21+77.70

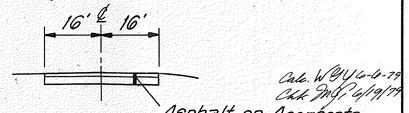


P.O.T. STA. 24+00

CURVE DATA

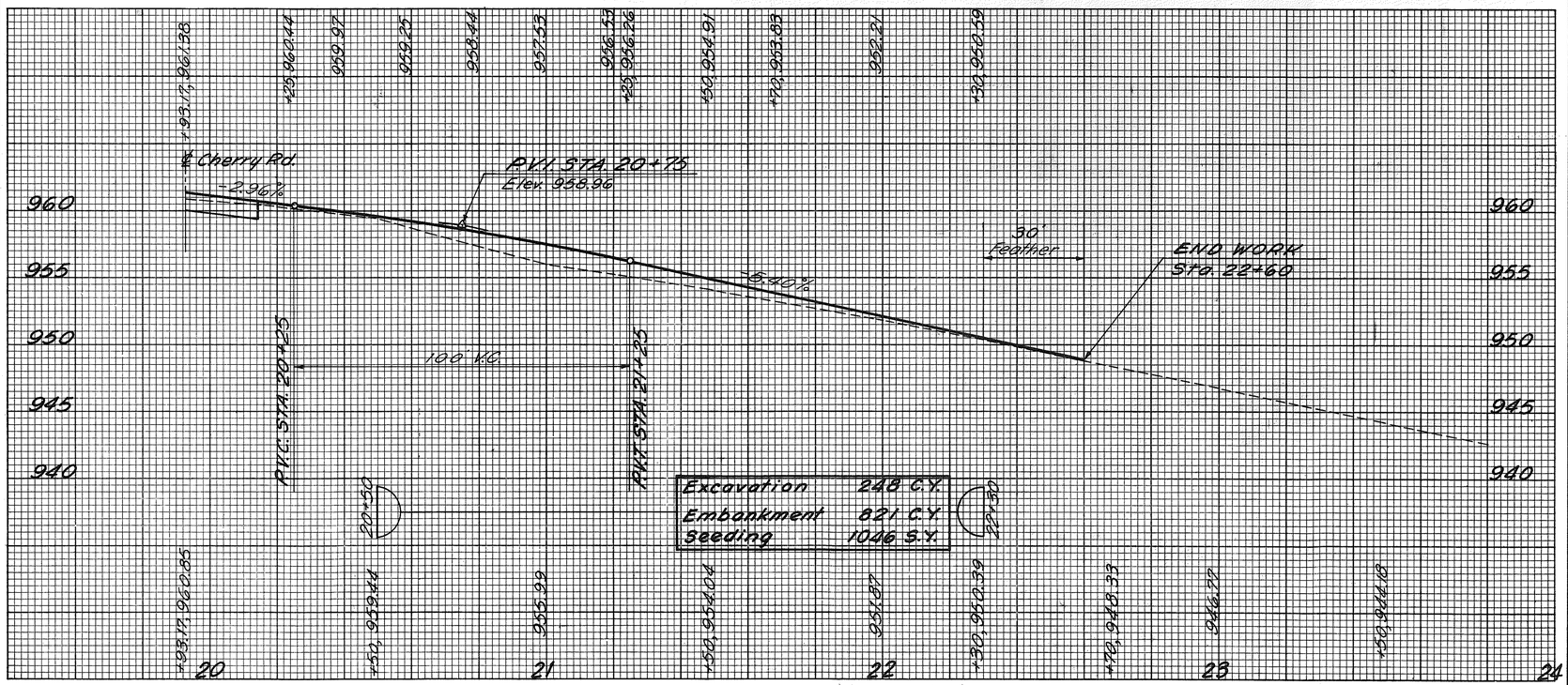
P.I. =	STA. 20+95.52
Δ =	18°-25'-31"
R =	200'
T =	32.44'
L =	64.32'
E =	2.61'

P.I. =	STA. 21+77.70
Δ =	14°-20'-06"
R =	400'
T =	50.30'
L =	100.08'
E =	3.15'



Calc. W.W.L. 2-6-79
Chk. D.M.S. 2/19/79

TYPICAL SECTION
ADJOINING PAVEMENT



THIRD STREET

QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 G.R. Rem. L.F.	606 G.R. Type S L.F.	606 Anchor Assembly Ea.
1GR	21+00 - 22+76	Rt.		133	1
2GR	21+00 - 22+48	Lt.		119.5	1
TOTALS				272.5	2

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

14
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
47	289	36	32	68	172
57	325	37	153	65	377
60	325	33	254	73	254
57		45	20		

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

955 950 945 940

R/W

3/4"/Ft.

0:1

Gravel

952.21
22+00
951.87

3/4"/Ft.

1/2"/Ft

955 950 945 940

R/W

3/4"/Ft.

0:1

Gravel

954.91
21+50
954.64

3/4"/Ft.

1/2"/Ft

960 955 950 945 940

R/W

3/4":1'

Gravel

957.53
21+00
955.99

3/4"/Ft.

1/2"/Ft

Note: Remove existing asphalt pavement under Item 203

960 955 950 945 940

1/2"/Ft.

Prop. O.B.T. Conduit

Variable

959.62
20+50
959.44

960 955 950

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

Calc. VJD 6-5-79
Chk. JMP 6/19/79

X-SECTIONS THIRD ST. STA. 20+50 to STA. 22+00

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

15/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL

70 60 50 40 30 20 10 ℄ 10 20 30 40 50

60

950
945
940

DRIVE LEFT

22+70
948.33

R/W

950
945
940

Gravel

22+50
949.59

R/W

3/4"/FT.

3/4"/FT.

BEGIN 30' FEATHER
22+30 END FULL DEPTH PAVEMENT

950
945
940

R/W

950.59
22+30
950.39

22+00

Gravel

17
107
47

38 0
42 18
36 32

70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70

Calc VD 6-8-79
Chk DMG 6/19/79

X-SECTIONS THIRD ST. STA. 22+30 to STA. 22+70

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

16
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

Curb Data
Δ = 112°-01'-47"
R = 50'
T = 74.17'
L = 97.76'

Curb Data
Δ = 59°-58'-21"
R = 100'
T = 57.70
L = 104.67

Curb Data
Δ = 86°-42'-12.5"
R = 20.00'
T = 18.88'
L = 30.26'

Curb Data
Δ = 101°-43'-00.1"
R = 20.00'
T = 24.57'
L = 35.51'

END APPROACH SLAB
STA 6+06.84

BEGIN APPROACH SLAB
STA. 5+81.84

END PROJECT STA. 14+07.05
MEET EXISTING PVMT.

END APPROACH SLAB
STA 13+21.11

Curb Ramp Type 2

Curb Ramp Type 2

Curb Ramp Type 2

BEGIN APPROACH SLAB
STA. 12+96.11

BEGIN PROJECT
STA 5+25.36

STA. 4+95.54 CHERRY ROAD =
STA. 600+75.39 S.R. 21

Existing key joint without tie bars.

℄ S.R. 21

℄ CHERRY ROAD

℄ 4TH STREET

PC. STA 13+01.01

R=2096.27'
Dc=2°-07'-30"

Note: Elevations shown on curb line are gutter elevations at face of curb.

LEGEND:
(1) Standard longitudinal joint.
(2) Expansion joint without dowels.

PAVEMENT DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E37(1)	

17
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

END APPROACH SLAB
STA 10+28.66

BACK=
PT STA 10+27.53
AHD.
STA 10+27.47

℄ STA 9+50.00 CHERRY RD.=
℄ STA 19+93.17 THIRD ST.

BEGIN APPROACH SLAB
STA 10+03.80

965.13 965.18 965.65 964.87 965.34 964.70 964.22 964.39 963.75 963.91 963.28 963.44 963.40 962.97 962.80 962.49 962.32 962.01 961.85 961.54 961.38 961.07 960.90 960.59 960.75 960.42 960.11 959.93 959.64 959.48 959.17 959.00 958.69

STA 10+09.02
963.86

Curb Data
Δ = 75°-46'-37.5"
R = 60.00'
T = 46.69'
L = 79.35'

Curb Ramp Type 2

10' 962.88 10' 962.34 10' 961.84 10' 961.34 10' 962.85 10' 962.38 10'

STA 20+54.58
959.95

960.90 960.53 960.13 959.71 959.27 958.60 958.31 957.79 957.24 956.67 956.09 955.50 954.91 954.34 953.76 953.19 952.62 952.04 951.47 950.90 950.34

961.23 960.59 960.29 959.97 959.62 959.25 958.86 958.44 958.00 957.53 957.04 956.53 955.99 955.45 954.91 954.37 953.83 953.29 952.75 952.21 951.67 951.13 950.59

959.68 959.41 959.11 958.45 958.08 957.69 957.27 956.79 956.27 955.74 955.20 954.66 954.12 953.58 953.04 952.50 954.96 951.42 950.88 950.34

16'

20 +

P.C. STA 20+63.08

R=200'

P.R.C. STA 21+27.40

R=400'

21

22

P.T. STA 22+27.48

℄ 3RD STREET

30' Feather

END APPROACH SLAB
STA 9+31.21

P.C. STA 9+12.33

Curb Ramp Type 2

10' 959.11 10' 958.98 10' 959.05 10' 958.80

6.40'

STA 20+63.08
958.68

STA 8+97.75
958.58

BEGIN APPROACH SLAB
STA 9+06.21

9 +

14'

℄ CHERRY ROAD

Curb Data
Δ = 75°-57'-08"
R = 35.00'
T = 27.32'
L = 46.40'

Note: Elevations shown on curb line are gutter elevations at face of curb.

LEGEND:
(1) Standard longitudinal joint.
(2) Expansion joint without dowels.

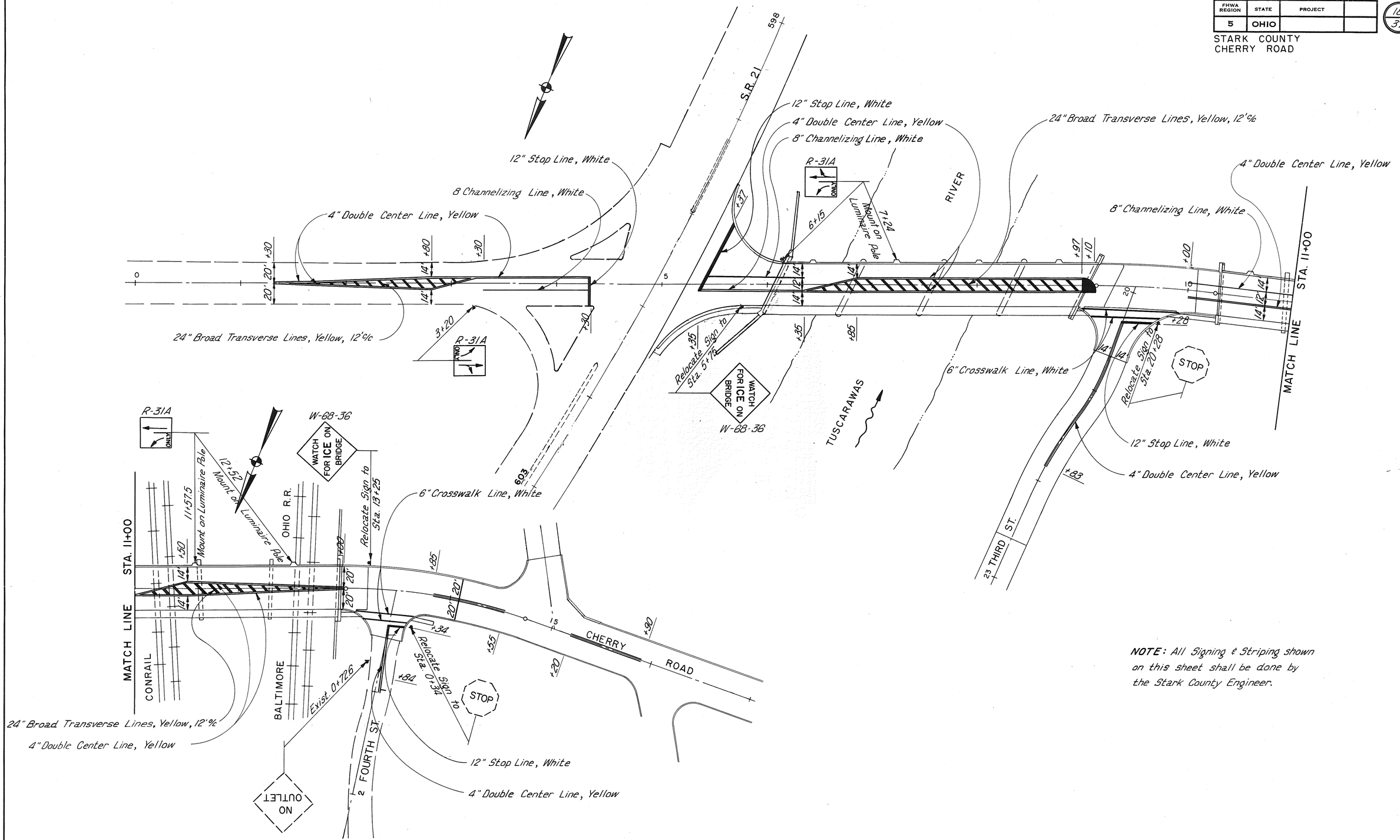
PAVEMENT DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

18
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21



NOTE: All Signing & Striping shown on this sheet shall be done by the Stark County Engineer.

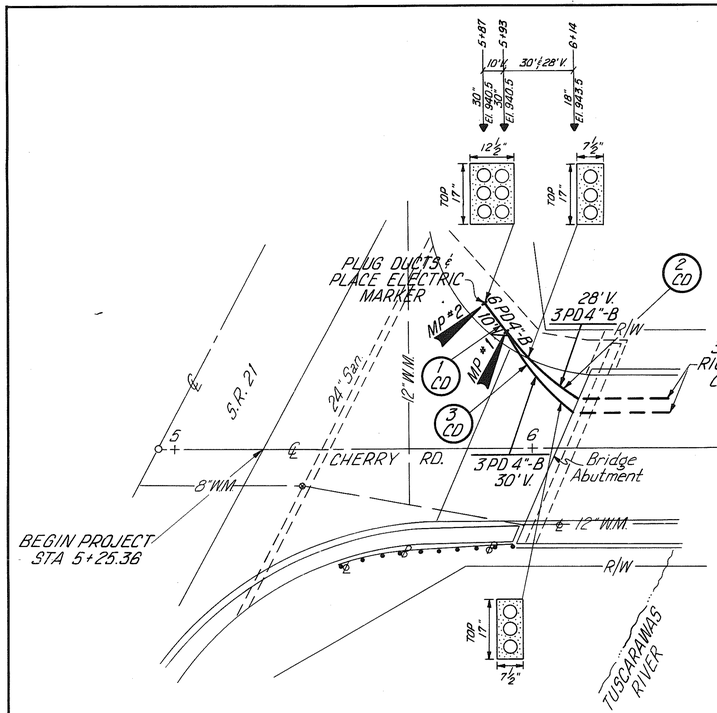
SIGNING & STRIPING

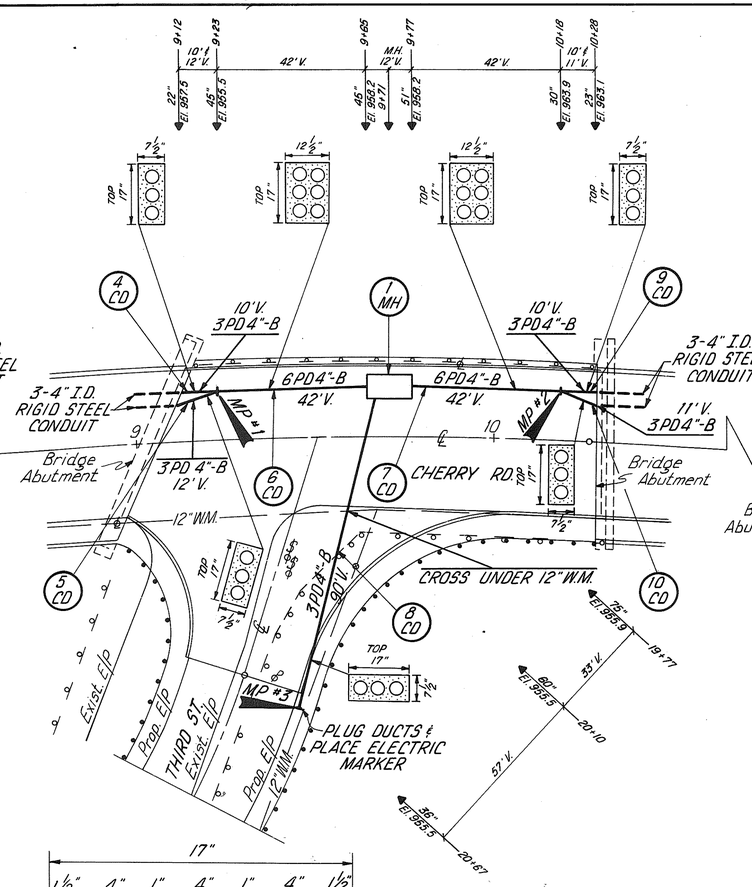
FHWA REGION	STATE	PROJECT	
5	OHIO	M-2E 37(1)	

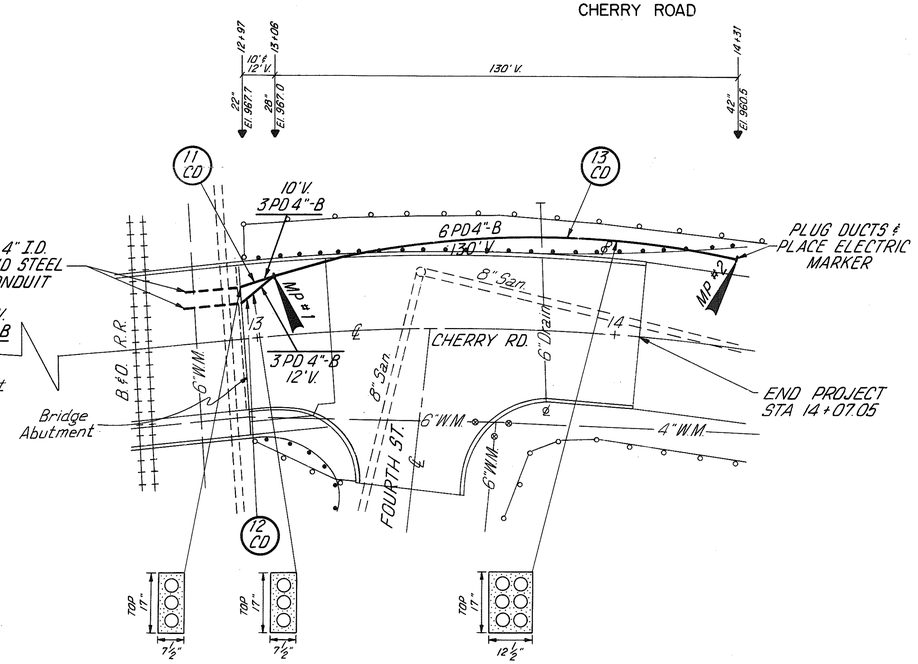
19/37

PE-7.20 & PE-7.21

STARK COUNTY
CHERRY ROAD





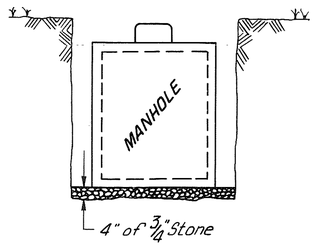


PROP. MANHOLE DIMENSIONS		
MANHOLE	INSIDE DIM.	OVERALL EXCA.
LENGTH	12'-0"	15'-4" (2)
WIDTH	6'-0"	9'-4" (2)
HEADROOM	7'-0"	
DEPTH		9'-10" (1)

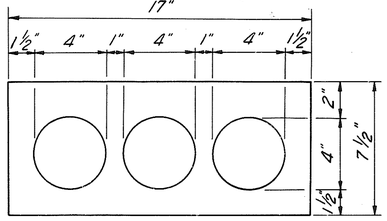
MANHOLE STRUCTURE		
WALLS	5"	REINFORCED
ROOF	6"	REINFORCED
FLOOR	5"	REINFORCED

(1) Includes 4" of ¾" Stone.

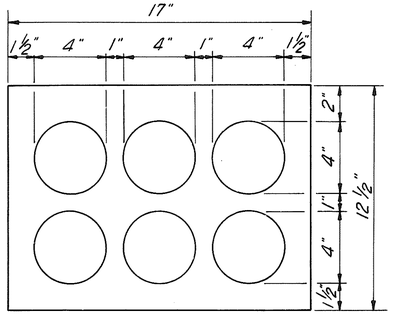
(2) Includes 15" for Sheeting and Shoring.



GRANULAR BEDDING DETAIL



3 DUCT ENCASEMENT DETAIL



6 DUCT ENCASEMENT DETAIL

NOTE: See Bridge Plans for telephone conduit on structures.

QUANTITIES					
REF. NO.	STATION TO STATION	SIDE	SPECIAL 3 DUCT O.B.T. CONDUIT	SPECIAL 6 DUCT O.B.T. CONDUIT	SPECIAL O.B.T. MANHOLE
			L.F.	L.F.	Lump
1-CD	5+87 to 5+93	Lt.		10	
2-CD	5+93 to 6+14	Lt.	28		
3-CD	5+93 to 6+14	Lt.	30		
4-CD	9+12 to 9+23	Lt.	10		
5-CD	9+12 to 9+23	Lt.	12		
6-CD	9+23 to 9+65	Lt.		42	
7-CD	9+77 to 10+18	Lt.		42	
8-CD	19+77 to 20+67 Third St.	Lt.		90	
9-CD	10+18 to 10+28	Lt.	10		
10-CD	10+18 to 10+28	Lt.	11		
11-CD	12+97 to 13+06	Lt.	10		
12-CD	12+97 to 13+06	Lt.	12		
13-CD	13+06 to 14+31	Lt.		130	
1-MH	9+71	Lt.			Lump
	TOTAL		123	314	Lump

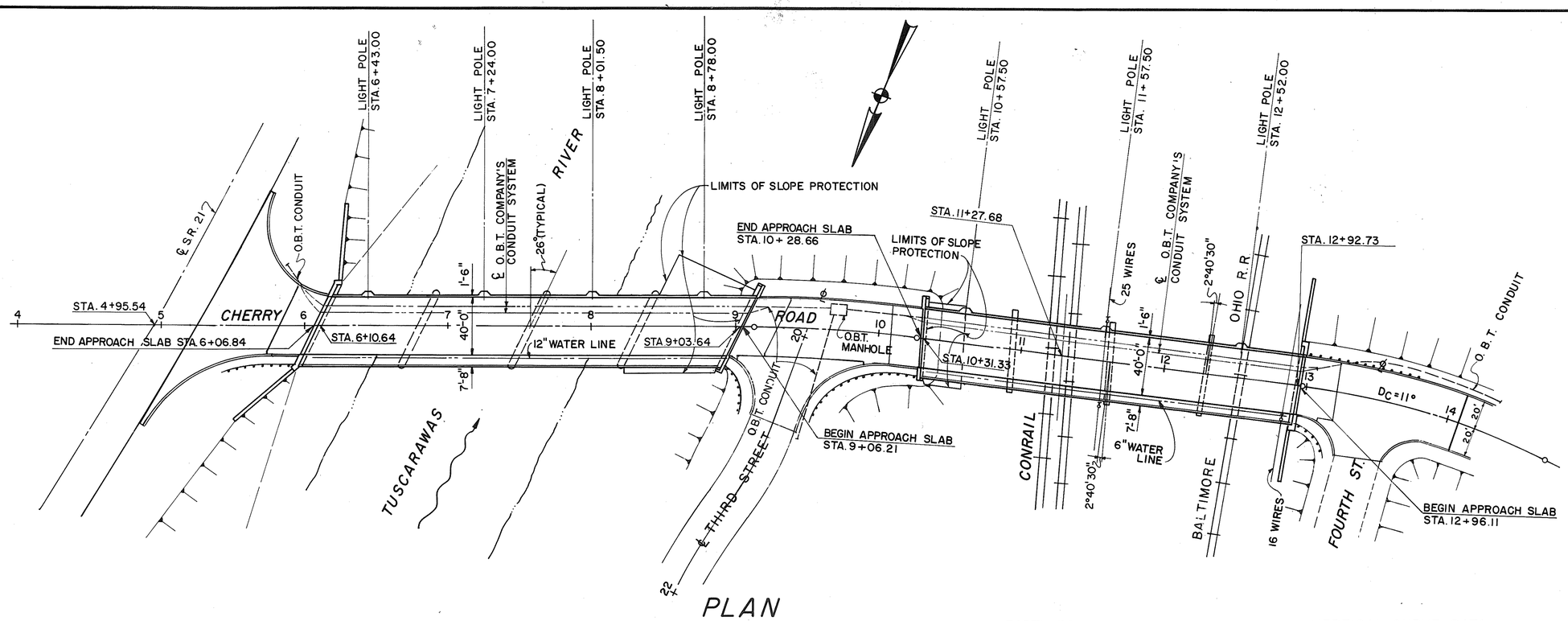
OHIO BELL TELEPHONE CONDUIT

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

20/37

PE-7-20 & PE-7-21

STARK COUNTY
CHERRY ROAD



PLAN

EARTHWORK limits shown are approx., actual slopes shall conform to plan cross-sections.

VERTICAL CURVE DATA

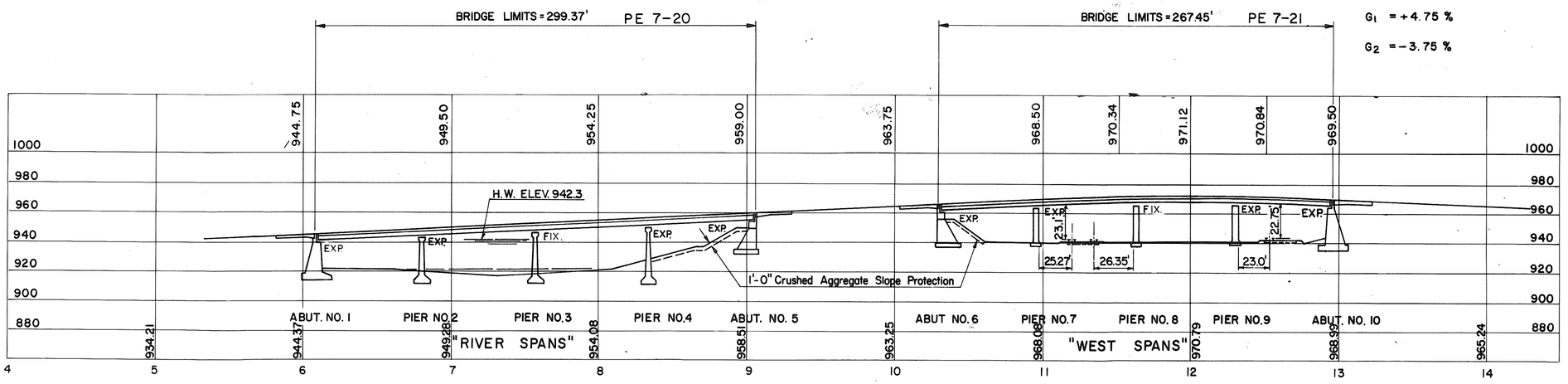
P.V.I. STA. 12+00.00

ELEV. 973.25

V.C. = 200 Ft.

G_1 = +4.75 %

G_2 = −3.75 %



PROFILE

EXISTING STRUCTURES

TYPE: Continuous Steel Beams with I-BEAM -LOK deck 4 1/4" thick and reinforced concrete substructures.

SPANS: 70'-0", 76'-6", 76'-6" and 70'-0" "River Spans" and 63'-6", 67'-8 3/8", 66'-8 3/8" and 63'-6" "West Spans"

ROADWAY: 40'-0" F/F curbs with 5'-5 1/2" sidewalk north side.

LOADING: H 20-33

BUILT: 1948

CONDITIONS: Superstructures - poor
Substructures - good

2000 ADT − 10,000
ADTT − 1,500

PROPOSED STRUCTURES

TYPE: Reinforced Concrete Slab on existing continuous steel beams.

SPANS: 70'-0", 76'-6", 76'-6" and 70'-0" "River Spans" and 63'-6", 67'-8 3/8", 66'-8 3/8" and 63'-6" "West Spans"

ROADWAY: 40'-0" F/F curbs with 6'-5 1/2" sidewalk north side.

LOADING: HS 20-44 Case II and the alternate Military Loading.

SKEWS: 26° L.F. "River Spans" and 2°40'30" R.F. and L.F. "West Spans"

SURFACE COURSE: Monolithic Concrete

APPROACH SLABS: AS-1-72 (25' long)

ALIGNMENT: Tangents

SUPERELEVATION: None

1/18

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SITE PLAN

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B & O R.R.
STARK COUNTY
CITY OF MASSILLON
STA. 6+06.84 TO STA. 12+96.11

Designed	Drawn	Checked	Reviewed	Date	Revised
V.K.	GY	C.E.	[illegible]	6-27-79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

21/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-72	DATED	6-30-72	
BR-1	DATED	5-29-79	
BR-2-67	DATED	10-15-71	
RB-1-55	DATED	2-02-59	
SD-1-69	DATED	6-12-69	Sheet No. 1 and No. 3 and to Supplemental Specifications:
853	DATED	6-26-78	
956	DATED	6-26-78	

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1977, including the 1978 Interim Specifications and the Ohio "Supplement" to these specifications.

DESIGN DATA:
Design Loading - H520-44, Case II and the alternate Military Loading
Concrete Class S - Compressive strength 4500 P.S.I.
Concrete Class C - Compressive strength 4000 P.S.I.
Structural Steel - ASTM A36 - Unit Stress 20,000 P.S.I.:
Reinforcing steel - ASTM A615, A616 or A617 - Grade 60, Minimum yield strength 60,000 P.S.I.

Utility Lines: All expense involved in relocating the affected utility Lines shall be borne by the owners, the contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

Construction Clearance of 8 ft. horizontally from the center of tracks and 21 ft. vertically from a point level with the top of the higher rail, and 4 feet from the center of tracks, shall be maintained at all times.

Portions of existing structures removed: Light Poles, on the bridges, shall be removed by the owner. Contractor must notify the owner about his work schedule in advance.
- Special attention shall be paid to the removal of safety curbs, sidewalks and bridge decks with expansion dams. Sidewalk tees and deck T-Beam-Lok's are welded to the stringers and these welds shall be cut in a manner leaving stringers undamaged.
- Blast plates over Baltimore & Ohio R.R. tracks shall be permanently removed to provide place for beam bottom flange cover plates.
- Abutment backwalls shall be removed to elevations shown on abutment detail drawings.

All salvaged steel and bridge railings will become the property of the contractor except for one (1) section of deck, full width of river bridge, which shall be carefully removed and stored on the site to be picked up by county forces. **

The contractor shall use all precautions necessary to see that the railroad aerial lines in front of abutment No. 10 are not disturbed during construction.

All Class C and S concrete shall be made using crushed carbonate stone or crushed aircooled blast furnace slag for the coarse aggregate.

Studs shall be installed in drilled holes using non-shrinking epoxy mortar per SS 956, following procedures per SS 853; or they may be installed using Celtite Inc. Resin, or approved alternate according to the manufacturer's instructions. Holes are paid for as Item 510 rather than as described in the last paragraph of SS 853.

ESTIMATED QUANTITIES

ITEM	UNIT	DESCRIPTION	BRIDGE NO. PE 7-20 "RIVER SPANS"							BRIDGE NO. PE 7-21 "WEST SPANS"						
			TOTAL	ABUT.	PIERS	SUPER.	GEN.	AS BUILT		TOTAL	ABUT.	PIERS	SUPER	GEN.	AS BUILT	
202	Cu.Yd.	Portions of structure removed	259	67		192				213	42		171			
509	Lb.	Reinforcing steel, grade 60	59,310	4,994	1,295	53,021				51,987	3,447	983	47,557			
Special	Lb.	Epoxy coated reinforcing steel, grade 60 (See proposal note)	51,304	1,243		50,061				46,126	1,161		44,965			
510	Lin.Ft.	Dowel holes	121	64	57					96	36	60				
511	Cu.Yd.	Class S concrete, superstructure	401			401				357			357			
511	Cu.Yd.	Class C concrete, abutments	83	83						57	57					
511	Cu.Yd.	Class C concrete, piers	16		16					13		13				
512	Sq.Yd.	Type B waterproofing	31	31						28	28					
513	Lb.	Structural steel	87,700			87,700				75,500			75,500			
513	Lb.	Structural steel *	4,100			4,100				3,643			3,643			
514	Lb.	Field painting of new structural steel, System B	87,700			87,700				75,500			75,500			
514	Lump	Field painting of existing steel, surface preparation	Lump				Sum			Lump				Sum		
514	Lump	Field painting of existing steel, spot prime	Lump				Sum			Lump				Sum		
514	Lump	Field painting of existing steel, complete coat prime	Lump				Sum			Lump				Sum		
514	Lump	Field painting of existing steel, complete coat finish	Lump				Sum			Lump				Sum		
516	Sq.Ft.	1" Preformed expansion joint filler	65	65												
517	Lin.Ft.	Railing (concrete parapet with double pipe rail)	299.37			299.37				267.45			267.45			
518	Cu.Yd.	Porous backfill	49	49						40	40					
518	Each	Scuppers including supports	12			12				8			8			
519	Sq.Ft.	Patching concrete structure	50	50						30	30					
601	Sq.Ft.	Crushed aggregate slope protection	563				563			184				184		
Special	Lin.Ft.	Neoprene strip-seal including steel extrusions and anchors								85.32				85.32		
Special	Lin.Ft.	Open cell neoprene sponge	94.24				94.24									
Special	Lump	O.B.T. Co. conduits and support system **	Lump				Sum			Lump				Sum		

Computed by: V.K. Date: 4.8.80

Checked by: EBL Date: 4.16.80

* Galvanized structural steel for O.B.T. Co. conduit support system, furnished and installed by the contractor and paid for by the County.

** Item - Special, O.B.T. Co. conduits and support system, conduits will be furnished by O.B.T. Co. but installed by the contractor and the county shall reimburse the contractor for the installation.

2/18

ERIKSSON ENGINEERING LIMITED
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GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B&O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

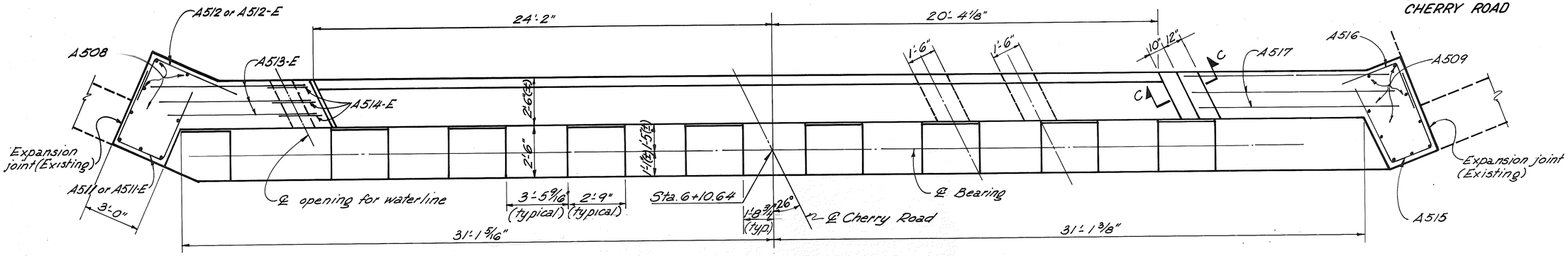
Designed	Traced	Checked	Reviewed	Date	Revised
V.K.	G.M.	CE	EBL	4.16.80	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

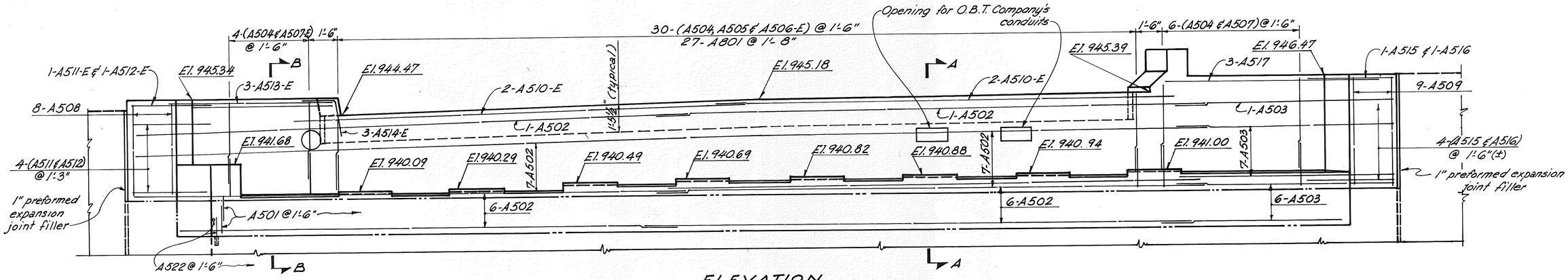
22
37

PE-7-20 & PE-7-21

STARK COUNTY
CHERRY ROAD



PLAN



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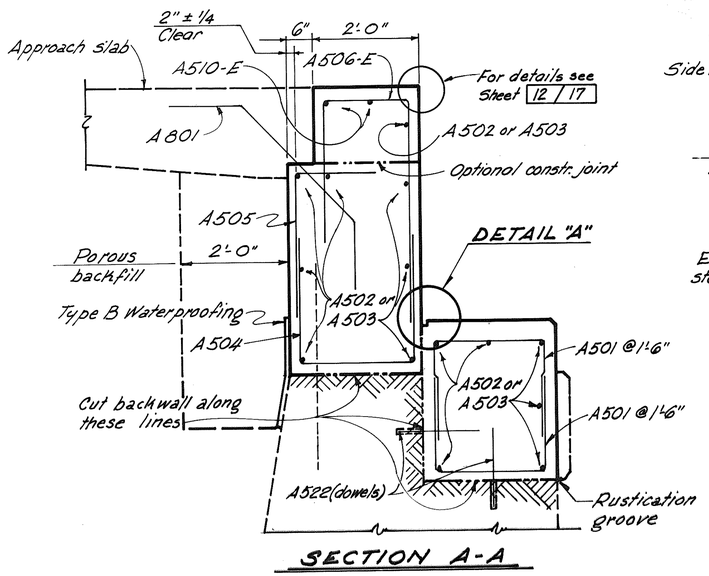
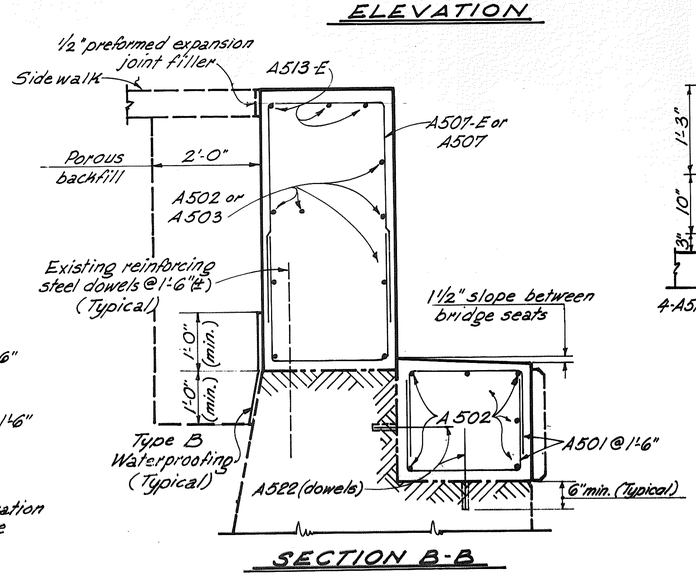


SECTION A-A



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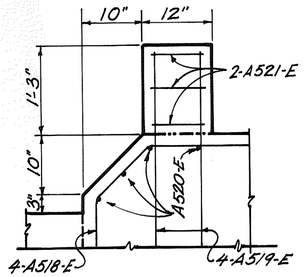


SECTION C-C

NOTES:

—Existing backwall shall be removed by cutting off along existing bridge seat construction joint and bridge seat shall be cut at the first rustication groove below bridge seat.
—Removal shall be performed in a manner leaving reinforcing steel dowels and remaining concrete undamaged.
—Dowels must be carefully cleaned before any backwall concrete could be placed.
—Areas of abutment and wingwalls to be patched shall be determined by the engineer at the time of construction.
—All areas to be patched with concrete or mortar must be neatly cut along edges by a saw of 1" deep cut min.
—Patching work shall be performed according to 519.06.
—Porous Backfill, 2 ft. thick, extend upward to the plane of the subgrade and laterally to the ends of the abutment.
—For Detail "A" see sheet 4/18
—Lap # 5 bars 1'-7"

BACKWALL CONCRETE: In addition to the provisions of 511.08, backwall concrete above the bridge seat or backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has been placed.

For location of Ohio Bell Telephone Company's conduits see Sheets 9&13/18 and for details and notes Sheet 18/18

3/18

ERIKSSON ENGINEERING LIMITED
1593 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

ABUTMENT NO. 1

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B & O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

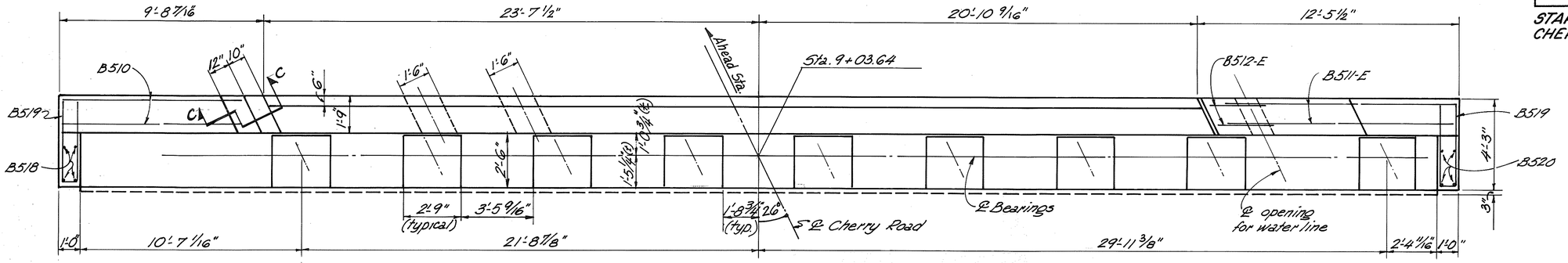
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	G.M.	C.E.	C.H.	6-27-77	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

23/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21



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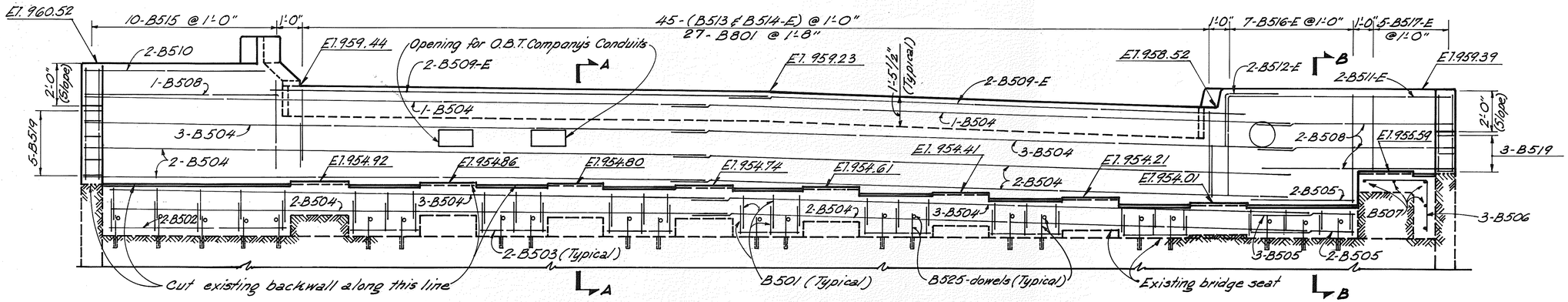

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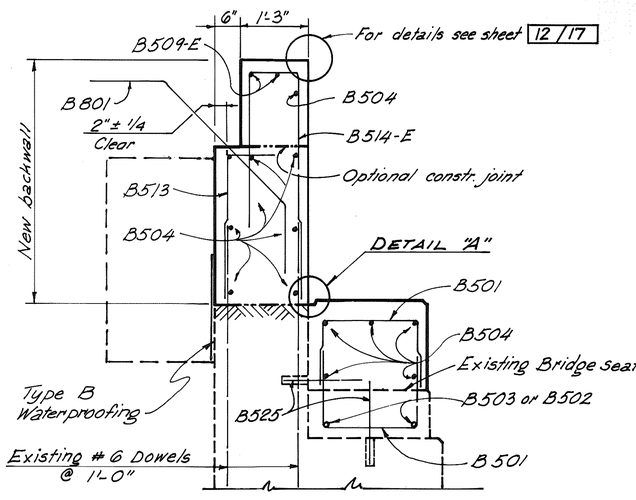
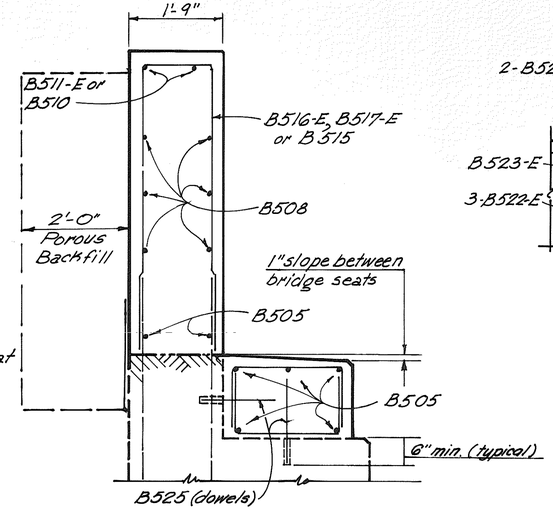
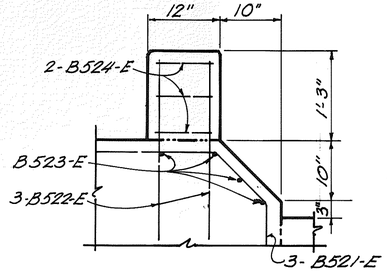


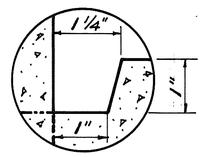
SECTION A-A



SECTION B-B



SECTION C-C



DETAIL "A"

NOTES:

Cut backwall along proposed bridge seat elevations in straight horizontal and vertical lines, at front face cuts shall have 1" deep sawed edges.

Existing bearing anchors shall be cut, where necessary, 2" below finished bridge seat elevations and remaining parts of anchor bolts must be cleaned before concrete of bridge seat could be placed.

For additional notes see sheet 3/18

Remove all existing deteriorated and fractured concrete on existing bridge seat before placing new bridge seat.

Porous backfill shall extend upward to the plane of the subgrade and laterally to the ends of abutment.

4/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

ABUTMENT NO. 5

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B & O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

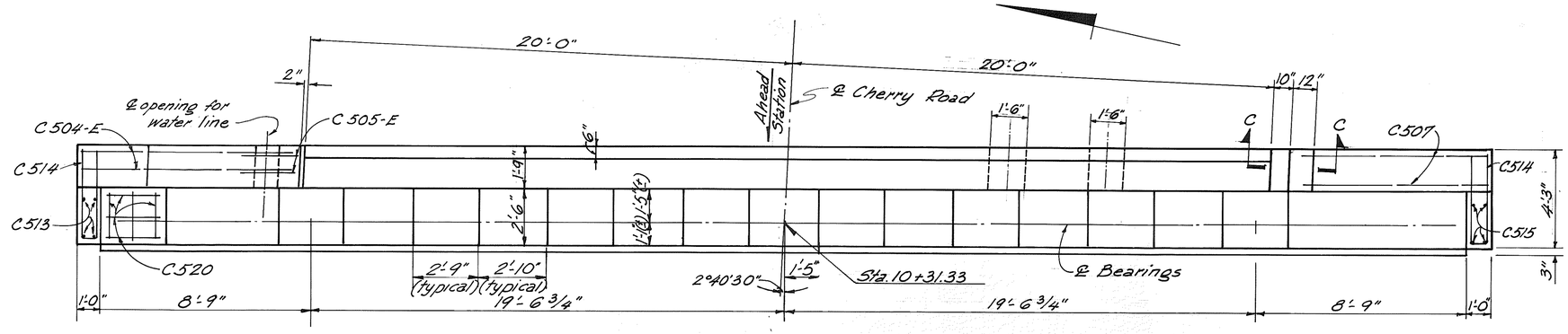
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	G.P.	C.E.	C.H.	6.27.79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

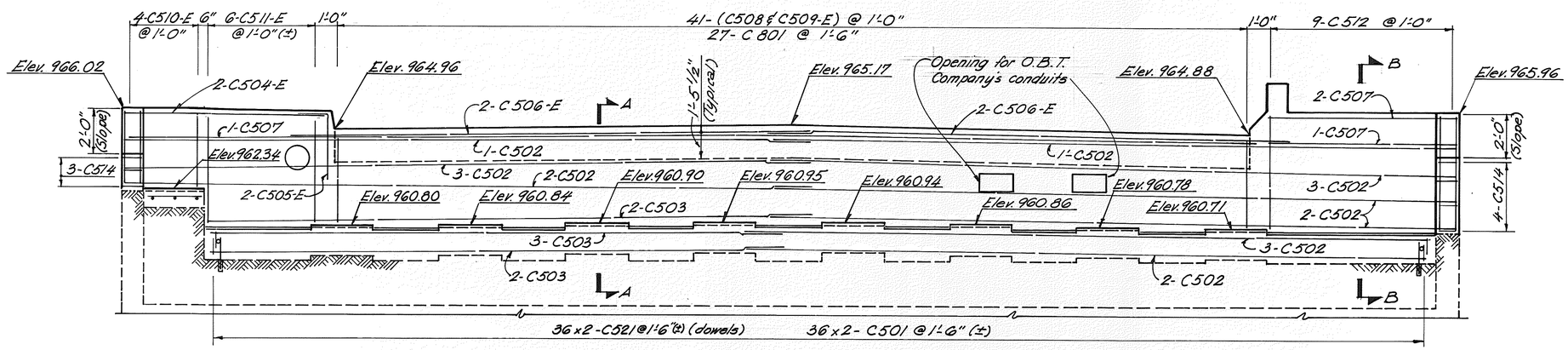
24
37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21



PLAN



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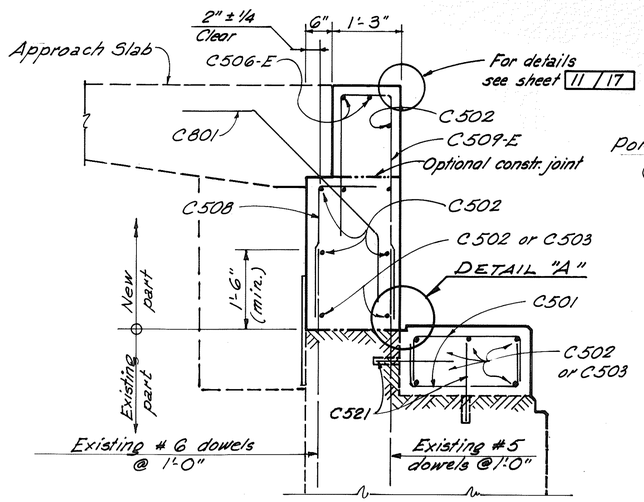
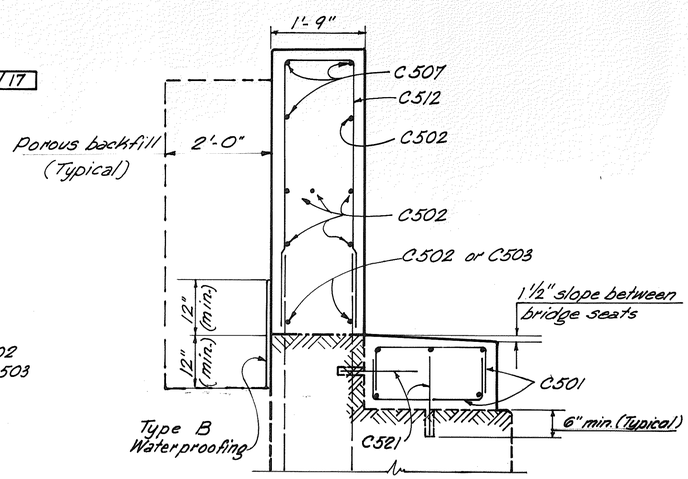
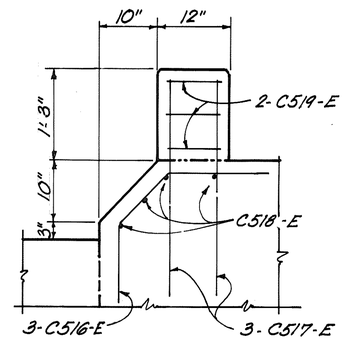


SECTION A-A



SECTION B-B



SECTION C-C

For notes and detail "A" see sheets 3 18 and 4 18

For location of Ohio Bell Telephone Company's conduits see Sheet 10 of 14 18 and for details and notes Sheet 18 18

5 18

ERIKSSON ENGINEERING LIMITED
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ABUTMENT NO. 6

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B & O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

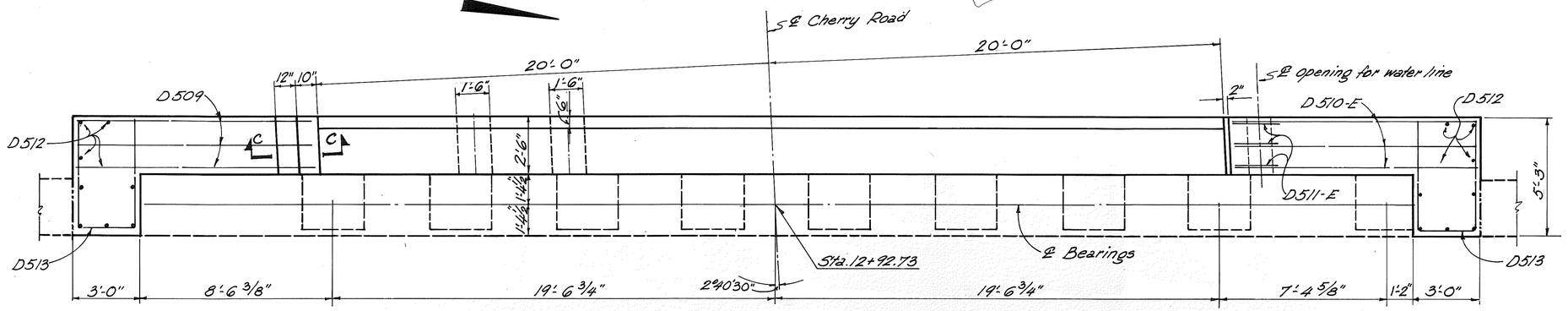
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	GM	CE.	C.A.	6-77	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

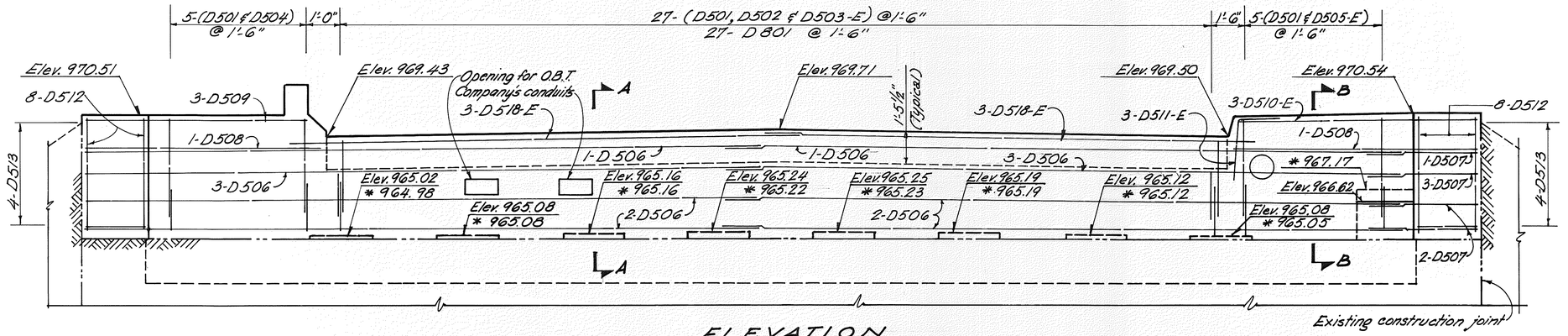
25/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21



PLAN



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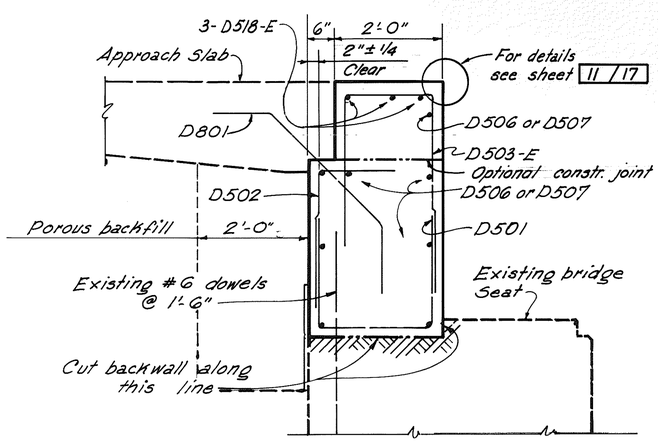
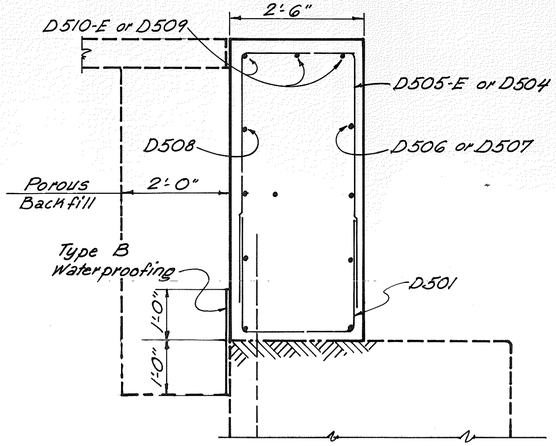
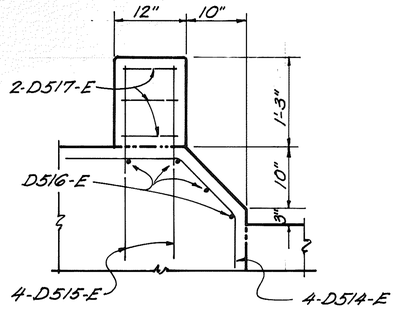


SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

Cut off backwall at existing bridge seat construction joint leaving existing steel dowels and remaining concrete undamaged.

Dowels must be cleaned before concrete for the new backwall could be placed.

* indicates existing bridge seat elevations. After removing bridge deck, contractor shall verify existing bridge seat elevations in field, before ordering steel shims to be placed on bridge seat under rocker masonry plate. Steel shims included with bearings for payment.

Existing bearing anchor bolts shall be carefully removed and holes filled with non-shrinking grout.

For additional notes see Sheet 3/18

6/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

ABUTMENT NO. 10

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER,
CONRAIL AND B&O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	GH	CE.	CE.	6-27-96	

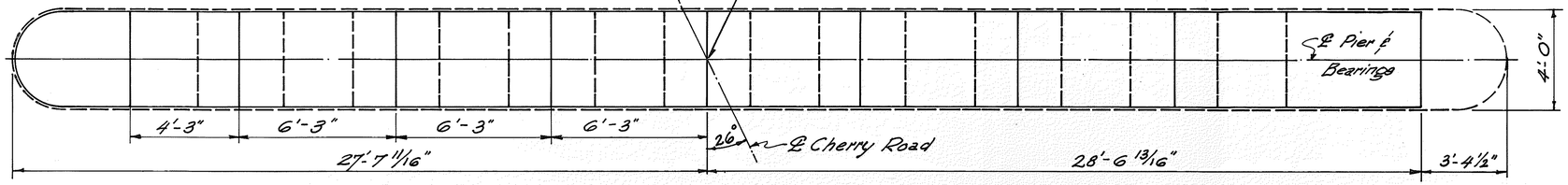
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

26
37

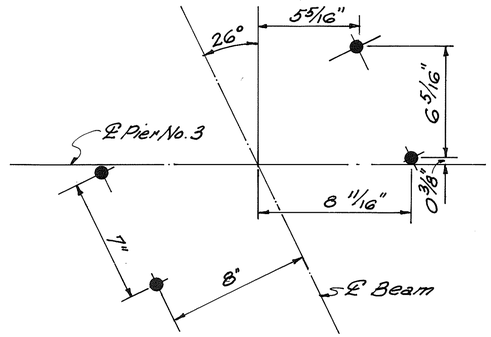
PE-7-20 & PE-7-21

STARK COUNTY
CHERRY ROAD

Sta. 6+80.64 - Pier No.2
Sta. 7+57.14 - Pier No.3
Sta. 8+33.64 - Pier No.4

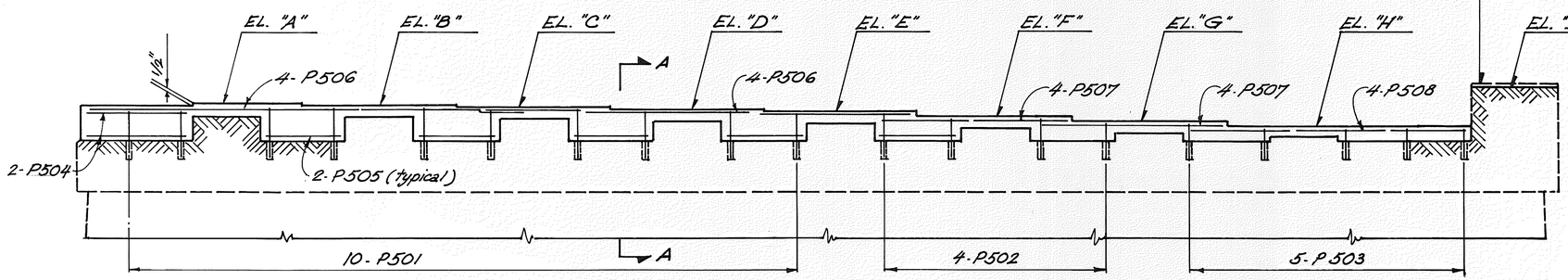


PLAN



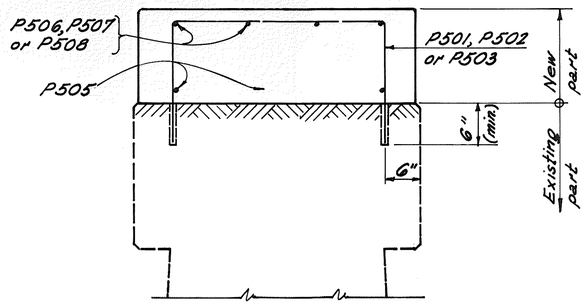
ANCHOR BOLT LAYOUT
AT PIER NO.3

EL. 944.79 - Pier No2
EL. 948.45 - Pier No.3
EL. 952.08 - Pier No.4
(Existing Elevations)



ELEVATION

ELEVATIONS									
	"A"	"B"	"C"	"D"	E	"F"	"G"	"H"	"I"
PIER No.2	943.96	943.90	943.84	943.78	943.66	943.46	943.26	943.06	944.75
PIER No.3	947.59	947.54	947.48	947.42	947.29	947.09	946.89	946.69	948.39
PIER No.4	951.23	951.17	951.11	951.05	950.92	950.72	950.52	950.33	952.02



SECTION A-A

BRIDGE SEAT REINFORCING: Reinforcing steel in the vicinity of the bridge seat shall be accurately placed to avoid interference with the drilling of bearing anchor holes.

Existing bearing anchors shall be cut, where necessary, 2" below finished bridge seat elevation and remaining parts of anchor bolts must be cleaned, except at elevation "I" where anchor bolts shall be carefully removed and holes filled with non-shrinking grout. Grind pedestal down to proposed elevation "I". All labor and materials to perform the above described work shall be paid for by Item 511, Class C concrete in pier caps.

Dowels (P501, P502 & P503) shall be installed and paid for according to Item 510, dowel holes.

Lap # 5 bars 1'-7"

7/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

PIERS NO.2, NO.3 & NO.4

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER,
CONRAIL AND B&O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

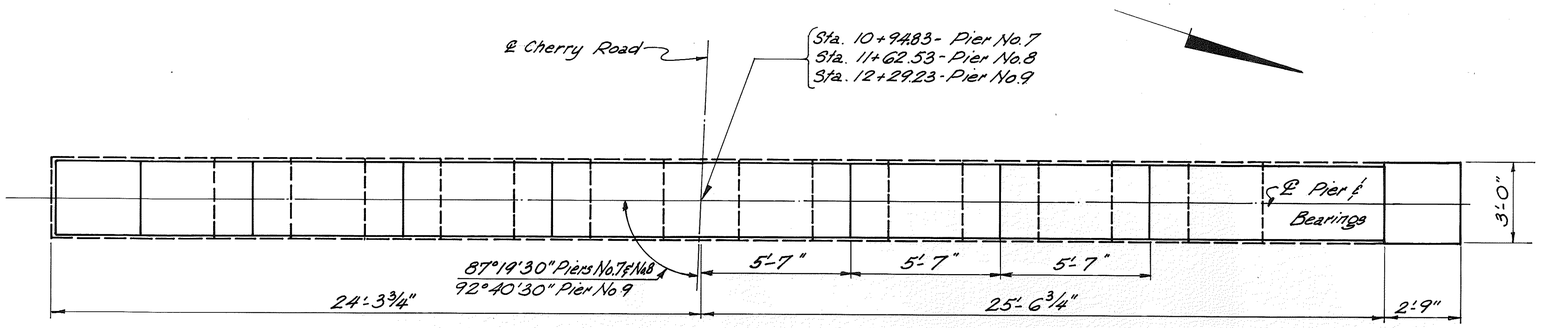
Designed	Traced	Checked	Reviewed	Date	Revised
V. K	GH	EE.	EL	6.27.79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

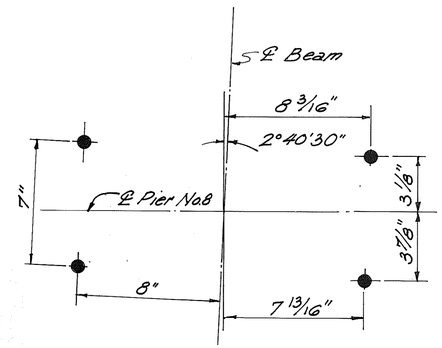
27/37

STARK COUNTY
CHERRY ROAD

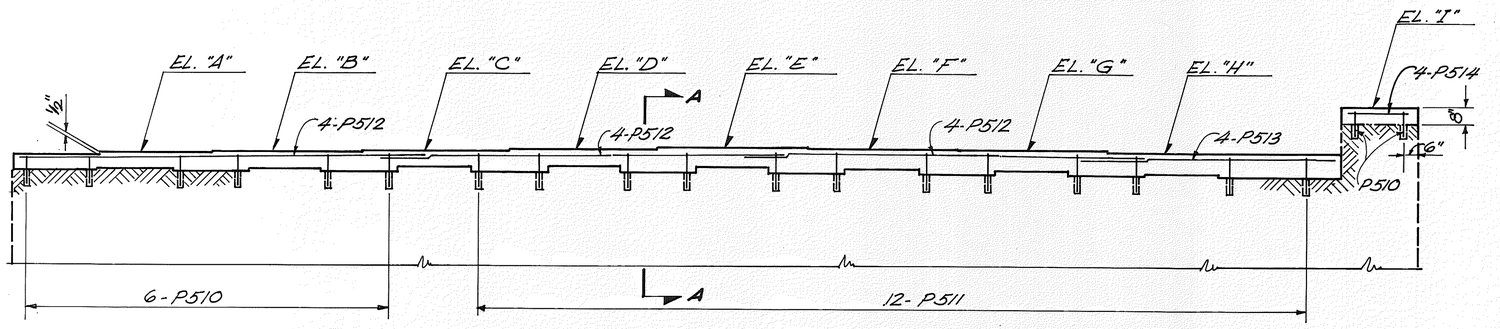
PE-7-20 & PE-7-21



PLAN

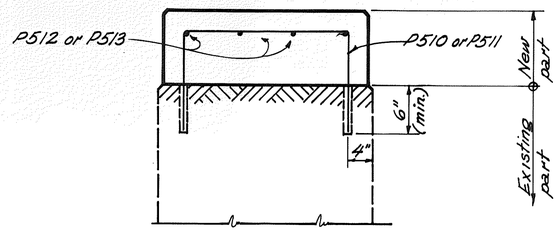


ANCHOR BOLT LAYOUT
AT PIER No.8



ELEVATION

ELEVATIONS									
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"
PIER No.7	963.36	963.43	963.51	963.59	963.61	963.55	963.49	963.45	965.15
PIER No.8	965.77	965.83	965.91	965.98	965.99	965.92	965.86	965.81	967.50
PIER No.9	966.24	966.29	966.36	966.43	966.44	966.37	966.30	966.25	967.94



SECTION A-A

NOTES:

Top part of concrete pedestals, under sidewalk beams, shall be removed to elevations of 8 inches below proposed elevations "I".
Removal shall be performed with sufficient care as to leave the remaining part of the pedestals undamaged and shall have 1" deep sawed edges.

For additional notes see sheet 7/18

8/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0231

PIERS NO. 7, NO. 8 & NO. 9
BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B & O R. R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

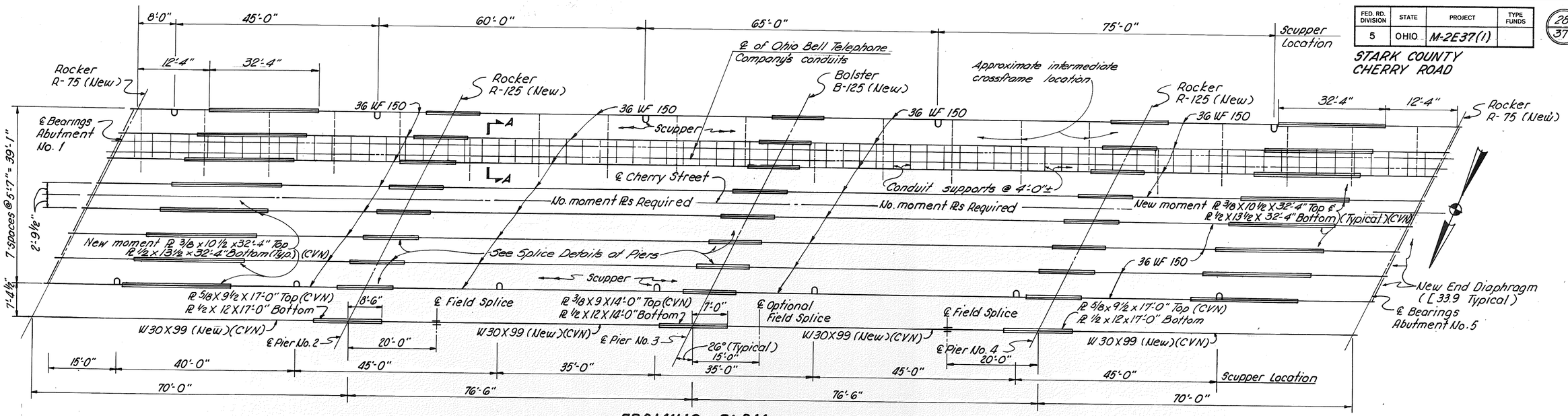
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	G.M.	D.E.	J.M.	6.27.79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

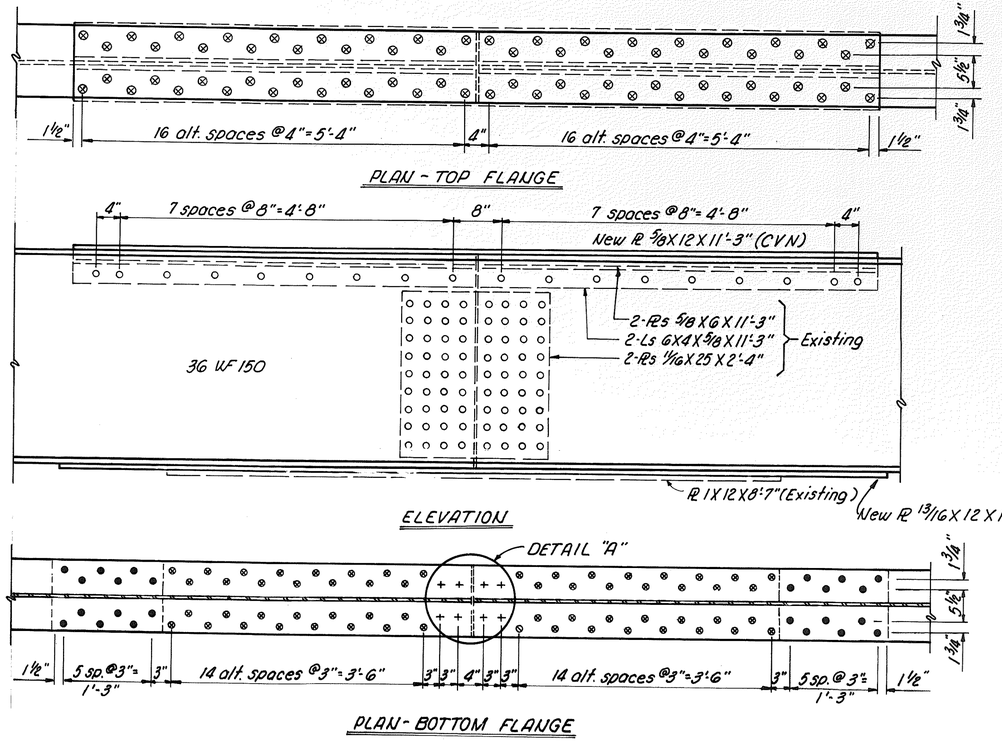
28/37

PE-7-20 & PE-7-21

STARK COUNTY
CHERRY ROAD

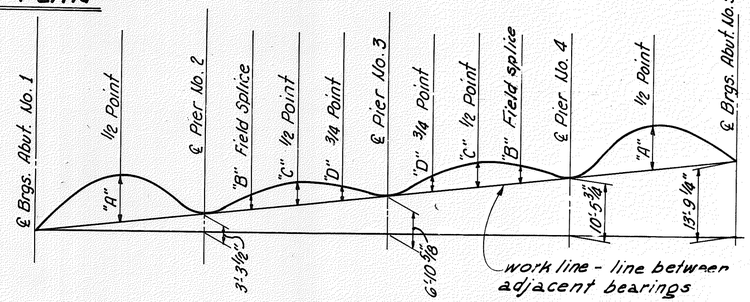


FRAMING PLAN



SPLICE DETAILS AT PIERS

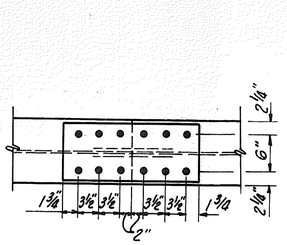
For 36 WF 150

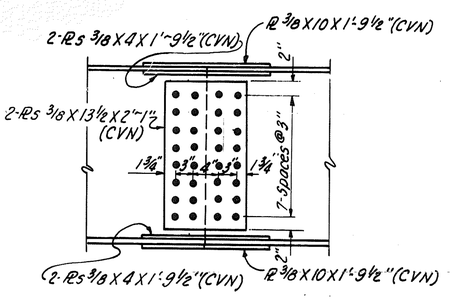


CAMBER AND BLOCKING DIAGRAM

FOR W30X99

	DEFLECTION & CAMBER			
	"A"	"B"	"C"	"D"
Deflection due to weight of steel	7/32"	1/32"	3/32"	1/32"
Deflection due to remaining dead load	1 1/32"	7/32"	13/32"	9/32"
Required shop camber	1 1/4"	1/4"	1/2"	5/16"





F.S. FOR W30X99

For Notes and Detail "A" See Sheet 10/18

NOTES:

Replace existing rockers and bolsters, beams under sidewalk and end diaphragms at each abutment with new ones and provide additional moment plates as shown.

For Ohio Bell Telephone Company's conduit details and section A-A see Sheet 18/18

Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements.

For notes and additional details reference is made to standard drawing SD-1-69.

9/18

ERIKSSON ENGINEERING LIMITED
1993 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0231

FRAMING PLAN

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B & O R. R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

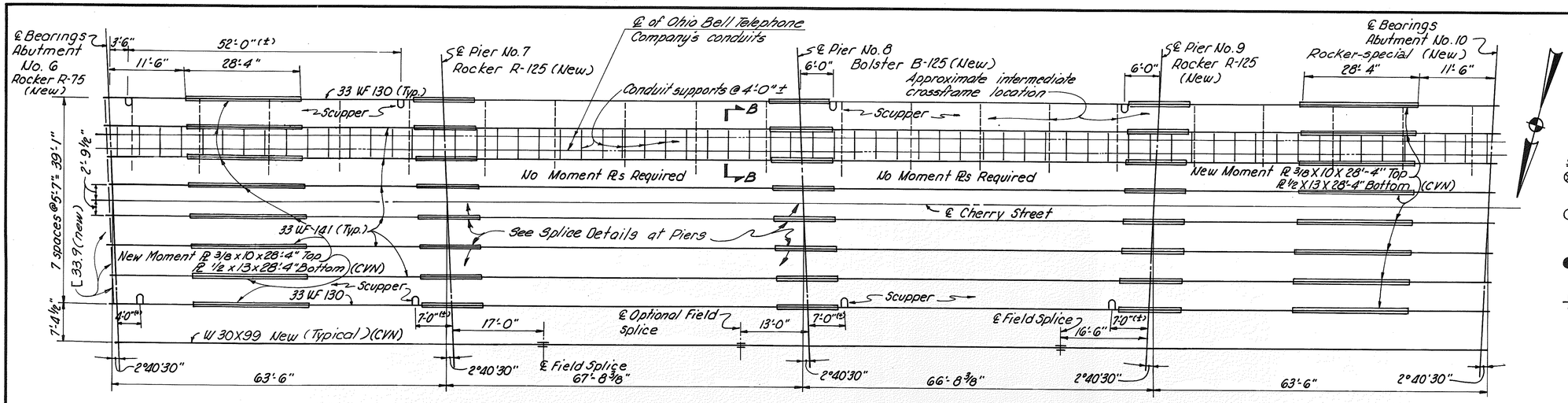
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	J. D.	CE	GBL	4/14/80	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

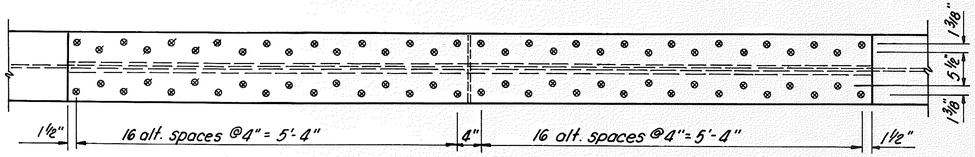
29
37

STARK COUNTY
CHERRY ROAD

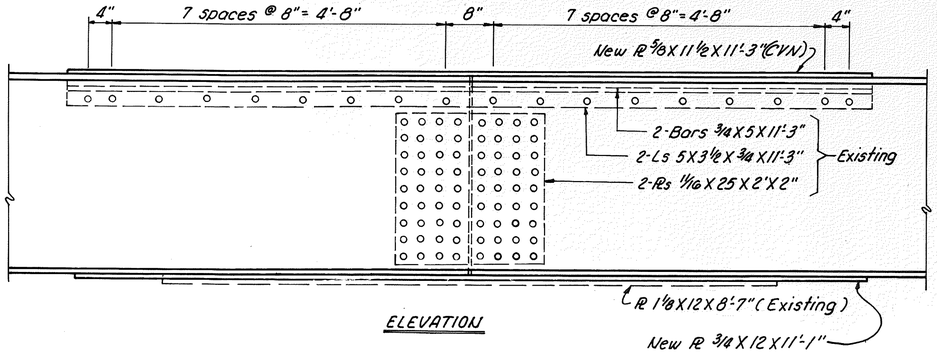
PE-7-20 & PE-7-21



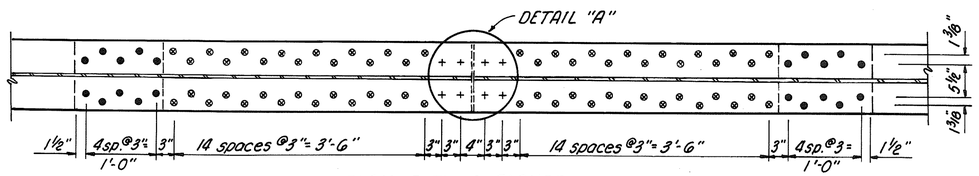
FRAMING PLAN



PLAN - TOP FLANGE



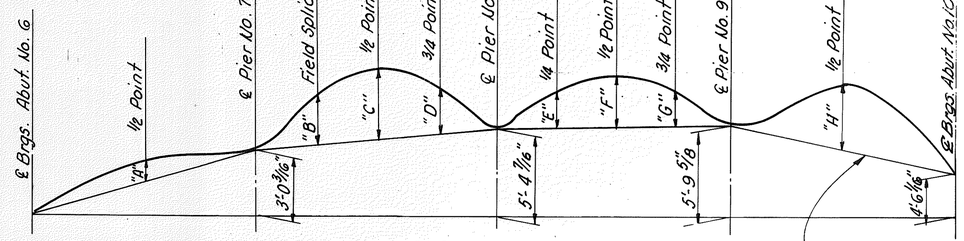
ELEVATION



PLAN - BOTTOM FLANGE

SPLICE DETAILS AT PIERS

For 33 WF 141 & 33 WF 130



CAMBER AND BLOCKING DIAGRAM FOR W 30 X 99

Workline - line between adjacent bearings.

	DEFLECTION & CAMBER							
	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
Deflection due to weight of steel	1/8"	0	1/32"	0	0	0	0	1/8"
Deflection due to remaining dead load	11/16"	1/32"	5/32"	1/32"	-1/32"	1/32"	-1/32"	11/16"
Adjustment required for vertical curve	0	2 3/16"	2 15/16"	2 3/16"	2"	2 5/8"	2"	2 9/16"
Required shop camber	13/16"	2 3/16"	3 1/8"	2 3/16"	2"	2 5/8"	2"	3 3/8"

NOTES

- ⊗ Indicates 7/8" rivets to be replaced by 7/8" diameter, A 325, high strength bolts.
- ○ Indicates 7/8" rivets, shall be checked and loose or damaged ones shall be replaced by high strength bolts.
- ● Provide holes for 7/8" diameter high strength bolts.
- \+ Indicates 15/16" "Turned Bolts" for existing rocker upper shoe connection, bolts shall be removed and holes sealed. See Detail "A"

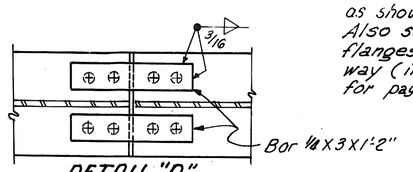
For moment plate details see standard drawing SD-1-69 Sheet No. 3 of 4.

For Ohio Bell Telephone Company's conduit details and Section B-B see Sheet 18/18

Where a shape or plate is designated (CVN) the material shall meet specified minimum notch toughness requirements.

NOTES:

Replaced all rockers and bolsters, beams under sidewalk and end diaphragms of abutments with new ones and provide additional moment plates as shown.
For details of Rocker-special use Standard Drawing RB-1-55. Use tabulated dimensions as shown for R-75, except R = 8 1/4 in. and H = 12 3/8 in.
The upper load plate of all rockers and bolsters shall be beveled to match the roadway grade and the thickness dimension C shall apply at the center of the plate.



DETAIL "A"

After Removing "Turned Bolts" seal holes on top of flange as shown.
Also seal holes in beam bottom flanges at abutments in similar way (included with item 513 for payment).

10/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

FRAMING PLAN
BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B&O R. R.
STARK COUNTY — STA. 6 + 06.84 TO
CITY OF MASSILLON — STA. 12 + 96.11

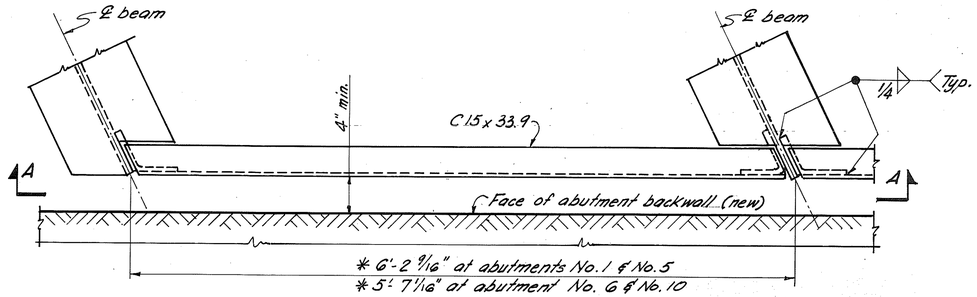
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.					

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

30/37

PE-7-20 & PE-7-21

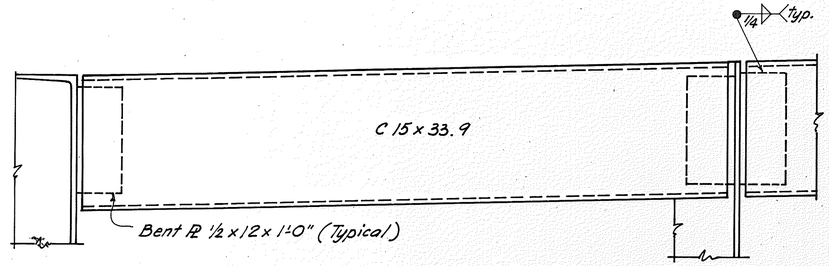
STARK COUNTY
CHERRY ROAD



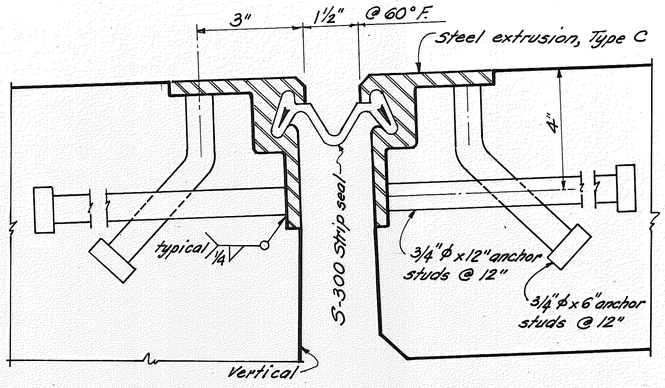
TYPICAL PLAN OF END DIAPHRAGMS

NOTES:

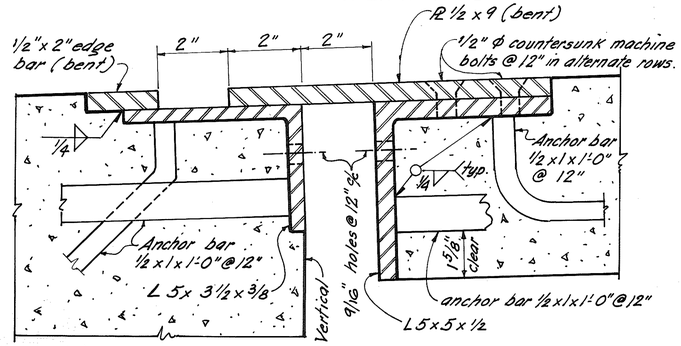
- Provide new end diaphragms (C15x33.9) at all four abutments.
- Cut beam ends, where required, to provide 4" min. clearance between beam ends and abutment backwall.
- * Dimensions should be verified in field before diaphragms are cut.



VIEW A-A

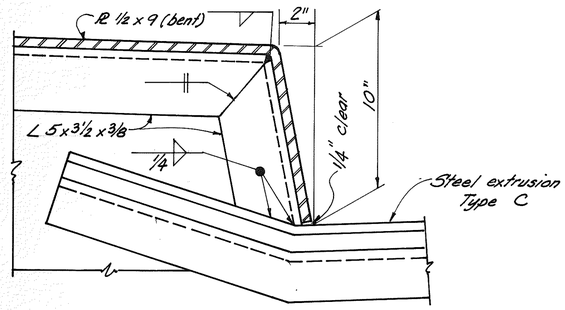


SECTION B-B

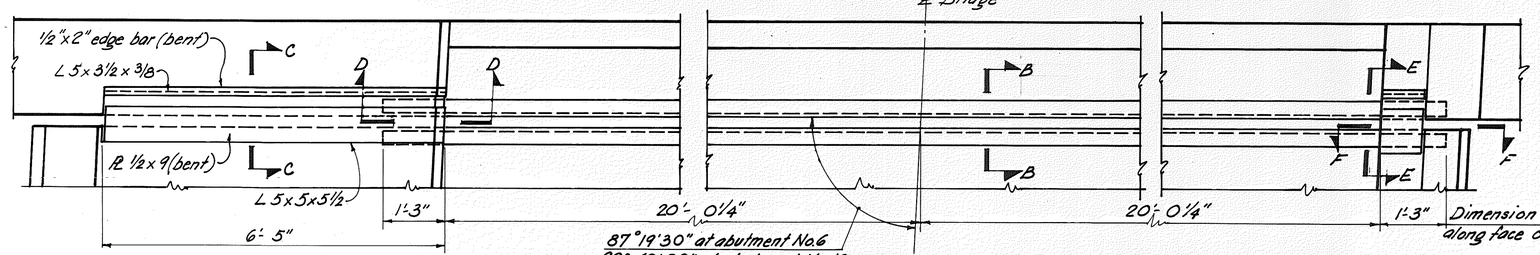


ABUTMENT SIDEWALK

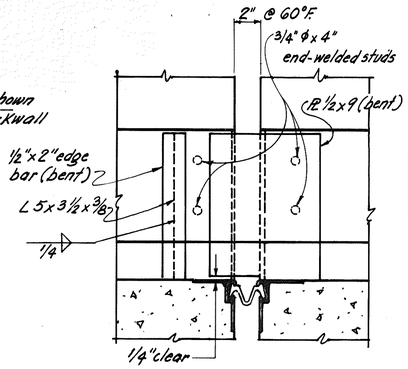
SECTION C-C



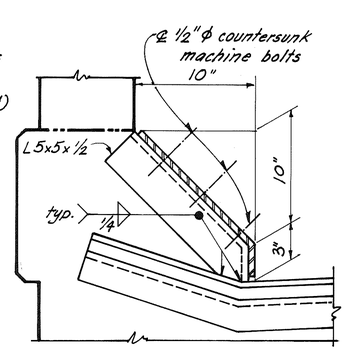
SECTION D-D



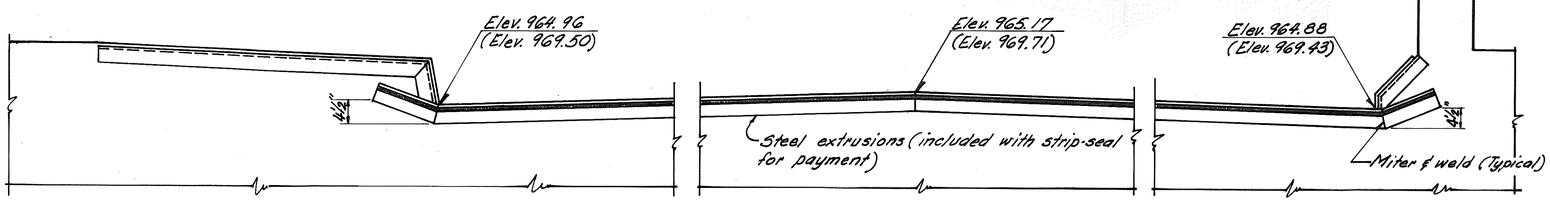
PART PLAN - EXPANSION DAM AT ABUTMENTS NO.6 & NO.10



VIEW E-E



SECTION F-F



BACKWALL ELEVATION

NOTES:

- Use strip seals S-300 and type C steel extrusions as manufactured by ACME or WABO-MAURER or approved alternate.
- Elevations shown in ( ) are for abutment No.10 only.

11/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0231

SUPERSTRUCTURE DETAILS

CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B&O R.R.
STARK COUNTY STA. 6+06.84 TO
CITY OF MASSILLON STA.12+96.11

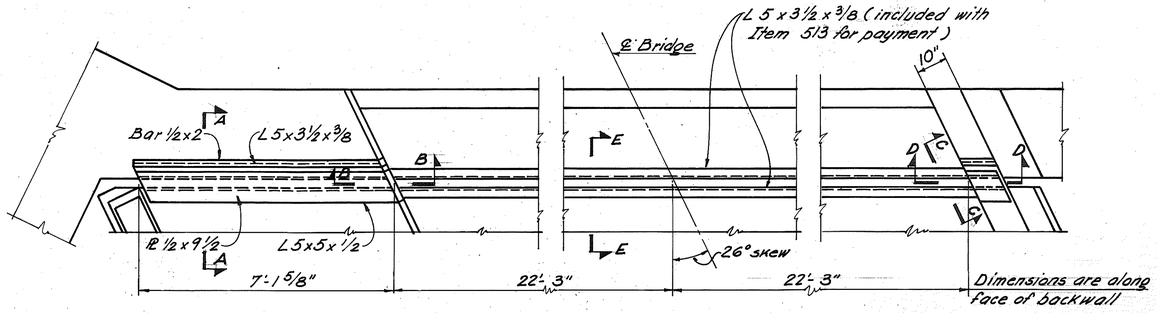
Designed	Traced	Checked	Reviewed	Date	Revised
V.K.	GM	LE	[illegible]	6-27-79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

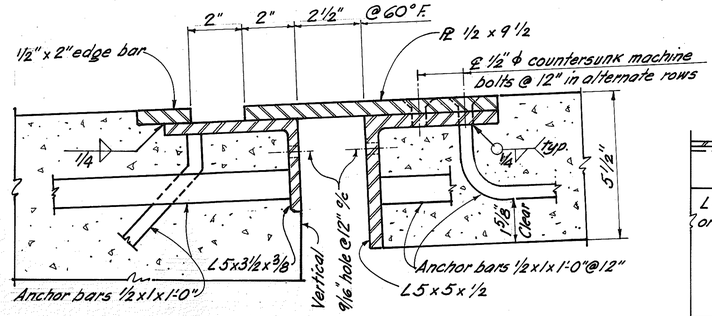
31/37

PE-7-20 & PE-7-21

STARK COUNTY
CHERRY ROAD

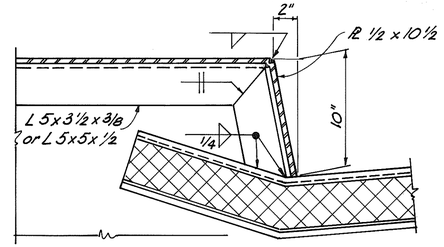


PART PLAN-EXPANSION DAM AT ABUTMENT NO.1

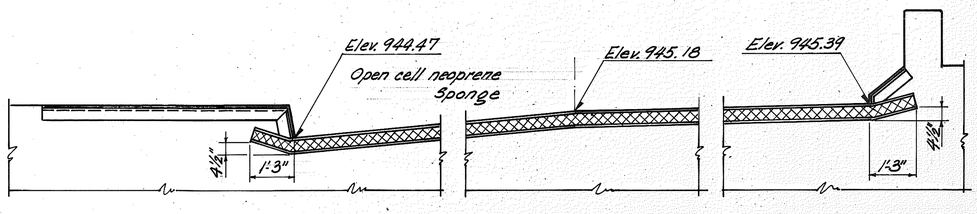


ABUTMENT SIDEWALK

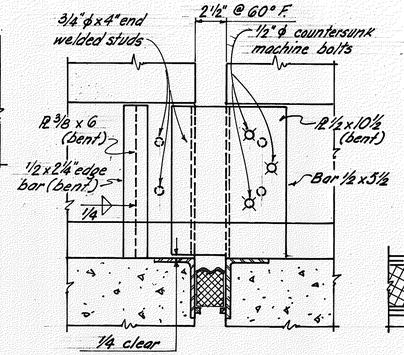
SECTION A-A



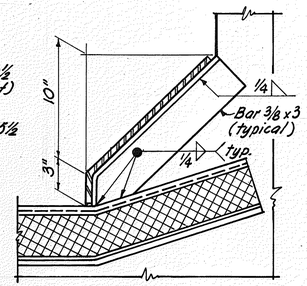
SECTION B-B



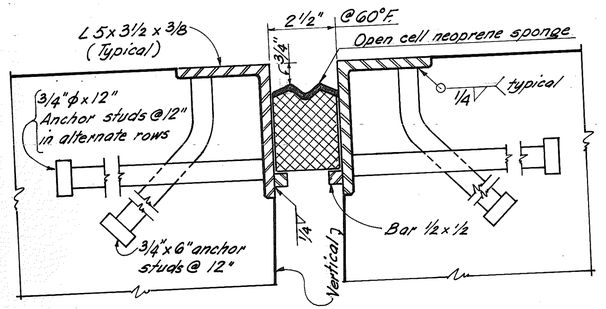
BACKWALL ELEVATION



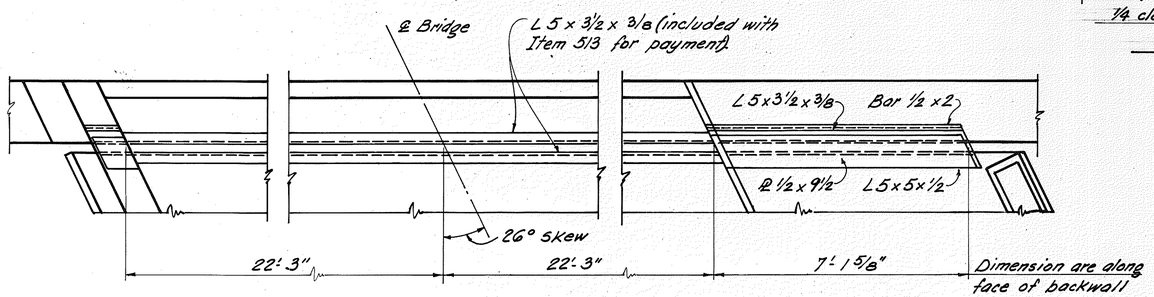
VIEW C-C



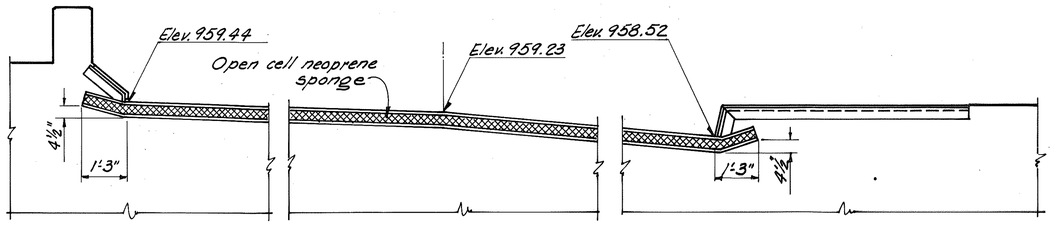
SECTION D-D



SECTION E-E



PART PLAN - EXPANSION DAM AT ABUTMENT NO.5



BACKWALL ELEVATION

12/18

ERIKSSON ENGINEERING LIMITED

1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0791

SUPERSTRUCTURE DETAILS

CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B&O R.R.

STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON

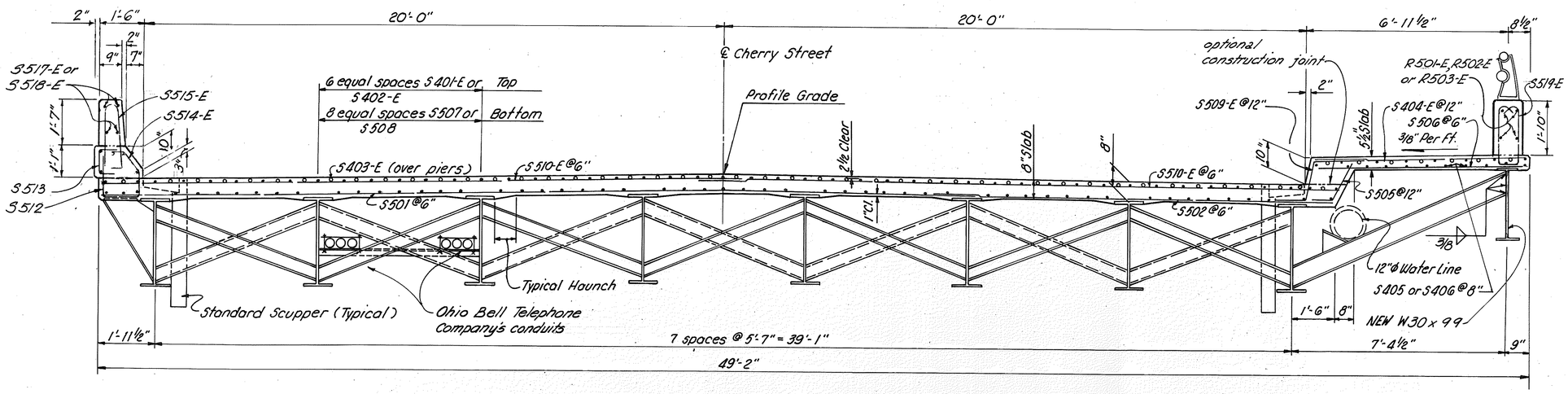
Designed	Traced	Checked	Reviewed	Date	Revised
V.K.	CY	CG	[illegible]	6-17-19	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

32/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21



TRANSVERSE SECTION

DECK SLAB DEPTH: The distance shown from top of deck slab to top of steel beam is the design dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

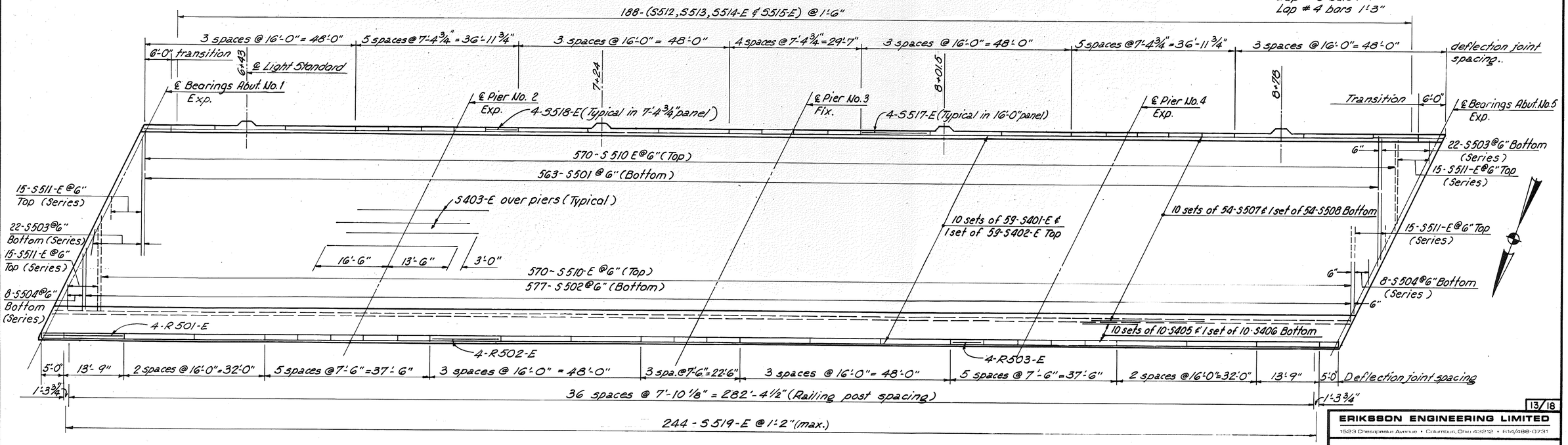
A HAUNCH WIDTH of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" to 12" (provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.)

SCUPPERS shall be in accordance with Standard Drawing SD-1-69 except that scupper pipes shall extend 8" below the bottom of the beams instead of 2".

All reinforcing bars in top mat of deck, curb and sidewalk shall be epoxy coated.

For Railing details See Sheet 15

Lap # 5 bars 1'-7"
Lap # 4 bars 1'-3"



DECK PLAN

For "Light Standard" details See sheet 15/18 and 1/18 for location.

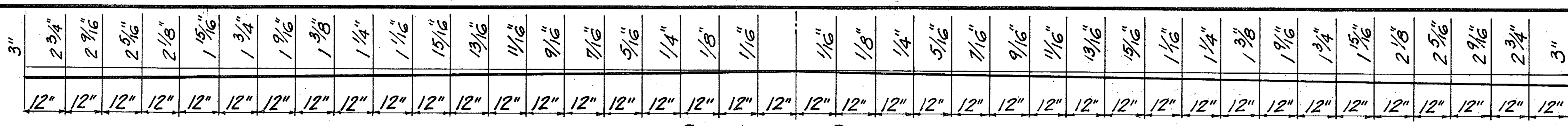
13/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

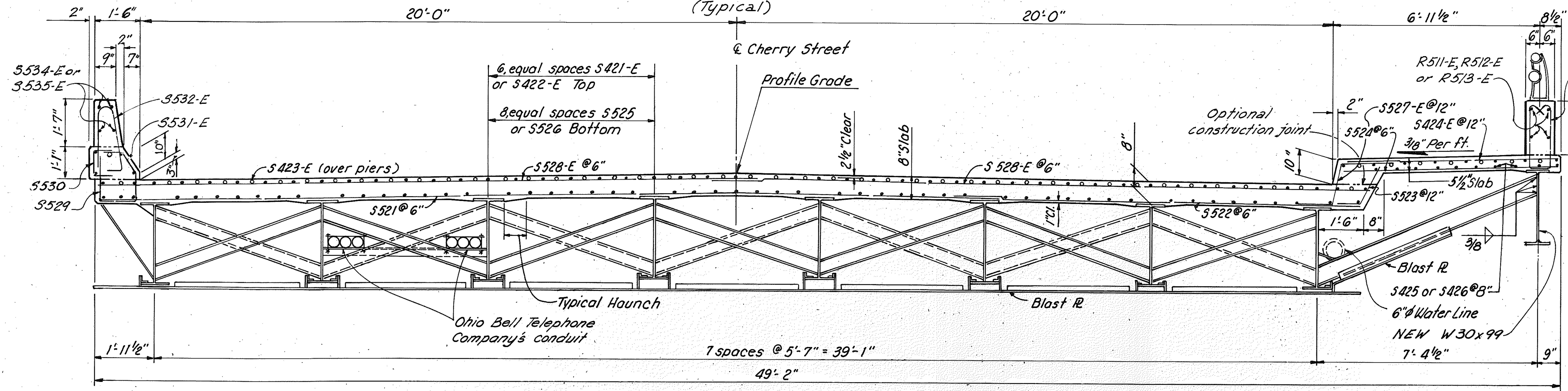
SUPERSTRUCTURE DETAILS

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B&O R. R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

Designed	Traced	Checked	Reviewed	Date	Revised
V.K.	GY	CE.	VK	6-27-79	



CROWN OF ROADWAY
(Typical)



TRANSVERSE SECTION

DECK SLAB DEPTH, The distance shown from top of deck slab of steel beam is the design dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to finished grade.

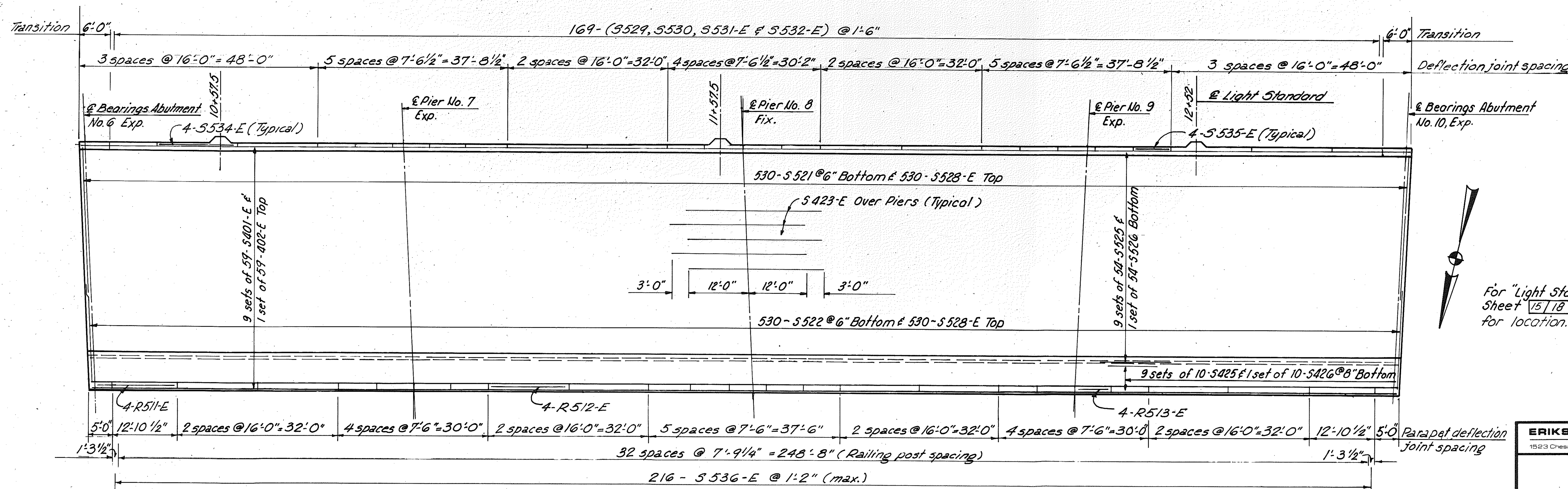
A HAUNCH WIDTH of 9" shall be used for computing quantity of concrete, however, the haunch width may vary between 6" and 12" (provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.)

Remove "Blast Plates" in span No. 4 to provide place for moment plates at beam bottom flanges. (All "Blast Plates" shall be removed permanently.)
All reinforcing bars in top mat of deck, curb and sidewalk shall be epoxy coated.

For Railing details See Sheet 15/18

Lap #5 bars 1'-7"

Lap #4 bars 1'-3"



DECK PLAN

For "Light Standard" details See Sheet 15/18 and sheet 1/18 for location.

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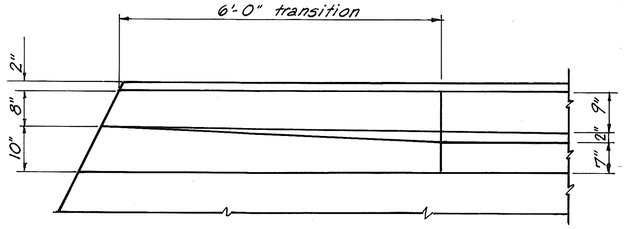
ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

SUPERSTRUCTURE DETAILS

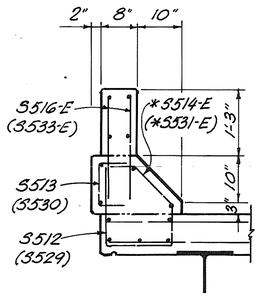
BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER,
CONRAIL AND B&O R. R.

STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

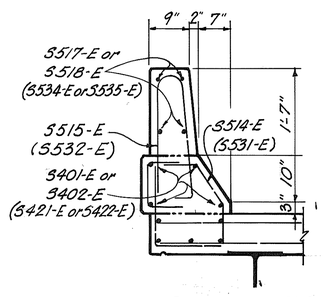
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	GM	CE	[illegible]	6.27 79	



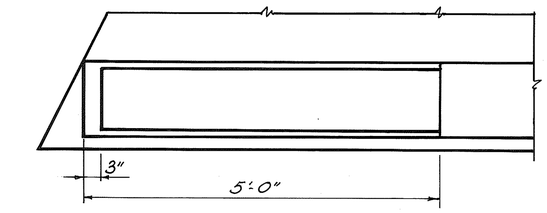
PART PLAN OF DEFLECTOR PARAPET TRANSITION



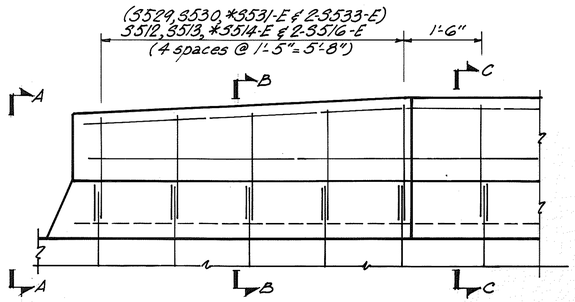
END VIEW A-A



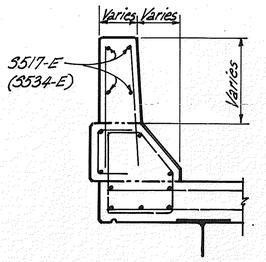
SECTION C-C



PLAN OF END POST



ELEVATION



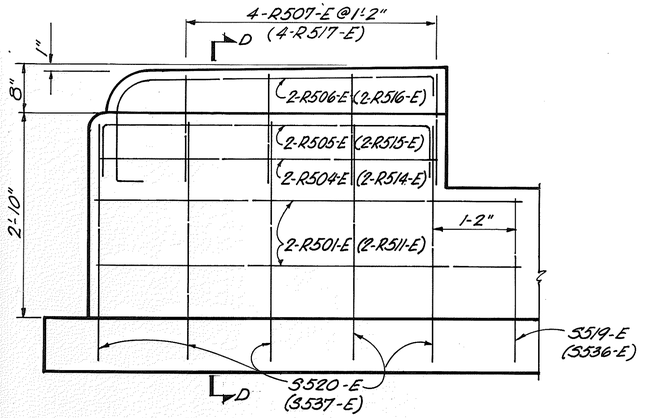
SECTION B-B

NOTES:

Deflector parapet and sidewalk railing details are typical for both bridges, except reinforcing steel shown in( ) are for "WEST SPANS" only.

*Adjust reinforcing bar in field where necessary.

For additional details of railings and notes, reference is made to Standard Drawings BR-1 and BR-2-67.

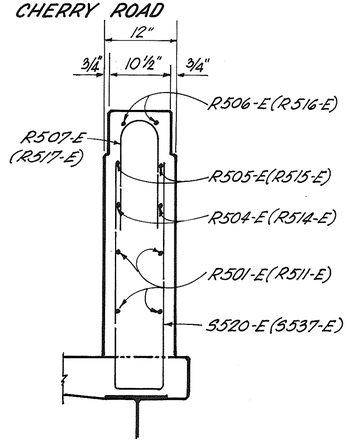


ELEVATION

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

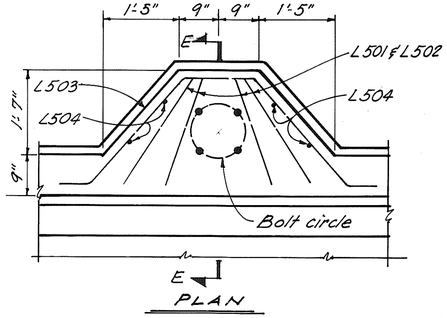
34/37

STARK COUNTY
CHERRY ROAD

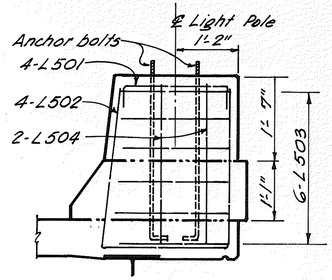


SECTION D-D

SIDEWALK RAILING DETAILS

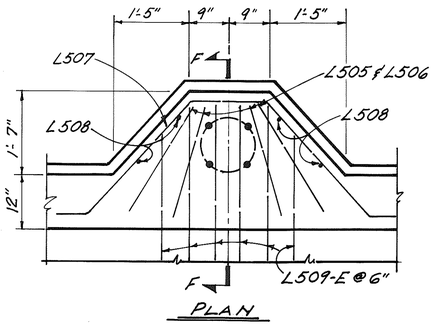


PLAN

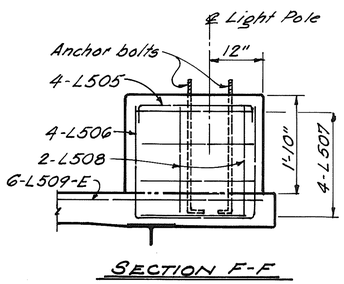


SECTION E-E

LIGHT POLE PILASTER AT DEFLECTOR PARAPET



PLAN



SECTION F-F

LIGHT POLE PILASTER AT SIDEWALK PARAPET

SCREED ELEVATIONS

"RIVER SPANS"					"WEST SPANS"				
LOCATION	20 Ft. LEFT		20 Ft. RIGHT		LOCATION	20 Ft. LEFT		20 Ft. RIGHT	
	STATIONS	ELEVATIONS	STATIONS	ELEVATIONS		STATIONS	ELEVATIONS	STATIONS	ELEVATIONS
Abutment No.1	6+20.39	945.47	6+00.89	944.54	Abutment No.6	10+30.40	964.94	10+32.26	965.03
1/4 Point	6+37.89	946.34	6+18.39	945.41	1/4 Point	10+46.28	965.73	10+48.14	965.82
1/2 Point	6+55.39	947.18	6+35.89	946.25	1/2 Point	10+62.15	966.49	10+64.01	966.58
3/4 Point	6+72.89	947.99	6+53.39	947.06	3/4 Point	10+78.02	967.23	10+79.88	967.31
PIER No.2	6+90.39	948.79	6+70.89	947.87	PIER No.7	10+93.90	967.96	10+95.76	968.05
1/4 Point	7+09.52	949.71	6+90.02	948.79	1/4 Point	11+10.82	968.75	11+12.68	968.83
1/2 Point	7+28.64	950.63	7+09.14	949.71	1/2 Point	11+27.75	969.42	11+29.61	969.49
3/4 Point	7+47.76	951.53	7+28.26	950.61	3/4 Point	11+44.67	969.96	11+46.53	970.01
PIER No.3	7+66.89	952.43	7+47.39	951.50	PIER No.8	11+61.60	970.37	11+63.46	970.41
1/4 Point	7+86.02	953.35	7+66.52	952.42	1/4 Point	11+78.74	970.68	11+79.67	970.70
1/2 Point	8+05.14	954.27	7+85.64	953.34	1/2 Point	11+95.88	970.87	11+95.87	970.87
3/4 Point	8+24.26	955.16	8+04.76	954.24	3/4 Point	12+13.03	970.91	12+12.08	970.91
PIER No.4	8+43.39	956.06	8+23.89	955.13	PIER No.9	12+30.17	970.83	12+28.29	971.85
1/4 Point	8+60.89	956.92	8+41.39	955.99	1/4 Point	12+46.04	970.67	12+44.16	970.70
1/2 Point	8+78.39	957.77	8+58.89	956.84	1/2 Point	12+61.92	970.41	12+60.04	970.45
3/4 Point	8+95.89	958.59	8+76.39	957.67	3/4 Point	12+77.79	970.01	12+75.91	970.06
Abutment No.5	9+13.39	959.39	8+93.89	958.46	Abutment No.10	12+93.67	969.48	12+91.79	969.54

DECK SCREED ELEVATIONS shown are the control elevations to which the screeds must be set. The proper allowance for the anticipated deflection due to weight of concrete deck, curb and sidewalk has been added.

15/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

SUPERSTRUCTURE DETAILS
BRIDGES NO. PE7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B&O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

Designed	Traced	Checked	Reviewed	Date	Revised
V.K.	GY	CR.	BB.	6.27.79	

PE-7-20 & PE-7-21

REINFORCING STEEL LIST

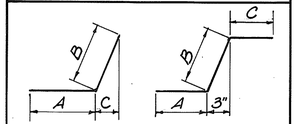
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

35/37

STARK COUNTY
CHERRY ROAD

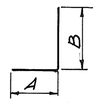
PE-7-20 & PE-7-21

BENDING DIAGRAM

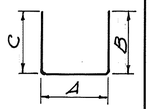


TYPE 1

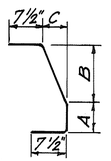
TYPE 2



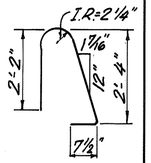
TYPE 3



TYPE 4



TYPE 5



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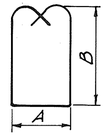
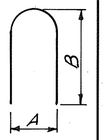
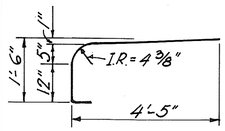


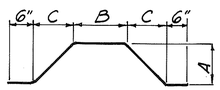
TYPE 7



TYPE 8



TYPE 9



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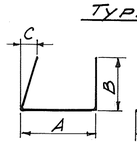
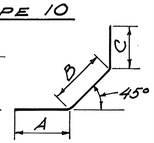
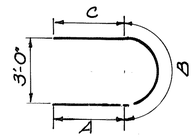


TYPE 11



TYPE 12



TYPE 13

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	REMARKS
			RIVER SPANS					
			ABUTMENT No. 1					
A501	84	5-7	489	4	2-2	1-10	1-10	
A502	28	30-0	876	5				
A503	14	13-0	190	5				
A504	40	6-7	275	4	2-2	2-4	2-4	
A505	30	4-0	125	3	1-5	2-9		
A506-E	30	8-6	266	4	1-8	4-4	2-9	
A507-E	4	10-7	44	4	2-2	4-4	4-4	
A507	6	12-11	81	4	2-2	5-6	5-6	
A508	8	5-2	43	5				
A509	9	6-3	59	5				
A510-E	4	25-0	104	3				
A511	4	10-0	42	4	2-8	3-9½	3-9½	
A511-E	1	10-0	10	4	2-8	3-9½	3-9½	
A512	4	7-6	31	3	2-7½	5-0		
A512-E	1	7-6	8	3	2-7½	5-0		
A513-E	3	8-6	27	5				
A514-E	3	4-5	14	3	2-0	2-7		
A515	5	10-0	52	4	2-3	4-0	4-0	
A516	5	5-10	30	3	3-0	3-0		
A517	3	11-0	34	5				
A518-E	4	6-0	25	12	3-0	1-0	2-0	
A519-E	8	2-6	21	5				
A520-E	4	2-6	10	3				
A521-E	6	4-5	28	4	0-8	2-0	2-0	
A522	84	1-6	131	5				
A801	27	5-0	360	12	1-0	3-0	1-0	
		TOTAL	3375 Lbs. (557 Lbs. epoxy coated)					
			ABUTMENT No. 5					
B501	60	5-10 to 4-4	318	4	2-1	2-0 to 1-3	2-0 to 1-3	3 sets of 20, vary "B" & "C" by 4½"
B502	2	9-0	19	5				
B503	14	3-3	47	5				
B504	26	30-0	814	5				
B505	7	5-0	37	5				
B506	3	5-5	17	3	3-0	2-6		
B507	5	2-3	12	5				
B508	7	9-6	69	5				
B509-E	4	25-0	104	5				
B510	2	8-6	18	5				
B511-E	2	11-0	23	5				
B512-E	2	5-0	10	3	2-7	2-7		
B513	45	3-8	172	3	1-0	2-10		
B514-E	45	7-8	360	4	0-11	4-3	2-9	
B515	10	12-0	125	4	1-5	5-5	5-5	
B516-E	7	11-6	84	4	1-5	5-2	5-2	
B517-E	5	8-6	44	4	1-5	3-8	3-8	
B518	4	3-6 to 5-3	18	5				2 sets of 2, vary by 1'-9"
B519	8	8-5	70	4	0-8	4-0	4-0	
B520	4	1-9 to 3-6	11	5				2 sets of 2, vary by 1'-9"
B521-E	3	6-0	19	12	3-0	1-0	2-0	
B522-E	6	2-6	16	5				
B523-E	4	1-7	7	5				
B524-E	6	3-0	19	4	0-8	1-3½	1-3½	
B525	44	1-6	69	5				
B801	27	5-0	360	12	1-0	3-0	1-0	
		TOTAL	2862 Lbs. (686 Lbs. epoxy coated)					
			PIERS No. 2, No. 3 & No. 4					
P501	30	6-1 to 5-7	183	4	3-0	1-8 to 1-5	1-8 to 1-5	5 sets of 6, vary B & C by 3/4"
P502	12	5-3 to 4-9	125	4	3-0	1-3 to 1-0	1-3 to 1-0	2 sets of 6, vary B & C by 3"
P503	15	4-3	66	4	3-0	0-9	0-9	
P504	6	8-9	55	13	2-0	4-9	2-0	
P505	30	3-3	102	5				
P506	24	17-0	426	5				
P507	24	8-0	200	5				
P508	12	11-0	138	5				
		TOTAL	1,295 Lbs.					

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	REMARKS
			SUPERSTRUCTURE					
S401-E	590	30-0	11824	3				
S402-E	59	7-6	296	5				
S403-E	159	30-0	3186	3				
S404-E	296	7-2	1417	3				
S405	100	30-0	2004	3				
S406	10	7-6	50	3				
S501	563	30-0	17616	3				
S502	577	14-0	8425	3				
S503	44	8-0 to 24-0	849	3				2 sets of 22, vary by 12"
S404	16	6-0 to 13-0	159	3				2 sets of 8 vary by 12"
S505	295	2-6	769	1	1-0	1-6	0-9	
S506	590	7-2	4410	3				
S507	540	30-0	16897	3				
S508	54	11-0	620	3				
S509-E	295	4-0	1231	2	0-8	1-3½	2-3	
S510-E	1140	22-6	26753	3				
S511-E	60	7-0 to 21-0	876	5				4 sets of 15, vary by 12"
S512	198	2-0	413	3	0-7½	1-6		
S513	198	1-9	361	4	0-9	0-7½	0-7½	
S514-E	198	2-9	568	5	0-9	0-10	0-7	
S515-E	188	5-3	1029	6				
S516-E	20	2-0 to 2-4	45	5				4 sets of 5, vary by 1"
S517-E	48	15-8	784	3				
S518-E	56	7-1	414	3				
S519-E	244	5-9	1463	7	0-8	2-3		
S520-E	10	7-9	81	7	0-8	3-3		
L501	8	3-0	25	4	2-0	0-7½	0-7½	
L502	8	8-1	67	11	2-4	3-0	0-4	
L503	12	7-3	91	10	1-10	1-4	1-10	
L504	8	3-1	26	5				
L505	12	3-0	38	4	2-1	0-7	0-7	
L506	12	6-0	75	4	2-1	2-1	2-1	
L507	12	8-0	100	10	2-1	1-4	1-10	
L508	12	2-1	26	3				
L509-E	18	5-0	94	3				
R501-E	8	18-5	—	3				
R502-E	40	15-8	—	3				
R503-E	52	7-2	—	3				Included with railing for payment.
R504-E	4	4-8	—	3				
R505-E	4	6-5	—	4	4-8	1-0	1-0	
R506-E	4	6-7	—	9				
R507-E	8	3-3	—	8	0-6½	1-6		
		TOTAL	103,082 Lbs. (50,061 Lbs. Epoxy coated)					

NOTES

Refer to C.M.S. sections 106.03, 700, 709.01 through 709.05 and 709.08. Sufficient additional reinforcing steel shall be provided for sampling. Random samples shall be replaced in the structures by the additional steel, spliced in accordance with 509.08.

In bar mark with letter "E" indicated reinforcing bar shall be epoxy coated.

Dimensions shown are out to out.

16/18

ERIKSSON ENGINEERING LIMITED
[illegible] Georgesville Road • Columbus, Ohio 43228 • 614/488-0391

REINFORCING STEEL LIST
BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER,
CONRAIL AND B & O R. R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	G. M.	C.F.	[illegible]	6-27-79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

36/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	REMARKS
			WEST SPANS					
			ABUTMENT No.6					
C501	72	3-6	263	4	2-1	0-10	0-10	
C502	19	30-0	595	5				
C503	7	25-6	186	5				
C504-E	2	8-6	18	3				
C505-E	2	4-5	9	3	2-0	2-7		
C506-E	4	23-0	96	5				
C507	4	8-0	33	3				
C508	41	3-5	146	3	1-0	2-7		
C509-E	41	7-5	317	4	0-11	4-0	2-9	
C510-E	4	7-11	33	4	1-4	3-5	3-5	
C511-E	6	10-9	67	4	1-4	4-10	4-10	
C512	9	11-1	104	4	1-4	5-0	5-0	
C513	4	1-6 to 3-3	10	3				2 sets of 2, vary by 1'-9"
C514	7	8-5	61	4	0-8	4-0	4-0	
C515	4	3-0 to 4-9	16	5				2 sets of 2, vary by 1'-9"
C516-E	3	6-0	19	12	3-0	1-0	2-0	
C517-E	6	2-6	16	8				
C518-E	4	1-5	6	3				
C519-E	6	3-0	19	4	0-8	1-3½	1-3½	
C520	6	2-3	14	8				
C521	72	1-6	113	5				
C801	27	5-0	360	12	1-0	3-0	1-0	
		TOTAL	2501	Lbs. (600 Lbs. epoxy coated)				
			ABUTMENT No. 10					
D501	37	6-0	232	4	2-2	2-0½	2-0½	
D502	27	3-9	106	3	1-5	2-7		
D503-E	27	8-2	230	4	1-8	4-0	2-9	
D504	5	11-7	60	4	2-2	4-10	4-10	
D505-E	5	11-7	60	4	2-2	4-10	4-10	
D506	16	30-0	301	8				
D507	8	5-0	42	5				
D508	2	10-6	22	5				
D509	3	9-10	31	5				
D510-E	3	10-8	33	3				
D511-E	3	4-5	14	3	2-0	2-7		
D512	16	5-5	90	5				
D513	8	12-3	102	4	2-8	4-11	4-11	
D514-E	4	6-0	25	12	3-0	1-0	2-0	
D515-E	8	2-6	21	5				
D516-E	4	2-2	9	5				
D517-E	6	4-0	25	4	0-8	1-9½	1-9½	
D518-E	6	23-0	144	5				
D801	27	5-0	360	12	1-0	3-0	1-0	
		TOTAL	2107	Lbs. (561 Lbs. epoxy coated)				
			PIERS No.7, No.8 & No.9					
P510	24	3-11	98	4	2-4	0-11	0-11	
P511	36	4-5	166	4	2-4	1-2	1-2	
P512	36	15-0	563	5				
P513	12	10-0	125	5				
P514	12	2-6	31	5				
		TOTAL	983	Lbs.				

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	REMARKS
			SUPERSTRUCTURE					
S421-E	531	30-0	10641	5				
S422-E	59	6-6	256	5				
S423-E	156	27-0	2814	5				
S424-E	266	7-2	1273	5				
S425	90	30-0	1804	3				
S426	10	6-6	43	3				
S521	530	30-0	16584	5				
S522	530	14-0	7739	5				
S523	265	2-6	691	1	1-0	1-6	0-9	
S524	530	7-2	3962	3				
S525	486	30-0	15207	3				
S526	54	10-0	563	3				
S527-E	265	4-0	1106	2	0-8	1-3½	2-3	
S528-E	1060	22-6	24876	3				
S529	179	2-0	373	3	0-7½	1-6		
S530	179	1-9	327	4	0-9	0-7½	0-7½	
S531-E	179	2-9	513	5	0-9	0-10	0-7	
S532-E	169	5-3	925	6				
S533-E	20	2-0 to 2-4	45	3				4 sets of 5, vary by 1"
S534-E	40	15-8	654	3				
S535-E	56	7-3	423	3				
S536-E	216	5-9	1295	7	0-8	2-3		
S537-E	10	7-9	81	7	0-8	3-3		
L501	4	3-0	13	4	2-0	0-7½	0-7½	
L502	4	8-1	34	11	2-4	3-0	0-4	
L503	6	7-3	45	10	1-10	1-4	1-10	
L504	4	3-1	13	5				
L505	8	3-0	25	4	2-1	0-7	0-7	
L506	8	6-0	50	4	2-1	2-1	2-1	
L507	8	8-0	67	10	2-1	1-4	1-10	
L508	8	2-1	17	5				
L509-E	12	5-0	63	8				
R511-E	8	17-6	—	5				
R512-E	32	15-8	—	5				
R513-E	52	7-2	—	5				
R514-E	4	4-8	—	5				* Included with railing for payment.
R515-E	4	6-5	—	4	4-8	1-0	1-0	
R516-E	4	6-7	—	9				
R517-E	8	3-3	—	8	0-6½	1-6		
		TOTAL	92,522	Lbs. (44,965 Lbs. epoxy coated)				

For Bending Diagram see sheet 16/18

17/18

ERIKSSON ENGINEERING LIMITED
[illegible] Olentangy River Road • Columbus, Ohio 43212 • (614) 488-0211

REINFORCING STEEL LIST

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER,
CONRAIL AND B&O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

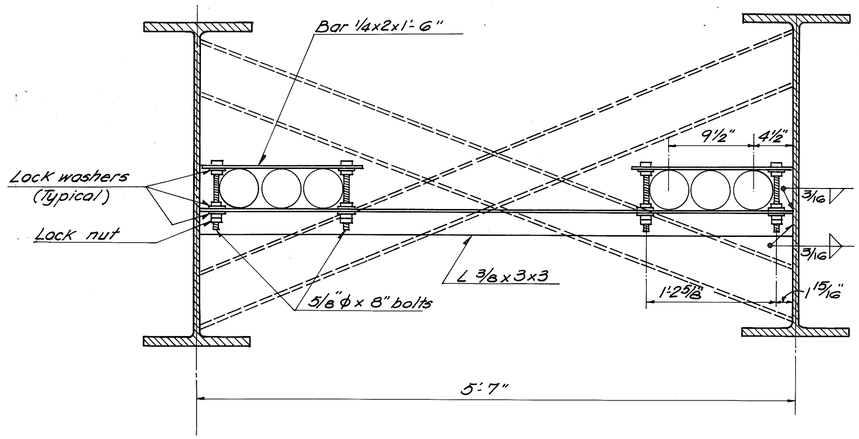
Designed	Drawn	Checked	Reviewed	Date	Revised
V.K.	G.M.	CE	V.K.	6-27-79	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5	OHIO	M-2E37(1)	

37/37

STARK COUNTY
CHERRY ROAD

PE-7-20 & PE-7-21



SECTION A-A
(Setion B-B similar)

NOTES:

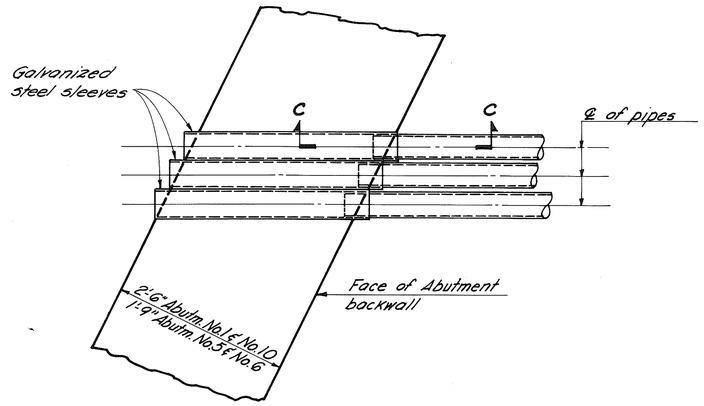
Ohio Bell Telephone company will furnish the conduit ducts (electro-galvanized 4"ID rigid steel pipes)

Steel sleeves, support angles, bars and bolts with accessories, all shall be galvanized, must be supplied by the contractor.

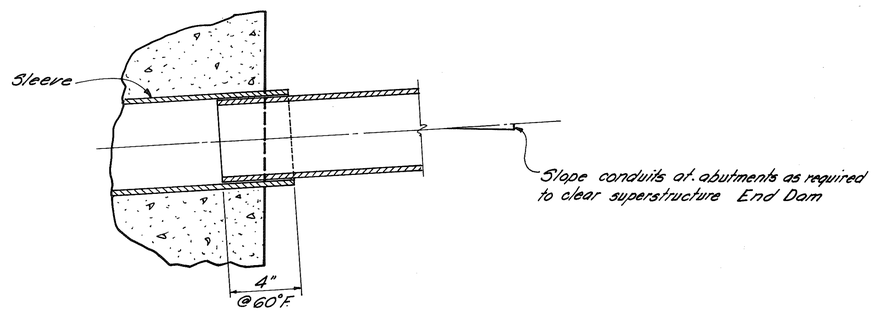
The contractor shall install the conduits according to details shown and for all this work and materials he will be paid for as item special by Ohio Bell Telephone Co.

After installing the conduits the voids in the backwall openings shall be carefully filled with grout and sealed at the backface of the backwalls to provide a watertight conduit penetration.

For location of section A-A see sheet 9/18 and for Section B-B sheet 10/18



PART PLAN AT ABUTMENT NO. 1
(at abutments No. 5, No. 6 & No. 10 details are similar)



SECTION C-C

CONDUIT EXPANSION DETAILS

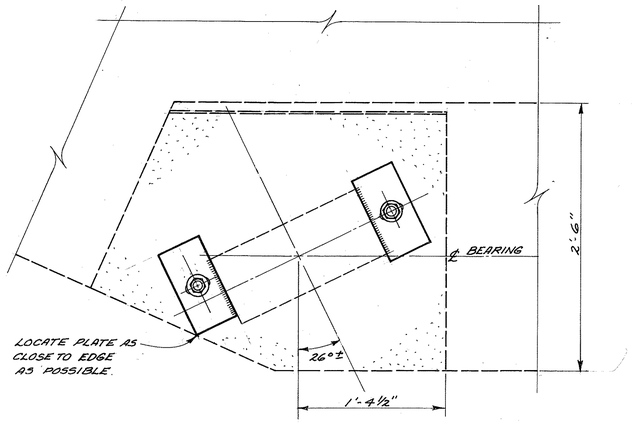
18/18

ERIKSSON ENGINEERING LIMITED
1523 Chesapeake Avenue • Columbus, Ohio 43212 • 614/488-0731

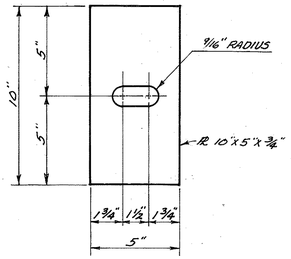
O. B. T. DETAILS

BRIDGES NO. PE 7-20 & PE 7-21
CHERRY ROAD OVER TUSCARAWAS RIVER,
CONRAIL AND B & O R.R.
STARK COUNTY — STA. 6+06.84 TO
CITY OF MASSILLON — STA. 12+96.11

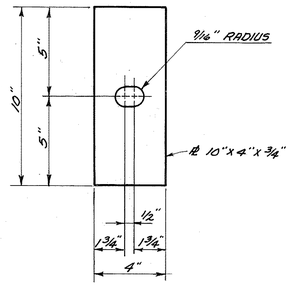
Designed	Traced	Checked	Reviewed	Date	Revised
V. K.	G. M.	CE	[illegible]	4/16/80	



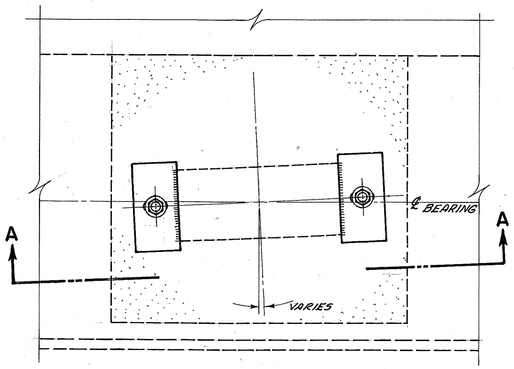
EAST BRIDGE ABUTMENT
(RIVER STRUCTURE) N.E. CORNER
SCALE: 1½" = 1'-0"



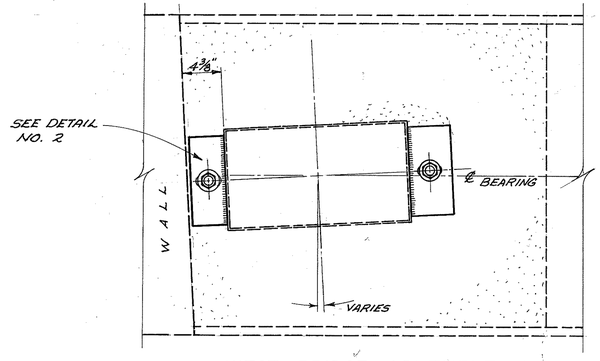
DETAIL NO. 1
TYPICAL RETAINER PLATE
SCALE: 3" = 1'-0"
143 REQD.



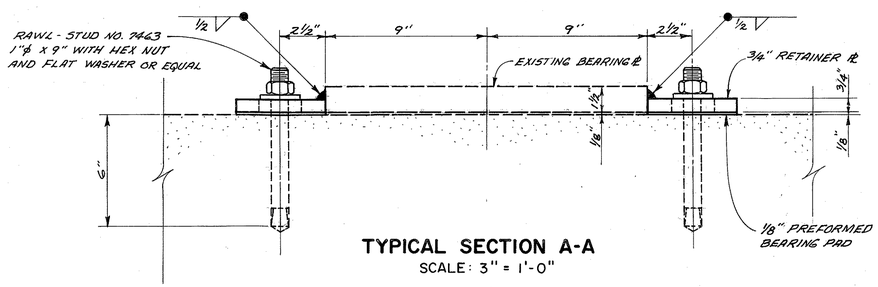
DETAIL NO. 2
RETAINER PLATE
SCALE: 3" = 1'-0"
1 REQD.



TYPICAL ALL ABUTMENTS AND
PIERS UNLESS OTHERWISE SHOWN
SCALE: 1½" = 1'-0"



WEST BRIDGE ABUTMENT
(RAILROAD STRUCTURE) N.W. CORNER
SCALE: 1½" = 1'-0"



TYPICAL SECTION A-A
SCALE: 3" = 1'-0"

1981 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

NOTES

1. SHOP COAT ALL PLATES WITH STRUCTURAL STEEL PRIME PAINT TO COMPLY WITH FSS TT-P-615 TYPE II. FINISH COAT WITH CORROSION RESISTANT GRAY FINISH PAINT. TOUCH UP ALL WELDED AREAS WITH THE ABOVE PRINTS AFTER REMOVING ALL SLAG AND CLEANING SURFACES.
2. POSITION ALL ROCKERS ACCORDING TO SPECIFICATIONS. ADJUST BEARING PLATES AS REQUIRED.
3. LOCATE RETAINER PLATES SNUG AGAINST EDGE OF EXISTING BEARING PLATES. TORQUE NUTS TIGHTLY BEFORE WELDING.
4. NO WORK REQUIRED AT CENTER PIERS (FIXED BEARING)

ESTIMATED QUANTITIES

ITEM	UNIT	DESCRIPTION	BRIDGE PE-7-20 "RIVER SPANS"			BRIDGE PE-7-21 "RAILROAD SPANS"			GRAND TOTAL
			TOTAL	ABUT.	PIERS	TOTAL	ABUT.	PIERS	
510	LIN. FT.	DOWEL HOLES	36	18	18	36	18	18	72
516	LBS.	¾" BEARING PLATE RETAINER	766	383	383	764	381	383	1530
516	SQ. FT.	⅛" PREFORMED BEARING PAD	25	12.5	12.5	25	12.5	12.5	50
516	LUMP	ALIGN ROCKERS	LUMP			LUMP			LUMP
516	EA.	ANCHOR BOLT WITH NUT AND FLAT WASHER	72	36	36	72	36	36	144

STARK COUNTY, OHIO

BEARING PLATE MODIFICATION

BRIDGES NO. PE-7-20 AND PE-7-21
CHERRY ROAD OVER TUSCARAWAS RIVER, CONRAIL AND B. & O. RAILROAD MASSILLON, OHIO

DESIGNED	DRAWN	CHECKED	F. B.	P.	REVISED	DATE
	J.R.B.					NOV., 1982
H.L.B.						NOV., 1982

PE-7-20 & PE-7-21