MICROFILMED

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
MOT - 70 - 6.49
CITY OF ENGLEWOOD
CLAY, RANDOLPH & BUTLER TOWNSHIPS
MONTGOMERY COUNTY

NOTE: The S.L.M. designation this project was adjusted from 6.53 to 6.49 as a result of the F.A.O.C. Subsequent designations shown this project at 6.53/11.02 shall be construed to be 6.49

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.49

1/219

DESIGN DESIGNATION

Current	ADT (1988)	= 27370
Design Year	ADT (2008)	= 35560
DHV		= 3558
D		= 55%
T		= 20%
Design Speed		= 70 m.p.h.
Legal Speed		= 65/55 m.p.h.
Functional Classification		= Interstate

Design Exceptions: Struct. Capacity, SSD, Superelev., Bridge Parapet Approved: 7-26-88 By: FHWA

CONVENTIONAL SIGNS

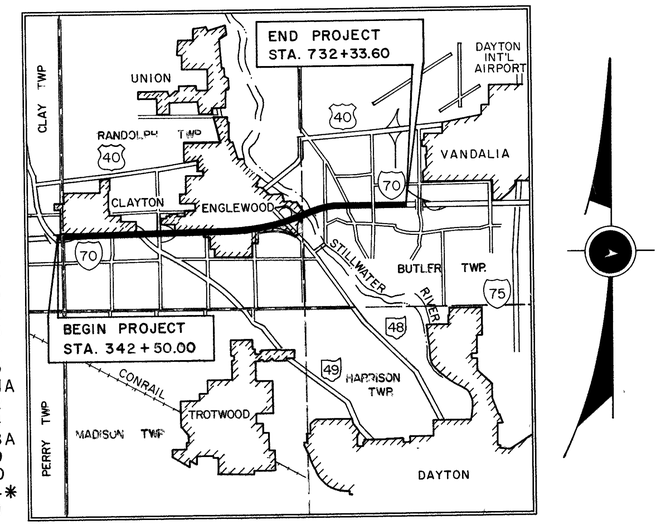
County Line
Township Line
Section Line
Corporation Line
Fence Line (existing) —x— (proposed) —x—
Center Line 105 100
Utility Poles: Telephone ○ Power ○ Light ○

Limited Access (only)
Right of Way (only)
Limited Access & Right of Way
Existing Right of Way
Property Line (in existing fence)
Railroad
Guardrail (existing) (proposed)
Underdrains (existing) (proposed)

INDEX OF SHEETS

+ Includes Sheet Nos 16A & 18A
* Includes Sheet Nos 145A, 153A, 156A, 156B, 163A, 170A, 170B, 170C, 170D, 173A, 173B, 176A, 183A, 198A, 213A, 213B, 213C & 213D

SHEET NUMBERS 178-180 NOT USED
SHEET NUMBERS 101 & 141 NOT USED



LOCATION MAP

SCALE IN MILES
0 1 2 3 4 5

LINE DATA

Begin Project Sta 342+50.00
End Project Sta. 732+33.60
= 38983.60 L.F.

Station Equation
Sta. 670+38.63 Back =
Sta 668+97.77 Ahead
(+) 140.86 L.F.

LENGTH OF PROJECT = 39124.46 L.F.
or 7.410 Mi.

BEGIN WORK STA. 341+25.00
END WORK STA. 733+88.60
= 39263.60 L.F.

STATION EQUATION
STA. 670+38.63 BACK
STA. 668+97.77 AHEAD (+) 140.86 L.F.
= 39404.46 L.F.

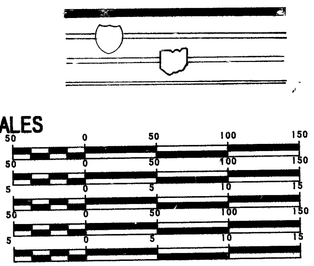
Add For Work

Diamond Mill Rd.	Sta. 49+70.00	to Sta	55+45.00	575.00 L.F.
Kimmel Rd.	Sta. 48+93.00	to Sta.	53+40.00	447.00 L.F.
Crestway Dr.	Sta. 47+72.00	to Sta	52+10.00	438.00 L.F.
N.B. S.R. 49	Sta. 127+58.00	to Sta	155+00.00	2742.00 L.F.
S.B. S.R. 49	Sta. 129+95.00	to Sta.	139+00.00	905.00 L.F.
Hoke Rd.	Sta. 48+95.00	to Sta.	62+85.00	1390.00 L.F.
Union Rd.	Sta. 53+90.00	to Sta.	65+85.00	1195.00 L.F.
S.R. 48	Sta 307+40.00	to Sta.	312+00.00	460.00 L.F.
Dog Leg Rd.	Sta. 5+50.00	to Sta.	17+42.00	1192.00 L.F.
				9344.00 L.F.
				39404.46 L.F.
Length Of Work =				48748.46 L.F.
			OR	9.233 Mi.

Portion to be Improved
Federal Roads
State Roads
Other Roads

SCALES

Plan
Profile: Horizontal
Profile: Vertical
Cross Sections: Horizontal
Cross Sections: Vertical



PREPARED BY
WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45404

Project MOT-70-6.49
Date of Letting Contract No. IR-70-1(45)24

IR-70-1(45)24

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (I) OF THE REVISED CODE OF OHIO, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1991 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 not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved G. Kenneth Capella, P.E.
Date 8/22/88 District Deputy Director of Transportation

Approved B. D. Hamilton
Date 5-24-90 Engineer, Bureau of Bridges and Structural Design

Approved Kenneth M. Miller
Date 3-14-91 Chief Engineer, Planning and Design

Approved Jerry Wray
Date 3-14-91 Director, Department of Transportation

SUPPLEMENTAL SPECIFICATIONS			
√ 802	4-13-90	√ 944	6-24-89
√			
√ 845	5-31-88	√ 952	12-14-88
√		√ 953	8-21-80
√ 852	6-10-87	√ 931	6-18-85
		√ 933	2-10-87
√		√ 923	1-10-69
√ 940	6-10-87		
√ 942	11-27-89		

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE
NON MEMBERS MUST BE CALLED DIRECTLY

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

Division Administrator Date

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

√ AS-1-81	√ 1-27-81	F-5	√ 5-1-76	GR-6	√ 2-5-82	RB-1-55	√ 2-2-59	TC-41.40	√ 6-18-79	MT-99.10	√ 11-14-86	√ MT-98.12	√ 8-25-89						
√ BP-3	√ 12-6-76	F-6	√ 5-1-76	BP-2	√ 1-11-85	SD-1-69	√ 6-12-69	TC-41.50	√ 3-26-79	MT-99.20	√ 4-29-88			√ MT-102.20	√ 8-25-89				
√ BP-5	√ 10-1-87	GR-1	√ 1-11-85	HL-50.11	√ 5-1-87	TC-7.65	√ 3-1-79	TC-42.10	√ 8-19-77	TC-35.10	√ 8-29-84	√ MT-98.13	√ 8-25-89						
√ BP-6	√ 10-1-87	GR-2B	√ 2-5-82	HW-4B	√ 4-1-80	TC-18.24	√ 4-25-79	TC-42.20	√ 3-26-79	CB-5	√ 11-10-83	√ MT-98.14	√ 8-25-89	HL-30.11	√ 5-1-87				
√ BP-4	√ 10-1-87	GR-8	√ 10-25-90	MC-4	√ 7-26-76	TC-18.26	√ 5-31-79	TC-51.10	√ 1-20-84	MH-1	√ 12-18-84			HL-30.21	√ 5-1-87				
√ BP-13	√ 1-23-90	GR-3	√ 10-25-90	MC-11	√ 8-1-78	TC-21.10	√ 1-20-84	TC-51.11	√ 1-20-84	BR-1	√ 5-29-79	√ MT-98.15	√ 8-25-89	HL-30.22	√ 5-1-87				
√ DBR-2-73	√ 4-10-73			MC-7	√ 10-15-76	TC-22.20	√ 3-1-79	TC-52.10	√ 4-3-79	EXJ-3-82	√ 8-1-84	√ MT-95.30	√ 10-10-88						
√ F-1	√ 11-10-83	GR-4	√ 2-5-82	MC-9	√ 1-30-84	TC-31.21	√ 3-6-79	TC-52.20	√ 4-3-79	EXJ-4-87	√ 1-5-89								
√ F-2	√ 5-1-76	GR-4A	√ 1-30-84	MC-9A	√ 1-11-85	TC-41.10	√ 8-29-84	TC-61.10	√ 4-5-82	VPF-1-90	√ 5-24-90	√ MT-102.10	√ 8-25-89						
√ F-3	√ 5-1-76	GR-5	√ 2-5-82	HW-4A	√ 4-1-80	TC-41.20	√ 3-26-79	TC-72.20	√ 2-26-82	SF-7	√ 10-1-87								

F.H.W.A REGION	STATE	PROJECT	
5	OHIO		

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MOT-70-6.53/11.02

SCHEMATIC PLAN

1200 0 1200 2400 3600
GRAPHIC SCALE IN FEET

BEGIN PROJECT
Sta. 342+50.00
S.L.M. 6.49
IR-70-1(43) 13
IR-70-1(45)24
BEGIN WORK
STA. 341+25
Curve Data
P.I Sta 360+92.57
Δ= 3°31'30"
D= 0°30'
R= 11,459.16
L= 352.61
T= 705.00
Curve Data
P.I. Sta 403+23.22
Δ= 7°50'00"
D= 0°40'00"
R= 8594.37
L= 1157.00
T= 588.42
BRIDGE Nº MOT-70-0821
STA 431+65.77 I.R. 70=
STA 138+15.96 N.B. S.R. 49
BEGIN WORK
STA 127+58 N.B.
END WORK
STA 52+10
PLEASANT PLAIN ROAD
Clayton
BRIDGE Nº
MOT-70-0719
L/R N. FORK
WOLF CREEK
END WORK
STA 53+40
END WORK
STA. 155+00 N.B.
CLINTON ST
End Work
Sta 55+45
BEGIN WORK
STA 48+93
BEGIN WORK
STA. 47+72
END WORK
Sta. 139+00 S.B.
BEGIN WORK
STA 129+55 S.B.
Begin Work
Sta 49+70
BRIDGE Nº
MOT-70-0672 L/R
RAZOR RUN
DIAMOND MILL
KIMMEL ROAD
DRIVE
HOKE
WASTLER ROAD
KIMMEL ROAD
CRESTWAY
S87°06'19"E
N85°03'41"E
S88°44'55"E
N86°51'05"E
N69°55'50"E
N74°32'50"E
S89°36'50"E
340
360
400
450
500
550
590
650
700
730
BRIDGE Nº MOT-70-0759
STA. 398+96.63 IR 70=
STA. 49+90.92
CRESTWAY DRIVE
Curve Data
P.I Sta 439+88.01
Δ= 6°11'24"
D= 1°00'
R= 5729.58
L= 619.00
T= 309.80
BRIDGE Nº MOT-70-0662
Sta 347+48.69 I.R. 70=
Sta 53+00.12 DIAMOND MILL ROAD
WENGER ROAD
BRIDGE Nº MOT-70-0859
STA 452+00.00 IR 70=
STA 55+71.89 HOKE ROAD
END WORK
STA 62+85
RAMP "B"
RAMP "A"
BRIDGE Nº MOT-70-0962
Sta. 505+89.26 I.R. 70=
Sta 59+89.15 UNION ROAD
BEGIN WORK
STA 48+85
S.R. 49
OLD SALEM ROAD
US 40
S.R. 48
UNION ROAD
Englewood
Curve Data
P.I Sta 532+88.37
Δ= 4°24'00"
D= 0°33'00"
R= 11,459.16
L= 880.00
T= 440.22
Curve Data
P.I Sta 567+63.08
Δ= 16°55'15"
D= 1°00'
R= 5729.58
L= 1692.08
T= 852.25
END WORK
STA 65+85
BEGIN WORK
STA 53+80
PC. STA
550+10.83
TAYWOOD ROAD
BRIDGE Nº MOT-70-10.62
Sta 559+10.40 I.R. 70=
Sta 50+89.50 TAYWOOD ROAD
BRIDGE Nº
MOT-70-11.30 L/R
Sta 595+35.08 I.R. 70=
Sta 309+61.27 S.R. 48
BRIDGE Nº
MOT-70-1192 L/R
END WORK
STA 312+00
BEGIN WORK
STA. 307+40
P.T. Sta.
607+56.45
PC STA.
598+32.12
STILLWATER
RIVER
HEATHCLIFF ROAD
Curve Data
P.I Sta. 602+95.04
Δ= 4°37'00"
D= 0°30'
R= 11,459.16
T= 461.92
L= 923.33
BRIDGE Nº MOT-70-1219 L/R
Sta. 642+37.48 I.R. 70=
Sta 50+00.00 MEEKER ROAD
MEEKER ROAD
FREDERICK PIKE
BRIDGE Nº
MOT-70-1297 L/R
Sta 667+49.20
I.R. 70=
Sta 50+00.00
Frederick Pike
END WORK
STA 51+20
BEGIN WORK
STA 48+75
KINMONT RD.
STATION EQUATION
PT Sta 670+38.63 (Back)=
Sta. 668+97.77 (Ahead)
LITTLE YORK ROAD
DOG LEG ROAD
BRIDGE Nº MOT-70-1322
Sta 694+74.76 I.R. 70=
Sta 11+45.78
DOG LEG ROAD
END WORK
STA. 17+42
BEGIN WORK
STA 5+80
END WORK
STA. 733+88.60
END PROJECT
Sta 732+33.60
S.L.M. 13.87
IR-70-1(45) 24
Curve Data
P.I Sta 662+51.77
Δ= 15°50'20"
D= 1°00'
R= 5729.58
L= 1583.89
T= 797.03
N
Note: Fredrick Pike work limits taken From Sheet Nº 50

VERTICAL CLEARANCE				
	Existing		Proposed	
Bridge No.	E.B.	W.B.	E.B.	W.B.
MOT-70-0662	15.75'	14.75'	16.88'	16.44'
MOT-70-0708	14.83'	15.25'	16.33'	16.72'
MOT-70-0759	14.92'	16.75'	16.37'	
MOT-70-0821	14.75'	14.83'	16.35'	16.35'
MOT-70-0859	14.92'	14.92'	16.25'	16.25'
MOT-70-0962	15.00'	15.08'	16.25'	16.25'
MOT-70-1062	16.08'	14.75'	16.49'	16.47'
MOT-70-1130L	16.00'	17.00'	16.00'	17.00'
MOT-70-1130R	15.17'	16.08'	15.17'	16.08'
MOT-70-1322	14.83'	16.08'	16.25'	16.25'

⊛ - BRIDGE Nº. MOT-49-1279L DIAMOND MILL OVER SOUTH BOUND S.R.49

★ - BRIDGE Nº. MOT-49-1269L SOUTH BOUND S.R.49 OVER RAZOR RUN

SCHEMATIC PLAN

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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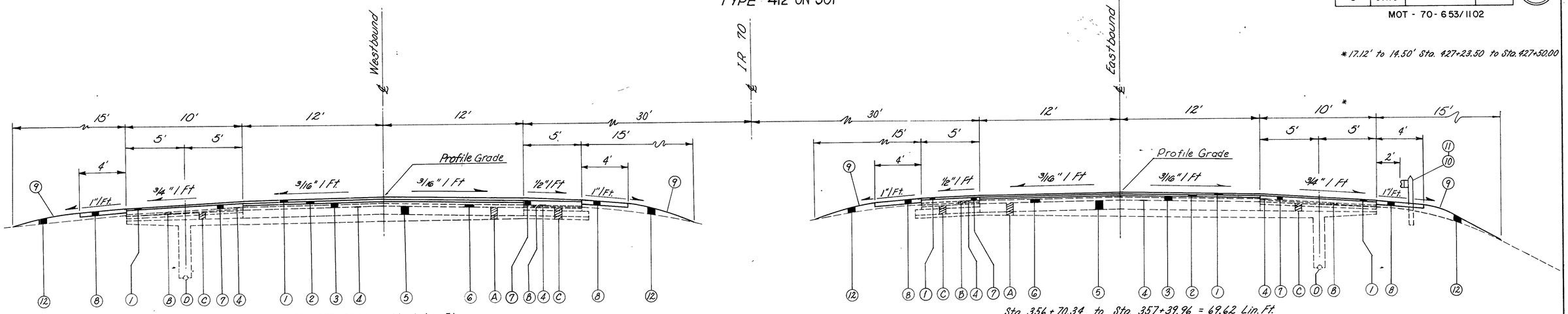
MOT - 70-653/1102

TYPICAL SECTION

TYPE 412 ON 301

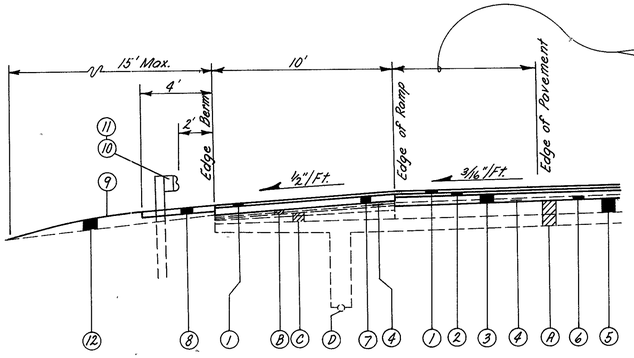


Sta. 356+39.76 to Sta. 357+39.96 = 100.20 Lin. Ft.
Sta. 364+44.96 to Sta. 367+00.00 = 255.04 Lin. Ft.
Sta. 381+50.37 to Sta. 397+34.80 = 1584.43 Lin. Ft.
Sta. 409+09.80 to Sta. 426+00.00 = 1690.20 Lin. Ft.
Sta. 436+75.00 to Sta. 436+78.21 = 3.21 Lin. Ft.
Sta. 442+97.21 to Sta. 528+48.15 = 8550.94 Lin. Ft.
Sta. 537+28.15 to Sta. 555+00.00 = 1771.85 Lin. Ft.
Sta. 576+02.91 to Sta. 580+23.06 = 420.15 Lin. Ft.
Sta. 580+23.06 to Sta. 580+73.06 (See Transition Detail, A-1 Sheet Nº 26)
14376.02 Lin. Ft.

NORMAL SECTION

NOTE: No Existing Underdrains, Sta. 553+00 to Sta. 569+00

Sta. 356+70.34 to Sta. 357+39.96 = 69.62 Lin. Ft.
Sta. 364+44.96 to Sta. 367+00.00 = 255.04 Lin. Ft.
Sta. 381+98.87 to Sta. 395+25.00 = 1326.13 Lin. Ft.
Sta. 409+09.80 to Sta. 426+00.00 = 1690.20 Lin. Ft.
Sta. 436+75.00 to Sta. 436+78.21 = 3.21 Lin. Ft.
Sta. 442+97.21 to Sta. 528+48.15 = 8550.94 Lin. Ft.
Sta. 537+28.15 to Sta. 555+00.00 = 1771.85 Lin. Ft.
Sta. 576+02.91 to Sta. 580+23.06 = 420.15 Lin. Ft.
Sta. 580+23.06 to Sta. 580+73.06 = (See Transition Detail, A-1 Sheet Nº 26)
14087.14 Lin Ft.



26.00' to 10.40' Sta. 361+39.13 to Sta. 367+00.00 = 560.87 Lin. Ft.
0.00' to 25.00' Sta. 398+08.60 to Sta. 410+08.55 = 1199.95 Lin. Ft.
0.00' to 12.00' Sta. 414+41.18 to Sta. 415+41.18 = 100.00 Lin. Ft.
12.00' to 30.00' Sta. 415+91.18 to Sta. 426+00.00 = 1058.82 Lin. Ft.

41.00' to 31.14' Sta. 461+36.00 to Sta. 464+24.26 = 288.26 Lin. Ft.
31.14' to 12.00' Sta. 464+24.26 to Sta. 471+25.00 = 700.74 Lin. Ft.
12.00' to 0.00' Sta. 471+25.00 to Sta. 472+25.00 = 100.00 Lin. Ft.
25.00' to 0.00' Sta. 464+99.97 to Sta. 476+99.97 = 1200.00 Lin. Ft.

S.B. S.R. 49 Sta. 361+39.13 to Sta 367+00.00 = 560.87 Lin. Ft. (Opposite Hand)
N.B. S.R. 49 Sta. 398+08.60 (W.B.) to Sta. 410+08.55 (W.B.) = 1199.95 Lin. Ft.
S.B. S.R. 49 Sta. 414+41.18 (E.B.) to Sta. 426+00.00 (E.B.) = 1158.82' (Opposite Hand)
Hoke Rd., Ramp "B" Sta. 461+36.00 (W.B.) to Sta. 472+25.00 (W.B.) = 1089.00 Lin. Ft.
Hoke Rd., Ramp "A" Sta. 464+99.97 (E.B.) to Sta. 476+99.97 (E.B.) = 1200.00 Lin. Ft.

TYPICAL ACCELERATION/DECELERATION LANES

LEGEND

(1)	Item	412	3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
(2)	Item	446	2 1/4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 2, MWS-60 (See Proposal Note)
(3)	Item	301	4 3/4" Bituminous Aggregate Base, MWS-60 (See Prop. note)
(4)	Item	407	Tack Coat
(5)	Item	SPECIAL	Breaking and Seating Existing Reinforced Concrete Pavement (See Prop. Note)
(6)	Item	254	Pavement Planing, Bituminous
(7)	Item	446	3 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, MWS-60 (See Proposal Note)
(8)	Item	617	4" Compacted Aggregate and Water (Type A)
(9)	Item	659	Seeding and Mulching, See General Notes
(10)	Item	202	Guardrail Removed
(11)	Item	606	Guardrail, Type 5
(12)	Item	203	Embankment

(A) Existing Pavement, 9" Reinforced Concrete on 3" to 6" Subbase, To Remain
(B) Existing Berm, 3" Asphalt Concrete, To Remain
(C) Existing Asphalt Concrete Leveling Course on Existing Base, To Remain
(D) Existing 6" Pipe Underdrain, To Remain

FHWA REGION	STATE	PROJECT	
5	OHIO		

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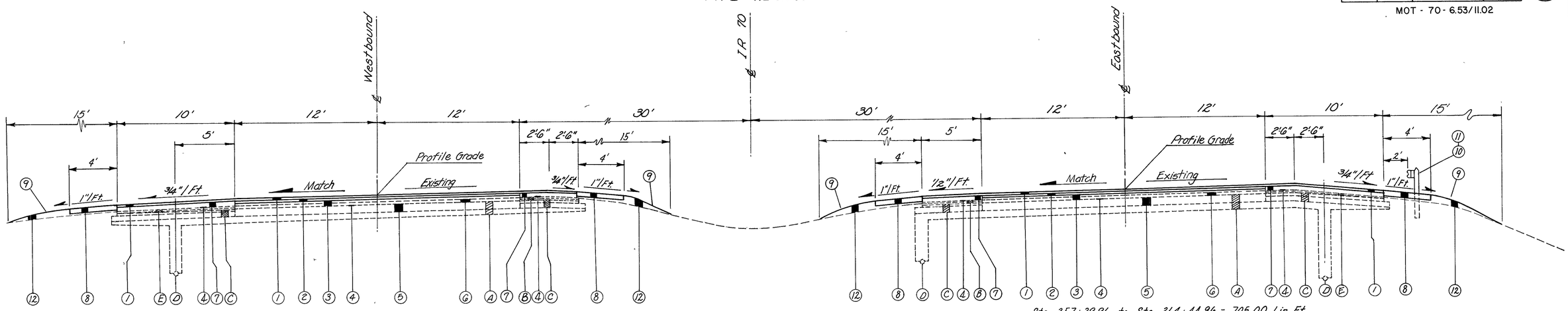
MOT - 70 - 6.53/11.02

TYPICAL SECTION
TYPE 412 ON 301



Sta. 357+39.96 to Sta. 364+44.96 = 705.00 Lin. Ft.
Sta. 397+34.80 to Sta. 409+09.80 = 1175.00 Lin. Ft.
Sta. 436+78.21 to Sta. 442+97.21 = 619.00 Lin. Ft.
Sta. 528+48.15 to Sta. 537+28.15 = 880.00 Lin. Ft.
Sta. 565+00.00 to Sta. 576+02.91 = 1102.91 Lin. Ft.
4481.91 Lin. Ft.

SUPERELEVATED SECTION

NOTE: No Existing Underdrains, Sta. 553+00 to Sta 569+00

Sta. 357+39.96 to Sta. 364+44.96 = 705.00 Lin. Ft.
Sta. 405+00.00 to Sta. 409+09.80 = 409.80 Lin. Ft.
Sta. 436+78.21 to Sta. 442+97.21 = 619.00 Lin. Ft.
Sta. 528+48.15 to Sta. 537+28.15 = 880.00 Lin. Ft.
Sta. 563+25.00 to Sta. 576+02.91 = 1277.91 Lin. Ft.
3891.71 Lin. Ft.

LEGEND

(1)	Item	412	3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
(2)	Item	446	2" Asphalt Concrete Intermediate Course, Type 2, MWS-60, (See Proposal Note)
(3)	Item	301	4 3/4" Bituminous Aggregate Base, MWS-60 (See Prop. Notes)
(4)	Item	407	Tack Coat
(5)	Item	SPECIAL	Breaking and Seating Existing Reinforced Concrete Pavement (See Prop. Note)
(6)	Item	254	Pavement Planing, Bituminous
(7)	Item	446	3 3/16" Asphalt Conc. Intermediate Course, Type 2, MWS-60, (See Proposal Note)
(8)	Item	617	4" Compacted Aggregate and Water (Type A)
(9)	Item	659	Seeding and Mulching, See General Notes.
(10)	Item	202	Guardrail Removed
(11)	Item	606	Guardrail, Type 5
(12)	Item	203	Embankment

(A) Existing Pavement, 9" Reinforced Concrete on 6" Subbase, To Remain
(B) Existing Berm, 3" Asphalt Concrete, To Remain
(C) Existing Asphalt Concrete Leveling Course on Existing Base, To Remain
(D) Existing 6" Pipe Underdrain, To Remain
(E) Existing Berm, 1 1/4" to 3" Asphalt Concrete, To Remain

TYPICAL SECTIONS

TYPICAL SECTION
TYPE 412

FHWA REGION	STATE	PROJECT	
5	OHIO		

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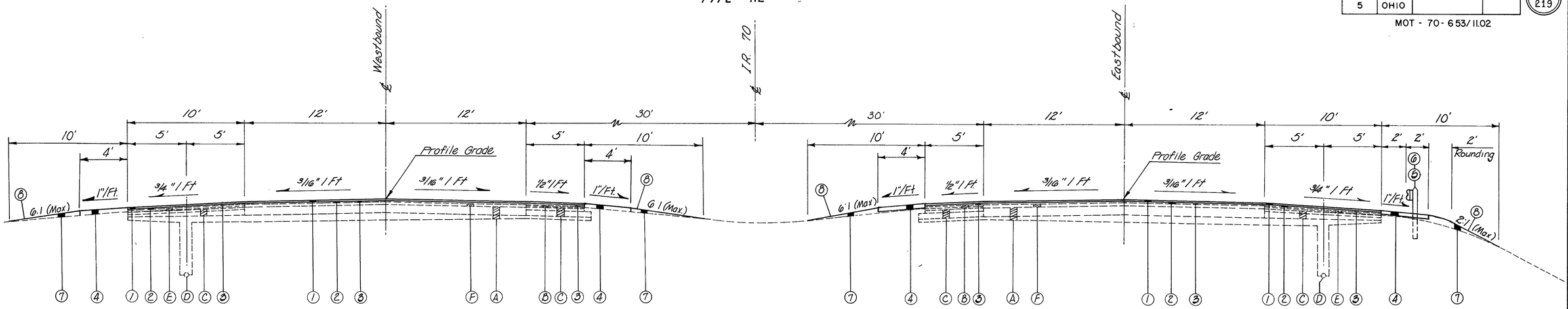
MOT - 70 - 6.53/11.02



Sta 580 + 73.06 to Sta 590 + 73.02 = 1000.06 Lin Ft.
Sta 590 + 73.02 to Sta 594 + 23.02 (***)
Sta 594 + 23.02 to Sta 596 + 07.08 (Bridge Limits MOT-70-1130 L)
Sta 596 + 07.08 to Sta 599 + 57.08 (***)
Sta 599 + 57.08 to Sta. 623 + 65.31 = 2407.33 Lin Ft.
Sta. 623 + 65.31 to Sta 627 + 15.31 (***)
Sta 627 + 15.31 to Sta 629 + 80.87 (Bridge Limits MOT-70-1102 L)
Sta 629 + 80.87 to Sta 633 + 30.87 (***)
Sta 633 + 30.87 to Sta. 638 + 43.35 = 503.48 Lin Ft.
Sta 638 + 43.35 to Sta. 641 + 93.35 (***)
Sta 641 + 93.35 to Sta. 643 + 05.41 (Bridge Limits MOT-70-1210 L)
Sta 643 + 05.41 to Sta. 646 + 55.41 (***)
Sta 646 + 55.41 to Sta 654 + 54.74 = 799.33 Lin. Ft.
Sta 666 + 65.08 to Sta 666 + 79.43 (***)
Sta 667 + 79.43 to Sta 667 + 97.02 (Bridge Limits ~ MOT-70-1267 L)
** Sta. 667 + 97.02 to Sta 670 + 06.16 (***)
Sta 670 + 06.16 to Sta 732 + 33.60 = 6227.44 Lin Ft.
Sta 732 + 33.60 to Sta 733 + 83.60 (See Transition Detail A-2 ~ Sheet Nº 26)

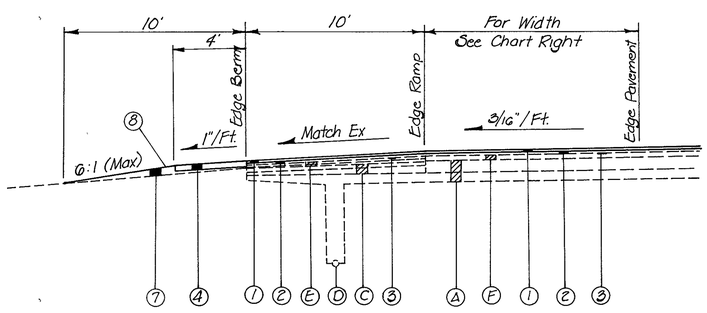
10,987.54 Lin. Ft

NORMAL SECTION

* Opposite Hand
** Includes Station Equation
Sta. 670 + 58.63 Back
Sta 668 + 37.77 Ahead
[Diff. = (-) 140.86 Lin Ft.]
*** See Transition Detail "H"
Sheet Nº 27

Sta 580 + 73.06 to Sta 591 + 12.18 = 1039.12 Lin Ft.
Sta 591 + 12.18 to Sta. 594 + 62.18 (***)
Sta. 594 + 62.18 to Sta 596 + 47.14 (Bridge Limits MOT-70-1130 R)
Sta 596 + 47.14 to Sta. 599 + 27.14 (***)
Sta 599 + 27.14 to Sta. 623 + 80.13 = 2382.99 Lin. Ft.
Sta. 623 + 80.13 to Sta 627 + 30.13 (***)
Sta 627 + 30.13 to Sta 630 + 04.69 (Bridge Limits MOT-70-1102 R)
Sta 630 + 04.69 to Sta 633 + 54.69 (***)
Sta. 633 + 54.69 to Sta 638 + 19.65 = 464.96 Lin. Ft
Sta 638 + 19.65 to Sta 641 + 69.65 (***)
Sta 641 + 69.65 to Sta 642 + 81.61 (Bridge Limits MOT-70-1219 R)
Sta 642 + 81.61 to Sta 646 + 31.61 (***)
Sta 646 + 31.61 to Sta. 654 + 54.74 = 823.13 Lin Ft
Sta. 666 + 65.08 to Sta 667 + 00.73 (***)
Sta 667 + 00.73 to Sta 668 + 20.16 (Bridge Limits MOT-70-1267 R)
** Sta. 668 + 20.16 to Sta 670 + 29.30 (***)
Sta 670 + 29.30 to Sta 732 + 33.60 = 6204.30 Lin Ft
Sta. 732 + 33.60 to Sta 733 + 83.60 (See Transition Detail A-2, Sheet Nº 26)

10,914.50 Lin Ft.



TYPICAL ACCELERATION/DECELERATION LANES

CHART
ACCELERATION/DECELERATION WIDTHS

***	0' to 12'	Sta 580 + 25.00 (EB)	to Sta. 581 + 25.00 (EB)	= 100.00 Lin. Ft *
	12'	Sta. 581 + 25.00 (EB)	to Sta 584 + 75.00 (EB)	= 350.00 Lin Ft. *
	12' to 38'	Sta. 584 + 75.00 (EB)	to Sta 588 + 50.00 (EB)	= 375.00 Lin. Ft *
	0' to 12'	Sta 581 + 25.00 (WB)	to Sta 583 + 75.00 (WB)	= 250.00 Lin Ft.
***	12'	Sta 583 + 25.00 (WB)	to Sta 593 + 91.00 (WB)	= 1066.00 Lin. Ft
***	12'	Sta 593 + 91.00 (WB)	to Sta 596 + 24.00 (WB)	(Bridge & Appr. Slab ~ MOT-70-1130 L)
***	12'	Sta 596 + 24.00 (WB)	to Sta 596 + 43.25 (WB)	= 19.25 Lin. Ft.
***	12' to 13.5'	Sta 596 + 43.25 (WB)	to Sta 597 + 03.00 (WB)	= 59.75 Lin Ft.
	14'	Sta 601 + 93.08 (EB)	to Sta 602 + 21.08 (EB)	= 28.00 Lin. Ft *
	14' to 12'	Sta 601 + 21.08 (EB)	to Sta 603 + 00.00 (EB)	= 178.92 Lin. Ft. *
	12'	Sta. 603 + 00.00 (EB)	to Sta 607 + 50.00 (EB)	= 450.00 Lin. Ft. *
	12' to 0'	Sta 607 + 50.00 (EB)	to Sta. 613 + 25.00 (EB)	= 575.00 Lin Ft. *
	35'	Sta 603 + 95.00 (WB)	to Sta 606 + 00.00 (WB)	= 205.00 Lin. Ft
	12'	Sta. 606 + 00.00 (WB)	to Sta 611 + 00.00 (WB)	= 500.00 Lin Ft.
	12' to 0'	Sta. 611 + 00.00 (WB)	to Sta. 612 + 00.00 (WB)	= 100.00 Lin. Ft.

LEGEND

(1)	Item 412	3/4"	Asphalt Concrete, MWS-60 (See Proposal Note)
(2)	Item 446	2 1/4"	Asphalt Conc. Intermediate Course, Type 2, MWS-60, (See Proposal Note)
(3)	Item 407		Tack Coat
(4)	Item 617		4" Compacted Aggregate and Water (Type A)
(5)	Item 202		Guardrail Removed
(6)	Item 606		Guardrail, Type 5
(7)	Item 203		Embankment
(8)	Item 659		Seeding & Mulching, See General Note

(A) Existing Pavement, 9" Reinforced Concrete on 3" to 6" Subbase, To Remain
(B) Existing Berm, 3" Asphalt Concrete, To Remain
(C) Existing 3" Waterproofed Aggregate Base on Porous Base, To Remain
(D) Existing 6" Pipe Underdrain, To Remain
(E) Existing Berm, 1 1/4" to 3" Asphalt Concrete, To Remain
(F) Existing 3" Bituminous Wearing Course, To Remain

FHWA REGION	STATE	PROJECT	
5	OHIO		

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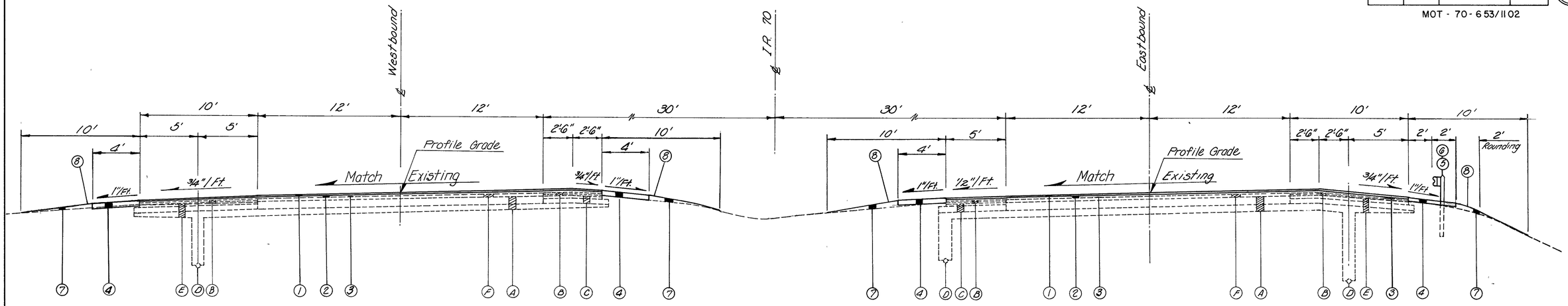
MOT - 70-653/1102

TYPICAL SECTION
TYPE 412



Sta. 654+54.74 to Sta. 663+29.43 = 874.69 Lin-Ft.
Sta. 663+29.43 to Sta 666+65.08 (See Transition Detail "H" ~ Sheet Nº 27)

874.69 Lin. Ft.

SUPERELEVATED SECTION

Sta. 654+54.74 to Sta. 663+50.73 = 895.99 Lin-Ft.
Sta. 663+50.73 to Sta. 666+65.08 (See Transition Detail "H" ~ Sheet Nº 27)

895.99 Lin. Ft.

LEGEND

(1) Item 412 3/4" . Asphalt Concrete, MWS-60 (See Proposal Note)
(2) Item 446 2¼" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
(3) Item 407 Tack Coat
(4) Item 617 4" Compacted Aggregate, and Water (Type A)
(5) Item 202 Guardrail Removed
(6) Item 606 Guardrail, Type 5
(7) Item 203 Embankment
(8) Item 659 Seeding and Mulching, See General Note

(A) Existing Pavement, 9" Reinforced Concrete on 6" Subbase, To Remain
(B) Existing Berm, 3" Asphalt Concrete, To Remain
(C) Existing 3" Waterproofed Aggregate Base on Porous Base, To Remain
(D) Existing 6" Pipe Underdrain, To Remain
(E) Existing Berm, 1¼" to 3" Asphalt Concrete, To Remain
(F) Existing 3" Bituminous Wearing Course, To Remain

TYPICAL SECTIONS

FHWA REGION	STATE	PROJECT	
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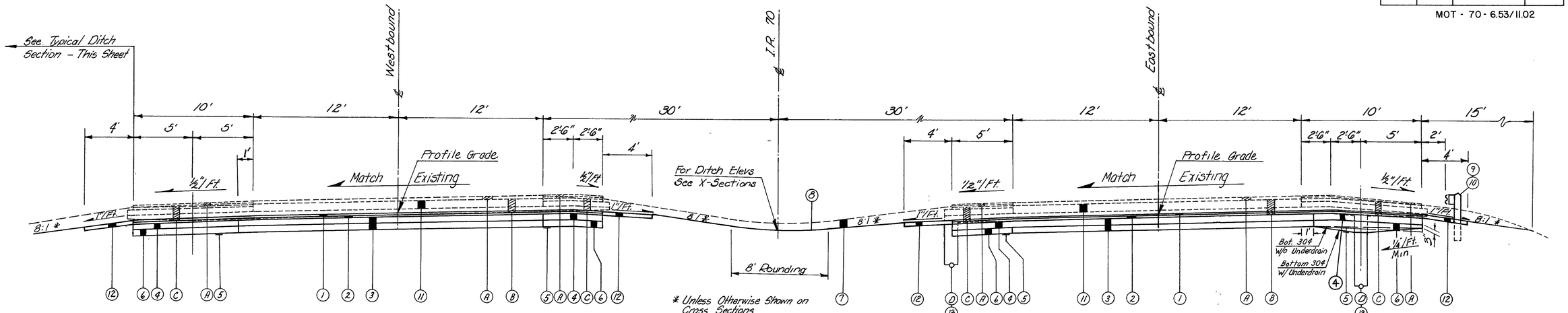
TYPICAL SECTION
TYPE 412 ON 301



Sta. 550+10.83 to Sta. 565+00.00 = 580.17 Lin Ft.

Sta. 397+34.80 to Sta. 405+00.00 = 765.20 Lin Ft
** Sta 550+10.83 to Sta 563+25.00 = 414.17 Lin Ft
1179.37 Lin. Ft.

* Unless Otherwise Shown on Cross Sections

SUPERELEVATED SECTION

NOTE: No Existing Underdrains Sta. 553+00 to Sta. 569+00

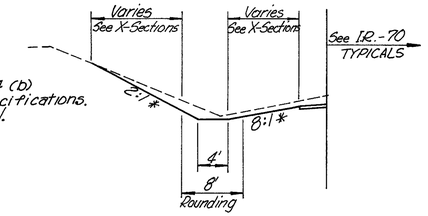
4 0 4 8
Graphic Scale In Feet

SUPERELEVATION TABLES

Sta. 397+34.80 TO Sta. 405+00.00						
Station	Westbound			Eastbound		
	Lt. Edge	℄	Rt. Edge	Lt. Edge	℄	Rt. Edge
397+34.80				954.08	955.20	955.41
+50				954.68	954.90	955.11
+75				955.35	955.11	955.34
398+00				955.11	955.35	955.59
+25				955.38	955.62	955.86
+50				955.16	955.92	956.16
+75				956.00	956.24	956.48
399+00				956.36	956.60	956.81
+25				956.73	956.97	957.21
+50				957.14	957.38	957.62
+75				957.57	957.81	958.05
400+00				958.03	958.27	958.51
+25				958.52	958.76	959.00
+50				959.04	959.28	959.52
+75				959.58	959.82	960.06
401+00				960.15	960.39	960.63
+25				961.21	960.97	961.21
+50				961.30	961.54	961.78
+75				962.33	962.09	962.33
402+00				962.40	962.64	962.88
+25				963.23	963.17	963.89
+50				963.48	963.70	963.94
+75				963.97	964.21	964.45
403+00				964.47	964.71	964.41
+25				964.96	965.20	965.44
+50				965.44	965.68	965.92
+75				965.91	966.15	966.39
404+00				966.37	966.61	966.85
+25				966.82	967.06	967.30
+50				967.26	967.50	967.74
+75				967.68	967.92	968.16
405+00				968.10	968.34	968.58

Sta. 550+10.83 TO Sta. 563+25.00						
Station	Westbound			Eastbound		
	Lt. Edge	℄	Rt. Edge	Lt. Edge	℄	Rt. Edge
550+10.83	938.55	938.38	938.53	940.00	940.22	940.46
+25	938.03	938.28	938.53	939.97	940.22	940.46
+50	937.84	938.12	938.44	939.94	940.18	940.54
+75	937.66	937.99	938.35	939.91	940.24	940.60
560+00	937.53	937.90	938.28	939.88	940.24	940.68
+25	937.46	937.85	938.23	939.88	940.21	940.60
+50	937.44	937.83	938.21	939.81	940.10	940.58
+75	937.46	937.85	938.23	939.79	940.17	940.26
561+00	937.58	937.97	938.35	939.77	940.15	940.54
+25	937.60	937.99	938.38	939.78	940.11	940.50
+50	937.73	938.12	938.50	939.70	940.08	940.47
+75	937.86	938.25	938.63	939.68	940.06	940.45
562+00	938.04	938.37	938.75	939.66	940.04	940.43
+25	938.09	938.48	938.78	939.68	940.01	940.40
+50	938.18	938.57	938.95	939.61	939.99	940.38
+75	938.25	938.64	939.02	939.58	939.96	940.35
563+00	938.31	938.70	939.34	939.55	939.93	940.32
+25	938.36	938.75	939.37	939.52	939.90	940.29
+50	938.39	938.78	939.16			
+75	938.40	938.78	939.17			
564+00	938.40	938.79	939.17			
+25	938.38	938.77	939.15			
+50	938.35	938.74	939.10			
+75	938.30	938.69	939.07			
565+00	938.24	938.63	939.01			

** Remove Rock and Shale As per 203.04 (D) ODOT Construction and Material Specifications. See x-sections for limits of removal.



TYPICAL DITCH SECTION
No Scale

LEGEND

① Item 412 3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
② Item 446 2 3/4" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
③ Item 301 12" Bituminous Aggregate Base, MWS-60. (See Proposal Note)
④ Item 301 6" Bituminous Aggregate Base, MWS-60. (See Proposal Note)
⑤ Item 203 Subgrade Compaction
⑥ Item 304 Variable Depth Aggregate Base, As Per Plan
⑦ Item 203 Excavation not Including Emb. Constr.
⑧ Item 659 Seeding and Mulching, See General Note
⑨ Item 202 Guardrail Removed
⑩ Item 606 Guardrail, Type 5
⑪ Item 202 Pavement Removed
⑫ Item 617 4" Compacted Aggregate and Water (Type A)
⑬ Item 605 6" Unclassified Pipe Underdrains, As Per Plan

Ⓐ Existing Bituminous Wearing Course
Ⓑ Existing Pavement, 9" Reinforced Portland Cement Concrete on Variable Depth Subbase
Ⓒ Existing Bituminous Macadam on Aggregate Base on Subbase
Ⓓ Existing Underdrains

FHWA REGION	STATE	PROJECT	
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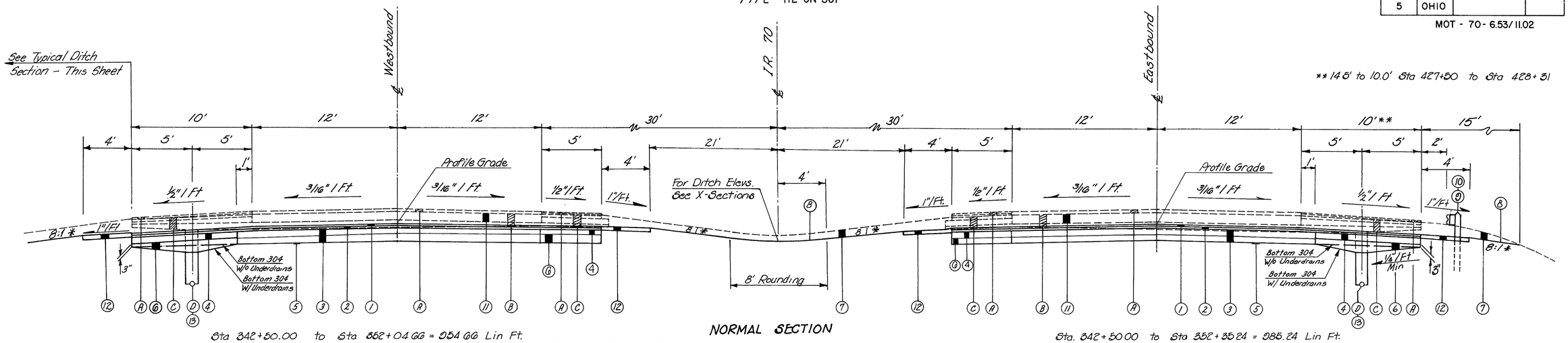
TYPICAL SECTION

TYPE 412 ON 301



NORMAL SECTION

NOTE : No Existing Underdrains Sta. 553+00 to Sta. 569+00

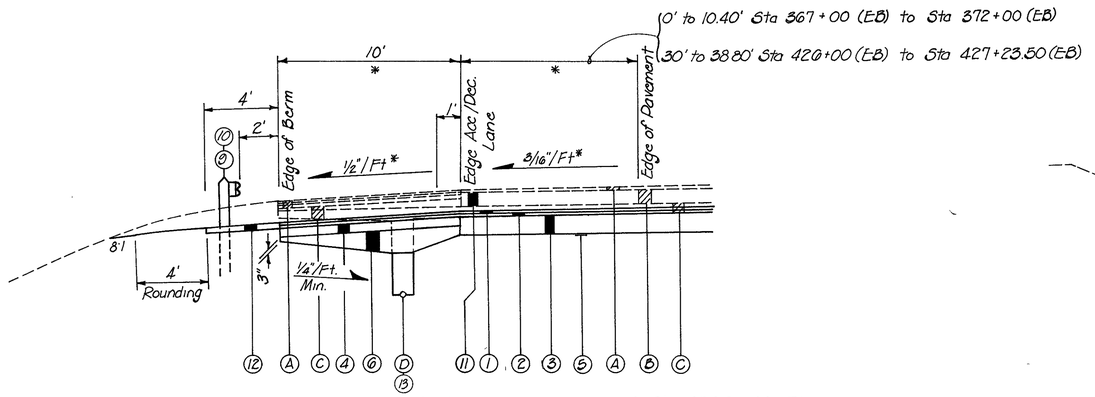
* Unless Otherwise Shown on Cross Sections

Graphic Scale In Feet (4 0 4 8)

Sta 342+50.00	to	Sta 352+04.66	=	954.66	Lin Ft.
Sta 352+04.66	to	Sta 353+14.76	=	Bridge & Approach Slabs	MOT-70-0672 L
Sta. 353+14.76	to	Sta 356+39.76	=	325.00	Lin Ft
Sta 367+00.00	to	Sta. 377+01.13	=	1001.13	Lin Ft
Sta. 377+01.13	to	Sta 378+50.87	=	Bridge & Approach Slabs	MOT-70-0719 L
Sta. 378+50.87	to	Sta 381+50.87	=	300.00	Lin. Ft.
Sta 426+00.00	to	Sta. 436+75.00	=	1075.00	Lin. Ft.
** Sta 555+00.00	to	Sta 560+10.83	=	410.83	Lin. Ft.
				4066.62	Lin. Ft.

Sta. 342+50.00	to	Sta 352+35.24	=	985.24	Lin Ft.
Sta. 352+35.24	to	Sta. 353+45.34	=	Bridge & Approach Slabs	MOT-70-0672 R
Sta 353+45.34	to	Sta 356+70.34	=	325.00	Lin Ft
Sta 367+00.00	to	Sta 377+40.63	=	1040.63	Lin. Ft.
Sta 377+40.63	to	Sta. 378+28.87	=	Bridge & Approach Slabs	MOT-70-0719 R
Sta 378+28.87	to	Sta. 381+28.87	=	300.00	Lin Ft
Sta 395+25.00	to	Sta. 397+34.80	=	209.80	Lin Ft.
Sta 426+00.00	to	Sta 436+75.00	=	1075.00	Lin. Ft.
** Sta 555+00.00	to	Sta 560+10.83	=	410.83	Lin Ft.
				4355.50	Lin Ft

** Remove Rock and Shale As per 203.04 (b) ODOT Construction and Material Specifications See x-sections for limits of removal.



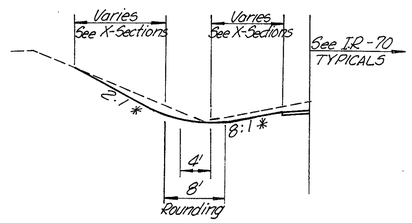
N.B. S.R 42 Sta 343+50.00 (WB) to Sta 352+04.66 (WB) = 854.66 Lin. Ft.
N.B. S.R 42 Sta 352+04.66 (WB) to Sta 353+14.76 (WB) (MOT-70-0672 L Incl. Approach Slabs)
N.B. S.R 42 Sta 353+14.76 (WB) to Sta. 356+39.76 (WB) = 325.00 Lin Ft.
N.B. S.R 42 Sta. 356+39.76 (WB) to Sta. 357+39.76 (WB) = 100.00 Lin. Ft.
S.B. S.R 42 Sta 367+00.00 (EB) to Sta 372+00.00 (EB) = 500.00 Lin. Ft. (Opposite Hand)

S.B. S.R 42 Sta 426+00.00 (EB) to Sta. 427+23.50 (EB) = 123.50 Lin Ft (Opposite Hand)

* For Grade Elevations and Widths Sta 343+50.00 (WB) to Sta 357+36.04 (WB) See Pavement Details, Sheet Nº 85

ACCELLERATIONS/DECELLERATION LANES

(FULL DEPTH PAVEMENT)



TYPICAL DITCH SECTION

No Scale

LEGEND

①	Item 412	3/4"	Asphalt Concrete, MWS-60 (See Proposal Note)
②	Item 446	2 3/4"	Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
③	Item 301		12" Bituminous Aggregate Base, MWS-60 (See Proposal Note)
④	Item 301		6" Bituminous Aggregate Base, MWS-60 (See Proposal Note)
⑤	Item 203		Subgrade Compaction
⑥	Item 304		Variable Depth Aggregate Base, As Per Plan
⑦	Item 203		Excavation not Including Emb. Constr.
⑧	Item 659		Seeding and Mulching, See General Notes
⑨	Item 202		Guardrail Removed
⑩	Item 606		Guardrail, Type 5
⑪	Item 202		Pavement Removed
⑫	Item 617		4" Compacted Aggregate and Water (Type A)
⑬	Item 605		6" Unclassified Pipe Underdrains, As Per Plan

Ⓐ Existing Bituminous Wearing Course
Ⓑ Existing Pavement, 9" Reinforced Portland Cement Concrete on Variable Depth Subbase
Ⓒ Existing Bituminous Macadam on Aggregate Base on Subbase
Ⓓ Existing Underdrains

TYPICAL SECTION
TYPE 412 ON 301

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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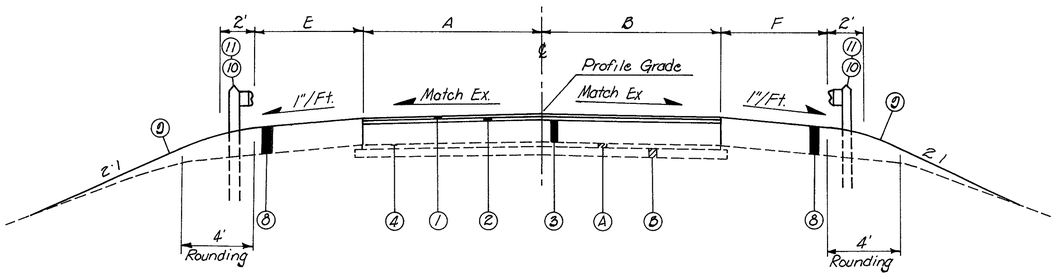
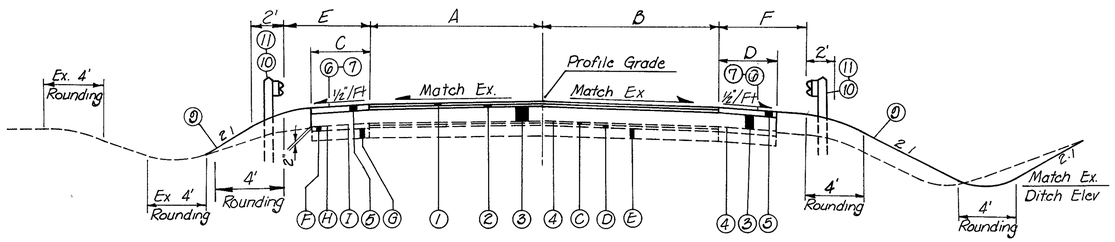


Hoke Road Sta. 49+83.64 to Sta. 61+60.14
Union Road Sta 53+97.80 to Sta 58+55.90
Dog Leg Road Sta 12+79.03 to Sta 17+37.03
Kinmont Road Sta 0+10.02 to Sta 2+25.00
Kimmel Road (See Chart Below)
Crestway Drive (See Chart Below)



UNION ROAD - Sta. 61+22.40 to Sta. 65+80.40

CROSS ROAD CHART

LOCATION	STATION	TO STATION	LENGTH	A	B	C	D	E	F
Kimmel Road	48+97.23	49+97.23	100.00'*	8'	8'	N/A	N/A	6'	6'
Kimmel Road	52+35.95	53+35.95	100.00'*	8'	8'	N/A	N/A	6'	6'
Crestway Drive	47+76.67	48+76.67	100.00'*	9'	9'	N/A	N/A	6'	6'
Crestway Drive	51+05.17	52+05.17	100.00'*	9'	9'	N/A	N/A	6'	6'
Hoke Road	49+83.64	54+32.64	449.00'	12'	12'	N/A	N/A	6'	6'
Hoke Road	57+11.14	61+60.14	449.00'	12'	12'	N/A	N/A	6'	6'
Union Road	53+97.90	58+55.90	458.00'	10.5'	10.5'	N/A	N/A	6'	6'
Union Road	61+22.40	62+60.00	137.60'	12'	12'	4'	4'	6'	6'
Union Road	62+60.00	63+00.00	40.00'	12'	12'	4' to 8'	4' to 8'	6' to 10'	6' to 10'
Union Road	63+00.00	65+00.00	200.00'	12' to 17'	12' to 17'	8'	8'	10'	10'
Union Road	65+00.00	65+80.40	80.40'	17'	17'	8'	8'	10'	10'
Dog Leg Road	5+54.53	10+12.53	458.00'	10'	10'	N/A	N/A	6'	6'
Dog Leg Road	12+79.03	17+37.03	458.00'	10'	10'	N/A	N/A	6'	6'
Kinmont Road **	0+10.00	2+25.00	215.00'	9.5' to 9'	9.5' to 9'	N/A	N/A	6'	6'

* See Transition Detail "B", Sheet Nº 26
** For Plan and Profile, See Sheet Nº 103

LEGEND

① Item 412 3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
② Item 446 2¾" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
③ Item 301 Variable Depth Bituminous Aggregate Base, MWS-60. (See Propsal Note)
④ Item 407 Tack Coat
⑤ Item 301 3½" Bituminous Aggregate Base, MWS-60. (See Propsal Note)
⑥ Item 409 Seal Coat Cover Aggregate Nº 8 @ 0.008 C.Y./S.Y.
⑦ Item 409 Seal Coat Bituminous Material @ 0.3 Gal./S.Y.
⑧ Item 203 Embankment
⑨ Item 659 Seeding and Mulching, See General Note
⑩ Item 202 Guardrail Removed
⑪ Item 606 Guardrail, Type 5

Ⓐ Existing Asphalt Concrete Pavement
Ⓑ Existing Base
Ⓒ Existing 1¼" Asphalt Concrete
Ⓓ Existing 1¾" Asphalt Concrete
Ⓔ Existing 8" Bituminous Aggregate Base
Ⓕ Existing 3" Bituminous Aggregate Base
Ⓖ Existing 8" Aggregate Base
Ⓗ Existing 409 Seal Coat Cover Aggregate Nº 8 @ 0.008 C.Y./S.Y.
Ⓘ Existing 409 Seal Coat Bituminous Material @ 0.3 Gal./S.Y.

CROSS ROAD TYPICAL SECTIONS

FHWA REGION	STATE	PROJECT	
5	OHIO		

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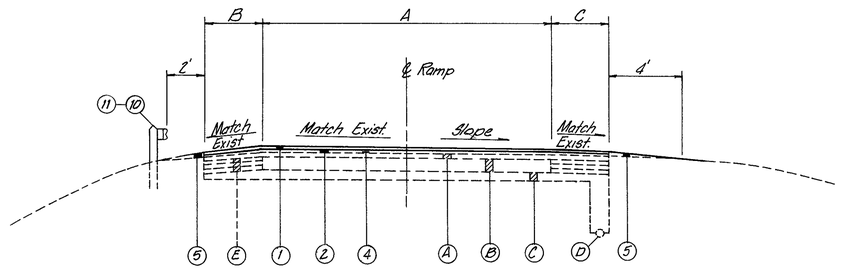
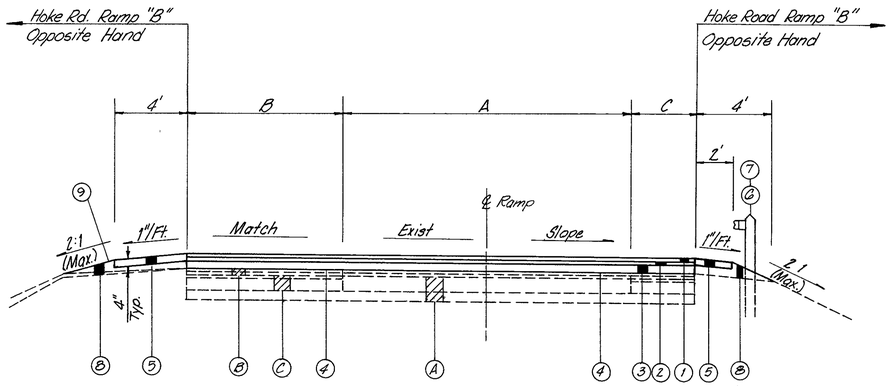
TYPICAL SECTION
TYPE 412 ON 301



TYPICAL SECTION
3" Overlay (All Ramps)



TYPICAL SECTION
Variable Depth Overlay
(Hoke Rd., Ramp 'A' Sta 2+04.32 to Sta 5+00.00 = 295.68 Lin Ft)
(Hoke Rd., Ramp 'B' Sta 12+04.32 to Sta 16+00 = 395.68 Lin Ft)

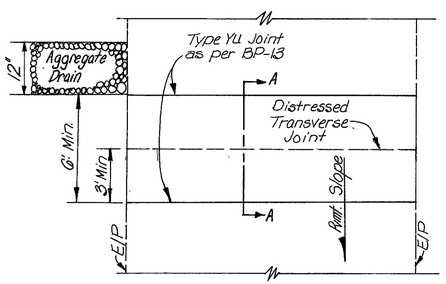
LEGEND

(1)	Item 412	3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
(2)	Item 446	2 1/4" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
(3)	Item 301	Variable Depth Bituminous Aggregate Base, MWS-60 (SEE PROPOSAL NOTE)
(4)	Item 407	Tack Coat
(5)	Item 617	Compacted Aggregate (0" Min) and Water. (Type A)
(6)	Item 202	Guardrail Removed
(7)	Item 606	Guardrail, Type 5
(8)	Item 203	Embankment
(9)	Item 659	Seeding and Mulching, See General Notes.
(10)	Item 202	Guardrail Removed
(11)	Item 606	Guardrail, Type 5
(A)		Existing Asphalt Concrete Overlay, to Remain
(B)		Existing Concrete Pavement, to Remain
(C)		Existing Sub Base, to Remain
(D)		Existing 6" Pipe Underdrains, to Remain
(E)		Existing Asphalt Concrete and Base, to Remain

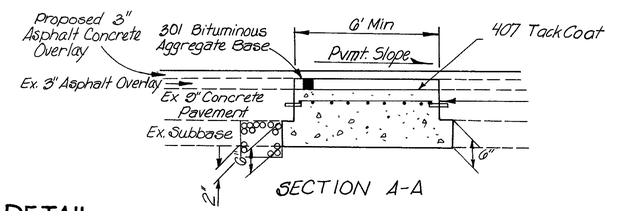
RAMP CHART

LOCATION	STATION TO STATION		LENGTH	A	B	C
N.B. S.R. 49	277+25.00	279+25.00	200.00'	24'	4'	10'
S.B. S.R. 49	254+12.00	254+87.00	75.00'	24'	10'	4'
S.B. S.R. 49	254+87.00	256+55.00	168.00'	24'	10'	4'
S.B. S.R. 49	256+55.00	258+05.00	150.00'	24'	10'	4'
S.B. S.R. 49	138+41.00	140+11.00	167.00'	16' to 17.68'	10'	5'
S.B. S.R. 49	140+11.00	140+69.00	58.00'	16'	10'	5'
N.B. S.R. 49	155+45.00	156+95.00	150.00'	19' to 20.5'	**	8' to 10'
N.B. S.R. 49	156+95.00	161+23.61	428.61'	16.75' to 19'	**	10'
N.B. S.R. 49	161+23.61	161+98.61	75.00'	14' to 16.75'	**	10'
HOKE ROAD						
Ramp 'A'	2+04.32	5+00.00	295.68'	16'	5'	10'
Ramp 'A'	5+00.00	7+18.00	218.00'	16'	3'	10'
Ramp 'A'	7+18.00	10+00.00	282.00'	16'	**3'	10'
Ramp 'A'	10+00.00	11+99.97	199.97'	16'	**	10'
Ramp 'A'	11+99.97	14+99.97	300.00'	16' to 12'	**	10'
Ramp 'B'	12+04.32	16+00.00	395.68'	16'	9'	3.5'
Ramp 'B'	16+00.00	20+60.00	460.00'	16'	9'	3.5'
Ramp 'B'	20+60.00	20+66.00	6.00'	16'	9'	3.5'
Ramp 'B'	20+66.00	21+35.00	69.00'	16' to 17.36'	9' to 10'	3.5'
S.R. 48						
Ramp 'A'	15+25.00	15+33.00	8.00'	16' to 15.75'	3'	6'
Ramp 'A'	15+33.00	16+15.25	82.25'	15.75 to 13.5'	Incl. in Mainline	6' to 10'
Ramp 'B'	17+20.00	17+95.00	75.00'	16'	8'	4'
Ramp 'B'	17+95.00	18+70.00	75.00'	16'	8'	4'
Ramp 'C'	8+48.00	9+23.00	75.00'	16'	4'	10'
Ramp 'C'	9+23.00	9+98.00	75.00'	16'	4'	10' to 8'
Ramp 'E'	10+00.00	10+75.00	75.00'	16'	4'	1 to 8'
Ramp 'E'	10+75.00	11+32.00	57.00'	16' to 14'	Incl. in Mainline	8'
Ramp 'E'	11+32.00	11+50.00	18.00'	14'	Incl. in Mainline	8'

** See Curb Removal Details, Sht. No. 109



PLAN VIEW



SECTION A-A

DETAIL
TYPICAL JOINT REPAIR

Note: For Full Depth Rigid Pavement Removal and Replacement Notes, See Sheet No. 13 and For Quantity Calculations See Sheet No. 21

RAMP TYPICAL SECTIONS

GENERAL NOTES

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CONTINGENCY QUANTITIES

The Contractor shall not order materials or perform work listed in the General Summary for items designated by plan note to be used "as directed by the Engineer" unless authorized by the Engineer. The actual work locations and quantities used at the Engineer's discretion shall be made a matter of record by incorporation into the final change order governing completion of this project.

CONSTRUCTION PLANS

Reference is hereby made to the following designated plans for former construction project included in this proposed improvement. Copies of these plans are on file at the District 7 office of the Department of Transporation, Sidney, Ohio.

MOT-40-2.73
MOT-40-5.98
MOT-40-7.96
MOT-40-11.07
MOT-40-6.53
MOT-Union Road

UNDERGROUND UTILITIES

The locations of the underground utilities shown on the plans are as obtained from the owners of the utility as required by Section 153.64 ORC.

UTILITY OWNERSHIP

The following utilities and owners are located within the work limits of this project:

GENERAL TELEPHONE AND ELECTRIC
6464 WESTBROOK RD.
CLAYTON, OHIO 45315
513-833-0463
Contact Person, Roger Fornay

DAYTON POWER AND LIGHT
COURT HOUSE PLAZA
DAYTON, OHIO 54524
513-224-6000
Contact Person, Gail Salser

CONTINENTAL CABLE
16 W. WENGER RD.
ENGLEWOOD, OHIO 45322
513-836-9621
Contact Person, Mike Neary

OHIO BELL TELEPHONE
4710 OLD TROY PIKE
DAYTON, OHIO 45424
513-227-4930
Contact Person, Ron Howard

COLUMBIA GAS COMPANY
P.O. BOX 1565
SPRINGFIELD, OHIO 45501
513-322-7111
Contact Person, Terry Caudill

DAYTON POWER AND LIGHT (GAS)
136 W. LEXINGTON ROAD
EATON, OHIO 45320
513-456-2611
Contact Person, Lou Huddleston

CITY OF ENGLEWOOD,OHIO
DEPARTMENT OF ENGINEERING
333 WEST NATIONAL ROAD
ENGLEWOOD, OHIO 45322
Contact Person, Vic Roberts

PROFILE AND ALIGNMENT

The proposed pavement resurfacing course shall follow the alignment and profile of the existing pavement, except as designated in proposed full depth pavement areas. Previous construction plans showing the original alignment and profile grade are on file for inspection if necessary at the ODOT District 7 office. See Construction Plans Note above for listing. The proposed asphalt concrete overlay shall have a uniform thickness with tapers as shown on these plans.

LOCATION OF GUARDRAIL

The locations of guardrail runs, as shown in these plans, are subject to adjustment prior to final acceptance. The Engineer shall be satisfied that all installations will afford maximum protection for traffic.

GUARDRAIL REPLACEMENT

No hazard shall be left unprotected except for the actual time necessary to remove, grade and reinstall guardrail in a continuous operation. The removal of all guardrail shall at all times be as directed by the Engineer. No guardrail shall be removed until the replacement material is on the site, ready for installation. Failure to comply with this requirement shall be deemed sufficient cause to order work suspended on this project until such time that the Engineer is assured of said compliance.

PART-WIDTH CONSTRUCTION

Because of the necessity of building (portions of) this project under traffic and constructing the full pavement width in stages, extreme care shall be taken to prevent the construction of a butt joint on centerline in the base courses. Longitudinal joints shall be lapped as shown on Standard Construction Drawing BP-5.

MILE MARKER LOCATION

The location of mile markers on the plans are approximate and a more precise location will be provided by the department. The Contractor shall notify the Engineer at least 30 days in advance of the planned date of marker installation. The Engineer will contact the bureau of technical services which will locate the longitudinal position of mile markers by means of a paint mark on the pavement edge. Alternate marks will not be provided on divided highways and the contractor shall set markers for the opposite roadway across from the provided mark. Delineators whose normal position falls within 50 feet of a mile marker shall be omitted.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

The following estimated quantities are provided in the Summary to be used as directed by the Engineer, for temporary erosion and sediment control measures:

207 Temporary Seeding and Mulching	44,875	Sq. Yd.
207 Straw or Hay Bales	150	Each
659 Commercial Fertilizer	10.58	Ton
659 Repair Seeding and Mulching	11,220	Sq. Yd.
659 Water	97	M. Gal.

SEEDING

Quantities for seeding are calculated for the soil areas between four (4) feet outside the excavation/embankment limits, as shown on the cross sections and typical sections.

ITEM SPECIAL - PRECAST REINFORCED CONCRETE OUTLET

Precast reinforced concrete outlets shall be provided at the outlet end of all pipe underdrains and farm drains except when they outlet into a dainage structure. See details on sheet 79A.

ITEM 660 - REINFORCED SODDING

Reinforced Sodding Shall be placed at the ends of the proposed type 4A curb as shown on standard drawing MC-7 for the following bridges:

MOT-70-0662
MOT-70-0759
MOT-70-0859
MOT-70-1322

An estimated quantity of 690 Sq. Yds. has been included in the General Summary for this work.

ITEM 304 - AGGREGATE BASE, AS PER PLAN

Materials furnished for this item shall exclude all slag except granulated slag or crushed air cooled blast furnace slag.

BRIDGE TERMINAL ASSEMBLY, TYPE AA OR AT, AS PER PLAN

All holes at Bridge Terminal Assembly posts in the thrie beam section adjacent to the Bridge shall be slotted 3/4"x 2 1/2" and bolts shall be tightened as specified at expansion joints as per 606.05. The cost for all material, labor and equipment necessary to perform this work shall be included in the price bid for ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE AA OR AT, AS PER PLAN.

CLEARING & GRUBBING

Although there are no trees and/or stumps specifically marked for removal within the limits of this project, a Lump Sum quantity has been included in the General Summary for Item 201, Clearing and Grubbing. All provisions as set forth in the Specifications under this Item shall be included in the Lump Sum price bid for Item 201, Clearing and Grubbing.

EROSION CONTROL

Items 601 and 660 are provided in the plans for erosion control. Rock of a stable nature will not be removed in order to place any of these items, and turf of a stable nature will not be removed in order to place 660. The Engineer shall check and non-perform quantities or adjust locations and quantities for these items where indicated by field conditions during construction. In addition these items shall meet the requirements of CMS 108.04.

FULL DEPTH RIGID PAVEMENT REMOVAL & RIGID REPLACEMENT, CLASS C AND FULL DEPTH PAVEMENT SAWING

WHERE SS 803 AND 905 APPEAR IN THE PLANS SHALL BE CONSIDERED TO READ 255.

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GENERAL NOTES

ITEM 202 - CURB REMOVED, AS PER PLAN,
The unit bid price for Item 202 - Curb Removed, as per plan, shall include the removal and disposal of the existing barrier curb, backfilling the void with bituminous material Item 301, regrading and restoration of the adjacent turf berm where applicable to assure good drainage. Drainage ditches should be maintained as much as possible. This item shall include all labor equipment and material necessary to complete the work to the statisfaction of the Engineer.

See Detail "A" and "B", Sheet N° 109.

ITEM 301 - BITUMINOUS AGGREGATE BASE; MWS-60.
A quantity of 500 Cu. Yds. is carried to the General Summary for Item 301 - Bituminous Aggregate Base. This is to be used in those locations designated under Item 203 - Excavation Not Including Embankment Construction and for repair of any seated areas that may have been "punched through" by the cracking and seating operations. From sht. 13 - 40 Cu yds, a total of 540 Cu.yds. carried to General Summary

ITEM 407 - TACK COAT,
The rate of application of 407 Tack Coat shall be subject to adjustment, as directed by the engineer.

Plan quantities indicate average application rates of 0.10 gallons per square yard of tack coat for estimating purposes only.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS

References to supplemental specifications 857, 858, 861, 957, 958, and 961 on the traffic control standard construction drawings in these plans shall be considered to read as respective references to items 630, 631, 633, 730, 731 and 733.

645 - Pavement Markings, By Type, 740. 0.5 INLAID, As Per Plan

This material is being installed as a field evaluation comparing to it to standard painted markings in adjacent sections.

The inlaid markings shall be layed out and installed as required by 645 and the manufactorer's directions. They shall be inlaid into the newly placed asphlt final course as described in 645.02. The contractor shall assign adequate personnel to layout and place the tape before final rolling is completed. Placement and rolling of the markings shall be completed before the asphalt pavement surface temperature cools below 150°F.
In Lieu of 740.05, the marking material shall be Stamark Pliant Polymer marking tape model A-380 (White) or A381 (Yellow) as manufactured by 3M Company, Traffic Materials Division, St. Paul Mn. 55144-1000.

WATERING AND MOWING PERMANENT SEEDED AREAS
The following estimated quantities are to be used as directed by the engineer to promote growth and to care for the permanent seeded areas, as per 659.09:

659	Water	485 M. Gal.
659	Mowing	505 M. Sq. Ft.

JOINT SEALERS
All references to 705.01 or 705.02, appearing on standard drawings or on the plans, shall be considered to read 705.04.

REPLACE UNDERDRAIN OUTLET
10' of existing 6" underdrain pipe outlet shall be removed and replaced with new 6" Conduit, Type F complete with Precast Reinforced Concrete Outlet. The new conduit shall be placed at the same grade as the existing pipe. Type C delineators shall be installed at all replaced outlets. Refer to the drawings for the exact locations of the outlets to be replaced.

ITEM 605 UNCLASSIFED PIPE UNDERDRAINS, AS PER PLAN
The existing 6" pipe underdrain and filter/backfill material shall be removed from the trench. New 6" pipe underdrains shall be installed in the same location and elevation as the existing pipe underdrain. New filter/backfill material shall be placed in the trench. Sand and/or slag will not be permitted for filter/backfill material. Pavement restoration details shall be in accordance with the details on sheet 4. Payment for removal of the existing pipe under is included in Item 605 Unclassified Pipe Underdrain, As Per Plan.

ITEM SPECIAL - IMPACT ATTENUATOR, G-R-E-A-T SYSTEM

This work shall consist of furnishing Temporary Impact Attenuators, as required in the plans This item shall include all related hardware, not separately specified, as required by the manufacturer to construct complete and functional G-R-E-A-T impact attenuator systems The Impact Attenuator shall be manufactured by the Energy Absorption Systems, Inc, One East Wacker Dr, Chicago, Illinois 60601, Tel (312) 467-6750 The Attenuator shall be placed in accordance with the Manufacturer's Specifications and at the location shown on sht 102

The Contractor shall be responsible for inspection, repairing, and otherwise restoring the temporary Impact Attenuator in accordance with the manufacturer's maintenance instructions while it is in use on the project. Such repairs shall be performed within twelve (12) hours of the incident, which caused damage to the attenuator. The contractor shall be responsible for supplying all necessary materials and equipment required to perform the above described restoration of the attenuator. One (1) extra complete set of Hex-Foam Cartridges, as manufactured by Energy Absorption systems, Inc. for the attenuator furnished, shall be stocked at all times for the above repairs and the cost shall be included in the cost of the temporary attenuator.

The nose cover of the temporary attenuator shall be marked with three evenly spaced four (4) inch wide horizontal stripes of white reflective material

Payment for the above work shall be made at the unit price bid for each, Item Special, as described below, which priced shall be considered full payment for furnishing, installing, at the specified locations, furnishing extra hex-foam cartridges as specified above, restoration after each vehicle impact, including all labor, tools, equipment and miscellaneous hardware and materials necessary to complete this item of work in place Also included in the above cost shall be the removal of the temporary impact attenuator and installation at the location specified for the next stage of construction, as directed by the Engineer.

Item Special - Temporary Impact Attenuator, G-R-E-A-T System,
Model number 200200NFGGCZ - - - - 3 each

EARTHWORK AND SEEDING CHART

PLAN and PROFILE SHEET N°	CROSS SECTION SHEET N°	STATION TO STATION		203 EXCAVATION Cu. Yds.	203 EMBANKMENT Cu. Yds.	659 SEEDING & MULCHING Sq. Yds.	LOCATION
28	57	342+50	354+50	8151	196	10586	I.R. 70
29	58	354+50	357+00	1260	143	2236	I.R. 70
29	59	365+00	370+00	2500	312	5404	I.R. 70
30	62	370+00	383+00	7204	168	10407	I.R. 70
31	65	392+00	400+00	4842	265	3722	I.R. 70
32	66	400+00	406+00	1887	156	3034	I.R. 70
33	67	425+00	430+00	1161	151	3105	I.R. 70
34	69	430+00	438+00	4253	330	6786	I.R. 70
42	71	554+00	565+00	20203	1298	16952	I.R. 70
43	73	565+00	576+00	8504	1003	14518	I.R. 70
45	76	593+00	596+50	28	315	1560	I.R. 70
50	78	666+00	669+00	0	778	2016	I.R. 70
86	90	40+41.89	61+90.14	0	1525	3397	Hoke Road
87	93	2+04.82	5+00	0	162	1047	Hoke Road
88	94	12+04.32	16+00	0	688	1202	Hoke Road
90	98	53+97.00	65+80.40	0	1012	4425	Union Road
103	106	5+54.58	17+37.03	0	730	3501	Dog Leg Road
103	108	0+10	2+25	0	138	716	Kinmont Road
13		Excavation used for Item 803 Full Depth Rigid Pavt Rem. & Rigid repla.		200			
TOTALS (TO GENERAL SUMMARY)				60.193	10,265	94,716	

659 Commercial Fertilizer
94,716 x 9/1000 x 20/2000 = 8.52 Tons (To General Summary)

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MONTGOMERY COUNTY
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GENERAL NOTES

ITEM 803 – FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS C

SEE SHEET NO. 10 FOR TYPICAL JOINT REPAIR DETAIL

SEE SHEET NO. 21 FOR QUANTITIES

SUBBASE / SUBGRADE FAILURES

IF, AFTER REMOVAL OF THE RIGID PAVEMENT, THE ENGINEER DETERMINES THAT THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING, HE SHALL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH COMPACTED 304 AGGREGATE AND PLACE AGGREGATE DRAINS AS NECESSARY. QUANTITIES OF ITEM 301 BITUMINOUS AGGREGATE BASE AND ITEM 304 AGGREGATE BASE HAVE BEEN PROVIDED TO RECONSTRUCT THE PORTION OF THE EXISTING PAVED BERM DISTURBED BY THE TRENCHING OPERATIONS FOR PLACING THE ITEM 605 AGGREGATE DRAINS.

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT BID PRICE FOR :

ITEM	UNIT	DESCRIPTION
*203	200 CU. YDS.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
*301	40 CU. YDS.	BITUMINOUS AGGREGATE BASE, MWS-60
#304	270 CU. YDS.	AGGREGATE BASE, AS PER PLAN
#605	525 LIN. FT.	AGGREGATE DRAINS

* QUANTITIES CARRIED FORWARD TO SHEET NO. 12
# QUANTITIES CARRIED DIRECTLY TO GENERAL SUMMARY, SHEETS 23 & 24.

MAINTENANCE OF TRAFFIC

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GENERAL REQUIREMENTS

It is the intention to perform the required work with the least inconvenience to and the maximum safety of the Contractor and the traveling public. The requirements for maintaining traffic as indicated in the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways (referred to as "Ohio Manual"), current edition, and pertinent items of the Ohio Department of Transportation (ODOT) specifications and proposal shall apply in addition to the following notes.

The work limits shown on the plans are for physical construction only. The installation and operation of all traffic control and traffic control devices required by the "Ohio Manual" shall be provided by the Contractor whether inside or outside the work limits.

Should any paved areas not designated for maintaining traffic become damaged or destroyed due to the Contractor's negligence or failure to provide adequate signs, barricades, cones, flaggers or other traffic control devices, the restoration of the paved areas shall be at the Contractor's expense to the satisfaction of the Engineer.

Should the Contractor desire to, an alternate Maintenance of Traffic Plan may be submitted for approval. No alternate plan shall be placed in effect until approval has been granted in writing by the Director.

ITEM 614 - MAINTAINING TRAFFIC

The Contractor shall maintain traffic at all times in accordance with the requirements of Specification 614 and as specified herein.

Traffic is to be maintained in a uniform pattern throughout the entire length of the project. Work can be performed simultaneously in the eastbound and westbound lanes, provided the operations do not interfere with each other. The Contractor shall arrange his operations so as to prevent any interference to the flow of traffic. All vehicles, equipment, men and their activities are restricted at all times to one side of the directional pavement unless otherwise approved by the Engineer.

Vehicles and equipment shall always move with, and not across or against the flow of traffic, except as noted below. Vehicles and other equipment shall not park or stop except within designated work areas, and shall not enter and leave work areas in a manner which will be hazardous to, or interfere with the normal traffic flow. Personal vehicles will not be permitted to park within the right-of-way.

The use of berms to control traffic is prohibited unless otherwise approved by the Engineer. Should any existing or new berm areas become damaged or destroyed due to the Contractor's negligence or failure to provide adequate signs, barricades, flaggers, or other traffic control devices, the restoration of the berms will be at the Contractor's expense, unless otherwise approved by the Engineer.

The Contractor shall arrange traffic control devices so traffic to and from I-70 is maintained at all times and at all interchanges, unless other wise approved by the Engineer. A "ROAD CONSTRUCTION AHEAD" sign (OW-128) shall be placed on all ramps leading onto I-70 and at work limits.

The Contractor will be required to provide, erect, maintain (proper position, kept clean and legible, and in good working condition), and remove lights, signs, barricades, cones and all other traffic control devices necessary for the maintenance of traffic. All signs shall be reflectorized or illuminated. Placement of all traffic control devices shall start and proceed in the direction of the flow of traffic. Removal of traffic control devices shall start at the end of the construction area and proceed toward oncoming traffic. The Contractor shall provide for the installation of all necessary traffic control devices before beginning work and immediately remove these devices when work is suspended or completed.

A minimum traveled lane width of eleven (11) ft. is to be maintained at all times, or as directed by the Engineer. In any areas where a lane would be less than eleven (11) ft. for construction purposes, the adjacent shoulder shall be marked to allow the minimum eleven (11) ft. width for the traveled lane.

Lane closures for pavement cracking and seating, joint repairs, pavement resurfacing, or bridge deck work shall be in only one lane of pavement direction at any given time.

No lane or shoulder closures will be permitted from 2:00 PM on the day preceding a holiday to 6:00 AM on the day following the holiday. Whenever a Saturday or Sunday falls within this period the holiday shall be considered to be a three day holiday including both Saturday and Sunday.

On this project the above shall be placed into effect on the following holidays:

New Year's Day
Memorial Day
Independence Day
Labor Day
Thanksgiving Day
Christmas Day

All Lanes Shall Remain Open To Traffic In The Vicinity Of Bridge No MOT-70-1420 Until August 15, 1991.

TRAFFIC CONTROL

The installation, maintenance and operation of traffic control devices shall conform to the requirements of the "Ohio Manual" and as specified per Item 614.03.

Before the work begins, the Contractor will provide the Engineer with the names and telephone number(s) for two persons who can be contacted 24 hours a day by the Engineer and affected public agencies to repair and/or replace the traffic control devices as needed to maintain the safety of the traveling public.

The Contractor shall notify the Engineer of any proposed revisions to existing traffic control devices. The contractor shall obtain the Engineer's approval prior to making any of these revisions.

The standard device for closing any lane(s) to traffic shall be properly weighted and reflectorized steel or plastic drums. Optional 28 inch traffic cones may be used for daytime operations in lieu of drums or barricades, if approved by the Engineer. To increase stability, cones may be weighted by double stacking, sandbagging, or as approved by the Engineer. Steel rings or chains of any type placed over the cones will not be permitted.

Channelization devices such as barricades, vertical panels and drums shall be constructed, reflectorized, and used in accordance with Item 614.03 and the "Ohio Manual". Channelizing devices shall be spaced at a maximum interval of 50 feet center to center unless otherwise directed by the Engineer. Steel drums placed on newly paved asphalt surface courses shall be placed on 1/2" plywood pads or their equivalent. Channelizing devices along the edge of the work area shall be equipped with Type C barricade warning lights. The Contractor shall adjust the spacing on all channelizing devices as directed by the Engineer to allow access as required while maintaining safety during construction.

The Contractor shall furnish and install two (2) "WATCH FOR STOPPED TRAFFIC" signs (OW-166) 1300 feet downstream from the "ROAD WORK AHEAD" sign (OW-134). If traffic backups reach the "WATCH FOR STOPPED TRAFFIC" signs, the Contractor shall install two (2) additional "WATCH FOR STOPPED TRAFFIC" signs every 2000 feet upstream from the "ROAD WORK AHEAD" sign. The necessity for these signs shall be constantly monitored by the Contractor.

The Contractor shall be responsible for maintaining safe and adequate traffic control at all times.

TEMPORARY PAVEMENT MARKING

Temporary pavement markings shall be installed as shown on the plan sheets and at locations as directed by the Engineer. All existing or temporary pavement markings that will conflict with traffic flow shall be removed by the Contractor in accordance with Item 621.134. Painting (black) over the pavement markings is not an acceptable method of removing pavement markings. All markings shall be according to Item 621 and the "Ohio Manual". For additional details, See Sheet No.18.

QUANTITIES

The following estimated quantities have been included in the General Summary to be used as directed by the Engineer for the Maintenance of Traffic.

ITEM 404	Bituminous Concrete for Maintaining Traffic	50 C.Y.
ITEM 410	Traffic Compacted Surface, Type A or B	500 C.Y.
ITEM 616	Calcium Chloride	10 TON
ITEM 616	Water	50 M. GAL

ITEM 622 - PORTABLE CONCRETE BARRIER (PCB)

Portable concrete barriers shall be used at the edge of the traveled lane prior to the full depth pavement removal in the adjacent lane. They shall be placed such that the traveled lane has a minimum width of eleven (11) feet. These barriers shall remain in place until the work in the area is completed, as directed by the engineer.

Where Temporary Concrete Barrier appears in the plans, it shall be considered to read Portable Concrete Barrier (PCB). PCB is identical to 622 Temporary Concrete Barrier except for the changes shown in the plans.

Supplementing 622.08: The method of measurement for PCB shall include the total of each individual placement of PCB required by the plans without regard to whether the same specific section of PCB could be reused again on the project.

ITEM SPECIAL - LAW ENFORCEMENT OFFICER WITH PATROL CAR

During the erection or take down of the temporary traffic control devices needed to reduce traffic to a single lane, the Contractor shall provide for the services of a law enforcement officer with a patrol car for controlling traffic and to protect the workers placing the traffic control devices. The Contractor shall procure the services of the law enforcement officer. Should the contractor desire the use of a law enforcement officer with a patrol car at other times, the cost shall not be paid for separately, but included in the cost of ITEM 614-MAINTAINING TRAFFIC.

Payment for the above will be made under "ITEM SPECIAL-LAW ENFORCEMENT OFFICER WITH PATROL CAR". An estimated quantity of 300 hours is provided in the GENERAL SUMMARY.

ITEM SPECIAL - REPLACEMENT DRUMS

Drums furnished by the contractor in accordance with the requirements of the plans, specifications and proposals which become damaged by traffic for reasons beyond the control of the Contractor shall be replaced in kind when ordered by the Engineer, and shall be paid for under ITEM SPECIAL-REPLACEMENT DRUMS. Payment for each new drum shall include: (1) The cost of removing and disposing of the damaged drums and (2) providing, maintaining and removing the replacement drums in accordance with the contract requirements of the original drums. An estimated quantity of 200 each replacement drums has been provided in the GENERAL SUMMARY.

ITEM SPECIAL - REPLACEMENT SIGNS

Flat sheet signs furnished by the Contractor in accordance with the requirements of the plans, specifications, and proposals which become damaged by traffic for reasons beyond the control of the Contractor shall be replaced in kind when ordered by the Engineer. Payment shall include the cost of removing and disposing of the damaged signs, hardware and supports, etc. Replacement signs shall be new but other material may be used subject to approval of the Engineer. Payment for the new sign shall be made at the bid price per square foot for ITEM SPECIAL-REPLACEMENT SIGNS, for which an estimated quantity of 100 sq. ft. has been provided in the GENERAL SUMMARY.

TRENCH FOR WIDENING

Trench excavation for base widening shall be only on one side of the pavement at a time. The open trench shall be adequately maintained and protected with drums or barricades at all times. Placement of proposed subbase and base material shall follow as closely as possible behind the excavation operations. The length of widening trench which is open at any one time shall be held to minimum and shall at all times be subject to approval of the Engineer.

EXTENSION OVER MORE THAN ONE CONSTRUCTION SEASON

If this project extends over more than one construction season, no cracked and seated pavement, no binder course, leveling course, or intermediate course will be permitted to be exposed over the winter months between construction seasons. The Contractor shall be responsible for scheduling the asphalt construction to meet the above conditions.

PAYMENT

Payment for all the Maintenance of Traffic except for items designated as "ITEM 404, Bituminous Concrete for Maintaining Traffic", "ITEM 410, Traffic Compacted Surface, Type A or B", "ITEM 614, Temporary Pavement Markings", "ITEM 616, Calcium Chloride", "ITEM 616, Water", "ITEM 622, Temporary Concrete Barrier", "ITEM SPECIAL, Law Enforcement Officer with Patrol Car", ITEM SPECIAL, Replacement Signs", and "ITEM SPECIAL, Replacement Drums" shall be included in the Lump Sum "ITEM 614, Maintaining Traffic". Estimated quantities have been carried to the General Summary.

MAINTENANCE OF TRAFFIC NOTES

MAINTENANCE OF TRAFFIC

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MAINTENANCE OF TRAFFIC (STRUCTURES)

1. Each crossroad bridge shall be closed to traffic prior to any work on that bridge. All work shall be completed before the bridge is re-opened to traffic. Detours for City, County and Township Roads Shall be established, maintained and subsequently removed by the Contractor.
2. A thirty calendar day time limit will be in effect for all bridge closures.
3. Closures of adjacent bridges over I-70 (mainline) will not be permitted.
4. Signs, barricades, and gates, placed in accordance with the Ohio Manual, and as directed by the Engineer, shall be furnished, installed, and removed by the Contractor.
5. During ramp closures, the Contractor shall provide for the detours, according to this sheet, including signing within the project limits.
6. Ramps at interchanges must remain open at all times during the time the bridges within the interchange are closed to Traffic.
7. The Contractor is to provide a preliminary notification of detour set-up in writing at least two weeks before any closure. A final notification is to be provided 48 hours prior to the closure. *
8. The cost for all of the above shall be included in the price bid for Item 614 - Maintaining Traffic.

CONSTRUCTION ON I-70 BRIDGE OVER SR 48

When construction on Bridge MOT-70-1130 L & R (I-70 over State Route 48) is in progress, the contractor will be permitted to close various lanes of SR 48 in order to facilitate construction while separating work areas from the traveled lanes. At no time will the contractor be permitted to close more than one lane in either direction on SR 48, except for short duration closures, as directed by the Engineer. The Contractor shall utilize proper channelizing devices and shall utilize temporary concrete barriers at the work area. Only the lane adjacent to, or below, the work may be closed. When work is proceeding on the center pier of the bridge, or on the median of State Route 48, the contractor may close the left-hand northbound lane and the southbound left turn lane simultaneously as work areas.

The Contractor shall also provide informational signing during the time the existing overhead signs are removed from the bridge for construction. These signs shall be ground mounted route marker assemblies for I-70 on SR 48 to be paid under Gly Maintaining Traffic.

The temporary concrete barrier locations and quantity calculations for State Route 48 are as follows:

WORK LOCATION	DIRECTION	STATIONS	LENGTH
Outside Piers	Eastbound	308+30 to 310+30	200'
	Westbound	309+15 to 311+15	200'
Centerline Pier	Eastbound	307+85 to 311+85	400'
	Westbound	307+35 to 311+35	400'
		TOTAL	1200'

A quantity of 1200 Lineal Feet of ITEM 622 - TEMPORARY, CONCRETE BARRIER has been carried to the General Summary.

* Notification Shall be to:
Vic Roberts - City of Englewood Engineer - 836-5106
Allen Cox - Montgomery County - 225-6122
Charles Ward - Randolph Township Road Superintendent 836-6086 or 836-7009

DETOUR TABLE

PHASE	ROAD CLOSED	DETOUR ROUTE
1	Northbound State Route 49 (Closed at IR-70 Exit Ramp) (MOT-70-0821)	State Route 49 to Hoke Road, East on IR-70, Exit IR-70 at State Route 48, to U.S. 40, to State Route 49
	Southbound State Route 49 (Closed at Razor Run) (MOT-49-1269L)	U.S. 40, State Route 48, IR-70, and Hoke Road
	Dog Leg Road (MOT-70-1322)	Little York Road, Frederick Pike and U.S.R. 40
2	Diamond Mill Rd. and Crestway Dr. (MOT-49-1279L & MOT-70-0662 & MOT-70-0759)	Westbrook Rd., Hoke Rd. and U.S.R. 40
	Union Road (MOT-70-0962)	Old Salem Rd., Taywood Rd. and Wenger Rd.
3	Kimmel Rd. (MOT-70-0708)	Crestway Dr. and Wenger Rd
	Hoke Rd. (MOT-70-0859)	S.R. 49, Old Salem Rd., Union Rd. and Wenger Rd.

MAINTENANCE OF TRAFFIC NOTES

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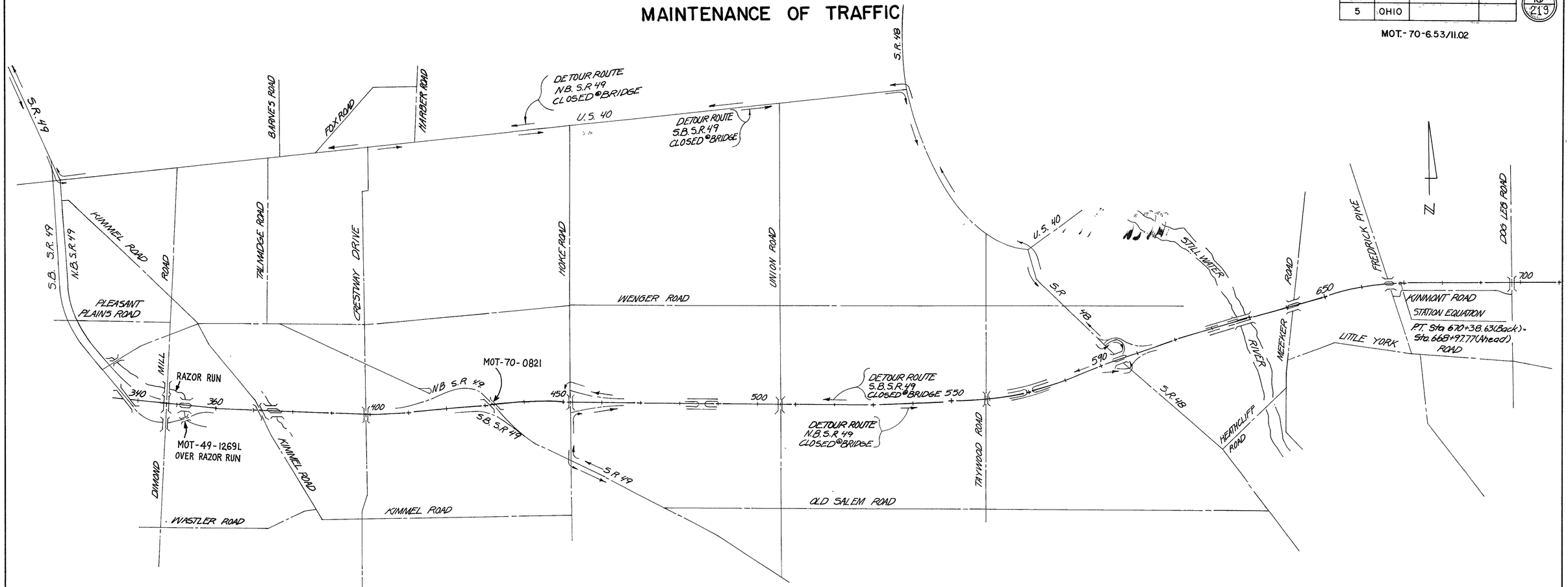
MAINTENANCE OF TRAFFIC



PHASE I (SEE ALSO SHT. 16A)

MOT-70-0821 CLOSED

MOT-49-1269L CLOSED

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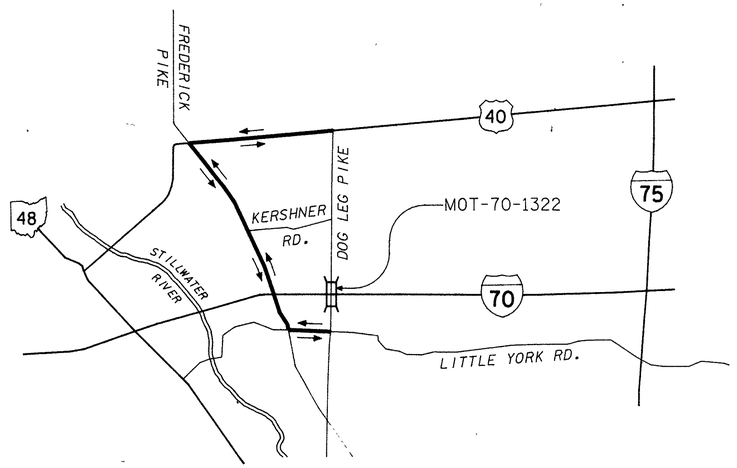
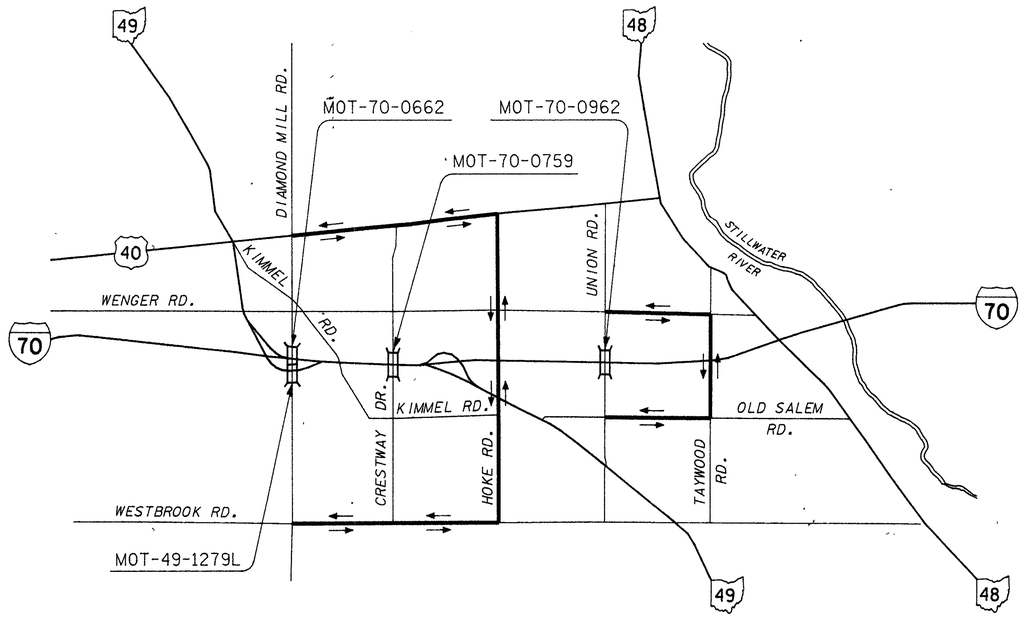
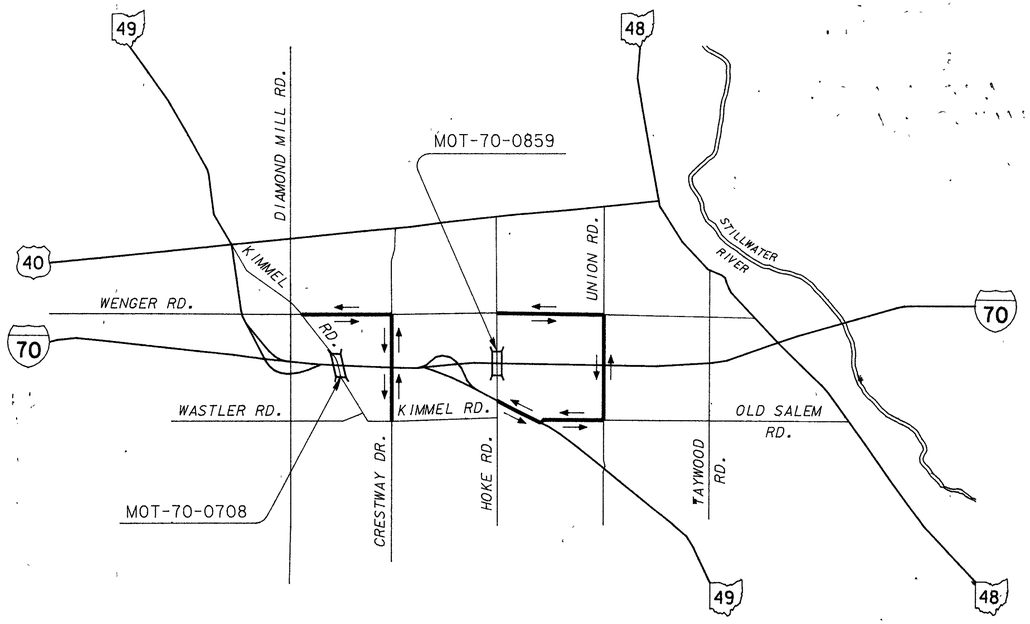


PHASE 1

(SEE ALSO SHEET NO. 16)



PHASE 2



PHASE 3

MAINTENANCE OF TRAFFIC

MAINTENANCE OF TRAFFIC

F.H.W.A. REGION	STATE	PROJECT	
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MAINTENANCE OF TRAFFIC DETAILS

Construction on I-70 shall be staged as follows:

STAGE 1

During Stage 1, traffic will be maintained on the right-hand lane of the directional pavement. The Contractor will strengthen the left shoulder by removing the existing shoulder and replacing with Class A Temporary Pavement. Strengthening is required in areas adjacent to new full depth pavement. Channelizing devices will be placed accordingly.

STAGE 2

Upon completion of the work in Stage 1 for the length of the project, the Contractor shall direct traffic to the left-hand lane and strengthened shoulder utilizing temporary markings to maintain the 11 ft. width of the traveled lane. During this stage, the contractor will work in the right lane(s) and shoulder, completing breaking and seating, improvement of the right shoulder, and placement of the Type 301 Bituminous Aggregate Base.

RAMP DETAILS:

During Stage 2, construction in the area of the interchange ramps shall be performed in the following sequence: (See RAMP CLOSURE DETAILS)

Phase 1: Traffic will be maintained to and from the ramps through the use of gaps in the right-hand lane(s) as shown on the detail sheet.

Phase 2: When all work has been completed on the right-hand lane(s) and shoulder, the contractor shall be permitted to close the ramps to complete the work in the gap areas. Closing of a ramp will not be permitted while the crossover bridge at the same interchange is closed. Ramps providing an alternate route for other ramps closed to traffic at adjacent interchanges cannot be closed concurently.

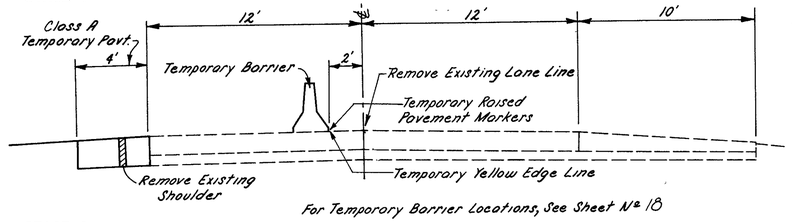
STAGE 3

When Stage 2 is completed, the Contractor will direct traffic to the right-hand lane and shoulder, maintaining the 11 ft. width of the traveled lane by the use of pavement markings. The contractor will then complete the breaking and seating, and paving operations in the left-hand lane.

STAGE 4

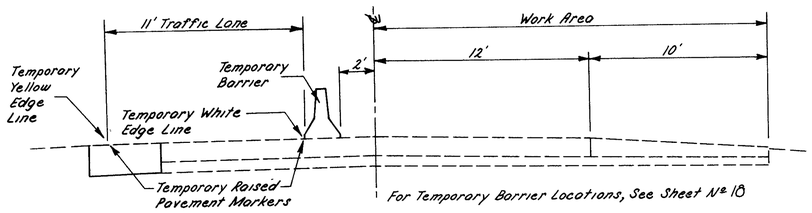
When Stage 3 is completed, the Contractor will direct traffic to the left-hand lane and shoulder, maintaining the 11 ft. width of the traveled lane by the use of pavement markings. The contractor will then complete paving operations in the right-hand lane, following the Ramp Details as in STAGE 2 (above).

STAGE 1



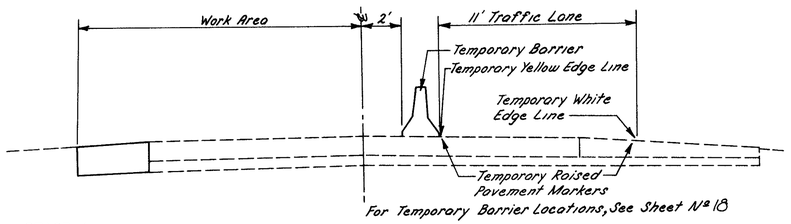
For Temporary Barrier Locations, See Sheet No 18

STAGE 2



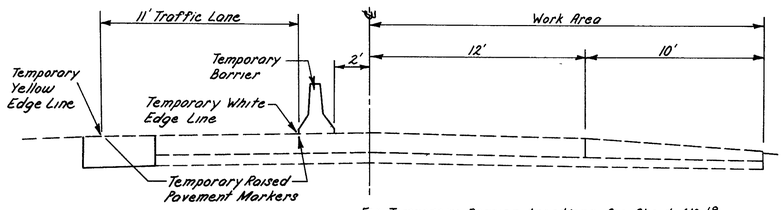
For Temporary Barrier Locations, See Sheet No 18

STAGE 3



For Temporary Barrier Locations, See Sheet No 18

STAGE 4

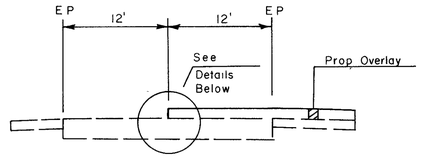


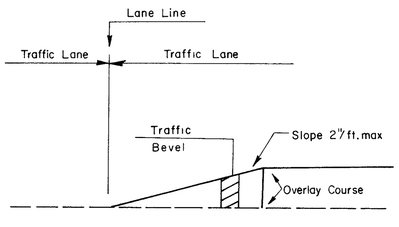
For Temporary Barrier Locations, See Sheet No 18

LONGITUDINAL JOINTS

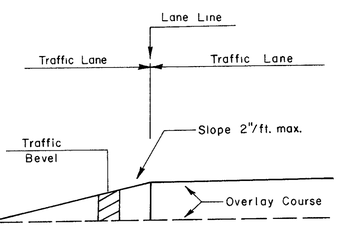
In any area where traffic is exposed to a longitudinal joint greater than 1 1/2" in depth, the contractor shall provide a bevel as detailed in these notes (TRAFFIC BEVEL DETAIL) to provide a smooth transition. The material used for the bevel shall be the same as used in the newly-placed surface course. The bevel may be constructed by planing, raking, separate placement, or any other method as approved by the Engineer. The traffic bevel shall be installed similar to either TRAFFIC BEVEL- Detail A or Detail B. In either case, the traffic bevel shall be removed prior to placement of the adjacent surface course. Payment for this work shall be included in ITEM 412 - Asphalt Concrete, MWS-60.

TRAFFIC BEVEL DETAILS





Traffic Bevel - Type B



Traffic Bevel - Type A

ITEM 615 - CLASS A TEMPORARY PAVEMENT

CLASS A TEMPORARY PAVEMENT will be used to strengthen the left shoulder for traffic use during STAGE 1 of construction on I-70.

The temporary pavement locations and quantity calculations are as follows:

SHEET	DIRECTION	STATION	TO STATION	LENGTH	AREA
28	Westbound	342+20	352+04.66	954.66'	424.3 S.Y.
28-29	Westbound	353+14.76	362+69.76	955.0'	424.4 S.Y.
29-30	Westbound	367+00	377+26.13	1026.13'	456.1 S.Y.
30-31	Westbound	378+25.37	387+50.37	955.0'	424.4 S.Y.
33-34	Westbound	426+00	439+55	1355.0'	602.2 S.Y.
42-43	Westbound	555+00	569+55	1455.0'	646.7 S.Y.
28	Eastbound	336+20	352+35.24	1615.24'	717.9 S.Y.
28-29	Eastbound	353+45.34	356+70.34	325.0'	144.4 S.Y.
29-30	Eastbound	360+70	377+74.63	1704.63'	757.6 S.Y.
30	Eastbound	378+73.87	381+98.87	325.0'	144.4 S.Y.
31-32	Eastbound	388+95	405+00	1605.0'	713.3 S.Y.
33-34	Eastbound	419+70	436+75	1705.0'	757.8 S.Y.
41-42	Eastbound	548+70	563+25	1455.0'	646.7 S.Y.
				TOTAL	6860.2 S.Y.

A total quantity of 6861 Sq. Yards has been carried to the General Summary.

STAGING NOTES AND DETAILS

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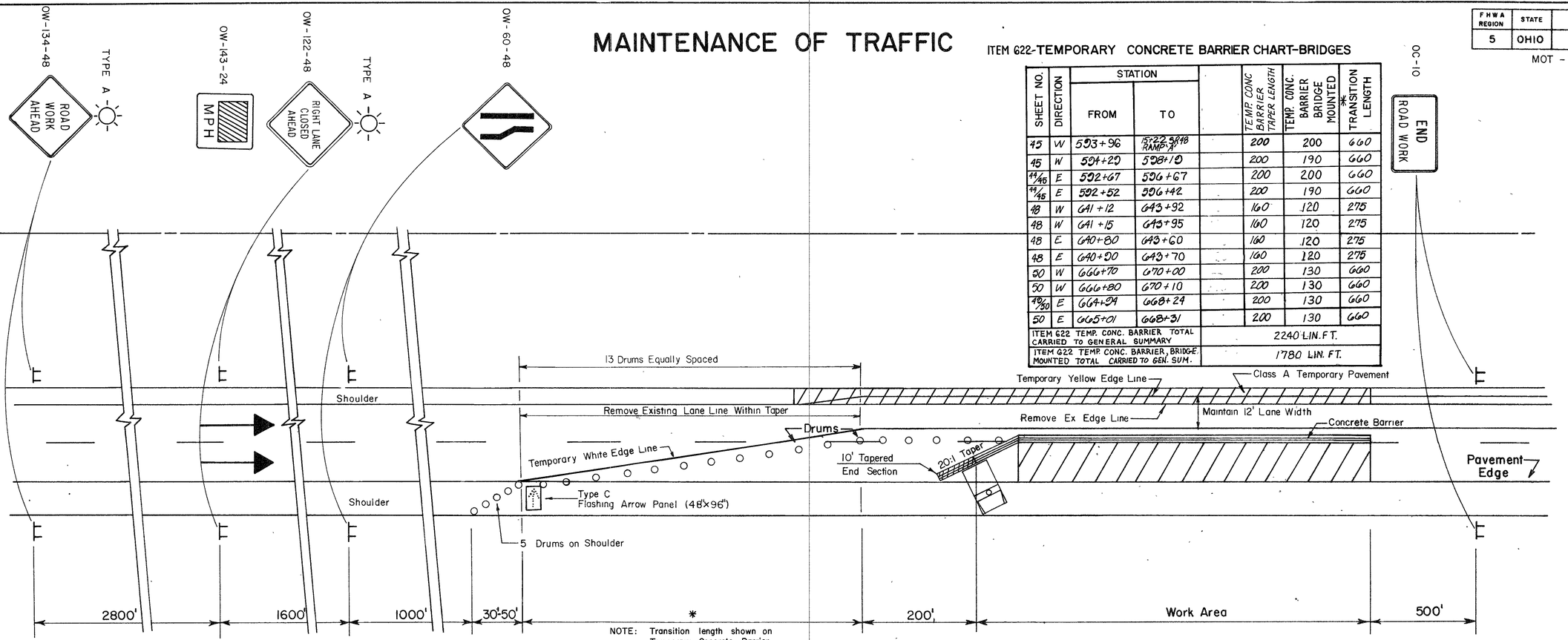
MAINTENANCE OF TRAFFIC



NOTE: Transition length shown on Temporary Concrete Barrier chart this sheet.

ITEM 622-TEMPORARY CONCRETE BARRIER CHART-BRIDGES

SHEET NO.	DIRECTION	STATION FROM	STATION TO		TEMP. CONC BARRIER TAPER LENGTH	TEMP. CONC. BARRIER BRIDGE MOUNTED	*TRANSITION LENGTH
45	W	593+96	15-22,5R48 RAMP A		200	200	660
45	W	594+20	598+10		200	190	660
44/46	E	592+67	596+67		200	200	660
44/45	E	592+52	596+42		200	190	660
48	W	641+12	643+92		160	120	275
48	W	641+15	643+95		160	120	275
48	E	640+80	643+60		160	120	275
48	E	640+20	643+70		160	120	275
50	W	666+70	670+00		200	130	660
50	W	666+80	670+10		200	130	660
49/50	E	664+24	668+24		200	130	660
50	E	665+01	668+31		200	130	660
ITEM 622 TEMP. CONC. BARRIER TOTAL CARRIED TO GENERAL SUMMARY					2240 LIN. FT.		
ITEM 622 TEMP. CONC. BARRIER, BRIDGE MOUNTED TOTAL CARRIED TO GEN. SUM.					1780 LIN. FT.		

GENERAL NOTES

1. THIRTEEN (13) DRUMS OR BARRICADES SHALL BE USED TO FORM THE LANE TRANSITION TAPER IN ADVANCE OF THE WORK AREA. FIVE (5) CHANNELIZING DEVICES SHALL BE USED TO FORM THE TAPER ON THE SHOULDER. CONES, DRUMS, OR BARRICADES SHALL BE SPACED AT 50 FOOT CENTERS FOR THE FIRST 1000 FEET OF THE WORK AREA AND AT A MAXIMUM OF 100 FEET FOR THE BALANCE OF THE WORK AREA. CONES MAY BE SUBSTITED FOR THE BARRICADES OR STEEL DRUMS FOR THE LANE CLOSURES DURING DAYLIGHT HOURS ONLY.
2. WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY, "OW-123-48" SIGNS SHALL BE SUBSTITUTED FOR "OW-122-48" SIGNS AND THE OW-60D SIGNS SHALL BE SUBSTITUTED FOR THE OW-60C SIGNS.
3. THE WORK TRUCK SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS TRUCK SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER.
4. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES. MAXIMUM SPACING SHALL BE 50' CENTER TO CENTER IN ADVANCE OF THE WORK AREA AND 200' CENTER TO CENTER WITHIN THE LIMITS OF THE WORK AREA.
5. TEMPORARY CONCRETE BARRIERS ALONG THE EDGE OF THE WORK AREA SHALL BE EQUIPPED WITH BARRIER REFLECTORS - SEE SHT. 217.
6. FOR ITEM 622 - TEMORARY CONCRETE BARRIER, BRIDGE MOUNTED DETAILS SEE SHEET 18A.

ITEM 622-TEMPORARY CONCRETE BARRIER CHART

SHEET NO.	DIRECTION	STATION FROM	STATION TO	TEMP. CONC. BARRIER LENGTH	TEMP. CONC. BARRIER TAPER LENGTH	BRIDGE MOUNTED LENGTH	*TRANSITION LENGTH
28/29	W	342+50	350+20	1330	280	60	1105
29/30	W	307+00	384+30	1350	280	100	1105
33/34	W	426+00	443+05	1425	280		935
42	W	555+00	566+05	825	280		935
28/29	E	330+70	350+70	1360	280	60	1105
29/30	E	304+20	381+20	1390	280	100	1105
31/32	E	302+45	405+00	975	280		1105
33/34	E	423+20	436+75	1075	280		1105
42	E	552+20	563+25	825	280		935
		SUB TOTAL		13084		320	
ITEM 622 TEMP. CONC. BARRIER TOTAL CARRIED TO GEN. SUMMARY				13084 X 2 = 26168 LIN. FT.			
ITEM 622 TEMP. CONC. BARRIER, BRIDGE MOUNTED TOTAL CARRIED TO GEN. SUM.				320 X 2 = 640 LIN. FT.			

BARRIER DETAIL

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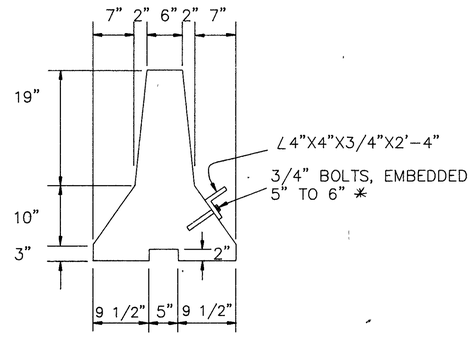
BRIDGE DECK SURFACE PREPARATION :

A. THE BRIDGE DECK SURFACE AREA ON WHICH THE PRECAST CONCRETE BARRIERS WILL REST, SHALL BE CLEARED OF ALL LOOSE SAND, GRAVEL, DIRT AND DEBRIS.

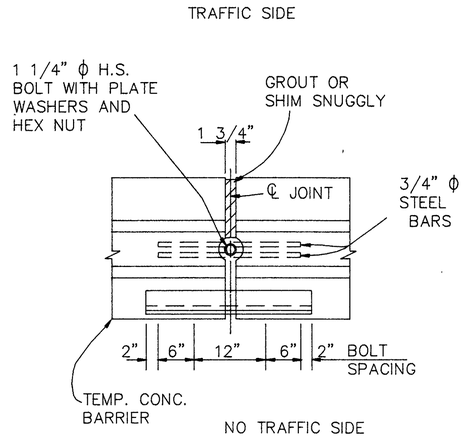
B. ANY IRREGULARITIES IN THE BRIDGE DECK AREA, UNLESS JUDGED BY THE ENGINEER TO BE INCONSEQUENTIAL, SHALL BE LEVELED WITH GROUT AND\OR ASPHALT.

C. ASPHALT ROLL ROOFING SHALL BE PLACED ON THOSE BRIDGE DECK AREAS, AS JUDGED BY THE ENGINEER, TO HAVE A SURFACE ROUGHNESS WHICH WOULD INHIBIT FRICTION CONTACT BETWEEN BARRIER SEGMENTS AND DECK.

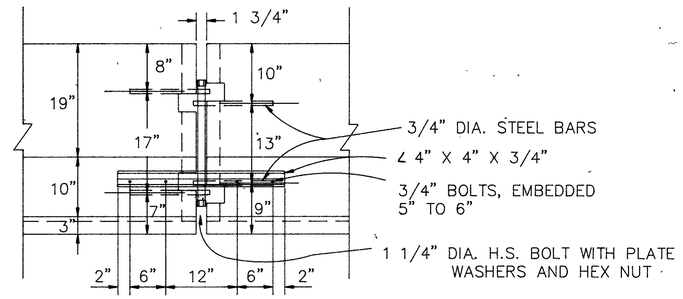


DETAIL

* EXPANSION BOLT PER CMS 712.01
OR EMBED WITH NON-SHRINK
EPOXY MORTAR *OR RESIN ANCHORS*
PER SS 852/952.

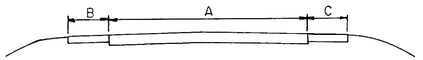


PLAN AT JOINT



ELEVATION AT JOINT

TEMPORARY CONCRETE BARRIER, BRIDGE MOUNTED
NO ANCHOR TO THE BRIDGE DECK IS NEEDED



PAVEMENT DIAGRAM

CALCULATIONS

OVERLAY

COMPUTED BY EC DATE 2-10-88

CHECKED BY M.L.E DATE 3-11-88

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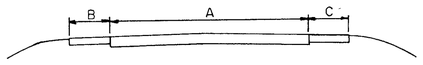
PAVEMENT DATA							PAVEMENT ITEMS																											
SHEET NO	LOCATION	DIRECTION	STATION FROM	STATION TO	LENGTH TOTAL	WIDTH "A"+"B"+"C" FROM DIAGRAM ABOVE	PAVEMENT AREA	407 Tack Coat		412 3/4" Asphalt Concrete MWS-60		WIDTH "A" FROM DIAGRAM ABOVE	Pavement Area "A"	446 2" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 2, MWS-60	301 4 3/4" Bituminous Aggregate Base MWS-60	SPL BREAKING & SEATING EXISTING REINFORCED CONC. PAV'T.	WIDTH "B" & "C" FROM DIAGRAM ABOVE	Pavement Area "B" & "C"	446 3 3/4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 2, MWS-60	254 Pavement Planing, Bituminous	203 Embankment	412 3/4" Asphalt Concrete MWS-60	446 2 1/4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE 2, MWS-60	Variable DEPTH ASPHALT CONC. INTERMEDIATE COURSE TYPE 2 MWS-60	412 Variable DEPTH ASPHALT CONC. MWS-60			659 Commercial Fertilizer	617 Water	659 4" Compacted Aggregate	659 Seeding & Mulching
					Lineal Feet	Ft	Sq Yds	Gal		Cu Yds		Ft	Sq Yds	Cu Yds	Cu Yds	Sq Yds	Ft	Sq. Yds.	Cu Yds	Sq Yds	Cu Yds	Cu Yds	Cu Yds.	Cu. Yds.	Cu. Yds.			Ton	M. Gals.	Cu Yds	Sq Yds
3	I R 70	WB	356+30 76	357+30 96	100.20	30	434 2	43		9		24	267 2		36	267	15	167	18	267	24		17							10	245
3	I R 70	EB	356+70 34	357+30 96	60 62	30	301 7	30		7		24	185 6		25	186	15	116	13	186	17		12							7	170
3	I R 70	WB	364+44 96	367+00 00	255 04	30	1105 2	111		23		24	680 0		90	680	15	425	44	680	61		43							25	623
3	I R 70	EB	364+44 96	367+00 00	255 04	30	1105 2	111		23		24	680 0		90	680	15	425	44	680	61		43							25	623
3	I R 70	WB	381+50 37	387+34 80	1584 43	30	6865.9	687		143		24	4225.1		557	4225	15	2040	275	4225	381		264							156	3813
3	I R 70	EB	381+08 57	385+28.00	1326.13	30	57 466	575		120		24	3536.3		467	3536	15	2210	230	3536	510		221							131	3242
3	I R 70	WB	409+09 80	426+0000	1690.20	30	7324 2	732		153		24	4507.2		595	4507	15	2817	294	4507	407		282							167	4132
3	I R. 70	EB	409+09 80	426+0000	1690.20	30	7324 2	732		153		24	4507.2		595	4507	15	2817	294	4507	407		282							167	4132
3	I R 70	WB	436+75 00	436+78 21	321	30	139	1		1		24	8.6		1	9	15	5	1	9	1		1							1	8
3	I R 70	EB	436+75 00	436+78 21	321	30	139	1		1		24	8.6		1	9	15	5	1	9	1		1							1	8
3	I.R 70	WB	442+97 21	528+48 15	8550 94	30	37,054 1	3705		772		24	22,802 5		3009	22,802	15	14,252	1485	22803	2058		1425							845	20,302
3	I R 70	EB	442+97 21	528+48 15	8550 94	30	37,054.1	3705		772		24	22,802 5		3009	22,802	15	14,252	1485	22803	2058		1425							845	20,302
3	I R 70	WB	537+28.15	555+00 00	1771 85	30	7678.0	768		160		24	4724 9		623	4725	15	2053	308	4725	426		295							175	4331
3	I R 70	EB	537+28.15	555+0000	1771 85	30	7678 0	768		160		24	4724 9		623	4725	15	2053	308	4725	426		295							175	4331
3	I R 70	WB	576+02 91	580+23 06	420.15	30	1820.6	182		38		24	1120 4		148	1120	15	700	73	1120	101		70							41	1027
3	I R 70	EB	576+02 91	580+23 06	420 15	30	1820 6	182		38		24	1120 4		148	1120	15	700	73	1120	101		70							41	1027
3	I R 70	WB	580+23 06	580+73 06	5000	30	2167	22				24									12	5		17						5	122
3	I R 70	EB	580+23 06	580+73 06	5000	30	216 7	22				24									12	5		17						5	122
4	I R 70	WB	357+30 96	364+44 96	705 00	30	3055 0	306		64		24	1680 0	104	248	1880	15	1175	123	1880	170									70	1723
4	I R 70	EB	357+30 96	364+44 96	705 00	30	3055 0	306		64		24	1880 0	104	248	1880	15	1175	123	1880	170									70	1723
4	I R 70	WB	357+31.80	405+00 00	1175 00	30	5091 7	509		106		24	3133 3	174	413	3133	15	1958	204	3133	283									116	2872
4	I R 70	EB	405+00 00	409+09 80	409 80	30	1775.8	178		37		24	1092 8	61	144	1093	15	683	71	1093	99									40	1002
4	I R. 70	WB	436+78 21	442+97 21	619 00	30	2682 3	268		56		24	1650.7	92	217	1651	15	1032	108	1651	149									61	1513
4	I R 70	EB	436+78 21	442+97 21	619 00	30	2682 3	268		56		24	1650 7	92	217	1651	15	1032	108	1651	149									61	1513
4	I R 70	WB	528+48 15	537+28 15	880 00	30	3813 3	381		80		24	2346 7	130	310	2347	15	1467	153	2347	212									87	2151
4	I R 70	EB	528+48 15	537+28 15	880 00	30	3813 3	381		80		24	2346 7	130	310	2347	15	1467	153	2347	212									87	2151
4	I R 70	WB	563+00 00	576+02 91	1102 91	30	4779 3	478		100		24	2041 1	163	388	2041	15	1338	191	2941	266									109	2396
4	I R 70	EB	563+25 00	576+02 91	1277 91	30	5537.6	554		116		24	3407 8	189	450	3408	15	2130	223	3405	308									126	3124
5	I R 70	WB	580+73 06	590+73 02	999 96	30	4333 2	433													148	90	271							99	1333
5	I R 70	EB	580+73 06	591+12 18	1039 12	30	4502 8	450													154	94	282							103	1385
5	I R 70	WB	590+73 02	594+23 02	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	EB	591+12 18	594+62 18	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	594+07 98	597+57 98	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	EB	594+47 14	597+97 14	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	597+57 98	623+04 31	2407 33	30	10431 8	1043														357	217	652						238	3210
5	I R 70	EB	597+97 14	623+80 13	2382 99	30	10,326 3	1033														353	215	645						235	3177
5	I R 70	WB	623+80 13	627+15 31	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	EB	623+80 13	627+30 13	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	629+80 87	633+30 87	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	EB	630+04 60	633+54 60	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	633+30 87	638+43 35	503 48	30	2181 7	218														75	46	136						50	671
5	I R 70	EB	633+54 60	638+19 65	464 96	30	2014.8	201														60	42	126						46	620
5	I R 70	WB	638+43 35	641+93 35	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I. R 70	EB	638+19 65	641+69 65	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	643+05 41	646+55 41	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	EB	642+81 61	646+31 61	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	646+55 41	654+54 74	799 33	30	3466 8	346														118	72	216						79	1066
5	I R 70	EB	646+31 61	654+54 74	823 13	30	3566 0	357														122	74	222						81	1098
5	I.R 70	WB	666+65 08	666+79 43	14 35	30	62 2	6													62	2				1				1	19
5	I R 70	EB	666+65 08	667+00 78	35 65	30	154 5	15													154	5	1							4	48
5	I R 70 *	WB	667+97 02	670+06 16	350.00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70 *	EB	668+20 16	670+29 30	350 00	30	1516 7	152													1138	52	32			15				34	467
5	I R 70	WB	670+06 16	732+33 60	6227 44	30	20,985 6	2099														922	562	1687						615	8303
5	I R 70	EB	670+29 30	732+33 60	6204 30	30	20,855 3	2088														919	560	1680						613	8272
5	I R 70	WB	732+33 60	733+83 60	150 00	30	650 0	65													271	22	14			15				15	200
5	I R 70	EB	732+33 60	733+83 60	150 00	30	650 0	65													271	22	14			15				15	200
*	Includes Station Equation	Sta	670+38 63	Back = Sta	666+07 77	Ahead (Diff = -)	140 86	Lin Ft.																										
6	I R 70	WB	654+54 74	663+29 43	874 69	30	3780 3	378														210	79	237						86	1106
6	I R 70	EB	654+54 74	663+50 73	895.99	30	3882 6	388														215	81	242						88	1135
6	I R 70	WB	663+29 43	666+65 08	335 65	30	1454 5	145													1075	81	22			15				33	448
6	I R 70	EB	663+50 73	666+65 08	314 35	30	1362 2	136													983	76	21			14				31	410
TOTALS (To General Summary)								28,801		3332				1239	12,962	98,231			6403	116,978	13,480	2662	11,142	34	270			11.67	64	6557	120,650



PAVEMENT DIAGRAM

CALCULATIONS

COMPUTED BY E.L.C DATE 3-8-88
CHECKED BY M.L.E DATE 3-11-88

FHWA REGION	STATE	PROJECT	
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SHEET NO	LOCATION	DIRECTION	STATION FROM	STATION TO	LENGTH TOTAL	WIDTH A+B+C FROM DIAGRAM ABOVE	PAVEMENT AREA
					Lineal Feet	Ft	Sq Yds
	FULL DEPTH PAVEMENT						
7	I.R.-70	WB	559+10.83	565+00.00	589.17	39	2553.1
7	I.R.-70	EB	397+34.80	405+00.00	765.20	39	3315.9
7	I.R.-70	EB	559+10.83	563+25.00	414.17	39	1794.7
8	I.R.-70	WB	342+50.00	352+04.66	954.66	39	4136.9
8	I.R.-70	EB	342+50.00	352+35.24	985.24	39	4269.4
8	I.R.-70	WB	353+14.76	356+39.76	325.00	39	1408.3
8	I.R.-70	EB	353+45.34	356+70.34	325.00	39	1408.3
8	I.R.-70	WB	367+00.00	377+01.13	1001.13	39	4338.2
8	I.R.-70	EB	367+00.00	377+49.63	1049.63	39	4548.4
8	I.R.-70	WB	378+50.37	381+50.37	300.00	39	1300.0
8	I.R.-70	EB	378+98.87	381+98.87	300.00	39	1300.0
8	I.R.-70	WB	426+00.00	436+75.00	1075.00	39	4658.3
8	I.R.-70	EB	426+00.00	436+75.00	1075.00	39	4658.3
8	I.R.-70	WB	555+00.00	559+10.83	410.83	39	1780.3
8	I.R.-70	EB	555+00.00	559+10.83	410.83	39	1780.3
8	I.R.-70	EB	395+25	397+34.8	209.80	39	909.1
	OVERLAY ~ CROSS ROADS						
9	Kimmel Road		48+97.23	49+99.23	100.00	16	177.8
9	Kimmel Road		52+35.95	53+35.95	100.00	16	177.8
9	Crestway Drive		47+76.67	48+76.67	100.00	18	200.0
9	Crestway Drive		51+05.17	52+05.17	100.00	18	200.0
9	Hoke Road		49+83.64	54+32.64	449.00	24	1197.3
9	Hoke Road		57+11.14	61+60.14	449.00	24	1197.3
9	Union Road		53+97.90	58+55.90	458.00	21	1068.7
9	Union Road		61+22.40	62+60.00	137.60	24	366.9
9	Union Road		62+60.00	63+00.00	40.00	24	106.7
9	Union Road		63+00.00	65+00.00	200.00	Var.	644.4
9	Union Road		65+00.00	65+80.40	80.40	34	303.7
9	Dog Leg Road		5+54.53	10+12.53	458.00	20	1017.8
9	Dog Leg Road		12+79.03	17+37.03	458.00	20	1017.8
9	Kinmont Road		0+10.00	2+25.00	215.00	Var.	441.9
	TOTALS (To General Summary)						

* THESE AREAS HAVE NO EXISTING UNDERDRAINS

PAVEMENT ITEMS

SHEET NO	412 3/4" ASPHALT CONC. MWS-60 Cu Yds.	446 2 3/4" ASPHALT CONC. INTERMEDIATE COURSE TYPE 2 MWS-60 Cu Yds.	203 Subgrade Compaction Sq. Yds.	407 Tack Coat Gals.	WIDTH A From Diagram Above Ft	202 Pavement Removed Sq. Yds.	203 Proof Rolling Hours	412 Variable Depth ASPHALT CONCRETE MWS-60 Cu Yds.	WIDTH Ft.	301 6" Bituminous Aggregate Base MWS-60 Cu. Yds.	304 Variable Depth Aggregate Base, AS PER PLAN Cu Yds.	254 Pavement Planing, Bituminous Sq. Yds.	WIDTH	301 Variable Depth Bituminous Aggregate Base MWS-60 Cu Yds	301 12" Bituminous Aggregate Base MWS-60 Cu. Yds	WIDTH Ft.	AREA Sq Yds.	409 Seal Coat Cover Aggregate N° 8 Cu. Yds.	409 Seal Coat Bituminous Material Gal.	301 3½" Bituminous Aggregate Base MWS-60 Cu Yds
7	53	195	2553		24	1571			9+5	153	153 *		25		546					
7	69	253	3316		24	2040			9+5	198	184		25		709					
7	38	138	1795		24	1104			9+5	107	100 *		25		384					
8	86	316	4137		24	2546			9+5	248	230		25		884					
8	89	326	4269		24	2627			9+5	255	237		25		912					
8	30	107	1408		24	867			9+5	84	78		25		301					
8	30	107	1408		24	867			9+5	84	78		25		301					
8	91	331	4338		24	2670			9+5	260	241		25		927					
8	95	348	4548		24	2799			9+5	272	253		25		972					
8	27	99	1300		24	800			9+5	78	72		25		278					
8	27	99	1300		24	800			9+5	78	72		25		278					
8	97	356	4658		24	2867			9+5	279	259		25		995					
8	97	356	4658		24	2867			9+5	279	259		25		995					
8	37	136	1780		24	1096			9+5	107	99 *		25		380					
8	37	136	1780		24	1096			9+5	107	99 *		25		380					
8	19	69	909		24	560			9+5	54	51		25		194					
9	4			18								178								
9	4			18								178								
9	4			20								200								
9	4			20								200								
9	22	74		120				9				100		247						
9	22	74		120				9				100		247						
9	20	67		107				8				88		231						
9	8	28		37										160		8	122	1	36	12
9	3	8		11										32		Var	53	1	16	5
9	13	48		64				2						90		16	355	3	107	34
9	3			30				11				142				16	143	1	43	14
9	19	63		102				8				83		200						
9	19	63		102				8				83		200						
9	7	22		44				7				76		30						
	1073	3819	44,157	813		27,177	15	62		2643	2465	1427		1437	9436			6	202	65

CALCULATIONS

CALCULATIONS

COMPUTED BY E.L.C. DATE 3-8-88

CHECKED BY M.L.E DATE 3-11-88

FHWA REGION	STATE	PROJECT	
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MOT-70-6.53/11.02

SHEET NO.	LOCATION	DIRECTION	STATION FROM	STATION TO	LENGTH TOTAL (Lineal Feet)	WIDTH (Ft)	PAVEMENT AREA (Sq. Yds)	407 Tack Coat (Gal.)	412 3/4" Asph Conc MWS-60 (Cu Yds.)	412 3/4" Asph. Conc MWS-60 (Cu Yds.)	446 2 1/4" ASPHALT CONC. INTERMEDIATE COURSE TYPE 2 MWS-60 (Cu Yds)	G17 Compacted Aggregate (Cu Yds.)	G17 Water (M. Gal)	301 Variable Depth Bituminous Aggregate Base MWS-60 (Cu Yds.)	254 Pavement Planing, Bituminous (Sq. Yds.)	412 Variable Depth ASPHALT CONCRETE MWS-60 (Cu Yds.)	446 Variable Depth ASPHALT CONC. INTERMEDIATE COURSE TYPE 2 MWS-60 (Cu Yds)
10	N.B. SR 40	**	277+25.00	270+25.00	200.00	38	844.4	84		7		6			317		35
10	S.B SR 40	*	254+12.00	254+87.00	75.00	38	316.7	32		7		1					26
10	S.B SR. 40		254+87.00	250+55.00	168.00	38	709.3	71		15	45	2					
10	S.B SR 40	*	250+55.00	258+05.00	150.00	38	633.3	63	5			4			264	41	
10	S.B SR 40	*	138+44.00	130+94.00	150.00	Var	529.2	50		6		4			261		22
10	S.B SR 40	*	130+94.00	140+11.00	17.00	Var	61.6	6		2		1					4
10	S.B S.R. 40	*	140+11.00	140+69.00	58.00	31	199.8	20		4		2					17
10	N.B SR 40	*	155+45.00	156+25.00	150.00	Var	470.2	48		5		4			232		20
10	N B SR. 40		150+25.00	101+23.61	428.61	Var	1327.7	133		28	83	12					
10	N B S.R. 40	*	161+23.61	161+98.61	75.00	Var	211.5	21		5		2					17
10	HOKE ROAD RAMP "A"	*	E+01.32	5+00.00	205.68	31	1018.5	102		21	63	22		168			
10	HOKE ROAD RAMP "A"		5+00.00	7+18.00	218.00	29	702.4	70		30	45	6					
10	HOKE ROAD RAMP "A"		7+18.00	10+00.00	282.00	29	908.7	91		19	57	8					
10	HOKE ROAD RAMP "A"		10+00.00	11+99.97	199.97	29	577.7	58		12	36	6					
10	HOKE ROAD RAMP "A"		11+99.97	14+24.97	225.00	Var	612.5	61		13	39	6					
10	HOKE ROAD RAMP "A"	*	14+24.97	14+99.97	75.00	Var	187.5	19		4		6					16
10	HOKE ROAD RAMP "B"	*	12+04.32	16+00.00	395.68	28.6	1253.0	125		26	78	29		300			
10	HOKE ROAD RAMP "B"		16+00.00	20+60.00	460.00	28.5	1450.6	145		31	92	13					
10	HOKE ROAD RAMP "B"	*	20+60.00	20+66.00	6.00	28.5	19.0	2		1		1					1
10	HOKE ROAD RAMP "B"	*	20+66.00	21+35.00	69.00	Var	227.6	23		5		2					19
10	SR 48 RAMP "A"	**	15+25.00	15+33.00	8.00	Var.	22.1	2	1			1					
10	SR 48 RAMP "A"	**	15+33.00	16+15.25	82.25	Var	208.8	21	4			1					
10	SR 48 RAMP "B"	**	17+20.00	17+95.00	75.00	28	233.3	23	5			2			233	4	
10	SR 48 RAMP "B"	*	17+95.00	18+70.00	75.00	28	233.3	23				2				3	
10	SR 48 RAMP "C"	*	8+48.00	9+23.00	75.00	30	250.0	25	5			2				10	
10	SR 48 RAMP "C"	*	9+23.00	9+98.00	75.00	Var	241.7	24	5			2			250	11	
10	SR 48 RAMP "E"	*	10+00.00	10+75.00	75.00	Var	204.2	20	4			1			204	3	
10	S.R 48 RAMP "E"	*	10+75.00	11+32.00	57.00	Var	145.6	15	3			1				1	
10	SR 48 RAMP "E"	*	11+32.00	11+50.00	18.00	24	48.0	5	1			1				5	
																3	
	NOTE																
	* Indicates an area in transition																
	** See Plan & Profile Sheet																
	ADDITIONS FOR CURB AREAS																
32	I R 70	Lt	410+09.00	415+00.00	491.00	1		6		1	3						2
33	N B SR 40	Lt	152+98.00	157+08.00	410.00	1		5		1	3						
35	I R 70	Rt	457+20.00	460+00.00	280.00	1		3		1	1						
36	I R 70	Rt	460+00.00	465+00.00	500.00	1		6		1	3						2
	TOTALS (TO GENERAL SUMMARY							1405	33	245	548	150	2	468	1761	81	181

No Embankment this Sheet
No Seeding & Mulching this Sheet

FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT

Location	New Cut-Outs	Ave. Width	Ave. Length	803 Full Depth Rigid Pavement Removal and Rigid Replacement (Sq Yds.)	803 Full Depth Pavement Sawing (Lin. Ft)	301 3" Bituminous Aggregate Base MWS-60 (Cu. Yds.)
I.R.70	150	6'	24'	2400	7200	200
				(Totals to General Summary)		

CALCULATIONS
EXTRA AREAS

COMPUTED BY E.L.C DATE 3-8-88
CHECKED BY M.L.E. DATE 3-11-88

FHWA REGION	STATE	PROJECT	
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SHEET NO.	LOCATION	DIRECTION	STATION FROM	STATION TO	LENGTH TOTAL (Lineal Feet)	WIDTH 'A'+'B'+'C' FROM DIAGRAM ABOVE Sh. 19 (Ft)	PAVEMENT AREA (Sq. Yds)	PAVEMENT ITEMS 407 Tack Coat (Gal.)	412 3/4" Asphalt Concrete MWS-60 (Cu. Yds.)		446 2 3/4" ASPHALT CONC. INTERMEDIATE COURSE TYPE 2 MWS-60 (Cu Yds)	SPL BREAKING & SEATING EXIST. REINF. CONC. PAV'T. (Sq. Yds.)	446 2 1/4" ASPHALT CONC. INTERMEDIATE COURSE TYPE2 MWS-60 (Cu. Yd.)	301 12" Bituminous Aggregate Base MWS-60 (Cu. Yds.)	301 4 3/4" Bituminous Aggregate Base MWS-60 (Cu. Yds.)	446 Variable Depth ASPHALT CONC. INTERMEDIATE COURSE TYPE 2 MWS-60	203 Subgrade Compaction (Sq. Yds.)	202 Pavement Removed (Sq. Yds.)	254 Pavement Planing, Bituminous (Sq. Yds.)	412 Variable Depth ASPHALT CONCRETE MWS-60 (Cu. Yds.)	203 Proof Rolling (Hours)
8	I.R-70, N.B. S.R. 49, EXIT Ramp		343+50.00	352+04.66	854.66	Var.	2222.1	222	46		169			741			2222	2222			
8	I.R.-70, N.B. S.R 49, EXIT Ramp		353+14.76	356+39.76	325.00	Var	527.8	53	11		40			176			528	528			
8	I.R.-70, N.B. S.R. 49, EXIT Ramp		356+39.76	357+39.76	100.00	Var.	66.7	7	2		5			22			67	67			
8	I.R.-70, S.B. S.R. 49, Entrance Ramp		367+00.00	372+00.00	500.00	Var.	288.9	29	6		22			96			289	289			
8	I.R-70, S.B. S.R. 49, Entrance Ramp		426+00.00	427+23.50	123.50	Var.	472.0	47	10		36			157			472	472			
5	I.R. - 70	EB	580+25.00	581+25.00	*																
5	I.R. - 70	EB	581+25.00	584+75.00	350.00	12	466.7	47	10				29								
5	I.R. - 70	EB	584+75.00	588+50.00	375.00	Var.	1041.7	104	22				65								
5	I.R. - 70	WB	581+25.00	583+75.00	250.00	Var.	166.7	17	4				10								
5	I.R. - 70	WB	583+25.00	593+91.00	*																
5	I.R - 70	WB	596+24.00	596+43.25	*																
5	I.R. - 70	WB	596+43.25	597+03.00	*																
5	I.R. - 70	EB	601+43.08	602+21.08	28.00	14	43.6	4	1				3								
5	I.R. - 70	EB	601+21.08	603+00.00	178.92	Var.	258.4	26	5				16								
5	I.R. - 70	EB	603+00.00	607+50.00	450.00	12	600.0	60	13				37								
5	I.R. - 70	EB	607+50.00	613+25.00	575.00	Var.	383 3	38	8				24								
5	I.R. - 70	WB	603+95.00	606+00.00	205.00	35	797.2	80	17				50								
5	I.R. - 70	WB	606+00.00	611+00.00	500.00	12	666.7	67	14				41								
5	I.R. - 70	WB	611+00.00	612+00.00	100.00	Var.	66.7	7	1				4								
3	IR-70, S.B. S.R. 49 Entrance Ramp		361+39.13	367+00.00	560.87	Var.	1134.2	113	24			1134	71		150				1134		
3	IR-70, N.B. S.R. 49 Entrance Ramp		398+08.60	410+08.55	1199.95	Var.	1666.6	167	35			1667	104		220				1667		
3	IR-70, S.B. S.R. 49 Entrance Ramp		414+41.18	415+41.18	100.00	Var	66 7	7	2			67	4		9				67		
3	IR-70, S.B. S.R. 49 Entrance Ramp		415+41.18	426+00.00	1058.82	Var.	2470.6	247	52			2471	154		326				2471		
3	Hoke Road Ramp "B"		461+36.00	464+24.26	288.26	Var.	1155.3	116	24			1155	72		152				1155		
3	Hoke Road Ramp "B"		464+24 26	471+25.00	700.74	Var.	1670.4	168	35			1680	105		222				1680		
3	Hoke Road Ramp "B"		471+25.00	472+25.00	100.00	Var.	66.7	7	2			67	4		9				67		
3	Hoke Road Ramp "A"		464+99 97	476+99 97	1200.00	Var.	1666.7	167	35			1667	104		220				1667		
*	"AREAS IN TRANSITION"																				
44	I.R. - 70	EB	580+25.00	580+73 06	48.06	Var.	16.0	2	1							1					
44	I.R. - 70	EB	580+73.06	581+25.00	51.94	Var.	52.0	5	1				4								
44	I.R. - 70	WB	583+25.00	590+73.02	748.02	12	997.4	100	21				62								
44/45	I.R. - 70	WB	590+73.02	593+91.00	317.98	12	424.0	42	9										317	13	
45	I.R. - 70	WB	596+24.00	596+43.25	19.25	12	25.7	3	1										26		
45	I.R - 70	WB	596+43.25	597+03.00	59 75	Var.	84.6	8	4										85		
TOTALS (To General Summary)								1960	416		272	2908	963	1102	1308	1	3578	3578	10,330	13	2

GENERAL SUMMARY

CALC. BY		MONTGOMERY COUNTY	OHIO
DATE		MOT-70-6.49/11.02	FHWA REGION 5
CHKD. BY			FEDERAL PROJECT
DATE			

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SHEET NUMBER																											PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
11	12	13	14	15	17	18	19	20	21	22	79	110	112	113	114	132	134	137	138	139	140		216	217										
																																		ROADWAY
																													201	11000	LUMP		CLEARING AND GRUBBING
								27177		3578	18				676														202	23000	31449	SQ.YD.	PAVEMENT REMOVED
											50																		202	30700	50	LIN. FT.	CONCRETE BARRIER REMOVED
											1681																		202	32001	1681	LIN.FT.	CURB REMOVED, AS PER PLAN (See Note on Sh.12)
											128																		202	32600	128	LIN.FT.	GUTTER REMOVED
											1516																		202	35100	1516	LIN.FT.	PIPE REMOVED, 24" AND UNDER
													25925																202	38000	25925	LIN.FT.	GUARDRAIL REMOVED
											9																		202	58300	9	EACH	CATCH BASIN OR INLET REMOVED
												48569																		202	75000	48569	LIN.FT.	FENCE REMOVED
	60193										39																		203	12000	60232	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
	10265						13489																						203	20000	23754	CU. YD.	EMBANKMENT
								15		2																			203	45000	17	HOUR	PROOF ROLLING
								44157		3578					1962														203	50000	49697	SQ.YD.	SUBGRADE COMPACTION
													21600																606	13000	21600	LIN.FT.	GUARDRAIL, TYPE 5
													600																606	15500	600	LIN.FT.	GUARDRAIL, BARRIER DESIGN, TYPE 5
													64																606	25000	64	EACH	ANCHOR ASSEMBLY, TYPE A
													28																606	25500	28	EACH	ANCHOR ASSEMBLY, BARRIER DESIGN, TYPE A
													35																606	26500	35	EACH	ANCHOR ASSEMBLY, TYPE T
													18																606	30500	18	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE B
													47																606	35000	47	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AA
													7																606	35001	7	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AA, AS PER PLAN (Sh. 11)
													6																606	35100	6	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AT
													4																606	35101	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE AT, AS PER PLAN (Sh. 11)
												20877																		607	15000	20877	LIN.FT.	FENCE, TYPE 47
												27692																		607	23000	27692	LIN.FT.	FENCE, TYPE CLT
												55																		625	32000	55	EACH	GROUND ROD
																																		EROSION CONTROL
44875																													207	10000	44875	SQ.YD.	TEMPORARY SEEDING AND MULCHING
150																													207	70000	150	EACH	STRAW OR HAY BALES
											11																		601	11000	11	SQ.YD.	RIPRAP USING 6" REINFORCED CONCRETE SLAB
											107																		601	20000	107	SQ.YD.	CRUSHED AGGREGATE SLOPE PROTECTION
											19																		601	27000	19	CU.YD.	DUMPED ROCK FILL, TYPE C
											4																		601	32100	4	CU.YD.	ROCK CHANNEL PROTECTION, TYPE B WITH FILTER
												72																	601	32200	72	CU.YD.	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
											0.05																		653	20000	0.05	TON	COMMERCIAL FERTILIZER
											523																		655	10000	523	SQ.YD.	SEEDING AND RENOVATING EXISTING SOD
	94716						129656																						659	10000	224372	SQ.YD.	SEEDING AND MULCHING
11220																													659	14000	11220	SQ.YD.	REPAIR SEEDING AND MULCHING
10.58	8.52						11.67																						659	20000	30.77	TON	COMMERCIAL FERTILIZER
97	485																												659	35000	582	M.GAL.	WATER
	505																												659	40000	505	M.SQ.FT.	MOWING
690																													660	20000	690	SQ.YD.	REINFORCED SODDING
																																		DRAINAGE
											4																		602	20000	4	CU.YD.	CONCRETE MASONRY
											880																		603	01500	880	LIN.FT.	6"" CONDUIT, TYPE F, 707.17 NON-PERF. , ASTM 3034 SDR 35 OR SS 931
											84																		603	05900	84	LIN.FT.	15"" CONDUIT, TYPE B
											200																		603	16400	200	LIN.FT.	36"" CONDUIT, TYPE B
											1																		604	01600	1	EACH	CATCH BASIN, NO. 5
											4																		604	09000	4	EACH	CATCH BASIN ADJUSTED TO GRADE
											1																		604	09500	1	EACH	CATCH BASIN RECONSTRUCTED TO GRADE
											63																		SPECIAL	60436600	63	EACH	PRECAST REINFORCED CONCRETE OUTLET (See Note on Sh. 11)
											8130																		605	13301	8130	LIN.FT.	6" UNCLASSIFIED PIPE UNDERDRAIN , AS PER PLAN (Sh. 12)
		525																											605	31100	525	LIN.FT.	AGGREGATE DRAIN

GENERAL SUMMARY

CALC. BY		MONTGOMERY-COUNTY	OHIO	24
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CHKD. BY			FEDERAL PROJECT	
DATE				

⊛ SEE PROPOSAL NOTE

SHEET NUMBER 11	12	13	14	15	17	18	19	20	21	22	79	110	112	113	114	132	134	137	138	139	140	215	216	217	PARTICIPATION 100% STATE	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
																														PAVEMENT
							116978	1427	1761	10336																254	01000	130502	SQ. YD.	PAVEMENT PLANING, BITUMINOUS
	540						12962	13581	668	2500	93															301	10010	30344	CU.YD.	BITUMINOUS AGGREGATE BASE, MWS-60 ⊛
		270						2465			137				327											304	20001	3199	CU.YD.	AGGREGATE BASE, AS PER PLAN (See Note on Sh. 11)
							28801	813	1405	1960	9			204												407	10000	33192	GAL.	TACK COAT
											324															408	10000	324	GAL	BITUMINOUS PRIME COAT
								6																		409	12000	6	CU.YD.	SEAL COAT COVER AGGREGATE, NO. 8
								202																		409	20000	202	GAL	SEAL COAT BITUMINOUS MATERIAL
							6264	1135	359	429	28			43												412	38000	8258	CU.YD.	ASPHALT CONCRETE, MWS-60 ⊛
											20															412	38000	20	CU.YD.	ASPHALT CONCRETE, MWS-60 (FOR DRIVES) ⊛
							18818	3819	729	1236	45			190												446	01210	24837	CU.YD.	ASPHALT CONCRETE-INTERMEDIATE COURSE, TYPE 2, MWS-60 ⊛
							98231			9908																SPECIAL	45198000	108139	SQ. YD.	BREAKING AND SEATING EXISTING REINFORCED CONCRETE PAVEMENT ⊛
											28															452	10000	28	SQ.YD.	6"" PLAIN CONCRETE PAVEMENT
															141											611	15001	141	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB, T=13", AS PER PLAN
															890											611	25000	890	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB, T=15"
															932											611	25001	932	SQ.YD.	REINFORCED CONCRETE APPROACH SLAB, T=15", AS PER PLAN
							6557		150																	617	10100	6707	CU.YD.	COMPACTED AGGREGATE, TYPE A
							64		2																	617	25000	66	M.GAL	WATER
											23															622	23300	23	LIN. FT.	CONCRETE BARRIER, TYPE A
											27		825													622	24000	852	LIN. FT.	CONCRETE BARRIER, TYPE D
									2400																	255	10000	2400	SQ. YD.	FULL DEPTH RIGID PAVEMENT REMOVAL & RIGID REPLACEMENT, CLASS C
									7200																	255	20000	7200	LIN. FT.	FULL DEPTH PAVEMENT SAWING
																														TRAFFIC CONTROL
																														(ADDITIONAL TRAFFIC CONTROL ON SHEET NO. 25)
											63					259										620	10300	322	EACH	DELINEATOR, TYPE C, POST MOUNTED
																39										620	15300	39	EACH	DELINEATOR, TYPE D, POST MOUNTED
																280										620	31200	280	EACH	DELINEATOR REMOVED FOR DISPOSAL
																	1.32									642	00090	1.32	MILE	EDGE LINE
																						100				630	80400	100	SQ.FT.	SIGN, PERMANENT OVERLAY, REWORKED
																		38.17								630	00100	38.2	CU.YD.	CONCRETE FOR EMBEDDED FOUNDATION
																		334								630	02100	334	LIN. FT.	GROUND MOUNTED SUPPORT, No. 2 POST
																		116								630	03100	116	LIN. FT.	GROUND MOUNTED SUPPORT, No. 3 POST
																		542								630	04100	542	LIN. FT.	GROUND MOUNTED SUPPORT, No. 4 POST
																		166								630	06400	166	LIN. FT.	GROUND MOUNTED SUPPORT, S4 x 7.7 BEAM
																		41								630	06500	41	LIN. FT.	GROUND MOUNTED SUPPORT, W6 x 9 BEAM
																		159								630	07000	159	LIN. FT.	GROUND MOUNTED SUPPORT, W8 x 18 BEAM
																		224								630	07500	224	LIN. FT.	GROUND MOUNTED SUPPORT, W10 x 22 BEAM
																		263								630	07600	263	LIN. FT.	GROUND MOUNTED SUPPORT, W10 x 12 BEAM
																		86.5								630	08000	87	LIN. FT.	GROUND MOUNTED SUPPORT, W12 x 30 BEAM
																		14								630	08100	14	LIN. FT.	ONE WAY SUPPORT, No. 4 POST
																		36								630	09000	36	EACH	BREAKAWAY BEAM CONNECTION
																			2							630	75000	2	EACH	SIGN ATTACHMENT ASSEMBLY
																		604.4								630	80102	605	SQ. FT.	SIGN, FLAT SHEET, TYPE G
																		1798.5	121.0							630	80204	1920	SQ. FT.	SIGN, EXTRUSHEET, TYPE G
																		1789.5	721.5							630	80402	2511	SQ. FT.	SIGN, PERMANENT OVERLAY, TYPE G
																		94								630	84900	94	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
																		8								630	85400	8	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL
																		2								630	85600	2	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REERECTION
																		140								630	86002	140	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
																		14								630	86102	14	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL
																			2							630	87100	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION
																			3							630	87400	3	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL
																			2							630	89600	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-18.24
																			2							630	89808	2	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-18.26
																			2							631	94000	2	EACH	REMOVAL OF LUMINAIRE AND STORAGE
																			2							631	94400	2	EACH	REMOVAL OF BALLAST AND STORAGE
																						100				630	80408	100	SQ.FT.	SIGN, PERMANENT OVERLAY, TYPE G, REWORKED
																				332						802	00100	332	EACH	BARRIER REFLECTOR, TYPE A
																				109						802	00200	109	EACH	BARRIER REFLECTOR, TYPE B
																				4.65					4.65	645	90000	4.65	MILE	EDGE LINE, 740.05 INLAID, AS PER PLAN (See Note on Sh.12)
																				2.70					2.70	645	90000	2.70	MILE	LANE LINE, 740.05 INLAID, AS PER PLAN (See Note on Sh.12)
																	27.85									644	00100	27.85	MILE	EDGE LINE,
																	13.26									644	00200	13.26	MILE	LANE LINE,
																	0.92									642	00290	0.92	MILE	CENTER LINE,
																	4879									644	00400	4879	LIN. FT.	CHANNELIZING LINE,
																	67									644	00500	67	LIN. FT.	STOP LINE,
																	2534									644	00700	2534	LIN. FT.	TRANSVERSE LINE,
																	3									644	01300	3	EACH	LANE ARROW,
																	2									644	01400	2	EACH	WORD ON PAVEMENT, 72",

REVISED 5-28-91

GENERAL SUMMARY

CALC. BY		MONTGOMERY COUNTY	OHIO	25
DATE		MOT-70-6.49/11.02	FHWA REGION 5	219
CHKD. BY			FEDERAL PROJECT	
DATE				

SHEET NUMBER																									PARTICIPATION			ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
11	12	13	14	15	17	18	19	20	21	22	79	110	112	113	114	132	134	137	138	139	140	138A	216	217								
																																MAINTENANCE of TRAFFIC
			50																									404	35000	50	CU.YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC
			500																									410	12000	500	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
			300																									SPECIAL	61411100	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR (See Sh. 14)
																					26							614	12460	26	EACH	WORK ZONE MARKING SIGN
			100																									SPECIAL	61412500	100	SQ.FT.	REPLACEMENT SIGN (See Note on Sh. 14)
			200																									SPECIAL	61412600	200	EACH	REPLACEMENT DRUM (See Note on Sh. 14)
																							26476					614	12900	26476	EACH	TEMPORARY RAISED PAVEMENT MARKER, TYPE A
																								672				614	13300	672	EACH	BARRIER REFLECTOR , TYPE B
																					56.87							614	20400	56.87	MILE	TEMPORARY LANE LINE , CLASS II
																					99.26							614	22000	99.26	MILE	TEMPORARY EDGE LINE , CLASS I
																					3000							614	28000	3000	LIN.FT.	TEMPORARY GORE MARKING , CLASS II
																												614	12470	81	EACH	WORK ZONE SPEED LIMIT SIGN (SEE PROPOSAL NOTE)
					6861																							615	20000	6861	SQ.YD.	TEMPORARY PAVEMENT, CLASS A
			50																									616	10000	50	M.GAL.	WATER ,
			10																									616	20000	10	TON	CALCIUM CHLORIDE
				1200		28408																						622	40020	29608	LIN.FT.	PORTABLE CONCRETE BARRIER, 32"
						2420																						622	40040	2420	LIN.FT.	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED
	3																											SPECIAL	69010300	3	EACH	TEMPORARY IMPACT ATTENUATOR (G.R.E.A.T. TYPE)
																																MODEL No. 200200NFGGCZ (See Note on Sh. 12)
																																FOR STRUCTURES 20' AND OVER
																																GENERAL SUMMARY – SEE SHEET NO. 142 & 143
																												624	10000	LUMP		MOBILIZATION
																												619	15020	LUMP		FIELD OFFICE, , TYPE C
																												623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
			LUMP																									614	11000	LUMP		MAINTAINING TRAFFIC
																																TRAFFIC CONTROL (CONT.)
																						350						625	24100	350	LIN.FT.	1½" DUCT, CABLE WITH TWO NO. 4 AWG 5000 VOLT CABLE
																						2						625	30700	2	EACH	PULLBOX, 713.08 18"
																						350						625	29000	350	LIN. FT.	TRENCH
																				2		2						625	32000	2	EACH	GROUND ROD
																						8						625	01500	8	EACH	CABLE SPLICING KITS
																			2									630	77600	2	EACH	OVERPASS STRUCTURE MOUNTED SIGN SUPPORT, TYPE TC-18.26, DESIGN NO. 6
																						2						631	84000	2	EACH	SIGN SERVICE
																						2						631	84400	2	EACH	SIGN WIRED, OVERPASS STRUCTURE MOUNTED
																						1						631	87100	1	EACH	BALLAST, TYPE CMRI-100-480
																						1						631	87200	1	EACH	BALLAST, TYPE CMRI-175-480
																						2						631	85100	2	EACH	DISCONNECT SWITCH WITH ENCLOSURE, TYPE X
																						1						631	89100	1	EACH	MERCURY VAPOR LUMINIARE, TC-31.21 WITH 100 WATT LAMP
																						1						631	89200	1	EACH	MERCURY VAPOR LUMINIARE, TC-31.21 WITH 175 WATT LAMP
																						2						631	85500	2	EACH	SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY
																						2						631	70100	2	EACH	BALLAST WIRING ENCLOSURE, TYPE B
																						2						631	71000	2	EACH	BALLAST WIRING ENCLOSURE MOUNTING BRACKET

FHWA REGION	STATE	PROJECT	
5	OHIO		

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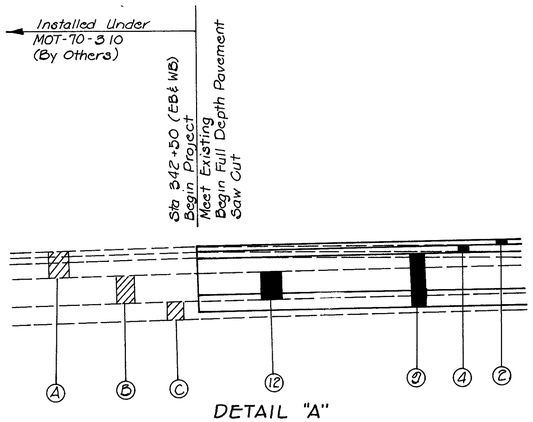
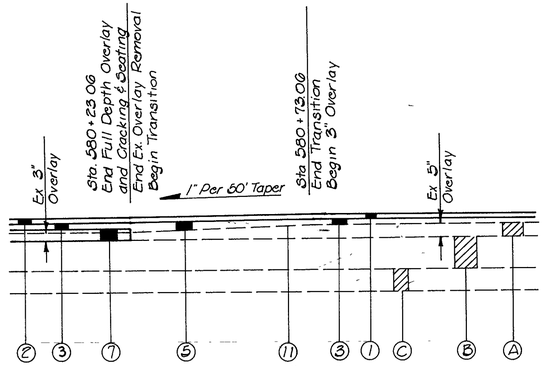
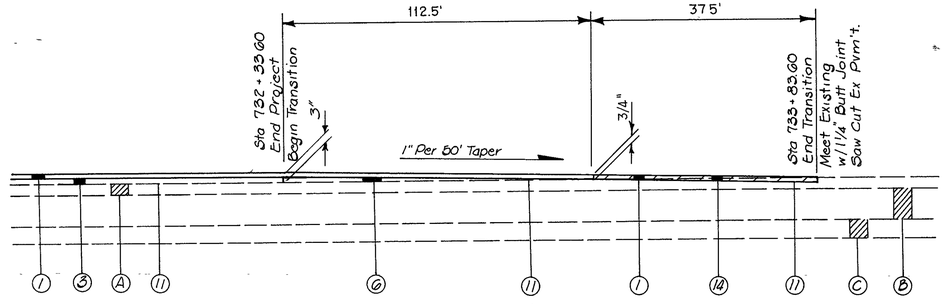


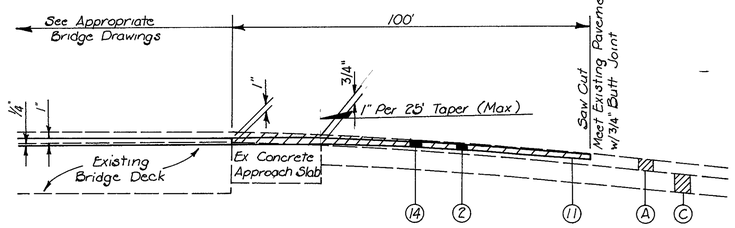
DETAIL "A"
TRANSITION AT BEGIN PROJECT



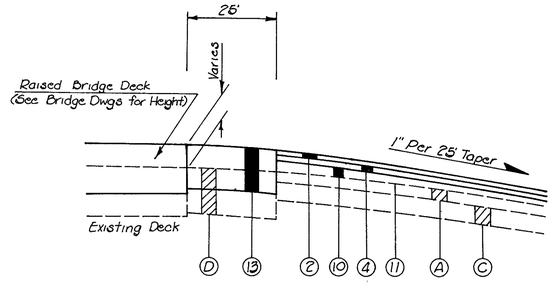
DETAIL "A-1"
TRANSITION 7½" OVERLAY TO 3" OVERLAY



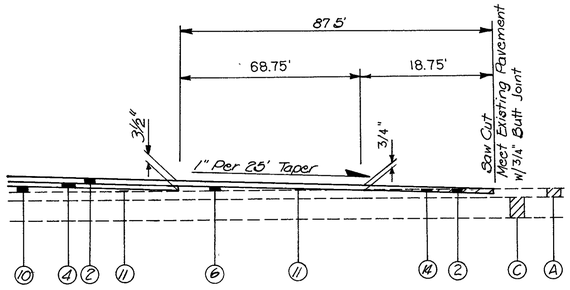
DETAIL "A-2"
TRANSITION AT END PROJECT



DETAIL "B"
TRANSITION AT CROSSROADS
(BRIDGE HEIGHT NOT ADJUSTED)



DETAIL "C"
TRANSITION AT CROSSROADS
(BRIDGE HEIGHT ADJUSTED)



DETAIL "D"
TRANSITION AT CROSSROADS
(MEET EXISTING PAVEMENT)

LEGEND

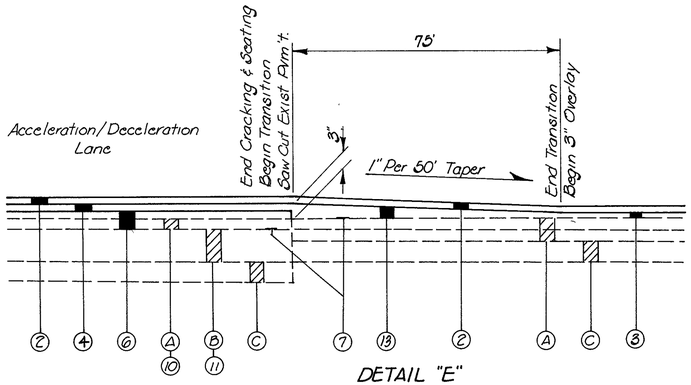
①	Item 412	3/4"	Asphalt Concrete, MWS-60 (See Proposal Note)
②	Item 412	3/4"	Asphalt Concrete, MWS-60 (See Proposal Note)
③	Item 446	2¼"	Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
④	Item 446	2¾"	Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
⑤	Item 446	2¼" to 3½"	Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
⑥	Item 412	Variable Depth	Asphalt Concrete, MWS-60 (See Proposal Note)
⑦	Item 301	4¾"	Bituminous Aggregate Base, MWS-60
⑧	OMITTED		
⑨	Item 301	12"	Bituminous Aggregate Base, MWS-60
⑩	Item 301	Variable Depth	Bituminous Aggregate Base, MWS-60
⑪	Item 407		Tack Coat
⑫	Item 202		Pavement Removed
⑬	Item 611		Reinforced Concrete Approach Slab (T=15") (SEE TABLE ON SH. 114)
⑭	Item 254		Pavement Planing, Bituminous

Ⓐ Existing Asphalt Concrete Pavement
Ⓑ Existing Reinforced Concrete Pavement
Ⓒ Existing Subbase
Ⓓ Item 202 Pavement Removed, Existing Reinforced Concrete Approach Slab

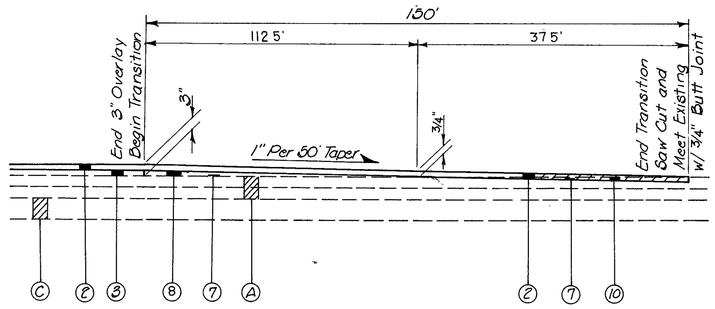
TRANSITION DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

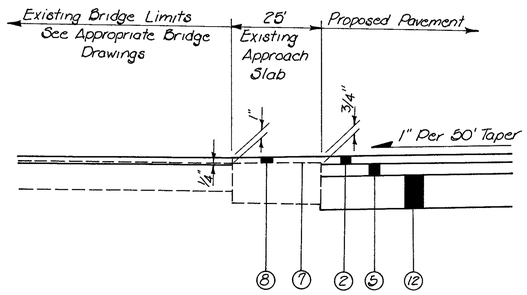
MOT-70-6.53/11.02



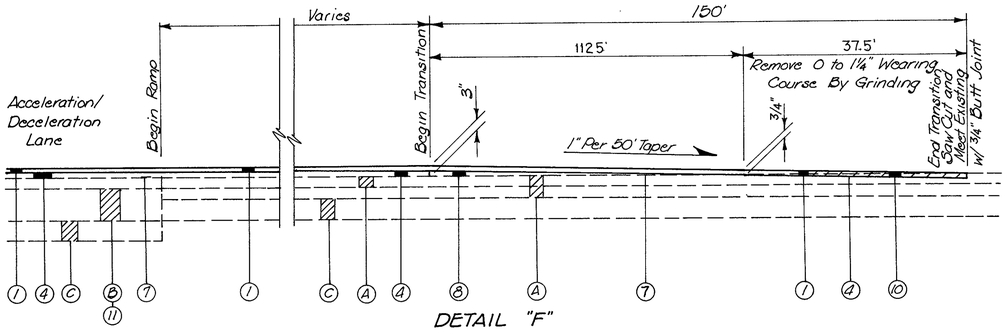
DETAIL "E"
BEGIN RAMP TRANSITION
(I-70 Overlay = 7½")



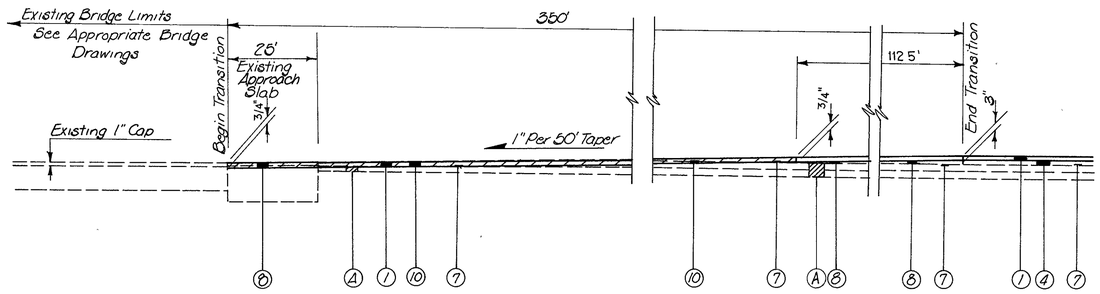
DETAIL E-1
END RAMP TRANSITION
(I-70 Overlay = 7½")



DETAIL "G"
TRANSITION AT BRIDGES
(FULL DEPTH PAVEMENT)



DETAIL "F"
END RAMP TRANSITION
(I-70 Overlay = 3")



DETAIL "H"
TRANSITION AT BRIDGES
(PROPOSED 3" OVERLAY)

LEGEND

① Item 412 3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
② Item 412 3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
③ Item 446 2¼" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
④ Item 446 2¼" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
⑤ Item 446 2¾" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
⑥ Item 301 4¾" Bituminous Aggregate Base, MWS-60
⑦ Item 407 Tack Coat
⑧ Item 412 Variable Depth Asphalt Concrete, MWS-60 (See Proposal Note)

⑩ Item 254 Pavement Planing, Bituminous
⑪ Item Special Breaking and Seating Existing Reinforced Concrete Pavement
⑫ Item 301 12" Bituminous Aggregate Base, MWS-60.
⑬ Item 446 Variable Depth Asphalt Concrete Intermediate Course, Type 2, MWS-60
Ⓐ Existing Asphalt Concrete Pavement
Ⓑ Existing Reinforced Concrete Pavement
Ⓒ Existing Subbase


FHWA REGION 5 | STATE OHIO | PROJECT
28
219
MOT-70-6.53/11.02
LEGEND
Dumped Rock Fill, Type C
NOTE: For Deceleration Lane Details and Typical Section See Sheet Nº 8 and 85
Connect To Exist Guardrail
Sta. 347+86.14, 66.75' Lt IR 70
Sta. 272+84.40 N.B. S.R. 49
Village of Clayton, Corporation Line
Type 47 Woven Wire Fence
RAZOR RUN
Sta. 279+25 End Transition Meet Existing
Sta. 277+25 Begin Transition End Full Depth Pavement
See Insert Below
Existing 6" Underdrains
NB SR 49
Construction Limits
Type 'D' Concrete Barrier
Ex. C.B. (See Note Below)
Westbound
Eastbound
Sta 347+48.69 I.R. 70
Sta 53+00.12 Diamond Mill Rd.
MOT-70-0662
Existing 6" Underdrain (To Remain)
Meet Existing Begin Full Depth Pavement See Detail "A" on Sh. 26.
Begin Work Sta. 341+25
Begin Project Sta. 342+50.00 S.L.M. 6.49
IR-70-1(45) 24
Detail
Ex. Gravel Dr.
NOTE: Existing Catch Basin "covered over" by others prior to this project shall remain in use as a Junction Box. The Contractor shall inspect the 12" Outlet Pipe and Catch Basin to insure their function. Proper Protection shall be provided over the Existing Catch Basin to insure no debris can infiltrate during paving operations.
FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
FOR APPROACH SLAB DETAILS SEE SH. 114
FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.
Replace Guardrail Between Bridges
B.M. Diamond Mill Rd. Chiseled sq. N.E. Cor. N.E. Abutment, on BT Deck Sta. 53+00.12 Bridge Nº MOT-70-0662 Elev. 978.53
+85 Fence Crossing Type 2, 20' x 6' x 18"
Match Line Sta. 354+50
INSERT
200' Taper @ 1" per 50'
Sta. 279+25 Meet Existing W/ 3/4" Butt Joint
0" to 3/4" Item 202 Pavement Removal
* Pavement Planing Bituminous
Sta. 277+25 Begin Taper Begin Overlay End Full Depth Pavement
N.B. S.R. 49
Proposed Grade W.B.
Proposed Grade E.B.
500' V.C. (W.B.)
600' V.C. (E.B.)
600' Original V.C.
Excavation 8181 Cu Yds
Embankment 180 Cu Yds
Seeding & Mulching 10,538 Sq Yds
Totals Carried To Sheet Nº 12
Diamond Mill Road
For Diamond Mill Rd Bridge Drawings See Shts. 155-157
Proposed 8½" Overlay (By Others)
Original Grade (-) 1.48% EB & WB
1.48% (E.B.) & (W.B.)
200' V.C. (E.B. & W.B.)
Existing 6" Underdrains
(-) 1.91% (W.B.)
(-) 1.78% (E.B.)
+0.20% (E.B.)
+0.44% (W.B.)
(-) 0.20% (E.B. & W.B.)
200' V.C. (W.B.)
250' V.C. (E.B.)
P.I. Sta. 347+00 (E.B.) Elev. 958.79
P.I. Sta. 347+25 (W.B.) Elev. 957.84
P.I. Sta. 343+50 (E.B. & W.B.) Elev. 965.01
P.C. Sta. 344+50 (E.B.)
P.C. Sta. 344+75 (W.B.)
P.T. Sta. 349+50 (E.B.)
P.T. Sta. 349+75 (W.B.)
P.I. Sta. 350+75 (E.B.) Elev. 959.54
P.I. Sta. 351+00 (W.B.) Elev. 959.40
25' Approach Slabs See Transition Detail "G" Sheet Nº 27
MOT-70-0672(R) Shown
60'10" Bridge Limits
325' Taper @ 1" per 50' (E.B. Shown)
Prop. E.B. Grade
Razor Run
NOTE: Sta. 342+50.00 ¢ Elev Ex P.C.C. Pvmt. = 965.78 (E.B. & W.B.)
Existing Profile W.B.
Existing E.B.
339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354


Sta. 356+30.78 (W.B.)
Sta. 356+70.34 (E.B.)
End Full Depth Pvmt.
End 1" Per 50' Taper
Begin Full Depth Only
Begin Break & Seat
Village of Clayton Corporation Line
Type 47, Woven Wire Fence
2 Strands Power ~ D.P.&L.
1 Strand Phone ~ G.T.E.
Sta. 367+00 E.B. & W.B.
End Full Depth Overlay
End Breaking & Seating
Begin Full Depth Pvmt.
+48 I.A.P.A. 143' Lt.
+32 I.A.P.A. 140' Lt.
+78 I.A.P.A. 138' Lt.
+78 I.A.P.A. 128' Lt.
Sta. 354+50
Sta. 370+00
Construction Limits
Existing 6" Underdrain
+95 75' Lt.
Match Line
Construction Limits
+75
Existing 6" Underdrain
S.B. S.R. 49
Existing 6" Underdrain
Construction Limits
+00 96' Rt.
+00 I.A.P.A. 128' Rt.
+89 112' Rt.
+44 I.A.P.A. 158' Rt.
Type 47, Woven Wire Fence
+99 Fence Crossing Type 2, 20'x6'x1.5'
+70 I.A.P.A. 191' Rt.
Sta. 258+05.00 Meet Existing w/ 1½" Butt Joint End Transition
Sta. 256+55.00 Begin Transition End 3" Overlay
+98 Fence Crossing Type 2, 20'x6'x1.5'
Sta. 254+87.00 Begin 3" Overlay End Transition
Station Equation Sta. 361+30.13 I.R. 70 = S.B. S.R. 49 Sta. 254+12.00
End Break & Seat Begin Transition Overlay
See Transition Details Sheet No 27
FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
Profile Grade E.B. & W.B.
W.B. Grade
E.B. Prop.
325' Taper @ 1" per 50'
+30.78 (W.B.)
+70.34 (E.B.) End Full Depth Pvmt.
Begin Full Depth Only Begin Break & Seat
Prop. E.B. Grade
Proposed Grade (E.B. & W.B.)
Profile Original P.C.C. Pavement
(-) 0.20%
(-) 0.92%
End Full Depth Overlay End Breaking and Seating Begin Full Depth Pvmt.
P.I. Sta. 368+75.00 Elev. 956.67
Existing 6" Underdrain
Existing 6" Underdrains
P.C. STA. 367+00
350' VC
Excavation 1260 Cu. Yds.
Embankment 143 Cu. Yds.
Seeding & Mulching 2236 Sq. Yds.
Totals carried to Sheet No 12
Excavation 2500 Cu. Yds.
Embankment 312 Cu. Yds.
Seeding & Mulching 5494 Sq. Yds.
Totals Carried to Sheet No 12
Existing Profile W.B. E.B.
STA. 354+50 TO STA. 370+00

MOT-70 - 6.53/11.02

NORTH FORK WOLF CREEK

MOT-70-0719 (L)

Village of Clayton Corporation Line

Sta 381+60.87 W.B. End Full Depth Pavement Begin Full Depth Overlay Begin Break & Seat

+83 C.P.A. 170' Lt

+74 C.P.A. 138' Lt

+78.C.P.A 138' Lt

+71.C.P.A 138' Lt.

+44.1.A.P.A 138' Lt.

+58.1.A.P.A 24' Lt.

Type 47 Woven Wire Fence

+22 A.C

+58 A.C

2 Strands Power ~ O.P.&L.
1 Strand Phone ~ G.T.E.

Construction Limits

Type "D" Concrete Barrier

+00 77.5 Lt

+12 A.C

+13 A.C

Existing 6" Underdrains

Westbound

Sta 370+00

Sta 385+00

Match Line

12" 371 372 373 374 375 376 377 378 379 380 381 382 383 384

Sta 371+13.49 I.R. 10
Sta 51+12.59 Kimmel Rd.

MOT-70-0708

Eastbound

+40 A.C

+20 A.C

+16 A.C

+65 18 Rt.

+87 A.C

+89 A.C

Construction Limits

Type 47 Woven Wire Fence

+95.1.C 114 Rt

+30 A.C

+50.1.A.P.A 108' Rt

+99.1.A.P.A 104' Rt

+96.1.A.P.A 108' Rt

+78. 1.A.P.A 123' Rt.

+19. C.P.A 122' Rt

+19.C.P.A 122' Rt

+02.1.A.P.A 122' Rt

+05.1.A.P.A 126' Rt

MOT-70-0719 (R)

Sta 381+08.87 E.B. End Full Depth Pavement Begin Full Depth Overlay Begin Break & Seat

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
FOR APPROACH SLAB DETAILS SEE SH. 114
FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.

Note: Fence shall be grounded at overhead Power Line Crossings

B.M Kimmel Road, Sta. 52+34.50, 12' ± Rt
Chiseled Sq NE Abut Wall on B.T Deck
Bridge Nº MOT-70-0708 Elev. 975.00

B.M, I-70 over Wolf Creek (W.B), Sta. 378+50, 66' Lt
Chiseled Sq N.E. Corner NE Abutment
Bridge Nº MOT-70-0719 Elev 954.56

Profile Grade E.B & W.B. 955.40 955.25 955.06 954.84 954.65 954.49 954.35 954.23 954.14 954.08 954.04 954.03 954.04 954.08 954.15 954.23 954.31 954.39 954.45 954.50 954.54 954.57 954.59 954.60 954.60 954.58 954.56 954.52 954.48 (E.B. & W.B.) 954.43 (W.B.) 954.23 954.22 954.20 954.19 954.17 954.15 954.14 +50.37 954.12 954.02 E.B. Profile Grade

350' V.C. 300' V.C.

P.T. Sta. 370+50
P.C. Sta. 370+50

Kimmel Road
See Sheet 1 of 80

P.T. Sta. 373+50.00

P.I. Sta. 375+50
Elev. 954.78

Profile Original P.C.C. Pavement

-0.20%

-0.02%

(+) 0.31%

+26.13 (E.B.) 954.38
+24.63 954.33
+25.37
+23.87 954.13
954.12
954.10
954.09
954.07
954.05
+98.87

Bridge Limits

MOT-70-0719
For Bridge Dwgs. See Sheets 186-188

325' Taper @ 1" per 50'
E.B. & W.B.

Sta. 377+26.13 W.B.
Sta. 377+24.63 E.B.
25'
Sta. 381+25.37 W.B.
Sta. 381+23.87 E.B.
1"

End Full Depth Pvmt.
Sta. 381+50.37 W.B.
Sta. 381+48.87 E.B.
Beg. Break & Seat
Beg. Full Depth Only
1 1/2"

Proposed Grade

Existing 6" Underdrain

P.I. Sta. 372+00
Elev. 953.68

P.C. Sta. 374+00

300' V.C.

P.T. Sta. 377+00

North Fork Wolf Creek

Existing 6" Underdrains

Excavation	7204 Cu. Yds
Embankment	168 Cu. Yds
Seeding & Mulching	10467 Sq. Yds

Totals carried to Sheet Nº 12

Existing Profile E.B. 956.08 955.85 955.67 955.45 955.30 955.20 955.03 954.80 954.58 954.41 954.24 954.12 954.00 953.82 953.70 953.63 953.68 W.B. Profile

370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385

960 955 950 945

STA. 370+00 TO STA. 385+00

MOT - 70 - 6.53/11.02

Sta. 385+00

Match Line

Sta. 400+00

Match Line

Type "3" Terminal

Village of Clayton Corporation Line

Type 47, Woven Wire Fence

+63 I.A.P.A. 138' Lt.

+61 C.P.A. 138' Lt.

+65

+77

+10 C.P.A. 138' Lt.

+38 I.A.P.A. 138' Lt.

+25 80' Lt.

+05 80' Lt.

Existing 6" Underdrain

Construction Limits

Westbound

Eastbound

386 387 388 389 390 391 392 393 394 395 396 397 398 399

12"

+95 81' Rt.

+25 81' Rt.

+05 81' Rt.

+01 I.A.P.A. 138' Rt.

+15 C.P.A. 128' Rt.

+50 C.P.A. 128' Rt.

+11 I.A.P.A. 128' Rt.

+00 I.A.P.A. 128' Rt.

+32 C.P.A. 128' Rt.

+71 C.P.A. 128' Rt.

128

+38

Type 47, Woven Wire Fence w/Grounding

2 Strands Power ~ D.P.&L.

2 Strands Power ~ D.P.&L.
1 Strand Phone ~ G.T.E.
1 Strand Cable

+37 C.P.A. 138' Rt.

+52, Fence Crossing Type 2, 20'x 6'x 15'

+79 A.C.

+10 A.C.

+34 C.P.A. 120' Lt.

Sta. 398+08.80 Ex. Ramp Taper Begins

MOT-70-0759

Sta. 398+96.63 T.R.70

Sta. 49+90.92 Crestway Dr.

6"

+50

Ex. Paved Gutter

+55 85' Rt.

+07 A.C.

+15 A.C.

Type "D" Concrete Barrier

Note. Fence shall be grounded at overhead power line crossings

2 Strands Power ~ D.P.&L.
1 Strand Phone ~ G.T.E.
1 Strand Cable ~ Continental

B.M. Crestway Drive, Chiseled Sq. N.E. Cor. Sta. 51+040, 12' ± Rt. NE Abutment Wall on B.T. Deck Bridge Nº MOT-70-0753, El. 979.27

NOTE. For U-Turn Median Opening Details See Sheet Nº 113

FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.
FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
FOR APPROACH SLAB DETAILS SEE SH. 114
FOR U-TURN MEDIAN DETAILS SEE SH. 113

Sta. 395+25 (E.B.) End Full Depth Overlay, Begin Full Depth Pvmt.

Profile Grade E.B.	953.30	953.50	953.70	953.88 +12.5	953.98	954.07	954.24	954.40	954.55	954.71	954.90	955.11	955.36	955.62	955.92	956.24	956.60	956.97	957.38	957.81	958.27	Profile Grade E.B.

NOTE:
Sta. 395+25 Ahead E.B. Profile Shown Only
W.B. Profile Full Depth Overlay

Original 600' V.C.

400' V.C.

Crestway Drive
See Sheet Nº 81

End Full Depth Overlay

Begin Full Depth Pavement

P.I. Sta 398+12.50
Elev. 954.03

P.C. Sta. 397+00

P.T. Sta 399+00

P.I. Sta 399+00
Elev. 955.72

960
955
950
945

Proposed Grade

Profile Original P.C.C. Pavement

Existing 6" Underdrain

Proposed Underdrain (Eastbound Only)

Existing 6" Underdrain

-0.20 % (Ex.)

0.84%

+1.842 % (Ex.)

0.60 %

0.50%

2.33%

Original P.I. Sta. 394+75
Elev. 950.85

P.C. Sta. 395+25

175' V.C.

Excavation	4842	Cu. Yds
Embankment	265	Cu. Yds
Seeding & Mulching	3722	Sq. Yds

Totals carried to Sheet Nº 12

Existing Profile E.B.	952.60	953.58	954.85	956.43	956.13	959.77

385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400

STA. 385+00 TO STA. 400+00

Note: For Curb Removal
See Detail A
Miscellaneous Details
Sheet № 109

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112

NOTE: Sta. 405+00 Back
E.B. Profile Shown Only
W.B. Profile Full Depth Overlay

Excavation	1887	Cu Yds
Embankment	156	Cu Yds
Seeding & Mulching	3034	Sq. Yds

Totals carried to Sheet № 12

Sta. 400+00 to Sta. 415+00

MOT. 70-6.53/11.02


Sta. 150+35 End 3" Overlay Begin Transition
Village of Clayton Corporation Line
Type 47, Woven Wire Fence
See Transition Detail Sheet № 27
Clinton St.
+16 C.P.A. 218' Lt
7 Strands Power ~ D.P.&L. (Overhead)
7 Strands Power ~ D.P.&L. (High Tension)
Construction Limits
Ex Type "A" Curb
NB SR 49
Sta. 415+00
Existing 6" Underdrains
Westbound
Eastbound
To Remain Slope to Drain
To Remain Slope To Drain
℄ S.B. SR 49
+35 I.A.P.A. 118' Rt.
+71 I.A.P.A. 118' Rt.
+00 C.P.A. 135 Rt
+63 C.P.A. 148' Rt.
Type 47, Woven Wire Fence
Type 47 Woven Wire Fence
Type C.L.T. Chain Link Fence
138+68 S.B. SR 49 53' Lt. C.P.A.
Southway Road
Note: Fence Shall Be Grounded At Overhead Power Line Crossings
Sta. 426+00.00 End Full Depth Overlay End Breaking and Seating Begin Full Depth Pavement
Sta. 140+69.00 End Full Depth Pvmt. Begin Transition
See Transition Detail "E" and "E1" Sheet № 27
Sta. 138+44.00 End Transition Meet Existing
(To Remain)
See Sheet № 84
Match Line
Sta. 430+00
416 417 418 419 420 421 422 423 424 425 426 427 428 429

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112

Profile Grade (EB & WB): 969.84, 969.58, 969.32, 969.04, 968.75, 968.45, 968.14, 967.82, 967.49, 967.14, 966.79, 966.42, 966.04, 965.65, 965.26, 964.85, 964.44

Excavation	1101	Cu. Yds
Embankment	151	Cu. Yds
Seeding & Mulching	3105	Sq. Yds

Totals carried to Sheet № 12

Existing Profile (WB): 969.40, 968.48, 967.40, 966.42, 965.42
Existing (EB): 969.45, 968.40, 967.40, 966.40, 965.45

415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430

Sta. 415+00 to Sta. 430+00

BM NB SR 49, N.E. Cor Bridge.
Sta 139+25.50 22' ± Rt.
Top Bolt W End Guardrail on ℄
Bridge No MOT-70-0821, Elev. 966.49

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.

Excavation	4253	Cu. Yds
Embankment	330	Cu. Yds
Seeding & Mulching	6786	Sq. Yds

Totals carried to Sheet No 12

Sta 430+00 to Sta 445+00

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT. 70-6.53/11.02

35
219

Sta 57+60
Sta 11+92.32
Hoke Rd - Ramp "B"

+25 Fence Crossing
Type 2, 20'x6'x18"

Type 47, Woven Wire Fence

+00 I.A.P.A.
113' Lt

+00
83 Lt.

+77
A.C.

Construction Limits

Sta 445+00

Match Line

Type "D" Concrete Barrier

Approx Loc GTE Underground Cable

City of Englewood Corporation Line

Westbound

Eastbound

Sta 452+00 I R 70-
Sta 55+71.89 Hoke Rd
MOT-70-0859

+00
88 Rt.

+86 I.A.P.A.
125' Rt

+28 Fence Crossing
Type 2, 20'x6'x18"

Sta 53+50
Sta 1+92.32
Hoke Rd
Ramp "A"

+98 E.P.A.
258' Lt

+00 I.A.P.A.
258' Lt

Type CLT Chain Link Fence

Type "B" Terminal

+00 C.P.A.
225' Lt

+21 Fence Crossing
Type 3

+27 C.P.A.
190' Lt

+76 L.P.E.C.
147' Lt

+19 L.P.E.C.
143' Lt

+76
20' Rt

Ramp "B"

Sta 460+00

Match Line

+24 I.A.P.A.
163' Rt

Ramp "A"

+00 Hoke Rd
90' Rt, E.P.A.

+00 I.A.P.A.
268' Rt

RAMP A

Note For curb Removal Details
See Miscellaneous Details, Sheet No 109

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
FOR APPROACH SLAB DETAILS SEE SH. 114
FOR GUARDRAIL AT PIERS, DETAILS SEE SH. 109.

Hoke Road
See Sheet No 8a

Profile Original P.C.C. Pavement

Existing 6" Underdrains

Proposed Grade

955
950
945
940
935

445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460

Sta. 445+00 to Sta. 460+00

MOT. 70-6.53/11.02

Sta 460+00

Sta 475+00

Match Line

Match Line

Sta 481+36.00 LR 70=
Sta 21+35.00 Ramp "B"
End Transition
Begin Break and Seal

Sta 464+24.28

Sta 471+25

Sta 472+25
Begin Ramp

+16, Fence Crossing
Type 3

Type "B" Terminal

+50 Fence Crossing
Type 3

+00 I.A.P.A
138' Lt

Type CLT, Chain Link Fence

+00 I.A.P.A
138' Lt

℄ Construction Limits

+00 C.P.A
138' Lt

+75 C.P.A
136' Lt

℄ Ramp "B"

Westbound

Construction Limits

Ex. 13'-5" x 18'-5" Pipe Arch

Eastbound

Ex Curb

462+60

℄ Ramp 17 "A"

+40 I.A.P.A
144 Rt

+80 Fence Crossing
Type 2, 28'X6'X15'

+92
+95
Type 3 Fence
Crossings

Construction Limits

Type CLT, Chain Link Fence

+00 I.A.P.A
143.5 Rt

+70 C.P.A
143 Rt

+92

+24

+45 C.P.A
143 Rt.

+25, I.A.P.A
145' Rt.

+50 I.A.P.A
145' Rt

Type "B" Terminal

+80, 143 Rt

Sta 481+99.97 Ramp "A"
Sta 482+19.97 LR 70
End Transition
Begin Break and Seal
Begin Full Depth
Overlay

Type "B" Terminal

Note: For Curb Removal Details
See Miscellaneous Sheet No 109

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112

960
955
950
945
940
935
930

Profile Original P.C.C. Pavement

Existing 6" Underdrains

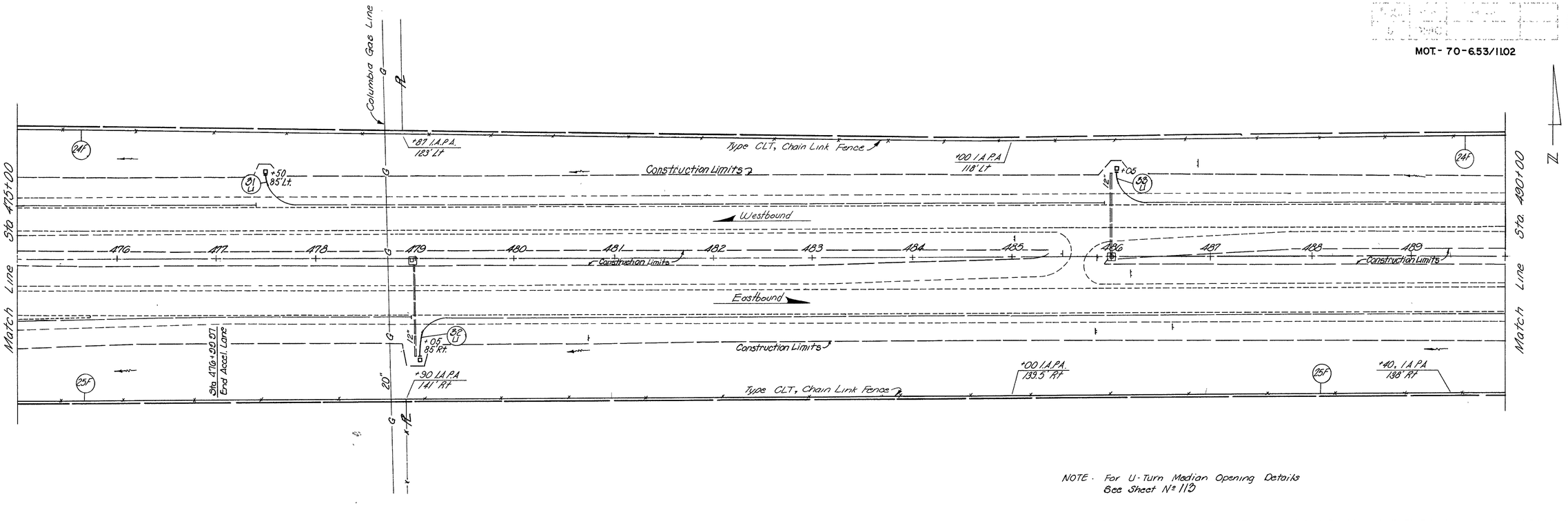
7½"

Proposed Grade

460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475

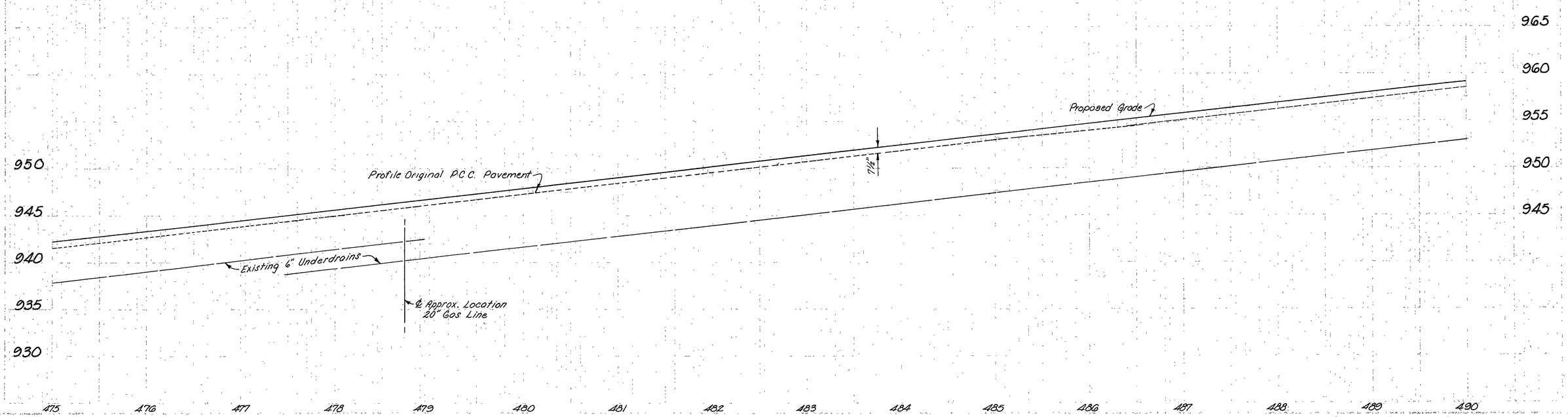
Sta. 460+00 to Sta 475+00

MOT- 70-6.53/11.02



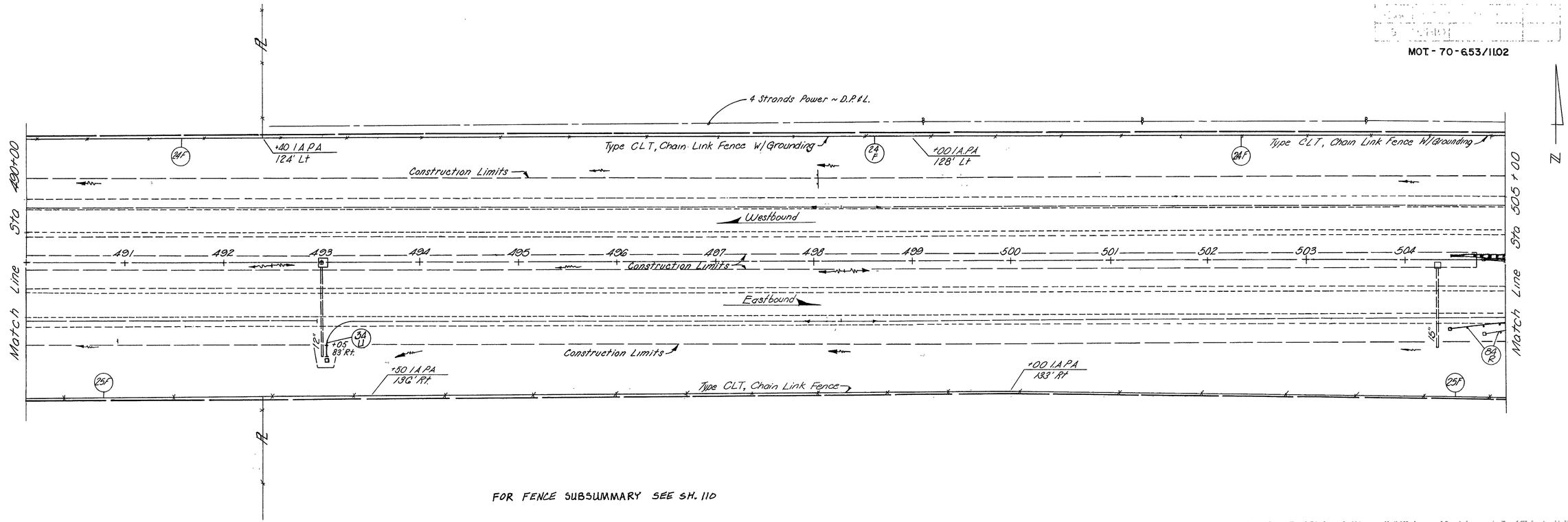
NOTE. For U-Turn Median Opening Details
See Sheet No 113

FOR FENCE SUBSUMMARY SEE SH. 110
FOR U-TURN MEDIAN DETAILS SEE SH. 113

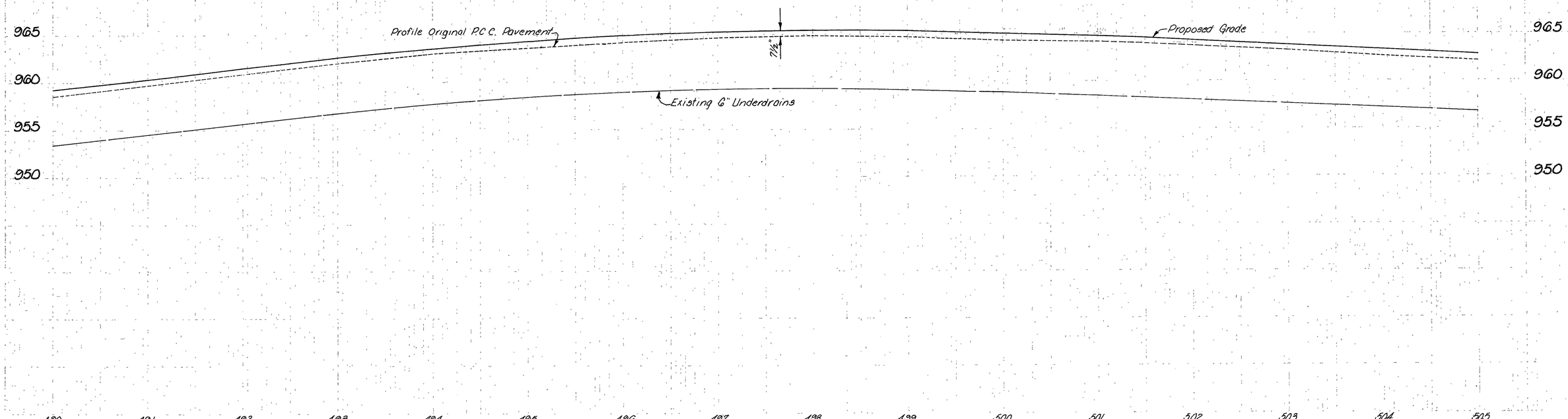


STA. 475+00 TO STA. 490+00

MOT - 70-6.53/11.02



FOR FENCE SUBSUMMARY SEE SH. 110



MOT.-70-6.53/11.02

Sta. 505+00

Match Line

Sta. 520+00

Match Line

N

61'+18 Union Rd. 70' Lt. C.P.A.

61'+18 Union Rd. 75' Rt. C.P.A.

62

61

60

59

58

64F

+25 A.C.

+15, Type 3 Fence Crossing

+10 A.C.

+18, Fence Crossing Type 3

66R

66F

4 Strands Power ~ D.P.&L.

4 Strands Power ~ D.P.&L.

5 Strands Power ~ D.P.&L.

Type C.L.T. Chain Link Fence W/ Grounding

+00 I.A.P.A. 123' Lt

20 F

+50 I.A.P.A. 129' Lt

Construction Limits

35 U

+95 81' Lt.

Westbound

Type D Conc. Barrier

86R

86R

507

508

509

510

511

512

513

514

515

516

517

518

519

MOT-70-0962

Construction Limits

Type D Conc. Barrier

Eastbound

+45 Type 3 Fence Crossing

65F

+28 A.C.

+09 A.C.

64R

Sta. 505+89.26 I.R. 70 = Sta. 59+89.15 Union Road

1 Strand ~ GTE

1 OH Guy ~ GTE

77F

Construction Limits

Type C.L.T. Chain Link Fence

+00 I.A.P.A. 124' Rt

+00 On Fence 124' Rt

27 F

+95 79' Rt.

30 U

+50 I.A.P.A. 120' Rt.

58+51 Union Rd 75' Rt., C.P.A.

50G+48 Type 3 Fence Crossing

58'-52' Union Rd 75'-11' C.P.A.

2 Strands ~ D.P.&L.

B.M., Union Road, Chiseled Square. N.E. Cor. Sta. 60+95', 18' Rt. Bridge No. MOT-70-0962, El. 981.27

FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.
FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112

Union Road
See Sheet No. 96

Proposed Grade

2 1/2"

Profile Original P.C.C. Pavement

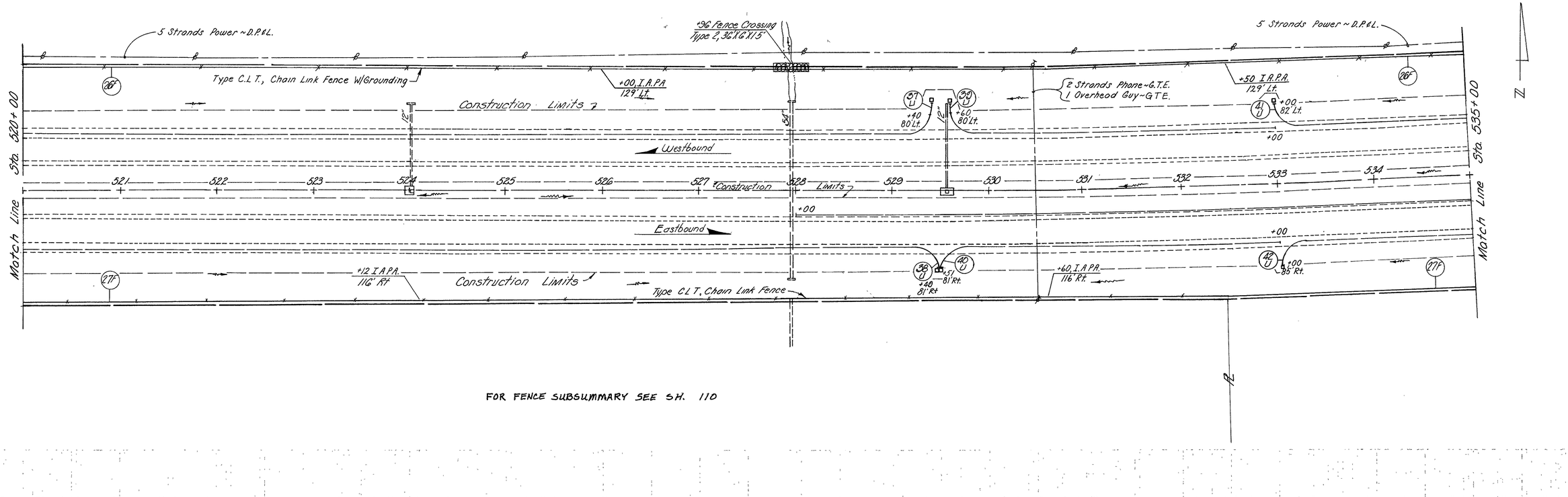
Existing 6" Underdrains

970
965
960
955
950
945

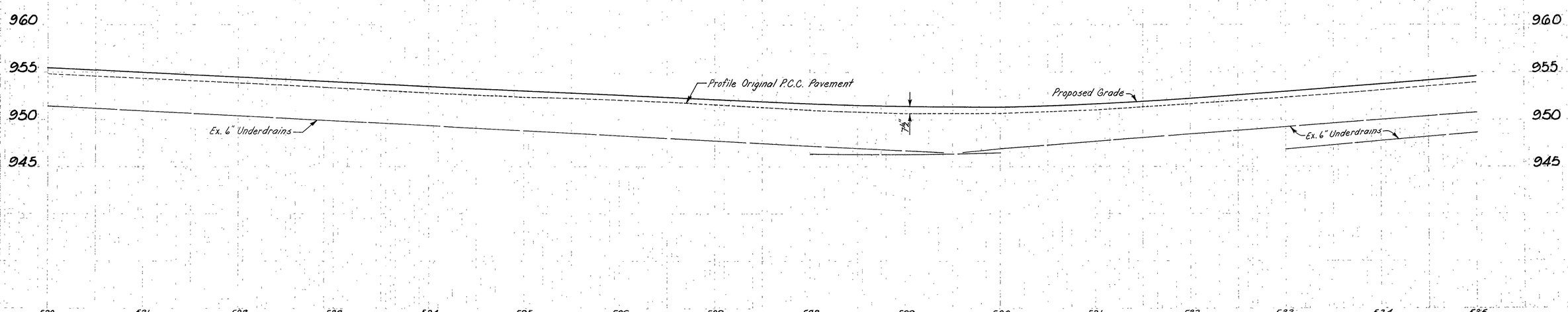
505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520

STA. 505+00 TO STA. 520+00

MOT.- 70-6.53/11.02



FOR FENCE SUBSUMMARY SEE SH. 110



MOT.- 70-6.53/11.02

5 Strands Power ~ D.P.&L.

+00 I.A.P.A. 129' Lt.

Type C.L.T. Chain Link Fence W/Grounding

+60 I.A.P.A. 129' Lt.

7 Strands Power ~ D.P.&L.

Construction Limits

Westbound

Eastbound

Match Line Sta 535+00

Match Line Sta 550+00

536 537 538 539 540 541 542 543 544 545 546 547 548 549

+32 On Fence 115.5' Rt.

+20 I.A.P.A. 119' Rt.

Type C.L.T. Chain Link Fence

+80 I.A.P.A. 119' Rt.

+86 I.A.P.A. 119' Rt.

+84 85' Lt.

City of Englewood Corporation Line

N

FOR FENCE SUBSUMMARY SEE SH. 110

960
955
950
945

Profile Original PCC Pavement

Ex. 6" Underdrains

Proposed Grade

7½"

535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550

STA. 535+00 TO STA. 550+00

MOT. 70-6.53/11.02

Prop. HW-4 Headwall
Inv. 36" ~ 930.25

Prop HW-4 Headwall
Inv 36" ~ 934.25

Sta. 565+00.00 (WB)
End Full Depth Pavement
Begin Full Depth Overlay
Begin Breaking and Seating

5 Strands Power ~ D.P&L.

+20 I.A.P.A.
129' Lt.

Type C.L.T. Chain Link Fence W/Grounding

4 Strands Power ~ D.P&L.
2 Strands Phone ~ G.T.E.
1 Strand: Cable TV-Continental
1 Overhead Guy - GTE

City of Englewood Corporation Line

52+16.90' Lt.
C.P.A.

52+22.60' Rt.
C.P.A.

Construction Limits

Type C.L.T. Chain Link fence

Match Line Sta. 550+00

Match Line Sta. 565+00

6'x10' Riprap w/10" Reinf. Conc. Slab

5'x6' Riprap with 6" Reinf. Conc. Slab

6'x10'x18" channel Protection, Type "B" W/ Filter

Type D Conc Barrier

Westbound

Eastbound

551 552 553 554 555 556 557 558 559 560 561 562 563 564

+00 78' Lt.

+00 72' Rt.

+80 I.A.P.A.
116' Rt.

+00 AC

+45 AC

+85 A.C.

Conc. +32' A.C.

49+355.85' Lt.
C.P.A.

49+350.75' Rt.
C.P.A.

Sta. 552+10.40 I.R. 70
Sta. 50+80.50, Taywood Rd.
MOT-70-1062

+25 I.A.P.A.
125' Rt.

Type C.L.T. Chain Link Fence

Construction Limits

Biggs Lane (Abandoned)

Begin Full Depth Overlay
Begin Break & Seat
End Full Depth Pavement
Sta. 563+00.00 (E.B.)

Sta. 555+00 E.B. & W.B.
End Full Depth Overlay
End Break and Seat
Begin Full Depth Pavement

℄ Overhead Power Line

BM Taywood Road, Chiseled Sq
N.E. Cor., Sta 51+95.50, 14'± Rt.
N.E. Abutment on B.T. Deck
Bridge No. MOT-70-1062, El. 958.0

FOR FENCE SUBSUMMARY SEE SH. 110
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112
FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.

Profile	Profile Grade (E.B.) Grade (W.B.)	945.60	945.11	944.61	944.11	943.61	943.22	942.84	942.45	942.08	941.72	941.40	941.21	940.03	940.76	940.58	940.41	940.23 (Begin Super) 938.38	940.22	940.23	940.24	940.24	940.21	940.19	940.17	940.15	940.11	940.08	940.06	940.04	940.01	939.99	939.96	939.93	939.90
		945.60	945.09	944.58	944.05	943.51	942.95	942.39	941.84	941.32	940.84	940.40	939.99	939.61	939.27	938.97	938.70	938.47	938.25	938.12	937.99	937.90	937.85	937.83	937.85	937.97	937.99	938.12	938.25	938.37	938.45	938.57	938.64	938.70	938.75	938.78	938.79	938.79	938.77	938.74	938.69	938.63

955
950
945
940
935

Profile Original P.C.C. Pavement

Proposed Grade

Ex. 6" Underdrains

Sta. 555+00 E.B. & W.B.
End Break & Seat
End Full Depth Only
Begin Full Depth Pavement

400' Taper @ 1" per 50' (E.B.)

+10.83

+00

+25

400' Taper @ 1" per 50' (E.B.)

P.I. Sta. 555+75

P.C. Sta. 555+00

150' V.C.

P.C. Sta. 550+50

P.T. Sta. 556+50

500' V.C. (W.B.)

Taywood Rd.

P.I. 559+00
Elev. 936.69

-2.28 (W.B.)

+0.572 % (W.B.)

P.T. Sta. 561+50

Sta. 563+25 (E.B.)
End Full Depth Only
Begin Full Depth Pavement
Begin Break & Seat

P.T. Sta. 563+25
Elev. 939.12

Original ℄ (E.B.) Super

-0.28 % (W.B.)

P.C. Sta. 562+50

350' V.C. (W.B.)

P.I. Sta. 565+00
End Full Depth Pavement
Beg. Full Depth Only
Beg. Breaking and Seating

Excavation	20203 Cu. Yds.
Embankment	1200 Cu. Yds.
Seeding & Mulching	16952 Sq. Yds.

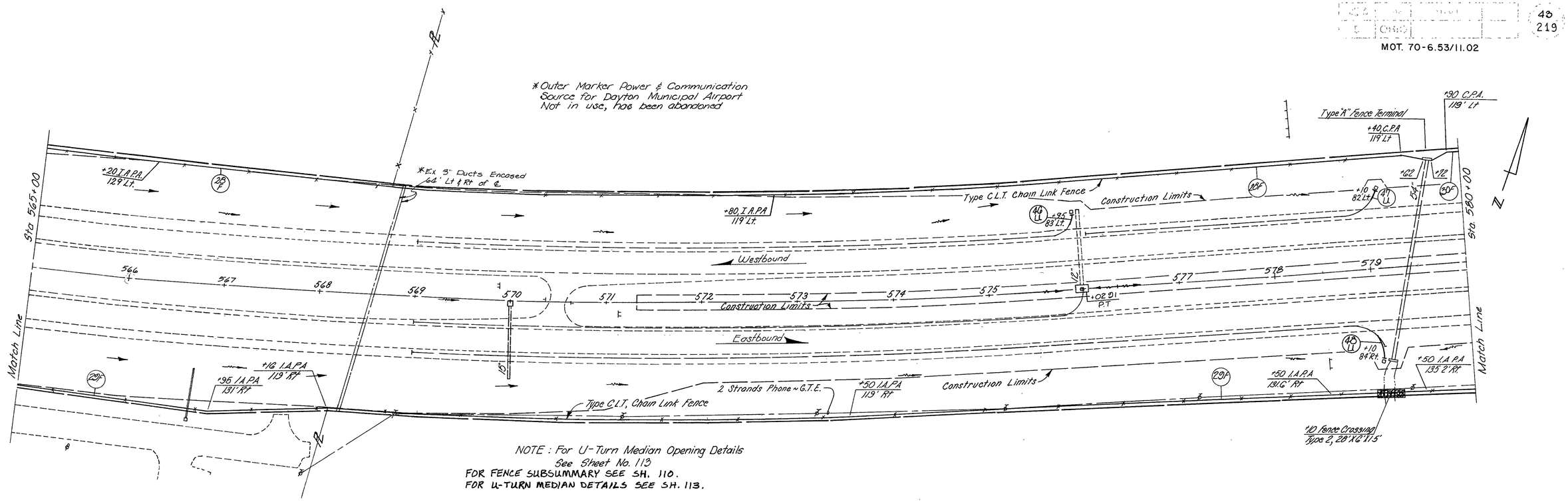
Totals carried to Sheet No. 12

Existing ℄ Profile (E.B.)	945.25	943.26	942.00	940.82	940.66	940.45	940.18	939.00	938.62	938.33	938.06	Existing ℄ Profile (W.B.)
	945.16	943.30	941.87	940.80	940.15	940.64	939.38	939.07	938.78	938.50	938.24	

550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565

STA 550+00 TO STA 565+00

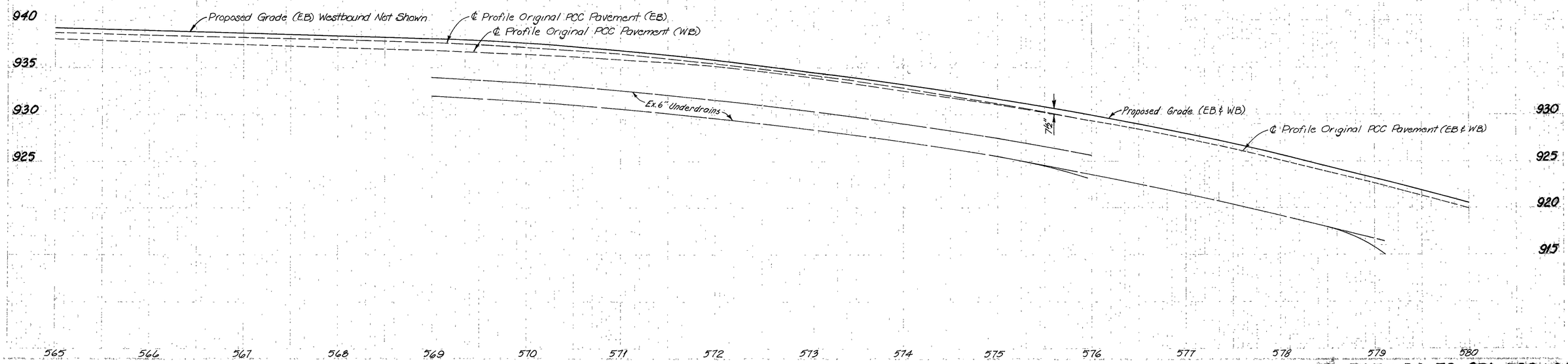
MOT. 70-6.53/11.02



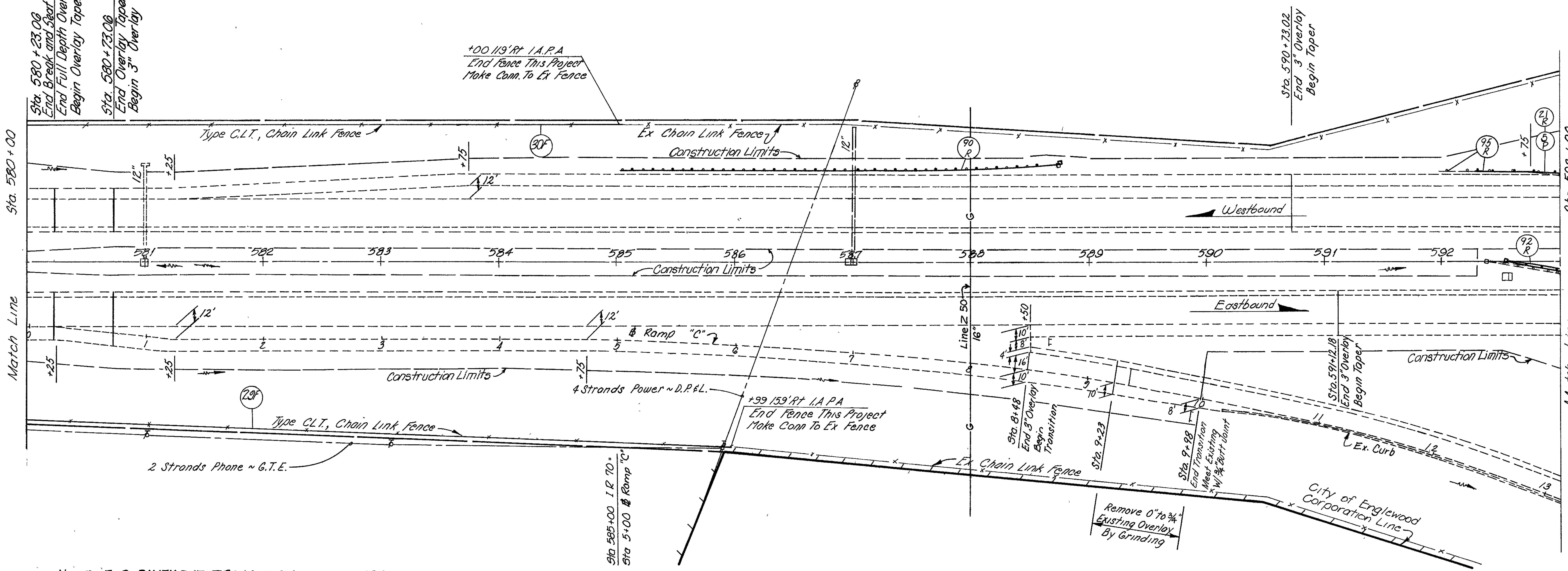
NOTE : For U-Turn Median Opening Details
See Sheet No. 113
FOR FENCE SUBSUMMARY SEE SH. 110.
FOR U-TURN MEDIAN DETAILS SEE SH. 113.

Excavation	8604 Cu. Yds
Embankment	1903 Cu. Yds
Seeding & Mulching	14518 Sq. Yds

Totals carried to Sheet № 12



STA. 565+00 TO STA. 580+00


Sta. 580+23.06
End Break and Seat
End Full Depth Overlay
Begin Overlay Taper
Sta. 580+73.06
End Overlay Taper
Begin 3" Overlay
+00 113' Rt I.A.P.A
End Fence This Project
Make Conn. To Ex Fence
Sta. 590+23.02
End 3" Overlay
Begin Taper
Type C.L.T, Chain Link Fence
Ex Chain Link Fence
Construction Limits
Westbound
Eastbound
Sta. 580+00
Sta. 593+00
Match Line
Ramp "C"
4 Strands Power ~ D.P.&L.
+99 159' Rt I.A.P.A
End Fence This Project
Make Conn To Ex Fence
2 Strands Phone ~ G.T.E.
Sta. 585+00 I.R. 70
Sta. 5+00 Ramp "C"
Sta. 8+48
End 3" Overlay
Begin Transition
Sta. 9+23
Sta. 9+98
End Transition
Meet Existing
Sta. 591+12.18
End 3" Overlay
Begin Taper
Ex. Curb
Remove 0" to ¾"
Existing Overlay
By Grinding
City of Englewood
Corporation Line

NOTE: FOR PAVEMENT TRANSITION SEE SHEET 26.
FOR FENCE SUBSUMMARY SEE SH. 110.
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112

LEGEND

- 412 - Asphalt Concrete MWS-60 (3/4")
- 446 - Asphalt Concrete Intermediate Course, Type 2, MWS-60 (2 1/4")
- 301 6" Bituminous Aggregate Base, MWS-60
- 203 Excavation


Sta. 580+23.06
End Break & Seat
End Full Depth Overlay
End Exist Only Removal
Sta. 580+73.06
Begin 3" Overlay
Ex 50'
Feather Prop Var Depth Only
Ex. 3" Overlay (To be removed)
Ex. 5" Overlay (To Remain)
Proposed Grade
Profile Original PCC Pavement
Ex. 5" Overlay (to Remain)
APPROX. LOC. 16" H.P. GAS
Sta. 590+73.02 (WB)
Sta. 591+12.18 (EB)
350' Taper @ 1" per 50'
87.5'
Remove by Grinding as Required to Provide 1¼" 412 Asphalt Concrete
580
581
582
583
584
585
586
587
588
589
590
591
592
593

MOT-70-6.53/11.02

Note: For S.R. 48 ~ See Sheet No. 102

Sta 593+00

Match Line

Sta 605+00

Match Line

S R 48

Sta 596+40.61 I R 70
Sta 16+77.04 Ramp "A"

Sta 16+15.25 Ramp "A"
Sta 597+03 I.R. 70
End Ramp
Begin Acceleration Lane

Sta 15+25
Meet Existing
w/ 1¼" Butt Joint

Sta 599+57.98
End Taper
Begin 3" Overlay

Construction Limits

Westbound

Eastbound

Sta. 599+97.14
End Taper
Begin 3" Overlay

Construction Limits

Sta 17+20
End Transition
Meet Existing
w/ ¾" Butt Joint

Remove 0" to ¾"
Ex Overlay
by Grinding

Sta 18+70
End 3" Overlay
Begin Transition

Ramp "B"

Ramp "A"

Ramp "E"

Ramp "C"

Ramp "F"

Sta. 535+35.08 I R 70 =
Sta 309+61.27 S.R 48
MOT-70-1130 L/R

Ex. 6" Curb

Exist. Curb

Remove 0" to ¾"
Overlay By
Grinding

Sta 10+00 "E"
Begin Transition
Meet Existing
w/ ¾" Butt Joint

Sta 10+32.5

Sta 601+93.08 I.R. 70 =
Sta 11+50 "E"
End Transition
Begin 3" Overlay
End Ramp
Begin Acceleration

Sta 603+00 I.R. 70 =
Sta 12+58.52 ℄ Ramp "F"

LEGEND

412 - 3/4" Asphalt Concrete MWS-60
446 - 2 1/4" Asphalt Concrete Intermediate Course, Type 2, MWS-60
301 6" Bituminous Aggregate Base, MWS-60
203 Excavation

Approach Slab Widening
See Sheet No 114

412 - VAR. DEPTH ASPHALT CONCRETE, MWS-60
407 Tack Coat

Excavation	28	Cu Yds
Embankment	315	Cu Yds
Seeding & Mulching	1560	Sq Yds

Totals carried to Sheet No 12

FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.
FOR APPROACH SLAB DETAILS SEE SH. 114.

350' Taper @ 1" per 100'
Remove by Grinding as Required to Provide ¾" ASPHALT CONCRETE

MOT-70-1130 Bridge Limits
For Bridge Drawings
See Sheets 180-195

350' Taper @ 1" per 50'
Remove by Grinding as Required to Provide ¾" ASPHALT CONCRETE
87.5'

Sta 591+23.02 W.B.
Sta 591+02.18 E.B.
Sta 596+01.98 W.B.
Sta 596+47.14 E.B.
Sta 597+57.88 (W.B.)
Sta 598+97.14 (E.B.)

℄ S.R. 48 See Sheet No 102

Ex. 1" Cap (To Remain)

Profile Original PCC Pavement
Ex. 5" Overlay (to Remain)
Proposed Grade

885 880 875 870 865 860

865 860 855 850 845 840 835

593 594 595 596 597 598 599 600 601 602 603 604 605

STA 593+00 TO STA 605+00

MOT-70-6.53/11.02

Sta 606+00 12.70' Rt
Sta 20+74.89 Ramp B

Sta 605+00

Construction Limits

97 K

Sta 611+00

Sta 612+00

℄ RAMP "B"

Westbound

Eastbound

606 607 608 609 610 611 612 613 614 615 616 617 618 619

Construction Limits

Match Line

Sta 607+30

96 K

Sta 613+25

84"

Ex Conc. Channel

City of Englewood Corporation Line

98 K

Sta 620+00

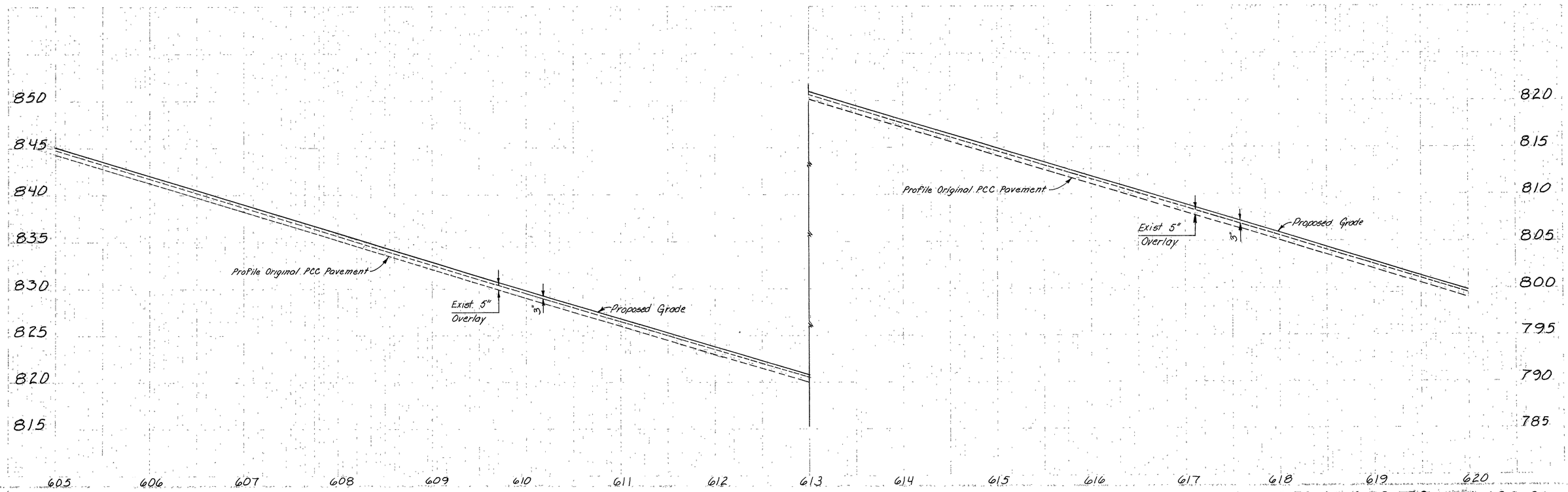
Match Line

Construction Limits

Ex Conc Trough

N

FOR GUARDRAIL SUMMARY SEE SH. 111-112.



STA 605+00 TO STA 620+00

MOT-70-6.53/11.02

City of Englewood Corporation Line

Sta. 620+00

Sta 635+00

Match Line

Match Line

Construction Limits

Sta. 623+45.3 End 3" Overlay Begin Taper

Sta. 633+39.87 End Taper Begin 3" Overlay

Westbound

Eastbound

Construction Limits

Sta. 623+80.13 End 3" Overlay Begin Taper

Sta. 633+54.69 End Taper Begin 3" Overlay

River

Stillwater

12"

N

NOTE : For U-Turn Median Opening Details
See Sheet No. 113.

FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.
FOR APPROACH SLAB DETAILS SEE SH. 114.

350' Taper @ 1" per 50'

MOT-70-1192 L/R Bridge Limits

350' Taper @ 1" per 50'

87.5'

Remove by Grinding as Required to Provide ¾" Asphalt Concrete

Remove by Grinding as Required to Provide ¾" Asphalt Concrete

87.5'

Sta 623+45.31 (WB)
Sta 623+80.13 (EB)

Sta 627+15.31 W.B.
Sta 627+30.13 E.B.

Sta 629+83.87 W.B.
Sta 630+04.69 E.B.

Sta 633+39.87 (WB)
Sta 633+54.69 (EB)

Proposed Grade

Profile Original PCC Pavement

3"

Ex. 5" Overlay (to Remain)

1¼"

1"

Existing 1" Cap (to Remain)

Proposed Grade

Profile Original PCC Pavement

1¼"

3"

Ex. 5" Overlay (to Remain)

810
805
800
795
790
785
780

620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635

STA 620+00 TO STA 635+00

MOT-70-6.53/11.02

Sta 635+00

Sta 650+00

Match Line

Match Line

Construction Limits

Westbound

Eastbound

Meeker 52 Road

Buried Phone Cable ~ Ohio Bell

3 Strands Power ~ D.P&L.

Sta. 644+55.41
End Taper
Begin 3" Overlay

Sta. 638+43.35
End 3" Overlay
Begin Taper

Sta. 638+19.65
End 3" Overlay
Begin Taper

Sta. 646+31.61
End Taper
Begin 3" Overlay

Sta. 642+37.48 I.R 70 ◦
Sta 50+00.00 Meeker Road
MOT-70-1219 L/R

637 638 639 640 641 642 643 644 645 646 647 648 649

107 R 108 R 109 R 110 R 111 R

15" 12" 42" 12" 30" 48"

FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.
FOR APPROACH SLAB DETAILS SEE SH. 114.

I R 70 over Meeker Road.
Chiseled Sq. N.E. Cor N.E. Abutment
(W.B.) Sta 642+37.48
Bridge No. MOT-70-1219,
Elev. 832.40

N

350' Taper @ 1" per 50'

87.5'

Remove by Grinding as Required to Provide 3/4" Asphalt Concrete

MOT-70-1219
Bridge Limits
For Bridge Drawings
See Sheets 190-199

Sta. 638+19.65 (EB)
Sta. 638+43.35 (WB)

Sta. 641+29.65 E.B.
Sta. 641+53.35 W.B.

Sta. 642+81.41 E.B.
Sta. 643+05.41 W.B.

Sta. 646+31.61 (EB)
Sta. 646+55.41 (WB)

Meeker Road

Existing 1" Cap (to Remain)

1" 1" 1" 3" 3" 3" 3"

Prop Grade

Existing 5" Overlay (to Remain)

Profile Original PCC Pavement

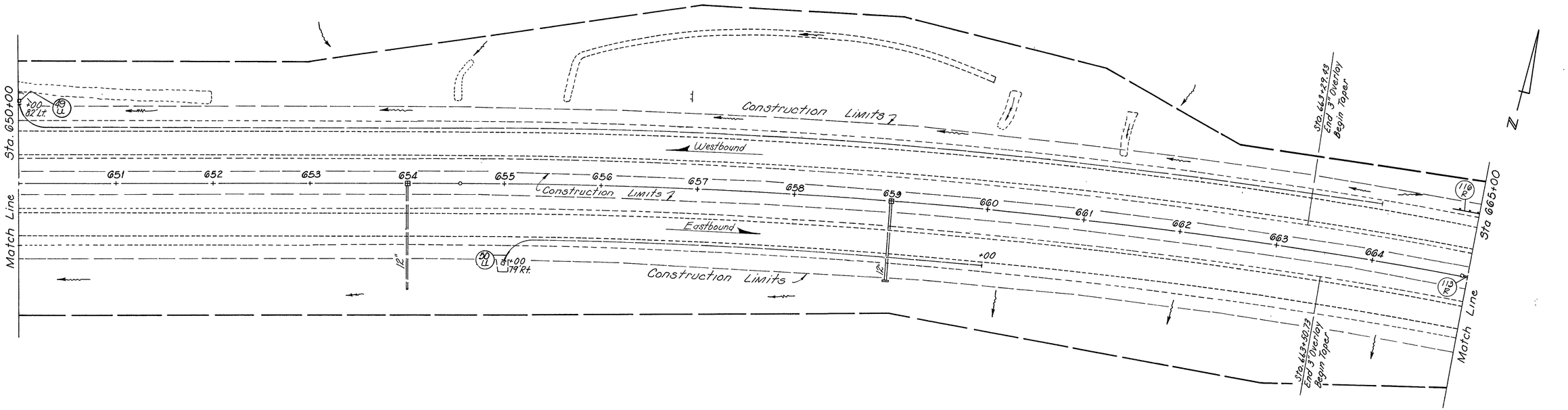
Proposed Grade

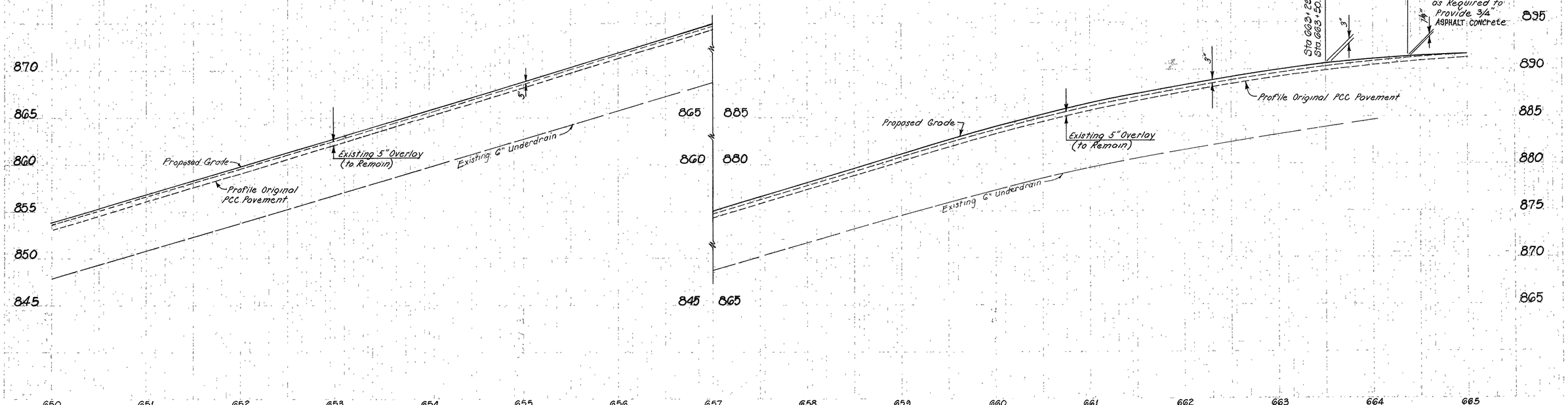
855 850 845 840 835 830 820 815 810 805 800

635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650

STA 635+00 TO STA 650+00

MOT-70-6.53/11.02





STA 650+00 TO STA 665+00

Sta. 51+20 End Work

Sta. 50+00.00 Frederick Pike = Sta GG7+49.20 I.R 70 Mot-70-1267 L/R

Station Equation Sta. 670+38.63 Back = Sta. 668+97.77 Ahead

Sta. 670+06.16 (W.B.) End Taper Begin 3" Overlay

Sta. 670+29.40 End Taper Begin 3" Overlay

Frederick Pike

OBT Buried Cable

OBT Box

Construction Limits

Westbound

Eastbound

Exist. Catch Basin Mounding to Remain

Kinmont Road

Sta. 48+75 Begin Work

Sta. 665+00 Line Match

Sta. 679+00 Line Match

BM I-70 over Frederick Pike (W.B.) Sta. GG7+49.20, 00' Lt Chiseled Sq. N.E. Cor. N.E. Abutment Elev. 892.84 Bridge No. MOT-70-1267 L/R

LEGEND

412 -¾" ASPHALT CONCRETE MWS-GO
44G -2¼" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, MWS-GO
301 Bituminous Aggregate Base, MWS-GO
203 Excavation

Approach Slab Widening See Sheet No 114

655 Seeding and Renovating Existing Sod

FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.

350' Taper @ 1" per 50'
Remove by Grinding as Required to Provide ¾" Asphalt Concrete

MOT-70-1267 Bridge Limits For Bridge Drawings See Sheets 200-211

350' Taper @ 1" per 50'
Remove by Grinding as Required to Provide ¾" Asphalt Concrete

87.5'

GGC+79.43 W.B. Sta 667+00.73 E.B.

Sta 667+97.02 W.B. Sta 668+20.16 E.B.

Sta 670+06.16 (W.B.) Sta 670+29.40 (E.B.)

Frederick Pike

Existing 7"Cap (to Remain)

20'

1"

1½"

3"

Approx. Loc. of OBT Buried Cable

Profile Original PCC Pavement

Existing 5" Overlay (to Remain)

3"

Proposed Grade

Excavation	01	Cu. Yds.
Embankment	7778	Cu Yds.
Seeding & Mulching	2010	Sq. Yds.

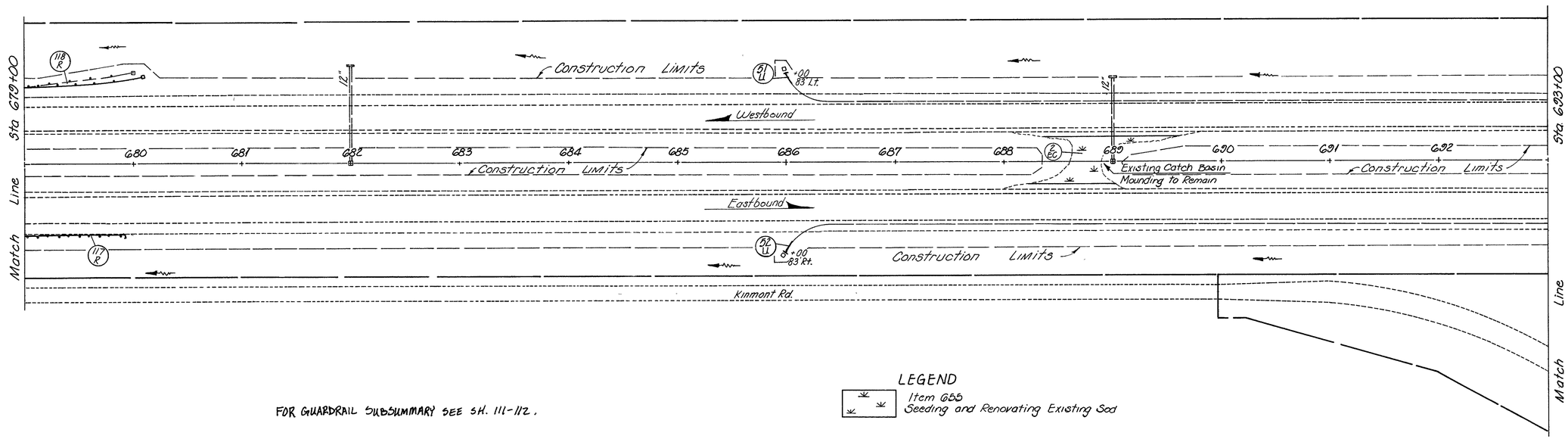
Totals carried to Sheet No 12

Station Equation Sta 670+38.63 (Back) = Sta GG8+97.77 (Ahead)

665 666 667 668 669 670 GG8 670 671 672 673 674 675 676 677 678 679

STA. 665+00 TO STA. 679+00

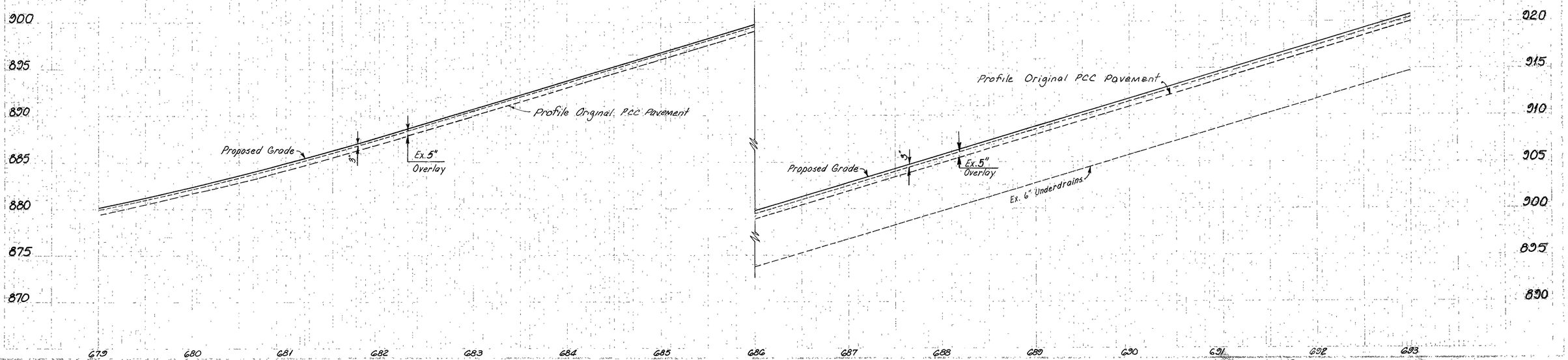
MOT-70-6.53/11.02



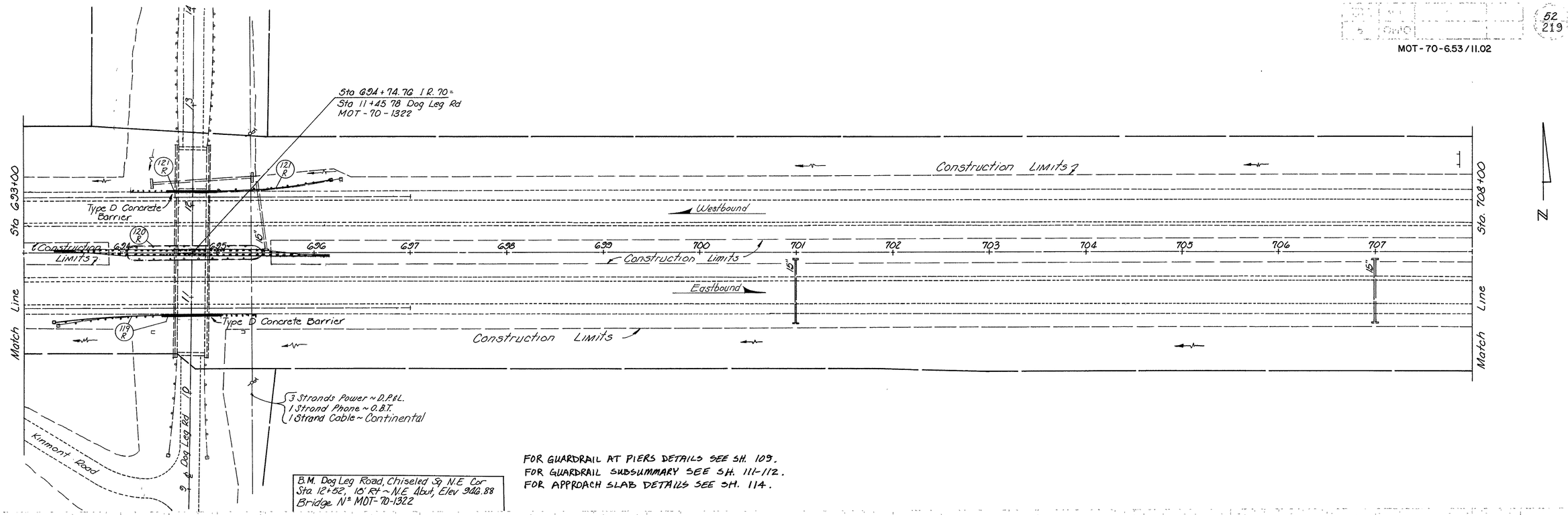
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.

LEGEND

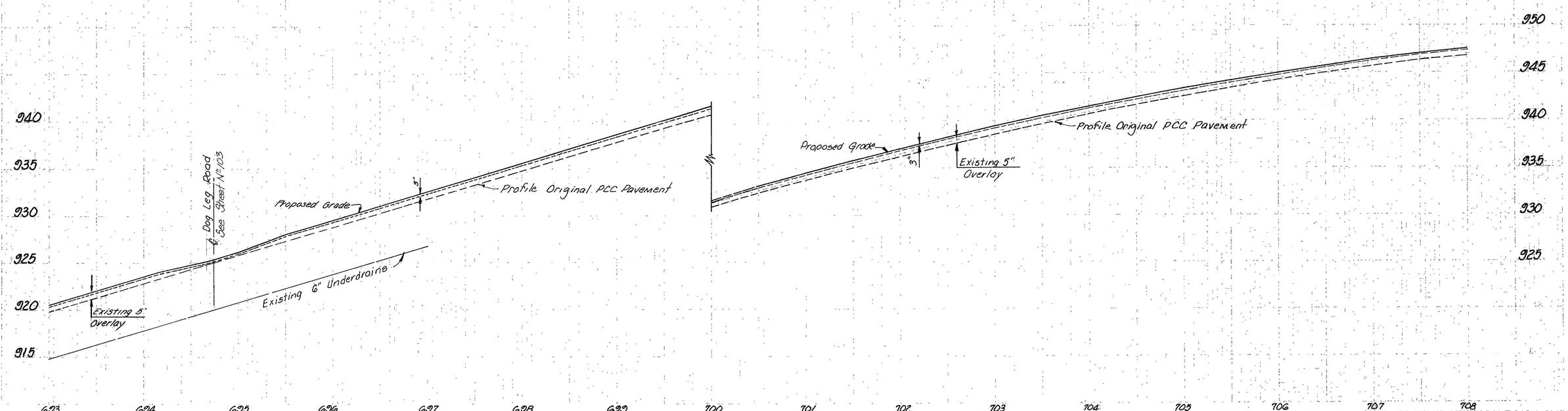
Item 655
Seeding and Renovating Existing Sod



STA 679+00 TO STA 693+00

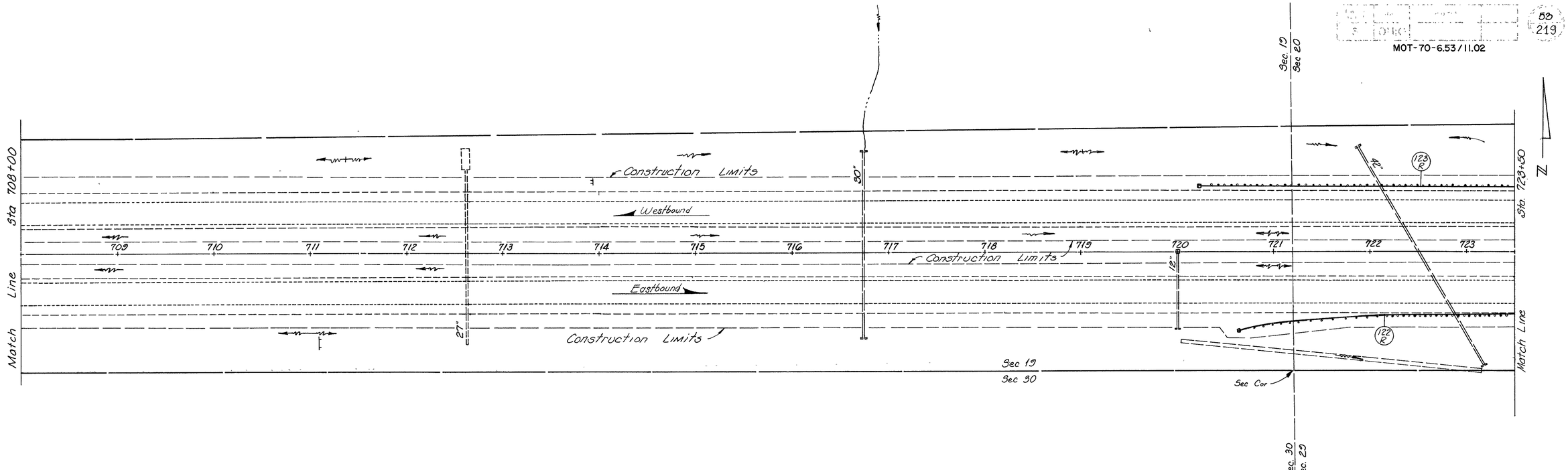


FOR GUARDRAIL AT PIERS DETAILS SEE SH. 109.
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.
FOR APPROACH SLAB DETAILS SEE SH. 114.

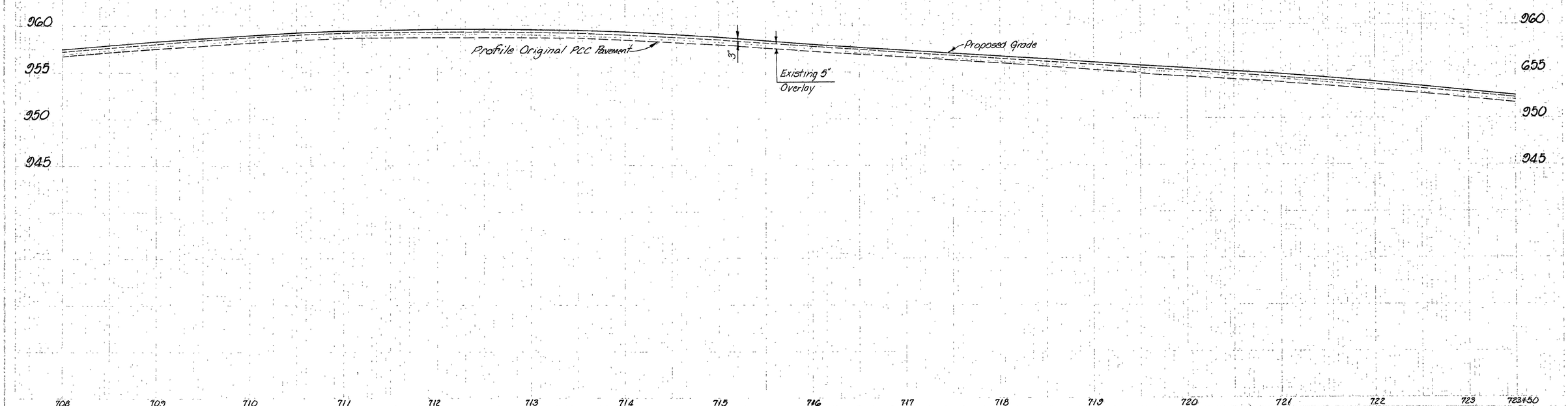


STA. 693+00 TO STA. 708+00

MOT-70-6.53/11.02



FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.



STA. 708+00 TO STA. 723+50

End Project
Sta 732+33.60
S.L.M. 13.87

IR-70-1(45)24

Sta. 733+83.60
Meet existing
with 3/4" Butt Joint

End Work
Sta 738+88.60

Sta 723+50

Construction Limits

60"

123 K

50 U

+00
64' Lt

Westbound

724 725 726 727 728 729 730 731 732 733 734 735 736 737

12"

Construction Limits

Eastbound

Match Line

122 K

+20
82' Rt.

53 U

Construction Limits

12"

+50

N

NOTE: FOR PAVEMENT TRANSITION SEE SHEET 26.
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.

100'
Prop. Taper @ 1" Per 80'
Var. Depth Overlay

Ex. 50'
Feather

Sta 728+72.21

Sta 732+33.60
End 3" Overlay
Begin Transition

See Transition Detail
A-2, Sheet N° 20

Sta. 733+83.60
End Transition
Meet Existing
w/ 3/4" Butt Joint

965
960
955
950
945

Proposed Grade

3"

Existing 5" Overlay
(To Remain)

Profile Original
PCC Pavement

8"

6"

37.5'
0" to 3/4"
Asph Conc Overlay to
be removed by Grinding

Existing 6" Underdrains

Profile Original
PCC Pavement

Existing 3" Overlay
To Remain

965
960
955
950

723+50 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738

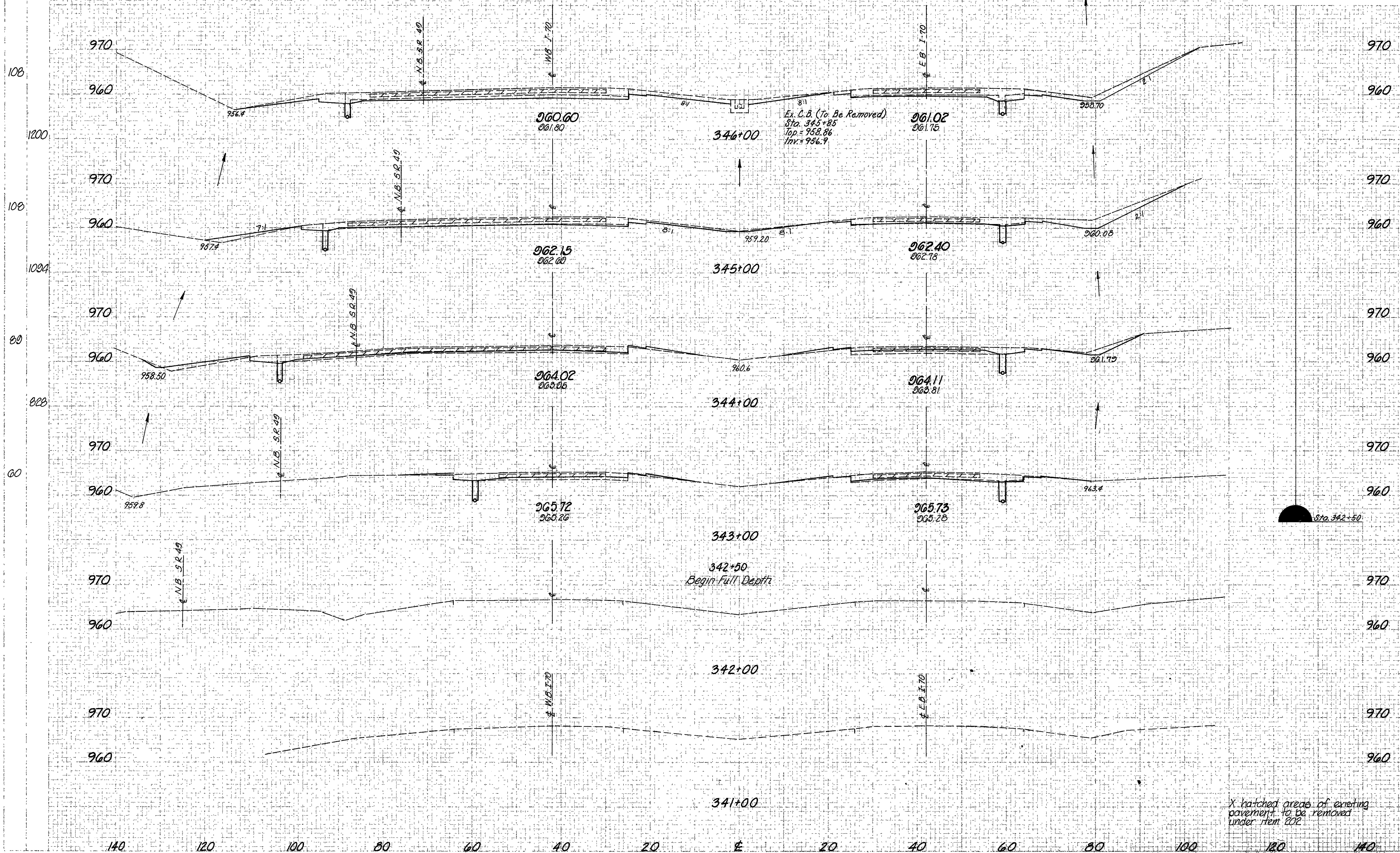
STA. 723+50 TO STA. 738+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

5	OHIO		

55/219

MOT-70-6.53/11.02



End Area Cut	End Area Fill	Volume Cut	Volume Fill
242	0		
		730	22
152	12		
		381	60
54	25		
		202	59
55	7		
		102	13
0	0		

X hatched areas of existing pavement to be removed under item 202

I.R. 70 X-SECTIONS Sta. 341+00 to Sta. 346+00

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

5 OHIO

MOT-70-6.53/11.02

56
219

X hatched areas of existing pavement to be removed under item 202.

I.R. 70 X-SECTIONS Sta. 347+00 to Sta. 352+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

5 OHIO

MOT-70 - 6.53/11.02

57
219

RAZOR RUN

Sta. 355+00

Sta. 354+50

Sta. 354+00

Sta. 353+45.34 (W.B.)
Ahead Only
Skewed

Sta. 353+45.34 (E.B.)
Ahead Only
Skewed

Sta. 353+14.76 (W.B.)
Ahead Only
Skewed

Sta. 353+14.76 (E.B.)
Ahead Only
Skewed

Sta. 352+04.66 (W.B.)
Back Only
Skewed

Sta. 352+35.24 (E.B.)
Back Only
Skewed

Match Line Sta. 352+00

Grade to Drain

℄ W.B. T.P. 70

℄ E.B. T.P. 70

Excavation 851 Cu Yds.
Embankment 100 Cu Yds.
Seeding & Mulching 0.338 Acres
Totals Carried to Sheet No. 28

X hatched areas of existing pavement to be removed under Item 202

TR 70 X-SECTIONS Sta. 352+04.66 to Sta. 355+00.00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

	STA	PROJECT	
5	OHIO		

MOT-70- 6 53/11 02

Excavation 1260 Cu. Yds.
Embankment 143 Cu. Yds.
Seeding & Mulching 2236 Sq. Yds.
Totals Carried to Sheet № 29

X hatched areas of existing pavement to be removed under item 202

Station		[illegible] AREA CUT	[illegible] AREA FILL	VOLUME CUT	VOLUME FILL
357+00		0	0		
				41	0
356+70.34	Ahead	74	0		
	Back	74	2		
				125	2
356+39.76	Ahead	147	2		
	Back	147	8		
				216	112
356+00		147	8		
				401	20
		102	3		

I.R. 70 X-SECTIONS Sta. 356+00 to Sta. 359+00

Estimated Quantities
Calc. By E.L.M. Date 2/88
Checked By S.L.K. Date 3/88


960
950
133
951.88
2:1
4:1
8:1
953.92
8:1
8:1
3:1
951.56
2:1
956.72
956.48
368+00
956.72
956.49
Excavation 2500 Cu. Yds.
Embankment 312 Cu. Yds.
Seeding & Mulching 5,804 Sq. Yds.
Totals Carried To Sheet No. 29
142 36
1339
387 130
108
951.64
954.17
951.2
957.02
956.66
367+00
Begin Full Depth
Ahead Only
957.02
956.65
67 34
833
193 63
42
951.4
6:1
953.67
949.6
366+00
37 0
233
66 0
0
12" Concrete Pipe
Ex. Catch Basin
Sta. 365+00
Grate = 953.17
Inv. = 951.00
365+00
Inv. 948.5
Sta. 365+00
0 0
℄ W.B.
℄ E.B.
954.4
364+00
X hatched areas of existing pavement to be removed under item 202
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

I.R. 70 X-SECTIONS Sta. 364+00 to Sta. 368+00

Estimated Quantities
Calc. By E.L.M. Date 2/88
Checked By S.I.K. Date 3/88


Exist. Pier (Kimmel Rd. Bridge)
Sta. 371+37.52 to 371+62.64
Elev. Footing Top = 952.10
Elev. Footing Bottom = 949.60
Exist. Pier (Kimmel Rd. Bridge)
Sta. 371+59.60 to 371+91.33
Elev. Footing Top = 952.10
Elev. Footing Bottom = 949.60
Exist. Pier (Kimmel Rd. Bridge)
Sta. 371+83.92 to 372+10.08
Elev. Footing Top = 952.00
Elev. Footing Bottom = 949.50
Ex. 12" Pipe
950.60
954.14
956.68
952.48
372+00
952.48
954.14
955.65
953.0
1.25:1
952.60
953.54
953.54
954.65
955.85
371+00
Sta. 371+40
Ex. Catch Basin
Top = 952.6 (From Orig.
Inv. = 951.0 Drawings)
954.65
955.73
952.64
952.36
953.43
955.49
956.06
370+00
Ex. Catch Basin
Sta. 370+08
Grate = 953.26
955.49
956.11
952.28
Sta. 370+00
℄ W.B.
℄ E.B.
952.12
953.68
956.21
956.24
369+00
956.21
956.34
951.92
X hatched areas of existing pavement to be removed under item 202
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140
960 950
107 1583 178 1850 155 1606 134 1488 133
312 0
1620 0
563 0
1748 4
381 2
1148 28
230 18
706 91
142 36

I.R. 70 X-SECTIONS Sta. 369+00 to Sta. 372+00

Estimated Quantities
Calc. By E.L.M. Date 2/88
Checked By S.L.K. Date 3/88

OHIO
MOT-70-6.53/11.02

61/219

954.48
954.53
951.30
377+00
954.48
954.58
954.60
954.80
951.60
952.80
376+00
954.60
954.80
954.54
955.03
951.60
Ex. Catch Basin
Sta. 375 + 30
Grate = 951.04
375+00
954.54
954.98
954.31
955.26
952.00
952.00
374+00
954.31
955.19
℄ W.B.
℄ E.B.
954.07
955.50
952.20
952.20
373+00
954.07
955.43
952.01
X hatched areas of existing pavement to be removed under item 202
960
950
940
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140
54
583
51
656
67
800
77
1072
116
1239
107
120 0
431 0
113 0
441 0
125 0
598 4
198 2
335 0
1198 0
312 0

I.R. 70 X-SECTIONS Sta. 373+00 to Sta. 377+00

Estimated Quantities
Calc By ELM Date 2/88
Checked By SLK Date 3/88

OHIO
MOT-70-6.53/11.02


950
940
954.14
953.82
954.05
953.79
951.2
4:1
8:1
8:1
8:1
4:1
381+00
911
56
84 16
219 88
950
940
954.17
953.98
954.09
954.00
952.52
951.00
3:1
8:1
4:1
6:1
8:1
3:1
380+00
108
84 29
875
361 26
960
950
48
107
25
-378+98.87
-378+50.37
954.20
954.12
950.50
6:1
6:1
379+00
Begin Full Depth
954.12
954.24
Sta. 378+50.37 (W.B.)
Ahead Only
Sta. 378+98.87 (E.B.)
Ahead Only
To Creek
378+98.87- 111 0
378+50.37- 48 0
294 0
950
940
To Creek
W.B. Only
E.B. Only
℄ W.B.
℄ E.B.
Excavation 7204 Cu.Yds.
Embankment 168 Cu.Yds.
Seeding & Mulching 10467 Sq.Yds.
Totals Carried To Sheet No. 30
950
940
954.48
951.30
951.20
954.38
Ex. 12" Stm.
Sta. 377+45 Inv. 948.5
(to be Removed)
25
202
50
7
54
-377+49.63
-377+01.13
Sta. 377+01.13 (W.B.)
Back Only
Sta. 377+49.63 (E.B.)
Back Only
377+49.63- 35 0
377+01.13- 103 0
124 0
5 0
120 0
X hatched areas of existing pavement to be removed under Item 202
140
120
100
80
60
40
20
℄
20
40
60
80
100
120
140

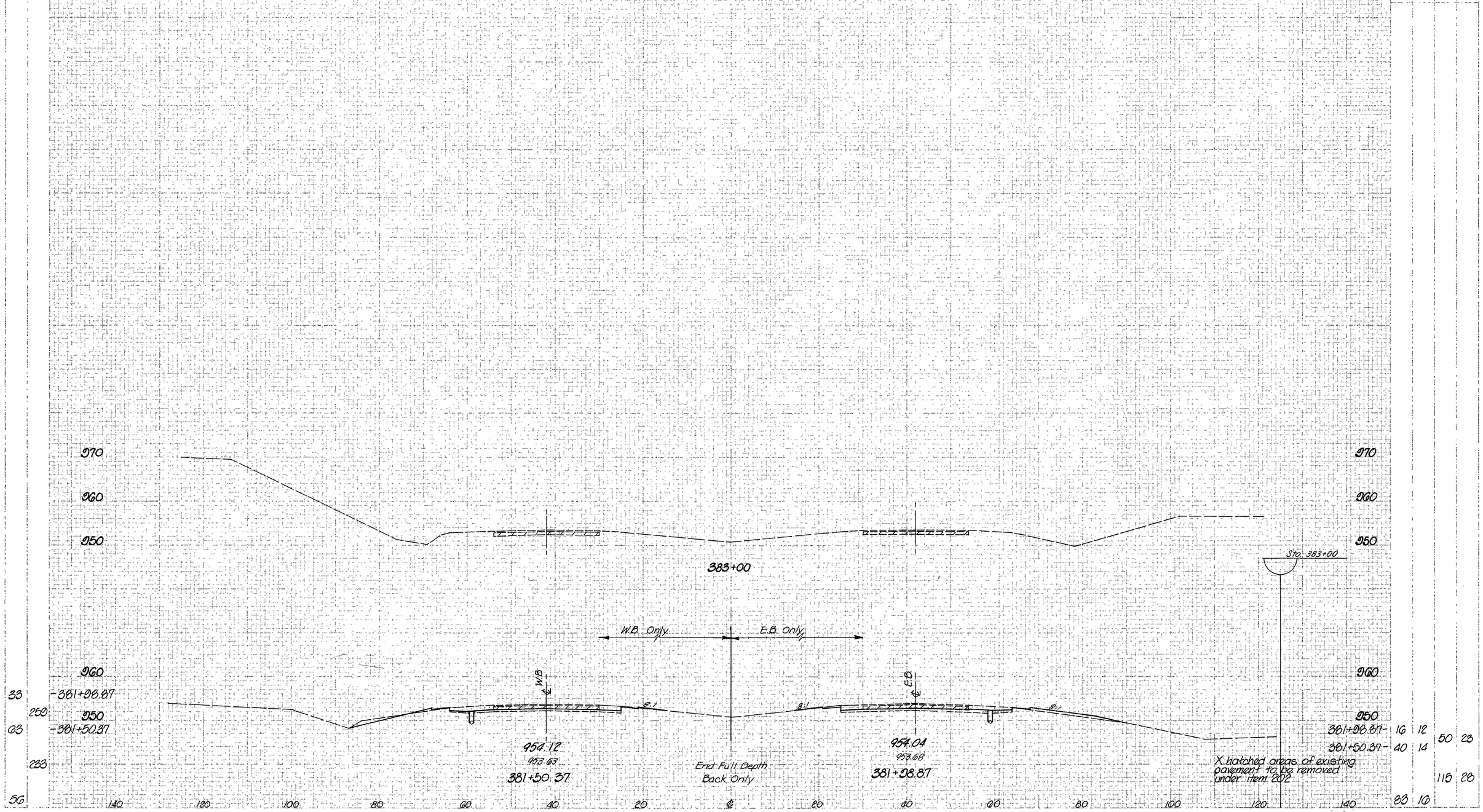
I.R. 70 X-SECTIONS Sta. 377+26.13 to Sta. 381+00

Estimated Quantities
Calc. By E.L.M. Date 2/88
Checked By J.L.K. Date 3/88

MOT-70-6.53/11.02

63
219

END AREA		VOLUME	
CUT	FILL	CUT	FILL
16	12	50	23
40	14		
		115	28
83	10		



I.R. 70 X-SECTIONS Sta. 382+00 to Sta. 383+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

64
219

MOT-70-6.53/11.02

397+00
954.35
952.40
954.85
2:1

396+00
953.80
950.90
953.56
2:1

395+25
Begin Full Depth

Sta 395+25.00 (EB)
(Ahead Only) | (Back & Ahead)

395+00
949.40
2:1

394+00
948.40

393+00
947.40
2:1
℄ EB
RW

392+00
946.36
12" Conc. Pipe
Ex. Catch Basin
Sta. 392+00
Grate = 948.8
Inv. = 947.27
Sta. 392+00

X hatched areas of existing pavement to be removed under Item 202

I-R 70 X-SECTIONS Sta 392+00 to Sta 397+00

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88


Incl. In Calculations
402+00
962.64
963.03
959.80
961.00
401+00
960.39
961.27
957.60
958.50
Sta. 400+70
Ex. CB on ℄
Top 956.94
Inv. 12"~954.24
400+00
958.27
959.77
958.00
957.00
957.00
12" Pipe
Sta. 400+00
399+00
956.60
958.18
956.00
954.50
954.50
12" Pipe
398+00
955.35
956.45
954.40
953.40
953.50
R/W
Excavation 4842 Cu.Yds.
Embankment 263 Cu.Yds.
Seeding & Mulching 3722 Sq.Yds.
Totals Carried to Sheet № 31
X hatched areas of existing pavement to be removed under item 202
960
950
140
120
100
80
60
40
20
℄

I.R. 70 X-SECTIONS Sta 398+00 to Sta 402+00

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

66
219

MOT-70-6.53/11.02

970
960

36" Conc. Pipe
12" Conc. Pipe
Ex. Inv
961.86

407+00

970
960

966.80
963.10

406+00

Sta. 406+00

970
960

964.90
964.00

405+00
Back Only
End Full Depth Pavement
Begin Overlay

968.34
968.05

970
960

963.30
964.50

404+00

966.61
966.31

970
960

961.80
963.00

403+00

964.71

R/W

	Cu. Yds	Cu. Yds	Sq. Yds
Excavation	1887		
Embankment	156		2024
Seeding & Mulching			

Totals Carried to Sheet No. 32

X hatched areas of existing pavement to be removed under Item 202

I-R 70 X-SECTIONS Sta 403+00 to Sta 407+00

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By SLK Date 3/88

OHIO

MOT-70-6.53/11.02

BEGIN FULL DEPTH
AHEAD ONLY

Excavation 1161 Cu.Yds.
Embankment 151 Cu.Yds.
Seeding & Mulching 3106 Sq.Yds.
Totals Carried to Sheet No 35

END AREA		VOLUME	
CUT	FILL	CUT	FILL
42	9		
		181	54
56	20		
		150	80
28	23		

X hatched areas of existing pavement to be removed under Item 202

I.R. 70 X-SECTIONS Sta. 424+00 to Sta. 428+00

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By SLK Date 3/88

OHIO

MOT-70-6.53/11.02

68
219

X hatched areas of existing pavement to be removed under item 202

END AREA		VOLUME	
CUT	FILL	CUT	FILL
253	0		
		933	0
251	0		
		996	0
287	0		
		856	0
175	0		
		535	0
114	0		
		289	17
42	9		

I.R. 70 X-SECTIONS Sta 429+00 to Sta 433+00

Estimated Quantities
Calc. By ELM. Date 3/88
Checked By SLK Date 3/88

OHIO

MOT-70-6.53/11.02

69
219

X hatched areas of existing pavement to be removed under item 202

Excavation	4253	Cu. Yds.
Embankment	330	Cu. Yds.
Seeding & Mulching	6786	Sq. Yds.

Totals Carried to Sheet No 34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	55		
		93	120
40	38		
		238	119
75	26		
		404	65
143	9		
		733	17
253	0		

T.R. 70 X-SECTIONS Sta 434+00 to Sta 438+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88


Sta. 555+50, 88' Lt.
Prop. 36" Storm, Inv. 936.25
Sta. 558+00
Ex. C.B. (Buried)(to be Removed)
To 30" Pipe
Fill Line
Cut Line
1/2"/Ft.
1"/Ft.
Prop. 84' ~ 15" Conduit, Type "B" @ 0.80%
936.75
939.61
940.9
Sta. 558+00
Prop. Std. No 5 C.B.
Top= 938.50
Inv. 15" S = 936.67
558+00
940.93
941.0
Inv. 15"
936.00
Prop. HW-4B
15" Headwall
Ex. C.B. Sta. 557+50 (to be Removed)
Top= 939.31
Inv. 12" E = 937.93
938.50
941.32
941.9
939.50
557+00
942.06
942.0
939.10
940.00
943.51
943.3
940.4
556+00
943.61
943.3
940.60
Ahead
Back
W.B.
E.B.
941.50
945.60
945.2
555+00
Begin Full Depth
Begin Rock Excavation (Ahead Only)
945.60
945.3
943.10
R/W
I.R. 70
942.9
Ex. 15"
944.2
Sta. 554+00
554+00
944.39
X hatched areas of existing pavement to be removed under item 202
950
940
2:1
8:1
7:1
128
1505
143
1494
126
1189
88
294
0
589 31
1078 133
479 41
1789 100
487 13
1596 59
375 10
48 15
89 28
0 0
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

I.R. 70 X SECTIONS Sta. 554+00 to Sta. 558+00

MOT-70-6.53/11.02

Estimated Quantities
Calc. By: ELM Date 3/88
Checked By: SLK Date 3/88

SEEDER 2

563+25 (E.B.)
End Full Depth (E.B.)
End Rock Removal (E.B. Only)

933.70 — 938.70 / 938.8 — 936.00 — 939.93 / 939.6 — 934.40
563+00
933.90 — 938.37 / 939.1 — 936.20 — 940.04 / 939.9 — 934.60
562+00
934.10 — 937.97 / 939.4 — 936.40 — 940.15 / 940.2 — 934.80
561+00
935.75 — 937.90 / 939.6 — 936.60 — 937.00 — 940.24 / 940.5 — 935.00
560+00
936.25 — 938.47 / 940.2 — 937.00 — 937.50 — 940.23 / 940.7
550+00

Sta 560+50, 88' Lt
Prop. 36" Storm, Inv. 934.25

Prop. 36" Storm El. 934.75

Prop. 36" Storm El. 936.75

Sta. 559+65
Ex. 30" Conc. Pipe
Outlet = 935.0

30" Conc pipe

* All Excavation this area is Rock and Shale

Excavation	20205 Cu Yds
Embankment	1295 Cu Yds
Seeding & Mulching	4.952 Sq Yds
Totals Carried To Sheet No. 42	

X hatched areas of existing pavement to be removed under Item 202

175	1944	700.45	2598.150
175	3024	697.41	2598.140
177	1739	760.40	2285.142
130	1144	474.37	1744.124
70	1100	468.30	1989.113
128		582.31	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

I.R. 70 X-SECTIONS Sta 559+00 to Sta 563+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

72
219

MOT-70-6.53/11.02

250
240

140 | 1770 | 155 | 1750 | 161 | 1898 | 161 | 1722 | 140 | 1709 | 175

2:1 6:1 933.70

935.40
568+00
END ROCK EXCAVATION

8:1 2:1 2:1 933.40

250
240

315 | 56 | 1228 | 170

250
240

2:1 6:1 932.90

Fill Line
Cut Line
935.60
567+00

8:1 2:1 2:1 933.60

250
240

348 | 34 | 1231 | 237

250
240

2:1 6:1 933.10

Fill Line
Cut Line
935.80
566+00

8:1 2:1 2:1 933.80

250
240

317 | 76 | 1169 | 359

250
240

2:1 6:1 933.30

938.63
938.3
End Full Depth (W.B.)

Fill Line
Cut Line
936.00
565+00

8:1 2:1 2:1 934.00

Sta. 565+00
260
AHEAD 314 | 50 | 1400 | 163
240
Back 326 | 0

250
240

R/W
2:1 6:1 933.50

W.B.
Fill Line
12.10
Cut Line
938.79
938.5
935.80
564+00

Ex. C.B.
Top = 935.78 (℄ Grate)
Inv. 12" S = 934.74

12" CMP
Ex. Inv. 934.72
934.20

R/W
2:1

250
240

445 | 20 | 2131 | 137

X hatched areas of existing pavement to be removed under item 202

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 | 706 | 45

IR 70 X-SECTIONS Sta 564+00 to Sta 568+00

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

MOT-70-6.53/11.02

73
219

573+00

572+00

571+00

570+00

569+00

940
930
928.00
929.50
930.50
931.50
932.50
935.00
935.20
932.6
932.80
933.00
933.20
2:1
6:1
8:1
12"
Ex. C.B.
Top = 935.0
Inv. 12" S = 934.05
Ex. 12" Stm.
Inv. = 933.2
℄ W.B.
℄ I.R. 70
℄ E.B.
R/W

* Includes 2701 C.Y. Rock and Shale

Excavation	* 8504	Cu. Yds.
Embankment	1803	Cu. Yds.
Seeding & Mulching	14610	Sq. Yds.

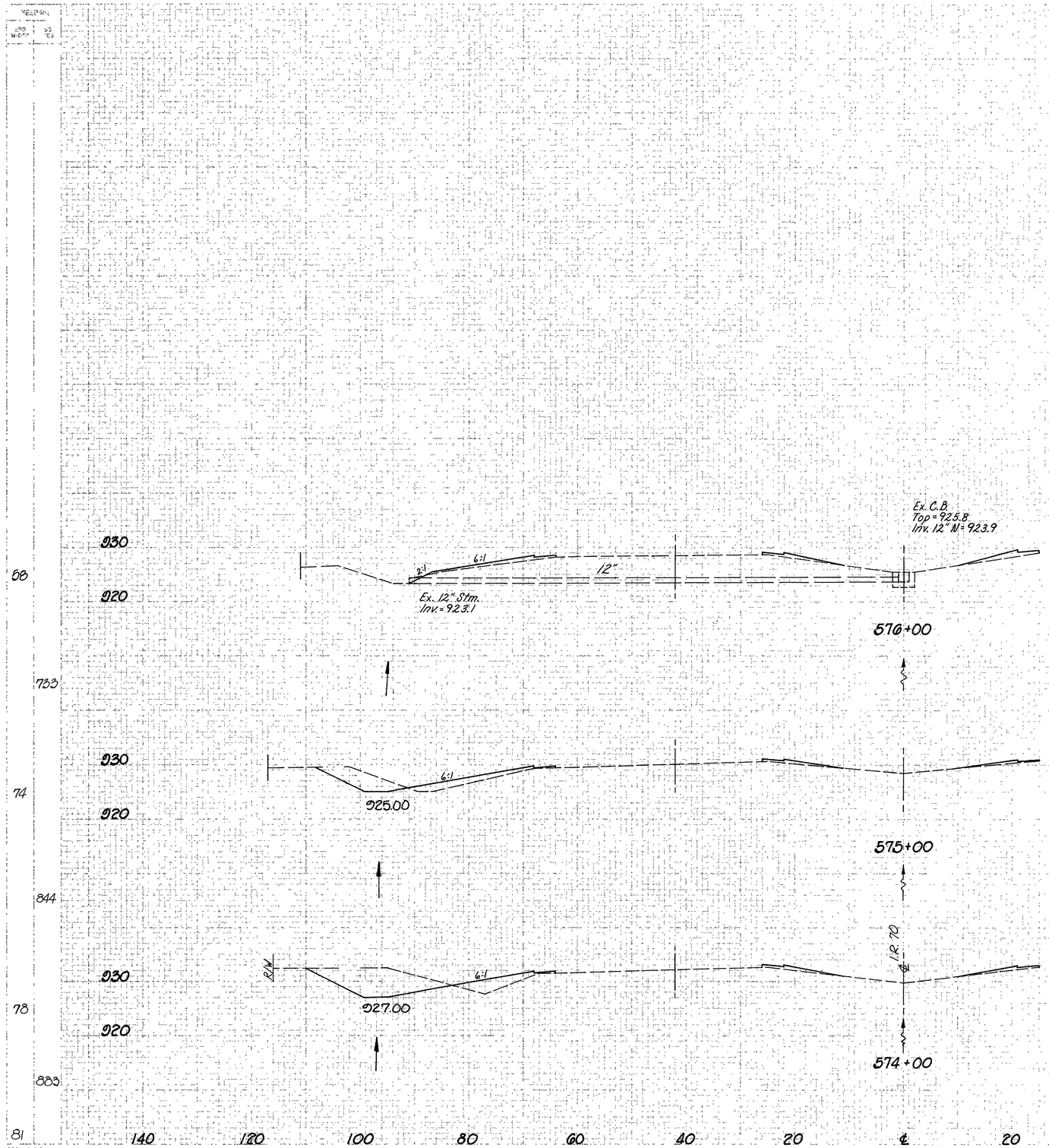
Totals Carried To Sheet No. 45

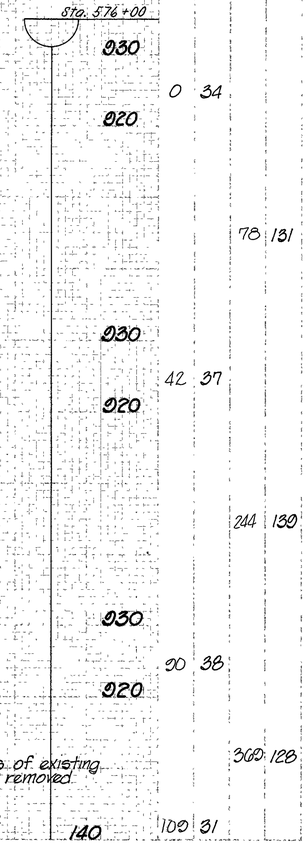
X hatched areas of existing pavement to be removed under Item 202

I.R. 70 X-SECTIONS Sta 569+00 to Sta 573+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

MOT-70-6.53/11.02



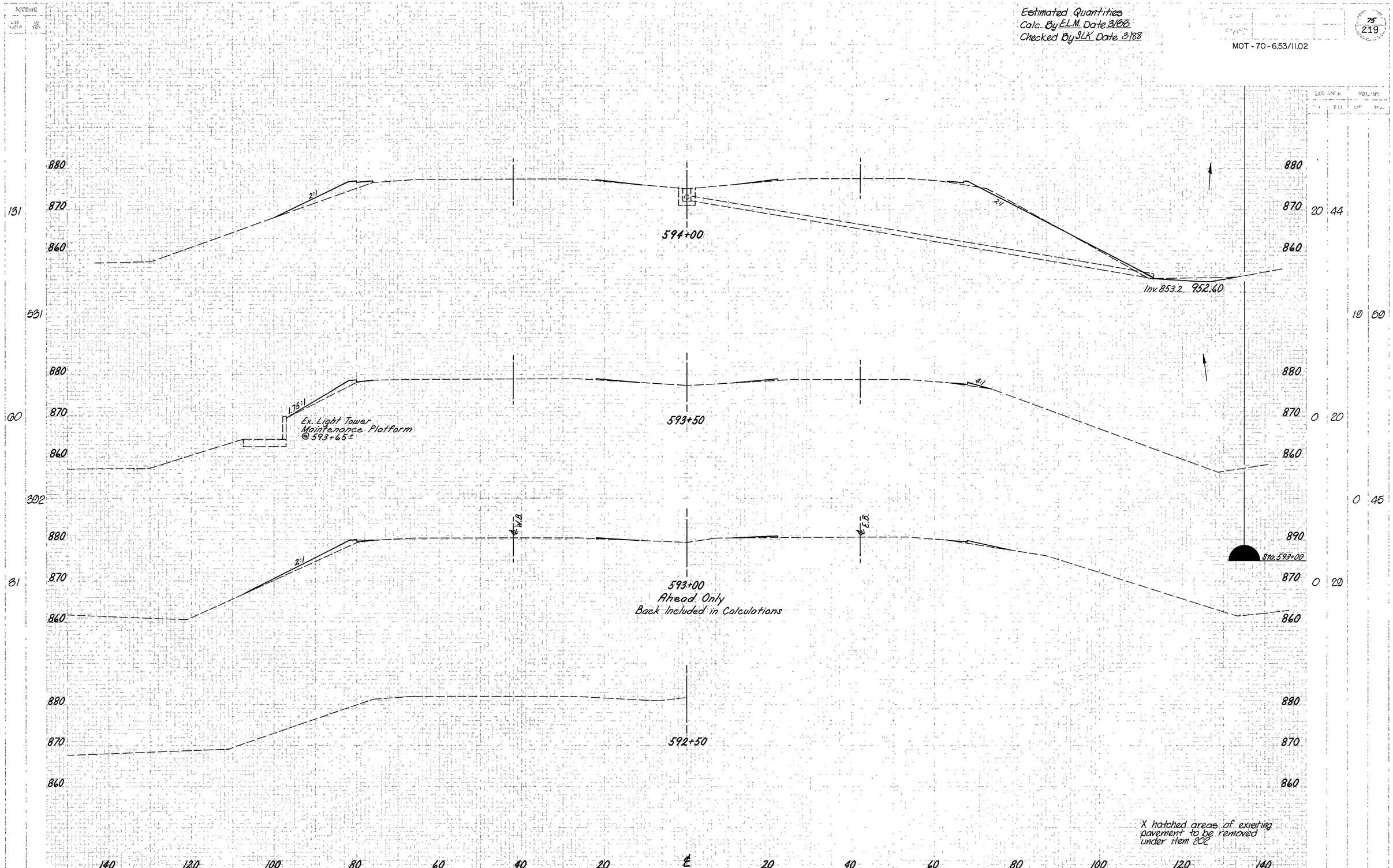


X hatched areas of existing pavement to be removed under Item 202

LR 70 X-SECTIONS Sta 574+00 to Sta 576+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

MOT - 70 - 6.53/11.02



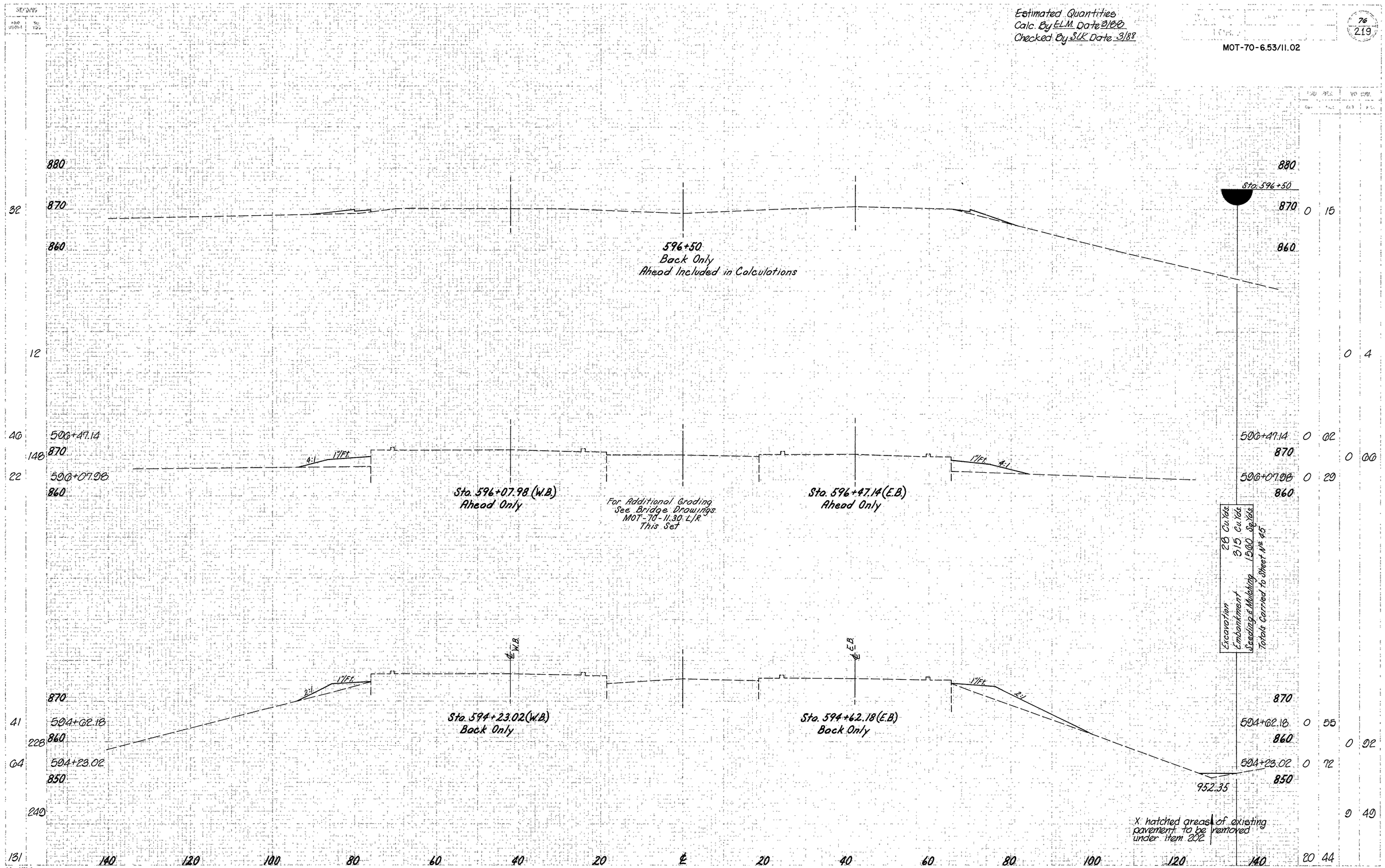
X hatched areas of existing pavement to be removed under Item 202

I.R. 70 X-SECTIONS Sta 592+50 to Sta 594+00

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

MOT-70-6.53/11.02

76
219

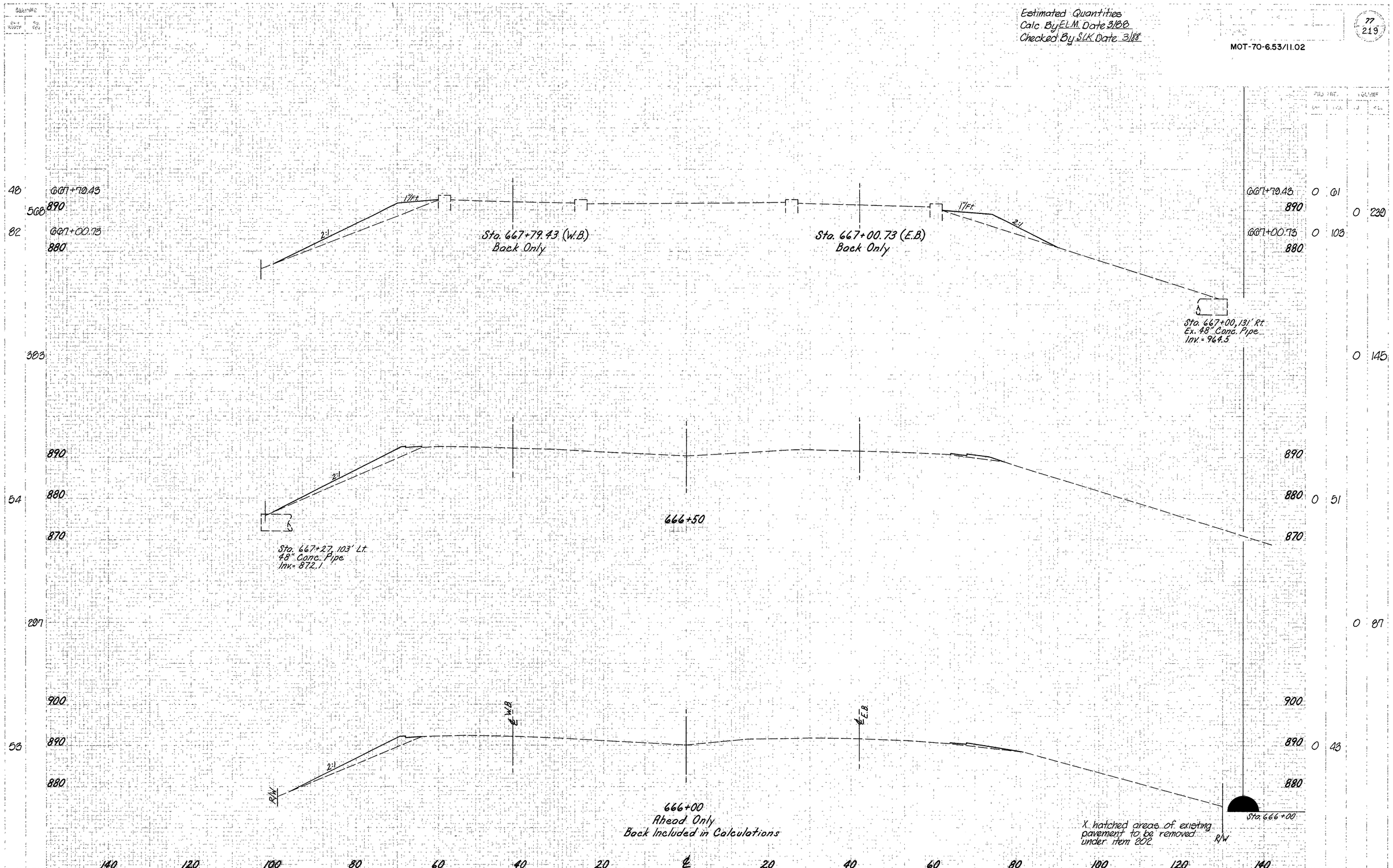


T.R. 70 X-SECTIONS Sta 594+23.02 to Sta 596+50

Estimated Quantities
Calc By ELM Date 3/88
Checked By SLK Date 3/88

77
219

MOT-70-6.53/11.02



I.R. 70 X-SECTIONS Sta. 666+00 to Sta. 667+00.73

Estimated Quantities
Calc. By ELM Date 3/88
Checked By SLK Date 3/88

MOT-70-6.53/11.02


890
880
669+50
R/W
890
880
R/W
669+00
Back Only
Ahead Included in Calculations
℄ Ex. Conc. Ditch
Sta. 669+00
Excavation 0 Cu.Yds.
Embankment 778 Cu.Yds.
Seeding & Mulching 2016 Sq.Yds.
Totals Carried to Sheet No 50
890
880
668+20.16
667+79.43
℄ W.B.
℄ E.B.
1'/Ft.
2:1
Sta. 667+79.43 (W.B.)
Ahead Only
Sta. 668+20.16 (E.B.)
Ahead Only
0 15
0 189
0 113
0 118
0 44
X hatched areas of existing pavement to be removed under item 202
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

FHWA REGION	STATE	PROJECT
5	OHIO	MOT-70-6.53/11.02

Computed By SED Date 3-10-88
Checked By GAS Date 3-11-88

UNDERDRAINS

* For Details See Sht 79A

Sheet No	Reference No	Station to Station	Side	202 Pipe Removed 24" & Under (Lin Ft)	Special Precast Reinforced Concrete Outlet * (Each)	603 6" Conduit Type "F" + (Lin Ft)	620 Delineator Type "C" (Each)	605 6" Unclassified Pipe Underdrains As Per Plan (Lin Ft)
28	1U	274+24 to 277+25	Lt		1	10	1	300
28	2U	347+08 to 352+00	Lt		1	10	1	495
28	3U	342+50 to 352+45	Rt		1	10	1	995
29	4U	352+85 to 360+95	Lt		1	20	1	355
29	5U	360+89	Rt	35	1	35	1	
29	6U	366+96	Rt	10	1	10	1	
30	7U	377+00	Lt	10	1	10	1	
30	8U	367+10 to 377+65	Rt		1	10	1	1045
31	9U	378+70 to 385+95	Rt		1	10	1	250
31	10U	378+18 to 391+95	Lt		1	10	1	265
31	11U	391+95	Lt.	10	1	10	1	
31	12U	392+05	Lt	10	1	10	1	
31	13U	392+05	Rt	10	1	10	1	
31	14U	398+55 to 405+00	Rt		1	10	1	640
32	15U	407+05	Lt	15	1	15	1	
32	16U	407+05	Rt	10	1	10	1	
32	17U	410+05	Lt	20	1	20	1	
33	18U	426+00 to 428+00	Lt		1	10	1	200
33	19U	139+05	Lt	10	1	10	1	
33	20U	138+95	Lt.	10	1	10	1	
34	21U	428+00 to 437+00	Lt.		1	10	1	800
34	22U	427+23 to 437+95	Rt		1	20	1	1090
35	23U	451+00	Lt.	10	1	10	1	
35	24U	451+00	Rt	10	1	10	1	
35	25U	14+75	Rt	10	1	10	1	
36	26U	12+40	Rt	10	1	10	1	
36	27U	21+00	Rt.	10	1	10	1	
36	28U	21+00	Rt.	10	1	10	1	
36	29U	471+00	Lt	10	1	10	1	
36	30U	471+00	Lt	10	1	10	1	
37	31U	477+50	Lt	10	1	10	1	
37	32U	479+05	Rt	25	1	25	1	
37	33U	486+05	Lt.	10	1	10	1	
38	34U	498+05	Rt.	20	1	20	1	
39	35U	517+95	Lt.	20	1	20	1	
39	36U	517+95	Rt	10	1	10	1	
40	37U	529+40	Lt	20	1	20	1	
40	38U	529+49	Rt	10	1	10	1	
40	39U	529+60	Lt	20	1	20	1	
40	40U	529+51	Rt	10	1	10	1	

UNDERDRAINS

Sheet No	Reference No	Station to Station	Side	202 Pipe Removed 24" & Under (Lin Ft)	Special Precast Reinforced Concrete Outlet * (Each)	603 6" Conduit Type "F" + (Lin Ft)	605 6" Unclassified Pipe Underdrains As Per Plan (Lin Ft)	620 Delineator Type "C" (Each)
40	41U	533+00	Lt	10	1	10		1
40	42U	533+00	Rt.	10	1	10		1
41	43U	548+95	Lt	20	1	20		1
42	44U	553+00	Lt	10	1	10		1
42	45U	553+00	Rt	10	1	10		1
42	46U	557+95	Lt	10	1	10		1
43	47U	579+10	Lt.	10	1	10		1
43	48U	579+10	Rt	20	1	20		1
49	49U	650+00	Lt	10	1	10		1
49	50U	655+00	Rt	10	1	10		1
51	51U	686+00	Lt	10	1	10		1
51	52U	686+00	Rt	10	1	10		1
54	53U	728+20	Rt	10	1	10		1
54	54U	730+00	Lt	10	1	10		1
36	55U	21+00	Lt	10	1	10		1
82	56U	153+75	Lt	10	1	10		1
82	57U	148+02	Rt	10	1	10		1
82	58U	148+00	Rt	10	1	10		1
83	59U	135+75	Lt	10	1	10		1
83	60U	132+75	Lt.	10	1	10		1
83	61U	130+00	Lt.	10	1	10		1
84	62U	129+05	Rt		1	10		1
30	63U	367+00 to 372+00	Lt	10	1	10	490	1
28	64U	353+25 to 356+70	Rt.				345	
32	65U	399+25 to 405+00	Rt	45		45	535	
31	66U	395+25 to 397+90	Rt				265	
28	67U	342+50 to 343+70	Lt.	70		70	60	
Totals To General Summary				740	63	880	8130	63

\+ 707.17 Non-Perforated, ASTM 3034 SDR 35 Or SS 931

ROADWAY

Sheet No	Reference No	Station to Station	Side	202 Catch Basin or Inlet Removed (Each)	202 Pipe Removed 24" & Under (Lin Ft)	202 Gutter Removed (Lin Ft)	202 Curb Removed (Lin Ft)	202 Ex Type "A" Conc Barrier Removed (Bridge Pier) (Lin Ft)	202 Ex Type "A" Conc Barrier Removed (Trans to Pier) (Lin Ft)	202 Ex Type "D" Conc Barrier Removed (Lin Ft)	202 Pavement Removed (Sq Yd)	203 Excavation Not Incl Embankment Construction (Cu Yd)
28	1R	345+87	℄	1								
28	2R	345+87 to 347+00	℄		113							
28	3R	347+00	Lt	1	107							
28	4R	350+00	℄	1								
28	5R	350+00 to 352+15	℄		215							
30	6R	375+30	℄	1								
30	7R	375+30 to 377+45	℄		215							
32	8R	398+83 to 399+33	Rt			50						
32	9R	410+15	Lt.	1								
32	10R	411+10	Lt.	1								
32	11R	410+09 to 415+00	Lt				491					
33	12R	152+98 to 157+08 NB SR 49	Lt				410					
34	13R	430+60 to 431+38	Lt			78						
35	14R	457+20 to 460+00	Rt				280					
36	15R	460+00 to 465+00	Rt				500					
36	16R	464+92	Rt	1								
42	17R	557+50	℄	1								
42	18R	557+50 to 558+00	℄		50							
42	19R	558+00	℄	1								
42	20R	558+00	Rt		76							
44	21R	592+75 to 593+00	Lt									1
45	22R	593+00 to 593+85	Lt.									7
45	23R	593+75 to 594+45	Rt									3
45	24R	596+18 to 15+25 "A"	Lt									10
45	25R	596+80 to 597+05	Rt									1
50	26R	665+75 to 666+53	Lt									5
50	27R	666+05 to 666+80	Rt									6
50	28R	668+17 to 669+00	Lt									5
50	29R	668+51 to 668+75	Rt									1
102	30R	308+90 SR 48	L/R						11		5	
102	31R	309+12 SR 48	Lt							135	4	
102	32R	310+44 SR. 48	L/R					12			5	
102	33R	310+66 SR 48	Lt							135	4	
Totals To General Summary				9	776	128	1681	12	11	27	18	39

PAVEMENT

* (For Drives)

Sheet No	Reference No	Station to Station	Side	301 Bituminous Aggregate Base (Cu Yd)	304 Aggregate Base (Cu Yd)	407 Tack Coat (Gal)	408 Prime Coat (Gal.)	452 6" Plain Portland Cement Concrete (Sq Yd)	622 Conc Barrier Std Type "A" (Bridge Pier) (Lin Ft)	622 Conc Barrier Std Type "A" (Trans to Pier) (Lin Ft)	622 Conc Barrier Std Type "D" (Lin Ft.)	446 Asp. Conc. Intermed. Course Type 2, MWS-60 (Cu Yd)	412 Asphalt Conc, MWS-60 (Cu. Yd)	412 * Asphalt Conc, MWS-60 (Cu. Yd.)
32	1P	410+09 to 415+00	Lt	19										
33	2P	415+00 to 415+15	Lt	1										
35	3P	457+20 to 460+00	Rt	11										
36	4P	460+00 to 465+00	Rt.	19										
44	5P	592+75 to 593+00	Lt.	1								1	1	
45	6P	593+00 to 593+85	Lt	7								1	2	
45	7P	593+75 to 594+45	Rt	3								1	1	
45	8P	596+18 to 15+25 "A"	Lt	10								1	4	
45	9P	596+80 to 597+05	Rt	1								1	1	
45	10P	600+57 to 601+93	Rt			9							7	
50	11P	665+75 to 666+53	Lt	5								1	2	
50	12P	666+05 to 666+80	Rt	6								1	3	
50	13P	668+17 to 669+00	Lt	5								1	2	
50	14P	668+51 to 668+75	Rt	1								1	1	
86	15P	51+50 Hoke Rd	Lt		16		38					4		2
96	16P	63+17 Union Rd	Rt		18		43					4		2
96	17P	64+33 Union Rd.	Lt		28		67					6		4
96	18P	64+86 Union Rd.	Rt		16		38					4		2
96	19P	65+53 Union Rd.	Rt		13		30					3		2
102	20P	300+12 SR 48	Lt	1							135	1	1	
102	21P	308+90 SR 48	L/R	1						10.9		1	1	
102	22P	310+44 SR 48	L/R	1					121			1	1	
102	23P	310+66 S.R 48	Lt	1							135	1	1	
103	24P	6+48 Dog Leg Rd	Lt.		11		26					3		2
103	25P	6+54 Dog Leg Rd.	Rt		9		22					2		2
103	26P	7+05 Dog Leg Rd	Lt		11		27					3		2
103	27P	14+74 Dog Leg Rd	Lt		6		13					1		1
103	28P	14+74 Dog Leg Rd	Lt			N/A		28						
103	29P	17+06 Dog Leg Rd	Rt		9		20					2		1
Totals To General Summary				93	137	9	324	28	12	11	27	45	28	20

EROSION CONTROL

Sheet No	Reference No.	Station to Station	Side	601 Crushed Aggr Slope Protect (Sq Yd)	601 Riprap with 6" reinforced Conc Slab (Sq Yd)	655 Renovating Existing Sod (Sq Yd)	655 Commercial Fertilizer (Ton)	601 Rock Channel Protection Type "B" w/ Filter (Cu Yd.)	601 Dumped Rock Fill, Type "C" (Cu Yd)
50	1EC	671+53 to 673+16	L/R			300	0.03		
51	2EC	688+22 to 689+60	L/R			223	0.02		
45	3EC	504+17 to 504+44	Lt.	9					
45	4EC	504+72 to 504+99	Rt	9					
45	5EC	505+55 to 505+85	Lt	10					
45	6EC	506+12 to 506+36	Rt	8					
50	7EC	666+83 to 667+10	Lt	9					
50	8EC	667+11 to 667+38	Rt	9					
50	9EC	667+55 to 667+89	Lt.	12					
50	10EC	667+50 to 668+24	Rt	12					
42	11EC	558+40 to 558+50	Lt.		7				
42	12EC	560+50 to 560+65	Lt.		4			4	
28	13EC	352+14 to 352+40	Lt	29					19
Totals to General Summary				107	11	523	0.05	4	19

DRAINAGE

Sheet No	Reference No	Station to Station	Side	604 Catch Basin Adj. to Grade (Each)	604 Catch Basin Reconstructed to Grade (Each)	604 Catch Basin No 6 (Each)	603 36" Conduit Type "B"	603 15" Conduit Type B (Lin Ft)	602 Concrete Masonry (Cu Yd)
29	1D	360+00	Rt	1					
34	2D	430+00	℄		1				1
36	3D	461+00	Lt.	1					
36	4D	463+73	Rt	1					
42	5D	558+00	℄			1			
42	6D	558+00	Lt					84	
42	7D	558+00	Rt						1
42	8D	603+84	Lt.	1					
42	9D	558+50 to 560+50	Lt				200		2
Totals to General Summary				4	1	1	200	84	4

SUB - SUMMARY

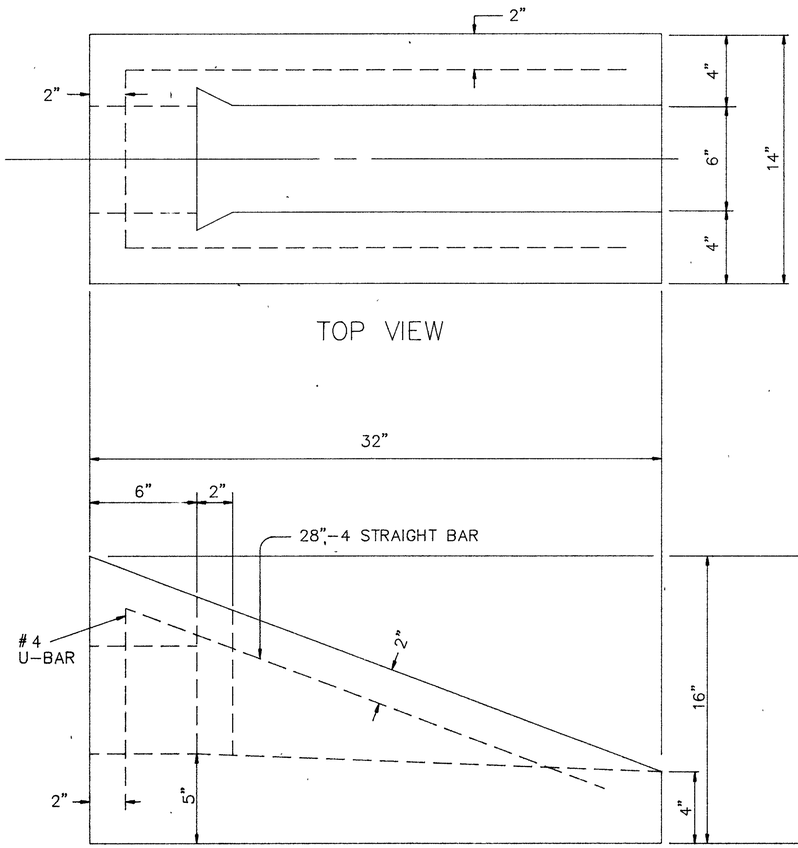
FHWA REGION	STATE	PROJECT	
5	OHIO		

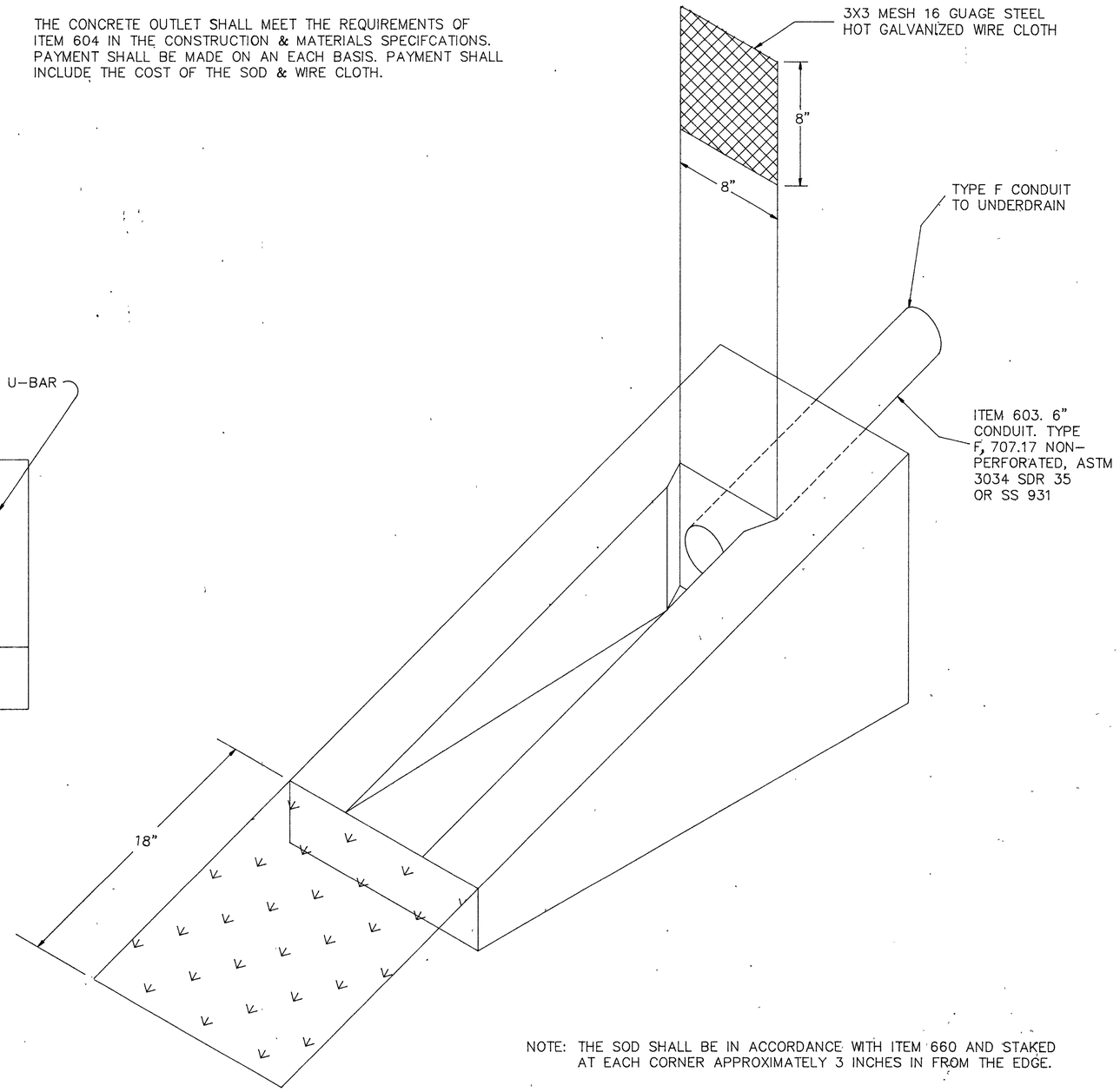
79A
219

MONTGOMERY COUNTY
MOT– 70 –6.49/11.02

ITEM SPECIAL – PRECAST REINFORCED CONCRETE OUTLET

THE CONCRETE OUTLET SHALL MEET THE REQUIREMENTS OF ITEM 604 IN THE CONSTRUCTION & MATERIALS SPECIFCATIONS. PAYMENT SHALL BE MADE ON AN EACH BASIS. PAYMENT SHALL INCLUDE THE COST OF THE SOD & WIRE CLOTH.





ITEM SPECIAL – PRECAST REINFORCED CONCRETE OUTLET

A PRECAST REINFORCED CONCRETE OUTLET SHALL BE USED AT THE OUTLET END OF ALL ITEM 605 PIPE UNDERDRAINS IN LIEU OF USING AN EROSION CONTROL PAD AND ANIMAL GUARD. THIS APPLIES TO ALL UNDERDRAINS THAT OUTLET THROUGH THE EMBANKMENT SLOPE.

NOTE: THE SOD SHALL BE IN ACCORDANCE WITH ITEM 660 AND STAKED AT EACH CORNER APPROXIMATELY 3 INCHES IN FROM THE EDGE.

A:MOT70DT1 19900719

PRECAST REINFORCED CONCRETE OUTLET DETAILS

MOT-70-6.53/11.02

Begin Work
Sta. 49+93

Sta 51+16.59 Kimmel Rd =
Sta 371+75.49 I.R 70

Sta 48+97.23
Meet Existing

Eastbound

Westbound

See Sheet № 30

Construction Limits

L/A

Sta 53+35.95
Meet Existing

R/W

Pond

20' Rad.

Drive Openings Saw Cut and Meet Existing Pavement

Overhead Electric

End Work
Sta 53+40

℄ KIMMEL RD.

Construction Limits

L/A

B.M., Kimmel Road, Chiseled Sq.
N.E. Cor., Sta. 52+34.50 12'±, Rt
N.E. Abut. on BT Deck, El 975.00
Bridge № MOT-70-0108

NOTE: See Transition Detail "B"
Sheet № 20.

SEE GUARDRAIL SUBSUMMARY
ON SH. 111-112.

MOT-70-0108 Bridge Limits
For Bridge Drawings See Sheet 162-164

100'

100'

Meet Existing
Sta. 48+97.23

Sta 49+97.23

℄ 112.70

Sta 52+35.95

Meet Existing
Sta. 53+35.95

25'

25'

Original ℄ Profile

975
970
965
960
955

44 45 46 47

MOT-70-6.53/11.02

N

Sta. 49+90.92 Crestway Dr=
Sta 398+96.63 I.R 70

Begin Work
Sta. 47+72

Sta. 47+76.67
Meet Existing

Construction Limits

Overhead
Power Line

397

398

L/A

Sta. 52+05.17
Meet Existing

End Work
Sta 52+10

R/W

43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58

30'

20'
Rad.

15'
Rad.

Saw Cut
and Meet Existing
with 3/4" Butt Joint

R/W

Saw Cut
and Meet Existing
with 3/4" Butt Joint

Eastbound

Westbound

Construction Limits

Southway Road

L/A

Construction Limits

400

401

Vinewood Ct.

Delray Court

B M Crestway Drive Chiseled Sq. N.E. Cor,
Sta 51+04.00, 12' ± Rt
N.E Abutment Wall on B.T. Deck
Bridge Nº MOT-70-0750, Elev. 979.27

Meet Existing Pavt. with 3/4" Butt Joint
Sta. 47+76.67

100'

MOT-70-0750 Bridge Limits
For Bridge Drawing See Sheet 169-171

100'

25'

Sta. 48+76.67

P.V.I.
Sta. 49+65
Elev. 980.68
I.R. 70

Sta. 51+05.17

25'

Sta. 52+05.17
Meet Existing Pavt.
with 3/4" Butt Joint

980
975
970
965
960

Eastbound

Westbound

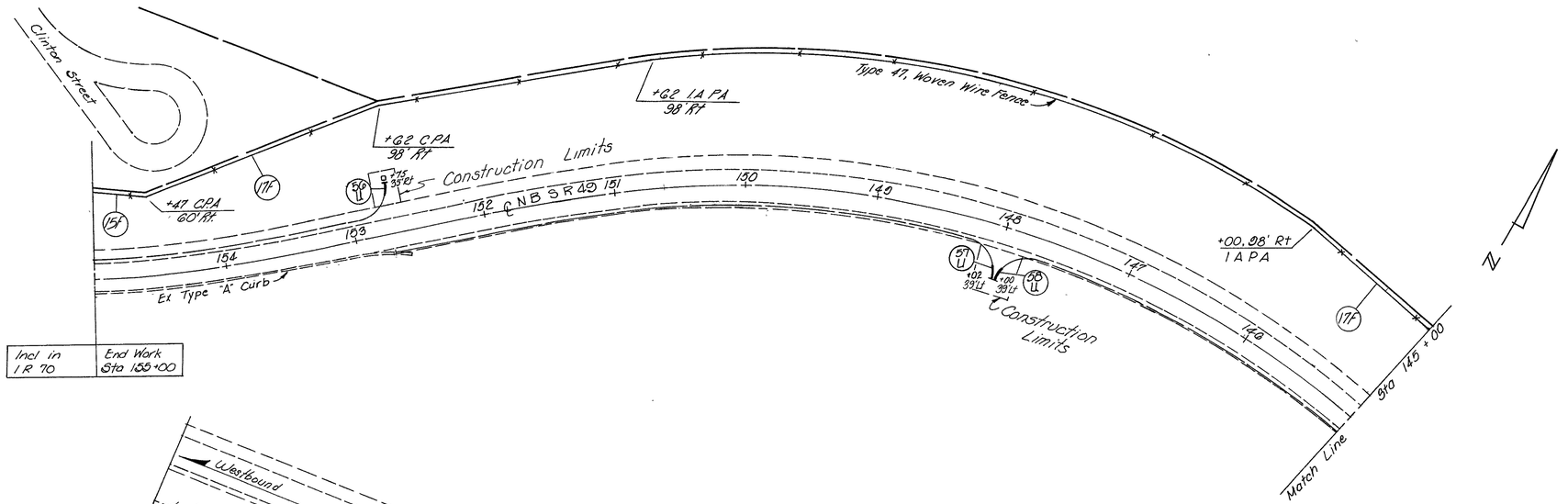
Ex. 30"
Storm

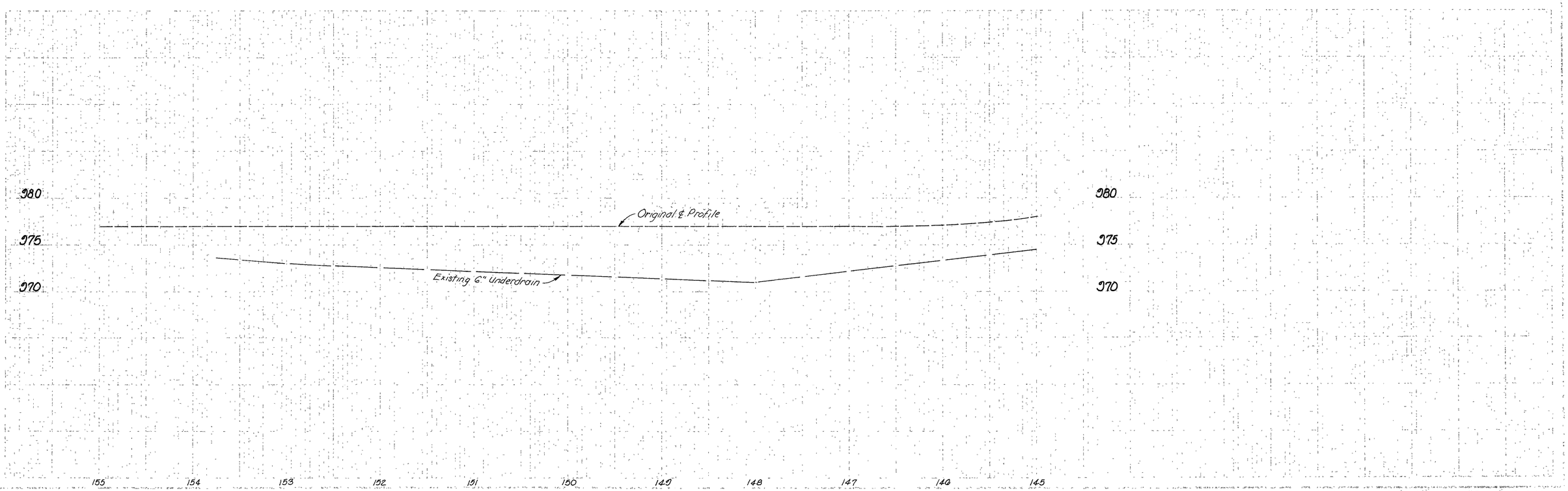
NOTE: FOR APPROACH SLAB DETAILS
SEE SH. 114.

FOR GUARDRAIL SUBSUMMARY
SEE SH. 111-112.

STA 43+00 TO STA 58+00 CRESTLAW DRIVE

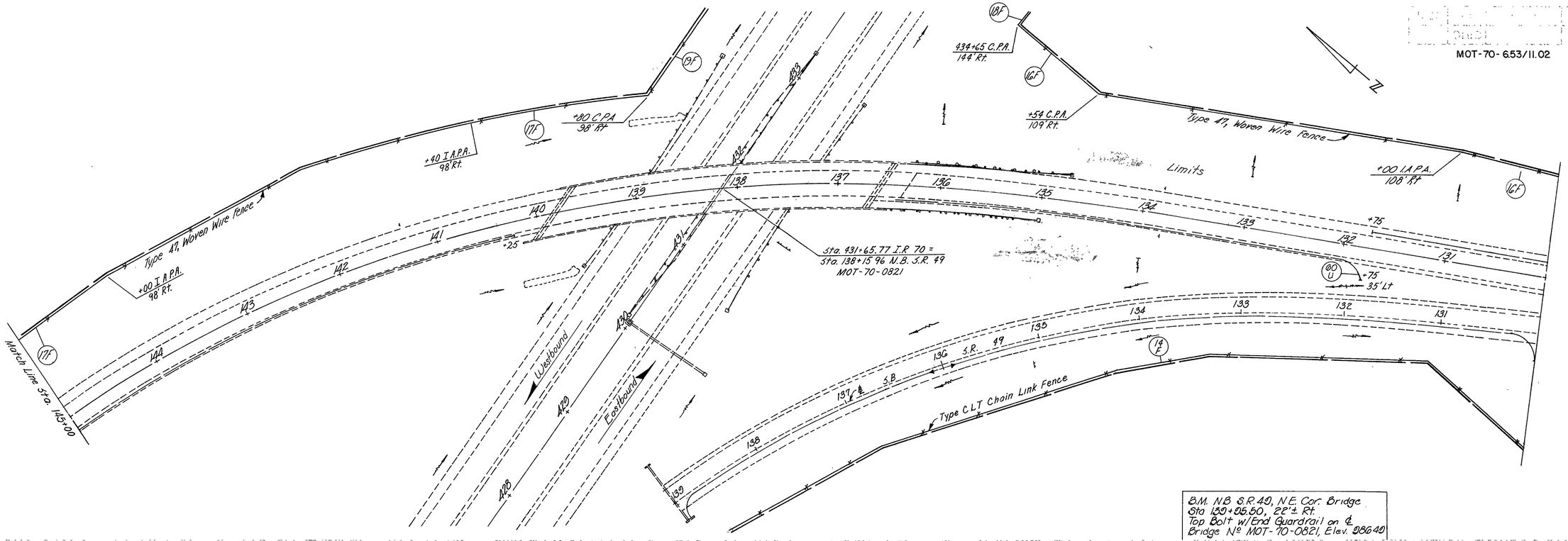
MOT – 70 – 6.53/11.02

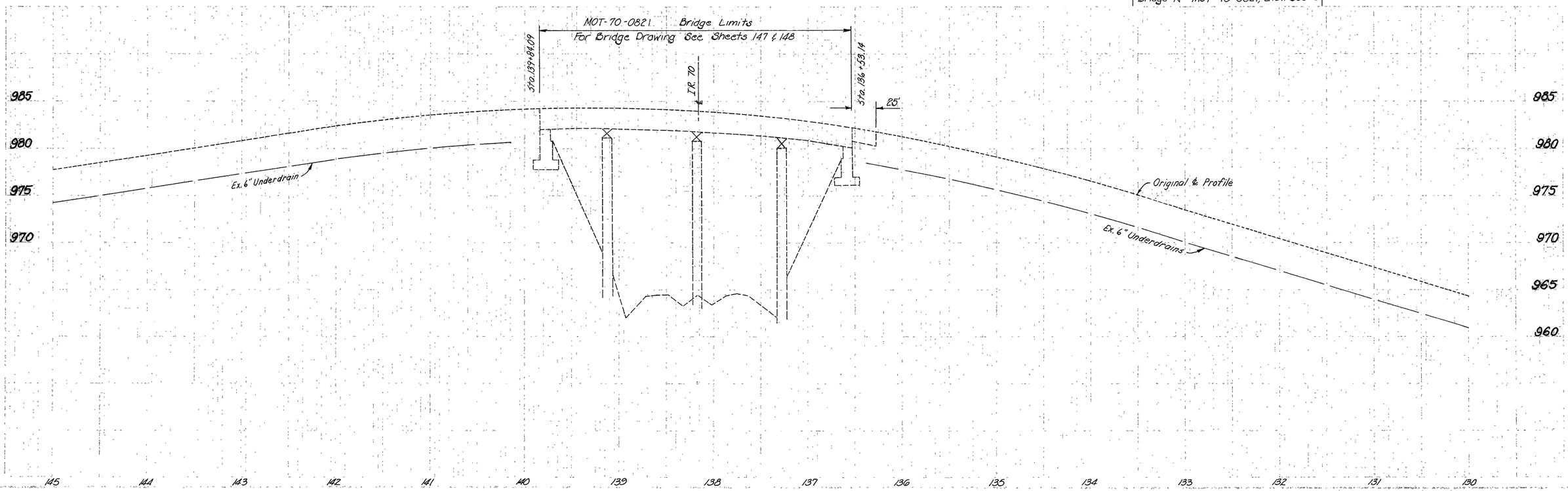




STA 145+00 TO STA 155+00 N B SR 42

MOT-70-6.53/11.02





STA. 140+00 TO STA. 145+00 N.B. S.R. 49

MOT-70-6.53/11.02

Sta. 431+65.71, I.R. 70 =
Sta 138+15.96 N.B. S.R. 49
Mot-70-0821

Westbound

Eastbound

Construction Limits

+00 I.A.P.A.
108' Rt

Begin Work
Sta 127+58 N.B.

Type 47 Woven Wire Fence

+63 E.P.A.
68' Rt

+94 C.P.A.
49' Lt.

+40 C.P.A.
41' Lt

Type C.L.T. Chain Link Fence

+86 C.P.A.
53' Lt.

+18, C.P.A.
39' Lt

Begin Work
Sta. 120+35.35

+00
118 Lt

+68 S.B. S.R. 49
53' Lt., C.P.A.

Incl. in
I.R. 70

End Work
Sta 130+00 S.B.

N.B. S.R. 49

SOUTHBOUND S.R. 49

Original ℄ Profile

Existing 6" Underdrain

970
965
960
955

130 138 137 136 135 134 133 132 131 130

NORTHBOUND S.R. 49

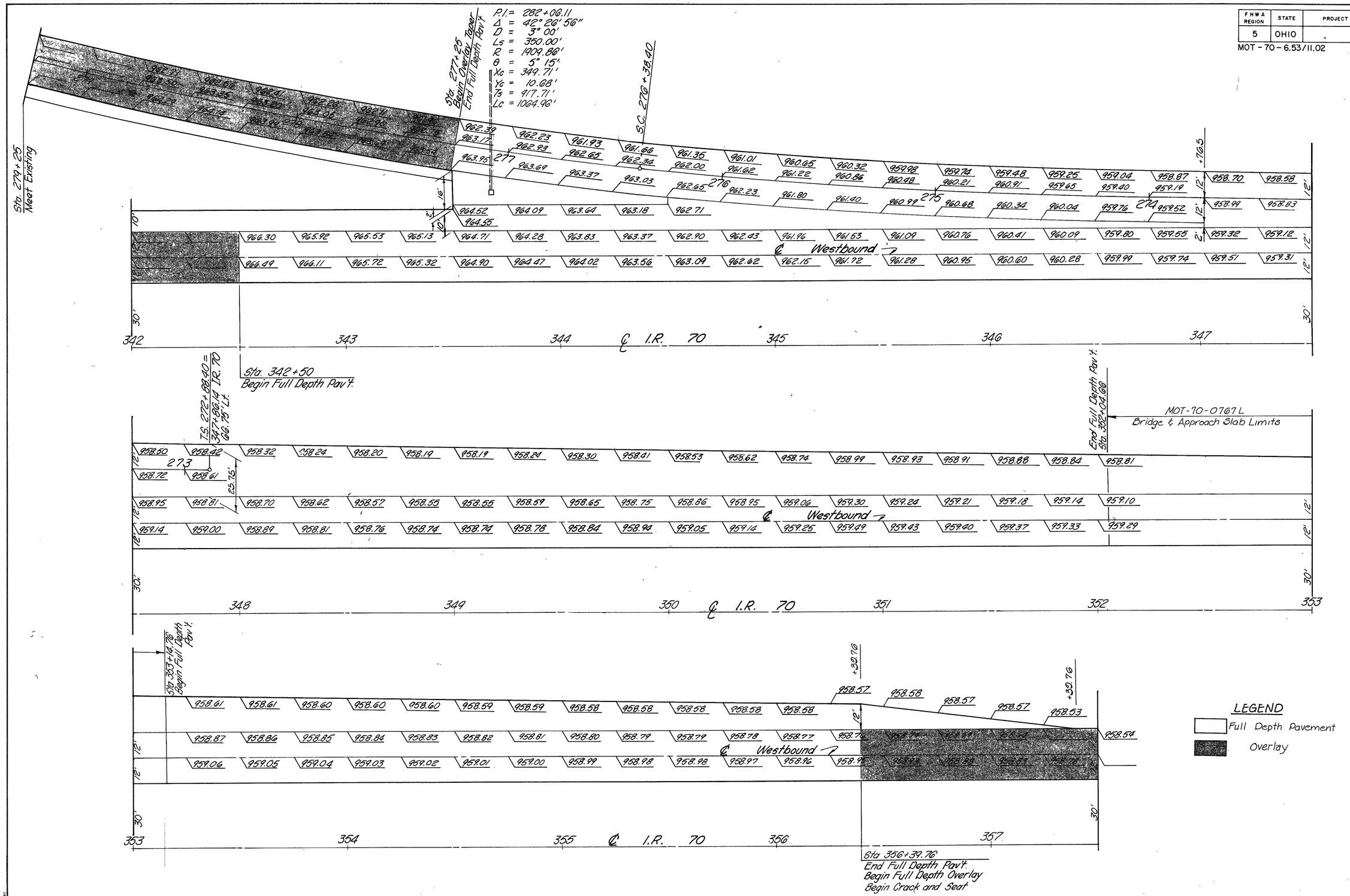
130 129 128 127 126 125

Sta 123+00 TO Sta 130+00 N.B. S.R. 49 & STA 123+00 TO STA 130+00 S.B. S.R. 49

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT - 70 - 6.53/11.02

85
219



MEDIA RESOURCES CORP

PAVEMENT DETAILS DECELERATION LANE N.B. S.R. 49

MOT. 7 0 - 6. 53/11.02

Begin Work
Sta. 48+85

End Work
Sta. 62+85

N

Blacktop Drive

Sta. 51+50, 50' Lt.
Meet Existing

Sta. 53+50 Hoke Rd. =
Sta. 1+92.32 Ramp "A"

Sta. 57+80 Hoke Rd. =
Sta. 11+92.32 Ramp "B"

15' R.

Type 'T' Anchor

Construction Limits

40' Rad.

20' Rad.

24' Rad.

Critical
Vertical
Point

Sta 452+00 I.E. 70
Sta 55+71.89 Hoke Rd.
MOT-70-0859

Eastbound

Westbound

See Sheet No 87

See Sheet No 85

NOTE : See Transition Details "C" and "D"
Sheet No. 20
For Approach Slab Details and Quantities,
See Sheet No 114
FOR GUARDRAIL SUBSUMMARY SEE
SH. 111-112.

B.M, Hoke Rd., Chiseled Square N.E Corner,
Sta 56+84, 44' Rt.
Abutment Wall, N.E. Corner Bridge
Bridge No MOT-70-0850, Elev 966.06

LEGEND

see detail E on Sht. 109.

959.33 959.82 962.47 964.61 966.37 967.75 968.39 968.22 966.63 965.27 963.24 960.87 959.08

619' Taper
@ 1" Per 25'

MOT-70-0850 Bridge Limits
For Bridge Drawings See Sheets 172-174

504' Taper
@ 1" Per 25'

970
965
960
955
950
945

Sta. 49+41.90
Meet Existing
3/4" Butt Joint

25' Approach Slab

Sta. 54+57.64

Sta. 56+56.14

25' Approach Slab

Proposed Grade

Proposed Grade

Existing ℄ Profile

Exist. Approach Slab (Typ.)

Min. Ex. Clearance = 16.21'

Min. Proposed Clearance = 16.29'

℄ I.E. 70

Sta. 61+90.14
Meet Existing
3/4" Butt Joint

Excavation	0	Cu. Yds
Embankment	1525	Cu Yds
Seeding & Mulching	3397	Sq. Yds.

Totals carried to Sheet No 12

957.14 959.78 962.08 963.89 965.32 966.38 968.00 968.34 966.34 965.73 964.40 962.70 960.88 959.03 957.82 957.22

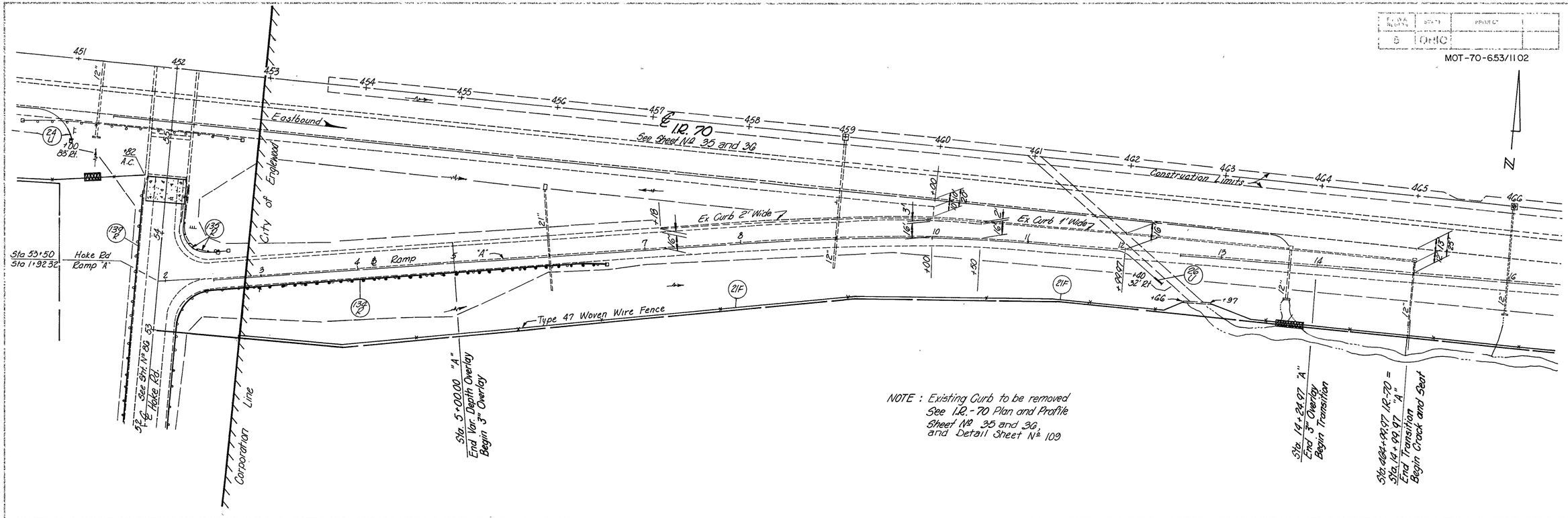
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64

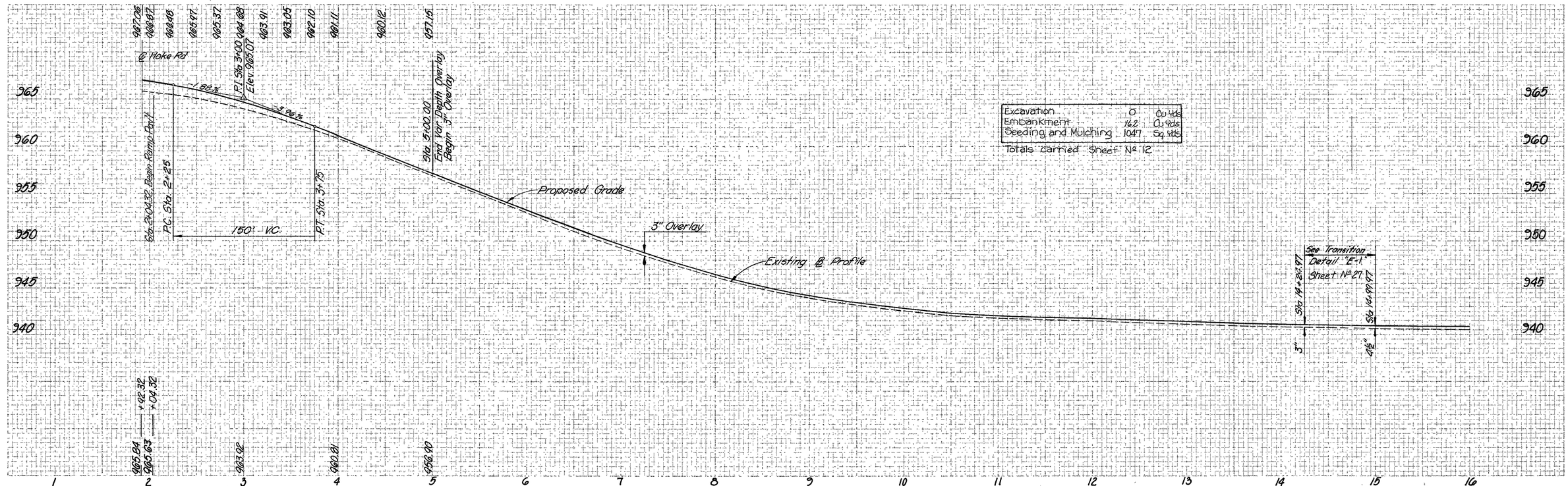
STA 49+00 TO STA 64+00 HOKE ROAD

FED. AID PROJ. NO.	STATE	PROJECT
S	OHIO	

MOT-70-6.53/11.02

87
219





HOKE ROAD RAMP "A"


Sta 57+60 Hoke Rd = Sta 11+92.32 Ramp "B"
Sta 16+00 "B" End Var. Depth Overlay Begin 3" Overlay
Sta. 461+36.00 I.R. 70 = Sta. 21+35.00 "B" End Transition Begin Breaking & Seating
Sta 464+24.26
Type 47, Woven Wire Fence
Construction Limits
℄ Ramp "B"
Englewood City Line of Corporation
Westbound
See Sheet Nº 80
Proposed Grade
Existing ℄ Profile
200' V.C.
150' V.C.
P.C. Sta. 12+25
P.T. Sta. 13+75
P.I. Sta. 15+00 Elev. 958.78
PC Sta 14+00
P.T. Sta. 16+00 End Var. Depth Overlay Begin 3" Overlay
Sta 12+04.32 Begin Ramp Profil.
Sta 11+92.32 Ramp "B"
℄ Hoke Rd.
Sta 20+60 End 3" Overlay
Sta 21+34
See Transition Detail E-1 Sheet Nº 27
-1.56%
-3.46%
-2.90%

Excavation	0	Cu. Yds.
Embankment	688	Cu. Yds.
Seeding and Mulching	1202	Sq. Yds.

Totals carried to Sheet Nº 12

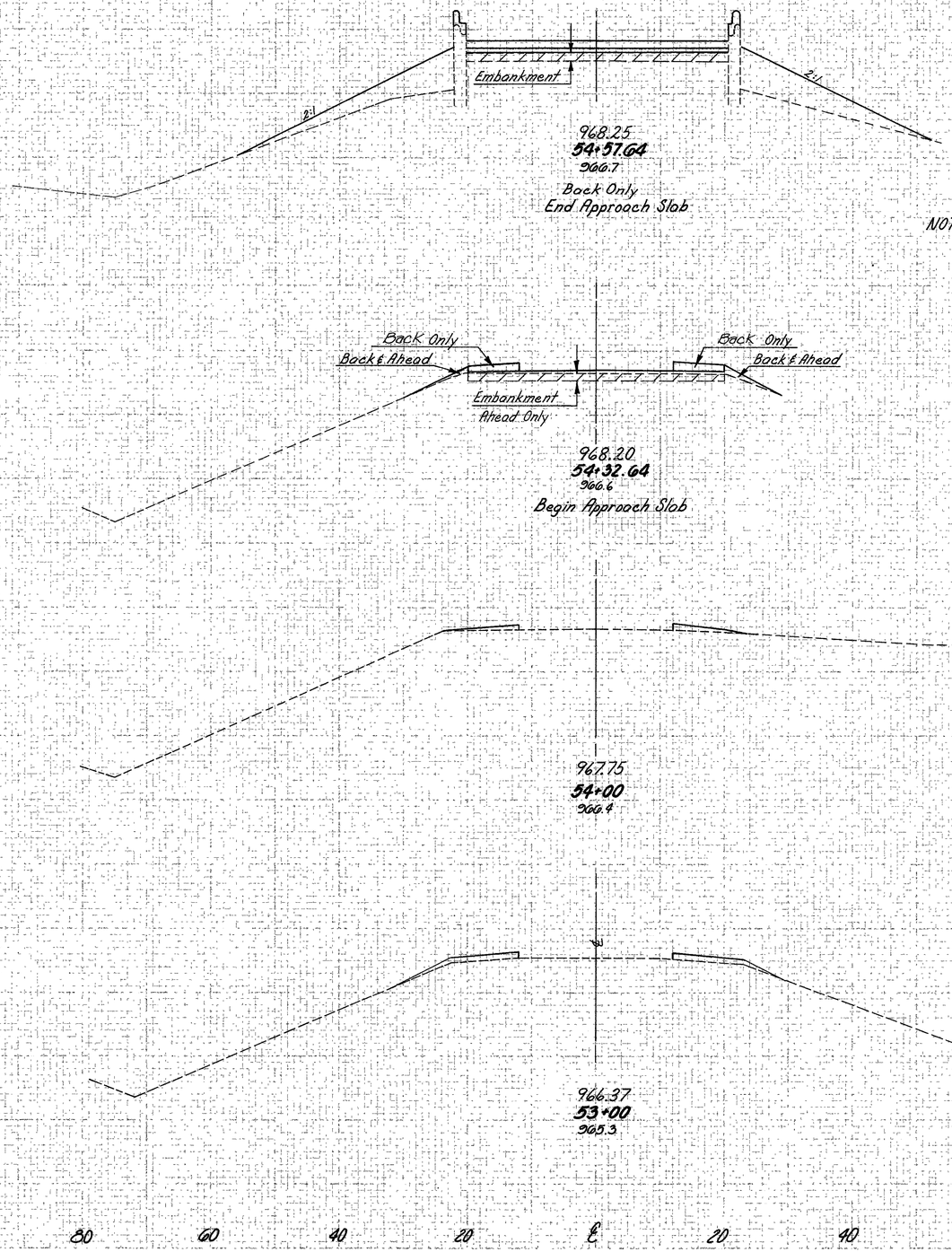
HOKE ROAD RAMP "B"

STA. 49+00 TO STA. 52+00 HOKE ROAD X-SECTIONS

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By J.L.K. Date 3/88

5 OHIO
MOT-70-6.53/11.02

20
219



NOTE:
See Approach Slab Details & Table
Sheet No. 114

	END AREA	VOLUME
960		
	0	
950		
		0 140
Ahead	0	71
54+32.64		
Back	0	32
960		
950		0 27
960		
	0	12
950		
		0 57
960		
	0	12
950		

Excavation 0 Cu.Yds.
Embankment 1525 Cu.Yds.
Seeding & Mulching 3397 Sq.Yds.
Totals Carried To Sheet No. 86

STA. 53+00 TO STA. 54.64 HOKE ROAD X-SECTIONS

Estimated Quantities
Calc By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

5

MOT-70-6.53/11.02

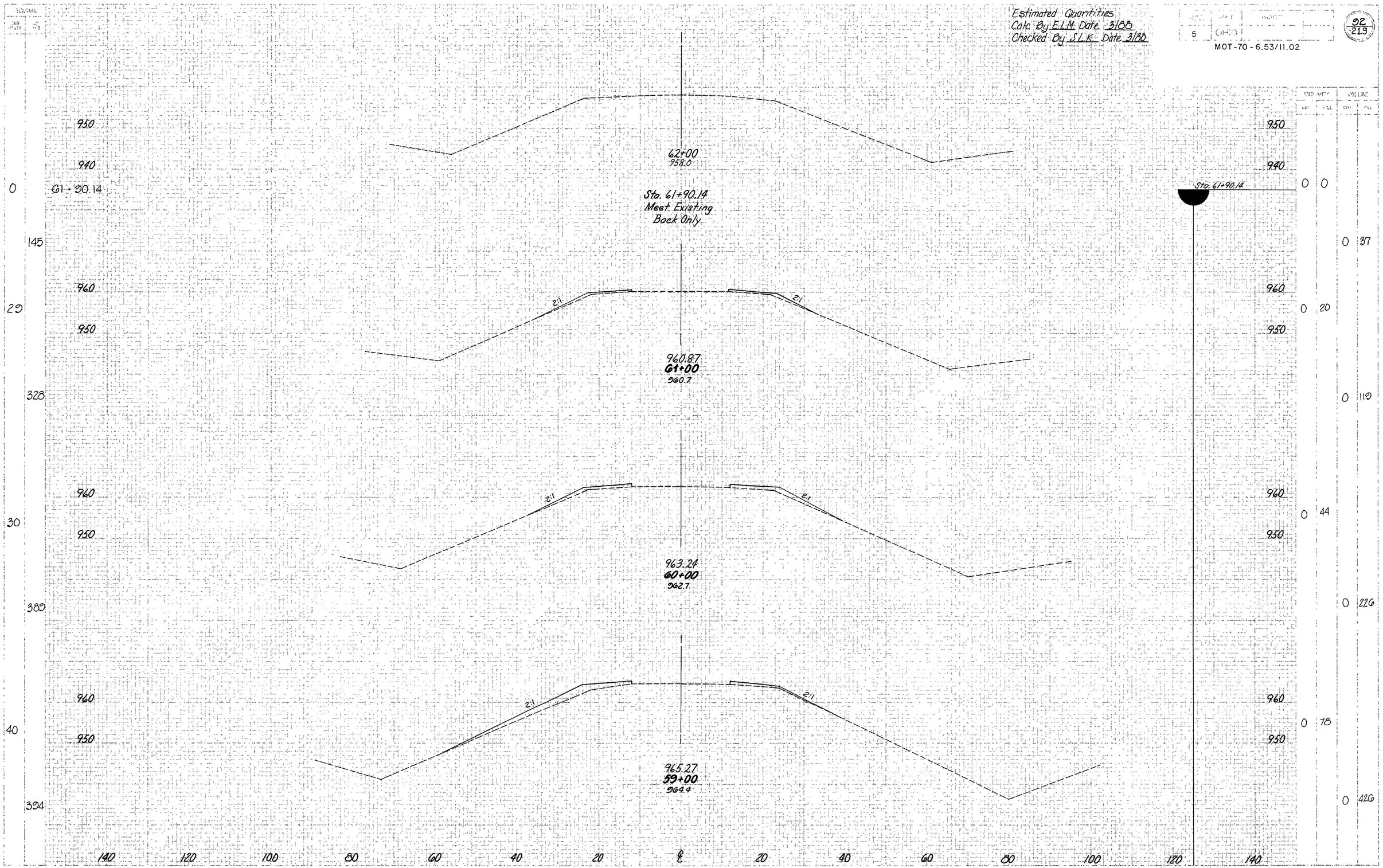
STA 56+86.14 TO STA 58+00 HOKE ROAD X-SECTIONS

Estimated Quantities
Calc By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

5

MOT-70 - 6.53/11.02

22
219



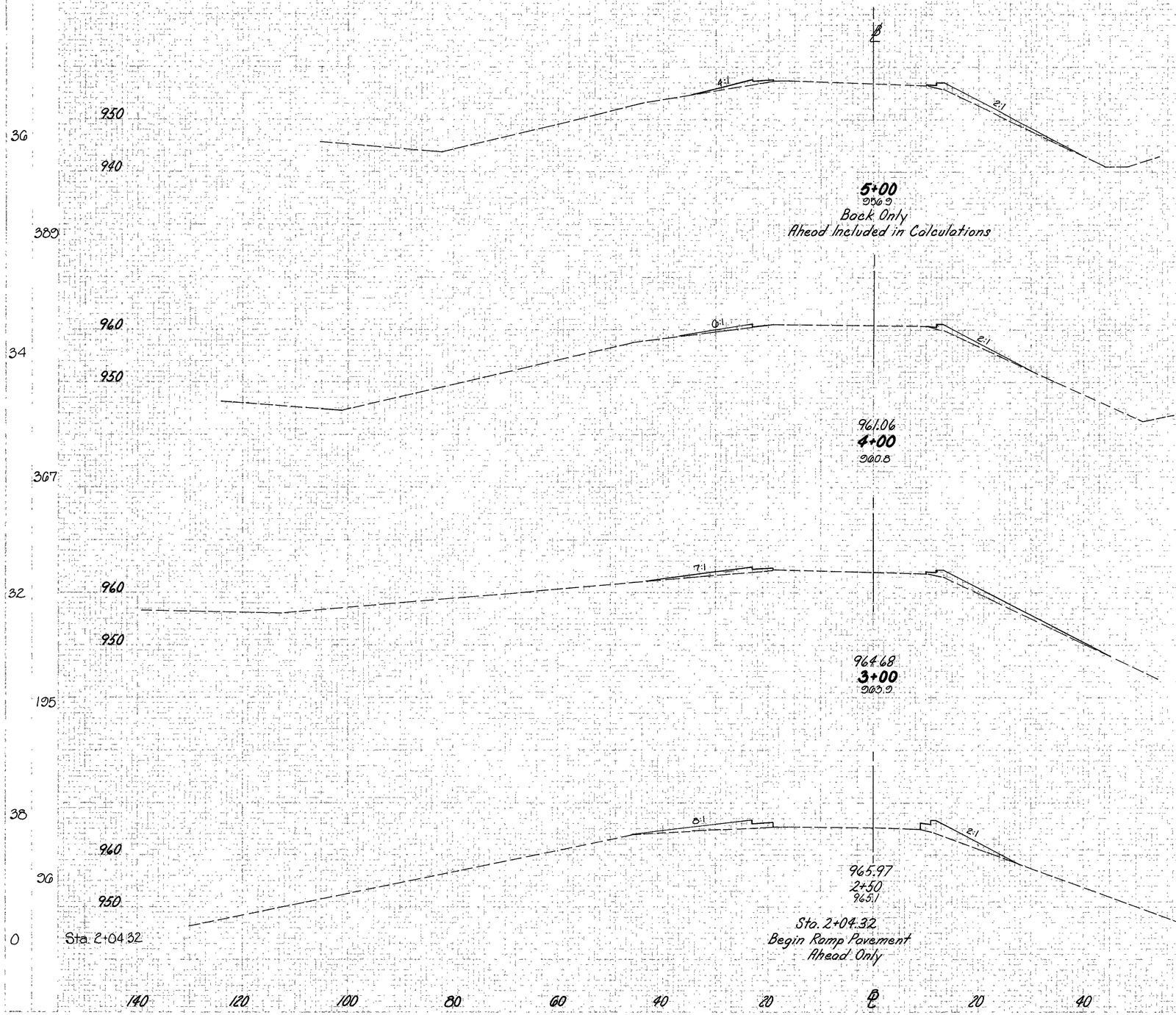
STA. 59+00 TO STA. 62+00 HOKE ROAD X-SECTIONS

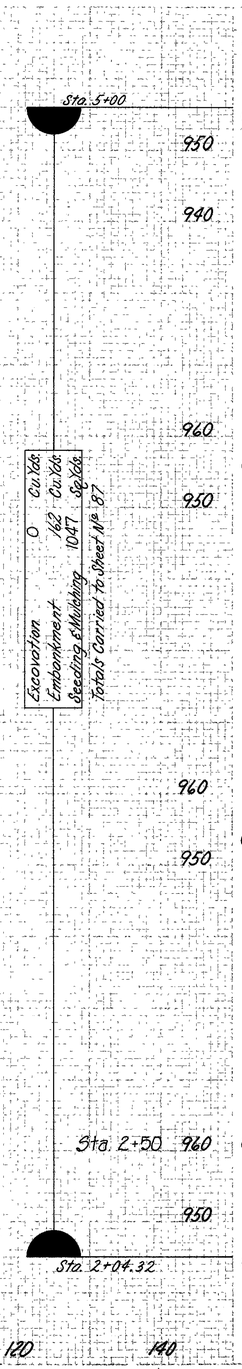
Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

5 0-110

MOT 70-6.53/11.02

23
219





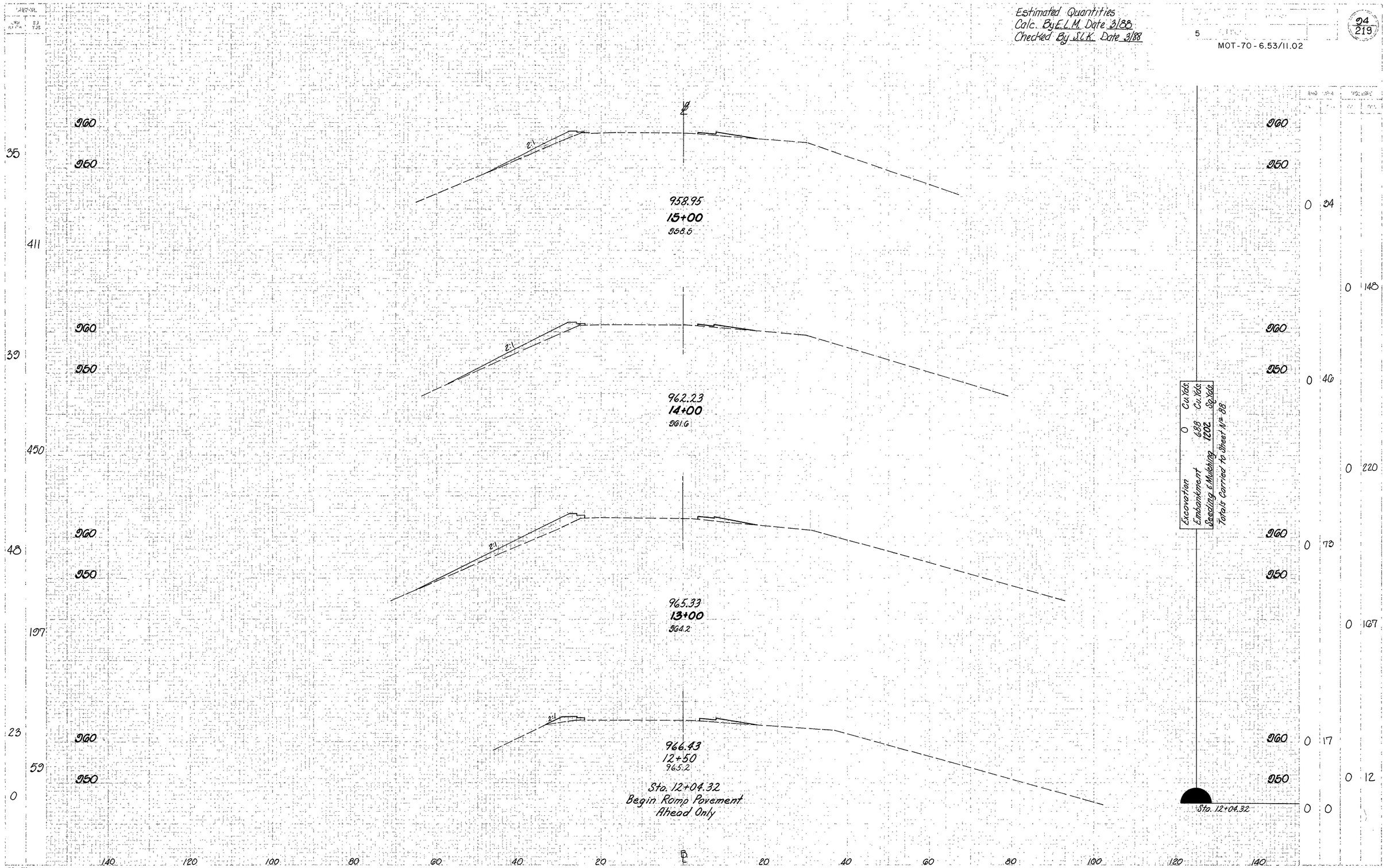
STA 2+50 TO 5+00 HOKE ROAD RAMP 'A' X-SECTIONS

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By J.L.K. Date 3/88

5

MOT-70-6.53/11.02

24
219



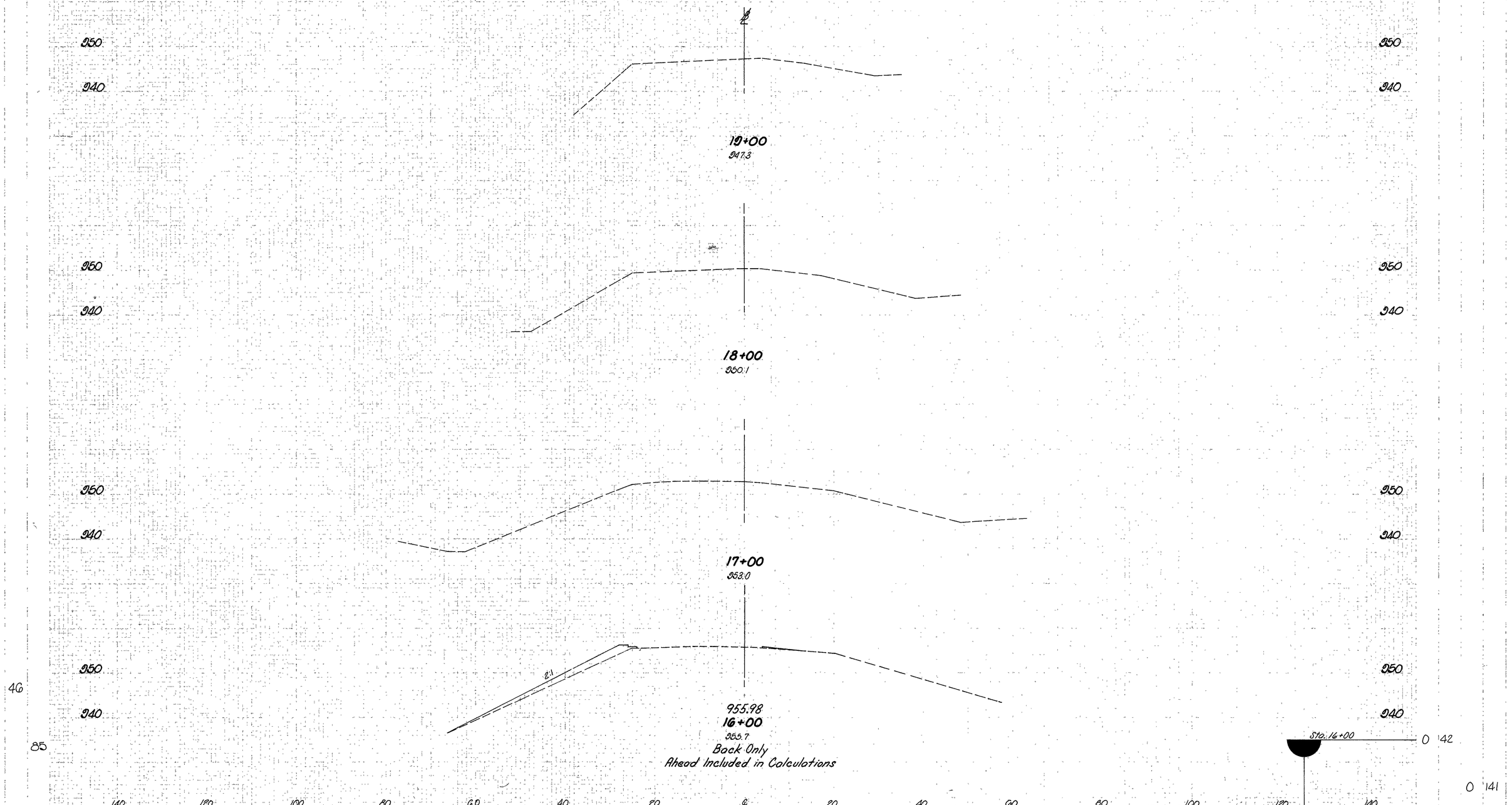
STA. 12+50 TO STA. 15+00 HOKE ROAD RAMP 'B' X-SECTIONS

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.I.K. Date 3/88

5

MOT-70 - 6.53/11.02

25
213



STA. 16+00 TO 19+00 HOKE ROAD RAMP 'B' X-SECTIONS

MOT. 70-6.53/11.02

BEGIN WORK
Sta. 53+00.00

End Work
Sta 68+00.00

Sta. 53+97.90
Meet Existing
w/ ¾" Butt Joint

Sta. 65+80.40
Meet Existing
w/ ¾" Butt Joint

BLACKTOP

Sta. 505+89.26 T.R. 70 =
Sta. 59+89.15 Union Rd.
MOT-70-0962

504

505

507

Eastbound

Westbound

Construction Limits

Sawcut and meet existing @ Drive

Critical Vertical Point

Overhead Electric

Sta. G4+88.00, 47' Lt.
Meet Existing

Sta. G8+17.00, 43' Lt.
Meet Existing

Sta. G4+88.00, 47' Rt.
Meet Existing

Sta. G8+53.00, 49' Rt.
Meet Existing

30' Blacktop Drive

25' Blacktop Drive

18' Blacktop Drive

9' Gravel Dr. (Blacktop Apron)

+33

+17

+86

+53

143 R

141 R

142 R

144 R

17 P

16 P

18 P

19 P

25 F

26 F

27 F

28 F

53 54 55 56 57 58 59 60 61 62 63 64 65 66 67

LEGEND

See Detail "E" on Sheet 109

NOTE: See Transition Details "C" and "D" Sheet No 20
FOR APPROACH SLAB DETAILS SEE SH. 114.
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.

B.M., Union Road, Chiseled Square N.E. Cor., Sta 60+96, 18' Rt
Bridge No MOT-70-0062, El 981.27

969.43 969.45 971.03 973.96 977.69 980.55 982.07 982.37 980.43 977.72 974.15 971.55 970.28

Excavation	0	Cu Yds
Embankment	1012	Cu Yds
Seeding & Mulching	4425	Sq Yds

Totals carried to Sheet No 12

483' Taper @ 1" Per 25'

MOT-70-0962 Bridge Limits
For Bridge Drawings See Sheets 175-177

483' Taper @ 1" Per 25'

25' Approach Slab

25' Approach Slab

Sta. 53+80.90

Sta. 60+97.40

Sta. 53+97.90
Meet Existing

Sta. 65+80.40
Meet Existing

T.R. 70

Min Ex. Clearance = 15.15'

Min Proposed Clearance = 16.25'

Existing Centerline Profile

985 980 975 970 965

969.22 969.44 970.68 973.28 976.68 979.20 980.46 +80.90 980.69 981.29 980.76 +97.40 979.16 976.78 973.54 971.27 970.04 970.36 970.19 +76

53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

STA 53+00 TO STA 68+00 UNION ROAD

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT. 70-6.53/11.02

27/219

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By S.L.K. Date 3/88

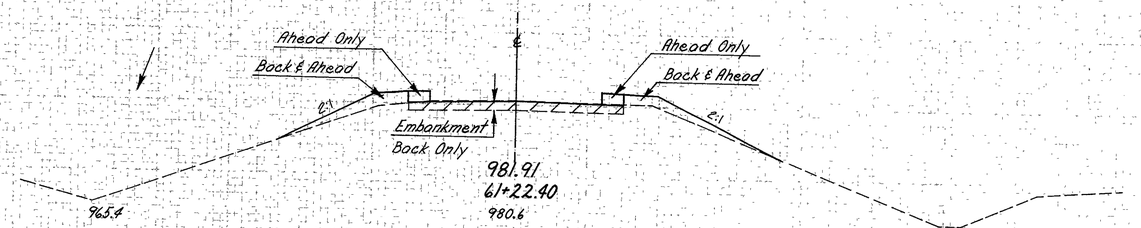
Sta. 53+00 to Sta. 58+00 UNION ROAD X-SECTIONS

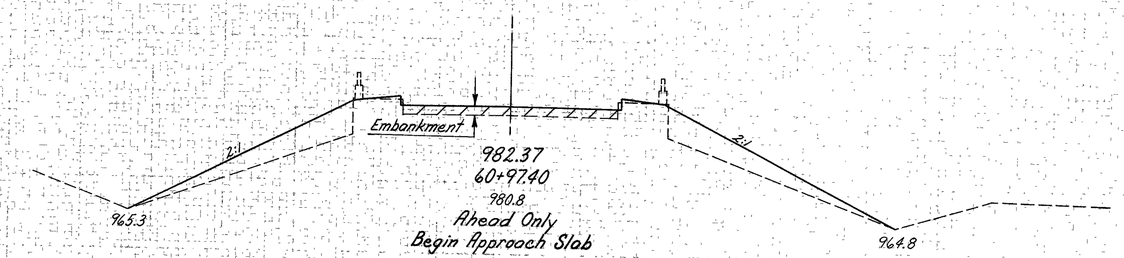
Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By G.A.S. Date 3/88

MOT. 70-6.53/11.02

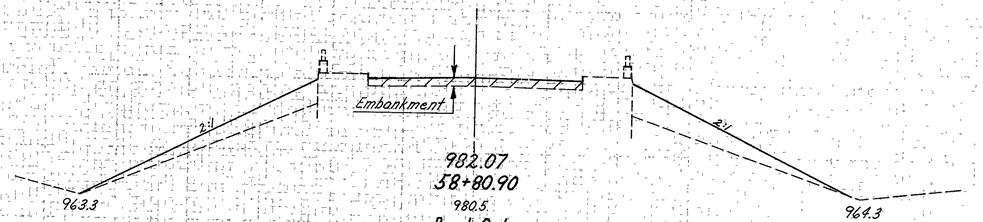
45 Ahead
30 Back
180
93 Ahead
79 Back
142
23 Ahead
31 Back
230
46

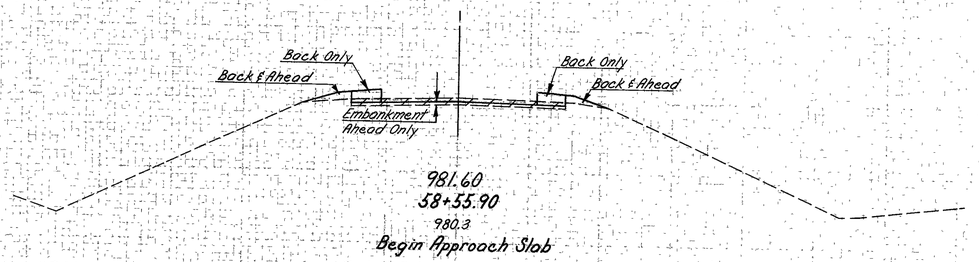
980
970
960





See Bridge Drawings
MOT-70-0962
Sheets 175-177





980
970
960

Ahead 0 32
Back 0 22

Excavation 0 Cu.Yds.
Embankment 10.12 Cu.Yds.
Seeding & Mulching 44.25 Sq.Yds.
Totals Carried to Sheet No 96

0 76

Ahead 1 147

0 64

Ahead 0 9
Back 0 23

0 61

Back 0 129

X hatched areas of existing pavement to be removed under Item 202

100 80 60 40 20 ℄ 20 40 60 80 100

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By GAS Date 3/88

MOT. 70-6.53/11.02

Sta. 62+00 to Sta. 64+00 UNION ROAD X-SECTIONS

Estimated Quantities
Calc By ELM Date 3/88
Checked By GAS Date 3/88

MOT. 70-6.53/11.02

65+80.40
970.36
Meet Existing

10'
Rounding
Meet Existing R/W
10%

970.83
65+53
970.72

4:1
6:1

971.55
65+00
971.27

10'
Rounding
Meet Existing R/W
6%

971.85
64+86 DRIVE RIGHT
971.53

10'
Rounding
Meet Existing R/W
Ex.
4.2%

973.20
64+33 DRIVE LEFT
973.54

Sta. 65+80.40

0 0
0 11
0 6
0 26
0 8

X hatched areas of existing pavement to be removed under item 202

Sta 64+33 to Sta 65+80.40 UNION ROAD X-SECTIONS

MOT-70-6.53/11.02

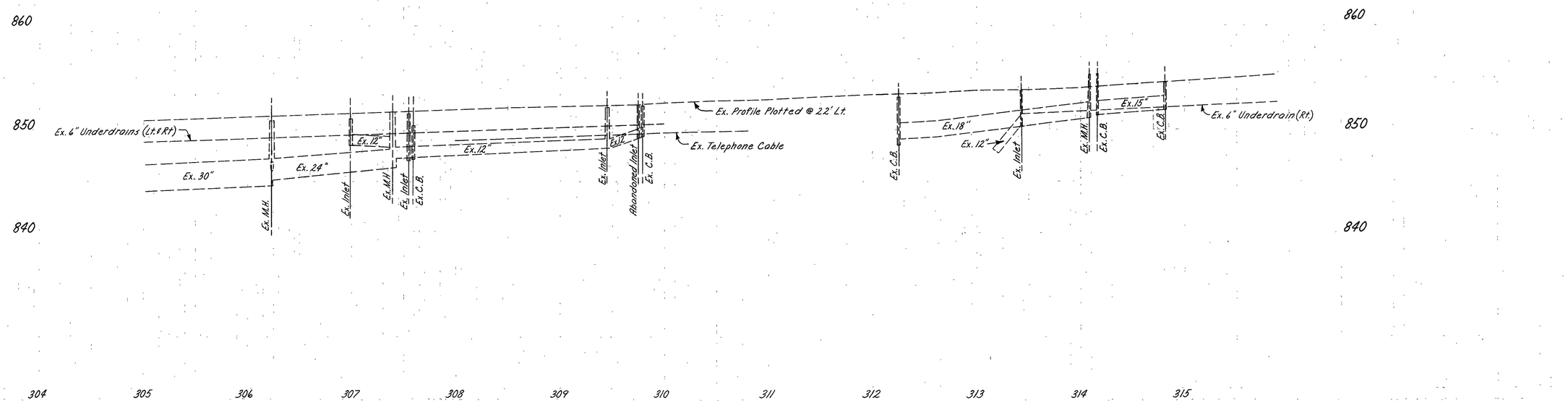
NOTES

1. For additional information Pavement Removal and Replacement, Concrete Barrier Removal and Replacement, see Details "C" and "D", Miscellaneous Details Sheet № 102
2. * Denotes Existing Joint Locations along Existing Concrete Barrier. Contractor shall Saw Cut at Existing Joints and remove existing barrier as required. Barrier shall be replaced to match existing barrier in line and grade As Per Standard Construction Drawing MC-9.
3. Utilities are approximate only and shall be field located prior to any construction in this area.
4. FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.

LEGEND

- 601 Crushed Aggregate Slope Protection
- ○ Existing Piers
- ⊙ Proposed Piers
- 622 Concrete Barrier
- 412 - 3/4" Asphalt Concrete MWS-60
- 446 - 2 1/4" Asphalt Concrete Intermediate Course, TYpe 2, MWS-60
- 301 7 1/2" Bituminous Aggregate Base, MWS-60.

Sta. 309+61.27 S.R. 48 =
Sta. 595+35.08 L.R.=70
Bridge № MOT-70-1130 L/R

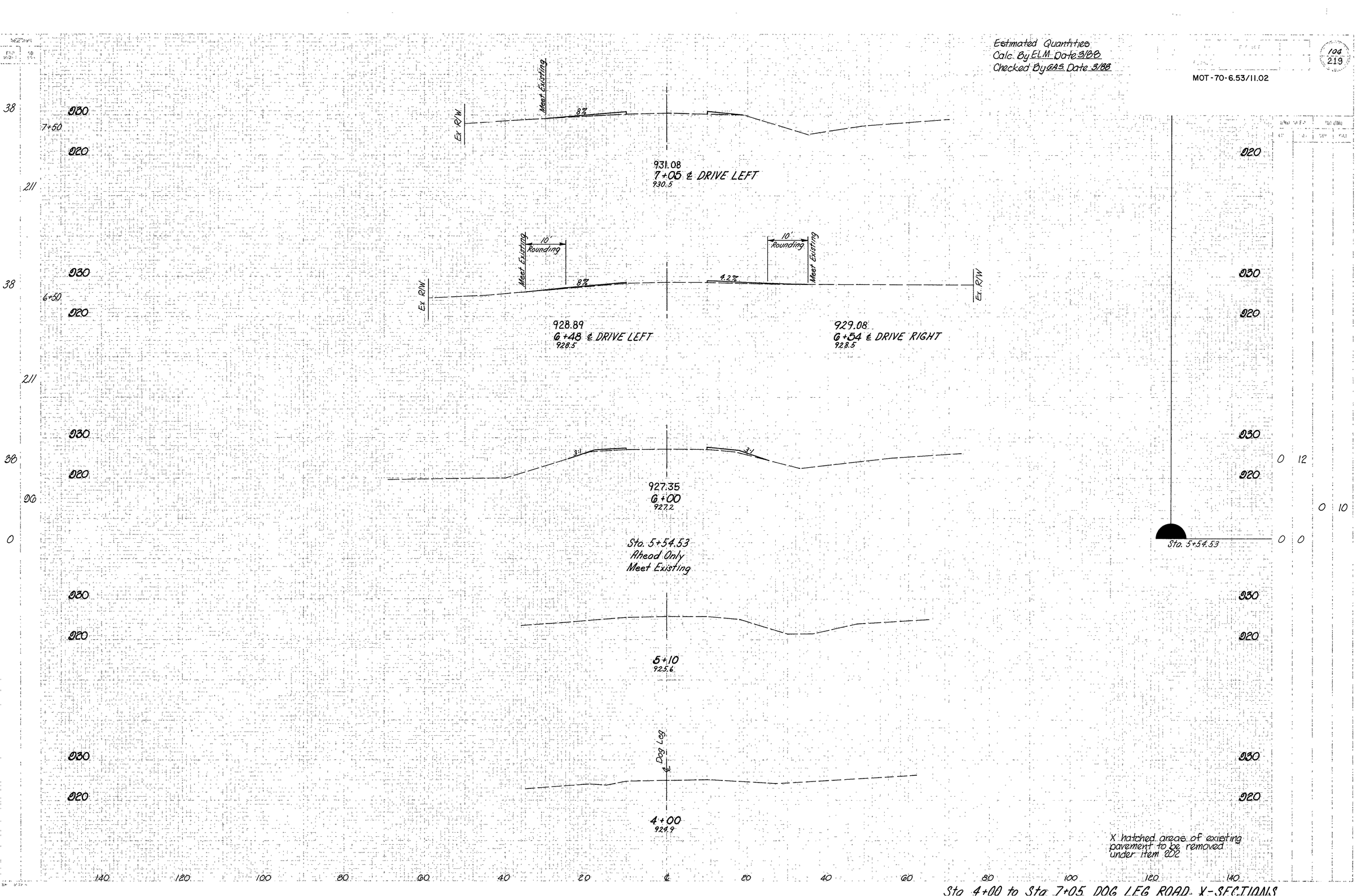


Sta 305+00 TO Sta 314+00 S.R. 48


5 OHIO
108
219
MOT.-70-6.53/11.02
BEGIN WORK
STA 5+50.00
END WORK
Sta 17+42.00
Sta 2+25
Meet Existing
w/ 3/4" Butt Joint
NOTE: For Profile
Kinmont Road
See Insert Below
Kinmont Road
Sta 5+54.53
Meet Existing
w/ 3/4" Butt Joint
Concrete Drive
10' Gravel Dr. with Blacktop Apron
12' Blacktop Drive
Construction Limits
Sta 6+48.00, 35' Lt.
Meet Existing
Sta 7+05.00, 30' Lt.
Meet Existing
DOG LEG ROAD
Sta 6+54.00, 35' Rt.
Meet Existing
10' Blacktop Drive
Sta 9+00 Dog Leg Rd
Sta 0+00 Kinmont Rd
Pavement Planing, Bituminous, Item 254
Critical
Vertical
Point
Sta 694+74.76 I.R. 70=
Sta 11+45.78 Dog Leg Rd
Mot-70-1322
Eastbound
Westbound
Sta. 14+74.00, 35' Lt.
Meet Existing
10' Concrete Drive with Blacktop Apron
Type "T"
Anchor
Sta. 17+06.00, 30' Lt.
Meet Existing
10' Gravel Dr. with Blacktop Apron
Sta 17+37.03
Meet Existing
w/ 3/4" Butt Joint
Gravel
452 6" Plain Portland Cement Concrete
See Detail "E" Sheet 109
FOR GUARDRAIL SUBSUMMARY SEE SH. 111-112.
FOR APPROACH SLAB DETAILS SEE SH. 114.
B M, Dog Leg Road, Chiseled Sq N.E. Cor.,
Sta 12+52, 18' Rt. ~ N.E. Abut., Elev. 946.88
Bridge No MOT-70-1322
INSERT
KINMONT ROAD
100' V.C.
Proposed Grade
Existing Profile
Meet Existing
Begin Work
Excavation 0 Cu. Yds
Embankment 133 Cu. Yds.
Seeding & Mulching 716 Sq. Yds.
Totals Carried to Sheet No 12
MOT-70-1322
For Bridge drawings see sheets 212-214
PVI STA 11+50
ELEV = 953.99
483' Taper @
1" Per 20.6'
25.00' Approach Slab
483' Taper @
1" Per 20.4'
Original ℄ Profile
Proposed Grade
Kinmont Dr.
Sta 9+00
Min. Ex. Clearance
Min. Proposal Clearance
Sta 17+37.03
Meet existing
Excavation 0 Cu. Yds
Embankment 730 Cu. Yds
Seeding & Mulching 3501 Sq. Yds
Totals Carried to Sheet No 12
STA 4+00 TO STA 19+00 DOG LEG ROAD

Estimated Quantities
Calc. By ELM Date 3/88
Checked By GAS Date 3/88

MOT-70-6.53/11.02



Sta 4+00 to Sta 7+05 DOG LEG ROAD X-SECTIONS

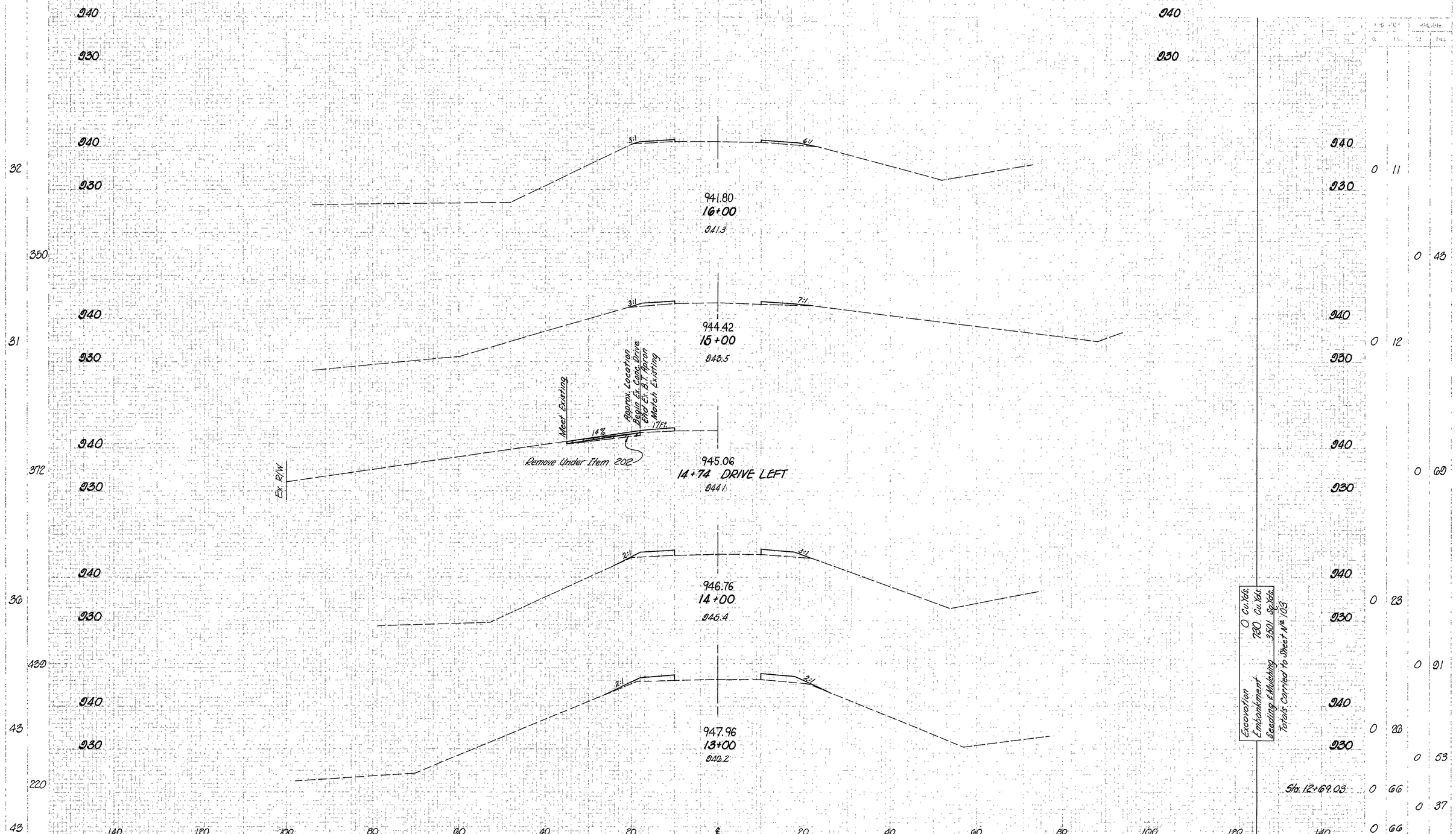

Estimated Quantities
Calc By E.L.M. Date 3/88
Checked By G.A.S. Date 3/88
OHIO
MOT-70-6.53/11.02
105
219
END AREA
VOLUME
CUT
FILL
Embankment
Remove Under Item 202
Sta. 12+54.03 to Sta. 12+69.03
948.35
12+54.03
Ahead Only
946.4
Ahead
940
930
0
66
Remove Under Item 202
Sta. 10+12.53 to Sta. 10+37.53
945.57
10+37.53
Back Only
943.6
Back
108
46
Sta. 10+22.53
56
32
Back Only
Back & Ahead
944.54
10+00
943.1±
21
36
117
8:1
940.68
9+00
939.3
20
80
Dog Leg Rd
3:1
935.84
8+00
934.8
920
19
115
12
X hatched areas of existing
pavement to be removed
under Item 202
43
61
219
44
34
411
40
489
48
239
38
140
120
100
80
60
40
20
℄

Sta. 8+00 to Sta. 12+54.03 DOG LEG ROAD X-SECTIONS

Estimated Quantities
Calc. By E.L.M. Date 3/88
Checked By G.A.S. Date 3/88

106
219

MOT-70-6.53/11.02



STA. 13+00 TO STA. 16+00 DOG LEG ROAD X-SECTIONS

Estimated Quantities
Calc By: E.L.M. Date 3/88
Checked By: GAS Date 3/88

5

MOT-70-6.53/11.02

107
219

950
940
930

18+00
940.2

17+83 DRIVE RIGHT
940.1

Sta. 17+37.03
Meet Existing
Back Only

Begin Ex. Gravel Drive
End Ex. B.T. Drive

Meet Existing

6.7%

1/ft

940.16

17+06 DRIVE LEFT
940.0

Sta. 17+37.03

X hatched areas of existing pavement to be removed under Item 202

STA. 17+06 TO STA. 18+00 DOG LEG RD X-SECTIONS

Estimated Quantities
Calc By ELM Date 3/88
Checked By GAS Date 3/88

MOT-70-6.53/11.02

Meet Existing
Sta. 2+25
Back Only

1"/Ft

½"/Ft

928.50
2+00
928.5

3:1

5:1

936.76
1+00
935.4

0+10
Ahead Only

Sta. 2+25

Sta. 0+10

Excavation	Embankment	Seeding & Mulching
0 Cu.Yds.	139 Cu.Yds.	716 Sq.Yds.

Totals Carried to Sheet No. 103

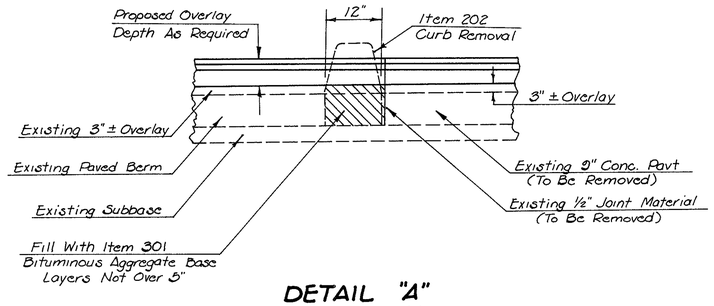
X hatched areas of existing pavement to be removed under Item 202

Sta 0+10 TO Sta 2+25 KINMONT RD X-SECTIONS

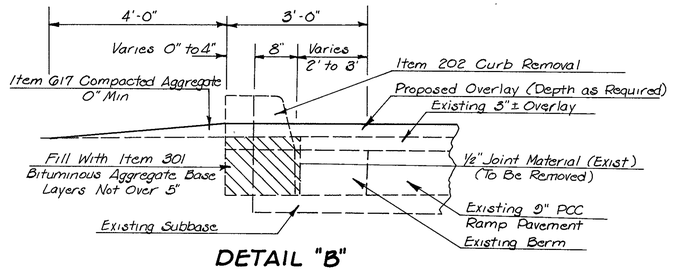
FHWA REGION	STATE	PROJECT	
5	OHIO		

100
219

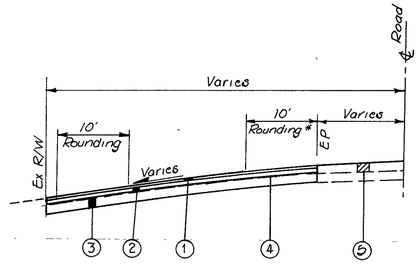
MOT-70-6.53/11.02



DETAIL "A"
CURB REMOVAL
GORE AREA
No Scale



DETAIL "B"
CURB REMOVAL
RAMPS
No Scale

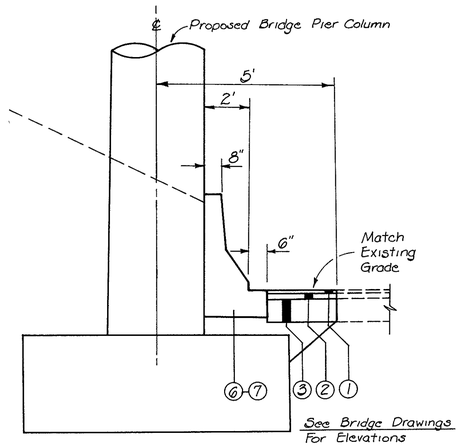


* When Required, See Drive Cross Sections

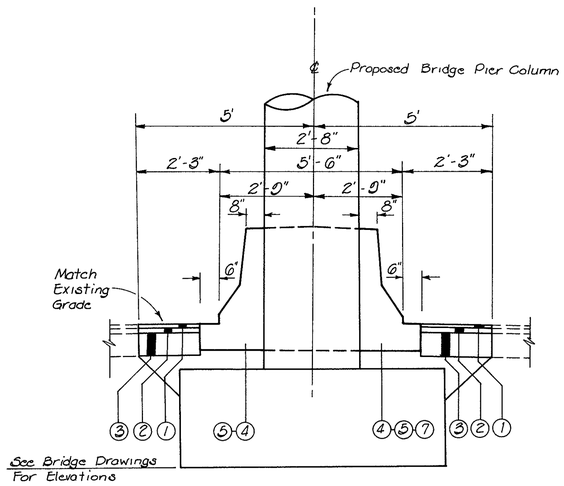
DETAIL "E"
TYPICAL DRIVE OVERLAY
No Scale

LEGEND

① Item 412 ~ 3/4" Asphalt Concrete, MWS-60 (See Proposal Note)
② Item 446 ~ 1¼" Asphalt Concrete Intermediate Course, Type 2, MWS-60 (See Proposal Note)
③ Item 304 ~ 6" Aggregate Base.
④ Item 408 ~ Prime Coat @ 0.4 gallon/Sq. Yd.
⑤ Proposed Crossroad Overlay
See Typical Section, Sheet Nº 9



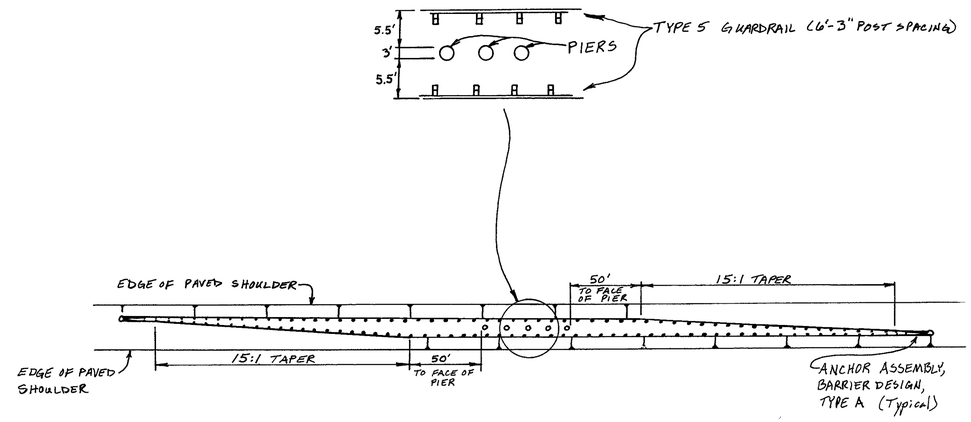
DETAIL "C"
REPAIR SECTION
PROPOSED WEST PIERS
S.R. 48
No Scale



DETAIL "D"
REPAIR SECTION
PROPOSED ℄ PIERS
S.R. 48
No Scale

LEGEND

①	Item 412	3/4"	Asphalt Concrete, MWS-60
②	Item 446	2¼"	Asphalt Concrete Intermediate Course, Type 2, MWS-60
③	Item 301	7½"	Bituminous Aggregate Base, MWS-60
④	Item 622	Concrete Barrier,	Type A (Transition to Pier)
⑤	Item 622	Concrete Barrier,	Type A (Bridge Pier)
⑥	Item 622	Concrete Barrier,	Type D
⑦	Item 202	Existing Concrete Barrier Removed	



GUARDRAIL AT PIERS

MISCELLANEOUS DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

FENCE SUB-SUMMARY

LOCATION	SIDE	STATION TO STATION FROM	STATION TO STATION TO	607 TYPE 47 WOVEN WIRE FENCE PAY QUANTITY	END POST ASSEMBLY	CORNER POST ASSEMBLY	LINE POST ASSEMBLY IN CONCRETE	INTER. ANCHOR POST ASSEMBLY	ABUTMENT CONNECTION	TERMINAL TYPE "A"	TERMINAL TYPE "B"	CROSSING TYPE "2"	CROSSING TYPE "3"	625 GROUND RODS	202 FENCE REMOVED	601 Rock Channel Protection, "C" Type W/Filter
				LIN.FT.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	LIN.FT.	CY
1F	Lt	347+46	352+14	524		1			2						524	
2F	L/R	352+37	353+13	96					4						96	
3F	Rt.	352+68	353+50	152					4			1			152	6.67
4F	Lt	353+65	371+95	1864		1		4	2			2			1864	13.34
5F	Rt	372+30	378+19	659		1		3	2					1	650	
6F	Lt	352+55	371+22	1988		2		5	2					8	1988	
7F	Rt	378+40	388+23	1020		2		2	3		1				1020	
8F	Lt	371+58	377+61	657		2			4					1	657	
9F	Rt	388+38	398+87	1057		2		3	1		1			4	1057	
10F	Lt	378+13	389+65	1308		2		3	1		1				1308	
11F	Rt	399+15	425+00	2607	1	1		5	1			1		2	2607	
13F	Lt	389+77	398+79	908		2		1	1		1	1		1	908	6.67
15F	Lt	399+10	154+47 N.B SR 49	1813		3		3	1					1	1813	
16F	Rt	434+65	N.B SR 49 127+63	800	1	1		1							800	
17F	Rt	431+98	N.B SR 49 154+47	1721		2		4							1721	
18F	Rt	434+65	451+82	1717		1		4	1			1	1		1717	6.67
19F	Lt	431+98	451+77	1986		1		3	1			1			1986	6.67
Totals				20,877	2	24		41	30		4	7	1	18	20,877	40.02
Totals (To General Summary)				20,877										18	20,877	41

LOCATION	SIDE	STATION TO STATION FROM	STATION TO STATION TO	607 TYPE CLT CHAIN LINK FENCE PAY QUANTITY	END POST ASSEMBLY	CORNER POST ASSEMBLY	LINE POST ASSEMBLY IN CONCRETE	INTER. ANCHOR POST ASSEMBLY	ABUTMENT CONNECTION	TERMINAL TYPE "A"	TERMINAL TYPE "B"	CROSSING TYPE "2"	CROSSING TYPE "3"	625 GROUND RODS	202 FENCE REMOVED	601 Rock Channel Protection "C" Type W/Filter
				LIN. FT.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	LIN. FT.	CY
12F	Rt.	425+00	138+68 SB SR 49	402		2									402	
14F	Lt.	SB SR 49 129+63	SB SR 49 138+68	842	1	4									842	
20F	Lt.	452+98	458+90	612	1		1	1			1				612	
21F	Rt.	HOKE Rd. 53+00	462+66	982	1			4			1				982	
22F	Lt.	459+07	473+21	1483		2	1	2			1		2		1483	
23F	Rt.	462+97	472+92	1017		1		2			1	1	2		1017	9.33
24F	Lt.	473+50	505+65	3248		2		5	1				2	7	3245	
25F	Rt	473+24	505+68	3268		2		5	1			1	1	1	3268	
26F	Lt.	506+10	559+00	5304		2		7	2			1	1	26	5304	12.00
27F	Rt.	506+09	558+85	5298		2		8	2				1	2	5298	
28F	Lt.	559+45	579+62	1984		2		2	1	1					1984	
29F	Rt.	559+32	585+99	2720		1		7	1			1		1	2720	9.33
30F	Lt.	579+72	585+00	532		1		1							532	
Totals				27,692	3	21	2	44	8	1	4	4	5	37	27,692	30.66
Totals (To General Summary)				27,692										37	27,692	31

Computed By: S.E.O.

Date: 01-04-88

Checked By: S.L.K.

Date: 01-06-88

NOTE: THE CONTRACTOR SHALL REFERENCE THE EXISTING FENCE LINE SO AS TO PERMIT INSTALLATION OF NEW FENCE IN THE SAME APPROXIMATE LOCATION AS THE EXISTING FENCE.

GUARDRAIL SUB-SUMMARY

COMPUTED BY E.L.C DATE 03/02/88
CHECKED BY M.L.E. DATE 03/10/88

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

111 / 219

* SEE STD DRWG GR-8 ⊕ AS PER PLAN

REFERENCE NO	LOCATION	SIDE	STATION FROM	STATION TO	202 Guardrail Removed		606 GUARDRAIL TYPE 4	TYPE 5	TYPE 7	BARRIER TYPE 5	GUARDRAIL REBUILT TYPE 4	TYPE 5	TYPE 7	BARRIER TYPE 5	606 ANCHOR ASSEMBLY TYPE A	TYPE B	TYPE T	BARRIER DESIGN	606 BRIDGE TERMINAL ASSEMBLY TYPE AA	TYPE AA ⊕	TYPE AT	TYPE AT ⊕	TYPE B	TYPE D	TYPE E	TYPE F	TYPE G	TYPE H	TYPE J	TRANSITION SECTION	GUARD POSTS	STIFFENED GUARDRAIL	622 TYPE D CONCRETE * BARRIER
					Lin Ft.		Lin Ft	Lin Ft	Lin Ft.	Lin. Ft	Lin Ft	Lin Ft	Lin. Ft	Lin Ft	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Lin. Ft.	Lin. Ft.
60R	I.R. 70 E.B.	Rt.	346+20	347+95	212.5			137.5							1		1															37.5	
61R	I.R. 70 W.B.	Lt.	347+25.3	348+75.7	212.5			87.5							1				1														40
62R	I.R. 70	Med.	346+05	348+92.5	575.0			475.0										2															
63R	I.R. 70 E.B.	Rt.	350+90	352+40	137.5			125.0							1								1										
64R	I.R. 70 E.B.	Rt.	350+44	352+41	200.0			125.0		50								1					1										
65R	I.R. 70 W.B.	Lt.	353+08	355+06	200.0			125.0		50								1					1										
66R	I.R. 70 W.B.	Lt.	353+10	354+60	137.5			125.0							1								1										
67R	I.R. 70 E.B.	Rt.	370+60.6	372+59.4	287.5			112.5							1		1		1		1											53	
68R	I.R. 70	Med.	370+31.7	373+19.2	575.0			475.0										2															
69R	I.R. 70 W.B.	Lt.	371+39.6	373+03.5	212.5			100.0							1				1														41
70R	I.R. 70 E.B.	Rt.	376+36	377+86	137.5			125.0							1								1										
71R	I.R. 70 E.B.	Rt.	375+60	377+60	200.0			125.0		50								1					1										
72R	I.R. 70 W.B.	Lt.	378+39	380+39	200.0			125.0		50								1					1										
73R	I.R. 70 W.B.	Lt.	378+14	379+64	150.0			125.0							1								1										
74R	I.R. 70 E.B.	Rt.	397+37.1	399+12.5	212.5			112.5							1				1														
75R	I.R. 70	Med.	397+52.9	400+40.4	600.0			475.0										2															40
76R	I.R. 70 W.B.	Lt.	398+80.7	400+56.1	212.5			112.5							1				1														40
77R	I.R. 70 E.B.	Rt.	430+72.1	432+50.1	237.5			87.5							1				1														68
78R	I.R. 70	Med.	430+09.6	433+22.1	625.0			525.0										2															
79R	I.R. 70 W.B	Lt.	430+78	432+69.5	237.5			100.0							1				1														69
80R	I.R. 70 E.B.	Rt.	450+54	452+72.8	225.0			112.5							1		1		1		1												73
81R	I.R. 70	Med.	450+50	453+50	600.0			500.0										2															
82R	I.R. 70 W.B.	Lt.	451+27.2	453+58.5	237.5			125.0							1		1		1		1												73
83R	I.R. 70	Med.	464+07	465+57	112.5			112.5							1		1																
84R	I.R. 70 W.B.	Lt.	464+10	465+58				112.5							1		1																
84R	I.R. 70 E.B.	Rt.	504+49.2	506+06.6	212.5			87.5							1				1														47
85R	I.R. 70	Med.	504+45.5	507+33.0	575.0			475.0										2															
86R	I.R. 70 W.B.	Lt.	505+72.1	507+29.5	212.5			87.5							1				1														47
87R	I.R. 70 E.B.	Rt.	557+64.9	563+72.7	212.5			512.5							1		1		1		1												62
88R	I.R. 70	Med.	557+66.7	560+54.2	575.0			475.0										2															
89R	I.R. 70 W.B.	Lt.	558+97.5	560+55.9	212.5			87.5							1				1														48
90R	I.R. 70 WB	Lt.	585+00	588+75	375.0			337.5							1		1																
91R	I.R. 70 E.B.	Rt.	593+12.1	594+76.6	162.5			137.5							1					1													
92R	I.R. 70 E.B.	Rt.	592+57.1	594+57.1	200.0			125.0		50								1	1														
93R	I.R. 70 W.B.	Lt.	596+12.9	598+12.9	200.0			125.0		50								1	1														
94R	I.R. 70 W.B.	Lt.	595+88.4	597+38.4	137.5			125.0							1					1													
95R	I.R. 70 W.B.	Lt.	592+36.6	594+11.6	175.0			162.5									1					1											
96R	I.R. 70 E.B.	Rt.	607+45	613+25	500.0			462.5							1		1																
97R	I.R. 70 W.B.	Lt.	607+07	612+95	587.5			550.0							1		1																
98R	I.R. 70 W.B.	Lt	616+00	621+25	525.0			487.5							1		1																
99R	I.R. 70 E.B.	Rt	625+78	627+28	150.0			125.0							1									1									
100R	I.R. 70 E.B.	Rt	630+12	630+50	37.5			25.0									1							1									
101R	I.R. 70 E.B.	Rt	625+23	627+23	200.0			125.0		50								1						1									
102R	I.R. 70 E.B	Rt.	630+07	630+45	37.5			25.0									1							1									
103R	I.R. 70 W.B.	Lt.	626+63	627+13	50.0			137.5									1							1									
104R	I.R. 70 W.B	Lt.	629+96	631+96	200.0			125.0		50								1						1									
105R	I.R. 70 W.B.	Lt	625+00	627+12	212.5			200.0									1							1									
106R	I.R. 70 W.B.	Lt.	629+89	631+39	150.0			125.0							1									1									
107R	I.R. 70 E.B	Rt.	640+10.8	641+60.8	137.5			125.0							1					1													
108R	I.R. 70 E.B.	Rt.	642+69.2	646+94.2	425.0			412.5									1							1									
109R	I.R. 70 E.B.	Rt	639+75.8	641+70.8	275.0			125.0		50								1		1													
110R	I.R. 70 W.B.	Lt	642+97.2	644+92.2	275.0			125.0		50								1		1													
111R	I.R. 70 W.B.	Lt.	643+09.2	644+59.2	150.0			125.0							1					1													
SUB-TOTALS CARRIED TO SHEET 112					13,900			10,800.0		500					30		18	24	15	6	4	2	16									701

GUARDRAIL SUB-SUMMARY

COMPUTED BY E.L.C. DATE 03/02/88
CHECKED BY M.L.E. DATE 03/10/88

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

112 / 2.19

* See Standard Drwg GR-8 ⊕ As Per Plan

REFERENCE NO	LOCATION	SIDE	STATION FROM	STATION TO	202 Guardrail Removed	606 GUARDRAIL TYPE 4	606 GUARDRAIL TYPE 5	606 GUARDRAIL TYPE 7	606 GUARDRAIL BARRIER TYPE 5	606 GUARDRAIL REBUILT TYPE 4	606 GUARDRAIL REBUILT TYPE 5	606 GUARDRAIL REBUILT TYPE 7	606 GUARDRAIL REBUILT BARRIER TYPE 5	606 ANCHOR ASSEMBLY TYPE A	606 ANCHOR ASSEMBLY TYPE B	606 ANCHOR ASSEMBLY TYPE T	606 ANCHOR ASSEMBLY BARRIER DESIGN	606 BRIDGE TERMINAL ASSEMBLY TYPE AA	606 BRIDGE TERMINAL ASSEMBLY TYPE AA ⊕	606 BRIDGE TERMINAL ASSEMBLY TYPE AT	606 BRIDGE TERMINAL ASSEMBLY TYPE AT ⊕	606 BRIDGE TERMINAL ASSEMBLY TYPE B	606 BRIDGE TERMINAL ASSEMBLY TYPE D	606 BRIDGE TERMINAL ASSEMBLY TYPE E	606 BRIDGE TERMINAL ASSEMBLY TYPE F	606 BRIDGE TERMINAL ASSEMBLY TYPE G	606 BRIDGE TERMINAL ASSEMBLY TYPE H	606 BRIDGE TERMINAL ASSEMBLY TYPE J	TRANSITION SECTION	GUARD POSTS	STIFFENED GUARDRAIL	622 TYPE D CONCRETE * BARRIER
					Lin Ft.	Lin Ft	Lin Ft.	Lin Ft.	Lin Ft	Lin Ft	Lin Ft	Lin Ft	Lin Ft	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each	Lin. Ft.	Lin.Ft.
	SUB-TOTALS FROM SHEET 111				13900.0		10,800.0		500					30		18	24	15	6	4	2	16										701
112R	I.R. 70 E.B.	RH.	665+57.1	667+07.1	150.0		125.0							/					/												
113R	I.R. 70 E.B.	RH.	664+95.6	666+95.6	200.0		125.0		50								/	/													
114R	I.R. 70 W.B.	LH.	668+09.4	670+09.4	200.0		125.0		50								/	/													
115R	I.R. 70 W.B.	LH	667+93.9	669+43.9	150.0		125.0							/							/										
116R	I.R. 70 W.B.	LH.	664+72.1	666+72.1	200.0		187.5									/					/										
117R	I.R. 70 E.B.	RH.	670+90	679+90	887.5		862.5							/		/															
118R	I.R. 70 W.B	LH.	672+85	680+10	687.5		687.5							/		/															
119R	I.R. 70 E.B.	RH.	693+32.4	695+40.2	200.0		112.5							/		/		/		/											62
120R	I.R. 70	Med	693+31.0	696+18.5	275.0		475.0										2														
121R	I.R. 70 W.B.	LH.	694+09.4	696+17.2	200.0		112.5							/		/		/		/											62
122R	I.R. 70 E.B.	RH.	720+65	729+02.5	825.0		800.0							/		/															
123R	I.R. 70 W.B	LH.	720+20	730+45	1012.5		987.5							/		/															
124R	KIMMEL RD.	RH.	49+28.4	49+80.4	62.5		37.5									/		/													
125R	KIMMEL RD.	RH.	52+44.3	53+18.3	75.0		50.0							/				/													
126R	KIMMEL RD.	LH	49+32.9	49+90.9	62.5		37.5									/		/													
127R	KIMMEL RD.	LH.	52+54.4	53+41.4	87.5		62.5							/				/													
128R	CRESTWAY DR	RH.	48+50, 95' RH	48+62	87.5		62.5							/				/													
129R	CRESTWAY DR.	RH.	51+18	51+55.60' RH	62.5		50.0							/				/													
130R	CRESTWAY DR	LH.	48+03	48+65	62.5		37.5							/				/													
131R	CRESTWAY DR.	LH.	51+15	51+77	62.5		37.5							/				/													
134R	HOKE RD & RAMP "A"	RH.	50+00, Hoke Rd.	61+60, Ramp "A"	750.0		712.5							/		/															
135R	HOKE RD.	RH.	53+85, 60' RH.	54+43	87.5		75.0							/				/													
136R	HOKE RD.	RH.	57+00	57+50, 60' RH.	87.5		75.0							/				/													
137R	HOKE RD. & RAMP "B"	RH	19+65, Ramp "B"	62+75	1262.5		1200.0							2		/															
138R	HOKE RD.	LH.	49+10	51+37	237.5		200.0							/		/															
139R	HOKE RD.	LH	51+62	54+43	300.0		275.0									/		/													
140R	HOKE RD.	LH.	57+00	62+75	576.0		550.0							/				/													
141R	UNION RD.	RH.	57+12.3	58+87.3	175.0		150.0							/				/													
142R	UNION RD.	RH.	60+89.7	62+89.7	200.0		175.0							/				/													
143R	UNION RD.	LH.	57+12.3	58+87.3	175.0		150.0							/				/													
144R	UNION RD.	LH.	60+89.7	62+89.7	212.5		175.0							/				/													
150R	S.R. 48	RH.	307+80	310+55	300.0		237.5							/		/															
151R	DOG LEG RD.	RH	9+21.4	10+21.4	100.0		75.0							/				/													
152R	DOG LEG RD.	RH.	12+70.1	16+45.1	375.0		350.0							/				/													
153R	DOG LEG RD.	LH	9+21.4	10+21.4	100.0		75.0							/				/													
154R	DOG LEG RD.	LH.	12+70.1	14+58	375.0		187.5									/		/													
155R	DOG LEG RD.	LH.	14+80	16+70	187.5		187.5							/		/															
156R	S.R 49 over RAZOR RUN	LH.	262+57	264+07	150.0		125.0							/								/									
157R	S.R 49 over RAZOR RUN	RH.	262+63	264+13	150.0		125.0							/								/									
158R	DIAMOND MILL Rd.	Lt	49+76.50	51+76.50	200.0		200.0												2												
159R	DIAMOND MILL Rd.	Rt	49+73.60	51+73.60	200.0		200.0												2												
160R	DIAMOND MILL Rd	Lt.	54+65.6	55+40.6	75.0		50.0							/					/												
161R	DIAMOND MILL Rd.	Rt.	54+62.7	55+12.7	50.0		50.0												/												
162R	DIAMOND MILL Rd	Rt	48+16	48+36	50.0		25.0									/			/												
163R	DIAMOND MILL Rd.	Lt.	47+36	48+36	100.0		75.0							/					/												
	TOTALS TO GENERAL SUMMARY				25925		21600		600					64		35	28	47	7	6	4	18										825

COMPUTED BY S.E.D. DATE 2-19-88

CHECKED BY G.A.S. DATE 3-11-88

FHWA REGION	STATE	PROJECT	
5	OHIO		

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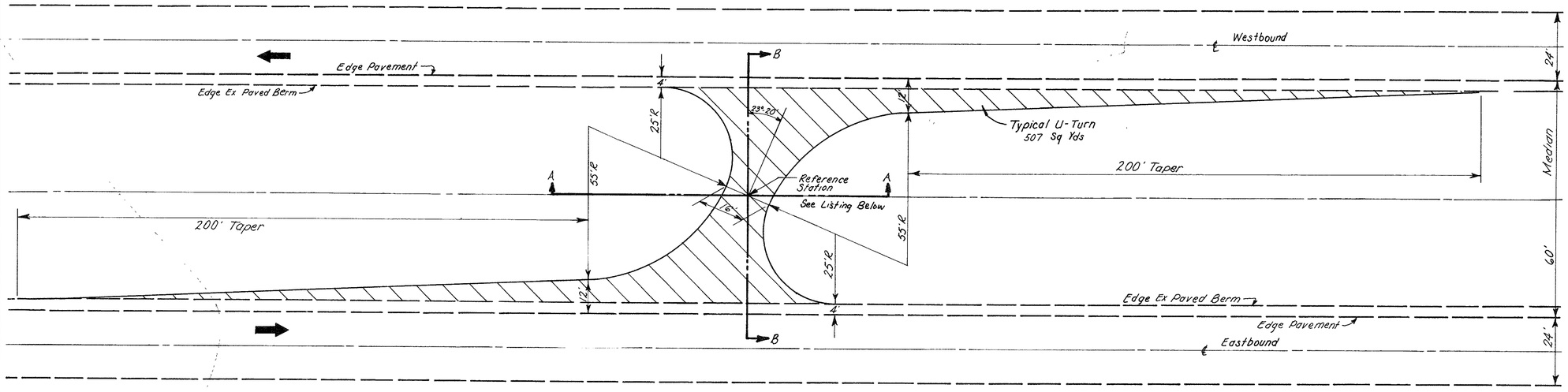
MOT - 70 - 653/11.02



PLAN
No Scale

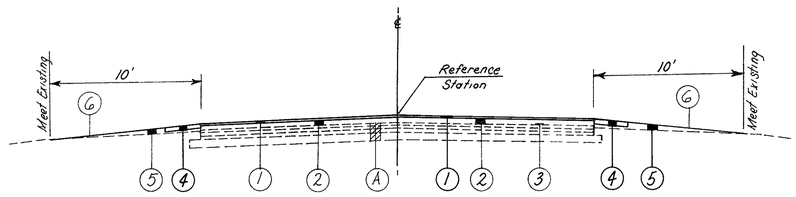
REFERENCE STATIONS

STA. 386 + 35

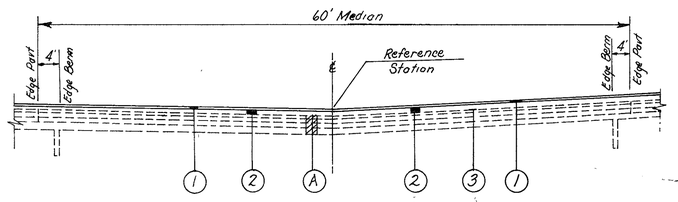
STA. 485 + 65

STA. 570 + 50

STA. 623 + 05



SECTION A-A
No Scale



SECTION B-B
No Scale

PAVEMENT LEGEND

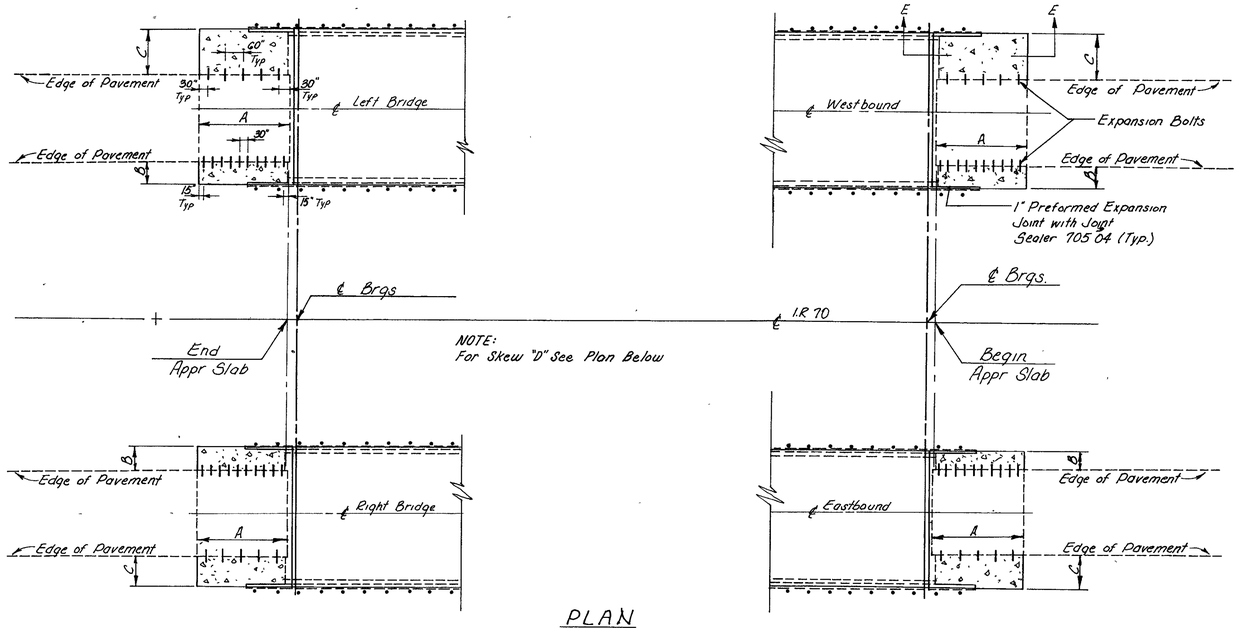
1. ITEM 412 3/4" Asphalt Concrete, MWS-60 (3/4" Depth, Ref. Sta 623+05) (See Proposal Note)
2. ITEM 446 3 3/4" Asphalt Concrete Intermediate Course, Type 2, MWS - 60 (2 1/4" Depth, Ref. Sta 623+05) (See Proposal Note)
3. ITEM 407 Tack Coat
4. ITEM 617 4" Compacted Aggregate
5. ITEM 203 Embankment
6. ITEM 659 Seeding & Mulching
- (A) Existing Pavement (To Remain)

PAVEMENT CALCULATIONS

ITEM		Qty. Ea.	No.	Total to Gen. Summary
412				
507 × 0.75 ÷ 36	=	10.6 Cu. Yd.	3	31.8
507 × 0.75 ÷ 36	=	10.6 Cu. Yd.	1	10.6
				43 C.Y. (Total)
446, Type 2				
507 × 3.75 ÷ 36	=	52.8 Cu. Yd.	3	158.4
507 × 2.25 ÷ 36	=	31.7 Cu. Yd.	1	31.7
				190 C.Y. (Total)
407, Tack Coat				
507 × 0.1	=	510 Gal.	4	204 Gal. (Total)

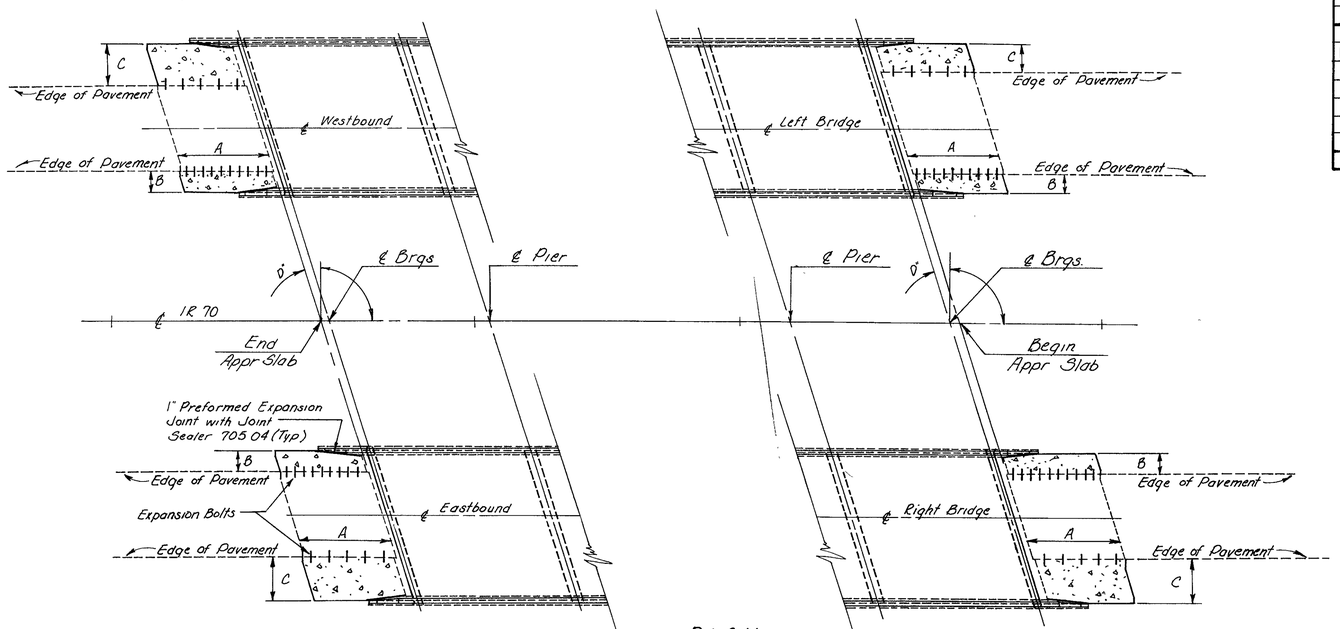
203 Embankment (Included in Mainline)
617 Compacted Aggregate (Included in Mainline)
659 Seeding & Mulching (Included in Mainline)

U-TURN MEDIAN OPENING

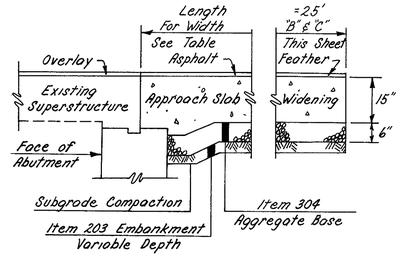


NOTE:
For Skew "D" See Plan Below

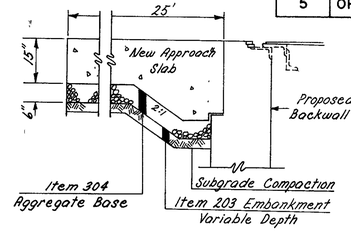
PLAN
STEEL RAILING APPLICATION
NO SCALE
APPROACH SLAB WIDENING



PLAN
CONC. PARAPET APPLICATION
NO SCALE
APPROACH SLAB WIDENING



SECTION E-E



SECTION F-F

FHWA REGION	STATE	PROJECT	
5	OHIO		

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219

MOT-70-653/11.02

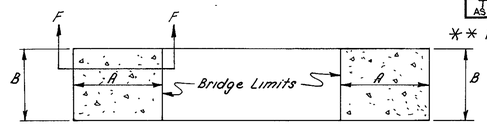
COMPUTED BY S.E.D. DATE 2-19-88

CHECKED BY G.A.S. DATE 3-11-88

APPROACH SLAB WIDENING TABLE

LOCATION	BRIDGE Nº	END N/E	END S/W	LENGTH "A" Ft	WIDTH "B" Ft.	WIDTH "C" Ft	SKEW "D" Angle	SLAB THICKNESS In	ITEM 611 REINFORCED CONCRETE APPROACH SLAB "A"×("B"+"C")÷9=S.Y	Item 304 Aggregate Edge * Cu. Yd.	Item 202 Pavement Removed Conc. Approach Slab S.Y.	Item 203 Subgrade Compaction
APPROACH SLAB WIDENING												
S.B.-S.R.49 Over RAZOR RUN	MOT-70-1269L	E	W	25'	7'	11'	4°44'08"RF	15"	(2×)50 = 100 **	16.7	N/A	
I-70 Over RAZOR RUN	MOT-70-0672 L	E	W	25'	7'	11'	20°00'00"RF	15"	(2×) 50 = 100 **	16.7	N/A	
	MOT-70-0672 R	E	W	25'	7'	13'	20°00'00"RF	15"	(2×) 55.6 = 111.2 **	18.5	N/A	
I-70 Over WOLF CREEK	MOT-70-0719 L	E	W	25'	7'	13'	30°00'00"R.F.	15"	(2×) 55.6 = 111.2 **	18.5	N/A	
	MOT-70-0719 R	E	W	25'	7'	13'	30°00'00"R.F.	15"	(2×) 55.6 = 111.2 **	18.5	N/A	
I-70 Over S.R. 98	MOT-70-1130 L	E	W	25'	5'	10'-10"	25°00'00"R.F.	15"	(2×) 44 = 88 **	14.7	N/A	
	MOT-70-1130 R	E	W	25'	5'	10'-10"	25°00'00"R.F.	15"	(2×) 44 = 88 **	14.7	N/A	
I-70 Over MEEKER RD.	MOT-70-1219 L	E	W	25'	10'	10'	15°48'50" L.F.	15"	(2×) 55.6 = 111.2 **	18.5	N/A	
	MOT-70-1219 R	E	W	25'	10'	10'	15°48'50" L.F.	15"	(2×) 55.6 = 111.2 **	18.5	N/A	
I-70 Over FREDERICK PK.	MOT-70-1267 L	E	W	20'	5'	10'-10"	14°47'00"R.F.	13"	(2×) 35.2 = 70.4 **	11.7	N/A	
	MOT-70-1267 R	E	W	20'	5'	10'-10"	14°47'00"R.F.	13"	(2×) 35.2 = 70.4 **	11.7	N/A	
							SUBTOTAL	15"= 932 S.Y. / 13"= 141 S.Y.		178.10	N/A	1073
NEW APPROACH SLABS				LENGTH	WIDTH		SKEW	SLAB THICKNESS	(A×B)÷9 = S.Y.			
DIAMOND MILL RD.	MOT-70-0662	N	S	25'	27'-4"		5°-59'-50"	15"	(2×) 75.9 = 151.8 ⊛	25 3	133.3	
HOKE RD.	MOT-70-0859	N	S	25'	43'-0"		0°	15"	(2×) 119.4 = 238.8 ⊛	39.8	222.2	
UNION RD.	MOT-70-0962	N	S	25'	30'-4"		0°	15"	(2×) 84.3 = 168.6	28.1	93 4	
DOG LEG RD.	MOT-70-1322	N	S	25'	32'-0"		0°	15"	(2×) 88.9 = 177.8 ⊛	29.6	93.4	
CRESTWAY DR.	MOT-70-0759	N	S	25'	27'-4"		0°	15"	(2×) 75.9 = 151.8 ⊛	25.3	133.3	
							SUB TOTAL	15"=168.6SY/15⊛ = 720.25 Y.		148.1	675.6	888.8
TOTAL TO GENERAL SUMMARY										327	676	1962

T= 13" **	141 S.Y.
T= 15"	890 S.Y.
T= 15" AS PER PLAN	932 S.Y.



NEW APPROACH SLAB

** AS PER PLAN

NOTES:
1. Prefurmed Expansion Joint Filler and Sealer at the Corners and Sides of the Approach Slabs Shall be Included in the Price Bid per Square Yard for the Approach Slab.
2. Type "A" Waterproofing as Specified Under Standard Drawing AS-1-81 Shall be Included in the Price Bid for Item 611 Reinforced Concrete Approach Slabs.
3. For Construction Details See Standard Drawing AS-1-81
4. Expansion Bolts per Standard Drawing BP-3.
⊛ 5. Item 611 - Reinforced Concrete Approach Slabs (See Table.) - Shall Include Type 4-A Curb As Shown On Std. Drwg BP-7.

APPROACH SLAB DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

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MOT 70-6.53/11.02

Begin Project
Sta 342+50.00
S.L.M. 0.40

I.R.-70-1(43)13 | I.R.-70-1(45)24

Station Equation
Sta. 330+43.55 Back =
Sta. 334+00.00 Ahead

MOT-70-0662

MOT-70-0672 L/R

NOTE At Sta 264+00
Match Ramp Edge Line
with Edge Line I.R 70

RAZOR RUN

Edge Line (White)
Edge Line (Yellow)
Lane Line
24" Broad Transverse Lines (White)
8" Channel Line (White)
Westbound
Eastbound
I R 70
Sta. 343+00
Match Line
SB S.R 49
Begin Work
Sta 341+25
DIAMOND MILL ROAD

EXIT 24 NORTH Greenville Clayton

G.F. 14'x11.5' Existing supports to be reused in place 357+46

M-37 49 M-2 349+40

X-79 352+40

W-49R-48 355+41

LEGEND

- NEW
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- EXISTING TO BE OVERLAYED (SAME LEGEND)
- EXISTING TO BE OVERLAYED (NEW LEGEND)

MOT-70-0708

MOT-70-0719 L/R

EXIT 25 SOUTH Tecumseh Trotwood 1 MILE

G.B. 12'x9.5' 371+60

KIMMEL ROAD

G.S. 10'x5.5' 365+02

G.C. 15'x8.5' 372+11

EXIT 24 NORTH Greenville Clayton 1/2 MILE

G.B. 20'x12' Sta 372+15

X-64 378+53

R-70 381+02

EXIT 24 Brookville Phillipsburg NEXT RIGHT G.C. 13'x7' 382+00

M-41 383+31

R-123

Crossover Sta 386+38

EXIT 24 NORTH Greenville Clayton 1/2 MILE

G.B. 14'x12' 386+23

EXIT 24 CAMPING NEXT RIGHT G.S.C. 10'x6' 389+00

SPEED LIMIT 65 MPH 55 TRUCKS USE RIGHT LANE EXCEPT TO PASS

R-9-84 392+00

Sta. 363+00
Sta. 393+00
Match Line
Lane Line
Edge Line (White)
Westbound
Eastbound
I R 70

M-5 376+93

W-38 SOUTH

X-79 377+50

NORTH FORK WOLF CREEK

W-19 380+67

W-12 381+96

G.B. 12'x5' 381+96

Crossover Sta 386+38 R-19

R-10 388+69

NOTE: At Sta. 243+51.02
Match Ramp Edge Line
With Edge Line I R 70

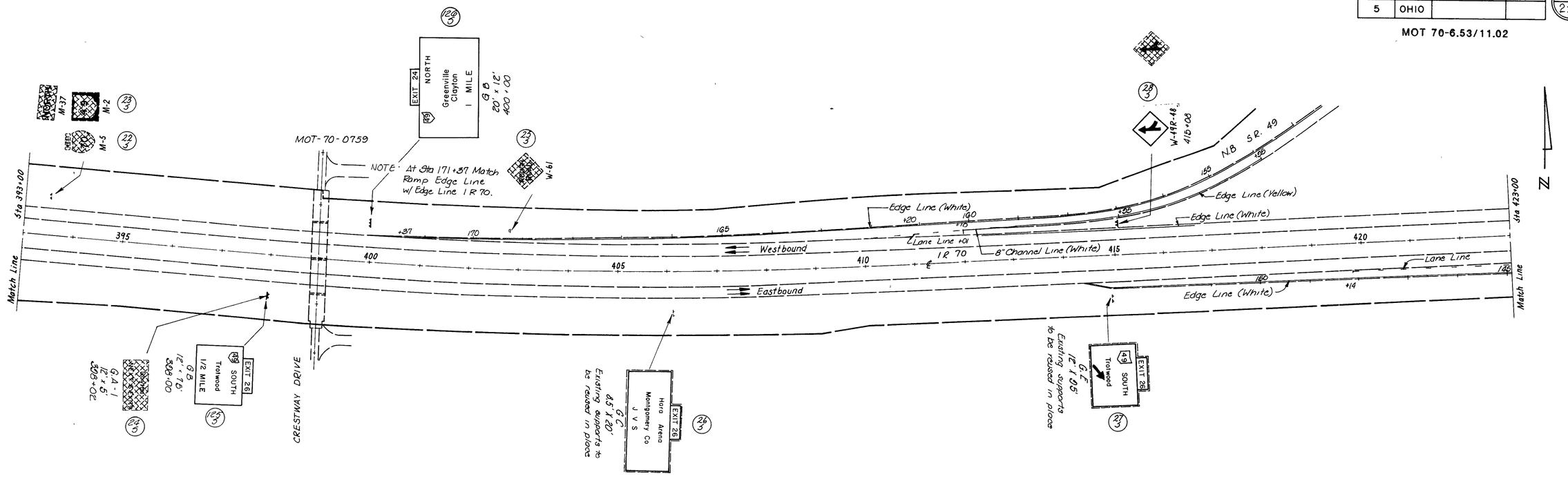
NOTE. Existing signing at all median crossovers shown for removal purposes. Installation of new signing to be according to crossover detail, Sheet No 127

STA. 329+00 TO STA. 393+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

11G 219

MOT 70-6.53/11.02



FHWA REGION	STATE	PROJECT	
5	OHIO		

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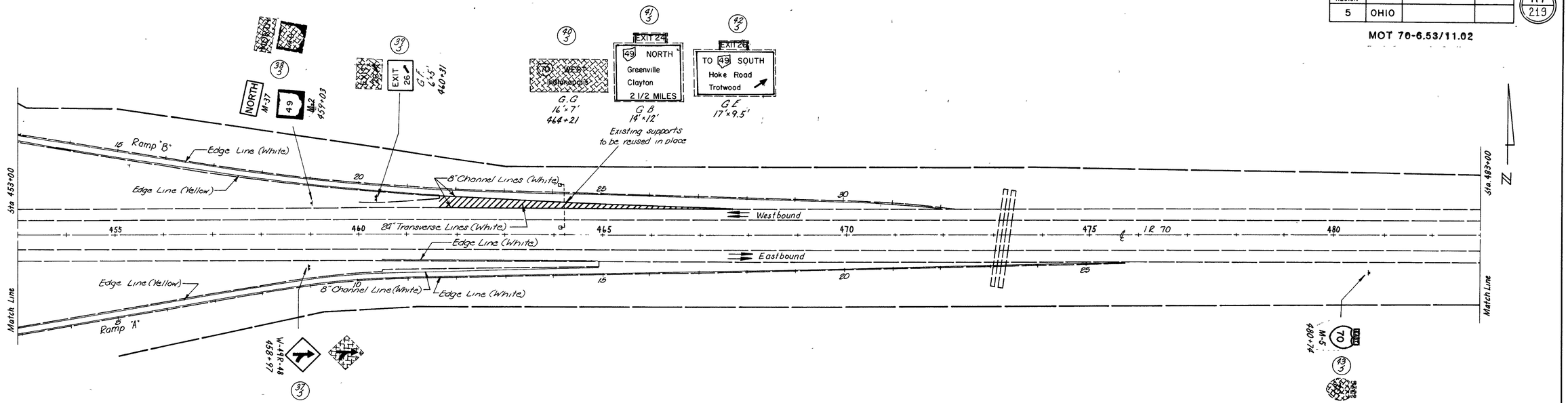
219

MOT 70-6.53/11.02



NOTE Existing signing at all median crossovers shown for removal purposes. Installation of new signing to be according to crossover detail, Sheet Nº 127

STA. 453+00 TO STA. 513+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

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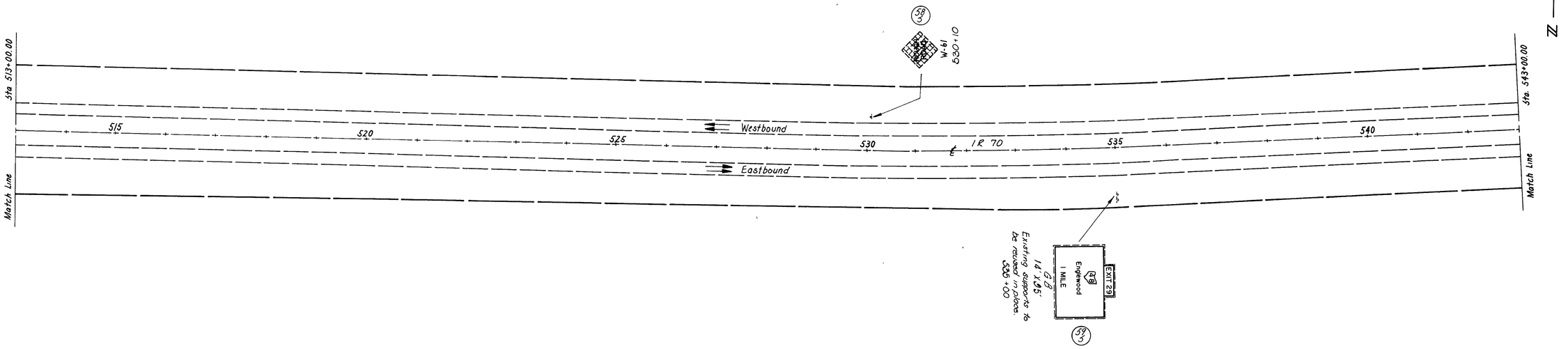
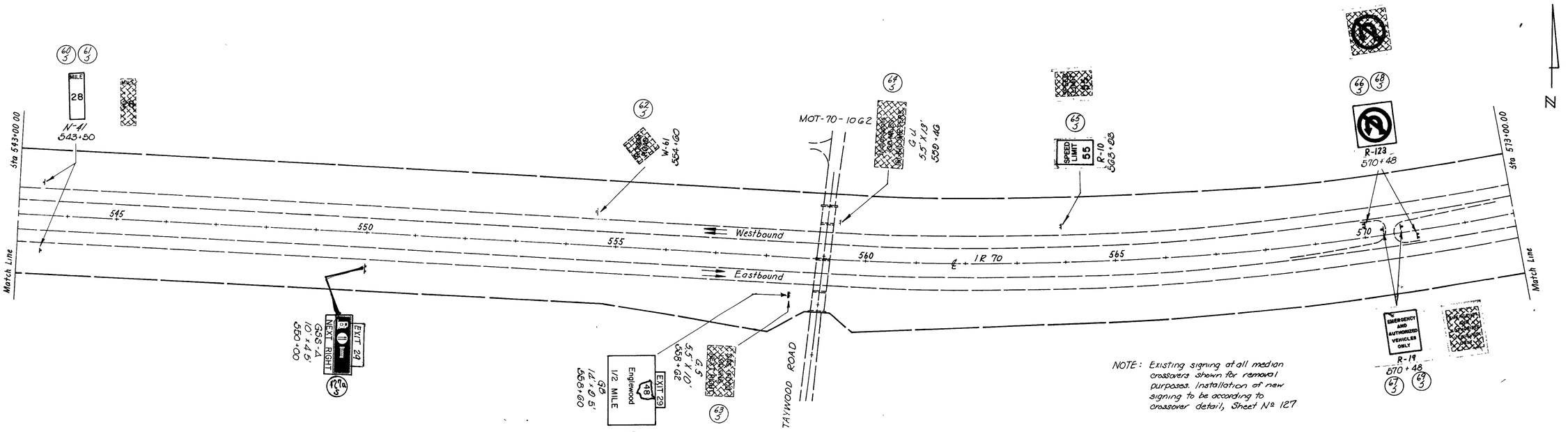
MOT 70-6.53/11.02





STA. 513+00 TO STA. 573+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

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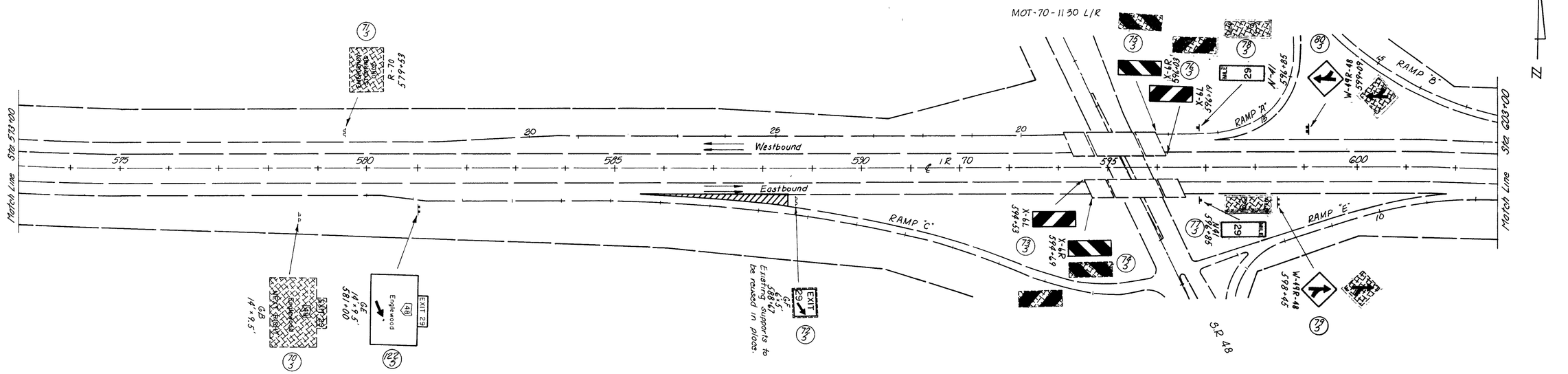
MOT 70-6.53/11.02

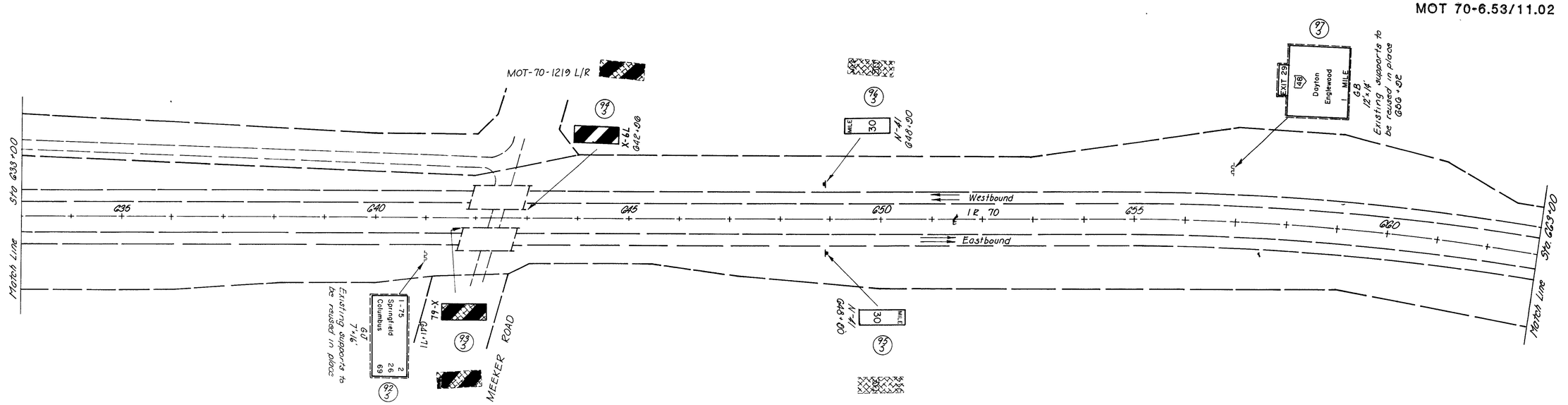


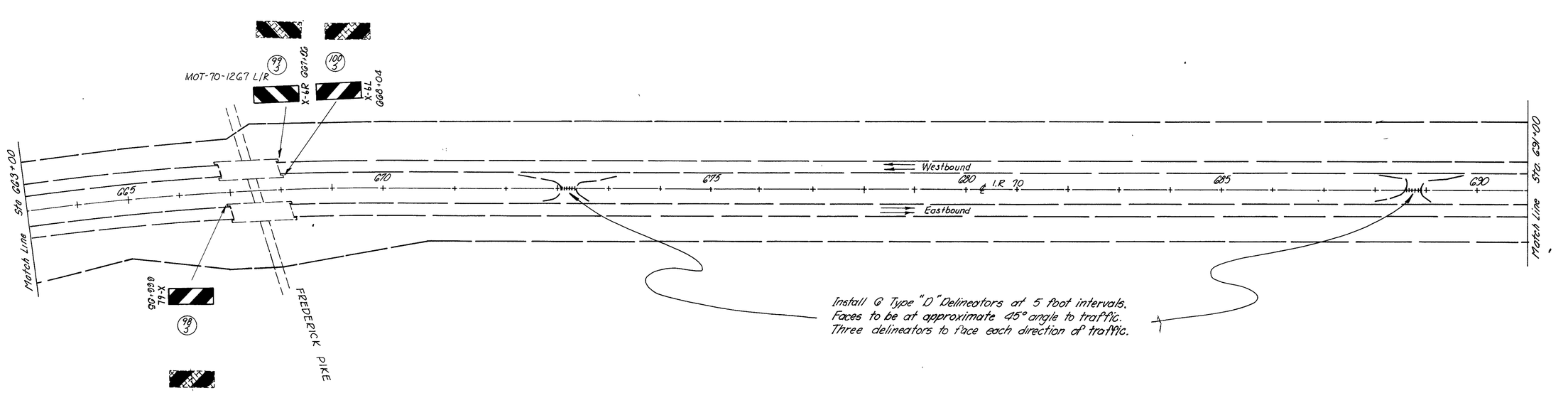
STA. 573+00 TO STA. 633+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

120
219

MOT 70-6.53/11.02





STA. 633+00 TO STA. 691+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

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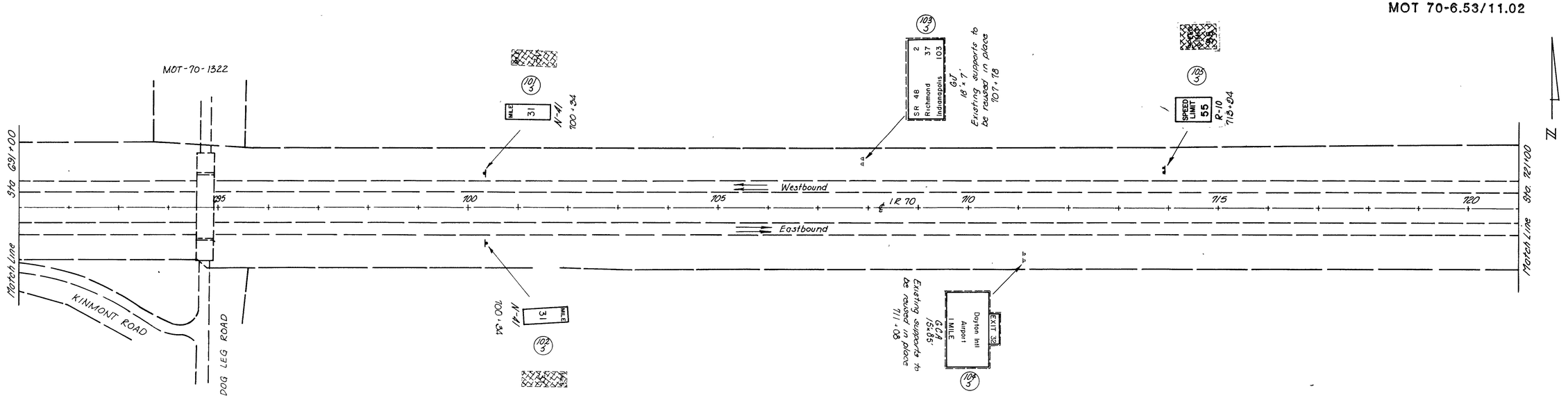
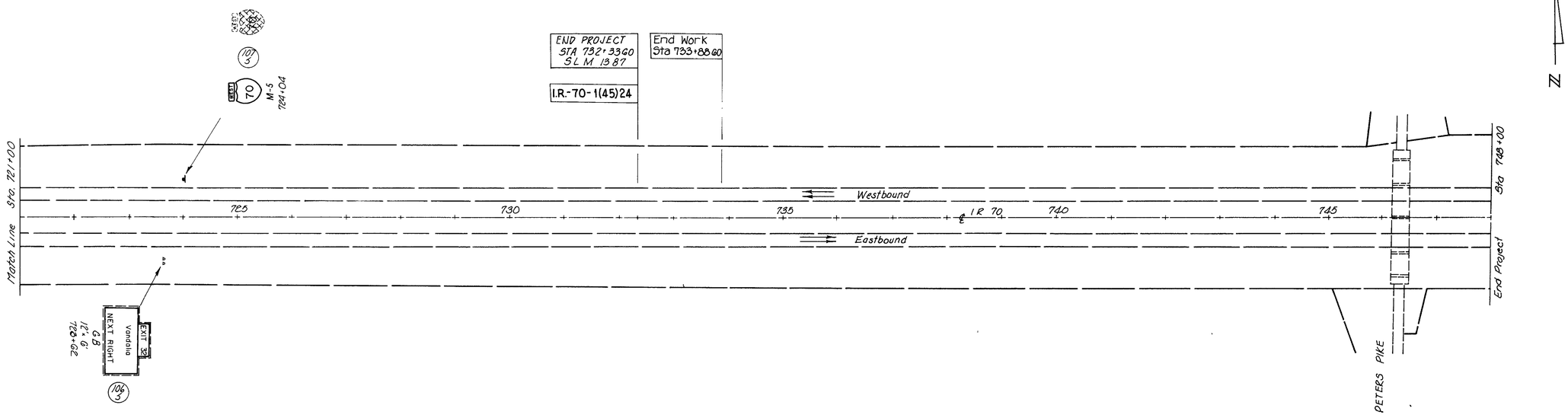
MOT 70-6.53/11.02

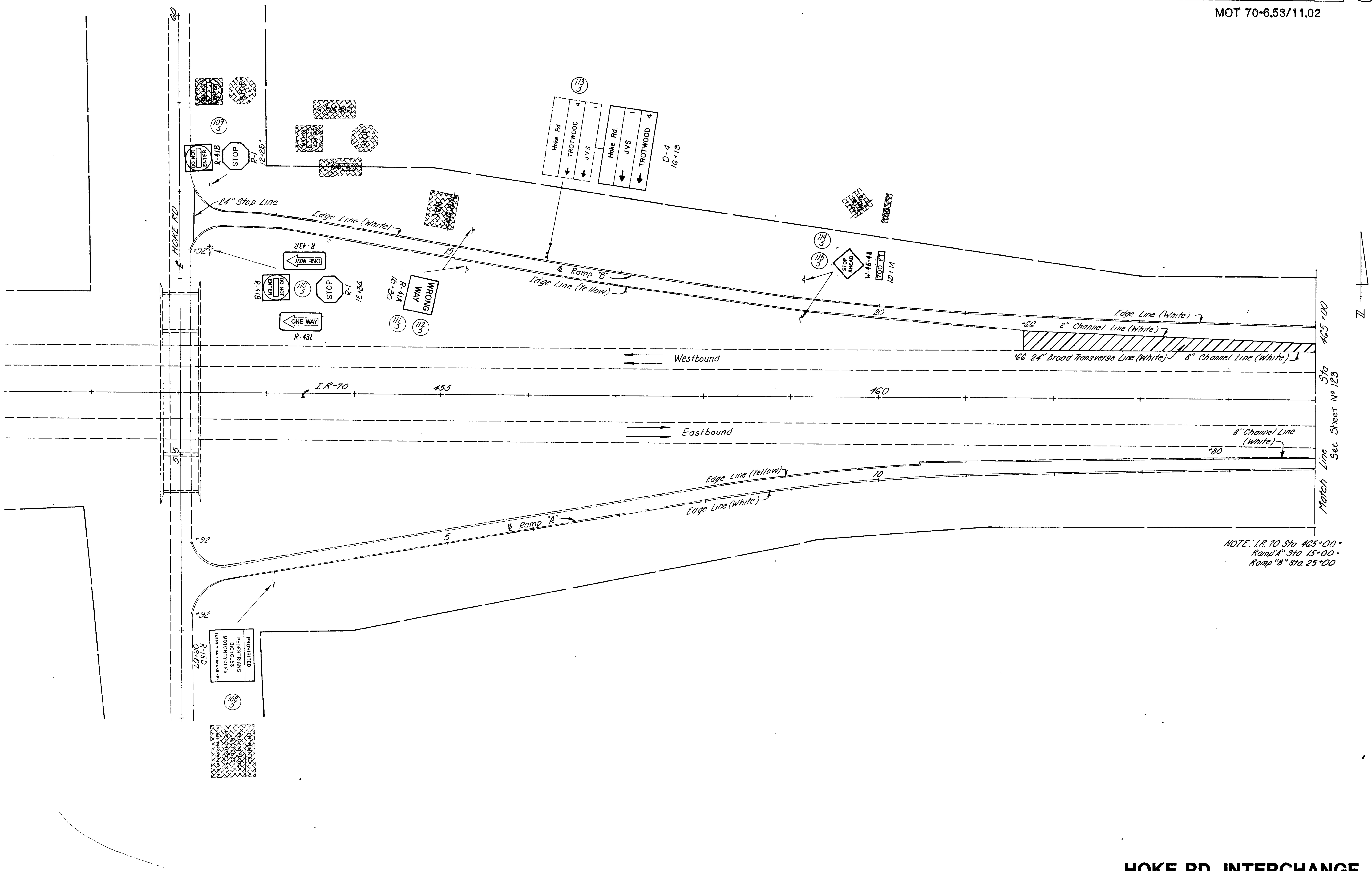




STA. 691+00 TO STA. 748+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT 70-6.53/11.02


HOKE RD
24" Stop Line
Edge Line (White)
℄ Ramp "B"
Edge Line (Yellow)
DO NOT ENTER
R-41B
STOP
R-1
12+25
R-43R
ONE WAY
R-41B
R-1
12+34
R-43L
WRONG WAY
R-41A
15+30
Hoke Rd
TROTWOOD 4
JVS
D-4
16+13
STOP AHEAD
W-45-48
700 FT
19+14
8" Channel Line (White)
24" Broad Transverse Line (White)
8" Channel Line (White)
Westbound
I.R-70
455
460
Eastbound
8" Channel Line (White)
Edge Line (Yellow)
Edge Line (White)
℄ Ramp "A"
PROHIBITED
PEDESTRIANS
BICYCLES
MOTORCYCLES
R-15D
Match Line Sta 465+00
See Sheet No 123
NOTE: I.R. 70 Sta 465+00 =
Ramp "A" Sta. 15+00 =
Ramp "B" Sta. 25+00

HOKE RD. INTERCHANGE

FHWA REGION	STATE	PROJECT	
5	OHIO		

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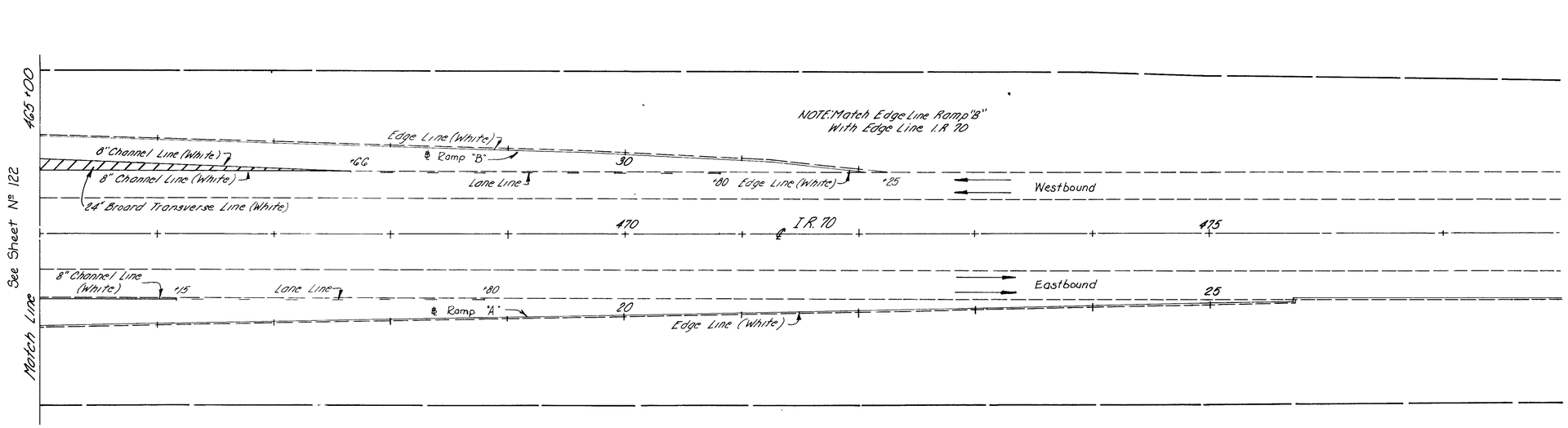
219

MOT 70-6.53/11.02



NOTE: At Sta 28+19 Ramp "B" Match Ramp Edge Line With Edge Line I.R 70

HOKE RD. INTERCHANGE

FHWA REGION	STATE	PROJECT	
5	OHIO		

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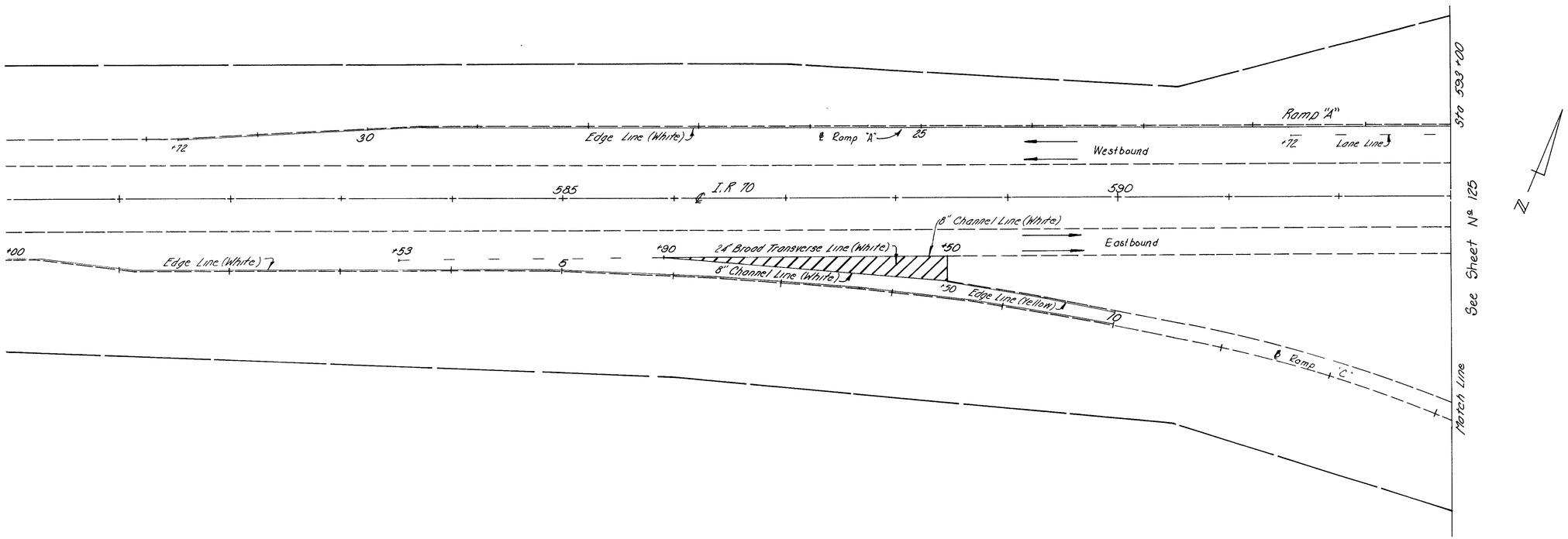
219

MOT-70-6.53/11.02

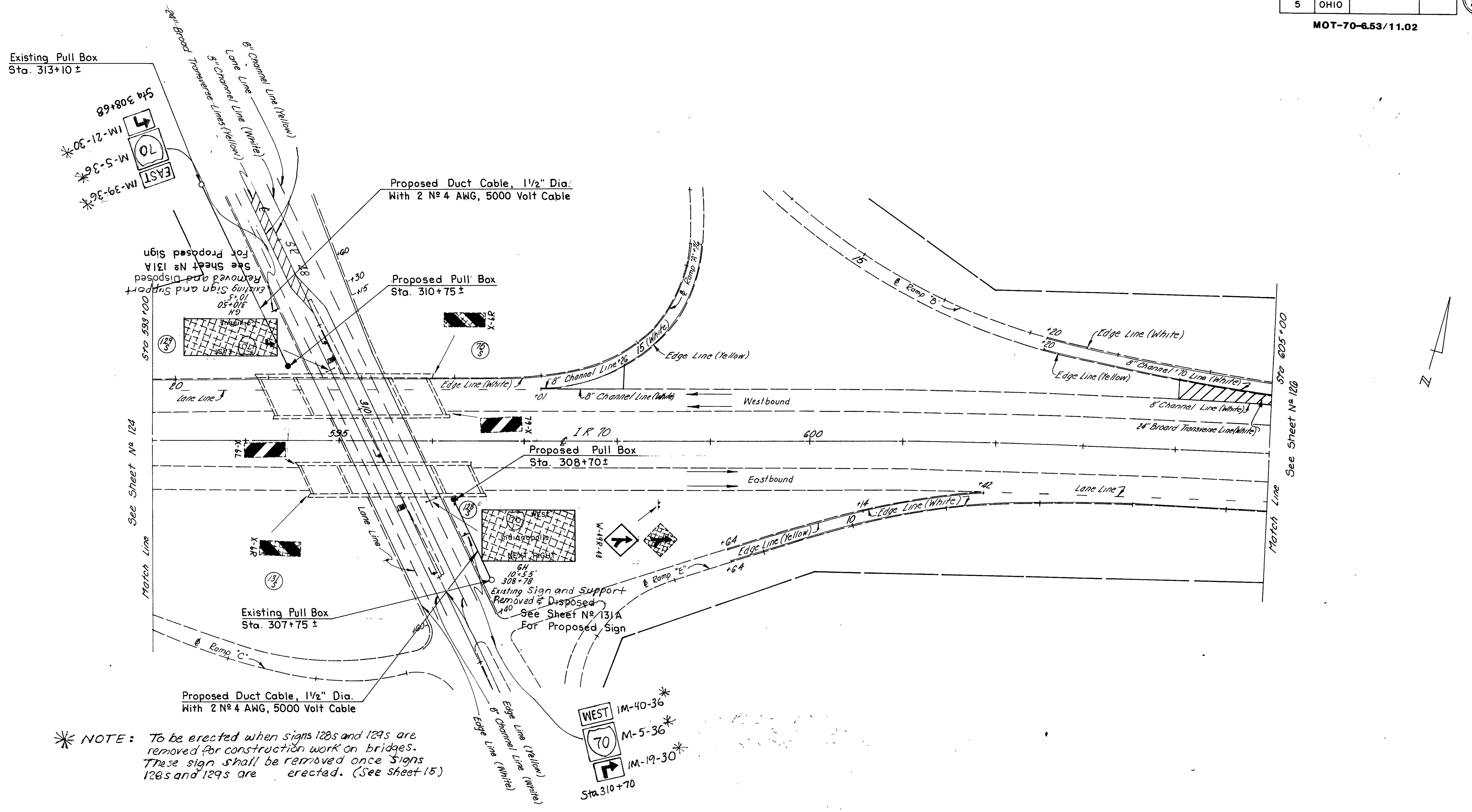


S.R. 48 INTERCHANGE

FHWA REGION	STATE	PROJECT	
5	OHIO		

125/219

MOT-70-~~6.~~53/11.02



Existing Pull Box
Sta. 313+10 ±
Sta 308+68
IM-21-30
M-5-36
IM-39-36
EAST
70
24" Broad Transverse Lines (Yellow)
8" Channel Line (Yellow)
Lane Line
8" Channel Line (White)
Proposed Duct Cable, 1½" Dia.
With 2 № 4 AWG, 5000 Volt Cable
Existing Sign and Support
Removed and Disposed
See Sheet № 131A
For Proposed Sign
Proposed Pull Box
Sta. 310+75 ±
Sta 598+00
Edge Line (White)
8" Channel Line
15 (White)
Edge Line (Yellow)
Ramp "A"
Ramp "B"
Edge Line (White)
Edge Line (Yellow)
8" Channel Line (White)
Sta 605+00
Lane Line
Westbound
IR 70
595
600
Proposed Pull Box
Sta. 308+70 ±
Eastbound
Lane Line
Edge Line (White)
Edge Line (Yellow)
24" Broad Transverse Line (White)
See Sheet № 124
See Sheet № 126
Match Line
Indianapolis
NEXT RIGHT
W-49R-48
Existing Sign and Support
Removed & Disposed
See Sheet № 131A
For Proposed Sign
Ramp "E"
Existing Pull Box
Sta. 307+75 ±
Ramp "C"
Proposed Duct Cable, 1½" Dia.
With 2 № 4 AWG, 5000 Volt Cable
Edge Line (White)
8" Channel Line (White)
Edge Line (Yellow)
WEST
IM-40-36
70
M-5-36
IM-19-30
Sta. 310+70

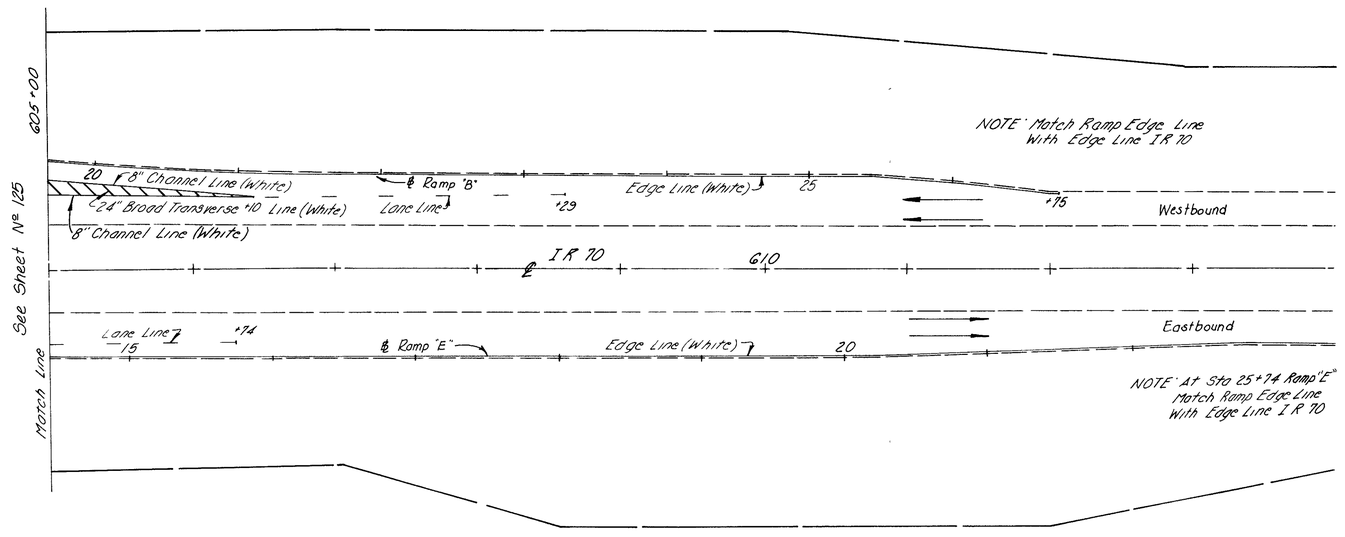
✱ NOTE: To be erected when signs 128s and 129s are removed for construction work on bridges. These sign shall be removed once signs 128s and 129s are erected. (See Sheet 15)

S.R. 48 INTERCHANGE

FHWA REGION	STATE	PROJECT	
5	OHIO		

120
219

MOT-70-6.53/11.02



N

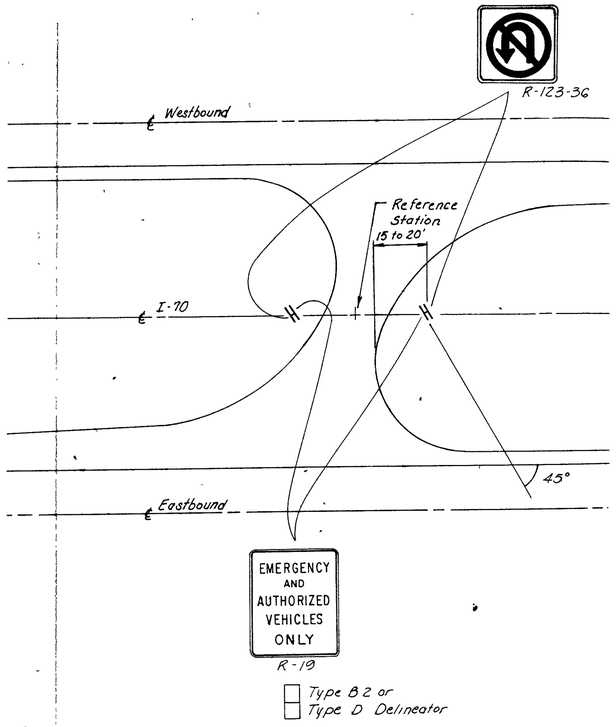
S.R. 48 INTERCHANGE

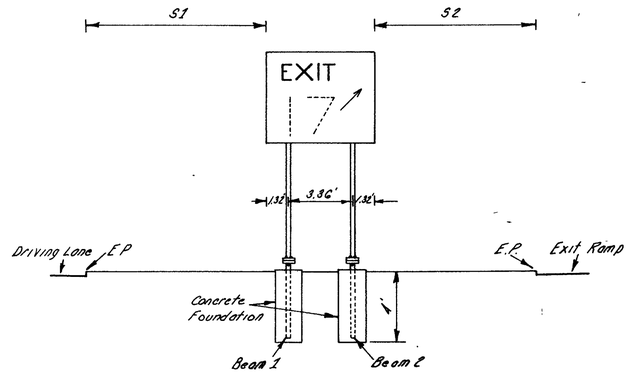
FHWA REGION	STATE	PROJECT	
5	OHIO		

127
219

MOT-70-6.53/11.02

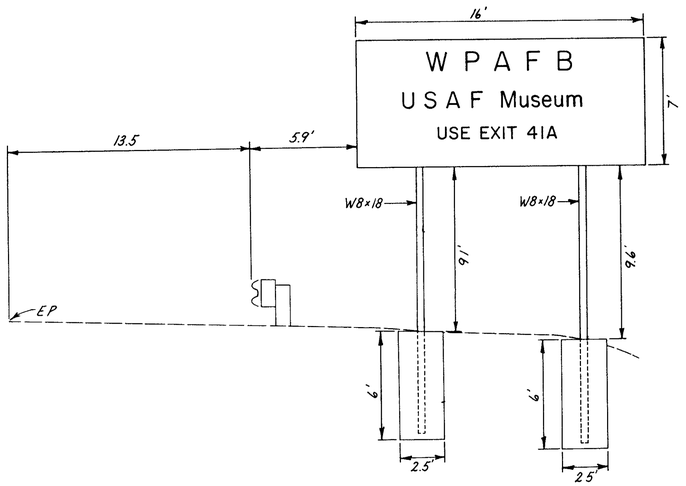
TYPICAL U-TURN MEDIAN





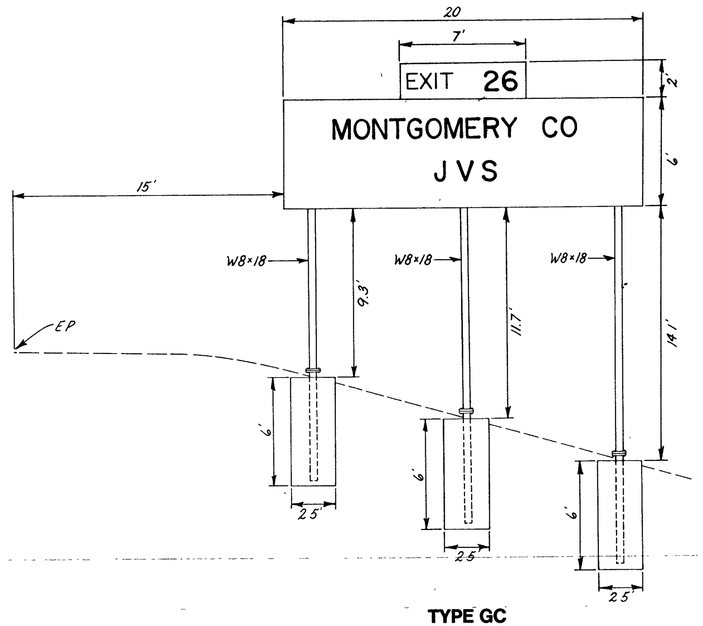
TYPE GF

Location	S1	S2	Beam 1 Length	Beam 2 Length
428+09	150	240	170	175
460+31	130	140	170	175



TYPE GCP

STA. 431+57 R



TYPE GC

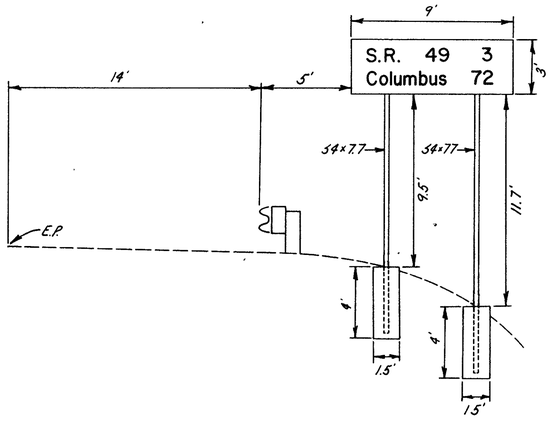
STA. 498+10 L

SIGN INSTALLATION DETAILS

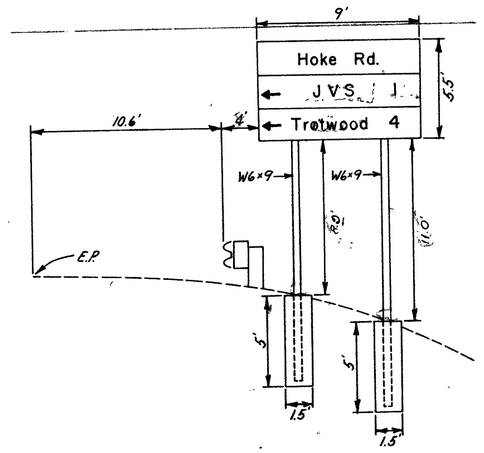
FHWA REGION	STATE	PROJECT	
5	OHIO		

128
213

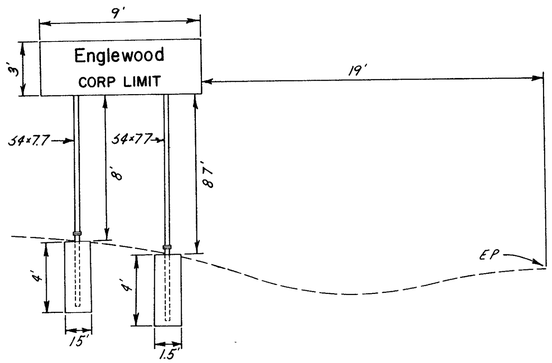
MOT-70-6.53/11.02



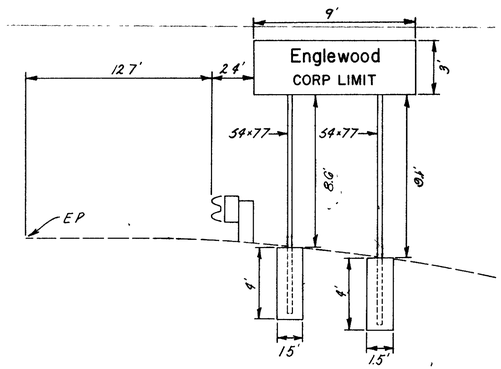
TYPE GJ
STA. 451+03 R



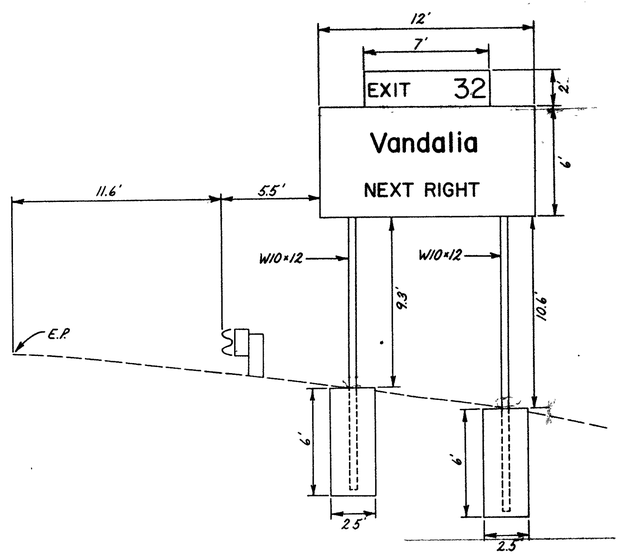
TYPE D4
STA. 16+13
Hoke Rd. Interchange
Ramp "B"



TYPE GN
STA. 452+20 R



TYPE GN
STA. 625+41 L



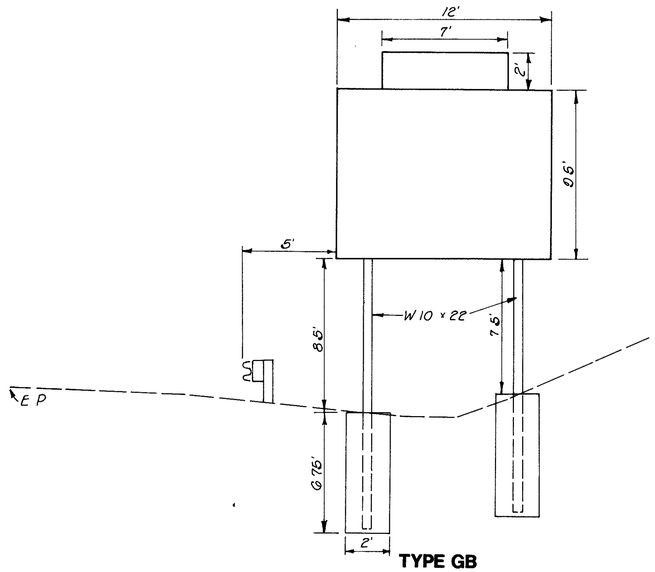
TYPE GB
STA. 723+62 R

SIGN INSTALLATION DETAILS

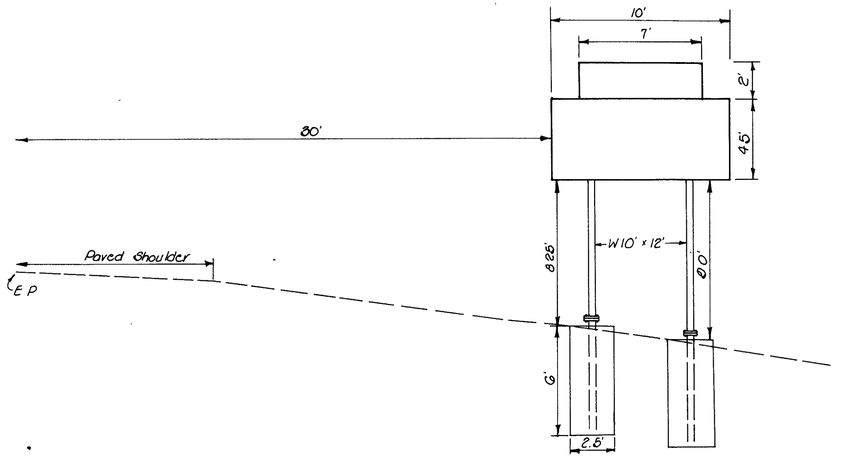
FHWA REGION	STATE	PROJECT	
5	OHIO		

129
219

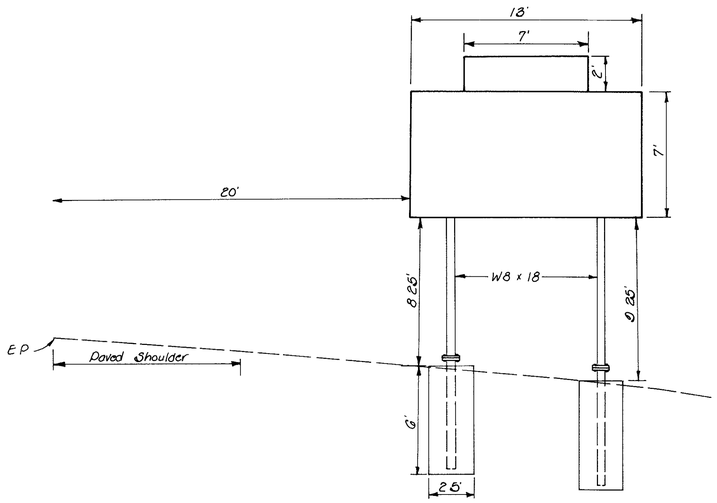
MOT-70-6.53/11.02



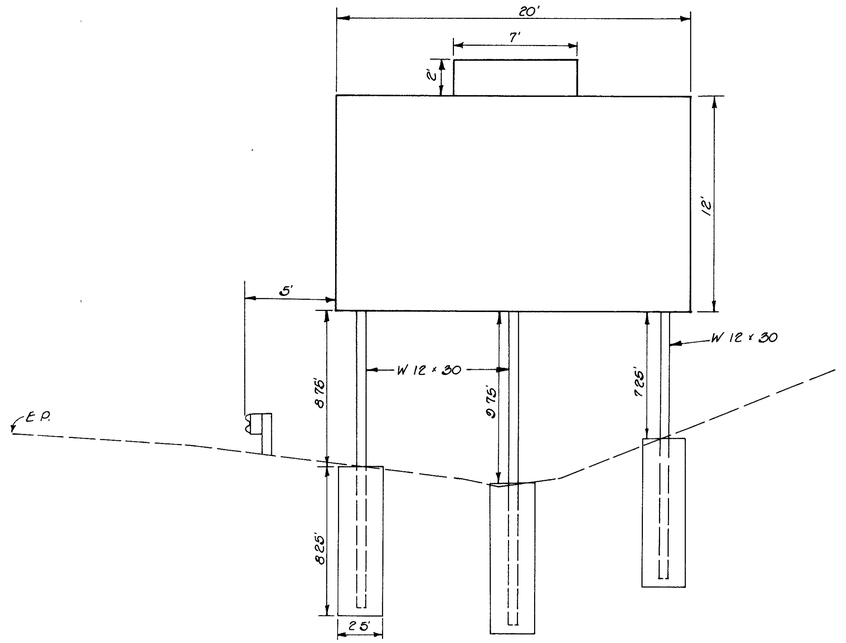
TYPE GB
STA. 371+60 R



TYPE GSC
STA. 389+00 L



TYPE GC
STA. 382+00 L



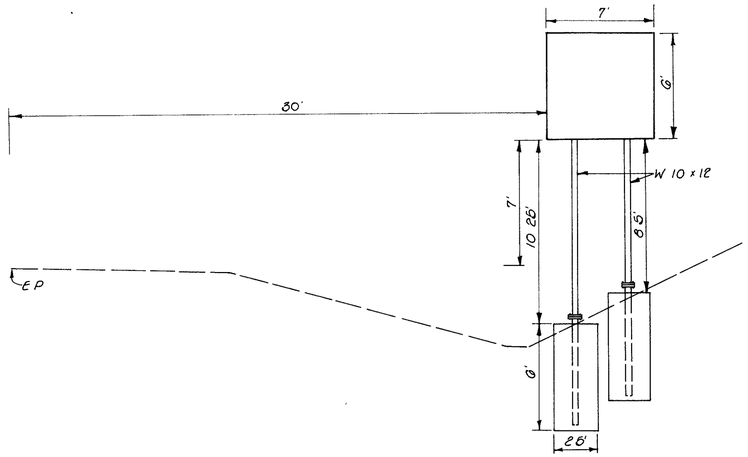
TYPE GB
STA. 372+15 L

SIGN INSTALLATION DETAILS

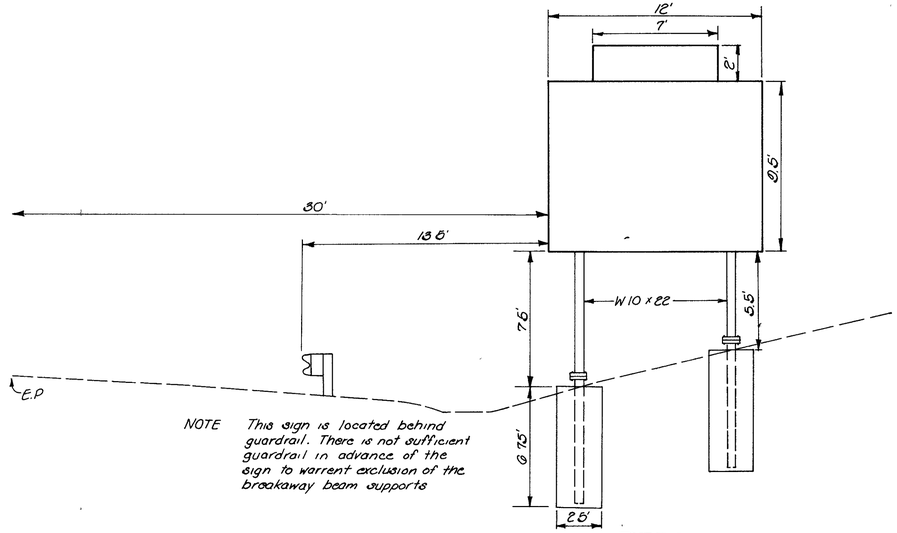
FHWA REGION	STATE	PROJECT	
5	OHIO		

130
213

MOT-70-6.53/11.02

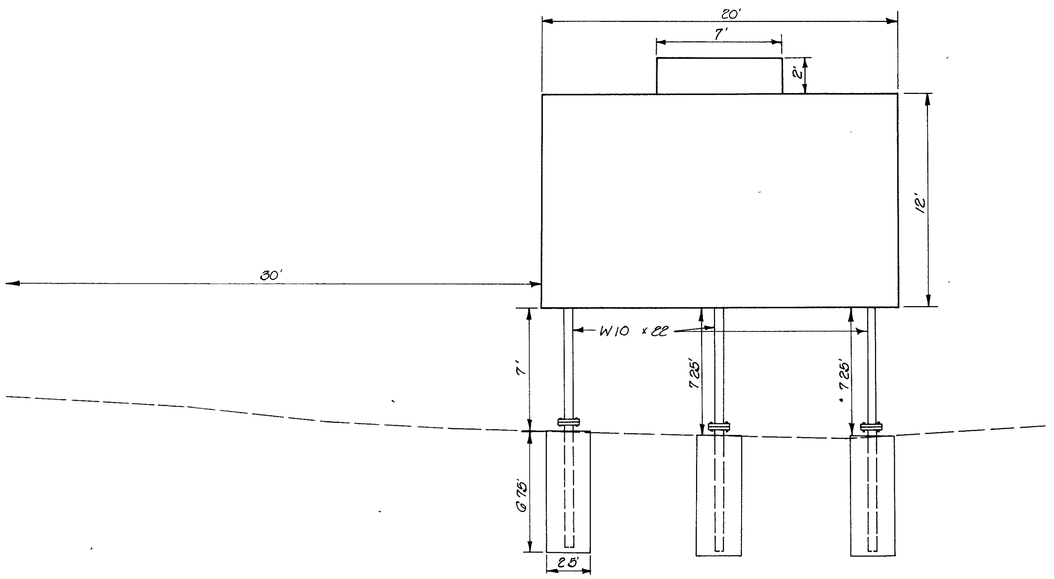


TYPE R-9-84
STA. 392+00 L



NOTE This sign is located behind guardrail. There is not sufficient guardrail in advance of the sign to warrent exclusion of the breakaway beam supports

TYPE GB
STA. 398+00 R



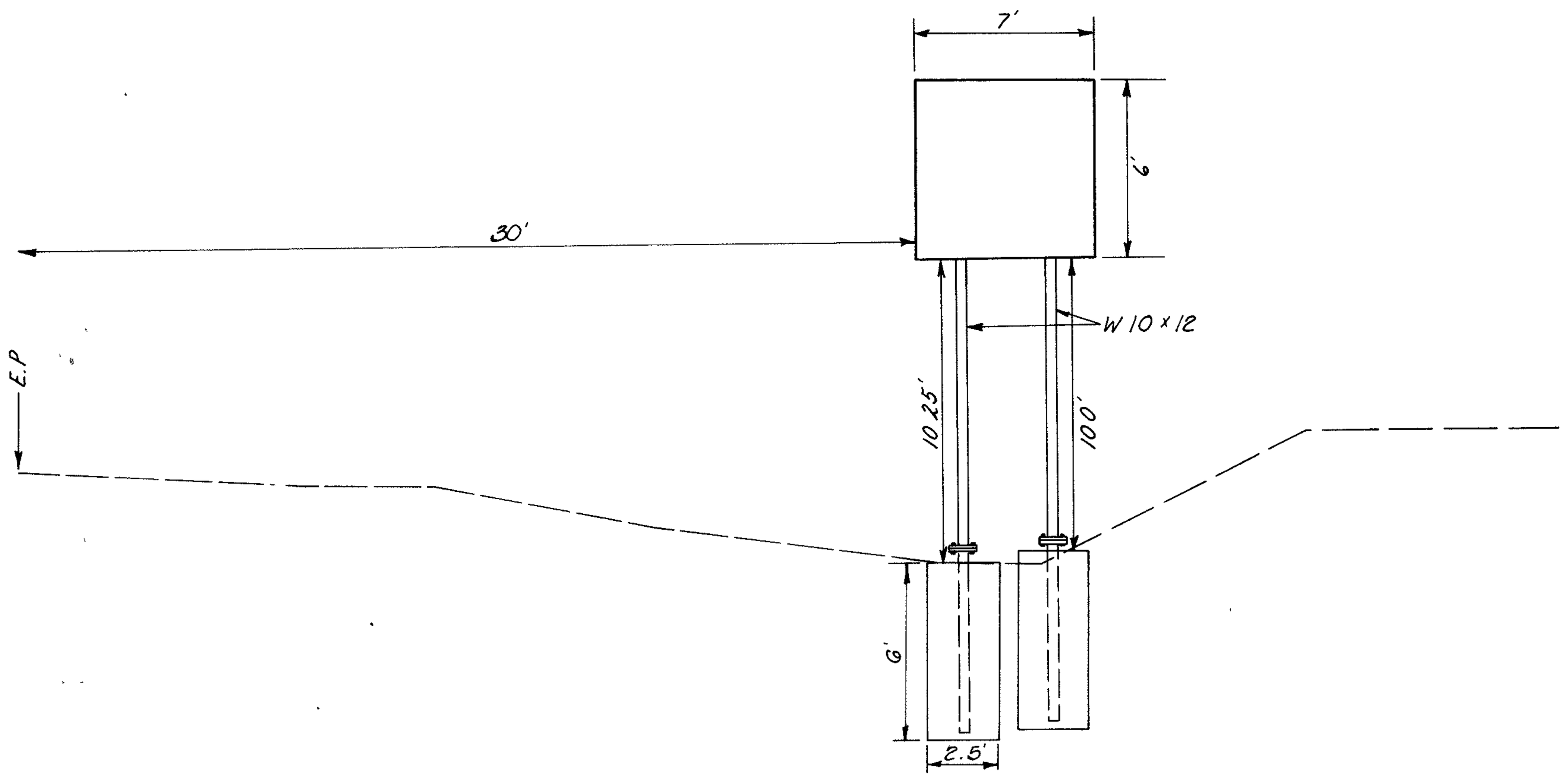
TYPE GB
STA. 400+00 L

SIGN INSTALLATION DETAILS

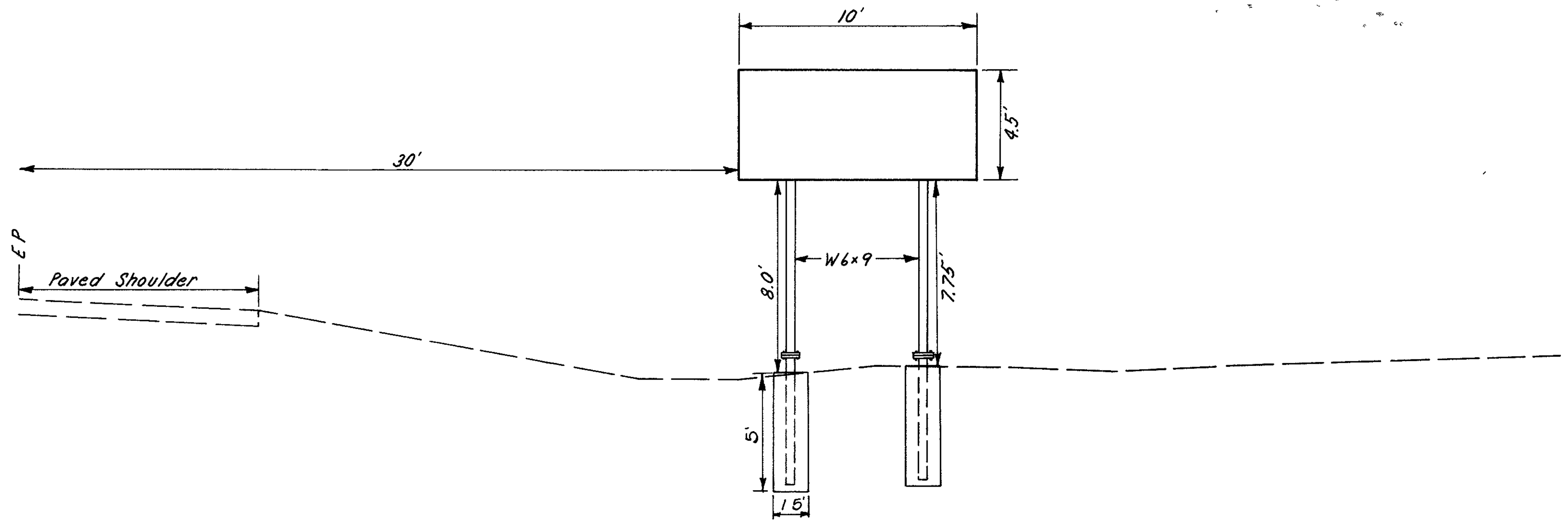
FHWA REGION	STATE	PROJECT	
5	OHIO		

131/219

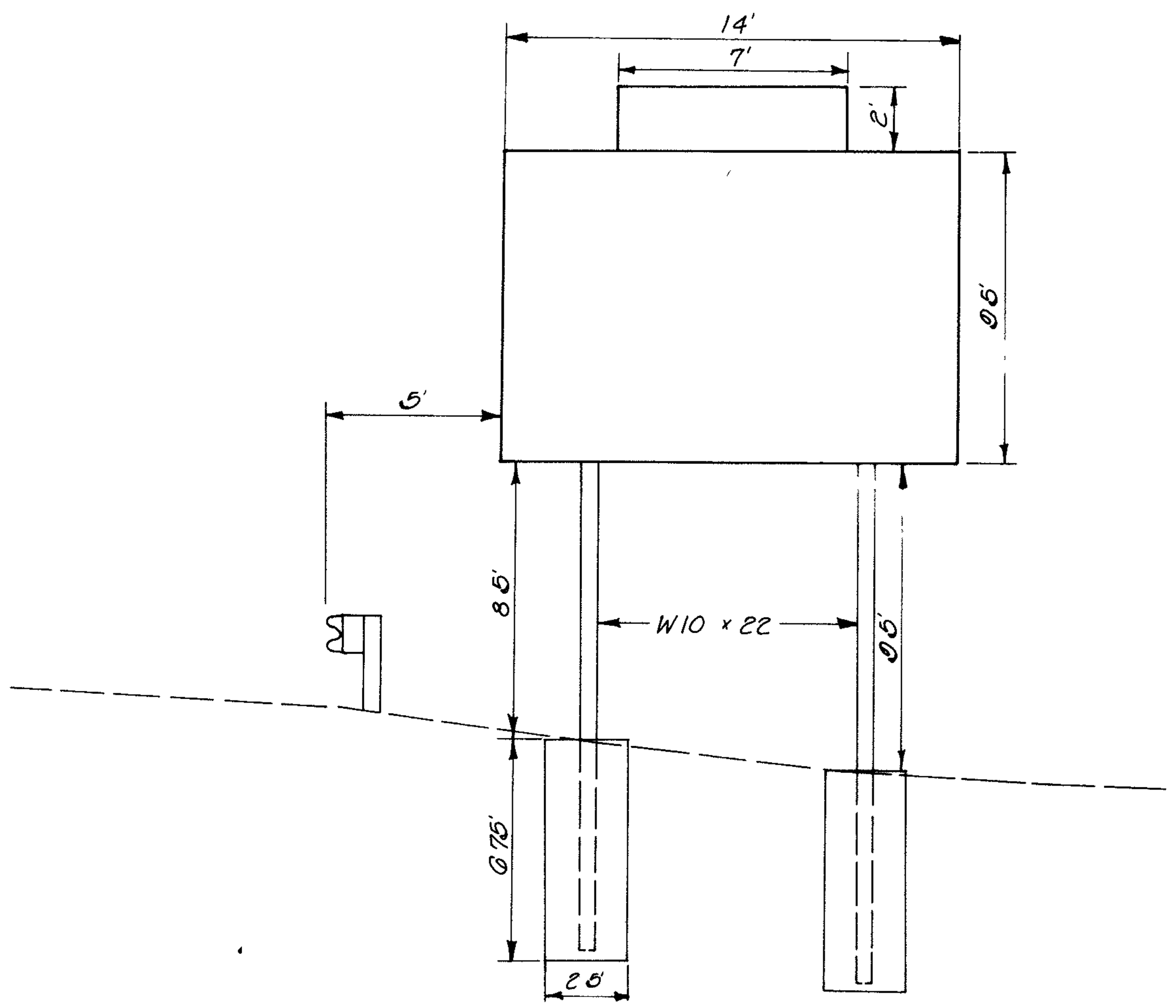
MOT-70-6.53/11.02



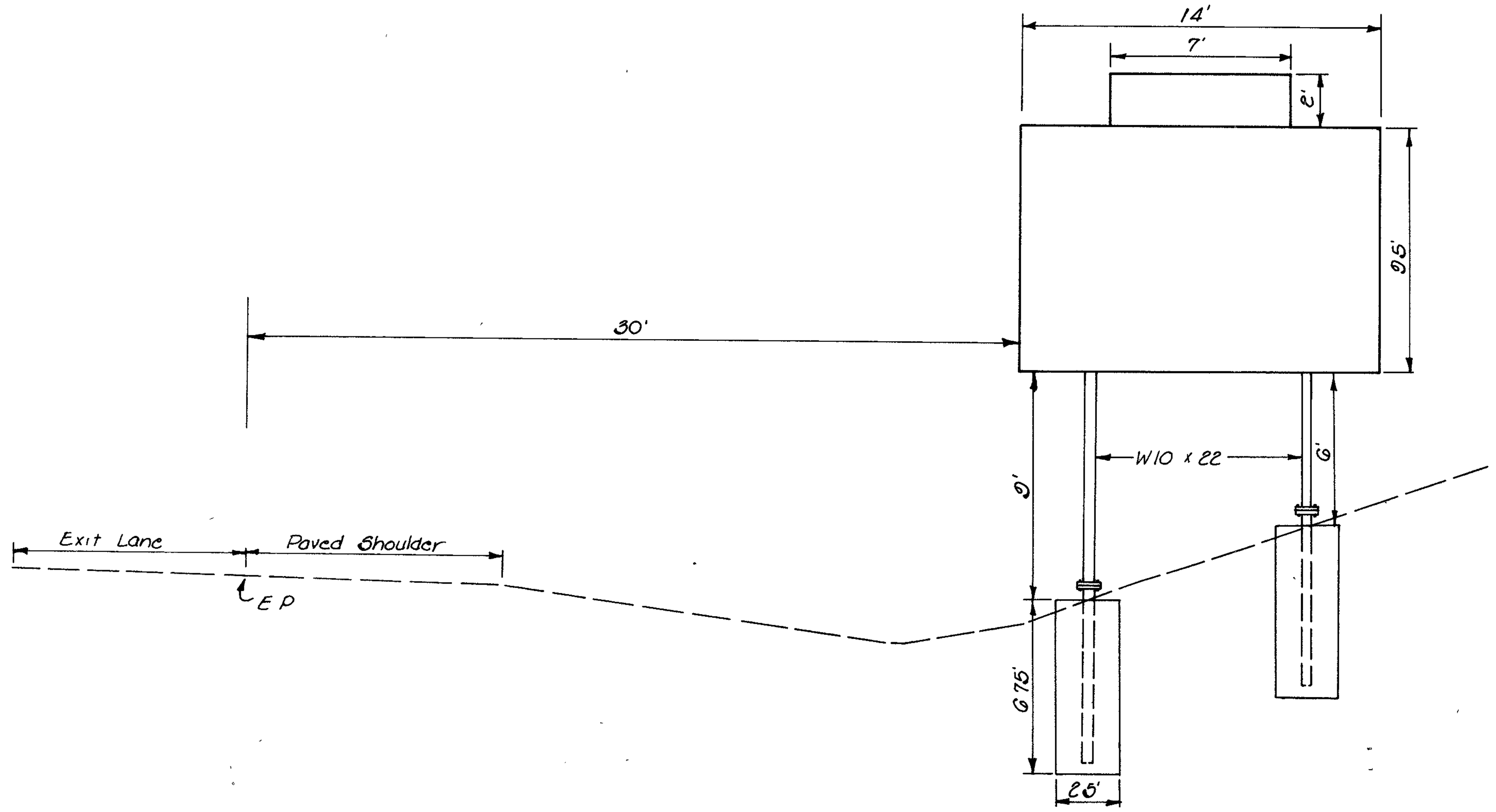
TYPE R-9-84
STA. 434+38 L



TYPE GSS-A
STA. 550+00 R



TYPE GB
STA. 558+60 R



TYPE GE
STA. 581+00 R

MEDIA RESOURCES CORP

SIGN INSTALLATION DETAILS

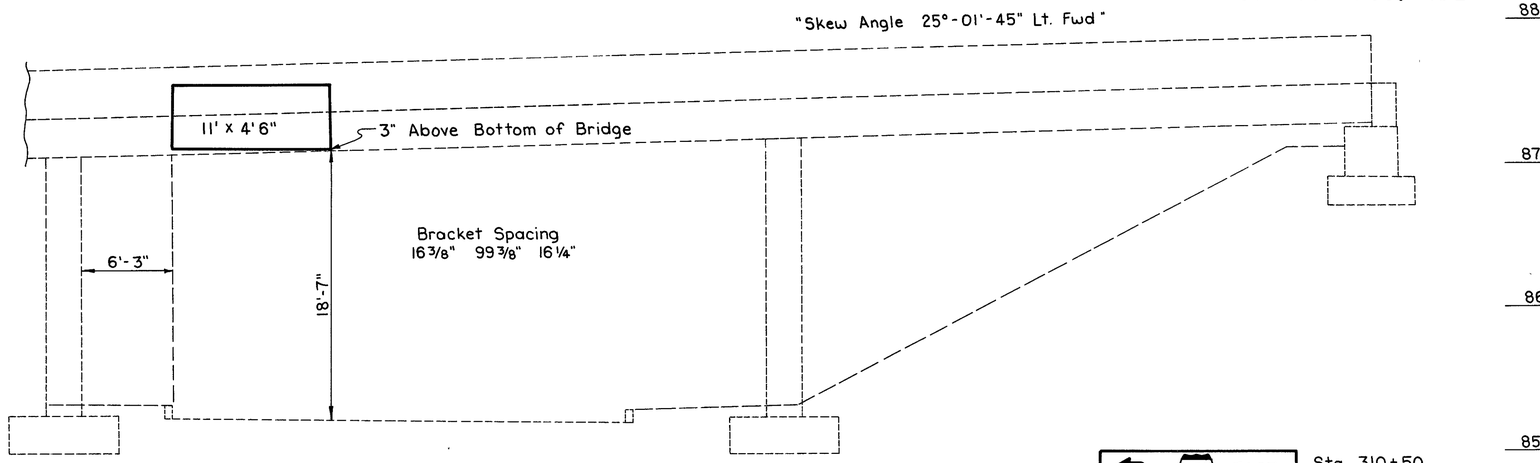
FHWA REGION	STATE	PROJECT	
5	OHIO		

131A / 219

MONTGOMERY COUNTY
MOT ~ 70 ~ 6.53/11.02

ESTIMATED QUANTITIES

Item Special	Cable Splice Kits	4 Each
Item 625	Trench	250 Lin. Ft.
Item 625	1½" Duct Cable with Two № 4 AWG 5000 Volt Cable	250 Lin. Ft.
Item 625	Pullbox 7.13.08 18"	1 Each
Item 625	Ground Rod	1 Each
Item 630	Removal of Overhead Mounted Sign and Disposal	1 Each
Item 630	Removal of Overhead Sign Support and Disposal	1 Each
Item 630	Overpass Structure Mounted Sign Support, Type TC-18.26, Design № 6	1 Each
Item 630	Signs, Extrusheet, Type G	49.5 Sq. Ft.
Item 631	Removal of Ballast and Storage	1 Each
Item 631	Removal of Luminaire and Storage	1 Each
Item 631	Signs Wired, Overpass Structure Mounted	1 Each
Item 631	Disconnect Switch with Enclosure Type X	1 Each
Item 631	Ballast, Type CMRI-100-480	1 Each
Item 631	Mercury Vapor Luminaire with Type H39HT-100 Watt Lamp	1 Each
Item 631	Sign Service	1 Each
Item 631	Switch Enclosure Mounting Bracket Assembly	1 Each
Item 631	Ballast Enclosure Mounting Bracket Assembly	1 Each
Item 631	Ballast Enclosure, Type B	1 Each



129 S

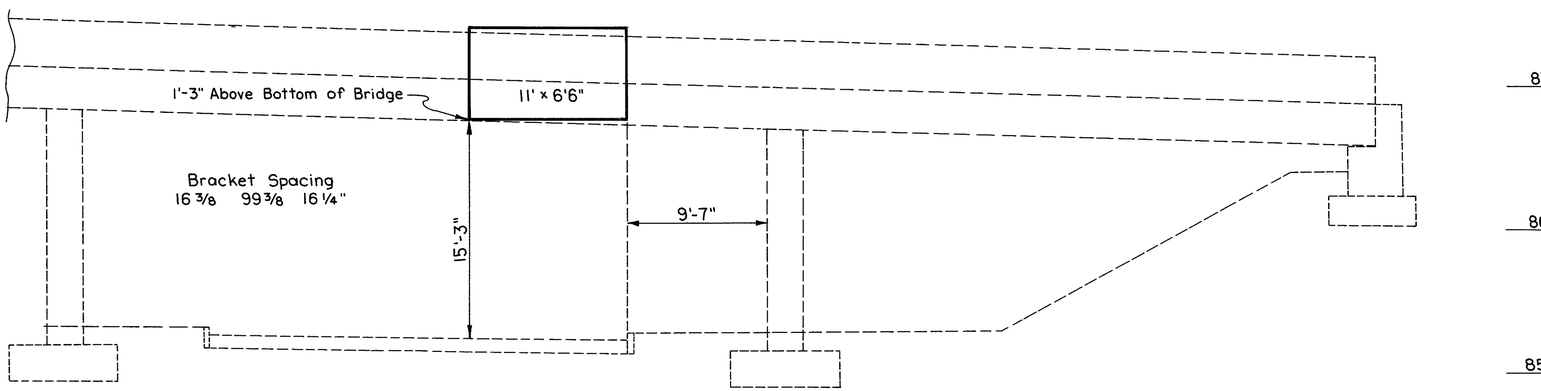
STA. 310+50 LEFT S.R. 48
"WESTBOUND LANE"

70 EAST
Columbus

Sta. 310+50
Level III
11' x 4'6"
G.H.

ESTIMATED QUANTITIES

Item Special	Cable Splice Kits	4 Each
Item 625	Trench	100 Lin. Ft.
Item 625	1½" Duct with Two № 4 ANG 5000 Volt Cable	100 Lin. Ft.
Item 625	Pullbox 7.13.08 18"	1 Each
Item 625	Ground Rod	1 Each
Item 630	Removal of Overhead Mounted Sign and Disposal	1 Each
Item 630	Removal of Overhead Sign Support and Disposal	1 Each
Item 630	Overpass Structure Mounted Sign Support, Type TC-18.26, Design № 6	1 Each
Item 630	Signs, Extrusheet, Type G	71.5 Sq. Ft.
Item 631	Removal of Ballast and Storage	1 Each
Item 631	Removal of Luminaire and Storage	1 Each
Item 631	Signs Wired, Overpass Structure Mounted	1 Each
Item 631	Disconnect Switch with Enclosure Type X	1 Each
Item 631	Ballast, Type CMRI-175-480	1 Each
Item 631	Mercury Vapor Luminaire with Type H39KB-175 Watt Lamp	1 Each
Item 631	Sign Service	1 Each
Item 631	Switch Enclosure Mounting Bracket Assembly	1 Each
Item 631	Ballast Enclosure Mounting Bracket Assembly, Type B	1 Each
Item 631	Ballast Enclosure, Type B	1 Each



128 S

STA. 308+78 RIGHT S.R. 48
"EASTBOUND LANE"

70 WEST
Indianapolis
NEXT RIGHT

Sta. 308+78
Level III
11' x 6'6"
G.H.

Quantities this Sheet
Carried to Sheet 138 & 138A

SIGN DETAILS STA. 308+78 AND STA. 310+50 S.R. 48

620 DELINEATORS

CALCULATIONS
MADE BY M.L.E. DATE 2-24-88
CHECKED G.A.S. DATE 2-26-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

122
219

ROADWAY	STATION TO STATION		SIDE	INTERVAL	TYPE 'A' POST	TYPE 'A' BRACK	TYPE 'C' POST	TYPE 'C' BRACK	TYPE 'D' POST	TYPE 'D' BRACK
I-70 MAINLINE										
I-70	342+45	359+02	R	400			4			
	372+00	414+20	"	"			11			
	427+10	463+80	"	"			9			
	478+19	580+00	"	"			25			
	588+50	600+58	"	"			3			
	613+00	670+39	"	"			14			
	668+98	733+89	"	"			16			
I-70	342+45	345+55	L	400			1			
	357+36	400+70	"	"			11			
	415+12	461+66	"	"			12			
	472+25	581+96	"	"			27			
	597+92	603+95	"	"			2			
	612+00	670+39	"	"			14			
	668+98	732+34	"	"			16			
I-70 MEDIAN CROSSOVERS										
	386+38								2	
	485+67								2	
	570+48								2	
	623+04								2	
INTERCHANGE State Route 49										
NB SR 49 (EXIT 24)										
	263+34	279+25	R	200			8			
SB SR 49										
	243+52	259+52	R	200			9			
NB SR 49										
	155+45	156+00	L	80			3			
	156+80		L&R				1		1	
	158+40	171+40	R	200			8			
SB SR 49 (EXIT 26)										
	138+44	139+21	L	90					2	
	140+11		L&R				1		1	
	141+01	143+71	R	90			4			
	145+71	153+71	R	200			5			
INTERCHANGE HOKE ROAD										
RAMP A	02+20	06+20	R	200			3			
	08+20		L&R				1		1	
	10+20		L						1	
	12+20		L&R				1		1	
	14+20	28+20	R	200			8			
RAMP B	12+25	32+35	L	200			11			
INTERCHANGE State Route 48										
RAMP A	13+82	15+02	L	30					5	
	15+32		L&R				1		1	
	15+92		R						1	
	17+72	31+72	R	200			8			
RAMP B	17+35		R						1	
	18+15		L&R				1		1	
	19+75	26+75	L	200			4			
RAMP C	0+00	08+00	R	200			5			
	10+00		L&R				1		1	
RAMP E	09+24		R						1	
	10+14		L&R				1		1	
	11+04	13+74	R	90			4			
	15+74	25+74	R	200			6			
SUB-TOTALS							259		27	

ROADWAY	STATION TO STATION		SIDE	INTERVAL	TYPE 'A' POST	TYPE 'A' BRACK	TYPE 'C' POST	TYPE 'C' BRACK	TYPE 'D' POST	TYPE 'D' BRACK
I-70 MAINLINE										
I-70	672+10	672+40	MED	5					6	
	689+60	689+90	MED	5					6	
SUB-TOTALS									12	

ROADWAY	STATION TO STATION		SIDE	INTERVAL	TYPE 'A' POST	TYPE 'A' BRACK	TYPE 'C' POST	TYPE 'C' BRACK	TYPE 'D' POST	TYPE 'D' BRACK
SUB-TOTALS										

SUB-TOTALS	ITEM 620 TYPE 'A' POST	TYPE 'A' BRACK	TYPE 'C' POST	TYPE 'C' BRACK	TYPE 'D' POST	TYPE 'D' BRACK	
Column I			259		27		DELINEATOR REMOVED FOR DISPOSAL
Column II					12		
TOTALS (TO GENERAL SUMMARY)			259 EACH		39 EACH		280 EACH

DELINEATOR SUB-SUMMARY

TRAFFIC CONTROL QUANTITIES

CALCULATIONS
MADE BY MLE DATE 2-25-88
CHECKED GAS DATE 2-29-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

133 219

MOT-70-6.53/11.02

* 100% STATE

ITEM 644 PAVEMENT MARKINGS

642 PAINT

* 740.05 INLAID, AS PER PLAN

	ROADWAY	SIDE	STATION FROM	STATION TO	EDGE LINE (WHITE)	EDGE LINE (YELLOW)	LANE LINE		CENTER LINE SOLID DOUBLE	CENTER LINE BROKEN SINGLE	CENTER LINE BROKEN AND SOLID DOUBLE		8" CHANNEL LINE (WHITE)	8" CHANNEL LINE YELLOW	24" STOP LINE	24" BROAD TRANSVERSE LINE (WHITE)	24" BROAD TRANSVERSE LINE (YELLOW)	LANE ARROWS	WORD "ONLY" ON PAVEMENT	* EDGE LINE (WHITE)	* EDGE LINE (YELLOW)	* LANE LINE
					LIN.FT.	LIN.FT.	LIN.FT.		LIN.FT.	LIN.FT.	LIN.FT.		LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	LIN. FT.	LIN. FT.	LIN. FT.
I-70	MAINLINE	R	342+45	359+02																1657	1657	1657
		"	359+02	372+00																	1298	1298
		"	372+00	414+20																4220	4220	4220
		"	414+20	424+10																	990	990
		"	424+10	427+10									300								300	300
		"	427+10	466+07	3897	3897	3897															
		"	466+07	478+19		1212	1212															
		"	478+19	580+00	10181	10181	10181															
		"	580+00	585+90		590	590															
		"	585+90	588+50		260	260						260									
		"	588+50	601+85	1335	1335	1335															
		"	601+85	613+00		1115	1115															
		"	613+00	670+39	5739	5739	5739															
		"	668+98	733+89	6491	6491	6491															
		L	342+45	343+55																110	110	110
		"	343+55	346+70									315								315	315
		"	346+70	357+36																	1066	1066
		"	357+36	400+70																4334	4334	4334
		"	400+70	412+01		1131	1131															
		"	412+01	461+66	4965	4965	4965															
		"	461+66	467+66		600	600						600									
		"	467+66	472+25		459	459															
		"	472+25	581+46	10921	10921	10921															
		"	581+46	597+17		1571	1571															
		"	597+17	603+95	678	678	678															
		"	603+95	606+35		240	240						240									
		"	606+35	612+00		565	565															
		"	612+00	670+39	5839	5839	5839															
		"	668+98	733+89	6491	6491	6491															
	STATE ROUTE 49																					
	NB SR 49 (EXIT 24)		263+34	269+50	616																	
			269+50	274+00	450		450															
			274+00	277+16	316								316			435						
			277+16	274+25	291	291																
	SB SR 49		243+52	251+68	816																	
			251+68	253+81	213		213															
			253+81	257+45	364								364									
			257+45	264+18	673	673																
	NB SR 49		134+80	139+85	505	505	505															
			155+45	156+95	150	150																
			156+95	160+10	315																	
			160+10	161+20	110		110						110									
			161+20	171+37	1017		1017															
	SB SR 49 (EXIT 26)		138+44	140+82	238	238																
			140+82	143+82	300								300			468						
			143+82	148+14	432		432															
			148+14	153+77	563																	
	HOKE ROAD		48+95	62+85	2780						1390											
	RAMP A		01+92	13+80	1188	1188																
			13+80	16+15	235								235									
			16+15	18+80	265		265															
			18+80	28+19	939																	
	RAMP B		11+92	21+66	974	974									67							
			21+66	27+66	600								600			900						
			27+66	30+80	314		314															
			30+80	32+25	145																	

REVISED 5-28-91

PAVEMENT MARKING SUB-SUMMARY

TRAFFIC CONTROL QUANTITIES

CALCULATIONS
MADE BY M.L.E. DATE 2-25-88
CHECKED G.A.S. DATE 2-29-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

124/219

* 100% STATE

PAVEMENT MARKINGS

644.05 INLAID, AS PER PLAN

	ROADWAY	SIDE	STATION FROM	STATION TO	644 EDGE LINE (WHITE)	644 EDGE LINE (YELLOW)	644 LANE LINE	642 EDGE LINE (WHITE)	642 CENTER LINE SOLID DOUBLE	642 CENTER LINE BROKEN SINGLE	642 CENTER LINE BROKEN AND SOLID DOUBLE	644 8" CHANNEL LINE (WHITE)	644 8" CHANNEL LINE YELLOW)	644 24" STOP LINE	644 24" BROAD TRANSVERSE LINE (WHITE)	644 24" BROAD TRANSVERSE LINE (YELLOW)	644 LANE ARROWS	644 WORD "ONLY" ON PAVEMENT	644.05 * EDGE LINE (WHITE)	644.05 * EDGE LINE (YELLOW)	644.05 * LANE LINE
					LIN.FT.	LIN.FT.	LIN.FT.	LIN FT	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	EACH	LIN. FT	LIN. FT.	LIN. FT.
STATE ROUTE 48																					
MAINLINE		EB	307+40	312+00	20		20														
		"	307+60	311+30	370	370	370														
		"	311+30	311+60	30		30						30								
		"	311+60	312+00	40		40					40	40								
		WB	307+40	307+60	20		20														
		"	307+60	311+15	355	355	355					355					3	2			
		"	311+15	311+30	15	15	15														
		"	311+30	312+00	70		70						70			40					
	RAMP A		15+25	16+01	76							76									
			16+01	22+72	671		671														
			22+72	31+72	900																
	RAMP B		17+20	18+70	150	150															
			18+70	21+10	240							240			317						
			21+10	23+29	219		219														
			23+29	26+75	346																
	RAMP C		0+00	03+53	353																
			03+53	05+90	237		237														
			05+90	08+50	260							260			374						
			08+50	10+00	150	150															
	RAMP E		08+64	10+14	150	150															
			10+14	11+42	128							128									
			11+42	15+74	432		432														
			15+74	25+74	1000																
KIMMEL ROAD			48+93	53+40				894	447												
CRESTWAY DRIVE			47+72	52+10				876			438										
UNION ROAD			53+90	65+85				2390			1195										
DOGLEG ROAD			05+50	17+42				2384			1192										
KINMONT ROAD			00+12	02+25				426			213										
									447 L.F		4428 L.F.										
TOTALS TO GENERAL SUMMARY					77,578	69,489	70,065	6970	0.09 MI.		0.84 MI.	4739	140	67	2494	40	3	2	10,321	14,290	14,290
					14.69 MI	13.16 MI	13.26 MI	1.32 MI											1.95 MI.	2.70 MI.	2.70 MI.
					TOTAL = 27.85 MI				0.09 MI.	TOTAL = 0.92 MI.		TOTAL = 4879 L.F.		67	TOTAL = 2534 L.F.		3	2	TOTAL = 4.65 MI.		2.70 MI.

REVISED 5-24-91

PAVEMENT MARKING SUB-SUMMARY

* Includes 7'x2' Exit Panel

TRAFFIC CONTROL QUANTITIES

CALCULATIONS MADE BY M.L.E. DATE 3-4-88 CHECKED G.A.S. DATE 3-7-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

135 219

A0T-70-6.53/11.02

ITEM 630 TRAFFIC SIGNS AND SIGN SUPPORTS

REF. NO.	STATION	SIDE	CODE	SIZE	SIGNS, TYPE 'G'			GROUND MOUNTED SIGN SUPPORTS														
					FLAT SHEET	EXTRU SHEET	PERMANENT OVERLAY	ONE-WAY SUPPORT NO.4 POST	NO.2 POST	NO.3 POST	NO.4 POST	S4 X 7.7 BEAM	W6 X 9 BEAM	W10 X 12 BEAM	W8 X 18 BEAM	W10 X 22 BEAM	W12 X 30 BEAM	CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION	REMOVAL OF GRD.MTD. SIGN AND DISPOSAL	REMOVAL OF GRD.MTD. MAJOR SIGN AND DISPOSAL	REMOVAL OF GRD.MTD. BEAM AND DISPOSAL	REMOVAL OF GRD.MTD. POST AND DISPOSAL	REMOVAL OF GRD.MTD. MAJOR SIGN AND REERECTION
					SQ.FT.	SQ.FT.	SQ.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	CU.YD.	EACH	EACH	EACH	EACH	EACH	EACH
I-70	MAINLINE																						
S-1	349+60	L	M-2-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		M-37-36	36"x18"	4.5																			
S-2	352+40	R	X-6L	12"x36"	3.0				11.0											1			1	
S-3	355+41	R	W-49R-48	48"x48'	16.0						16.0-16.0									1			2	
S-4	357+44	L	GE	14'x11.5			175*																	
S-5	365+02	L	GS	10'x5.5'																	1	2		
S-123	371+60	R	GB	12'x9.5'		128*										25.0-24.0		2.46						
S-6	372+11	L	GC	15'x8.5'																	1	2		
S-124	372+15	L	GB	20'x12'		254*											29.0-30.0-27.5	4.50						
S-7	374+93	R	M-5-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		IM-39-36	36"x18"	4.5																			
S-8		R	M-2-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		M-39-36	36"x18"	4.5																			
S-9	377+50	R	X-6L	12"x36"	3.0				11.0											1			1	
S-10	378+53	L	X-6L	12"x36"	3.0				11.0											1			1	
S-11	380+97	R	W-61-36	36"x36"																1			1	
S-12	381+02	L	R-70-48	48"x36"																1			2	
S-13	381+96	R	GB	12'x9.5'																	1	2		
S-118	382+00	L	GC	13'x7'		105*									21.0-22.0			2.20	2					
S-14	386+38	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-15	MEDIAN	R	R-19-24	24"x30"	5.0															1			1	
S-16	CROSSOVER	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-17		R	R-19-24	24"x30"	5.0															1			1	
S-18	385+31	R	N-41	12"x36"	3.0				11.0											1			1	
S-19		L	N-41	12"x36"	3.0				11.0											1			1	
S-20	386+83	L	GB	14'x12'																	1	2		
S-21	388+39	R	R-70-48	48"x36"																1			2	
S-119	389+00	L	GSC	10'x4'		54*								21.0-21.5				2.20	2	1			2	
S-120	392+00	L	R-9-84	7'x6'										22.5-20.5				2.20	2				2	1
S-22	393+49	L	M-5-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		IM-40-36	36"x18"	4.5																			
S-23		R	M-2-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		M-37-36	36"x18"	4.5																			
S-125	398+00	R	EB	12'x9.5'		128*										24.0-22.0		2.46	2					
S-24	398+02	R	GA-1	12'x5'																	1	2		
S-126	400+00	L	GB	20'x12'		254*										26.0-26.0-26.0		3.69	3					
S-25	402+81	L	W-61-36	36"x36"																1			1	
S-26	406+12		GC	20'x8.5'			184*																	
S-27	414+92	R	GE	12'x9.5'			128*																	
S-28	415+08	L	W-49R-48	48"x48'	16.0						16.0-16.0									1			2	
S-29	428+09	R	GF	6'x5'		30						17.0-17.5						0.54	2	1			2	
S-30	431+57	R	GCP	16'x7'		112									22.0-22.5			2.20	2	1			4	
S-116	434+38	R	R-10-48	4'x5'	20.0						15.0-15.0									1			2	
S-117	434+38	R	R-10-48	4'x5'	20.0						15.0-15.0									1			2	
S-31	437+53	R	N-41	12"x36"	3.0				11.0											1			1	
S-32		L	N-41	12"x36"	3.0				11.0											1			1	
S-33	434+38	L	R-9-84	7'x6'										22.5-22.0				2.20	2				2	1
S-34	444+24	R	W-61-36	36"x36"																1			1	
S-35	451+03	R	GJ	9'x3'		27						16.5-18.5						0.54	2	1			2	
S-36	452+20	R	GN	9'x3'		27						15.0-16.0						0.54	2	1			2	
S-37	458+97	R	W-49R-48	48"x48'	16.0						16.0-16.0									1			2	
S-38	459+03	L	M-2-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		M-37-36	36"x18"	4.5																			
S-39	460+31	L	GF	6'x5'		30						17.0-17.0						0.54	2	1			2	
S-43	480+74	R	M-5-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		IM-39-36	36"x18"	4.5																			
S-44	485+67	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-45	MEDIAN	R	R-19-24	24"x30"	5.0															1			1	
S-46	CROSSOVER	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-47		R	R-19-24	24"x30"	5.0															1			1	
S-48	485+84	R	R-70-48	48"x36"																1			2	
S-49	486+62	R	W-61-36	36"x36"																1			1	
S-50	486+89	L	GB	13'x12'			170*																	
S-51	490+93	R	R-10-48	4'x5'	20.0						15.0-15.0									1			2	
S-52	491+50	R	N-41	12"x36"	3.0				11.0											1			1	
S-53		L	N-41	12"x36"	3.0				11.0											1			1	
S-54	498+10	L	GC	20'x6'		134*									21.5-24.0-26.0			3.30	3	1			12	

TRAFFIC SIGN SUB-SUMMARY

✱ Includes 7'x2' Exit Panel

TRAFFIC CONTROL QUANTITIES

CALCULATIONS MADE BY M.L.E. DATE 3-4-88 CHECKED G.A.S. DATE 3-7-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

ITEM 630 TRAFFIC SIGNS AND SIGN SUPPORTS

REF. NO.	STATION	SIDE	CODE	SIZE	SIGNS, TYPE 'G'			GROUND MOUNTED SIGN SUPPORTS															
					FLAT SHEET	EXTRU SHEET	PERMANENT OVERLAY	ONE-WAY SUPPORT NO.4 POST	NO.2 POST	NO.3 POST	NO.4 POST	S4 X 7.7 BEAM	W6 X 9 BEAM	W10 X 12 BEAM	W8 X 18 BEAM	W10 X 22 BEAM	W12 X 30 BEAM	CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION	REMOVAL OF GRD.MTD. SIGN AND DISPOSAL	REMOVAL OF GRD.MTD. MAJOR SIGN AND DISPOSAL	REMOVAL OF GRD.MTD. BEAM AND DISPOSAL	REMOVAL OF GRD.MTD. POST AND DISPOSAL	REMOVAL OF GRD.MTD. MAJOR SIGN AND REERECTION
					SQ.FT.	SQ.FT.	SQ.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	CU.YD.	EACH	EACH	EACH	EACH	EACH	EACH
S-55	503+70	L	W-62-36	36"x36"																1			1	
S-58	530+10	L	W-61-36	36"x36"																1			1	
S-59	535+00	R	GB	14'x9.5'			147✱																	
S-60	543+50	R	N-41	12"x36"	3.0				11.0											1			1	
S-61		L	N-41	12"x36"	3.0				11.0											1			1	
S-127	558+60	R	GB	14'x9.5'		147✱										25.0-26.0		2.46						
S-62	554+60	L	W-61-36	36"x36"																1			1	
S-63	558+62	R	GS	10'x5.5'																	1		2	
S-64	559+46	L	GJ	13'x5.5'																	1	2		
S-65	563+93	L	R-10-48	4'x5'	20.0						15.0-15.0									1			2	
S-66	570+48	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-67	MEDIAN	R	R-19-24	24"X30"	5.0															1			1	
S-68	CROSSOVER	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-69		R	R-19-24	24"X30"	5.0															1			1	
S-70	578+50	R	GB	14'x9.5'																	1	2		
S-71	579+53	L	R-70-48	48"x36"																1			2	
S-122	581+00	R	GE	14'x9.5'		147✱								25.5-22.5				0.54	2					
S-72	588+67	R	GF	6'x5'			30																	
S-73	594+53	R	X-6L	12"x36"	3.0				11.0											1			1	
S-74	594+69	R	X-6R	12"x36"	3.0				11.0											1			1	
S-75	596+03	L	X-6R	12"x36"	3.0				11.0											1			1	
S-76	596+19	L	X-6L	12"x36"	3.0				11.0											1			1	
S-77	596+85	R	N-41	12"x36"	3.0				11.0											1			1	
S-78		L	N-41	12"x36"	3.0				11.0											1			1	
S-79	598+45	R	W-49R-48	48"x48'	16.0						16.0-16.0									1			2	
S-80	599+09	L	W-49R-48	48"x48'	16.0						16.0-16.0									1			2	
S-81	603+75	L	GF	6'x5'			30																	
S-82	612+15	L	GE	14'x12'			182✱																	
S-83	615+36	R	W-68-48	48"x48'																1			2	
S-84	618+21	R	M-5-36-2	36"x36"	9.0						14.0									1			1	
S-85	SIGN ASS'LY		IM-39-36	36"x18"	4.5																			
S-86	623+04	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-87	MEDIAN	R	R-19-24	24"X30"	5.0															1				
S-88	CROSSOVER	L	R-123-36	36"x36"	9.0					13.0										1			1	
S-89		R	R-19-24	24"X30"	5.0															1				
S-90	625+41	L	GN	9'x3'		27						15.5-16.0						0.54	2	1			3	
S-91	630+25	L	GB	14'x12'			182✱																	
S-92	640+98	R	GJ	16'x7'			112																	
S-93	641+71	R	X-6L	12"x36"	3.0				11.0											1			1	
S-94	642+96	L	X-6L	12"x36"	3.0				11.0											1			1	
S-95	648+90	R	N-41	12"x36"	3.0				11.0											1			1	
S-96		L	N-41	12"x36"	3.0				11.0											1			1	
S-97	656+92	L	GB	14'x12'			182✱																	
S-98	666+95	R	X-6L	12"x36"	3.0				11.0											1			1	
S-99	667+96	L	X-6R	12"x36"	3.0				11.0											1			1	
S-100	668+04	L	X-6L	12"x36"	3.0				11.0											1			1	
S-101	700+34	R	N-41	12"x36"	3.0				11.0											1			1	
S-102		L	N-41	12"x36"	3.0				11.0											1			1	
S-103	707+88	L	GJ	18'x7'			126																	
S-104	711+08	R	GCA	15'x8.5'			141.5✱																	
S-105	713+94	L	R-10-48	4'x5'	20.0						15.0-15.0									1			2	
S-106	723+62	R	GB	12'x6'		86✱								21.5-22.5				2.20	2	1			2	
S-107	724+04	L	M-5-36-2	36"x36"	9.0						14.0									1			1	
	SIGN ASS'LY		IM-40-36	36"x18"	4.5															1			2	
S-116	Not Used																							
S-117	Not Used																							
S-127a	550+00	R	GSS-A	10'x4.5'		59✱								19.5-21.5				2.2	2					
HOKE ROAD RAMP A																								
S-108	02+97	R	R-15D	30"x30"	6.25				12.0-12.0	12.0										1			1	
RAMP B									12.0-12.0															
S-109	12+25	L	R-1-48	48"x48"	16.0						14.0-14.0									1			2	
	SIGN ASS'LY		R-41B-36	36"x36"	9.0															1				
S-110	12+34	R	R-1-48	48"x48"	16.0			14.0			14.0									1			2	
	SIGN ASS'LY		R-41B-36	36"x36"	9.0															1				
			R-43R-36	36"x12"	3.0															1				
			R-43L-36	36"x12"	3.0															1				

TRAFFIC SIGN SUB-SUMMARY

TRAFFIC CONTROL QUANTITIES

CALCULATIONS MADE BY M.L.E DATE 3-4-88 CHECKED G.A.S. 3-7-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

ITEM 630 TRAFFIC SIGNS AND SIGN SUPPORTS

REF. NO.	STATION	SIDE	CODE	SIZE	SIGNS, TYPE 'G'			GROUND MOUNTED SIGN SUPPORTS														
					FLAT SHEET	EXTRU SHEET	PERMANENT OVERLAY	ONE-WAY SUPPORT NO.4 POST	NO.2 POST	NO.3 POST	NO.4 POST	S4 X 7.7 BEAM	W6 X 9 BEAM	W10 X 12 BEAM	W8 X 18 BEAM	W10 X 22 BEAM	W12 X 30 BEAM	CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION	REMOVAL OF GRD.MTD. SIGN AND DISPOSAL	REMOVAL OF GRD.MTD. MAJOR SIGN AND DISPOSAL	REMOVAL OF GRD.MTD. BEAM AND DISPOSAL	REMOVAL OF GRD.MTD. POST AND DISPOSAL	REMOVAL OF GRD.MTD. MAJOR SIGN AND REERECTION
					SQ.FT.	SQ.FT.	SQ.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	CU.YD.	EACH	EACH	EACH	EACH	EACH	EACH
S-111	15+30	L	R-41A-36	36"x24"	6.0															1				2	
S-112		R	R-41A-36	36"x24"	6.0															1				2	
S-113	16+13	L	D-4	9'x5.5'		49.5							19.5-21.5					0.66	2					2	
S-114	19+14	L	W-45-48	48"x48"	16.0						16.0-16.0									1				2	
	SIGN ASS'LY		W-145A-30	30"x16"	3.3																				
S-115		R	W-45-48	48"x48"	16.0						16.0-16.0									1				2	
	SIGN ASS'LY		W-145A-30	30"x16"	3.3																				
TOTALS TO GENERAL SUMMARY					604.4	1798.5	1789.5	14	334	116	542	166	41	263	159	224	86.5	38.17	36	94	8	14	140	2

TRAFFIC SIGN SUB-SUMMARY

* Includes 7'x2' Exit Panel

TRAFFIC CONTROL QUANTITIES

CALCULATIONS MADE BY M L E DATE 3-4-88 CHECKED G.A.S DATE 3-7-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

138 219

MOT-70-6.53/11.02

ITEM 630 OVERHEAD TRAFFIC SIGNS AND SIGN SUPPORTS

REF. NO.	STATION	SIDE	CODE	SIZE	SIGNS		OVERPASS STRUCTURE MOUNTED SIGN SUPPORTS								ITEM 631		ITEM 631	ITEM 631
					EXTRUSHEET TYPE G	PERMANENT OVERLAY TYPE 'G'	TYPE TC-18.26 DESIGN Nº 6								Sign Attachment Assembly	Removal of Overhead Mounted Sign and Reerection	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION TYPE 18.24	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL TYPE 18.26	Removal of Ballast and STORAGE	REMOVAL of Luminaire and STORAGE
					SQ. FT.	SQ.FT.	Each								EACH	EACH	EACH	EACH	EACH	EACH	EACH
I-70 MAINLINE																					
S-40	464+21	L	GG	16'x7'																	
S-41		L	GB	14'x12'		182*											1				
S-42		L	GE	17'x9.5'		175.5*															
S-56	506+05	L	GB	14'x12'		182*									1	1		1			
S-57		L	GB	14'x12'		182*									1	1		1			
STATE ROUTE 48																					
S-128	308+78	R	GH	11' x 6'6"	71.5		1										1		1	1	1
S-129	310+50	L	GH	11' x 4'6"	49.5		1										1		1	1	1
TOTALS TO GENERAL SUMMARY					121.0	721.5	2								2	2	3	2	2	2	2

TRAFFIC CONTROL QUANTITIES

CALC. BY U.S. DATE 4-3-91
CHKD. BY R.B. DATE 4-3-91

FHWA REGION	STATE	PROJECT	
5	OHIO		

138A
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MONTGOMERY COUNTY
MOT~70~6.53/11.02

OVERHEAD SIGN LIGHTING

SHEET NO.	REFERENCE NO.	STATION	SIDE	CODE	SIGN SIZE		ITEM 625 CABLE SPLICING KITS	ITEM 625 PULLBOX 713.08 18"	ITEM 625 TRENCH	ITEM 625 GROUND ROD	ITEM 625 1 1/2" DUCT WITH TWO NO. 4 AWG 5000 VOLT CABLE	CABLE	ITEM 631 SIGNS WIRED OVERPASS STRUCTURE MOUNT	ITEM 631 BALLAST TYPE CMRI-100 (480)	ITEM 631 BALLAST TYPE CMRI-175 (480)	ITEM 631 BALLAST WIRING ENCLOSURE TYPE B	ITEM 631 BALLAST WIRING ENCLOSURE MOUNTING BRACKET	ITEM 631 MERCURY VAPOR LUMINAIRE TC-31.21 WITH 175 WATT LAMP	ITEM 631 MERCURY VAPOR LUMINAIRE TC-31.21 WITH 100 WATT LAMP	ITEM 631 SIGN SERVICE	ITEM 631 DISCONNECT SWITCH WITH ENCLOSURE TYPE X	ITEM 631 SWITCH ENCLOSURE MOUNTING BRACKET ASSEMBLY	
							EACH	EACH	LIN. FT.	EACH	LIN. FT.		EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
		STATE ROUTE 48																					
	S-128	308+78	RT.	G.H.	11' X 6'-6"		4	1	100	1	100		1		1	1	1	1		1	1	1	
	S-129	310+50	LT.	G.H.	11' X 4'-6"		4	1	250	1	250		1	1		1	1		1	1	1	1	
TOTALS TO GENERAL SUMMARY							8	2	350	2	350		2	1	1	2	2	1	1	2	2	2	

A:MOT70TC1 19910404

802 BARRIER REFLECTORS

CALCULATIONS
MADE BY MLE DATE 6-1-88
CHECKED G.A.S. DATE 6-3-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT - 70 - 6.53/11.02

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STATIONING FROM	STATIONING TO	SIDE	SPACING (FT)	TYPE A W	TYPE A Y	TYPE B W	TYPE B Y	TYPE A2 W	TYPE A2 Y	TYPE B2 W	TYPE B2 Y	REMARKS
IR 70												
346+20	347+95	R	100	3								
347+25	348+50	L	62.5	2		1						
346+49	348+49	M	100		6							3 Each Direction
350+90	353+20	R	100	2		2						
350+44	353+26	R	100	3		1						
352+25	355+06	L	100	3		1						
352+03	354+60	L	100	3		1						
370+86	372+56	R	85	3								
370+75.5	372+75.5	M	100		6							3 Each Direction
371+40	372+78	L	69	2		1						
376+36	379+10	R	100	2		2						
375+60	378+84	R	100		3		2					
377+15	380+39	L	100		3		2					
376+90	379+64	L	100	2		2						
397+62	399+12	R	75	2		1						
397+96.6	399+96.6	M	100		6							3 Each Direction
398+81	400+31	L	75	2		1						
431+00	432+50	R	75	2		1						
430+34.6	432+97.1	M	87.5		8							4 Each Direction
430+78	432+44	L	83	2		1						
450+79	452+72	R	96.5	2		1						
451+00	453+00	M	100		6							3 Each Direction
451+30	453+30	L	100	2		1						
464+07	465+57	L	100		3							
464+10	465+58	L	100	3								
504+75	506+00	R	62.5	2		1						
504+89.3	506+89.3	M	100		6							3 Each Direction
505+75	507+00	L	62.5	2		1						
557+90	563+70	R	96.7	6		1						
558+10.5	560+10.5	M	100		6							3 Each Direction
559+00	560+30	L	65	2		1						
585+00	588+75	L	100	5								
593+12.1	596+62	R	100	2		3						
592+57.1	596+45	R	100		2		3					
594+25	598+12.9	L	100		2		3					
592+366	597+43	L	100	5		2						
607+45	613+25	R	100	7								
607+07	612+95	L	100	7								
616+00	621+25	L	100	7								
625+78	630+50	R	100	3		3						
625+23	630+45	R	100		4		3					
626+63	631+96	L	100		4		3					
625+00	631+39	L	100	5		3						
640+10.8	646+94.2	R	100	7		1						
639+75.8	642+84	R	100		3		2					
641+84	644+92.2	L	100		3		2					
641+96	644+592	L	100	2		2						
665+571	668+32	R	100	2		2						
664+956	668+22	R	100		3		2					
666+83	670+034	L	100		3		2					
664+02.1	669+039	L	100	5		1						
670+90	679+90	R	100	10								
672+85	680+10	L	100	9								
693+60	695+40	R	90	2		1						
693+74.8	695+74.8	M	100		6							3 Each Direction
694+10	695+90	L	90	2		1						
720+65	729+03	R	100	10								
720+20	730+45	L	100	12								
COLUMN TOTALS				154	83	40	24					

STATIONING FROM	STATIONING TO	SIDE	SPACING (FT)	TYPE A W	TYPE A Y	TYPE B W	TYPE B Y	TYPE A2 W	TYPE A2 Y	TYPE B2 W	TYPE B2 Y	REMARKS
Kimmel Road												
49+284	53+183	R	100	2		3						
49+329	53+414	L	100	3		3						
Crestway Drive												
48+50	51+55	R	100	2		3						
48+03	51+77	L	100	2		3						
N.B. S.R. 49												
135+03	140+16	L			2		5					
134+81	139+76				2		4					
Hoke Road												
50+00 Hoke Road	6+60 Ramp A	R	100	9								
53+85	57+50	R	100	4		2						
19+65 Ramp B	62+75	R	100	14								
49+10	51+35	L	100	4								
51+62	62+75	L	100	11		2						
Union Road												
57+123	62+863.7	R	100	5		2						
57+123	62+897	L	100	5		2						
S.R. 48												
307+80	310+55	R	100	4								
Dog Leg Road												
9+30	16+38	R	100	7		2						
9+30	14+50	L	100	5		2						
14+82	16+70	L	100	3								
S.R. 49 over Razor Run												
261+77	264+07	L	100	2		2						
261+83	264+13	R	100	2		2						
DIAMOND MILL RD.												
48+00	55+00	L	100	4		4						
49+00	55+00	R	100	3		4						
COLUMN TOTALS				95		45						

STATIONING FROM	STATIONING TO	SIDE	SPACING (FT)	TYPE A W	TYPE A Y	TYPE B W	TYPE B Y	TYPE A2 W	TYPE A2 Y	TYPE B2 W	TYPE B2 Y	REMARKS
COLUMN TOTALS												

SUB-TOTALS	TYPE A W	TYPE A Y	TYPE B W	TYPE B Y	TYPE A2 W	TYPE A2 Y	TYPE B2 W	TYPE B2 Y	REMARKS
COLUMN 1	154	83	40	24					
COLUMN 2	95		45						
COLUMN 3									
SHEET TOTALS	249	83	85	24					
	332		109						

MAINTENANCE OF TRAFFIC

CALCULATIONS
MADE BY M.L.E. DATE 3-7-88
CHECKED G.A.S. DATE 3-8-88

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

(140 219)

ITEM 614 TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS

	ROADWAY	SIDE	STATION FROM	STATION TO	CLASS I EDGE LINE (WHITE)	CLASS I EDGE LINE (YELLOW)	CLASS II LANE LINE	CLASS II GORE MARKINGS		WORK ZONE MARKING SIGNS	
					LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.		EACH	
STAGE 1											
	I-70	EB	342+45	670+39		32794	32794				
		EB	688+98	733+89		4491	4491			8 (I-70 Eastbound)	
		WB	342+45	670+39		32794	32794				
		WB	688+98	733+89		4491	4491			8 (I-70 Westbound)	
STAGE 2											
	I-70	EB	342+45	670+39	32794	32794	32794				
		EB	688+98	733+89	4491	4491	4491				
		WB	342+45	670+39	32794	32794	32794				
		WB	688+98	733+89	4491	4491	4491				
Northbound SR 49 (Exit 24)								200			
Southbound SR 49 (Exit 26)								200			
Hoke Road Ramp 'B'								200			
SR 48 Ramp 'B'								200			
SR 48 Ramp 'C'								200			
STAGE 3											
	I-70	EB	342+45	670+39	32794	32794	32794				
		EB	688+98	733+89	4491	4491	4491				
		WB	342+45	670+39	32794	32794	32794				
		WB	688+98	733+89	4491	4491	4491				
Northbound SR 49 (Exit 24)							200	200			
Southbound SR 49 (Exit 24)							200			2	
Northbound SR 49 (Exit 26)							200			2	
Southbound SR 49 (Exit 26)							200	200			
Hoke Road Ramp 'A'							200			2	
Hoke Road Ramp 'B'							200	200			
SR 48 Ramp 'A'							200			2	
SR 48 Ramp 'B'							200	200			
SR 48 Ramp 'C'							200	200			
SR 48 Ramp 'E'							200			2	
STAGE 4											
	I-70	EB	342+45	670+39	32794	32794	32794				
		EB	688+98	733+89	4491	4491	4491				
		WB	342+45	670+39	32794	32794	32794				
		WB	688+98	733+89	4491	4491	4491				
Northbound SR 49 (Exit 24)								200			
Southbound SR 49 (Exit 26)								200			
Hoke Road Ramp 'B'								200			
SR 48 Ramp 'B'								200			
SR 48 Ramp 'C'								200			
STATE ROUTE 48		EB	306+30	310+30	400						
		WB	309+15	313+15	400						
		EB	304+85	311+35		650					
		WB	307+85	314+35		650					
TOTALS TO GENERAL SUMMARY					224510	299580	300280	3000		26	
					42.52 MI	56.74 MI	56.87 MI				
					TOTAL =	99.26 MI					

TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS

BRIDGE GENERAL SUMMARY

CALC. BY		MONTGOMERY COUNTY	OHIO
DATE		MOT-70-6.49/11.02	FHWA REGION 5
CHKD. BY			FEDERAL PROJECT
DATE			

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SHEET NUMBER																				PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
144	145A	148	151	154	157	161	164	168	171	174	177	184	214	199	202											
			LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP	LUMP							202	11202	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN
			224	351		640	637	875			674			1070	791							202	23501	5262	SQ.YD.	WEARING COURSE REMOVED, AS PER PLAN
												65			120							503	21100	185	CU. YD.	UNCLASSIFIED EXCAVATION
												116										503	21101	116	CU. YD.	UNCLASSIFIED EXCAVATION, AS PER PLAN
												LUMP			LUMP							505	11100	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION
												504										507	13300	504	LIN.FT.	STEEL PILES HP 12 x 53
												24										507	93301	24	EACH	STEEL POINT, AS PER PLAN
															544							507	21100	544	LIN. FT.	12" CAST IN PLACE REINFORCED CONCRETE PILES
			584	300		1792	300	1623	312	1719	1004	5555	934	600	7333							509	15400	22056	LB.	REINFORCING STEEL, GRADE 60
				3033	67012		6247		57321	81649	7536	44871	67346	5286	36392							509	15800	376693	LB.	EPOXY COATED REINFORCING STEEL, GRADE 60
				40	72		72		168	148	12	76	252	144	98							510	11100	1082	EACH	DOWEL HOLE
										334		79.7	264		97.2							511	31502	774.9	CU.YD.	CLASS S CONCRETE, SUPERSTRUCTURE
				4.2			8.1					42.8		14.5	25.8							511	31502	95.4	CU.YD.	CLASS S CONCRETE, SUPERSTRUCTURE, BARRIER PARAPET RAILING
					286				249													511	31503	535	CU.YD.	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN
			3			3		3			13.4											511	34450	22.4	CU.YD.	CLASS S CONCRETE, ABUTMENT
												20.3			22.8							511	41000	43.1	CU. YD.	CLASS C CONCRETE, PIER ABOVE FOOTINGS
												39.1			12.6							511	44500	51.7	CU. YD.	CLASS C CONCRETE, ABUTMENT ABOVE FOOTINGS
													22									511	45500	22	CU. YD.	CLASS C CONCRETE, ABUTMENT AND PIER CAP MODIFICATION
										29												511	45700	29	CU. YD.	CLASS C CONCRETE, ABUTMENT
												43.1			30.3							511	46500	73.4	CU. YD.	CLASS C CONCRETE, FOOTING
		178	30	254		60	377	104			376	802		249	300							SPECIAL	51267500	2730	SQ. YD.	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)
					684				606	680			650									SPECIAL	51267502	2620	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY), (SEE PROPOSAL NOTE)
									150300				162700									513	11100	313000	LB.	STRUCTURAL STEEL, AISC CATEGORY 1
												55000										513	11101	55000	LB.	STRUCTURAL STEEL, ASTM A36, AISC CATEGORY 1 FOR REHABILITATION, AS PER PLAN
					2000				1920				2272									513	20000	6192	EACH	WELDED STUD SHEAR CONNECTORS
					1250					3500												513	00100	4750	LB.	STRUCTURAL STEEL, AISC CERTIFICATION NOT REQUIRED
		LUMP																				513	21201	LUMP		TRIMMING OF BEAM END, AS PER PLAN
					LUMP				LUMP	LUMP			LUMP									SPECIAL	51400600	LUMP		FIELD PAINTING OF NEW STEEL, SYSTEM IZEU (SEE PROPOSAL NOTE)
												LUMP										SPECIAL	51400600	LUMP		FIELD PAINTING OF NEW STEEL, SYSTEM IZEU (BRIDGE NO. MOT-70-11.30 L/R) (SEE PROPOSAL NOTE)
					60				58	95			69									516	11210	282	LIN. FT.	STRUCTURAL EXPANSION JOINT, INCLUDING ELASTOMERIC STRIP SEALS
							51				28											516	11800	79	LIN. FT.	VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINT
							5				5											516	11900	10	LIN. FT.	HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINT
												5550										516	14400	5550	LB.	STRUCTURAL STEEL FOR EXPANSION JOINT REHABILITATION, AS PER PLAN
			78	51		209	51	188				46		184	165							516	31001	972	LIN. FT.	JOINT SEALER, 705.04, AS PER PLAN
									8													516	44000	8	EACH	LAMINATED ELASTOMERIC BEARINGS (1.75"x9 1/2"x16" ELASTOMERIC PAD WITH 1 1/2"x11"x17" STEEL LOAD PLATE) (50 DUROMETER)
													8									516	44000	8	EACH	LAMINATED ELASTOMERIC BEARINGS (1.86"x10"x18" ELASTOMERIC PAD WITH 1 1/2"x11"x19" STEEL LOAD PLATE) (50 DUROMETER)
									4													516	44000	4	EACH	LAMINATED ELASTOMERIC BEARINGS (1.88"x11 1/2"x15" ELASTOMERIC PAD WITH 1 1/2"x13"x21" STEEL LOAD PLATE) (60 DUROMETER)
													4									516	44100	4	EACH	LAMINATED ELASTOMERIC BEARINGS (2.13"x13 1/2"x17" ELASTOMERIC PAD WITH 2"x15"x23" STEEL LOAD PLATE) (60 DUROMETER)
									8													516	44100	8	EACH	LAMINATED ELASTOMERIC BEARINGS (2.13"x7"x10" ELASTOMERIC PAD WITH 1 1/2"x9"x14" STEEL LOAD PLATE) (50 DUROMETER)
	512																					SPECIAL	51911550	512	SQ. YD.	PATCHING CONCRETE BRIDGE DECK WITH QUICK SETTING CONCRETE (SEE SHT. 145A)

A:MOT70GS1 19910103

BRIDGE GENERAL SUMMARY

CALC. BY		MONTGOMERY COUNTY	OHIO
DATE		MOT-70-6,49/11.02	FHWA REGION 5
CHKD. BY			FEDERAL PROJECT
DATE			

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SHEET NUMBER																		PARTICIPATION		ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
144	148	151	154	157	161	164	168	171	174	177	184	214	199	202				STATE & FEDERAL	STATE					
												8								516	44100	8	EACH	LAMINATED ELASTOMERIC BEARINGS (2.13"x7"x11" ELASTOMERIC PAD WITH 1 1/2"X9"X14" STEEL LOAD PLATE) (50 DUROMETER)
										8										516	45400	8	EACH	REALIGN BEARING DEVICES, AS PER PLAN (ABUT. ROCKERS, R75)
	10																			516	45400	10	EACH	REALIGN BEARING DEVICES, AS PER PLAN (ABUT. ROCKERS, R125)
									12											516	45400	12	EACH	REALIGN BEARING DEVICES, AS PER PLAN
											1520									516	45402	1520	LB.	BEARING DEVICES MODIFIED, AS PER PLAN
									LUMP	LUMP										516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
		112.5			275		425													517	72301	812.5	LIN. FT.	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS AND ANCHOR BOLTS), AS PER PLAN
			263			518				427	365		345	238						517	76201	2156	LIN. FT.	RAILING FACED, AS PER PLAN
				8				8	12		13	8		9						518	12201	58	EACH	SCUPPER, INCLUDING SUPPORTS, AS PER PLAN
	14		22			10				16	14		64	12						518	12701	152	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN
			22																	518	12801	22	EACH	SCUPPER MODIFICATION, AS PER PLAN
								5	11		41	10		17						518	21100	84	CU. YD.	POROUS BACKFILL
				5																518	21101	5	CU. YD.	POROUS BACKFILL, As Per Plan
		52			246		288													SPECIAL	51822200	586	SQ. FT.	STEEL DRIP STRIP
											70									518	41100	70	LIN.FT.	6" PERFORATED HELICAL C.S.P., 707.01
											47									518	41200	47	LIN. FT.	6" NON-PERFORATED HELICAL C.S.P., INCLUDING SPECIALS, 707.01
	155	30	50	5	65		60	25	50	35				35	255		255			519	11100	510	SQ. FT.	PATCHING CONCRETE STRUCTURE
		9			34		60				19			12						SPECIAL	53000400	134	EACH	ABANDON SCUPPER
2976																		2976		SPECIAL	60739900	2976	LIN. FT.	VANDAL PROTECTION FENCE, 6 FT. STRAIGHT, COATED FABRIC
647																		647		SPECIAL	60739910	647	LIN.FT.	VANDAL PROTECTION FENCE, 8 FT. STRAIGHT, COATED FABRIC
												141								601	20501	141	CU. YD.	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN
		250	383		698	694	971			730			1044	864						845	10300	5634	SQ. YD.	LATEX MODIFIED CONCRETE OVERLAY, (1 1/4" THICK)
											372			144						845	10301	516	SQ. YD.	LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK), AS PER PLAN
		15	9		32	27	54			37			58	52						845	11000	284	CU. YD.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS
		2				12	10			14										845	30000	38	CU. YD.	FULL DEPTH REPAIR

FHWA REGION	STATE	PROJECT	
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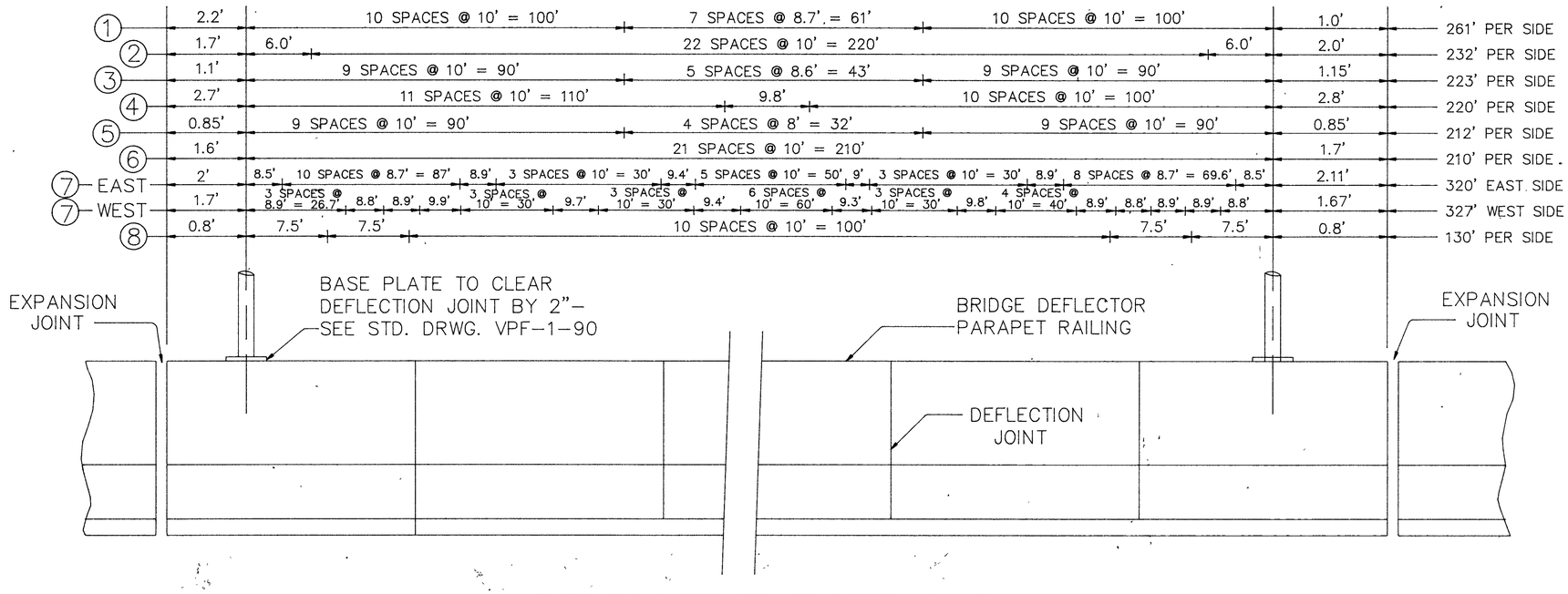
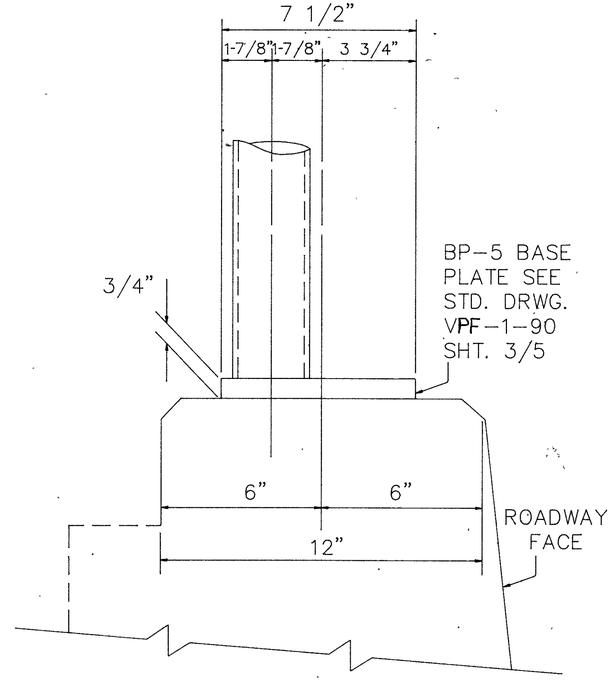
MONTGOMERY COUNTY
MOT-70-6.49/11.02



ELEVATION FOR FENCE POST LOCATIONS

BRIDGE NUMBER	VANDAL PROTECTION FENCE, 6FT. STRAIGHT, COATED FABRIC	VANDAL PROTECTION FENCE, 8FT. STRAIGHT, COATED FABRIC
	LIN. FT.	LIN. FT.
① MOT-70-0662	522	
② MOT-70-0708	464	
③ MOT-70-0759	446	
④ MOT-70-0859	440	
⑤ MOT-70-0962	424	
⑥ MOT-70-1322	420	
⑦ MOT-49-1112R EAST		320
⑦ MOT-49-1112R WEST		327
⑧ MOT-49-1279L	260	
TOTALS CARRIED TO BRIDGE GENERAL SUMMARY	2976	647



FENCE LOCATION ON TOP OF PROPOSED DEFLECTOR PARAPET

MOT-70-0708
MOT-70-0962
MOT-49-1279L

SEE END VIEW BP-5 ON STD. DRWG. VPF-1-90 SHT. 3/5 FOR FENCE DETAILS ON PROPOSED DEFLECTOR PARAPET FOR:

MOT-70-0662
MOT-70-0759
MOT-70-0859
MOT-70-1322

SEE END VIEW BP-4 ON STD. DRWG. VPF-1-90 SHT. 3/5 FOR FENCE DETAILS ON EXISTING PARAPET FOR:

MOT-49-1112R

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

VANDAL PROTECTION FENCE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

A:MOT70VFD 19900717

GENERAL NOTES

REFERENCE shall be made to Standard Drawings

AS-1-81	dated	11-27-81	GR1	dated	1-11-85
DBR-2-73	dated	4-10-73	GR3	dated	10-25-90
SD-1-69	dated	6-12-69	BP5	dated	10-1-87
RB-1-55	dated	2-2-59	BR1	dated	5-29-79
EXJ-4-87	dated	1-5-89			

and to Supplemental Specifications:

			852	dated	6-10-87
845	dated	5-31-88	952	dated	12-14-88
			953	dated	8-21-80

DESIGN SPECIFICATIONS: The repairs to the structures shall conform to "Standard Specifications for Highways Bridges" adopted by the American Association of State Highway and Transportation Officals, 1983 including the 1984, 1985 & 1986 interim specifications and the Ohio "supplement" to these Specifications.

DESIGN DATA

Concrete Class S - Unit Stress 1500 p.s.i.

Concrete Class C - Unit Stress 1333 p.s.i.

Reinforcing Steel - ASTM A615, A616 or A617 - Grade 60 Unit Stress 24,000 p.s.i.

Structural Steel - ASTM A36 - unit stress 20,000 p.s.i.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and/or from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work but they shall be considered tentative and approximate. The Contractor is referred to CMS Sections 102.05, 105.02 and 513.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a prebid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

EXISTING REINFORCING STEEL: Where concrete is being removed and replaced, the existing reinforcing steel shall remain and be trimmed to provide the required clearance. Any existing reinforcing bars which are to be incorporated into the new work and which are made unusable by the Contractor's concrete removal operations shall be replaced with new steel at his cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new steel. An allowance of 300lbs. of reinforcing steel has been included with the quantities for the pertinent structures and is to be used for the replacement of corroded steel.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the Owner(s). The Contractor and Owner(s) are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE): Specified concrete surfaces shall be sealed using either a silane or an epoxy sealer. See the proposal for surface preparation requirements, application rates, material requirements and application procedures. The surfaces to be sealed are shown on the plans.

ITEM SPECIAL, ABANDON SCUPPER: This item shall consist of plugging the pipe outlet at the Scupper and filling the Scupper with Class "C" Concrete. The price bid for this item shall be per each, and shall include all material, equipment, and labor necessary to complete the work.

ITEM 518, SCUPPER MODIFICATION, Type B or type D: This item shall consist of modifying existing scuppers by adding steel bars to adjust the scuppers vertically to match the latex modified concrete overlay. This work shall be in accordance with Detail "B" or Detail "D" as shown on Sheet 146. Adequate measurements shall be made in the field to determine dimensions of the Scuppers and the number and spacing of Scupper bars. Price bid for this item shall be per each, and shall include all labor, materials and equipment necessary to complete this work.

ITEM SPECIAL, STEEL DRIP STRIP: After the deck is scarified and before the concrete is placed, a steel drip strip, as detailed, shall be installed along the full length of each side of the bridge. An additional strip 12" long U.N.O. shall be placed at each guardrail post. The strips shall be fastened at 3' c/c maximum (2 minimum for 12" long strips) with power driven pins or No. 10 galvanized screws and expansion anchors. Where splices are required, the individual pieces shall be butted tightly together, not lapped. Steel for galvanized strips shall be 0.105" thick and shall meet the requirements of ASTM A568 with galvanizing in accordance with 711.02. Stainless steel shall be 20 gauge ASTM A167, Type 304, mill finish. Payment shall be at the contract price bid for Item Special, Sq. Ft., Steel Drip Strip, and shall include all materials, labor, tools, and incidentals necessary to complete the item.

ITEM 517, RAILING FACED, AS PER PLAN: The contractor shall carefully remove the existing aluminum railing and stack neatly along the right-of-way for subsequent pick-up by State forces. The concrete safety curb and the remaining vertical leg of the bulb angle which protrudes above the scarified deck shall be removed. 1" dia. holes, 6" or 12" deep(min.), shall be drilled at spacing as shown on the drawing. The holes shall be thoroughly cleaned of all dust and other deleterious material. Reinforcing bars shall be grout anchored as per SS852 and SS952 with the exception that the hole size shall be 1" dia.

All loose and unsound concrete in the area of the parapet to be faced, shall be removed. All remaining sound concrete shall then be mechanically scarified 1/4" deep. The minimum thickness for the proposed facing shall be 4". All resteel shall be epoxy coated as per 509. Epoxy coated resteel which is damaged due to cutting, bending, etc. shall be repaired as per 509. Concrete cover over all resteel shall be 2". The concrete surfaces to be faced shall be thoroughly drenched with clean water and allowed to dry to a damp condition just before placing the concrete.

The existing deflection joints shall be extended completely through the proposed facing and shall be made by forming or sawcutting the hardened concrete within 3 days after pouring. The 1/4" joints shall be sealed 3/4" deep (min.) with an inpregnated precompressed expanding foam sealant tape known as Will-Seal, manufactured by Illbruck/USA Inc., Minneapolis or a low density, closed cell, crosslinked ehtylene vinyl acetate foam known as Evazote 50, manufactured by Epoxy Industries, Inc., Ravena, New York.

Additional Materials shall be: Concrete as per 511, Class S
Reinforcing Steel as per 509

(All of the above work and relevant plan notes shall be included in the price bid for Item 517-LF-Railing Faced, as per plan; except curb removal shall be included in the price bid for Item 202-Portions of structures removed, and reinforcing steel shall be paid for under Item 509.

[redacted]

At the option of the contractor, and at no additional cost to the state, new abutment steel end dam components, L 6"x4"x1/2" and edge bar,(verify thickness) may be used in lieu of relocating existing.

EXISTING BRIDGE PLANS: Existing bridge plans may be inspected at the Bureau of Bridges and Structural Design in Columbus, Ohio or in the District 7 office in Sidney, Ohio.

ITEM 516-JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN: This work shall include all labor and materials necessary to raise the superstructures to gain the specified additional clearances over I-70 or to meet the revised profile of I-70 as shown on the plans. Included for payment with this work are jacks, temporary supports, longitudinal blocking, placing high early strength class C concrete pedestals as per Item 511, dowel holes as per item 510, 1/8" preformed bearing pads as per item 516, cleaning and painting of existing abutment rocker assemblies including base plates, and other work as specified on plans. Payment shall be made at the contract price bid for Item 516, lump sum, Jacking and temporary support of superstructure, as per plan. Reinforcing steel shall be paid for under Item 509.

GENERAL JACKING REQUIREMENTS:
The following are the jacking requirements which apply to Item 516- Jacking and temporary support of superstructure, as per plan & to Item 516- Realign bearing devices, as per plan.

JACK CAPACITY: Jacks are required to have a capacity to safely support each abutment and pier support. Minimum Jack capacity is listed on the General Plan sheet for each bridge.

JACKING PLANS: Detailed plans of the jacking procedures, including methods of preventing horizontal movement, shall be prepared by a registered professional engineer and shall bear his signature and seal.

The contractor shall submit 3 copies of the plans and 2 copies of design calculations to the director 15 days pior to jacking operations and receive approval before starting jacking operations.

Attachments made by welding to any main structural member shall be approved by the director before such attachments are made. Details of the attachments shall be submitted for approval as part of the jacking procedure plans or independently by a similar submission.

Approval of the above plans shall not relieve the contractor of responsibility for the behavior of the jacking procedures proposed.

It shall be understood that all jacking operations are to be directed by a registered professional engineer.

All jacking operations of a particular bridge must be completed before the latex concrete overlay is placed on said bridge.

ITEM 516 - REALIGN BEARING DEVICES, AS PER PLAN:
This item shall include all work necessary to properly align bridge bearings as well as their cleaning and painting. Included shall be: the required jacking* and temporary support, disassembly of the bearings, hand cleaning (grinding if necessary), sandblasting and painting (system A) as required by 514, replacement of any damaged sheet lead (711.19), installation of any necessary 1/8" thick steel shims of the same size as the bearings to provide a snug fit, realignment of the upper bearing plate by removing existing welds and rewelding so that the bearings are aligned at 60°F, reassembly of the bearings, and removal of the jacks. At the option of the contractor and at no additional cost to the state, new bearings of the same type as the existing may be installed in place of the realigned bearings. All work shall be to the satisfaction of the Project Engineer. The contractor shall submit his method of jacking the bearings for prior approval. Payment for all the above described labor and materials will be made at the contract price bid for Item 516 - Each - Realign bearing devices; as per plan.

** - APPROXIMATELY 1 INCH*

ITEM 202- EXISTING ASPHALT WEARING COURSE REMOVED, AS PER PLAN: This work shall include the cost for removing any waterproofing material between the concrete and the asphalt. Removal of the waterproofing shall be a separate operation from deck scarification as required under Item 845.

ITEM 518 - SCUPPER EXTENSION: Bridge scupper drains are to be extended as shown on the plans at each bridge designated, so that the scupper pipes will extend 1'-6" below the bottom of steel beam or 1'-6" below the bottom of conc. slab as applicable. It will be the responsibility of the contractor to field examine each bridge to determine the type of exist. scupper and to extend the exist. scupper in kind. The extension shall be field welded to the exist. scupper to the satisfaction of the Engineer. The quantity shall be measured by the unit for each scupper extension completed in place and the price paid shall include all labor, materials, equipment, and incidentals necessary to complete the work.

ITEM 513- TRIMMING OF BEAM END, AS PER PLAN. This work shall consist of the removal and satisfactory disposal of the end of existing beam by method approved by the Engineer to provide a 2" min. clearance at 60°F, as shown on plans. Such removal shall be performed with sufficient care so as to leave the remaining portion of the structure undamaged. In case of damage to the existing structure, repair or replacement shall be made at the Contractors expense and to the approval of the Engineer. Paint (Item 514, System A) end of beam and areas damaged by removal operation. Payment shall be made at the contract price bid for ITEM 513 - LUMP SUM - TRIMMING OF BEAM END, AS PER PLAN.

ADDITIONAL GENERAL NOTES for Bridge No. MOT-70-1130 L/R, see sheet 183 and for Bridge No. MOT-70-1267 L/R, see sheet 202.

WOOLPERT
CONSULTANTS
409 East Monument Avenue
Dayton Ohio 45402-1226

GENERAL NOTES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.S.	R.M.J.		R.G.S.	GBL	2/20/88	

CALC. BY		MONTGOMERY COUNTY	OHIO	145A
DATE		MOT-70-6.49/11.02	FHWA REGION 5	219
CHKD. BY			FEDERAL PROJECT	
DATE				

ITEM SPECIAL—PATCHING CONCRETE BRIDGE DECK WITH QUICK SETTING CONCRETE

ITEM SPECIAL PATCHING CONCRETE BRIDGE DECK WITH QSC:

A. DESCRIPTION. THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR CONCRETE BRIDGE DECK INCLUDING THE REMOVAL OF ALL LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, SURFACE PREPARATION, BONDING COAT AND THE MIXING, PLACING, FINISHING, CURING AND SEALING (IF REQUIRED).

B. REMOVAL OF UNSOUND CONCRETE. THE ENGINEER SHALL SOUND THE ENTIRE DECK AND OUTLINE THE AREAS TO BE REMOVED. THE PERIMETER OF ALL REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1 INCH TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. ADDITIONAL SAW CUTS MAY BE REQUIRED TO FACILITATE REMOVAL. COOLING WATER FROM WET SAWING AND DUST FROM ANY DRY SAWING SHALL NOT BE ALLOWED TO CONTAMINATE THE EXPOSED PATCH HOLES. ALL UNSOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL OBVIOUSLY LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND CLASS AND SHALL BE OPERATED AT AN ANGLE OF LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK. CONCRETE SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN THE CONCRETE AND A PRIMARY REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED. THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM 3/4 INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICAL. REINFORCING WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATIONS, THE ENGINEER WILL RE-SOUND THE DECK TO INSURE THAT ONLY SOUND CONCRETE REMAINS.

C. SURFACE PREPARATION. CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE BONDING GROUT AND/OR THE PATCHING MATERIAL. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED WITHIN 24 HOURS PRIOR TO PATCHING BY ABRASIVE BLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL.
CONTAMINATION OF THE AREA TO BE PATCHED BY CONSTRUCTION EQUIPMENT OR FROM ANY OTHER SOURCE SHALL BE PREVENTED BY PLACEMENT OF A CLEAN 4-MIL POLYETHYLENE SHEET (OR ANY OTHER COVERING AS APPROVED BY THE ENGINEER) ON THE SURFACE OF THE DECK FOLLOWING THE AIR BLAST CLEANING.
WHERE REINFORCING STEEL IS EXPOSED, THE CONTRACTOR SHALL PROVIDE ADEQUATE SUPPORTS FOR THE CONCRETE MIXER SO THAT REINFORCING STEEL AND ITS BOND WITH THE CONCRETE WILL NOT BE DAMAGED BY THE WEIGHT AND MOVEMENT OF THE CONCRETE MIXER, OR SHALL PROVIDE MEANS TO CONVEY CONCRETE FROM THE MIXER TO THE PATCH LOCATIONS. FOR PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE LEFT IN THE CONDITION AS RECOMMENDED BY THE MANUFACTURER. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED.

D. MATERIALS, PLACING AND CURING. THE DECK SHALL BE PATCHED WITH QUICK SET CONCRETE (QSC) WHICH SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

COARSE AGGREGATE (NO. 8)	703.02
QUICK SETTING CONCRETE MORTAR, TYPE 2	SS933
WATER	499.02

QSC PATCHES SHALL BE BONDED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. PROPORTIONING AND PLACING OF QSC PATCHES SHALL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. THE CONCRETE SHALL BE MIXED AND PLACED AS PER MANUFACTURER'S RECOMMENDATIONS WITH THE AMBIENT TEMPERATURE ABOVE 50 DEGREES F. COARSE AGGREGATE, WHICH HAS BEEN CLEANED, DRIED AND BAGGED, SHALL BE ADDED AT A RATE OF 30 POUNDS OF AGGREGATE PER 50 POUNDS OF DRY QSC MORTAR.

QSC PATCHES SHALL BE CURED FOR A MINIMUM OF TWO HOURS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. 3000 PSI COMPRESSIVE STRENGTH SHALL BE VERIFIED WITH A PROPERLY CALIBRATED IMPACT REBOUND HAMMER, PROVIDED BY THE CONTRACTOR, PRIOR TO OPENING TO TRAFFIC.
IMMEDIATELY FOLLOWING APPLICATION OF THE BONDING GROUT THE PATCHING MATERIAL SHALL BE PLACED, CONSOLIDATED AND FINISHED TO THE EXISTING GRADE ELEVATION. PATCHES EXCEEDING 50 SQUARE FEET SHALL BE LEVELED AND CONSOLIDATED WITH A MECHANICAL VIBRATING SCREED. SMALLER PATCHES SHALL BE HAND VIBRATED AND LEVELED WITH A TEN FOOT STRAIGHTEDGE.

E. FINISHING. AFTER THE PATCHES HAVE BEEN CONSOLIDATED AND FINISHED THEY SHALL BE TEXTURED IN ACCORDANCE WITH SECTION 451.09 OF THE CMS.

F. INSPECTION AND SOUNDING OF CONCRETE PATCHES. AFTER CURING AND BEFORE FINAL ACCEPTANCE, ALL PATCHED AREAS SHALL BE SOUNDED. ALL UNSOUND AREAS AND AREAS EXHIBITING CRACKING SHALL BE REMOVED AND REPATCHED ACCORDING TO THIS NOTE.
ALL SOUNDING AND REPLACEMENT OF REJECTED AREAS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND INCLUDED IN THE UNIT BID PRICE FOR THIS ITEM.

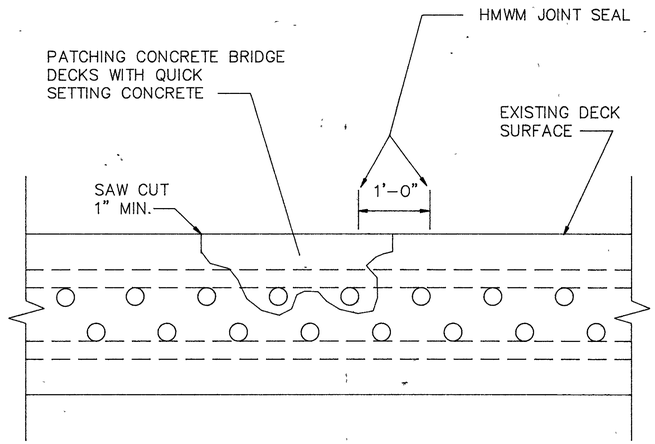
G. SEALING PATCH EDGES. ALL JOINTS ALONG PATCH EDGES SHALL BE SEALED WITH AN APPROVED HIGH MOLECULAR WEIGHT METHACRYLATE SEALER ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND THE HMWM PROPOSAL NOTE (NO. 324-88). COST FOR SEALING SHALL BE INCLUDED WITH PATCHING WHEN A SEPARATE PAY ITEM FOR WEARING SURFACE SEALING IS NOT INCLUDED IN THE PLANS.

H. METHOD OF MEASUREMENT. THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE YARDS OF THE EXPOSED SURFACE OF ALL PATCHES, IRRESPECTIVE OF THE DEPTH OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED.

I. BASIS OF PAYMENT. PAYMENT SHALL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
SPECIAL	SQ. YDS.	PATCHING CONCRETE BRIDGE DECK WITH QUICK SETTING CONCRETE

BRIDGE NO.	ITEM	DESCRIPTION	QUANTITY (S.Y.)
MOT-70-1130 L	SPECIAL	PATCHING CONCRETE BRIDGE DECK WITH QSC	190
MOT-70-1130 R	"	" " " " " "	72
MOT-70-1192 L	"	" " " " " "	128
MOT-70-1192 R	"	" " " " " "	122
		TOTAL CARRIED TO BRIDGE GENERAL SUMMARY	512 S.Y.



TYPICAL PARTIAL SECTION

NOTE:
PATCHING SHALL BE PLACED TO THE ELEVATION OF THE EXISTING BRIDGE DECK SURFACE.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

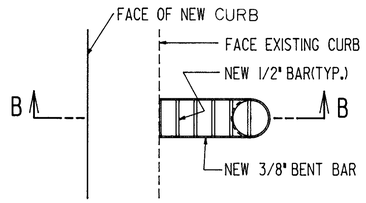
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BR1 19901214

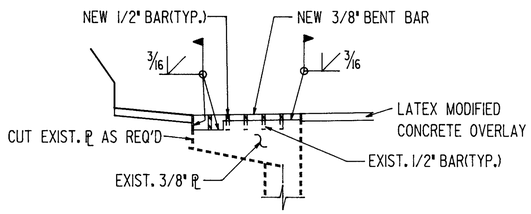
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

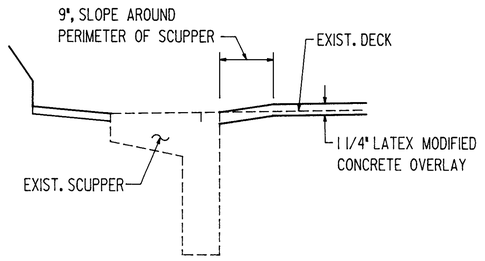
146
219



PLAN



SECTION B-B
DETAIL B

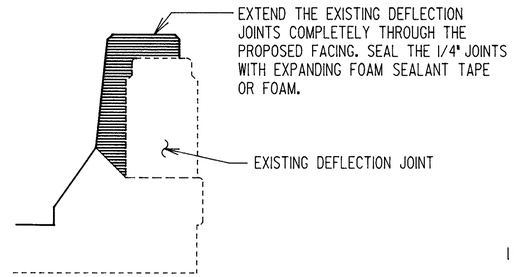


DETAIL C

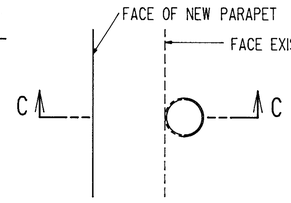
TYPICAL SCUPPER TREATMENT FOR BRIDGE DECK OVERLAYS

NOTES:

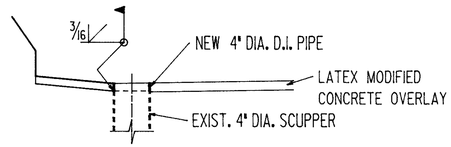
1. WHEN THE SCUPPER IS LOCATED MORE THAN TWO(2) FEET FROM THE PROPOSED EDGE OF PAVEMENT DETAIL C IS TO BE USED.
2. WHEN ANY PHYSICAL PART OF THE SCUPPER IS LOCATED WITHIN TWO(2) FEET OF THE PAVEMENT EDGE, DETAIL B OR DETAIL D IS TO BE USED.
3. ALL NEW STEEL AND EXISTING DISTURBED STEEL SURFACES THAT ARE EXPOSED SHALL BE PAINTED AS PER ITEM SPECIAL , SYSTEM IZEU .
4. ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTAL ITEMS NEEDED FOR DETAIL B OR DETAIL D TYPE SCUPPER TREATMENT SHALL BE PAID FOR UNDER ITEM SPECIAL-SCUPPER MODIFICATION. COSTS FOR DETAIL TYPE C TREATMENT SHALL BE INCLUDED IN THE PRICE FOR ITEM 845 LATEX MODIFIED CONCRETE OVERLAY 1 1/4".
5 EXTEND SCUPPERS AS NOTED ON PLANS SEE ITEM 518 - SCUPPER EXTENSION, SHEET 145.



DETAIL A

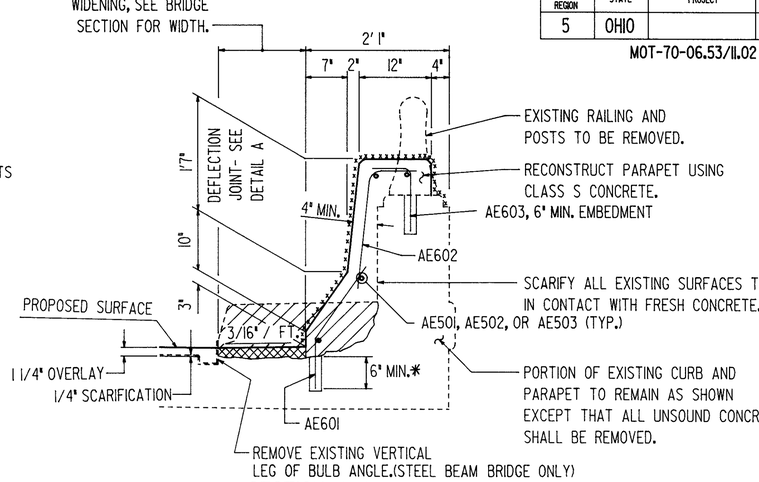


PLAN



SECTION C-C

DETAIL D



SECTION A-A

* 12" MIN FOR BRIDGES MOT-49-1279L & MOT-70-1267 L/R. **EXCEPT AS NOTED.**

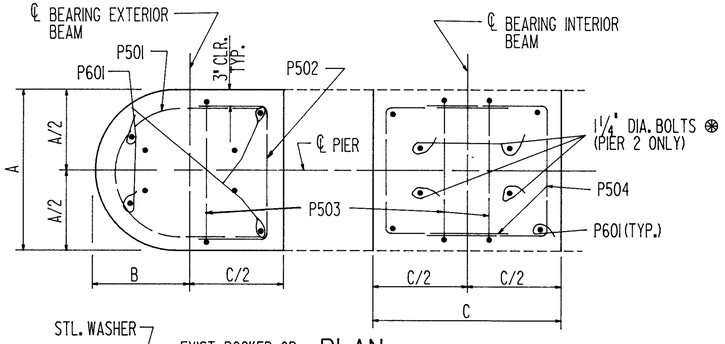
RAILING FACED AS PER PLAN (ITEM 517)

X X X SURFACES TO BE SEALED UNDER ITEM SPECIAL- SEALING OF CONCRETE SURFACES. CONCRETE TO REMOVED AND REPLACED WITH ITEM 845- LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK AND VARIABLE THICKNESS).

EXISTING CURB TO BE REMOVED UNDER ITEM 202- PORTIONS OF STRUCTURE REMOVED.

NOTES

1. INSTALL DEFLECTION JOINTS AS PER DETAIL A THIS SHEET AND GENERAL NOTE FOR ITEM 517. SPACING SHALL COINCIDE WITH EXISTING DEFLECTION JOINT LOCATIONS
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED AND PAID FOR UNDER ITEM 517- RAILING FACED AS PER PLAN. ALL REBARS SHALL HAVE A MINIMUM OF 2" CLEARANCE.
3. REMOVE EXISTING VERTICAL LEG OF BULB ANGLE (STL. BEAM BRIDGE ONLY) UNDER ITEM 202- PORTIONS OF STRUCTURE REMOVED. IF THE REMAINING BULB ANGLE COMES LOOSE OR IF UNSOUND CONCRETE EXISTS UNDERNEATH THE BULB ANGLE, THE CONTRACTOR SHALL REMOVE THE ENTIRE BULB ANGLE AT NO ADDITIONAL COST TO THE STATE.



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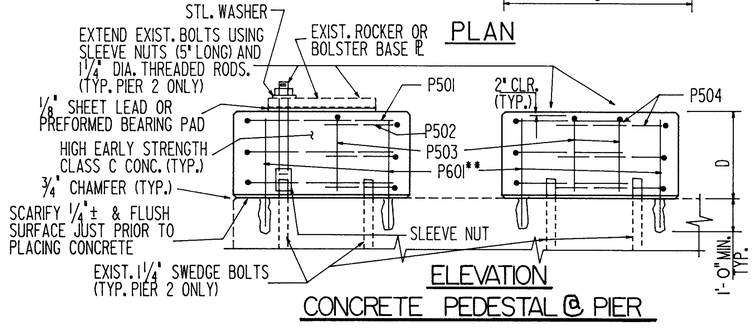
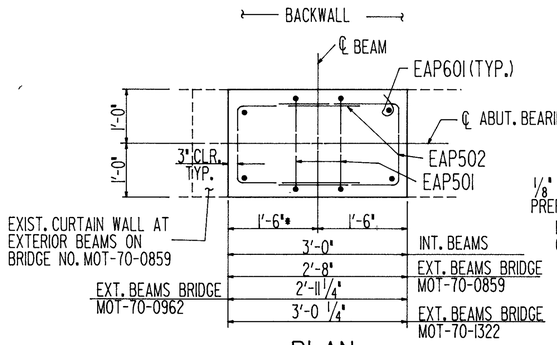


ELEVATION

CONCRETE PEDESTAL @ PIER

** P601 PLACED IN 1 1/4" DIA. DOWEL HOLES AS PER ITEM 510.

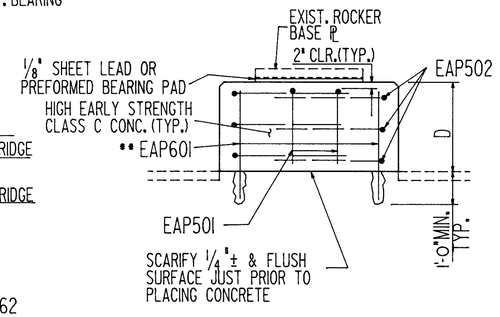


PLAN

* 1'-2" EXT. BEAMS ON BRIDGE NO. MOT-70-0859

* 1'-5 1/4" EXT. BEAMS ON BRIDGE NO. MOT-70-0962

* 1'-6 1/4" EXT. BEAMS ON BRIDGE NO. MOT-70-1322



** EAP601 PLACED IN 1 1/4" DIA. DOWEL HOLES AS PER ITEM 510; SEE NOTE.

ELEVATION

CONCRETE PEDESTAL @ ABUTMENT

⊛ *For New Anchor Bolt placement on MOT-70-1322, see Bridge Detail Sheet. Core shall be exercized so none of the existing reinforcing steel is damaged by the dowel hole drilling. Any damaged existing steel shall be repaired at the Contractor's expense to the Engineer's satisfaction.*

BRIDGE NO.	DIMENSIONS			
	A	B	C	D
MOT-70-0859	3'-0"	1'-8"	3'-6"	1'-9"
MOT-70-0962	2'-8"	1'-6 1/4"	3'-0"	1'-9 3/4"
MOT-70-1322	2'-8"	1'-7 3/4"	3'-0"	◉

◉ 2'-2" @ Abutments & 2'-5 1/4" @ Piers

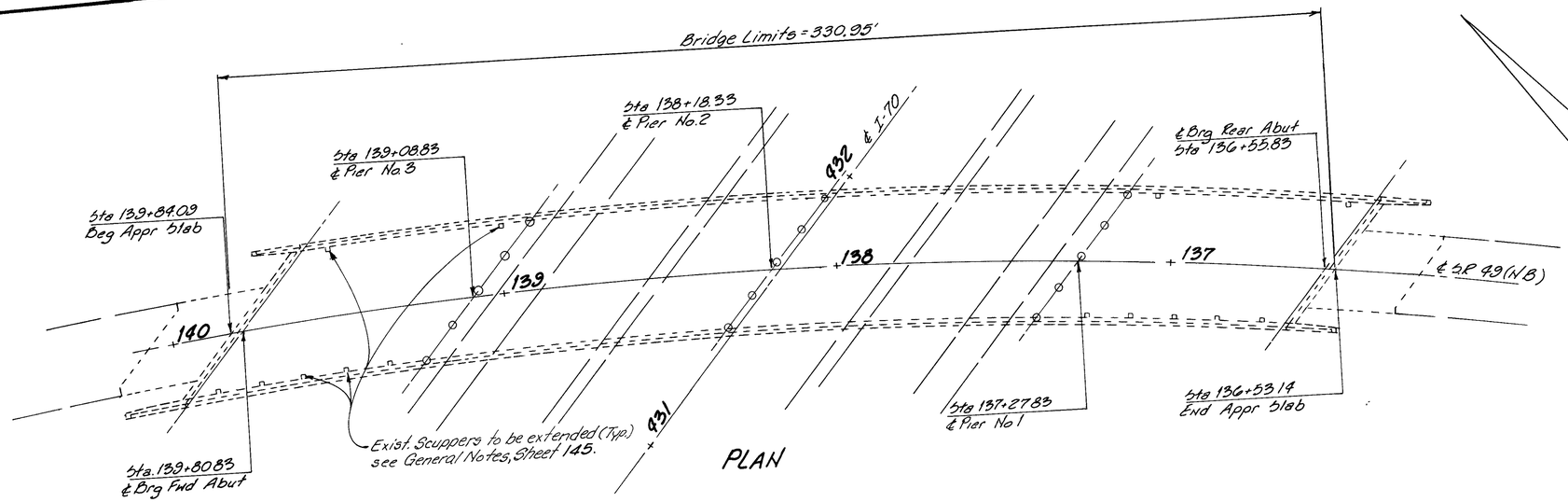
WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

GENERAL DETAILS

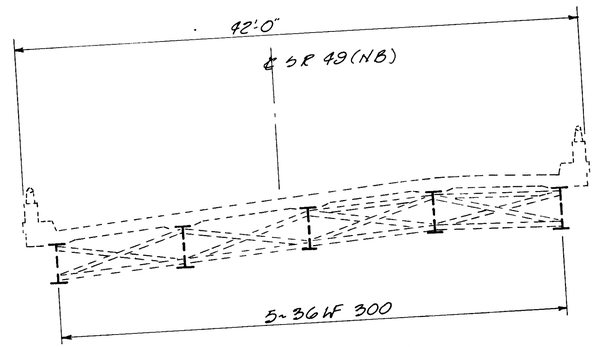
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S	DBL	2/24/06	

FEDERAL REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

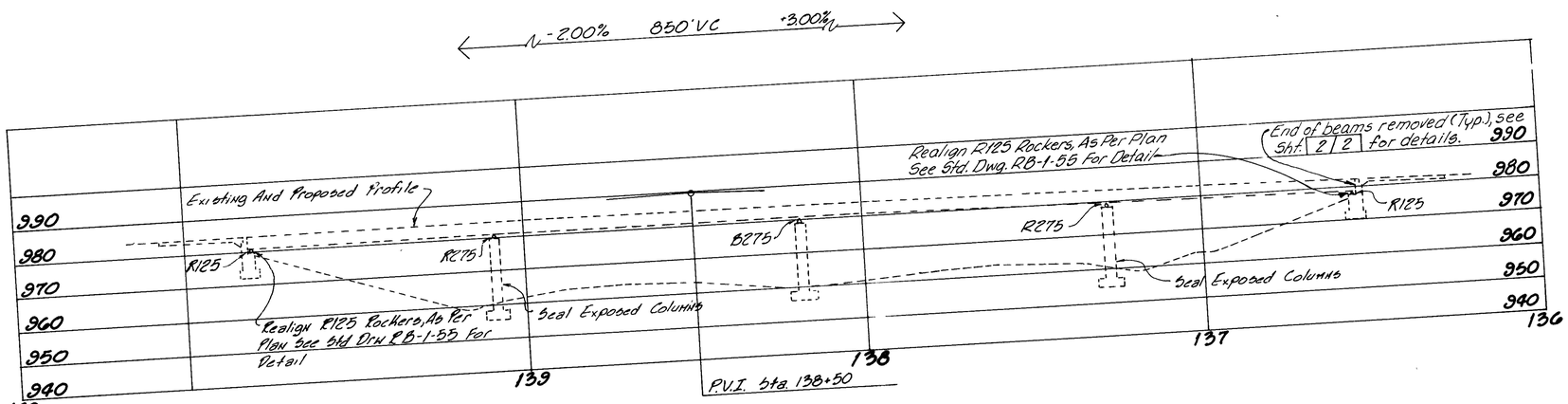


PLAN



BRIDGE SECTION

Rocker or Bolster Size	Jack Capacity Required (Min.)
R125	100 Ton
R275	200 Ton
B275	200 Ton



ELEVATION

EXISTING STRUCTURE

Type Continuous Steel Beam With Reinf Concrete Deck And Substructure
Spans 72'-0", 2@90'-6", 72'-0" c< Brgs Along ℄ S.R. 49
Roadway. 40'-0" ¼ Concrete Parapets With Aluminum Railing And 1'-0" Curbs.
Loading. C.F. 2000(51), Adequate for AASHO Alternate Loading.
Wearing Surface: Concrete Overlay
Skew: 39°44'18" Lt Fwd With Respect To Reference Ch
Alignment: 9-00' Curve
Superelevation: 0.083 ft/ft
Approach Slabs: AS-1-54 (25' Long)

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409 E. Monument / Dayton, Ohio 45402

GENERAL PLAN, ELEVATION AND BRIDGE SECTION

BRIDGE NO. MOT-49-1112 (R)/MOT-70-0821 (NORTHBOUND S.R.49 OVER I-70

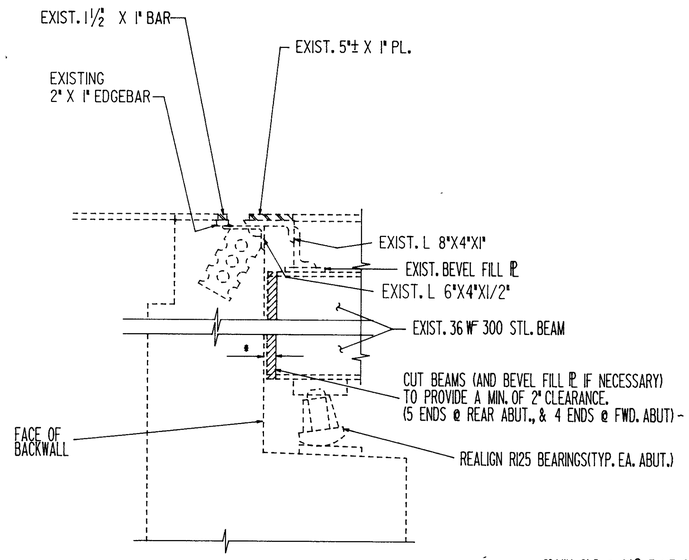
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
D.E.M.	RACH	JOE	R.G.S.	[illegible]	2/20/98

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

148
219

MOT-70-06.53/11.02



END OF BEAM REMOVAL DETAIL

* 2" MIN. CLR. @ 60° F MEASURED @ RT. ANGLES TO ABUT. BACKWALL.

PROPOSED WORK

1. PATCH ABUTMENTS & PIERS AS DIRECTED BY THE ENGINEER. REALIGN ABUTMENT BEARINGS, AND REMOVE ENDS OF BEAMS. SEAL SHOULDER PIERS.
2. ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON NORTH BOUND S.R. 49 AT ALL TIMES. FOR NOTES SEE SHEET 16.
3. OTHER WORK AS DESCRIBED IN THESE PLANS.

ITEM 519 - PATCHING OF CONCRETE STRUCTURE:
ESTIMATED AREAS TO BE PATCHED ARE AS FOLLOWS:

ABUTMENT CORNERS, SEATS AND BACKWALL	150 SQ. FT.
PIER COLUMNS	5 SQ. FT.
TOTAL =	155 SQ. FT.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
516	10	EACH	REALIGN BEARING DEVICES, AS PER PLAN (ABUT. ROCKERS, R125)		
519	155 *	SF.	PATCHING CONC. STRUCTURE		
SPECIAL	178	SY.	SEALING OF CONC. SURFACES, SEE PROPOSAL NOTE		
518	14	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN		
513	LUMP		TRIMMING OF BEAM END, AS PER PLAN		

* 50% Federal Participation

QUANTITIES CARRIED TO BRIDGE GENERAL SUMMARY

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

2 / 2

REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

BRIDGE NO. MOT-49-1112R (MOT-70-0821)

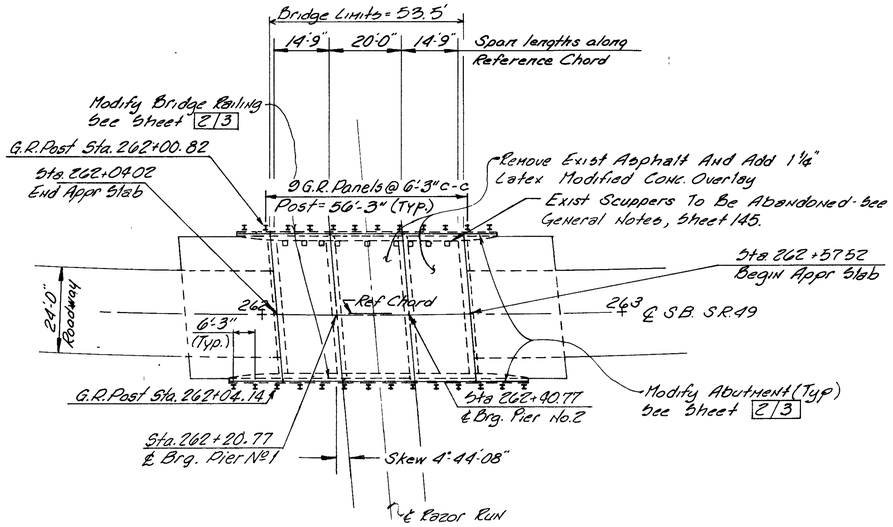
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S	[illegible]	2/19/86	

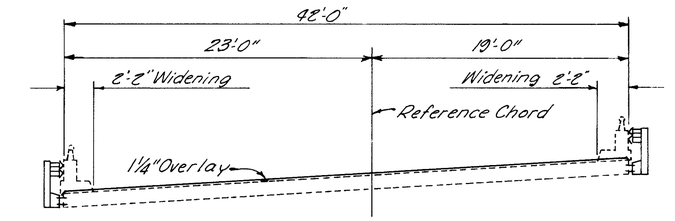
FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

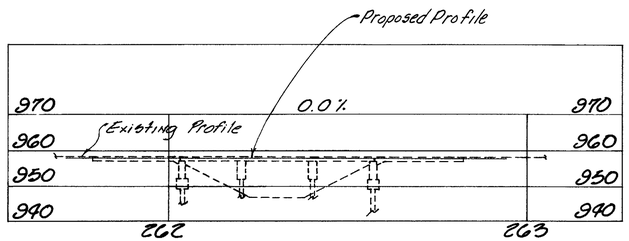
149
219



PLAN



BRIDGE SECTION



ELEVATION

EXISTING STRUCTURE

Type: Continuous concrete slab w/ capped pile Abutments & Piers.
Spans: 14'-9", 20'-0", 14'-9" along Ref. Chord
Roadway: 40'-0" f/f Parapets w/ alum. railing and 1'-0" concrete curbs.
Loading: C.F. - 2000 (adequate for AASHO alternate loading).
Wearing Surface: Asphalt
Skew: 4°44'08" Rt. forward from Ref. Chord
Alignment: Chord between ends of Bridge Slab
Approach Slab: AS-1-54 (25' long)
Superelevation: 0.066 ft/ft.

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409 East Monument Avenue
Dayton, Ohio 45402-1226

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GENERAL PLAN, ELEVATION, & BRIDGE SECTION

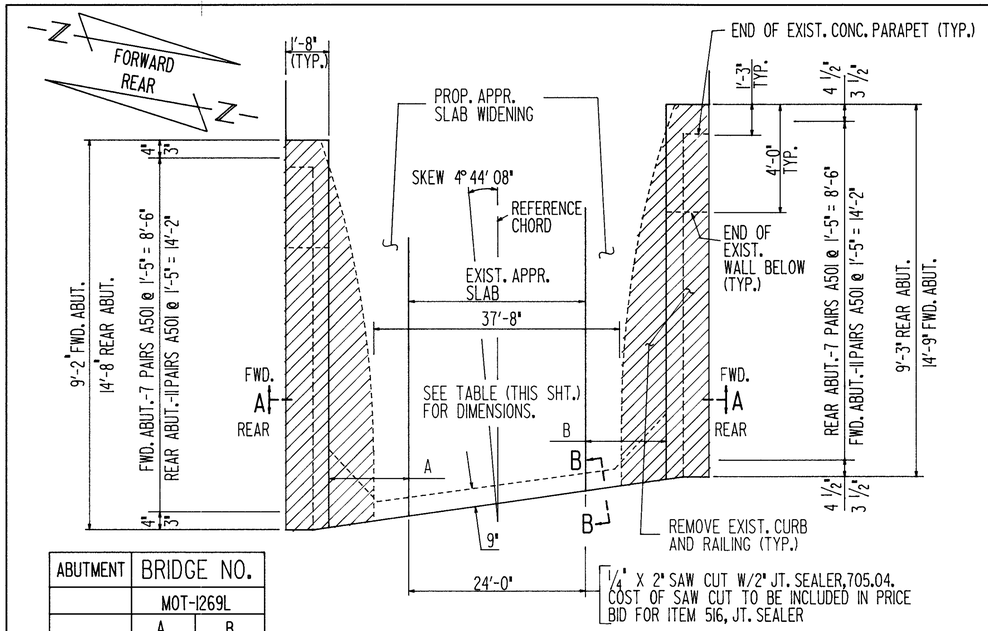
BRIDGE NO. MOT-49-1269(L)
(SOUTHBOUND S.R. 49 OVER RAZOR RUN)
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	RMJ		R.G.S	b.D.Z	4/29/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

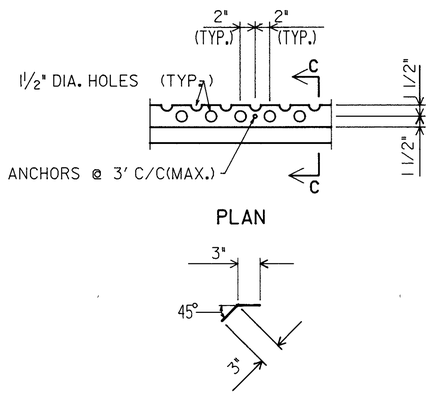
150 / 219

MOT-70-06.53/11.02



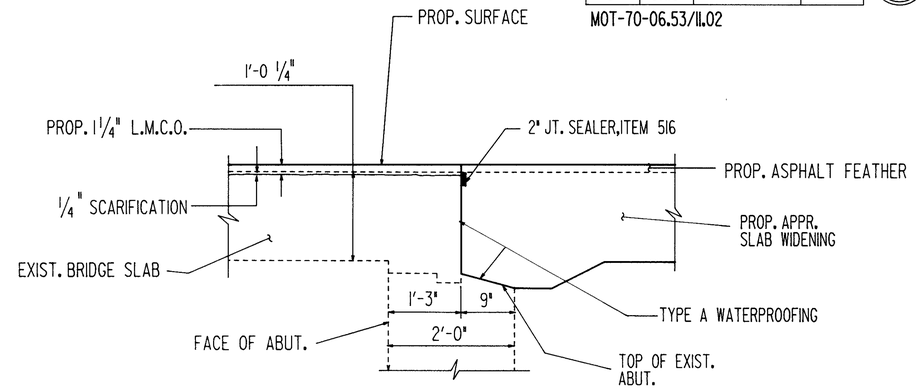
PLAN- ABUTMENT MODIFICATION

ABUTMENT	BRIDGE NO.	
	MOT-1269L	
	A	B
REAR	5'-4"	9'-4"
FORWARD	9'-4"	5'-4"

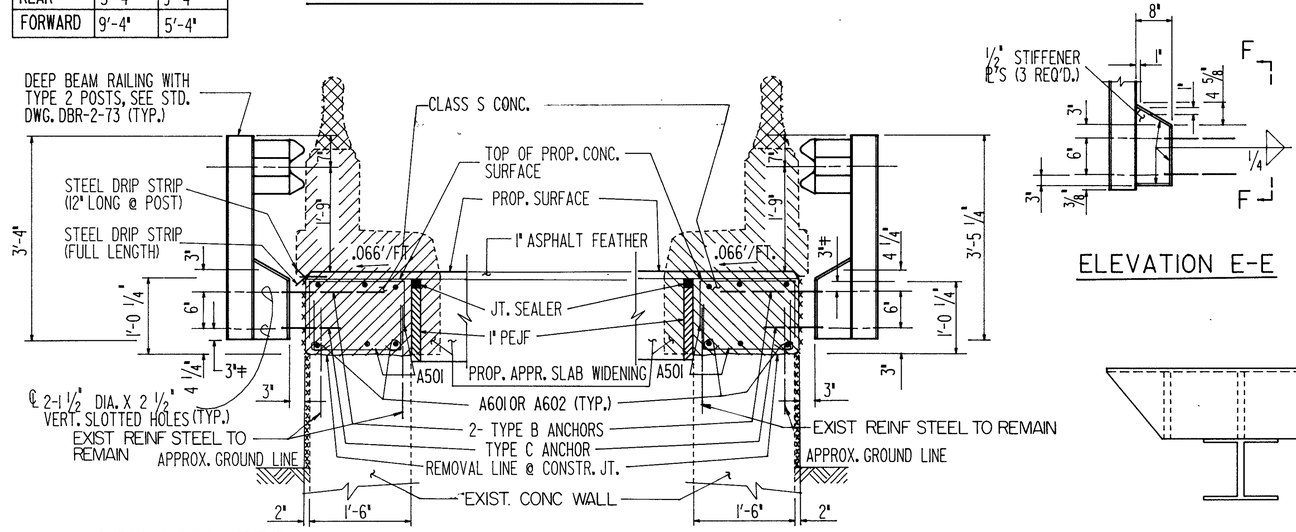


DRIP STRIP DETAIL

FOR NOTES REGARDING DRIP STRIP SEE SHT. 145



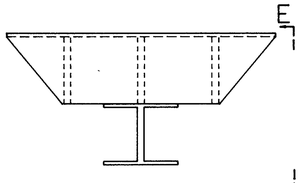
SECTION B-B



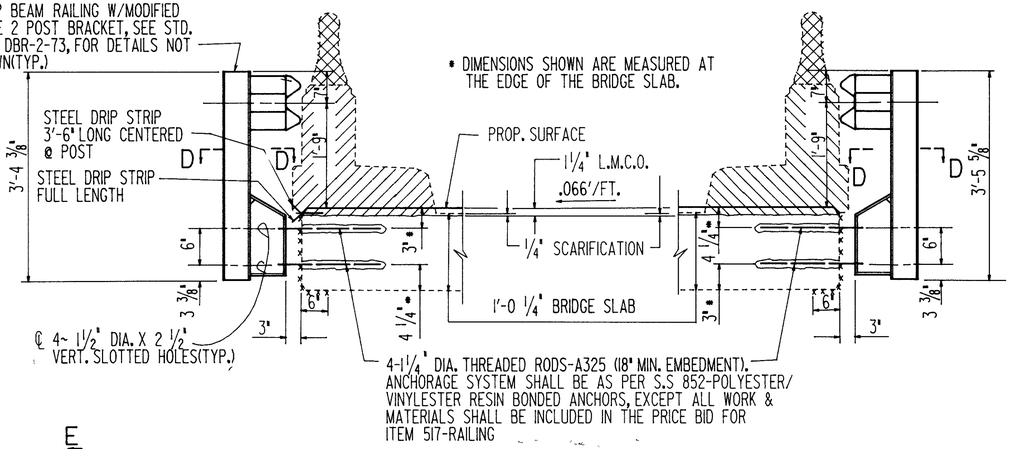
DIMENSIONS SHOWN ARE TYP. FOR LEFT & RIGHT POSTS.

SECTION A-A

ELEVATION E-E

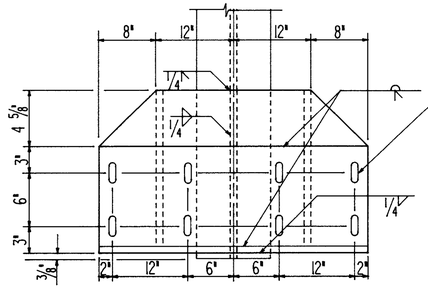


VIEW D-D



* DIMENSIONS SHOWN ARE MEASURED AT THE EDGE OF THE BRIDGE SLAB.

MODIFIED BRIDGE RAILING DETAIL



ELEVATION F-F

NOTE: ALL PL'S ARE 1/2" THICK.

EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-PORTIONS OF STRUCTURES REMOVED.

EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR SUBSEQUENT PICK-UP BY STATE FORCES. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORTIONS OF STRUCTURES REMOVED.

XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.

NOTES:

1. GALVANIZING: ALL GUARD RAIL POSTS, TUBES, BRACKETS, HARDWARE & ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE W/ASTM A123 OR ASTM A153.

2. PREFORMED EXPANSION JOINT FILLER & SEALER AT CORNERS AND SIDES OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ.YD. FOR THE APPROACH SLAB.

3. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENED APPR. SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR THE APPR. SLAB.

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409 E. Monument/Dayton, Ohio 45402

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MISCELLANEOUS DETAILS

BRIDGE NO. MOT-49-1269 L

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S	DDL	3/29/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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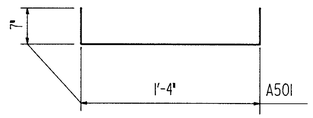
MOT-70-06.53/11.02

REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
A501	BNT.	72	2'-3"	169
A601	STR.	12	8'-9"	158
A602	STR.	12	14'-3"	257
			TOTAL	584

BENT BAR DETAILS



ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED		
202	224	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
509	584	LBS.	REINFORCING STEEL, GRADE 60		
516	78	L.F.	JOINT SEALER, 705.04, AS PER PLAN		
511	3	C.Y.	CLASS S CONCRETE, ABUTMENT		
517	112.5	L.F.	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP & TYPE 2 STEEL		
			POSTS AND ANCHOR BOLTS) AS PER PLAN (SEE PROPOSAL NOTE)		
519	30 *	S.F.	PATCHING CONCRETE STRUCTURE		
845	250	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	15	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
845	2	C.Y.	FULL DEPTH REPAIR		
SPECIAL	30	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
SPECIAL	9	EACH	ABANDON SCUPPER		
SPECIAL	52	S.F.	STEEL DRIP STRIP		

PROPOSED WORK

1. REMOVE ASPHALT FROM THE SUPERSTRUCTURE. REMOVE CURB & RAILING FROM SUPERSTRUCTURE & ABUTMENTS.
2. MODIFY & PATCH ABUTMENTS AS DIRECTED BY THE ENGINEER.
3. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
4. PERFORM PARTIAL DEPTH AND FULL DEPTH DECK REPAIR AND PLACE LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK).
5. SEAL EDGE OF DECK.
6. SEAL JOINTS AS NOTED.
7. ADD NEW DEEP BEAM RAILING TO BRIDGE & ABUTMENTS.
8. SOUTHBOUND S.R. 49 SHALL BE CLOSED TO TRAFFIC FOR A LIMITED TIME PERIOD. FOR NOTES SEE SHEET 16.
9. OTHER WORK AS DESCRIBED IN THESE PLANS.

ITEM 519 - PATCHING CONCRETE STRUCTURE:
ESTIMATED AREAS TO BE PATCHED ARE AS FOLLOWS:
ABUTMENT CORNERS 30 SQ. FT.

* 50% Federal Participation

QUANTITIES CARRIED TO BRIDGE GENERAL SUMMARY

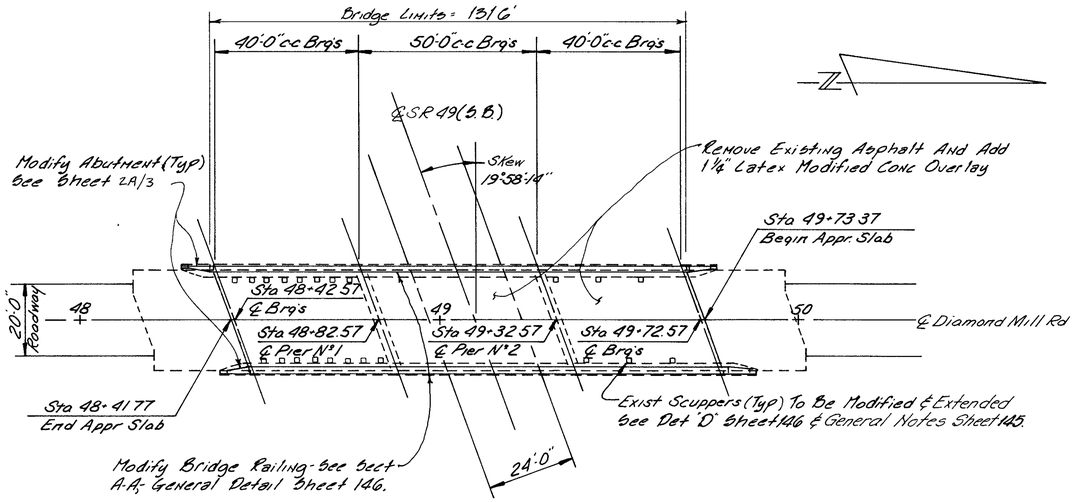
WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

3 / 3

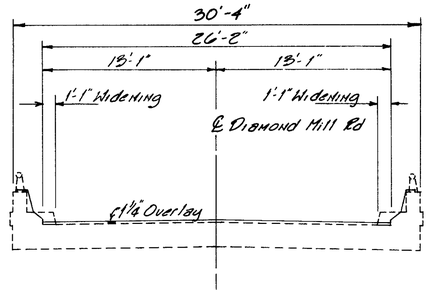
REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

BRIDGE NO. MOT-49-1269 L

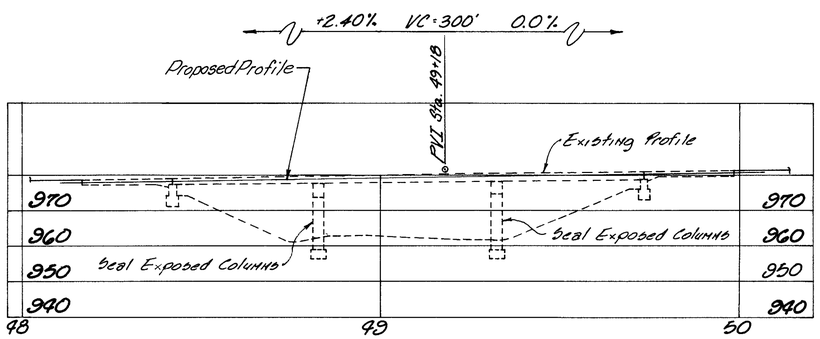
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S	G.B.L.	2/29/80	



PLAN



BRIDGE SECTION



ELEVATION

EXISTING STRUCTURE

Type: Continuous reinforced concrete slab w/ reinforced concrete substructure
Spans: 40', 50', 40' ℄ brgs.
Roadway: 24'-0" F/F w/ 2'-0" safety curbs w/ concrete parapets & alum. railing.
Loading: C.F. 130
Skew: 19°58'14" Right Forward.
Wearing Surface: Asphalt
Alignment: Tangent
Approach Slab: 25' long

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409 E. Monument / Dayton, Ohio 45402

1 / 3

GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-49-1279(L)
DIAMOND MILL RD. OVER SOUTHBOUND S.R. 49

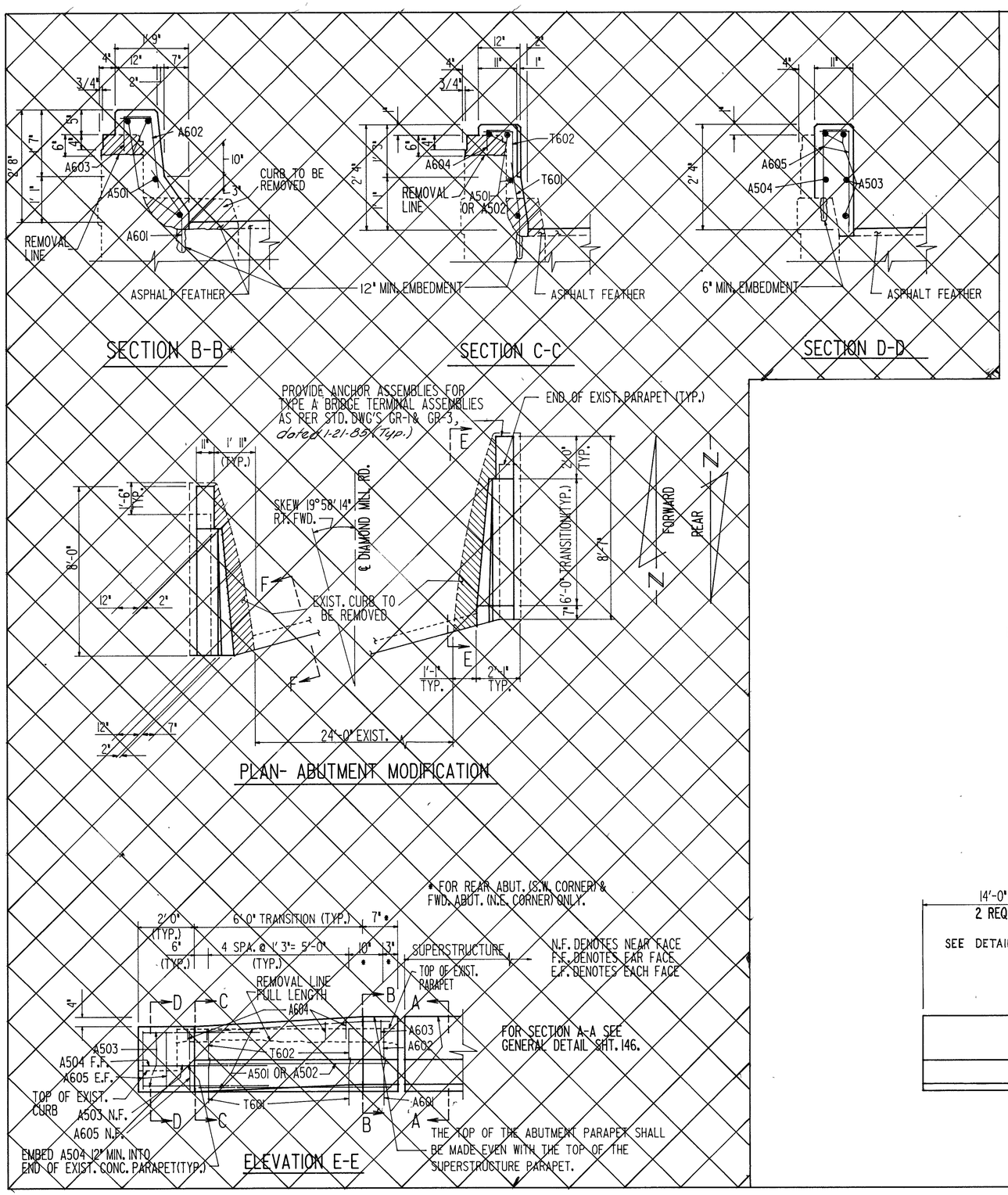
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.		R.M.J.	R.G.S.	D.A.K.	2/29/08	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

153
219



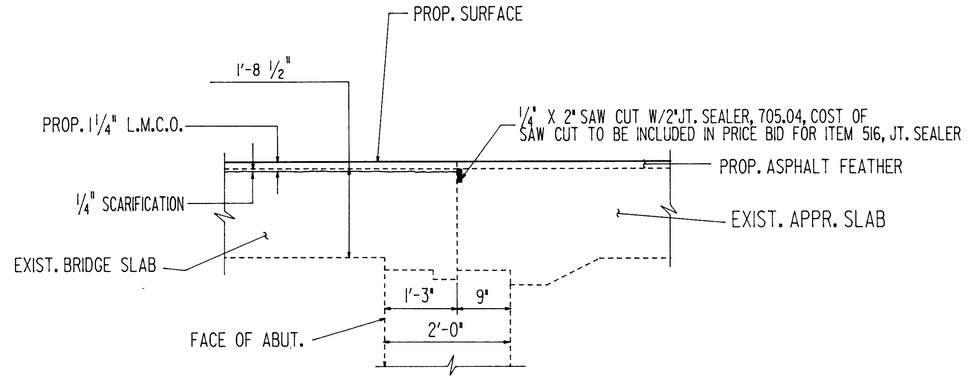
SECTION B-B*

SECTION C-C

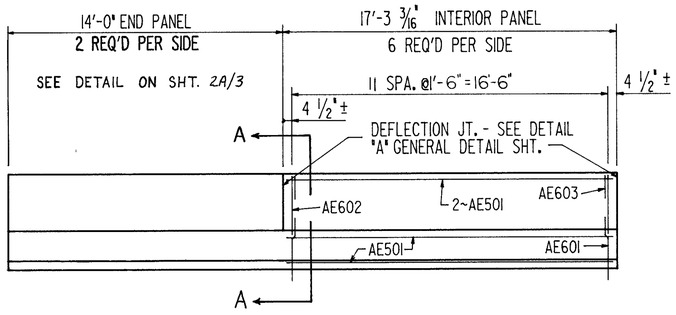
SECTION D-D

PLAN- ABUTMENT MODIFICATION

ELEVATION E-E



SECTION F-F



SUPERSTRUCTURE PARAPET DETAIL

WOOLPERT CONSULTANTS
409 E. Monument/Dayton, Ohio 45402

2/3

MISCELLANEOUS DETAILS

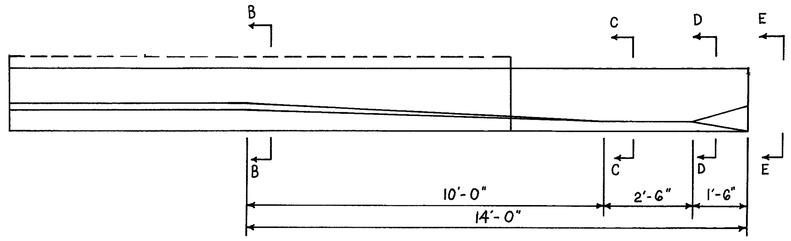
BRIDGE NO. MOT-49-1279 L

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.			

FHWA REGION	STATE	PROJECT		153A 219
5	OHIO			

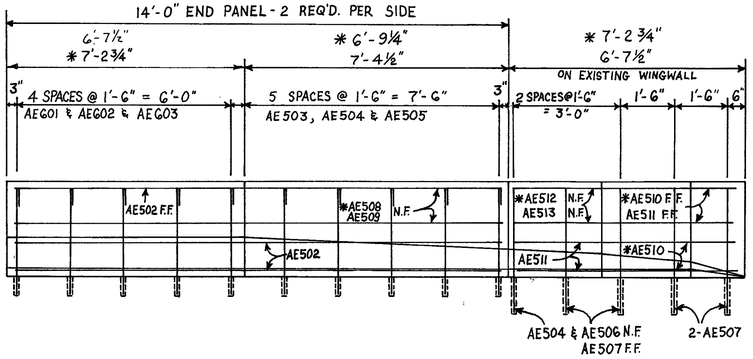
MONTGOMERY COUNTY
MOT-70-06.49/11.02



PLAN

N.F. = Near Face
F.F. = Far Face

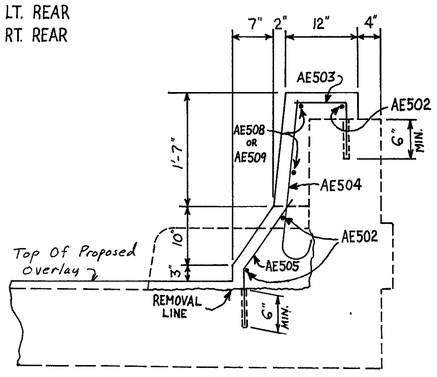
Type "AA" Bridge Terminal Assembly
At Each Corner Of Bridge



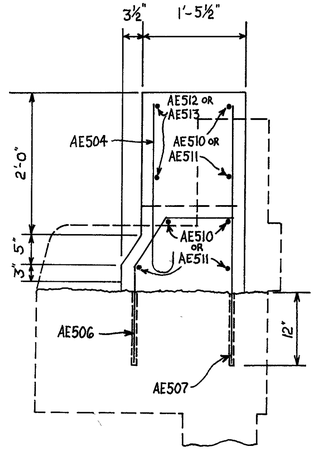
ELEVATION

EXISTING WINGWALLS

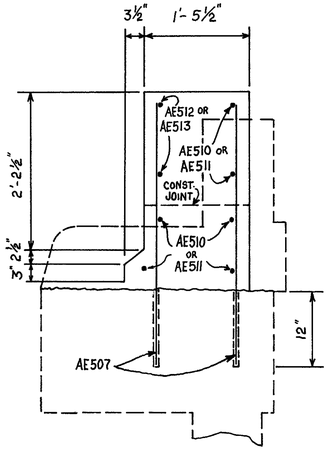
(*) RT. FORWARD AND LT. REAR
( ) LT. FORWARD AND RT. REAR



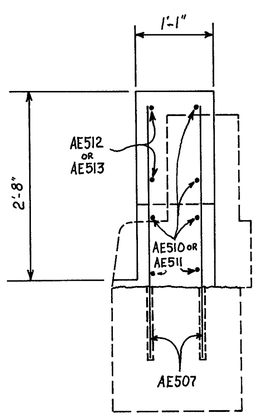
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
2A/3

DETAILS
BRIDGE No. MOT-49-1279L

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BS1 19901130

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

154/219

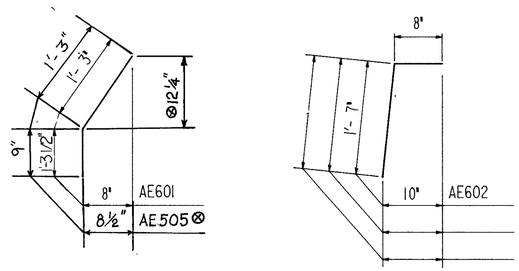
MOT-70-06.53/11.02

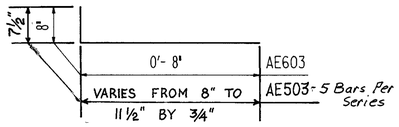
REINFORCING STEEL LIST

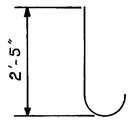
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
AE501	STR.	48	16'-10"	843
AE502	STR.	12	13'- 6"	169
AE601	BNT.	164	2'-4"	575
AE602	BNT.	164	2'- 1"	513
AE603	BNT.	164	1'- 2"	288
AE503	BNT.	4		27
AE504	BNT.	32	3'-0"	100
AE505	BNT.	20	2'-0"	42
AE506	BNT.	12	3'-0"	38
AE507	STR.	28	3'- 7"	105
AE508	BNT.	4	13'-8"	57
AE509	BNT.	4	13'-8"	57
AE510	STR.*	12	6'-10¾"	86
AE511	STR.*	12	6'-3½"	79
AE512	BNT.	4	6'-9¾"	28
AE513	BNT.	4	6'-2½"	26
			TOTAL	3033

LETTER 'E' IN PREFIX INDICATES EPOXY COATING.
* BEND IN FIELD AS REQUIRED.

BENT BAR DETAILS







AE504

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED		
202	351	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
511	4.2	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE, BARRIER PARAPET RAILING		
516	51	L.F.	JOINT SEALER, 705.04, AS PER PLAN		
510	40	EACH	DOWEL HOLES		
517	263.2	L.F.	RAILING FACED, AS PER PLAN		
519	50*	S.F.	PATCHING CONCRETE STRUCTURE		
509	300	LBS.	REINFORCING STEEL, GRADE 60		
509	3033	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60		
845	383	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	9	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
SPECIAL	254	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
518	22	EACH	SCUPPER MODIFICATION, AS PER PLAN		
518	22	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN		

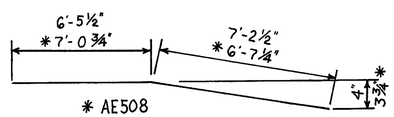
PROPOSED WORK

1. REMOVE ASPHALT FROM THE SUPERSTRUCTURE.
2. MODIFY PARAPETS ON THE SUPERSTRUCTURE AND ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS.
3. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
4. PATCH ABUTMENTS, PIERS, AND BOTTOM OF SLAB AS DIRECTED BY THE ENGINEER.
5. PERFORM PARTIAL DEPTH AND FULL DEPTH DECK REPAIR AND PLACE LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK).
6. SEAL JOINTS AS NOTED.
7. REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
8. DIAMOND MILL ROAD SHALL BE CLOSED TO TRAFFIC FOR A LIMITED TIME PERIOD. FOR NOTES SEE SHEET 16.
9. OTHER WORK AS DESCRIBED IN THESE PLANS.

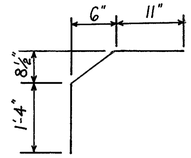
ITEM 519 - Patching of Concrete Structure:
Estimated Areas to be Patched as Follows -

Abutment Corners	—	20 Sq.Ft.
Bottom of Slab	—	25 Sq.Ft.
Pier Columns	—	5 Sq.Ft.
Total	=	50 Sq.Ft.

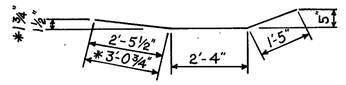
BENT BAR DETAILS



* AE508
AE509



AE506



AE513
* AE512

* 50% FEDERAL PARTICIPATION

QUANTITIES CARRIED TO BRIDGE GENERAL SUMMARY

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

3/3

REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

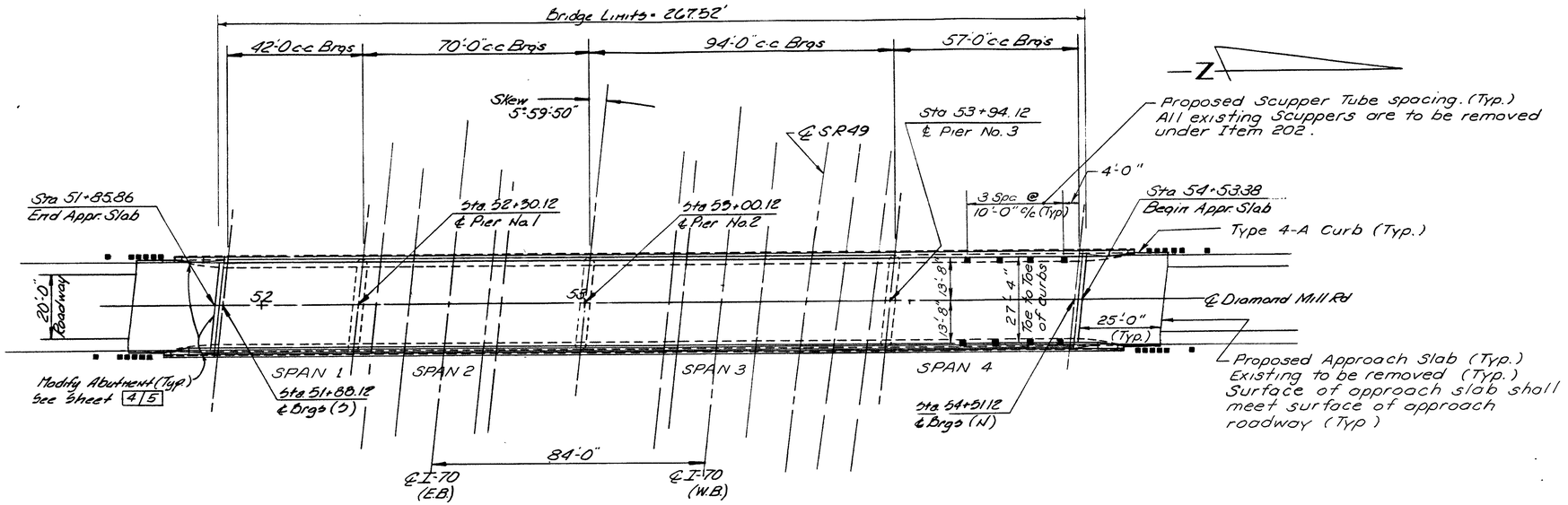
BRIDGE NO. MOT-49-1279 L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	G.B.L.	3/29/88	

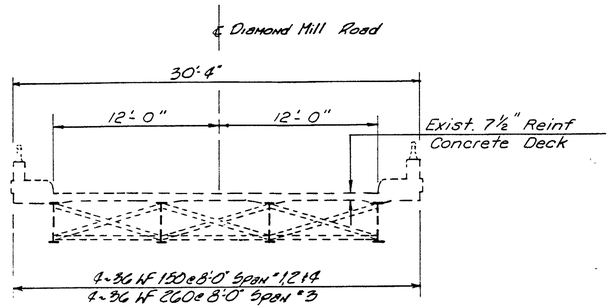
FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

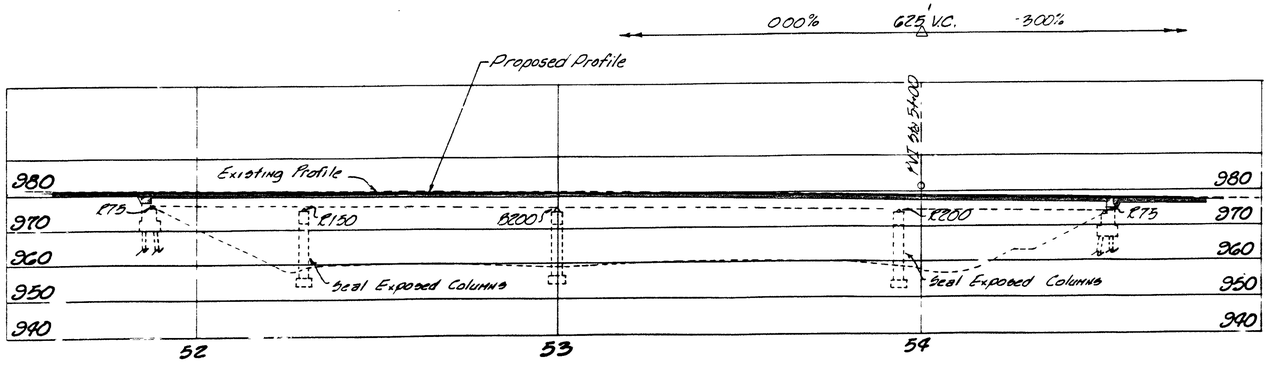
155
219



PLAN



EXISTING BRIDGE SECTION



ELEVATION

SEE SHEET NO. 14.5 FOR DESIGN STRESSES AND GENERAL NOTES

DESIGN CRITERIA

The following components of the existing structure have been re-designed according to the Strength Design Method.

A) Existing steel beams

PROPOSED STRUCTURE MODIFICATION

TYPE: 4 Span Continuous Existing Steel Beam Bridge with new composite reinforced concrete deck and existing reinf. conc. substructures.
SPANS: 42'-0", 70'-0", 94'-0", 57'-0" c/c Brgs.
ROADWAY: 27'-4" Toe to Toe of curbs
SKEW: 5°59'50" Lt Forward
LOADING: HS 20-44, Case II and Alternate Military Loading
ALIGNMENT: Tangent
WEARING SURFACE: Monolithic Concrete
SUPERELEVATION: None
APPROACH SLABS: AS-1-81 (25'-0" Long)

EXISTING STRUCTURE

Type: Continuous Steel Beam With Reinforced Concrete Deck And Substructure.
Spans: 42'-70'-94'-57' c/c Brgs.
Roadway: 24'-0" w/ 2'-0" Safety Curbs With Concrete Parapets And Aluminum Railing
Loading: CF-130
Skew: 5°-59'-50" Lt. Forward
Wearing Surface: Asphalt
Alignment: Tangent
Approach Slabs: 25' Long.

SFN: 5705045

WOOLPERT CONSULTANTS
409 E. Monument Dayton Ohio 45402

1 5

GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0662
DIAMOND MILL RD. OVER I-70

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.		R.G.S.	D.D.Z.	2/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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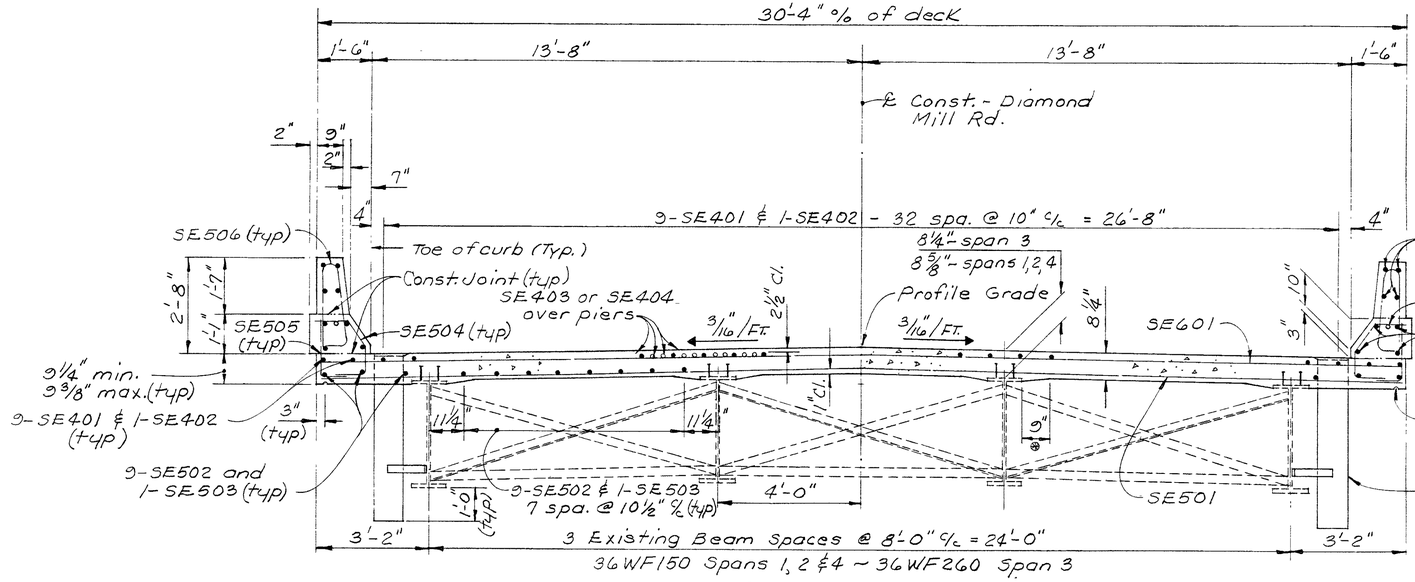
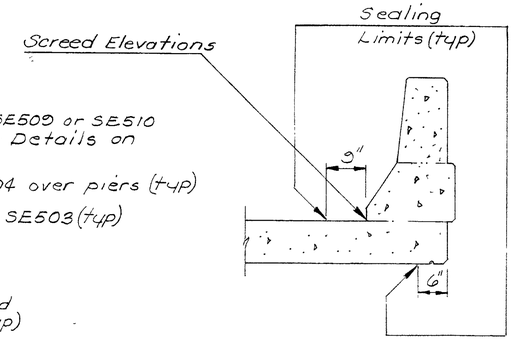
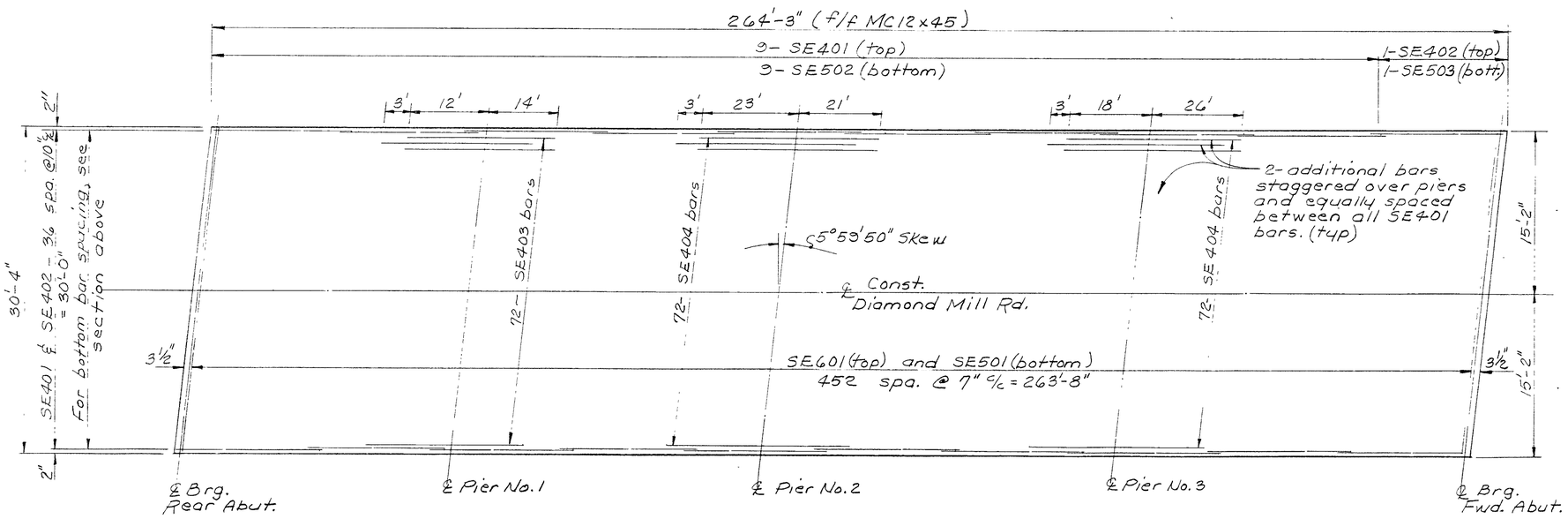


TRANSVERSE SECTION



PARAPET SEALING LIMITS



DECK REINFORCING PLAN
(All ⊙ laps to be 1'-8" min.)

⊙ Number 4 bars
Number 5 bars to lapped 2'-2" min.)

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY SECTION 2.7 OF THE AASHTO/AWS BRIDGE WELDING CODE.

⊛ 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" WIDTH.)

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.

ITEM SPECIAL , SEALING OF CONCRETE SURFACES : DEFLECTOR PARAPETS SHALL BE SEALED WITH AN EPOXY SEALER. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

2 5

SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-0662
DIAMOND MILL RD.
OVER I-70

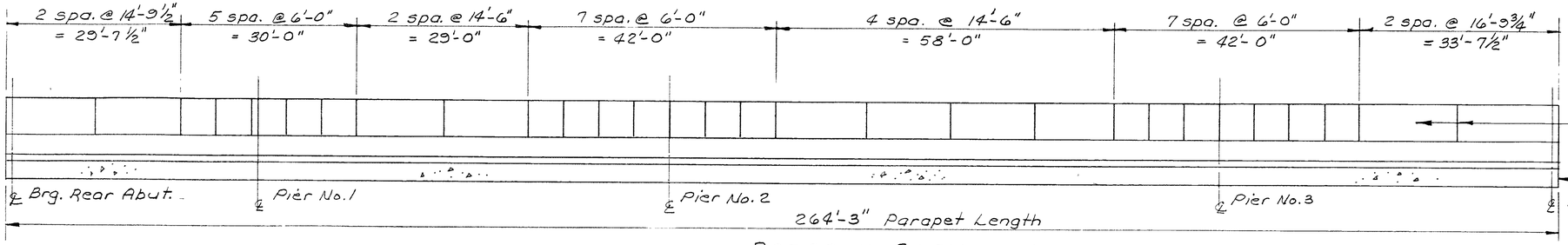
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RGI	WTF	5-21-90	

064233

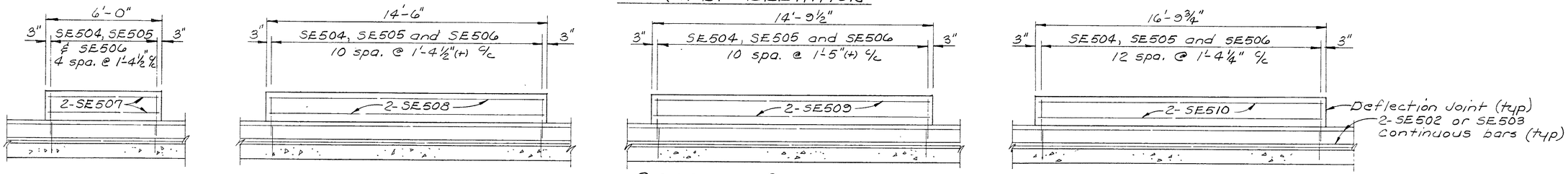
FHWA REGION	STATE	PROJECT	
5	OHIO		

156A 219

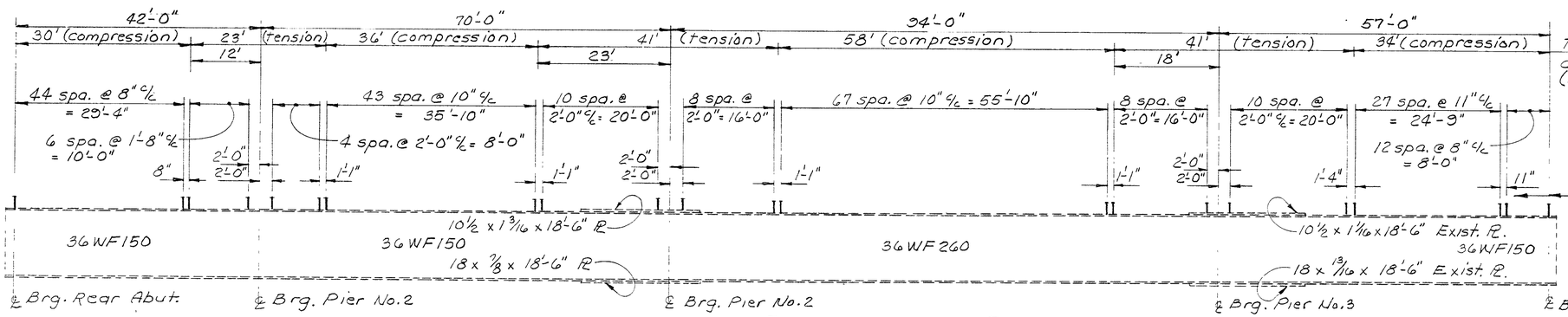
MOT-70-6.53/11.02



PARAPET ELEVATION

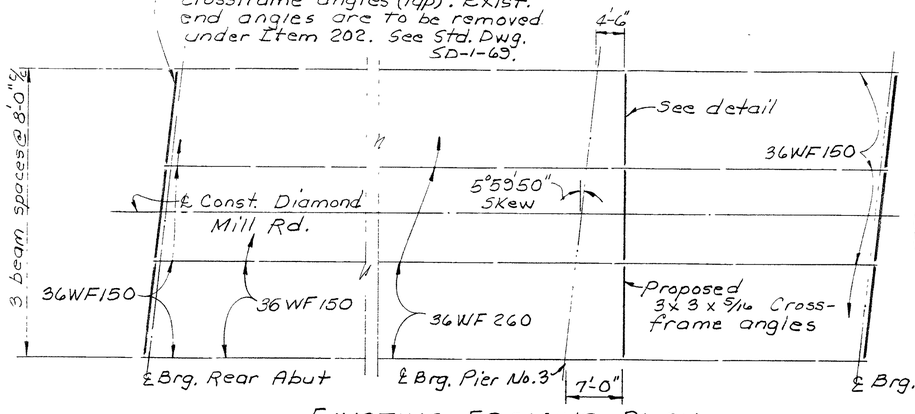


PARAPET PANELS

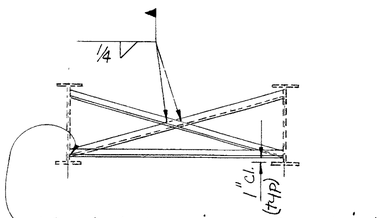


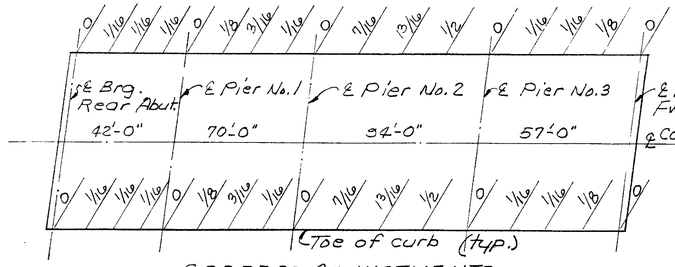
EXISTING BEAM ELEVATION

Vertical scale is exaggerated.
500 shear connectors are required per beam line.



EXISTING FRAMING PLAN
(Partial)

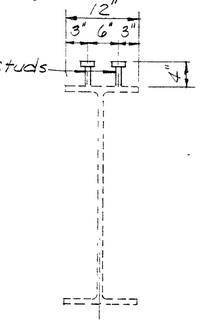




SCREED ADJUSTMENTS

Dimensions (in inches) are shown at the quarter points of each span. Screeds shall be adjusted upward by these amounts above the final deck profile due to deflection from the concrete deadload.

Screed Elevation = El. T/beam + slab depth over beam + Adjustment.



BEAM SECTION

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

3 | 5

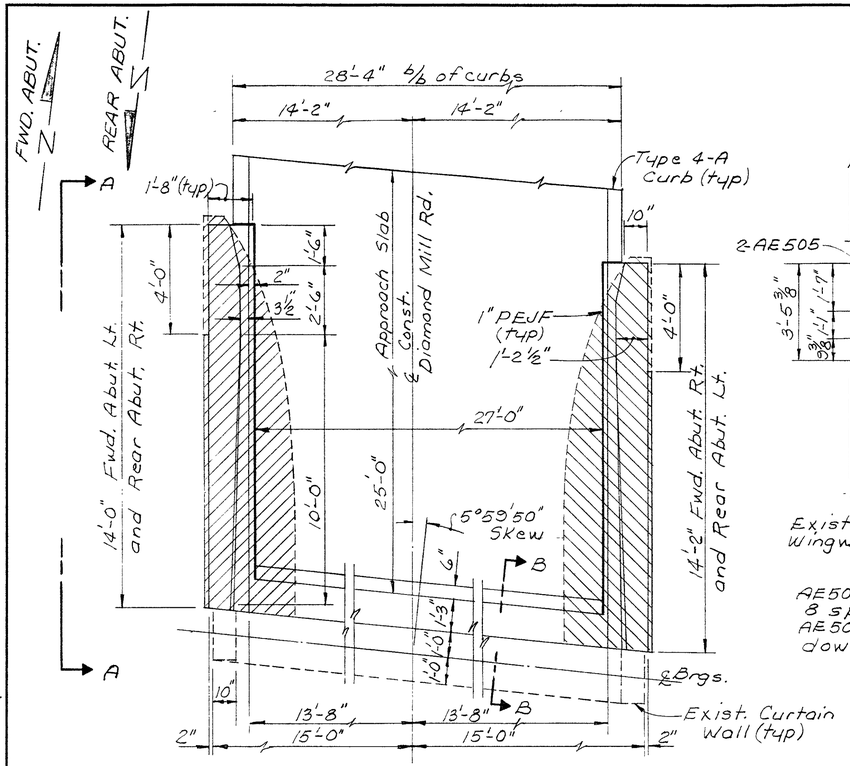
SUPERSTRUCTURE DETAILS BRIDGE No. MOT-70-0662 DIAMOND MILL RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-21-90	

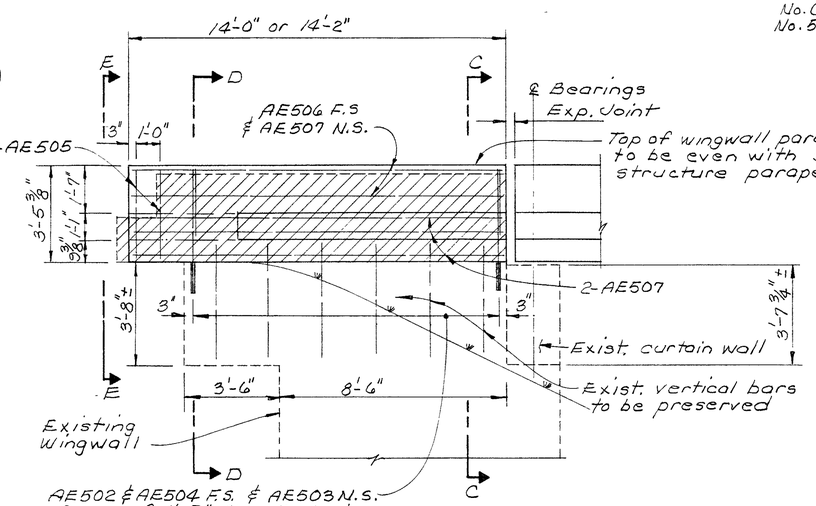
FHWA REGION	STATE	PROJECT	
5	OHIO		

156B 219

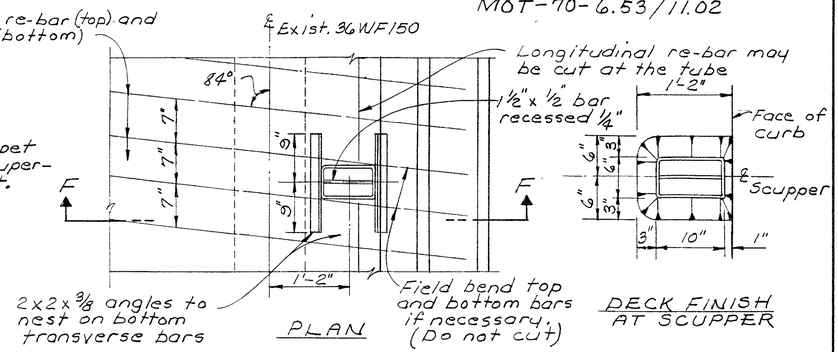
MOT-70-6.53/11.02



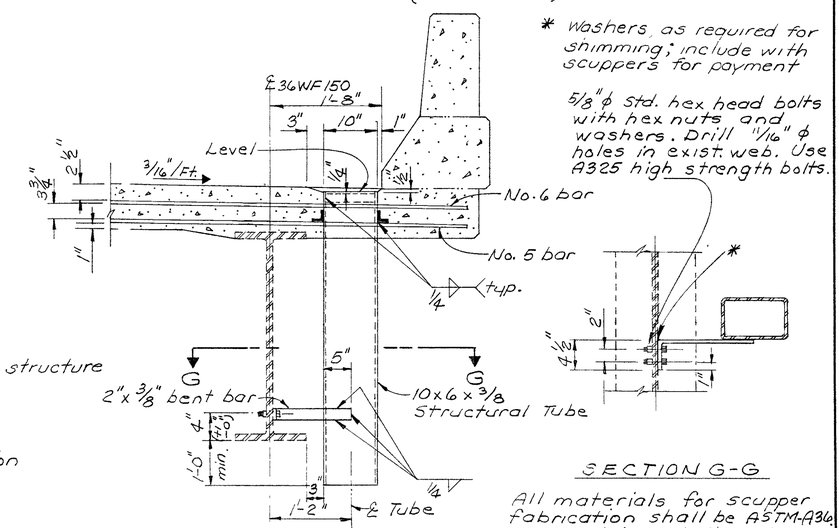
PLAN - ABUTMENT MODIFICATION
(Rear and Forward)



VIEW A-A
For additional wingwall parapet transition and guardrail mounting details, see Std Drwg GR-3.



DECK FINISH AT SCUPPER



SECTION F-F

SECTION G-G

All materials for scupper fabrication shall be ASTM-A36. Galvanizing shall be in accordance with 711.02.

SCUPPER DETAILS

DIMENSION "A"

Ambient temp.(F)	Rear Abut.	Fwd. Abut.
30°	1 7/8"	1 15/16"
40°	1 3/4"	1 13/16"
50°	1 11/16"	1 11/16"
60°	1 5/8"	1 9/16"
70°	1 9/16"	1 9/16"
80°	1 7/16"	1 5/16"
90°	1 3/8"	1 1/4"

(3" Seals Required). The openings shall not be less than 1½".

LEGEND

~Indicates portions of existing structure that are to be removed.

N.S. ~ Indicates near side

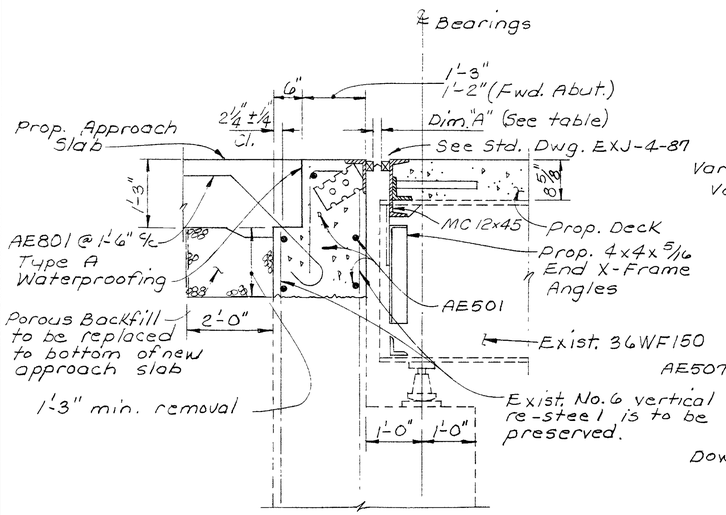
F.S. ~ Indicates far side

PEJF ~ Indicates Preformed Expansion Joint Filler

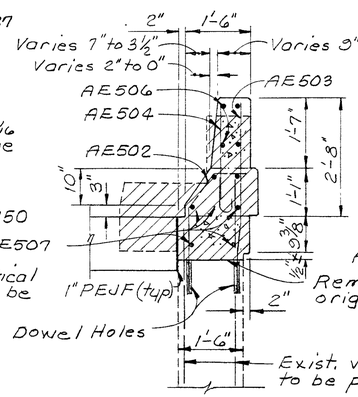
NOTES

All abutment backwall and parapet concrete shall be Class S.

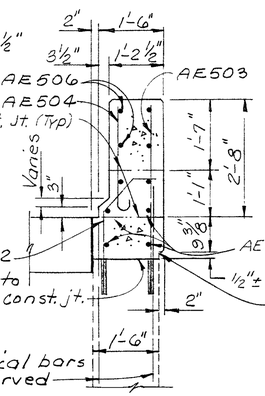
Type A Waterproofing, Preformed Expansion Joint Filler and Sealer at the corners and sides of the approach slab shall be included in the price bid per sq. yd. for the approach slab.



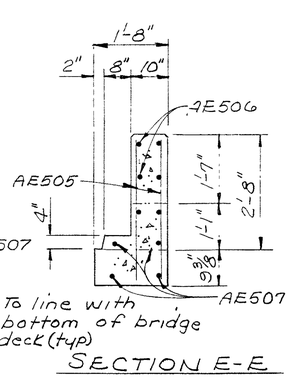
SECTION B-B
(All existing expansion joint armor is to be removed with backwall)



SECTION C-C



SECTION D-D



SECTION E-E

ITEM SPECIAL, SEALING OF CONCRETE SURFACES (SEE GENERAL NOTES AND PROPOSAL). THE FOLLOWING AREAS SHALL BE SEALED AT EACH ABUTMENT: THE ENTIRE SURFACE PERIMETER (TO TOE OF CURB) OF THE NEW DEFLECTOR PARAPETS AND THE ABUTMENT BACKWALL, SEATS AND BREASTWALL (DOWN FROM SEAT TO GROUND SURFACE) FACE TO FACE OF EXISTING CURTAIN WALLS.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

4 | 5

ABUTMENT AND SCUPPER DETAILS
BRIDGE No. MOT-70-0662
DIAMOND MILL RD.
OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-21-90	

084333

FHWA REGION	STATE	PROJECT	
5	OHIO		

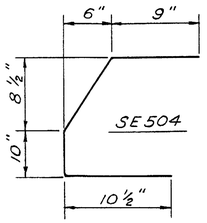
157/219

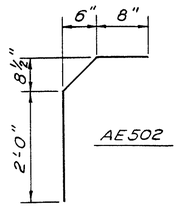
MOT-70- 6.53/11.02

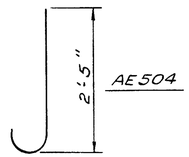
REINFORCING STEEL LIST

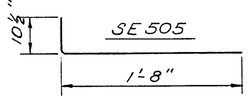
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
ABUTMENTS				
AE501	Str.	10	30'-0"	313
AE502	Bnt.	36	3'-5"	128
AE503	Str	36	4'-3"	160
AE504	Bnt.	36	3'-0"	113
AE505	Str.	16	3'-1"	51
AE506	Bnt	8	13'-8"	114
AE507	Str	32	13'-8"	456
AE801	Bnt.	38	4'-11"	499
			TOTAL	1834
SUPERSTRUCTURE				
SE401	Str	333	30'-0"	6673
SE402	Str	37	9'-3"	229
SE403	Str.	74	26'-0"	1285
SE404	Str	148	44'-0"	4350
SE501	Str	453	30'-0"	14,174
SE502	Str.	342	30'-0"	10,701
SE503	Str.	38	13'-9"	545
SE504	Bnt.	418	3'-1"	1344
SE505	Bnt.	418	2'-5"	1054
SE506	Bnt.	418	5'-3"	2289
SE507	Str.	152	5'-8"	898
SE508	Str.	48	14'-2"	709
SE509	Str	16	14'-5"	241
SE510	Str	16	16'-5"	274
SE601	Str	453	30'-0"	20,412
			TOTAL	65,178

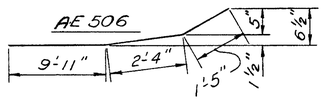
BENDING DIAGRAMS

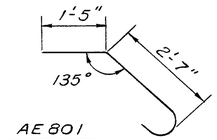


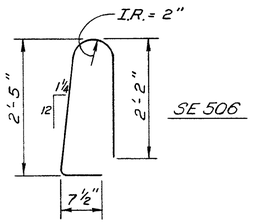












LETTER "E" IN PREFIX INDICATES EPOXY COATING

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT
202	Lump	Sum	Portions of Structure Removed	
509	67012	Lbs.	Epoxy Coated Reinforcing Steel, Grade 60	
510	72	Each	Dowel Holes	
511	286	Cu. Yd.	Class S Concrete, Superstructure, As Per Plan	
513	1250	Lbs.	Structural Steel (AISC Certification not required)	
513	2000	Each	Welded Stud Shear Connectors	
516	60.00	Lin Ft	Structural Expansion Joint, including Elastomeric Strip Seals	
518	8	Each	Scuppers, Including Supports, As Per Plan	
518	5	Cu Yd.	Porous Backfill, As Per Plan	
519	5 *	Sq. Ft.	Patching Concrete Structure	
Special	684	Sq. Yd.	Sealing of Concrete Surfaces, (Epoxy) (See Proposal Note)	
~~Special~~	~~Lump~~	~~Sum~~	~~Field Painting of Existing Steel, Surface Preparation, System OZEU, (See Proposal Note)~~	
~~Special~~	~~Lump~~	~~Sum~~	~~Field Painting of Existing Steel, Prime Coat, System OZEU, (See Proposal Note)~~	
~~Special~~	~~Lump~~	~~Sum~~	~~Field Painting of Existing and New Steel, Intermediate Coat, System OZEU, (See Proposal Note)~~	
~~Special~~	~~Lump~~	~~Sum~~	~~Field Painting of Existing and New Steel, Finish Coat, System OZEU, (See Proposal Note)~~	
~~Special~~	~~Lump~~	Sum	~~Contain, collect, store and evaluate abrasives and paint~~ chips, (See Proposal Note)	
~~Special~~	~~Lump~~	Sum	~~Shipment and disposal of non hazardous waste, (See Proposal Note)~~	
~~Special~~	~~Lump~~	~~Sum~~	~~Shipment and disposal of hazardous waste, (See Proposal Note)~~	
Special	Lump	Sum	Field Painting of new steel, System IZEU (See Proposal Note)	

* 50% Federal Participation

Quantities Carried To Bridge General Summary

PROPOSED WORK

1. Remove existing deck, Expansion Joint armor, Portions of Backwalls, Designated Areas of Wingwalls and Approach Slabs.
2. Patch Abutments as directed by the Engineer.
3. Install new X-Frame angles at Forward Pier and at Abutments.
4. Install new Expansion Joint systems at Abutments.
5. Complete New Deck, Parapets, Backwall and Wingwall modifications and new Approach Slabs.
6. Seal all Parapets and designated Pier Columns as shown on the plans.
7. Replace Guardrail as shown on Roadway Plans.
8. Paint all Structural Steel. (Color of finish coat shall be gray)
9. Diamond Mill Road shall be closed to traffic for a limited time period. For notes see sheet 16.
10. Other work as described in these plans.

ITEM 519 - PATCHING CONCRETE STRUCTURE
ESTIMATED AREAS TO BE PATCHED ARE AS FOLLOWS:
S.E. CORNER OF WINGWALL AND SOUTH ABUTMENT SEAT - 5 SQ.FT.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

575

REINFORCING STEEL LIST
ESTIMATED QUANTITIES
& PROPOSED WORK NOTES

BRIDGE NO. MOT-70-0662
DIAMOND MILL RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
Ohol	—	T.G.C.	RCT 5-11-90	WTF	5-21-90	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

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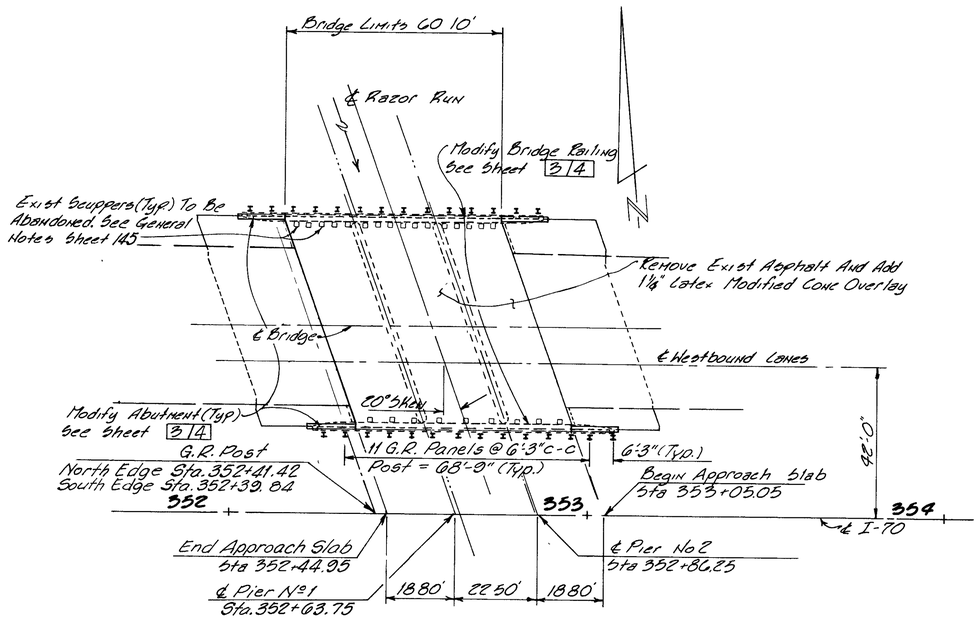
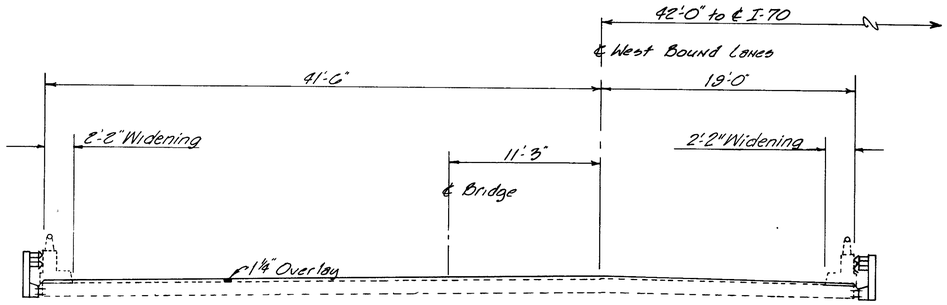
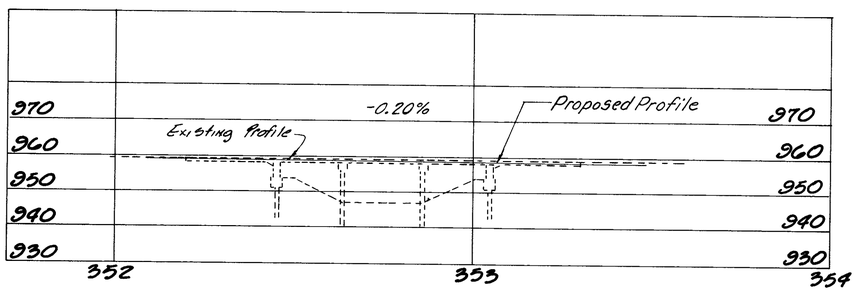


PLAN



BRIDGE SECTION

For Temporary Concrete Barrier see Sheet 17. Temporary Concrete Barrier, Bridge Mounted Is Carried In The Roadway Quantities Barrier Shall Not Be Anchored To Bridge Deck.



ELEVATION

EXISTING STRUCTURE

Type : Continuous Concrete Slab With Capped Pile Abutments And Capped Pile Piers
Spans : 18'-0", 22'-6", 18'-0"
Roadway : 53'-6" ft Of Parapets With Aluminum Railing And Curbs
Loading : CF-2000 (Adequate For AASHO Alternate Loading)
Wearing Surface : Asphalt
Skew : 20° 00' 00" Ft Forward
Alignment : Tangent
Approach Slabs : AS-1-54 (25' Long)

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409 E. Monument / Dayton, Ohio 45402

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GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0672 (L)
(WESTBOUND I-70 OVER RAZOR RUN)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.M.	RACH	JOE	R.G.S.	DBR	2/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

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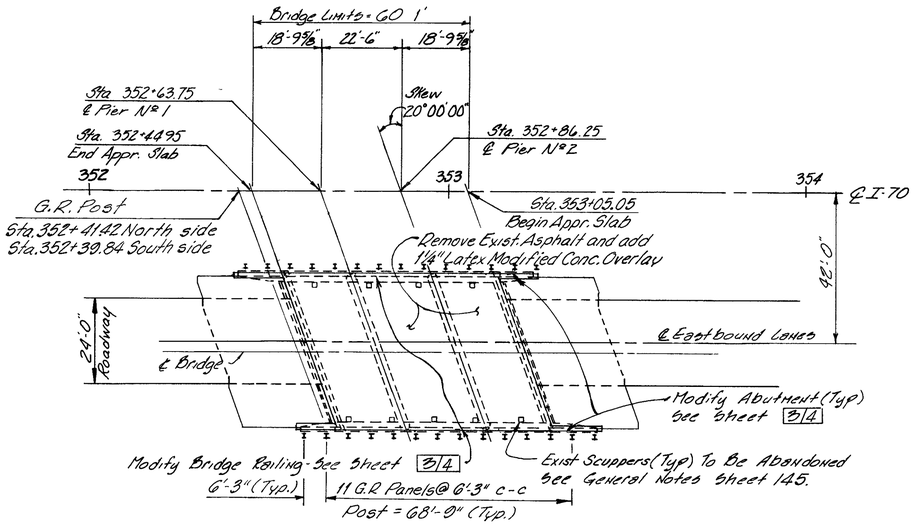
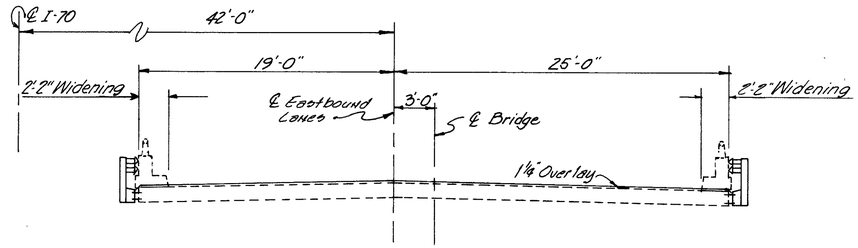
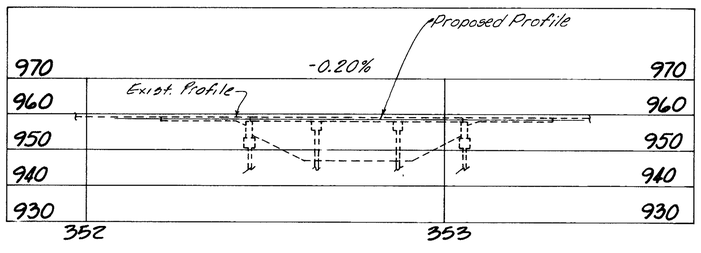


PLAN



BRIDGE SECTION

For Temporary Concrete Barrier see Sheet 17. Temporary Concrete Barrier, Bridge Mounted Is Carried In The Roadway Quantities. Barrier Shall Not Be Anchored To Bridge Deck.



ELEVATION

EXISTING STRUCTURE

Type: Continuous concrete slab w/ capped pile abutments & capped pile piers.
Span: 18'-0", 22'-6", 18'-0"
Roadway: 42'-0 f/f of parapets w/ alum. railing & 1'-2" curbs.
Load Frequency: CF = 2000(57) (Adequate for for AASHO alternate loading.)
Wearing Surface: Asphalt
Skew: 20°00'00" Rt. Forward
Alignment: Tangent
Approach Slabs: AS-1-54 (25' long).

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409 E Monument Dayton Ohio 45402

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GENERAL PLAN, ELEVATION, & BRIDGE SECTION

BRIDGE NO. MOT-70-0672(R)
(EASTBOUND I-70 OVER RAZOR RUN)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM.		RMJ	R.G.S.	[illegible]	[illegible]	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

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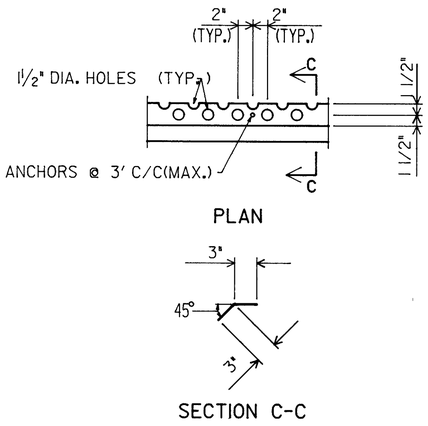
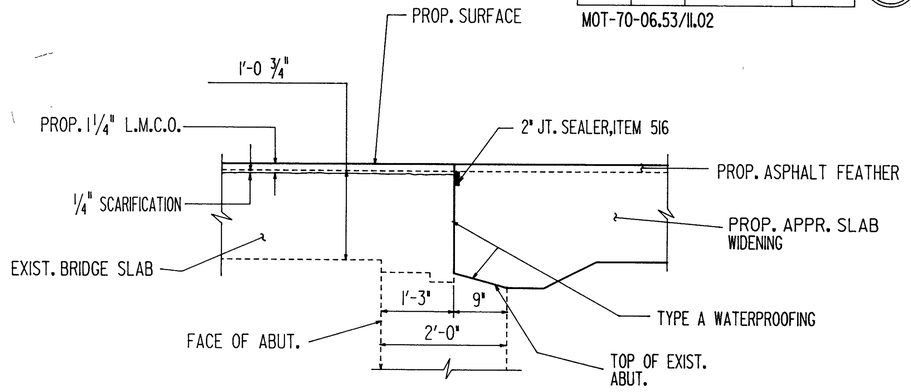
PLAN- ABUTMENT MODIFICATION

ABUTMENT	BRIDGE NO.			
	MOT-0672L		MOT-0672R	
	A	B	A	B
REAR	5'-4"	9'-4"	11'-4"	5'-4"
FORWARD	9'-4"	5'-4"	5'-4"	11'-4"

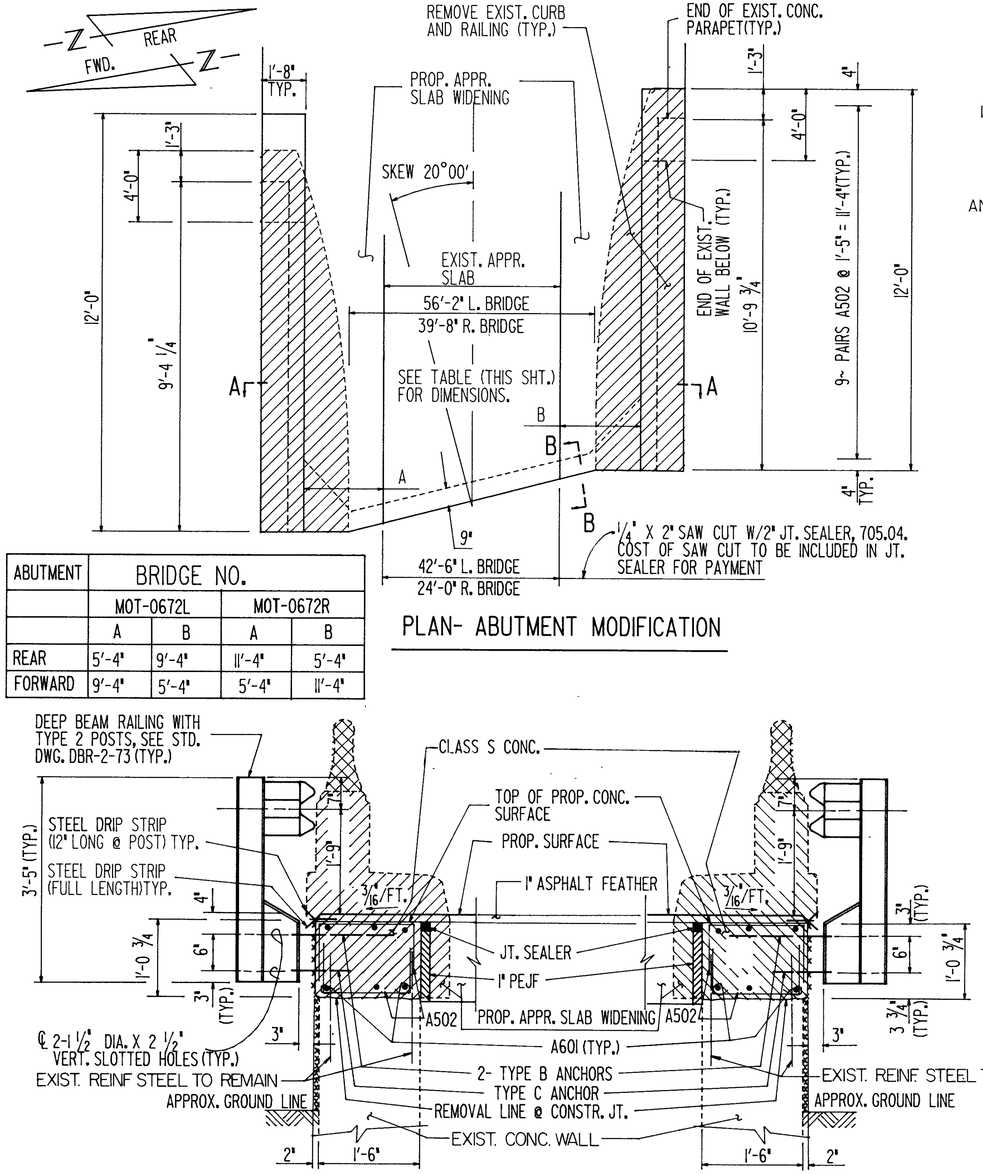


DRIP STRIP DETAIL

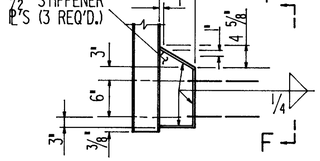
FOR NOTES REGARDING DRIP STRIP SEE SHT. 145.



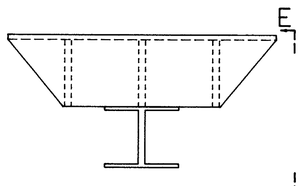
SECTION B-B



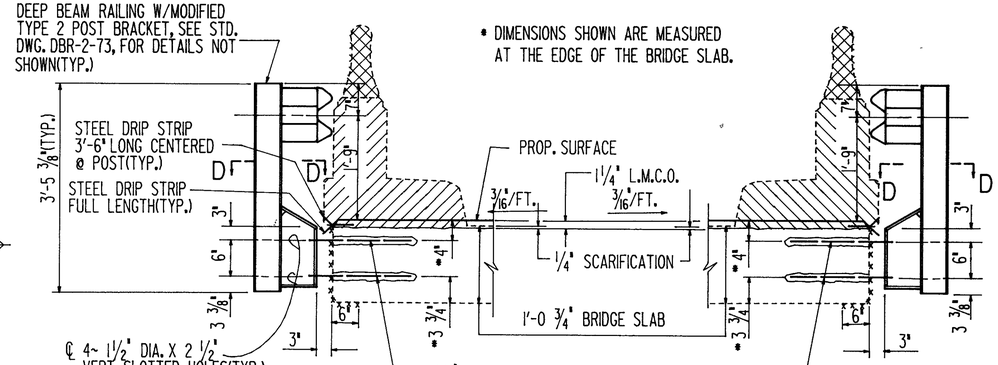
SECTION A-A



ELEVATION E-E

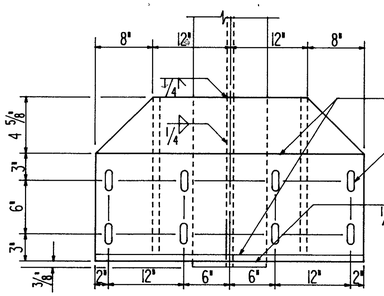


VIEW D-D



MODIFIED BRIDGE RAILING DETAIL

* DIMENSIONS SHOWN ARE MEASURED AT THE EDGE OF THE BRIDGE SLAB.



ELEVATION F-F

NOTE: ALL PL'S ARE 1/2" THICK.

EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-PORTIONS OF STRUCTURES REMOVED.

EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR SUBSEQUENT PICK-UP BY STATE FORCES. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORTIONS OF STRUCTURES REMOVED.

XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.

NOTES:

1. GALVANIZING: ALL GUARD RAIL POSTS, TUBES, BRACKETS, HARDWARE & ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE W/ASTM A123 OR ASTM A153.

2. PREFORMED EXPANSION JOINT FILLER & SEALER AT CORNERS AND SIDES OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ.YD. FOR THE APPROACH SLAB.

3. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENED APPR. SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR THE APPR. SLAB.

WOOLPERT CONSULTANTS
409 E. Monument/Dayton, Ohio 45402

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MISCELLANEOUS DETAILS

BRIDGE NO. MOT-70-0672 L/R

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	DBZ	2/29/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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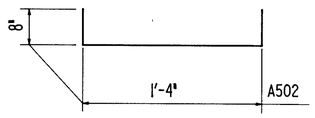
MOT-70-06.53/11.02

REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
A502	BNT.	144	2'-5"	363
A601	STR.	48	11'-6"	829
			TOTAL	1192

BENT BAR DETAILS



ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED		
202	640	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
509	1792	LBS.	REINFORCING STEEL, GRADE 60		
516	209	L.F.	JOINT SEALER, 705.04, AS PER PLAN		
511	3	C.Y.	CLASS S CONCRETE, ABUTMENT		
517	275	L.F.	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL		
			POSTS AND ANCHOR BOLTS), AS PER PLAN (SEE PROPOSAL NOTE)		
519	65 *	S.F.	PATCHING CONCRETE STRUCTURE		
845	698	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	32	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
SPECIAL	60	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
SPECIAL	246	S.F.	STEEL DRIP STRIP		
SPECIAL	34	EACH	ABANDON SCUPPER		

PROPOSED WORK

1. REMOVE ASPHALT FROM THE SUPERSTRUCTURE. REMOVE CURB & RAILING FROM SUPERSTRUCTURE & ABUTMENTS.
2. MODIFIY ABUTMENTS. PATCH ABUTS. & BOTTOM OF SLAB AS DIRECTED BY THE ENGINEER.
3. SCARIFY EXIST. DECK 1/4" AND REMOVE DETERIORATED CONC. AS DIRECTED BY THE ENGINEER.
4. PERFORM PARTIAL & FULL DEPTH DECK REPAIR AND PLACE LATEX MODIFIED CONC. OVERLAY (1 1/4" THICK).
5. SEAL EDGE OF DECK.
6. SEAL JTS. AS NOTED.
7. ADD NEW DEEP BEAM RAILING TO BRIDGE & ABUTMENTS.
8. ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON EACH BRIDGE AT ALL TIMES. FOR NOTES SEE SHEET 16.
9. OTHER WORK AS DESCRIBED IN THESE PLANS.

ITEM 519 - PATCHING CONCRETE *STRUCTURE*
ESTIMATED AREAS TO BE PATCHED ARE AS FOLLOWS:

BOTTOM OF SLAB	15	SQ.FT.
ABUTMENT CORNERS	50	SQ.FT.
TOTAL =	65	SQ.FT.

QUANTITIES CARRIED TO BRIDGE GENERAL SUMMARY

* 50% Federal Participation

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

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REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

BRIDGE NO. MOT-70-0672 L/R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	G.B.L.	3/20/88	

F.H.W.A REGION	STATE	PROJECT	
5	OHIO		

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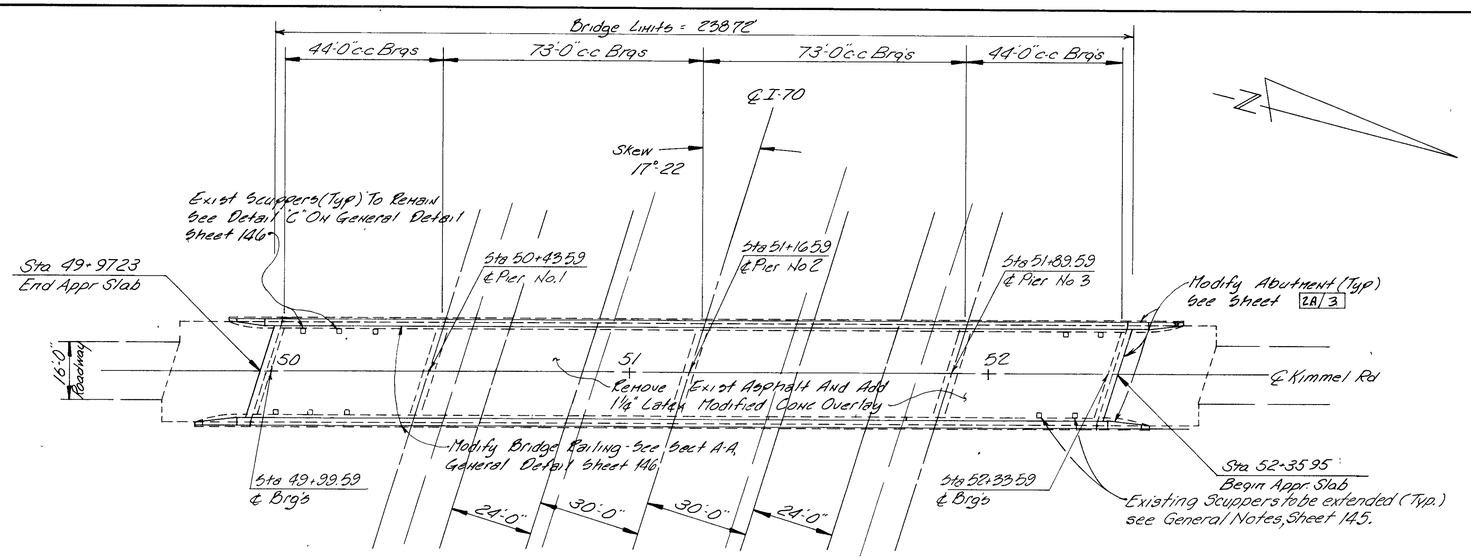
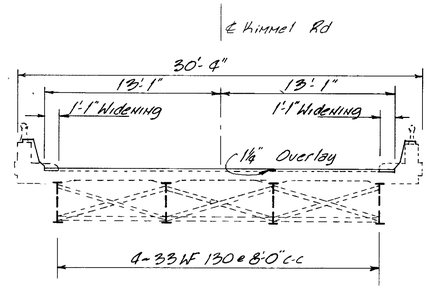
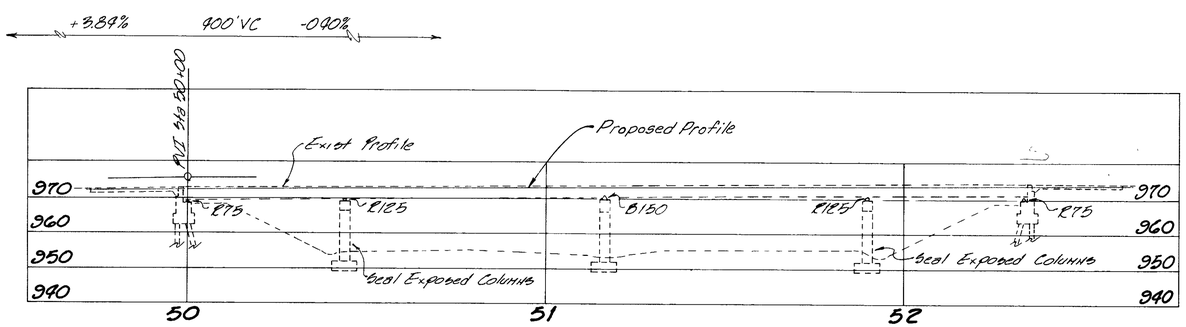


PLAN



BRIDGE SECTION



ELEVATION

EXISTING STRUCTURE

Type: Continuous Steel Beam With Reinf. Conc Deck And Substructure
Spans: 44'-0", 73'-0", 73'-0", 44'-0" ℄ Brgs
Roadway: 24'-0" ft 2' Safety Curbs With Concrete Parapet And Aluminum Railing
Loading: CF-30
Wearing Surface: Asphalt
Skew: 17° 22'-00" Lft Forward
Alignment: Tangent
Superelevation: None
Approach Slabs, 25' Long,

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409 E. Monument Dayton Ohio 45402

GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0708
(KIMMEL RD. OVER I-70)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.M.	L.A.P.	JOE	R.G.S.	SDZ	3/29/88	

F.A.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

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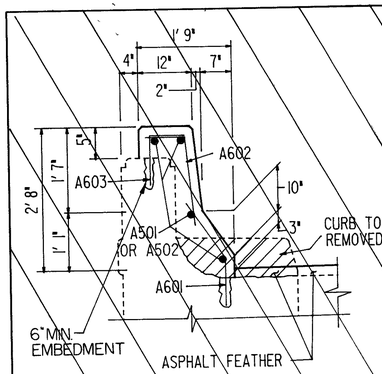
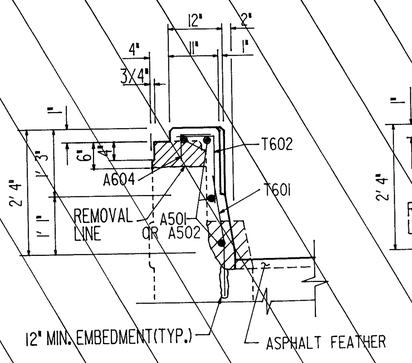
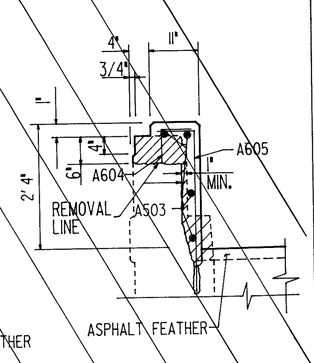


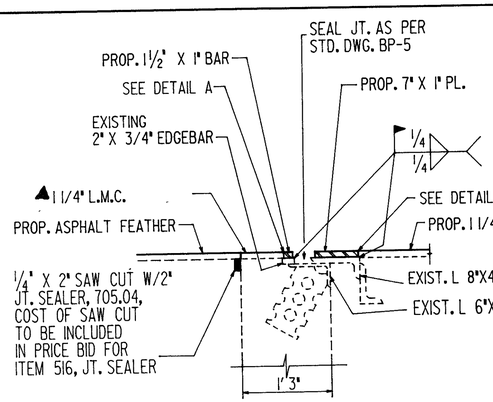
SECTION B-B



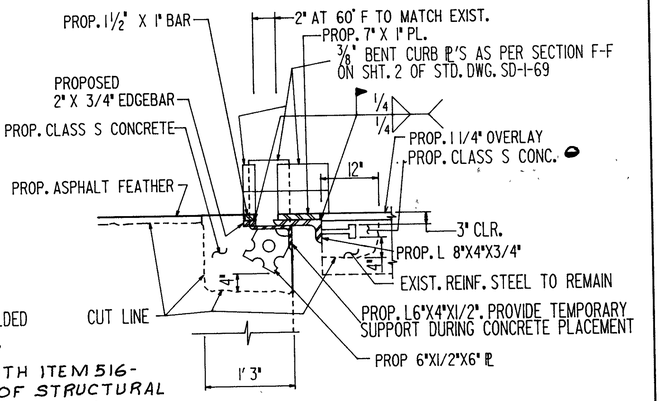
SECTION C-C



SECTION D-D



NOTE: EXTEND BRIDGE END DAM ON ALL FOUR CORNERS (1'-1" WHERE SAFETY CURB IS REMOVED) WITH STEEL SHAPES. THE PROPOSED EXTENSION PIECES SHALL BE WELDED TO THE EXIST. END DAM AND HAVE THE SAME ALIGNMENT, SEE DETAIL THIS SHEET.

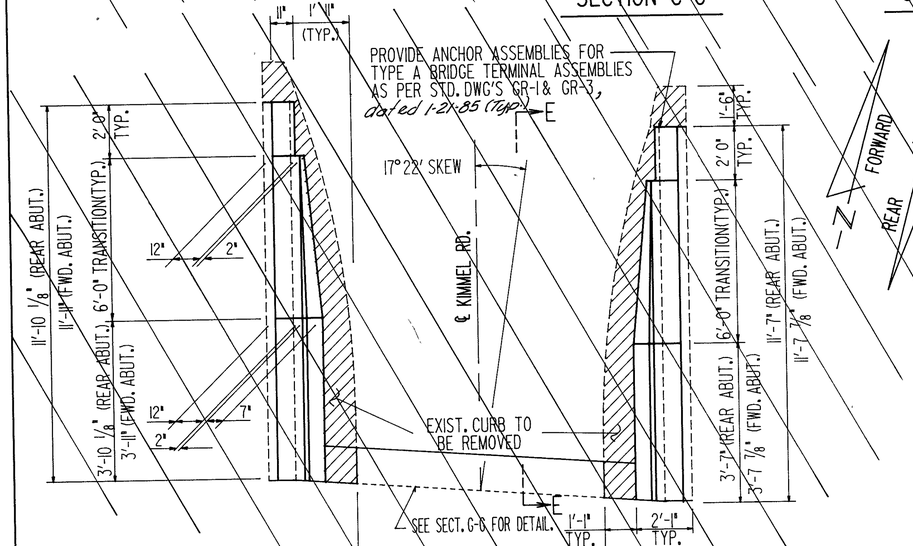


▲ LMC USED TO RAISE THE BACKWALL SHOULD CONFORM TO SS845 BUT SHOULD BE INCLUDED WITH ITEM 516- EXTENSION OF STRUCTURAL EXPANSION JOINTS FOR PAYMENT

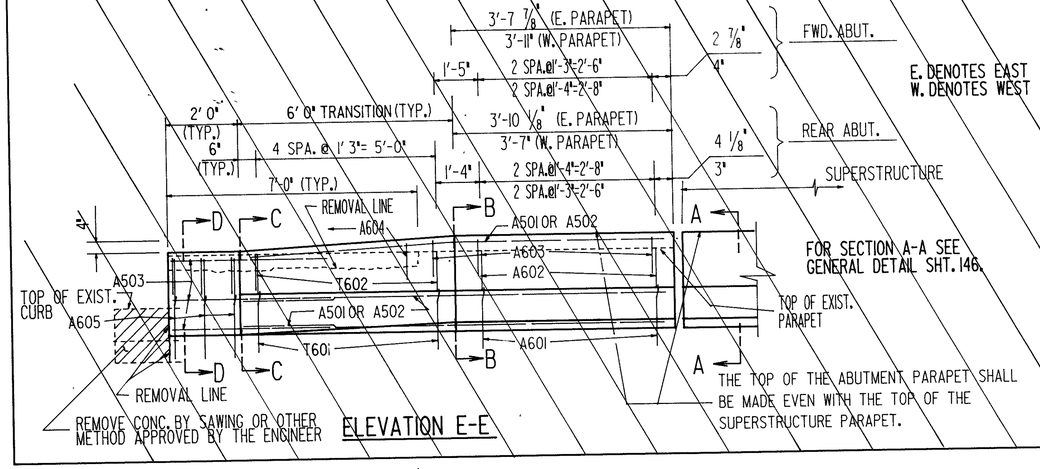
SECTION G-G

● INCLUDE WITH ITEM 516- EXTENSION OF STRUCTURAL EXPANSION JOINTS FOR PAYMENT

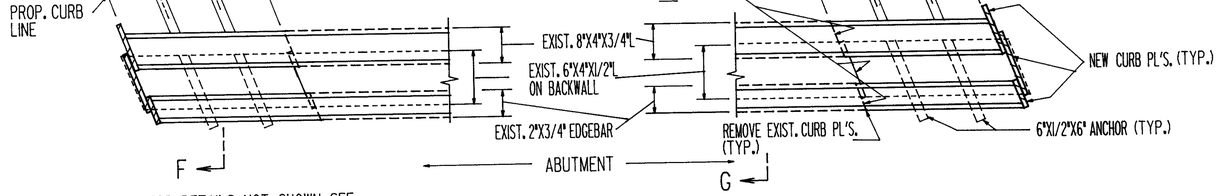
SECTION F-F **



PLAN- ABUTMENT MODIFICATION



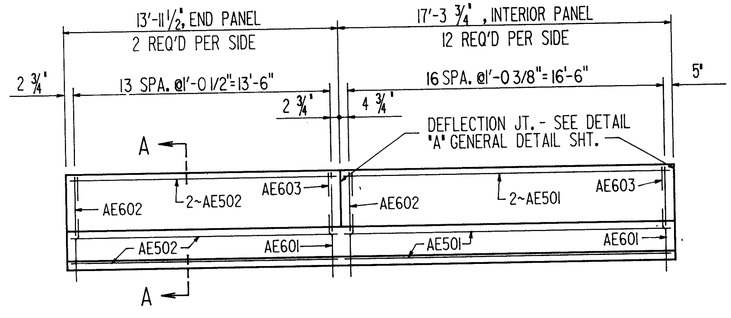
ELEVATION E-E



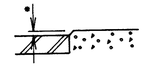
** FOR DETAILS NOT SHOWN SEE STD. DWG. SD-1-69.

PLAN END DAM @ WIDENED AREAS **

NOTE: DETAILS & DIMENSIONS NOT SHOWN ARE IDENTICAL; U.N.O.



SUPERSTRUCTURE PARAPET DETAIL



* CONCRETE SURFACES ADJACENT TO DECK JOINTS SHALL BE FINISHED FLUSH OR SLIGHTLY ABOVE THE STEEL JOINT SURFACE.

DETAIL A

WOOLPERT CONSULTANTS
409 E. Monument/Dayton, Ohio 45402

2/3

MISCELLANEOUS DETAILS

BRIDGE NO. MOT-70-0708

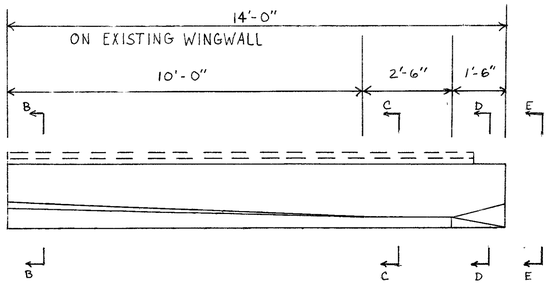
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S	D.B.Z	4/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

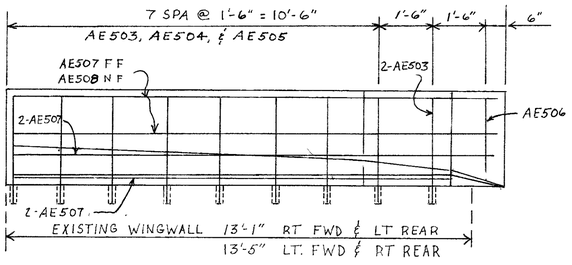
163A 219

MONTGOMERY COUNTY
MOT-70-06.49/11.02

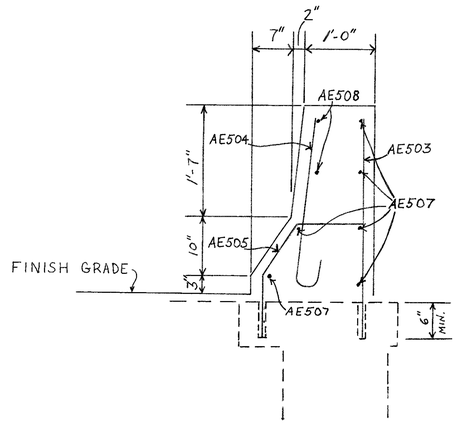


PLAN

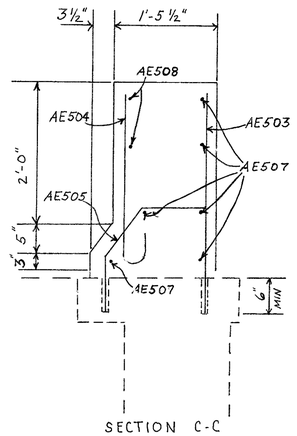
NF = NEAR FACE
FF = FAR FACE
TYPE "AA" BRIDGE TERMINAL ASSEMBLY
AT EACH CORNER OF BRIDGE



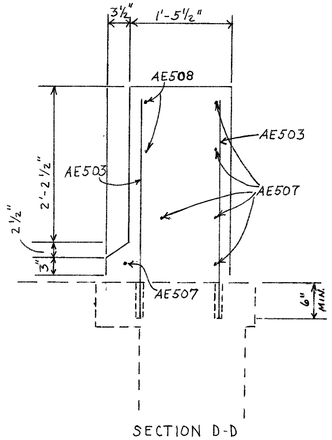
ELEVATION



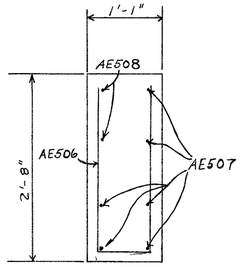
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

2A/3

DETAILS
BRIDGE Nº MOT-70-0708

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BS1 19901130

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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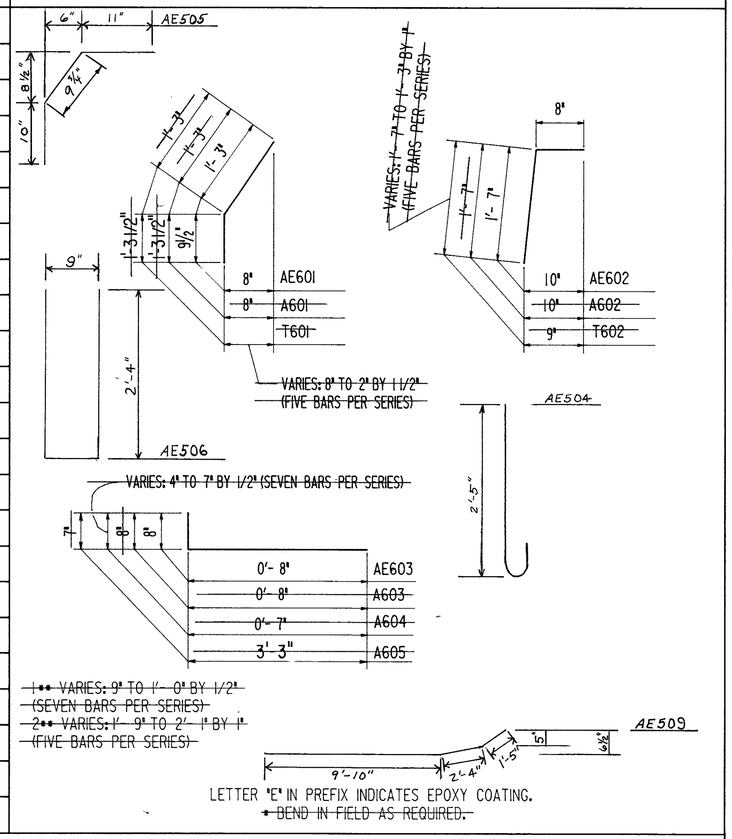
219

MOT-70-06.53/11.02

REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
AE501	STR.	96	16'- 11"	1694
AE502	STR.	16	13'- 6"	225
AE601	BNT.	464	1'- 10"	1275
AE602	BNT.	464	2'- 1"	1450
AE603	BNT.	464	1'- 2"	815
AE503	STR.	40	3'- 1"	129
AE504	BNT.	32	3'- 0"	100
AE505	BNT	32	2'-5 1/4"	82
AE506	BNT.	4	5'-2"	22
AE507	STR	24	13'- 8"	342
AE508	BNT.	8	13'- 7"	113
			TOTAL	6247

BENT BAR DETAILS



LETTER 'E' IN PREFIX INDICATES EPOXY COATING.
* BEND IN FIELD AS REQUIRED.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED		
202	637	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
509	300	LBS.	REINFORCING STEEL, GRADE 60		
516	50.5	L.F.	JT. SEALER, 705.04 , AS PER PLAN		
516	**50.5**	**L.F.**	**VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINT**		
517	518.4	L.F.	RAILING FACED, AS PER PLAN		
516	**4.5**	**L.F.**	**HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINT**		
509	6247	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60		
510	72	EACH	DOWEL HOLES		
845	694	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	27	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
845	12	C.Y.	FULL DEPTH REPAIR		
SPECIAL	377	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
518	10	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN		
511	8.1	C.Y.	CLASS S CONCRETE, SUPERSTRUCTURE, BARRIER PARAPET RAILING		

PROPOSED WORK

1. REMOVE ASPHALT FROM THE SUPERSTRUCTURE & BACKWALL.
2. REMOVE EXIST. STEEL R'S (THAT RETAIN ASPHALT) FROM END DAMS & ADD STEEL R'S AS SHOWN ON PLANS. ADD EXTENTIONS TO END DAMS WITH PARAPET CURB R'S FOR ROADWAY WIDENING AT FOUR LOCATIONS AFTER EXIST. SAFETY CURB HAS BEEN REMOVED.
3. MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS.
4. SCARIFY EXIST. DECK 1/4" AND REMOVE DETERIORATED CONC. AS DIRECTED BY THE ENGINEER.
5. PERFORM PARTIAL & FULL DEPTH DECK REPAIR AND PLACE LATEX MODIFIED CONC. OVERLAY (1 1/4" THICK)
6. SEAL JTS. AS NOTED.
7. REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
8. KIMMEL RD. SHALL BE CLOSED TO TRAFFIC FOR A LIMITED TIME PERIOD. FOR NOTES SEE SHT. 16.
9. OTHER WORK AS DESCRIBED ON THESE PLANS.

Quantities Carried To Bridge General Summary

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

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REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

BRIDGE NO. MOT-70-0708

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	C.B.L.	3/30/98	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT 70-6.53/11.02

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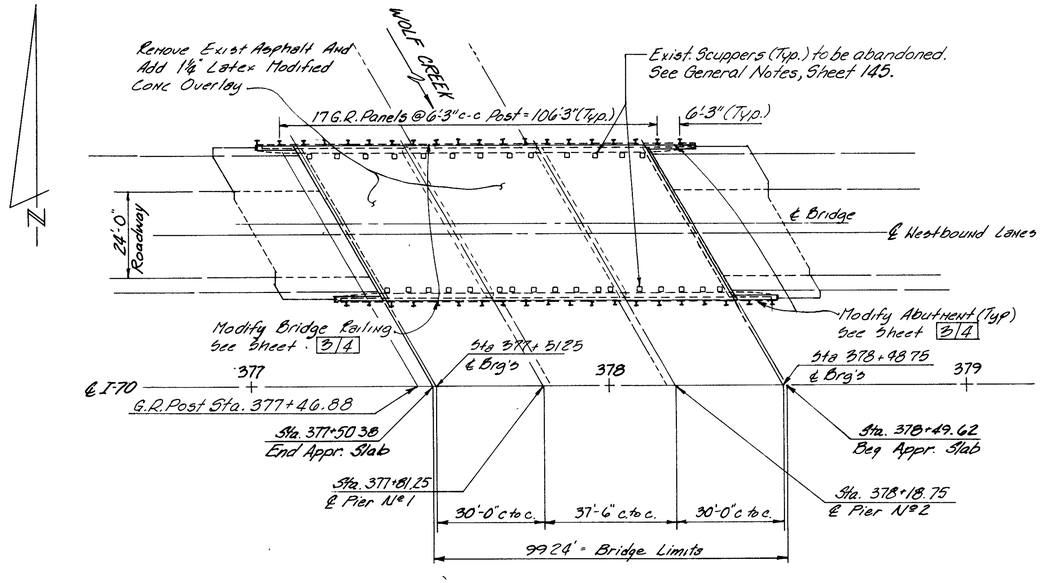
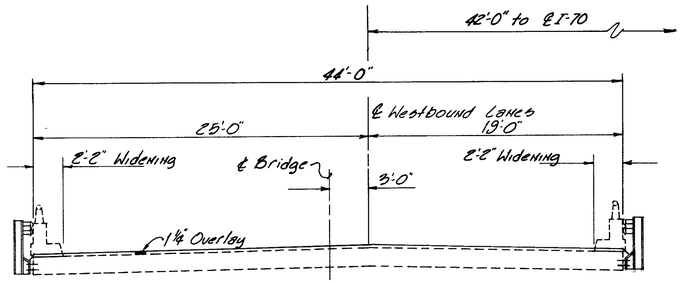
219

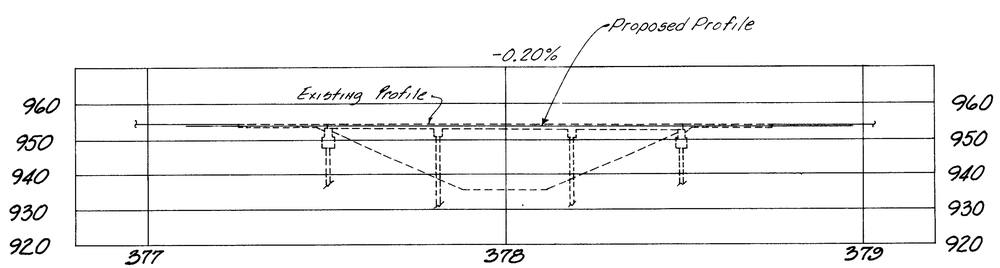


PLAN



BRIDGE SECTION

For Temporary Concrete Barrier see Sheet 17. Temporary Concrete Barrier, Bridge Mounted Is Carried In The Roadway Quantities. Barrier Shall Not Be Anchored To Bridge Deck.



ELEVATION

EXISTING STRUCTURE

Type: Continuous concrete slab w/capped pile abutments & piers.
Spans: 30'-0", 37'-6", 30'-0" c to c. brgs.
Roadway: 42'-0" f/f/ parapets, 1'-0" concrete curb & alum. railing.
Loading: CF-2000(57) (Adequate for AASHO alt. loading).
Wearing Surface: Asphalt
Skew: 30° Rt. Forward.
Alignment: Tangent.
Approach Slabs: AS.-1-54 (25' long).

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2324 Stanley Avenue/Dayton, Ohio 45404

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GENERAL PLAN, ELEVATION, & BRIDGE SECTION

BRIDGE NO. MOT 70-0719L
(WESTBOUND I-70 OVER WOLF CREEK)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	Rach	R.M.J.	R.G.S.	S.B.Z.	4/20/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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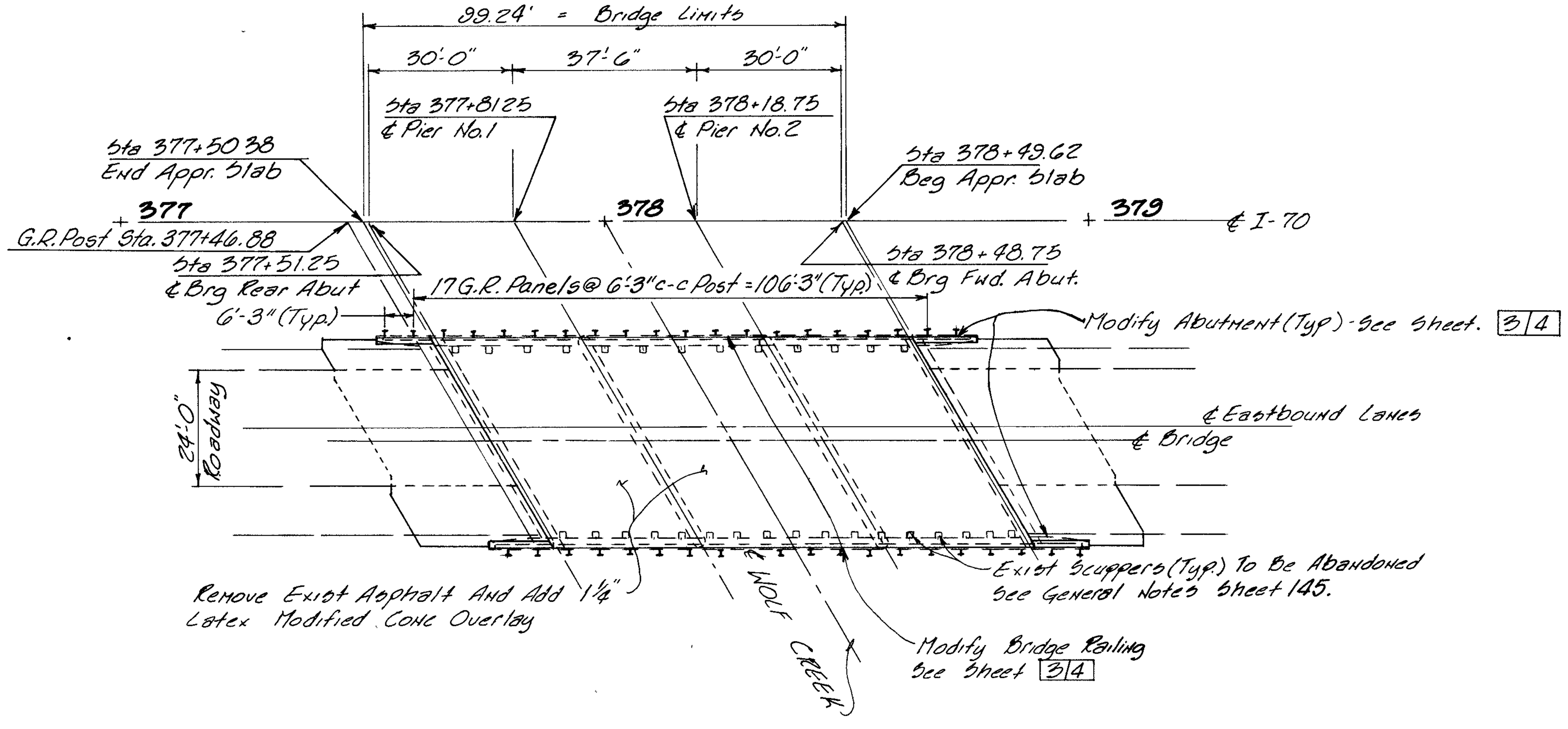
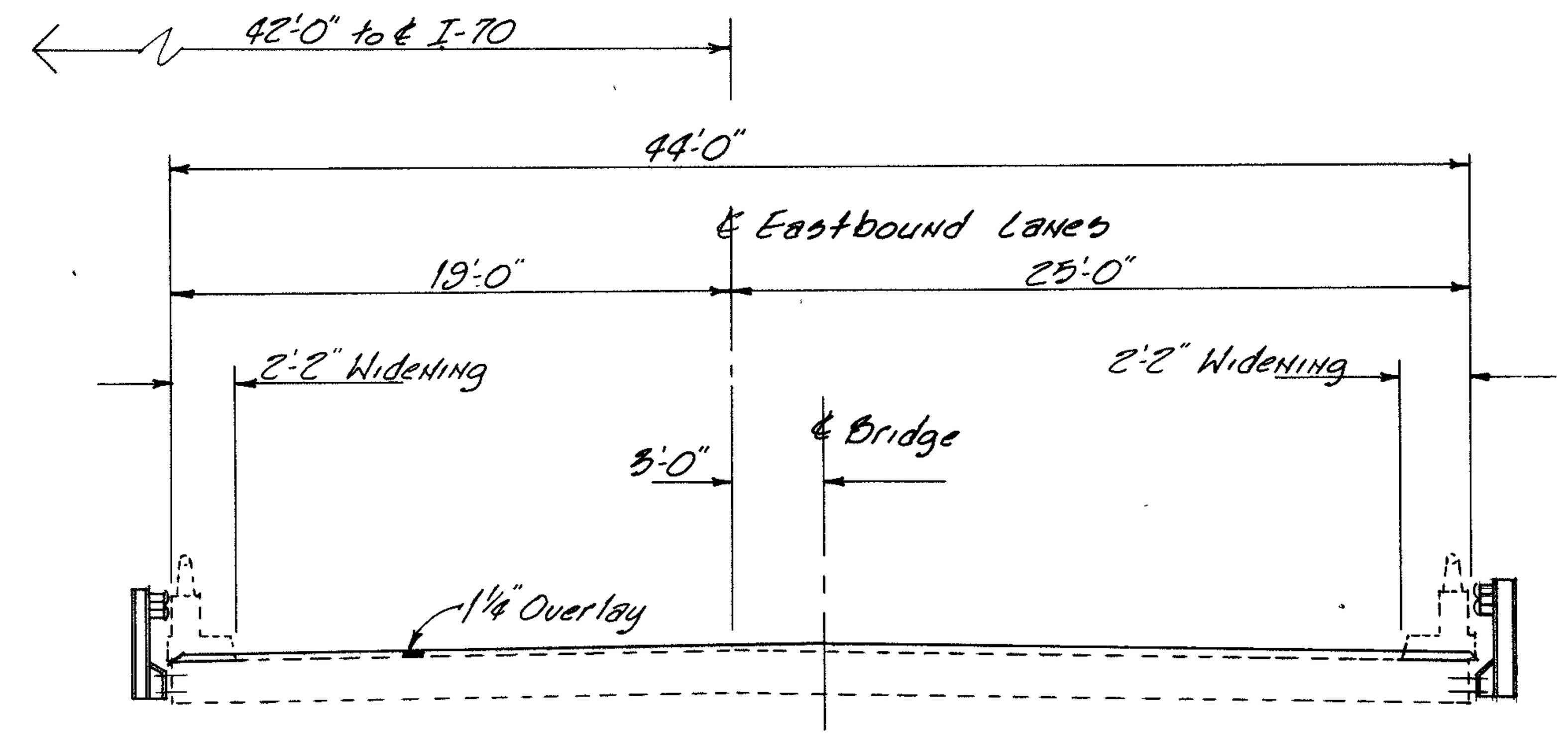
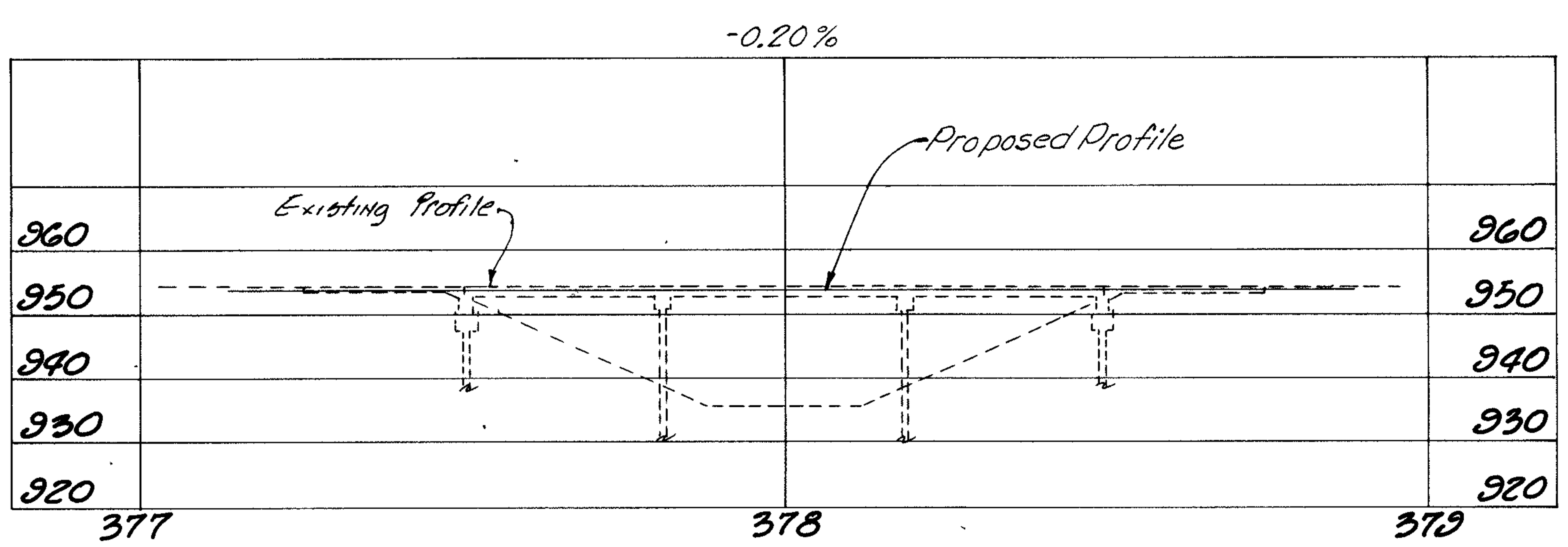


PLAN



BRIDGE SECTION

For Temporary Concrete Barrier see Sheet 17. Temporary Concrete Barrier, Bridge Mounted Is Carried In The Roadway Quantities. Barrier Shall Not Be Anchored To Bridge Deck.



ELEVATION

EXISTING STRUCTURE

Type: Continuous Conc Slab With Capped Pile Abutments And Piers.
Spans: 30'-0", 37'-6", 30'-0" ℄ Brgs.
Roadway: 42'-0" ℄ Parapets 1'-0" Conc. Curb And Alum. Railing
Loading: CF-2000(57) (Adequate For AASHO Alternate Loading)
Wearing Surface: Asphalt
Skew: 30° Rt Fwd
Alignment: Tangent
Approach Slabs: AS-1-54 (25' Long)

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409 E. Monument / Dayton, Ohio 45402

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GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0719(R)
(EASTBOUND I-70 OVER WOLF CREEK)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH	JOE	R.G.S.	[illegible]	2/20/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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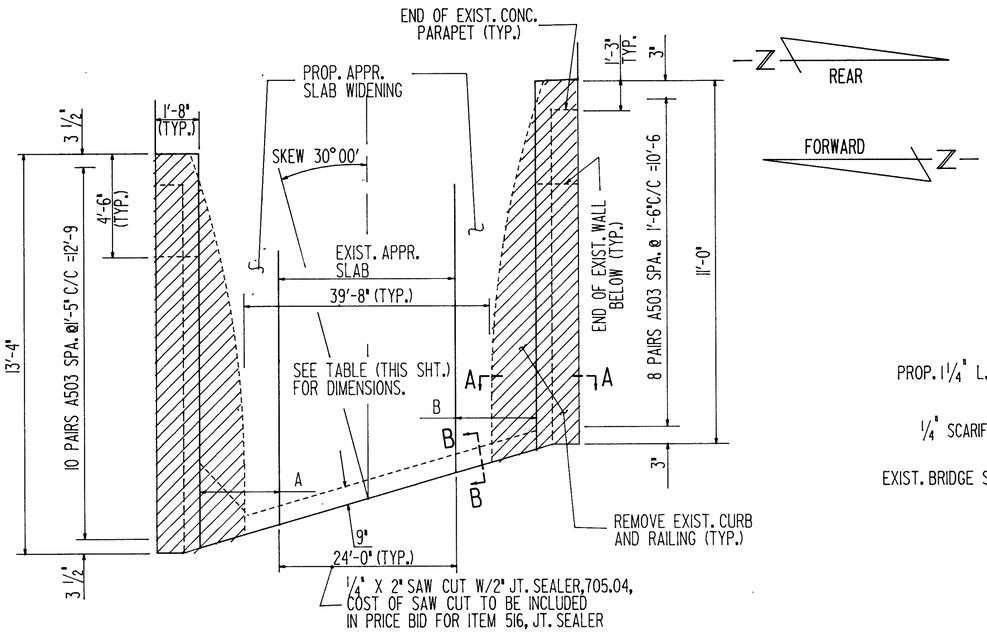
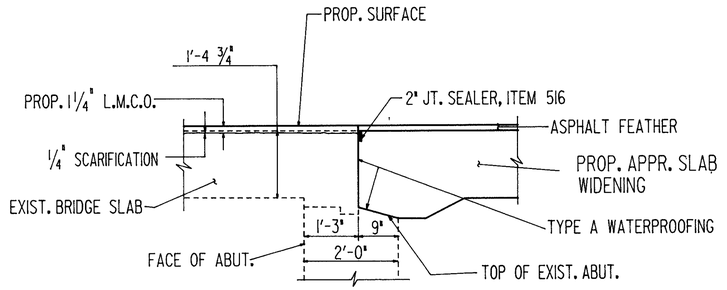
MOT-70-06.53/11.02

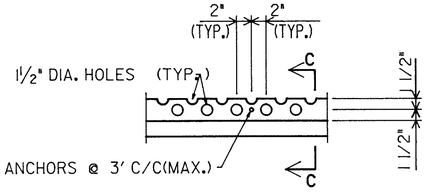


PLAN- ABUTMENT MODIFICATION

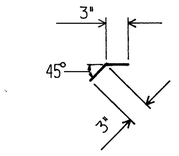
ABUTMENT	BRIDGE NO.			
	MOT-0719L		MOT-0719R	
	A	B	A	B
REAR	5'-4"	11'-4"	11'-4"	5'-4"
FORWARD	11'-4"	5'-4"	5'-4"	11'-4"



SECTION B-B



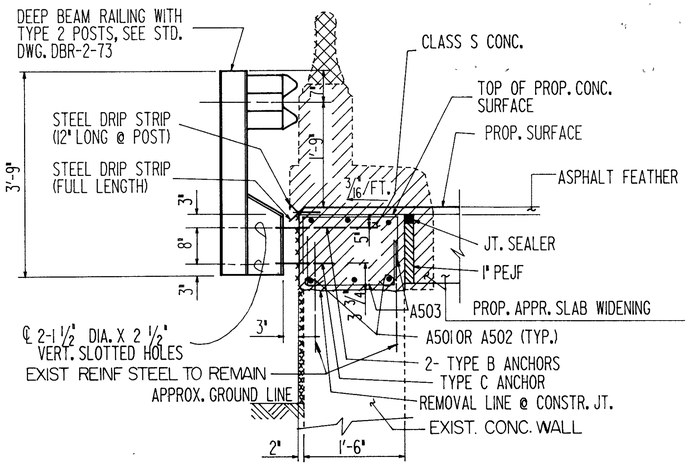
PLAN



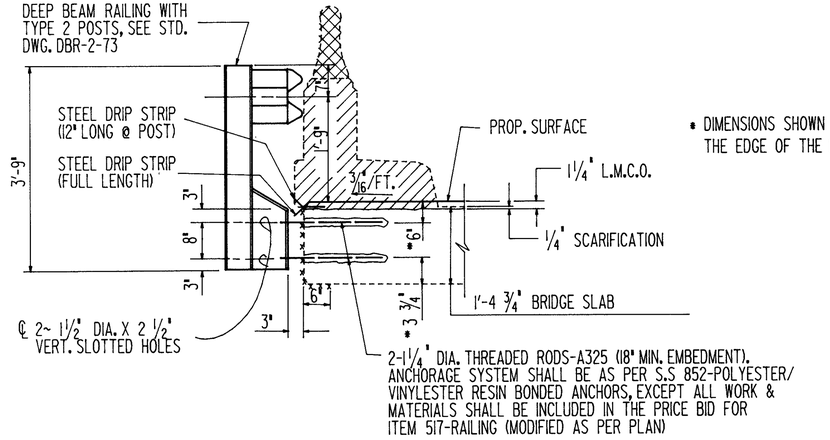
SECTION C-C

DRIP STRIP DETAIL

FOR NOTES REGARDING DRIP STRIP SEE SHT. 145.



SECTION A-A



* DIMENSIONS SHOWN ARE MEASURED AT THE EDGE OF THE BRIDGE SLAB.

MODIFIED BRIDGE RAILING DETAIL

▨ EXIST. CURB & PARAPET TO BE REMOVED UNDER ITEM 202-PORTIONS OF STRUCTURES REMOVED.

▩ EXIST. RAILING & POSTS TO BE REMOVED & STACKED NEATLY ALONG THE RIGHT-OF-WAY FOR SUBSEQUENT PICK-UP BY STATE FORCES. ALL WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 202-PORTIONS OF STRUCTURES REMOVED.

XXXX SURFACES TO BE SEALED UNDER ITEM SPECIAL-SEALING OF CONCRETE SURFACES.

NOTES:

1. GALVANIZING: ALL GUARD RAIL POSTS, TUBES, BRACKETS, HARDWARE & ACCESSORIES SHALL BE GALVANIZED IN ACCORDANCE W/ASTM A123 OR ASTM A153.

2. PREFORMED EXPANSION JOINT FILLER & SEALER AT CORNERS AND SIDES OF THE APPROACH SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ.YD. FOR THE APPROACH SLAB.

3. TYPE A WATERPROOFING AT THE BRIDGE LIMIT END OF THE WIDENED APPR. SLAB (AS PER STD. DWG. AS-1-81) SHALL BE INCLUDED IN THE PRICE BID FOR THE APPR. SLAB.

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409 E. Monument/Dayton, Ohio 45402

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MISCELLANEOUS DETAILS

BRIDGE NO. MOT-70-0719 L/R

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S		3/29/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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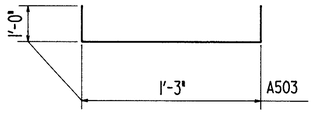
MOT-70-06.53/11.02

REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
A501	STR.	24	10'-6"	263
A502	STR.	24	12'-4"	309
A503	BNT.	144	3'-0"	451
			TOTAL	1023

BENT BAR DETAILS



ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED		
202	875	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
509	1623	LBS.	REINFORCING STEEL, GRADE 60		
516	188	L.F.	JT. SEALER, 705.04, AS PER PLAN		
511	3	C.Y.	CLASS S CONCRETE, ABUTMENT		
			RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2		
517	425	L.F.	STEEL POSTS AND ANCHOR BOLTS) AS PER PLAN (SEE PROPOSAL NOTE)		
			AND BOLTS) (SEE PROPOSAL NOTE)		
519	60 *	S.F.	PATCHING CONCRETE STRUCTURE		
845	971	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	54	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
845	10	C.Y.	FULL DEPTH REPAIR		
SPECIAL	104	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
SPECIAL	288	S.F.	STEEL DRIP STRIP		
SPECIAL	60	EACH	ABANDON SCUPPER		

PROPOSED WORK

1. REMOVE ASPHALT FROM THE SUPERSTRUCTURE. REMOVE CURB & RAILING FROM SUPERSTRUCTURE & ABUTMENTS.
2. MODIFY & PATCH ABUTS. AS DIRECTED BY THE ENGINEER.
3. SCARIFY EXIST. DECK 1/4" & REMOVE DETERIORATED CONC. AS DIRECTED BY THE ENGINEER.
4. PERFORM PARTIAL & FULL DEPTH DECK REPAIR AND PLACE LATEX MODIFIED CONC. OVERLAY (1 1/4" THICK)
5. SEAL EDGE OF DECK.
6. SEAL JTS. AS NOTED.
7. ADD NEW DEEP BEAM RAILING TO BRIDGE & ABUTMENTS.
8. ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON EACH BRIDGE AT ALL TIMES. FOR NOTES SEE SHT. 16.
9. OTHER WORK AS DESCRIBED IN THESE PLANS.

ITEM 519 - PATCHING CONCRETE STRUCTURE:
ESTIMATED AREAS TO BE PATCHED ARE AS FOLLOWS:
ABUTMENT CORNERS 60 SQ. FT.

*50% FEDERAL PARTICIPATION

Quantities Carried To Bridge General Summary

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

4 / 4

REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

BRIDGE NO. MOT-70-0719 L/R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	G.B.L.	2/29/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

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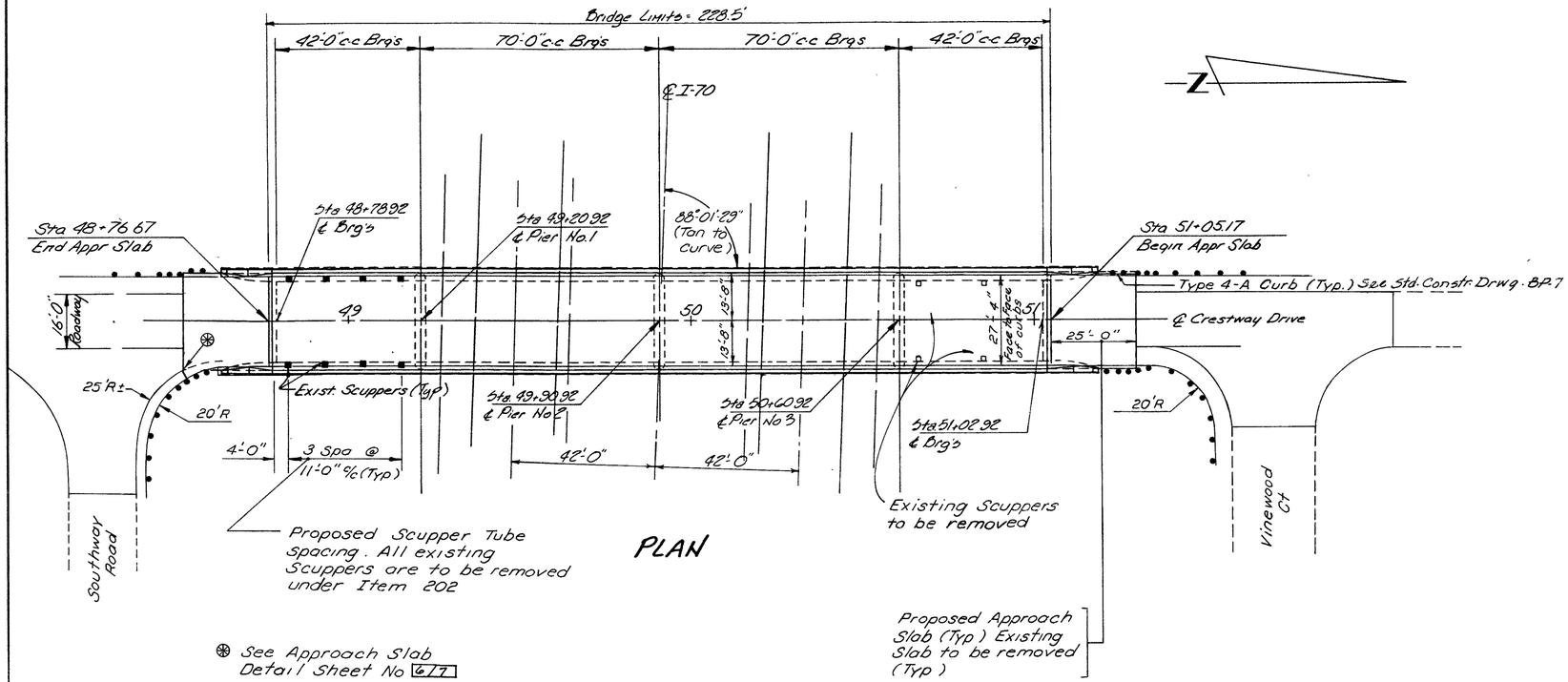
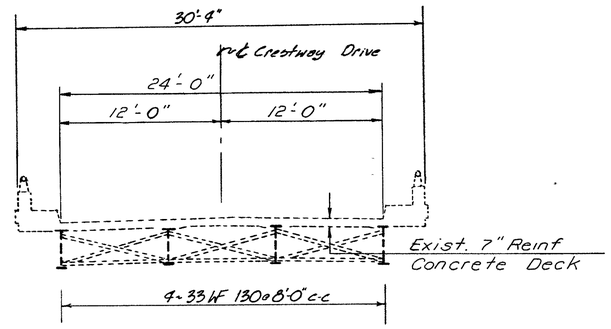
219

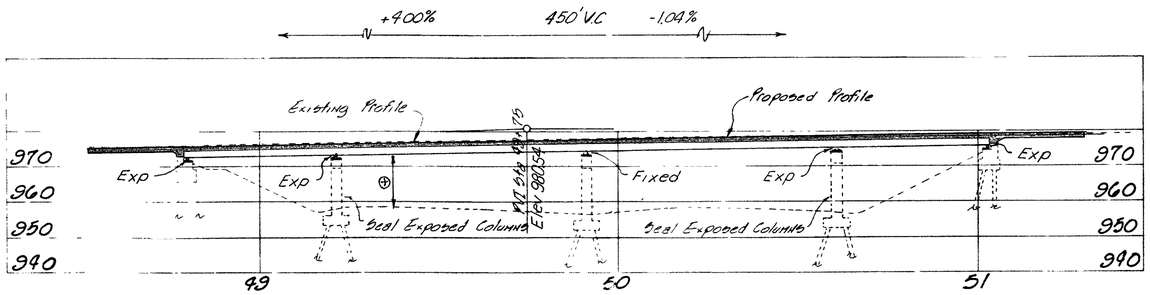


PLAN

⊛ See Approach Slab Detail Sheet No 6 7 7



EXISTING BRIDGE SECTION



ELEVATION

⊕ Obtain a 16'-3" minimum vertical clearance

See Bearing Details & Seat Modifications Sheet No 5 7 7

DESIGN STRESSES:

Concrete Class S - Compressive Strength 4500 P.S.I.

Reinforcing Steel - ASTM A615, A616, A617 - Grade 60 Minimum yield strength 60,000 p.s.i.

Structural Steel - Yield strength 36,000 psi.

Existing plans for the bridge may be examined at the ODOT District 7 office in Sidney, Ohio or at the ODOT Bureau of Bridges and Structural Design office in Columbus, Ohio

PROPOSED STRUCTURE MODIFICATION

TYPE: 4 Span Continuous New Steel Beam Bridge with new composite reinforced concrete deck and existing reinforced concrete substructures.
SPANS: 42'-0", 70'-0", 70'-0", 42'-0" ℅ Brgs.
ROADWAY: 27'-4" face to face of curbs
LOADING: HS 20-44 Case II and Alternate Military Loading
SKEW: None
ALIGNMENT: Tangent
SUPERELEVATION: None
WEARING SURFACE: Monolithic Concrete
APPROACH SLABS: AS-1-81 (25' LONG)

EXISTING STRUCTURE

Type: Continuous Steel Beam With Reinf Concrete Deck And Substructure
Spans: 42'-0", two @ 70'-0", 42'-0" ℅ Brg
Roadway 24'-0" W/ 2'-0" Safety Curbs With Concrete Parapet And Aluminum Railing
Load: CF-30
Wearing Surface: Asphalt
Skew: None
Alignment: Tangent
Approach Slabs: 25' Long,

SFN: 5705312

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

1 7

GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0759
CRESTWAY DR. OVER I-70

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.	JOE	R.G.S.		2/29/86	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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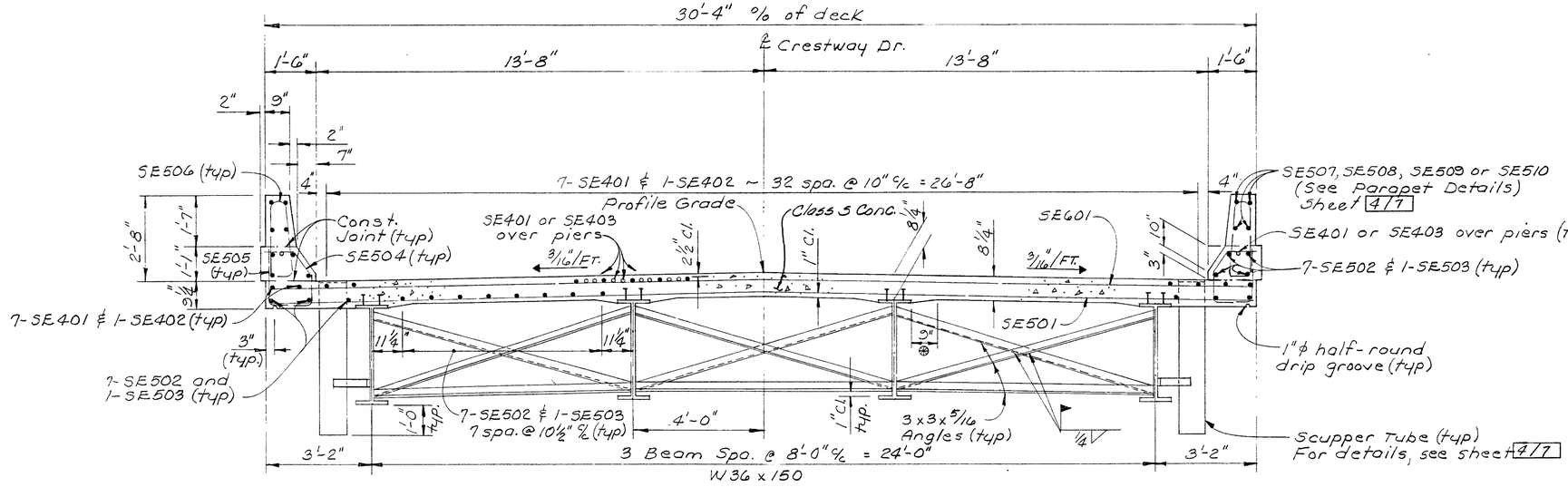
MOT-70-6.53/11.02



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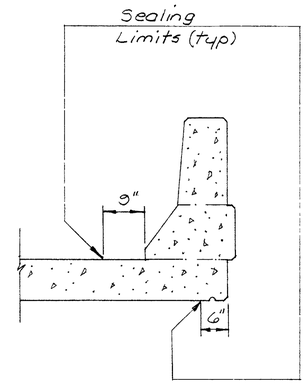
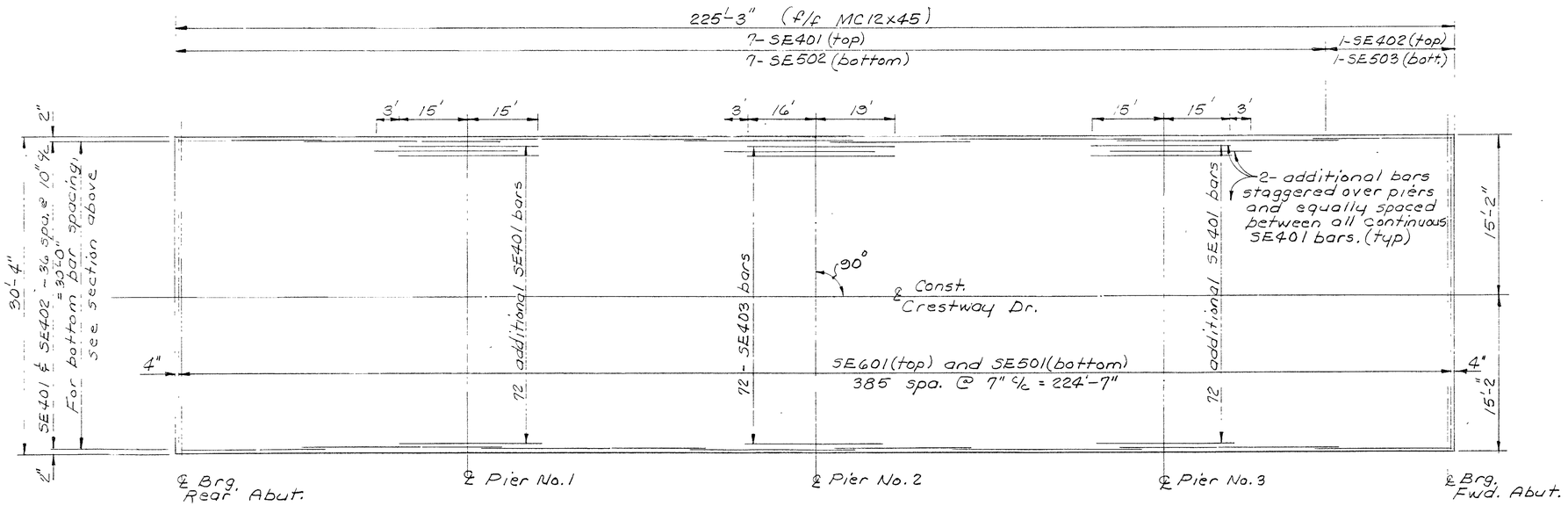


PARAPET SEALING

N



DECK REINFORCING PLAN

All #4 bar laps to be 1'-8" min.
All #5 bar laps to be 2'-2" min.

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY SECTION 2.7 OF THE AASHTO/AWS BRIDGE WELDING CODE.

⊕ 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" WIDTH.)

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.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: DEFLECTOR PARAPETS SHALL BE SEALED AS PER DETAILS WITH AN EPOXY SEALER. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS. APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

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SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-0759
CRESTWAY DR. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		JAM	WTF	5-18-89	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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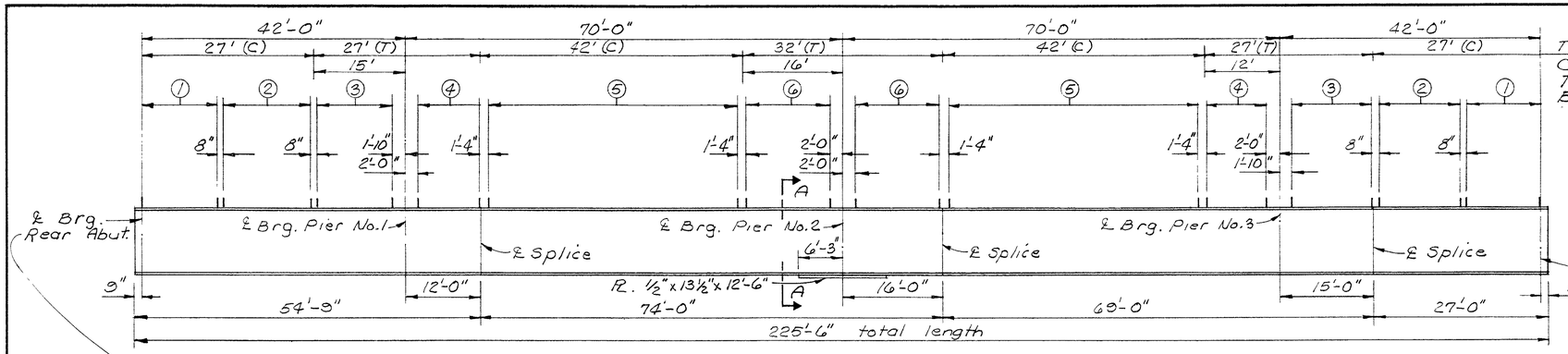
MOT-70-6.53/11.02

T = Tension Zone
C = Compression Zone
Top flange is shown.
Bottom is opposite.

SHEAR CONNECTOR SPACING *

①	24 spa.	@ 6" c/c	= 12'-0"
②	21 spa.	@ 8" c/c	= 14'-0"
③	7 spa.	@ 1'-10" c/c	= 12'-10"
④	6 spa.	@ 1'-8" c/c	= 10'-0"
⑤	48 spa.	@ 10" c/c	= 40'-0"
⑥	8 spa.	@ 1'-8" c/c	= 13'-4"

* Connectors may be moved slightly at the splices to avoid interferance with the flange bolts.



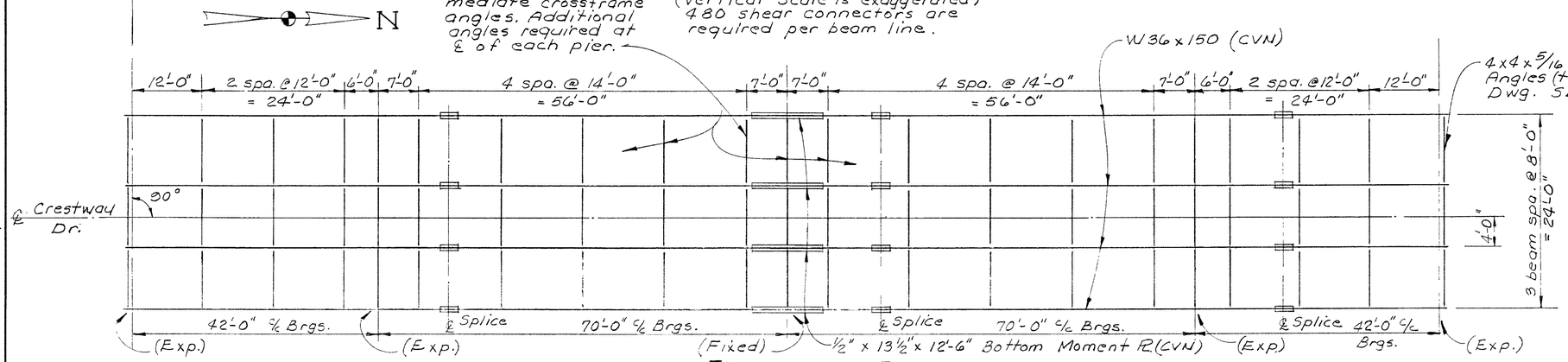
BEAM ELEVATION

(Vertical scale is exaggerated)
480 shear connectors are required per beam line.

3x3x5/16 Intermediate crossframe angles. Additional angles required at ℄ of each pier.

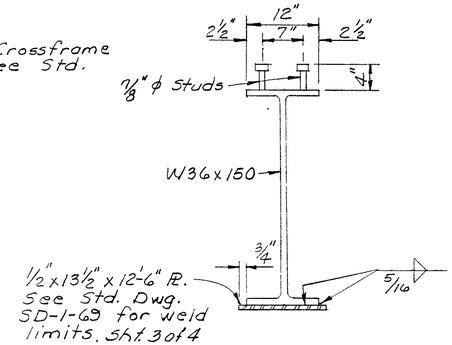
W36x150 (CVN)

4x4x5/16 End Crossframe Angles (typ). See Std. Dwg. SD-1-69

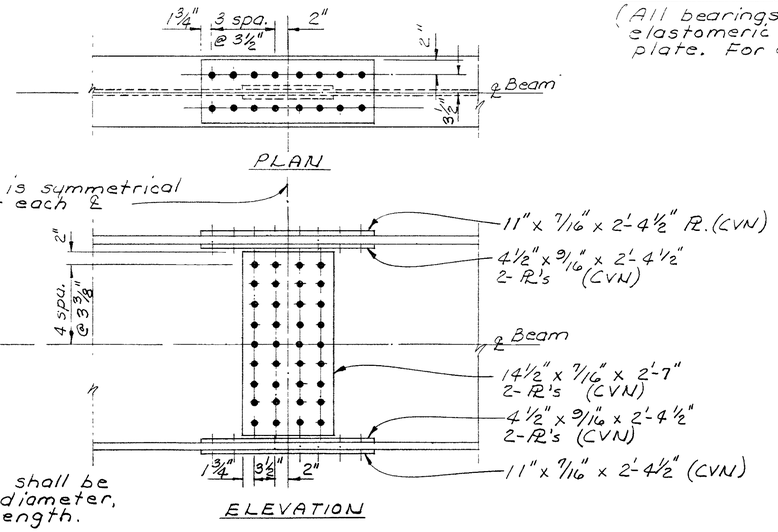


FRAMING PLAN

(All bearings are laminated elastomeric with steel load plate. For details, see sheet 617)



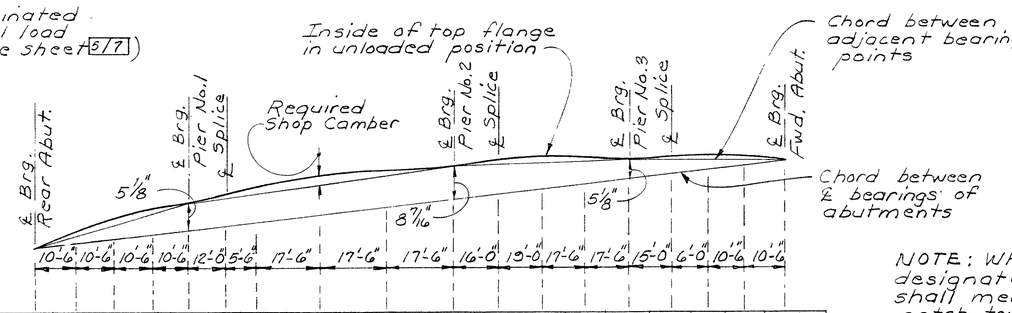
SECTION A-A



All bolts shall be A325, 1" diameter, high strength.

SPLICE DETAILS

For additional details see Std. Drwg. SD-1-69, Sheet 4 of 4



A	0	0	0	0	0	0	0	1/16	0	0	0	1/16	0	0	0	0	0	0	A
B	0	0	0	0	0	1/8	1/4	3/8	3/16	0	3/16	3/8	1/4	0	0	0	0	0	B
C	0	1/4	5/16	1/4	0	7/16	5/8	13/16	5/8	0	9/16	13/16	5/8	0	1/4	5/16	1/4	0	C
D	0	1/4"	5/16"	1/4"	0	9/16"	7/8"	1 1/4"	13/16"	0	3/4"	1 1/4"	7/8"	0	1/4"	5/16"	1/4"	0	D

CAMBER DIAGRAM

Line A: Is deflection due to weight of steel
Line B: Is deflection due to remaining deadload
Line C: Is adjustment for vertical curve
Line D: Is required shop camber

SCREED ADJUSTMENTS: Screeds shall be adjusted upward by the amounts shown on Line B above the final deck profile due to deflection from the concrete deadload.

NOTE: Where a shape or plate is designated (CVN), the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

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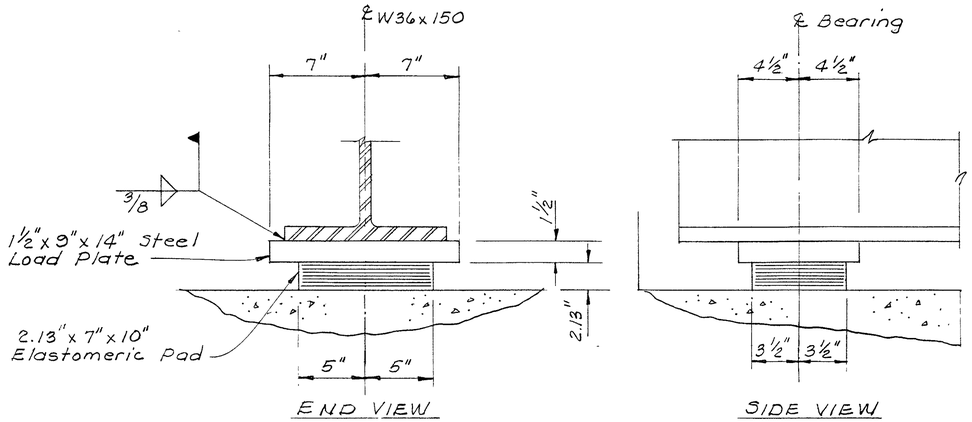
SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-0759
CRESTWAY DR. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		JAM	WTF	5-18-89	

FHWA REGION	STATE	PROJECT	
5	OHIO		

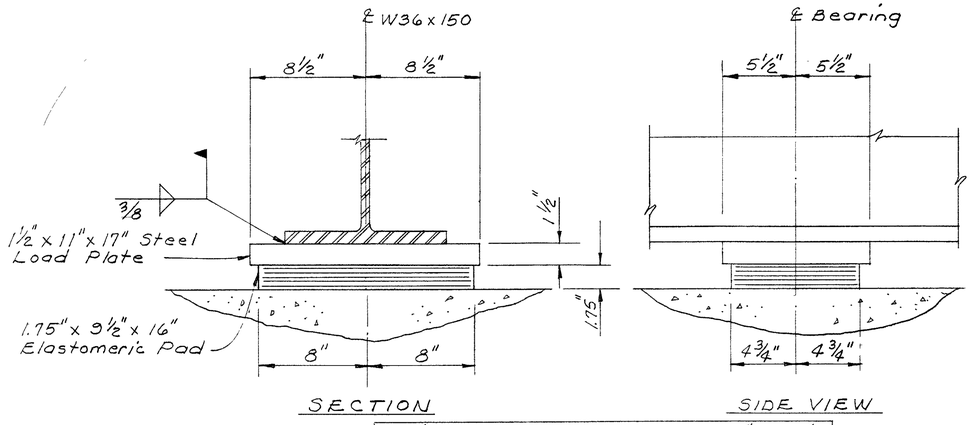
170C 219

MOT-70-6.53/11.02



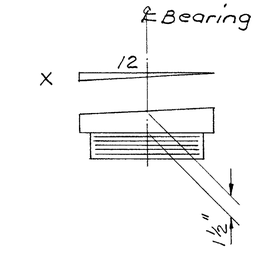
7 internal elastomers x 0.182" = 1.27"
2 external elastomers x 0.130" = 0.26"
8 steel laminates x 0.075" = 0.60"
50 durometer
Max. design load = 54.5 Kips

EXPANSION BEARING
(Rear and Fwd. Abutments)



4 internal elastomers x 0.254" = 1.02"
2 external elastomers x 0.181" = 0.36"
5 steel laminates x 0.075" = 0.37"
50 durometer
Max. design load = 141.0 Kips

EXPANSION BEARING
(Pier No. 1 and 3)

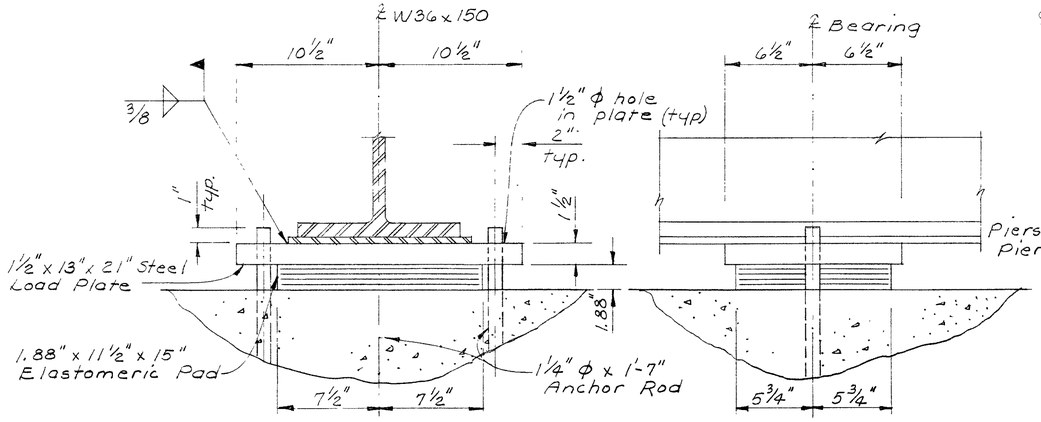


LOAD PLATE BEVEL REQUIRED

Rear Abut.	X = 5/16
Pier No. 1	X = 1/4
Pier No. 2	X = 3/16
Pier No. 3	X = 1/16
Fwd. Abut.	X = 0

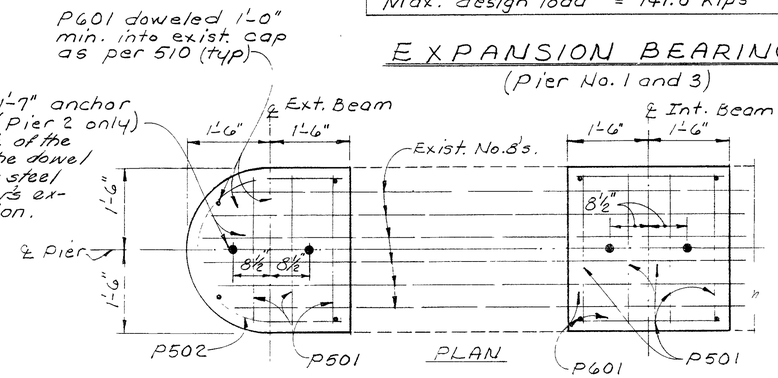
Anchor rods shall be galvanized according to 711.02. Install as per 510. Partial dowel holes and anchor rods are included with bearings for payment.

Care shall be exercised so that none of the existing reinf. steel is damaged by the dowel hole drilling. Any damaged existing steel shall be repaired at the Contractor's expense to the Engineer's satisfaction.

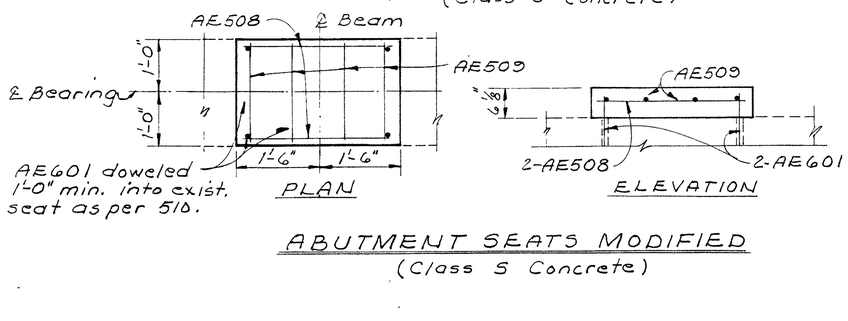


3 internal elastomers x 0.356" = 1.07"
2 external elastomers x 0.254" = 0.51"
4 steel laminates x 0.075" = 0.30"
60 durometer
Max. design load = 158.0 Kips

FIXED BEARING
(Pier No. 2)



PIER SEATS MODIFIED
(Class S Concrete)



ABUTMENT SEATS MODIFIED
(Class S Concrete)

LAMINATED ELASTOMERIC BEARINGS

TOLERANCES:
INDIVIDUAL ELASTOMER LAYER THICKNESS: ± 20% OF DESIGN VALUE NOT TO EXCEED ± 1/8"

PLAN DIMENSIONS	-0, +1/4"
DESIGN THICKNESS ≤ 11/4"	-0, +1/8"
DESIGN THICKNESS > 11/4"	-0, +1/4"
EDGE COVER OF EMBEDDED LAMINATES	-0, +1/8"

LOAD PLATE: THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. STEEL LOAD PLATES SHALL BE ONE AND ONE HALF INCH THICK MIN. FOR BEARINGS RATED UP TO AND INCLUDING 200 KIPS AND SHALL BE TWO INCHES THICK MIN. FOR BEARINGS RATED OVER 200 KIPS.
WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 400°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING : IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F, AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS OR GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

STEEL DESIGNATION: THE STEEL LOAD PLATE SHALL BE A36 STEEL

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516, EACH, LAMINATED ELASTOMERIC BEARINGS (SEE ESTIMATED QUANTITIES)

ELASTOMERIC TEST PAD: THE ELASTOMERIC BEARING MANUFACTURER SHALL SUPPLY A PLAIN ELASTOMERIC PAD FOR TESTING PURPOSES. THE PAD SHALL BE FURNISHED FROM THE SAME BATCH OF NEOPRENE THAT IS USED IN THE FABRICATION OF THE LAMINATED ELASTOMERIC BEARINGS AND THE FABRICATOR SHALL CERTIFY THE IDENTITY OF THE ELASTOMER. THE PAD SHALL HAVE A 1/2" THICKNESS AND SHALL HAVE MINIMUM LENGTH AND WIDTH DIMENSIONS OF 6 INCHES.

PAYMENT FOR THE TEST PAD WILL BE INCLUDED IN THE BID PRICE FOR THE BEARING.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

5 7

BEARING DETAILS AND SEAT MODIFICATIONS BRIDGE No. MOT-70-0759 CRESTWAY DR. OVER I-70

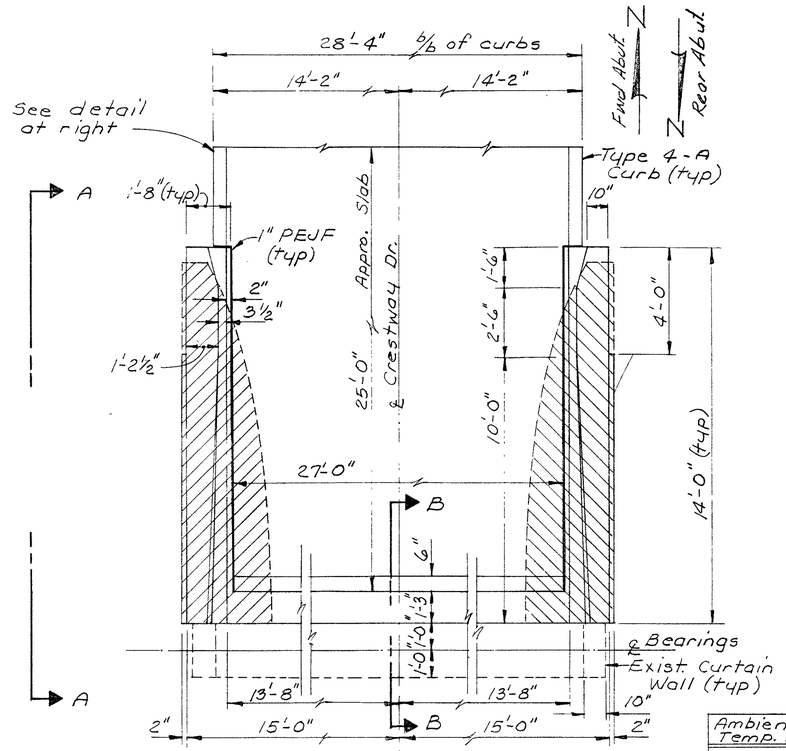
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		JAM	WTF	5-18-89	

664033

FHWA REGION	STATE	PROJECT	
5	OHIO		

170D / 219

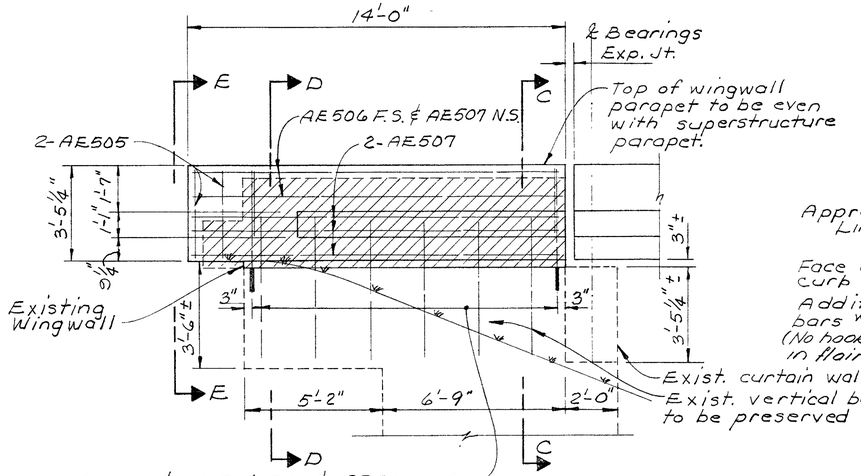
MOT-70-6.53/11.02



PLAN-ABUTMENT MODIFICATION
(Rear and Forward)

Ambient Temp. (F)	Dim. A
30°	1 7/8"
40°	1 3/4"
50°	1 11/16"
60°	1 5/8"
70°	1 9/16"
80°	1 7/16"
90°	1 3/8"

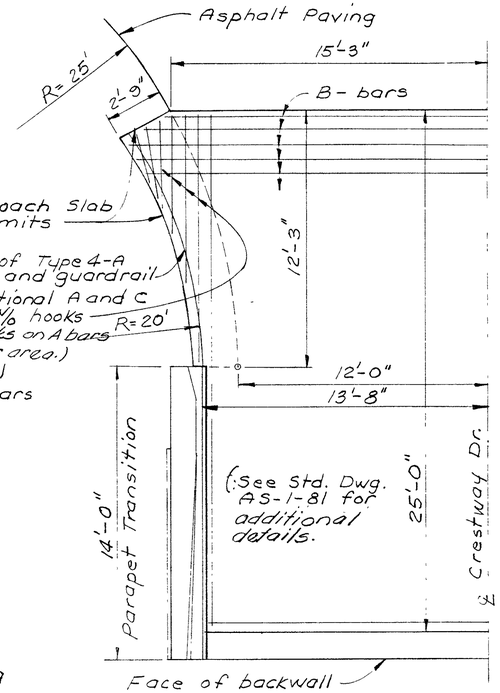
Use 3" seals @ each abut.
Do not install when "A" is less than 1½"



AE502 & AE504 F.S. & AE503 N.S.
8 spa. @ 1'-5"(±) c/c. Embed AE502 and AE503, 1'-0" min. into dowel holes.

VIEW A-A

For additional wingwall parapet transition and guardrail mounting details, see Std. Drwg. GR-3 dated 2-22-90



PART APPROACH SLAB
(Right side at rear abut.)

LEGEND

~ Indicates portions of existing that are to be removed

N.S. ~ Indicates near side

F.S. ~ Indicates far side

PEJF ~ Indicates Preformed Expansion Joint Filler

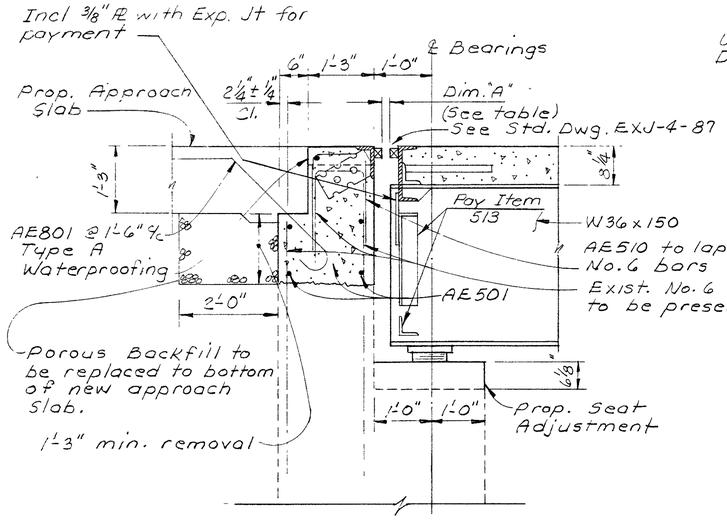
NOTES

All abutment backwall and parapet concrete shall be Class S.

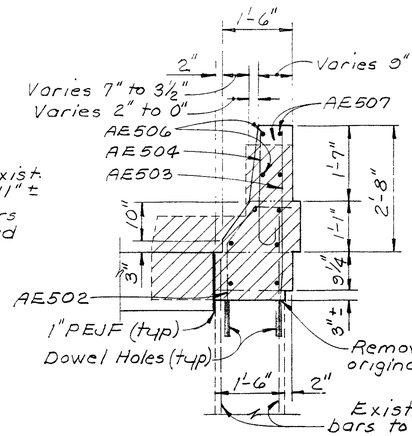
Type A Waterproofing, Preformed Expansion Joint Filler and sealer at the corners and sides of the approach slab shall be included in the price bid per sq. yd. for the approach slab.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES ◉ (SEE GENERAL NOTES AND PROPOSAL NOTE). THE FOLLOWING AREAS SHALL BE SEALED AT EACH ABUTMENT: THE ENTIRE SURFACE PERIMETER (TO TOE OF CURB) OF THE NEW DEFLECTOR PARAPETS AND THE ABUTMENT BACKWALL, NEW PEDESTALS, SEATS AND BREASTWALL (1'-0" DOWN FROM SEAT) FACE TO FACE OF EXISTING CURTAIN WALLS.

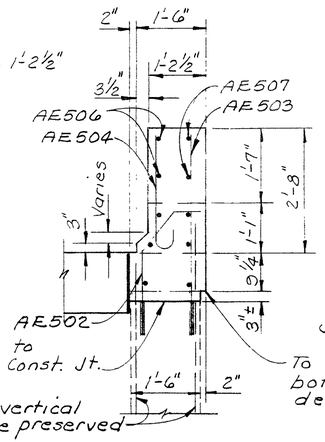
◉ Epoxy



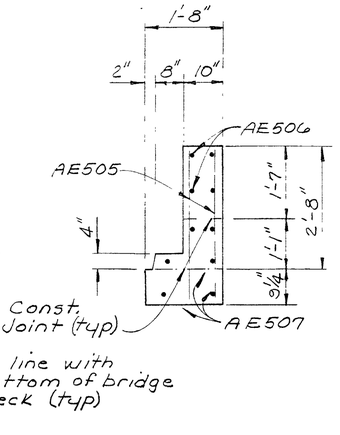
SECTION B-B
(All existing expansion joint armor is to be removed with backwall.)



SECTION C-C



SECTION D-D



SECTION E-E

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

6 | 7

ABUTMENT AND APPROACH SLAB DETAILS
BRIDGE No. MOT-70-0759
CRESTWAY DR. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED · DATE	REVISED
Ohol	Ohol		JAM	WTF 5-18-90	

584733

FHWA REGION	STATE	PROJECT	
5	OHIO		

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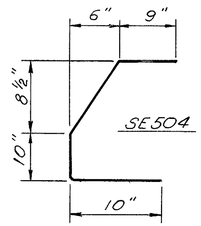
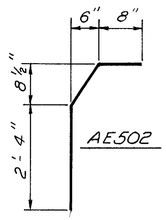
MOT-70-0653/11.02

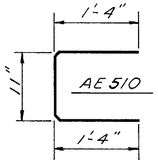
REINFORCING STEEL LIST

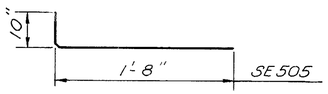
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
ABUTMENTS				
AE501	STR	10	30'-0"	313
AE502	BNT	36	3'-9"	141
AE503	STR	36	4'-7"	172
AE504	BNT.	36	3'-0"	113
AE505	STR	16	3'-1"	51
AE506	BNT	8	13'-8"	114
AE507	STR	32	13'-8"	456
AE508	STR	16	2'-8"	33
AE509	STR	32	1'-8"	56
AE510	BNT	62	3'-4"	216
AE601	STR	32	1'-4"	64
AE801	BNT	38	4'-11"	499
			TOTAL	2228
PIERS				
P501	STR	54	2'-8"	150
P502	BNT	6	6'-8"	42
P601	STR	48	1'-8"	120
			TOTAL	312
SUPERSTRUCTURE				
SE401	STR	407	30'-0"	8156
SE402	STR	37	26'-7"	657
SE403	STR	74	35'-0"	1730
SE501	STR	386	30'-0"	12,078
SE502	STR	266	30'-0"	8323
SE503	STR	38	30'-4"	1202
SE504	BNT	336	3'-1"	1080
SE505	BNT	336	2'-4"	818
SE506	BNT	336	5'-3"	1840
SE507	STR.	64	6'-2"	412
SE508	STR	32	7'-2"	239
SE509	STR	48	13'-8"	684
SE510	STR.	32	14'-5"	481
SE601	STR	386	30'-0"	17,393
			TOTAL	55,093

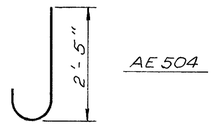
BENDING DIAGRAMS

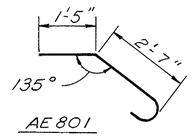


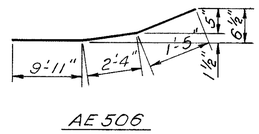


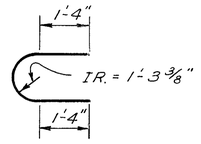


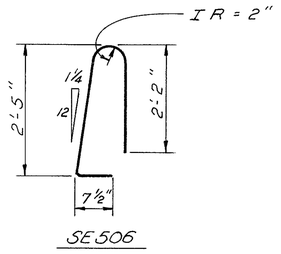












LETTER "E" IN PREFIX INDICATES EPOXY COATING.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	Lump	Sum	Portions of Structure removed		
509	312	Lbs.	Reinforcing Steel, Grade 60		
509	57,321	Lbs	Epoxy Coated Reinforcing Steel, Grade 60		
510	168	Each	Dowel Holes		
511	249	Cu Yds	Class S Concrete, Superstructure, As Per Plan		
513	150,300	Lbs	Structural Steel (AISC Category I)		
513	1920	Each	Welded Stud Shear Connectors		
Special	LUMP		FIELD PAINTING OF NEW STEEL, SYSTEM IZEU (SEE PROPOSAL NOTE)		
516	58.00	Lin Ft.	Structural Expansion Joint, including Elastomeric Strip Seals		
516	8	Each	Laminated Elastomeric Bearings (2.13"x7"x10" Elastomeric Pad with 1½"x9"x14" Steel Load Plate) (50 Durometer)		
516	8	Each	Laminated Elastomeric Bearings (1.75"x9½"x16" Elastomeric Pad with 1½"x11"x17" Steel Load Plate) (50 Durometer)		
516	4	Each	Laminated Elastomeric Bearings (1.88"x11½"x15" Elastomeric Pad with 1½"x13"x21 Steel Load Plate) (60 Durometer)		
518	5	Cu Yds	Porous Backfill		
518	8	Each	Scuppers, Including Supports, As Per Plan		
519	25 *	Sq. Ft.	Patching concrete structure		
Special	606	Sq Yd.	Sealing of Concrete Surfaces (Epoxy) (See Proposal Note)		

* 50% Federal Participation

Quantities Carried To Bridge General Summary

PROPOSED WORK

1. Remove existing deck, all structural steel, bearings, approach slabs, portions of abutment backwalls and designated areas of wingwalls.
2. Patch abutments as directed by the Engineer and install bearing seat modifications at abutments and Piers. Contractor shall provide for the bridge to have 16'-3" min vertical clearance when the overlay is placed on I-70
3. Install new bearings and erect new structural steel.
4. Install new expansion joint systems at abutments.
5. Complete new deck, parapets, backwalls and wingwall modifications and new approach slabs.
6. Seal all parapets, designated areas of abutments and designated pier columns as shown on the plans.
7. Paint Structural Steel; Color Gray
8. Replace Guardrail as shown on Roadway Plans.
9. Complete other work as described in these plans
10. Crestway Dr shall be closed to traffic for a limited time period. For notes, see sheet 16.

ITEM 519 - Patching Concrete Structures
Estimated areas to be patched are as follows:

Abutment Seats	20 Sq Ft.
North West Corner Wingwall	5 Sq. Ft
TOTAL =	25 Sq Ft.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

7/7

REINFORCING STEEL LIST
ESTIMATED QUANTITIES & PROPOSED WORK NOTES
BRIDGE NO. MOT-70-0759

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
OHOL	TGC	—	JAK 5/18/90	WTF	5-21-90	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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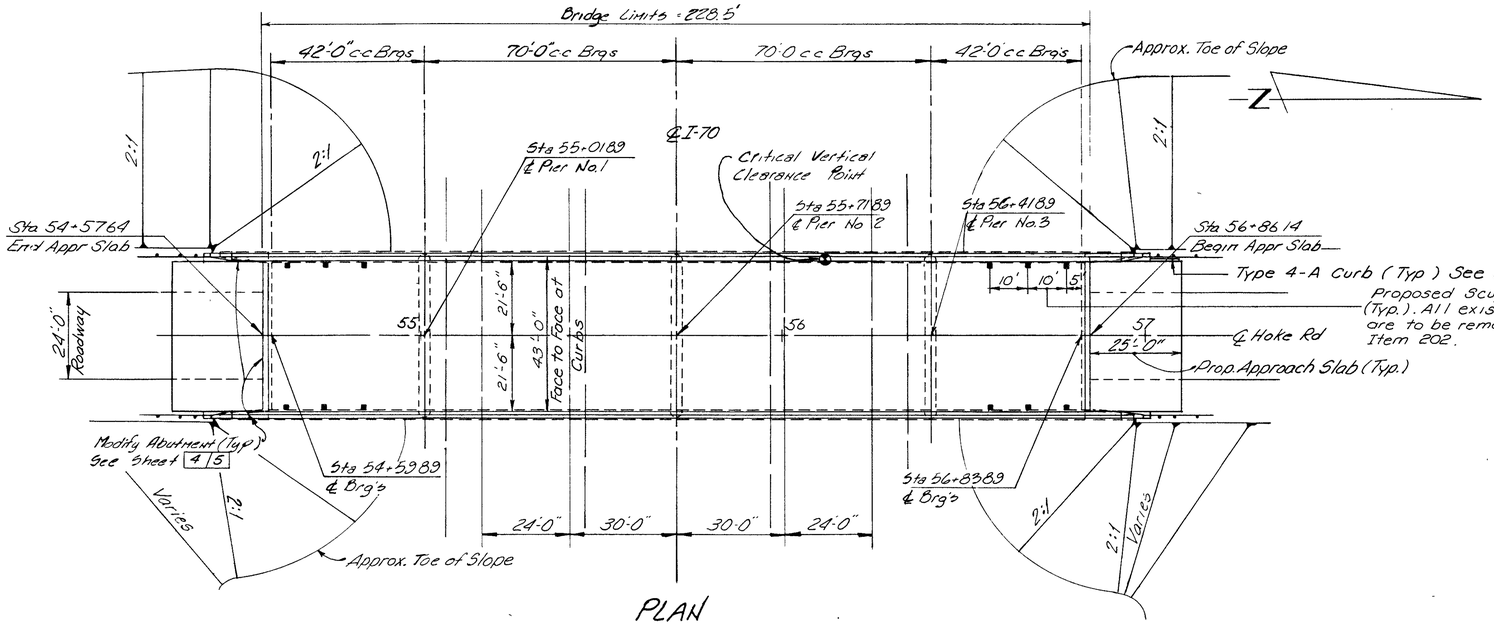
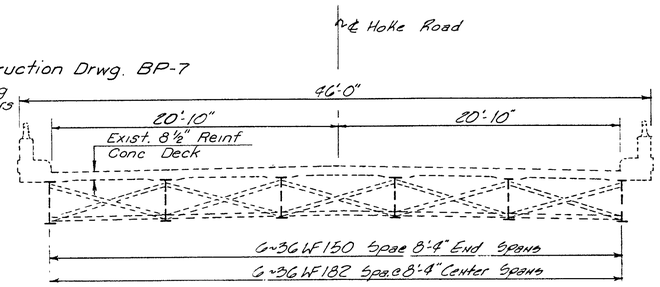
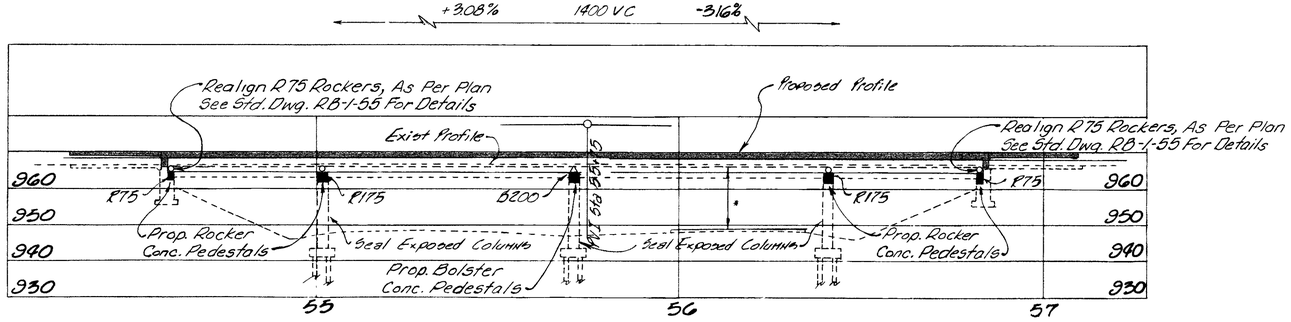
MOT-70-6.53/11.02





EXISTING BRIDGE SECTION



ELEVATION

* Raise Bridge 1'-9" Min. To obtain 16'-3" Minimum Vertical Clearance

Rocker Or Bolster Size	Jack Capacity Req'd (Min) ⊛
R75	1 Ton
R175	5.5 Tons
B200	7.2 Tons

For Rocker and Bolster Conc. Pedestals See General Detail, Sheet 146.

⊛ For existing Structural Steel at each bearing.

See sheet No. 145 for Design Stresses

Existing plans for the bridge may be examined at the ODOT District 7 office in Sidney, Ohio or at the ODOT Bureau of Bridges and Structural Design office in Columbus, Ohio.

PROPOSED STRUCTURE MODIFICATION

TYPE: Existing 4 Span Continuous Steel Beam Bridge with new reinforced concrete deck and existing reinforced concrete substructures.
SPANS: 42'-0", 70'-0", 70'-0", 42'-0" ℄ Brgs.
ROADWAY: 43'-0" Face to Face of curbs.
SKEW: None
LOADING: HS 20-44, Case II and Alternate Military Loading.
ALIGNMENT: Tangent
WEARING SURFACE: Monolithic Concrete
SUPERELEVATION: None
APPROACH SLABS: AS-1-81 (25'-0" Long)

EXISTING STRUCTURE

Type: Continuous Steel Beam With Reinforced Concrete Deck And Substructure.
Spans. 42'-0", 70'-0", 70'-0", 42'-0" ℄ Brg's.
Roadway. 44'-0" ℄ Parapets With Aluminum Railing And 1'-0 Curbs
Loading: CF-400
Wearing Surface: Asphalt
Skew: 0°00'00"
Alignment: Tangent
Approach Slab: AS-1-54 25'-0" Long

SFN: 5705371

WOOLPERT CONSULTANTS
1409 E Monument Dayton, Ohio 45402

1/5

GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0859
HOKE RD. OVER I-70

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.	JOE	R.G.S.	S.B.Z.	2/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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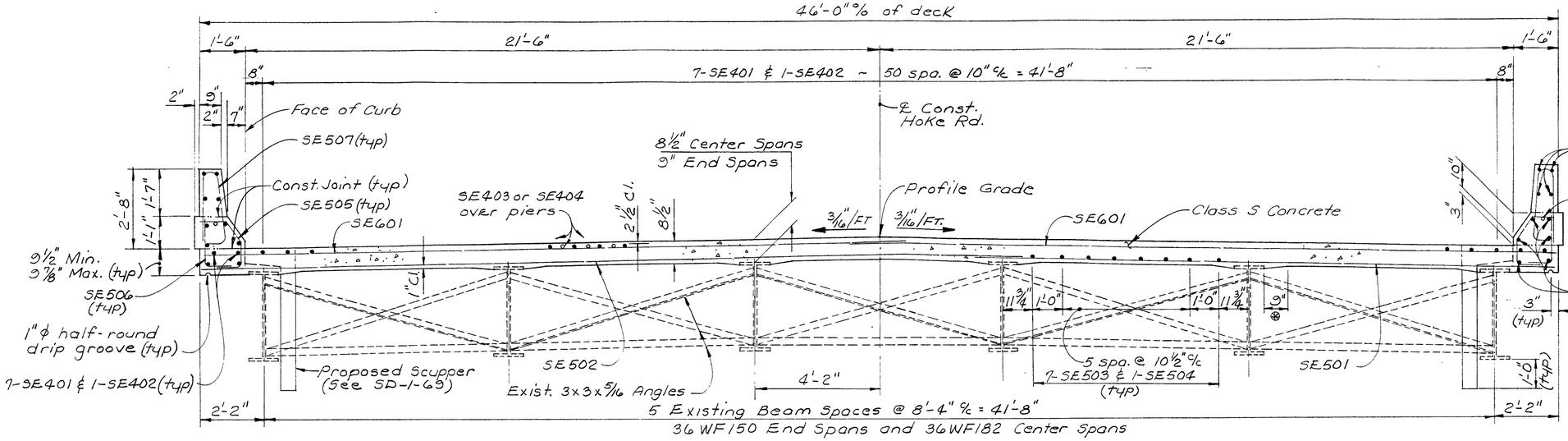
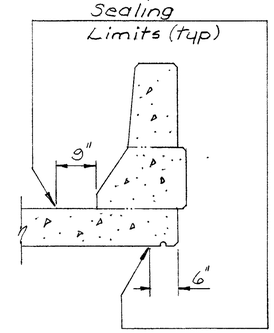
MOT-70-6.53/11.02



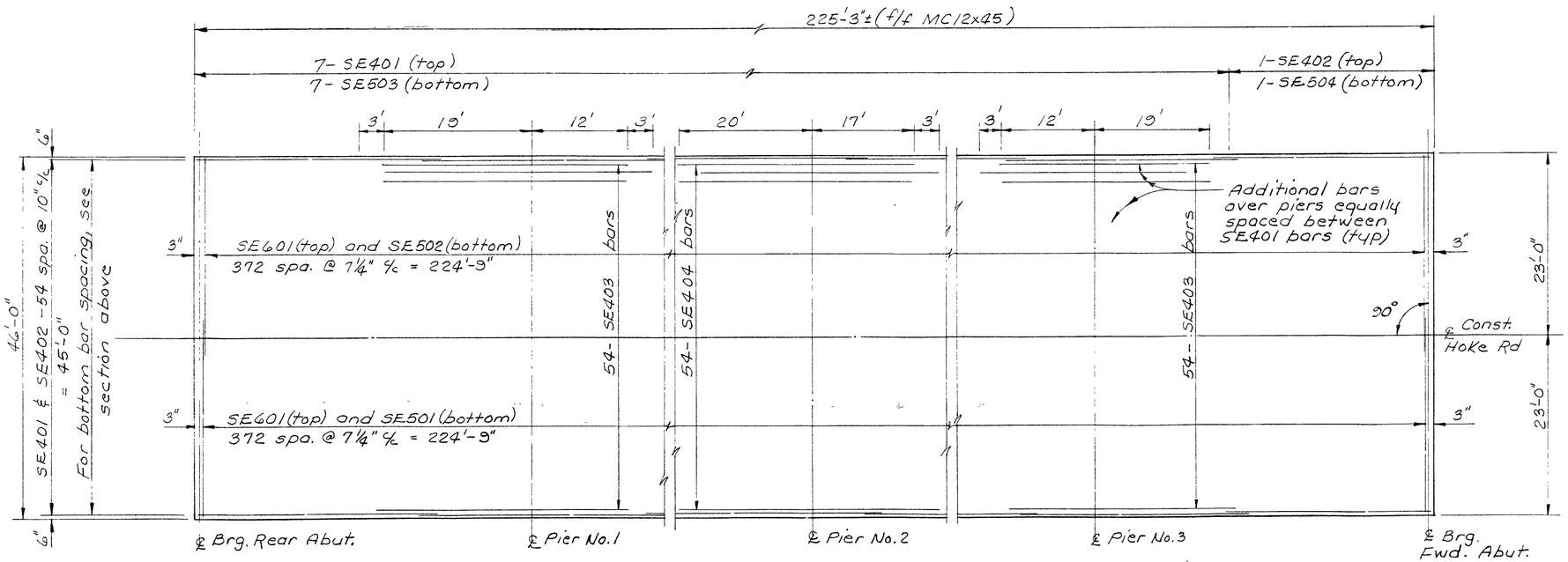
TRANSVERSE SECTION
(Class S Concrete)

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" AND 12" (PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" WIDTH.)



PARAPET SEALING



DECK REINFORCING PLAN
(All laps◉ to be 1'-8" min.)

◉ No. 4 bar
(All No. 5 bar laps to be 2'-2" Min.)
(All No. 6 bar laps to be 2'-7" Min.)

FIELD PAINTING OF NEW AND EXISTING STEEL

NEW STRUCTURAL STEEL SHALL BE PAINTED WITH SYSTEM IZEU PAINT ACCORDING TO THE NOTE IN THE PROPOSAL.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: DEFLECTOR PARAPETS SHALL BE SEALED AS PER DETAILS WITH AN EPOXY SEALER. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

2/5

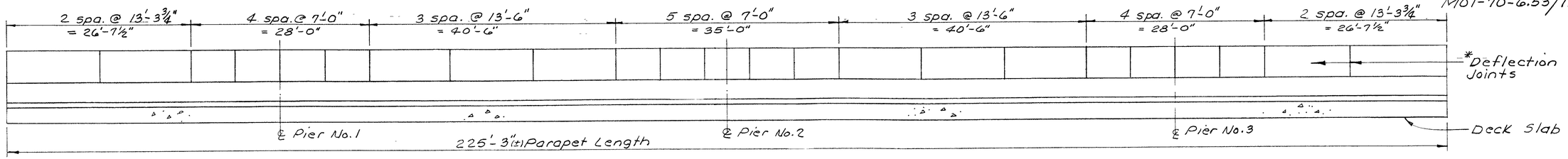
SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-0859
HOKE RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		JAM	WTF	5-18-90	

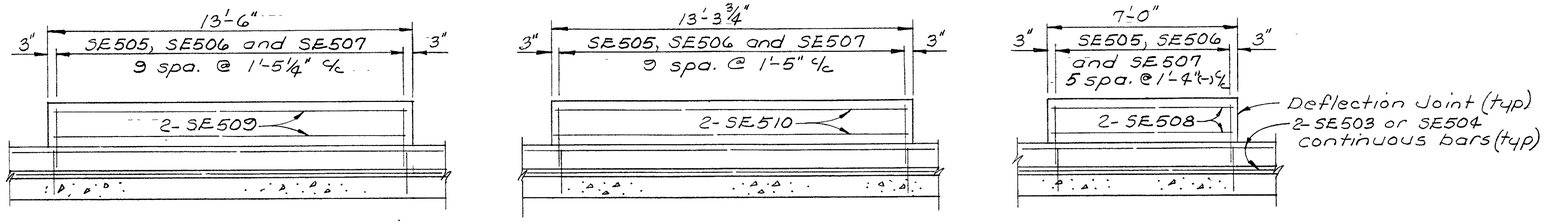
FHWA REGION	STATE	PROJECT	
5	OHIO		

173A 219

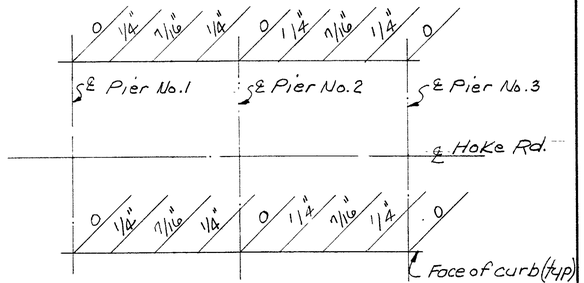
MOT-70-6.53/11.02



PARAPET ELEVATION

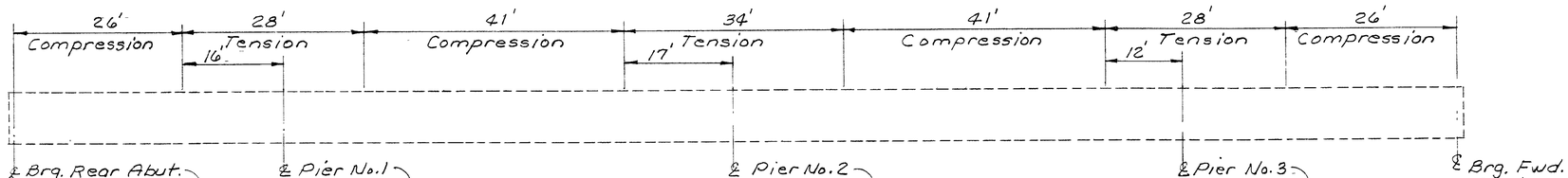


PARAPET PANELS



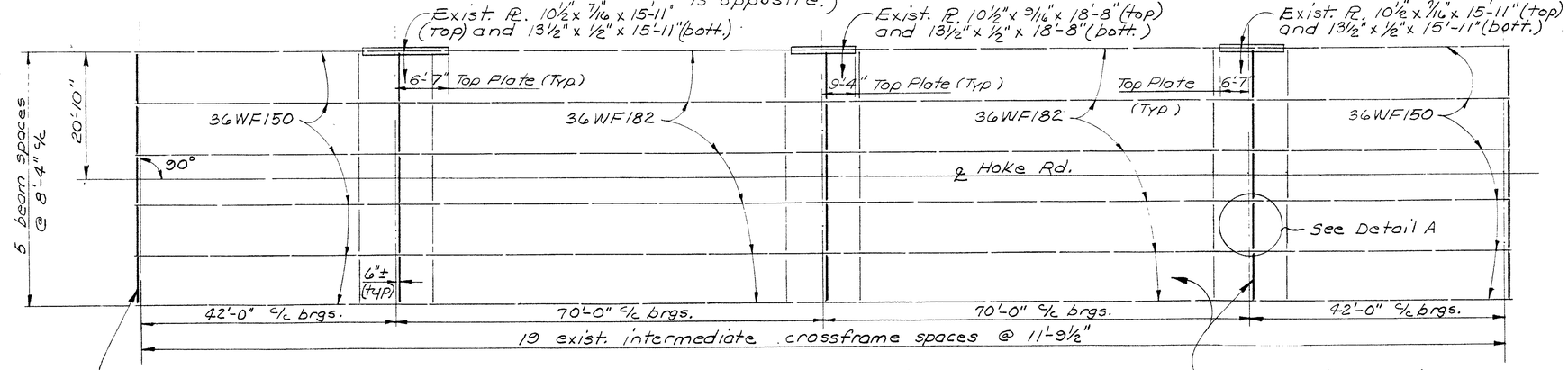
SCREED ADJUSTMENTS

Dimensions shown are at the quarter points of the center spans. Screeds shall be adjusted upward by these amounts above the final deck profile due to deflection from the concrete deadload. No adjustments are necessary in the end spans.



EXISTING BEAM ELEVATION

(showing tension and compression zones. Top flange is shown, bottom is opposite.)

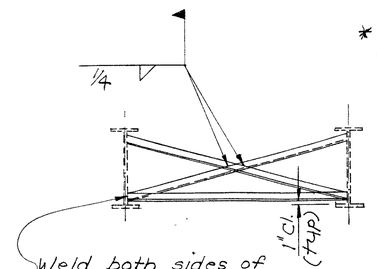


EXISTING FRAMING PLAN

Proposed 4x4x5/16 end cross-frame angles (typ). Existing end crossframes to be removed under Item 202. See Std. Dwg. SD-1-69.

Proposed intermediate cross-frames (3x3x5/16 angles) near ℄ of each pier. Do not locate any angle leg closer than 3" to the exist web weld.

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY SECTION 2.7 OF THE AASHTO LAWS BRIDGE WELDING CODE.



Weld both sides of vertical legs and top side of horizontal legs with ¼" continuous fillet weld. (typ)

DETAIL A

* For Additional Deflection Joint Details see Std. Drwg. BR-1

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

3 | 5

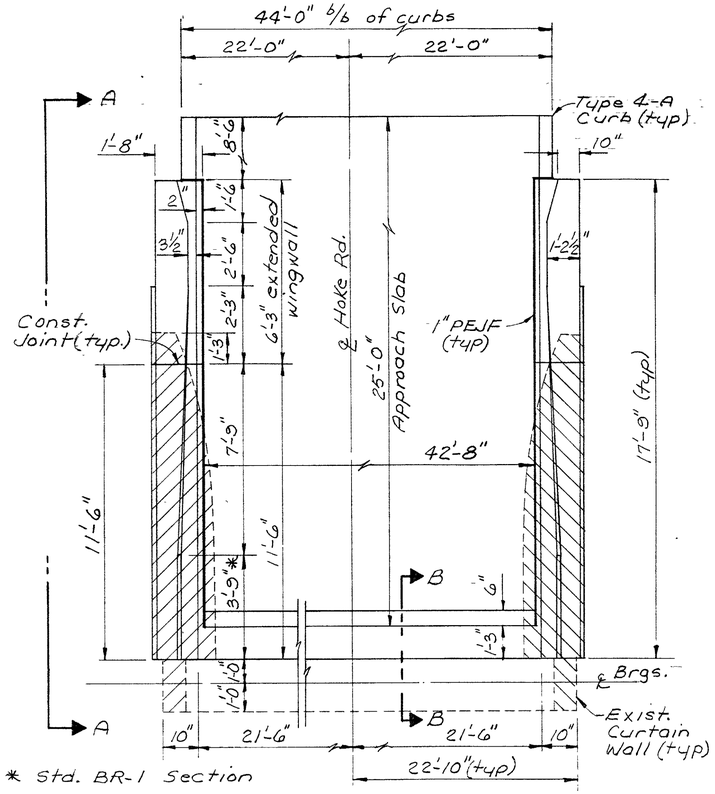
SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-0859
HOKE RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		JAM	WTF	5-18-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

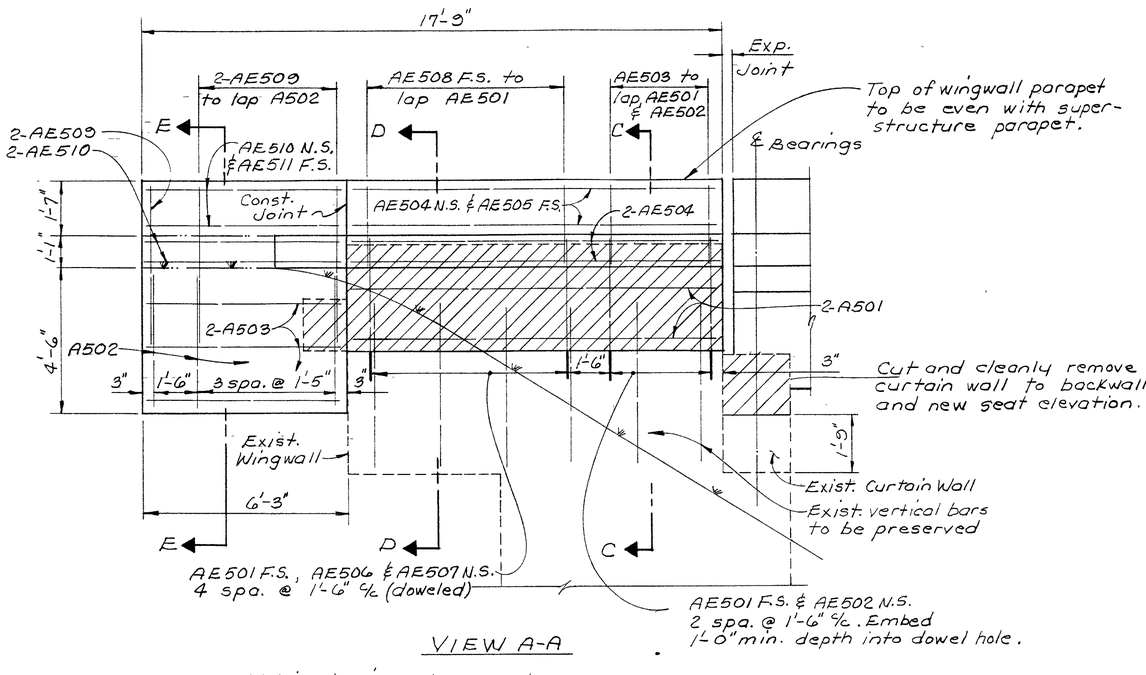
(73B 219)

MOT-70-6.53/11.02



PLAN - ABUTMENT MODIFICATION

(North and South)



VIEW A-A

For additional wingwall parapet transition and guardrail mounting details, see sheet Std. Drwg GR-3

DIMENSION "A"

Ambient Temp. (F)	3" Seal required
30°	1 7/8"
40°	1 3/4"
50°	1 11/16"
60°	1 5/8"
70°	1 1/2"
80°	1 7/16"
90°	1 3/8"

(The opening shall not be less than 1½" for installation.)

LEGEND

▨ ~ Indicates portions of existing that are to be removed.

N.S. ~ Indicates near side

F.S. ~ Indicates far side

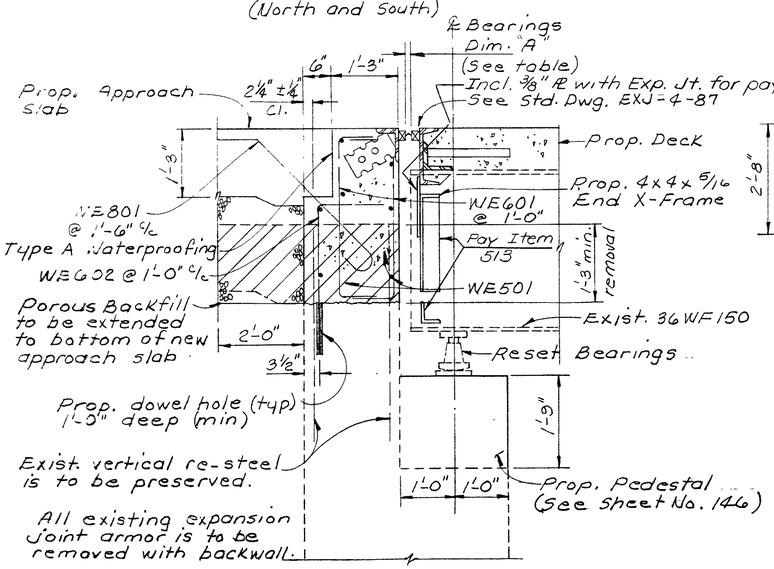
PEJF ~ Indicates Preformed Expansion Joint Filler

NOTES

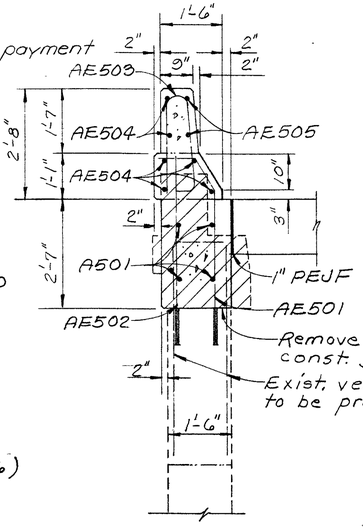
All parapets above the construction joint at slab level are to be Class S Concrete.

Type A Waterproofing, Preformed Expansion Joint Filler and sealer at the corners and sides of the approach slab shall be included in the price bid per sq. yd. for the approach slab.

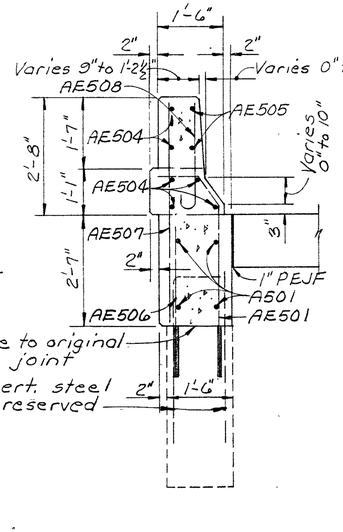
ITEM SPECIAL, SEALING OF CONCRETE SURFACES (SEE GENERAL NOTES AND PROPOSAL). THE FOLLOWING AREAS SHALL BE SEALED AT EACH ABUTMENT: THE ENTIRE SURFACE PERIMETER (TO TOE OF CURB) OF THE NEW DEFLECTOR PARAPETS AND THE ABUTMENT BACKWALL, NEW PEDESTALS, SEATS AND BREASTWALL DOWN FROM EXISTING SEAT TO GROUND SURFACE FACE TO FACE OF EXISTING CURTAIN WALLS.



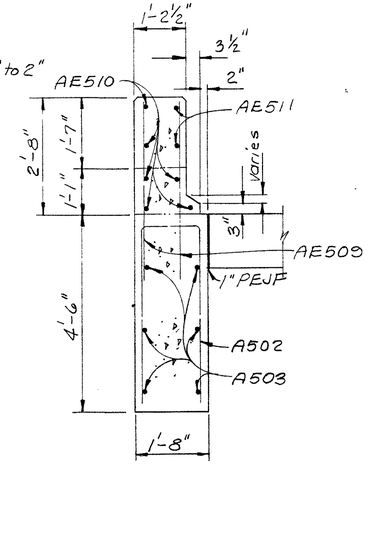
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

4 | 5

ABUTMENT DETAILS

BRIDGE No. MOT-70-0859

HOKE RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		J.A.M.	WTF	5-18-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

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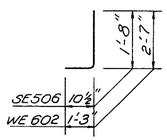
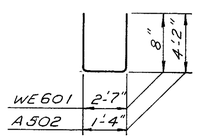
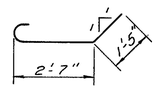
REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
WINGWALLS				
AE501	BNT	32	5'-2"	172
AE502	STR	12	4'-7"	57
AE503	BNT	12	5'-3"	66
AE504	STR	24	11'-2"	280
AE505	BNT	8	11'-2"	93
AE506	STR	20	2'-8"	56
AE507	STR	20	5'-0"	104
AE508	BNT	20	3'-0"	63
AE509	STR	40	4'-4"	181
AE510	STR	24	5'-11"	148
AE511	BNT	8	5'-11"	49
A501	STR.	16	11'-2"	186
A502	BNT	20	9'-5"	197
A503	STR.	24	5'-11"	148
TOTAL EPOXY				1269
TOTAL NON-EPOXY				531
ABUT. PEDESTALS				
EAP501	BNT	24	4'-2"	104
EAP502	BNT.	72	5'-3"	394
EAP601	STR	48	2'-7"	186
			TOTAL	684
PIER PEDESTALS				
P501	BNT	18	7'-2"	135
P502	BNT	18	5'-7"	105
P503	BNT	30	5'-2"	162
P504	BNT	72	6'-9"	507
P601	STR	72	2'-7"	279
			TOTAL	1188
BACKWALL				
WE501	STR	28	23'-8"	691
WE601	BNT	168	3'-7"	904
WE602	BNT	84	3'-8"	463
WE801	BNT	54	4'-11"	709
			TOTAL	2767
SUPERSTRUCTURE				
SE401	STR	385	30'-0"	7715
SE402	STR	55	26'-8"	980
SE403	STR	112	31'-0"	2319
SE404	STR	56	37'-0"	1384
SE501	STR	373	19'-9"	7684
SE502	STR	373	28'-1"	10,926
SE503	STR	364	30'-0"	11390
SE504	STR	52	30'-4"	1645
SE505	BNT	356	3'-1"	1145
SE506	BNT	356	2'-5"	897
SE507	BNT	356	5'-3"	1949
SE508	STR	104	6'-8"	723
SE509	STR	48	13'-2"	659
SE510	STR	32	13'-0"	434
SE601	STR	746	24'-2"	27,079
			TOTAL	76,929

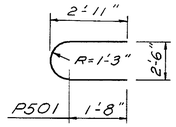
BENDING DIAGRAMS

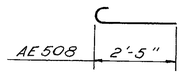


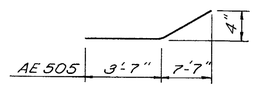


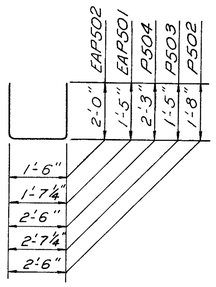


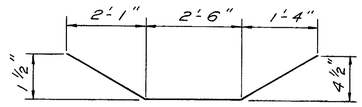
WE801



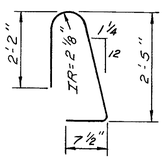




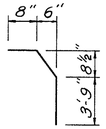




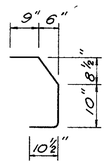
AE511



SE507 & AE503



AE501



SE505

Note: Letter "E" in prefix indicates epoxy coating.

ESTIMATED QUANTITIES

CK 5/16/90 JAM

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT
202	Lump Sum		Portions of Structure removed	
509	1719	Lbs	Reinforcing Steel, Grade 60	
509	81,649	Lbs.	Epoxy coated Reinforcing Steel, Grade 60	
510	148	Each	Dowel Hole	
511	29	Cu Yd	Class C Concrete, Abutment	
511	334	Cu Yd	Class S Concrete, Superstructure	
513	3500	Lbs.	Structural Steel, (AISC certification not required)	
516	12	Each	Realign Bearing devices, As Per Plan	
516	Lump Sum		Jacking and Temporary support of Superstructure, As Per Plan	
516	94.88	Lin Ft	Structural Expansion Joint, Including Elastomeric Strip Seals	
518	11	Cu Yd	Porous Backfill	
518	12	Each	Scuppers, Including supports, As Per Plan	
519	50 *	Sq Ft	Patching concrete structure	
Special	680	Sq Yd	Sealing of Concrete Surfaces (Epoxy) See Proposal Note	
Special	Lump Sum		Field Painting of New Steel, System IZEU ⊙	
Special	Lump Sum		~~Field Painting of Existing Steel, Finish Coat, System OZEU, As Per Plan~~	

⊙ See Proposal Note

QUANTITIES CARRIED TO BRIDGE GENERAL SUMMARY

* 50% Federal Participation

PROPOSED WORK

1. Remove Existing Deck, Abutment Backwalls, Expansion Joint Armor and designated areas of Wingwalls. The Contractor shall be careful when sawing the Existing Concrete Deck so that the sawing operation will stay clear of the top flange and top cover plates of the existing beams. See sheet 3/5 for the top cover plate locations
2. Jack Superstructure at Piers and Abutments 1'-9" min (using temporary supports and longitudinal blocking and installing concrete pedestals). Contractor shall provide for the bridge to have 16'-3" min. vertical clearance when the overlay is placed on I-70. See sheet 146 for Pier Pedestal details.
3. Install New X-Frame Angles at Piers and Abutments.
4. Patch Abuts. & Piers as directed by the Engineer, and Realign Abut Rocker Bearings to be vertical.
5. Install New Expansion Joint Systems at Abutments. Seal Parapets as shown on plans.
6. Complete New Deck, Parapets, Backwalls and Wingwall modifications.
7. Seal all Parapets and designated Pier Columns as shown on plans.
8. Paint Structural Steel as indicated by Plan Note. The color of the finish paint shall be gray
9. Hoke Road shall be closed to traffic for a limited time period. For Notes, see Sheet 16.
10. Other work as described in these Plans.

ITEM 519 - Patching Concrete Structures
Estimated areas to be patched are as follows:

Abutment Seats	30 Sq Ft
Pier Columns	20 Sq Ft.
	50 Sq. Ft.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

5/5

REINFORCING STEEL LIST
ESTIMATED QUANTITIES
& PROPOSED WORK NOTES

BRIDGE NO. MOT-70-0859

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	T.G.C.	—	J.A.M. 5/16/90	WTF	5-18-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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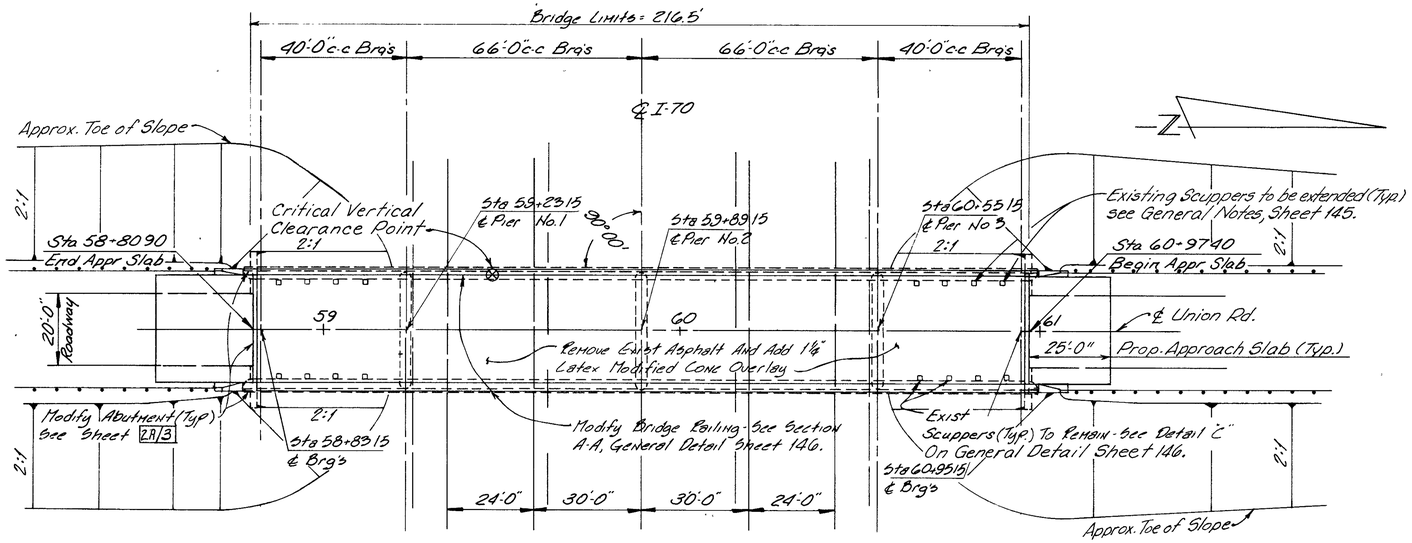
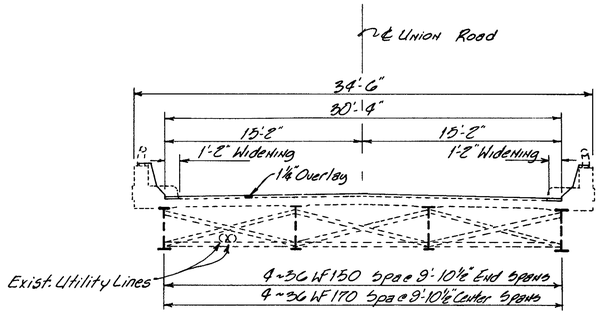
MOT-70-6.53/11.02



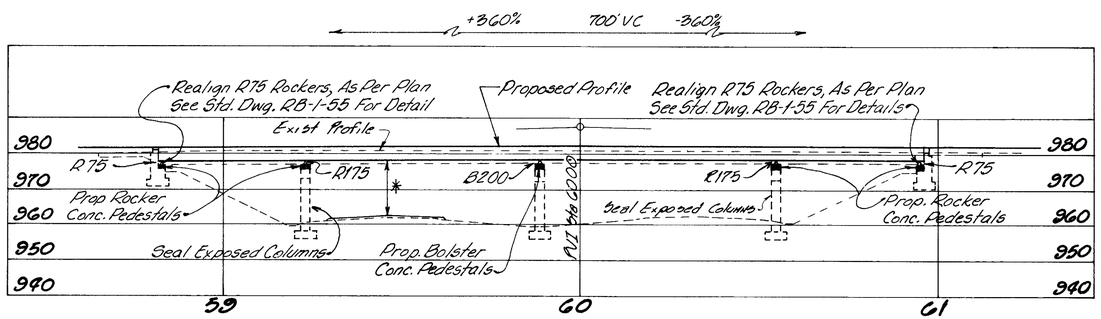
PLAN



BRIDGE SECTION

Rocker Or Bolster Size	Jack Capacity Req'd (Min.)
R 75	25 Ton
R175	100 Ton
B200	100 Ton

For Rocker and Bolster Conc. Pedestals See General Detail Sheet 146.



ELEVATION

* Raise Bridge 1'-0¾" Min. to Maintain 16'-3" Minimum Vertical Clearance.

EXISTING STRUCTURE

Type Continuous Steel Beam With Reinf. Concrete Deck And Substructure
Spans: 90', 66', 66', 90' ℄ Brg.
Roadway: 28'-11" Safety Curbs With Concrete Parapet And Aluminum Railing
Loading: CF-130
Wearing Surface: Asphalt
Skew: None
Alignment: Tangent
Approach Slabs: AS-1-54 (15' Long)

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

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GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-0962
(UNION RD. OVER I-70)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.S.	JOE	R.G.S.	S.D.R.	2/29/88	

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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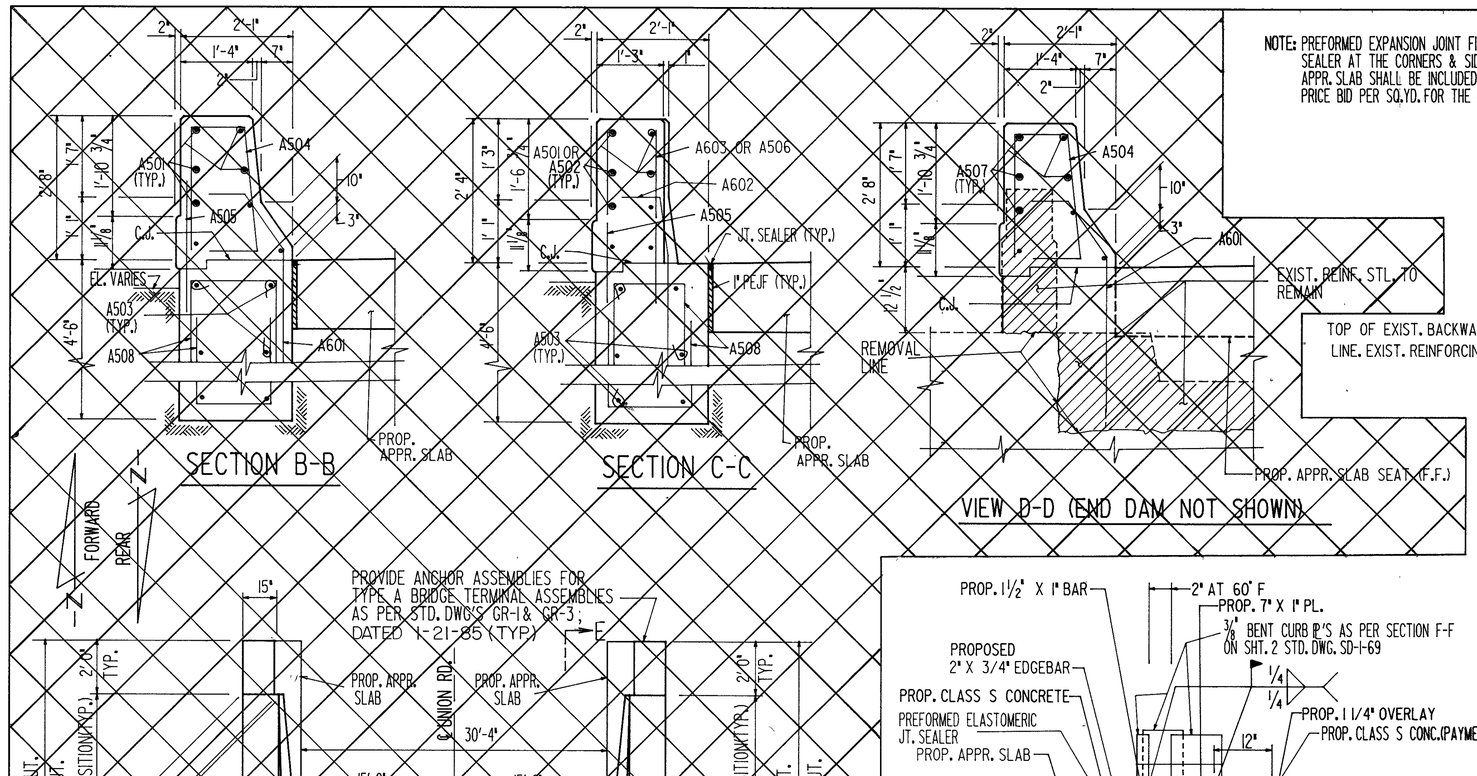
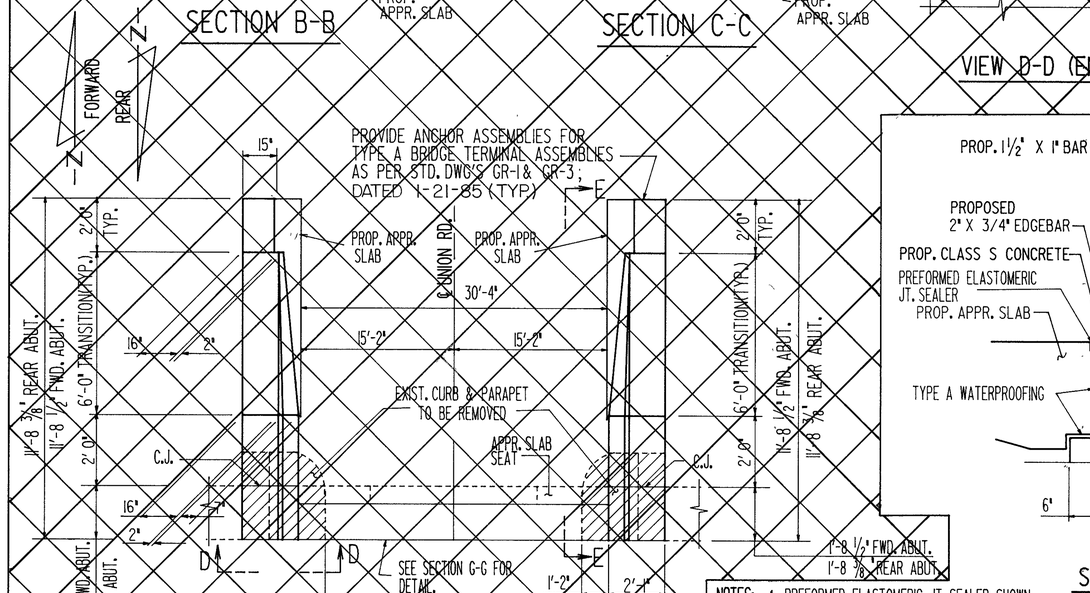
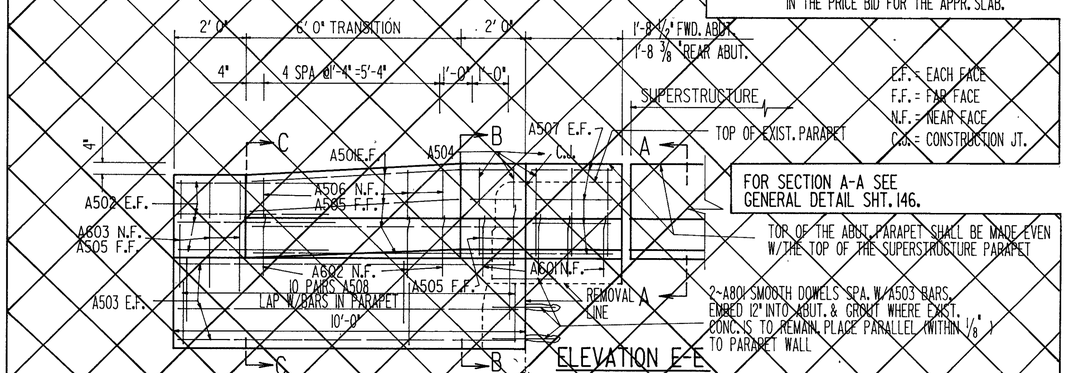
NOTE: PREFORMED EXPANSION JOINT FILLER & SEALER AT THE CORNERS & SIDES OF THE APPR. SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ.YD. FOR THE APPR. SLAB.



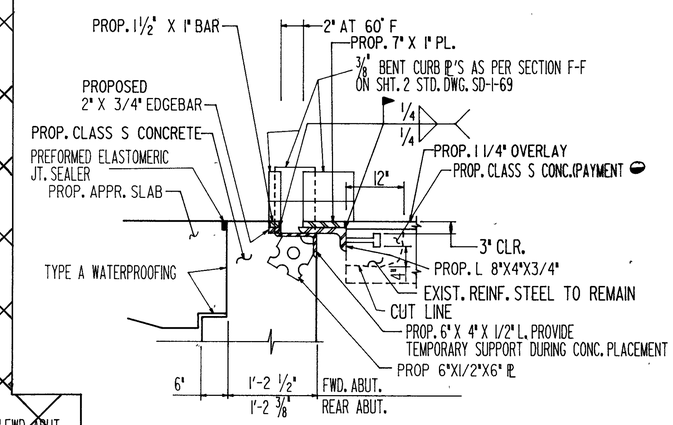


PLAN ABUTMENT MODIFICATION



ELEVATION E-E

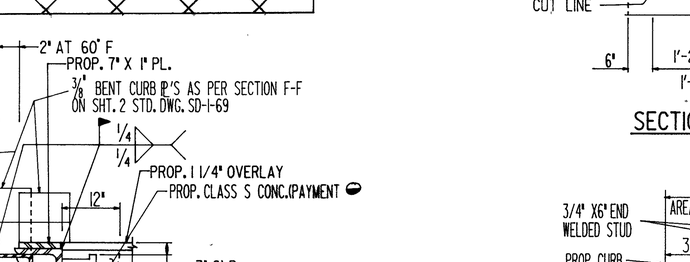
NOTES:
1. PREFORMED ELASTOMERIC JT. SEALER SHOWN AT THE BRIDGE LIMIT END OF THE APPR. SLAB SHALL BE INCLUDED IN THE PRICE BID PER SQ.YD. FOR THE APPR. SLAB.
2. TYPE A WATERPROOFING SHALL BE INCLUDED IN THE PRICE BID FOR THE APPR. SLAB.



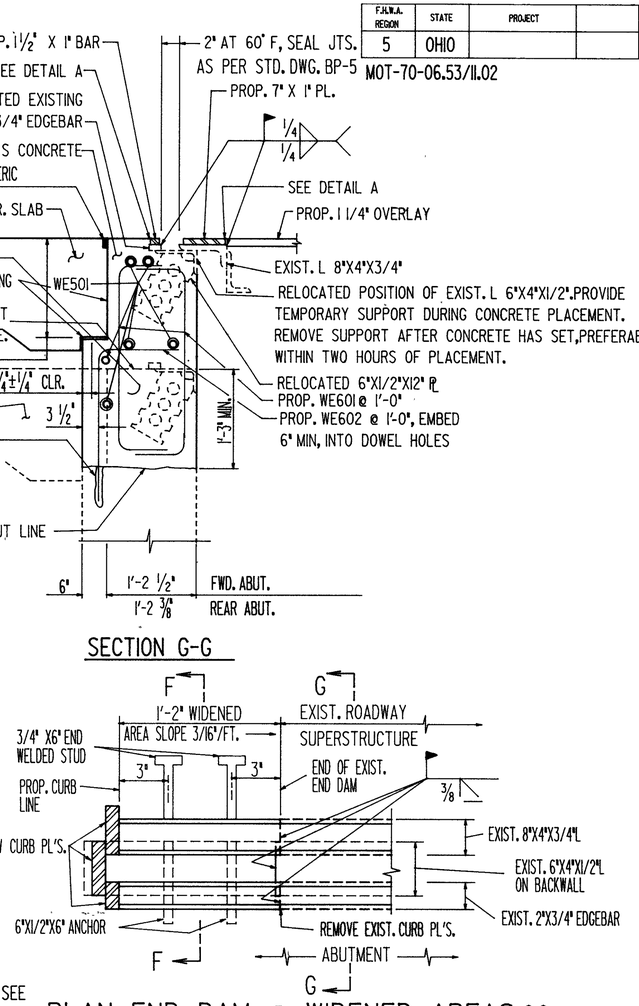
SECTION F-F **

Include with item 516 - extension of structural expansion joints for payment.

** FOR DETAILS NOT SHOWN SEE STD. DWG. SD-1-69.



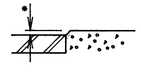
SUPERSTRUCTURE PARAPET DETAIL



SECTION G-G

PLAN END DAM @ WIDENED AREAS **

NOTE: END DAM WIDENING SHOWN IS FOR THE N.E. & S.W. CORNERS OF THE BRIDGE. THE N.W. & S.E CORNERS ARE SIMILAR, BUT OPPOSITE HAND.



* CONCRETE SURFACES ADJACENT TO DECK JOINTS SHALL BE FINISHED FLUSH OR SLIGHTLY ABOVE THE STEEL JOINT SURFACE.

DETAIL A

WOOLPERT CONSULTANTS
409 E. Monument/Dayton, Ohio 45402

2 / 3

MISCELLANEOUS DETAILS

BRIDGE NO. MOT-70-0962

MONTGOMERY COUNTY

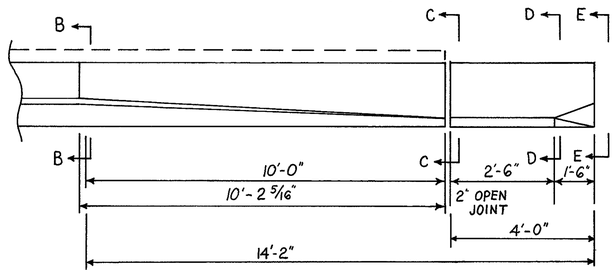
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	G&L	2/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

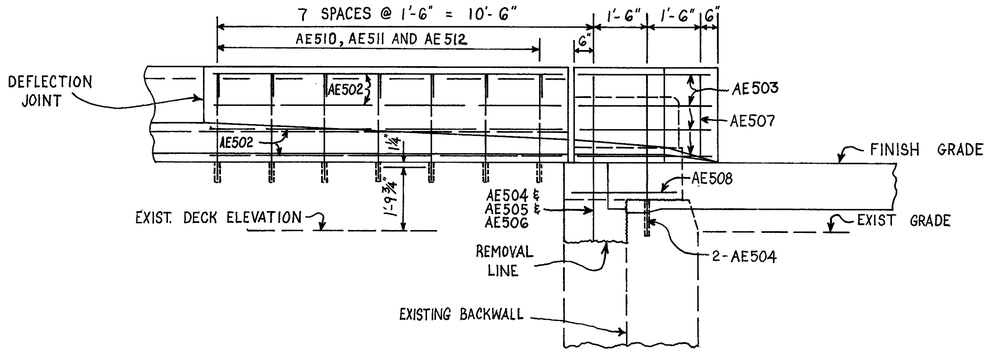
176A
219

MONTGOMERY COUNTY
MOT-70-06.49/11.02

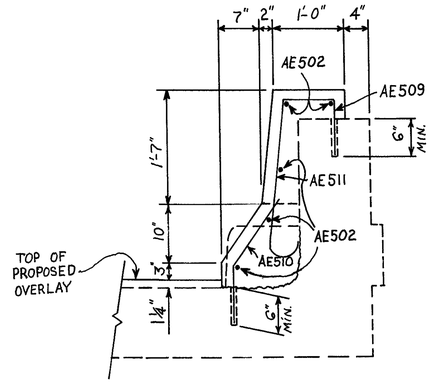
N.F. = NEAR FACE
F.F. = FAR FACE
TYPE "AA" BRIDGE TERMINAL ASSEMBLY AT EACH CORNER OF BRIDGE



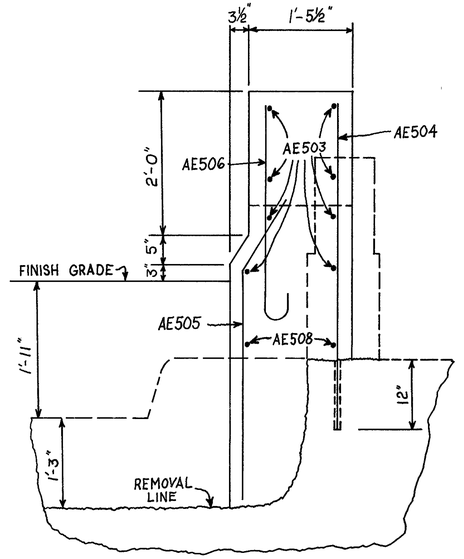
PLAN



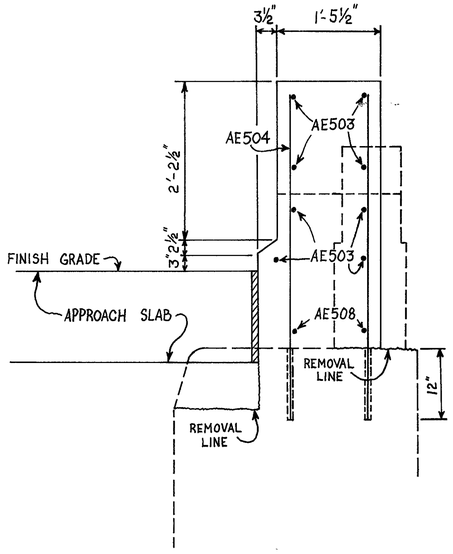
ELEVATION



SECTION B-B



SECTION C-C



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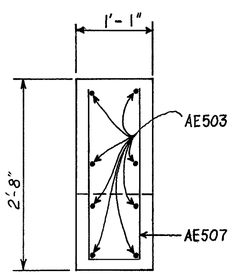


SECTION E-E

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
24/3

DETAILS
BRIDGE Nº. MOT-70-0962

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BS1 19901130

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

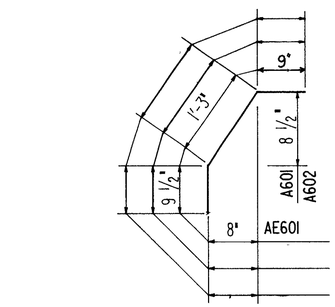
177
219

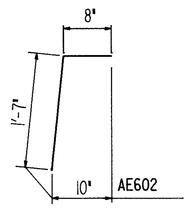
MOT-70-6.53/11.02

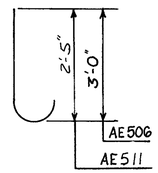
REINFORCING STEEL LIST

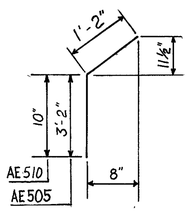
MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
AE501	STR.	120	12'-5"	1554
AE502	STR.	20	9'-9"	204
AE601	BNT.	390	1'-10"	1072
AE602	BNT.	390	2'-1"	1219
AE603	BNT.	390	1'-2"	686
~~AE604~~	~~BNT.~~	~~4~~	—	~~60~~
~~AE605~~	~~BNT.~~	~~28~~	~~2'-10"~~	~~119~~
~~AE606~~	~~BNT.~~	~~28~~	~~1'-11"~~	~~81~~
AE503	STR.	32	3'-8"	123
AE504	STR.	4	4'-6"	19
AE505	BNT.	4	4'-4"	18
AE506	BNT.	4	3'-7"	15
AE507	BNT.	4	5'-6"	23
AE508	STR.	8	2'-8"	22
AE509	BNT.	4	10'-3 3/8"	43
AE510	BNT.	28	2'-0"	59
AE511	BNT.	28	3'-0"	88
			TOTAL	5145
ABUT. PEDESTALS				
EAP501	BNT.	16	4'-2"	70
EAP502	BNT.	48	5'-3"	263
EAP601	STR.	32	2'-7"	124
			TOTAL	457
PIER PEDESTALS				
P501	BNT.	18	6'-2"	116
P502	BNT.	18	4'-9"	89
P503	BNT.	18	4'-10"	91
P504	BNT.	36	5'-11"	222
P601	STR.	48	2'-7"	186
			TOTAL	704
BACKWALL				
WE501	STR.	12	32-0"	401
WE601	BNT.	132	3'-6"	694
WE602	BNT.	66	3'-2"	314
WE801	BNT.	40	4'-11"	525
			TOTAL	1934

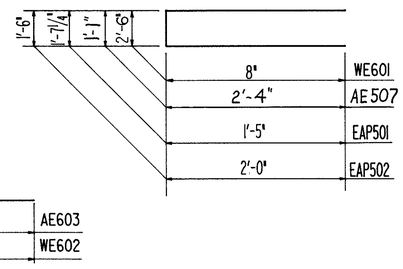
BENT BAR DETAILS

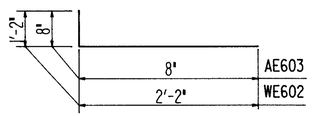


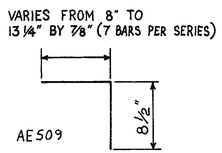


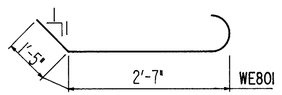


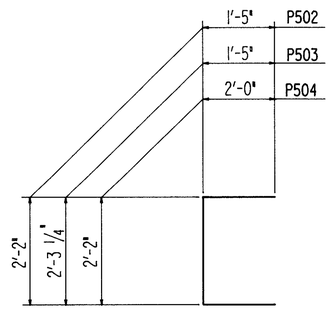


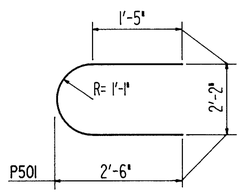












VARIES FROM 3'-10" TO 3'-8" BY 1/2" (FIVE BARS PER SERIES).

LETTER 'E' IN PREFIX INDICATES EPOXY COATED REINF. STEEL.
* BEND IN FIELD AS REQUIRED.
** SMOOTH DOWEL BAR

PROPOSED WORK

1. REMOVE ASPHALT FROM SUPERSTRUCTURE & BACKWALL.
2. JACK SUPERSTRUCTURE AT PIERS & ABUTMENTS 1'-9 3/4" MIN. (USING TEMPORARY SUPPORTS & LONGITUDINAL BLOCKING AND INSTALLING CONCRETE PEDESTALS). CONTRACTOR SHALL PROVIDE FOR THE BRIDGE TO HAVE 16'-3" MIN. VERT. CLEARANCE WHEN THE OVERLAY IS PLACED ON I-70.
3. REMOVE ABUTMENT PORTIONS OF END DAM & TOP OF ABUTMENT BACKWALL. CLEAN & REPOSITION ABUTMENT PORTIONS OF END DAMS. ADD EXTENSIONS TO END DAM WITH PARAPET CURB TYPE'S FOR ROADWAY WIDENING AT 4 LOCATIONS AFTER EXIST. SAFETY CURB HAS BEEN REMOVED.
4. PATCH ABUTS. AS DIRECTED BY THE ENGINEER, AND REALIGN ABUT BEARINGS.
5. MODIFY PARAPETS ON THE SUPERSTRUCTURE & ABUTMENTS. SEAL PARAPETS AS SHOWN ON PLANS.
6. SCARIFY EXIST. DECK 1/4" & REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
7. PERFORM PARTIAL AND FULL DEPTH DECK REPAIR AND PLACE L.M.C.O. (1 1/4" THICK).
8. SEAL JTS. AS NOTED.
9. UNION RD. SHALL BE CLOSED TO TRAFFIC FOR A LIMITED TIME PERIOD. FOR NOTES SEE SHT. 16.
10. OTHER WORK AS DESCRIBED IN THESE PLANS.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM		PORTIONS OF STRUCTURE REMOVED		
202	674	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
509	1004	LBS.	REINFORCING STEEL, GRADE 60		
516	8	EACH	REALIGN BEARING DEVICES, AS PER PLAN (ABUT. ROCKERS, R75)		
516	LUMP SUM	L.S.	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		
517	427.4	L.F.	RAILING FACED, AS PER PLAN		
519	35*	S.F.	PATCHING CONCRETE STRUCTURE		
511	13.4	C.Y.	CLASS S CONCRETE, ABUTMENT		
509	7536	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60		
845	730	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	37	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
845	14	C.Y.	FULL DEPTH REPAIR		
510	12	EACH	DOWEL HOLES		
SPECIAL	376	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
516	28	L.F.	VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINT		
516	5	L.F.	HORIZONTAL EXTENSION OF STRUCTURAL EXPANSION JOINT		
518	16	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN		

* 50% Federal Participation

ITEM 519 - PATCHING CONCRETE STRUCTURE:
ESTIMATED AREAS TO BE PATCHED ARE AS FOLLOWS-
ABUTMENT SEATS 35 SQ. FT.

Quantities Carried To Bridge General Summary

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

3/3

REINFORCING STEEL LIST ESTIMATED QUANTITIES & PROPOSED WORK NOTES

BRIDGE NO. MOT-70-0962

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	G.B.L.	3/29/98	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

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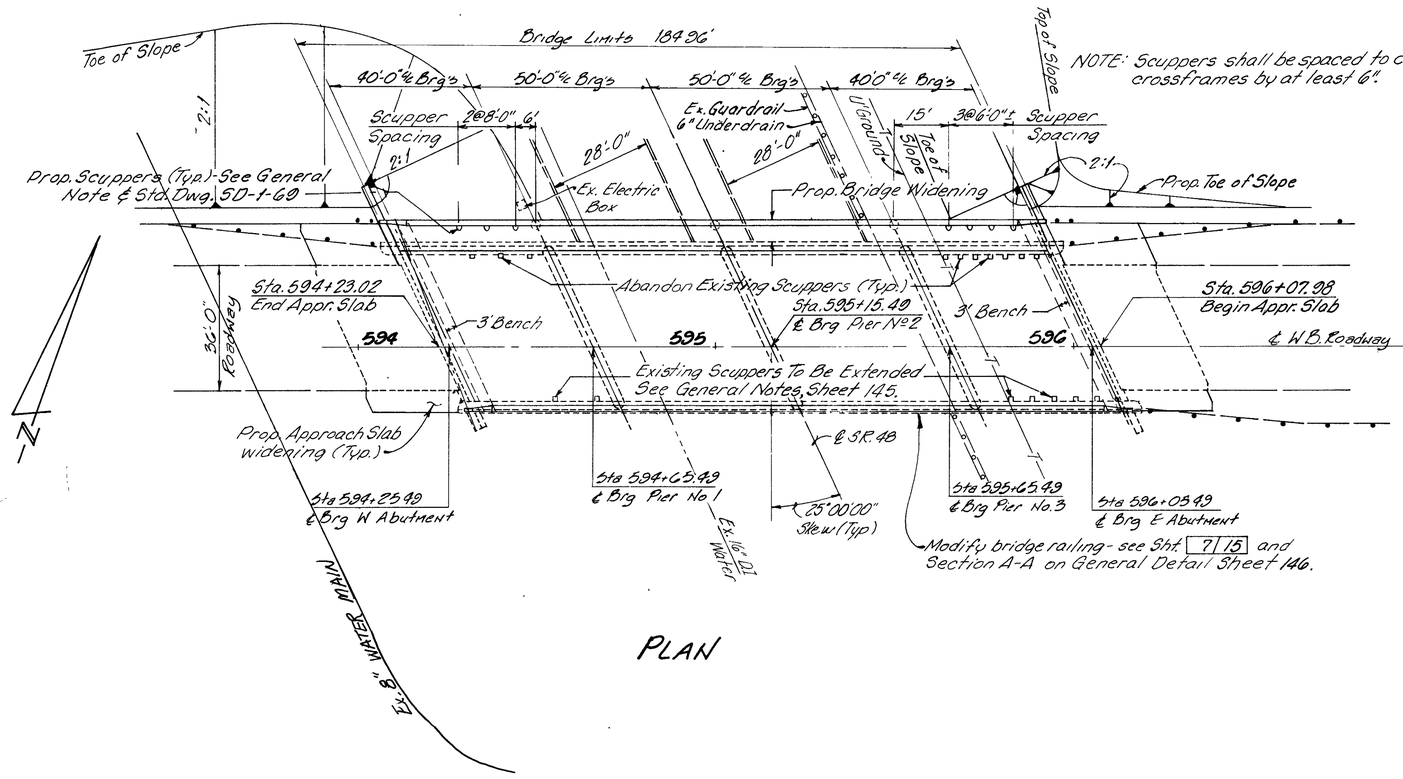
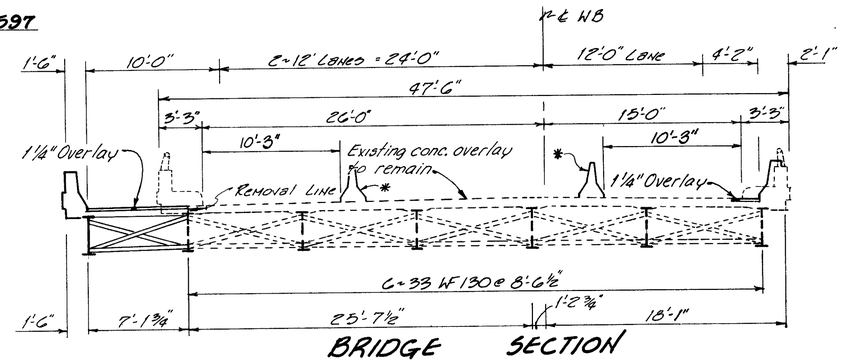
219

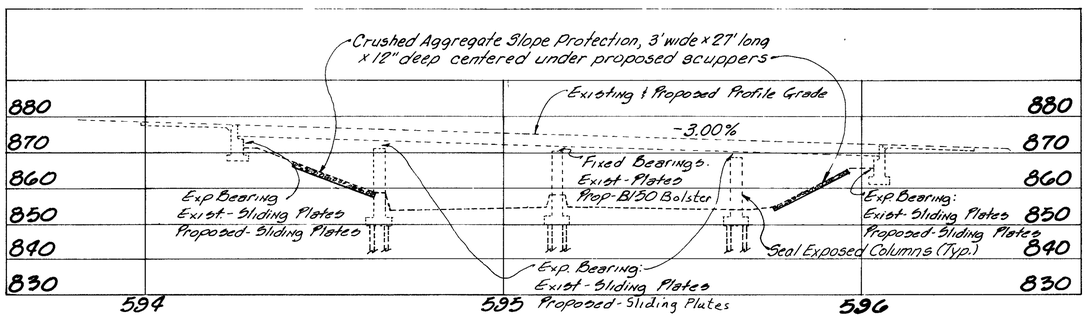


PLAN



BRIDGE SECTION

* Item 622, Temporary Concrete Barrier, bridge mounted, is carried in the roadway quantities. Barrier shall not be anchored or braced to bridge deck.



ELEVATION

Pile Notes: The Existing Piling Are 12HP53 With An "As Built" Length Of 20'

All Proposed Piling Shall Be 12HP53 With An Estimated Average Pay Length Of 21' At All Piers

The Pile Design Load Is 35 Tons See Sheet 15/15 For Soil Boring Information.

EXISTING STRUCTURE

Type: Continuous Steel Beam With Reinforced Concrete Deck And Substructure
Spans: 40'-0", 50'-0", 50'-0", 40'-00" ¢ Bearings
Roadway: E.B 30'-0", W.B 41'-0" ft 2'-0" Safety Curbs With Concrete Parapets And Aluminum Railing
Loading: CF 2000
Wearing Surface: Latex Modified Concrete
Skew. 25°00' Rt Forward
Alignment: Tangent
Approach Slabs: AS-1-54, 25'-0" Long

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

1/15

GENERAL PLAN, ELEVATION AND BRIDGE SECTION

BRIDGE NO. MOT-70-11.30 (L)
(OVER S.R. 48)

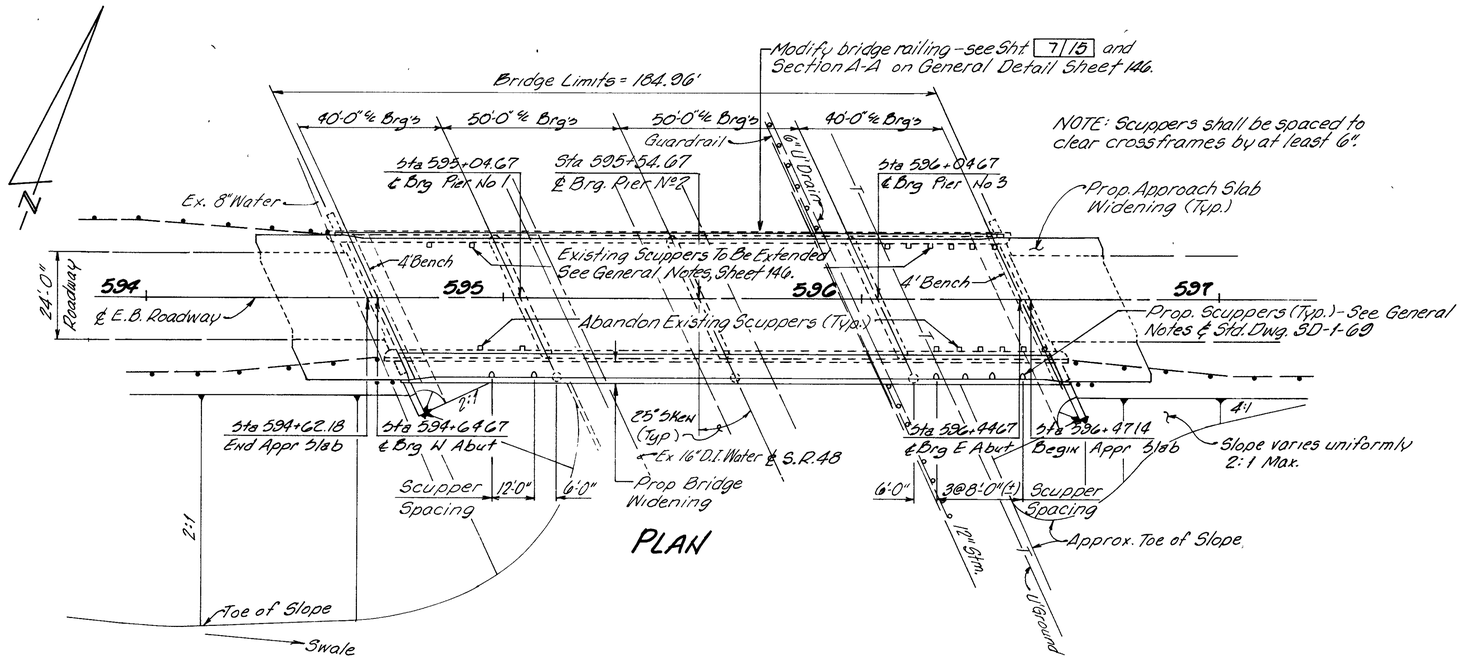
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.	JOE	R.G.S.	S.D.D.	2/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

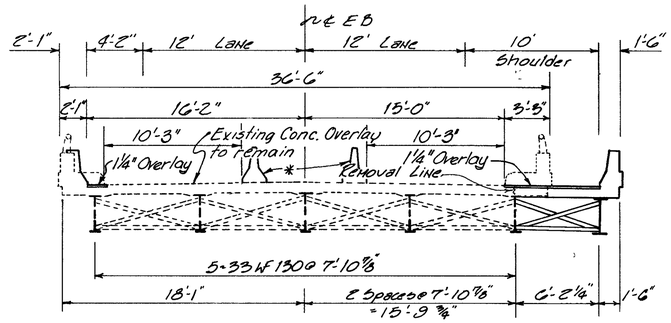
182
219

MOT-70-6.53/11.02



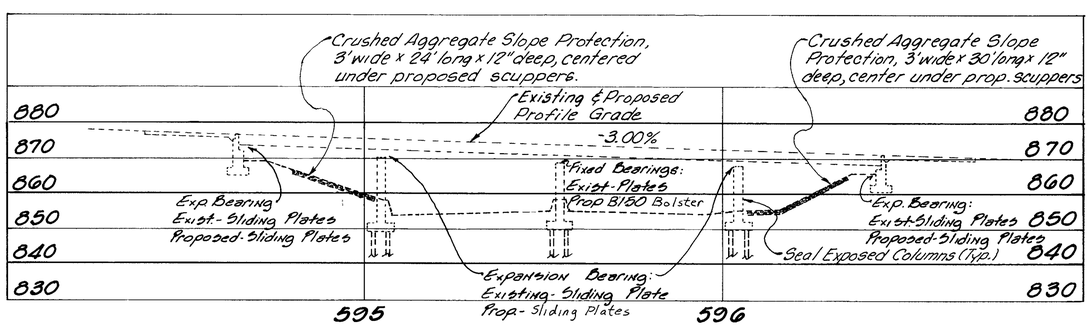
PLAN

NOTE: Scuppers shall be spaced to clear crossframes by at least 6".



BRIDGE SECTION

* Item 622, Temporary Concrete Barrier, bridge mounted, is carried in the roadway quantities. Barrier shall not be anchored or braced to bridge deck.



ELEVATION

Pile Notes: The Existing Piling Are 12HP53 With An "As Built" Length Of 20'
All Proposed Piling Shall Be 12HP53 With An Estimated Average Pay Length Of 21' Feet At All Piers.

The Pile Design Load Is 35 Tons. See Sheet 15/15 For Soil Boring Information.

EXISTING STRUCTURE

Type: Continuous Steel Beam With Reinforced Concrete Deck And Substructure
Spans: 40'-0", 50'-0", 50'-0", 40'-0" ℄ Bearings
Roadway: E.B 30'-0", W.B 41'-0", 4 @ 2'-0" Safety Curbs With Concrete Parapets And Aluminum Railings
Loading: CF 2000
Wearing Surface: Latex Modified Concrete
Skew: 25°00' Rt Forward
Alignment: Tangent
Approach Slabs: AS-1-54, 25'-0" Long

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

2/15

GENERAL PLAN, ELEVATION AND BRIDGE SECTION

BRIDGE NO. MOT-70-1130 (R)
(OVER SR. 48)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	JOE		R.G.S.	S.B.Z.	2/4/88	

GENERAL NOTES (FOR ADDITIONAL NOTES SEE SHT. 145)

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

EMBANKMENT CONSTRUCTION: The embankment shall be constructed to the level of the subgrade in the area of the proposed abutment widening. Excavation may then be made for the abutments.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN: After the embankment has been constructed in the area of the abutment and excavation for the abutment has been performed, contractor shall compact the existing soil under the proposed footer. Compaction shall meet the requirements of section 203.13 for a depth of 12" below the bottom of footer. Granular backfill meeting the requirements of Item 304 shall be used, if required, to maintain the footing elevation.

PILE DESIGN LOAD: Piers - 35 tons per pile.

FOUNDATION BEARING PRESSURE: Abutment footings, as designed, produce a maximum bearing pressure of 2 tons per sq.ft..

PILE POINTS: Steel pile points shall be used to protect the tips of the proposed piling. The steel points shall be furnished by the Associated Pile and Fitting Corp., 262 Rutherford Blvd., Clifton, New Jersey 07014; International Construction Equipment Inc., 301 Warehouse Dr., Matthews, North Carolina 28016; Dougherty Foundation Products Inc., P.O. Box 688, Franklin Lakes, New Jersey 07417; Versa Steel Inc., 3601 N.W. Yeon Ave., P.O. Box 10559, Portland, Oregon 97210 or by a manufacturer that can furnish a steel point that is acceptable to the Director. The pile points shall satisfy or exceed the requirements of ASTM A27 (Grade 65/30) or ASTM A148 (Grade 90/60).

ITEM 845, LATEX MODIFIED CONCRETE OVERLAY(1 1/4"),AS PER PLAN: ~~Scarification of the concrete surface as per section 845.05 shall not apply to the proposed concrete deck in the widened areas. However, the proposed concrete deck surface shall be given a rough surface satisfactory to the Engineer. The surface shall be textured in the longitudinal direction by an approved device that will produce a relatively uniform pattern of grooves. The grooves shall be approx. 1/4" deep x 1/4" wide spaced at approx. 5/8" c/c.~~

The proposal note entitled "LATEX MODIFIED CONCRETE (LMC) OVERLAY OF NEW CONCRETE BRIDGE DECKS" SHALL apply to this item.

ITEM 518, SCUPPERS, INCLUDING SUPPORTS, / AS PER PLAN: Shall be in accordance with Std. Dwg. SD-1-69 except that scupper pipes shall extend 1'-6" below the bottom of beam instead of 2".

MAINTENANCE OF TRAFFIC:

S.R. 48 - Maintain two lanes of traffic Southbound and one lane Northbound at all times.

I-70 - Westbound - Maintain one thru lane and ramp lane at all times.

Eastbound - Maintain one thru lane at all times.

For additional maintenance of traffic notes & details see roadway plans.

The contractor shall safeguard the traveling public on S.R. 48 by providing platforms, nets, or other suitable protection above the traveled lanes.

ITEM 513, STRUCTURAL STEEL, ASTM A36(AISC CATEGORY I) FOR REHABILITATION, AS PER PLAN; AND ITEM 516, STRUCTURAL STEEL FOR EXPANSION JT. REHABILITATION, AS PER PLAN: Structural Steel under these items will not require shop drawings prior to fabrication. The contractor shall make necessary measurements and prepare sketches, drawings, tables etc. The Engineer shall have the authority and responsibility for ensuring that the fabricated steel is acceptable. Technical assistance will be provided on request by the Bureau of Bridges. Mill test reports and shipping documents shall be submitted to the Engineer for review and approval prior to incorporating steel items into the work, as required by 501.07. After fabrication the Contractor shall submit shop drawings to the Engineer for review and approval to ensure that the drawings depict the steel as actually incorporated into the work. The Engineer will then send one approved set to the Bureau of Bridges for information. Pay weights shall be computed in compliance with 513 of the Construction and Material Specifications and submitted to the Engineer for his review and approval. The fabricator shall furnish a 35 mm microfilm copy of each shop drawing, which shall be mounted on an aperture card as specified in 501.05.

SPECIAL, FIELD PAINTING OF NEW STEEL, SYSTEM IZEU, : All painted areas of the existing structure that are damaged by removing existing signs, conduits, and areas disturbed by new construction (welding, erecting forms, etc.) shall be given one coat of primer(708.17) & one finish coat(708.18). Cost of the above shall be included in the price bid for SPECIAL, Field Painting of New Steel, System IZEU (BRIDGE No MOT-70-1130 L/R)

The color of the finish coat of paint for the new steel shall be green.

WOOLPERT CONSULTANTS
409 East Monument Avenue
Dayton, Ohio 45402-1226

3 /15

GENERAL NOTES

BRIDGE NO. MOT-70-1130 L/R
OVER S.R. 48

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.S.	R.M.J.		R.G.S.	S.D.Z.	2/20/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

183A 219

MONTGOMERY COUNTY
MOT-70-6.49/11.02

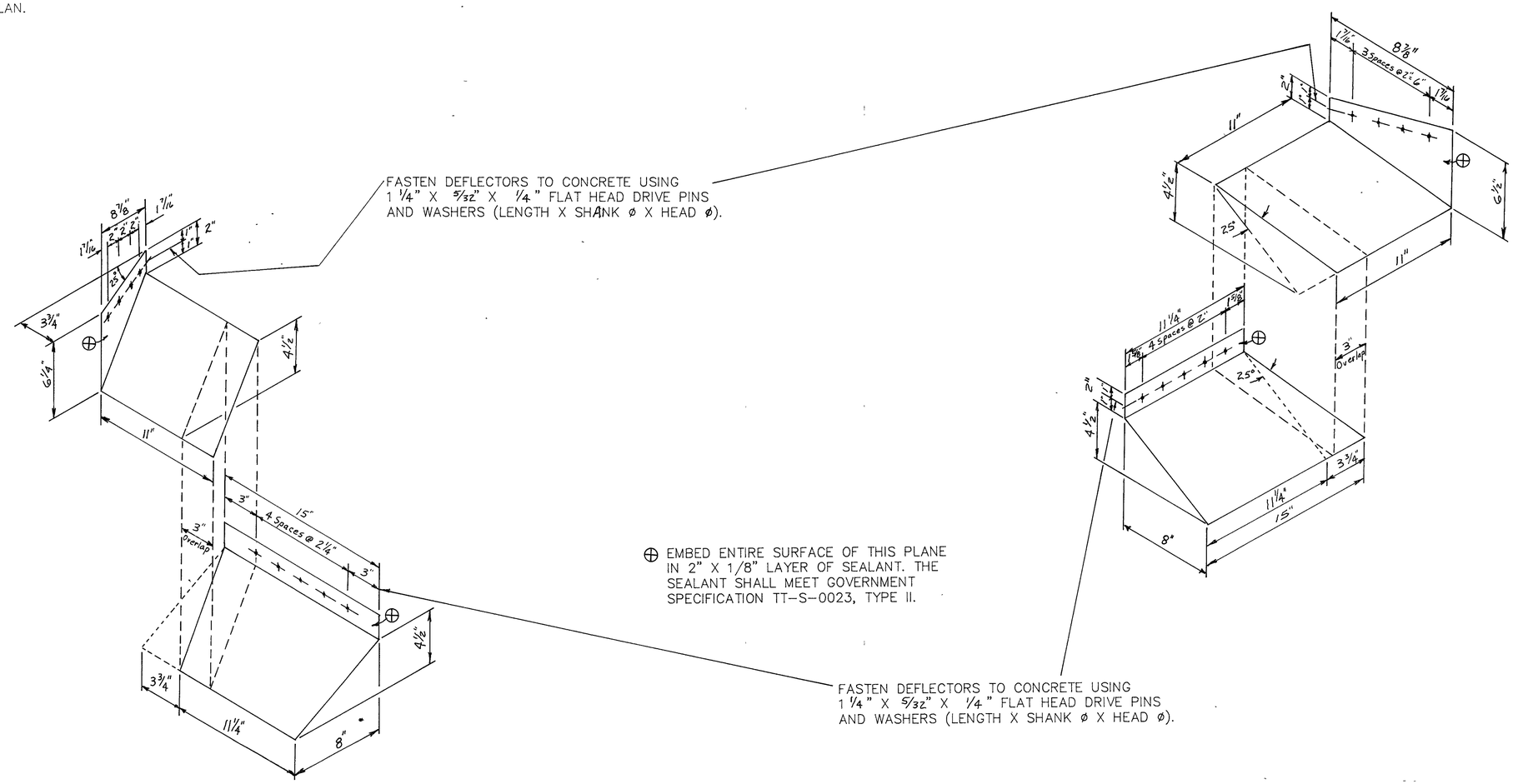
DRIP DEFLECTORS

DRIP DEFLECTORS SHALL BE PLACED ON THE OUTSIDE (WIDENED) SIDE OF BRIDGE NO. MOT-70-1130 L & R

DEFLECTORS SHALL BE MADE FROM .105" THICK STEEL MEETING THE REQUIREMENTS OF ASTM. A568 AND SHALL BE GALVANIZED IN ACCORDANCE WITH 711.02

FOR ADDITIONAL DETAILS SEE BRIDGE STANDARD DRAWING EXJ-3-82 SHT 4 OF 4

DEFLECTORS SHALL BE INCLUDED WITH ITEM 516 - STRUCTURAL STEEL FOR EXPANSION JOINT REHABILITATION, AS PER PLAN.



STATE OF OHIO DEPARTMENT OF TRANSPORTATION	3A / 15

DRIP DEFLECTOR DETAILS

BRIDGE NO. MOT-70-1130 R/L
(OVER S.R. 48)

MONTGOMERY COUNTY

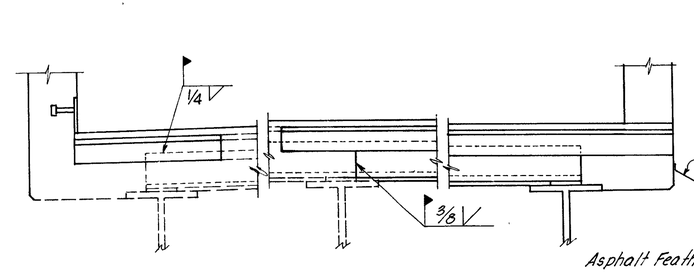
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BG3 19910103

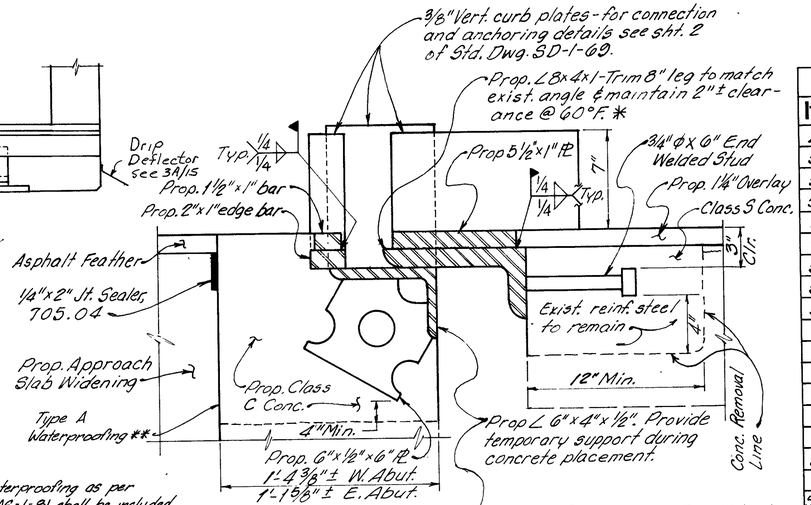
FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

184
219

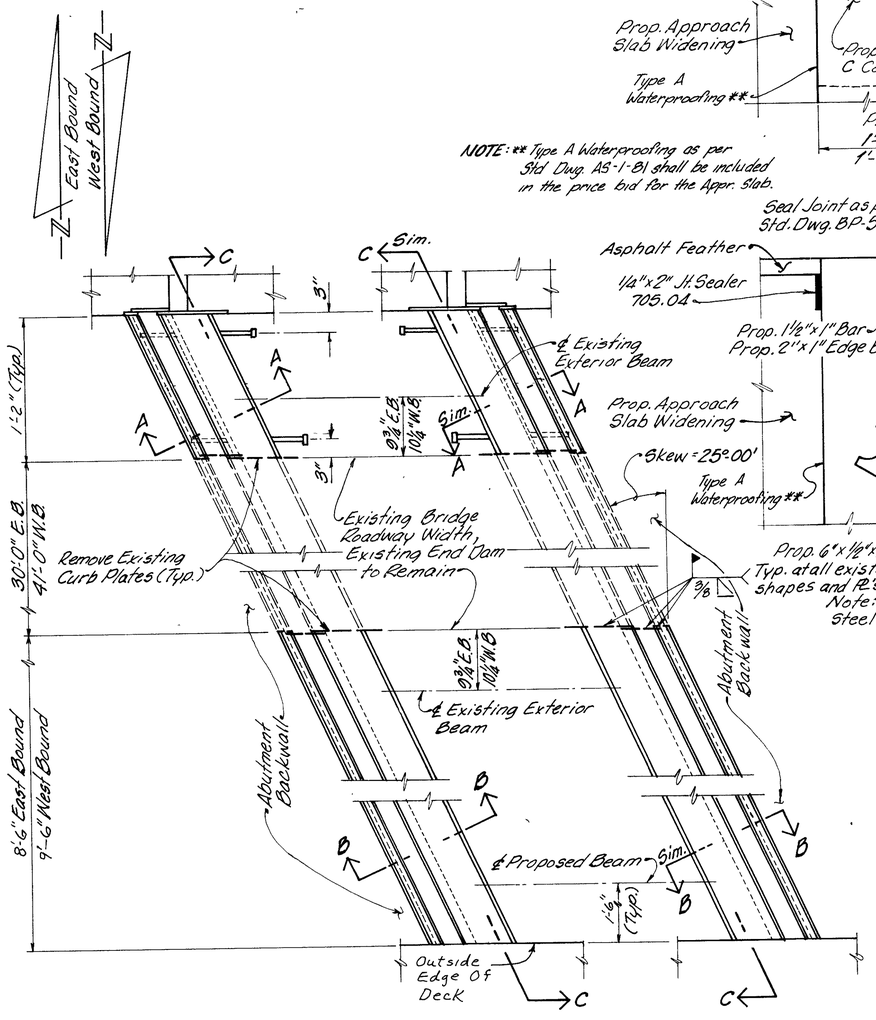


SECTION C-C

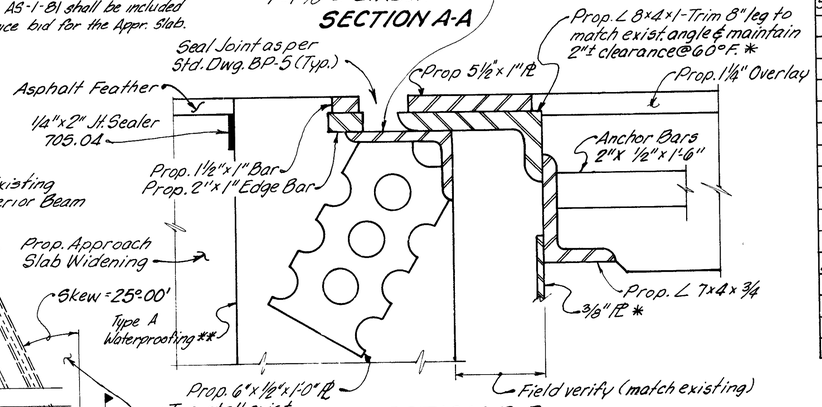


SECTION A-A

NOTE: ** Type A Waterproofing as per Std. Dwg. AS-1-81 shall be included in the price bid for the Appr. Slab.

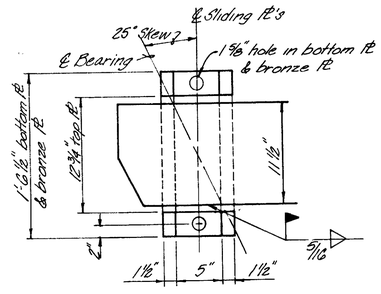


PLAN
END DAM

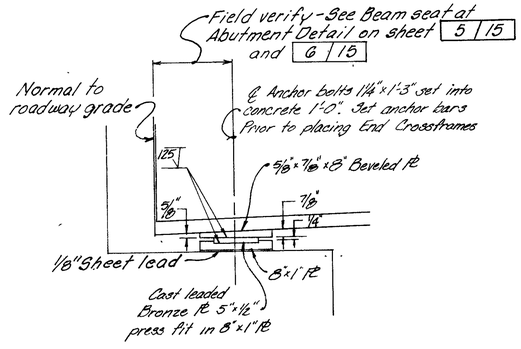


SECTION B-B

Note: * Cost to be included in Item 516, Structural Steel for Expansion Joint.



PLAN



ELEVATION

SLIDING PL BEARING DETAIL

NOTES:
1. For details not shown see Std. Dwg. SD-1-69.
2. Payment for End Dam shall be by Item 516, Structural Steel for Expansion Joint Rehabilitation, as per plan.

ESTIMATED QUANTITIES

Item	Total	Unit	DESCRIPTION	Super	Abut	Pier	Gen
202	Lump		Portions of Structure Removed				L.S.
503	116	C.Y.	Unclassified Excavation, As Per Plan		116		
503	65	C.Y.	Unclassified Excavation			65	
505	Lump		Pile Driving Equipment Mobilization			L.S.	
507	504	L.F.	Steel Piles HP 12x53			504	
507	24	Each	Steel Point, As Per Plan			24	
509	5555	Lb.	Reinforcing Steel, Grade 60		1577	3378	600
510	76	Each	Dowel Holes		76		
511	797	C.Y.	Class S Concrete, Superstructure	797			
511	42.8	C.Y.	Class S Concrete, Superstructure, Barrier Parapet Railing	40.5	2.3		
511	43.1	C.Y.	Class C Concrete, Footing		18.2	24.9	
511	20.3	C.Y.	Class C Concrete, Pier Above Footings			20.3	
511	39.1	C.Y.	Class C Concrete, Abutment Above Footing		39.1		
513	55,000	Lb.	Structural Steel, ASTM A36 (A1SC Category I) for Rehabilitation As Per Plan	55,000			
Special	Lump		Field Painting of New Steel, System IZEU (BRIDGE No. MOT-70-1130 L/R) (SEE PROPOSAL NOTE)				
516	5550	Lb.	Structural Steel for Expansion Joint Rehabilitation, As Per Plan	5550			
516	1520	Lb.	Bearing Devices, Modified As Per Plan	1520			
516	46	L.F.	Joint Sealer, 705.04, AS PER PLAN				46
517	365	L.F.	Railing Faced, As Per Plan	365			
518	41	C.Y.	Porous Backfill		41		
518	13	Each	Scuppers, Including Supports, As Per Plan	13			
518	70	L.F.	6" Perforated Helical C.S.P., 707.01		70		
518	47	L.F.	6" Non-perforated Helical C.S.P., Including Specials, 707.01		47		
509	44871	Lb.	Epoxy Coated Reinforcing Steel, Grade 60	34685	1673	8513	
845	372	S.Y.	Latex Modified Concrete Overlay, 1¼", AS PER PLAN	372			
Special	802	S.Y.	Sealing of Concrete Surfaces, See Proposal Note	434	14	354	
Special	19	Each	Abandon Scupper	19			
518	14	Each	Scupper, VERTICAL EXTENSION, AS PER PLAN	14			

QUANTITIES CARRIED TO BRIDGE GENERAL SUMMARY

WOOLPERT CONSULTANTS
409 East Monument Avenue
Dayton, Ohio 45402 1226

4 15

ESTIMATED QUANTITIES AND MISCELLANEOUS DETAILS

BRIDGE NO. MOT-70-1130(L/R)
(OVER S.R. 48)

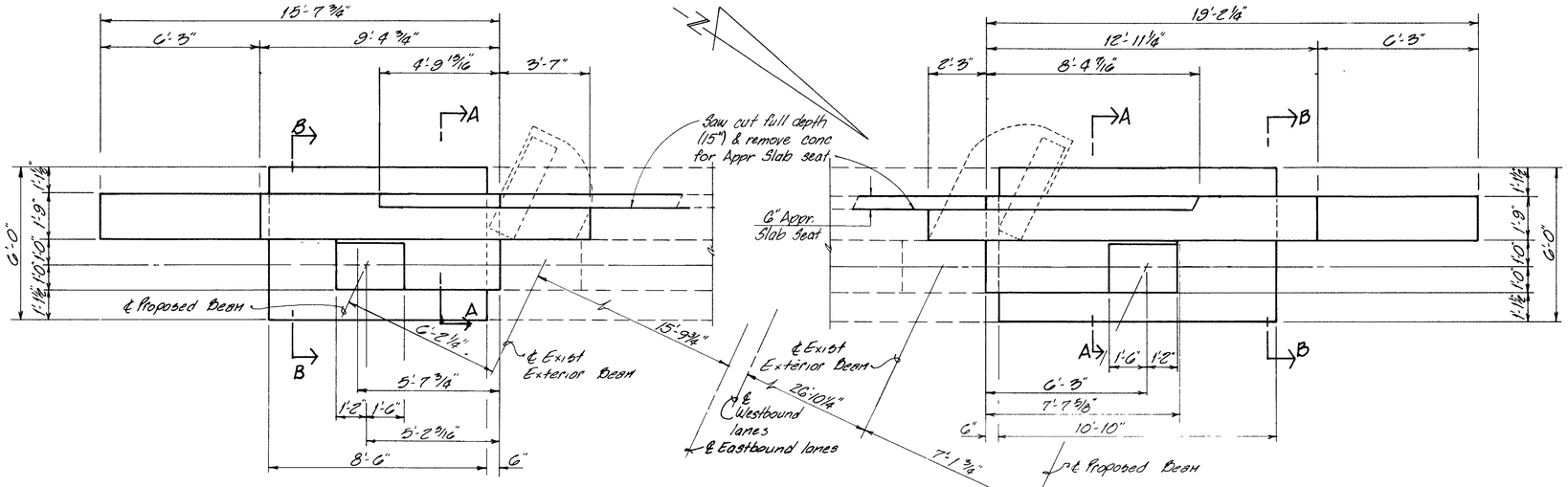
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH		R.G.S.	D.S.Z.	2/29/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

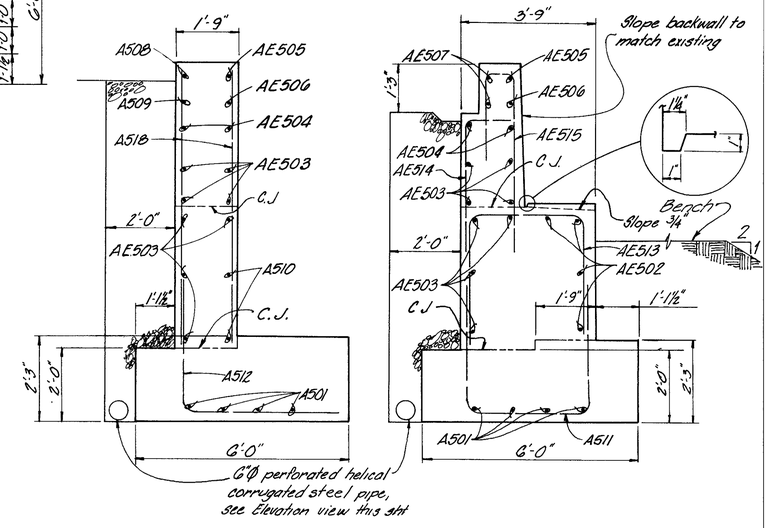
185 / 219

MOT-70-6.53 / 11.02



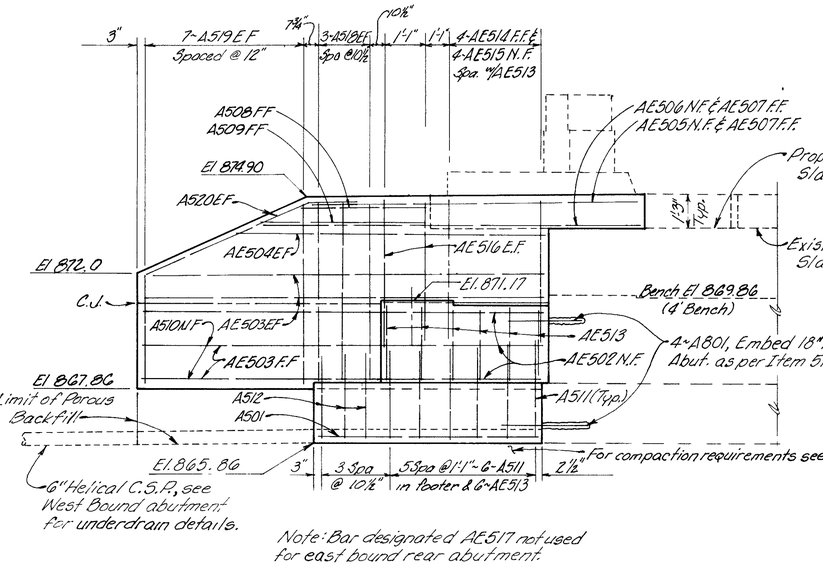
PLAN - EASTBOUND

PLAN - WESTBOUND

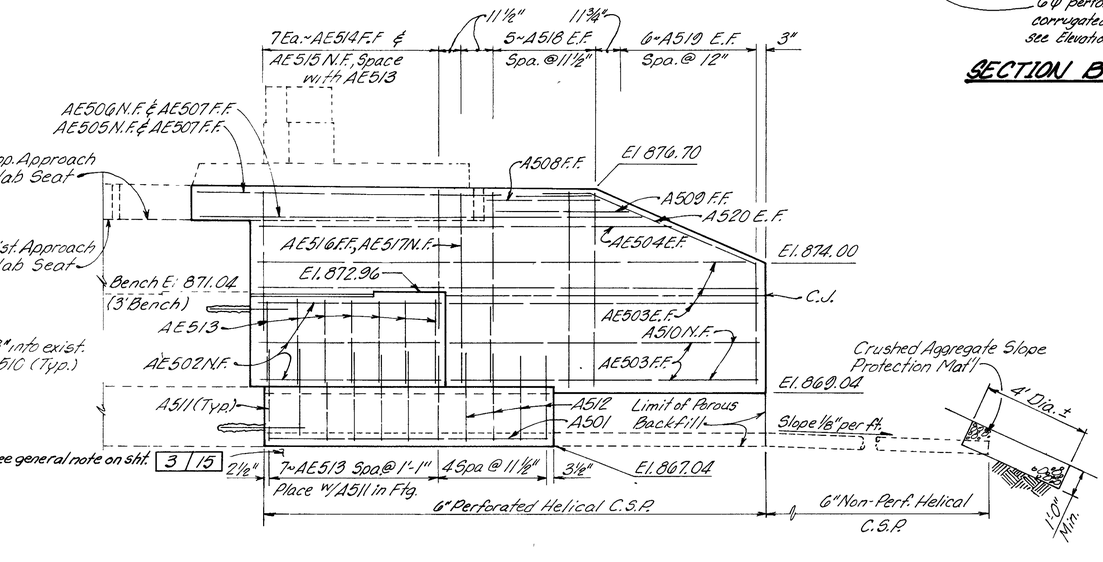


SECTION B-B

SECTION A-A



ELEVATION



ELEVATION

NOTES

- Saw cut and concrete removals shall be included in the price bid for Item 202, Portions of Existing Structures Removed.
- E.F. denotes Each Face.
- F.F. denotes Far Face
- N.F. denotes Near Face
- For Reinforcing Steel List see Sht. 13 / 15
- C.J. denotes Construction Joint.

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5 / 15

REAR ABUTMENT WIDENING

BRIDGE NO. MOT-70-1130 (L/R)
(OVER S.R. 48)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM.	EACH	JOE	R.G.S.	D.B.Z.	2/20/02	

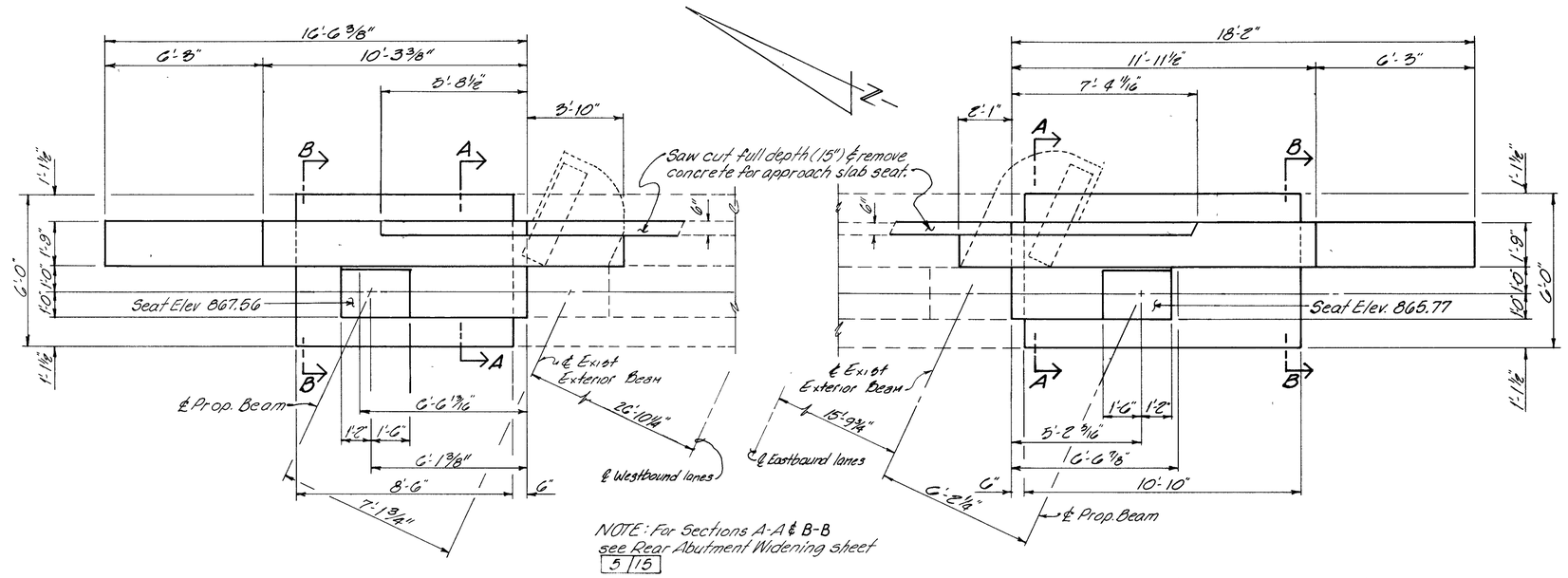
89344

MEDIA RESOURCES CORP

FHWA REGION	STATE	PROJECT	
5	OHIO		

186 / 219

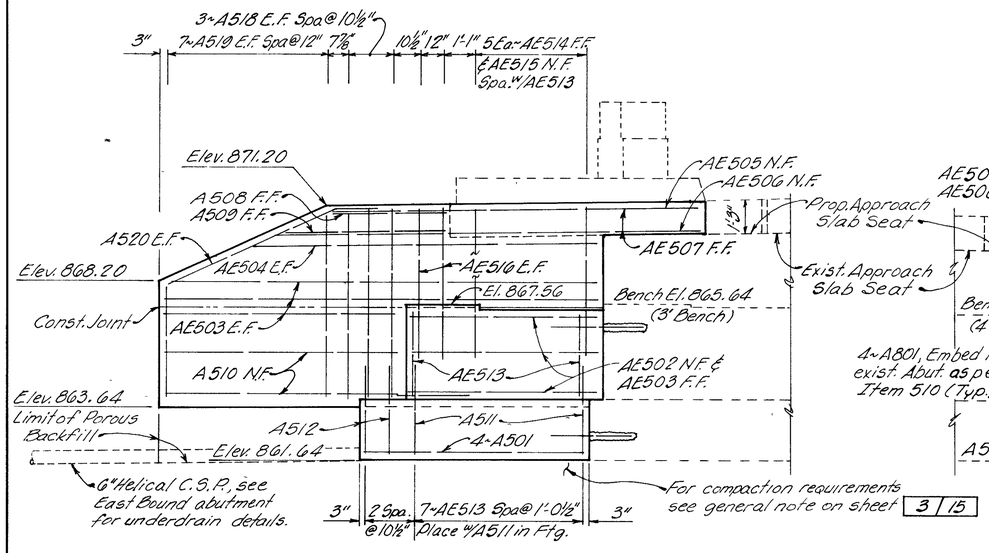
MOT-70-6.53/11.02



NOTE: For Sections A-A & B-B see Rear Abutment Widening sheet 5 / 15

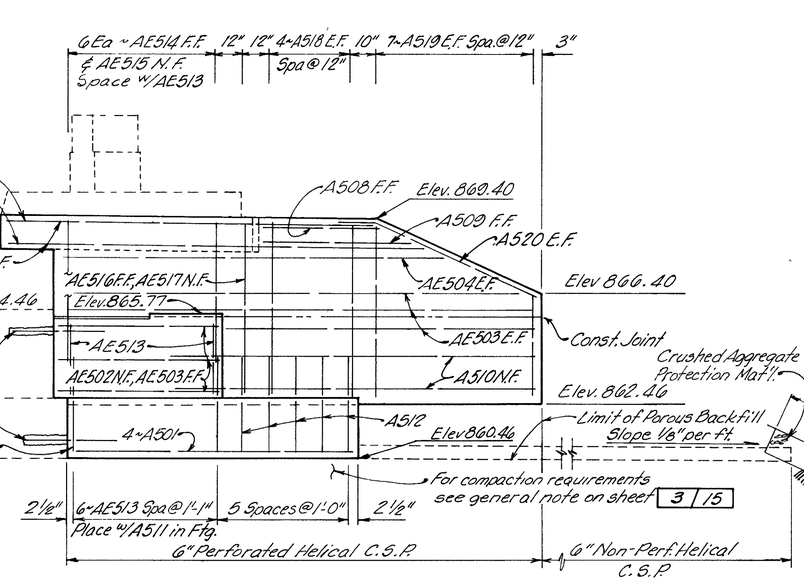
PLAN (WEST BOUND)

PLAN (EAST BOUND)



Note: Bar designated AE517 not used for west bound forward abutment.

ELEVATION



ELEVATION

NOTES

- Saw cut and concrete removals shall be included in the price bid for Item 202, Portions of Existing Structures Removed.
- For Reinforcing Steel List see Sht. 13 / 15
- N.F. denotes Near Face.
- E.F. denotes Each Face.
- F.F. denotes Far Face.

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6 / 15

FORWARD ABUTMENT WIDENING

BRIDGE NO. MOT-70-1130 (L/R)
(OVER S.R. 48)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.H.	RACH	JOE	R.G.S.	S.B.Z.	2/20/82	

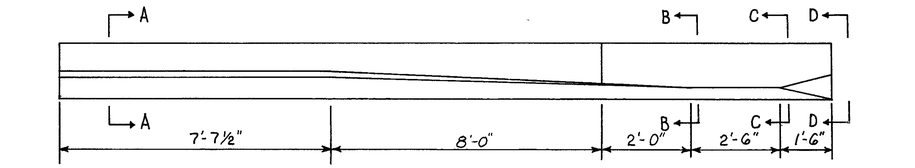
FHWA REGION	STATE	PROJECT	
5	OHIO		

187/219

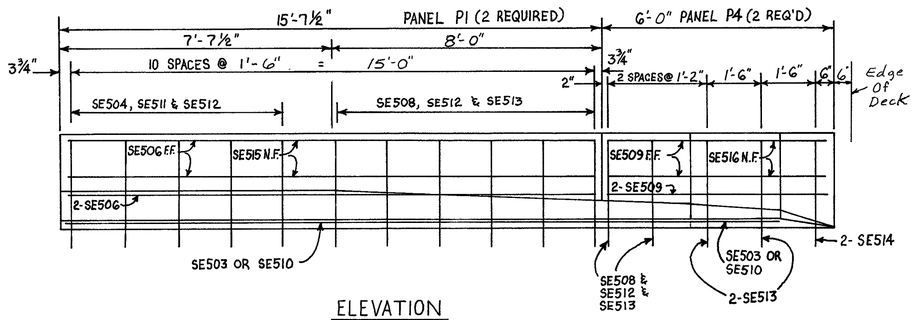
MONTGOMERY COUNTY
MOT-70-06.49/11.02

For Section A-A See Sht. 146
N.F = Near Face
F.F = Far Face

Type "AA" Bridge Terminal Assembly -
MOT-70-1130R : Rt Rear & Lt Rear
MOT-70-1130L : Rt Forward & Lt. Forward
Type "AT" Bridge Terminal Assembly -
MOT-70-1130L : Lt. Rear

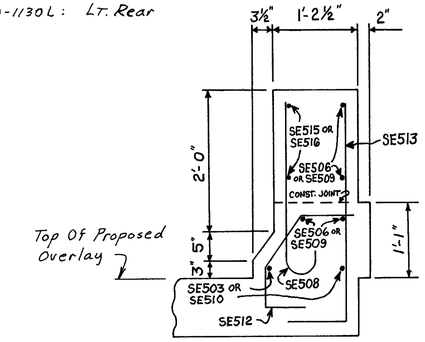


PLAN

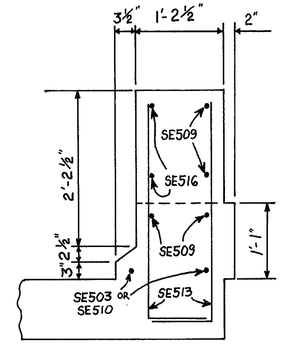


ELEVATION

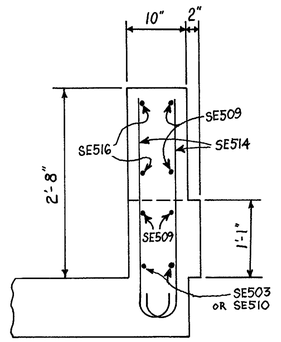
Panel P1 And P4 Detail



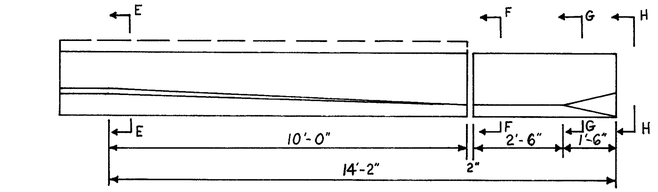
SECTION B-B



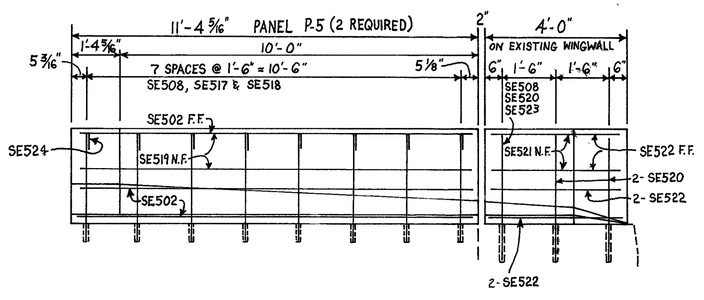
SECTION C-C



SECTION D-D

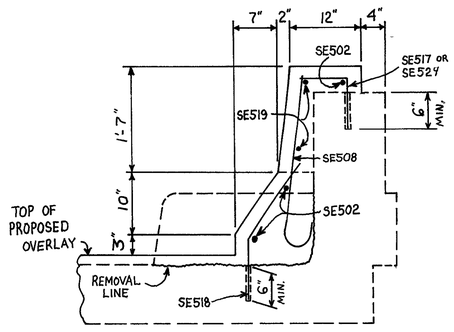


PLAN

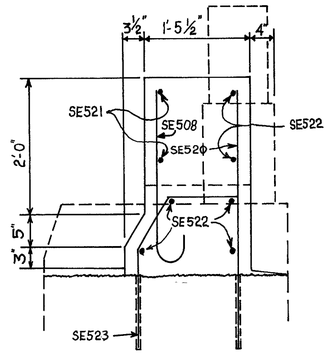


ELEVATION

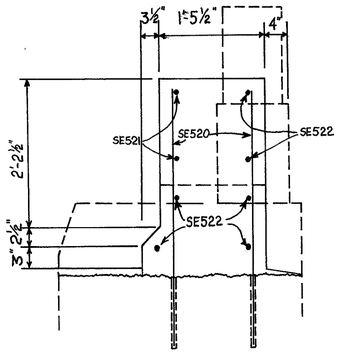
Panel P5 And Existing Wingwall Detail



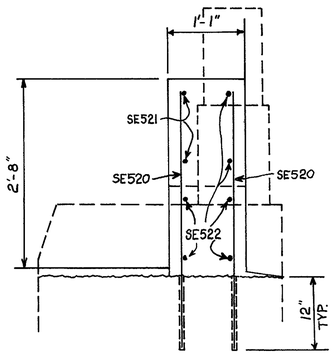
SECTION E-E



SECTION F-F



SECTION G-G



SECTION H-H

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

7/15

DETAILS
BRIDGE No. MOT-70-1130 L/R

MONTGOMERY COUNTY

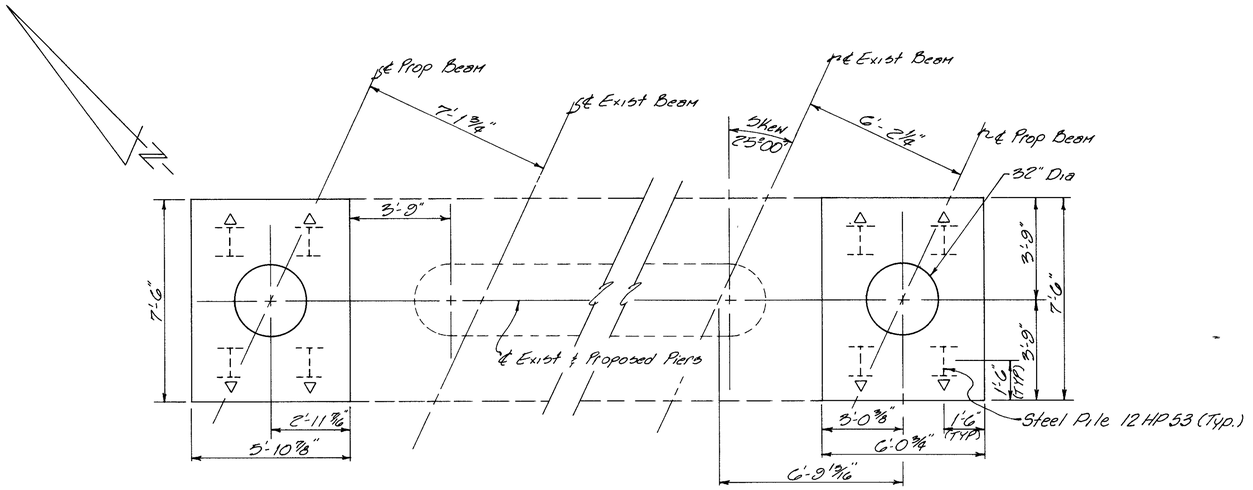
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BS1 19901130

FHWA REGION	STATE	PROJECT	
5	OHIO		

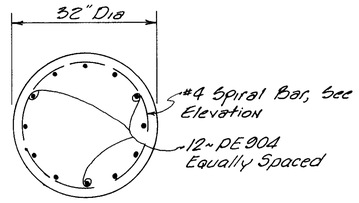
MOT-70-6.53/11.02

188/219



WESTBOUND BRIDGE PLAN EASTBOUND BRIDGE

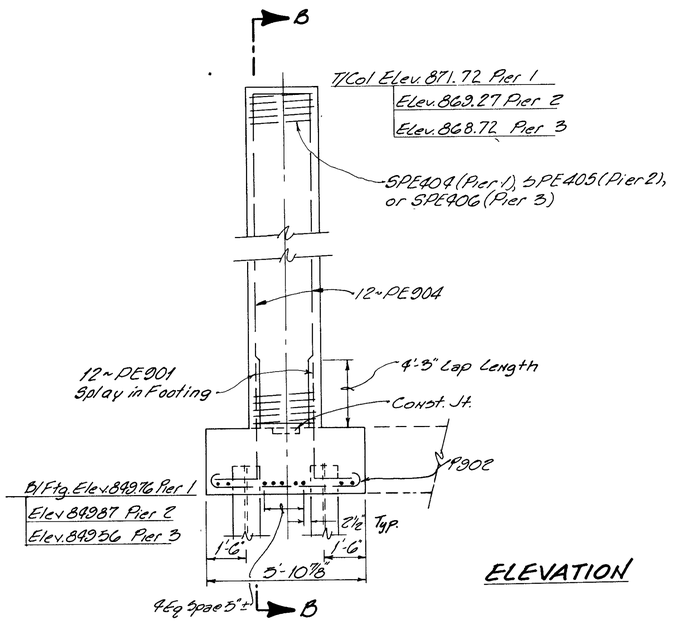
▽ Represents Direction Of Pile Batter



SECTION A-A

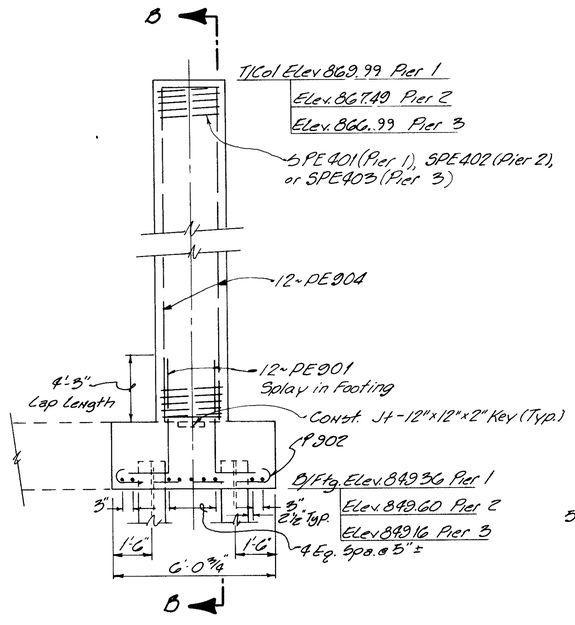
NOTES: - See Roadway Plans for removal & replacement of concrete barrier and other roadway items req'd. for construction of the piers.

- For Reinf. steel list see sht. 14/15.

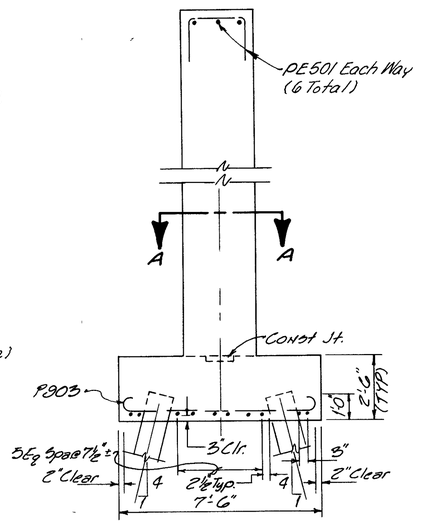


ELEVATION

WESTBOUND BRIDGE



EASTBOUND BRIDGE



SECTION B-B

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

8/15

PIER DETAILS
I-70 OVER S.R. 48

BRIDGE NO. MOT-70-1130 L/R
(OVER S.R. 48)

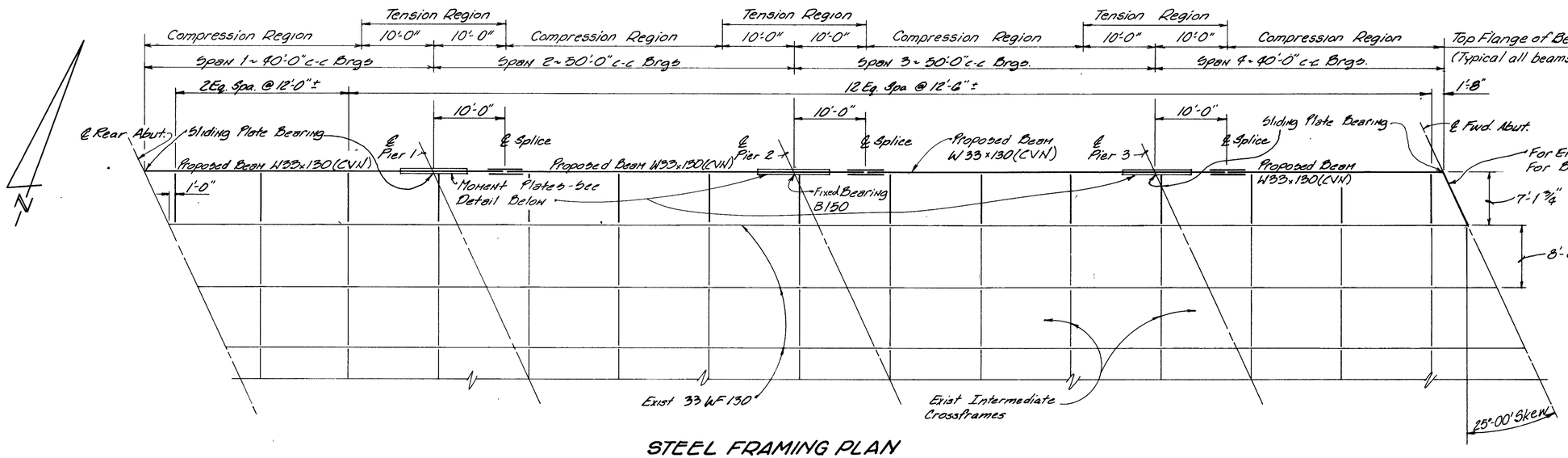
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	L.A.P.	JOE	R.G.S.	S.B.Z.	3/22/82	

FHWA REGION	STATE	PROJECT	
5	OHIO		

189 / 219

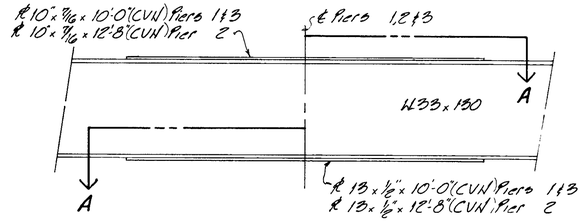
MOT-70-6.53/11.02



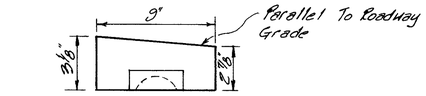
STEEL FRAMING PLAN

NOTES:

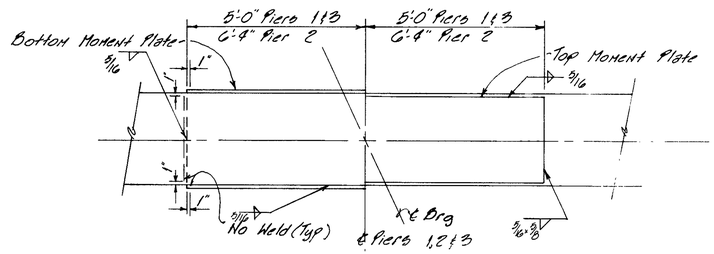
- For B150 Bolster Bearings See Std. Dwg. RB-1-98 And Load Plate Modification This Sheet.
- For Sliding Plate Details See Sheet 4 / 15
- For Intermediate Crossframes See Sheet 11 / 15
- For End Dam Details See Sheet 4 / 15
- For Beam Splice Details See Sheet 10 / 15
- Payment for Structural Steel shall be by Item 513 Structural Steel, ASTM A36 (Category I) for rehabilitation, as per plan.
- Welded Attachment of supports for concrete deck finishing machine may be made to areas of the stringer flanges designated "Compression." Attachments shall not be made to areas designated "Tension." Fillet welds to compression flanges shall not be closer than 1" from edge of flange, be not more than 2" long, and be not smaller than the minimum size required by AASHTO/A.W.S.



MOMENT PLATE DETAILS



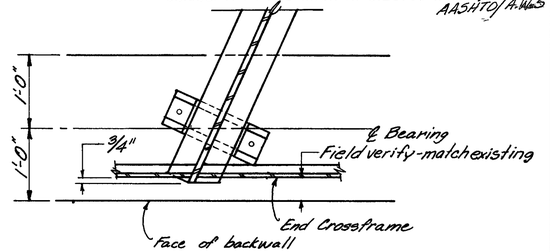
ELEVATION
LOAD PLATE MODIFICATIONS
(For Details Not Shown-See Std Drg. RB-1-98)



SECTION A-A

DEFLECTION & CAMBER		
LOCATION	SPAN 1 & 4	SPAN 2 & 3
DEFLECTION DUE TO WEIGHT STEEL	0	0
DEFLECTION DUE TO REMAINING DEAD LOAD	1/8"	3/16"
CAMBER REQ'D FOR VERTICAL CURVE	—	—
SUM OF DEFLECTION & CAMBER	1/8"	3/16"
REQ'D SHOP CAMBER	0*	0*

* NOTE : BEAMS SHALL BE FABRICATED SO THAT ANY CURVED BEAM WILL BE PLACED WITH THE CONVEX FLANGE UP.



BEAM SEAT @ ABUTMENT

Note: Where A Shape Or Plate Is Designated (CVN), The Material Shall Meet Specified Minimum Notch Toughness Requirements As Specified In 711.01 Of The Construction & Material Specification.

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409 E. Monument / Dayton, Ohio 45402

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STEEL FRAMING PLAN & DETAILS

BRIDGE NO. MOT-70-1130L (OVER S.R. 48)

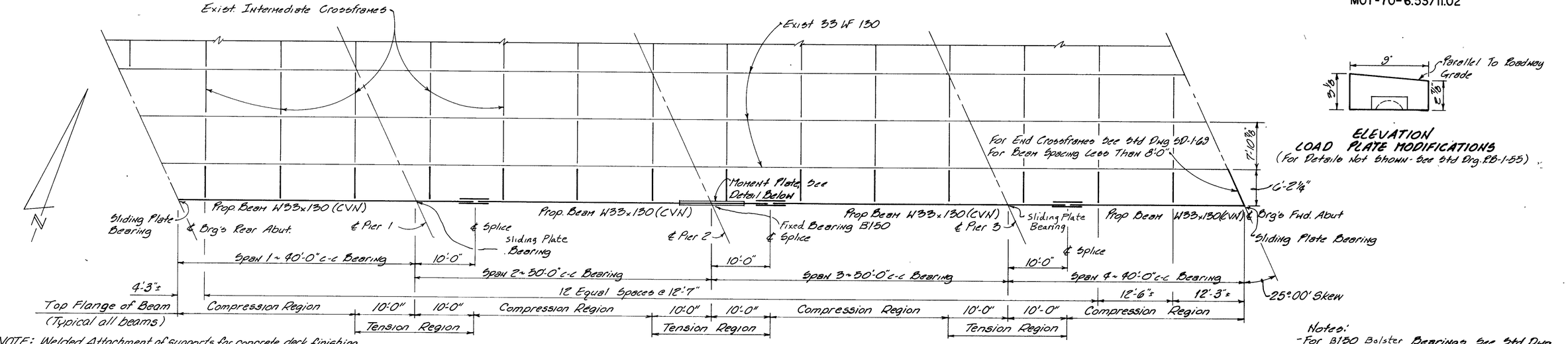
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DEM	RACH	RMJ	R.G.S.	J.D.L.	3/20/98	

FHWA REGION	STATE	PROJECT	
5	OHIO		

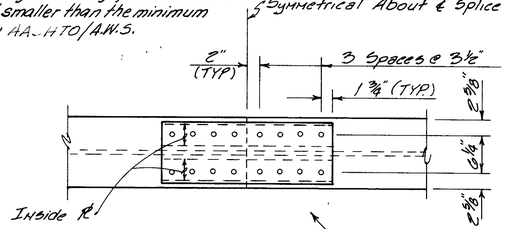
190/219

MOT-70-6.53/11.02

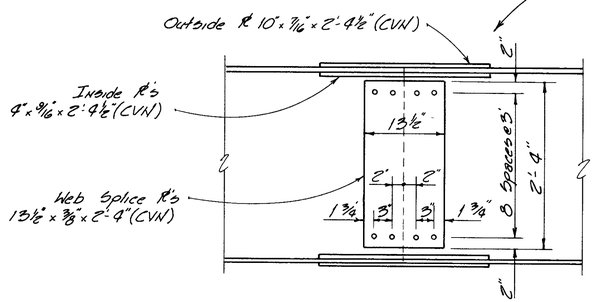


STEEL FRAMING PLAN

NOTE: Welded Attachment of supports for concrete deck finishing machine may be made to areas of the stringer flanges designated "Compression." Attachments shall not be made to areas designated "Tension." Fillet welds to compression flanges shall be not closer than 1" from the edge of flange, be not more than 2" long, and be not smaller than the minimum size required by AASHTO/A.W.S.



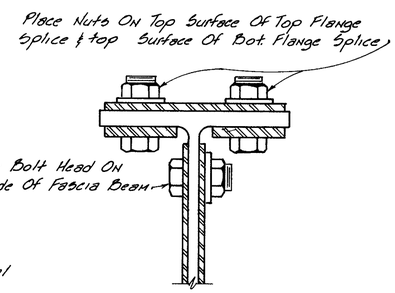
PLAN



ELEVATION

BEAM SPLICE DETAILS

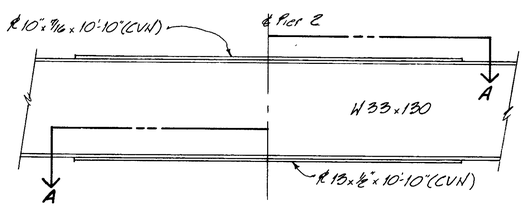
For Notes See Std Dwg SD-1-69



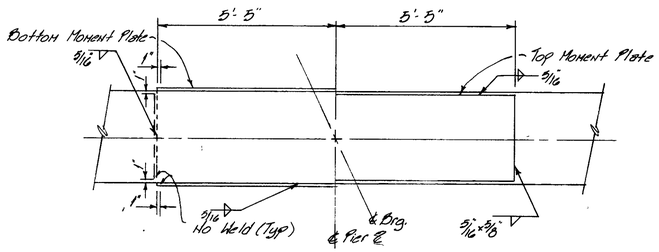
PARTIAL SECTION ℄ ℄ OF BEAM SPLICE

DEFLECTION & CAMBER		
LOCATION	SPAN 1, 4	SPAN 2,3
DEFLECTION DUE TO WEIGHT STEEL	0	0
DEFLECTION DUE TO REMAINING DEAD LOAD	1/8"	3/16"
CAMBER REQ'D FOR VERTICAL CURVE	–	–
SUM OF DEFLECTION & CAMBER	1/8"	3/16"
REQ'D SHOP CAMBER	0*	0*

* NOTE: BEAMS SHALL BE FABRICATED SO THAT ANY CURVED BEAM WILL BE PLACED WITH THE CONVEX FLANGE UP.



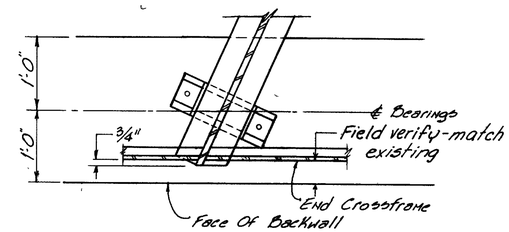
MOMENT PLATE DETAIL



SECTION A-A

Notes:
- For B150 Bolster Bearings See Std. Dwg. RB-1-55 And Load Plate Modifications This Sheet.
- For Sliding Plate Details See Sht. 4/15
- For Intermediate Crossframes See Sht. 12/15
- For End Dam Details See Sht. 4/15
- Payment for Structural Steel shall be by Item 513 Structural Steel, ASTM A36 (A15C Category I) for rehabilitation, as per plan.

ELEVATION
LOAD PLATE MODIFICATIONS
(For Details Not Shown See Std Drg. RB-1-55)



BEAM SEAT @ ABUTMENT

Note: Where A Shape Or Plate Is Designated (CVN), The Material Shall Meet Specified Minimum Notch Toughness Requirements As Specified In 711.01 Of The Construction & Material Specifications.

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

15/15

STEEL FRAMING PLAN & DETAILS

BRIDGE NO. MOT-70-1130 (R)
(OVER S.R. 48)

MONTGOMERY COUNTY

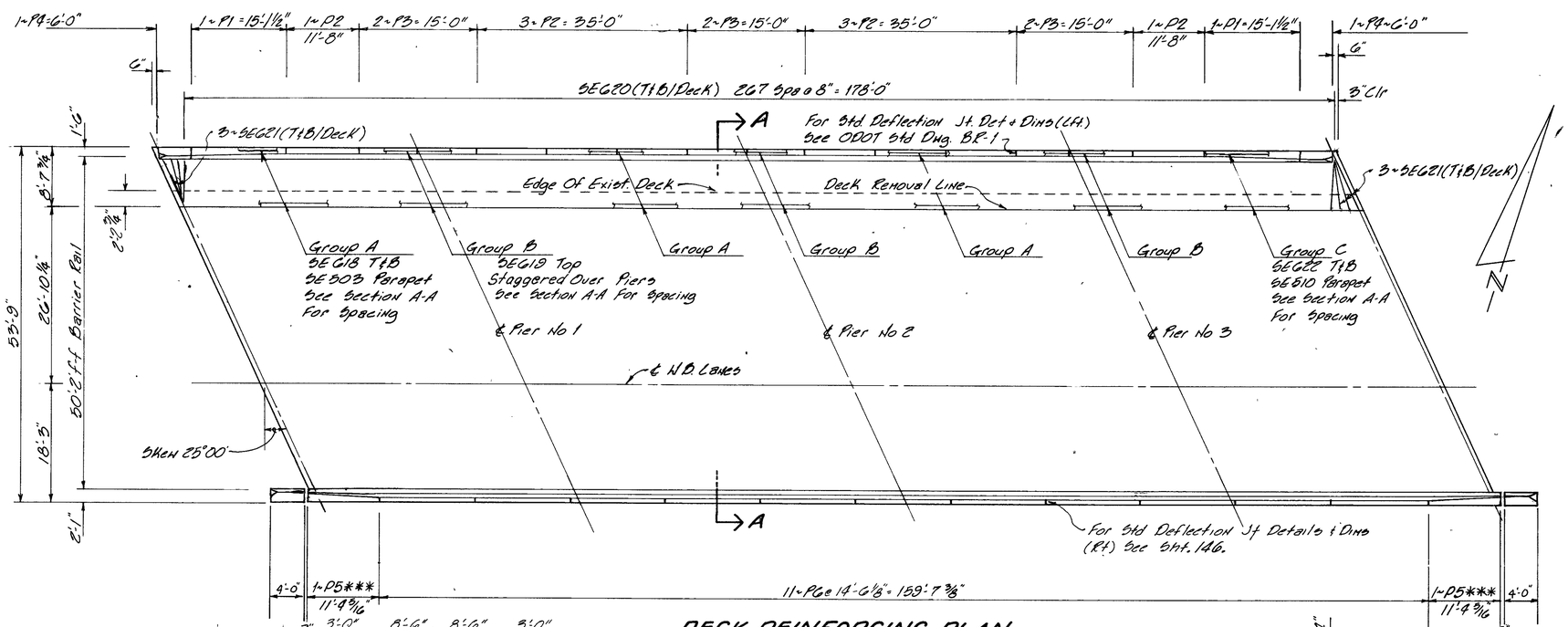
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH	JOE	R.C.S.	B.B.Z.	2/20/98	

88844
MEDIA RESOURCES CORP

FHWA REGION	STATE	PROJECT	
5	OHIO		

191 / 219

MOT-70-6.53/11.02

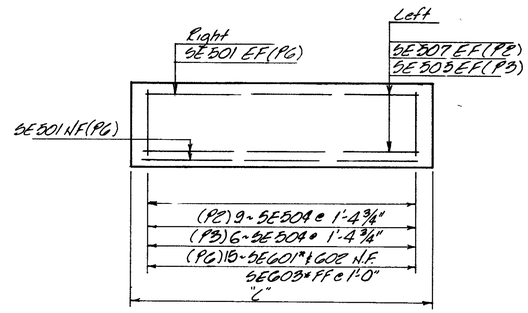


DECK REINFORCING PLAN

PANELS

Mark	"L"	No. Req'd
P1	15'-1½"	2
P2	11'-8"	8
P3	7'-6"	6
P4	6'-6"	2
P5***	11'-4 3/16"	2
P6	14'-6⅛"	11

*** Field verify - remove & replace (shorten) end panel as req'd to construct parapet curb plates, see Sht. 4/15. Cost to be included in Item 517-Railing Faced, as per plan.



For Panel P1, P4 And P5 Details See Sht. 7/15

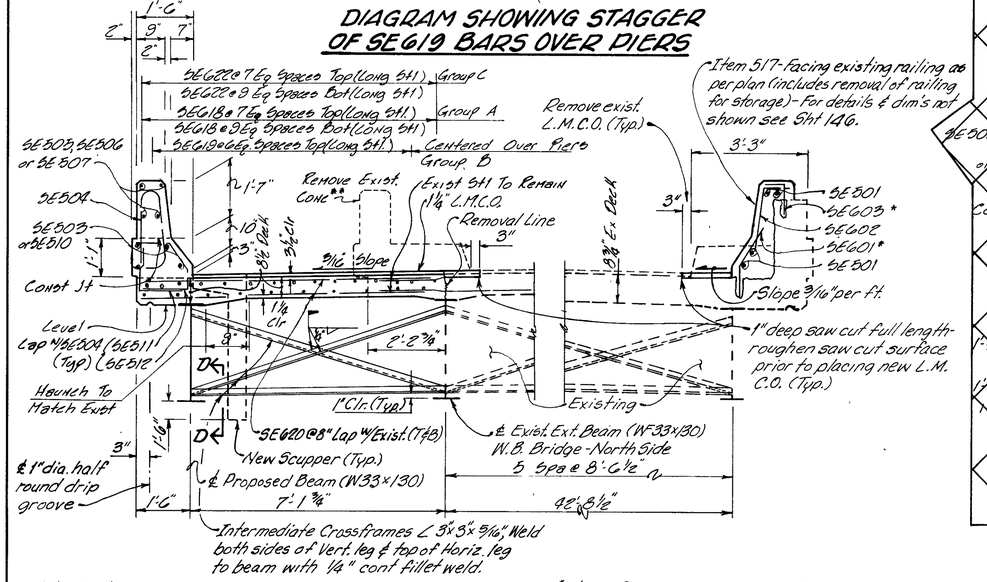


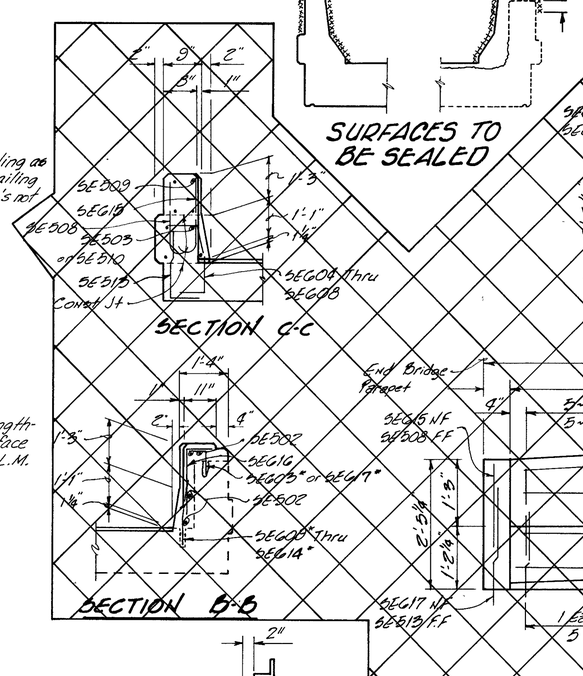
DIAGRAM SHOWING STAGGER OF 5EG19 BARS OVER PIERS

Note: Cost of saw cut and removal of existing concrete to be included in Item 202-Portions of Structures removed.

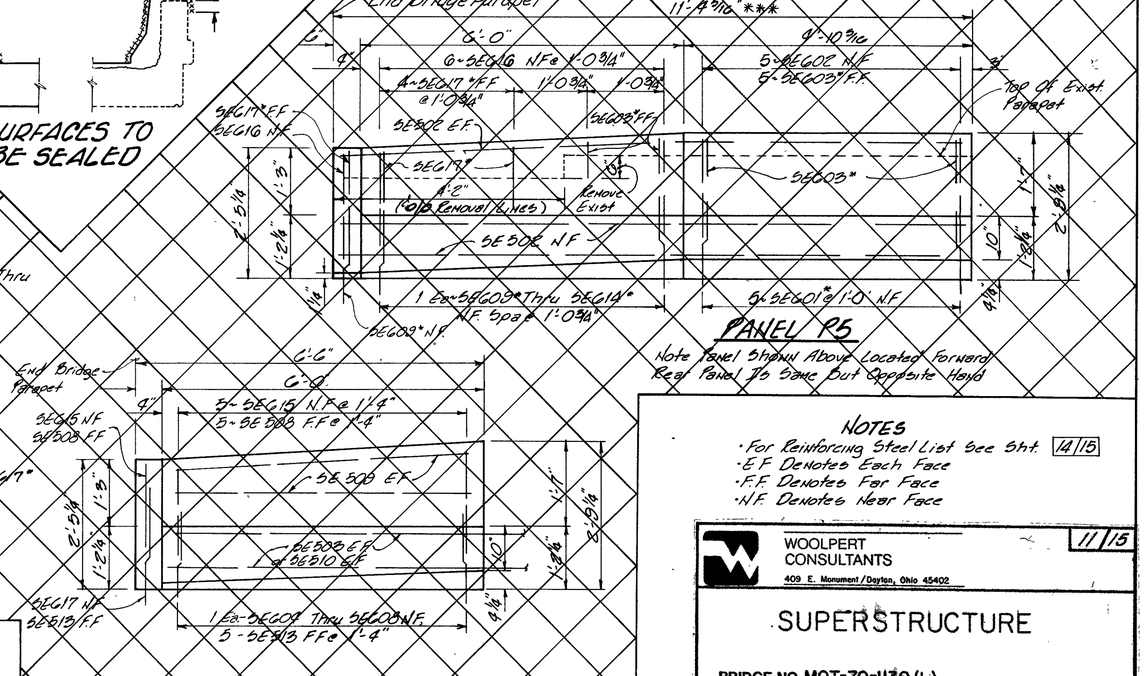
SECTION A-A

*Note: Dowel Bars 6" Into Exist Conc

**Note: Remove Existing Railing for storage - included in Item 202 Portions of Structures Removed for payment.



SURFACES TO BE SEALED



NOTES

- For Reinforcing Steel List See Sht. 14/15
- E.F. Denotes Each Face
- F.F. Denotes For Face
- N.F. Denotes Near Face

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

11/15

SUPERSTRUCTURE

BRIDGE NO. MOT-70-11.30 (L)
(OVER S.R. 48)

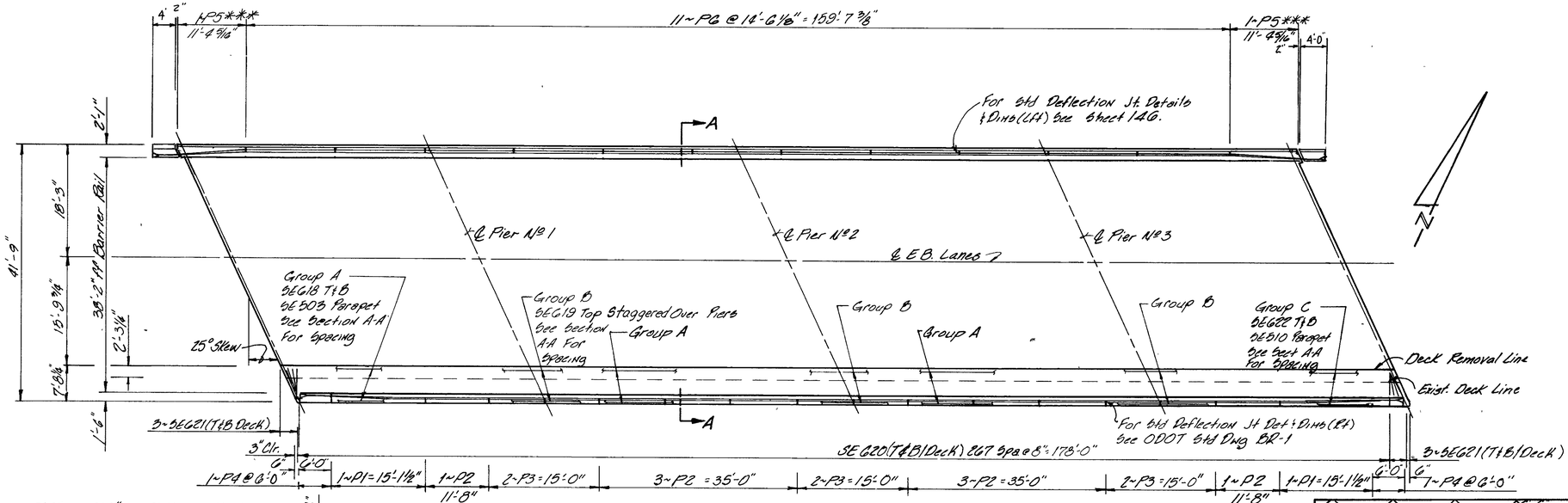
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	JOE		R.G.S.	S.D.K.	3/20/98	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

192
219



DECK REINFORCING PLAN

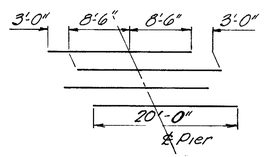
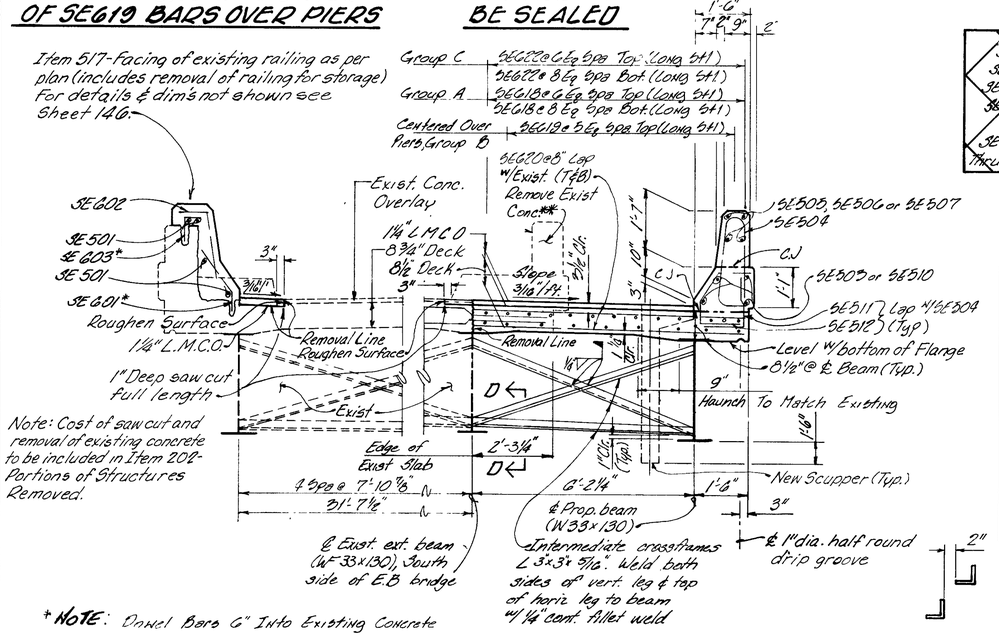


DIAGRAM SHOWING STAGGER OF SEG19 BARS OVER PIERS

SURFACES TO BE SEALED

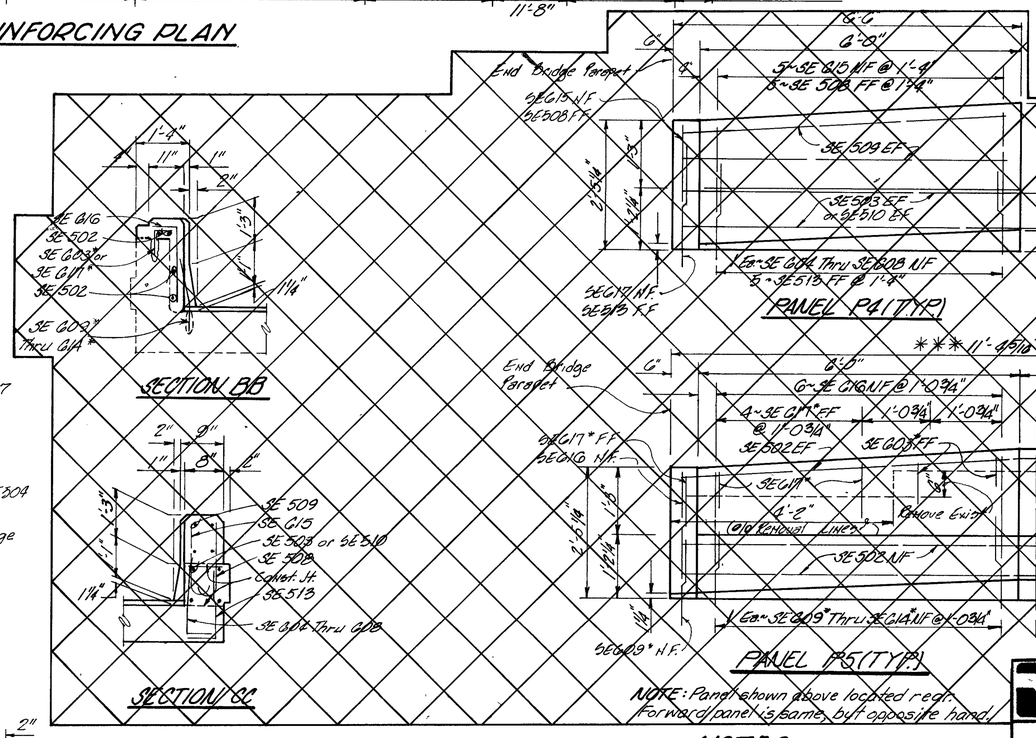


* NOTE: Dowel Bars 6" Into Existing Concrete

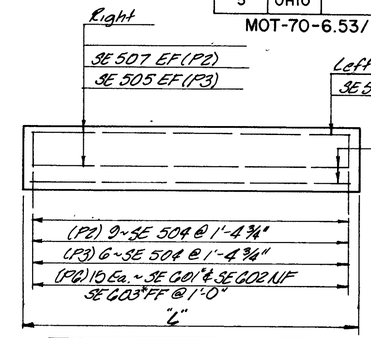
** NOTE: Remove Existing Railing For Storage, included in Item 202- Portions of Structures Removed for payment.

SECTION A-A

SECTION D-D



MARK	"L"	No. REQ'D.
P1	15'-1 1/2"	2
P2	11'-8"	8
P3	7'-6"	6
P4	6'-6"	2
P5***	11'-4 9/16"	2
P6	14'-6 1/16"	11



FOR PANEL P1, P4 AND P5 DETAILS SEE SHT. 7/15

PANELS

*** Field verify - remove & replace (shorten) end panel as reqd to construct parapet curb plates, see Sht. 4/15. Cost to be included in Item 517- Railing Faced as per plan.

NOTES

- For REINFORCING STEEL LIST see Sht. 14/15
- E.F. denotes Each Face.
- N.F. denotes Near Face.
- F.F. denotes Far Face.

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

12/15

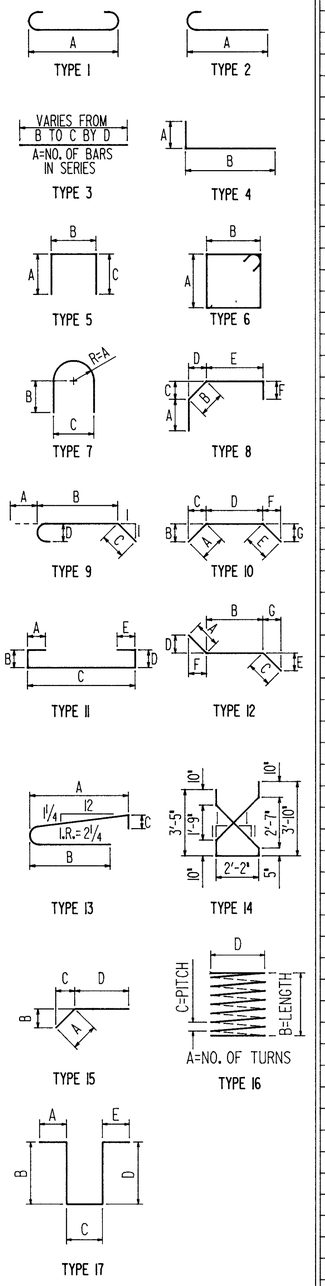
SUPERSTRUCTURE

BRIDGE NO. MOT-70-1130R (OVER S.R. 48)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.	R.M.J.	R.G.S.			

BAR TYPE DIAGRAM



REAR ABUTMENT (MOT - 70 - 1130 R) ALL REINFORCING STEEL BAR MARKS IN THE REAR ABUTMENT SHALL HAVE THE SUFFIX "R".

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A501	4	8'-2"	34	STR.							
AE502	4	6'-0"	25	STR.							
AE503	8	15'-3"	127	STR.							
AE504	2	12'-0"	25	STR.							
AE505	1	12'-9"	13	STR.							
AE506	1	14'-6"	15	STR.							
AE507	2	10'-6"	22	STR.							
A508	1	4'-2"	4	STR.							
A509	1	6'-2"	6	STR.							
A510	2	11'-4"	24	STR.							
A511	6	11'-2"	70	5	4'-0"	3'-5"	4'-0"				
A512	3	8'-2"	26	4	3'-10"	4'-6"					
AE513	6	8'-4"	52	5	2'-7"	3'-5"	2'-7"				
AE514	4	5'-9"	24	4	1'-5"	4'-6"					
AE515	4	8'-10"	37	5	2'-9"	11"	5'-5"				
AE516	4	5'-5"	23	STR.							
A518	6	6'-7"	41	STR.							
A519	14	3'-9" TO 6'-7"	75	3	7	3'-9"	6'-7"	5 5/8"			
A520	2	8'-8"	18	15	2'-0"	10"	1'-9 3/4"	6'-9"			
~~AE521~~	~~3~~	~~3'-10"~~	~~12~~	~~STR.~~							
~~AE522~~	~~12~~	~~1'-8"~~	~~20~~	~~STR.~~							
~~AE601~~	~~5~~	~~3'-2"~~	~~24~~	~~STR.~~							
~~AE602~~	~~3~~	~~4'-2"~~	~~19~~	~~STR.~~							
A801	8	3'-0"	64	STR.							

NOTE: BAR AE517 NOT USED

REAR ABUTMENT (MOT - 70 - 1130 L) ALL REINFORCING STEEL BAR MARKS IN THE REAR ABUTMENT SHALL HAVE THE SUFFIX "R"

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A501	4	10'-6"	44	STR.							
AE502	4	7'-1"	30	STR.							
AE503	8	18'-10"	157	STR.							
AE504	2	15'-8"	33	STR.							
AE505	1	14-10"	15	STR.							
AE506	1	16'-10"	18	STR.							
AE507	2	12'-7"	26	STR.							
A508	1	4'-2"	4	STR.							
A509	1	6'-2"	6	STR.							
A510	2	13'-7"	28	STR.							
A511	7	11'-2"	82	5	4'-0"	3'-5"	4'-0"				
A512	4	8'-2"	34	4	3'-10"	4'-6"					
AE513	7	9'-10"	72	5	3'-4"	3'-5"	3'-4"				
AE514	7	5'-9"	42	4	1'-5"	4'-6"					
AE515	7	8'-10"	64	5	2'-9"	11"	5'-5"				
AE516	1	7'-5"	8	4	1'-5"	6'-2"					
AE517	1	10'-10"	11	5	2'-9"	11"	7'-5"				
A518	10	7'-3"	76	STR.							
A519	12	4'-7" TO 6'-8"	71	3	6	4'-7"	6'-8"	5"			
A520	2	8'-8"	18	15	2'-0"	9 1/2"	1'-10"	6'-9"			
~~AE521~~	~~3~~	~~3'-10"~~	~~12~~	~~STR.~~							
~~AE522~~	~~12~~	~~1'-8"~~	~~20~~	~~STR.~~							
~~AE601~~	~~5~~	~~3'-2"~~	~~24~~	~~STR.~~							
~~AE602~~	~~3~~	~~4'-2"~~	~~19~~	~~STR.~~							
A801	8	3'-0"	64	STR.							

FORWARD ABUTMENT (MOT - 70 - 1130R) ALL REINFORCING STEEL BAR MARKS IN THE FORWARD ABUTMENT SHALL HAVE THE SUFFIX "F"

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A501	4	10'-6"	44	STR.							
AE502	4	6'-0"	25	STR.							
AE503	8	17'-10"	149	STR.							
AE504	2	14'-5"	30	STR.							
AE505	1	13-10"	14	STR.							
AE506	1	15'-6"	16	STR.							
AE507	2	11'-5"	24	STR.							
A508	1	4'-4"	5	STR.							
A509	1	6'-4"	7	STR.							
A510	2	13'-8"	29	STR.							
A511	6	11'-2"	70	5	4'-0"	3'-5"	4'-0"				
A512	5	8'-2"	43	4	3'-10"	4'-6"					
AE513	6	8'-6"	53	5	2'-8"	3'-5"	2'-8"				
AE514	6	5'-8"	35	4	1'-4"	4'-6"					
AE515	6	8'-9"	55	5	2'-9"	10"	5'-5"				
AE516	1	6'-6"	7	4	1'-4"	5'-4"					
AE517	1	9'-11"	10	5	2'-9"	10"	6'-7"				
A518	8	6'-7"	55	STR.							
A519	14	3'-7" TO 6'-7"	74	3	7	3'-7"	6'-7"	6"			
A520	2	8'-9"	18	15	2'-0"	10 3/8"	1'-9 5/8"	6'-10"			
~~AE521~~	~~3~~	~~3'-10"~~	~~12~~	~~STR.~~							
~~AE522~~	~~12~~	~~1'-8"~~	~~20~~	~~STR.~~							
~~AE601~~	~~5~~	~~3'-2"~~	~~24~~	~~STR.~~							
~~AE602~~	~~3~~	~~4'-2"~~	~~19~~	~~STR.~~							
A801	8	3'-0"	64	STR.							

FORWARD ABUTMENT (MOT - 70 - 1130L) ALL REINFORCING STEEL BAR MARKS IN THE FORWARD ABUTMENT SHALL HAVE THE SUFFIX "F"

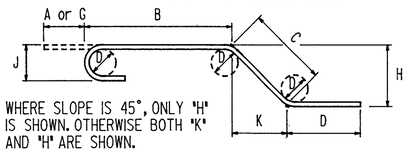
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A501	4	8'-2"	34	STR.							
AE502	4	6'-11"	29	STR.							
AE503	8	16'-2"	135	STR.							
AE504	2	12'-9"	27	STR.							
AE505	1	13'-10"	14	STR.							
AE506	1	15'-10"	17	STR.							
AE507	2	11'-6"	24	STR.							
A508	1	4'-4"	5	STR.							
A509	1	6'-4"	7	STR.							
A510	2	11'-4"	24	STR.							
A511	7	11'-2"	82	5	4'-0"	3'-5"	4'-0"				
A512	2	8'-2"	17	4	3'-10"	4'-6"					
AE513	7	9'-8"	71	5	3'-3"	3'-5"	3'-3"				
AE514	5	5'-8"	30	4	1'-4"	4'-6"					
AE515	5	8'-9"	46	5	2'-9"	10"	5'-5"				
AE516	4	5'-5"	23	STR.							
A518	6	7'-2"	45	STR.							
A519	14	4'-2" TO 7'-2"	83	3	7	4'-2"	7'-2"	6"			
A520	2	8'-9"	18	15	2'-0"	10 3/8"	1'-9 5/8"	6'-10"			
~~AE521~~	~~3~~	~~3'-10"~~	~~12~~	~~STR.~~							
~~AE522~~	~~12~~	~~1'-8"~~	~~20~~	~~STR.~~							
~~AE601~~	~~5~~	~~3'-2"~~	~~24~~	~~STR.~~							
~~AE602~~	~~3~~	~~4'-2"~~	~~19~~	~~STR.~~							
A801	8	3'-0"	64	STR.							

NOTE: BAR AE517 NOT USED

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

193 / 219



WHERE SLOPE IS 45°, ONLY "H" IS SHOWN. OTHERWISE BOTH "K" AND "H" ARE SHOWN.

TYPICAL BAR BENDING DETAILS

NOTES

1. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBERS. FOR EXAMPLE A-601 IS A NO.6 SIZE BAR AND A P-1004 IS A NO.10 SIZE BAR.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR.
3. RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR. RADIUS DIMENSION "I.R." IS TO INSIDE OF BAR.
4. THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
5. FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
6. DIMENSION ON HOOK IS SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOKSIZE.
7. EPOXY COATED REINFORCING STEEL IS INDICATED BY THE LETTER "E" IN THE BAR MARK PREFIX.
8. REINFORCING STEEL SAMPLES
   REFER TO CMS SECTIONS 106.03, 700, 709.01 THRU 709.05 AND 705.08. 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.
9. FOR THE BAR TYPE 16, THE NO. OF TURNS "A" IS THE LENGTH "B" DIVIDED BY THE PITCH "C", PLUS 3 TURNS (TOTAL NO. OF CLOSED COILS), EXPRESSSED AS THE NEAREST WHOLE NO.. 1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH UNIT.
10. FOUR STEEL CHANNEL TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LBS. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE SPACED EQUALLY ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF FOUR SPACERS, BASED ON 0.80 LBS PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY FOR SPIRAL BAR.

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

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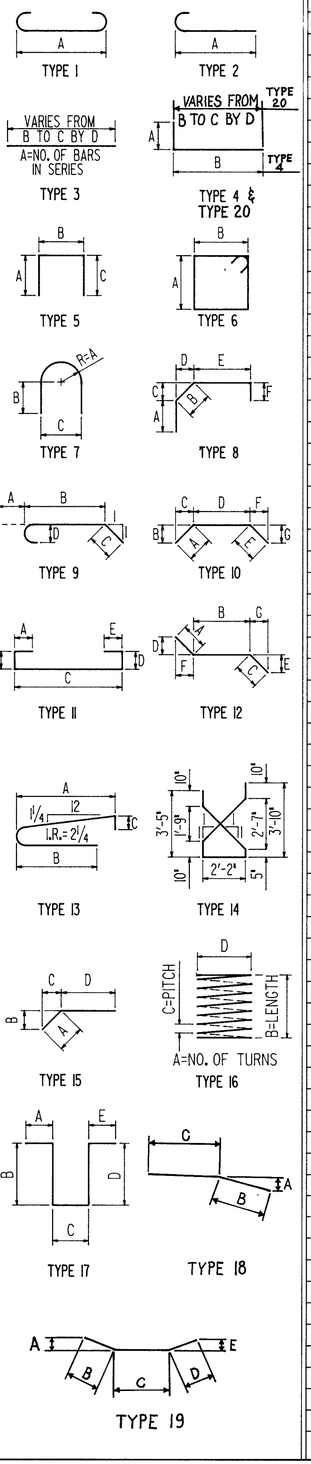
REINFORCING STEEL LIST

BRIDGE NO. MOT-70-1130 (L/R) OVER S.R. 48

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	BBK	2/22/88	

BAR TYPE DIAGRAM



MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
NOTE: QUANTITIES FOR MOT-70-1130 BRIDGE LEFT AND BRIDGE RIGHT ARE IDENTICAL UNLESS NOTED OTHERWISE. QUANTITIES SHOWN ARE FOR ONE BRIDGE ONLY.											
BRIDGE RIGHT (1130R)- ALL REINFORCING STEEL BAR MARKS IN BRIDGE RIGHT SHALL HAVE THE SUFFIX "R".											
BRIDGE LEFT (1130L)- ALL REINFORCING STEEL BAR MARKS IN BRIDGE LEFT SHALL HAVE THE SUFFIX "L".											
DECK ADDITION - 1130R (BRIDGE RIGHT)											
SE618	96	30'- 0"	4326	STR.							
SE619	18	20'- 0"	541	STR.							
SE620	536	7'- 5"	5974	STR.							
SE621	12	7'-6" TO 8'-2"	141	3	3	7'-6"	8'-2"	4"			
SE622	16	13'- 0"	312	STR.							
DECK ADDITION - 1130L (BRIDGE LEFT)											
SE618	108	30'- 0"	4866	STR.							
SE619	21	20'- 0"	631	STR.							
SE620	536	8'- 5"	6779	STR.							
SE621	12	8'-6" TO 9'-3"	160	3	3	8'-6"	9'-3"	4½"			
SE622	18	13'- 0"	351	STR.							
NEW PARAPET											
SE503	24	30'- 0"	751	STR.**							
SE504	118	5'- 3"	646	13	2'-5"	2'-2"	7½"				
SE505	24	7'- 0"	175	STR.							
SE506	8	15'- 3½"	128	STR.							
SE507	32	11'- 2"	373	STR.							
~~SE508~~	~~12~~	~~2'- 8"~~	~~33~~	~~2~~	~~2'-1"~~						
SE509	8	5'- 8"	47	STR.**							
SE510	4	12'- 0"	50	STR.**							
SE511	118	2'- 2"	267	4	10½"	1'-5"					
SE512	134	3'- 0"	419	8	9"	10½"	9"	10½"	8½"	6"	
SE508	16	3'- 0"	50	2	2'-5"						
SE513	24	3'- 8½"	57	4	10"	3'-0"					
SE514	4	3'- 7"	15	2	3'-7"						
SE515	4	15'- 3"	64	18	4¼"	7'-10"	7'-5"				
SE516	4	5'- 7"	23	19	1¼"	1'-10"	2'-4"	1'-5"	5"		
RAILING FACED, AS PER PLAN											
SE501	44	14'- 2"	650	STR.							
SE502	6	11'- 2"	70	STR.**							
SE601	164	1'- 10"	451	15	1'-3"	8"	1'-0¾"	9½"			
SE602	164	2'- 1"	512	15	1'-7"	1'-6¾"	2"	8"			
SE603	164	1'- 2"	288	4	8"	8"					
SE508	18	3'- 0"	56	2	2'-5"						
SE517	2	10'- 1½"	21	20	8"	8¼"	1'-1¼"	7/8"			
SE518	16	2'- 0½"	34	15	9½"	5½"	7¾"	1'-3"			
SE519	4	11'- 2"	47	18	5½"	10'-0"	1'-2"				
SE520	10	3'- 7"	37	STR.							
SE521	4	3'- 9"	16	18	5"	1'-5"	2'-4"				
SE522	12	3'- 8"	46	STR.**							
SE523	2	2'-11¼"	6	10	1'-4"	9"	1'-1"	9¾"	11"	6¼"	9"
SE524	2	1'-2½"	3	4	8"	8"					

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
BRIDGE RIGHT (1130R) -ALL REINFORCING STEEL BAR MARKS IN BRIDGE RIGHT SHALL HAVE THE SUFFIX "R".											
PIER NO. 1 (1130R)											
SPE401	1	17'-10"	415	16	74	17'-10"	3"	2'-4"			
PE501	6	4'-5"	28	5	1'-6"	1'-8"	1'-6"				
PE901	12	7'-11"	323	4	1'-6½"	6'-8"					
P902	10	8'-0"	272	1	5'-6"						
P903	9	9'-6"	291	1	7'-0"						
PE904	12	17'-10"	728	STR.							
PIER NO. 2 (1130R)											
SPE402	1	15'-0"	351	16	63	15'-0"	3"	2'-4"			
PE501	6	4'-5"	28	5	1'-6"	1'-8"	1'-6"				
PE901	12	7'-11"	323	4	1'-6½"	6'-8"					
P902	10	8'-0"	272	1	5'-6"						
P903	9	9'-6"	291	1	7'-0"						
PE904	12	15'-0"	612	STR.							
PIER NO. 3 (1130R)											
SPE403	1	15'-0"	351	16	63	15'-0"	3"	2'-4"			
PE501	6	4'-5"	28	5	1'-6"	1'-8"	1'-6"				
PE901	12	7'-11"	323	4	1'-6½"	6'-8"					
P902	10	8'-0"	272	1	5'-6"						
P903	9	9'-6"	291	1	7'-0"						
PE904	12	15'-0"	612	STR.							
BRIDGE LEFT (1130L) -ALL REINFORCING STEEL BAR MARKS IN BRIDGE LEFT SHALL HAVE THE SUFFIX "L".											
PIER NO. 1 (1130L)											
SPE404	1	19'-2"	445	16	80	19'-2"	3"	2'-4"			
PE501	6	4'-5"	28	5	1'-6"	1'-8"	1'-6"				
PE901	12	7'-11"	323	4	1'-6½"	6'-8"					
P902	10	8'-0"	272	1	5'-6"						
P903	9	9'-6"	291	1	7'-0"						
PE904	12	19'-2"	782	STR.							
PIER NO. 2 (1130L)											
SPE405	1	16'-7"	387	16	69	16'-7"	3"	2'-4"			
PE501	6	4'-5"	28	5	1'-6"	1'-8"	1'-6"				
PE901	12	7'-11"	323	4	1'-6½"	6'-8"					
P902	10	8'-0"	272	1	5'-6"						
P903	9	9'-6"	291	1	7'-0"						
PE904	12	16'-7"	677	STR.							
PIER NO. 3 (1130L)											
SPE406	1	16'-4"	381	16	68	16'-4"	3"	2'-4"			
PE501	6	4'-5"	28	5	1'-6"	1'-8"	1'-6"				
PE901	12	7'-11"	323	4	1'-6½"	6'-8"					
P902	10	8'-0"	272	1	5'-6"						
P903	9	9'-6"	291	1	7'-0"						
PE904	12	16'-4"	666	STR.							

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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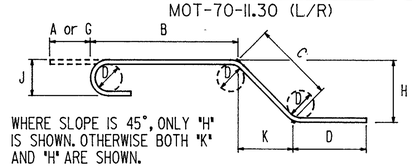
MOT-70-11.30 (L/R)



WHERE SLOPE IS 45°, ONLY "H" IS SHOWN. OTHERWISE BOTH "K" AND "H" ARE SHOWN.

TYPICAL BAR BENDING DETAILS

NOTES

1. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBERS. FOR EXAMPLE A-601 IS A NO.6 SIZE BAR AND A P-1004 IS A NO.10 SIZE BAR.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR.
3. RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR. RADIUS DIMENSION "I.R." IS TO INSIDE OF BAR.
4. THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
5. FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
6. DIMENSION ON HOOK IS SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOKSIZE.
7. EPOXY COATED REINFORCING STEEL IS INDICATED BY THE LETTER "E" IN THE BAR MARK PREFIX.
8. REINFORCING STEEL SAMPLES
   REFER TO CMS SECTIONS 106.03, 700, 709.01 THRU 709.05 AND 705.08. 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.
9. FOR THE BAR TYPE 16, THE NO. OF TURNS "A" IS THE LENGTH "B" DIVIDED BY THE PITCH "C", PLUS 3 TURNS (TOTAL NO. OF CLOSED COILS), EXPRESSSED AS THE NEAREST WHOLE NO.. 1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH UNIT.
10. FOUR STEEL CHANNEL TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LBS. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE SPACED EQUALLY ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF FOUR SPACERS, BASED ON 0.80 LBS PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY FOR SPIRAL BAR.

** BEND IN FIELD AS REQUIRED.

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DAYTON, OHIO 45402

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REINFORCING STEEL LIST

BRIDGE NO. MOT-70-1130 (L/R)
OVER S.R. 48

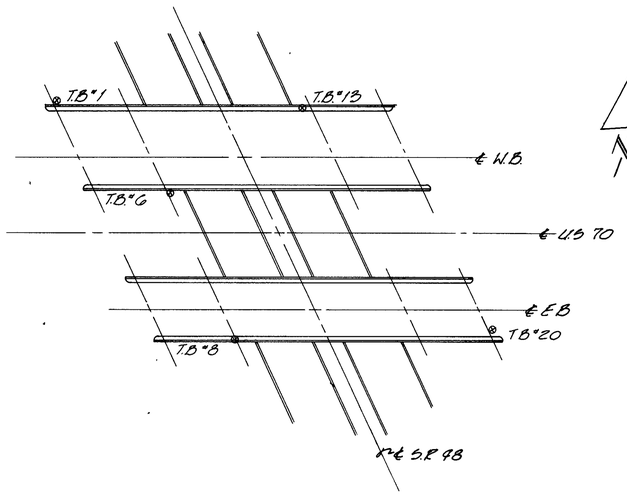
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.D.M.	RACH		R.G.S.	SJL	2/2/96	

FHWA REGION	STATE	PROJECT	
5	OHIO		

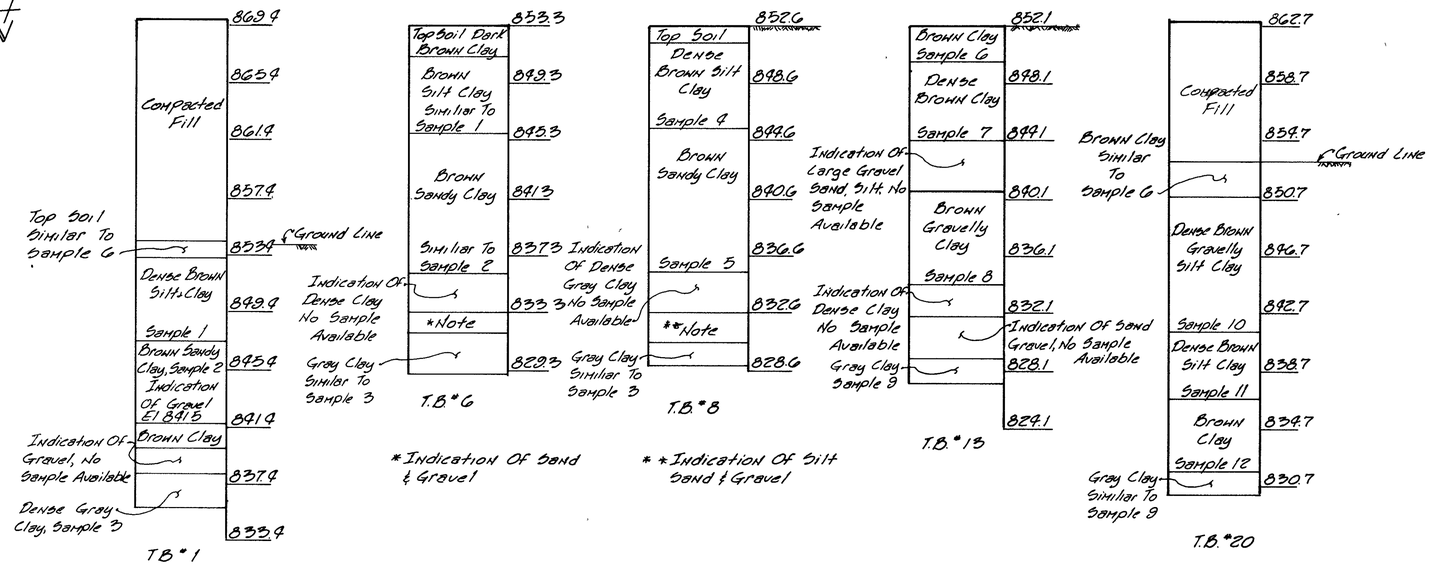
MOT-70-6.53/11.02

195/219



SITE PLAN

T.B = Test Boring Hole



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15/15

SOIL BORING

BRIDGE NO. MOT-70-1130 (L/R)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.H.	JOE		R.G.S.	S.D.Z	2/28/86	

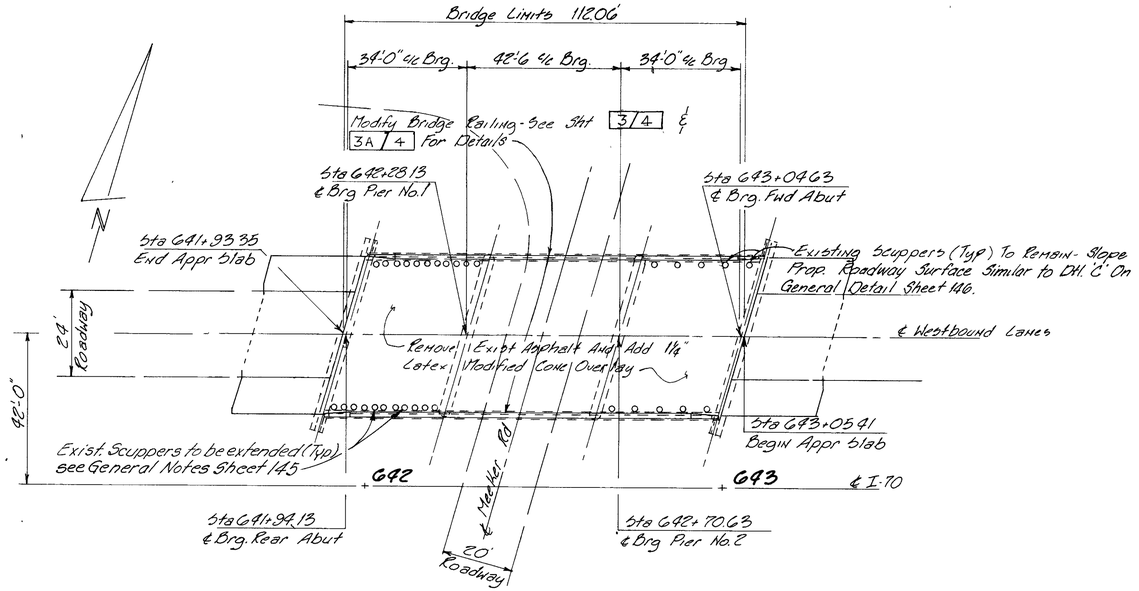
88644

MEDIA RESOURCES CORP

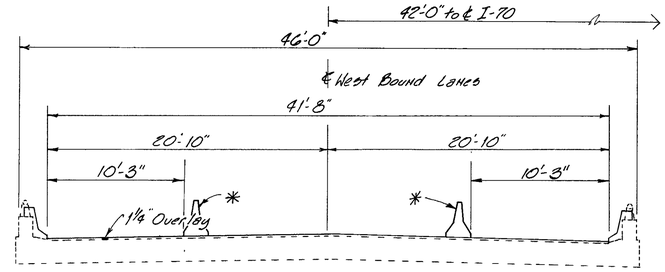
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

196
219

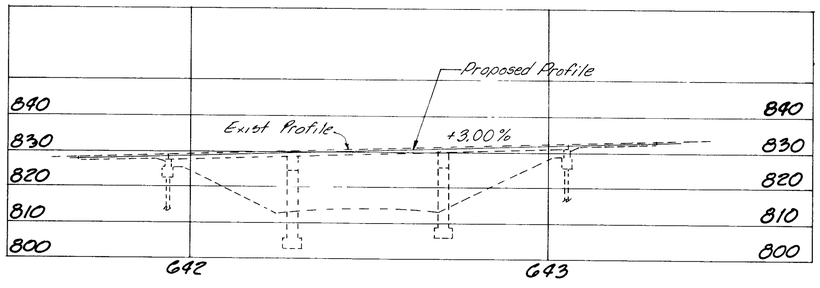


PLAN



BRIDGE SECTION

* Item 622, Temporary Concrete Barrier, bridge mounted, is carried in the roadway quantities. Barrier shall not be anchored or braced to bridge deck.



ELEVATION

EXISTING STRUCTURE

Type: Continuous Concrete Slab w/Capped Pile Abutments & Concrete Piers
Spans. 34'-0" - 42'-6" - 34'-0" ℄ Bearings
Roadway. 44'-f-f Concrete Parapet w/Alum Handrail
Loading. CF 2000
Wearing Surface: Asphalt
Skew: 15°-48'-50" L.F.
Alignment: Tangent
Approach Slabs. AS-1-54 (25' Long)

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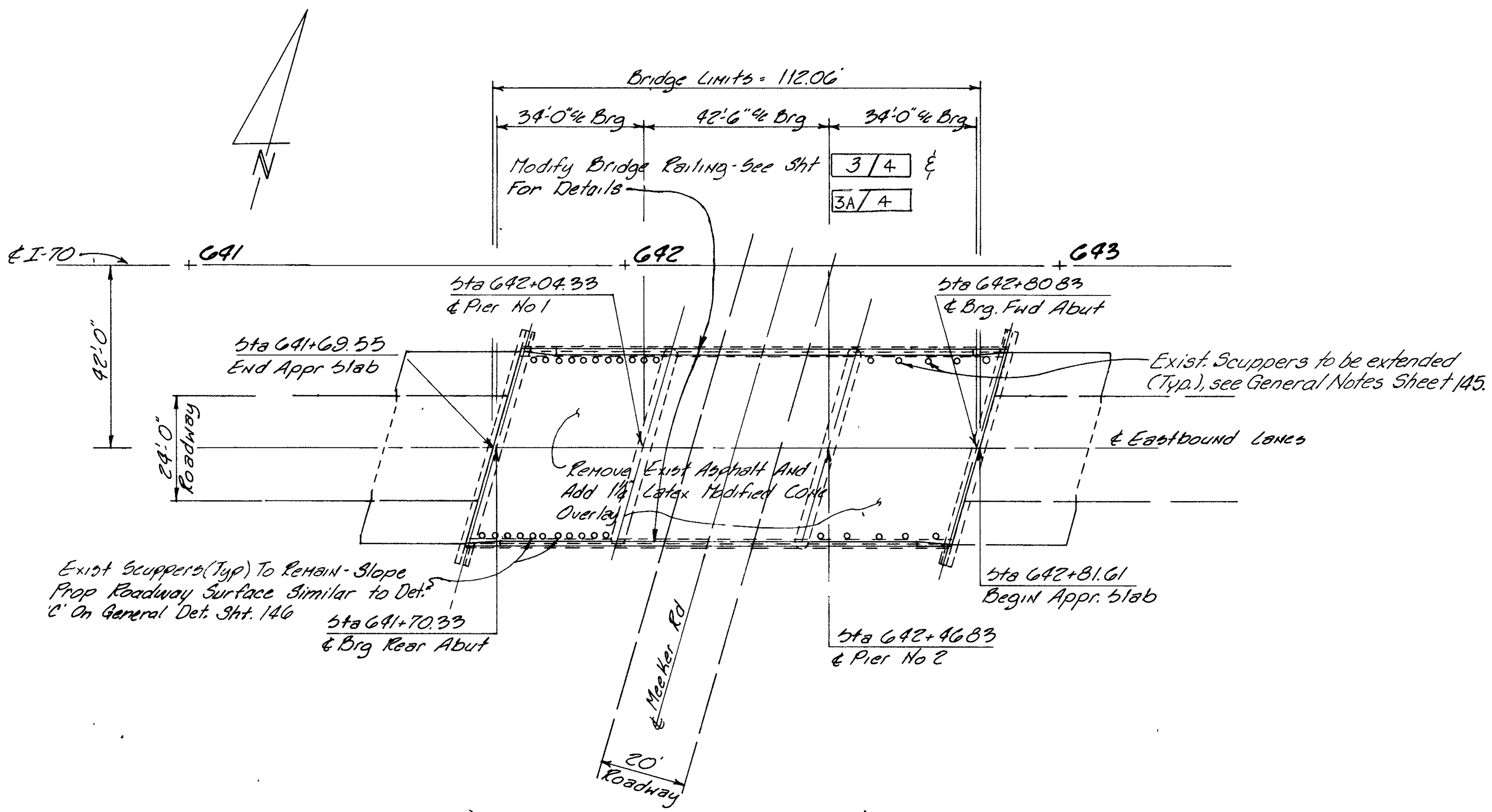
1/4

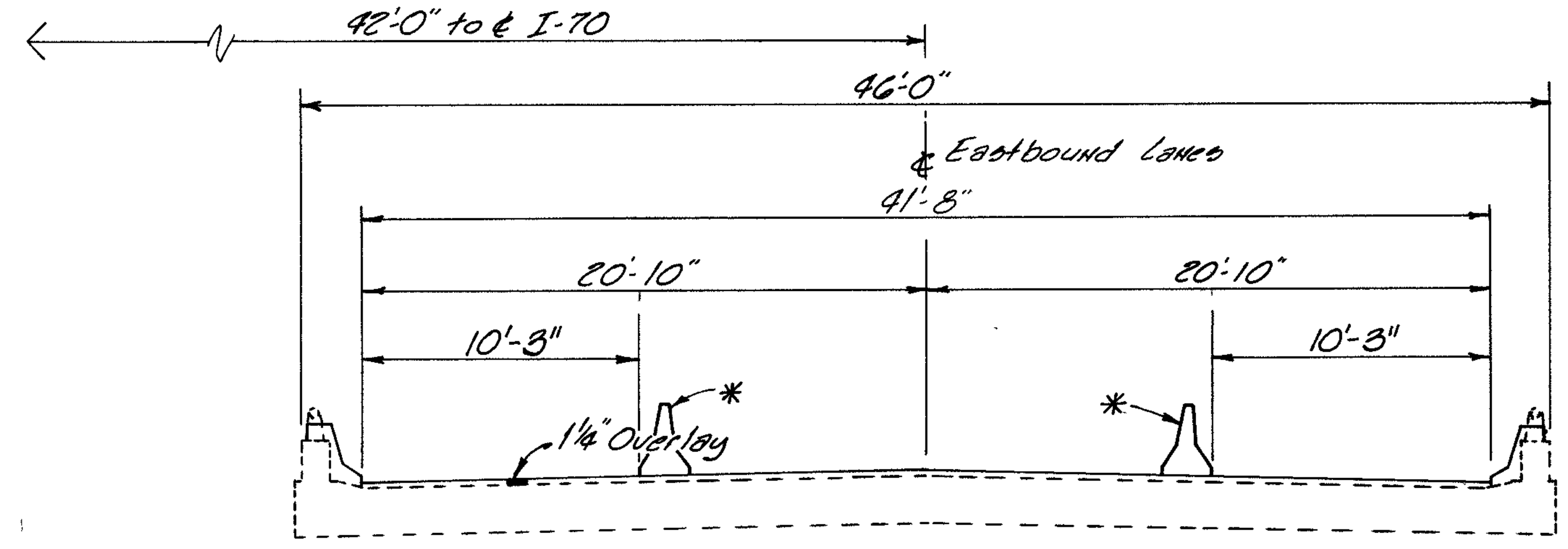
GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-1219(L)
(WESTBOUND I-70 OVER MEEKER RD.)
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH	JOE	R.G.S.		2/20/88	

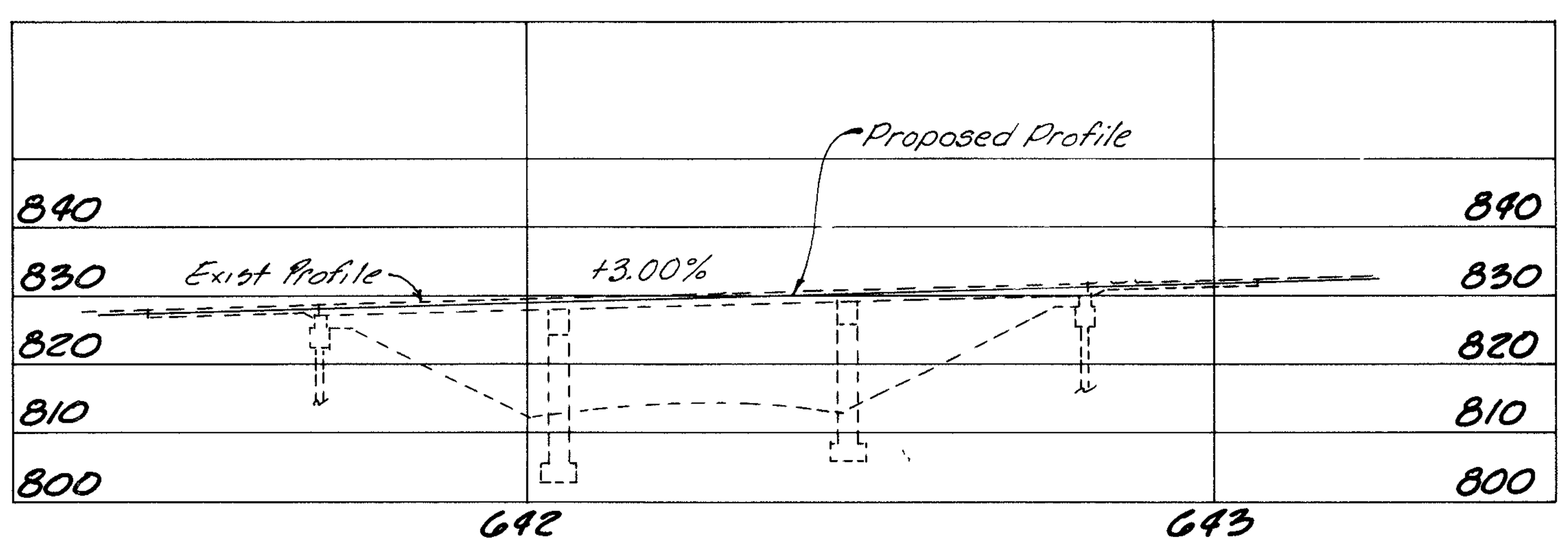


PLAN



BRIDGE SECTION

* Item 622, Temporary Concrete Barrier, bridge mounted, is carried in the roadway quantities. Barrier shall not be anchored or braced to bridge deck.



ELEVATION

EXISTING STRUCTURE

Type: Continuous Concrete Slab With Capped Pile Abutments & Concrete Piers
Spans: 34'-0"-42'-6"-34'-0" c/c Bearings
Roadway: 44' f-f Concrete Parapet With Aluminum Handrail
Loading: CF 2000
Wearing Surface: Asphalt
Skew: 15° 48'-50" L.F.
Alignment: Tangent
Approach Slabs: AS-1-54 (25' Long)

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2/4

GENERAL PLAN, ELEVATION, AND BRIDGE SECTION

BRIDGE NO. MOT-70-1219(R)
(EASTBOUND I-70 OVER MEEKER RD.)

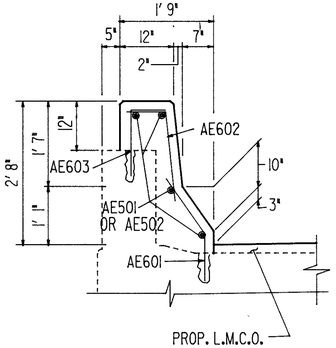
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	KGH	JOE	R.G.S.	SBB	2/29/88	

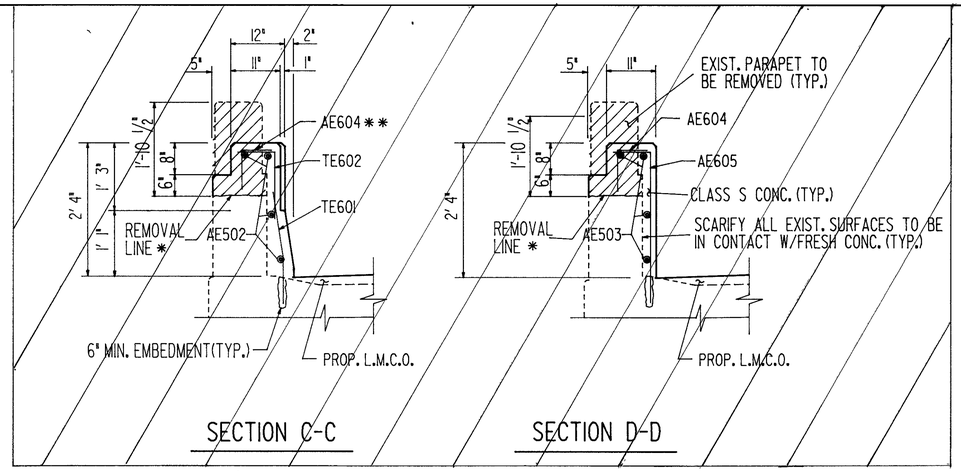
F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

198
219

MOT-70-06.53/11.02



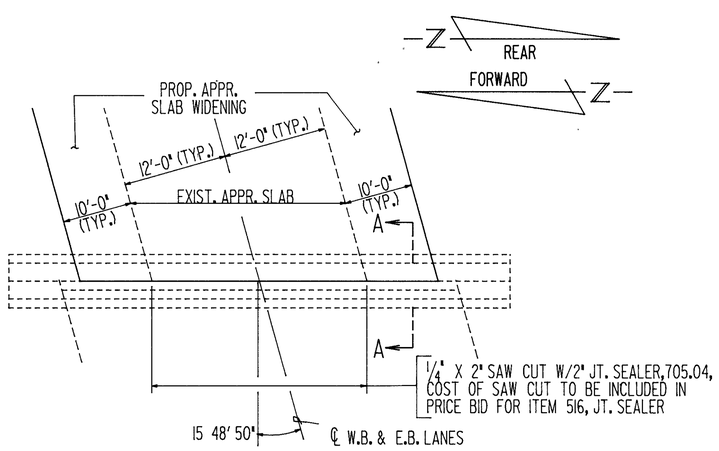
SECTION B-B



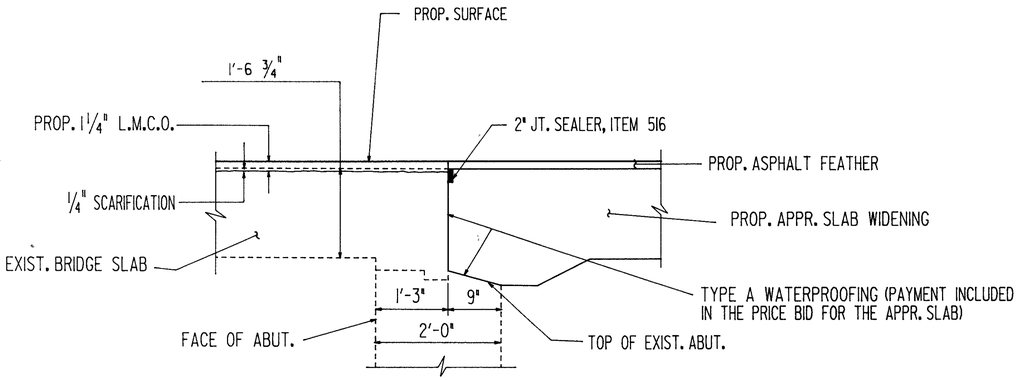
NOTE: FOR DETAILS NOT SHOWN AND ADDITIONAL NOTES SEE SECTION A-A ON GENERAL DETAIL SHEET.

~~* SEE SUPERSTRUCTURE PARAPET DETAIL FOR REMOVAL LIMIT.~~

~~** BEYOND REMOVAL LIMIT, EMBED AE604 INTO EXIST. CONC. (6" MIN.).~~

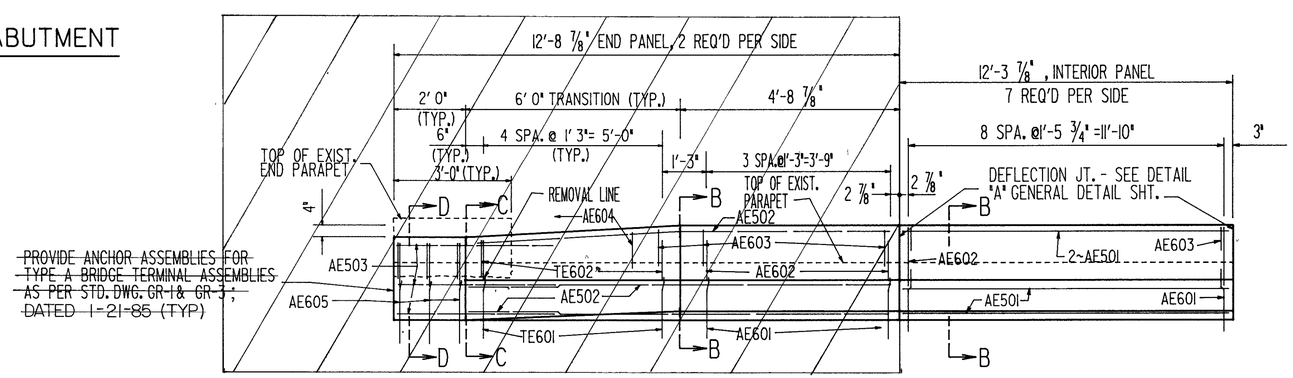


PLAN - EXIST. ABUTMENT



SECTION A-A

For End Panel Detail, See Sheet 3A/4.



~~PROVIDE ANCHOR ASSEMBLIES FOR TYPE A BRIDGE TERMINAL ASSEMBLIES AS PER STD. DWG. GR-1 & GR-3; DATED 1-21-85 (TYP)~~

SUPERSTRUCTURE PARAPET DETAIL

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3/4

MISCELLANEOUS DETAILS

BRIDGE NO. MOT-70-1219 L/R

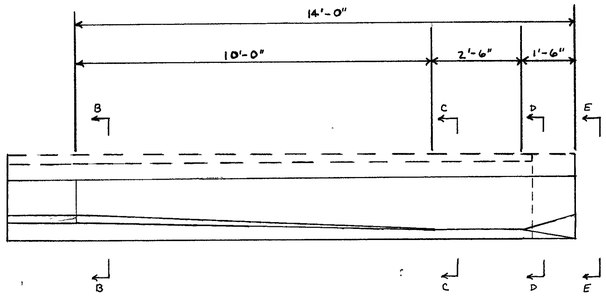
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	SBR	2/2988	

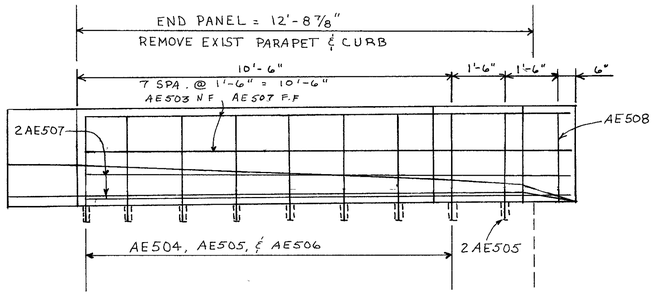
FHWA REGION	STATE	PROJECT	
5	OHIO		

198A 219

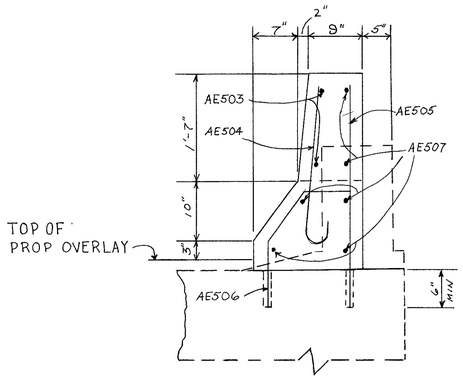
MONTGOMERY COUNTY
MOT-70-06.49/11.02



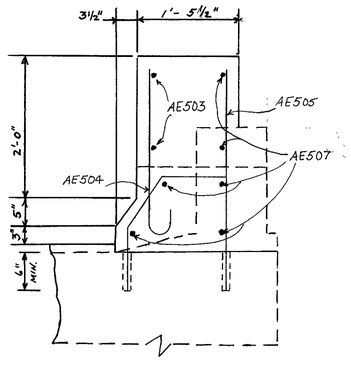
PLAN



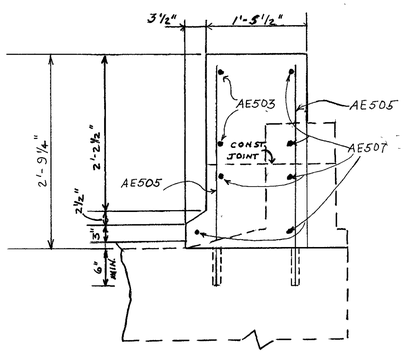
ELEVATION



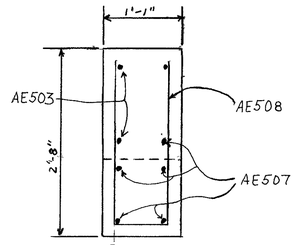
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

N.F. = NEAR FACE
F.F. = FAR FACE
TYPE "AA" BRIDGE TERMINAL ASSEMBLY AS PER PLAN
MOT-70-1219 L : RT FORWARD & LT FORWARD
MOT-70-1219 R : RT REAR & LT REAR
TYPE "AT" BRIDGE TERMINAL ASSEMBLY AS PER PLAN
MOT-70-1219 R . RT. FORWARD

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

3A/4

DETAILS
BRIDGE Nº MOT-70 1219 L/R

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BS1 19901211

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

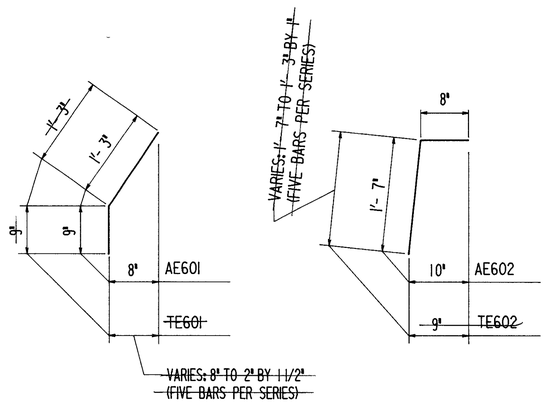
199
219

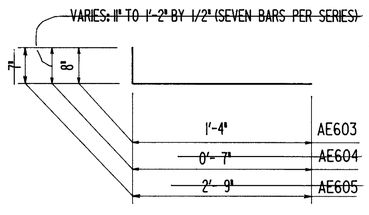
MOT-70-06.53/11.02

REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
PARAPETS				
AE501	STR.	112	11'-10"	1382
AE502	STR. *	32	4'-4"	145
AE503	BNT.	16	13'-8"	228
AE601	BNT.	252	1'-10"	693
AE602	BNT.	252	2'-1"	787
AE603	BNT.	252	1'-10"	693
~~AE604~~	~~BNT.~~	~~56~~	~~1**~~	~~123~~
~~AE605~~	~~BNT.~~	~~24~~	~~3'-2"~~	~~114~~
~~TE601~~	~~BNT.~~	~~40~~	~~1'-10"~~	~~110~~
~~TE602~~	~~BNT.~~	~~40~~	~~2**~~	~~115~~
AE504	BNT	64	3'-0"	200
AE505	STR.	72	3'-1"	231
AE506	BNT.	64	3'-0"	200
AE507	STR.*	48	13'-8"	684
AE508	BNT	8	5'-2"	43
			TOTAL	5286

BENT BAR DETAILS





1** VARIES: 1'-4" TO 1'-7" BY 1/2" (SEVEN BARS PER SERIES)
2** VARIES: 1' 9" TO 2' 1" BY 1" (FIVE BARS PER SERIES)

LETTER 'E' IN PREFIX INDICATES EPOXY COATING.
* BEND IN FIELD AS REQUIRED.

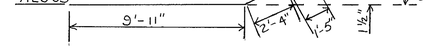
ESTIMATED QUANTITIES

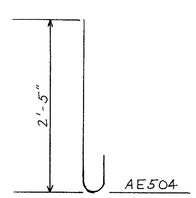
ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	LUMP SUM	L.S.	PORTIONS OF STRUCTURES REMOVED		
202	1070	S.Y.	WEARING COURSE REMOVED, AS PER PLAN		
509	600	LBS.	REINFORCING STEEL, GRADE 60		
516	184	L.F.	JOINT SEALER, 705.04 AS PER PLAN		
517	345	L.F.	RAILING FACED, AS PER PLAN		
~~518~~	~~5~~	~~S.Y.~~	~~PATCHING CONCRETE STRUCTURES (ABUTMENT CORNERS)~~		
509	5286	LBS.	EPOXY COATED REINFORCING STEEL, GRADE 60		
845	1044	S.Y.	LATEX MODIFIED CONCRETE OVERLAY, 1 1/4"		
845	58	C.Y.	LATEX MODIFIED CONCRETE, VARIABLE THICKNESS		
510	144	EACH	DOWEL HOLES		
511	14.5	C.Y	CLASS S CONCRETE, SUPERSTRUCTURE, BARRIER PARAPET RAILING		
SPECIAL	249	S.Y.	SEALING OF CONCRETE SURFACES, SEE PROPOSAL NOTE		
518	64	EACH	SCUPPER, VERTICAL EXTENTION, AS PER PLAN		

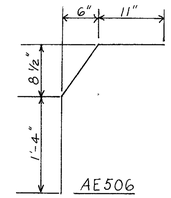
PROPOSED WORK

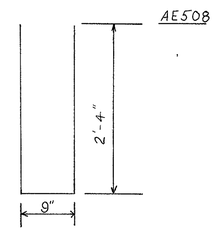
1. REMOVE ASPHALT FROM THE SUPERSTRUCTURE.
2. ~~PATCH ABUTMENT CORNERS AS DIRECTED BY THE ENGINEER.~~
2. MODIFY PARAPETS ON THE SUPERSTRUCTURE. SEAL PARAPETS AS SHOWN ON PLANS.
3. SCARIFY EXISTING DECK 1/4", AND REMOVE DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER.
4. PERFORM PARTIAL DEPTH AND FULL DEPTH DECK REPAIR AND PLACE LATEX MODIFIED CONCRETE OVERLAY (1 1/4" THICK).
5. SEAL JOINTS AS NOTED.
6. REPLACE GUARDRAIL AS SHOWN ON ROADWAY PLANS.
7. ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON EACH BRIDGE AT ALL TIMES. FOR NOTES SEE SHEET 16.
8. OTHER WORK AS DESCRIBED IN THESE PLANS.

BENT BAR DETAILS









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DAYTON, OHIO 45402

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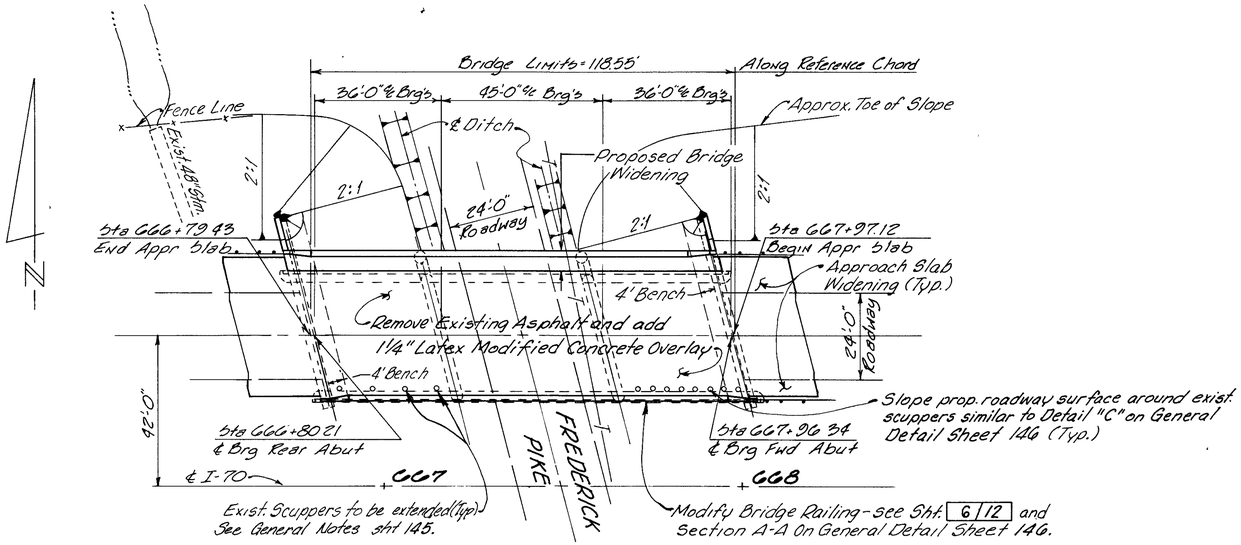
REINFORCING STEEL LIST
ESTIMATED QUANTITIES
& PROPOSED WORK NOTES

BRIDGE NO. MOT-70-1219 L/R

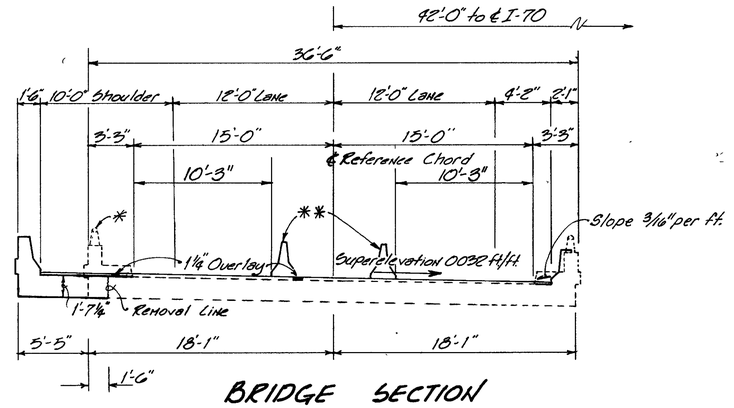
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.M.J.		R.G.S.	G.B.L.	2/2008	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02



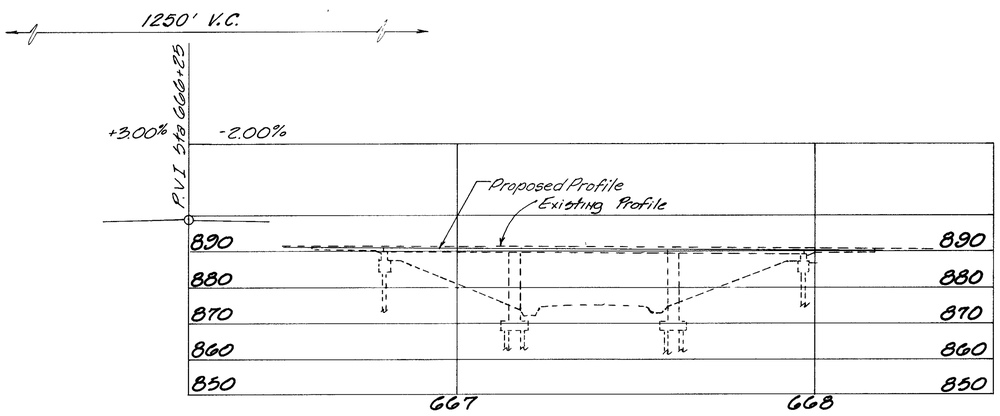
PLAN



BRIDGE SECTION

* Remove existing railing for storage. Cost to be included in the price bid for Item 202-Portions of Structures Removed.

** Item 622, Temporary Concrete Barrier, bridge mounted, is carried in the roadway quantities. Barrier shall not be anchored or braced to bridge deck.



ELEVATION

Pile Notes

- The Existing Piling Are 12" Cast-In-Place Reinforced Concrete Piles With An "As Built" Length Of 27 Feet For Abutments And 19' For Piers.
- All Proposed Piling Shall Be 12" Cast-In-Place Reinforced Concrete With An Estimated Tip Length Of 28 Feet For Abutments And 20 Feet For Piers.
- The Pile Design Load Is 35 Tons For The Abutments And 90 Tons For The Piers. See Sheet 12/12 For Soil Boring Information.

EXISTING STRUCTURE

Type: Continuous Concrete Slab With Reinforced Concrete Substructure.
Spans: 36'-0", 45'-0" And 36'-0" ℄ Brgs. Measured Along Reference Chord Between ℄ Abut Brgs.
Roadway: 30'-0" ft 2'-0" Safety Curbs With Concrete Parapet And Aluminum Railing
Loading: CF-2000
Wearing Surface: Asphalt
Skew: 14°-47'-00" Rt. Fwd ℄ ℄ Construction I-70
Alignment: Along A Chord Between ℄ Of Abutment Bearings - Chord Of A 1°00' Curve
Superelevation: 0.032 ft/ft.
Approach Slabs: AS-1-59 (20' Long)

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GENERAL PLAN ELEVATION AND BRIDGE SECTION

BRIDGE NO. MOT-70-1267(L)
(OVER FREDERICK PIKE)

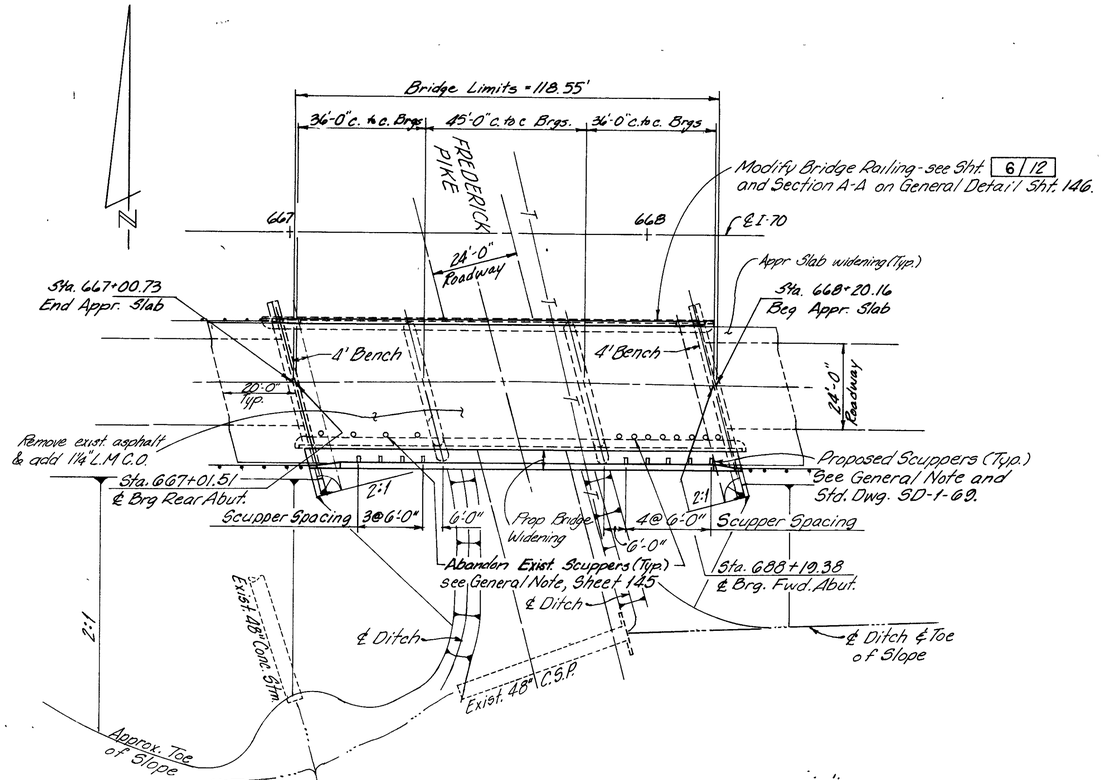
MONTGOMERY COUNTY

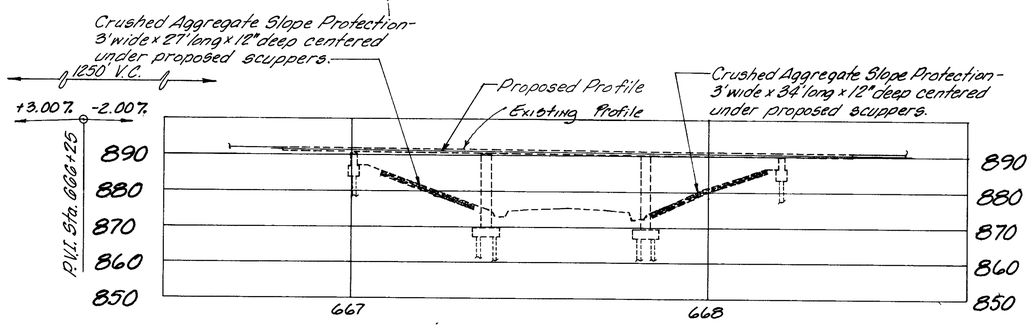
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.M.	RACH	JOE	R.G.S.			

FHWA REGION	STATE	PROJECT	
5	OHIO		

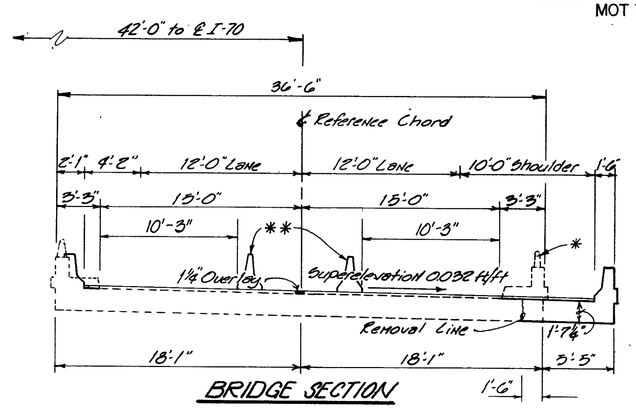
MOT 70-6.53/11.02

201/219





ELEVATION



BRIDGE SECTION

* Remove existing railing for storage. Cost to be included in the price bid for Item 202-Portions of Structures Removed.

** Item 622, Temporary Concrete Barrier, bridge mounted, is carried in the roadway quantities. Barrier shall not be anchored or braced to bridge deck.

Pile Notes

The Existing Piling Are 12" Cast-In-Place Reinforced Concrete Piles With An "As Built" Length Of 27 Feet For Abutments And 19 Feet For Piers.

All Proposed Piling Shall Be 12" Cast-In-Place Reinforced Concrete With An Estimated Pay Length Of 28 Feet For Abutments And 20 Feet For Piers.

The Pile Design Load Is 35 Tons For The Abutments And 90 Tons For The Piers.

See Sheet 12/12 For Soil Boring Information.

EXISTING STRUCTURE

Type : Continuous concrete slab w/reinf. concrete substructure.
Spans : 36'-0", 45'-0", 36'-0" c. to c. brgs.
Roadway : 30'-0" f/f @ 2'-0" safety curbs, w/conc. parapet & alum. railing.
Loading : CF-2000
Wearing Surface : Asphalt
Skew : 14°47'00" Rt. Fwd. @ ℄ construction I-70.
Alignment : Along chord between ℄ of abut. brgs. - chord of a 1°00' curve.
Superelevation : 0.032 ft/ft.
Approach Slabs : AS-1-54 (20'-0" long).

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

2-/12

GENERAL PLAN, ELEVATION, & BRIDGE SECTION

BRIDGE NO. MOT-70-1267R (OVER FREDERICK PIKE)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH	R.M.J.	R.C.S.	S.D.Z.	2/29/00	

GENERAL NOTES (FOR ADDITIONAL NOTES SEE SHT. 145)

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

202/219

EMBANKMENT CONSTRUCTION: The embankment shall be constructed to the level of the subgrade in the area of the proposed abutment widening. Excavation may then be made for the abutments.

PILE HAMMER: The pile hammer used to install the cast-in-place reinforced concrete piles shall have a State's Energy Rating of not less than 16,000 foot pounds. This requirement does not relieve the contractor from 108.05 which states that the contactor is to provide sufficient equipment for prosecuting the required work, refer to "ODOT'S Manual Of Procedures for Structures" to obtain the State's Energy Rating.

PILE WALL THICKNESS: The cast-in-place reinforced concrete piles shall have a wall thickness that is not less than 0.200 inches. The actual pile gage chosen is the responsibility of the contractor.

PILE DESIGN LOAD: Abutments - 35 tons per pile.
Piers - 40 tons per pile.

ITEM 845, LATEX MODIFIED CONCRETE OVERLAY(1 1/4"),AS PER PLAN: Scarification of the concrete surface as per section 845.05 shall not apply to the proposed concrete deck in the widened areas. However, the proposed concrete deck surface shall be given a rough surface satisfactory to the Engineer. The surface shall be textured in the transverse direction by an approved device that will produce a relatively uniform pattern of grooves. The grooves shall be approx. 1/4" deep x 1/4" wide spaced at approx. 5/8" c/c.

The proposal note entitled "Latex Modified Concrete (LMC) overlay of New Concrete Bridge Decks" shall apply to this item.

ITEM 518, SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN: Shall be in accordance with Std. Dwg. SD-1-69 except that scupper pipes shall extend 1'-6" below the bottom of slab.

MAINTENANCE OF TRAFFIC:
Frederick Pike shall be closed to traffic for the minimum time required for widening the structure. Road closures shall conform to "The Manual."

I-70 - Maintain one lane of traffic on each bridge at all times.

For additional maintenance of traffic notes & details see roadway plans.

ESTIMATED QUANTITIES

Item	Total	Unit	DESCRIPTION	Super	Abut	Pier	Gen
202	Lump	Sum	Portions of structures removed				Lump Sum
202	791	S.Y.	wearing course removed, as per plan	791			
503	120	C.Y.	UNCLASSIFIED EXCAVATION		52	68	
505	Lump	Sum	Pile Driving equipment mobilization		Lump	Sum	
507	544	L.F.	12" Cast-In-Place reinforced concrete piles		224	320	
509	7333	lbs.	Reinforcing steel, Grade 60		2150	4574	600
510	98	Each	Dowel holes		98		
511	22.8	C.Y.	Class C concrete, Piers above footings			22.8	
511	30.3	C.Y.	Class C concrete, Footings		15.0	15.3	
511	12.6	C.Y.	Class C concrete, Abutments Above Footings		12.6		
511	97.2	C.Y.	Class S concrete, Superstructure	97.2			
511	25.8	C.Y.	Class S concrete, Superstructure Barrier Parapet Railing	25.2	0.6		
516	165	L.F.	Joint sealer, 705.04, as per plan				165
517	238	L.F.	Railing Faced, As Per Plan	238			
518	17	C.Y.	Porous Backfill		17		
518	9	Each	Scuppers, Including Supports, as per plan	9			
519	35*	S.F.	Patching Concrete Structures		35		
509	36392	lbs.	Epoxy Coated Reinforcing Steel, Grade 60	29818	648	5026	
845	.864	S.Y.	Latex Modified Concrete Overlay, 1¼"	864			
845	52	C.Y.	Latex Modified Concrete, Variable THICKNESS	52			
845	144	S.Y.	Latex Modified Concrete Overlay, 1¼" as per plan	144			
Special	300	S.Y.	Sealing of Concrete Surfaces, See Proposal Note	287	13		
Special	12	Each	Abandon Scupper	12			
518	12	Each	Scupper, VERTICAL EXTENTION, AS PER PLAN	12			

* 50% FEDERAL PARTICIPATION

REVISED 5-28-91

3/12

WOOLPERT CONSULTANTS
409 East Monument Avenue
Dayton, Ohio 45402-1226

GENERAL NOTES & ESTIMATED QUANTITIES

BRIDGE NO. MOT-70-1267 (L/R)
OVER FREDERICK PIKE

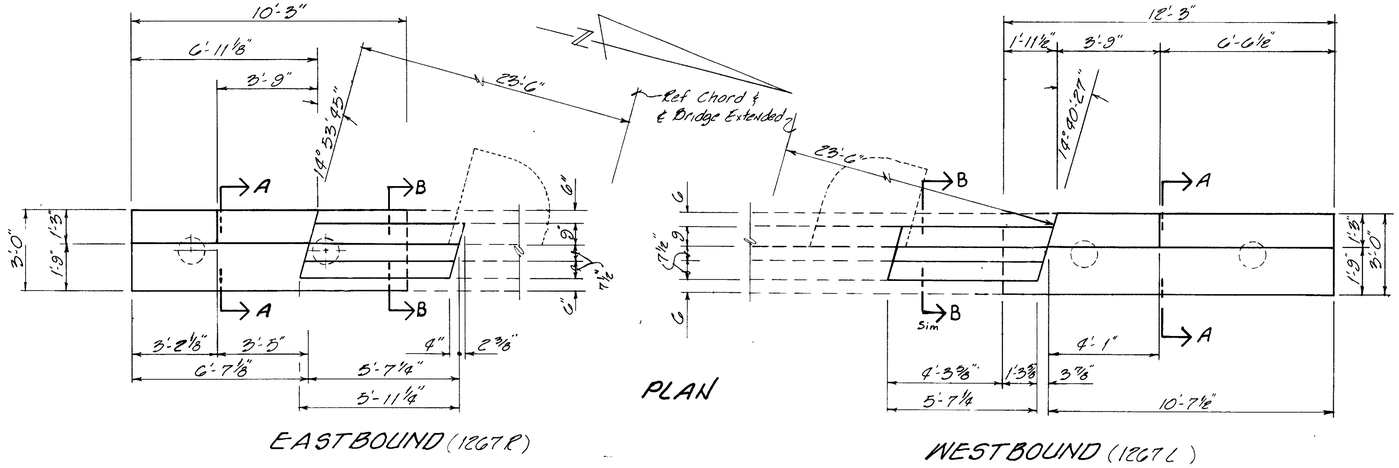
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	R.J.		R.G.S.	S.B.Z.	12/92	

FHWA REGION	STATE	PROJECT	
5	OHIO		

203
219

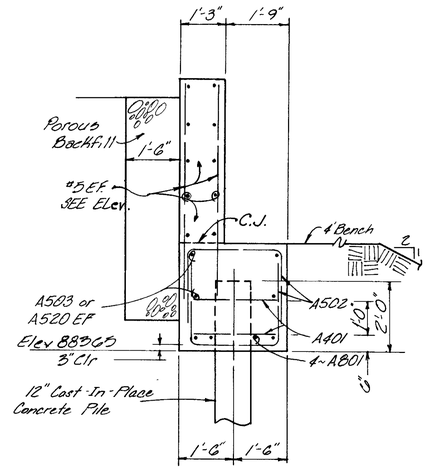
MOT-70-6.53/11.02

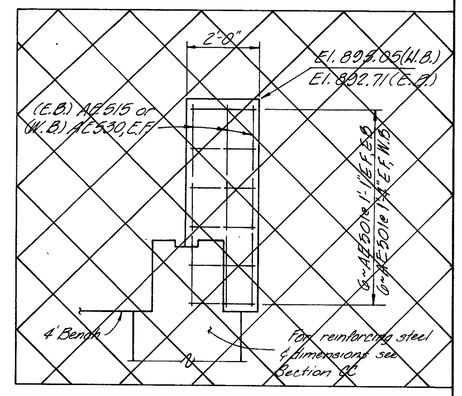


PLAN

EASTBOUND (1267R)

WESTBOUND (1267L)

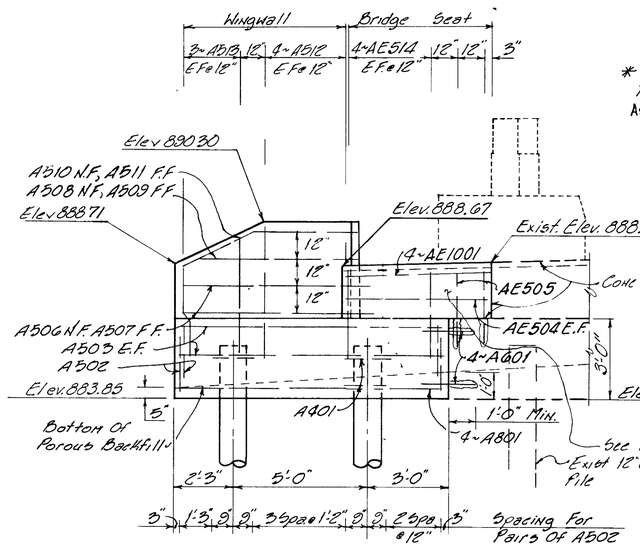




~~SECTION BB~~

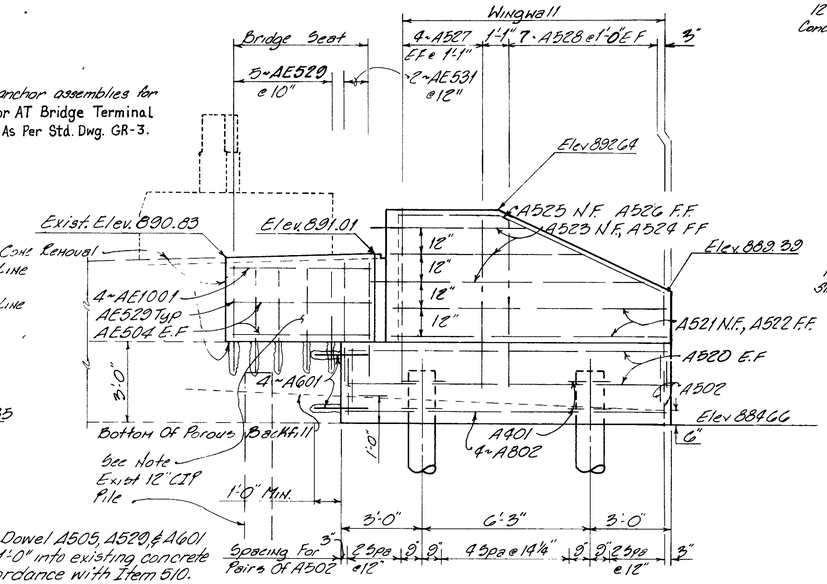
NOTE: Type A Waterproofing shall be included in the price bid for the Appr Slab.

SECTION AA



EASTBOUND (1267R)

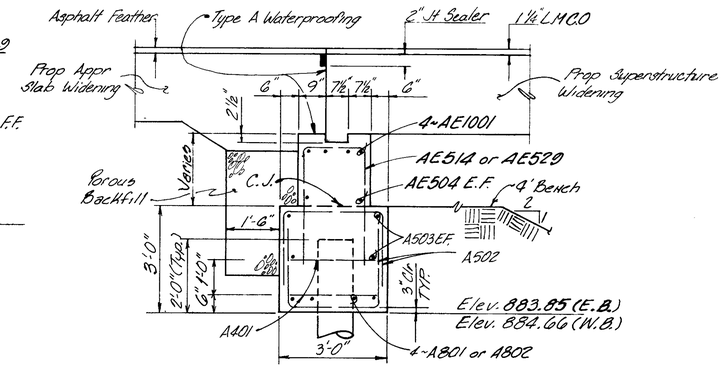
* Provide anchor assemblies for Type AA or AT Bridge Terminal Assemblies As Per Std. Dwg. GR-3.



NOTE: Dowel A505, A520, & A601 Bars 1'-0" into existing concrete in accordance with Item 510.

ELEVATION

WESTBOUND (1267L)



SECTION B-B

NOTES

- C.J. Denotes Construction Joint.
- For Steel Reinforcing List see Sht 10/12
- E.F. Denotes Each Face
- N.F. Denotes Near Face
- F.F. Denotes Far Face
- Existing Reinf. Steel Projecting From The Abutment That Protrudes Into The Proposed Concrete Shall Be Cut As Req'd for Clearance And Retained In The Widened Abutment All Other Reinf. Steel Shall Be Burned Off Flush With The Concrete Surfaces.

4-12

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

REAR ABUTMENT WIDENING

BRIDGE NO. MOT-70-1267(L/R)
(OVER FREDERICK PIKE)

MONTGOMERY COUNTY

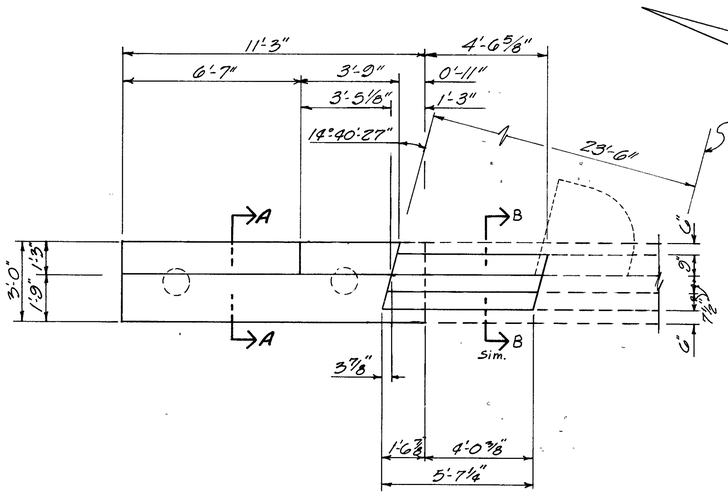
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.E.M.	EACH	JOE	R.G.S.	J.S.D.	2/20/68	

88944
MEDIA RESOURCES CORP

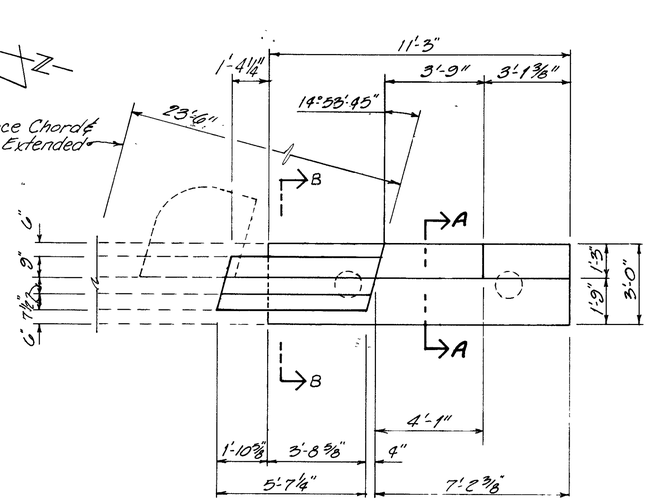
FHWA REGION	STATE	PROJECT	
5	OHIO		

204
219

MOT-70-6.53/11.02

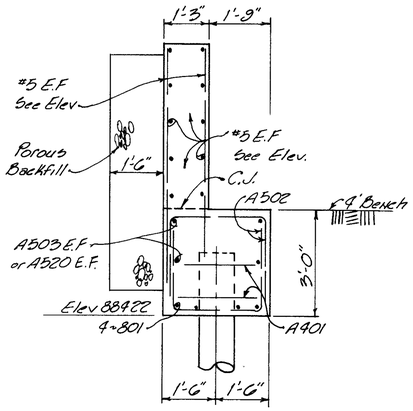


WESTBOUND (12.67 L)

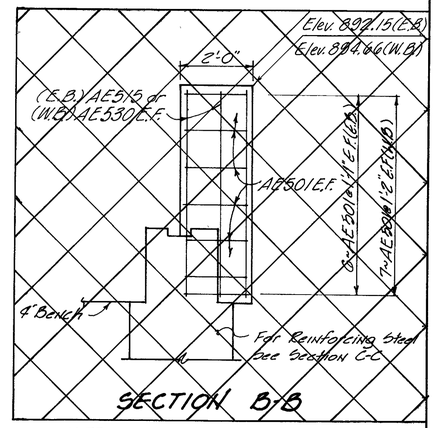


EASTBOUND (12.67 R)

PLAN

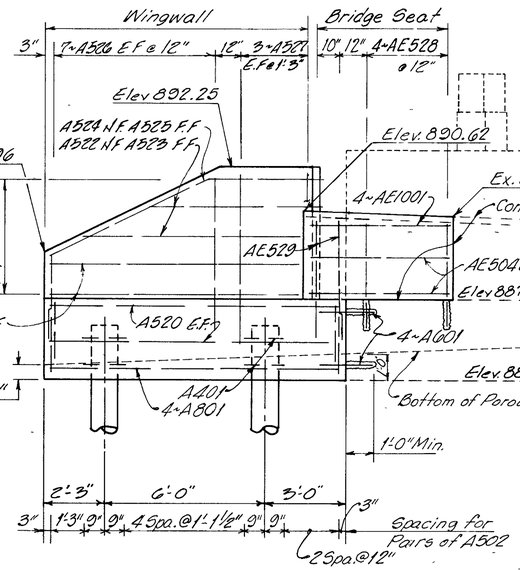


SECTION A-A



SECTION B-B

NOTE: Type A Waterproofing shall be included in the price bid for the Appr. Slab.

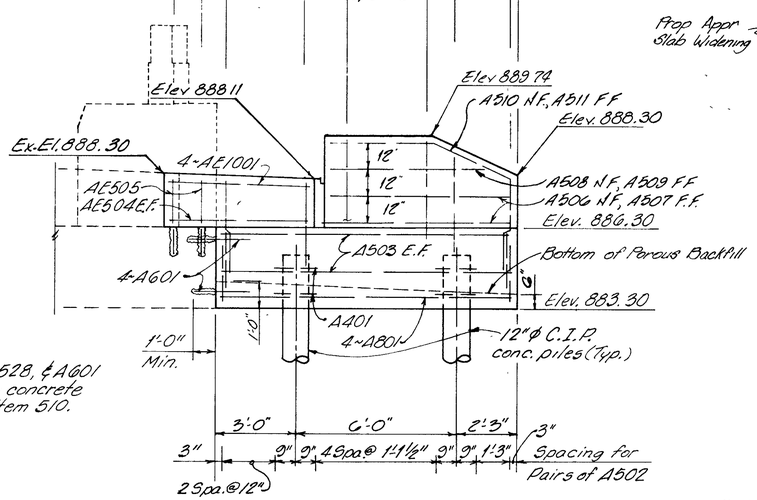


WESTBOUND (12.67 L)

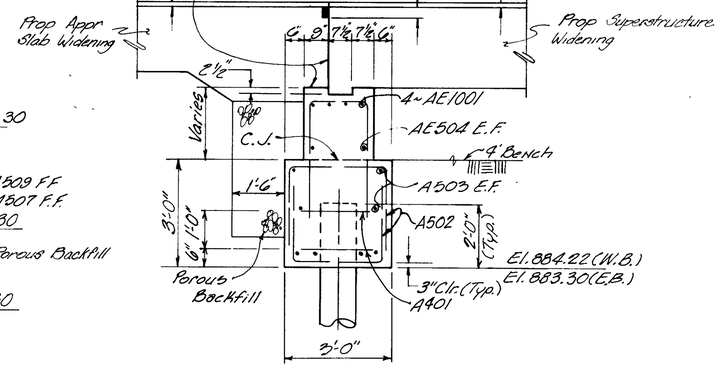
* Provide anchor assemblies for Type AA or AT Bridge Terminal Assemblies, As Per Std. Dwg. GR-3.

NOTE: Dowel A505, A528, & A601 Bars 1'-0" into existing concrete in accordance with Item 510.

ELEVATION



EASTBOUND (12.67 R)



SECTION B-B

NOTES

- C.J. Denotes Construction Joint.
- For Steel Reinforcing List See Sheet 10/12
- E.F. Denotes Each Face
- N.F. Denotes Near Face
- F.F. Denotes Far Face
- EXISTING REINFORCING STEEL PROJECTING from the abutment that protrudes into the proposed concrete shall be cut as read for clearance and be retained in the widened abutment. All other reinforcing steel shall be burned off flush with the concrete surfaces.

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

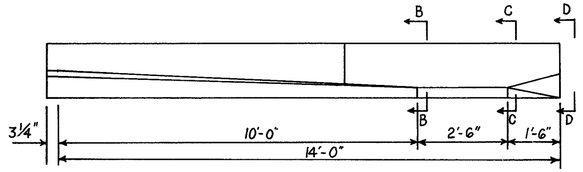
5/12

FORWARD ABUTMENT WIDENING

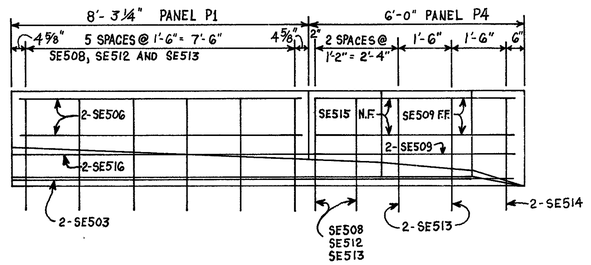
BRIDGE NO. MOT-70-1267(L/R)
(OVER FREDERICK PIKE)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	EACH	JOE	R.G.S.	S.B.Z.	2/20/88	

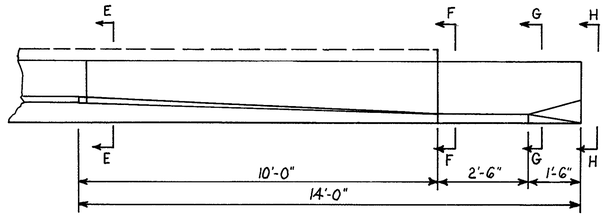


PLAN

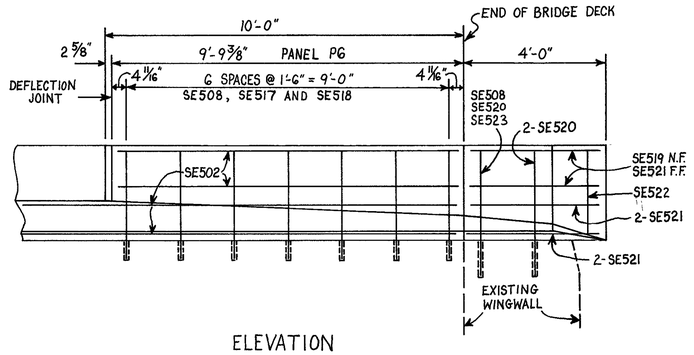


ELEVATION

Panel P1 & P4 Detail



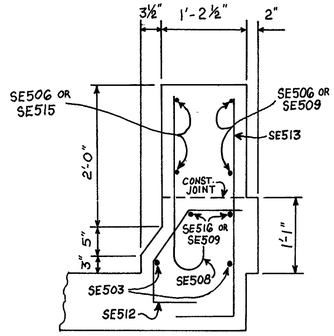
PLAN



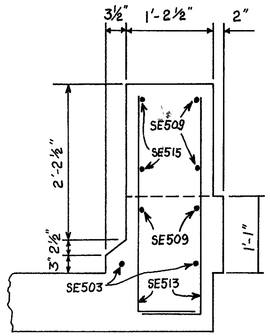
ELEVATION

Panel P6 And Existing Wingwall Detail

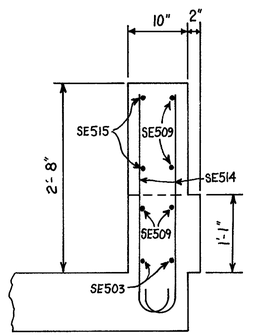
N.F. = NEAR FACE
F.F. = FAR FACE
TYPE "AA" BRIDGE TERMINAL ASSEMBLY
MOT-70-1267R : LT. REAR & RT. REAR
MOT-70-1267L : LT. FORWARD & RT. FORWARD
TYPE "AT" BRIDGE TERMINAL ASSEMBLY
MOT-70-1267L : LT. REAR



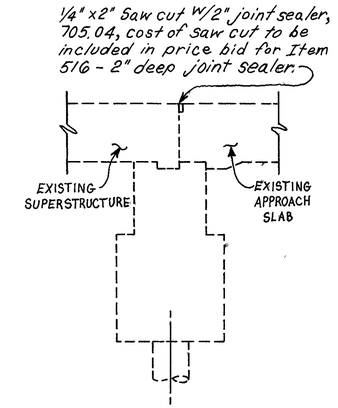
SECTION B-B



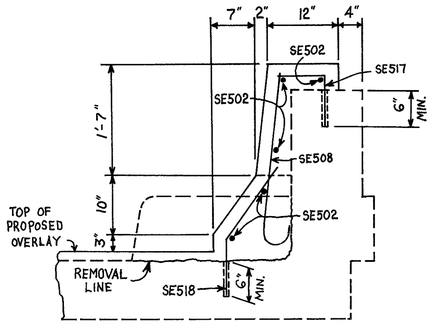
SECTION C-C



SECTION D-D



SECTION D-D
FROM SHT. 8/12 & 9/12



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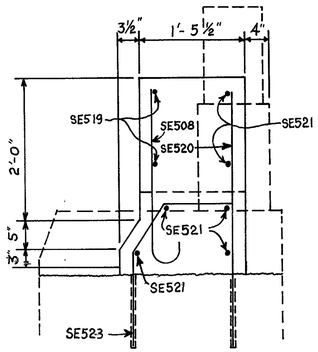

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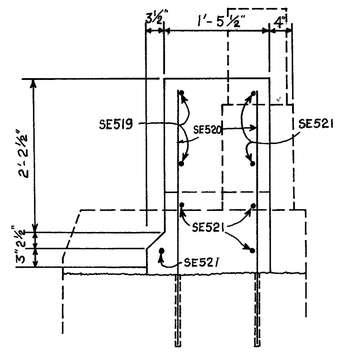

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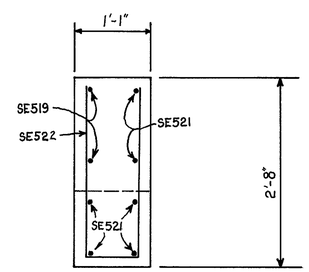


SECTION H-H

FHWA REGION	STATE	PROJECT		205 / 219
5	OHIO			

MONTGOMERY COUNTY
MOT-70-06.49/11.02

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION — 6/12

DETAILS
BRIDGE No. MOT-70-1267 R/L

MONTGOMERY COUNTY

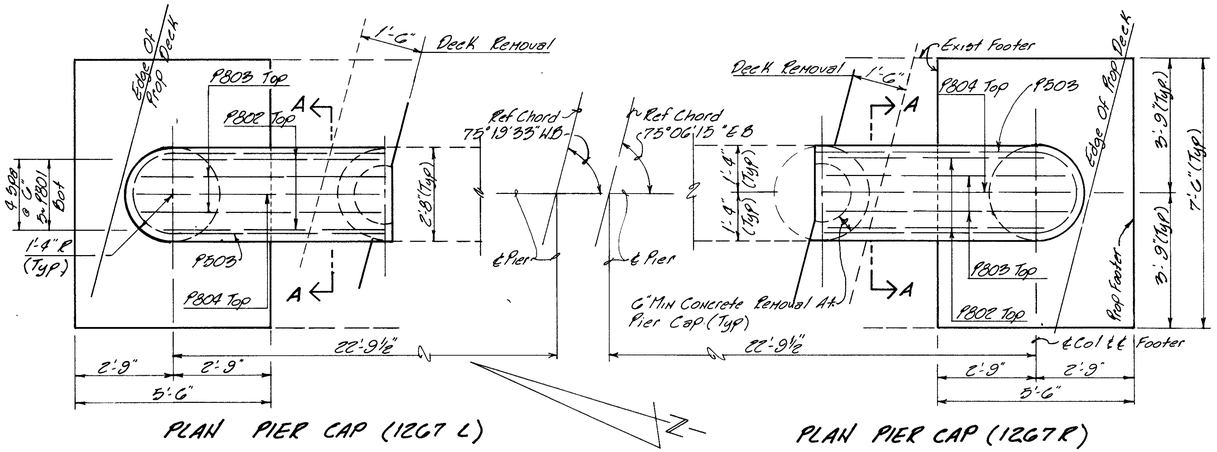
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

A:MOT70BS1 19901213

FHWA REGION	STATE	PROJECT	
5	OHIO		

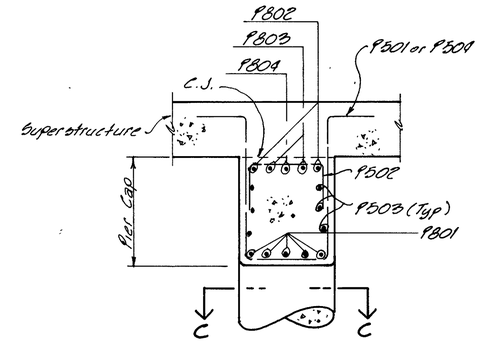
206
219

MOT-70-6.53/11.02

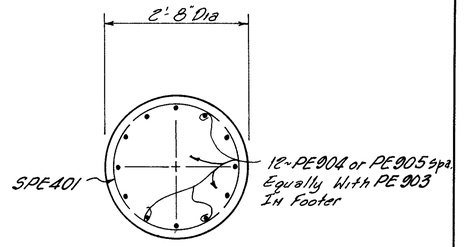


PLAN PIER CAP (1267 L)

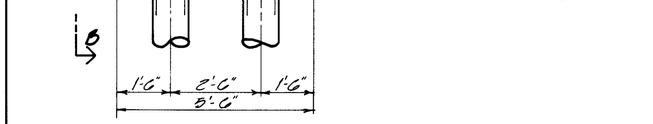
PLAN PIER CAP (1267 R)



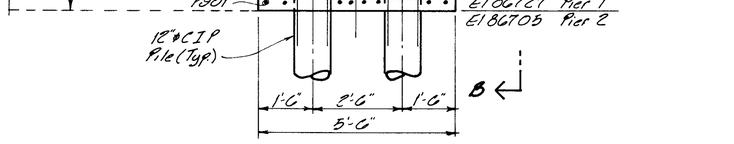
SECTION A-A



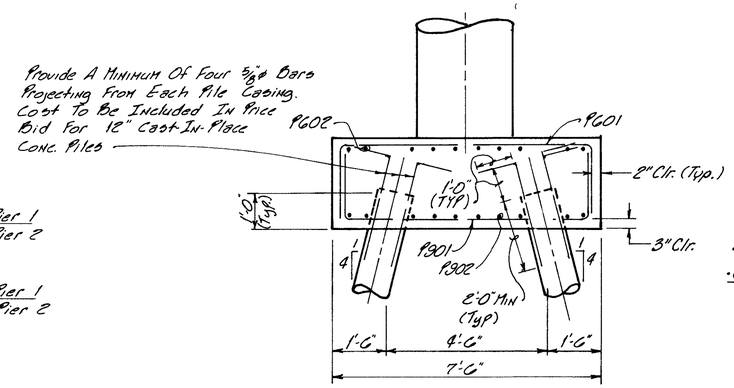
SECTION C-C



ELEVATION - PIER (1267 L)



ELEVATION - PIER (1267 R)



ELEVATION B-B

NOTES

- For Reinforcing Steel List See Sht 11/12
- C.J. Denotes Construction Joint

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

7/12

PIERS

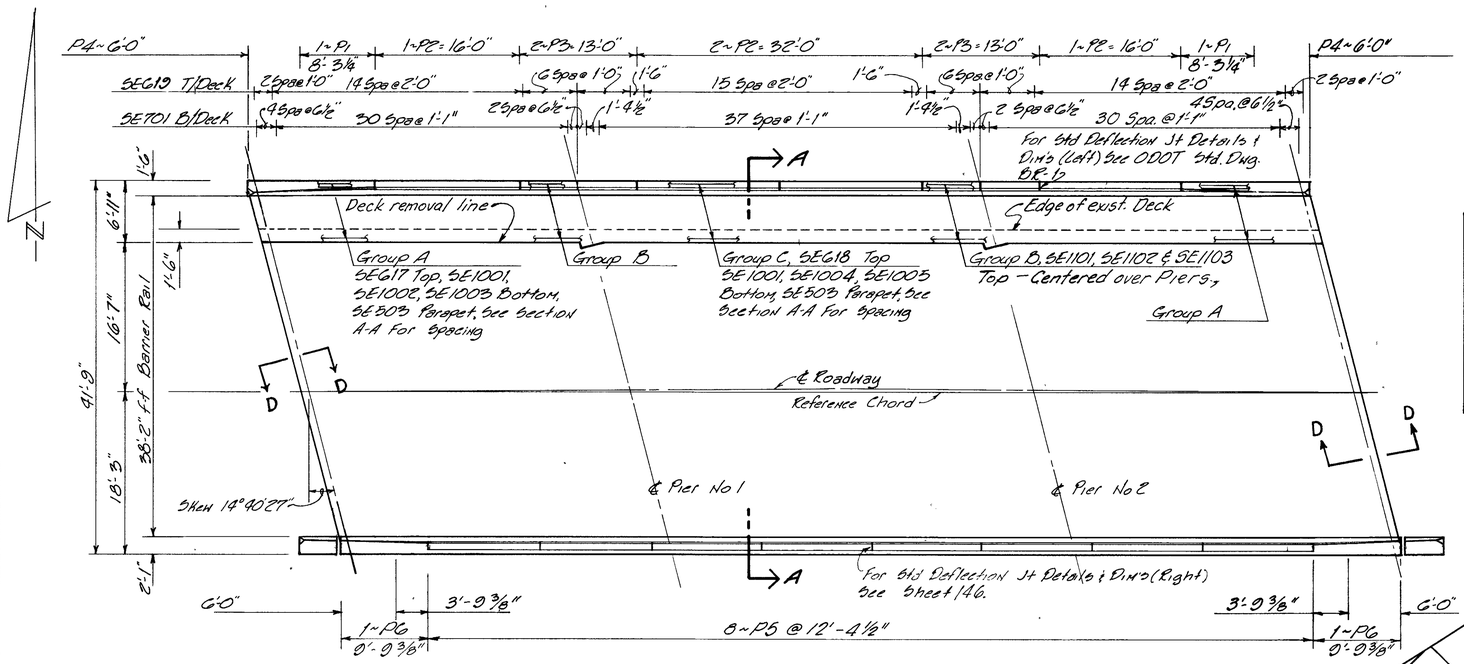
BRIDGE NO. MOT-70-1267(L/R) OVER [illegible] PK

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH	JOE	R.G.S.	S.D.Z	2/22/88	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

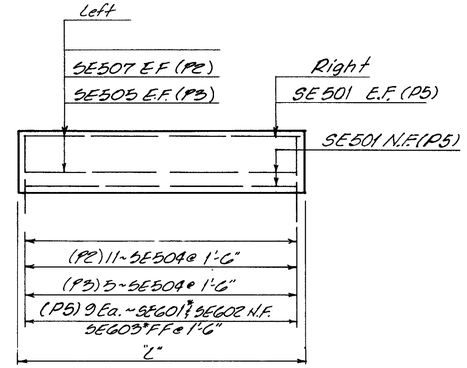


PLAN

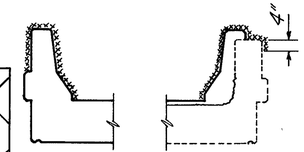
FOR SECTION D-D SEE SHT. 6/12

PANELS

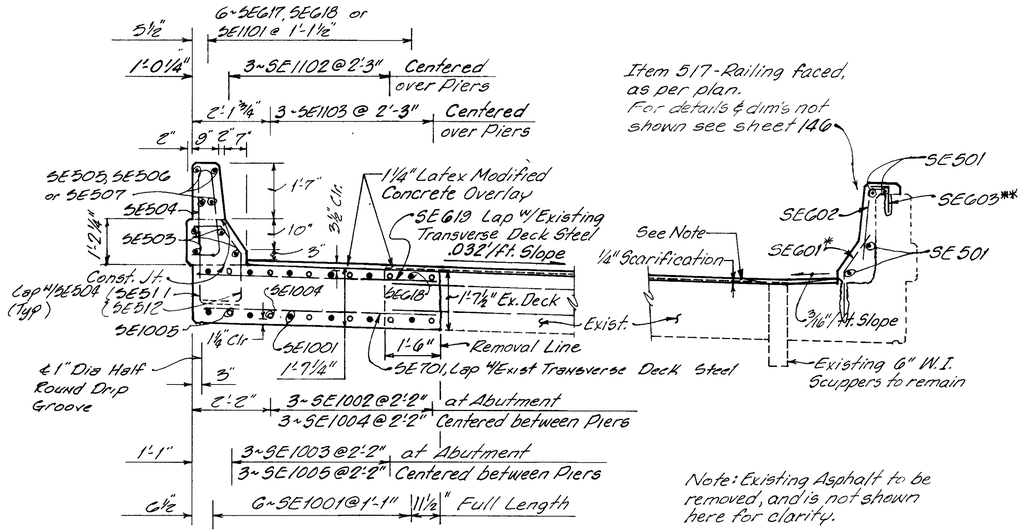
Mark	"L"	No. Req'd
P1	8'-3¼"	2
P2	16'-0"	4
P3	6'-6"	4
P4	6'-0"	2
P5	12'-4½"	8
P6	9'-0⅜"	2



FOR PANEL P1, P4 AND P6 DETAILS SEE SHT. 6/12



SURFACES TO BE SEALED



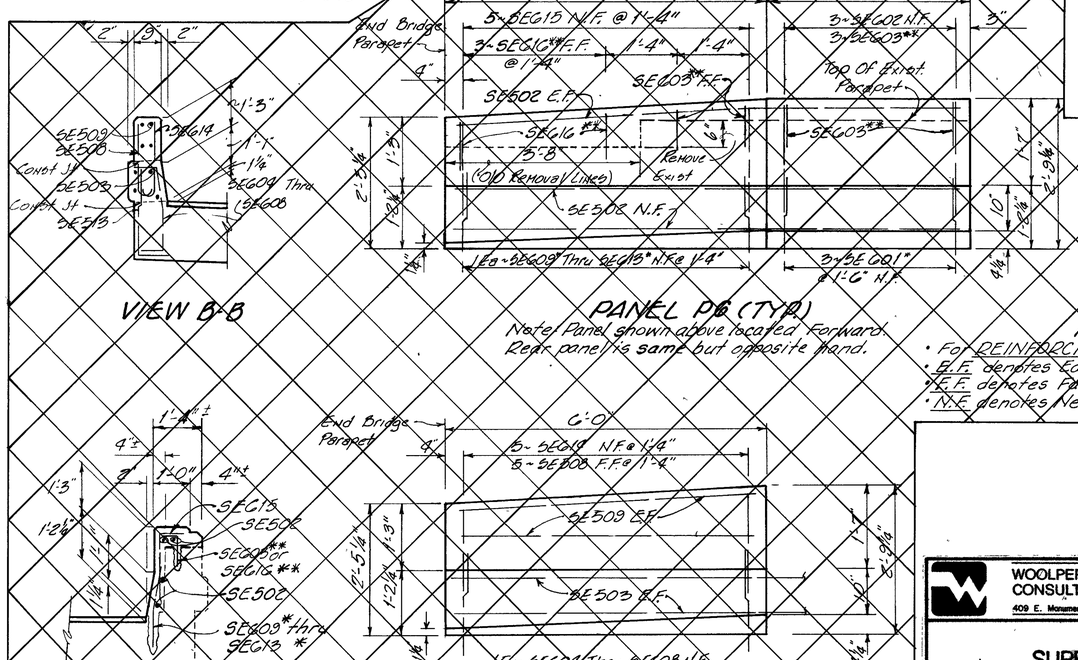
SECTION A-A

* Dowel bars 12" into existing concrete.

** Dowel bars 6" into existing concrete.

Item 517 - Railing faced, as per plan. For details & dim's not shown see sheet 146

Note: Existing Asphalt to be removed, and is not shown here for clarity.



NOTES

- For REINFORCING STEEL LIST see Sht. 11/12
- E.F. denotes Each Face
- F.F. denotes Far Face
- N.F. denotes Near Face

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

8-12

SUPERSTRUCTURE

BRIDGE NO. MOT-70-1267(L)
(OVER FREDERICK PIKE)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.M.	RACH	JOE	R.G.S.	S.B.Z	2/20/80	

FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT-70-6.53/11.02

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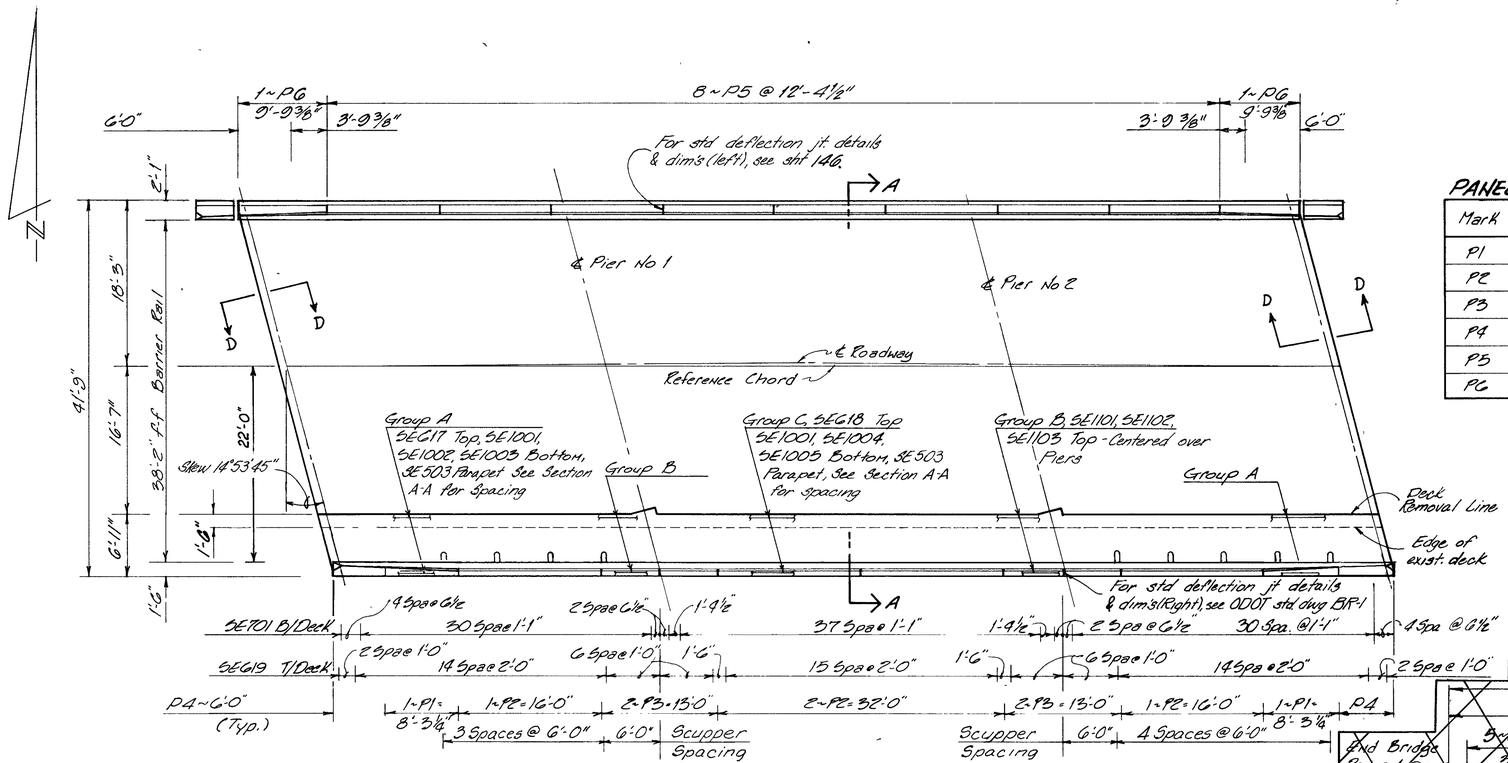
219

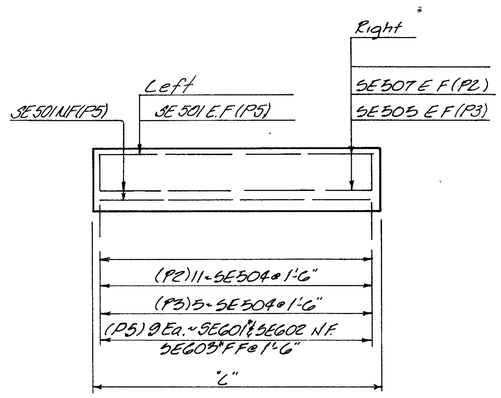


PLAN

FOR SECTION D-D SEE SHT. 6/12

PANELS

Mark	"L"	No Req'd
P1	8'-3¼"	2
P2	16'-0"	4
P3	6'-6"	4
P4	6'-0"	2
P5	12'-4½"	8
P6	0'-9⅜"	2



FOR PANEL P1, P4 & P6 DETAILS SEE SHT. 6/12

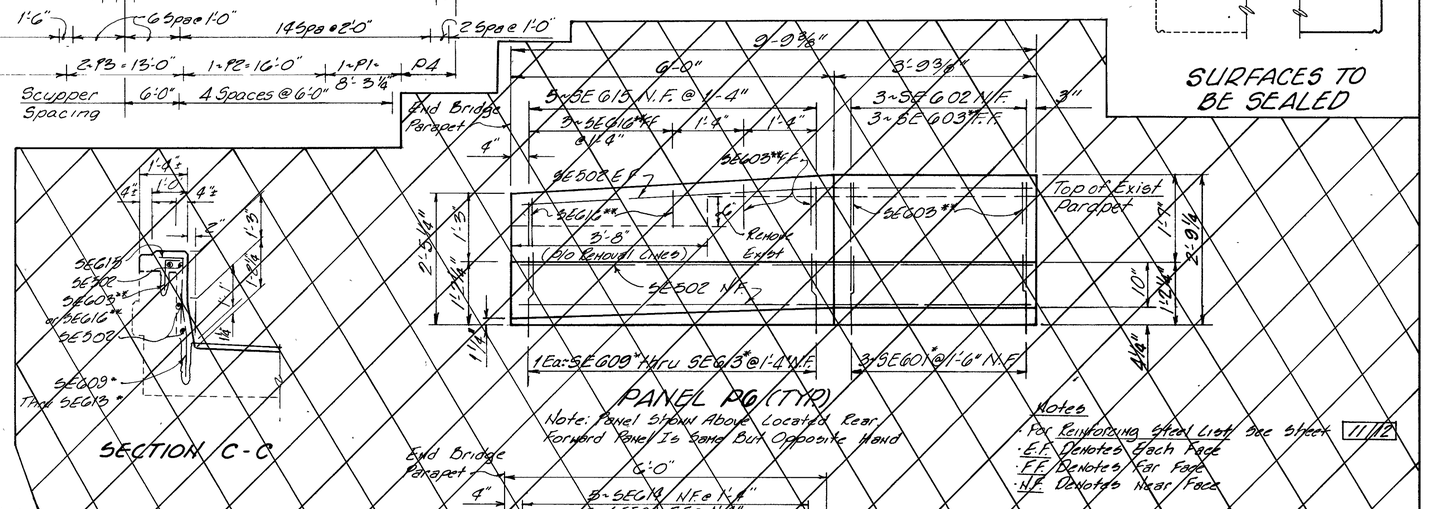
SECTION A-A

* Dowel Bars 12" Into Existing Concrete

** Dowel bars 6" into existing concrete.

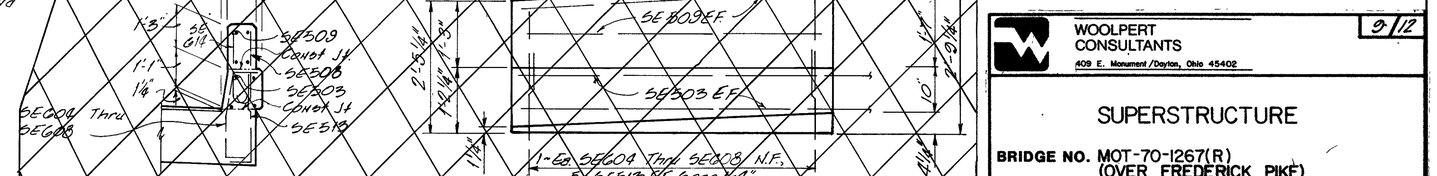
SECTION C-C

SECTION B-B



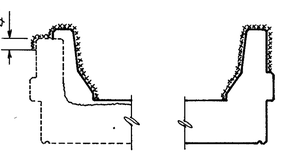
PANEL P6 (TYP)

Note: Panel Shown Above Located Rear. Forward Panel Is Same But Opposite Hand



PANEL P4 (TYP.)

Note: Panel Shown Above At Forward Rear Panel Is Same But Opposite Hand.



SURFACES TO BE SEALED

Notes

- For Reinforcing Steel List See Sheet 11/12
- E.F. Denotes Each Face
- F.F. Denotes Far Face
- N.F. Denotes Near Face

WOOLPERT CONSULTANTS
409 E. Monument / Dayton, Ohio 45402

9/12

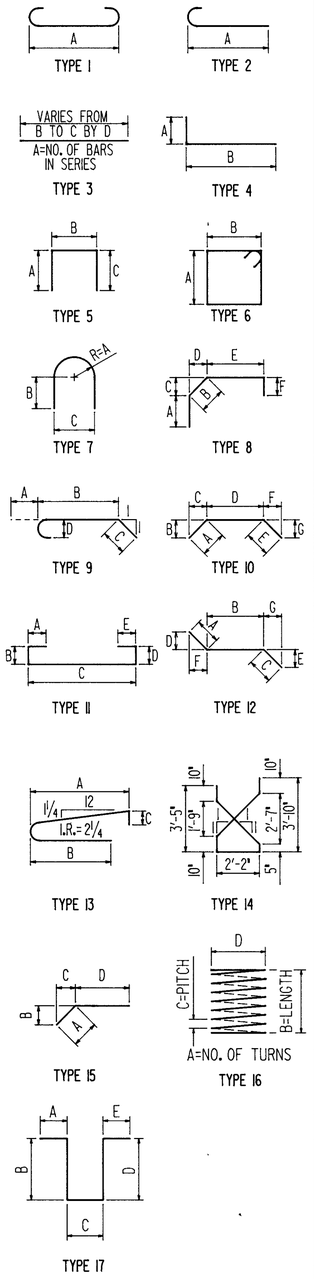
SUPERSTRUCTURE

BRIDGE NO. MOT-70-1267(R)
(OVER FREDERICK PIKE)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.E.M.	JOE		R.G.S.	S.P.S.Z.	2/20/98	

BAR TYPE DIAGRAM



REAR ABUTMENT (MOT - 70 - 1267 R) ALL REINFORCING STEEL BAR MARKS IN THE REAR ABUTMENT SHALL HAVE THE SUFFIX "R".

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A401	4	9'- 2"	25	6	1'-9"	2'-6¾"					
~~AE501~~	~~24~~	~~1'- 8"~~	~~42~~	~~STR.~~							
A502	18	6'- 7"	124	5	2'-1"	2'-8"	2'-1"				
A503	4	9'- 11"	41	STR.							
AE504	2	5'- 3"	11	STR.							
AE505	2	6'- 7"	14	5	2'-7"	1'-8"	2'-7"				
A506	2	7'- 11"	17	STR.							
A507	2	7'- 2"	15	STR.							
A508	1	5'- 11"	6	STR.							
A509	1	6'- 2"	6	STR.							
A510	1	6'- 10"	7	15	3'-0"	1'-4"	2'-8"	3'-11"			
A511	1	7'- 1"	7	15	3'-0"	1'-4"	2'-8"	4'-2"			
A512	8	4'- 9"	40	STR.							
A513	6	3'- 4" TO 4'- 4"	24	3	3	3'-4"	4'-4"	6"			
AE514	4	7'- 5"	31	5	3'-0"	1'-8"	3'-0"				
~~AE515~~	~~6~~	~~5'- 6"~~	~~34~~	~~STR.~~							
A601	8	2'- 0"	24	STR.							
~~AE602~~	~~6~~	~~4'- 11"~~	~~44~~	~~STR.~~							
A801	4	9'- 11"	106	STR.							
AE1001	4	5'- 3"	90	STR.							

NOTE: BARS A516, A517, A518, & A519 NOT USED

REAR ABUTMENT (MOT - 70 - 1267 L) ALL REINFORCING STEEL BAR MARKS IN THE REAR ABUTMENT SHALL HAVE THE SUFFIX "R"

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A401	4	9'- 2"	25	6	1'-9"	2'-6¾"					
~~AE501~~	~~24~~	~~1'- 8"~~	~~42~~	~~STR.~~							
A502	22	6'- 7"	151	5	2'-1"	2'-8"	2'-1"				
AE504	4	5'- 3"	22	STR.							
A520	4	11'- 11"	50	STR.							
A521	2	11'- 10"	25	STR.							
A522	2	10'- 7"	22	STR.							
A523	3	5'- 5" TO 9'- 5"	23	3	3	5'-5"	9'-5"	2'-0"			
A524	3	5'- 2" TO 9'- 2"	22	3	3	5'- 2"	9'-2"	2'-0"			
A525	1	11'- 2"	12	15	4'- 5"	1'-11¾"	3'-11⅜"	6'-10"			
A526	1	10'- 11"	11	15	4'-2"	1'-10⅜"	3'-8¾"	6'-10"			
A527	8	6'- 4"	53	STR.							
A528	14	3'- 2" TO 6'- 2"	68	3	7	3'-2"	6'-2"	6"			
AE529	5	9'- 0"	47	5	3'-9½"	1'- 8"	3'-9½"				
~~AE530~~	~~6~~	~~7'- 0"~~	~~44~~	~~STR.~~							
AE531	2	10'- 5"	22	5	4'-6"	1'-8"	4'-6"				
A601	8	2'- 0"	24	STR.							
~~AE602~~	~~6~~	~~4'- 11"~~	~~44~~	~~STR.~~							
A802	4	11'- 11"	127	STR.							
AE1001	4	5'- 3"	90	STR.							

FORWARD ABUTMENT (MOT - 70 - 1267R) ALL REINFORCING STEEL BAR MARKS IN THE FORWRD ABUTMENT SHALL HAVE THE SUFFIX "F"

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A401	4	9'- 2"	25	6	1'-9"	2'-6¾"					
~~AE501~~	~~24~~	~~1'- 8"~~	~~42~~	~~STR.~~							
A502	20	6'- 7"	137	5	2'-1"	2'-8"	2'-1"				
A503	4	10'- 11"	46	STR.							
AE504	2	5'- 3"	11	STR.							
AE505	2	6'- 7"	14	5	2'-7"	1'-8"	2'-7"				
A506	2	8'- 5"	18	STR.							
A507	2	7'- 2"	15	STR.							
A508	1	6'- 8"	7	STR.							
A509	1	6'- 5"	7	STR.							
A510	1	7'- 2"	7	15	2'-7"	1'-1"	2'-4"	4'-8"			
A511	1	6'- 11"	7	15	2'-7"	1'-1"	2'-4"	4'-5"			
A512	8	4'- 9"	40	STR.							
A513	6	3'-4" TO 4'-4"	96	3	3	3'-4"	4'-4"	6"			
AE514	4	7'- 5"	31	5	3'-0"	1'-8"	3'-0"				
~~AE515~~	~~6~~	~~5'- 6"~~	~~34~~	~~STR.~~							
A601	8	2'- 0"	24	STR.							
~~AE602~~	~~6~~	~~4'- 11"~~	~~44~~	~~STR.~~							
A801	4	10'- 11"	117	STR.							
AE1001	4	5'- 3"	90	STR.							

NOTE: BARS A516, A517, A518, & A519 NOT USED

FORWARD ABUTMENT (MOT - 70 - 1267L) ALL REINFORCING STEEL BAR MARKS IN THE FORWARD ABUTMENT SHALL HAVE THE SUFFIX "F"

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
A401	4	9'- 2"	25	6	1'-9"	2'-6¾"					
~~AE501~~	~~26~~	~~1'- 8"~~	~~45~~	~~STR.~~							
A502	20	6'- 7"	137	5	2'-1"	2'-8"	2'-1"				
A503	4	10'- 11"	46	STR.							
AE504	4	5'- 3"	22	STR.							
A520	2	11'- 4"	24	STR.							
A521	2	10'- 7"	22	STR.							
A522	2	6'-8" TO 8'-10"	16	3	2	6'-8"	8'-10"	2'-2"			
A523	2	6'-11" TO 9'-1"	17	3	2	6'-11"	9'-1"	2'-2"			
A524	1	10'- 6"	11	15	4'-6"	2'-0"	4'-0"	6'-1"			
A525	1	10'- 9"	11	15	4'-9"	2'-11½"	4'-3"	6'-1"			
A526	14	3'-2" TO 6'-2"	68	3	7	3'-2"	6'-2"	6"			
A527	6	6'- 4"	40	STR.							
AE528	4	9'- 9"	41	5	4'-2"	1'-8"	4'-2"				
AE529	2	10'- 9"	22	5	4'-8"	1'-8"	4'-8"				
~~AE530~~	~~6~~	~~7'- 0"~~	~~44~~	~~STR.~~							
A601	8	2'- 0"	24	STR.							
~~AE602~~	~~6~~	~~4'- 11"~~	~~44~~	~~STR.~~							
A801	4	10'- 11"	117	STR.							
AE1001	4	5'- 3"	90	STR.							

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

MOT-70-06.53/11.02

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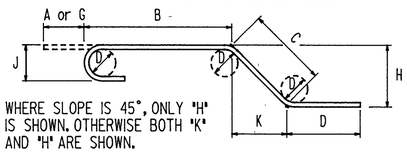

TYPICAL BAR BENDING DETAILS

NOTES

1. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBERS. FOR EXAMPLE A-601 IS A NO.6 SIZE BAR AND A P-1004 IS A NO.10 SIZE BAR.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR.
3. RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR. RADIUS DIMENSION "I.R." IS TO INSIDE OF BAR.
4. THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
5. FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
6. DIMENSION ON HOOK IS SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOKSIZE.
7. EPOXY COATED REINFORCING STEEL IS INDICATED BY THE LETTER "E" IN THE BAR MARK PREFIX.
8. REINFORCING STEEL SAMPLES
   REFER TO CMS SECTIONS 106.03, 700, 709.01 THRU 709.05 AND 705.08. 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.
9. FOR THE BAR TYPE 16, THE NO. OF TURNS "A" IS THE LENGTH "B" DIVIDED BY THE PITCH "C", PLUS 3 TURNS (TOTAL NO. OF CLOSED COILS), EXPRESSSED AS THE NEAREST WHOLE NO.. 1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH UNIT.
10. FOUR STEEL CHANNEL TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LBS. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE SPACED EQUALLY ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF FOUR SPACERS, BASED ON 0.80 LBS PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY FOR SPIRAL BAR.

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

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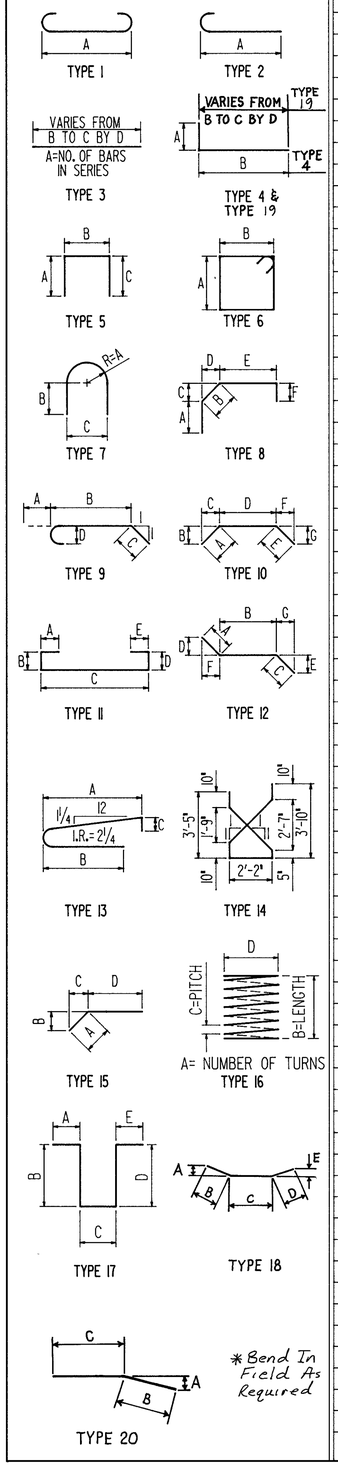
REINFORCING STEEL LIST

BRIDGE NO. MOT - 70 - 1267 (L/R) OVER FREDERICK PIKE

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RACH		RGS	GBZ	2/20/98	

BAR TYPE DIAGRAM



MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
NOTE: QUANTITIES FOR PIER NO.1 AND PIER NO.2 ARE IDENTICAL QUANTITIES SHOWN ARE FOR ONE PIER ONLY.											
PIER NO.1 (1267 L) ALL REINFORCING STEEL BAR MARK IN PIER NO.1 SHALL HAVE THE SUFFIX "R".											
PIER NO.2 (1267 L) ALL REINFORCING STEEL BAR MARK IN PIER NO.2 SHALL HAVE THE SUFFIX "F".											
SPE401	1	16' - 0"	373	16	67	16'-0"	3"	2'-4"			
P501	3	15' - 0"	47	17	1'-4"	5'-3"	2'-4"	5'-3"	1'-4"		
P502	3	5' - 3"	16	5	1'-7"	2'-4"	1'-7"				
P503	3	14' -10"	46	7	1'-0⅜"	5'-10"	2'-0¾"				
P601	8	10' - 10"	130	5	2'-0"	7'-2"	2'-0"				
P602	10	8' - 10"	133	5	2'-0"	5'-2"	2'-0"				
P801	5	5' - 10"	78	STR.							
P802	2	9'- 6"	51	4	3'-10"	5'-10"					
P803	2	10' - 6"	56	4	3'-10"	6'-10"					
P804	1	10'- 8"	28	4	3'-10"	7'-0"					
P901	8	10' - 7"	288	5	2'-0"	7'-2"	2'-0"				
P902	10	8' - 7"	292	5	2'-0"	5'-2"	2'-0"				
PE903	12	7' - 11"	323	4	1' -6 ½"	6'-8"					
PE905	12	20' - 0"	816	STR.							
NOTE: QUANTITIES FOR PIER NO.1 AND PIER NO.2 ARE IDENTICAL. QUANTITIES SHOWN FOR ONE PIER ONLY.											
PIER NO.1 (1267 R) ALL REINFORCING STEEL BAR MARKS IN PIER NO.1 SHALL HAVE THE SUFFIX "R".											
PIER NO.2 (1267 R) ALL REINFORCING STEEL BAR MARKS IN PIER NO.2 SHALL HAVE THE SUFFIX "F".											
SPE401	1	16' - 0"	373	16	67	16'-0"	3"	2' - 4"			
P502	3	5' - 3"	16	5	1'-7"	2'-4"	1'-7"				
P503	2	14'- 10"	31	7	1'-0⅜"	5'-10"	2'-0¾"				
P504	3	12' - 6"	39	17	1'-4"	4'-0"	2'-4"	4'-0"	1'-4"		
P601	8	10'- 10"	130	5	2'-0"	7'-2"	2'-0"				
P602	10	8'- 10"	133	5	2'-0"	5'-2"	2'-0"				
P801	5	5' - 10"	78	STR.							
P802	2	8'- 0"	43	4	2'-4"	5'-10"					
P803	2	9'- 0"	48	4	2'-4"	6'-10"					
P804	1	9'- 2"	24	4	2'-4"	7'-0"					
P901	8	10' - 7"	288	5	2' - 0"	7'-2"	2' - 0"				
P902	10	8' - 7"	292	5	2'-0"	5'-2"	2'-0"				
PE903	12	7' - 11"	323	4	1'-6 ½"	6'-8"					
PE904	12	18' - 6"	755	STR.							

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	F	G
NOTE: QUANTITIES FOR MOT - 70 - 1267 BRIDGE LEFT & RIGHT ARE IDENTICAL QUANTITIES SHOWN ARE FOR ONE BRIDGE ONLY.											
BRIDGE RIGHT (1267R) - ALL REINFORCING STEEL BAR MARK IN BRIDGE RIGHT SHALL HAVE THE SUFFIX "R".											
BRIDGE LEFT (1267L) - ALL REINFORCING STEEL BAR MARK IN BRIDGE LEFT SHALL HAVE THE SUFFIX "L".											
DECK ADDITION											
SE617	12	19'- 8"	355	STR.							
SE618	6	12'- 4"	111	STR.							
SE619	73	6'- 10"	749	STR.							
SE701	116	6'- 10"	1620	STR.							
SE1001	18	41'- 6"	3214	STR.							
SE1002	6	29'- 9"	768	2	28'- 6"						
SE1003	6	26'- 1"	673	2	24'- 10"						
SE1004	3	26'- 0"	336	STR.							
SE1005	3	19'- 10"	256	STR.							
SE1101	12	36'- 10"	2348	STR.							
SE1102	6	21'- 6"	685	STR.							
SE1103	6	16'- 2"	515	STR.							
NEW PARAPET											
SE503	12	30'- 0"	376	STR.*							
SE504	64	5'- 3"	351	13	2'-5"	2'-2"	7½"				
SE505	16	6'- 2"	103	STR.							
SE506	8	7'- 11"	66	STR.							
SE507	16	15'- 8"	262	STR.							
SE508	16	3'- 0"	50	2	2'-5"						
SE509	8	5'- 8"	47	STR.							
SE510		NOT USED									
SE511	64	2'- 8"	178	4	10½"	1'-11"					
SE512	80	3'- 5"	285	8	9"	10⅜"	6"	8½"	8½"	10½"	
SE513	24	3'- 8½"	93	4	10"	3'-0"					
SE514	4	3'- 7"	15	2	3'-0"						
SE515	4	5'- 7"	23	18	1"	1'-10"	2'-4"	1'-5"	5"		
SE516	4	25'- 6"	106	STR.							
			1955								
RAILING FACED, AS PER PLAN											
SE501	32	12'- 0"	400	STR.							
SE502	10	9'- 5"	98	STR.							
SE508	16	3'- 0"	50	2	2'-5"						
SE601	72	2'- 6"	270	15	1'-3"	8"	1'-0¾"	9½"			
SE602	72	2'- 1"	225	15	1'-7"	1'-6¾"	2"	8"			
SE603	72	1'- 2"	127	4	8"	8"					
SE517	2	–	21	19	8"	8¼"	13½"	7⅛"			
SE518	14	2'- 0½"	30	15	9½"	5½"	7¾"	1'-3"			
SE519	4	3'- 9"	16	20	5"	1'-5"	2'-4"				
SE520	6	3'- 7"	22	STR.							
SE521	12	3'- 10"	48	STR.*							
SE522	2	5'- 2"	11	5	2'-4"	9"	2'-4"				
SE523	2	2'- 11¼"	6	10							
			1324								

F.H.W.A. REGION	STATE	PROJECT	
5	OHIO		

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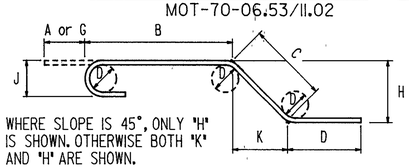
MOT-70-06.53/11.02



TYPICAL BAR BENDING DETAILS

NOTES

1. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR DIGITS ARE USED INDICATE THE BAR SIZE NUMBERS. FOR EXAMPLE A-601 IS A NO.6 SIZE BAR AND A P-1004 IS A NO.10 SIZE BAR.
2. ALL DIMENSIONS ARE OUT TO OUT OF BAR.
3. RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR. RADIUS DIMENSION "I.R." IS TO INSIDE OF BAR.
4. THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
5. FOR STANDARD HOOK DIMENSIONS, SEE SECTION 509.05 OF THE SPECIFICATIONS.
6. DIMENSION ON HOOK IS SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOKSIZE.
7. EPOXY COATED REINFORCING STEEL IS INDICATED BY THE LETTER "E" IN THE BAR MARK PREFIX.
8. REINFORCING STEEL SAMPLES
   REFER TO CMS SECTIONS 106.03, 700, 709.01 THRU 709.05 AND 705.08. 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.
9. FOR THE BAR TYPE 16, THE NO. OF TURNS "A" IS THE LENGTH "B" DIVIDED BY THE PITCH "C", PLUS 3 TURNS (TOTAL NO. OF CLOSED COILS), EXPRESSSED AS THE NEAREST WHOLE NO.. 1½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH UNIT.
10. FOUR STEEL CHANNEL TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.80 LBS. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE SPACED EQUALLY ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF FOUR SPACERS, BASED ON 0.80 LBS PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY FOR SPIRAL BAR.

WOOLPERT CONSULTANTS
409 E. MONUMENT AVE.
DAYTON, OHIO 45402

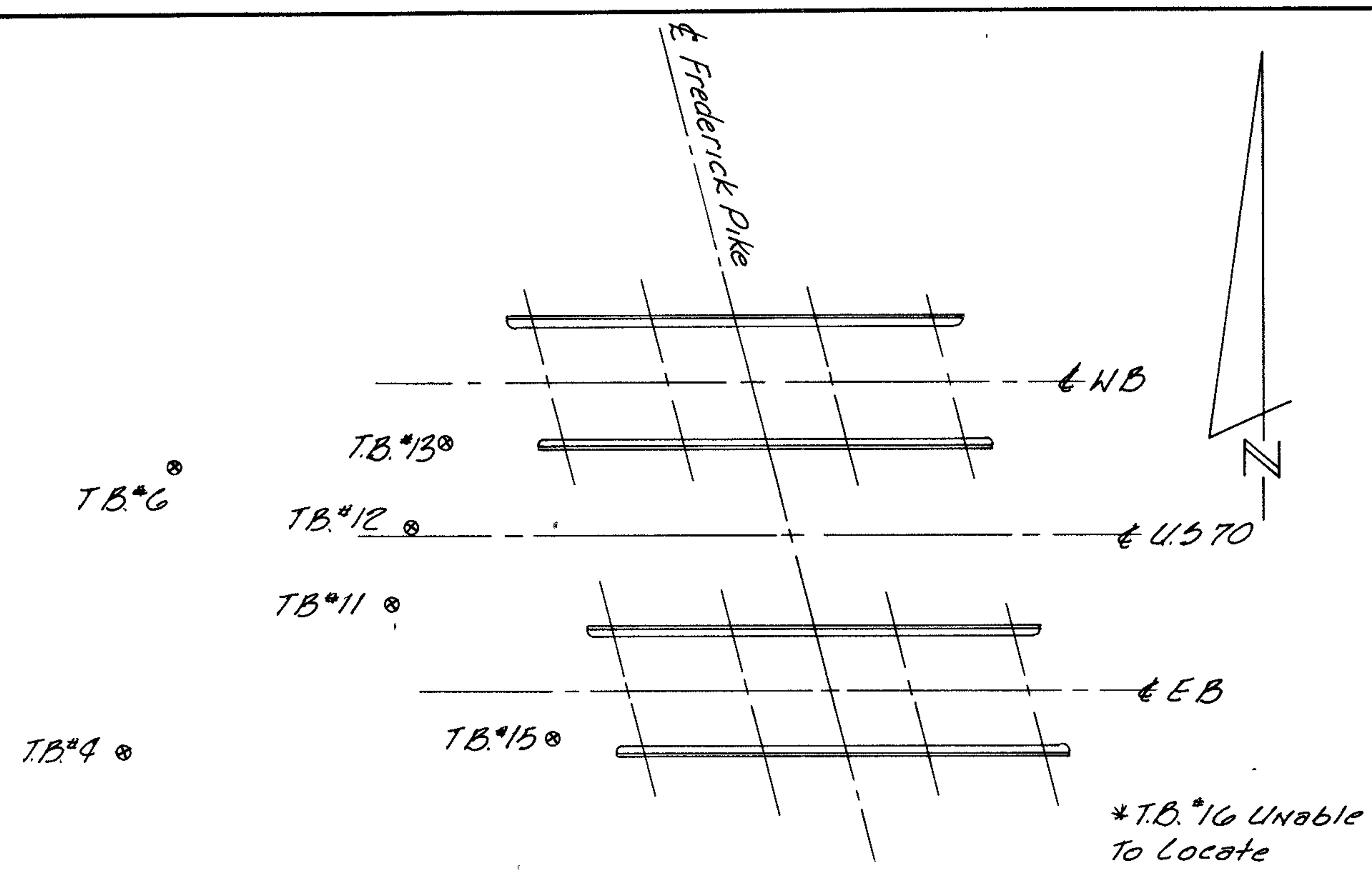
11/12

REINFORCING STEEL LIST

BRIDGE NO. MOT - 70 - 1267 (L/R) OVER
FREDERICK PIKE

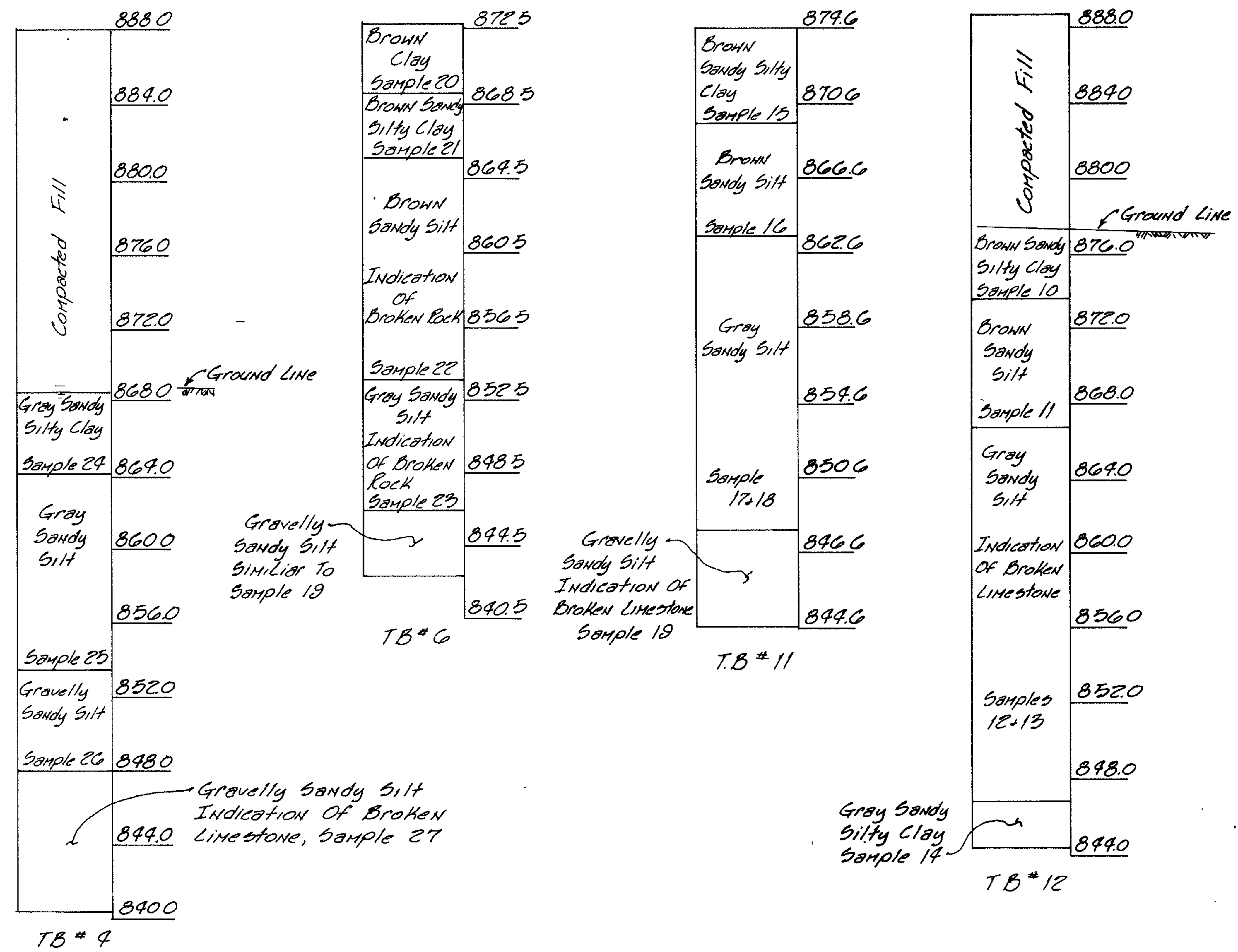
MONTGOMERY COUNTY

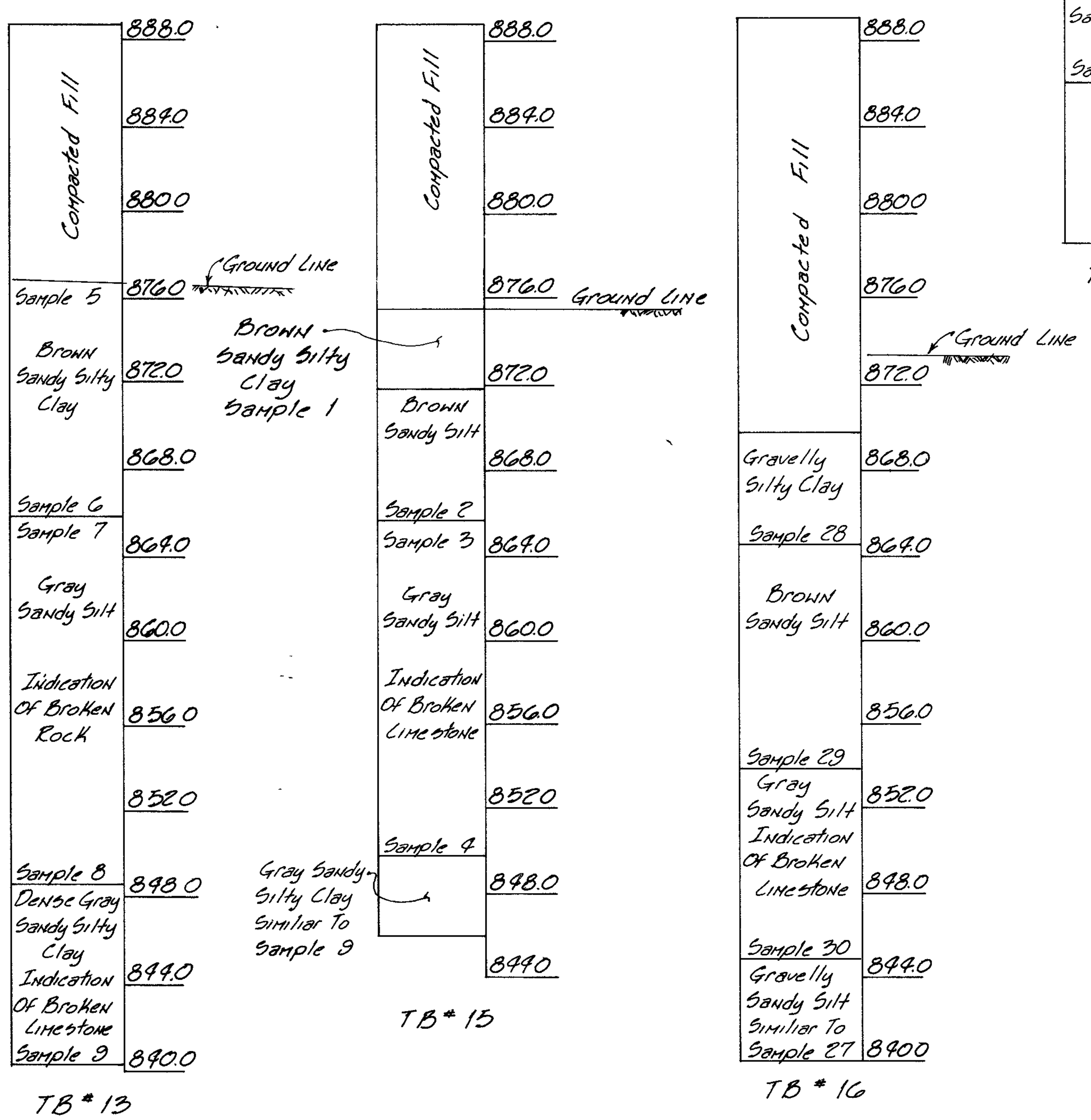
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.D.M.	RACH		R.G.S.	SDZ	12/98	



SITE PLAN

TB = Test Boring Hole





SOIL REPORT

Sample No	Laboratory No	% Gravel	% Coarse Sand	% Fine Sand	% Silt	% Clay	% Water Content	% Liquid Limit	% Plastic Limit	% Plasticity Index	Description
1	11257	3	5	21	36	35		35	19	16	Brown Sandy Silty Clay
2	11258	8	11	19	36	26		24	14	10	Brown Sandy Silt
3	11259	6	10	21	41	22		21	13	8	Gray Sandy Silt
4	11260	1	7	35	36	21		16	11	5	Gray Sandy Silt
5	11261	1	5	21	36	37		37	18	19	Brown Sandy Silty Clay
6	11262	6	7	20	39	28		29	15	14	Brown Sandy Silty Clay
7	11263	7	8	23	41	21		20	13	7	Gray Sandy Silt
8	11264	10	9	20	42	19		Non-Plastic			Gray Sandy Silt
9	11265	6	9	9	33	43		32	15	17	Gray Sandy Silty Clay
10	11266	5	8	20	39	28		31	19	12	Brown Sandy Silty Clay
11	11267	11	11	16	37	25		23	14	9	Brown Sandy Silt
12	11268	8	9	21	42	20		18	13	5	Gray Sandy Silt
13	11269	6	9	23	48	14		17	13	4	Gray Sandy Silt
14	11270	12	12	12	32	32		29	15	14	Gray Sandy Silty Clay
15	11271	0	4	17	42	37		39	21	18	Brown Sandy Silty Clay
16	11272	7	11	19	35	28		23	14	9	Brown Sandy Silt
17	11273	9	9	20	41	21		20	13	7	Gray Sandy Silt
18	11274	3	8	24	45	20		18	13	5	Gray Sandy Silt
19	11275	18	7	16	32	27		22	15	7	Gravelly Sandy Silt
20	11276	10	9	14	43	24		44	29	15	Brown Clay
21	11277	3	9	25	34	29		28	15	13	Brown Sandy Silty Clay
22	11278	5	9	25	36	25		20	13	7	Brown Sandy Silt
23	11279	7	7	24	36	26		19	13	6	Gray Sandy Silt
24	11923	7	7	18	41	27		29	13	14	Gray Sandy Silty Clay
25	11924	12	15	23	33	17		17	12	5	Gray Sandy Silt
26	11925	24	11	16	31	18		20	13	7	Gravelly Sandy Silt
27	11926										Gravelly Sandy Silt Visual Classification
28	11927	16	9	14	37	24		34	21	13	Gravelly Silty Clay
29	11828	12	9	19	36	24		22	14	8	Brown Silty Silt
30	11929	3	10	20	39	28		22	13	9	Gray Sandy Silt

WOOLPERT CONSULTANTS
409 E. Monument/Dayton, Ohio 45402

12/12

SOIL BORING

BRIDGE NO. MOT-70-1267(L/R)
(OVER FREDERICK PIKE)

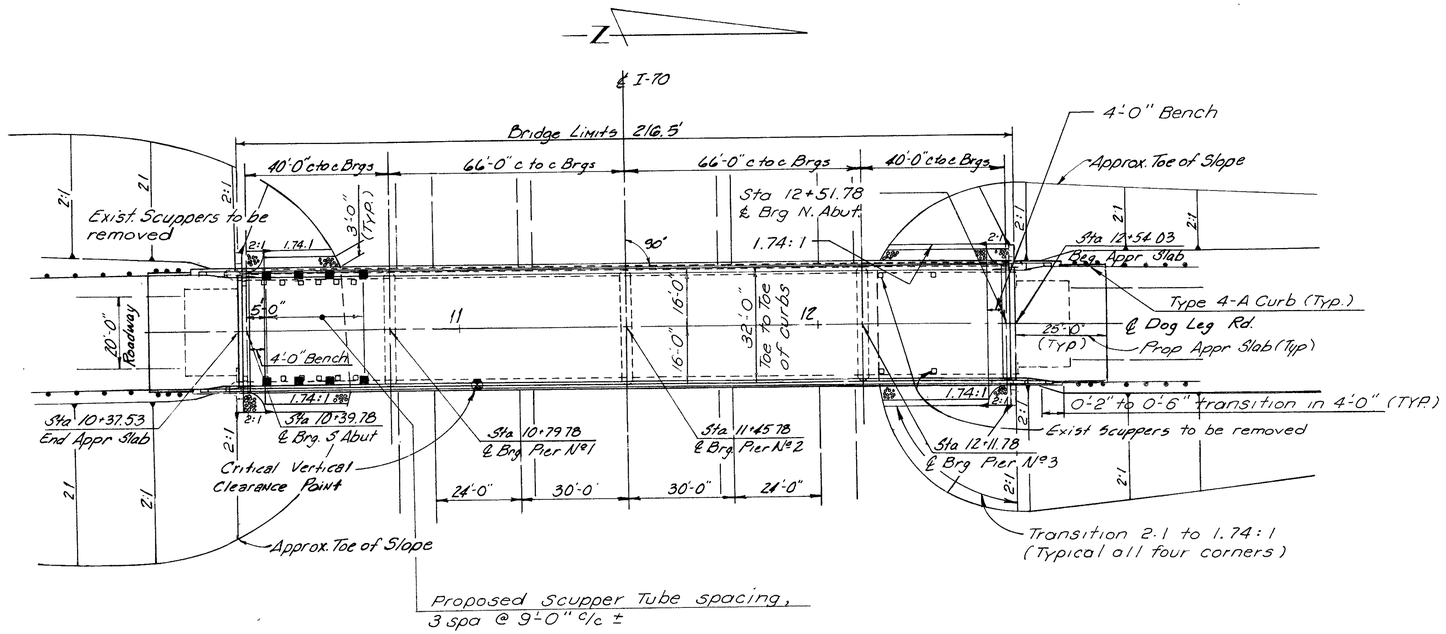
MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	JOE		RGS	S.B.Z.	2/20/86	

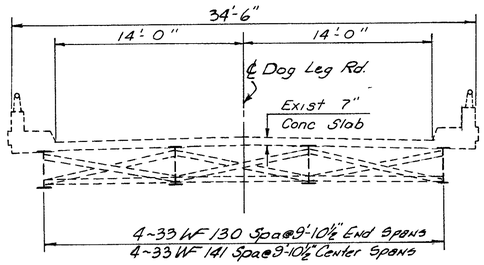
FHWA REGION	STATE	PROJECT	
5	OHIO		

MOT 70-6.53/11.02

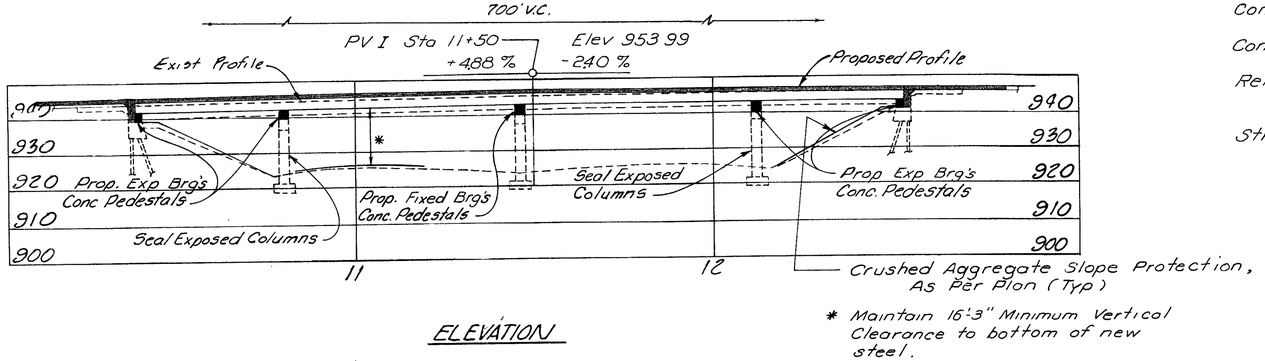
212
219



PLAN



EXISTING BRIDGE SECTION



ELEVATION

For Concrete Pedestals see General Detail Sheet 146.

DESIGN STRESSES

Concrete Class C - Compressive Strength 4000 P.S.I.

Concrete Class S - Compressive Strength 4500 P.S.I.

Reinforcing Steel - ASTM A615, A616, A617 Grade 60 Minimum Yield Strength 60,000 P.S.I.

Structural Steel - Yield strength 36,000 P.S.I.

PROPOSED STRUCTURE MODIFICATION

TYPE: 4 Span Continuous New Steel Beam Bridge with new composite reinforced concrete deck and existing reinforced concrete substructures.
SPANS 40'-0", 66'-0", 66'-0", 40'-0" % bearings
ROADWAY: 32'-0" Toe to Toe of Parapet Curbs
LOADING: HS 20-44 Case II and alternate Military Loading.
SKEW: None
ALIGNMENT: Tangent
SUPERELEVATION: None
WEARING SURFACE: Monolithic Concrete
APPROACH SLABS: AS-1-81 (25' Long)

EXISTING STRUCTURE

Type Continuous steel beam w/reinf. concrete deck & sub-structure.
Spans 40'-0", 66'-0", 66'-0", 40'-0" c to c brgs
Roadway 28'-0" b/b 2 safety curbs w/concrete parapets & alum railing.
Loading: CF = 30
Wearing Surface: Asphalt
Skew None
Alignment Tangent
Approach Slabs: AS-1-81 (15' long).

SFN: 5705797

1/7

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

GENERAL PLAN, ELEVATION, & BRIDGE SECTION

BRIDGE NO. MOT 70-1322
(DOG LEG ROAD OVER I-70)

MONTGOMERY COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.E.M.	RMJ	RMJ	R.G.S	J.S.L.	2/20/98	

FHWA REGION	STATE	PROJECT	
5	OHIO		

2/3
2/19

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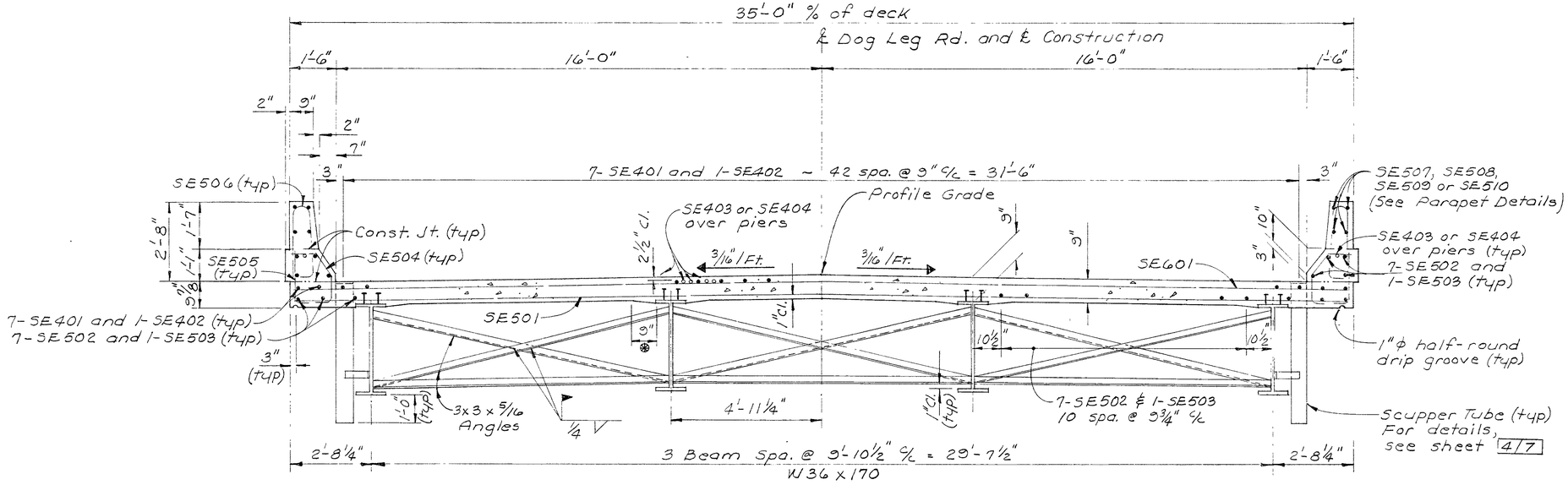
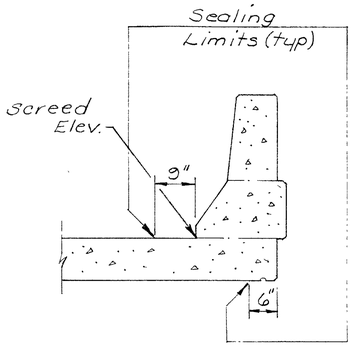
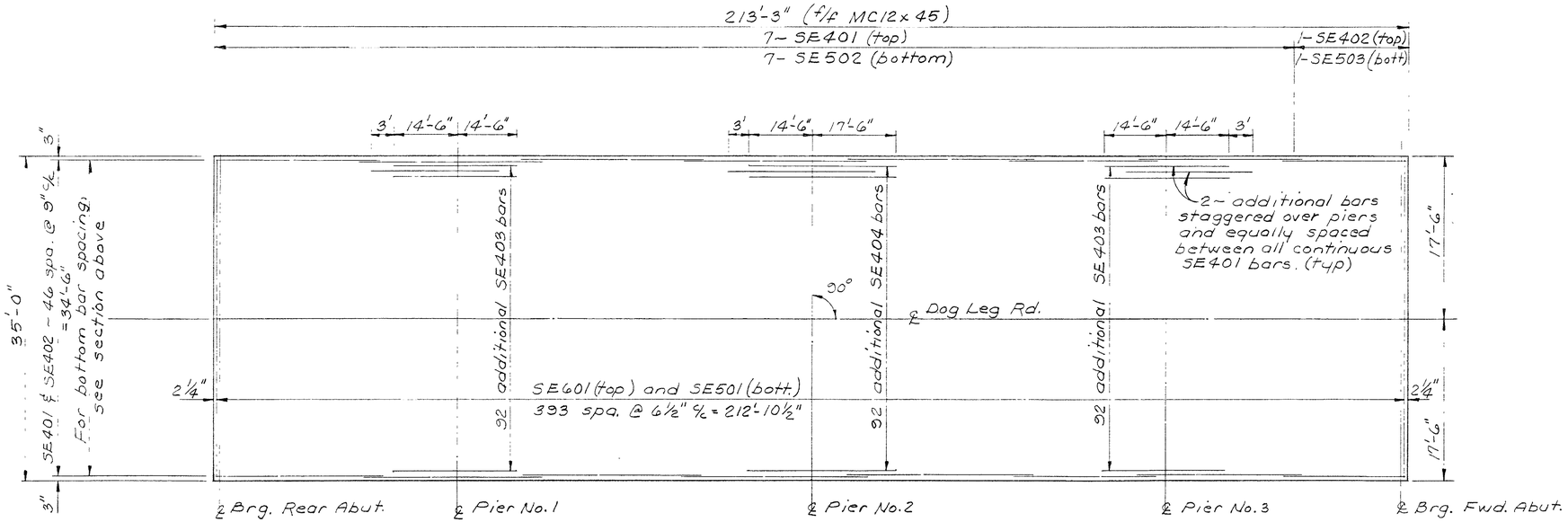


TRANSVERSE SECTION



PARAPET SEAL

N



DECK REINFORCING PLAN

All No. 4 bar laps to be 1'-8" min.
All No. 5 bar laps to be 2'-2" min.

WELDED ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE MAY BE MADE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". ATTACHMENTS SHALL NOT BE MADE TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE NOT CLOSER THAN 1" FROM EDGE OF FLANGE, BE NOT MORE THAN 2" LONG, AND BE NOT SMALLER THAN THE MINIMUM SIZE REQUIRED BY SECTION 2.7 OF THE AWS BRIDGE WELDING CODE.

❀ 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" WIDTH.)

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.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: DEFLECTOR PARAPETS SHALL BE SEALED AS PER DETAILS WITH AN EPOXY SEALER. SEE THE PROPOSAL FOR SURFACE PREPARATION REQUIREMENTS, APPLICATION RATES, MATERIAL REQUIREMENTS AND APPLICATION PROCEDURES.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

2/7

SUPERSTRUCTURE DETAILS BRIDGE No. MOT-70-1322 DOG LEG RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-24-90	

804233

FHWA REGION	STATE	PROJECT	
5	OHIO		

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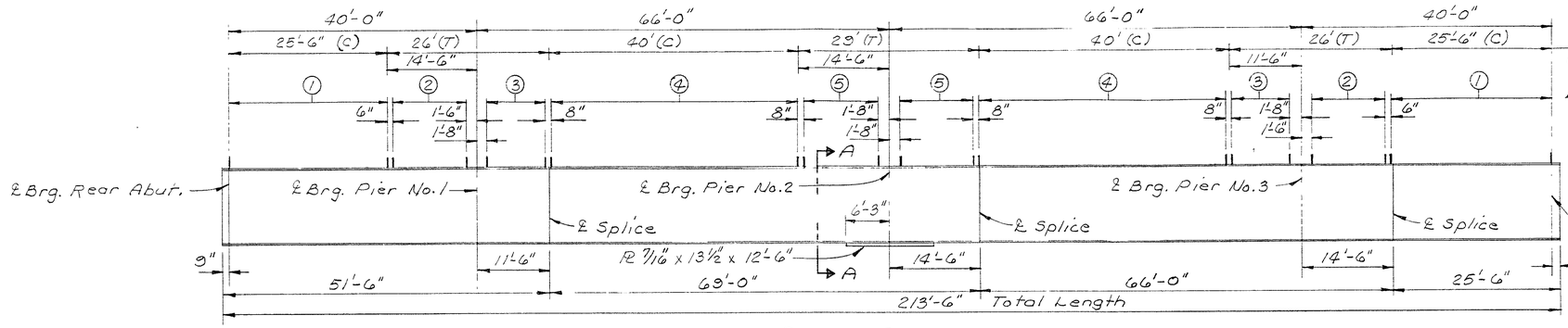
MOT-70-6.53/11.02



T= Tension Zone
C= Compression Zone
Top flange is shown.
Bottom is opposite

SHEAR CONNECTOR SPACING *

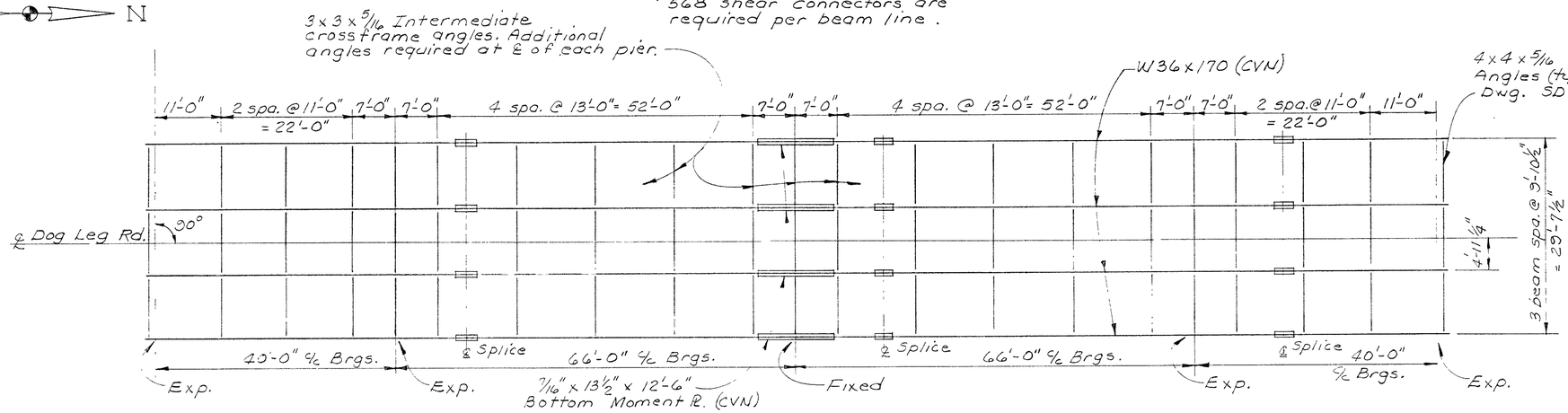
①	52 spa. @ 6" c/c = 26'-0"
②	9 spa. @ 1'-4" c/c = 12'-0"
③	7 spa. @ 1'-4" c/c = 9'-4"
④	60 spa. @ 8" c/c = 40'-0"
⑤	9 spa. @ 1'-4" c/c = 12'-0"

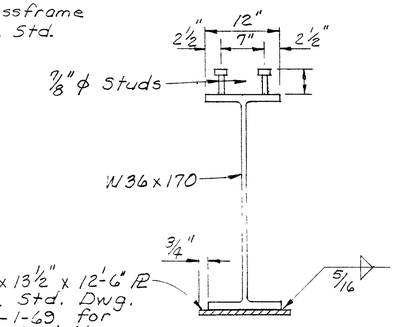
* Connectors may be moved slightly at the splices to avoid interferance with the flange bolts.

BEAM ELEVATION

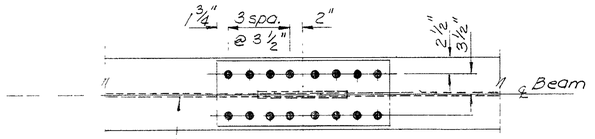
(vertical scale is exaggerated)
568 shear connectors are required per beam line.

N

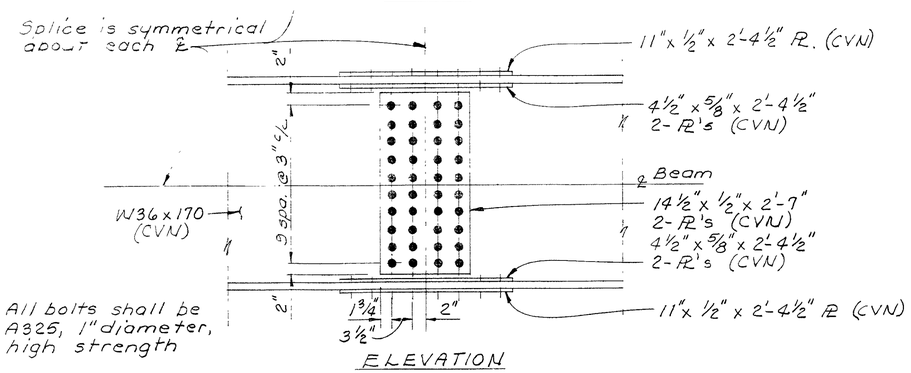




SECTION A-A



PLAN



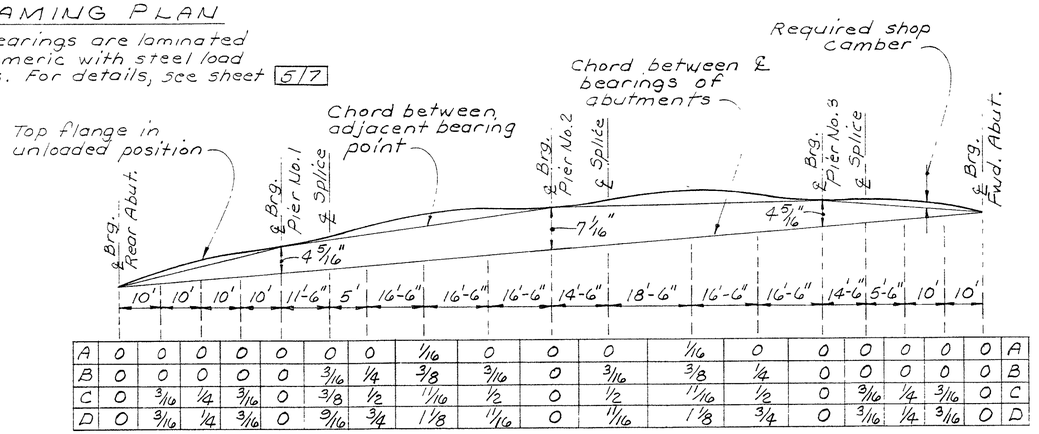
All bolts shall be A325, 1" diameter, high strength

ELEVATION

SPLICE DETAILS

FRAMING PLAN

(All bearings are laminated elastomeric with steel load plates. For details, see sheet 5/7



A	0	0	0	0	0	0	0	1/16	0	0	0	1/16	0	0	0	0	0	0	A
B	0	0	0	0	0	3/16	1/4	3/8	3/16	0	3/16	3/8	1/4	0	0	0	0	0	B
C	0	3/16	1/4	3/16	0	3/8	1/2	11/16	1/2	0	1/2	11/16	1/2	0	3/16	1/4	3/16	0	C
D	0	3/16	1/4	3/16	0	9/16	3/4	1 1/8	11/16	0	11/16	1 1/8	3/4	0	3/16	1/4	3/16	0	D

CAMBER DIAGRAM

Line A : Is deflection due to weight of steel.
Line B : Is deflection due to remaining deadload.
Line C : Is adjustment for vertical curve.
Line D : Is required shop camber (inches).

NOTE: Where a shape or plate is designated (CVN), the material shall meet specified minimum notch toughness requirements as specified in 711.01 of CMS.

SCREED ADJUSTMENTS: Screeds shall be adjusted upward by the amounts shown on Line "B" above the final deck profile due to deflection from the concrete dead load.

Screed Elevation = Elev T/ Beam + Slab Depth over Beam + Adjustment

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

3 7

SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-1322
DOG LEG RD. OVER I-70

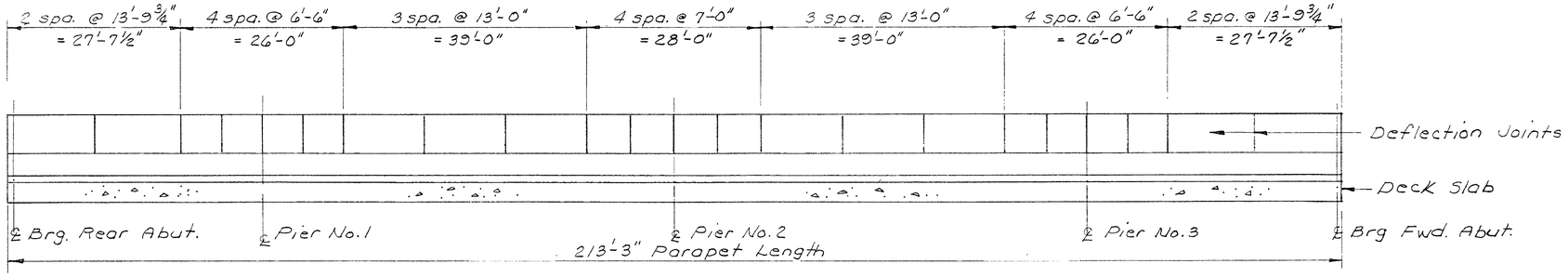
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-24-90	

264232

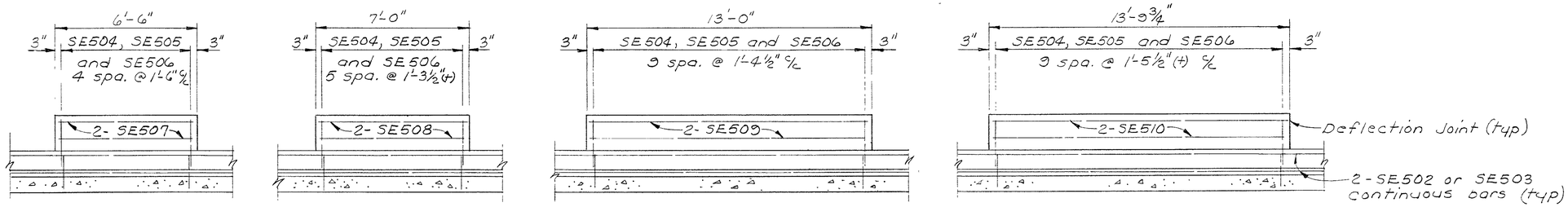
FHWA REGION	STATE	PROJECT	
5	OHIO		

213B/219

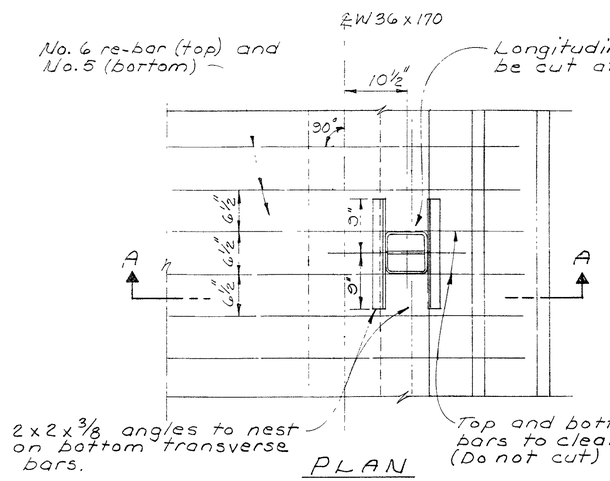
MOT-70-6.53/11.02



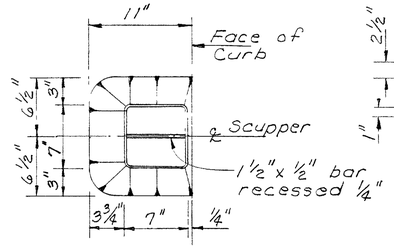
PARAPET ELEVATION



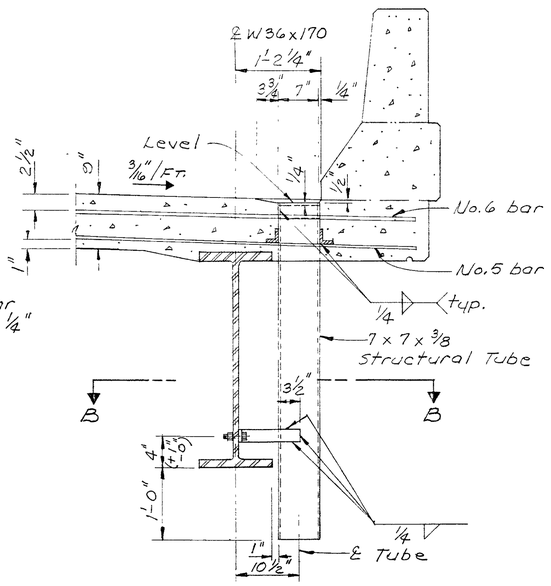
PARAPET PANELS



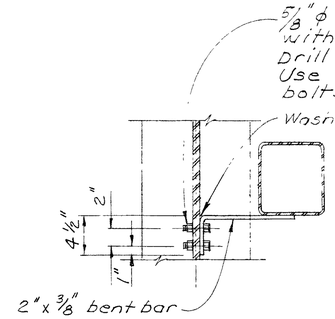
PLAN



DECK FINISH AT SCUPPER



SECTION A-A



All materials for scupper fabrication shall be ASTM-A36. Galvanizing shall be in accordance with 711.02.

SECTION B-B

SCUPPER DETAILS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

4 | 7

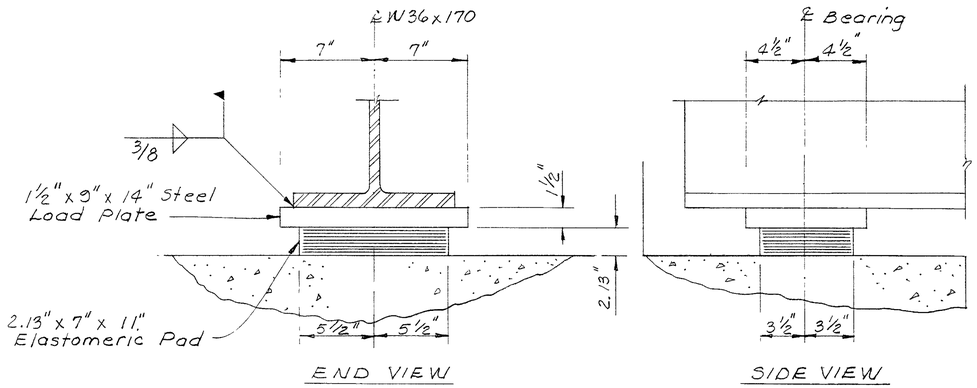
SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-1322
DOG LEG RD.
OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-24-90	

FHWA REGION	STATE	PROJECT	
5	OHIO		

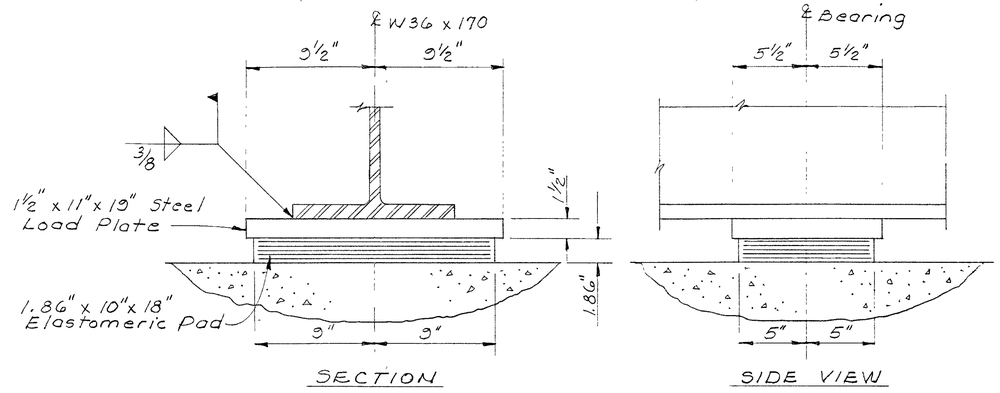
213C 219

MOT-70-6.53/11.02



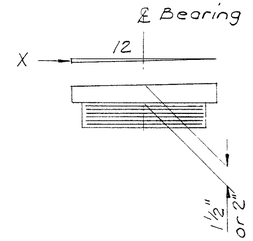
7 internal elastomers x 0.182" = 1.27"
2 external elastomers x 0.130" = 0.26"
8 steel laminates x 0.075" = 0.60"
50 durometer
Max. design load = 66.2 Kips

EXPANSION BEARING
(Rear and Fwd. Abutments)



4 internal elastomers x 0.273" = 1.092"
2 external elastomers x 0.195" = 0.390"
5 steel laminates x 0.075" = 0.375"
50 durometer
Max. design load = 164.5 Kips

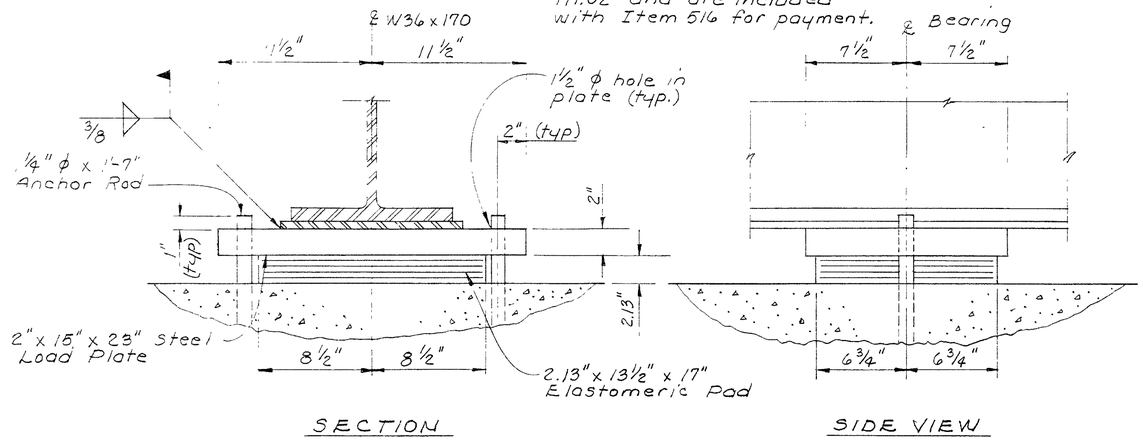
EXPANSION BEARING
(Pier No. 1 and 3)



LOAD PLATE BEVEL REQUIRED

Rear Abut. X = 1/4
Pier No. 1 X = 1/4
Pier No. 2 X = 3/16
Pier No. 3 X = 1/8
Fwd. Abut. X = 0

Anchor rods shall be galvanized according to 711.02 and are included with Item 516 for payment.



3 internal elastomers x 0.412" = 1.236"
2 external elastomers x 0.295" = 0.590"
4 steel laminates x 0.075" = 0.300"
60 durometer
Max. design load = 203.7 Kips

FIXED BEARING
(Pier No. 2)

LAMINATED ELASTOMERIC BEARINGS

TOLERANCES:
INDIVIDUAL ELASTOMER LAYER THICKNESS: ± 20% OF DESIGN VALUE NOT TO EXCEED ± 1/8"

PLAN DIMENSIONS	-0, +1/4"
DESIGN THICKNESS ≤ 1¼"	-0, +1/8"
DESIGN THICKNESS > 1¼"	-0, +1/4"
EDGE COVER OF EMBEDDED LAMINATES	-0, +1/8"

LOAD PLATE: THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. STEEL LOAD PLATES SHALL BE ONE AND ONE HALF INCH THICK MIN. FOR BEARINGS RATED UP TO AND INCLUDING 200 KIPS AND SHALL BE TWO INCHES THICK MIN. FOR BEARINGS RATED OVER 200 KIPS.
WELDING OF THE LOAD PLATE TO THE SUPERSTRUCTURE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE SHALL NOT EXCEED 400°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80°F OR LOWER THAN 40°F, AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60°F ± 10°F, THE BEAMS OR GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F ± 10°F.

STEEL DESIGNATION: THE STEEL LOAD PLATE SHALL BE A36 STEEL

BASIS OF PAYMENT: THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS EITHER FIXED OR EXPANSION. PAYMENT WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516, EACH, LAMINATED ELASTOMERIC BEARINGS(SEE ESTIMATED QUANTITIES)

ELASTOMERIC TEST PAD: THE ELASTOMERIC BEARING MANUFACTURER SHALL SUPPLY A PLAIN ELASTOMERIC PAD FOR TESTING PURPOSES. THE PAD SHALL BE FURNISHED FROM THE SAME BATCH OF NEOPRENE THAT IS USED IN THE FABRICATION OF THE LAMINATED ELASTOMERIC BEARINGS AND THE FABRICATOR SHALL CERTIFY THE IDENTITY OF THE ELASTOMER. THE PAD SHALL HAVE A 1/2" THICKNESS AND SHALL HAVE MINIMUM LENGTH AND WIDTH DIMENSIONS OF 6 INCHES.

PAYMENT FOR THE TEST PAD WILL BE INCLUDED IN THE BID PRICE FOR THE BEARING.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

5 | 7

BEARING DETAILS
BRIDGE No. MOT-70-1322
DOG LEG RD. OVER I-70

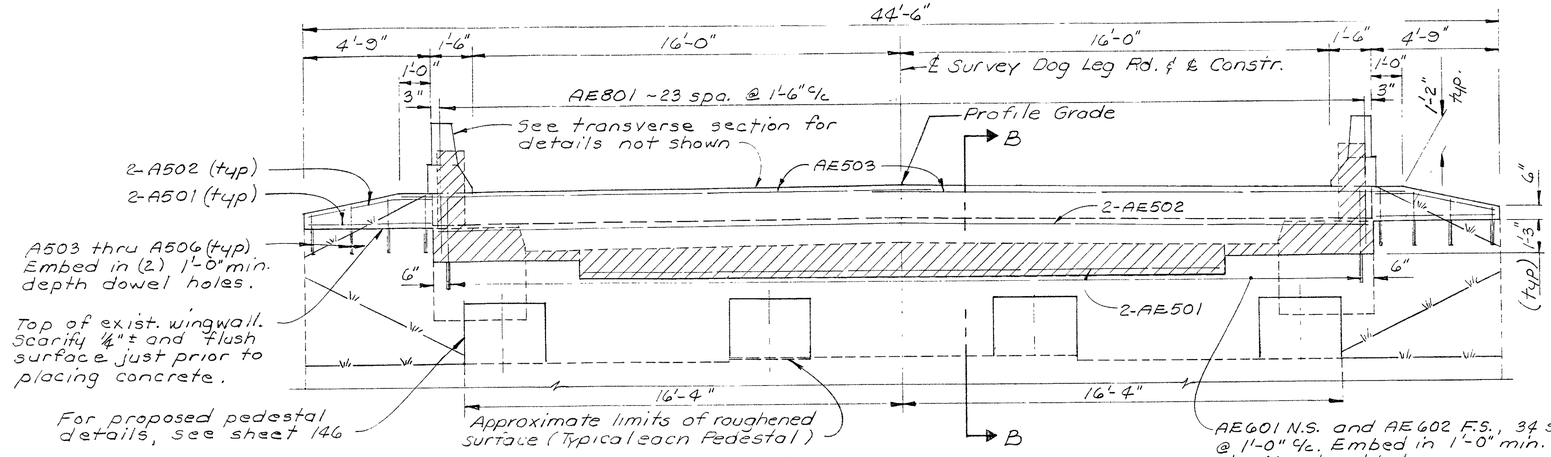
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-24-90	

524233

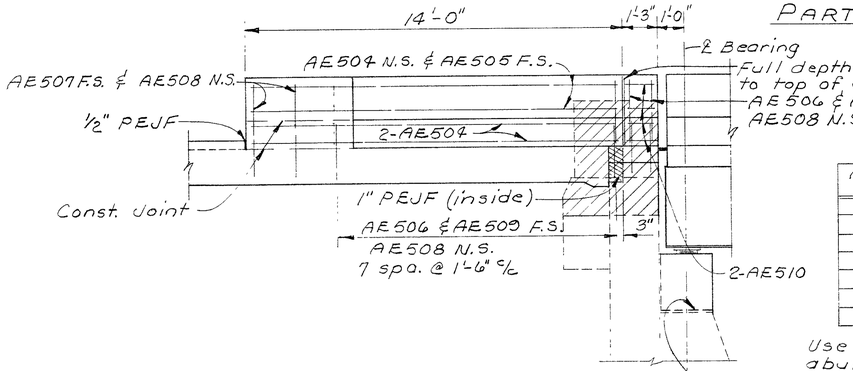
FHWA REGION	STATE	PROJECT	
5	OHIO		

213D 218

MOT-70-6.53/11.02



PART- ELEVATION



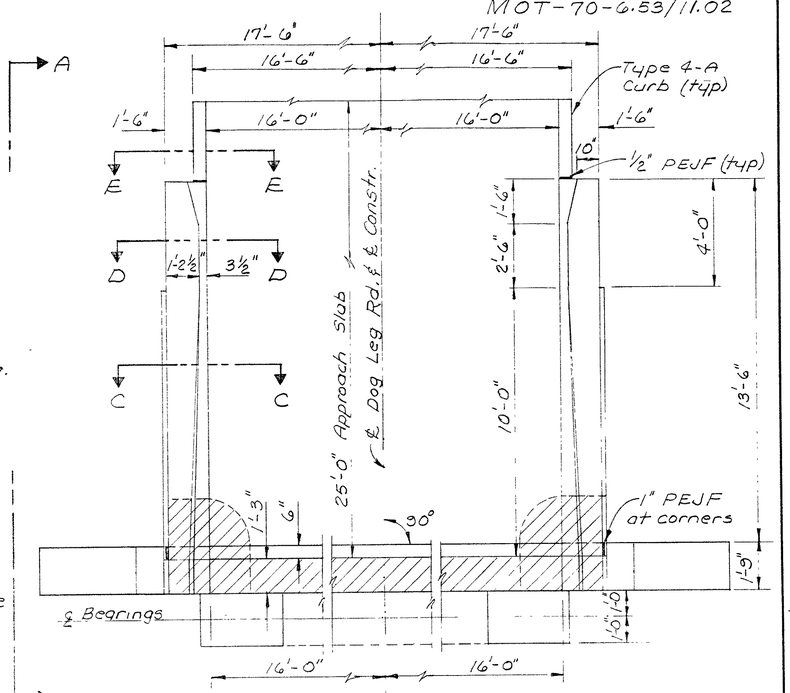
VIEW A-A

Ambient Temp. (F)	Dim. "A"
30°	1 7/8"
40°	1 3/4"
50°	1 11/16"
60°	1 5/8"
70°	1 9/16"
80°	1 7/16"
90°	1 3/8"

Use 3" seals at each abutment. Do not install when "A" is less than 1½".

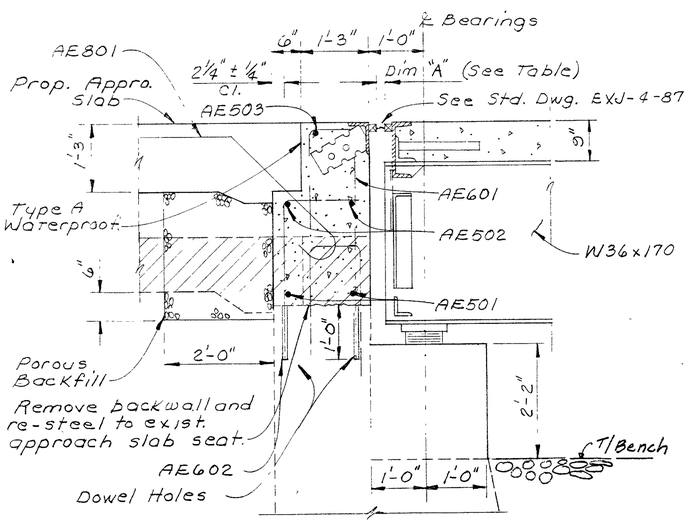
LEGEND

- Indicates portions of existing structure that are to be removed.
- N.S. - Indicates near side
- F.S. - Indicates far side
- PEJF - Indicates Preformed Expansion Joint Filler



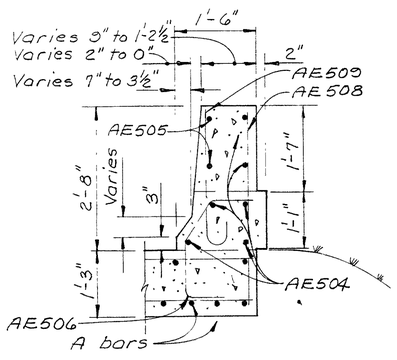
For additional parapet transition and guardrail mounting details, See Std. Dwg. GR-3.

PLAN - ABUTMENT AND APPROACH SLAB

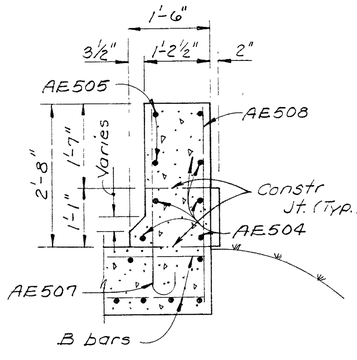


SECTION B-B

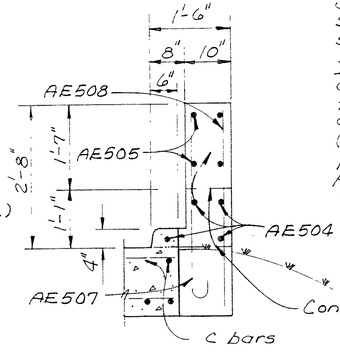
(All existing expansion joint armor is to be removed with backwall)



SECTION C-C



SECTION D-D



SECTION E-E

See Std. Dwg. AS-1-81 for added approach slab details.

NOTES

Concrete for parapets above the approach slab shall be Class S.

Type A Waterproofing, Preformed Expansion Joint Filler and sealer at the approach slabs shall be included in the price bid per sq. yd. for the approach slab.

Item Special, Sealing of Concrete Surfaces (See General Notes and Proposal Note.) The following areas shall be sealed at each abutment: The entire surface perimeter (to toe of curb) of the new deflector parapets and the abutment backwall, new pedestals, seats and breastwall (1'-0" down from seat.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

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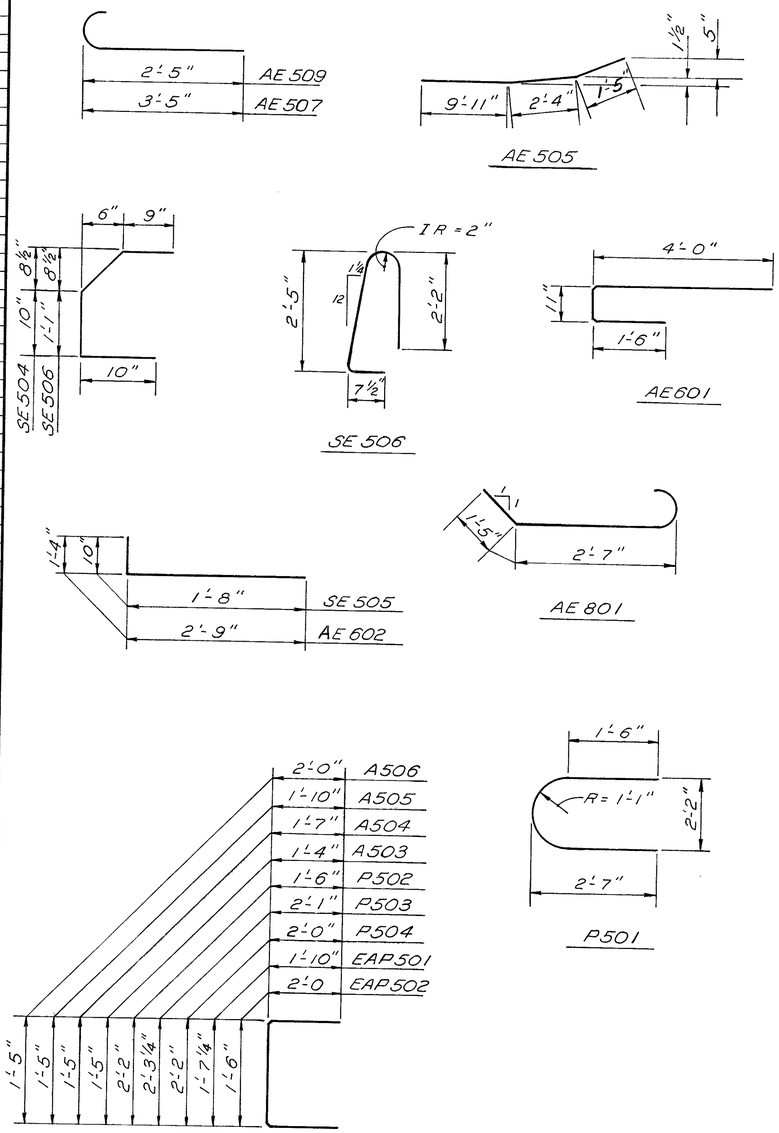
ABUTMENT DETAILS
BRIDGE No. MOT-70-1322
DOG LEG RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		RCI	WTF	5-24-90	

REINFORCING STEEL LIST

MARK	SHAPE	NUMBER	LENGTH	WEIGHT
ABUTMENTS				
A501	Str	8	4'-5"	37
*A502	Str	8	4'-7"	38
A503	Bnt.	4	3'-10"	16
A504	Bnt	4	4'-4"	18
A505	Bnt	4	4'-10"	20
A506	Bnt.	4	5'-2"	22
AE501	Str.	4	23'-8"	99
AE502	Str	4	34'-8"	145
AE503	Str.	4	20'-0"	83
AE504	Str	24	13'-8"	342
AE505	Bnt	8	13'-8"	114
AE506	Bnt	40	3'-4"	139
AE507	Bnt.	8	4'-0"	33
AE508	Str	48	3'-6"	175
AE509	Bnt.	40	3'-0"	125
AE510	Str	32	0'-11"	31
AE601	Bnt	70	6'-1"	640
AE602	Bnt.	70	3'-11"	412
AE801	Bnt.	48	4'-11"	630
		Total Epoxy		2968
		Total Non-Epoxy		151
ABUT. PEDESTALS				
EAP501	Bnt	16	5'-0"	83
EAP502	Bnt	48	5'-3"	263
EAP601	Str.	32	3'-0"	144
			Total	490
PIER PEDESTALS				
P501	Bnt	18	6'-4"	119
P502	Bnt	18	4'-11"	92
P503	Bnt.	18	6'-2"	116
P504	Bnt.	36	5'-11"	222
P601	Str	48	3'-3"	234
			Total	783
SUPERSTRUCTURE				
SE401	Str.	329	30'-0"	6593
SE402	Str	47	14'-7"	458
SE403	Str	188	29'-0"	3642
SE404	Str	94	32'-0"	2009
SE501	Str	394	34'-6"	14,177
SE502	Str	329	30'-0"	10,294
SE503	Str.	47	18'-5"	903
SE504*	Bnt	328	3'-1"	1055
SE505	Bnt.	328	2'-5"	827
SE506	Bnt	328	5'-3"	1796
SE507	Str	64	6'-2"	412
SE508	Str	32	6'-8"	223
SE509	Str	48	12'-8"	634
SE510	Str	32	13'-5"	448
SE601	Str.	394	34'-6"	20,417
			Total	63,888

BENDING DIAGRAMS



NOTE: Letter "E" in prefix indicates epoxy coating.

* Bend in field as required.

FHWA REGION	STATE	PROJECT	
5	OHIO		

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MOT-70-6.53/11.02

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	AS BUILT	
202	Lump	Sum	Portions of Structure removed		
509	934	Lb.	Reinforcing Steel, Grade 60		
509	67,346	Lb	Epoxy Coated Reinforcing Steel, Grade 60		
510	252	Each	Dowel Hole		
511	22	Cu Yd.	Class C Concrete, Abutment and Pier Cap Modifications		
511	264	Cu Yd.	Class S Concrete, Superstructure		
513	162,700	Lb.	Structural Steel (AISC Category I)		
513	2272	Each	Welded Stud Shear Connectors		
SPECIAL	LUMP		Field Painting of New Steel, System IZEU ◉		
516	69.00	Lin Ft	Structural Expansion Joint including Elastomeric Strip Seals		
516	8	Each	Laminated Elastomeric Bearings (2.13"x 7"x 11" Elastomeric Pad with 1½"x 9"x 14" steel load plate) (50 Durometer)		
516	8	Each	Laminated Elastomeric Bearings (1.86"x 10"x 18" Elastomeric Pad with 1½"x 11"x 19" steel load plate) (50 Durometer)		
516	4	Each	Laminated Elastomeric Bearings (2.13"x 13½"x 17" Elastomeric Pad with 2"x 15"x 23" steel load plate) (60 Durometer)		
518	10	Cu. Yd.	Porous Backfill		
518	8	Each	Scuppers, Including Supports, As Per Plan		
601	141	Cu Yd.	Crushed Aggregate slope Protection, As Per Plan		
Special	650	Sq. Yd.	Sealing of Concrete surfaces (epoxy) ◉		

◉ See Proposal Note

Quantities Carried to Bridge General Summary

PROPOSED WORK

1. Remove existing deck, all structural steel, bearings, approach slabs and designated portions of abutment backwalls.
2. Construct bearing seat modifications at abutments and piers.
3. Install new bearings and erect new structural steel.
4. Install new expansion joint systems at abutments
5. Complete new deck, parapets, backwall and wingwall modifications and new approach slabs.
6. Seal all parapets, designated areas of abutments and designated pier columns as shown on the plans
7. Paint Structural Steel. Finish Coat shall be gray.
8. Install new guardrail as shown on roadway plans.
9. Complete other work as described in these plans.
10. Dog Leg Rd shall be closed to traffic for a limited time period. For notes, see sheet 16.

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

7/7

REINFORCING STEEL LIST
ESTIMATED QUANTITIES &
PROPOSED WORK NOTES
BRIDGE NO. MOT-70-1322
DOG LEG RD. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
OHOL	TGC	——	RCL	WTF	5-24-90	

FD RD DIVISION	STATE	PROJECT	
5	OHIO		

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PLAN NO. MOT-70-6.49/11.02

DESCRIPTION

The work shall consist of removing all copy from the extrusheet aluminum signs and furnishing and erecting permanent overlays (including new reflective background and copy). The overlays shall be directly attached to the aluminum extrusheet on the sign proper, the exit number panel, and the glare shield when needed. The Contractor is responsible for furnishing all materials, labor and equipment necessary to perform the work.

REMOVAL

In addition to the requirements of 630.12, the Contractor shall remove and dispose of all existing copy, including legend, border, shields, and existing overlays. The Contractor's removal technique shall not damage the extrusheet aluminum and shall leave the extrusheet aluminum smooth, with no indentations or protrusions from fasteners, no aluminum burrs, and no scaling from reflective sheeting which will impair the appearance or function of the overlays when attached.

MATERIAL

1. Flat Sheet Aluminum and Fiberglass Reinforced Plastic– Overlay, shields, and service symbol signs shall be fabricated from 0.040 inch flat sheet aluminum, ASTM B209, 6061–T6 in accordance with 730.11 or 0.075 inch fiberglass reinforced plastic (FRP) meeting the "Recommended Traffic Control Sign Panel Specification" published by the Society of the Plastics Industry. FRP Overlays for glare shields may be "tinted " to match the color of the sign under daylight viewing conditions per 630.04(6).
2. Reflective Sheeting– Shall be type F unless otherwise specified, shall meet the requirements of 630.02, and shall be contained on the "ODOT Approved Manufacturers and Brand Names of Reflective Sheeting " list.
3. Nonreflective Sheeting– Glare shield shall be covered with nonreflective sheeting per 630.04(6), unless tinted as per item 1 above.
4. Copy– Shall comply with 630.04(5).
5. Fasteners
   a) Overlays and Shields shall be fastened to the extrusheet aluminum with AVEX No.1693–0619 rivets having a 0.188 inch diameter, 0.339 inch head diameter, and a 0.602 inch maximum length or CHOBERT No. 1162–0617 rivets having a 3/16 inch nominal diameter, 0.375 inch head diameter and a 0.5313 inch maximum length.
   b) Copy including legends and borders shall be fastened with AVEX No. 1691–0414 rivets having a 0.1265 inch diameter, 0.250 head diameter and a 0.452 inch maximum length or BRIV No 1801–0513 rivets having a 5/32 inch nominal diameter, 0.310 inch head diameter and a 0.339 inch maximum length.

OVERLAY FABRICATION

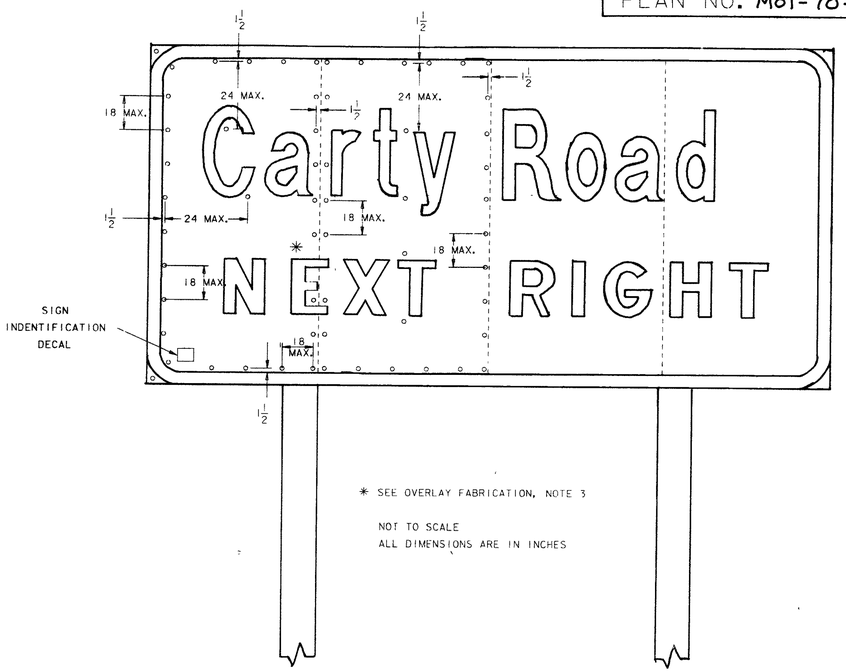
1. The number of individual overlays per sign shall be kept to a minimum and approximately equal in size with no overlay having a length or width dimension less than 18 inches, except as noted in item 6 below. The size of individual overlays shall be designed for safety during erection based on the equipment and method of erection by the Contractor. Where sign dimensions will permit, vertical joints shall be used in lieu of horizontal joints.
2. Sign designs and layouts shall be in accordance with the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways, the ODOT Design Manual for Directional Guide Signs, and the ODOT Standard Sign Design Manual. or the FHWA Standard Highway Sign Manual. Working drawings shall be submitted as per 630.03.
3. All legends and borders shall be shop mounted except for any copy which when attached would be common to two or more individual overlays. All shields and service symbol signs shall be mounted in the field.
4. Sign indentification decals shall be in accordance with 630.04(7) except that decals shall be applied to the front, bottom,left–hand corner or left most overlay immediately inside the border for each overlaid sign.
5. All overlays shall be packaged, shipped, stored, and erected in such a manner that they are not scratched, dented, bent, or damaged in any way which would reduce the effective life of the reflective sheeting or of the copy. They shall be stored in such a manner that packaging paper or cardboard material does not become wet. If packaging material or slip sheeting becomes wet, it shall be removed from contact with sign faces before it dries to prevent damage to the reflective sheeting. Damage to the overlays will be cause for rejection.
6. Should it be found that a sign overlay does not evenly fit the existing extrusheet sign, the Contractor shall be paid under Item Special Signs, Permanent Overlay, Reworked or Special Signs, Permanent Overlay, Type G, Reworked, on a per foot basis for the work and material needed to reduce or enlarge the size of the overlay to conform to the following tolerances:

   If the complete overlay is too small to cover the existing sign, it shall be centered on the existing extrusheet and additional overlay material of the same type shall be furnished and installed by the Contractor to cover the remaining portion of the sign. If the additional material measures more than 6 inches on a side the border shall be adjusted to the outside edge of the additional overlay material.
   If the complete overlay when centered on the extrusheet overhangs the existing sign by more than 6 inches on a side, the Contractor shall rework the overlay using the incorrect overlay material to the greatest extent practicable so that it fits the existing sign within this tolerance.
   Legend spacing shall comply with all overlay fabrication requiremnents stated above (Overlay Fabrication, paragraph 2) to the greatest extent practicable as determined by the Engineer.

Estimated quantities have has been carried to the General Summary for this type of work, to be used as directed by the Engineer.

OVERLAY ERECTION

1. Only one directional guide sign in each direction at each interchange or intersection may be overlaid at one time. When two or more signs are on the same support, only one sign may be overlaid at a time.
2. Major dents and abrasions originating on the back of the extrusheet sign and protruding to the front shall be hammered flush with the remaining extrusheet surface prior to overlaying to avoid bulges, dimples, etc., in the overlay when erected.
3. The first overlay panel installed on a sign shall be located at the left (or right) edge of the sign. Subsequent panels shall be installed proceeding across the sign horizontally to the other side. If there is more than one row of overlay panels, the top row will be installed first with work proceeding by row to the bottom of the sign.
4. Overlay panels shall be butt jointed without overlaps or gaps except where butt joints would cause warping or buckling. When necessary, overlaps (preferred) or gaps not to exceed 3/32 inch per foot or 3/8 inch overall will be permitted to achieve a flatter surface fit.
5. Fastener Spacing for Attaching Overlay Panels to Extrusheet Aluminum.
   a) The fastener spacing around the perimeter of each overlay shall be a maximum of 18 inches. Fasteners shall be set back one and one half inches from each edge of the overlay panel except where borders exist. In this case, fasteners shall be set back one and one–half inches from the inside of the border. Each corner of each overlay panel shall have a fastener located one and one–half inches from each edge (or inside of border).
   b) An additional fastener shall be placed in each corner of the sign halfway between the corner and the outside of the border.
   c) The maximum fastener spacing within the interior of each overlay shall be 24 inches. Fasteners used in attaching overlays to the extrusheet aluminum shall not be fastened through any demountable embossed copy.
   d) Shields and service symbol signs shall be mounted after overlays are installed.



6. The first fastener to be started in an overlay panel shall be located at the top of the panel. Fasteners shall not be drawn down excessively in dimpled or pocketed areas of the overlay.

METHOD OF MEASUREMENT

Permanent overlays will be measured as the area, in square feet, of overlay furnished and erected in place, and includes removal and disposal of all existing copy. Permanent overlays reworked will be measured as the difference in the area, in square feet, between the oversized or undersized overlay and the final reworked overlay in place; and includes additional labor, overlay material, border, copy, and fasteners as needed.

BASIS OF PAYMENT

Quantities of Permanent Overlays, and "Permanent Overlays Reworked" measured as provided above, in place, complete and accepted, will be paid for under:

Item	Unit	Description
630	Square Foot	Signs, Permanent Overlay
630	Square Foot	Signs, Permanent Overlay, Type G
Special	Square Foot	Signs, Permanent Overlay, Reworked . . . . . 100 S.F. #
Special	Square Foot	Signs, Permanent Overlay, Type G, Reworked . . . . 100 S.F. #

These quantities have been carried to the general summary on sh. 24.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF TRANSPORTATI

HIGHWAY SIGNING

PERMANENT OVERLAY FIELD INSTALLATION

HS-1.00

WJC

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614 TEMPORARY RAISED PAVEMENT MARKERS

PLAN NO MOT-70-6.53/11.02

216/219

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING, INSTALLING, MAINTAINING, AND SUBSEQUENTLY REMOVING TEMPORARY RAISED PAVEMENT MARKERS (TRPM'S). THE TRPM'S SHALL BE YELLOW OR WHITE, AS DESCRIBED IN THE PLAN.

MATERIAL

ALL UNITS SHALL BE OF SUFFICIENT STRENGTH AND PROPERLY SHAPED SO AS NOT TO BE DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR BROKEN, OR THE REFLECTOR DISLODGED OR DAMAGED BY IMPACTS FROM VEHICLES TIRES, INCLUDING THOSE OF HIGH PRESSURE TRUCK TIRES LOADED TO 4500 POUNDS.

RETROREFLECTORS SHALL BE PROVIDED IN ONE OR TWO DIRECTIONS ON EACH UNIT AS REQUIRED BY THE USAGE AND SHALL RETURN WHITE OR YELLOW LIGHT AS IS APPROPRIATED FOR THE APPLICATION.

THE REFLECTOR SHALL HAVE AN EFFECTIVE AREA OF 0.35 SQUARE INCH FOR TYPE A OR 3.0 SQUARE INCH FOR TYPE B. ITS BRIGHTNESS OR SPECIFIC INTENSITY (WHEN TESTED AT 0.2 DEGREE ANGLE OF OBSERVATION AND THE FOLLOWING ANGLES OF INCIDENCE) SHALL MEET OR EXCEED THE FOLLOWING:

SPECIFIC INTENSITY

TYPE A

INCIDENCE ANGLE (DEGREES)	WHITE	YELLOW
0	1.0	0.6
20	0.4	0.24
45	–	–

TYPE B

	WHITE	YELLOW
0	3.0	1.8
20	1.2	0.72
45	0.3	0.2

ANGLE OF INCIDENCE FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE NORMAL TO THE LEADING EDGE OF THE MARKER FACE (ALSO HORIZONTAL ENTRANCE ANGLE).

ANGLE OF OBSERVATION FORMED BY A RAY FROM LIGHT SOURCE TO THE MARKER AND THE RETURNED RAY FROM THE MARKER TO THE MEASURING RECEPTOR.

SPECIFIC INTENSITY IS THE MEAN CANDLEPOWER OF THE REFLECTED LIGHT (AT GIVEN INCIDENCE AND DIVERGENCE ANGLES) FOR EACH FOOT–CANDLE AT THE REFLECTOR (ON A PLANE PERPENDICULAR TO THE INCIDENT LIGHT).

TYPE A UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY BOTH AT NIGHT AND DURING DAYLIGHT. THEIR DAY TIME VISIBILITY SHALL BE ASSURED BY SIZE, SHAPE AND COLOR AS FOLLOWS:

1) THE UNITS SHALL BE A HIGH VISIBILITY YELLOW OR WHITE COLOR WHICH WILL NOT DEGRADE SUBSTANTIALLY DUE TO TRAFFIC WEAR AND WHICH WILL MATCH THE COLOR OF THE REFLECTOR.

2) WHEN VIEWED FROM ABOVE, THE UNITS SHALL HAVE A VISIBLE AREA OF NOT LESS THAN 14 SQUARE INCHES.

3) WHEN VIEWED FROM THE FRONT, PARALLEL TO THE PAVEMENT, AS FROM APPROACHING TRAFFIC, THE UNIT SHALL HAVE A WIDTH OF APPROXIMATELY 4 INCHES AND A VISIBLE AREA OF NOT LESS THAN 1.5 SQUARE INCHES.

TYPE B UNITS ARE INTENDED TO PROVIDE HIGH VISIBILITY AT NIGHT BY RETRO–REFLECTING AUTOMOTIVE HEADLIGHT BACK TO THE DRIVER.

INSTALLATION: THEY SHALL BE ATTACHED TO CLEAN, DRY PAVEMENT BY A BUTYL ADHESIVE PAD, A BITUMINOUS ADHESIVE OR OTHER CONSTRUCTION GRADE ADHESIVES (SUCH AS FRANKLIN PANEL AND METAL ADHESIVE) SUITABLE TO ANCHOR THE UNIT UNDER THE ABOVE CONDITIONS. WHEN IT IS NECESSARY TO ATTACH UNITS TO NEW CONCRETE WITH CURING COMPOUND REMAINING, THE CURING COMPOUND MEMBRANE SHALL BE REMOVED BY SANDBLASTING OR OTHER MECHANICAL CLEANING METHOD. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

THE CONTRACTOR SHALL IMMEDIATELY REPLACE, AT HIS COST, ANY UNITS WHICH FAIL (BROKEN HOUSING, HOUSING WORN TO THE EXTENT THAT DAYTIME VISIBILITY IS SIGNIFICANTLY DIMINISHED OR OF AN UNACCEPTABLE COLOR, DETACHED OR BROKEN REFLECTOR, HOUSING DETACHED FROM ADHESIVE).

TRPM'S ARE LIKELY TO BE REMOVED BY SNOW PLOWING OPERATIONS, THUS THEY ARE NOT CONSIDERED SUITABLE FOR USE DURING THE PERIOD FROM OCTOBER 15 UNTIL APRIL 30. THE CONTRACTOR IS ADVISED TO SCHEDULE HIS WORK AND/OR THE USE OF THESE DEVICES TO AVOID THIS PERIOD. SHOULD THE CONTRACTOR CHOOSE TO USE TRPM'S DURING THIS PERIOD AND THEY ARE SUBSEQUENTLY REMOVED OR DESTROYED BY SNOW AND ICE CONTROL ACTIVITIES, THE CONTRACTOR SHALL IMMEDIATELY, AT HIS COST, PROVIDE A SUBSTITUTE TRAFFIC GUIDANCE SYSTEM EFFECTIVE DURING LIGHT AND DARK AND WHICH IS ACCEPTABLE TO THE ENGINEER.

THE UNITS SHALL BE PLACED ACCURATELY TO DEPICT STRAIGHT OR UNIFORMLY CURVING LINES. WHEN USED TO SUPPLEMENT TEMPORARY PAVEMENT MARKINGS, THEY MAY BE PLACED ON OR IMMEDIATELY ADJACENT TO THE PAVEMENT MARKING. LOCATIONS SHALL BE ADJUSTED UP TO ONE FOOT LONGITUDINALLY OR SIX INCHES LATERALLY TO AVOID PLACEMENT ON JOINTS, CRACKED OR DETERIORATED PAVEMENT. THEY SHALL NOT BE PLACED DIRECTLY ON PAVEMENT MARKINGS IF THIS WILL DETRACT FROM THEIR ABILITY TO REMAIN ATTACHED TO THE PAVEMENT.

APPLICATION

1) WHEN REQUIRED TO SUPPLEMENT PAVEMENT MARKING; THEY SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A OR B	20' C/C
LANE LINE	A OR B	40' C/C*
CENTER LINE (SINGLE/BROKEN)	A OR B	40' C/C *
CENTER LINE (DOUBLE/SOLID)	A OR B	2 UNITS SIDE BY SIDE 4 INCHES APART 20' C/C
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A OR B	10' C/C

* CENTERED IN GAP

2) WHEN USED TO SIMULATE (REPLACE) PAVEMENT MARKING THEY SHALL BE PLACED AS FOLLOWS:

LINE	TYPE	SPACING
EDGE LINE	A	5' C/C
LANE LINE	A	4@3.33' C/C 30' GAP (40' CYCLE)
CENTER LINE (DOUBLE SOLID)	A	2 UNITS SIDE BY SIDE 5' C/C
CENTER LINE (SINGLE BROKEN)	A	4@3.33' C/C 30' GAP (40' CYCLE)
CHANNELIZING LINE (INCLUDES EXIT GORE NOSE)	A	5' C/C
EDGE LINE (TWO COLOR) (WHITE/YELLOW)	A	BACK TO BACK 5' C/C

YELLOW TRPM'S USED TO SEPARATE OPPOSITE FLOWS OF TRAFFIC (CENTER LINES) SHALL INCLUDE REFLECTIONS FOR BOTH DIRECTIONS. ALL OTHER YELLOW TRPM'S AND WHITE TRPM'S SHALL PROVIDE RETROREFLECTIVITY FOR ONE DIRECTION.

REMOVAL

REMOVAL SHALL BE ACCOMPLISHED IN A MANNER THAT LITTLE OR NONE OF THE ADHESIVE REMAINS ON THE PAVEMENT AND PERMANENT PAVEMENT SURFACES SHALL NOT BE SCARRED, BROKEN OR ROUGHENED SIGNIFICANTLY.

PAYMENT

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH TRPM AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK. IT SHALL ALSO INCLUDE REPLACEMENT AT NO ADDITIONAL COST OF ALL TRPM'S WHICH, IN THE JUDGEMENT OF THE ENGINEER, FAIL FOR ANY REASON, EXCEPT DUE TO FAILURE OF THE PAVEMENT TO WHICH THEY ARE ATTACHED.

ITEM	UNIT	DESCRIPTION
614	EACH	TEMPORARY RAISED PAVEMENT MARKERS

STAGE	STATIONING (FROM–TO) (SIDE)	SPACING	TYPE A W	TYPE A Y	TYPE A Y/Y	TYPE B W	TYPE B Y	TYPE B Y/Y	REMARKS (LINE TYPE)
1	I.R 70 342+45 to 783+89 EB & WB *	20'		3728					Left Edgeline
2	I.R 70 342+45 to 783+89 EB & WB *	20'	3728	3728					Yellow - Left Edgeline White - Right Edgeline
	Northbound S.R 40 (Exit 24)	10'	20						Gore Marking
	Southbound S.R 40 (Exit 26)	10'	20						
	Hoke Rd Ramp 'B'	10'	20						Gore Marking
	S.R 48 Ramp 'B'	10'	20						
	S.R 48 Ramp 'C'	10'	20						Gore Marking
3	I.R 70 342+45 to 783+89 EB & WB *	20'	3728	3728					Yellow - Left Edgeline White - Right Edgeline
	S.R 40 (Exit 24) Northbound	40'	5						Lane Line
		10'	20						Gore Marking
	S.R. 40 (Exit 24) Southbound	10'	20						Gore Marking
	S.R 40 (Exit 26) Northbound	10'	20						Gore Marking
	S R 40 (Exit 26) Southbound	40'	5						Lane Line
		10'	20						Gore Marking
	Hoke Rd Ramp 'A'	40'	5						Lane Line
	Hoke Rd. Ramp 'B'	40'	5						Lane Line
		10'	20						Gore Marking
	S R 48 Ramp 'A' Ramp 'E'	40'	5						Lane Line
		40'	5						Lane Line
	S R 48 Ramp 'B'	40'	5						Lane Line
		10'	20						Gore Marking
	S R 48 Ramp 'C'	40'	5						Lane Line
		10'	20						Gore Marking
4	I.R 70 342+45 to 783+89 EB & WB *	20'	3728	3728					Yellow - Left Edgeline White - Right Edgeline
	S.R 40 Northbound (Exit 24)	10'	20						Gore Marking
	S.R 40 Southbound (Exit 26)	10'	20						
	Hoke Road Ramp 'B'	10'	20						Gore Marking
	S.R 48 Ramp 'B' Ramp 'C'	10' 10'	20 20						Gore Marking
	TOTALS (To General Summary)		11,564	14,912					
			26,476						

* Stationing Includes Station Equation
Refer to Schematic Plan

Calculated By M.L.E. Date 2-26-88
Checked By G.A.S Date 2-29-88

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

614 TEMPORARY RAISED PAVEMENT MARKERS

STANDARD NO.

DESIGNED	DRAWN	CHECKED	DATE	REVISED
	Autocad		5-12-87	

614 BARRIER REFLECTORS

PLAN NO. MOT-70-6.53/11.02

217/219

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING BARRIER REFLECTORS (TYPE A) ON GALVANIZED STEEL GUARDRAIL AND/OR BARRIER REFLECTORS (TYPE B) ON CONCRETE BARRIERS IN ACCORDANCE WITH PLANS AND SPECIFICATIONS

MATERIAL

THE BARRIER REFLECTOR SHALL BE AS MANUFACTURED BY STIMSONITE, REFLEXITE OR AN APPROVED FUNCTIONAL EQUIVALENT AS DESCRIBED BELOW:

STIMSONITE- MODEL 965 (WHITE & YELLOW) OR
REFLEXITE- MODEL 650 (WHITE & YELLOW)

THE ADHESIVE SHALL BE FRANKLIN PANEL AND METAL FRAMING ADHESIVE AS MANUFACTURED BY FRANKLIN CHEMICAL INDUSTRIES, PR-365 AS MANUFACTURED BY PRODUCTS RESEARCH AND CHEMICAL CORPORATION OR AN APPROVED EQUAL

ALL ADHESIVES SHALL HAVE A SHELF LIFE OF 6 MONTHS AT 75 DEGREES F STORAGE MINIMUM GUARANTEED

LAYOUT

THE CONTRACTOR SHALL LAYOUT ALL LOCATIONS TO ASSURE PROPER PLACEMENT THE LAYOUT SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATIONS ARE STARTED. THE LAYOUT SHALL BE INCIDENTAL TO THE INSTALLATION OPERATION.

INSTALLATION

1) ON CONCRETE BARRIERS THE HEIGHT OF THE TOP OF THE REFLECTOR SHALL BE 26 INCHES ABOVE THE NEAR EDGE OF PAVEMENT, BUT IN NO CASE SHALL THE TOP OF THE REFLECTOR BE LESS THAN 3 INCHES BELOW THE TOP OF THE CONCRETE BARRIER. ATTACHMENT SHALL BE BY THE ABOVE REFERENCED ADHESIVE AND APPLIED PER MANUFACTURER'S RECOMMENDATION

2) GUARDRAIL REFLECTORS SHALL BE INSTALLED WITHIN THE CONCAVE SURFACE OF THE GUARDRAIL. ATTACHMENT MAY BE BY BRACKET WHICH FITS UNDER THE HEAD OF THE CENTER GUARDRAIL BOLT OR BY THE ABOVE REFERENCED ADHESIVE AND APPLIED PER MANUFACTURER'S RECOMMENDATION.

3) THE ABOVE REFERENCED ADHESIVE SHALL BE FLASHED WHEN APPLIED TO ACHIEVE MAXIMUM BONDING STRENGTH

4) WHEN MOUNTED ON A FLAT SURFACE, THE REFLECTOR SHOULD BE TILTED UPWARD FROM THE VERTICAL OR PLUMB POSITION 2-3 DEGREES TO FACILITATE "RAIN WASHING" OF THE REFLECTOR FACE.

5) TWO-LANE HIGHWAY - WHITE UNITS SHALL BE PLACED ON THE RIGHT SIDE OF APPROACHING TRAFFIC.

FOUR-LANE DIVIDED HIGHWAY - WHITE UNITS SHALL BE PLACED ON THE RIGHT SIDE OF APPROACHING TRAFFIC AND YELLOW ON THE LEFT

BASIS OF PAYMENT

BASIS OF PAYMENT SHALL BE AT THE UNIT PRICE BID FOR EACH REFLECTOR AND SHALL INCLUDE ALL LABOR, EQUIPMENT, HARDWARE AND INCIDENTALS REQUIRED TO PERFORM THE WORK.

ITEM	UNIT	DESCRIPTION
614	EACH	BARRIER REFLECTOR, TYPE A
614	EACH	BARRIER REFLECTOR, TYPE B

A. BARR-REF

614 BARRIER REFLECTORS

The reflectors and their mounting shall conform to supplemental specifications 802 except that spacing shall be as shown in the subsummary table.

STATIONING (FROM-TO) (SIDE)	SPACING	TYPE A W	TYPE A Y	TYPE B RURAL W	TYPE B RURAL Y	TYPE B CITY W	TYPE B CITY Y			REMARKS
342+50 TO 352+20 WB, Lt	50				34					
367+00 TO 384+30 WB, Lt	50				35					
426+00 TO 443+05 WB, Lt	50				35					
555+20 TO 566+05 WB, Lt	50				23					
339+70 TO 356+70 EB, Lt	50				35					
364+20 TO 381+99 EB, Lt	50				37					
392+45 TO 405+00 EB, Lt	50				26					
423+20 TO 436+75 EB, Lt	50				28					
552+20 TO 563+25 EB, Lt	50				23					
342+50 TO 352+20 WB, Rt	50			34						
367+00 TO 384+30 WB, Rt	50			35						
426+00 TO 443+05 WB, Rt	50			35						
555+00 TO 566+05 WB, Rt	50			23						
342+70 TO 356+70 EB, Rt	50			35						
364+20 TO 381+00 EB, Rt	50			37						
392+45 TO 405+00 EB, Rt	50			26						
423+20 TO 436+75 EB, Rt	50			28						
552+20 TO 563+25 EB, Rt	50			23						
S.R 48										
308+30 TO 310+80 EB, Rt	50			5						
309+15 TO 311+15 WB, Rt	50			5						
307+85 TO 311+85 EB, Lt	50				9					
307+35 TO 311+35 WB, Lt	50				9					
IR 70 Bridges										
592+52 TO 596+42 EB, Lt	50				9					
592+67 TO 596+62 EB, Rt	50			9						
594+01 WB TO 15+22 Rt S.R. 48 Ramp "A"	50			9						
594+29 TO 598+19 WB, Lt	50				9					
664+94 TO 668+24 EB, Lt	50				8					
665+01 TO 668+31 EB, Rt	50			8						
667+70 TO 670+00 W.B, Rt	50			8						
666+80 TO 670+05 WB, Lt	50				8					
641+30 TO 643+80 W.B, Rt	50			6						
641+30 TO 643+80 W.B, Lt	50				6					
641+00 TO 643+50 E.B, Rt	50			6						
641+00 TO 643+50 E.B, Lt	50				6					
SUB-TOTALS				332	340					
TOTAL				672						

Calc. - M.L.E 5-26-88
Chkd - G.A.S. 5-27-88

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

614 BARRIER REFLECTORS

STANDARD NO.

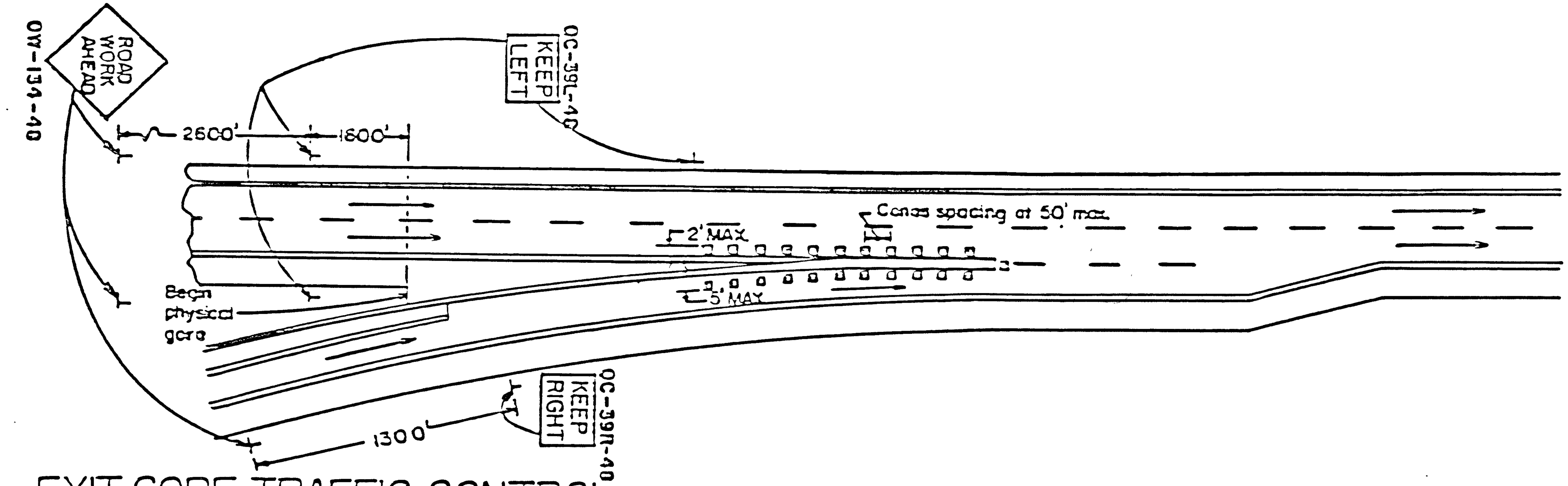
DESIGNED	DRAWN	CHECKED	DATE	REVISED
	Autocad		5-12-87	

FED. RD. DIVISION	STATE	PROJECT		
5	OHIO			

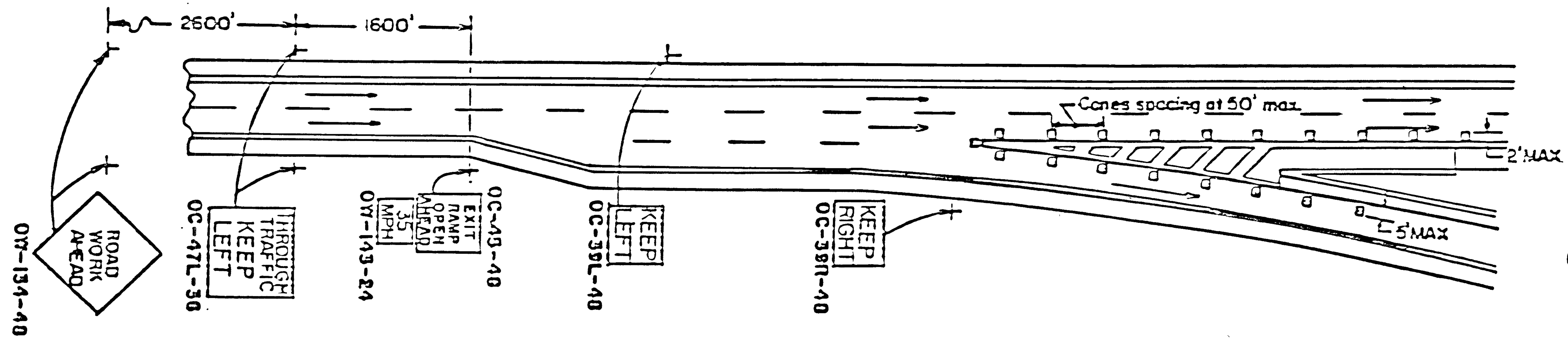
218/219

PLAN NO. MOT-70-6.53/11.02

ENTRANCE GORE TRAFFIC CONTROL



EXIT GORE TRAFFIC CONTROL



GENERAL NOTE

1. THE REQUIREMENTS OF THE "TRAFFIC CONTROL FOR LONG LINE PAVEMENT MARKING OPERATIONS" NOTE (M.T. 99.20) SHALL APPLY IN LIEU OF THIS DETAIL WHERE EDGE LINES AND/OR CHANNELIZING LINES ARE SPRAYED IN MOVING OPERATIONS SEPARATE FROM ANY OTHER WORK.
2. WHERE THE WORK IN THE GORE AREA REQUIRES MORE POSITIVE TRAFFIC CONTROL OR OVERNIGHT WORK AREA PROTECTION, THE TRAFFIC CONTROL FOR "LANE CLOSURE AT THE ENTRANCE RAMP" OR "LANE CLOSURE AT EXIT GORE" SHOULD BE EMPLOYED. ~~SEE SHEET~~ ___.
3. THE SPACING BETWEEN SIGNS SHOWN ON THIS DETAIL MAY BE ADJUSTED (INCREASED OR DECREASED) WITH THE APPROVAL OF THE ENGINEER TO POSITION THEM NO CLOSER THAN 200 FEET TO EXISTING SIGNS WHICH MUST REMAIN IN USE.
4. AT AN ISOLATED ENTRANCE GORE AREA, A FLASHING ARROW PANEL CONFORMING TO REQUIREMENTS IN TC-35.10 MAY BE SUBSTITUTED FOR THE ADVANCE OC-39-48 SIGNS
5. AT AN INTERCHANGE WHERE BOTH EXITS AND ENTRANCES ARE MARKED WITH TRAFFIC CONTROL IN PLACE AT THE SAME TIME, THE OW-134-48 SIGN ON THE ENTRANCE RAMP IS NOT REQUIRED.
6. FOR NIGHT CLOSURES, THE OW-134-48 AND THE OC-47L-36 SIGNS SHALL BE LIGHTED USING TYPE A FLASHING BARRICADE WARNING LIGHT.

OHIO DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL FOR WORK IN GORE AREAS

DATE 1/81

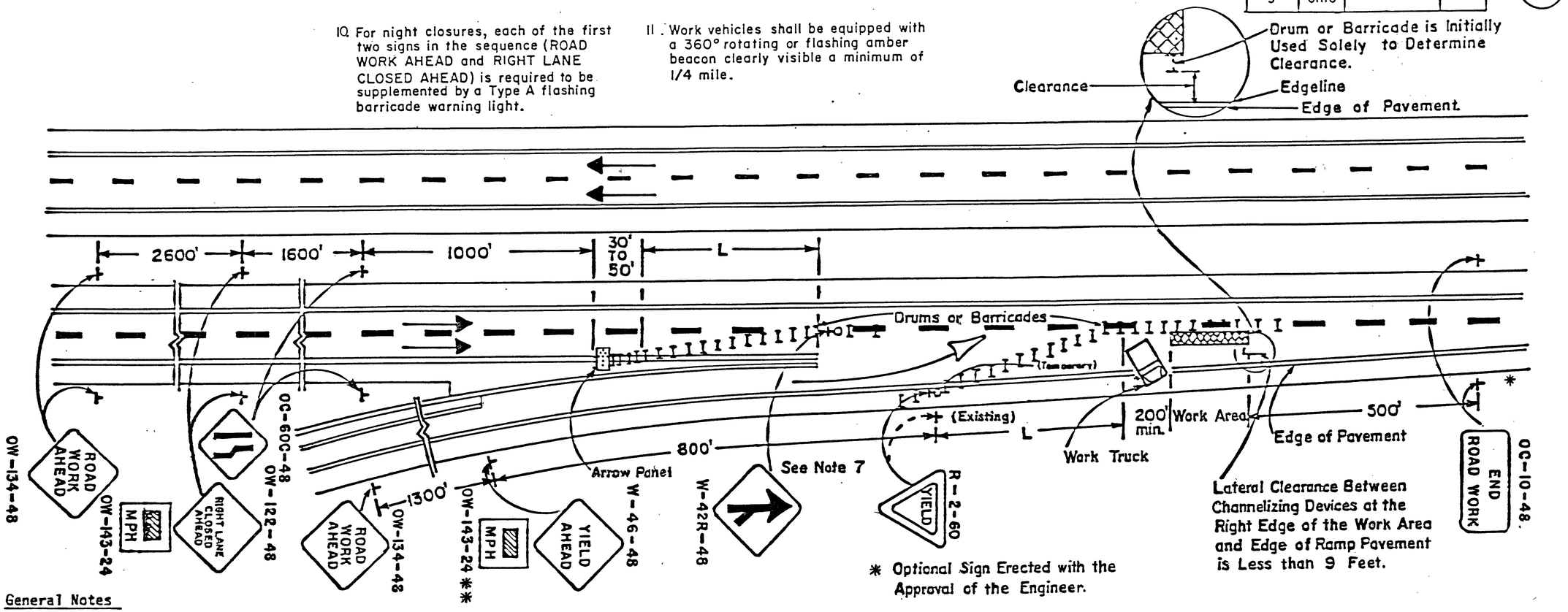
DR JDL CK CDR

71-2

Rev. EEF PM 10/85

10. For night closures, each of the first two signs in the sequence (ROAD WORK AHEAD and RIGHT LANE CLOSED AHEAD) is required to be supplemented by a Type A flashing barricade warning light.

11. Work vehicles shall be equipped with a 360° rotating or flashing amber beacon clearly visible a minimum of 1/4 mile.



* Optional Sign Erected with the Approval of the Engineer.

General Notes

1. This work area traffic control application shall be employed when the lateral clearance between channelizing devices at the right edge of the work area and the edge of the ramp pavement is less than 9 feet. When the clearance is more than 9 feet, the traffic control on "Lane Closure at Entrance Ramp: Plan A" should be used, or the ramp should be closed. When the ramp is closed, appropriate detour signs shall be provided.

2. Thirteen (13) drums or barricades shall be used to form the lane transition taper in advance of the work area. Five (5) channelizing devices shall be used to form the taper on the shoulder. Cones, drums, or barricades shall be spaced at 50 foot centers. Cones may be substituted for barricades or drums for the lane closures during daylight hours. (See note 10)

3. Ramp signs shall be dual mounted on multi-lane ramps. When the ramp is not long enough to allow placement as specified above, the signs may be spaced proportionately within the space available as determined by the Engineer (a 200' minimum spacing must be maintained).

4. The flashing arrow panel shall be in accordance with TC-35.10

5. The work truck shown at the beginning of the work area shall be in place and unoccupied whenever men are working within the work area. This truck shall be moved from the pavement whenever workmen are not in the work area. Other protective devices may be used in lieu of work truck shown when approved by the Engineer.

6. Type C steady burning barricade warning lights shall be erected on drums or barricades for night lane closures. Maximum spacing shall be 50' center to center in advance of the work area and 200' center to center within the limits of the work area.

7. It may be necessary to move the location of an existing Yield condition In these cases, the permanent R-2 sign installation shall be covered and the temporary installation shall be mounted upon a drive post which shall be banded to a drum with stainless steel strapping material or other techniques subject to the approval of the Engineer.

8. Taper Formulae:

   $L = S \times W$ for Speeds of 45 or more.
   $L = WS^2/60$ for Speeds 40 or less.

   Where:

   L = Minimum length of taper.
   S = Numerical value of posted speed limit prior to work or 85 percentile speed.
   W = Width of offset.

9. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

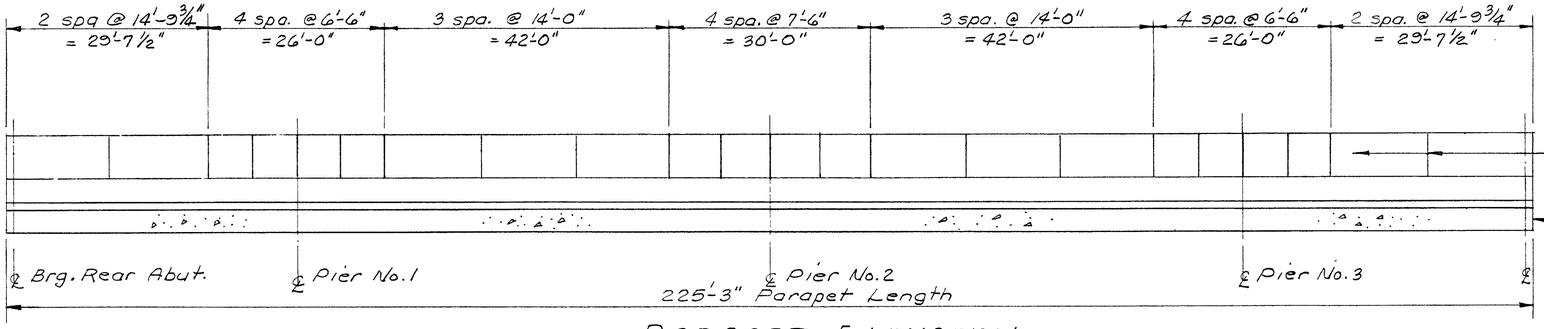
LANE CLOSURE AT ENTRANCE RAMP PLAN B	DATE 3-3-79

Rev. EEF 9/84

FHWA REGION	STATE	PROJECT	
5	OHIO		

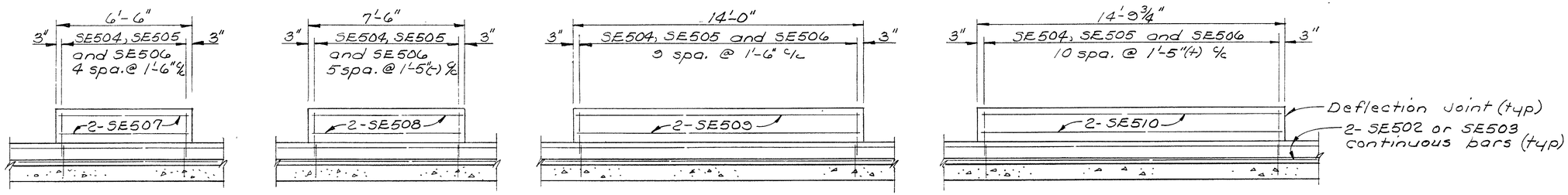
170B 219

MOT-70-6.53/11.02

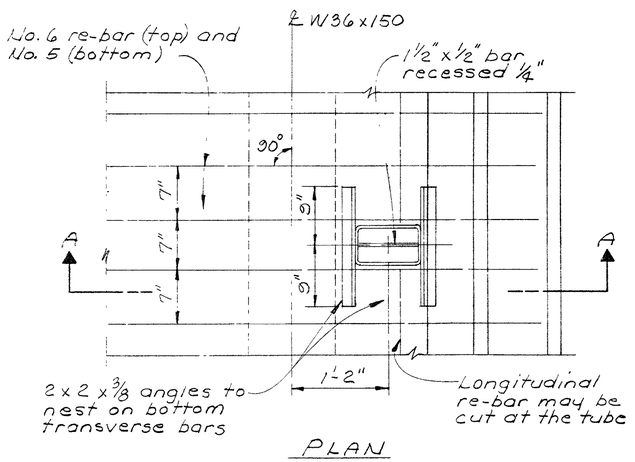


* For additional Deflection Joint Details see Std. Drwg. BR-1

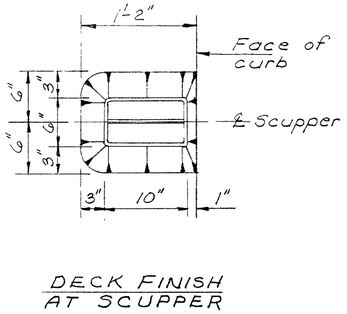
PARAPET ELEVATION



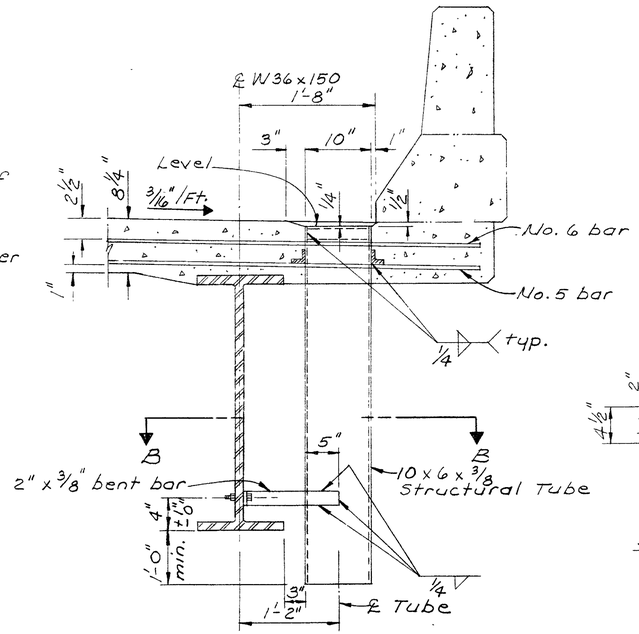
PARAPET PANELS



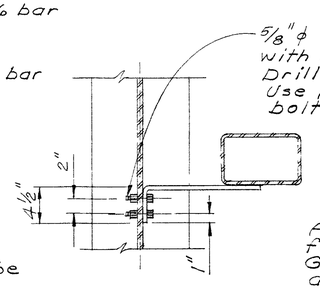
PLAN



DECK FINISH AT SCUPPER



SECTION A-A



SECTION B-B

All materials for scupper fabrication shall be ASTM-A36. Galvanizing shall be in accordance with 711.02.

SCUPPER DETAILS

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
BUREAU OF BRIDGES AND STRUCTURAL DESIGN

4 | 7

SUPERSTRUCTURE DETAILS
BRIDGE No. MOT-70-0759
CRESTWAY DR. OVER I-70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Ohol	Ohol		JAM	WTF	5-18-89	

224233