STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

WYA.-23-10.40

WYANDOT COUNTY
CRAWFORD, SALEM & CRANE
TOWNSHIPS

WYA.-23-10.40	OHIO	1/108
STATE	FHWA REGION 5	
	FEDERAL PROJECT	

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.

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light

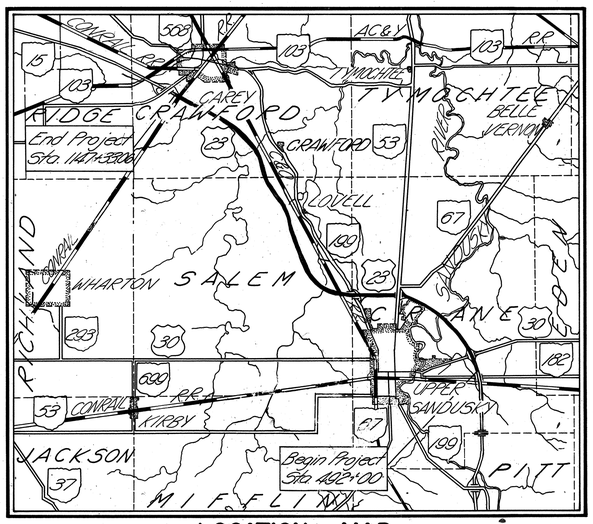
Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

SHEET NO. 96 IS OMITTED.

LINE DATA

Begin Project	Sta. 492+00.00	
End Project	Sta. 1147+33.06	
Sub-Total =	65,533.06 Lin. Ft.	
Deduct for Station Equation	- 28.33 Lin. Ft.	
Net Length of Project =	65,504.73 Lin. Ft.	or 12.406 Miles
Begin Work	Sta. 491+00	
End Work	Sta. 1147+60.06	
S.R. 53 Sta. 39+00 - Sta. 48+90.75 =	990.75 Lin. Ft.	
S.R. 53 Sta. 51+09.25 - Sta. 60+31.62 =	922.37 Lin. Ft.	
Sub-Total =	67,579.18 Lin. Ft.	
Deduct for Station Equation	- 28.33 Lin. Ft.	
Net Length of Work =	67,550.85 Lin. Ft.	or 12.793 Miles



LOCATION MAP

SCALE IN MILES
0 1 2 3 4 5 6 7 8

Portion to be improved
State & Federal Routes
Other Roads

SCALES

Plan 0' 50' 100'

Cross Section: Horizontal 0 10' 20' Vertical 0 10' 20'

1981 SPECIFICATIONS

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

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 May D. Moorhead
Date 1-12-82 District Deputy Director of Transportation

Approved Robert B. Pfeiffer
Date 3-9-82 Engineer, Bureau of Bridges and Structural Design
J.S.R.

Approved Howard E. Nye
Date 3-3-82 Chief Engineer, Planning and Design
3/11/82

Approved David L. Weis
Date 3-30-82 Director, Department of Transportation

UNDERGROUND UTILITIES
48 HOURS
BEFORE YOU DIG
Call···800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS MUST BE CALLED DIRECTLY

SUPPLEMENTAL SPECIFICATIONS	
845	3-2-81
848	3-4-80
953	8-21-80
1001	1-3-77

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

BP-4	7-16-81	GR-4A	2-5-82	TC-61.10	2-26-82		
BP-5	7-16-81	GR-6	2-5-82				
CB-2-2-A&B	5-1-79	MC-3	6-1-79				
F-2	5-1-76	MC-4	7-26-76	TC-71.10	4-9-79		
F-3	5-1-76			TC-72.20	2-26-82		
F-5	5-1-76	DBR-2-73	4-10-73				
F-6	5-1-76						
GR-1	2-5-82	HL-11	6-1-79				
GR-2B	2-5-82						
GR-3	2-5-82	TC-35.10	10-5-77				
GR-3A	2-5-82	TC-41.10	3-26-79				
GR-3B	2-5-82	TC-42.10	8-19-77				
GR-4	2-5-82	TC-51.11	4-3-79				

Rev. 4-26-82

Plan Prepared By:
DISTRICT NO. 1
OHIO DEPARTMENT OF TRANSPORTATION

SEAL

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

Project: WYA.-23-10.40
Date of Letting 19, Contract No.

LD 0300 Rev. 1-1-81

TITLE SHEET

FHWA REGION	STATE	PROJECT	
5	OHIO		

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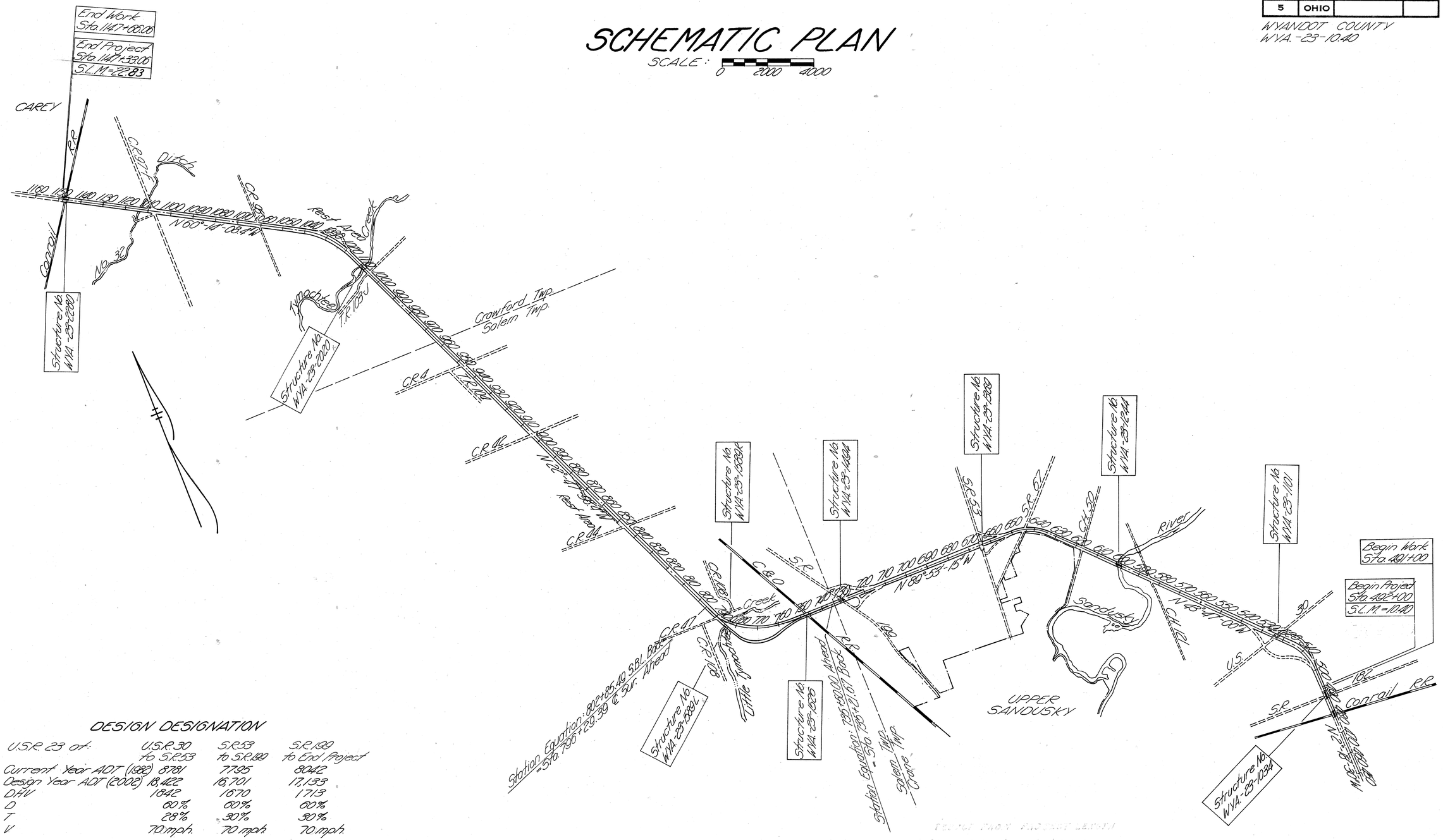
WYANDOT COUNTY
WYA.-23-10.40

SCHEMATIC PLAN

SCALE: 0 2000 4000



DESIGN DESIGNATION

U.S.R. 23 at:	U.S.R. 30 to S.R. 53	S.R. 53 to S.R. 199	S.R. 199 to End Project
Current Year ADT (1982)	8781	7795	8042
Design Year ADT (2002)	18,422	16,701	17,133
DHV	1842	1670	1713
D	60%	60%	60%
T	28%	30%	30%
V	70 mph.	70 mph.	70 mph.

DEDUCT FROM PROJECT LENGTH

STRUCTURE NO.	LENGTH
WYA-23-1101	[illegible]
WYA-23-1034	[illegible]
WYA-23-1589	[illegible]
WYA-23-2020	[illegible]
TOTAL	[illegible]

Rev. 4-26-82

SCHEMATIC PLAN

TYPICAL SECTIONS

TYPE - 848

FHWA REGION	STATE	PROJECT	
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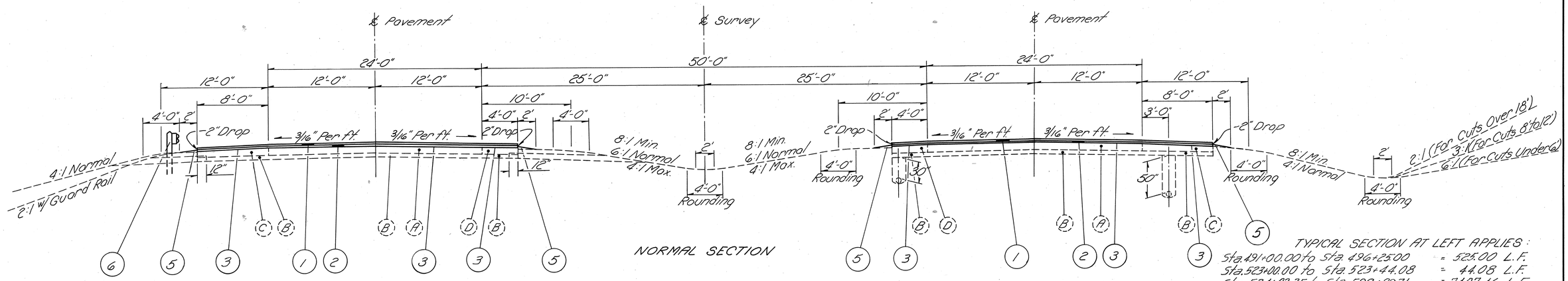
WYANDOT COUNTY
WYA.-23-10.40

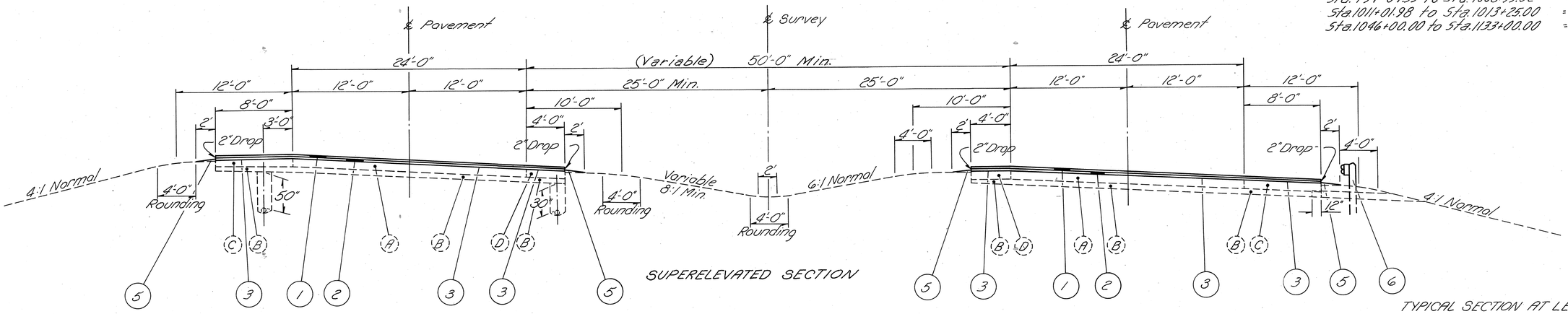


NORMAL SECTION

Note ~
Guard Rail Detail
applies either side

TYPICAL SECTION AT LEFT APPLIES :

Sta. 491+00.00 to Sta. 496+25.00	=	525.00 L.F.
Sta. 523+00.00 to Sta. 523+44.08	=	44.08 L.F.
Sta. 524+82.25 to Sta. 598+89.71	=	7407.46 L.F.
Sta. 601+15.29 to Sta. 628+25.00	=	2709.71 L.F.
Sta. 655+75.00 to Sta. 730+56.37	=	7481.37 L.F.
Sta. 731+96.21 to Sta. 735+21.67	=	325.46 L.F.
(Station Equation : 735+21.67 Back = 735+50.00 Ahead)		
Sta. 735+50.00 to Sta. 740+00.00	=	450.00 L.F.
Sta. 797+04.39 to Sta. 1008+99.02	=	21,194.63 L.F.
Sta. 1011+01.98 to Sta. 1013+25.00	=	223.02 L.F.
Sta. 1046+00.00 to Sta. 1133+00.00	=	8700.00 L.F.



SUPERELEVATED SECTION

TYPICAL SECTION AT LEFT APPLIES :

Sta. 496+25.00 to Sta. 523+00.00	=	2675.00 L.F.
Sta. 628+25.00 to Sta. 655+75.00	=	2750.00 L.F.
Sta. 740+00.00 to Sta. 748+01.08	=	801.08 L.F.
Sta. 749+66.16 to Sta. 781+05.89	=	3139.73 L.F.
Sta. 781+98.35 to Sta. 797+04.39	=	1506.04 L.F.
Sta. 1013+25.00 to Sta. 1046+00.00	=	3275.00 L.F.

LEGEND (EXISTING)

- (A) 9" Reinforced Portland Cement Concrete Pavement
- (B) 6" Subbase
- (C) 6 1/2" to 9" Stabilized Crushed Aggregate (8' Shoulder)
- (D) 7 3/4" to 9" Stabilized Crushed Aggregate (4' Shoulder)

LEGEND (PROPOSED)

- (1) Item 848 - 1 1/4" Asphalt Concrete Surface Course, Type 1
- (2) Item 848 - 1 3/4" Asphalt Concrete Intermediate Course, Type 2
- (3) Item 407 - Tack Coat : Applied at the rate of 0.10 Gal. per Sq. Yd., with cover aggregate (703.06) applied at the rate of 7 lbs. per Sq. Yd.
- (5) Item 617 - Reconditioning Shoulders : Including Shoulder preparation, Compacted Aggregate and Water
- (6) Item 606 - Guard Rail, Type 5

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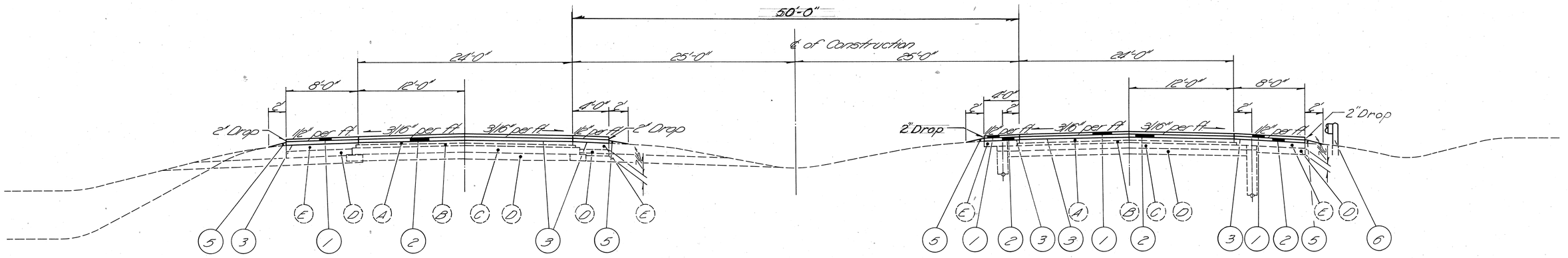
TYPICAL SECTION

TYPE 848



NORMAL SECTION

Note ~ Guard Rail Detail applies either side.

Section Above Applies From Sta. 1133+00 to Sta. 1145+81.04 = 1281.04 L.F.
Sta. 1147+33.06 to Sta 1147+66.06 = 33.00 L.F.

LEGEND (EXISTING)

(A) 2½" Asphaltic Concrete Surface Course.
(B) 3" Asphaltic Concrete Base Course.
(C) 8" Waterbound Macadam Base Course.
(D) 8" Subbase.
(E) 6" Stabilized Crushed Aggregate Shoulders.

LEGEND (PROPOSED)

(1) Item 848 - 1¼" Asphalt Concrete Surface Course, Type 1.
(2) Item 848 - 1¾" Asphalt Concrete Intermediate Course, Type 2.
(3) Item 407 - Tack Coat, Applied at the rate of 0.10 Gal. per Sq. Yd., with Cover Aggregate (703.06) applied at the rate of 7 lbs. per Sq. Yd..
(5) Item 617 - Reconditioning Shoulders: Including Shoulder preparation, Compacted Aggregate and Water.
(6) Item 606 - Guard Rail, Type 5.

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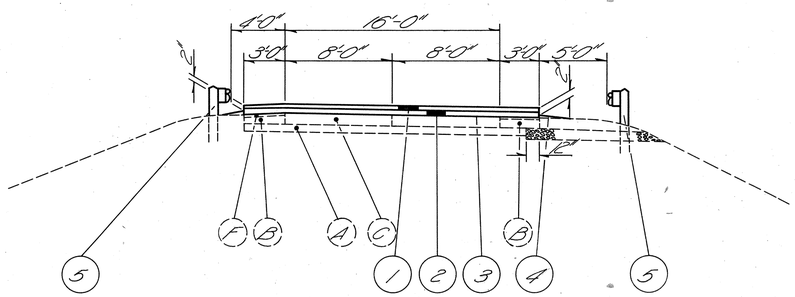
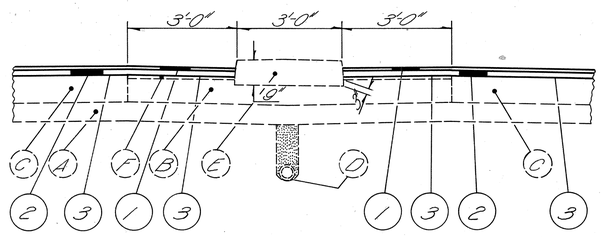
TYPICAL SECTIONS
TYPE 848



NORMAL RAMP SECTION



S.R. 199 RAMP ~ MEDIAN DETAIL

LEGEND (EXISTING)

(A) 6" Subbase, Grading "A" or "B".

(B) Stabilized Crushed Aggregate Shoulder.

(C) 9" Reinforced Portland Cement Concrete Pavement.

(D) 6" Pipe.

(E) Portland Cement Concrete Median Pavement (Standard Type 2).

(F) 1" Asphalt Concrete.

LEGEND (PROPOSED)

(1) Item 848 ~ 1½" Asphalt Concrete Surface Course, Type 1.

(2) Item 848 ~ 1¾" Asphalt Concrete Intermediate Course, Type 2.

(3) Item 407 ~ Tack Coat: Applied at the rate of 0.10 Gal. per Sq. Yd. with cover Aggregate (703.06) applied at the rate of 7 lbs. per Sq. Yd..

(4) Item 617 ~ Reconditioning Shoulders: Including Shoulder preparation, Compacted Aggregate and Water.

(5) Item 606 ~ Guard Rail, Type 5.

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WYANDOT COUNTY
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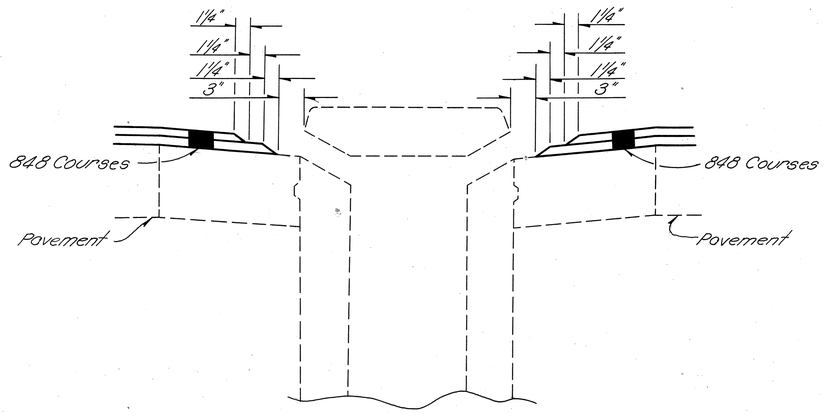
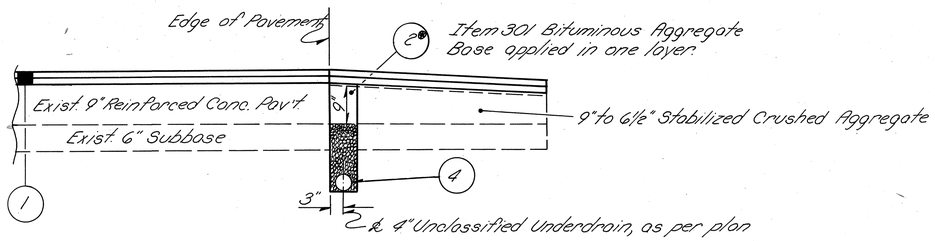
PAVEMENT FEATHER AT CURB INLET



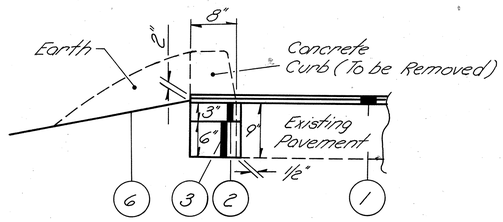


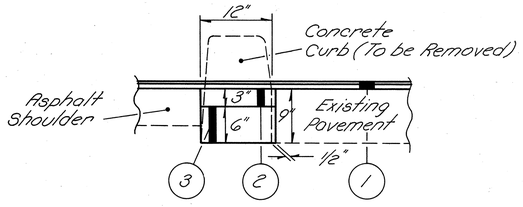
4" UNCLASSIFIED PIPE UNDERDRAINS AS PER PLAN

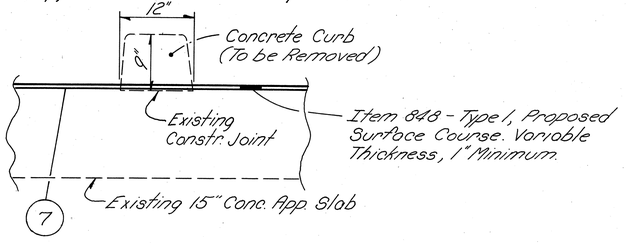
LEGEND

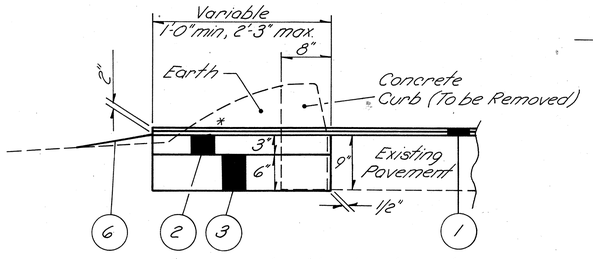
1. Proposed Surface Courses ~ See Typical Sections
2. Item 301 - Bituminous Aggregate Base; AC-20, RT-11 or RT-12 *(Included with Item 605 for payment.)
3. Item 304 - Aggregate Base
4. Item 605 - 4" Unclassified Pipe Underdrains, as per plan
5. Item 203 - 12" Embankment
6. Item 659 - Seeding and Mulching
7. Item 407 - Tack Coat: Applied at the rate of 0.10 Gal. per Sq. Yd., with cover Aggregate (703.06) applied at the rate of 7 lbs. per Sq. Yd.

CURB REMOVAL DETAILS

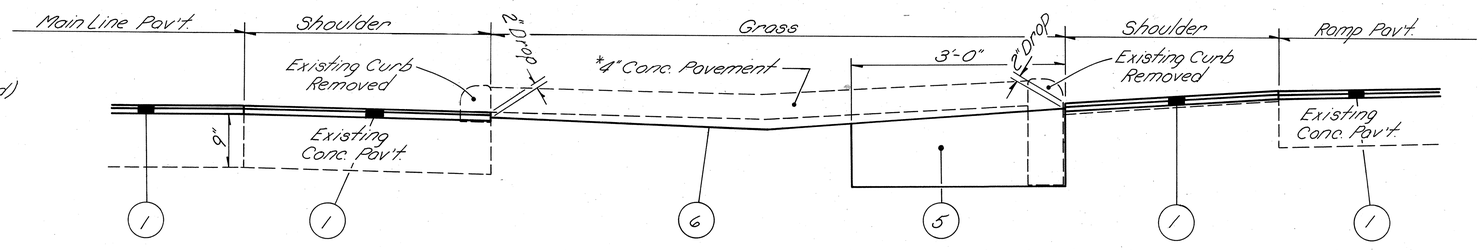








* Paved Shoulder to slope at the same rate as adjoining ramp pavement.



* Any existing pavement between curbs shall be removed and the cost of this item will be included in with the cost of item 202 Curb Removal, as per plan.

FEATHER AT CURB INLETS ~ CURB REMOVAL ~ UNCLASSIFIED PIPE UNDERDRAIN DETAILS

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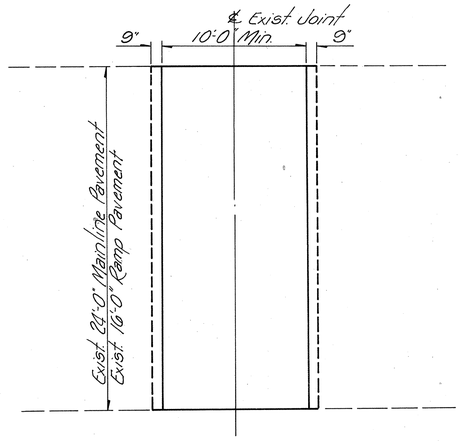
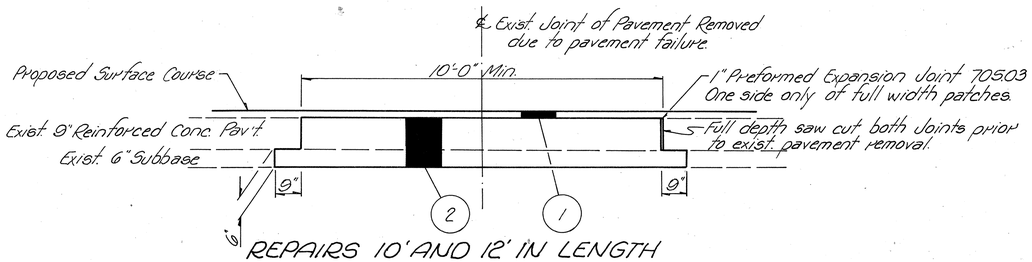
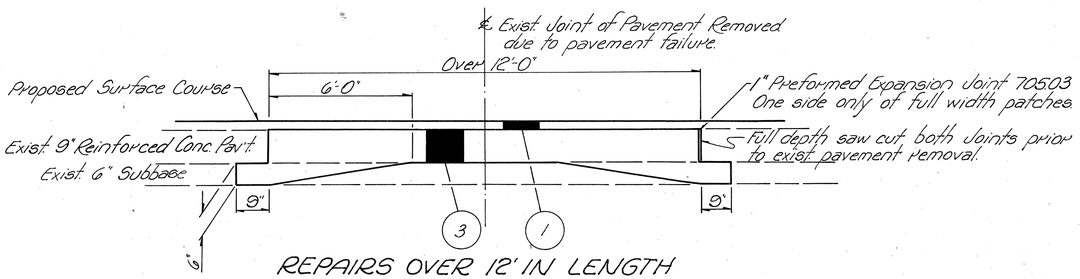
TYPICAL PAVEMENT JOINT REPAIR



PLAN VIEW



REPAIRS 10' AND 12' IN LENGTH



REPAIRS OVER 12' IN LENGTH

Note: Locations of Joint Repairs will be determined by the Engineer.

(1) Proposed Surface Courses, See Typical Sections.

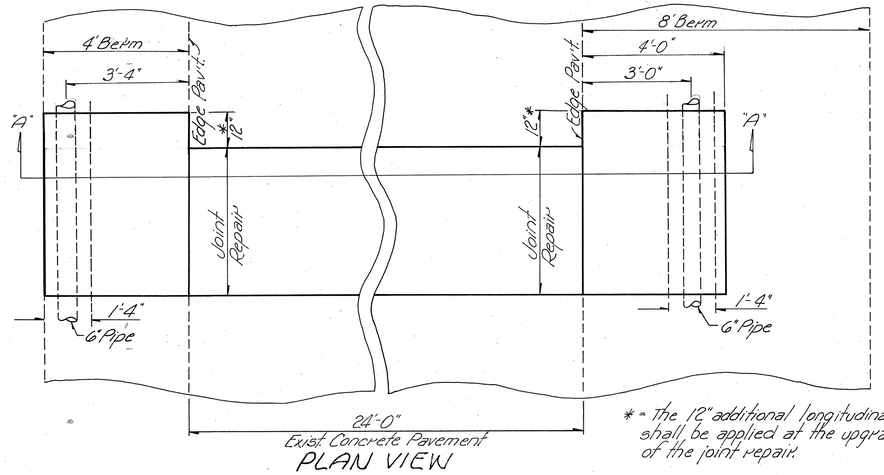
(2) 15"-305 Portland Cement Concrete Base, 701.02 except for 9" length at ends which will project 9" under the ends of the 451 left in place with a thickness of 6".

(3) 305 Portland Cement Concrete Base 9" thickened to 15" at end of patch at the rate of 1" per longitudinal foot and extended 9" under pavement left in place. No load transfer required at transverse joint required in patches less than 20' long. For patches over 20' use dowels as per Std. Dwg. BP-4.

(4) Item 301-6" Bituminous Aggregate Base; AC-20, RT-11 or RT-12.

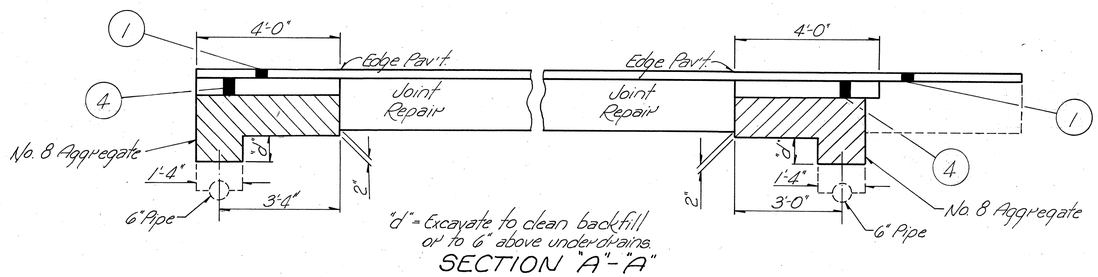
(5) Item 605-Aggregate Drains.

LONGITUDINAL AGGREGATE DRAINS
"AS PER PLAN"



PLAN VIEW

* = The 12" additional longitudinal drain shall be applied at the upgrade side of the joint repair.

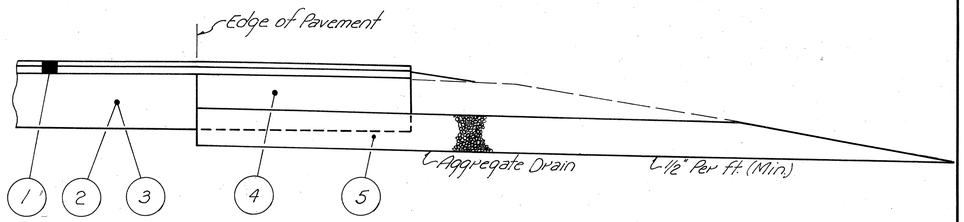


"d" = Excavate to clean backfill or to 6" above underdrains.

SECTION "A"-"A"

605 AGGREGATE DRAINS — In addition to the provisions of 605 the following shall apply to this item.

Crosshatched Area shall be excavated as noted above "d." Payment for the above excavation disposal of excavated material and placing of the No. 8 Aggregate to within 6" of the existing paved berm surface, shall be included in the price bid per lineal foot of 608 Aggregate Drain as per plan measured parallel to the pavement edge.



AGGREGATE DRAIN DETAIL
(AT REPAIR SECTIONS)

The above detail applies at all Pavement Repair Sections in the passing lane where the existing roadway is in a fill section.

PAVEMENT JOINT REPAIR & AGGREGATE DRAIN DETAILS

FHWA REGION	STATE	PROJECT		
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WYANDOT COUNTY
WYA-23-10.40

Computations By Initials J.S.S. Date 1/12/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

ESTIMATED PAVEMENT REPAIR QUANTITIES

Station From	Station To	Lane	Estimated No. of Removals	Length	Width		202 Pavement Removed Sq. Yd.	305 Portland Cement Concrete Base Sq. Yd.	301 Bituminous Aggregate Base Cu. Yd.	Special Pavement Sawing Lin. Ft.	605 Aggregate Drains Lin. Ft.
Northbound U.S. 23											
		Driving	184	10'	12'		2,453.3	2,453.3	104.3	4,416	1,408
		Passing	98	10'	12'		1,306.7	1,306.7	72.6	2,352	980
		Ramps	8	10'	16'		142.2	142.2	5.9	256	80
Southbound U.S. 23											
		Driving	290	10'	12'		3,866.7	3,866.7	164.3	6,960	2,219
		Passing	163	10'	12'		2,173.3	2,173.3	120.7	3,912	1,630
		Ramps	13	10'	16'		231.1	231.1	9.6	416	130
Totals							10,173.3	10,173.3	477.4	18,312	6,447

EARTHWORK

Sheet No.	203 Excavation Cu. Yd.	203 Embankment Cu. Yd.
11	0	125
87	0	656
Totals	0	781

GROUND RODS AT FENCE
(Power Lines Crossing Proposed Fence)

Station From	Station To	Side	625 Ground Rod Each
585+14		Lt.	1
586+87		Rt.	1
618+33		Lt.	1
618+73		Rt.	1
643+92		Rt.	1
645+07		Lt.	1
706+71		Lt. & Rt.	2
785+90		Rt.	1
788+88		Lt.	1
796+78		Rt.	1
797+11		Lt.	1
847+45		Rt.	1
848+34		Lt.	1
924+00	933+00	Rt.	4
932+41		Lt.	1
948+65		Rt.	1
949+48		Lt.	1
1002+55		Lt.	1
1003+87		Rt.	1
1061+65		Lt.	1
1116+20	1117+32	Rt.	2
1121+35	1122+41	Lt.	2
1126+12		Lt. & Rt.	2
Totals			30

MISCELLANEOUS COMPUTATIONS

659 Seeding & Mulching :

From Sheet 11	562 Sq. Yd.
From Sheet 87	1400 Sq. Yd.
Total	1962 Sq. Yd.

659 Commercial Fertilizer
(1962 × 9 × 20) ÷ (1000 × 2000) = 0.18 Tons

PAVEMENT QUANTITIES

Computation By
Initials J.S.S. Date 1/12/82
Computation By
Initials J.W.R. Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
WYA.-23-10.40

Station From	Station To	Ln Ft	203 Embankment Cu Yd	301 Bituminous Aggregate Base Cu Yd	304 Aggregate Base Cu Yd	848 Asphalt Concrete Intermediate Course, Type 2 Cu Yd	848 Asphalt Concrete Surface Course, Type 1 Cu Yd	407 Tack Coat Gals	407 Cover Aggregate Tons	617 Shoulder Preparation Sq Yd	617 Compacted Aggregate Cu Yd	659 Seeding and Mulching Sq Yd
US 23 Mainline NB & SB												
491+00	492+00	100.00								66.7	0.9	
Asphalt Surface(Feather)						6.7	17.4	53.3	1.9			
8' Paved Shoulder(")						1.1	2.9	8.9	0.3			
4' Paved Shoulder(")						1.1	2.9	8.9	0.3			
492+00	522+44.08	3044.08								1,659.5	46.1	
Asphalt Surface						789.2	563.7	1023.5	36.8			
8' Paved Shoulders						191.2	136.5	393.2	13.8			
4' Paved Shoulders						131.5	94.0	270.6	9.5			
522+44.08	523+44.08	100.00								88.9	1.2	
Asphalt Surface(Feather)						6.7	17.4	53.3	1.9			
8' Paved Shoulders(")						2.2	5.8	17.8	0.6			
4' Paved Shoulders(")						1.1	2.9	8.9	0.3			
523+44.08	524+82.25	138.17										
Br. No WYA-23-11.01 L&R												
No Work												
524+82.25	525+82.25	100.00								88.9	1.2	
Asphalt Surface(Feather)						6.6	17.4	53.4	1.9			
8' Paved Shoulders(")						2.2	5.8	17.8	0.6			
4' Paved Shoulders(")						1.1	2.9	8.9	0.3			
525+82.25	598+09.71	7,227.46								5,630.1	156.4	
Asphalt Surface						1,833.8	1,338.4	3,854.7	34.9			
8' Paved Shoulders						507.0	370.1	1,042.9	36.5			
4' Paved Shoulders						293.9	209.9	604.6	21.2			
598+09.71	598+80.71	80.00								71.1	1.0	
Asphalt Surface(Feather)						8.3	15.4	42.7	1.5			
8' Paved Shoulders(")						2.8	5.1	14.2	0.5			
4' Paved Shoulders(")						1.4	2.6	7.1	0.2			
598+80.71	601+15.29	234.58										
Br. No WYA-23-12.41 L&R												
See Deck Overlay Sheet												
601+15.29	601+95.29	80.00								71.1	1.0	
Asphalt Surface(Feather)						8.3	15.4	42.6	1.5			
8' Paved Shoulders(")						2.8	5.1	14.2	0.5			
4' Paved Shoulders(")						1.4	2.6	7.1	0.3			
601+95.29	729+76.37	12,781.08								9,701.0	269.5	
Asphalt Surface						3,356	2,366.9	6,866.6	238.6			
8' Paved Shoulders						851.7	605.4	1,752.1	61.3			
4' Paved Shoulders						517.3	369.5	1,064.1	37.3			
729+76.37	730+56.37	80.00								55.3	0.8	
Asphalt Surface(Feather)						8.3	15.4	42.7	1.5			
8' Paved Shoulders(")						2.9	3.6	12.1	0.4			
4' Paved Shoulders(")						1.4	2.6	7.1	0.3			
730+56.37	731+90.21	139.84										
Br. No WYA-23-14.04 L&R												
See Deck Overlay Sheet												
731+90.21	732+70.21	80.00								35.6	0.5	
Asphalt Surface(Feather)						8.3	15.4	42.7	1.5			
8' Paved Shoulders(See Ramps)												
4' Paved Shoulders(Feather)						1.4	2.5	7.1	0.2			
732+70.21	740+00	695.46								300.6	10.9	
(735+12.67 Back = 735+00.00 Ahead)												
Asphalt Surface						180.3	128.8	370.9	13.0			
8' Paved Shoulder						15.8	11.3	32.6	1.1			
4' Paved Shoulders						30.1	21.5	61.8	2.2			

Station From	Station To	Ln Ft	203 Embankment Cu Yd	301 Bituminous Aggregate Base Cu Yd	304 Aggregate Base Cu Yd	848 Asphalt Concrete Intermediate Course, Type 2 Cu Yd	848 Asphalt Concrete Surface Course, Type 1 Cu Yd	407 Tack Coat Gals	407 Cover Aggregate Tons	617 Shoulder Preparation Sq Yd	617 Compacted Aggregate Cu Yd	659 Seeding and Mulching Sq Yd
US 23 Southbound Lanes												
740+00	746+03.51	603.51								294.2	8.2	
Asphalt Surface						85.8	61.3	176.6	6.2			
8' Paved Shoulder						28.5	20.4	58.7	2.1			
4' Paved Shoulder						14.3	10.2	29.5	1.0			
746+03.51	747+03.72	100.21								44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.7	0.9			
8' Paved Shoulder(")						1.1	2.9	8.9	0.3			
4' Paved Shoulder(")						0.6	1.5	4.5	0.2			
747+03.72	749+18.48	154.76										
Br. No WYA-23-15.20L												
No Work												
749+18.48	750+18.69	100.21								44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.6	0.9			
8' Paved Shoulder(")						1.1	2.9	8.9	0.3			
4' Paved Shoulder(")						0.5	1.4	4.5	0.1			
750+18.69	784+32.04	3,413.35								1,523.7	42.3	
Asphalt Surface						444.3	317.3	913.9	32.0			
8' Paved Shoulder						148.9	106.3	306.3	10.7			
4' Paved Shoulder						73.7	52.6	151.6	5.3			
784+32.04	785+31.21	99.17								44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.7	0.9			
8' Paved Shoulder(")						1.1	2.9	8.9	0.3			
4' Paved Shoulder(")						0.6	1.5	4.5	0.2			
785+31.21	786+36.79	105.58										
Br. No WYA-23-5.89L												
No Work												
786+36.79	787+36.58	99.79								44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.6	0.9			
8' Paved Shoulder(")						1.1	2.9	8.9	0.3			
4' Paved Shoulder(")						0.5	1.4	4.5	0.1			
787+36.58	802+85.49	1,548.91								579.2	16.1	
Asphalt Surface						200.8	143.4	413.0	14.5			
8' Paved Shoulder						62.0	44.3	127.5	4.5			
4' Paved Shoulder						25.3	18.1	52.1	1.8			
(802+85.49 US 23 SB = 796+29.39 US 23)												
Sheet Totals						9,874.9	7,198.2	20,747.8	726.2		20,433.5	558.5

PAVEMENT QUANTITIES

Computed By Initials J.S.S. Date 1/12/82
Computed Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
WYA-23-10.40

Station From	Station To	Lin. Ft.	203 Embankment Cu. Yd.	301 Bituminous Aggregate Base Cu. Yd.	304 Aggregate Base Cu. Yd.	848 Asphalt Conc Intermediate Course, Type 2 Cu. Yd.	848 Asphalt Conc Surface Course, Type 1 Cu. Yd.	407 Tack Coat Gals.	407 Cover Aggregate Tons	408 Bituminous Prime Coat Gals.	617 Shoulder Separation Sq. Yd.	617 Compacted Aggregate Cu. Yd.	659 Seeding and Mulching Sq. Yd.
U.S. 23 Northbound Lanes													
740+00	747+01.08	701.08									100.9	4.5	
Asphalt Surface						90.9	64.9	187.0	6.5				
8' Paved Shoulder						1.0	0.7	2.0	0.1				
4' Paved Shoulder						15.2	10.8	31.2	1.1				
747+01.08	748+01.08	100.00									44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.7	0.9				
8' Paved Shoulder(")						1.1	2.9	8.9	0.3				
4' Paved Shoulder(")						0.6	1.5	4.5	0.2				
748+01.08	749+86.16	185.08											
Br. No. WYA-23-1528R													
No Work													
749+86.16	750+86.16	100.00									44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.6	0.9				
8' Paved Shoulder(")						1.1	2.9	8.9	0.3				
4' Paved Shoulder(")						0.5	1.4	4.5	0.2				
750+86.16	780+04.58	2,938.42									1,295.5	36.0	
Asphalt Surface						377.9	270.0	777.5	27.2				
8' Paved Shoulder						125.6	89.7	258.3	9.0				
4' Paved Shoulder						63.2	45.1	130.0	4.6				
780+04.58	781+05.89	101.31									44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.7	0.9				
8' Paved Shoulder(")						1.1	2.9	8.9	0.3				
4' Paved Shoulder(")						0.6	1.5	4.5	0.2				
781+05.89	781+98.35	92.46											
Br. No. WYA-23-1529R													
No Work													
781+98.35	782+99.66	101.31									44.4	0.6	
Asphalt Surface(Feather)						3.3	8.7	26.6	0.9				
8' Paved Shoulder(")						1.1	2.9	8.9	0.3				
4' Paved Shoulder(")						0.5	1.4	4.5	0.2				
782+99.66	796+29.39	1,329.73									489.2	13.0	
Asphalt Surface						170.5	121.8	350.8	12.3				
8' Paved Shoulder						50.3	35.9	103.5	3.6				
4' Paved Shoulder						20.5	14.6	42.1	1.5				
U.S. 23 Mainline, NB & SB													
796+29.39	1007+99.02	2,169.63									17,447.2	484.6	
Asphalt Surface						5,488.4	3,920.3	11,290.5	395.2				
8' Paved Shoulders						1,089.7	1,206.9	3,475.9	121.7				
4' Paved Shoulders						851.4	608.2	1,751.5	61.3				
1007+99.02	1008+99.02	100.00									88.9	1.2	
Asphalt Surface(Feather)						6.7	17.4	53.3	1.9				
8' Paved Shoulders(")						2.2	5.8	17.8	0.6				
4' Paved Shoulders(")						1.1	2.9	8.9	0.3				
1008+99.02	1011+01.98	202.96											
Br. No. WYA-23-2220.64R													
No Work													
1011+01.98	1012+01.98	100.00									88.9	1.2	
Asphalt Surface(Feather)						6.6	17.4	53.3	1.9				
8' Paved Shoulders(")						2.2	5.8	17.8	0.6				
4' Paved Shoulders(")						1.1	2.9	8.9	0.3				

Station From	Station To	Lin. Ft.	203 Embankment Cu. Yd.	301 Bituminous Aggregate Base Cu. Yd.	304 Aggregate Base Cu. Yd.	848 Asphalt Conc Intermediate Course, Type 2 Cu. Yd.	848 Asphalt Conc Surface Course, Type 1 Cu. Yd.	407 Tack Coat Gals.	407 Cover Aggregate Tons	408 Bituminous Prime Coat Gals.	617 Shoulder Separation Sq. Yd.	617 Compacted Aggregate Cu. Yd.	659 Seeding and Mulching Sq. Yd.
1012+01.98	1145+01.04	13,290.06									10,737.3	298.3	
Asphalt Surface						3,447.9	2,402.8	7,082.8	248.2				
8' Paved Shoulders						1,000.7	721.2	2,007.0	72.7				
4' Paved Shoulders						539.1	385.1	1,108.0	38.8				
1145+01.04	1145+81.04	80.00									71.1	1.0	
Asphalt Surface(Feather)						8.3	15.4	42.7	1.5				
8' Paved Shoulders(")						2.8	5.1	14.2	0.5				
4' Paved Shoulders(")						1.4	2.6	7.1	0.3				
1145+81.04	1147+33.06	152.02											
Br. No. WYA-23-2200.64R													
See Deck Overlay Sheets													
1147+33.06	1147+86.06	33.00									14.7	0.2	
Asphalt Surface(Feather)							2.4	17.6	0.6				
8' Paved Shoulders(")							0.8	5.9	0.2				
4' Paved Shoulders(")							0.4	2.9	0.1				
Sheet Totals						13,993.5	10,039.1	29,019.7	1,018.2		30,551.3	842.4	

PAVEMENT QUANTITIES

Computations By Initials J.S.S. Date 1/12/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
WYA-23-10.40

11/108

Location	203 Embankment	301 Bituminous Aggregate Base	304 Aggregate Base	848 Asphalt Conc. Intermediate Course, Type 2	848 Asphalt Conc. Surface Course, Type 1	407 Tack Coat	407 Cover Aggregate	617 Shoulder Preparation	617 Compacted Aggregate	659 Seeding and Mulching
	Cu. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Tons	Sq. Yd.	Cu. Yd.	Sq. Yd.
RAMPS:										
U.S.30 - Ramp "A"	22.2							833.8	23.2	87.1
Asphalt Surface				298.7	222.2	642.1	22.5			
Paved Shoulders				106.6	77.6	225.7	7.9			
U.S.30 - Ramp "B"		4.7	9.5					788.6	21.9	
Asphalt Surface				195.0	149.8	434.0	15.2			
Paved Shoulders				131.7	95.5	275.0	9.6			
U.S.30 Ramp "C"	11.1							1327.0	36.9	55.7
Asphalt Surface				315.7	238.0	688.7	24.1			
Paved Shoulders				120.0	87.7	253.0	8.9			
U.S.30 - Ramp "F"		3.8	7.6					1412.7	39.2	
Asphalt Surface				312.4	233.2	674.2	23.6			
Paved Shoulders				150.2	109.2	315.	11.0			
S.R.53 - Ramp "A"		4.7	9.4					731.9	20.3	
Asphalt Surface				191.5	146.0	422.7	14.8			
Paved Shoulders				121.3	88.6	255.7	9.0			
SR.53 - Ramp "D"	11.1							591.5	16.4	58.7
Asphalt Surface				163.6	125.3	363.1	12.7			
Paved Shoulders				67.9	50.6	146.1	5.1			
S.R.199 - Ramp "A"	11.3							513.1	14.3	49.0
Asphalt Surface				202.5	152.7	442.0	15.5			
Paved Shoulders				77.1	56.7	163.6	5.7			
S.R.199 - Ramp "B"	16.9	0.4	0.9					747.4	20.8	60.6
Asphalt Surface				201.3	159.2	454.7	15.9			
Paved Shoulders				112.5	89.3	256.7	9.0			
S.R.199 - Ramp "C"		4.9	9.7					822.9	22.9	
Asphalt Surface				221.5	161.5	465.6	16.3			
Paved Shoulders				142.1	103.1	297.3	10.4			
S.R.199 - Ramp "D"	24.1	0.2	0.5					513.4	14.3	91.7
Asphalt Surface				136.5	111.4	321.9	11.3			
Paved Shoulders				56.2	44.9	129.0	4.5			
Ent. Ramp From S.B. Rest Area		4.8	9.6					400.3	11.1	
Asphalt Surface				117.9	87.8	253.5	8.9			
Paved Shoulders				91.6	66.7	192.4	6.7			
Exit Ramp to S.B. Rest Area	13.8							268.9	7.5	77.0
Asphalt Surface				107.6	80.4	232.3	8.1			
Paved Shoulders				40.8	30.5	88.1	3.1			
Exit Ramp to N.B. Rest Area	13.8							267.9	7.4	81.8
Asphalt Surface				84.8	64.1	185.3	6.5			
Paved Shoulders				40.6	30.4	87.7	3.1			
Ent. Ramp From N.B. Rest Area		5.5	11.0					511.1	14.2	
Asphalt Surface				141.1	104.3	301.2	10.5			
Paved Shoulders				115.5	83.8	241.6	8.5			

Location	203* Embankment	301 Bituminous Aggregate Base	304 Aggregate Base	848 Asphalt Conc. Intermediate Course, Type 2	848 Asphalt Conc. Surface Course, Type 1	407 Tack Coat	407 Cover Aggregate	617 Shoulder Preparation	617 Compacted Aggregate	659* Seeding and Mulching
	Cu. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Cu. Yd.	Gal.	Tons	Sq. Yd.	Cu. Yd.	Sq. Yd.
INTERSECTIONS:										
C.R.121								252.9	7.0	
Asphalt Surface				74.6	57.1	165.3	5.8			
Paved Shoulders				17.2	12.3	35.4	1.2			
C.R.50								228.9	6.4	
Asphalt Surface				54.8	44.5	129.1	4.5			
Paved Shoulders				17.2	12.3	35.4	1.2			
S.R.67								253.2	7.0	
Asphalt Surface				74.4	57.8	167.3	5.9			
Paved Shoulders				17.3	12.3	35.5	1.3			
C.R.47								260.8	7.2	
Asphalt Surface				74.0	57.2	165.7	5.8			
Paved Shoulders				26.3	20.0	58.0	2.0			
C.R.44								237.0	6.6	
Asphalt Surface				67.7	52.8	153.1	5.4			
Paved Shoulders				24.3	18.6	54.0	1.9			
C.R.42								236.1	6.6	
Asphalt Surface				64.4	50.5	146.4	5.1			
Paved Shoulders				24.3	18.6	53.8	1.9			
C.R.4								234.3	6.5	
Asphalt Surface				66.3	51.8	150.2	5.3			
Paved Shoulders				24.1	18.4	53.4	1.9			
T.R.103-J								225.9	6.3	
Asphalt Surface				58.9	46.6	135.1	4.7			
Paved Shoulders				23.2	17.8	51.7	1.8			
C.R.98								219.5	6.1	
Asphalt Surface				56.9	45.1	130.8	4.6			
Paved Shoulders				22.5	17.3	50.2	1.8			
C.R.97-F								303.4	8.4	
Asphalt Surface				99.4	75.2	217.6	7.6			
Paved Shoulders				32.5	24.5	70.7	2.5			
Sheet Totals		124.6	29.0	58.2	4984.5	3761.0	10866.9	380.6		12182.5	338.5	561.6
Totals Sheet 9					9874.9	7198.2	20747.8	726.2		20433.5	558.5	
Totals Sheet 10					13983.5	10089.1	29019.7	1018.2		30551.3	842.4	
Grand Totals		124.6	29.0	58.2	28852.9	21048.3	60634.4	2125.0		63167.3	1739.4	561.6

* Quantities carried to Sheet 8

PAVEMENT COMPUTATIONS
U.S. 23

Computations By Initials J.S.S. Date 9/27/81
Computations Checked By Initials PWK Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
WYA-23-10.40

Mainline Pavement Factors:
848 Surface Type I: 1127(1.25/12)(24)(1) = 0.092593 Cu.Yd/Lin.Ft.
848 Intermediate Type 2: 1127(1.75/12)(24)(1) = 0.129630 Cu.Yd/Lin.Ft.
407 Tack Coat: 1.9(24)(1)(0.10) = 0.266667 Gal/Lin.Ft.
407 Cover Aggregate: 1.9(24)(1)(7/2000) = 0.009333 Tons/Lin.Ft.
Outside (8') Shoulder Factors:
848 Surface Type I: 1127(1.25/12)(8)(1) = 0.030864 Cu.Yd/Lin.Ft.
848 Intermediate Type 2: 1127(1.75/12)(8)(1) = 0.043210 Cu.Yd/Lin.Ft.
407 Tack Coat: 1.9(8)(1)(0.1) = 0.088889 Gal/Lin.Ft.
407 Cover Aggregate: 1.9(8)(1)(7/2000) = 0.003111 Tons/Lin.Ft.
Inside (4') Shoulder Factors:
848 Surface Type I: 1127(1.25/12)(4)(1) = 0.015432 Cu.Yd/Lin.Ft.
848 Intermediate Type 2: 1127(1.75/12)(4)(1) = 0.021605 Cu.Yd/Lin.Ft.
407 Tack Coat: 1.9(4)(1)(0.1) = 0.044444 Gal/Lin.Ft.
407 Cover Aggregate: 1.9(4)(1)(7/2000) = 0.001556 Tons/Lin.Ft.
Reconditioning Shoulders:
617 Shoulder Preparation: 1.9(2)(1) = 0.222222 Sq.Yd/Lin.Ft.
617 Compacted Aggregate: 1.27(1.9)(0.333)(2)(1) = 0.006173 Cu.Yd/Lin.Ft.
617 Water - Calculated on total 617 Aggregate quantity.

From Sta. 401+00 to Sta. 492+00 - Feather - 100' Lin.Ft.
Pavement:
848 Type I: 1127(2)[60(24)(0.5+1.75/2(12)) + 40(24)(1.25/12)] = 17.41 Cu.Yd.
848 Type 2: 1127(2)(40)(24)(0.5+1.75/2(12)) = 6.67 Cu.Yd.
407 Tack Coat: (0.266667)(100)(2) = 53.33 Gals.
407 Cover Aggregate: (0.009333)(100)(2) = 1.87 Tons
Outside Shoulders: (Lt. Shoulder with Ramp "F"):
848 Type I: 1127[60(8)(0.5+1.75/2(12)) + 40(8)(1.25/12)] = 2.90 Cu.Yd.
848 Type 2: 1127(40)(8)(0.5+1.75/2(12)) = 1.11 Cu.Yd.
407 Tack Coat: 0.088889(100) = 8.89 Gals.
407 Cover Aggregate: 0.003111(100) = 0.31 Tons
Inside Shoulders:
848 Type I: 1127(2)[60(4)(0.5+1.75/2(12)) + 40(4)(1.25/12)] = 2.90 Cu.Yd.
848 Type 2: 1127(2)(40)(4)(0.5+1.75/2(12)) = 1.11 Cu.Yd.
407 Tack Coat: 0.044444(2)(100) = 8.89 Gals.
407 Cover Aggregate: 0.001556(2)(100) = 0.31 Tons
Reconditioning:
617 Shoulder Preparation: (0.222222)(2)(100) = 88.89 Sq.Yd.
617 Compacted Aggregate: (0.006173)(1.5)(2)(100) = 66.67 Sq.Yd.
617 Water - Calculated on total 617 Aggregate quantity. = 0.93 Cu.Yd.

From Sta. 492+00 to Sta. 522+44.08 = 3,044.08 Lin.Ft.
Pavement:
848 Type I: 2(0.092593)(3,044.08) = 563.72 Cu.Yd.
848 Type 2: 2(0.129630)(3,044.08) = 789.21 Cu.Yd.
407 Tack Coat: 2(0.266667)(3,044.08) = 1,623.51 Gals.
407 Cover Aggregate: 2(0.009333)(3,044.08) = 56.82 Tons
Outside Shoulders:
848 Type I: 0.030864[2(3,044.08) - 909.50 - 755.00] = 138.53 Cu.Yd.
848 Type 2: (0.043210)(4423.66) = 191.15 Cu.Yd.
407 Tack Coat: 0.088889(4,423.66) = 393.21 Gals.
407 Cover Aggregate: 0.003111(4,423.66) = 13.76 Tons
Inside Shoulders:
848 Type I: 2(0.015432)(3044.08) = 93.95 Cu.Yd.
848 Type 2: 2(0.021605)(3044.08) = 131.53 Cu.Yd.
407 Tack Coat: 2(0.044444)(3,044.08) = 270.58 Gals.
407 Cover Aggregate: 2(0.001556)(3,044.08) = 9.47 Tons
Reconditioning Shoulders:
617 Shoulder Preparation: (0.222222)(4423.66 + 3044.08) = 1,659.50 Sq.Yd.
617 Compacted Aggregate: (0.006173)(4423.66 + 3,044.08) = 46.10 Cu.Yd.

From Sta. 522+44.08 to Sta. 523+44.08 - Feather - 100' Lin.Ft.
Pavement:
848 Type I: 1127(2)[60(24)(0.5+1.75/2(12)) + 40(24)(1.25/12)] = 17.41 Cu.Yd.
848 Type 2: 1127(2)(40)(24)(0.5+1.75/2(12)) = 6.67 Cu.Yd.
407 Tack Coat: (0.266667)(100)(2) = 53.33 Gals.
407 Cover Aggregate: (0.009333)(100)(2) = 1.87 Tons
Outside Shoulders:
848 Type I: 1127(2)[60(8)(0.5+1.75/2(12)) + 40(8)(1.25/12)] = 5.80 Cu.Yd.
848 Type 2: 1127(2)(40)(8)(0.5+1.75/2(12)) = 2.22 Cu.Yd.
407 Tack Coat: 0.088889(2)(100) = 17.78 Gals.
407 Cover Aggregate: 0.003111(2)(100) = 0.62 Tons
Inside Shoulders:
848 Type I: 1127(2)[60(4)(0.5+1.75/2(12)) + 40(4)(1.25/12)] = 2.90 Cu.Yd.
848 Type 2: 1127(2)(40)(4)(0.5+1.75/2(12)) = 1.11 Cu.Yd.
407 Tack Coat: 0.044444(2)(100) = 8.89 Gals.
407 Cover Aggregate: 0.001556(2)(100) = 0.31 Tons
Reconditioning:
617 Shoulder Preparation: (0.222222)(4)(100) = 88.89 Sq.Yd.
617 Compacted Aggregate: (0.006173)(1.5)(4)(100) = 1.23 Cu.Yd.

From Sta. 523+44.08 to Sta. 524+82.25 = 138.17 Lin.Ft.
No Pavement Work. Bridge No. WYA-23-10.97 L&R

From Sta. 524+82.25 to Sta. 525+82.25 - Feather = 100.00 Lin.Ft.
Pavement:
848 Type I: 1127(2)[60(24)(0.5+1.75/2(12)) + 40(24)(1.25/12)] = 17.41 Cu.Yd.
848 Type 2: 1127(2)(40)(24)(0.5+1.75/2(12)) = 6.67 Cu.Yd.
407 Tack Coat: (0.266667)(100)(2) = 53.33 Gals.
407 Cover Aggregate: (0.009333)(100)(2) = 1.87 Tons
Outside Shoulders:
848 Type I: 1127(2)[60(8)(0.5+1.75/2(12)) + 40(8)(1.25/12)] = 5.80 Cu.Yd.
848 Type 2: 1127(2)(40)(8)(0.5+1.75/2(12)) = 2.22 Cu.Yd.
407 Tack Coat: 0.088889(2)(100) = 17.78 Gals.
407 Cover Aggregate: 0.003111(2)(100) = 0.62 Tons
Inside Shoulders:
848 Type I: 1127(2)[60(4)(0.5+1.75/2(12)) + 40(4)(1.25/12)] = 2.90 Cu.Yd.
848 Type 2: 1127(2)(40)(4)(0.5+1.75/2(12)) = 1.11 Cu.Yd.
407 Tack Coat: 0.044444(2)(100) = 8.89 Cu.Yd.
407 Cover Aggregate: 0.001556(2)(100) = 0.31 Tons
Reconditioning:
617 Shoulder Preparation: (0.222222)(2)(100) = 88.89 Sq.Yd.
617 Compacted Aggregate: (0.006173)(1.5)(2)(4)(100) = 1.23 Cu.Yd.

From Sta. 525+82.25 to Sta. 598+09.71 = 7,227.46 Lin.Ft.
Pavement:
848 Type I: 2(0.092593)(7,227.46) = 1,338.42 Cu.Yd.
848 Type 2: 2(0.129630)(7227.46) = 1,873.70 Cu.Yd.
407 Tack Coat: 2(0.266667)(7,227.46) = 3,854.85 Gals.
407 Cover Aggregate: 2(0.009333)(7,227.46) = 134.91 Tons
Outside Shoulders:
848 Type I: 0.030864[2(7227.46) - 842.18 - 130.00 + 125.00] = 382.10 Cu.Yd.
848 Type 2: (0.043210)(11,732.14) = 506.95 Cu.Yd.
407 Tack Coat: 0.088889(11,732.14) = 1,042.86 Gals.
407 Cover Aggregate: 0.003111(11,732.14) = 36.50 Tons
Inside Shoulders:
848 Type I: 0.015432[2(7227.46) - (425+426.5)] = 200.93 Cu.Yd.
848 Type 2: (0.021605)(13,003.42) = 283.90 Cu.Yd.
407 Tack Coat: 0.044444(13,003.42) = 604.59 Gals.
407 Cover Aggregate: 0.001556(13,003.42) = 21.17 Tons
Reconditioning:
617 Shoulder Preparation: (0.222222)(11,732.14 + 13,003.42) = 5,650.12 Sq.Yd.
617 Compacted Aggregate: 0.006173(25,335.56) = 156.40 Cu.Yd.

From Sta. 598+09.71 to Sta. 598+89.71 - Feather - 80' Lin.Ft.
Pavement:
848 Type I: 1127(2)[50(1.25/12)(24) + 30(24)(1.75+1/2(12))] = 15.37 Cu.Yd.
848 Type 2: 1127(2)(50)(24)(1.75+1.25/2(12)) = 8.33 Cu.Yd.
407 Tack Coat: 0.266667(80)(2) = 42.67 Gals.
407 Cover Aggregate: 0.009333(80)(2) = 1.49 Tons
Outside Shoulders:
848 Type I: 1127(2)[50(1.25/12)(8) + 30(1.75+1/2(12))(8)] = 5.12 Cu.Yd.
848 Type 2: 1127(2)(50)(8)(1.75+1.25/2(12)) = 2.78 Cu.Yd.
407 Tack Coat: 0.088889(80)(2) = 14.22 Gals.
407 Cover Aggregate: 0.003111(80)(2) = 0.50 Tons
Inside Shoulders:
848 Type I: 1127(2)[50(1.25/12)(4) + 30(1.75+1/2(12))(4)] = 2.56 Cu.Yd.
848 Type 2: 1127(2)(50)(4)(1.75+1.25/2(12)) = 1.39 Cu.Yd.
407 Tack Coat: 0.044444(80)(2) = 7.11 Gals.
407 Cover Aggregate: 0.001556(80)(2) = 0.25 Tons
Reconditioning:
617 Shoulder Preparation: (0.222222)(80)(4) = 71.11 Sq.Yd.
617 Compacted Aggregate: (0.006173)(1.5)(80)(4) = 0.99 Cu.Yd.

From Sta. 598+89.71 to Sta. 601+15.29 = 225.58 Lin.Ft.
Bridge No. WYA-23-12.44
See Deck Overlay Sheets.

From Sta. 601+15.29 to Sta. 601+85.29 - Feather = 80.00 Lin.Ft.
Pavement:
848 Type I: 1127(2)[50(1.25/12)(24) + 30(24)(1.75+1/2(12))] = 15.37 Cu.Yd.
848 Type 2: 1127(2)(50)(24)(1.75+1.25/2(12)) = 8.33 Cu.Yd.
407 Tack Coat: 0.266667(80)(2) = 42.67 Gals.
407 Cover Aggregate: 0.009333(80)(2) = 1.49 Tons
Outside Shoulders:
848 Type I: 1127(2)[50(1.25/12)(8) + 30(1.75+1/2(12))(8)] = 5.12 Cu.Yd.
848 Type 2: 1127(2)(50)(8)(1.75+1.25/2(12)) = 2.78 Cu.Yd.
407 Tack Coat: 0.088889(80)(2) = 14.22 Gals.
407 Cover Aggregate: 0.003111(80)(2) = 0.50 Tons
Inside Shoulders:
848 Type I: 1127(2)[50(1.25/12)(4) + 30(1.75+0.5/2(12))(4)] = 2.56 Cu.Yd.
848 Type 2: 1127(2)(50)(4)(1.75+0.5/2(12)) = 1.39 Cu.Yd.

407 Tack Coat: 0.044444(80)(2) = 7.11 Gals.
407 Cover Aggregate: 0.001556(80)(2) = 0.25 Tons
Reconditioning:
617 Shoulder Preparation: (0.222222)(80)(4) = 71.11 Sq.Yd.
617 Compacted Aggregate: (0.006173)(1.5)(80)(4) = 0.99 Cu.Yd.

From Sta. 601+85.29 to Sta. 729+76.37 = 12,791.08 Lin.Ft.
Pavement:
848 Type I: 2(0.092593)(12,791.08) = 2,366.88 Cu.Yd.
848 Type 2: 2(0.129630)(12,791.08) = 3,323.02 Cu.Yd.
407 Tack Coat: 2(0.266667)(12,791.08) = 6,818.58 Gals.
407 Cover Aggregate: 2(0.009333)(12,791.08) = 238.57 Tons
Outside Shoulders:
848 Type I: 0.030864[2(12,791.08) + (1441.37) - 131.5 - 627.5 - 859.5 - 908.5 - 1040.0 - 350.10] = 608.37 Cu.Yd.
848 Type 2: 0.043210(19,711.36) = 851.73 Cu.Yd.
407 Tack Coat: 0.088889(19,711.36) = 1,752.12 Gals.
407 Cover Aggregate: 0.003111(19,711.36) = 61.32 Tons
Inside Shoulders:
848 Type I: 0.015432[2(12,791.08) - 2(407.0) - (392+415)] = 389.49 Cu.Yd.
848 Type 2: 0.021605(23,943.16) = 517.29 Cu.Yd.
407 Tack Coat: 0.044444(23,943.16) = 1,064.13 Gals.
407 Cover Aggregate: 0.001556(23,943.16) = 37.26 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222(19,711.36 + 23,943.16) = 9,700.99 Sq.Yd.
617 Compacted Aggregate: 0.006173(19,711.36 + 23,943.16) = 282.48 Cu.Yd.

From Sta. 729+76.37 to Sta. 730+56.37 - Feather - 80' Lin.Ft.
Pavement:
848 Type I: 1127(2)[50(1.25/12)(24) + 30(24)(1.75+1/2(12))] = 15.37 Cu.Yd.
848 Type 2: 1127(2)(50)(24)(1.75+0.5/2(12)) = 8.33 Cu.Yd.
407 Tack Coat: 0.266667(80)(2) = 42.67 Gals.
407 Cover Aggregate: 0.009333(80)(2) = 1.49 Tons
Outside Shoulder: (Rt only, Lt Shoulder with Ramp "D")
(Approach Slab over to Ramp "B" included)
848 Type I: 8(27[33.75(1.25/12) + 50(1.25/12) + 30(1.75+1/2(12))] = 3.00 Cu.Yd.
848 Type 2: 8(27[33.75(1.75/12) + 50(1.75+0.50/2(12))] = 2.85 Cu.Yd.

407 Tack Coat: 1.9(25)(1.5)(0.10) = 4.17 Gals.
407 Cover Aggregate: 1.9(25)(1.5)(7/2000) = 0.15 Tons
Inside Shoulders:
848 Type I: 1127(2)[50(1.25/12)(4) + 30(1.75+1/2(12))(4)] = 2.56 Cu.Yd.
848 Type 2: 1127(2)(50)(4)(1.75+0.5/2(12)) = 1.39 Cu.Yd.
407 Tack Coat: 0.044444(80)(2) = 7.11 Gals.
407 Cover Aggregate: 0.001556(80)(2) = 0.25 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222[80(2) + 80 + 33.75 - 25] = 55.28 Sq.Yd.
617 Compacted Aggregate: 0.006173(248.75)(1.5) = 0.77 Cu.Yd.

From Sta. 730+56.37 to Sta. 731+96.21 = 139.84 Lin.Ft.
Bridge No. WYA-23-12.94
See Deck Overlay Sheets.

From Sta. 731+96.21 to Sta. 732+76.21 - Feather = 80' Lin.Ft.
Pavement:
848 Type I: 1127(2)[50(1.25/12)(24) + 30(24)(1.75+1/2(12))] = 15.37 Cu.Yd.

PAVEMENT COMPUTATIONS
U.S. 23

Computations By	
Initials J.S.S.	Date 9/22/81
Computations Checked By	
Initials JWR	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA.-23-10.40

From Sta. 731+96.21 to Sta. 732+76.21~ (Continued)~
848 Type 2: $1/27(2)(50)(24)\left(\frac{1.75+0.5}{2(12)}\right)$ = 8.33 Cu. Yd.
407 Tack Coat: 0.266667 (80)(2) = 42.67 Gals.
407 Cover Aggregate: 0.009333 (80)(2) = 1.49 Tons
Outside Shoulders: See Ramps "B" and "D".
Inside Shoulders:
848 Type 1: $1/27(2)\left[50\left(\frac{1.25}{12}\right)(4)+30\left(\frac{1.75+1}{2(12)}\right)(4)\right]$ = 2.56 Cu. Yd.
848 Type 2: $1/27(2)(50)(4)\left(\frac{1.75+0.5}{2(12)}\right)$ = 1.39 Cu. Yd.
407 Tack Coat: 0.044444 (80)(2) = 7.11 Gals.
407 Cover Aggregate: 0.001556 (80)(2) = 0.25 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222 (80)(2) = 35.56 Sq. Yd.
617 Compacted Aggregate: 0.006173 (1/2)(80)(2) = 0.49 Cu. Yd.

From Sta. 732+76.21 to Sta. 740+00 = 695.46 Lin. Ft.
(Sta. 735+21.67 Back = Sta. 735+50.00 Ahead, Deduct 28.33')
Pavement:
848 Type 1: 2(0.092593)(695.46) = 128.79 Cu. Yd.
848 Type 2: 2(0.129630)(695.46) = 180.30 Cu. Yd.
407 Tack Coat: 2(0.266667)(695.46) = 370.91 Gals.
407 Cover Aggregate: 2(0.009333)(695.46) = 12.98 Tons
Outside Shoulders: (Rt. Shoulder with Ramp "B")~
848 Type 1: 0.030864 (695.46 − 328.79) = 11.32 Cu. Yd.
848 Type 2: 0.043210 (366.67) = 15.84 Cu. Yd.
407 Tack Coat: 0.088889 (366.67) = 32.59 Gals.
407 Cover Aggregate: 0.003111 (366.67) = 1.14 Tons
Inside Shoulders:
848 Type 1: 2 (0.015432)(695.46) = 21.46 Cu. Yd.
848 Type 2: 2(0.021605)(695.46) = 30.05 Cu. Yd.
407 Tack Coat: 2(0.044444)(695.46) = 61.82 Gals.
407 Cover Aggregate: 2(0.001556)(695.46) = 2.16 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222 [2(695.46) + 366.67] = 390.58 Sq. Yd.
617 Compacted Aggregate: 0.006173 (1,757.59) = 10.85 Cu. Yd.

U.S. 23 ~ SOUTHBOUND LANES~
From Sta. 740+00 to Sta. 746+63.51 ~ 663.51' along BL, Dc.=1°~(Length along ℄ pavement = 662.12')
Pavement:
848 Type 1: 0.092593 (662.12) = 61.31 Cu. Yd.
848 Type 2: 0.129630 (662.12) = 85.83 Cu. Yd.
407 Tack Coat: 0.266667 (662.12) = 176.57 Gals.
407 Cover Aggregate: 0.009333 (662.12) = 6.18 Tons
Outside Shoulder: (Length along ℄ Shoulder = 660.27'):
848 Type 1: 0.030864 (660.27) = 20.38 Cu. Yd.
848 Type 2: 0.043210 (660.27) = 28.53 Cu. Yd.
407 Tack Coat: 0.088889 (660.27) = 58.69 Gals.
407 Cover Aggregate: 0.003111 (660.27) = 2.05 Tons
Inside Shoulder: (Length along ℄ Shoulder = 663.74'):
848 Type 1: 0.015432 (663.74) = 10.24 Cu. Yd.
848 Type 2: 0.021605 (663.74) = 14.34 Cu. Yd.
407 Tack Coat: 0.044444 (663.74) = 29.50 Gals.
407 Cover Aggregate: 0.001556 (663.74) = 1.03 Tons
Reconditioning: (Average length = 661.89'):
617 Shoulder Preparation: 2 (0.222222)(661.89) = 294.17 Sq. Yd.
617 Compacted Aggregate: 2(0.006173)(661.89) = 8.17 Cu. Yd.

From Sta. 746+63.51 to Sta. 747+63.72~ Feather ~ 100.21' along BL, Dc=1°~
Pavement: (Length along ℄ Pavement = 100.00'):
848 Type 1: 1/2(17.41) = 8.71 Cu. Yd.
848 Type 2: 1/2(6.66) = 3.33 Cu. Yd.
407 Tack Coat: 1/2(53.33) = 26.67 Gals.
407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons
Outside Shoulder:
848 Type 1: 1/2 (5.80) = 2.90 Cu. Yd.
848 Type 2: 1/2 (2.22) = 1.11 Cu. Yd.
407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons
Inside Shoulder:
848 Type 1: 1/2 (2.90) = 1.45 Cu. Yd.
848 Type 2: 1/2 (1.11) = 0.56 Cu. Yd.
407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons
Reconditioning:
617 Shoulder Preparation: 1/2(88.88) = 44.44 Sq. Yd.
617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu. Yd.

From Sta. 747+63.72 to Sta. 749+18.48 ~ 154.76' along BL (Dc=1°).
No Pavement Work.
Bridge No. WYA.-23-1526L

From Sta. 749+18.48 to Sta. 750+18.69 ~ Feather~ 100.21' along BL, Dc=1°. (Length along ℄ Pavement = 100.00').
Pavement:
848 Type 1: 1/2 (17.41) = 8.71 Cu. Yd.
848 Type 2: 1/2 (6.66) = 3.33 Cu. Yd.
407 Tack Coat: 1/2 (53.33) = 26.67 Gals.
407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons
Outside Shoulder:
848 Type 1: 1/2 (5.80) = 2.90 Cu. Yd.
848 Type 2: 1/2 (2.22) = 1.11 Cu. Yd.
407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons
Inside Shoulder:
848 Type 1: 1/2 (2.90) = 1.45 Cu. Yd.
848 Type 2: 1/2 (1.11) = 0.56 Cu. Yd.
407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons
Reconditioning:
617 Shoulder Preparation: 1/2(88.88) = 44.44 Sq. Yd.
617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu. Yd.

From Sta. 750+18.69 to Sta. 784+32.04 = 3,413.35' along BL.
Length along ℄ Pavement: $581.31\left(\frac{5717.578}{5729.578}\right)+736.19+\left[400+\frac{1}{2}(12)\left(\frac{8\pi}{180}\right)\right]+1662.04\left(\frac{1444.39}{1432.39}\right)+34.09$ = 3,427.17'
Length along ℄ Outside Shoulder = 3,445.60'
Length along ℄ Inside Shoulder = 3,411.11'
Pavement:
848 Type 1: 0.092593 (3,427.17) = 317.33 Cu. Yd.
848 Type 2: 0.129630 (3,427.17) = 444.26 Cu. Yd.
407 Tack Coat: 0.266667 (3,427.17) = 913.91 Gals.
407 Cover Aggregate: 0.009333 (3,427.17) = 31.99 Tons
Outside Shoulder:
848 Type 1: 0.030864 (3,445.60) = 106.34 Cu. Yd.
848 Type 2: 0.043210 (3,445.60) = 148.88 Cu. Yd.
407 Tack Coat: 0.088889 (3,445.60) = 306.28 Gals.
407 Cover Aggregate: 0.003111 (3,445.60) = 10.72 Tons
Inside Shoulder:
848 Type 1: 0.015432 (3,411.11) = 52.64 Cu. Yd.
848 Type 2: 0.021605 (3,411.11) = 73.70 Cu. Yd.
407 Tack Coat: 0.044444 (3,411.11) = 151.60 Gals.
407 Cover Aggregate: 0.001556 (3,411.11) = 5.31 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222 (3,445.60 + 3,411.11) = 1,523.71 Sq. Yd.
617 Compacted Aggregate: 0.006173 (3,445.60 + 3,411.11) = 42.33 Cu. Yd.

From Sta. 784+32.04 to Sta. 785+31.21~ Feather ~ 99.17' along BL (400' Spiral)
Length along ℄ Pavement = 100.00'
Pavement:
848 Type 1: 1/2(17.41) = 8.71 Cu. Yd.
848 Type 2: 1/2 (6.66) = 3.33 Cu. Yd.
407 Tack Coat: 1/2 (53.33) = 26.67 Gals.
407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons
Outside Shoulder:
848 Type 1: 1/2 (5.80) = 2.90 Cu. Yd.
848 Type 2: 1/2 (2.22) = 1.11 Cu. Yd.
407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons
Inside Shoulder:
848 Type 1: 1/2 (2.90) = 1.45 Cu. Yd.
848 Type 2: 1/2 (1.11) = 0.56 Cu. Yd.
407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons
Reconditioning:
617 Shoulder Preparation: 1/2 (88.88) = 44.44 Sq. Yd.
617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu. Yd.

From Sta. 785+31.21 to Sta. 786+36.79 ~ 105.58' along BL.
No Pavement Work. Bridge No. WYA-23-1589L

From Sta. 786+36.79 to Sta. 787+36.58 ~ Feather~ 99.79' along BL (in Spiral).
Length along ℄ Pavement = 100.00'
Pavement:
848 Type 1: 1/2 (17.41) = 8.71 Cu. Yd.
848 Type 2: 1/2 (6.66) = 3.33 Cu. Yd.
407 Tack Coat: 1/2 (53.33) = 26.67 Gals.
407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons
Outside Shoulder:
848 Type 1: 1/2 (5.80) = 2.90 Cu. Yd.
848 Type 2: 1/2 (2.22) = 1.11 Cu. Yd.
407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons
Inside Shoulder:
848 Type 1: 1/2 (2.90) = 1.45 Cu. Yd.
848 Type 2: 1/2 (1.11) = 0.56 Cu. Yd.
407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons
Reconditioning:
617 Shoulder Preparation: 1/2 (88.88) = 44.44 Sq. Yd.
617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu. Yd.

From Sta. 787+36.58 to Sta. 802+85.49~ 1,548.91' along BL.
Pavement:
848 Type 1: 0.092593 (1,548.91) = 143.42 Cu. Yd.
848 Type 2: 0.129630 (1,548.91) = 200.79 Cu. Yd.
407 Tack Coat: 0.266667 (1,548.91) = 413.04 Gals.
407 Cover Aggregate: 0.009333 (1,548.91) = 14.46 Tons
Outside Shoulder:
848 Type 1: 0.030864 (1,548.91 − 114.13) = 44.28 Cu. Yd.
848 Type 2: 0.043210 (1,434.78) = 62.00 Cu. Yd.
407 Tack Coat: 0.088889 (1,434.78) = 127.54 Gals.
407 Cover Aggregate: 0.003111 (1,434.78) = 4.46 Tons
Inside Shoulder:
848 Type 1: 0.015432 (1,548.91 − 377.28) = 18.08 Cu. Yd.
848 Type 2: 0.021605 (1,171.63) = 25.31 Cu. Yd.
407 Tack Coat: 0.044444 (1,171.63) = 52.07 Gals.
407 Cover Aggregate: 0.001556 (1,171.63) = 1.82 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222 (1,434.78 + 1,171.63) = 579.20 Sq. Yd.
617 Shoulder Aggregate: 0.006173 (2,606.41) = 16.09 Cu. Yd.
End Separate Southbound Lanes
Sta. 802+85.49 Back = Sta. 796+29.39 Ahead.

U.S. 23 ~ NORTHBOUND LANES~
From Sta. 740+00 to Sta. 747+01.08 = 701.08'
Pavement:
848 Type 1: 0.092593 (701.08) = 64.92 Cu. Yd.
848 Type 2: 0.129630 (701.08) = 90.88 Cu. Yd.
407 Tack Coat: 0.266667 (701.08) = 186.95 Gals.
407 Cover Aggregate: 0.009333 (701.08) = 6.54 Tons
Outside Shoulder:
848 Type 1: 0.030864 (701.08 − 678.33) = 0.70 Cu. Yd.
848 Type 2: 0.043210 (22.75) = 0.98 Cu. Yd.
407 Tack Coat: 0.088889 (22.75) = 2.02 Gals.
407 Cover Aggregate: 0.003111 (22.75) = 0.07 Tons
Inside Shoulder:
848 Type 1: 0.015432 (701.08) = 10.82 Cu. Yd.
848 Type 2: 0.021605 (701.08) = 15.15 Cu. Yd.
407 Tack Coat: 0.044444 (701.08) = 31.16 Gals.
407 Cover Aggregate: 0.001556 (701.08) = 1.09 Tons
Reconditioning:
617 Shoulder Preparation: 0.222222 (22.75 + 701.08) = 160.85 Sq. Yd.
617 Compacted Aggregate: 0.006173 (723.83) = 4.47 Cu. Yd.

From Sta. 747+01.08 to Sta. 748+01.08~ Feather ~ 100.00'
Pavement:
848 Type 1: 1/2 (17.41) = 8.71 Cu. Yd.
848 Type 2: 1/2 (6.66) = 3.33 Cu. Yd.
407 Tack Coat: 1/2 (53.33) = 26.67 Gals.
407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons
Outside Shoulder:
848 Type 1: 1/2 (5.80) = 2.90 Cu. Yd.
848 Type 2: 1/2 (2.22) = 1.11 Cu. Yd.
407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons
Inside Shoulder:
848 Type 1: 1/2 (2.90) = 1.45 Cu. Yd.
848 Type 2: 1/2 (1.11) = 0.56 Cu. Yd.
407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons
Reconditioning:
617 Shoulder Preparation: 1/2 (88.88) = 44.44 Sq. Yd.
617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu. Yd.

From Sta. 748+01.08 to Sta. 749+66.16 = 165.08'
No Pavement Work. Bridge No. WYA-23-1526R

From Sta. 749+66.16 to Sta. 750+66.16~ Feather ~ 100.00'
Pavement:
848 Type 1: 1/2 (17.41) = 8.71 Cu. Yd.
848 Type 2: 1/2 (6.66) = 3.33 Cu. Yd.
407 Tack Coat: 1/2 (53.33) = 26.67 Gals.
407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons
Outside Shoulder:
848 Type 1: 1/2 (5.80) = 2.90 Cu. Yd.
848 Type 2: 1/2 (2.22) = 1.11 Cu. Yd.
407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons
Inside Shoulder:
848 Type 1: 1/2 (2.90) = 1.45 Cu. Yd.
848 Type 2: 1/2 (1.11) = 0.56 Cu. Yd.
407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons
Reconditioning:
617 Shoulder Preparation: 1/2 (88.88) = 44.44 Sq. Yd.
617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu. Yd.

From Sta. 750+66.16 to Sta. 780+04.58 = 2,938.42'
Length along ℄ Pavement $= 939.15+\left(300.00-\frac{37(3\pi)}{2(180)}\right)+1{,}699.27\left(\frac{2{,}827.789}{2{,}864.789}\right) = 939.15+299.03+1{,}677.32$ = 2,915.50'
Pavement:
848 Type 1: 0.092593 (2,915.50) = 269.95 Cu. Yd.
848 Type 2: 0.129630 (2,915.50) = 377.94 Cu. Yd.
407 Tack Coat: 0.266667 (2,915.50) = 777.47 Gals.
407 Cover Aggregate: (0.009333)(2,915.50) = 27.21 Tons
Outside Shoulder: Length ℄ Shoulder:
$939.15+\left(300-\frac{53(3\pi)}{2(180)}\right)+1{,}699.27\left(\frac{2{,}811.789}{2{,}864.789}\right)$ = 2,905.60'
848 Type 1: 0.030864 (2,905.60) = 89.68 Cu. Yd.
848 Type 2: 0.043210 (2,905.60) = 125.55 Cu. Yd.
407 Tack Coat: 0.088889 (2,905.60) = 258.28 Gals.
407 Cover Aggregate: 0.003111 (2,905.60) = 9.04 Tons
Inside Shoulder: Length ℄ Shoulder: $939.15+\left(300-\frac{23(3\pi)}{2(180)}\right)+1{,}699.27\left(\frac{2{,}841.789}{2{,}864.789}\right)$ = 2,924.18'

PAVEMENT COMPUTATIONS
U.S. 23

Computations By Initials J.S.S. Date 9/22/81
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

14/108

WYANDOT COUNTY
WYA-23-10.40

From Sta. 750+66.16 to Sta. 780+04.58 ~ (Continued) ~
- 848 Type 1: 0.015432 (2,924.18) = 45.13 Cu.Yd.
- 848 Type 2: 0.021605 (2,924.18) = 63.18 Cu.Yd.
- 407 Tack Coat: 0.044444 (2,924.18) = 129.96 Gals.
- 407 Cover Aggregate: 0.001550 (2,924.18) = 4.55 Tons

Reconditioning:
- 617 Shoulder Preparation: 0.222222 (2,905.00 + 2,924.18) = 1,285.51 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (5,829.78) = 35.99 Cu.Yd.

From Sta. 780+04.58 to Sta. 781+05.89 ~ Feather ~ 101.31'
Length along ℄ Pavement = 100.00'
Pavement:
- 848 Type 1: 1/2 (17.41) = 8.71 Cu.Yd.
- 848 Type 2: 1/2 (6.66) = 3.33 Cu.Yd.
- 407 Tack Coat: 1/2 (53.33) = 20.07 Gals.
- 407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons

Outside Shoulder:
- 848 Type 1: 1/2 (5.80) = 2.90 Cu.Yd.
- 848 Type 2: 1/2 (2.22) = 1.11 Cu.Yd.
- 407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
- 407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons

Inside Shoulder:
- 848 Type 1: 1/2 (2.90) = 1.45 Cu.Yd.
- 848 Type 2: 1/2 (1.11) = 0.56 Cu.Yd.
- 407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
- 407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons

Reconditioning:
- 617 Shoulder Preparation: 1/2 (88.88) = 44.44 Sq.Yd.
- 617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu.Yd.

From Sta. 781+05.89 to Sta. 781+98.35 = 92.46'
No Pavement Work.
Bridge No. WYA-23-1580.R

From Sta. 781+98.35 to Sta. 782+99.66 ~ Feather ~ 101.31'
Length along ℄ Pavement = 100.00'
Pavement:
- 848 Type 1: 1/2 (17.41) = 8.71 Cu.Yd.
- 848 Type 2: 1/2 (6.66) = 3.33 Cu.Yd.
- 407 Tack Coat: 1/2 (53.33) = 20.07 Gals.
- 407 Cover Aggregate: 1/2 (1.87) = 0.94 Tons

Outside Shoulder:
- 848 Type 1: 1/2 (5.80) = 2.90 Cu.Yd.
- 848 Type 2: 1/2 (2.22) = 1.11 Cu.Yd.
- 407 Tack Coat: 1/2 (17.78) = 8.89 Gals.
- 407 Cover Aggregate: 1/2 (0.62) = 0.31 Tons

Inside Shoulder:
- 848 Type 1: 1/2 (2.90) = 1.45 Cu.Yd.
- 848 Type 2: 1/2 (1.11) = 0.56 Cu.Yd.
- 407 Tack Coat: 1/2 (8.89) = 4.45 Gals.
- 407 Cover Aggregate: 1/2 (0.31) = 0.16 Tons

Reconditioning:
- 617 Shoulder Preparation: 1/2 (88.88) = 44.44 Sq.Yd.
- 617 Compacted Aggregate: 1/2 (1.23) = 0.62 Cu.Yd.

From Sta. 782+99.66 to Sta. 796+29.39 = 1,329.73'
Length ℄ Pavement: 1,029.73 (2,827.780 / 2,564.780)
+(300 - 37(37)/2(100)) = 1,315.40'
Pavement:
- 848 Type 1: 0.092503 (1,315.40) = 121.80 Cu.Yd.
- 848 Type 2: 0.129630 (1,315.40) = 170.52 Cu.Yd.
- 407 Tack Coat: 0.266667 (1,315.46) = 350.79 Gals.
- 407 Cover Aggregate: 0.009333 (1,315.40) 12.28 Tons

Outside Shoulder:
Length ℄ Shoulder: 1,029.73 (2,811.780 / 2,564.780)
+(300 - 23(37)/2(100)) = 1,309.86'
- 848 Type 1: 0.030864 (1,309.29 - 145.35) = 35.92 Cu.Yd.
- 848 Type 2: 0.043210 (1,163.93) = 50.29 Cu.Yd.
- 407 Tack Coat: 0.088889 (1,163.93) = 103.46 Gals.
- 407 Cover Aggregate: 0.003111 (1,163.93) = 3.62 Tons

Inside Shoulder:
Length ℄ Shoulder: 1,029.73 (2,841.780 / 2,564.780)
+(300 - 23(37)/2(100)) = 1,320.86'
- 848 Type 1: 0.015432 (1,320.86 - 373.25) = 14.62 Cu.Yd.
- 848 Type 2: 0.021605 (947.61) = 20.47 Cu.Yd.
- 407 Tack Coat: 0.044444 (947.61) = 42.12 Gals.
- 407 Cover Aggregate: 0.001550 (947.61) = 1.47 Tons

Reconditioning:
- 617 Shoulder Preparation: 0.222222 (1,103.93 + 947.61) = 409.23 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (2,111.54) = 13.03 Cu.Yd.

End Separate Northbound Lanes ~ Sta. 796+29.39

From Sta. 796+29.39 to Sta. 1007+99.02 = 2,169.63'
Pavement:
- 848 Type 1: 0.092503 (2) (2,169.63) = 3,920.32 Cu.Yd.
- 848 Type 2: 0.129630 (2) (2,169.63) = 5,498.44 Cu.Yd.
- 407 Tack Coat: 0.266667 (2) (2,169.63) = 1,230.48 Gals.
- 407 Cover Aggregate: 0.009333 (2) (2,169.63) = 395.15 Tons

Outside Shoulders:
- 848 Type 1: 0.030864 (2) (2,169.63) - (134.80 + 118.85) - 1281.0 - 910.0 - (134.92 + 134.99) - (133.35 + 133.39) - (127.24 + 127.00)] = 1,206.90 Cu.Yd.
- 848 Type 2: 0.043210 (39,103.73) = 1,689.67 Cu.Yd.
- 407 Tack Coat: 0.088889 (39,103.73) = 3475.39 Gals.
- 407 Cover Aggregate: 0.003111 (39,103.73) = 121.65 Tons

Inside Shoulders:
- 848 Type 1: 0.015432 (2) (2,169.63) - (367.37)(2) - (367.10)(2) - (366.54)(2) - (364.37)(2)] = 608.15 Cu.Yd.
- 848 Type 2: 0.021605 (39,408.50) = 851.42 Cu.Yd.
- 407 Tack Coat: 0.044444 (39,408.50) = 1,751.47 Gals.
- 407 Cover Aggregate: 0.001556 (39,408.50) = 61.32 Tons

Reconditioning:
- 617 Shoulder Preparation: 0.222222 (39,103.73 + 39,408.50) = 17,417.14 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (78,512.23) = 434.65 Cu.Yd.

From Sta. 1007+99.02 to Sta. 1008+99.02 ~ Feather ~ 100.00 Lin.Ft.
Pavement:
- 848 Type 1: 1/27 (2) [60 (24) (0.5+1.75/2(12)) + 40 (24) (1.25/12)] = 17.41 Cu.Yd.
- 848 Type 2: 1/27 (2) (40) (24) (0.5+1.75/2(12)) = 6.67 Cu.Yd.
- 407 Tack Coat: (0.266667) (100) (2) = 53.33 Gals.
- 407 Cover Aggregate: (0.009333) (100) (2) = 1.87 Tons

Outside Shoulders:
- 848 Type 1: 1/27 (2) [60 (8) (0.5+1.75/2(12)) + 40 (8) (1.25/12)] = 5.80 Cu.Yd.
- 848 Type 2: 1/27 (2) (40) (8) (0.5+1.75/2(12)) = 2.22 Cu.Yd.
- 407 Tack Coat: 0.088889 (2) (100) = 17.78 Gals.
- 407 Cover Aggregate: 0.003111 (2) (100) = 0.62 Tons

Inside Shoulder:
- 848 Type 1: 1/27 (2) [60 (4) (0.5+1.75/2(12)) + 40 (4) (1.25/12)] = 2.90 Cu.Yd.
- 848 Type 2: 1/27 (2) (40) (4) (0.5+1.75/2(12)) = 1.11 Cu.Yd.
- 407 Tack Coat: 0.044444 (2) (100) = 8.89 Gals.
- 407 Cover Aggregate: 0.001556 (2) (100) = 0.31 Tons

Reconditioning:
- 617 Shoulder Preparation: 0.222222 (4) (100) = 88.89 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (1/2) (4) (100) = 1.23 Cu.Yd.

From Sta. 1008+99.02 to Sta. 1011+01.98 = 202.96'
No Pavement Work.
Bridge No. WYA-23-2020

From Sta. 1011+01.98 to Sta. 1012+01.98 ~ Feather ~ 100.00 Lin.Ft.
Pavement:
- 848 Type 1: 1/27 (2) [60 (24) (0.5+1.75/2(12)) + 40 (24) (1.25/12)] = 17.41 Cu.Yd.
- 848 Type 2: 1/27 (2) (40) (24) (0.5+1.75/2(12)) = 6.67 Cu.Yd.
- 407 Tack Coat: (0.266667) (100) (2) = 53.33 Gals.
- 407 Cover Aggregate: (0.009333) (100) (2) = 1.87 Tons

Outside Shoulders:
- 848 Type 1: 1/27 (2) [60 (8) (0.5+1.75/2(12)) + 40 (8) (1.25/12)] = 5.80 Cu.Yd.
- 848 Type 2: 1/27 (2) (40) (8) (0.5+1.75/2(12)) = 2.22 Cu.Yd.
- 407 Tack Coat: 0.088889 (2) (100) = 17.78 Gals.
- 407 Cover Aggregate: 0.003111 (2) (100) = 0.62 Tons

Inside Shoulder:
- 848 Type 1: 1/27 (2) [60 (4) (0.5+1.75/2(12)) + 40 (4) (1.25/12)] = 2.90 Cu.Yd.
- 848 Type 2: 1/27 (2) (40) (4) (0.5+1.75/2(12)) = 1.11 Cu.Yd.
- 407 Tack Coat: 0.044444 (2) (100) = 8.89 Gals.
- 407 Cover Aggregate: 0.001556 (2) (100) = 0.31 Tons

Reconditioning:
- 617 Shoulder Preparation: 0.222222 (4) (100) = 88.89 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (1/2) (4) (100) = 1.23 Cu.Yd.

From Sta. 1012+01.98 to Sta. 1145+01.04 = 13,299.06'
Pavement:
- 848 Type 1: 0.092503 (2) (13,299.06) = 2,462.80 Cu.Yd.
- 848 Type 2: 0.129630 (2) (13,299.06) = 3,447.91 Cu.Yd.
- 407 Tack Coat: 0.266667 (2) (13,299.06) = 7,092.84 Gals.
- 407 Cover Aggregate: 0.009333 (2) (13,299.06) = 248.26 Tons

Outside Shoulders:
- 848 Type 1: 0.030864 (2) (13,299.06) - 910.0 - 1670.0 - (134.83)(2) - (243.86 + 152.73)] = 721.17 Cu.Yd.
- 848 Type 2: 0.043210 (23,366.17) = 1,009.85 Cu.Yd.
- 407 Tack Coat: 0.088889 (23,366.17) = 2,077.00 Gals.
- 407 Cover Aggregate: 0.003111 (23,366.17) = 72.69 Tons

Inside Shoulder:
- 848 Type 1: 0.015432 (2) (13,299.06) - (366.15 + 366.05) - (384.04 + 530.05)] = 385.06 Cu.Yd.
- 848 Type 2: 0.021605 (24,951.83) = 539.08 Cu.Yd.
- 407 Tack Coat: 0.044444 (24,951.83) = 1108.95 Gals.
- 407 Cover Aggregate: 0.001556 (24,951.83) = 38.83 Tons

Reconditioning:
- 617 Shoulder Preparation: 0.222222 (23,366.17 + 24,951.83) = 10,757.32 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (48,318.00) = 298.27 Cu.Yd.

From Sta. 1145.01.04 to Sta. 1145+81.04 + Feather - 80 Lin.Ft.
Pavement:
- 848 Type 1: 1/27 (2) [50 (1.25/12)(24) + 30 (1.25+1/2(12))] = 15.37 Cu.Yd.
- 848 Type 2: 1/27 (2) (50) (24) (1.25+0.5/2(12)) = 8.33 Cu.Yd.
- 407 Tack Coat: 0.266667 (50) (2) = 42.67 Gals.
- 407 Cover Aggregate: 0.009333 (80) (2) = 1.40 Tons

Outside Shoulders:
- 848 Type 1: 1/27 (2) [50 (1.25/12)(8) + 30 (1.25+1/2(12))(8)] = 5.12 Cu.Yd.
- 848 Type 2: 1/27 (2) (50) (8) (1.25+0.5/2(12)) = 2.78 Cu.Yd.
- 407 Tack Coat: 0.088889 (50) (2) = 14.22 Gals.
- 407 Cover Aggregate: 0.003111 (50) (2) = 0.50 Tons

Inside Shoulders:
- 848 Type 1: 1/27 (2) [50 (1.25/12)(4) + 30 (1.25+1/2(12))(4)] = 2.56 Cu.Yd.
- 848 Type 2: 1/27 (2) (50) (4) (1.25+0.5/2(12)) = 1.39 Cu.Yd.
- 407 Tack Coat: 0.044444 (50) (2) = 7.11 Gals.
- 407 Cover Aggregate: 0.001556 (50) (2) = 0.25 Tons

Reconditioning:
- 617 Shoulder Preparation: (0.222222) (80) (4) = 71.11 Sq.Yd.
- 617 Compacted Aggregate: (0.000173) (1/2) (80) (4) = 0.99 Cu.Yd.

From Sta. 1145+81.04 to Sta. 1147+33.00 = 152.02'
Bridge No. WYA-23-2290
See Deck Overlay Sheets.

From Sta. 1147+33.06 to Sta. 1147+66.00 ~ Feather ~ 33.00'
Pavement:
- 848 Type 1: 1/27 (2) (33) (24) (1.25+0/2(12)) = 2.44 Cu.Yd.
- 407 Tack Coat: 0.266667 (2) (33) = 17.60 Gals.
- 407 Cover Aggregate: 0.009333 (2) (33) = 0.62 Tons

Outside Shoulders:
- 848 Type 1: 1/27 (2) (33) (8) (1.25/2(12)) = 0.81 Cu.Yd.
- 407 Tack Coat: 0.088889 (2) (33) = 5.87 Gals.
- 407 Cover Aggregate: 0.003111 (2) (33) = 0.21 Tons

Inside Shoulders:
- 848 Type 1: 1/27 (2) (33) (4) (1.25/2(12)) = 0.41 Cu.Yd.
- 407 Tack Coat: 0.044444 (2) (33) = 2.93 Gals.
- 407 Cover Aggregate: 0.001556 (2) (33) = 0.10 Tons

Reconditioning:
- 617 Shoulder Preparation: 2.0 (2) (33) = 14.67 Sq.Yd.
- 617 Compacted Aggregate: 0.000173 (1/2) (2) (33) = 0.20 Cu.Yd.

End Mainline Resurfacing ~ Sta. 1147+66.00

PAVEMENT COMPUTATIONS
U.S. 23

RAMPS AT U.S. 30

RAMP "C"

Pavement Area ~ 66.7 + 1013.7 + 1431.6 + 2053.5 + 739.2 + 1582.3 = 6887.0 S.Y.

Feather Area at U.S. 30 ~ 1582.3 - 1/9 [(24 + 25.79/2) 89.26 + 24(309.41)] = 510.30 S.Y.

Outside Shoulder Area ~ 8[100.72 + 250.20 + 299.45(3815.72/3819.72) + 160.35] + (8 + 3/2)(200) + 3[972.84 + (200 + 17.5(8π)/2(180))(2) + 452.29 (733.70/716.20) + 54.13 + (200 - 13.5(6π)/2(180))(2) + 200(1896.36/1909.86) - 90.59] + 3[10.03 + 97.40 + 50.56] = 15,255.27 S.F.

Inside Shoulder Area ~ 3[972.84 + (200 - 1.5(8π)/2(180))(2) + 452.29(714.70/716.20) + 54.13 + (200 + 13.5(6π)/2(180))(2) + 200(1923.36/1909.86) - 90.59] + 3[75.59 + 37.83] = 7511.28 S.F.

Pavement :

848 Type 1 - 1/3[1.25/12(6887.0 - 510.3)] + 1/27 (1.25/12)[(60)(24) + 35.47(55) - π(55)²(65.63)/360] + 1/27(0.5 + 1.75/12(2))[510.30(9) - 1658.34] = 238.00 C.Y.

848 Type 2 - 1/3[1.75/12(6887.0 - 510.3)] + 1/27 [1.75 + 0.5/12(2)](1658.34) = 315.74 C.Y.

407 Tack - 0.10(6887.0) = 688.70 Gal.

407 Agg. - 7/2000(6887.0) = 24.10 Tons

Shoulders :

848 Type 1 - 1/27[1.25/12(15,255.27 + 7511.28 - 3(157.99 + 113.42) + 3(60 + 73) + (1.75 + 0.5/2(12)) (3)(157.99 - 73 + 113.42 - 60)] = 87.67 C.Y.

848 Type 2 - 1/27[1.75/12(22766.55 - 814.23) + (1.75 + 0.5/12(2))(3)(60 + 73)] = 119.96 C.Y.

407 Tack Coat: 1/9(0.1)(15,255.27 + 7,511.28 = 252.96 Gals.

407 Cover Aggregate: 1/9(7/2000)(15,255.27 + 7,511.28) = 8.85 Tons

Reconditioning :

617 Prep. - 1/9(2)(810.41 + 200 + 2399.34 + 157.99 + 2390.34 - 100.00 + 113.42) = 1327.00 S.Y.

617 Agg. - 0.006173(5971.50) = 36.86 C.Y.

Curb Removal Area ~ Sta. 10+10 to Sta. 11+10 Lt.

203 Embankment - 1/27(1)(3)(100) = 11.11 C.Y.

659 Seeding & Mulching - 22.4 + 1/9(3)(100) = 55.73 S.Y.

RAMP "F"

Pavement Area ~ 1/9[(15.10 + 17.19/2)(100) + (17.19 + 19.27/2)(100)] + 1254.3 + 982.9 + 985.4 + 2126.0 + 1011.1 = 6741.64 S.Y.

Shoulder Between M.L. & Exist. Curb ~ (10 + 13.25/2)(156) + (13.25 + 18/2)(220) + 1(376) = 5627.00 S.F.

Outside Shoulder ~ 8(100) + 8(531.0) + (8 + 3/2)(200) + 3[518.31(1430.89/1432.39) + 296.84(714.70/716.20) + (200 - 1.5(8π)/2(180)) + 819.17 + (200 + 15(8π)/2(180)) + 368.51(717.70/716.20) + 203.66] + 3(8 + 40 + 73 + 35) = 14435.92 S.F.

Inside Shoulder ~ 3[50 + 518.31(1449.89/1432.39) + 296.84(733.70/716.20) + (200 + 17.5(8π)/2(180)) + 819.71 + (200 - 17.5(8π)/2(180)) + 368.51(698.70/716.20) + 203.66] + 3(8 + 50 + 44) = 8290.83 S.F.

Pavement :

848 Type 1 - 1/3[1.25/12(6741.64 - 410.16)] + 1/27 (1.25/12)[60(16) + 1/2(8)(50) + 1/2(7)(50)] + 1/27 (0.5 + 1.75/2(12))[410.16(9) - 1335.0] = 233.18 C.Y.

848 Type 2 - 1/3[1.75/12(6741.64 - 410.16)] + 1/27 (1.75 + 0.5/2(12))(1335.0) = 312.42 C.Y.

407 Tack - 0.10(6741.64) = 674.16 Gal.

407 Agg. - 7/2000(6741.64) = 23.60 Tons

RAMP "F" Cont.

Shoulders :

848 Type 1 - 1/27[1.25/12(5627.00) + 14435.92 + 8290.83 - 3(156 + 102) + 3(2)(60)) + (1.75 + 0.5/2(12)) (3)(96 + 42)] = 109.23 C.Y.

848 Type 2 - 1/27[1.75/12(28353.75 - 774.00) + (1.75 + 0.5/2(12))(3)(2)(60)] = 150.21 C.Y.

407 Tack Coat: 1/9(0.1)(28,353.75) = 315.04 Gals.

407 Cover Aggregate: 1/9(7/2000)(28,353.75) = 11.03 Tons

301 - 1/27[1(0.25)(376) + 0.67(0.25)(50)] = 3.79 C.Y.

304 - 1/27[1(0.5)(376) + 0.67(0.5)(50)] = 7.58 C.Y.

Reconditioning :

617 Prep. - 1/9(2)(3593.64 + 2763.61) = 1412.72 S.Y.

617 Agg. - 0.006173(6357.25) = 39.24 C.Y.

RAMP "A"

Pavement Area ~ 444.9 + 1146.4 + 9039 + 1466.7 + 165.3 + 1892.6 + 401.6 = 6421.4 S.Y.

Outside Shoulder ~ 8(1327.81)(5725.58/5729.58) + 350.39(2289.08/2291.83)(8 + 3/2) + 3[379.10 (953.43/954.93) + 148.08] + 3[53.51 + 60 + 51.62] = 14615.04 S.F.

Inside Shoulder (Future E.B. 30) ~ 4[587.71 (5755.58/5729.58) + 352.53] = 3771.88 S.F.

Inside Shoulder ~ 3[379.10(972.43/954.93) + 148.08] + 3[28.51 + 78] = 1921.91 S.F.

Pavement :

848 Type 1 - 1/3[1.25/12(6421.4 - 444.9)] + 1/27 (1.25/12)(16)(52.49) + 1/27(1.25/12)[16(60) + 1/2(6.49)(55) - (π(55)²(6.7298)/360) + 1/2(31.49)(50) - (π(50)²(32.2027)/360)] + 1/27(0.5 + 1.75/2(12))[444.9(9) - 839.84 - 1045.52] = 222.15 C.Y.

848 Type 2 - 1/3(1.75/12)(6421.4 - 444.9) + 1/27 (1.75/12)(839.84) + 1/27(1.75 + 0.5/2(12))(1045.52) = 298.69 C.Y.

407 Tack - 0.10(6421.4) = 642.14 Gal.

407 Agg. - 7/2000(6421.4) = 22.47 Tons

Shoulders :

848 Type 1 - 1/27[1.25/12(14119.62 + 3771.64 + 1602.39 + 3(53.51 + 60 + 28.51 + 35)) + (1.75 + 0.5/2(12))(51.62 + 43)] = 77.58 C.Y.

848 Type 2 - 1/27[1.75/12(14119.62 + 3771.64 + 1602.39 + 3(53.51)) + (1.75 + 0.5/2(12))(60 + 28.51 + 35)] = 106.59 C.Y.

407 Tack Coat: 1/9(0.1)(14,615.04 + 3,771.64 + 1,921.92) = 225.65 Gals.

407 Cover Aggregate: 1/9(7/2000)(20,308.57) = 7.90 Tons

Reconditioning :

617 Prep. - 1/9(2)(2368.56 + 942.91 + 534.13 + 106.51 - 200) = 833.80 S.Y.

617 Agg. - 0.006173(3952.11 - 200) = 23.16 C.Y.

Curb Removals :

203 Embankment - 1/27[(1)(3)(102) + (1)(3)(98)] = 22.22 C.Y.

659 Seeding and Mulching - 20.4 + 1/9(3)(102 + 98) = 87.07 S.Y.

RAMP "B"

Pavement Area ~ 470.7 + 1790.2 + 1243.2 + 732.1 + 104.3 = 4,340.5 S.F.

Shoulder Between M.L. & Exist. Curb ~ (10 + 13.52/2) 250 + (13.52 + 18/2)(175) + 1(425) = 6123.00 S.F.

Outside Shoulder ~ 8(1200.26 + 295.56) + (8 + 3/2) (300) + 3[333.14(714.70/716.20) + (200 - 15(8π)/2(180)) + 5.30 + 215.78(250.61/249.11) + 21.05] + 3(21.17 + 42 + 57 + 42) = 15880.37 S.F.

Inside Shoulder ~ 3[50 + 333.14(733.70/716.20) + (200 + 17.5(8π)/2(180)) + 5.30 + 215.78(231.61/249.11) + 6.22 + 15] + 3(36 + 59.5) = 2745.42 S.F.

Pavement :

848 Type 1 - 1/3(1.25/12)(4340.5 - 470.7) + 1/27 (1.25/12)[16(21.05 + 60) + 1/2(12.5)(74.83) + (7 + 55/2)(24.87) - (π(55)²(24.32)/360) + 1/2 (4.62)(38.83)] + 1/27(1.75 + 0.5/2(12))[470.7(9) - 1983.15] = 149.84 C.Y.

RAMP "B" Cont.

Pavement : Cont.

848 Type 2 - 1/3(1.75/12)(4340.5 - 470.7) + 1/27 (1.75 + 0.5/2(12))(1983.15) = 195.00 C.Y.

407 Tack - (0.10)(4340.5) = 434.05 Gal.

407 Agg - 7/2000(4340.5) = 15.19 Tons

Shoulders :

848 Type 1 - 1/27[1.25/12(6123.00 + 15880.88 - 3(102.17 + 95.50) + 2745.42) + (1.75 + 0.5/2(12)) (3)(102.17 + 95.50)] = 95.25 C.Y.

848 Type 2 - 1/27[1.75/12(24748.8 - 593.01) + (1.75 + 0.5/2(12)(3)(60)(2)] = 131.72 C.Y.

407 Tack Coat: 1/9(0.1)(24,748.80) = 274.99 Gals.

407 Cover Aggregate: 1/9(7/2000)(24,748.80) = 9.62 Tons

301 - 1/27[1(0.25)(425) + 0.67(0.25)(128)] = 4.73 C.Y.

304 - 1/27[1(0.5)(425) + 0.67(0.5)(128)] = 9.46 C.Y.

Reconditioning :

617 Prep. - 1/9(2)(2633.76 + 915.14) = 788.64 S.Y.

617 Agg. - 0.006173(3548.9) = 21.91 C.Y.

RAMPS AT S.R. 53

RAMP "A"

Pavement Area ~ 567.4 + 1259.0 + 1064.0 + 1336.8 = 4227.2 S.Y.

Shoulder Between M.L. & Exist. Curb ~ (10 + 14.14/2)(294.28) + (14.14 + 18/2)(126.72) + 1(421) = 6009.35 S.F.

Outside Shoulder ~ 8[1200.26(2799.29/2864.79) - 145.00(2805.00/2864.79) + 294.28] + (8 + 3/2) (200) + 3[379.40(714.70/716.20) + (200 - 1.5(8π)/2(180)) + 145.00(267.5/266.0) + 16.71] + 3[16.61 + 47.50 + 61.50 + 46] = 14438.90 S.F.

Inside Shoulder ~ 3[19.28 + 379.40(733.70/716.20) + (200 + 17.5(8π)/2(180)) + 145.00(248.5/266.0) + 16.71] + 3[31.29 + 63] = 2566.89 S.F.

Pavement :

848 Type 1 - 1/3(1.25/12)(4227.2 - 981.2) + 1/27 (1.25/12)[(16)(173.68 + 8(6.03π)/2(180)) + 145 (258/266) + 16.71] + 1/27(1.25/12)[16(60) + 1/2 (5)(46) + (2 + 6/2)(60) + (10 + 55/2)(31) π(55)²(32.29)/360] + 1/27(1.75 + 0.5/2(12)) 981.2(9) - 5303.2 - 1470.11) = 145.98 C.Y.

848 Type 2 - 1/3(1.75/12)(4227.2 - 981.2) + 1/27 [(1.75/12)(5303.20) + (1.75 + 0.5/2(12))(1470.11)] = 191.54 C.Y.

407 Tack - (0.10)(4227.2) = 422.72 Gal.

407 Agg. - 7/2000(4227.2) = 14.80 Tons

Shoulders :

848 Type 1 - 1/27(1.25/12)(6009.35 + 14438.90 + 2566.98 - 3(109.50 + 32) + (1.75 + 0.5/2(12))(3)(109.52 + 32)] = 88.63 C.Y.

848 Type 2 - 1/27[1.75/12(23015.14 - 3(171.61 + 94.29) + 1.75 + 0.5/2(12)(3)(62.11 + 62.39)] = 121.30 C.Y.

407 Tack Coat: 1/9(0.1)(23,015.14) = 255.72 Gals.

407 Cover Aggregate: 1/9(7/2000)(23,015.14) = 8.95 Tons

301 - 1/27[1(0.25)(421) + 0.67(0.25)(126)] = 4.68 C.Y.

304 - 1/27[1(0.5)(421) + 0.67(0.5)(126)] = 9.36 C.Y.

Reconditioning :

617 Prep. - 1/9(2)(2437.76 + 855.63) = 731.86 S.Y.

617 Agg. - 0.006173(3293.39) = 20.33 C.Y.

RAMP "D"

Pavement Area ~ 834.6 + 1699.7 + 210.7 + 885.8 = 3630.80 S.Y.

Outside Shoulder ~ 8[359.64(2929.789/2864.789) + 504.36] + (8 + 3/2)(200) + 3[303.16(714.70/716.20) + (200 - 1.5(8π)/2(180)) + 106.24(267.5/266)] + 3[60 + 52.1 + 50.56] = 10393.04 S.F.

Inside Shoulder ~ 3[(169.77 + 17.5(7.82π)/2(180)) + 333.39 (733.70/716.20) + (200 + 17.5(8π)/2(180)) + 106.24(248.5/266)] + 3[(26.60 + 35) + 43] = 2752.72 S.F.

RAMP "D" Cont.

Pavement :

848 Type 1 - 1/3(1.25/12)(3630.8 - 885.8) + 1/27 (1.25/12)(16)[200 + (8(8π)/2(180)) + 106.24(258/266)] + 1/27(1.25/12)[16(60) + (13 + 50/2)(33.40) - (π(50)²(40.11)/360)] + 1/27(1.75 + 0.5/2(12)) [885.8(9) - 4857.65 - 1137.04] = 125.31 C.Y.

848 Type 2 - 1/3(1.75/12)(2745.0 + (4857.65/9)) + 1/27(1.75 + 0.5/2(12)(1137.04) = 163.62 C.Y.

407 Tack - 0.10(3630.8) = 363.08 Gal.

407 Agg. - 7/2000(3630.8) = 12.71 Tons

Shoulders :

848 Type 1 - 1/27[1.25/12(10393.04 + 2752.72 - 3(52.1 + 50.56 + 43)) + (1.75 + 0.5/2(12)) 3(52.1 + 50.56 + 43)] = 50.55 C.Y.

848 Type 2 - 1/27[1.75/12(10393.04 + 2752.72 - 3(60 + 52.1 + 50.56 + 26.60 + 35 + 43)) + 1.75 + 0.5/2(12)(3)(60 + 26.60 + 35)] = 67.94 C.Y.

407 Tack Coat: 1/9(0.1)(10,393.04 + 2,752.72) = 146.06 Gals.

407 Cover Aggregate: 1/9(7/2000)(13,145.76) = 5.11 Tons

Reconditioning :

617 Prep. - 1/9(2)(1844.08 + 917.57 - 100) = 591.48 S.Y.

617 Agg. - 0.006173(2661.65) = 16.43 C.Y.

Curb Removals :

203 Embankment - 1/27(1)(3)(100) = 11.11 C.Y.

659 Seeding & Mulching - 25.4 + 1/9(3)(100) = 58.73 S.Y.

RAMPS AT S.R. 199

RAMP "A"

Pavement Area ~ 893.0 + 2173.1 + 1353.6 = 4419.7 S.Y.

Outside Shoulder ~ 8(415) + (8 + 3/2)(392.06) + 3[200(410.76/409.26) + 152.61(271.68/270.18) + 140.56] + 3[(37.58 + 25) + 53 + 56.5] = 10288.12 S.F.

Inside Shoulder ~ 3[200(1449.89/1432.89) + 234.18(733.70/716.20) + (250 + 1.5(10π)/2(180)) + (250 - 1.5(17.5π)/2(180)) + 203.51(391.76/409.26) + 152.61(252.68/270.18) + 140.56] + 3(60) = 4437.64 S.F.

Pavement :

848 Type 1 - 1/3(1.25/12)(4419.7 - 1353.6) + 1/27 (1.25/12)(16)[(91.24 - 8(10.44π)/2(180)) + 203.51 (401.26/409.26) + 152.61(262.18/270.18) + 140.56] + 1/27(1.25/12)[16(60) + (4.78 + 55/2) (22.42) - (π(55)²(24.06)/360)] + 1/27 (1.75 + 0.5/2(12))[1353.6(9) - 9259.11 - 995.09] = 152.72 C.Y.

848 Type 2 - 1/3(1.75/12)(3066.1 + (9259.11/9)) + 1/27(1.75 + 0.5/2(12))(995.09) = 202.51 C.Y.

407 Tack - 0.10(4419.7) = 441.97 Gal.

407 Agg. - 7/2000(4419.7) = 15.47 Tons

Shoulders :

848 Type 1 - 1/27[1.25/12(10288.12 + 4437.67 - 3(53 + 56.5)) + (1.75 + 0.5/2(12))(3) (53 + 56.5)] = 56.69 C.Y.

848 Type 2 - 1/27[1.75/12(10288.12 + 4437.67 - 3(62.58 + 53 + 56.5 + 60)) + (1.75 + 0.5/2(12)) (3)(62.58 + 60)] = 77.05 C.Y.

407 Tack Coat: 1/9(0.1)(10,288.12 + 4,437.67) = 163.62 Gals.

407 Cover Aggregate: 1/9(7/2000)(14,725.79) = 5.73 Tons

Reconditioning :

617 Prep. - 1/9(2)(2410.99 - 102) = 513.11 S.Y.

617 Agg. - 0.006173(2308.99) = 14.25 C.Y.

Curb Removal :

203 Embankment - 1/27(1)(3)(102) = 11.33 C.Y.

659 Seeding & Mulching - 15.0 + 1/9(3)(102) = 49.00 S.Y.

PAVEMENT COMPUTATIONS
RAMPS

Computations By Initials J.S.S. Date 10/16/81
Computations Checked By Initials J WR Date 1/12/82
Final Revisions By Initials Date

RAMPS at S.R.199~(Continued)~
RAMP "B"~
Pavement Area~ 1/2(25)(1200) + (14+14.97/2)(131) +
[(14.97+15.25/2)(80)] + 80(16) + [124.36 + 8(23.36π)/2(180)]
(16) + 16(725.64)(237.18/229.18) + 14(73.5)
(236.18/229.18) + (14+16.23/2)(103.5)(236.74/229.18)
+[(16.23+18/2)(72) + 18(18)] + 36.1/2(9) + 26(9) = 40,924.63 S.Y.
Shoulder Between M.L. & Exist. Curb~ (10+12.95/2)
(141.5) + (12.95 + 14.61/2)(80) + 1(141.5 + 75.5) = 2,943.11 S.Y.
Outside Shoulder~8[1,200.26 + 125 + 80] + [8(30)
+ (8+6.6/2)(50)] + (6.6+3/2)(129.36) + 3(902.64)
(227.68/229.18) + 3(100)(227.68/229.18) = 15,456.24 S.Y.
Inside Shoulder~3(25+55) + 3[(172.36 +
17.5(28.24π)/2(180) - 55) + 725.64(246.68/229.18) +
140.56 + 60] = 3,549.85 S.Y.
Shoulder Inside Island~(0+3/2)(18) + 3(247.80 ÷
229.18)(82) + 3(97.5)(245.85/229.18) + 1/2(5)(13)
+ 1/2(3)(1) + 3(48) + 3(60 + 13.75) - π(25)²(90)/360 +
(25)² = 1,155.14 S.Y.
Pavement:
848 Type 1 : 1/27 (1.25/12)[40,924.63 - 2,488.80 -
1,556.28 - [(15.03+15.82/2)(60) + (13.5)(19)
+ (20.5)(26.5) + (25)² - (π(25)²(90)/360)]] +
1/27[1.25/12 (14.97+15.14/2)(50) + (1.75+1/2(12))
(15.14 + 15.25/2)(30) + (1.75 + 1/2(12))(16)(30) +
(1.25/12)(16)(50) + (1.25/12)(16.23+17.53/2)
(60) + (1.75 + 0.5/2(12))((17.53 + 18/2)(22) +
18(18)) + (1.25/12)(925.5) + (1.75 + 0.5/2(12))
(1,155.14)] = 159.24 C.Y.
848 Type 2 : 1/27(1.75/12)[35,020.17] + 1/27
(1.75+0.5/2(12))[50(14.97+15.14/2) + 50(16) +
60(16.23 + 17.53/2) + 925.5] = 201.27 C.Y.
407 Tack : 0.10(1/9)(40,924.63) = 454.72 Gals.
407 Agg. : 7/2000(1/9)(40,924.63) = 15.92 Tons
301 Bit. Agg. Base : 1/27(0.25)(2.6)(9) = 0.22 C.Y.
304 Agg. Base : 1/27(0.5)(2.6)(9) = 0.43 C.Y.
Shoulders:
848 Type 1 : 1/27 (1.25/12)[1,765.21 + 15,456.24 -
8(80) - 8(80) - (8+6.6/2)(50) - 3(100)
(227.68/229.18) + 3,549.85 - 3(80) - 3
(60) + 1,155.14 - 355.38 - 292.99] + 1/27
[(1.25/12)(12.95 + 13.99/2)(50) + (1.75 + 1/2(12))
(13.99 + 14.61/2)(30) + (1.25/12)(8)(50) +
(1.75 + 1/2(12))(8)(30)(2) + (1.25/12)(8 + 6.6/2)
(50) + (1.25/12)(3)(60)(227.68/229.18) +
(1.75+0.5/2(12))(40)(3)(227.68/229.18) +
(1.75 + 1/2(12))(3)(30) + (1.25/12)(3)(60)(2) +
(1.25/12)(3)(60)(247.80/229.18) + (1.75+0.5/2(12))
(3(22)(247.80/229.18) + 27) + (1.25/12)(3)(60) +
(1.75+0.5/2(12))(3(13.75) + 134.13)] = 89.32 C.Y.
848 Type 2 : 1/27 (1.75/12)(19,315.03) + 1/27
(1.75+0.5/2(12))[(12.95 + 13.99/2)(50) + 8(50) +
(8+6.6/2)(50) + 3(60)(227.68/229.18) + 3(60)
(2) + 3(60)(247.80/229.18) + 3(60)] = 112.49 C.Y.
407 Tack : 1/9(0.10)[2,943.11 + 3,549.85 +
15,456.24 + 1,155.14] = 256.71 Gals.
407 Agg. : 7/2000 (1/9)
(23,104.34) = 8.99 Tons
Reconditioning:
617 Prep. : 1/9(2)(2,611.35 + 450 (246.68/229.18) +
110 (246.68/229.18) + 149.27) = 747.42 S.Y.
617 Agg. : 0.006173(3,363.38) = 20.76 C.Y.
Curb Removal Areas:
301 : 1/27 (0.25/12)[0.67(53) + (0.67+2.23/2)(185)] = 0.23 C.Y.
304 : 1/27(0.5/12)[303.76] = 0.47 C.Y.
203 Embankment : 1/27(1)[(3)(100+40)(248.18 ÷
229.18)] = 16.85 C.Y.
659 Seeding & Mulching : 1/9(454.82) + 10.1 = 60.64 S.Y.

RAMP "C"~
Pavement Area : 1,485.9 + 1,200.7 + 718.5 + 1,250.7 = 4,655.8 S.Y.
Shoulder Between M.L. & Exist. Curb : (10+16.25/2)
(300) + (16.25 + 18/2)(146) + 1(446) = 6,883.75 S.F.
Outside Shoulder : 8(1,200.26 + 300.00) + (8+3/2)
(200) + 3[398.65(714.70/716.20) + (200 - 15(8π)/2(180))
+ 2(150 + 1.5(6π)/2(180)) + 83.41(717.70/716.20)] +
3[(42.5+18.5) + (62.5 + 44)] = 16,548.94 S.F.
Inside Shoulder : 3[57 + 398.65(733.70/716.20) +
(200 + 17.5(8π)/2(180)) + (150 - 17.5(6π)/2(180)) + 39(698.70/716.20)]
+ 3[44.41(698.70/716.20) + (150 - 17.5(6π)/2(180)) + 61] = 3,321.46 S.F.
Pavement:
848 Type 1 : 1/3 (1.25/12)(4,655.8 - 1,250.7 + 1,066.7)
+ 1/27[(1.25/12)(16(60) + 1/2(7)(60) + (3+60/2)
(18) - π(60)²(17.67)/360)] + 1/27(17.5+0.5/2(12)
[9(1,250.7 - 1,066.7) - (1,181.88)] = 161.48 C.Y.
848 Type 2 : 1/3(1.75/12)(4,471.8) + 1/27(1.75 + 0.5 ÷
2(12))(1,181.88) = 221.48 C.Y.
407 Tack : 0.10(4,655.8) = 465.58 Gals.
407 Agg. : 7/2000 (4,655.8) = 16.30 Tons
Shoulders:
848 Type 1 : 1/27[(1.25/12)(6,883.75 + 16,548.94 +
3,321.46 - 3(106.5)) + (1.75 + 0.5/2(12))(106.5)(3)] = 103.09 C.Y.
848 Type 2 : 1/27[(1.75/12)(6,883.75 + 16,548.94 +
3,321.46 - 3(167.5 + 61)) + (1.75 + 0.5/2(12))(3)(61)(2)] = 142.07 C.Y.
407 Tack Coat : 1/9 (0.1)(26,754.15) = 297.27 Gals.
407 Cover Aggregate : 1/9(7/2000)(26,754.15) = 10.40 Tons
301 : 1/27[1(0.25)(446) + 0.67(0.25)(116)] = 4.85 C.Y.
304 : 1/27[1(0.5)(446) + 0.67(0.5)(116)] = 9.70 C.Y.
Reconditioning:
617 Prep. : 1/9(2)(2,849.21 + 853.74) = 822.88 S.Y.
617 Agg. : 0.006173 (3,702.95) = 22.86 C.Y.

RAMP "D"
Pavement Area~1/2(12)(100) + 12(183.82) + 12(60)
+ 9(1,706.2 + 547.6 + 500.5) + 9(2.7) + (15+16.5)/2(25) = 28,972.59 S.F.
Outside Shoulder~8[100 + 183.82 + 86.37 +
293.04(3,815.72/3,819.72)] + (8+3/2)(250 -
2.75(29.375π)/2(180)) + 3[313.66(227.68/229.18) +
(250 - 1.5(31.25π)/2(180)) + 5] + 3[(38.27 + 23) +
(55.5 + 50.5)] = 8,874.89 S.F.
Inside Shoulder~3[(250 + 17.5(29.375π)/2(180)) +
313.66 (246.68/229.18) + (70.27 + 17.5(15.1π)/2(180))]
+ 3[179.73 + 17.5(16.15π)/2(180) + 5 + 60] = 2,735.60 S.F.
Pavement:
848 Type 1 : 1/27(1.25/12)[28,972.59 - (12(80) +
393.75 + (16.5+19.5)/2(55)) - 2,956.82] + 1/27
(1.25/12)[12(50) + (16.77 + 19.5/2)(50) + (16)(60)
+ (5 + 55/2)(21.73) - π(55)²(23.96)/360] + 1/27
[(1.75 + 1/2(12))(12(30) + (16.5 + 16.77/2)5 +
393.75) + (1.75 + 0.5/2(12))(2,956.82 - 979.40)] = 111.40 C.Y.
848 Type 2 : 1/27(1.75/12)(23,672.02) + 1/27
(1.75+0.5/2(12))(600 + 906.75 + 979.40) = 136.49 C.Y.
407 Tack : 1/9 (0.10)(28,972.59) = 321.92 Gals.
407 Agg. : 1/9 (7/2000)(28,972.59) = 11.27 Tons
301 : 1/27(0.25)(2.7)(9) = 0.23 C.Y.
304 : 1/27 (0.5)(2.7)(9) = 0.45 C.Y.

RAMP "D" (Continued)~
Shoulders:
848 Type 1 : 1/27(1.25/12)[8874.89 - 8(30)(2) -
3(106) + 2,735.60] + 1/27[(1.75 + 1/2(12))(8)
(30)(2) + (1.75 + 0.5/2(12))(3)(106)] = 44.86 C.Y.
848 Type 2 : 1/27(1.75/12)[8,874.89 - 8(80)(2) - 3
(167.27) + 2,735.60 - 3(60)] + 1/27(1.75 + 0.5/2(12))
[8(50)(2) + 3(61.27 + 60)] = 56.16 C.Y.
407 Tack Coat : 1/9(0.1)(8,874.89 + 2,735.60) = 129.01 Gals.
407 Cover Aggregate : 1/9(7/2000)(11,610.49) = 4.52 Tons
Reconditioning
617 Prep. : 1/9(2)(1,645.69 + 664.67) = 513.41 S.Y.
617 Agg. : 0.006173 (2,310.36) = 14.26 C.Y.
Curb Removal Areas:
203 Embankment : 1/27(1)(3)(98 + 122) = 24.44 C.Y.
659 Seeding & Mulching : 1/9(3)(220) + 18.4 = 91.73 S.Y.

SOUTHBOUND REST AREA~
Entrance Ramp~
Pavement Area~(2.97+22.42/2)(778.00) +
(22.42 + 24.92/2)(103.00) + (14+16/2)(300.06) +
(16 + 18/2)(107.25)(1,645.02/1,637.02) + 16(159.42)
(1,645.02/1,637.02) + 16(100) = 22,810.97 S.F.
Outside Shoulder : 8(1181.06) + (8+3/2) 100 + 3
(159.42)(1,635.52/1,637.02) + 3(100) = 10,776.30 S.F.
Inside Shoulder : 3(159.42)(1,654.52/1,637.02) + 3(100) = 783.37 S.F.
Shoulder Between M.L. & Existing Curb~
(9.92 + 14.25/2)(300) + (14.25 + 18/2)(107) + 1(408.4) = 5,759.28 S.F.
Pavement:
848 Type 1 : 1/27[(1.25/12 (22,810.97 - 16(40)) +
(1.75+0.5/2(12))(16)(40)] = 87.76 C.Y.
848 Type 2 : 1/27[(1.75/12)(22,810.97 - 1600) +
(1.75 + 0.5/2(12))(16)(60)] = 117.90 C.Y.
407 Tack : 1/9 (0.10)(22,810.97) = 253.46 Gals.
407 Agg. : 1/9(7/2000)(22,810.97) = 8.87 Tons
Shoulders:
848 Type 1 : 1/27 (1.25/12)[10,776.30 - 3(40) + 783.37
- 3(40) + 5,759.28] + 1/27 (1.75/0.5/2 (12))(3)(40)(2) = 66.72 C.Y.
848 Type 2 : 1/27(1.75/12)[10,776.30 - 3(100) + 783.37
- 3(100) + 5,759.28] + 1/27(1.75 + 0.5/2(12))(3)(60)(2) = 91.55 C.Y.
407 Tack Coat : 1/9(0.1)(17,318.95) = 192.43 Gals.
407 Cover Aggregate : 1/9(7/2000)(17,318.95) = 6.74 Tons
301 : 1/27[1(0.25)(408.4) + 0.67(0.25)(161.2)] = 4.78 C.Y.
304 : 1/27 [1(0.5)(408.4) + 0.67(0.5)(161.2)] = 9.56 C.Y.
Reconditioning:
617 Prep. : 1/9(2)(1,540.33 + 261.12) = 400.32 S.Y.
617 Agg. : 0.006173 (1,801.45) = 11.12 C.Y.
Exit Ramp~
Pavement Area : 2,563.69 (9) - 135.21(16) = 20,909.85 S.F.
Outside Shoulder : 8 [100 + 256.41 + 453.07
(3,815.72/3,819.72)] + (8+3/2)(100)(3,816.97/3,819.72)
+ 3(100)(3,818.22/3,819.72) = 7,321.53 S.F.
Inside Shoulder : 3(100)(3,837.22/3,819.72)(2) = 602.75 S.F.
Pavement:
848 Type 1 : 1/27[(1.25/12)(20,909.85 - 16(40)) +
(1.75 + 0.5/2(12))(16)(40)] = 80.42 C.Y.
848 Type 2 : 1/27[(1.75/12)(20,909.85 - 1600) +
(1.75+0.5/2(12))(16)(60)] = 107.63 C.Y.
407 Tack : 1/9 (0.10)(20,909.85) = 232.33 Gals.
407 Agg. : 1/9(7/2000) (20,909.85) = 8.13 Tons
Shoulders:
848 Type 1 : 1/27[(1.25/12)(7,321.53 - 299.88 + 602.75
- 301.37) + (1.25/12)(3)(60)(2) + (1.75 + 0.5/2(12))
(3)(40)(2)] = 30.47 C.Y.
848 Type 2 : 1/27[(1.75/12)(7,323.03) + (1.75 + 0.5/2(12))
(3)(60)(2)] = 40.80 C.Y.
407 Tack Coat : 1/9(0.1)(7,321.53 + 602.75) = 88.05 Gals.
407 Cover Aggregate : 1/9(7/2000)(7,924.28) = 3.08 Tons
Reconditioning:
617 Prep. : 1/9(2)(1,008.90 + 200.92) = 268.85 S.Y.
617 Agg. : 0.006173(1,209.82) = 7.47 C.Y.
Curb Removal:
203 Embankment : 1/27[1(3)(124.6)] = 13.84 C.Y.
659 Seeding & Mulching : 1/9(124.6)(3) + 35.44 = 76.97 S.Y.

NORTHBOUND REST AREA~
Exit Ramp~
Pavement Area : 2,440.39(9) - 16[(255.17)
(645.56/653.56) + 50.21 + 28.15(3,827.72/3,819.72)] = 16,676.06 S.F.
Outside Shoulder : 8[100 + 370 + 335.18(3,815.72 ÷
3,819.72)] + (8+3/2)(100)(3,816.97/3,819.72) + 3(100)
(3,818.22/3,819.72) = 7,288.14 S.F.
Inside Shoulder : 3(100)(3,837.22/3,819.72)(2) = 602.75 S.F.
Pavement:
848 Type 1 : 1/27[(1.25/12)(16,676.06 - 16(40) +
(1.75+0.5/2(12))(16)(40)] = 64.09 C.Y.
848 Type 2 : 1/27[(1.75/12)(16,676.06 - 1,600) +
(1.75+0.5/2(12))(16)(60)] = 84.76 C.Y.
407 Tack : 1/9(0.10)(16,676.06) = 185.29 Gals.
407 Agg. : 1/9(7/2000)(16,676.06) = 6.49 Tons
Shoulders:
848 Type 1 : 1/27[(1.75/12)(7,288.14 - 299.88 + 602.75
- 301.37) + (1.25/12)(3)(60)(2) + (1.75 + 0.5/2(12))(3)(40)(2)] = 30.35 C.Y.
848 Type 2 : 1/27[(1.75/12)(16,676.06 - 1,600) +
(1.75+0.5/2(12))(3)(60)(2)] = 40.62 C.Y.
407 Tack Coat : 1/9(0.1)(7,288.14 + 602.75) = 87.68 Gals.
407 Cover Aggregate 1/9(7/2000)(7,890.89) = 3.07 Tons
Reconditioning:
617 Prep. : 1/9(2)(1,004.72 + 200.92) = 267.92 S.Y.
617 Agg. : 0.006173(1,205.64) = 7.44 C.Y.
Curb Removal Areas:
203 Embankment : 1/27(1)(3)(124.52) = 13.84 C.Y.
659 Seeding & Mulching : 1/9(124.52)(3) + 40.24 = 81.75 S.Y.
Entrance Ramp~
Pavement Area : 3,362.67(9) - 16(197.21) = 27,108.67 S.F.
Outside Shoulder : 8(1,200.26 + 301.00) + (8 + 3/2)
(100)(4,908.32/4,911.07) + 3[203.27(4,909.57 ÷
4,911.07) + 45.73] + 3(100) = 13,606.59 S.F.
Inside Shoulder : 3[203.27(4,928.57/4,911.07) +
45.73] + 3(100) = 1,049.17 S.F.
Shoulder Between M.L. & Exist. Curb : (10+15.26/2)
(301.00) + (15.26 + 18/2)(169.00) + 1(474.6) = 7,086.70 S.F.
Pavement:
848 Type 1 : 1/27[(1.25/12)(27,108.67 - 16(40) +
(1.75 + 0.5/2(12))(16)(40)] = 104.34 C.Y.
848 Type 2 : 1/27[(1.75/12)(27,108.67 - 1,600) +
(1.75+0.5/2(12)(16)(60)] = 141.11 C.Y.
407 Tack : 1/9(0.10)(27,108.67) = 301.21 Gals.
407 Agg. : 1/9(7/2000)(27,108.67) = 10.54 Tons
Shoulders:
848 Type 1 : 1/27[(1.25/12)(13,606.59 + 1,049.17 -
2(3)(40) + 7,086.70) + (1.75+0.5/2(12)(2)(3)(40)] = 83.79 C.Y.
848 Type 2 : 1/27[(1.75/12)(21,742.46 - 2(3)(100) +
(1.75+0.5/2(12))(2)(3)(60)] = 115.45 C.Y.
407 Tack Coat : 1/9(0.1)(21,742.46) = 241.58 Gals.
407 Cover Aggregate : 1/9(7/2000)(21,742.46) = 8.46 Tons
301 : 1/27[1(0.25)(474.6) + 0.67(0.25)(180.5)] = 5.51 C.Y.
304 : 1/27[1(0.5)(474.6) + 0.67(0.5)(180.5)] = 11.03 C.Y.
Reconditioning:
617 Prep. : 1/9(2)(1,950.14 + 349.72) = 511.08 S.Y.
617 Agg. : 0.006173 (2,299.86) = 14.20 C.Y.

PAVEMENT COMPUTATIONS
~INTERSECTIONS~

Intersection ~ C.R. 121 ~

Pavement Area: 367.1 + (472.0 + 472.0) + 342.2 = 1,653.3 Sq.Yd.

Shoulders @ Approaches:
Y = R(1 - cos S) X = R sin S
For 8' Shoulder, 50' R: 8/50 = 1 - cos S, ∴ S = 32.86°; ∴ X = 27.13'
For 8' Shoulder, 40' R: 8/40 = 1 - cos S, ∴ S = 36.87°; ∴ X = 24.00'

Area per Approach: ((8+40)/2)(24) - π(40)²(36.87)/360 + ((8+50)/2)(27.13) - π(50)²(32.86)/360 = 131.07 Sq.Ft.

Length 4' (Inside) Shoulder @ Media Crossing ~
L = 2[2π(148)(18.8969)/360 + 250.29 + 2π(140)(40.4608)/360 + 2π(148)(17.8942)/360] 2(364.9367) = 729.87'

Pavement:
848 Type 1: 1/27[1.25/12 (2)(472.0)(9) + 1.25/12 [9(367.1) - (20+24)/2 (17.5)] + (1.75+0.5)/2(12) ((20+24)/2)(17.5) + 1.25/12 [9(342.2) - ((20+23)/2)(17.5)] + (1.75+0.5)/2(12) ((20+23)/2)(17.5)] = 57.11 Cu.Yd.
848 Type 2: 1/27[1.75/12 (2)(472.0)(9) + 1.75/12 [9(367.1) - (20+31)/2 (30)] + (1.75+0.5)/2(12) ((24+31)/2)(12.5) + 1.75/12 [9(342.2) - (20+29)/2 (30)] + (1.75+0.5)/2(12) ((23+29)/2)(12.5)] = 74.59 Cu.Yd.
407 Tack Coat: 0.10(1,653.3) = 165.33 Gals.
407 Cover Aggregate: 7/2000(1,653.3) = 5.79 Tons

Shoulders:
848 Type 1: 1/27(1.25/12)[2(131.07) + 4(729.87)] = 12.27 Cu.Yd.
848 Type 2: 1/27(1.75/12)[2(131.07) + 4(729.87)] = 17.18 Cu.Yd.
407 Tack Coat: 1/9(0.1)[3,181.62] = 35.35 Gals.
407 Cover Aggregate: 1/9(7/2000)(3,181.62) = 1.24 Tons

Reconditioning:
617 Shoulder Preparation: 1/9(2)[729.87 + (24+64+27.13+91) + (27.13+88+24+63)] = 252.92 Sq.Yd.
617 Compacted Aggregate: 0.006173[1,138.13] = 7.03 Cu.Yd.

Intersection ~ C.R. 50 ~

Pavement Area = 1,291.0 Sq.Yd. = 225.0 + 841.0 + 225.0

Shoulders @ Approaches:
Area per Approach: ((8+40)/2)(24) - π(40)²(36.87)/360 + ((8+50)/2)(27.13) - π(50)²(32.86)/360 = 131.07 Sq.Ft.
Length 4' (Inside) Shoulder = 729.87'

Pavement:
848 Type 1: 1/27[1.25/12 (841.0)(9)] + 1/27(2)[1.25/12 (9(225) - (24+30)/2 (17.5)) + (1.75+0.5)/2(12) ((24+30)/2)(17.5)] = 44.46 Cu.Yd.
848 Type 2: 1/27[1.75/12 (841)(9)] + 1/27(2)[1.75/12 (9(225) - (24+45)/2 (30)) + (1.75+0.5)/2(12) ((30+45)/2)(12.5)] = 54.83 Cu.Yd.
407 Tack Coat: 0.10(1,291) = 129.10 Gals.
407 Cover Aggregate: 7/2000(1,291) = 4.52 Tons

Shoulders:
848 Type 1: 1/27(1.25/12)[2(131.07) + 4(729.87)] = 12.27 Cu.Yd.
848 Type 2: 1/27(1.75/12)[3,181.62] = 17.18 Cu.Yd.
407 Tack Coat: 1/9(0.1)(3,181.62) = 35.35 Gals.
407 Cover Aggregate: 1/9(7/2000)(3,181.62) = 1.24 Tons

Reconditioning:
617 Shoulder Preparation: 1/9(2)[729.87 + (24+45+27.13+54)(2)] = 228.92 Sq.Yd.
617 Compacted Aggregate: 0.006173[1,030.13] = 6.36 Cu.Yd.

Intersection ~ S.R. 67 ~

Pavement Area: 420.9 + 868.9 + 383.6 = 1,673.4 Sq.Yd.

Shoulders @ Approaches:
Area per Approach: 2(((8+50)/2)(27.13) - π(50)²(32.86)/360) = 139.75 Sq.Ft.
Length 4' (Inside) Shoulder = 729.87'

Pavement:
848 Type 1: 1/27[1.25/12 (868.9)(9)] + 1/27[1.25/12 (9(420.9) - (24+30)/2 (17.5)) + (1.75+0.5)/2(12) ((24+30)/2)(17.5) + 1.25/12 (9(383.6) - (24+28)/2 (17.5)) + (1.75+0.5)/2(12) ((24+28)/2)(17.5)] = 57.75 Cu.Yd.
848 Type 2: 1/27[1.75/12 (868.9)(9)] + 1/27[1.75/12 (9(420.9) - (24+38)/2 (30)) + (1.75+0.5)/2(12) ((30+38)/2)(12.5) + 1.75/12 (9(383.6) - (24+34)/2 (30)) + (1.75+0.5)/2(12) ((28+34)/2)(12.5)] = 74.44 Cu.Yd.
407 Tack Coat: 0.10(1,673.4) = 167.34 Gals.
407 Cover Aggregate: 7/2000(1,673.4) = 5.86 Tons

Shoulders:
848 Type 1: 1/27(1.25/12)[2(139.75) + 4(729.87)] = 12.34 Cu.Yd.
848 Type 2: 1/27(1.75/12)[3,198.98] = 17.28 Cu.Yd.
407 Tack Coat: 1/9(0.1)(3,198.98) = 35.54 Gals.
407 Cover Aggregate: 1/9(7/2000)(3,198.98) = 1.24 Tons

Reconditioning:
617 Shoulder Preparation: 1/9(2)[729.87 + 4(27.13) + 69 + 72 + 71 + 89] = 253.20 Sq.Yd.
617 Compacted Aggregate: 0.006173 (1,139.39) = 7.03 Cu.Yd.

Intersection ~ C.R. 47 ~

Pavement Area: 1,657(9) = 14,913 Sq.Ft.
West Approach Area: ((24+18)/2)(61) + 50(31.68) - π(50)²(64.72)/360 + 40(56.08) - π(40)²(108.998)/360 = 2,174.33 Sq.Ft.
East Approach Area: 24(90.68) + 60(30.67) - π(60)²(54.45)/360 + 40(82.84) - π(40)²(128.453)/360 = 3,837.98 Sq.Ft.
Median Crossing Area: 14,913 - 2,174.33 - 3,837.98 = 8,900.69 Sq.Ft.

Shoulder Areas:
West Approach: ((8+4)/2)(2π)(47)(64.72/360) + 4(34.61) + ((8+2)/2)(2π)(37)(108.998/360) = 879.32 Sq.Ft.
(Length = 158.09')
East Approach: ((8+4)/2)(2π)(37)(128.453/360) + 4(68.4) + ((8+4)/2)(2π)(57)(54.45/360) = 1,096.36 Sq.Ft.
(Length = 205.53')
Median Crossing: 4[250.29 + 46.47(48/50) + 24.63 + 98.65(48/50)] + 4[250.29 + 56.03(48/50) + 9.23 + 86.77(38/40)] = 3,239.90 Sq.Ft.
(Length = 809.98')

Pavement:
848 Type 1: 1/27[1.25/12 (8900.69 + 2174.33 - 17.5((18+23.5)/2) + 3,837.98 - 17.5((24+28)/2)) + (1.75+0.5)/2(12) (17.5)((18+23.5)/2 + (24+28)/2)] = 57.22 Cu.Yd.
848 Type 2: 1/27[1.75/12 (14,913 - 30((18+35.5)/2 + (24+36.5)/2)) + (1.75+0.5)/2(12) (12.5)((23.5+35.5)/2 + (28+36.5)/2)] = 73.99 Cu.Yd.
407 Tack Coat: 1/9(0.10)(14,913) = 165.70 Gals.
407 Cover Aggregate: 1/9(7/2000)(14,913) = 5.80 Tons

Shoulders:
848 Type 1: 1/27[1.25/12 (3,239.90 + 879.32 - 2(4)(17.5) + 1,096.36 - 2(4)(17.5)) + (1.75+0.5)/2(12) (4)(17.5)(4)] = 20.01 Cu.Yd.
848 Type 2: 1/27[1.75/12 (5,215.58 - 4(4)(30)) + (1.75+0.5)/2(12) (4)(4)(12.5)] = 26.27 Cu.Yd.
407 Tack Coat: 1/9(0.1)(5,215.58) = 57.95 Gals.
407 Cover Aggregate: 1/9(7/2000)(5,215.58) = 2.03 Tons

Reconditioning:
617 Shoulder Preparation: 1/9(2)(158.09 + 205.53 + 809.98) = 260.80 Sq.Yd.
617 Compacted Aggregate: 0.006173 (1,173.60) = 7.24 Cu.Yd.

Intersection ~ C.R. 44 ~

Pavement Area: 1,531(9) = 13,779 Sq.Ft.

Shoulder Areas:
Area per Approach: ((8+4)/2)(2π)(47)(113.947/360 + 66.053/360) + 4(55.07) = 1,106.21 Sq.Ft.
(Length = 202.72')
Median Crossing: 2[4(250.29 + (32.33 + 51.14)(48/50))] = 2,643.37 Sq.Ft.
(Length = 660.84')

Pavement:
848 Type 1: 1/27[1.25/12 (13,779 - 2(17.5)((24+27.5)/2)) + (1.75+0.5)/2(12) (2)(17.5)((24+27.5)/2)] = 52.81 Cu.Yd.
848 Type 2: 1/27[1.75/12 (13,779 - 2(30)((24+34)/2)) + (1.75+0.5)/2(12) (2)(12.5)((27.5+34)/2)] = 67.69 Cu.Yd.
407 Tack Coat: 1/9(0.10)(13,779) = 153.1 Gals.
407 Cover Aggregate: 1/9(7/2000)(13,779) = 5.36 Tons

Shoulders:
848 Type 1: 1/27[1.25/12 (2,643.37 + 2(1,106.21) - 2(2)(4)(17.5)) + (1.75+0.5)/2(12) (2)(2)(4)(17.5)] = 18.63 Cu.Yd.
848 Type 2: 1/27[1.75/12 (4,855.79 - 2(2)(4)(30)) + (1.75+0.5)/2(12) (2)(2)(4)(12.5)] = 24.33 Cu.Yd.
407 Tack Coat: 1/9(0.1)(4,855.79) = 53.95 Gals.
407 Cover Aggregate: 1/9(7/2000)(4,855.79) = 1.89 Tons

Reconditioning:
617 Shoulder Preparation: 1/9(2)(660.84 + 2(202.72)) = 236.95 Sq.Yd.
617 Compacted Aggregate: 0.006173 (1,066.28) = 6.58 Cu.Yd.

Intersection ~ C.R. 42 ~

Pavement Area: 1,464(9) = 13,176 Sq.Ft.

Shoulder Areas:
Area per Approach: ((8+4)/2)(2π)(47)((66.786 + 113.214)/360) + 4(53.18) = 1,098.65 Sq.Ft.
(Length = 200.83')
Media Crossing: 2[4(250.29 + (32.33 + 51.14)(48/50))] = 2,643.37 Sq.Ft.
(Length = 660.84')

Pavement:
848 Type 1: 1/27[1.25/12 (13,176 - 2(17.5)((24+27.5)/2)) + (1.75+0.5)/2(12) (2)(17.5)((24+27.5)/2)] = 50.49 Cu.Yd.
848 Type 2: 1/27[1.75/12 (13,176 - 2(30)((24+34)/2)) + (1.75+0.5)/2(12) (2)(12.5)((27.5+34)/2)] = 64.44 Cu.Yd.
407 Tack Coat: 1/9(0.10)(13,176) = 146.40 Gals.
407 Cover Aggregate: 1/9(7/2000)(13,176) = 5.12 Tons

Shoulders:
848 Type 1: 1/27[1.25/12 (2,643.37 + 2(1,098.65) - 2(2)(4)(17.5)) + (1.75+0.5)/2(12) (2)(2)(4)(17.5)] = 18.57 Cu.Yd.
848 Type 2: 1/27[1.75/12 (4,840.67 - 2(2)(4)(30)) + (1.75+0.5)/2(12) (2)(2)(4)(12.5)] = 24.25 Cu.Yd.
407 Tack Coat: 1/9(0.1)(4,840.67) = 53.79 Gals.
407 Cover Aggregate = 1.88 Tons

Reconditioning:
617 Shoulder Preparation: 1/9(2)(660.84 + 2(200.83)) = 236.11 Sq.Yd.
617 Compacted Aggregate: 0.006173 (1,062.50) = 6.56 Cu.Yd.

Intersection ~ C.R. 4 ~

Pavement Area: 1,502(9) = 13,518 Sq.Ft.

Shoulder Areas:
Area per Approach: ((8+4)/2)(2π)(47)((68.367 + 111.633)/360) + 4(49.18) = 1,082.65 Sq.Ft.
(Length = 196.83')
Median Crossing: 2[4(250.29 + (32.33 + 51.14)(48/50))] = 2,643.37 Sq.Ft.
(Length = 660.84')

Pavement:
848 Type 1: 1/27[1.25/12 (13,518 - 2(17.5)((24+27.5)/2)) + (1.75+0.5)/2(12) (2)(17.5)((24+27.5)/2)] = 51.81 Cu.Yd.
848 Type 2: 1/27[1.75/12 (13,518 - 2(30)((24+34)/2)) + (1.75+0.5)/2(12) (2)(12.5)((27.5+34)/2)] = 66.20 Cu.Yd.
407 Tack Coat: 1/9(0.10)(13,518) = 150.20 Gals.
407 Cover Aggregate: 1/9(7/2000)(13,518) = 5.26 Tons

Shoulders:
848 Type 1: 1/27[1.25/12 (2,643.37 + 2(1,082.65) - 2(2)(4)(17.5)) + (1.75+0.5)/2(12) (2)(2)(4)(17.5)] = 18.44 Cu.Yd.
848 Type 2: 1/27[1.75/12 (4,808.67 - 16(30)) + (1.75+0.5)/2(12) (16)(12.5)] = 24.07 Cu.Yd.

PAVEMENT COMPUTATIONS
~INTERSECTIONS~

Computations By Initials J.S.S. 10/19/81
Computations Ck'd By Initials S.W.R. 11/12/82
Final Revisions By Initials

FHWA REGION	STATE	PROJECT	
5	OHIO		

18/108

WYANDOT COUNTY
WYA.-23-10.40

Intersection ~ C.R. 4 ~ (Continued) ~

407 Tack Coat: 1.19(0.1)(4808.07) = 53.43 Gals.
407 Cover Aggregate: 1.19(1/2000)(4808.07) = 1.87 Tons
Reconditioning:
617 Shoulder Preparation: 1.19(2)(660.84+2(106.83)) = 234.33 Sq.Yd.
617 Compacted Aggregate: 0.000173(1,054.50) = 6.51 Cu.Yd.

Intersection ~ T.R. 103-J ~
Pavement Area: 1,351(9) = 12,159 Sq.Ft.
Shoulder Areas:
West Approach: $\frac{8+4}{2}(2\pi)(37)\left(\frac{118.042}{360}\right) + \frac{8+4}{2}(2\pi)(67)\left(\frac{68.633}{360}\right) + 4(33.79)\left(\frac{304}{200}\right)$ = 1,008.73 Sq.Ft.
(Length = 179.95)
East Approach: $\frac{8+4}{2}(2\pi)(47)\left(\frac{77.062+102.938}{360}\right) + 4(28.40)$ = 939.53 Sq.Ft.
(Length = 176.05)
Median Cross: $4[250.29+(32.30+51.14)\left(\frac{48}{50}\right)]2$ = 2,643.14 Sq.Ft.
(Length = 660.78)
Pavement:
848 Type 1: $1.27\left[\frac{1.25}{12}(12,159-17.5\left(\frac{24+27.5}{2}\right) - 17.5\left(\frac{24+27}{2}\right) + \frac{1.75+0.5}{2(12)}(17.5\left(\frac{24+27.5}{2}\right) + 17.5\left(\frac{24+27}{2}\right)\right]$ = 46.56 Cu.Yd.
848 Type 2: $1.27\left[\frac{1.75}{12}(12,159-30\left(\frac{24+34.5}{2}\right) - 30\left(\frac{24+34}{2}\right) + \frac{1.75+0.5}{2(12)}(12.5\left(\frac{27.5+34.5}{2}\right) + 12.5\left(\frac{27+34}{2}\right)\right]$ = 58.90 Cu.Yd.
407 Tack Coat: 1.19(0.10)(12,159) = 135.10 Gals.
407 Cover Aggregate: 1.19$\left(\frac{1}{2000}\right)$(12,159) = 4.73 Tons
Shoulders:
848 Type 1: $1.27\left[\frac{1.25}{12}(2,643.14+1,008.73+999.53-2(2)(4)(17.5)) + \frac{1.75+0.5}{2(12)}(16)(17.5)\right]$ = 17.84 Cu.Yd.
848 Type 2: $1.27\left[\frac{1.75}{12}(4,651.40-16(30)) + \frac{1.75+0.5}{2(12)}16(12.5)\right]$ = 23.23 Cu.Yd.
407 Tack Coat: 1.19(0.1)(4,651.40) = 51.68 Gals.
407 Cover Aggregate: 1.19(1/2000)(4,651.40) = 1.81 Tons
Reconditioning:
617 Shoulder Preparation: 1.19(2)(660.78+179.93+176.05) = 225.95 Sq.Yd.
617 Compacted Aggregate: 0.000173(1306.76) = 6.28 Cu.Yd.

Intersection ~ C.R. 98 ~
Pavement Area: 1,303(9) = 11,772 Sq.Ft.
Shoulders Areas:
Area per Approach: $\frac{8+4}{2}(2\pi)(37)\left(\frac{110}{360}\right) + \frac{8+4}{2}(2\pi)(57)\left(\frac{70}{360}\right) + 4(22.85)$ = 935.44 Sq.Ft.
(Length = 183.52')
Median Crossing: $2[4(250.29+(32.33+51.14)\frac{48}{50})]$ = 2,643.37 Sq.Ft.
(Length = 680.84')
Pavement:
848 Type 1: $1.27\left[\frac{1.25}{12}(11,772-2(17.5)\left(\frac{24+27.5}{2}\right)) + \frac{1.75+0.5}{2(12)}(2)(17.5)\left(\frac{24+27.5}{2}\right)\right]$ = 45.07 Cu.Yd.
848 Type 2: $1.27\left[\frac{1.75}{12}(11,772-2(30)\left(\frac{24+34}{2}\right) + \frac{1.75+0.5}{2(12)}(2)(12.5)\left(\frac{27.5+34}{2}\right)\right]$ = 58.85 Cu.Yd.
407 Tack Coat: 1.19(0.10)(11,772) = 130.80 Gals.
407 Cover Aggregate: 1.19$\left(\frac{1}{2000}\right)$(11,772) = 4.58 Tons
Shoulders:
848 Type 1: $1.27\left[\frac{1.25}{12}(2,643.37+2(935.44)-2(2)(4)(17.5)) + \frac{1.75+0.5}{2(12)}(16)(17.5)\right]$ = 17.31 Cu.Yd.
848 Type 2: $1.27\left[\frac{1.75}{12}(4,514.25-2(2)(4)(30)) + \frac{1.75+0.5}{2(12)}(16)(12.5)\right]$ = 22.48 Cu.Yd.
407 Tack Coat: 1.19(0.1)(4,514.25) = 50.15 Gals.
407 Cover Aggregate: 1.19(1/2000)(4,514.25) = 1.76 Tons
Reconditioning:
617 Shoulder Preparation: 1.19(2)(660.84+2(163.52)) = 219.53 Sq.Yd.
617 Compacted Aggregate: 0.000173(987.88) = 6.10 Cu.Yd.

Intersection ~ C.R. 97F ~
Pavement Area: 2,176(9) = 19,584 Sq.Ft.
Pavement:
848 Type 1: $1.27\left[\frac{1.25}{12}(19,584-17.5\left(\frac{24+26.5}{2}\right) - 17.5\left(\frac{24+26}{2}\right) + \frac{1.75+0.5}{2(12)}(17.5)\left(\frac{24+26}{2}\right) + \frac{24+26}{2}\right]$ = 75.22 Cu.Yd.
848 Type 2: $1.27\left[\frac{1.75}{12}(19,584-30\left(\frac{24+31}{2}\right) + \frac{24+30.5}{2}\right) + \frac{1.75+0.5}{2(12)}(12.5)\left(\frac{26.5+31}{2} + \frac{26+30.5}{2}\right)\right]$ = 99.38 Cu.Yd.
407 Tack Coat: 0.10(2,176) = 217.60 Gals.
407 Cover Aggregate: 1/2000(2,176) = 76.2 Tons
Shoulder Areas:
South Approach: $\frac{8+6.5}{2}(15) + \frac{6.5+4}{2}(2\pi)(37)\left(\frac{108.253}{360}\right) + 4(15) + \frac{8+2}{2}(2\pi)(72)\left(\frac{90.375}{360}\right) + 4(5.04)$ = 1,194.72 Sq.Ft.
(Length = 228.75')
North Approach: $\frac{8+4}{2}(2\pi)(147)\left(\frac{80.375}{360}\right) + 4(55.61) + \frac{8+4}{2}(2\pi)(73)\left(\frac{119.085}{360}\right)$ = 2,065.85 Sq.Ft.
(Length = 302.85')
Median Crossing: $4[250.29+38.54\left(\frac{48}{50}\right) + 64.92\left(\frac{148}{150}\right) + 250.29 + 100.00 + 55.79\left(\frac{48}{50}\right) + 21.28\left(\frac{73}{75}\right)]$ = 3,103.61 Sq.Ft.
(Length = 775.90')
Shoulders:
848 Type 1: $1.27\left[\frac{1.25}{12}(1,194.72+2,065.85+3,103.61-2(2)(4)(17.5)) + \frac{1.75+0.5}{2(12)}(16)(17.5)\right]$ = 21.45 Cu.Yd.
848 Type 2: $1.27\left[\frac{1.75}{12}(6,364.18-16(30)) + \frac{1.75+0.5}{2(12)}(16)(12.5)\right]$ = 32.48 Cu.Yd.
407 Tack Coat: 1.19(0.1)(6,364.18) = 70.71 Gals.
407 Cover Aggregate: 1.19(1/2000)(6,364.18) = 2.47 Tons
Reconditioning:
617 Shoulder Preparation: 1.19(2)(226.75+302.85+775.90) = 303.44 Sq.Yd.
617 Compacted Aggregate: 0.000173(1,355.50) = 8.43 Cu.Yd.

Computations By Initials J.S.S. Date 1/12/82
Computations Checked By Initials J.W.R. Date 1/12/82
Plans Prepared By Date

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WYANDOT COUNTY
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GENERAL NOTES

STATIONING — The Stations within the limits of this project have been established from the plans of former construction projects. Copies of these plans are on file at the District One Office of the Ohio Department of Transportation, Lima, Ohio.

MOBILIZATION, AS PER PLAN — The Contractor shall provide a suitable Field Office having a minimum of 800 Sq.Ft. of floor space which shall be in accordance with 619.01 and 619.02. Payment shall be included in the lump sum price bid for Item 624, Mobilization, as per plan.

PIPE UNDERDRAINS — Any Pipe Underdrains broken or damaged as a result of construction operations shall be replaced by the Contractor at no cost to the State of Ohio.

PROFILE AND ALIGNMENT — The proposed pavement resurfacing course shall follow the alignment and profile of the existing pavement. Previous construction plans showing the original alignment and profile grade are on file for inspection if necessary at the Ohio Department of Transportation, District One Office. The proposed asphalt concrete overlay shall have a uniform thickness of approximately 3 inches.

CONTINGENCY QUANTITIES — The Contractor shall not order materials or perform work for plan items set up 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.

GUARD RAIL REMOVED FOR STORAGE — Guard Rail, including **all posts and accessories designated for removal on this project shall be carefully dismantled and stored on the project for removal by State forces. All material not considered salvageable shall be disposed of as directed. All post holes** shall be carefully filled and tamped and the site cleaned and restored. The storage location shall be approved by the Engineer.
Payment for all of the above shall be at the unit price bid for Item 608, Guard Rail Removed for Storage, measured by the linear foot center to center of the terminal posts.

310 SUBBASE — In areas of pavement replacement where unsuitable subbase material is encountered, the Engineer shall require the replacement of the unsuitable subbase. Included in the General Summary is 500 Cu.Yds. of 310 Subbase, Type 1, Grading A to be used as directed by the Engineer for subbase replacement. The cost of removing and disposing of the unsuitable subbase and the reshaping of the subbase will be included in the unit price bid for Item 310 Subbase, Type 1, Grading A.

605 PIPE UNDERDRAINS, AS PER PLAN — 4" Unclassified Pipe Underdrains shall be installed at the locations shown in the plans, using 4" diameter plastic and polyethylene corrugated drainage pipe or tubing, heavy duty, meeting the requirements of 707.15 and backfilled in accordance with 605.03.
The existing asphalt paved shoulder adjacent to the existing pavement shall be sawed 6" wide to the full depth of shoulder pavement, then cut with a trenching machine to a 6" trench width down to the proposed grade. The 4" Underdrain pipe shall then be laid into, and if necessary, tamped into the 6" trench, care being taken not to damage the 4" Underdrain pipe. Stone backfill as per 605.03 and Item 301 Bituminous Aggregate Base shall be as per the details shown on Sheet 6.
Payment for all of the above materials and operations shall be at the unit price bid for Item 605-4" Unclassified Pipe Underdrains, as per plan.

LOCATION OF GUARD RAIL — The locations of Guard Rail runs as shown in these plans are subject to adjustment to assure that the planned installations will afford maximum protection for traffic.

ELEVATION DATUM — All elevations are based on U.S.G.S. datum.

EROSION CONTROL — Item 601 is provided in the plans for Erosion Control. Rock or turf of a stable nature will not be removed in order to place any of this item. The Engineer shall check and non-perform quantities or adjust locations and quantities for this item where indicated by field conditions during construction.

ITEM SPECIAL - PAVEMENT SAWING — All concrete pavement repair areas will be located by the Engineer and marked with paint prior to the start of pavement sawing operations. The existing concrete pavement shall be sawed full depth at the limits of the designated areas, thereby providing a vertical face to avoid spalling at the bottom edge of the existing concrete and to facilitate removal. The Contractor may elect to make additional cuts to facilitate the removal of pavement; however only those cuts designated by the Engineer will be measured for payment. An estimated quantity of Pavement Sawing has been included in the General Summary for use as directed by the Engineer.

PAVEMENT REMOVAL — After sawing at the designated joint repair locations, all existing pavement and loose and broken material shall be removed and disposed of outside the limits of the project.

WATERING PERMANENT SEEDED AREAS — The following estimated quantity 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 10 M. Gal.

ITEM 617 COMPACTED AGGREGATE — In addition to the calculated quantities, an estimated quantity of 500 Cu.Yds. of Item 617 Compacted Aggregate is included to be used as directed by the Engineer for the purpose of filling ruts and depressions in the area adjacent to the paved shoulders.

ITEM 617 — An estimated quantity of 50 M. gallons of water is included in this item to aid compaction. Its use shall be as directed by the Engineer.

DECK OVERLAY — Surface preparation for concrete repair of bridge decks, deck patching, and concrete overlay of bridge decks shall be performed in accordance with Supplemental Specification 845, unless such requirements are modified in these plans. Quantities shown for Latex Modified Concrete Overlay, Variable Thickness, and Full Depth Repair are estimated quantities to be used as directed by the Engineer after the deck has been sounded.
Placement of the concrete overlay shall be completed during the night, between official sunset and sunrise, unless otherwise authorized by the Engineer.
In the early Spring or late Fall the concrete overlay may be placed other than at night upon approval of the Engineer if all of the following conditions are met and documented throughout the time of placement:
Maximum wind velocity = 10 M.P.H. Maximum concrete temperature = 70°F.
Minimum humidity = 40% Maximum air temperature = 70°F.
All other portions of Item 511 shall apply, except those which are in conflict with the above.
Longitudinal joints in the concrete overlay are permitted but only to the extent necessary to accommodate the width of the finishing machine or to allow for maintenance of vehicular traffic, or to facilitate changes in roadway crown, except as approved by the Director or as indicated on the plans. Joints shall not be used adjacent to deck edges.

ITEM SPECIAL - LIGHTING FOR NIGHT PLACEMENT OF CONCRETE DECK OVERLAYS — The Contractor shall submit to the Director a plan for adequate lighting of the work areas at least fifteen (15) calendar days prior to placing the overlays, and approval must be granted before the work begins.
Payment for this item shall be made at the contract price bid per unit and shall include all labor, generators, power supplies, fuel, electrical, wiring, lights and all other incidentals necessary to complete this item. A unit shall be all the lighting necessary to complete all phases of the overlay operation on approximately one-half of each structure. An estimated quantity of 12 units has been included in the General Summary for this purpose.

TRAFFIC MAINTENANCE — One lane traffic areas shall be controlled with temporary traffic control devices arranged as indicated in the "Ohio Manual of Uniform Traffic Control Devices for Streets and Highways" current edition, and the application standards appearing in these plans. The Contractor shall furnish, place and maintain yellow alternating Flasher Beacon Lights on all "Road Construction Ahead" signs when and as directed by the Engineer. It shall be understood that the cost of Electrical Service shall be included in the lump sum bid for Item 614 Maintaining Traffic.
The maximum length of any one lane traffic zone shall be two miles. The minimum distance between one lane traffic zones shall be two miles.
No work on US 23 pavement or berms shall be performed by the Contractor from 4:00 P.M. Friday to 6:00 A.M. Monday. Two-lane traffic in each direction shall be maintained during these periods, except in the immediate area of scheduled bridge repair work, where one-lane traffic in each direction shall be maintained while such work is in progress. No work on US 23 pavement or berms shall be performed by the Contractor 24 hours preceding a National Holiday, during which two-lane traffic in each direction shall be maintained.
Payment for providing watchmen, erecting, maintaining, and removing signs, barricades, cones, markers, special lighting, etc., shall be included in the lump sum price bid for Item 614 Maintaining Traffic.
There shall not be more than one proposed course placed on existing pavement or shoulder, before adjacent courses are placed. Permanent pavement marking shall be placed within 30 calendar days after completion of final surface courses.
All drums and barricades used as channelizing devices for traffic and placed adjacent to a lane in use by traffic shall be equipped with steady burn barricade warning lights in accordance with O.M.U.T.C.D.
The Contractor shall establish hours of operation on this project at his option, unless otherwise noted. The actual placing (pouring) of the deck overlays shall be performed between Monday AM. and Friday noon and no such placing shall occur on the day immediately preceding a National Holiday period.
Maximum usage of existing and proposed pavement will be made to avoid excessive closing of ramps. Where it becomes necessary to close a ramp, exclusive of Ramps "B" and "D" at S.R. 199, traffic will be appropriately detoured to the next adjacent interchange in accordance with the aforementioned manual. The Contractor shall not close the ramps on any two adjacent interchanges within the same span of time and the Contractor shall not close any two "Entrance" or "Exit" Ramps within the same interchange at the same time. No ramp shall be closed nor work performed 24 hours preceding, or on, a National Holiday. No ramp shall be closed nor work performed from 3:00 P.M. Friday to 6:00 A.M. Monday; the exceptions shall be S.R. 199 Ramps "B" and "D" which may remain closed on weekend periods to accomplish required bridge work. No ramp shall be closed without prior approval of the Engineer and District Traffic Engineer. The Contractor shall notify the Engineer and District Traffic Engineer at least two weeks in advance of his intention to close a ramp so that traffic may be routed to other access points.
During the initial first day set-up period and the last day tear-down period of each traffic control sequence, a law enforcement officer with patrol car shall be present to assist in traffic control operations. During the actual placing of the deck overlay or other times the Contractor may at his option use such an officer to assist in traffic control. The use of the law enforcement officer as required by the plans shall be paid for on a unit price (hourly - est. 60 hrs.) basis under the item Special shown. All optional use of such an officer and all other labor, equipment and materials required for traffic control shall be included in the lump sum price bid for Item 614, Maintaining Traffic.
Lane widths for all closings shall be a minimum of 12 feet.

ALTERNATE METHODS — If the Contractor so elects, he may submit Alternate Methods for the Maintenance of Traffic, provided the intent of the above provisions are followed and no additional inconvenience to the traveling public results therefrom. No alternate plan shall be placed into effect until approval has been granted, in writing, by the Director of Transportation.

ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE — Raised Pavt. markers shall be removed in a manner that prevents damage to the castings. All depressions caused by removal of the markers shall be filled with 848 to the existing road surface prior to resurfacing. Contractor shall provide crates and neatly stack the Raised Pavement Markers in the crates (quantity marked on outside). The crates shall be placed on pallets that can be lifted by crane or forklifts. Crates holding the markers shall be stored on the project site as directed by the Engineer. All costs to be included in the contract price bid for Item 202 - Raised Pavement Markers for Storage - 2009 Each.

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WYA-23-10.40

GENERAL NOTES

614 TEMPORARY PAVEMENT MARKINGS

GENERAL

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND WHEN NECESSARY, REMOVE TEMPORARY RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE MAINTAINED IN GOOD CONDITION DURING THE REQUIRED SERVICE PERIOD TO PROVIDE DAY AND NIGHT VISIBILITY. THE MARKINGS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER TO MAINTAIN REQUIRED VISIBILITY AT NO ADDITIONAL COST TO THE STATE.

MATERIALS

UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE OF PAINT OR PAVEMENT MARKING TAPE.

A. PAINT

PAINT SHALL COMPLY WITH 708.14 AND SHALL BE APPLIED IN ACCORDANCE WITH 621 EXCEPT AS MODIFIED HEREIN.

B. PAVEMENT MARKING TAPE

FLEXIBLE RETROREFLECTIVE PREFORMED PRESSURE SENSITIVE TAPE SHALL HAVE STRAIGHT EDGES AND BE FREE OF CRACKS. THE TAPE SHALL CONSIST OF PIGMENT AND FILLERS WITH SUFFICIENT BINDER AND PLASTICIZER TO RETAIN GLASS BEADS HAVING A REFRACTIVE INDEX MEETING THE MINIMUM REFLECTIVE INTENSITY STANDARD STATED IN THE MANUFACTURERS INFORMATION. THE TAPE SHALL BE FLEXOLITE "WET REFLECTIVE", 3M "SCOTCHLANE", OR AN APPROVED EQUAL.

THE GLASS BEADS SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE TAPE WITH SUFFICIENT SURFACE BEADS TO PROVIDE OPTIMUM REFLECTORIZATION AT ALL TIMES.

PAVEMENT MARKING TAPE SHALL COMPLY WITH THE COLOR REQUIREMENTS OF 708.14.

THE TAPE SHALL HAVE A PRECOATED ADHESIVE LAYER FOR PAVEMENT APPLICATION WITHOUT THE USE OF HEAT, SOLVENTS OR ADDITIONAL ADHESIVES. THE ADHESIVE SHALL BE SUFFICIENT TO RETAIN COMPLETE MARKINGS ON THE PAVEMENT SURFACE THROUGHOUT THE USEFUL LIFE OF THE MARKINGS.

IN ADDITION TO THE FOREGOING, ALL TEMPERATURE APPLICATION REQUIREMENTS AND OTHER APPLICABLE MANUFACTURERS MATERIAL AND APPLICATION INSTRUCTIONS SHALL BE FOLLOWED.

LAYOUT

THE TEMPORARY MARKINGS SHALL BE ACCURATELY LAID OUT IN CONFORMANCE WITH 621.051 AND SHALL BE LOCATED IN A TRUE LINE ON THE CENTER LINE, LANE LINE, EDGE LINE, OR CHANNELIZING LINE WHERE PERMANENT MARKINGS WOULD LIE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

PLACEMENT

TEMPORARY MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS, UNLESS OTHERWISE SPECIFIED IN THE PLANS.

TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS ARE NO LONGER NEEDED, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134 AND NECESSARY PAVEMENT MARKINGS INSTALLED BEFORE THE FLOW OF TRAFFIC IS CHANGED TO THE NEXT PHASE OR RETURNED TO ITS NORMAL CHANNEL.

WHERE PAVEMENT MARKINGS ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL FURNISH AND PLACE THE PERMANENT MARKINGS WITHING 30 CALENDAR DAYS FOLLOWING COMPLETION OF ALL SURFACE COURSES IN A SINGLE ROADWAY OR PRIOR TO THE END OF THE CONSTRUCTION SEASON, WHICHEVER COMES FIRST. PERMANENT MARKINGS SHALL NOT BE PLACED OVER ANY CLASS I, TAPE MARKINGS.

A. CLASS I MARKINGS

CLASS I MARKINGS SHALL BE AS DEFINED IN 621, EXCEPT AS FOLLOWS:
1) LANE LINES SHALL BE 4-INCHES IN WIDTH.
2) TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
3) STOP LINES SHALL BE 12-INCHES IN WIDTH.
4) CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

GORE MARKINGS SHALL CONSIST OF TWO CHANNELIZING LINES PLACED AT THE THEORETICAL OR TEMPORARY GORE OF RAMPS AND DIVERGING OR CONVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR SOLID 4-INCH LINES, 24 GALLONS PER MILE FOR SOLID 6-INCH LINES, 48 GALLONS PER MILE FOR SOLID 12-INCH LINES, AND 4 GALLONS PER MILE FOR 4-INCH DASHED LINES.

B. CLASS II MARKINGS

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

CHANNELIZING LINES SHALL CONSIST OF WHITE 12-INCH BY 4-INCH DASHES SPACED AT A MAXIMUM OF 20-FOOT INTERVALS.

GORE MARKINGS SHALL BE TWO CONTINUOUS, WHITE 50-FOOT BY 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 16 GALLONS PER MILE FOR GORE MARKINGS, 0.8 GALLONS PER MILE FOR CHANNELIZING LINE, AND 0.4 GALLONS PER MILE FOR LANE LINE AND CENTER LINE.

CONFLICTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

METHOD OF MEASUREMENT

TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. DASHED LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED, IN ACCORDANCE WITH 621.15.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT

PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF THE MARKINGS.

ITEM	UNIT	DESCRIPTION
614	MILES	TEMPORARY LANE LINES, CLASS ____, (PAINT OR TAPE)
614	MILES	TEMPORARY CENTER LINES, CLASS ____, (PAINT OR TAPE)
614	MILES/LIN. FT.	TEMPORARY CHANNELIZING LINES, CLASS ____, (PAINT OR TAPE)
614	MILES	TEMPORARY EDGE LINES, CLASS I, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY GORE MARKING, CLASS II, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY STOP LINES, CLASS I, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY CROSSWALK LINES, CLASS I, (PAINT OR TAPE)
614	EACH	TEMPORARY LANE ARROWS, CLASS I, (PAINT OR TAPE)
614	EACH	TEMPORARY WORD "ONLY" ON PAVEMENT, 72-INCH, CLASS I, (PAINT OR TAPE)
614	LIN. FT.	TEMPORARY TRANSVERSE LINES, CLASS I, (PAINT OR TAPE)

For Quantities, see sheet 92.

MAINTENANCE OF TRAFFIC FOR BRIDGE WORK — One-lane traffic shall be maintained in the vicinity of each structure during the proposed deck repair and overly. No traffic shall be permitted on any area which has been machine scarified for bridge overlay. The latex modified concrete overlay, Item 845, shall be completed in each lane prior to placement of the approach pavement asphalt overlay courses.

If traffic is to be routed over the completed bridge deck overlay before the approach pavement resurfacing is completed, temporary ramps shall be constructed to the top of the concrete overlay using 848 Surface Course Type 1, feather at a maximum slope of 6 ft per inch. These ramps shall be removed prior to resurfacing. Cost of placing and removing these temporary ramps shall be included with Item 614 for payment.

ITEM 848 ASPHALT CONCRETE — On this project Item 848, table 2-2, properties of mixtures shall be for heavy traffic volumes.

FEATHERING 848 AT BRIDGES — No resurfacing material shall be placed on the following bridges: WYA-23-1101 Lt & Rt, WYA-23-1526 Lt & Rt, WYA-23-1589 Lt & Rt, WYA-23-2020 Lt & Rt. The transition from 3 inches to 0 inches shall be made off the limits of the bridges in a distance of approximately 100 feet at each end of the bridge.

Bridges to be resurfaced with Item 845 Latex Modified Concrete Overlay, include: WYA-23-1244 Lt & Rt, WYA-23-1494 Lt & Rt, WYA-23-2280 Lt & Rt. The transition from 3 inches to 1 inch in the 848 material shall be made off the limits of the bridges in a distance of approximately 80 feet at each end of the bridge, except for the final transition from bridges WYA-23-2280 Lt & Rt. This final transition shall be from 1 inch to 0 inches in a distance of 33 feet.

FENCING — The Centerline of US 23, Baselines of ramps & Centerlines of intersecting highways will be re-established by State Forces. It shall be the responsibility of the Contractor to establish the fence corners as shown in these plans, in accordance with 623.

The unit price bid per linear foot of Item 607 Fence Type 47, shall be considered to include the cost of removing any Trees or Brush which would interfere with placement of the fence at the plan locations.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS
References to Supplemental Specifications 857, 858, 859, 957, 958 and 959 on the Traffic Control Standard Construction Drawings in these plans shall be considered to read as respective references to Items 630, 631, 632, 730, 731 and 732.

JULY 14, 1981

SUB - SUMMARY

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA. - 23 - 10.40

Sheet No	ROADWAY 202 Pipe Removed 24" and Under Lin. Ft.	202 Curb Removed, AS PER PLAN Lin. Ft.	202 Guardrail Removed for Storage Lin. Ft.	202 Inlet Removed Each	517 Railing (Deep Beam Rail w/st. Tub Backup) Lin. Ft.	606 Guard Rail Type 5 Lin. Ft.	606 Guardrail Barrier Design Type 5 Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Barrier Design Type A Each	606 Anchor Assemblies Type T Each	606 Bridge Terminal Assemblies Type B Each	Type C Each	Type D Each	Type E Each	Type F Each	Type J Each	607 Fence Type 47 Lin. Ft.	EROSION CONTROL 601 Rock Chan. Protection Type B w/ Bedding Cu. Yd.	DRAINAGE 603 Conduit Lin. Ft. Type C 12"	Type F 6"	604 Std. C 28 Catch Basin Each	604 Catch Basin Adjusted to Grade Each	605 4" Und. Pipe Underdrains Lin. Ft.
25		632				224.96		1												26			1	494
26			251.80			2325.97	50.00	1	1	1			4			2	556			68				573
27			2472.90			2201.57	50.00	2	1	3							1791	19.6		32			2	836
28		661	2462.80														466							
30			400.00			362.50		1		1							2412						1	200
31		204															2400			158				1762
32																	2400			46				582
33																	1902			52				1080
34																	2319			132				1352
35			604.74			439.18	50.00	1	1	1							1987			48				412
36			1282.76			1198.32	50.00	2	1	3				4		2	2043	10.7						
37								1									2403							
38																	2211			66				664
39			325.00			312.50		1		1							2395						2	316
40		653															2463			118				935
41			2492.68			2795.30		4	2	4						4	2671	10.7						
42			2594.82			2679.70		4									2400			170				1425
43			750.00			725.00		2		2							2400							588
44																	2400			190				2362
45																	2404			56			2	588
46		562															1269						1	
47		469	3223.53			2809.70	5.66	6	1	5							1918		14		1			
48	50	394	842.64	1		779.53		2		1							1776						1	
49		413	2635.66			2327.68	94.34		1	2			4			2	2184							
50			2785.16			2829.25		1				4				3	2498							
51			4791.19			4791.19											1172							
52			345.07			314.01		2									310			22				400
53			1303.97		211.16	980.31				2	4						1094							
54			183.61			2.41				2							1174							
55			1687.50		184.92	1602.58		2		2	4						1693							
56			183.53			158.53		2									2401			70				700
57																	2477			76				636
58																	2401			32				400
59																	1600							
60																	2004							
61																	1724							
62		567															1200							
63		125															2385							
64																	2510			28				95
65																	1977	10.7		30				585
66																	2400							
67																	2487			218				1838
68																	2190			134				2314
69																	2362			142				2261
70																	2400			160				1324
71																	2400	21.3		32				270
72																	2400							
73																	1405							
74			327.60			171.35	50.00	1	1	1							1859							
75			1902.63		811.84	878.29	50.00	1	1	2	8						1169							
76		125															2317						1	
77		665															2461							
78																	1780			80				98
79			475.00			275.00		2		2							2659	12.4		72				2382
80																	2997			142				1162
81																	2404							
82																	2047							
83			1009.00			971.50		1		1							2400			130				1788
84			1103.50			1066.00		1		1							2400							
85			1410.40			1385.08		1		1							2400							
86			1427.10			1277.42	50.00		1					2		1	1179	10.7						
Totals	50	5470	39274.59	1	1207.92	35944.83	450.00	42	11	38	16	4	8	6	4	10	119,506	96.1	14	2530	1	11		30,422

GENERAL SUMMARY

Computations By
Initials J.S.S. Date 1/12/82
Computations Checked By
Initials JWR Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

22/108

WYANDOT COUNTY
WYA-23-10.40

ITEM	SHEET NUMBER																				ITEM	TOTALS	UNIT	DESCRIPTION
		8		11		19	20	21		88	89	91	92	93	94	95								
																								ROADWAY
202								50													202	50	Lin.Ft.	Pipe Removed, 24" and Under
202		10,173																			202	10,173	Sq.Yd.	Pavement Removed
202								5,470													202	5,470	Lin.Ft.	Curb Removed, As Per Plan
202								39,274.59													202	39,274.59	Lin.Ft.	Guard Rail Removed for Storage
202								1													202	1	Each	Inlet Removed
203		781																			203	781	Cu.Yd.	Embankment
606								35,944.83													606	35,944.83	Lin.Ft.	Guard Rail, Type 5
606								450.00													606	450.	Lin.Ft.	Guard Rail, Barrier Design, Type 5
606								42													606	42	Each	Anchor Assembly, Std Type A
606								11													606	11	Each	Anchor Assembly, Barrier Design, Std Type A
606								38													606	38	Each	Anchor Assembly, Std Type T
606								16													606	16	Each	Bridge Terminal Assembly, Std Type B
606								4													606	4	Each	Bridge Terminal Assembly, Std Type C
606								8													606	8	Each	Bridge Terminal Assembly, Std Type D
606								6													606	6	Each	Bridge Terminal Assembly, Std Type E
606								4													606	4	Each	Bridge Terminal Assembly, Std Type F
606								10													606	10	Each	Bridge Terminal Assembly, Std Type J
607								119,506													607	119,506	Lin.Ft.	Fence, Type 47
625		30																			625	30	Each	Ground Rod
																								EROSION CONTROL
601								96													601	96	Cu.Yd.	Rock Channel Protection, Type B with Bedding
659						10															659	10	M Gal.	Water
659		1,962																			659	1,962	Sq.Yd.	Seeding and Mulching
659		0.18																			659	0.18	Tons	Commercial Fertilizer
																								DRAINAGE
603								14													603	14	Lin.Ft.	12" Conduit, Type C
603								2,530													603	2,530	Lin.Ft.	6" Conduit, Type F
604								1													604	1	Each	Catch Basin, Std. No. 2-23
604								11													604	11	Each	Catch Basin Adjusted to Grade
605		6,447																			605	6,447	Lin.Ft.	Aggregate Drains, as per Plan
605								30,422													605	30,422	Lin.Ft.	4" Unclassified Pipe Underdrains, as per Plan
																								BRIDGE REPAIR
SPECIAL											136										SPECIAL	136	Lin. Ft	Barrier Curb Removed
SPECIAL											3										SPECIAL	3	Each	Scuppers Abandoned
517								1,207.92													517	1,207.92	Lin. Ft.	Railing (Deep Beam Rail with Steel Tubular Backup, Type 2 Post and Bolts)
516										122	275	151									516	598	Lin. Ft.	Vertical Extension of Structural Expansion Joints
845										1,481	1,742	1,295									845	4968	Sq. Yd.	Latex Modified Concrete Overlay (1¼" Thickness)
845										25	29	21									845	75	Cu. Yd	Latex Modified Concrete Overlay (Variable Thickness)
845										36	42	30									845	108	Cu. Yd	Full-depth Repair
SPECIAL						12															SPECIAL	12	Units	Lighting for Night Placement of Deck Overlay

GENERAL SUMMARY

Computations By Initials J.S.S. Date 1/12/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
WYA.-23-10.40

ITEM	SHEET NUMBER																			ITEM	TOTALS	UNIT	DESCRIPTION
		8		11		19	20	21		88	89	91	92	93	94	95							
																							PAVEMENT
301		477		29																301	506	Cu.Yd.	Bituminous Aggregate Base ; AC-20, RT-11 or RT-12
304				58																304	58	Cu.Yd.	Aggregate Base
305		10173																		305	10173	Sq.Yd.	9" Portland Cement Concrete Base, As Per Plan
310						500														310	500	Cu.Yd.	Subbase, Type I, Grading A
407				60634																407	60634	Gals.	Tack Coat
407				2125																407	2125	Tons	Cover Aggregate
Special		18312																		Special	18312	Lin.Ft.	Pavement Sawing
617				63167																617	63167	Sq.Yd.	Shoulder Preparation
617				1739		500														617	2239	Cu.Yd.	Compacted Aggregate
617						50														617	50	M Gals	Water
848				28853																848	28853	Cu.Yd.	Asphalt Concrete Intermediate Course, Type 2
848				21048																848	21048	Cu.Yd.	Asphalt Concrete Surface Course, Type 1
																							TRAFFIC CONTROL
202														706						202	706	Each	Delineators Removed for Storage
614													25.19							614	25.19	Miles	Temporary Lane Lines, Class II, Paint
614													0.33							614	0.33	Miles	Temporary Channelizing Lines, Class II, Paint
614													700							614	700	Lin.Ft.	Temporary Gore Marking, Class II, Paint
620														5						620	5	Each	Delineators, Type A, Bracket Mounted
620														2						620	2	Each	Delineators, Type C, Bracket Mounted
620														283						620	283	Each	Delineators, Type A, Post Mounted
620														185						620	185	Each	Delineators, Type C, Post Mounted
620														90						620	90	Each	Delineators, Type D, Post Mounted
621															56.72					621	56.72	Miles	Edge Lines
621															25.24					621	25.24	Miles	4" Lane Lines
621															0.23					621	0.23	Miles	Center Lines
621															4847					621	4847	Lin.Ft.	Channelizing Lines
621																725				621	725	Lin.Ft.	Stop Lines
621															2388					621	2388	Lin.Ft.	Transverge Lines
621																5				621	5	Each	Lane Arrows
202						2009														202	2009	Each	Raised Pavement Markers Removed for Storage
614													25.19							614	25.19	Miles	Temporary Lane Lines, Class II, Tape
614													0.33							614	0.33	Miles	Temporary Channelizing Lines, Class II, Tape
614													700							614	700	Lin.Ft.	Temporary Gore Marking, Class II, Tape
																							Traffic Control Continued on Sheet 97
Special						60														Special	60	Hrs	Law Enforcement Officer with Patrol Car
614						Lump														614	Lump		Maintaining Traffic
623						Lump														623	Lump		Construction Layout Stakes
624						Lump														624	Lump		Mobilization, as per Plan

FHWA REGION	STATE	PROJECT	
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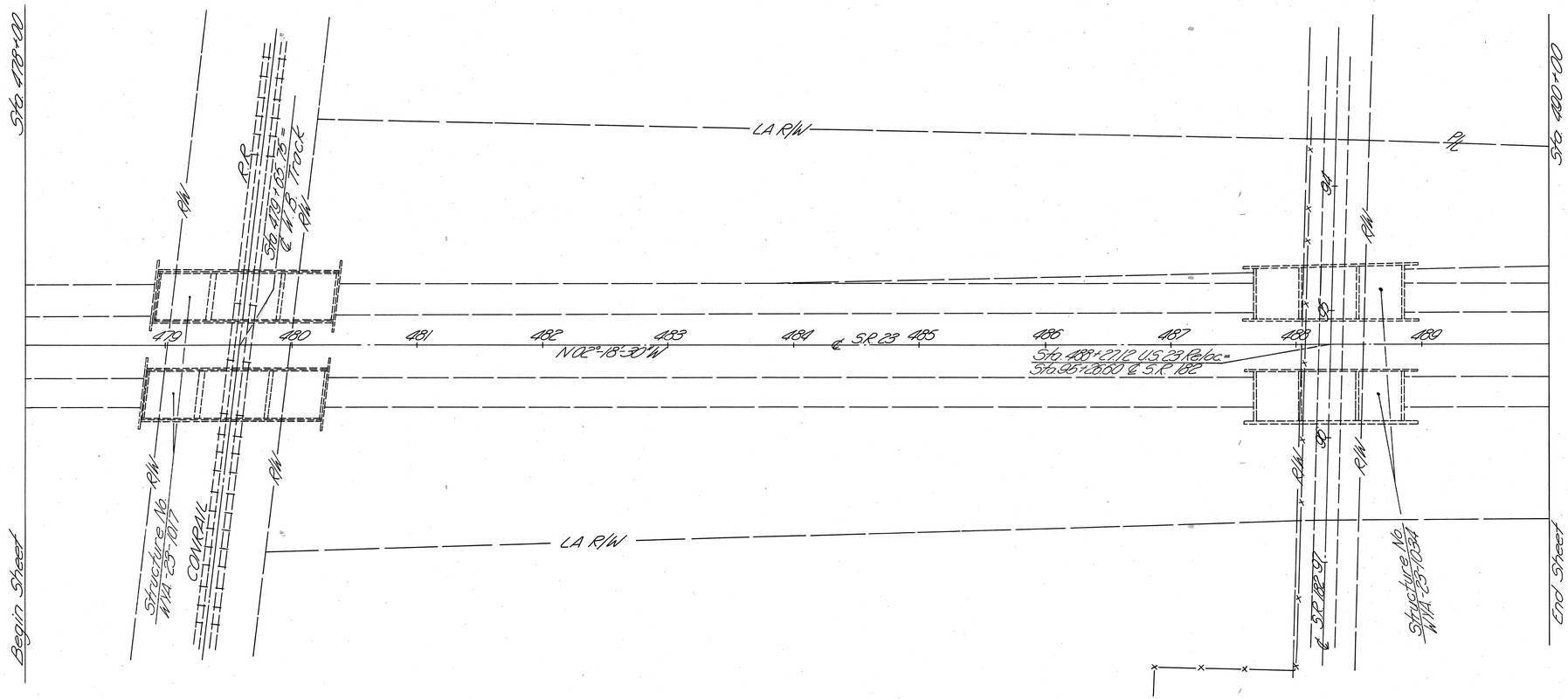
WYANDOT COUNTY
WYA.-23-10.40



Sta. 478+00 to Sta. 490+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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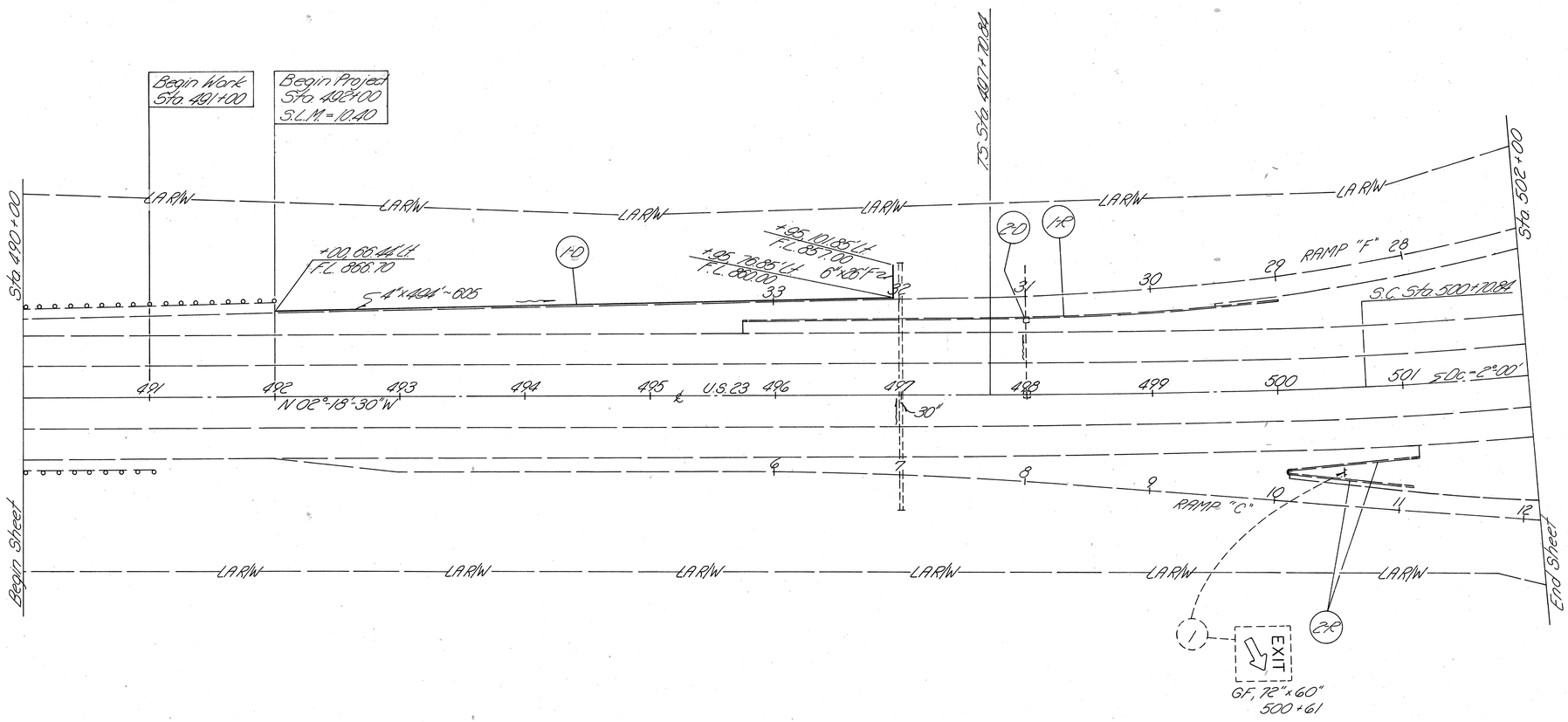
WYANDOT COUNTY
WYA. - 23 - 10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed Lin. Ft.	
1-R	405+75	29+00*	Lt.	426.0	
2-R	500+07.5	501+09.5	Rt.	206.0	
	Totals			632.0	

* Sta. on Ramp "F"

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	604 Catch Basin Adjusted to Grade Each	605 Underdrain Pipe Lin. Ft.
1-D	492+00	496+95	Lt.	26		494
2-D	498+00		Lt.		1	
	Totals			26	1	494

SIGN LEGEND

Existing Sign shall be removed and Erected on new Breakaway Posts

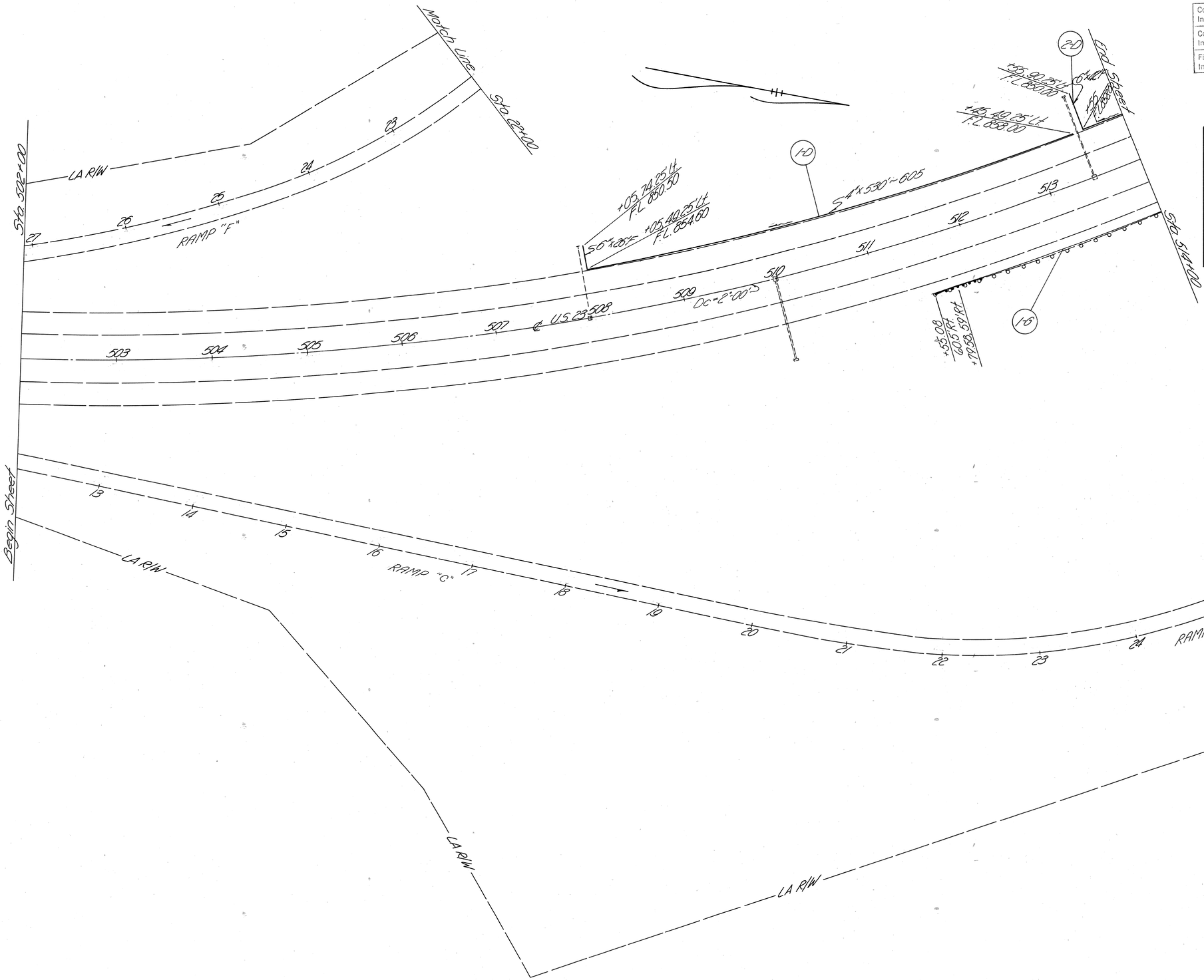
Rev. 4-26-82

Sta. 490+00 to Sta. 502+00

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials J.V.P. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guardrail removed for storage Lin. Ft.	606 Guard rail Type 7 Lin. Ft.	606 Anchor Assembly Type A Each
1-6	511+55.08	514+00	Rt.	251.80	224.96	1
Totals				251.80	224.96	1

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type 7 6"	605 Underdrain 4" Perforated Lin. Ft.
1-D	508+05	513+25	Lt.	20	530
2-D	513+55	514+00	Lt.	48	43
Totals				68	573

Sta 502+00 to Sta 514+00

Computations By Initials J.S.S. Date 1/11/62
Computations Checked By Initials J.V.P Date 1/12/62
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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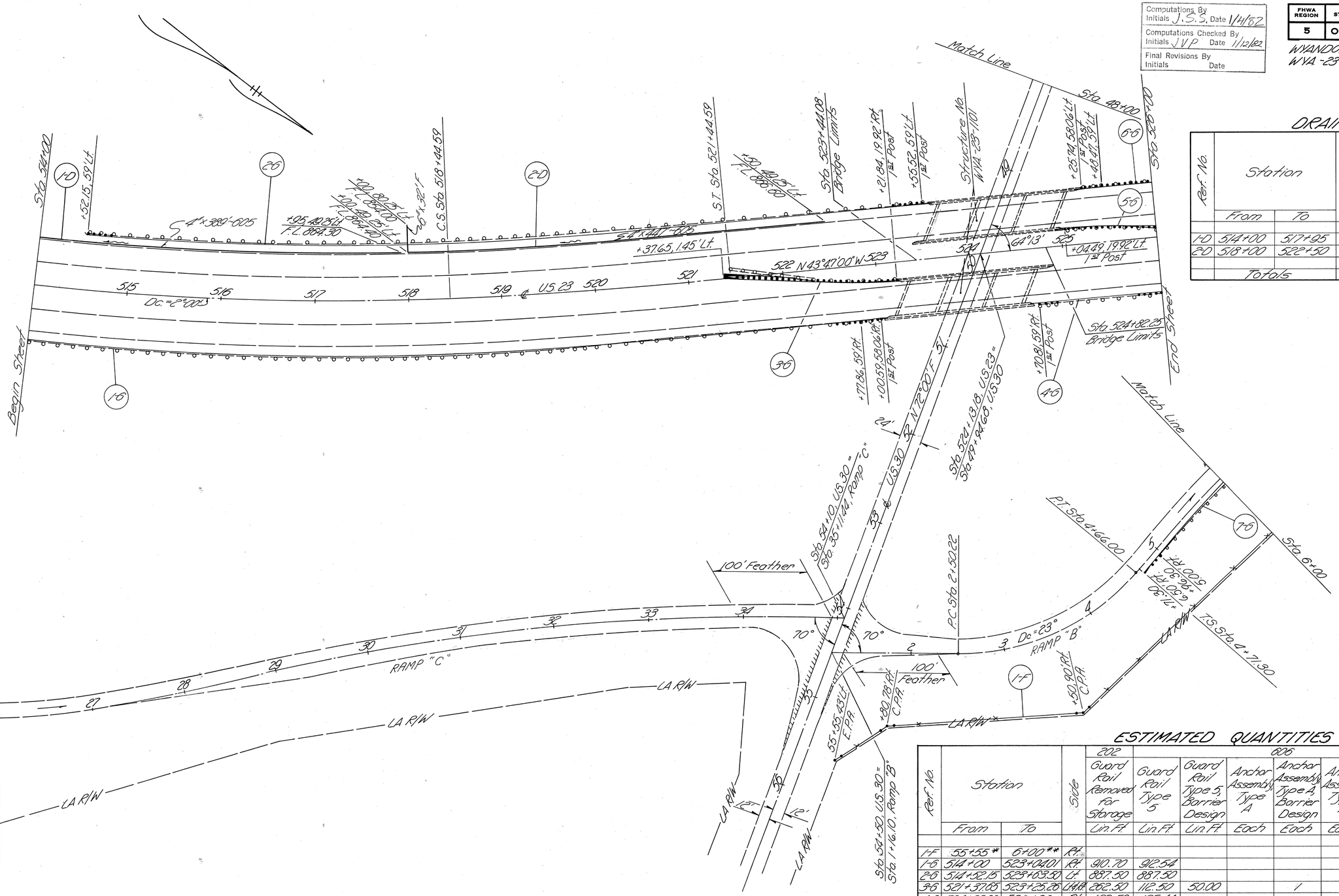
WYANDOT COUNTY
WYA-23-10.40



DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Underdrain Lin. Ft.
1-D	514+00	517+95	Lt.			389
2-D	518+00	522+50	Lt.	32		447
	Totals			32		836

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage	606 Guard Rail Type 5	606 Guard Rail Type 5, Barrier Design	606 Anchor Assembly Type A	606 Anchor Assembly Type A, Barrier Design	606 Anchor Assembly Type T	606 Bridge Terminal Assembly Type O	606 Bridge Terminal Assembly Type J	607 Fence Type 47
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Each	Each	Each	Lin. Ft.
1-F	55+55 *	6+00 **	Rt.									556.0
1-6	514+00	523+04.01	Rt.	910.70	912.54					1		
2-6	514+32.15	523+63.50	Lt.	887.50	887.50				1		1	
3-6	521+37.105	523+25.20	Lt. & Rt.	262.50	112.50	50.00		1		1		
4-6	524+82.83	526+00	Rt.	132.50	135.44						1	
5-6	525+01.07	526+00	Lt.	103.10	97.76					1		
6-6	525+22.32	526+00	Lt.	76.00	76.53					1		
7-6	4+71.30 **	6+00 **	Rt.	100.00	103.70		1					
	Totals			2,412.90	2,325.97	50.00	1	1	1	4	2	556.0

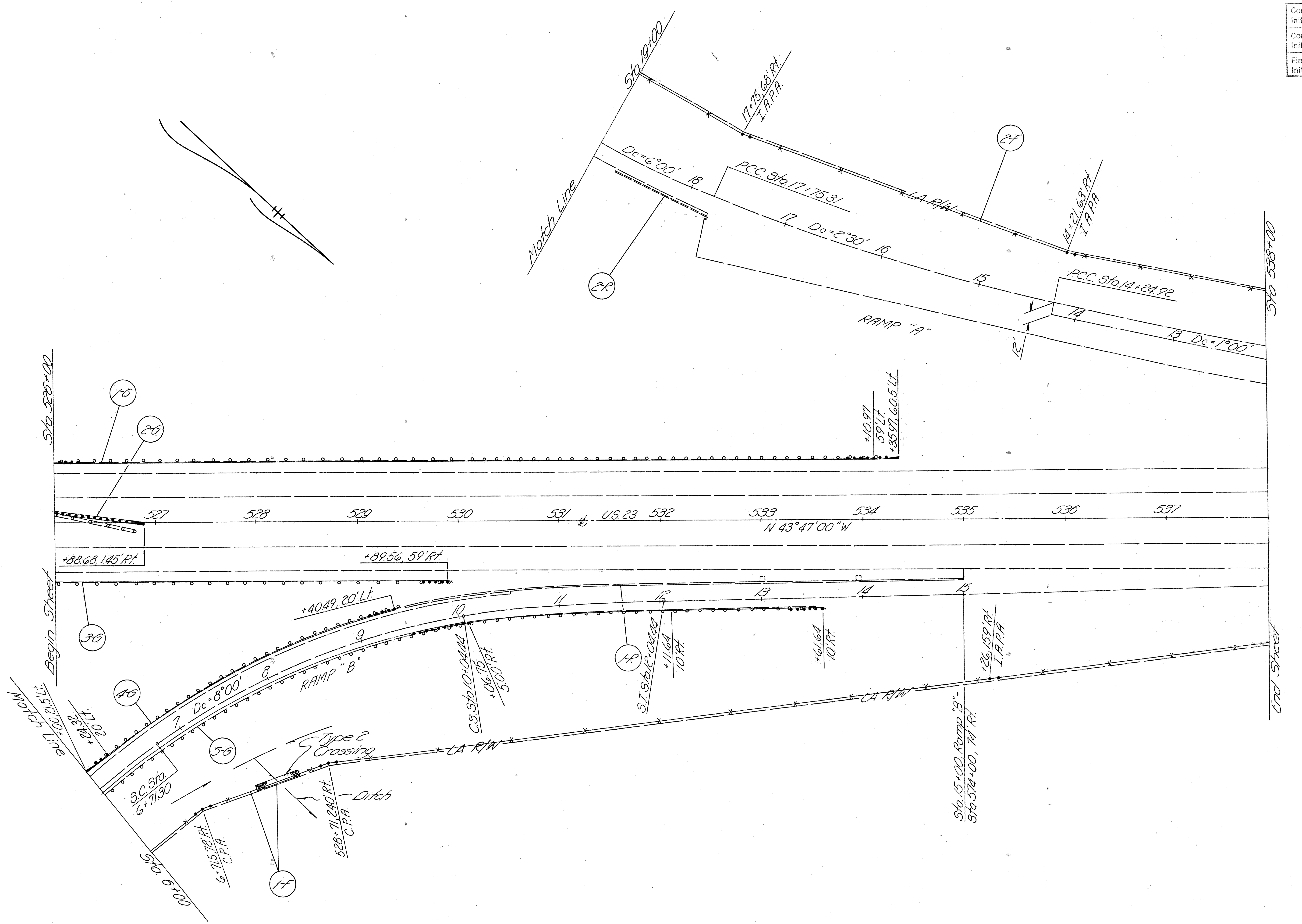
* Sta on U.S. 30 ** Sta. on Ramp "B"

Sta. 514+00 to Sta 526+00

FHWA REGION	STATE	PROJECT
5	OHIO	

WYANDOT COUNTY
WYA.-23-10.40

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials J.V.P. Date 1/12/82
Final Revisions By Initials Date



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 (Lin. Ft.)	606 Anchor Assembly Type A, Barrier Design (Each)	606 Anchor Assembly Type A (Each)	606 Guard Rail Type 5 Barrier Design (Lin. Ft.)	606 Guard Rail Type 5 (Lin. Ft.)	606 Anchor Assembly Type T (Each)	604 Catch Basin Adjusted to Grade (Each)	601 Rock Channel Protection Type B w/ Bedding (Cu. Yd.)	202 Guard Rail Removed for Storage (Lin. Ft.)	202 Curb Removed (Lin. Ft.)
1-F	6+00 **	538+00	Rt.	1,135.0							19.6		
2-F	19+00 *	538+00	Lt.	656.0									
1-G	526+00	534+35.97	Lt.			1		810.97				810.9	
2-G	526+00	526+88.68	Lt.&Rt.		1		50.00	14.74				139.4	
3-G	526+00	529+89.56	Rt.					377.06	1			392.5	
4-G	6+00 **	9+40.49 **	Lt.			1		312.50	1			350.0	
5-G	6+00 **	13+61.64 **	Rt.					746.30	1			750.0	
1-R	9+50 **	535+00	Rt.							2			553.0
2-R	17+73.31 *	18+75.31 *	Rt.										108.0
Totals				1,791.0	1	2	50.00	2,261.57	3	2	19.6	2,462.8	661.0

* Sta. on Ramp "A" ** Sta. on Ramp "B"

FHWA REGION	STATE	PROJECT	
5	OHIO		

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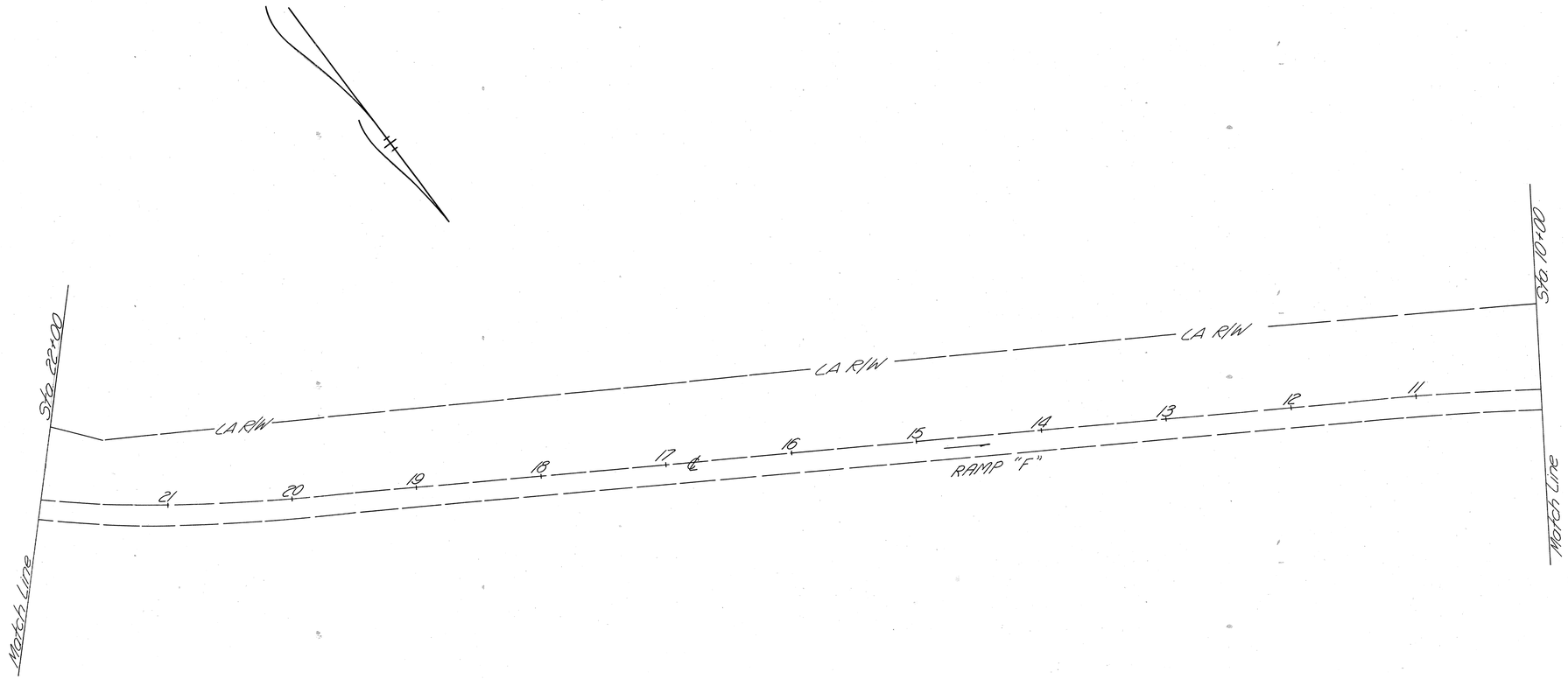
WYANDOT COUNTY
WYA.-23-10.40



RAMP "F" ~ Sta. 22+00 to Sta. 10+00

Computations By	
Initials J.S.S	Date 1/4/82
Computations Checked By	
Initials JJP	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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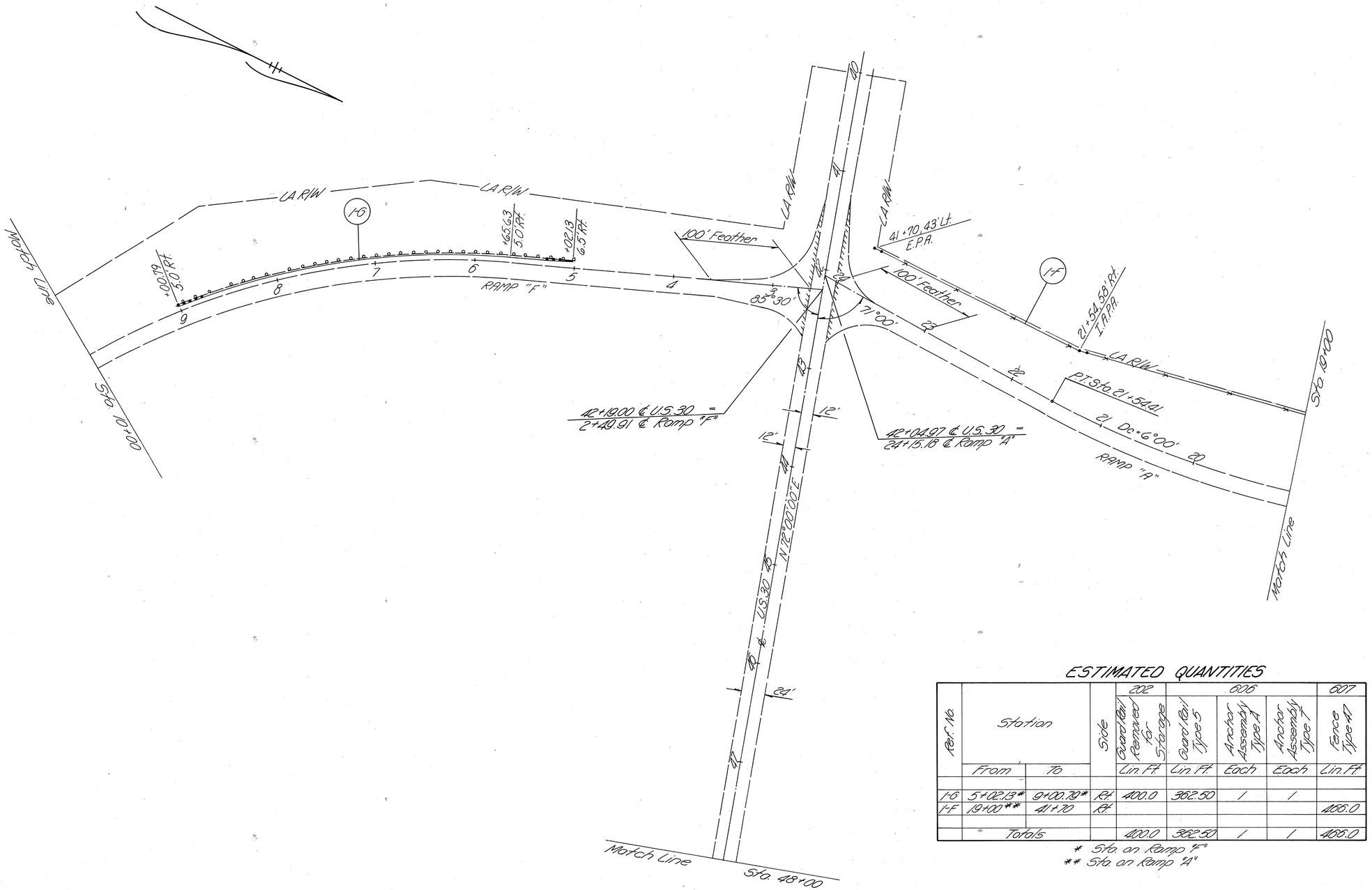
108

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	202 Guard Rail Removed for Storage	606 Guard Rail Type 5	606 Anchor Assembly Type A	606 Anchor Assembly Type F	607 Fence Type 47
				Lin. Ft.	Lin. Ft.	Each	Each	Lin. Ft.
I-G	5+02.13*	9+00.79*	Rt.	400.0	362.50	1	1	
I-F	19+00**	41+70	Rt.					466.0
	Totals			400.0	362.50	1	1	466.0

* Sta. on Ramp "F"
** Sta. on Ramp "A"

Sta. 10+00 on RAMP "F" to Sta. 19+00 on RAMP "A"

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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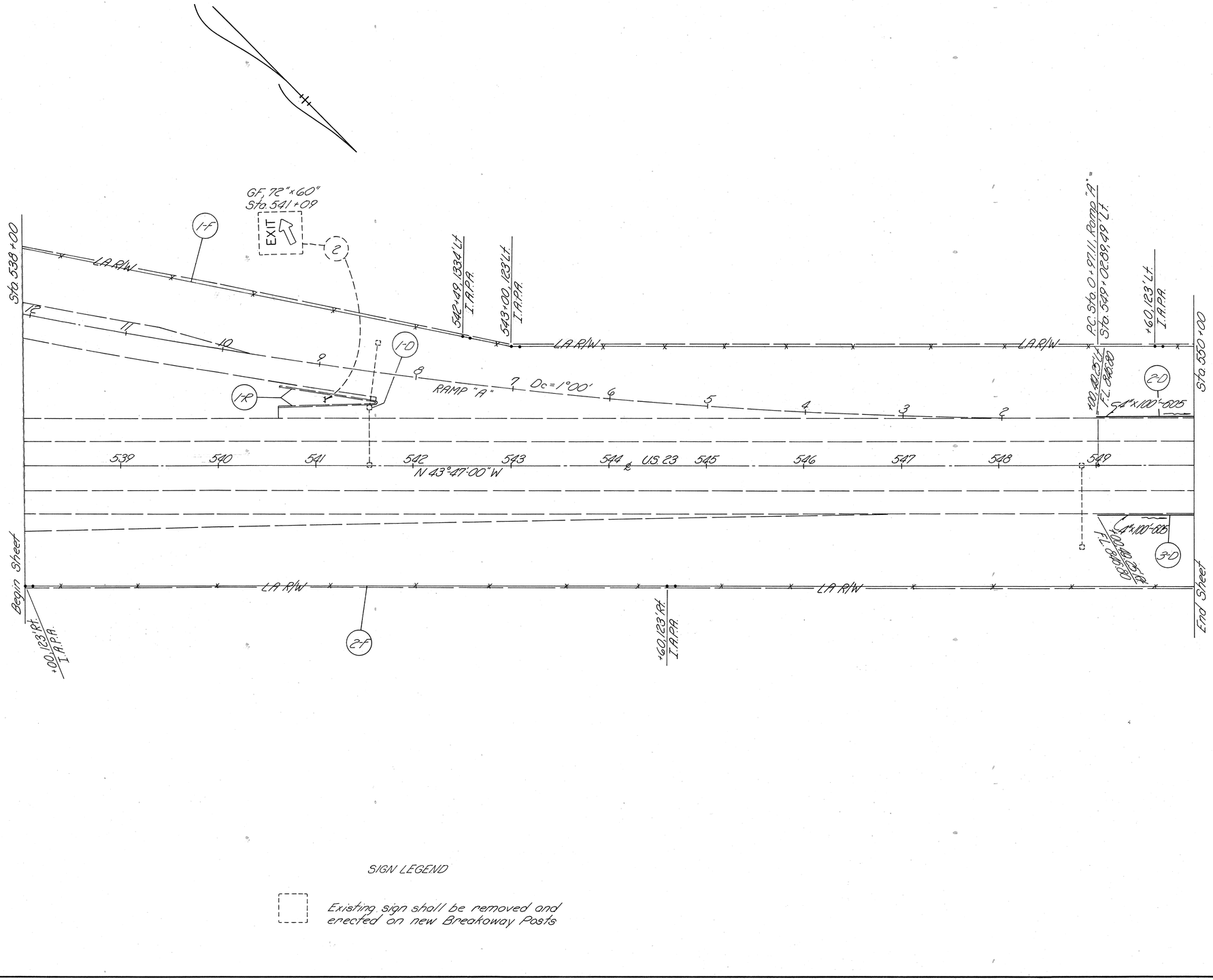
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed		607 Fence Type 4T
				Lin. Ft.		Lin. Ft.
1-F	538+00	550+00	Lt.			1,212.0
2-F	538+00	550+00	Rt.			1,200.0
1-R	540+80.71	8+35.21*	Lt.	204.0		
	Totals			204.0		2,412.0

* Sta on Ramp "A"

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	604 Catch Basin Adjusted To Grade	605 4" Underdrain Unclassified Pipe
				Each	Lin. Ft.
1-D	541+55		Lt.	1	
2-D	549+00	550+00	Lt.		100
3-D	549+00	550+00	Rt.		100
	Totals			1	200

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta. 538+00 to Sta. 550+00

Computations By	
Initials J.S.S.	Date 1/4/82
Computations Check	
Initials JVP	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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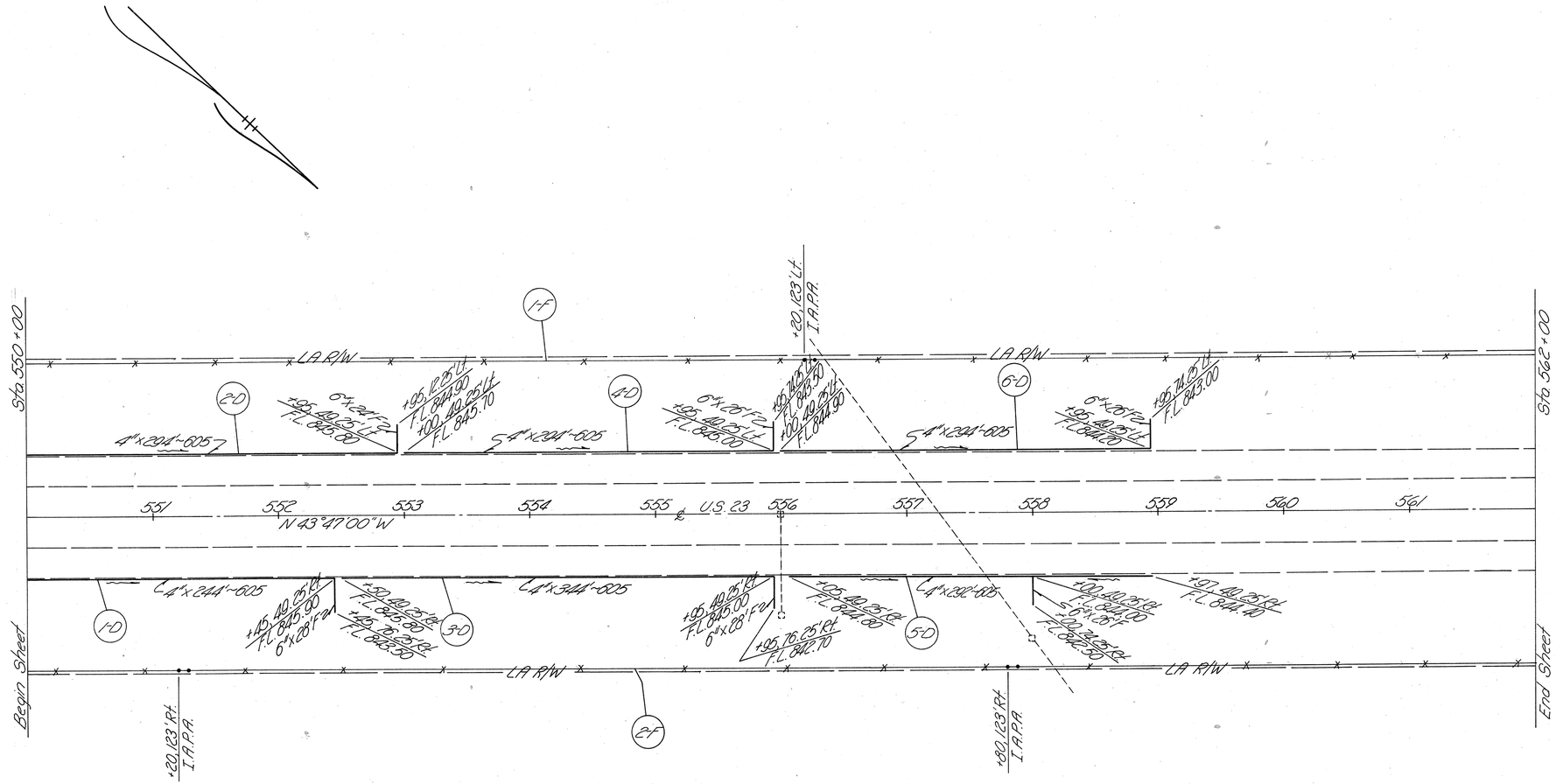
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	607 Fence Type 4 Lin. Ft.
1-F	550+00	562+00	Lt.	1,200.0
2-F	550+00	562+00	Rt.	1,200.0
Totals				2,400.0

DRAINAGE "D"

Ref. No	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Underdrain Lin. Ft.
1-D	550+00	552+45	Rt.	28		244
2-D	550+00	552+95	Lt.	24		294
3-D	552+50	555+95	Rt.	28		344
4-D	553+00	555+95	Lt.	26		294
5-D	556+05	558+97	Rt.	26		292
6-D	556+00	558+95	Lt.	26		294
Totals				158		1,762

Sta. 550+00 to Sta. 562+00

Computed by Initials	J.S.S.	Date	1/4/82
Computed by Initials	JVP	Date	1/21/82
Final Revisions By Initials		Date	

FHWA REGION	STATE	PROJECT	
5	OHIO		

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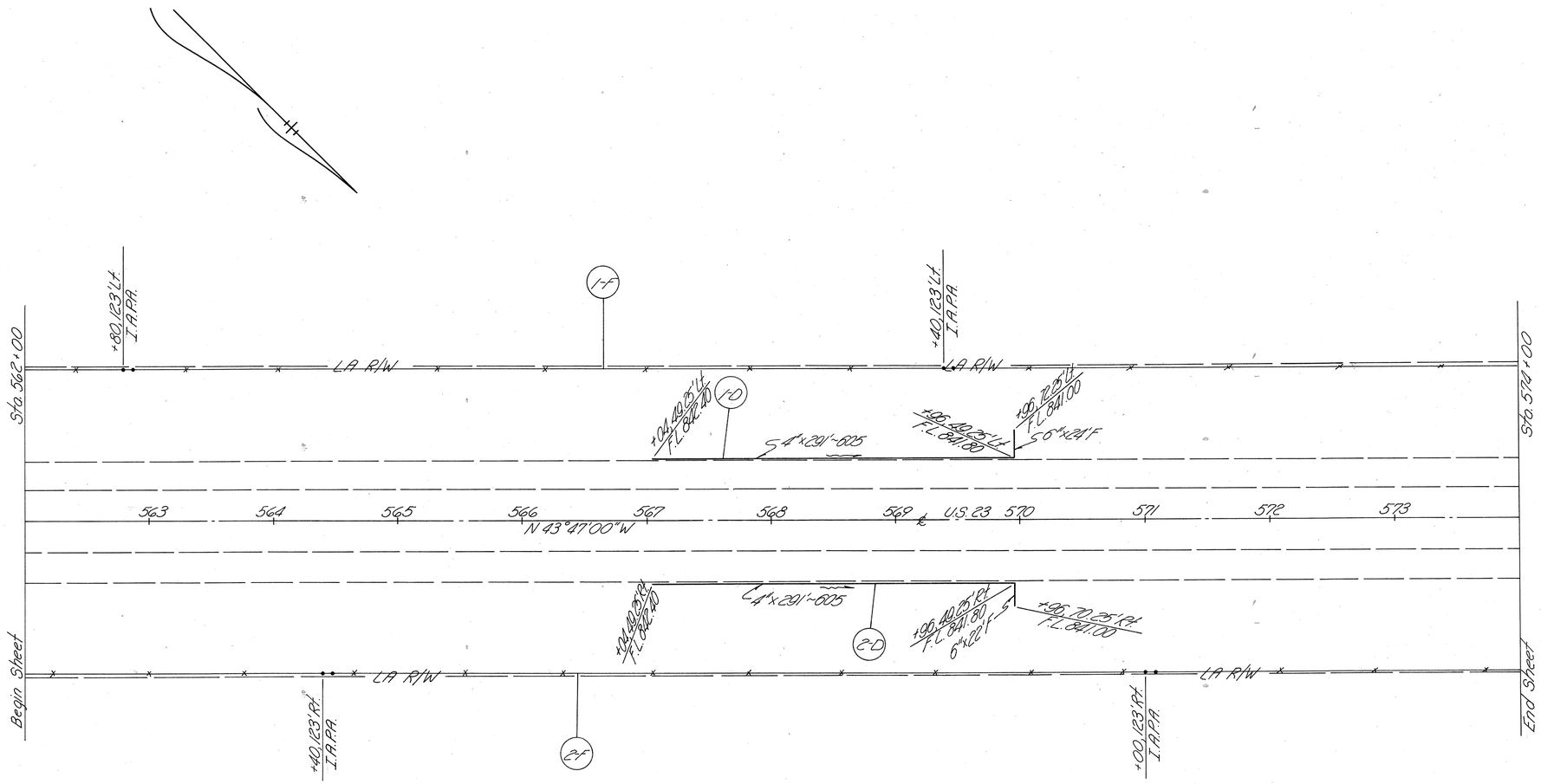
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 4 Lin. Ft.
1-F	562+00	574+00	Lt.	1,200.0
2-F	562+00	574+00	Rt.	1,200.0
	Totals			2,400.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Underdrain Pipe Lin. Ft.
1-D	567+04	569+95	Lt.	24		291
2-D	567+04	569+95	Rt.	22		291
	Totals			46		582

Sta. 562+00 to Sta. 574+00

Computations By
Initials J.S.S. Date 1/4/82
Computations Checked
Initials JVP Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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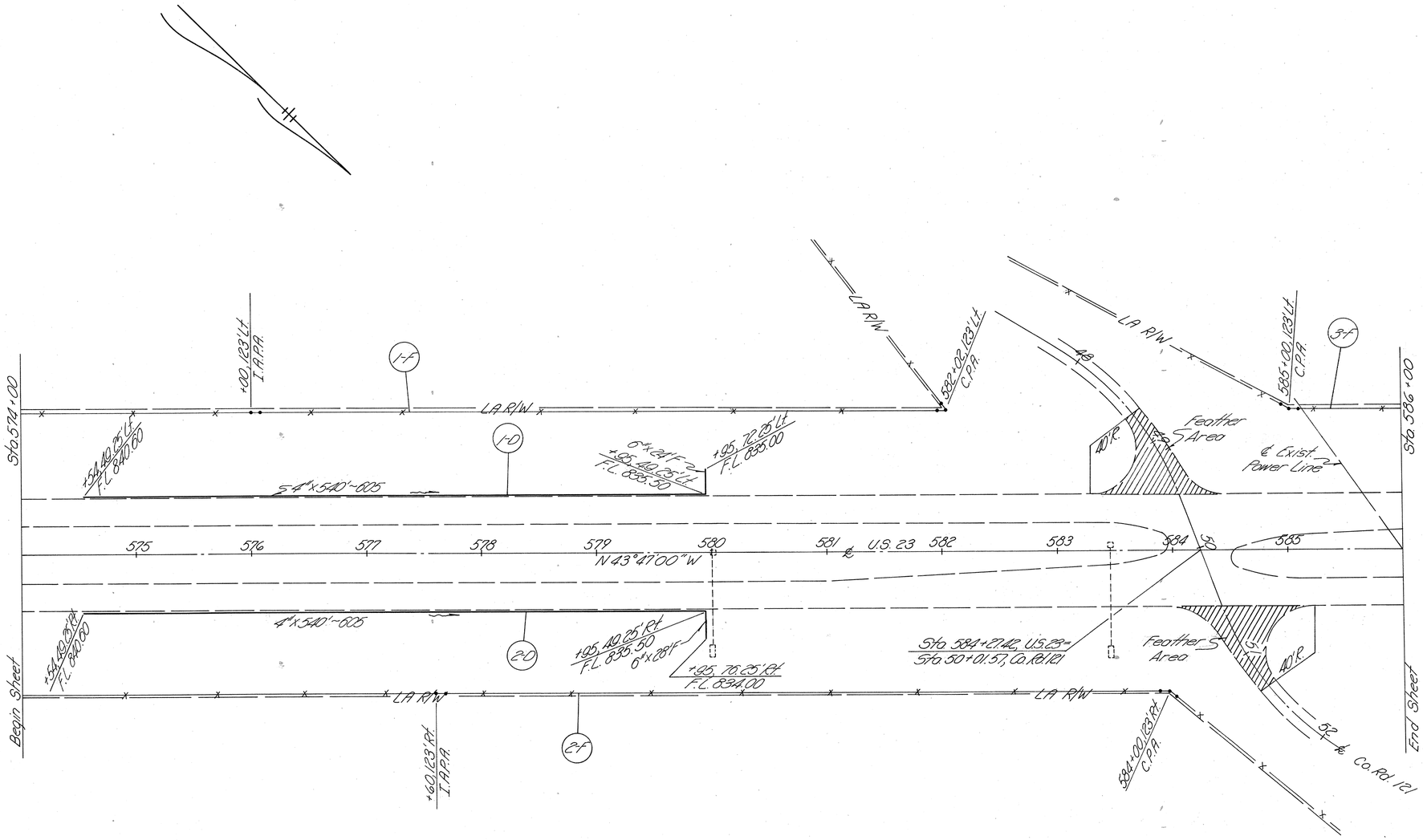
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 4' Lin. Ft.
1F	574+00	582+02	Lt.	802.0
2F	574+00	584+00	Rt.	100.00
3F	585+00	586+00	Lt.	100.0
	Totals			1,902.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	605 4" Unclassified Pipe Underdrains Lin. Ft.
1-D	574+54	579+95	Lt.	24	540
2-D	574+54	579+95	Rt.	28	540
	Totals			52	1080

Sta 574+00 to Sta 586+00

Computations By	
Initials J.S.S.	Date 1/4/82
Computations Checked By	
Initials J.V.P.	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
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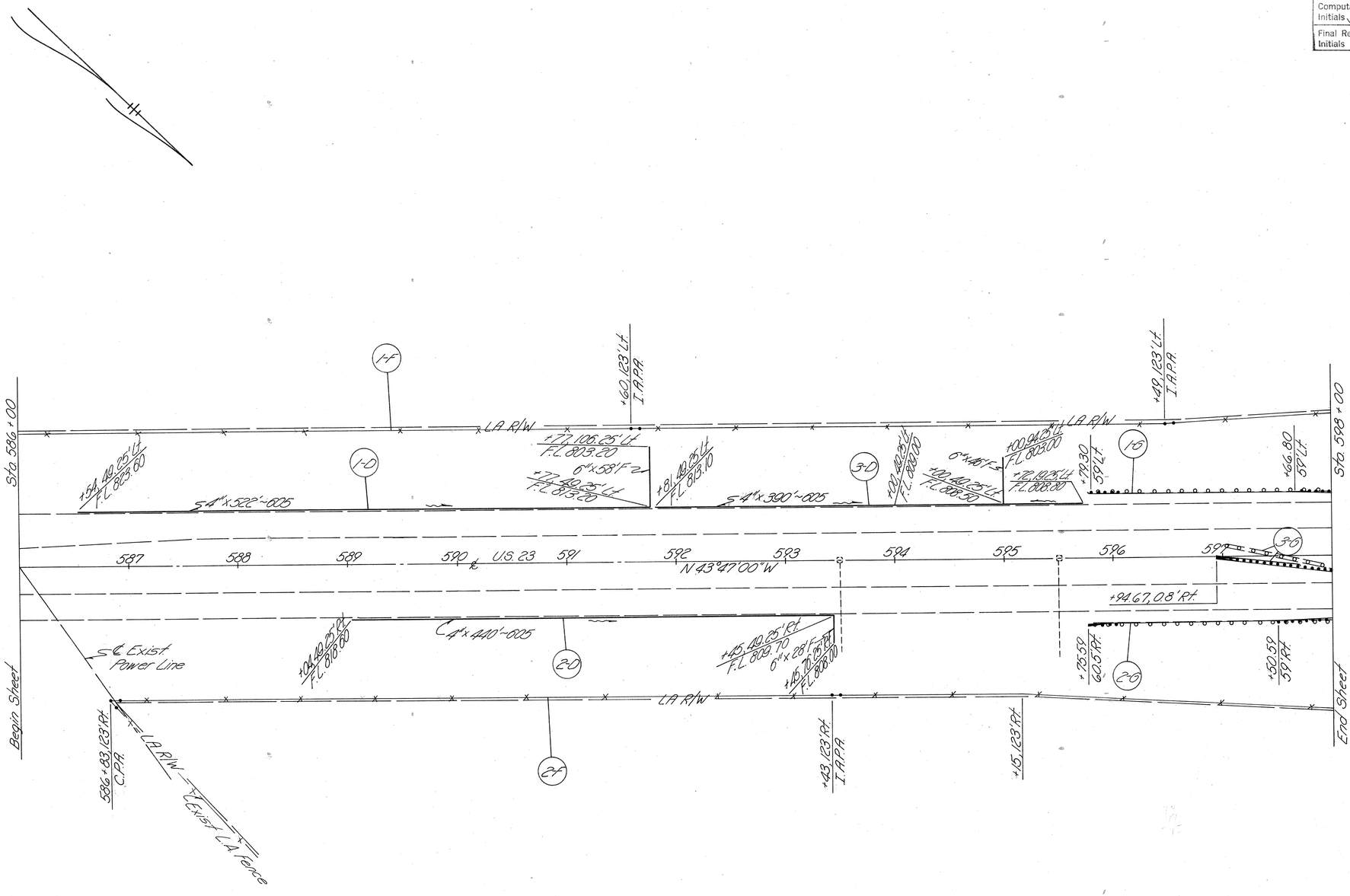
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

607								
	Fence Type 47	Lin. Ft.			1201.0	1118.0		2319.0
	Anchor Assembly Type T	Each				1		1
	Anchor Assembly Type "A" Barrier Design	Each					1	1
	Anchor Assembly Type A	Each				1		1
	Guard Rail Type 5 Barrier Design	Lin. Ft.					50.00	50.00
	Guard Rail Type 5	Lin. Ft.			228.28	208.57	3.39	439.8
202	Guard Rail Removed for Storage	Lin. Ft.			228.30	213.02	182.42	624.74
	Side				Lt.	Rt.	Rt.	
Station	From	To	Ref. No.					
	586+00	588+00	1-F	Lt.	586+83	588+00	588+00	Totals
	588+00	589+83	2-F	Lt.	586+83	589+00	589+00	
	589+83	591+77	1-D	Lt.	589+83	591+77	591+77	
	591+77	593+45	2-D	Rt.	589+83	593+45	593+45	
	593+45	595+72	3-D	Lt.	591+77	595+72	595+72	
	595+72	598+00	3-G		595+72	598+00	598+00	

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Underdrain Lin. Ft.
1-D	586+54	591+77	Lt.	58		522
2-D	589+04	593+45	Rt.	28		440
3-D	591+81	595+72	Lt.	46		390
	Totals			132		1352

Sta. 586+00 to Sta. 598+00

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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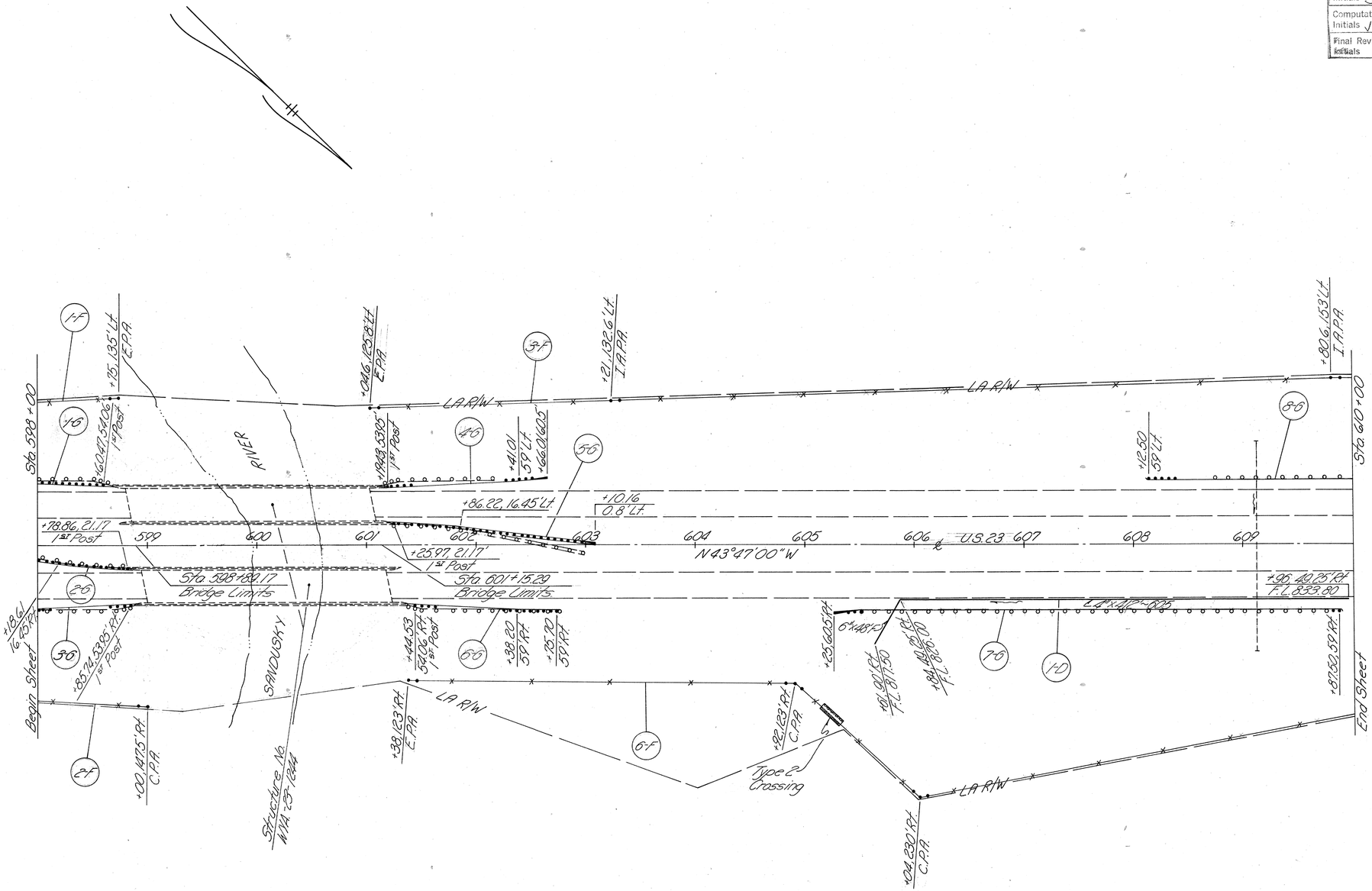
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.	607 Guard Rail Type 5 Lin. Ft.	607 Guard Rail Type 5 Barrier Design Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type Barrier Design Each	606 Anchor Assemblies Type T Each	608 Bridge Terminal Assemblies Type E Each	608 Bridge Terminal Assemblies Type J Each	801 Rock Channel Protection Type B w/Bedding Cu. Yd.	607 Fence Type 47 Lin. Ft.
1-F	598+00	598+08.45	Lt.	65.70	66.72					1			75.0
2-F	598+00	598+22.28	Rt.	61.08	81.11								101.0
3-F	598+30	598+80.66	Rt.	61.08	87.00					1			886.0
4-G	601+80.01	602+06.01	Lt.	102.00	125.00					1		10.67	915.0
5-G	601+22.55	601+53.16	Lt.	202.30	112.30	50.00							
6-G	601+38.55	602+17.08	Rt.	137.30	121.00				1		1		
7-G	602+25.35	602+87.25	Rt.	423.00	425.00				1				
8-G	601+00	601+29.30	Lt.	125.00	115.00				1				
Totals				1,282.26	1,088.32	50.00	2	1	3	4	2	10.67	1,087.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	605 4" Underdrain Pipe Lin. Ft.
1-D	605+81	609+96	Rt.	48	412
Totals				48	412

Sta. 598+00 to Sta. 610+00

Computations By	
Initials J.S.S.	Date 1/4/82
Computations Checked By	
Initials J V P	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
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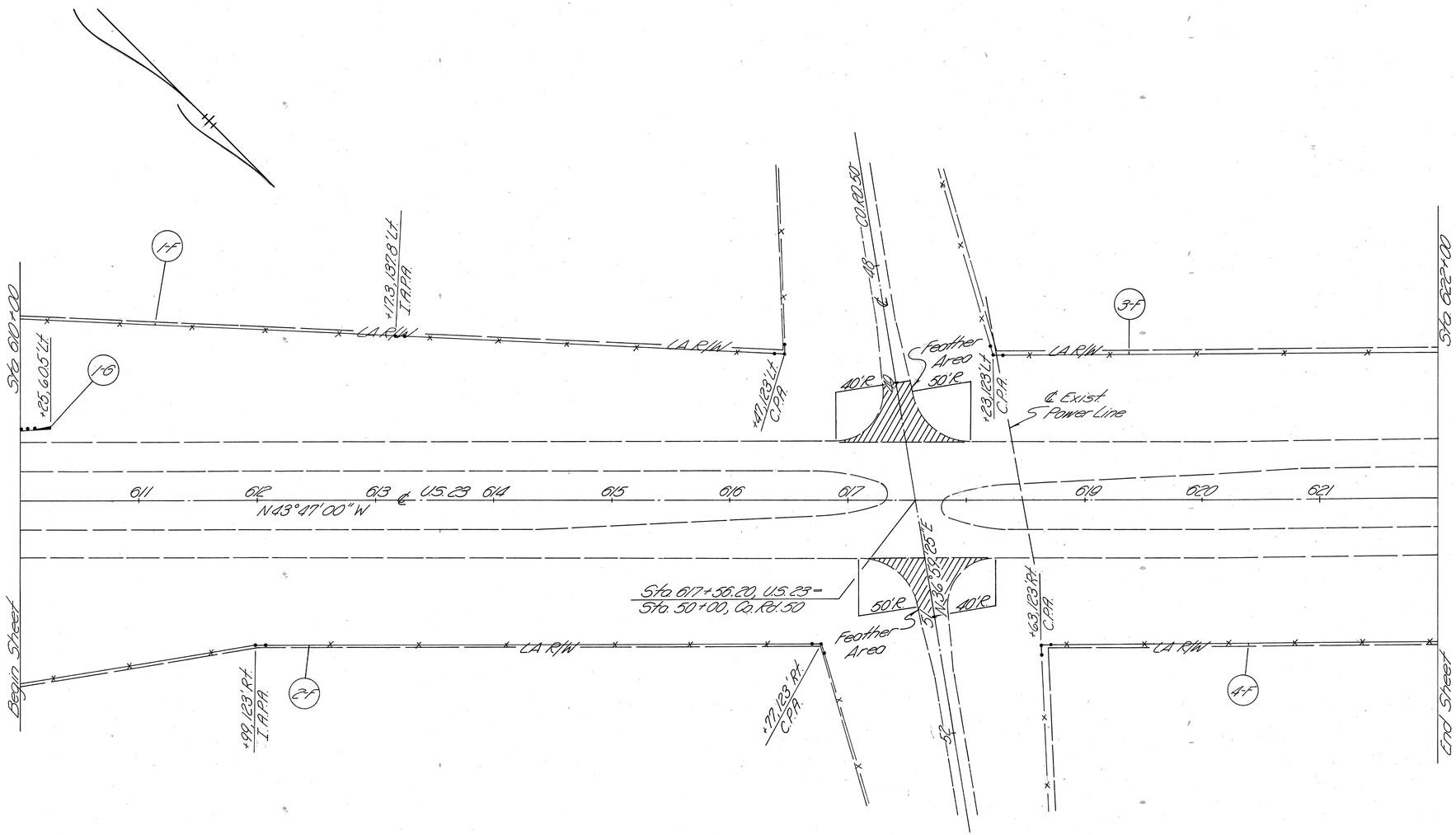
ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	606 Anchor Assembly Type A Each	607 Fence Type 4D Lin. Ft.
1-F	610+00	616+47	Lt.		649.0
2-F	610+00	616+77	Rt.		680.0
3-F	618+23	622+00	Lt.		377.0
4-F	618+63	622+00	Rt.		337.0
1-G	610+00	610+25	Lt.	1	
	Totals			1	2043.0



Sta. 610+00 to Sta. 622+00

Computation Initials	J.S.S.	1/11/82
Computation Initials	VP	1/12/82
Final Revisions Initials		

FHWA REGION	STATE	PROJECT	
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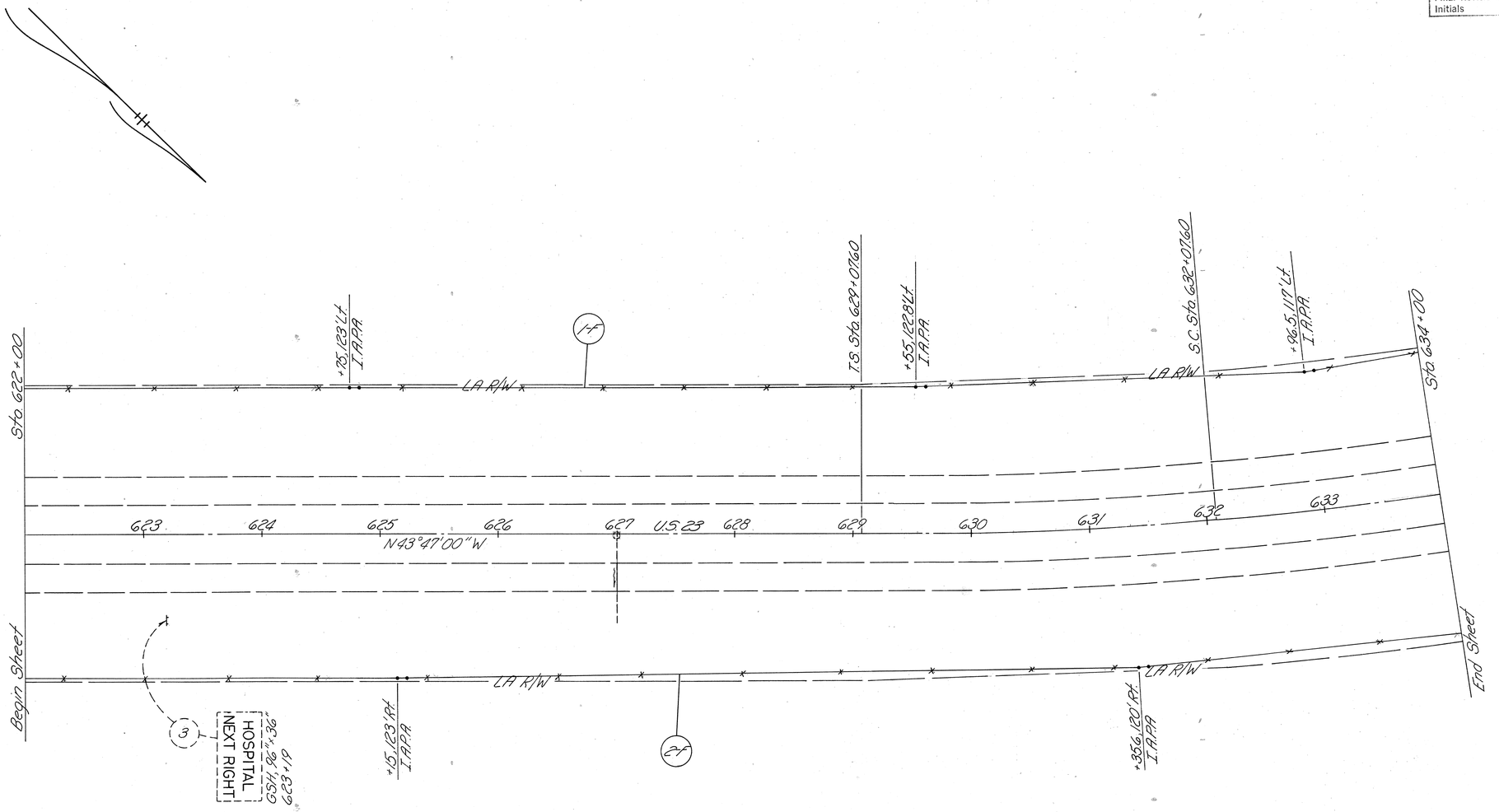
WYANDOT COUNTY
WYA-23-10.40



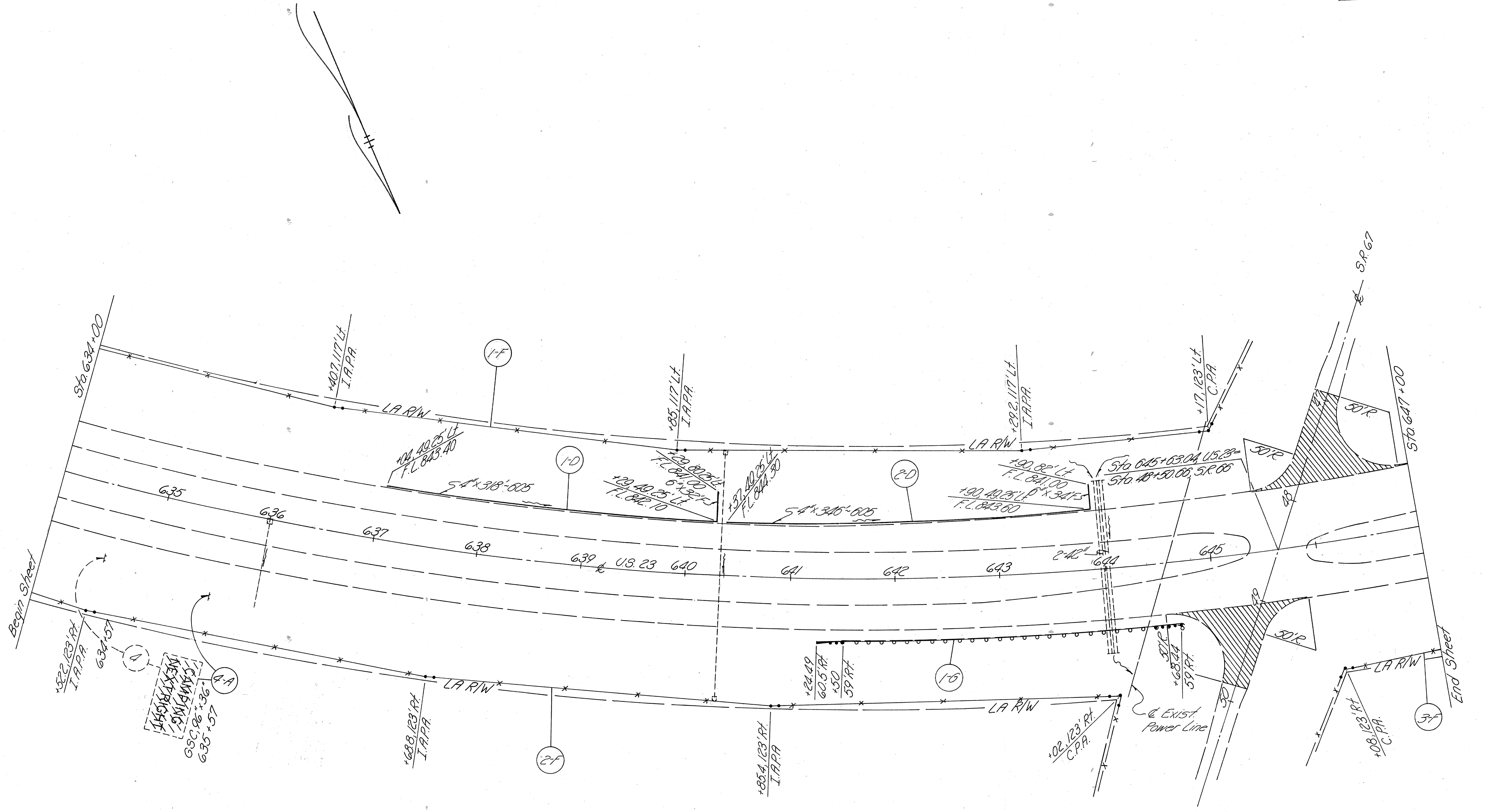
ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	622+00	634+00	Lt	1,183.0
2-F	622+00	634+00	Rt	1,220.0
	Totals			2,403.0

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta 622+00 to Sta 634+00



SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts, at new location

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage (Lin. Ft.)	606 Guard Rail Type 5 (Lin. Ft.)	606 Anchor Assemblies Type A (Each)	606 Anchor Assemblies Type T (Each)	607 Fence Type 47 (Lin. Ft.)
1-F	634+00	645+17	Lt.					1,072.0
2-F	634+00	644+02	Rt.					1,045.0
3-F	646+08	647+00	Rt.					94.0
1-G	641+24.40	644+08.44	Rt.	325.00	312.50	1	1	
	Totals			325.00	312.50	1	1	2,211.0

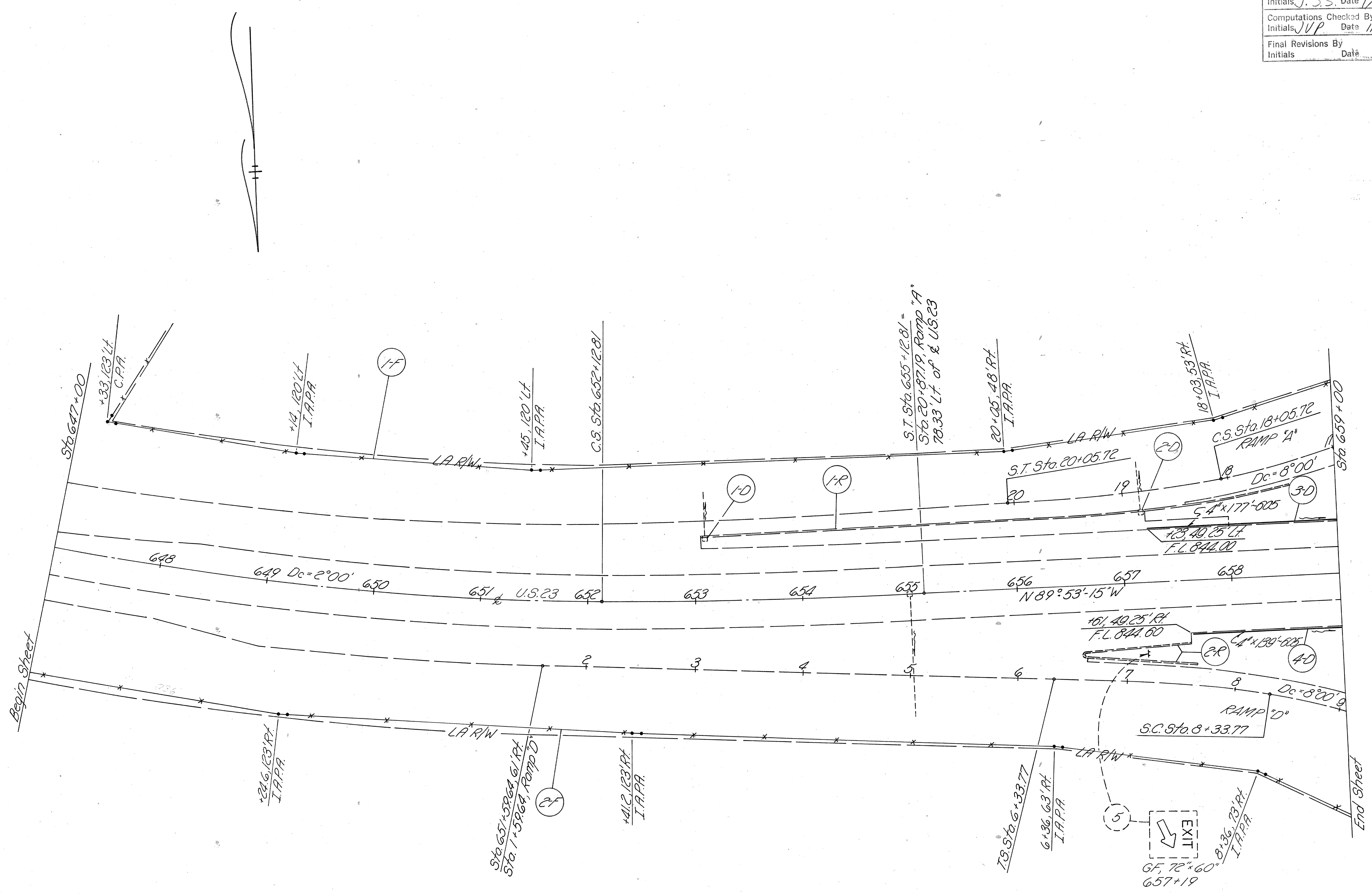
DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unclassified Pipe Underdrains (Lin. Ft.)
1-D	637+04	640+29	Lt.	32		318
2-D	640+37	643+90	Lt.	34		346
	Totals			66		664

Computations By Initials J. S. S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT		
5	OHIO			

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed (Lin. Ft.)		607 Fence Type 47 (Lin. Ft.)
1-F	647+33	659+00	Lt.			1,149.0
2-F	647+00	659+00	Rt.			1,246.0
1-R	653+00	17+56*	Lt.	447.0		
2-R	6+62**	657+59.5	Rt.	206.0		
	Totals			653.0		2,395.0

* Sta. on Ramp "A"
** Sta. on Ramp "D"

DRAINAGE "D"

Ref. No.	Station From	Station To	Side		604 Catch Basin Adjusted to Grade (Each)	605 4" Unclassified Pipe Underdrains (Lin. Ft.)
1-D	653+05		Lt.		1	
2-D	18+85*		Lt.		1	
3-D	657+23	659+00	Lt.			177
4-D	657+61	659+00	Rt.			139
	Totals				2	316

SIGN LEGEND

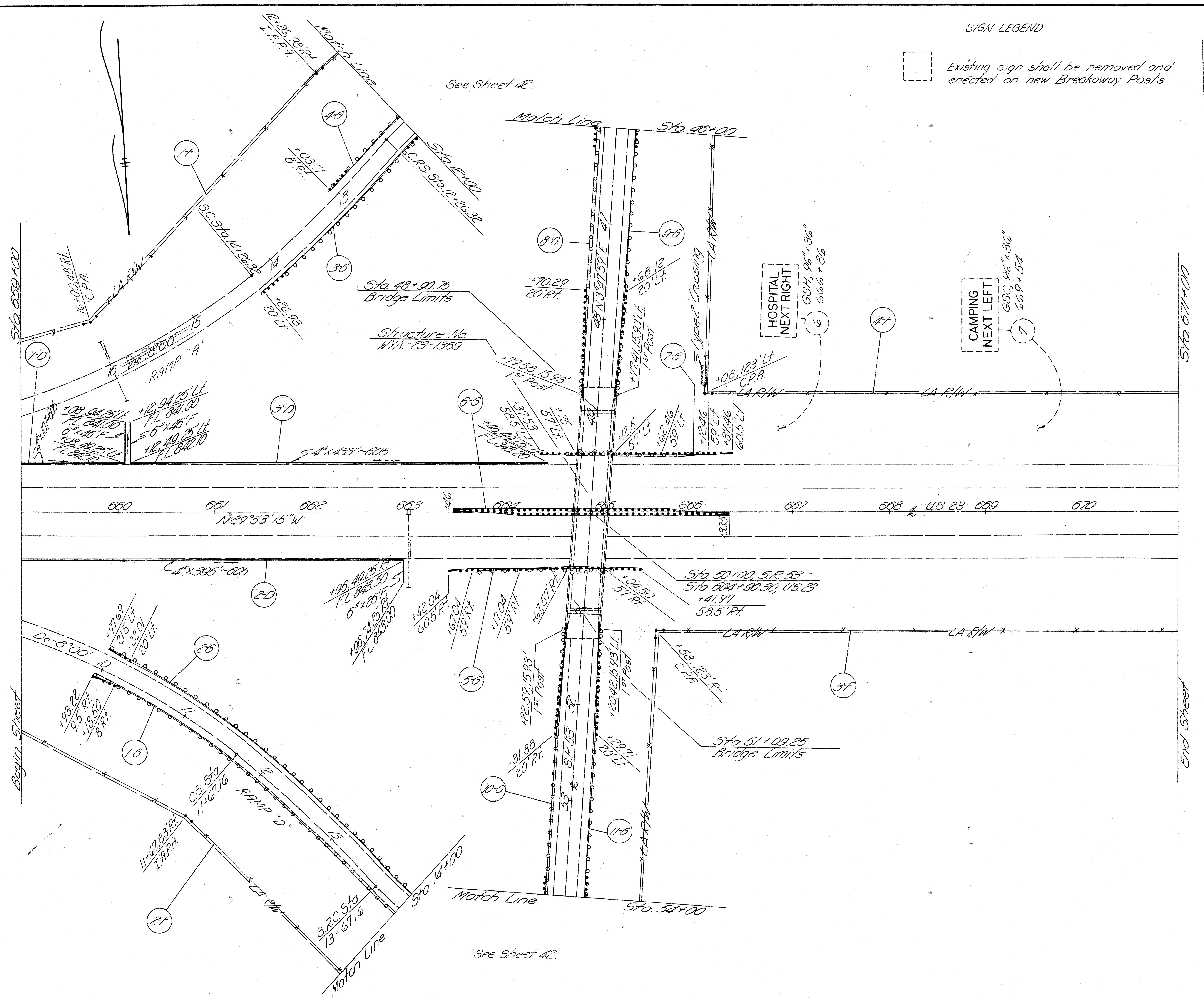
Existing sign shall be removed and erected on new Breakaway Posts

WYANDOT COUNTY
WYA-23-10.40

Computations By Initials J.S.S.	Date 1/4/82	
Computations Checked By Initials JVP	Date 1/12/82	
Final Revisions By Initials	Date	

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage (Lin. Ft.)	601 Rock Channel Protection Type B w/ Bedding (Cu. Yd.)	606 Guard Rail Type 5 (Lin. Ft.)	606 Anchor Assemblies Type A (Each)	606 Anchor Assemblies Type A Barrier Design (Each)	606 Anchor Assemblies Type T (Each)	606 Bridge Terminal Assembly Type F (Each)		607 Fence Type 47 (Lin. Ft.)
1-F	659+00	12+00*	Lt.									455.0
2-F	659+00	14+00**	Rt.									422.0
3-F	54+00ø	671+00	Rt.									826.0
4-F	46+00ø	671+00	Lt.		10.67							760.0
1-G	9+93.22**	14+00**	Rt.	400.00		380.27	1					
2-G	9+97.69**	14+00**	Lt.	400.00		380.97	1					
3-G	12+00*	14+26.93*	Lt.	200.00		215.24			1			
4-G	12+00*	13+03.71*	Rt.	100.00		92.00			1			
5-G	663+42.04	665+41.97	Rt.	137.50		162.50	1		1			
6-G	663+46	666+33.5	Lt.&Rt.			275.00		2				
7-G	664+37.53	666+37.46	Lt.	137.50		162.50	1		1			
8-G	46+00ø	48+96.82ø	Rt.	280.53		282.79				1		
9-G	46+00ø	48+94.65ø	Lt.	278.31		280.62				1		
10-G	51+05.35ø	54+00ø	Rt.	278.31		280.62				1		
11-G	51+03.18ø	54+00ø	Lt.	280.53		282.79				1		
Totals				2,492.68	10.67	2,795.30	4	2	4	4		2,463.0

* Sta. on Ramp "A"
** Sta. on Ramp "D"
ø Sta. on S.R. 53

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Type F 6" (Lin. Ft.)		605 4" Unclassified Pipe Underdrains (Lin. Ft.)
1-D	659+00	660+08	Lt.	46		107
2-D	659+00	662+96	Rt.	26		395
3-D	660+12	664+46	Lt.	46		433
Totals				118		935

Computations By
Initials J.S.S. Date 1/4/82
Computations Checked By
Initials JVP Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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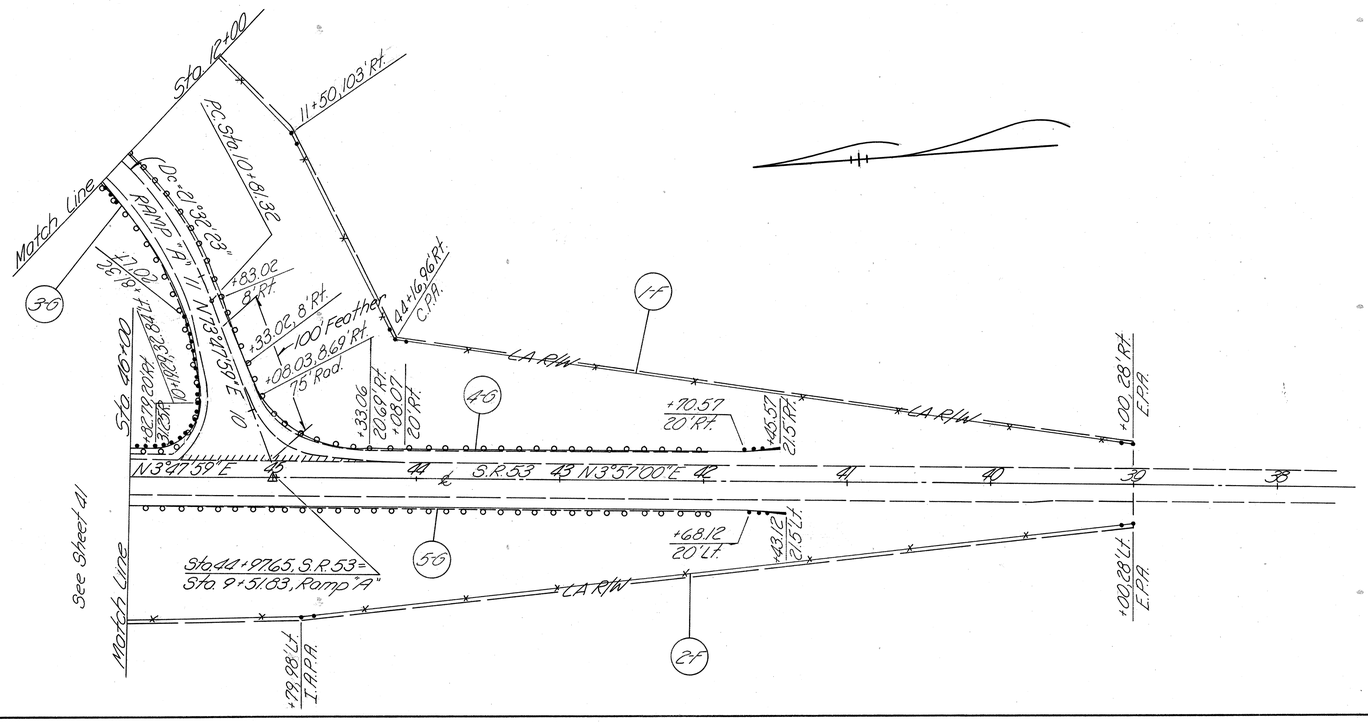
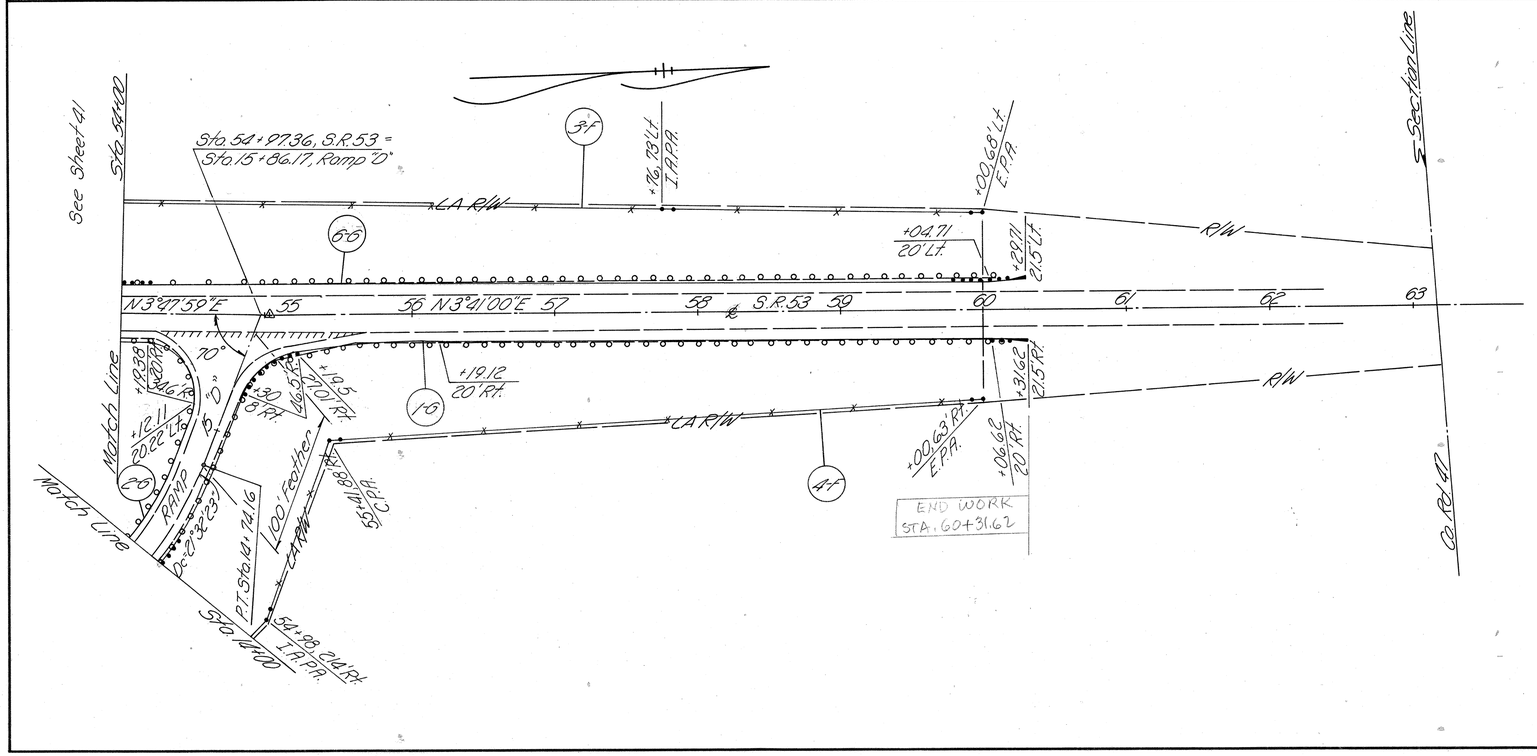
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.	606 Guard Rail Type 5 Lin. Ft. Straight	606 Guard Rail Type 5 Lin. Ft. Shop Curved 31.25' R.	606 Guard Rail Type 5 Lin. Ft. Shop Curved 46.5' R.	606 Guard Rail Type 5 Lin. Ft. Shop Curved 34.88' R.	606 Guard Rail Type 5 Lin. Ft. Shop Curved 75' R.	606 Anchor Assembly Type A Each	607 Fence Type A1 Lin. Ft.
1-F	39+00	12+00*	Rt.								755.0
2-F	39+00	46+00	Lt.								707.0
3-F	54+00	60+00	Lt.								600.0
4-F	14+00**	60+00	Rt.								609.0
1-G	14+00**	60+31.62	Rt.	662.50	619.73		50.00			1	
2-G	14+00**	54+00	Lt.	184.19	125.91			62.50			
3-G	12+00*	46+00	Rt.	231.97	189.47	50.00					
4-G	41+46.57	12+00*	Rt.	500.00	458.00				87.50	1	
5-G	41+43.12	46+00	Lt.	409.19	431.88					1	
6-G	54+00	60+29.71	Lt.	606.97	604.71					1	
	Sub-Totals			2,594.82	2,429.70	50.00	50.00	62.50	87.50	4	2671.0
	Totals			2,594.82		2,679.70				4	2,671.0

* Sta on Ramp "A"
** Sta on Ramp "C"



S.R.53 RAMP "A" & RAMP "D"

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 11/2/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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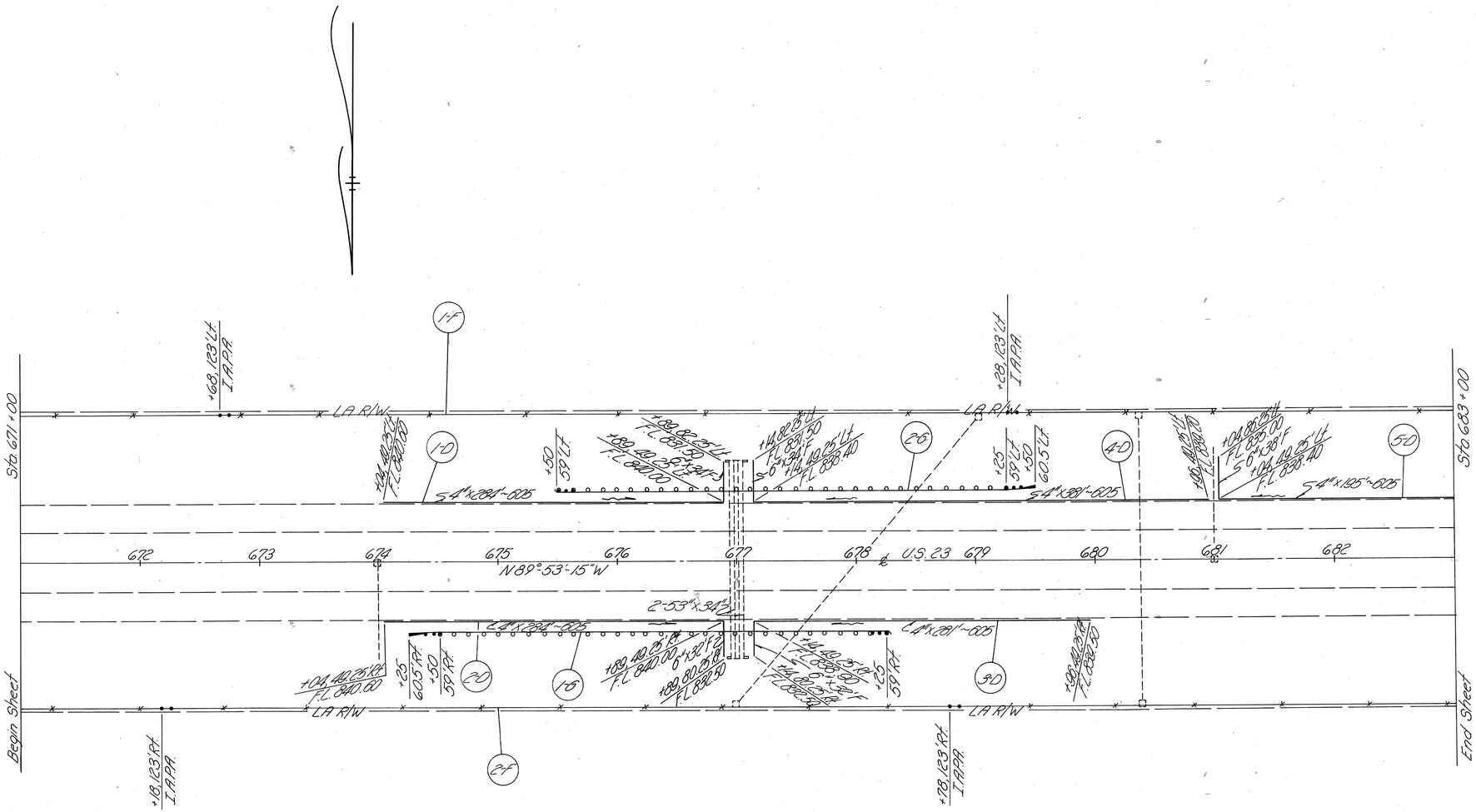
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Station From	Station To	Ref. No.	Side	007 Fence Type 47 Lin. Ft.	600 Anchor Assemblies Type 1 Each	600 Anchor Assemblies Type A Each	606 Guard Rail Type 5 Lin. Ft.	622 Guard Rail Removed for Storage Lin. Ft.
671+00	683+00		Lt.	1,200.0				
671+00	683+00		Rt.	1,200.0				
671+04	683+25	1-F	Rt.		1	1	362.50	325.00
671+04	683+50	2-F	Lt.		1	1	362.50	325.00
671+50	683+50						725.00	650.00
Totals				2,400.0	2	2	1,450.00	1,300.00

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Type F 6" Lin. Ft.		605 4" Underdrain Pipe Lin. Ft.
1-D	671+04	676+38	Lt.	34		284
2-D	671+04	676+38	Rt.	32		284
3-D	677+14	679+95	Rt.	32		281
4-D	679+14	680+95	Lt.	34		381
5-D	681+04	683+00	Lt.	38		195
	Totals			170		1,425

Sta. 671+00 to Sta. 683+00

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA.-23-10.40

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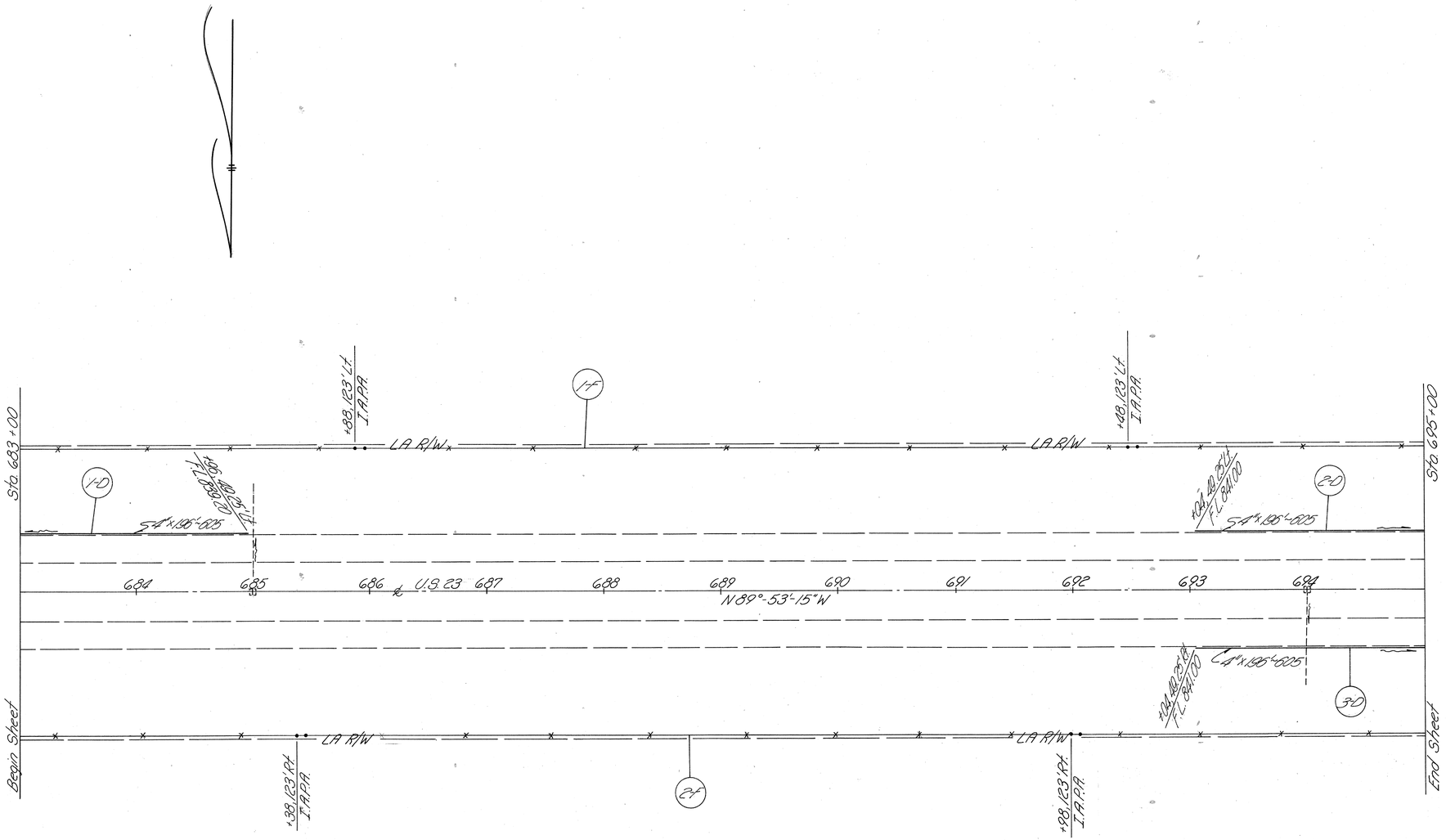

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	683+00	695+00	Lt.	1,200.0
2-F	683+00	695+00	Rt.	1,200.0
	Totals			2,400.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side		605 # Unclass. Hdwl. Pipe Underdrains Lin. Ft.
1-D	683+00	684+96	Lt.		196
2-D	693+04	695+00	Lt.		196
3-D	693+04	695+00	Rt.		196
	Totals				588

Sta. 683+00 to Sta. 695+00

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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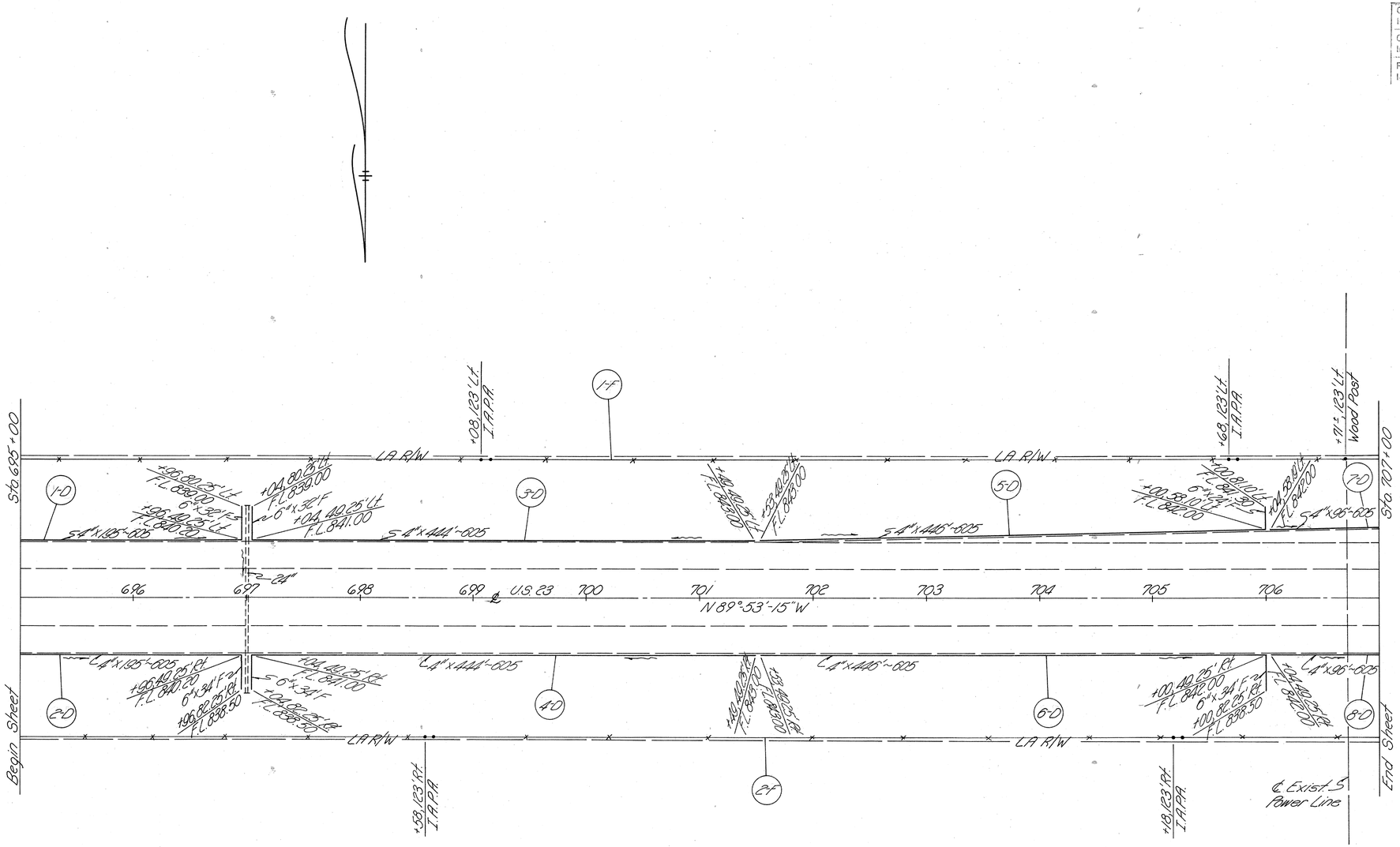
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	695+00	707+00	Lt.	1200.0
2-F	695+00	707+00	Rt.	1200.0
	Totals			2400.0

DRAINAGE "D"

Ref. No	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unclass. Perf. Pipe Underdrains Lin. Ft.
1-D	695+00	696+96	Lt.	32		195
2-D	695+00	696+96	Rt.	34		195
3-D	697+04	701+49	Lt.	32		444
4-D	697+04	701+49	Rt.	34		444
5-D	701+53	706+00	Lt.	24		446
6-D	701+53	706+00	Rt.	34		446
7-D	706+04	707+00	Lt.			96
8-D	706+04	707+00	Rt.			96
	Totals			190		2382

Sta. 695+00 to Sta. 707+00

Computations By
Initials J.S.S. Date 1/4/82
Computations Checked By
Initials JVP Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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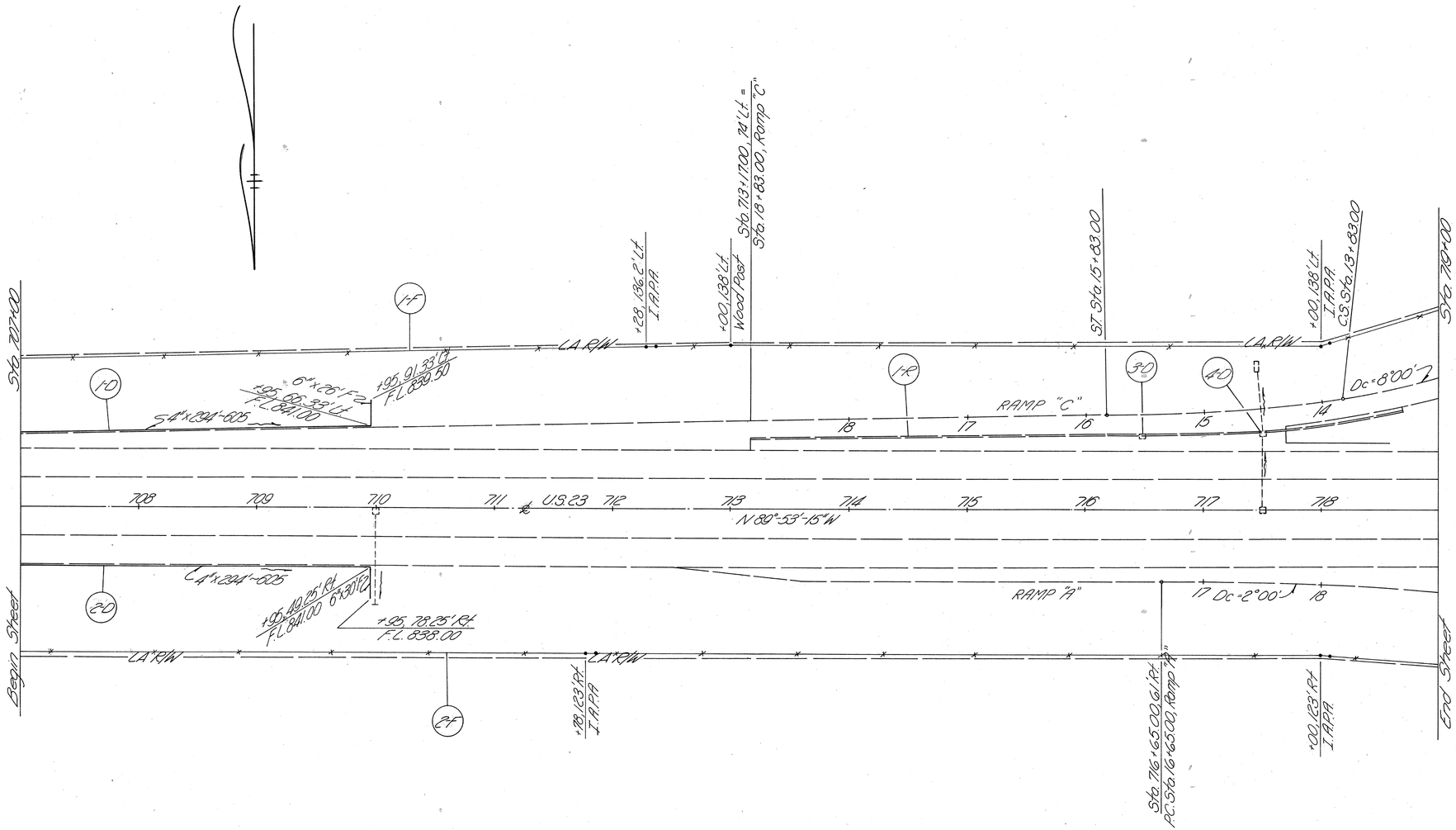
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Culvert Removal Lin. Ft.		607 Fence Type 47 Lin. Ft.
1F	707+00	719+00	Lt.			1,200.0
2F	707+00	719+00	Rt.			1,200.0
1R	713+17	713+25*	Lt.	562.0		
	Totals			562.0		2,400.0

* Sta. on Ramp "C"

DRAINAGE "D"

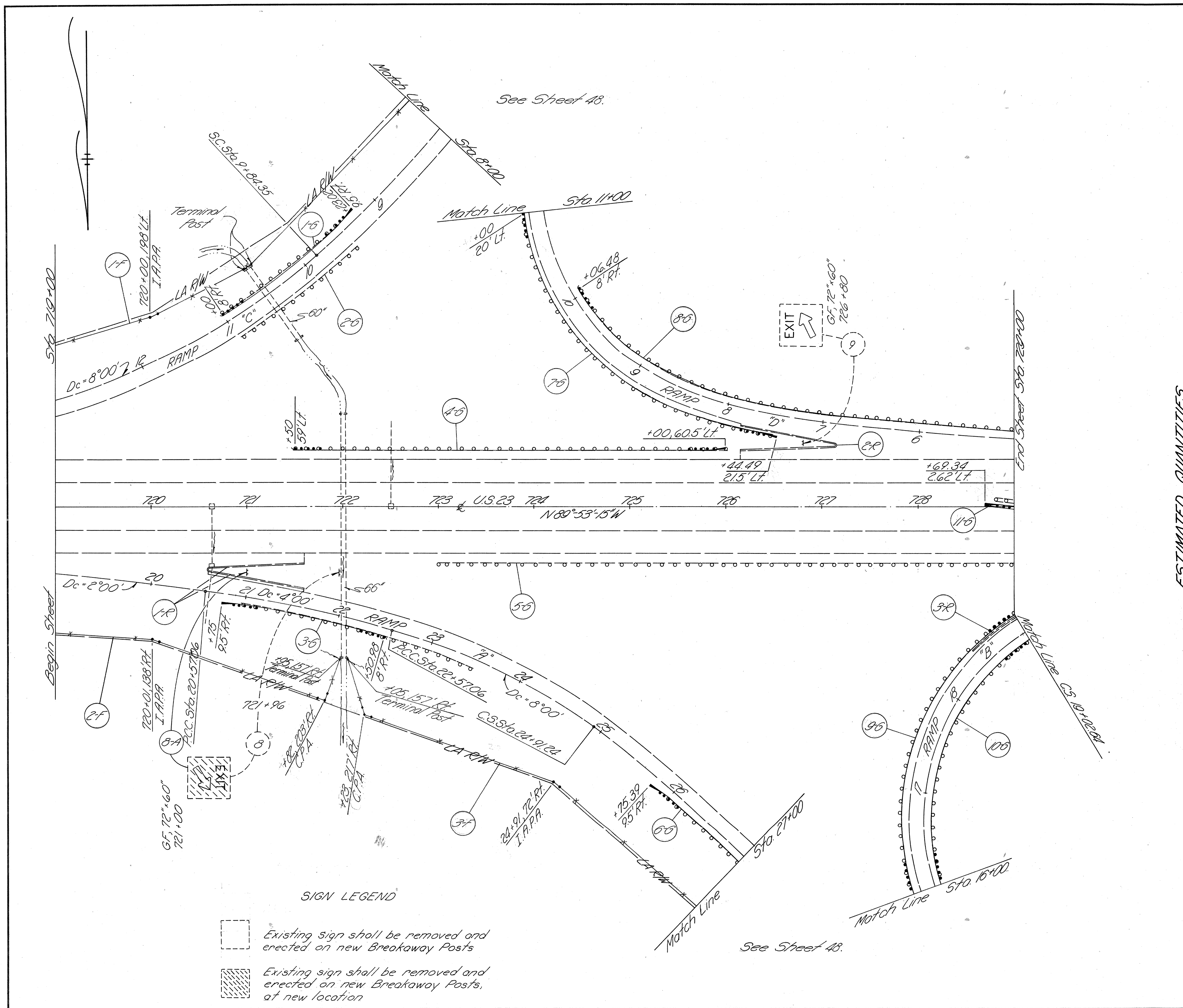
Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	604 Catch Basin Adjusted to Grade Each	605 6" Unobstructed Pipe Underdrains Lin. Ft.
1D	707+00	709+95	Lt.	26		294
2D	707+00	709+95	Rt.	30		294
3D	716+50		Lt.		1	
4D	717+50		Lt.		1	
	Totals			56	2	588

Sta. 707+00 to Sta. 719+00

FHWA REGION	STATE	PROJECT		
5	OHIO			

WYANDOT COUNTY
WYA-23-10.40

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed (Lin. Ft.)	202 Guard Rail Removed for Storage (Lin. Ft.)		604 Catch Basin Adjusted to Grade (Each)	Guard Rail Type 5 (Lin. Ft.)	606 Anchor Assemblies Type A (Each)	606 Anchor Assemblies Type A Barrier Design (Each)	606 Anchor Assemblies Type T (Each)	Guard Rail Type 5 Barrier Design (Lin. Ft.)	607 Fence Type 47 (Lin. Ft.)
1-F	719+00	8+00 ø	Lt.										461.0
2-F	719+00	721+95	Rt.										338.0
3-F	722+05	27+00 *	Rt.										470.0
1-G	9+23.02 ø	11+00 ø	Rt.		150.00			137.50	1		1		
2-G	9+50 ø	11+00 ø	Lt.		150.00								
3-G	20+75 *	23+50 *	Rt.		250.00			137.50	1		1		
4-G	721+50	726+00	Lt.		450.00			412.50	1		1		
5-G	723+00	729+00	Rt.		600.00			575.00	1				
6-G	25+75.39 *	27+00 *	Rt.		100.00			99.75	1				
7-G	7+44.40 øø	11+00 øø	Lt.		375.00			337.50	1		1		
8-G	729+00	10+06.48 øø	Lt.		489.40			488.82			1		
9-G	16+00 **	19+02.64 **	Lt.		329.05			329.05					
10-G	16+00 **	19+02.64 **	Rt.		292.08			292.08					
11-G	728+69.34	729+00	Lt.&Rt.		38.00					1		5.66	
1-R	720+56.5	21+57.06 *	Rt.	208.0			1						
2-R	726+20.27	7+78.07 øø	Lt.	204.0									
3-R	18+50 **	19+02.64 **	Lt.	57.0									
Totals				469.0	3,323.53		1	2,809.70	6	1	5	5.66	1,269.0

* Sta. on Ramp "A"
** Sta. on Ramp "B"
ø Sta. on Ramp "C"
øø Sta. on Ramp "D"

FHWA REGION	STATE	PROJECT	
5	OHIO		

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WYANDOT COUNTY
WYA -23-10.40

Computations By Initials J. S. S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

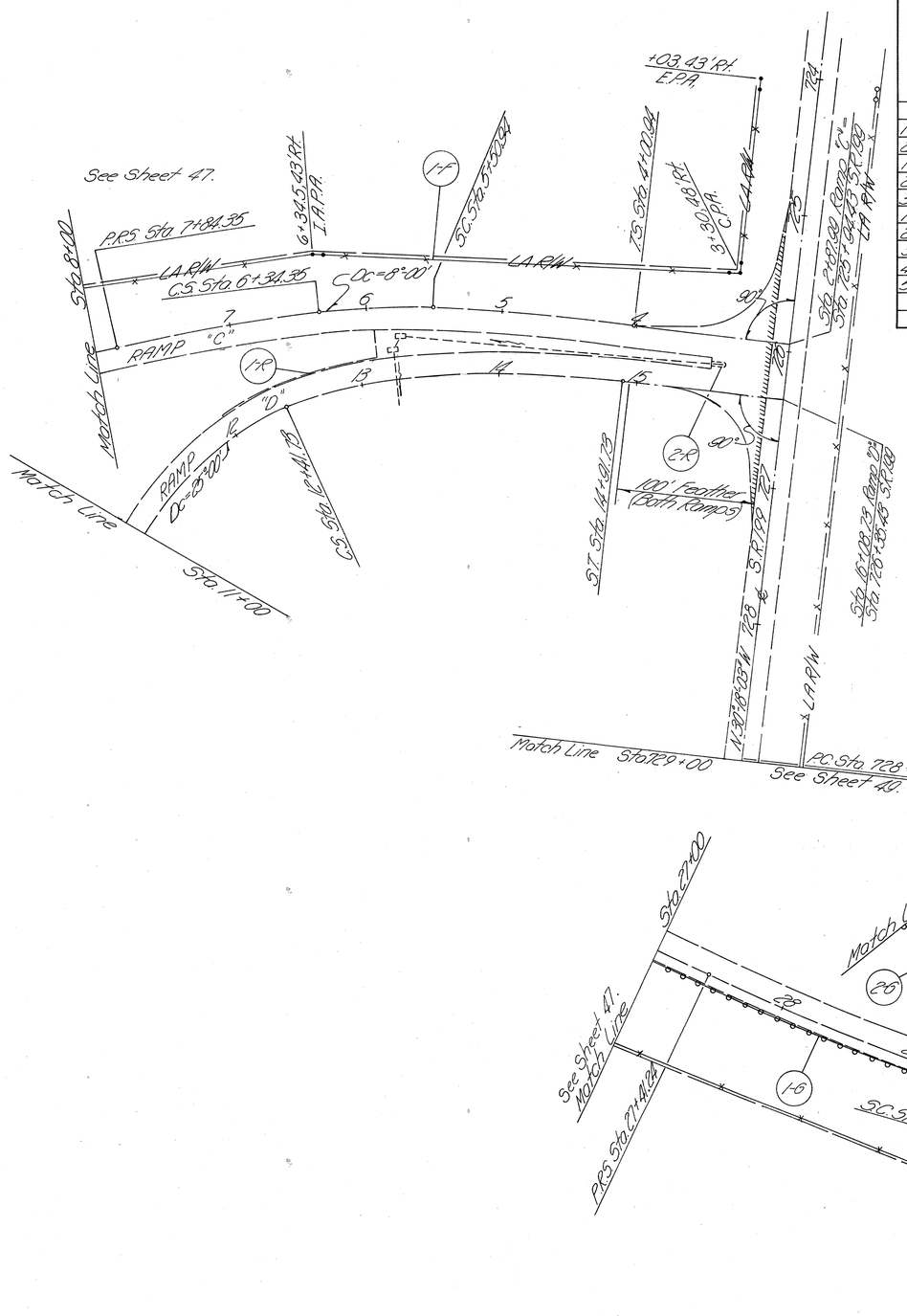
ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	202 Curb Removed Lin. Ft.	202 Inlet Removed Each	202 Guard Rail Removed for Storage Lin. Ft.	202 Pipe Removed & Left in Place Under Lin. Ft.			606 Guard Rail Type 5 Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type T Each	607 Fence Type 47 Lin. Ft.
1-F	8+00 ø	724+03	Rt.										624.0
2-F	27+00 *	743+00	Lt.										1,294.0
1-S	27+00 *	32+50 *	Rt.			550.00				487.75		1	
2-S	14+27 **	16+00 **	Lt.			160.22				160.22	1		
3-S	14+30 **	16+00 **	Rt.			152.42				131.56	1		
1-R	12+00 øø	13+13 øø	Lt.	124.0									
2-R	15+57.5 ø	15+71.5 øø	Lt.	28.0									
3-R	14+00 **	15+00 **	Lt.	108.5									
4-R	35+50 *	35+63 *	Lt.	27.0									
5-R	737+94.5	9+63 **	Lt.	106.0	1		50						
	Totals			303.5	1	842.64	50			779.53	2	1	1,918.0

* Sta. on Ramp "A"
** Sta. on Ramp "B"
ø Sta. on Ramp "C"
øø Sta. on Ramp "D"

DRAINAGE "D"

Ref. No	Station From	Station To	Side	603 Conduit Lin. Ft. Type C 12"	604 Sta. C-2B Catch Basin Each
1-D	9+63 **	9+75 **		14	1



S.R. 199 RAMPS "A" & "B" AND RAMPS "C" & "D"

Computations By	
Initials J.S.S.	Date 1/4/82
Computations Checked By	
Initials JVP	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT		
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WYANDOT COUNTY
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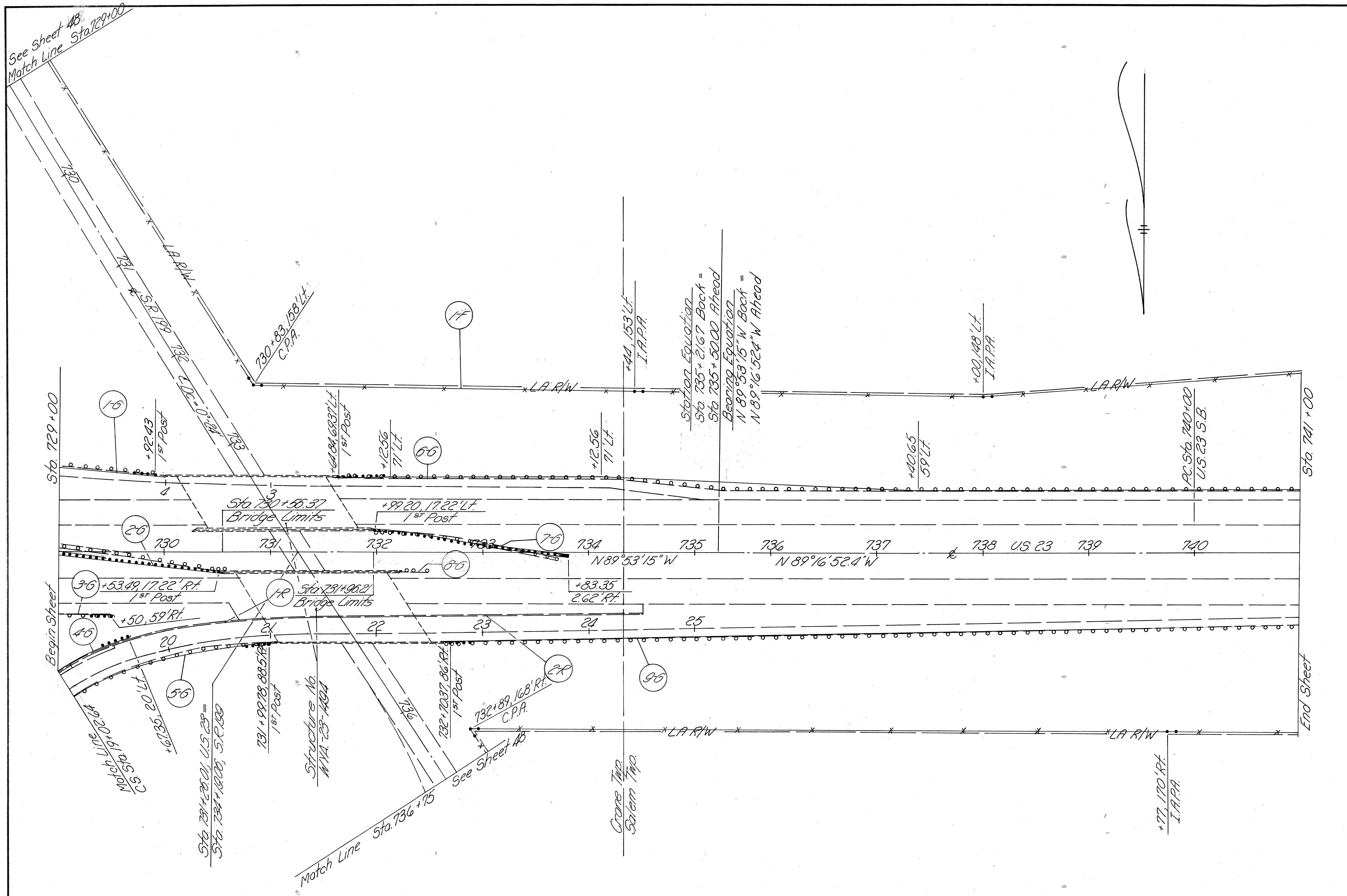


ESTIMATED QUANTITIES

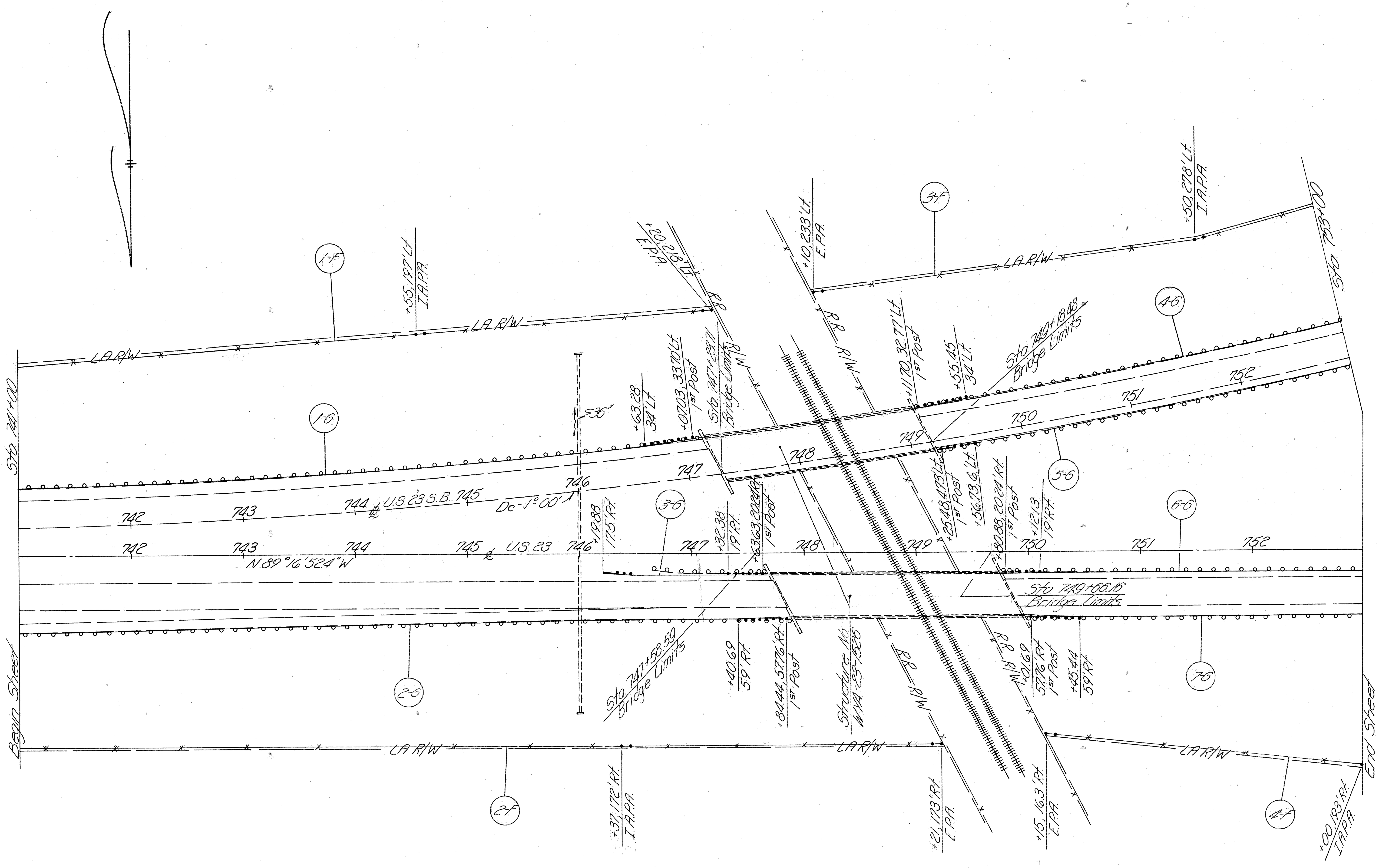
Ref. No.	Station From	Station To	Side	202 Curb Removed (Lin. Ft.)	202 Guard Rail Removed for Storage (Lin. Ft.)	604 Catch Basin Adjusted to Grade (Each)	606 Guard Rail Type 5 (Lin. Ft.)	606 Guard Rail Type 5 Barrier Design (Lin. Ft.)	606 Anchor Assemblies Type A Barrier Design (Each)	606 Anchor Assemblies Type T (Each)	606 Bridge Terminal Assemblies Type D (Each)	606 Bridge Terminal Assemblies Type J (Each)	607 Fence Type 47 (Lin. Ft.)
1-F	730+83	741+00	Lt.										993.0
2-F	732+89	741+00	Rt.										783.0
1-G	729+00	730+00.41	Lt.		98.10		98.68					1	
2-G	729+00	730+56.91	Lt.&Rt.		224.50		112.50	44.34			1		
3-G	729+00	729+50	Rt.		50.00		37.50			1			
4-G	19+02.64**	19+67.35**	Lt.		73.23		60.73			1			
5-G	19+02.64**	731+03.20	Rt.		188.00		188.86				1		
6-G	731+61.42	741+00	Lt.		907.13		909.18				1		
7-G	731+95.78		Lt.&Rt.		262.50		112.50	50.00	1		1		
8-G	732+27	732+52	Rt.		25.00								
9-G	732+62.39	741+00	Rt.		807.20		807.73					1	
1-R	19+02.64**	21+00**	Lt.	196.0									
2-R	22+33**	24+50**	Lt.	217.0		1							
Totals				413.0	2,635.66	1	2,327.68	94.34	1	2	4	2	1,776.0

** Sta. on Ramp "B"

Computations By	
Initials J.S.S.	Date 1/4/82
Computations Checked By	
Initials JVP	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT		
5	OHIO			

WYANDOT COUNTY
WYA.-23-10.40



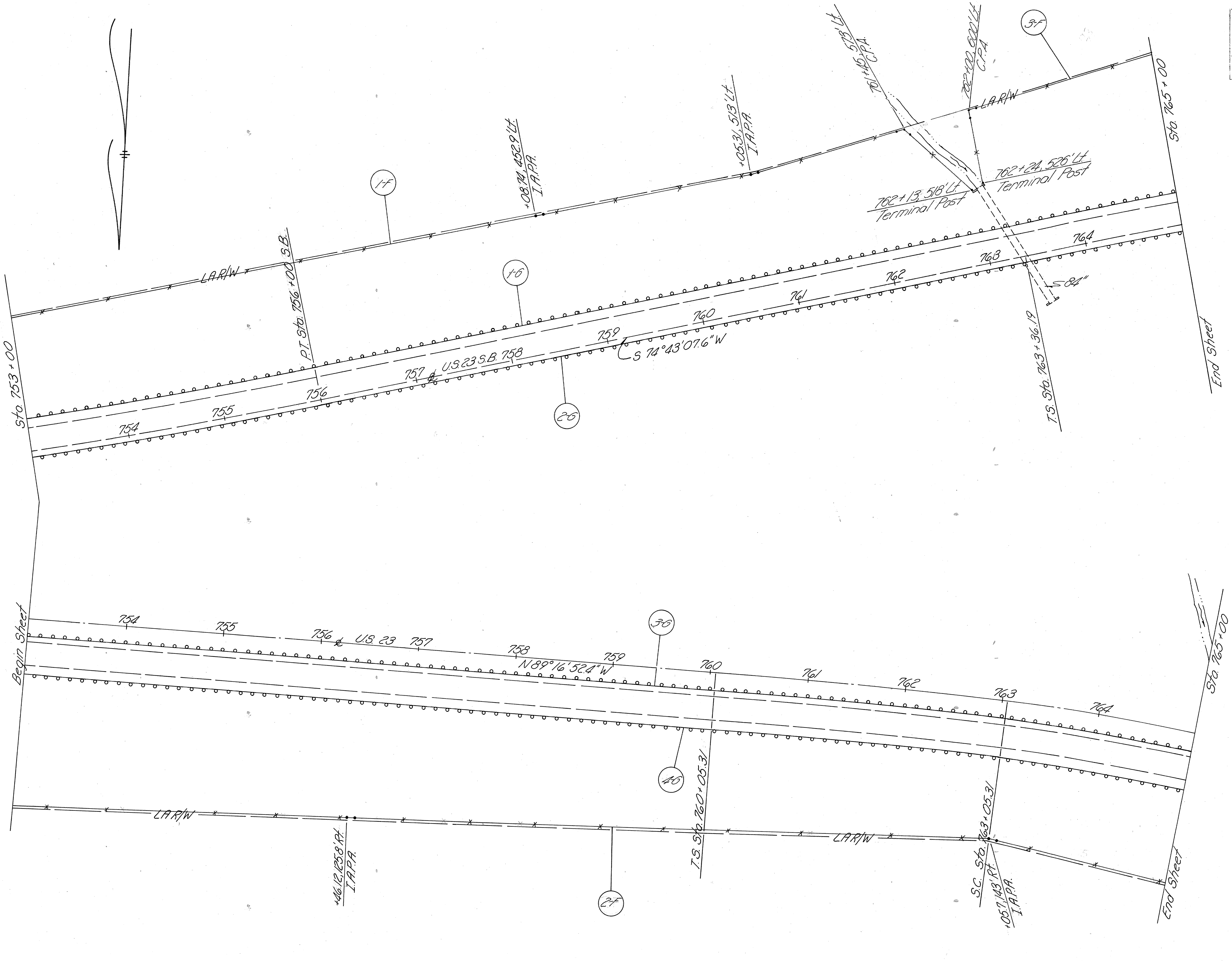
ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage	606 Guard Rail Type 5	606 Anchor Assemblies Type A	606 Anchor Assemblies	606 Bridge Terminal Assemblies Type C	606 Bridge Terminal Assemblies Type J	607 Fence Type 47
				Lin. Ft.	Lin. Ft.	Each		Each	Each	Lin. Ft.
1-F	741+00	747+20	Lt.							623.0
2-F	741+00	749+21	Rt.							821.0
3-F	748+10	753+00	Lt.							453.0
4-F	750+15	753+00	Rt.							287.0
1-G	741+00	747+15.01*	Lt.	606.25	609.85				1	
2-G	741+00	747+91.86	Rt.	687.59	690.82			1		
3-G	746+19.88	747+71.05	Rt.	100.00	125.00	1		1		
4-G	749+04.28*	753+00*	Lt.	389.06	392.35			1		
5-G	749+18.06*	753+00*	Rt.	378.53	381.30			1		
6-G	749+72.90	753+00	Rt.	322.27	325.37				1	
7-G	749+93.71	753+00	Rt.	301.46	304.56				1	
	Totals			2,785.16	2,829.25	1		4	3	2,184.0

* Sta. on U.S. 23 S.B.

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

WYANDOT COUNTY
WYA - 23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage (Lin. Ft.)		606 Guard Rail Type 5 (Lin. Ft.)	607 Fence Type 47 (Lin. Ft.)
1-F	753+00	762+13	Lt.				1,031.0
2-F	753+00	765+00	Rt.				1,194.0
3-F	762+00	765+00	Lt.				273.0
1-G	753+00*	765+00*	Lt.	1,198.22		1,198.22	
2G	753+00*	765+00*	Rt.	1,200.31		1,200.31	
3G	753+00	765+00	Rt.	1,198.21		1,198.21	
4G	753+00	765+00	Rt.	1,194.45		1,194.45	
Totals				4,791.19		4,791.19	2,498.0

* Sta. on ℄ U.S. 23 S.B.

Computations By Initials J.S.S. Date 1/4/82
Computations Checked By Initials JVP Date 11/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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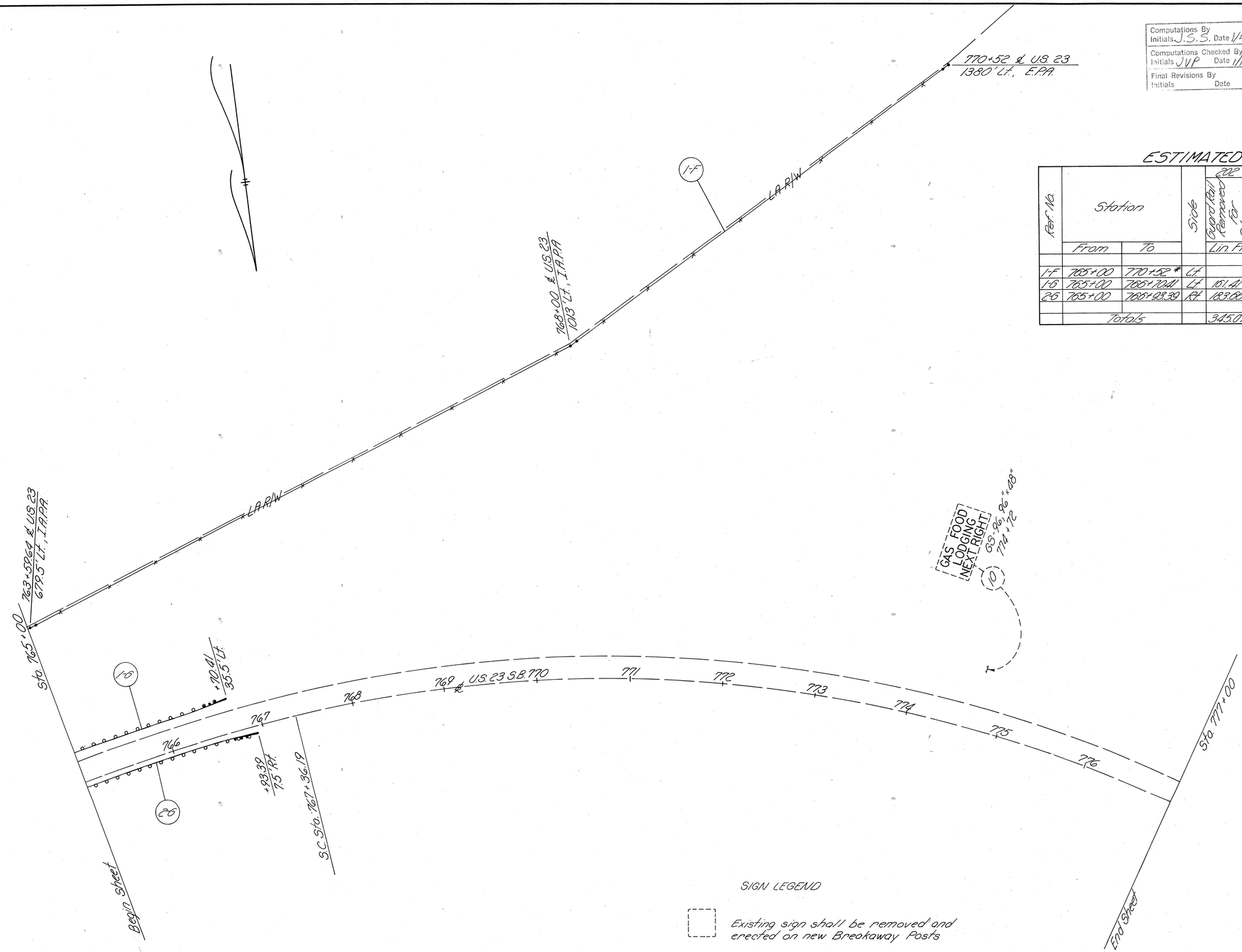
WYANDOT COUNTY
WYA.-23-10.40

ESTIMATED QUANTITIES

Ref No.	Station From	Station To	Side	202 Guard Rail Removed for Storage		606 Guard Rail Type 5	606 Anchor Assembly Type A	607 Fence Type 4
				Lin. Ft.		Lin. Ft.	Each	Lin. Ft.
1-F	765+00	770+52 *	Lt.					1172.0
1-G	765+00	765+101.41	Lt.	101.41		145.62	1	
2G	765+00	765+93.39	Rt.	183.66		108.39	1	
	Totals			345.07		314.01	2	1172.0

* Sta. on ℄ U.S. 23



Sta. 765+00 to Sta. 777+00 (S.B.)

Computations By Initials J. S. S. Date 1/11/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA.-23-10.40

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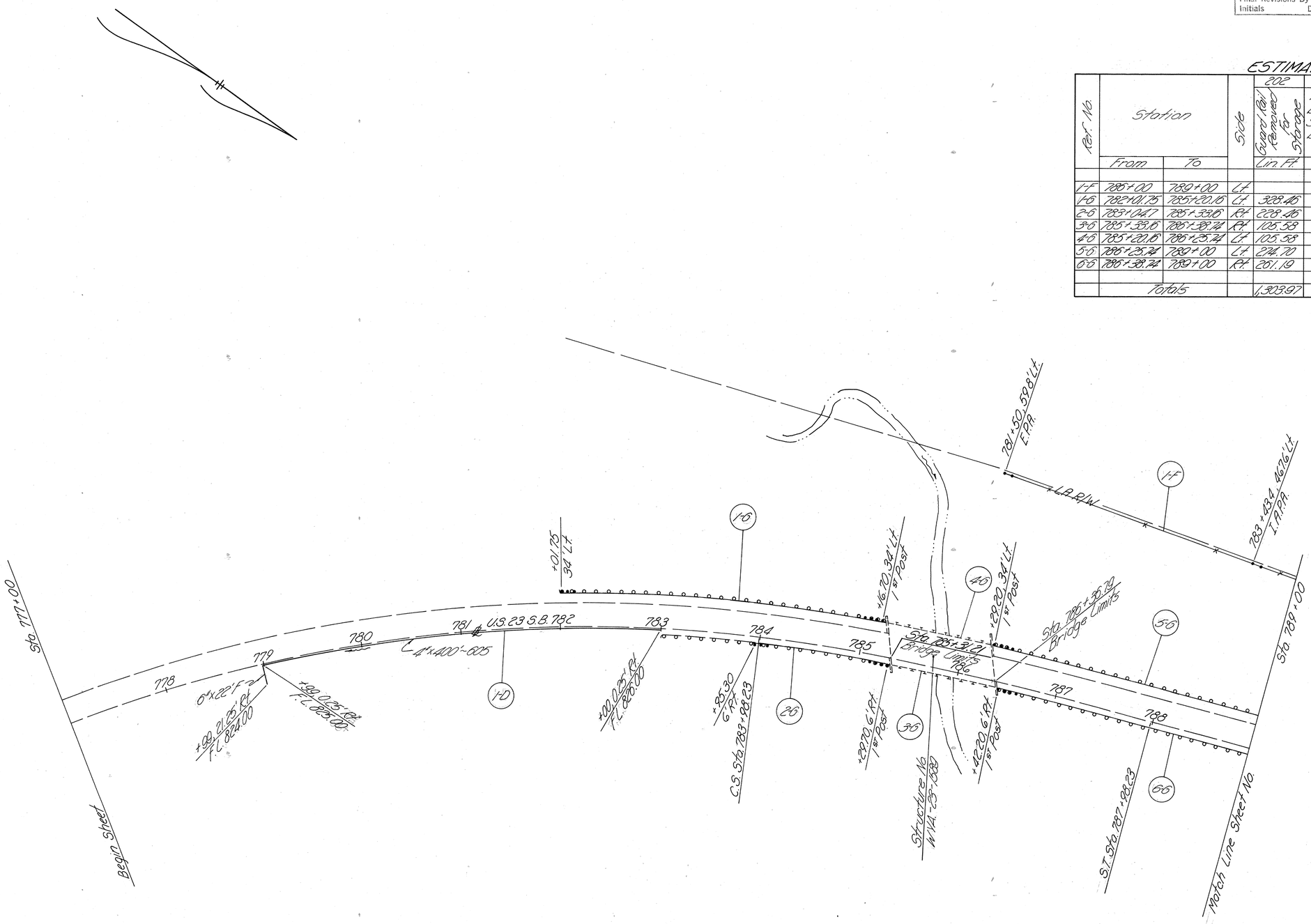
ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removal to Storage Lin. Ft.	517 Railing (Deep Beam Rail with Steel Tubular Back-up, Type 2 Post 5) Lin. Ft.	606 Guard Rail Type 5 Lin. Ft.	606 Anchor Assemblies Type T Each	606 Bridge Terminal Assembly Type B Each	607 Fence Type 4 Lin. Ft.
1-F	785+00	789+00	Lt.						310.0
1-G	782+01.75	785+30.16	Lt.	328.46		315.96	1	1	
2-G	783+04.47	785+33.66	Rt.	228.46		128.46	1	1	
3-G	785+33.66	786+38.74	Rt.	105.58	105.58				
4-G	785+20.16	786+25.74	Lt.	105.58	105.58				
5-G	786+25.74	789+00	Lt.	274.20		274.20		1	
6-G	786+38.24	789+00	Rt.	261.19		261.19		1	
	Totals			1,303.97	211.16	980.31	2	4	310.0



DRAINAGE "D"

605 4" Unclassified Pipe Underdrains Lin. Ft.			400
623 Conduit Lin. Ft.	Type of	6	22
Side			Rt.
Station	To		783+00
	From		778+00
Ref. No.			1-D

Sta. 777+00 to Sta. 789+00 (S.B.)

Computations By	
Initials J.S.S.	Date 1/11/82
Computations Checked By	
Initials J.V.P.	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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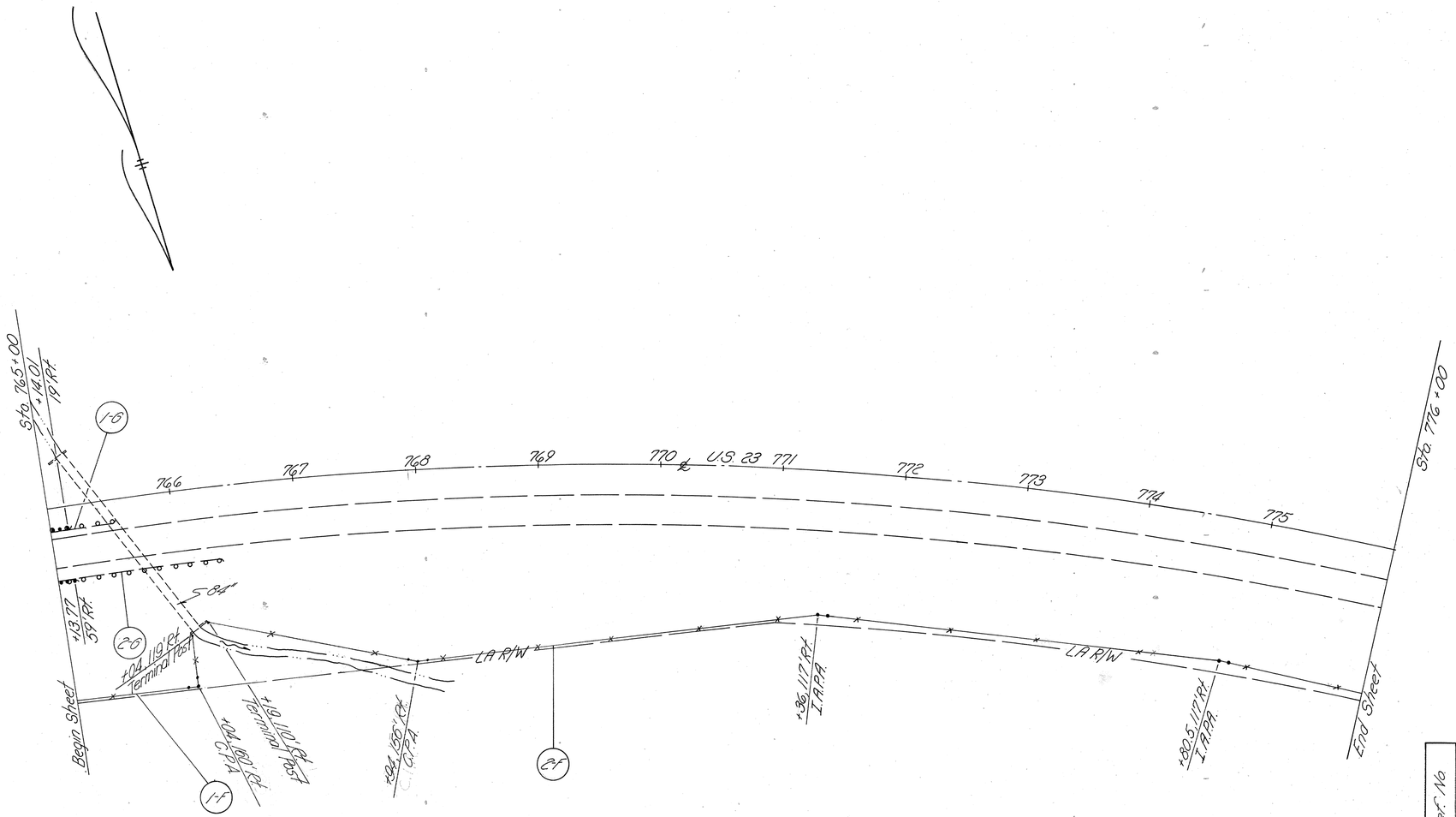
WYANDOT COUNTY
WYA. - 23 - 10.40



ESTIMATED QUANTITIES

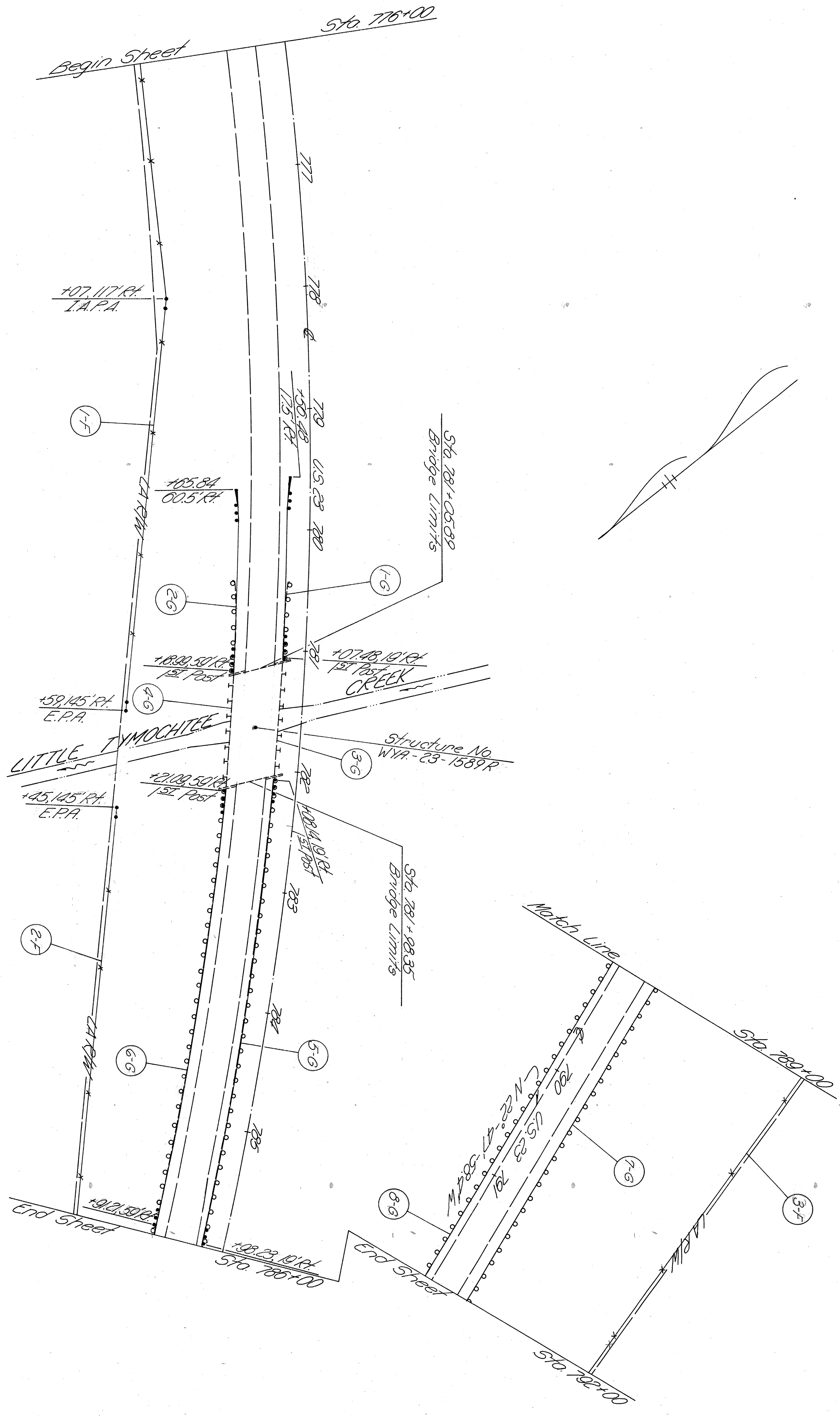
Ref. No	Station From	Station To	Side	202 Guard Rail Removed for Storage		606 Guard Rail Type 5	606 Anchor Assembly Type T	607 Fence Type A
				Lin. Ft.		Lin. Ft.	Each	Lin. Ft.
1-F	765+00	766+04	Rt.					141.0
2-F	766+19	770+00	Rt.					953.0
1-G	765+00	765+55	Rt.	54.52		1.42	1	
2-G	765+00	766+36.04	Rt.	129.09		0.99	1	
	Totals			183.61		2.41	2	1,094.0

Sta. 765+00 to Sta. 776+00 (N.B.)

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials JVP Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.		517 Railing (O.B.R. with Steel Tubular backup Type 2 Posts) Lin. Ft.		606 Guard Rail Type 5 Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type T Each	606 Bridge Terminal Assemblies Type B Each	607 Fence Type 47 Lin. Ft.
1-F	776+00	781+59	Rt.									536.0
2-F	782+45	786+00	Rt.									337.0
3-F	789+00 *	792+00 *	Lt.									301.0
1-G	779+56.48	781+11.38	Rt.	66.43				128.77	1		1	
2-G	779+65.84	781+22.92	Rt.	76.03				128.77	1		1	
3-G	781+11.38	782+04.49	Rt.	92.46		92.46						
4-G	781+22.92	782+17.41	Rt.	92.46		92.46						
5-G	782+04.49	785+98.23	Rt.	391.11				378.77		1	1	
6-G	782+17.41	785+94.18	Rt.	369.01				366.27		1	1	
7-G	789+00 *	792+00 *	Lt.	300.00				300.00				
8-G	789+00 *	792+00 *	Rt.	300.00				300.00				
	Totals			1687.50		184.92		1602.58	2	2	4	1174.0

* Sta. on ℄ U.S. 23 S.B.

FHWA REGION	STATE	PROJECT	
5	OHIO		

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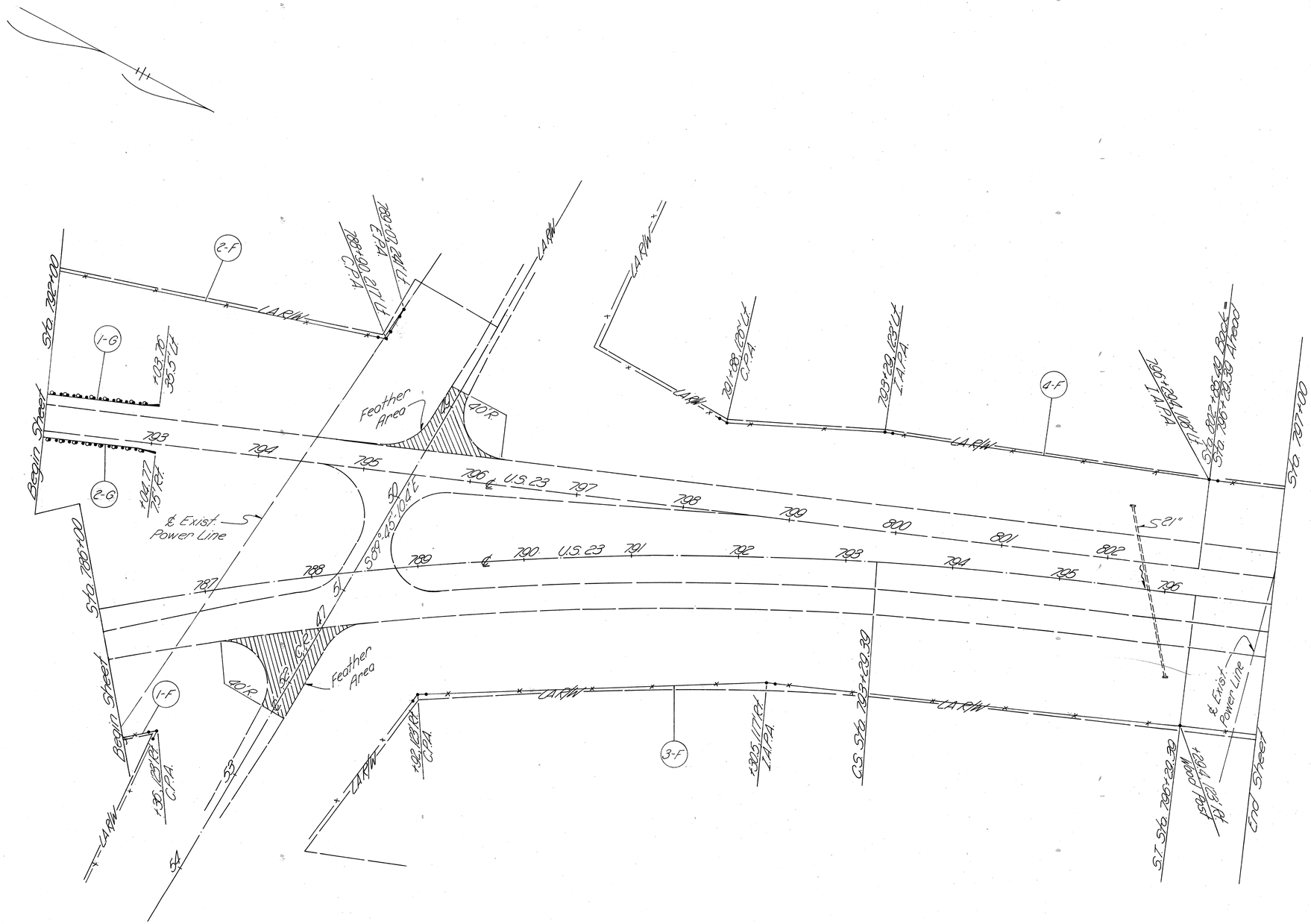
WYANDOT COUNTY
WYA-23-10.40

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.K. Date 1/12/82
Final Revisions By Initials Date



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.		606 Guard Rail Type 5 Lin. Ft.	606 Anchor Assemblies Type 19 Each	607 Fence Type 47 Lin. Ft.
1-F	786+00	786+36	Rt.					330
2-F	788+05	788+07	Lt.					340
3-F	788+92	797+00	Rt.					1880
4-F	791+88	797+00	Lt.					527.0
1-G	782+00 *	783+03.76 *	Lt.	91.26		78.76	1	
2-G	782+00 *	783+04.77 *	Rt.	92.27		79.77	1	
		Totals		183.53		158.53	2	16.980

* Sta on ℄ US 23 SB

Sta 786+00 to Sta 797+00

Computations By
Initials J.S.S. Date 1/11/82
Computations Checked By
Initials J.W.R. Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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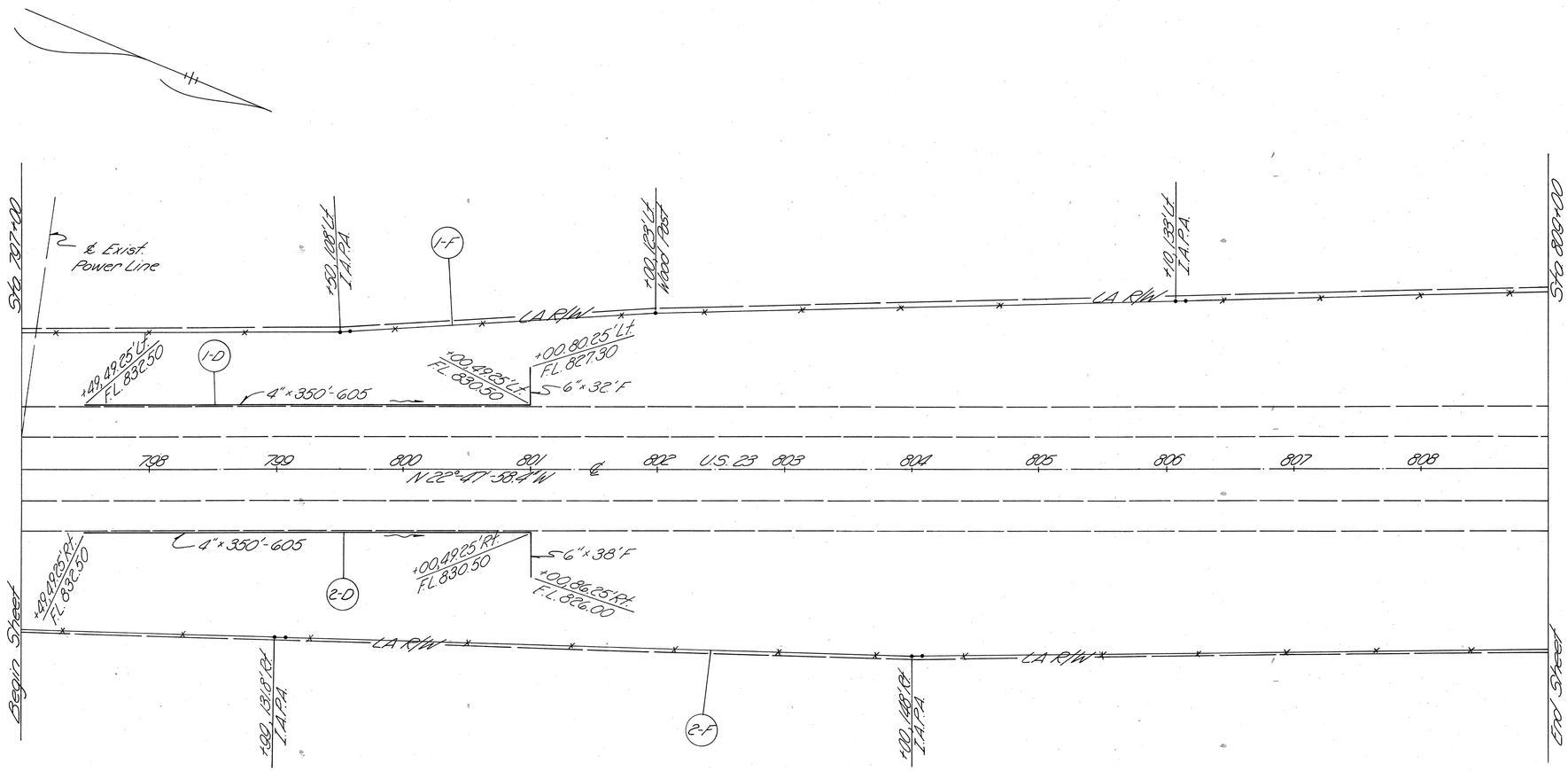
WYANDOT COUNTY
WYA-23-10.00



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	797+00	809+00	Lt.	1200.0
2-F	797+00	809+00	Rt.	1201.0
	Totals			2401.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unclassified Pipe Underdrains Lin. Ft.
1-D	797+49	801+00	Lt.	32		350
2-D	797+49	801+00	Rt.	38		350
	Totals			70		700

Sta. 797+00 to Sta. 809+00

Computations By Initials J. S. S. Date 1/11/82
Computations Checked By Initials G W K Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
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WYANDOT COUNTY
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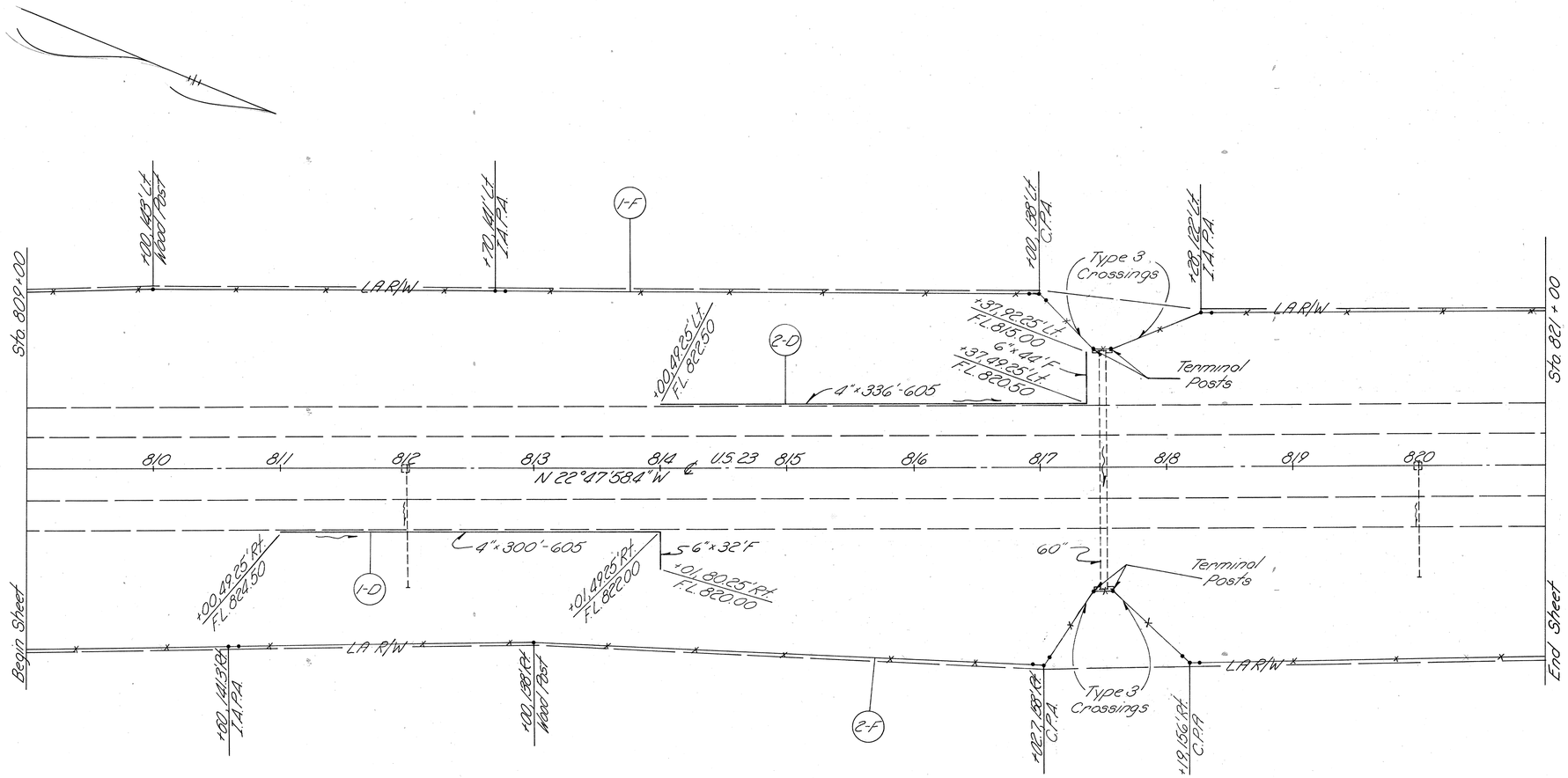

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side		607 Fence Type 47
					Lin. Ft.
1-F	809+00	821+00	Lt.		1225.0
2-F	809+00	821+00	Rt.		1252.0
	Totals				2477.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unclassified Pipe Underdrains Lin. Ft.
1-D	811+00	814+01	Rt.	32		300
2-D	814+00	817+37	Lt.	44		336
	Totals			76		636

Sta. 809+00 to Sta. 821+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

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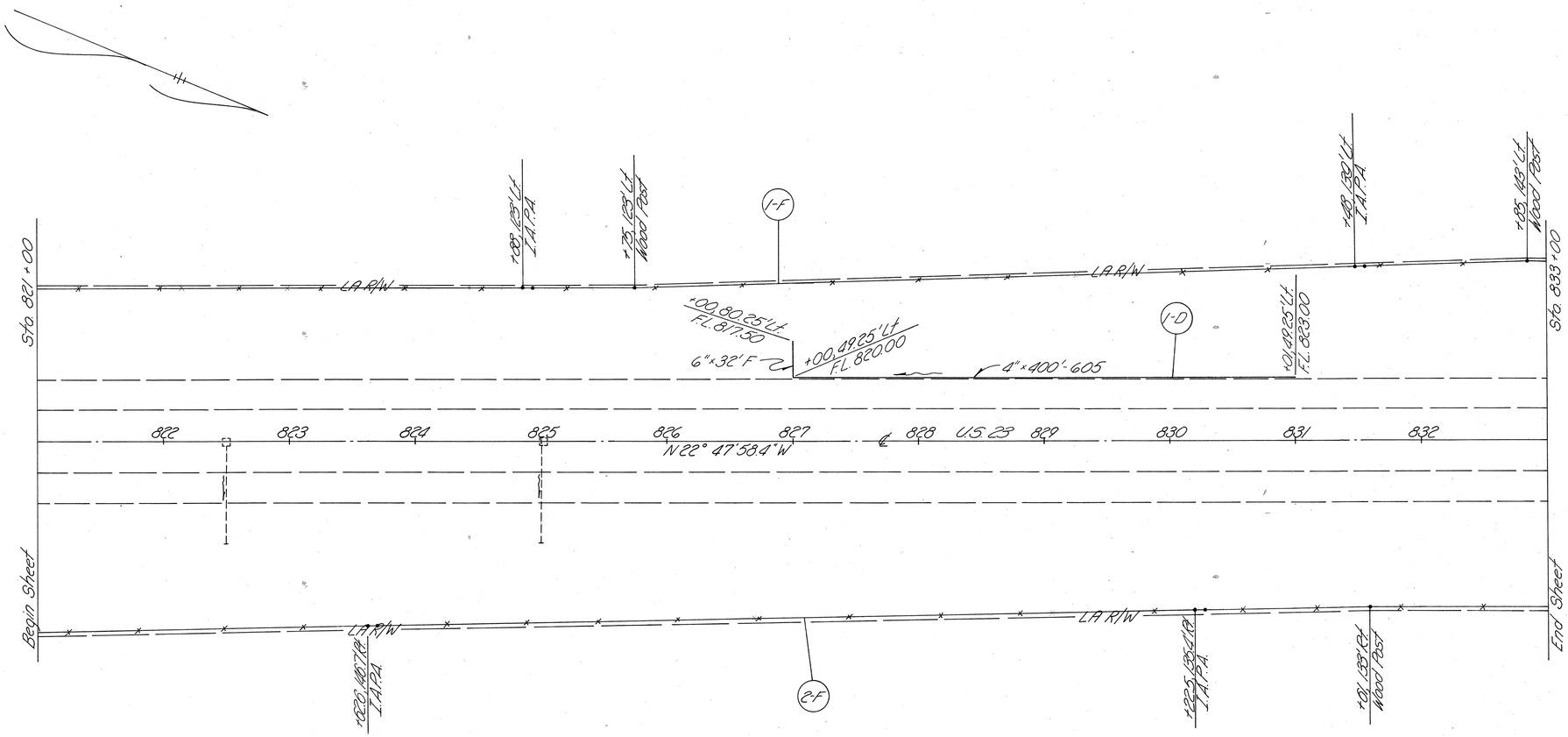
Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	821+00	833+00	Lt.	1200.0
2-F	821+00	833+00	Rt.	1201.0
	Totals			2401.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	605 Pavement Edge Drain 4" Underdrain Lin. Ft.
1-D	827+00	831+01	Lt.	32	400
	Totals			32	400

Sta. 821+00 to Sta. 833+00

Computations By	
Initials J.S.S.	Date 1/11/82
Computations Checked By	
Initials JWR	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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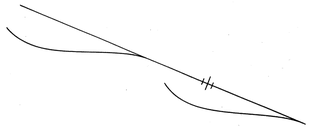
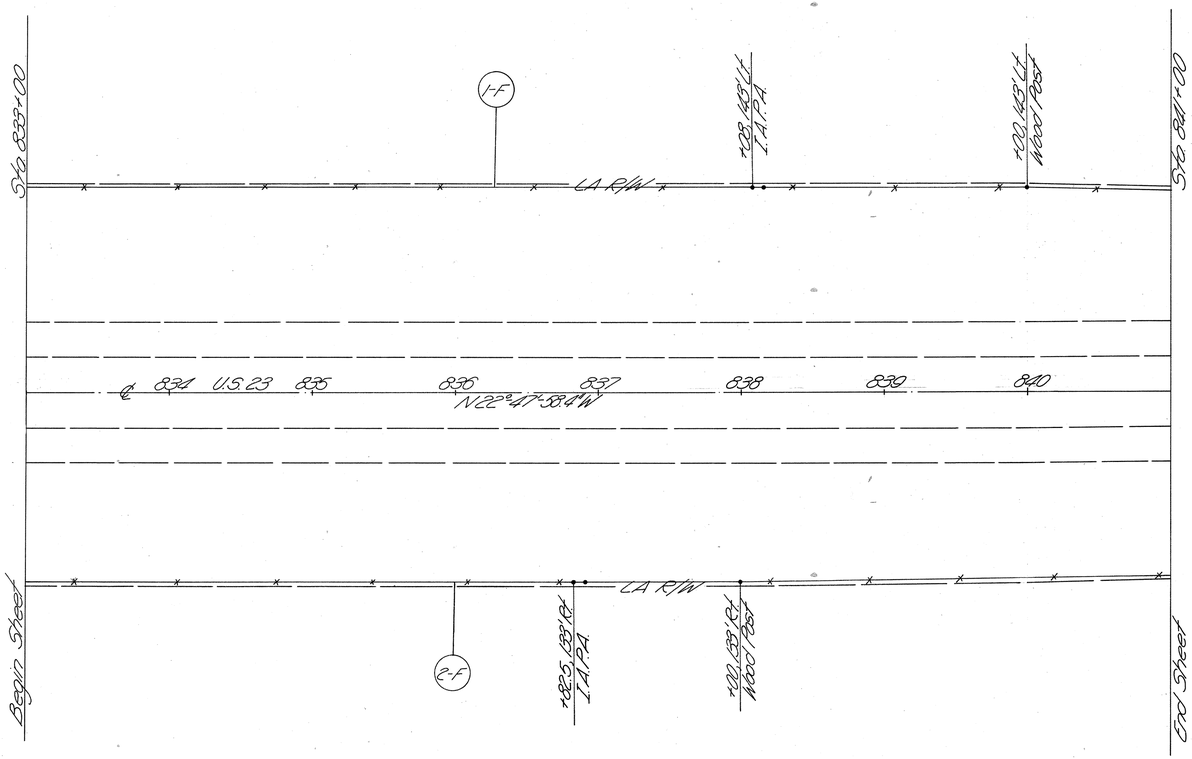
WYANDOT COUNTY
WYA-23-10.40





ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	833+00	841+00	Lt.	8000
2-F	833+00	841+00	Rt.	8000
	Totals			16000

Sta. 833+00 to Sta. 841+00

Computations By
Initials J.S.S. Date 1/14/82
Computations Checked By
Initials JWK Date 1/22/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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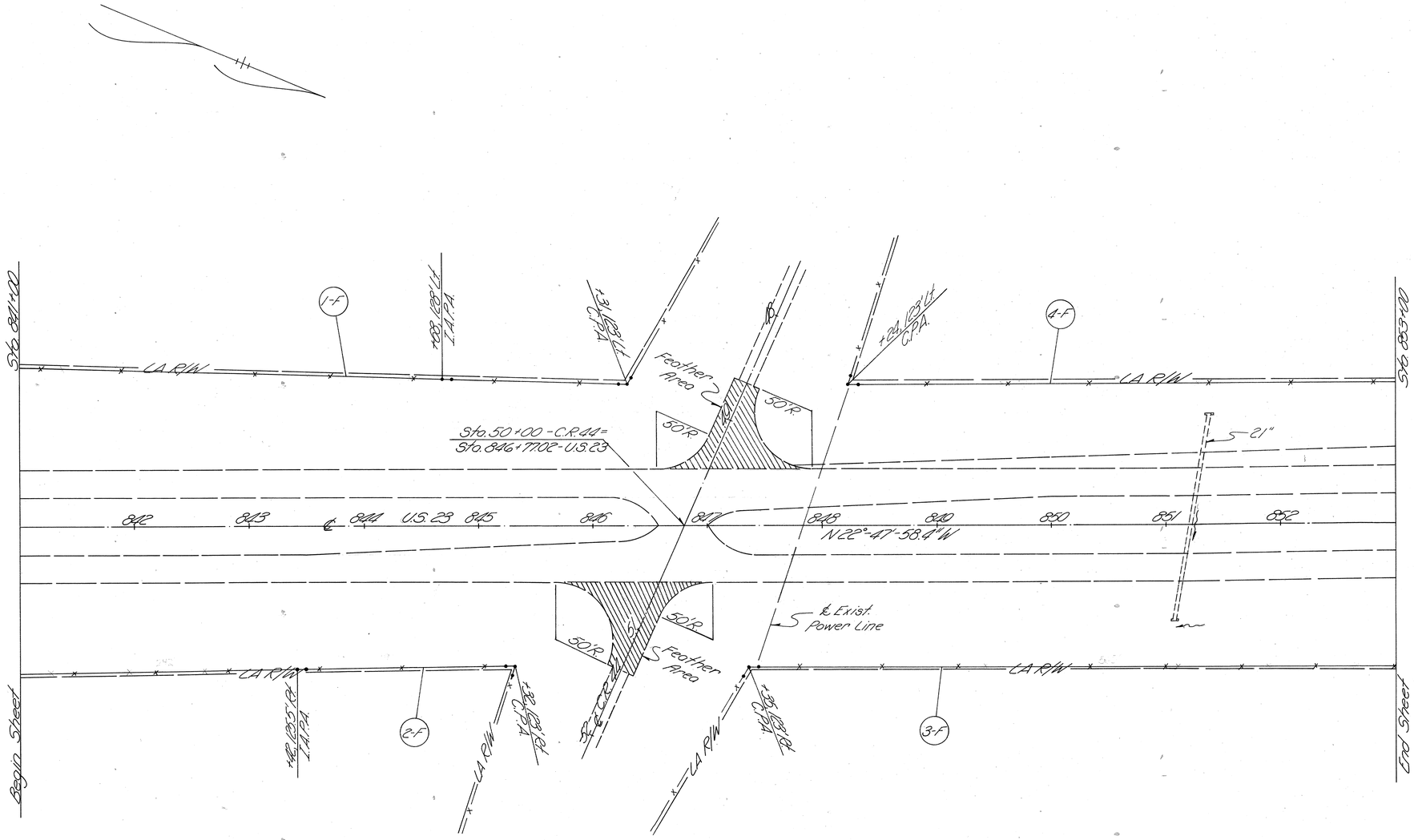
WYANDOT COUNTY
WYA-23-10.40

ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	841+00	846+31	Lt.	531.0
2-F	841+00	845+32	Rt.	432.0
3-F	847+35	853+00	Rt.	565.0
4-F	848+24	853+00	Lt.	476.0
	Totals			2004.0



Sta 841+00 to Sta 853+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

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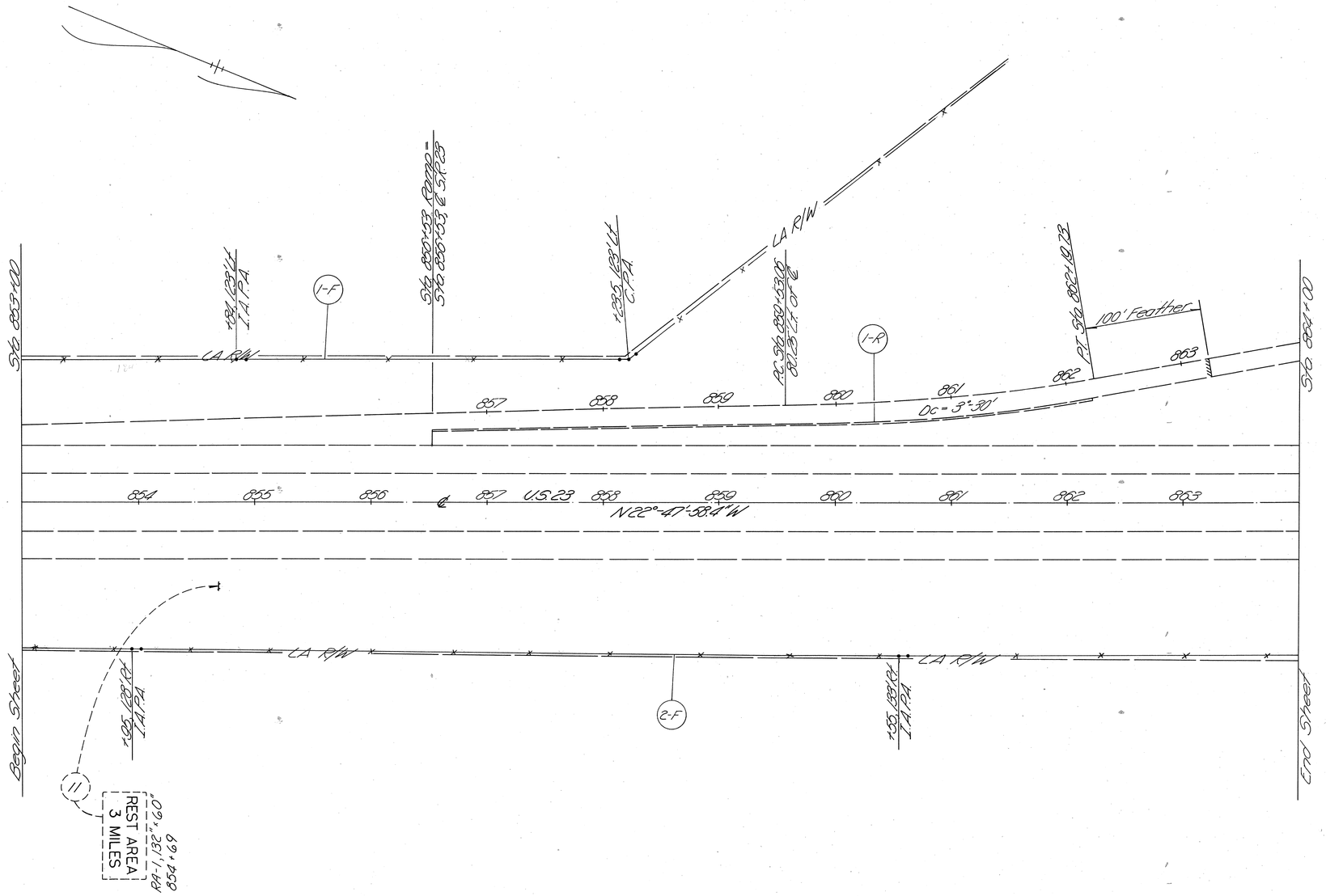
WYANDOT COUNTY
WYA-23-10.40

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials JWR Date 1/12/82
Final Revisions By Initials Date



ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	202 Curb Removed Lin. Ft.	607 Fence Type 47 Lin. Ft.
I-F	853+00	858+35	Lt		6210
2-F	853+00	864+00	Rt		11000
I-R	856+53	862+19	Lt	5670	
	Totals			5670	17210

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta 853+00 to Sta 864+00

Computations By Initials J. S. Date 1/11/82
Computations Checked By Initials J W R Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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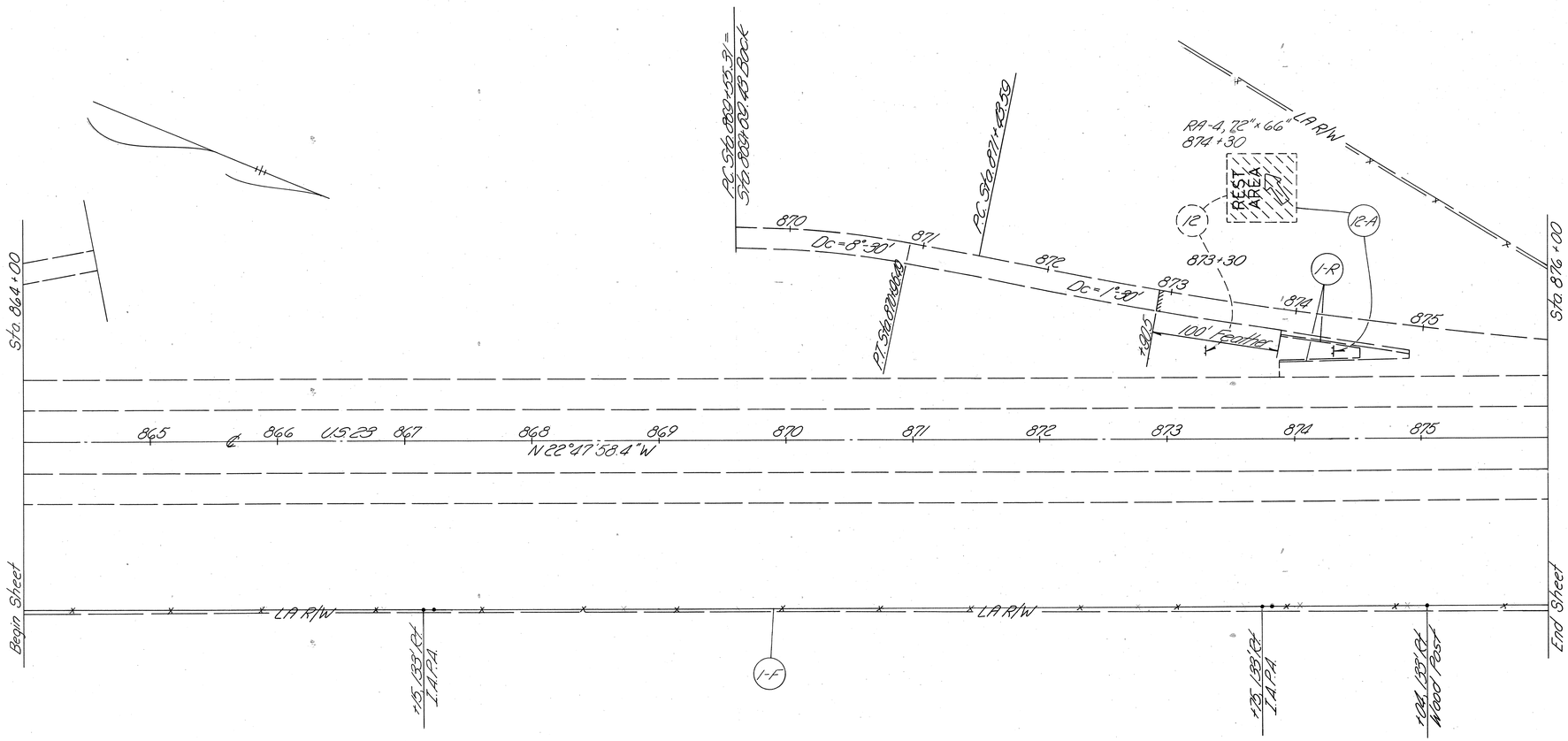
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed Lin. Ft.	607 Fence Type 47 Lin. Ft.
1-F	864+00	876+00	Rt.		1200.0
1-R	873+88	874+90	Lt.	125.0	
	Totals			125.0	1200.0

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts, at new location

Sta. 864+00 to Sta. 876+00

Computations By	
Initials J.S.S.	Date 1/11/82
Computations Checked By	
Initials J.W.K.	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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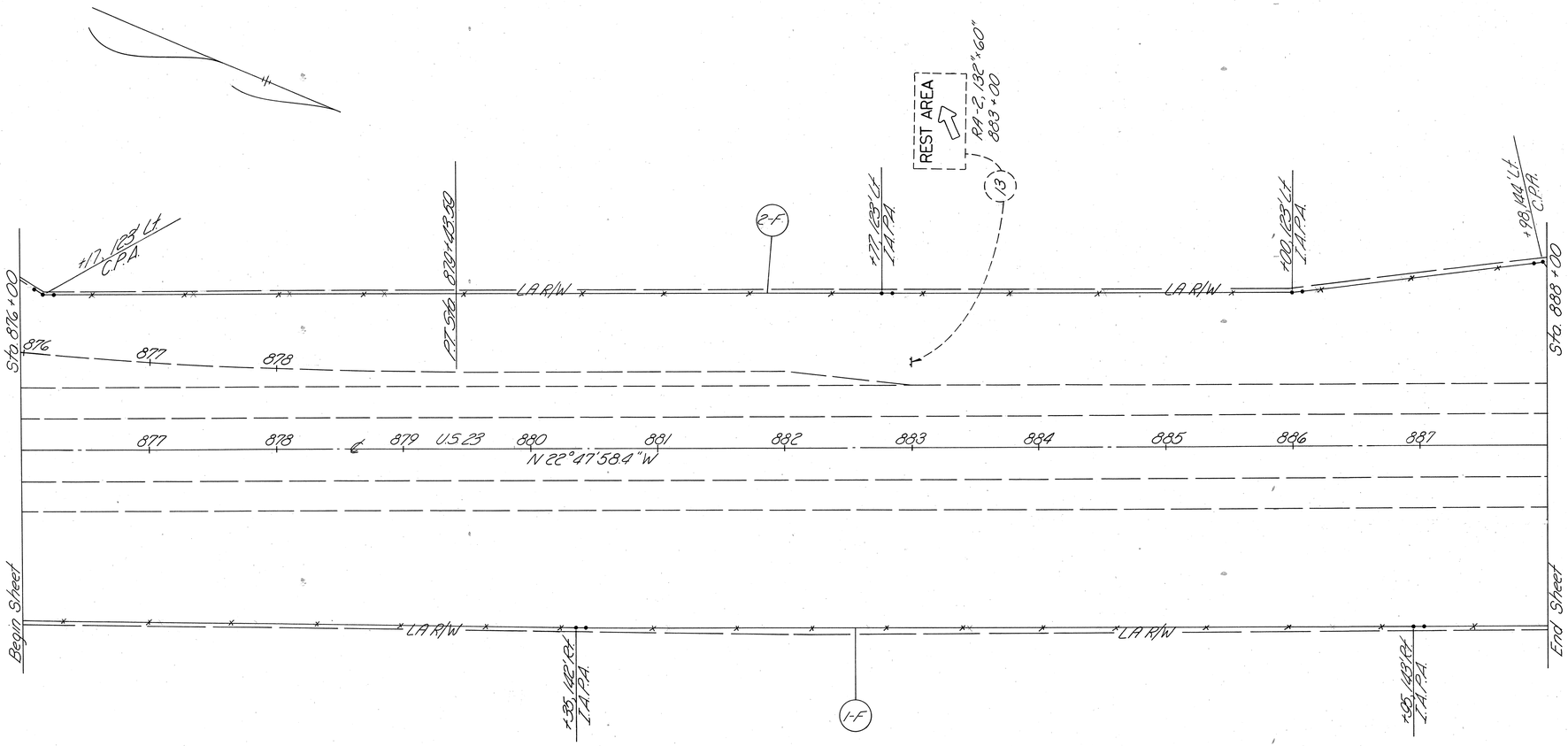
WYA.-23-10.40

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	876+00	888+00	Rt.	12000
2-F	876+17	888+00	Lt.	11850
	Totals			23850



SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta 876+00 to Sta 888+00

Computations By Initials J.S.S. Date 1/11/62
Computations Checked By Initials F.W.R. Date 1/12/62
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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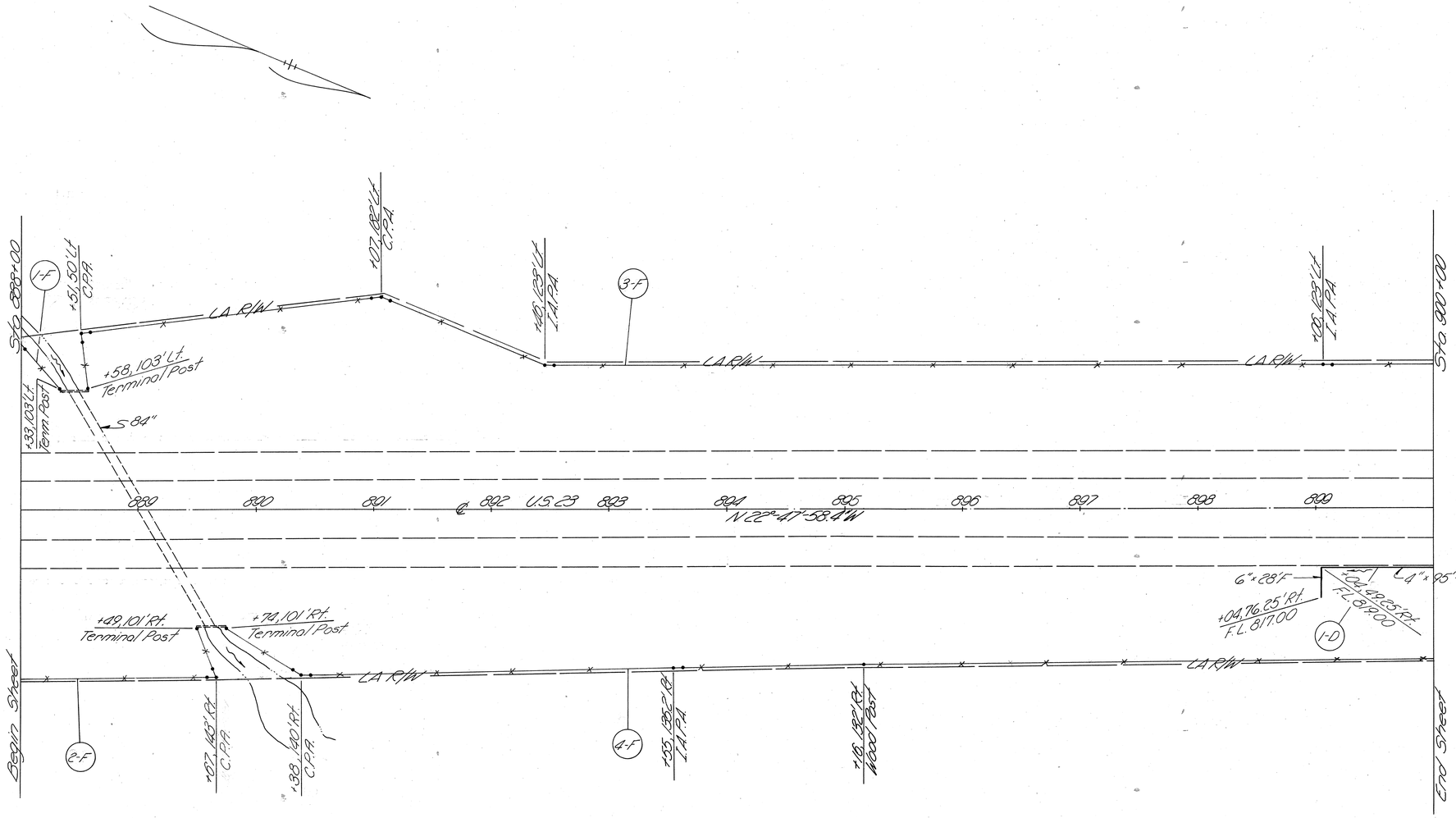
WYANDOT COUNTY
WYA -23-10.40



ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side		607 Fence Type 47 Lin. Ft.
1-F	888+00	888+33	Lt.		50.0
2-F	888+00	889+67	Rt.		212.0
3-F	888+51	900+00	Lt.		1210.0
4-F	889+74	900+00	Rt.		1038.0
	Totals				2510.0

DRAINAGE "D"

Ref. No	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 6" Unclassified Pipe Underdrains Lin. Ft.
1-D	899+04	900+00	Rt.	28		95
	Totals			28		95

Sta 888+00 to Sta 900+00

Computations By Initials J.S.S. Date 1/11/92
Computations Checked By Initials JWR Date 1/12/92
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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WYANDOT COUNTY
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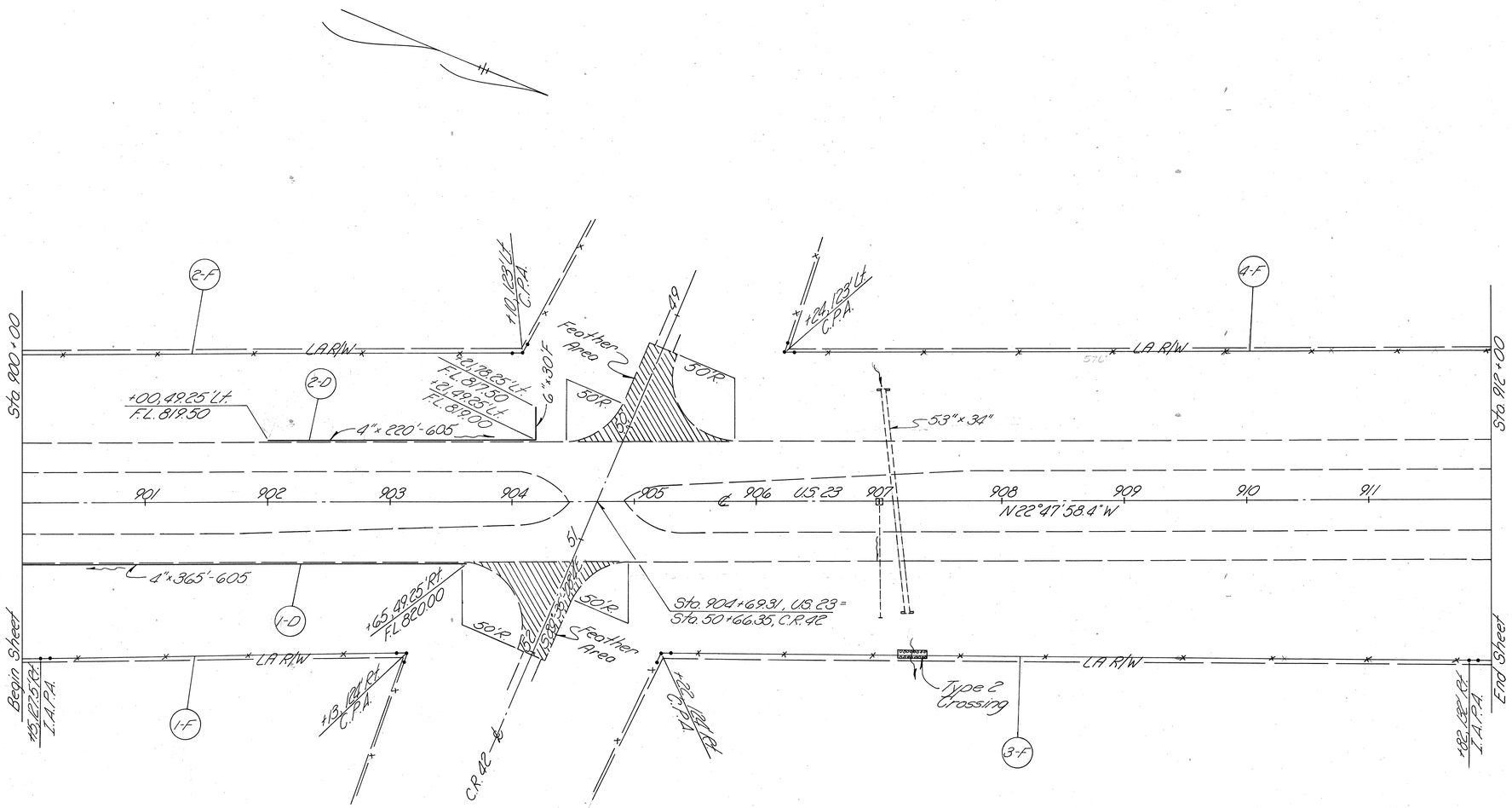

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	601 Rock Channel Protection Type B w/Bedding Cu Yd	607 Fence Type 47 Lin. Ft.
1-F	900+00	903+13	Rt.		313.0
2-F	900+00	904+10	Lt.		410.0
3-F	905+22	912+00	Rt.	10.66	678.0
4-F	906+24	912+00	Lt.		576.0
	Totals			10.66	1977.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Underdrain Lin. Ft.
1-D	900+00	903+65	Rt.			365
2-D	902+00	904+21	Lt.	30		220
	Totals			30		585

Sta. 900+00 to Sta. 912+00

Computations By
Initials J.S.S. Date 1/11/82
Computations Checked By
Initials GWR Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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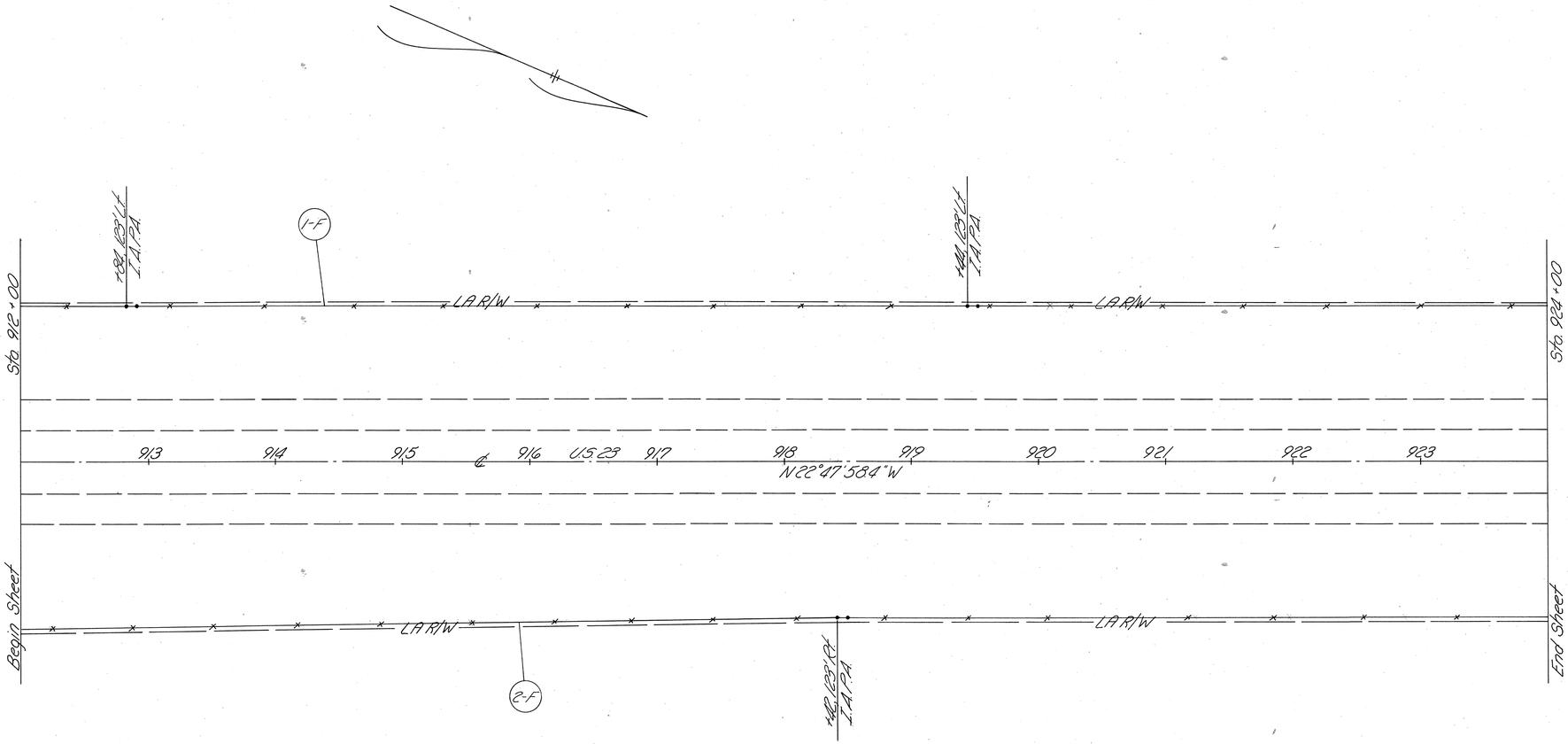
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	912+00	924+00	Lt.	1200.0
2-F	912+00	924+00	Rt.	1200.0
	Totals			2400.0

Sta. 912+00 to Sta. 924+00

Computations By Initials J.S.S. Date 1/11/92	FHWA REGION	STATE	PROJECT	
Computations Checked By Initials J.W.R. Date 1/14/92	5	OHIO		
Final Revisions By Initials Date				

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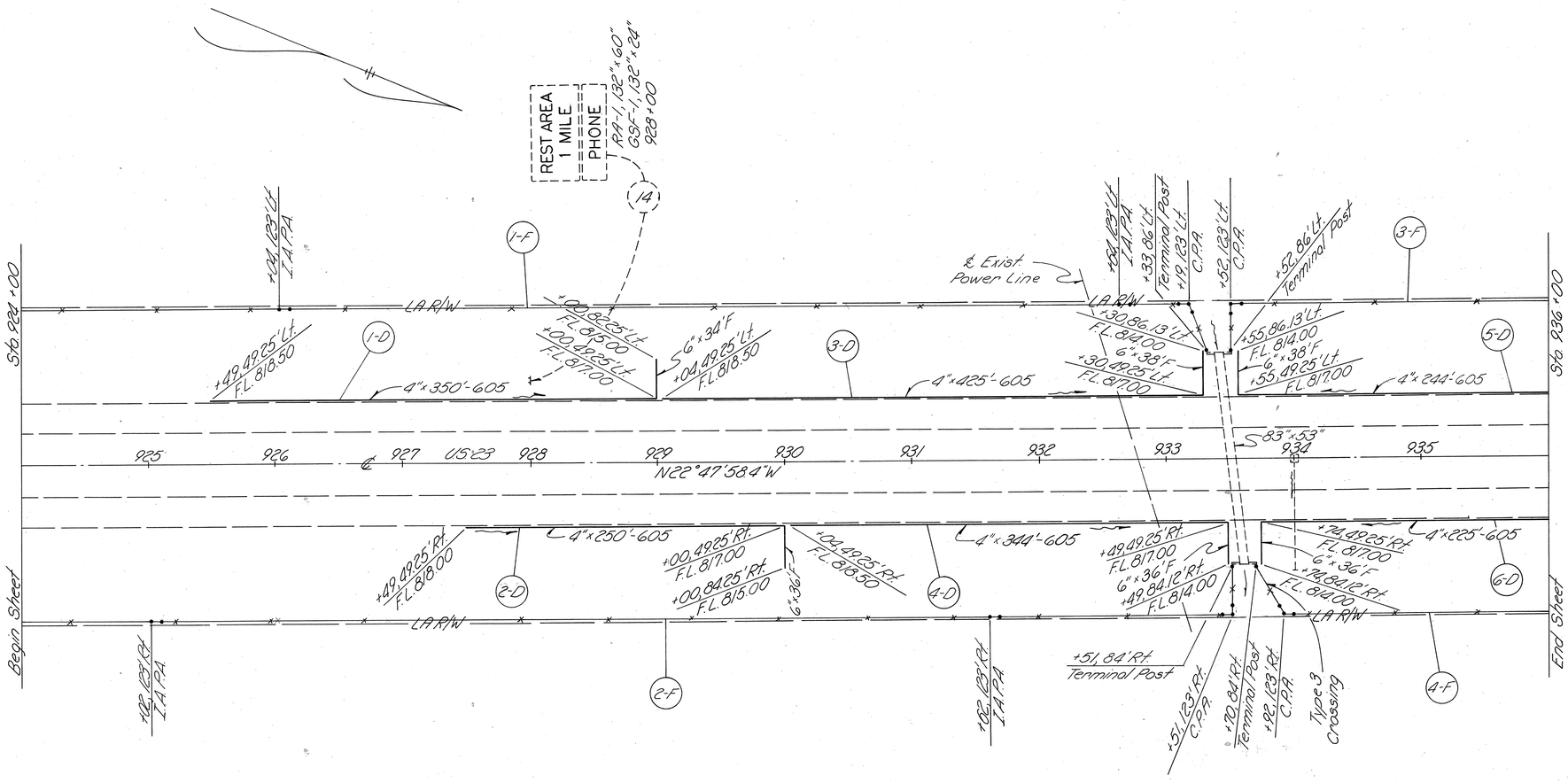
WYANDOT COUNTY
WYA -23 -1040



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type "47" Lin. Ft.
1-F	924+00	933+33	Lt.	959.0
2-F	924+00	933+51	Rt.	990.0
3-F	933+52	936+00	Lt.	285.0
4-F	933+70	936+00	Rt.	253.0
	Total			2487.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	605 4" Underdrains Lin. Ft.
1-D	925+49	929+00	Lt.	34	350
2-D	927+49	930+00	Rt.	36	250
3-D	929+04	933+30	Lt.	38	425
4-D	930+04	933+49	Rt.	36	341
5-D	933+55	936+00	Lt.	38	244
6-D	933+74	936+00	Rt.	36	225
	Totals			218	1838

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta. 924+00 to Sta. 936+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials JWR Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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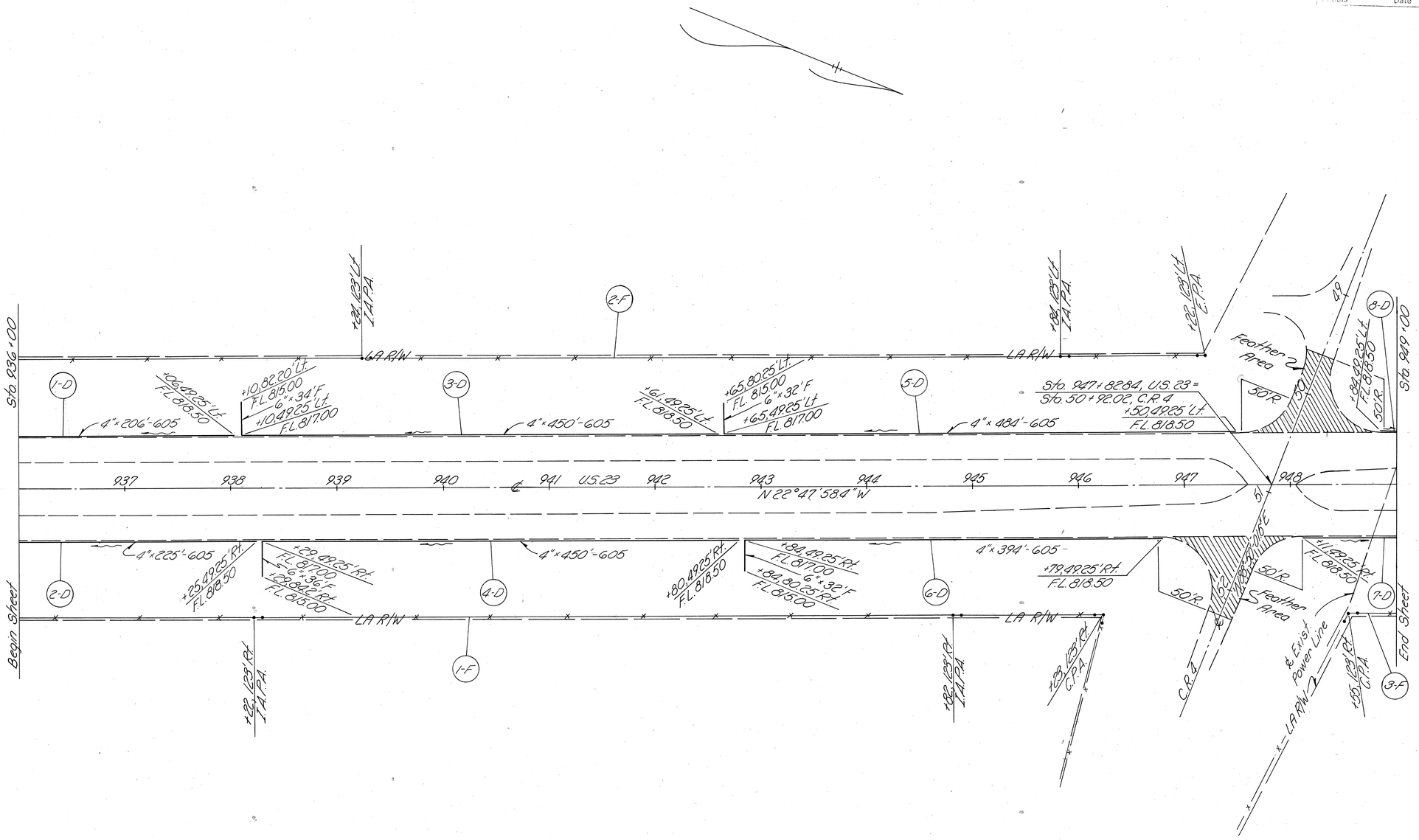
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	936+00	946+23	Rt.	1023.0
2-F	936+00	947+22	Lt.	1122.0
3-F	948+55	949+00	Rt.	45.0
	Totals			2190.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Type F 6" Lin. Ft.	605 4" Unclassified Pipe Underdrains Lin. Ft.
1-D	936+00	938+06	Lt.		206
2-D	936+00	938+25	Rt.		225
3-D	938+10	942+61	Lt.	34	450
4-D	938+29	942+80	Rt.	36	450
5-D	942+65	947+50	Lt.	32	484
6-D	942+84	946+78	Rt.	32	394
7-D	948+11	949+00	Rt.		89
8-D	948+84	949+00	Lt.		16
		Totals		134	2314

Sta. 936+00 to Sta. 949+00

Computations By Initials J.S.S. Date 1/11/82	FHWA REGION	STATE	PROJECT	
Computations Checked By Initials J W R Date 1/11/82	5	OHIO		
Final Revisions By Initials Date				

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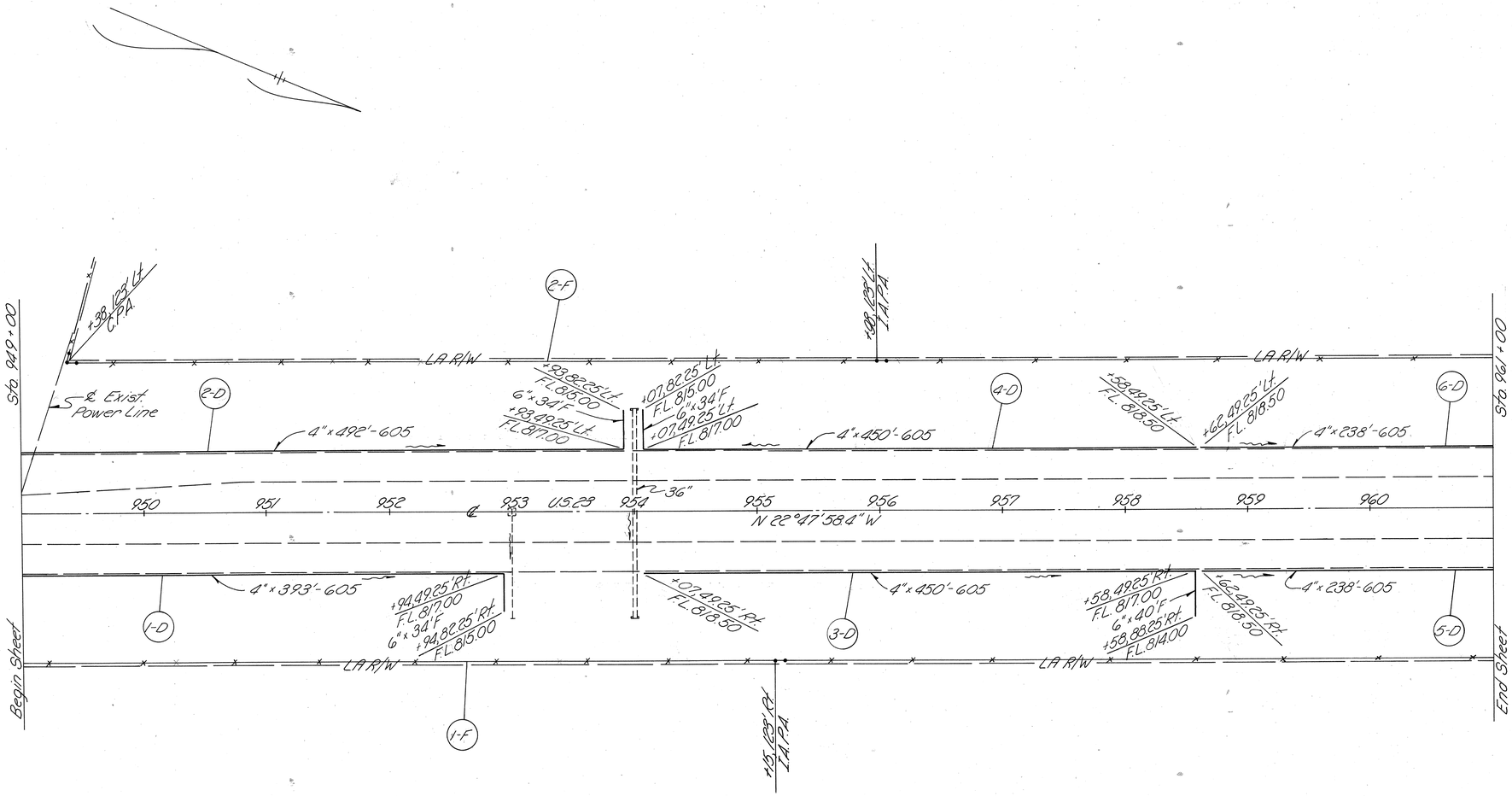
WYANDOT COUNTY
WYA - 23 - 10.40



ESTIMATED QUANTITIES

Ref. No	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	949+00	961+00	Rt.	1200.0
2-F	949+38	961+00	Lt.	1162.0
	Totals			2362.0

DRAINAGE "D"

Ref. No	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unposs-ified Pipe Underdrains Lin. Ft.
1-D	949+00	952+94	Rt.	34		393
2-D	949+00	953+93	Lt.	34		492
3-D	954+07	958+58	Rt.	40		450
4-D	954+07	958+58	Lt.	34		450
5-D	958+62	961+00	Rt.			238
6-D	958+62	961+00	Lt.			238
	Totals			142		2261

Sta. 949+00 to Sta. 961+00

Computations By	
Initials J.S.S.	Date 1/11/82
Computations Checked By	
Initials J.W.R.	Date 1/12/82
Final Revisions By	
Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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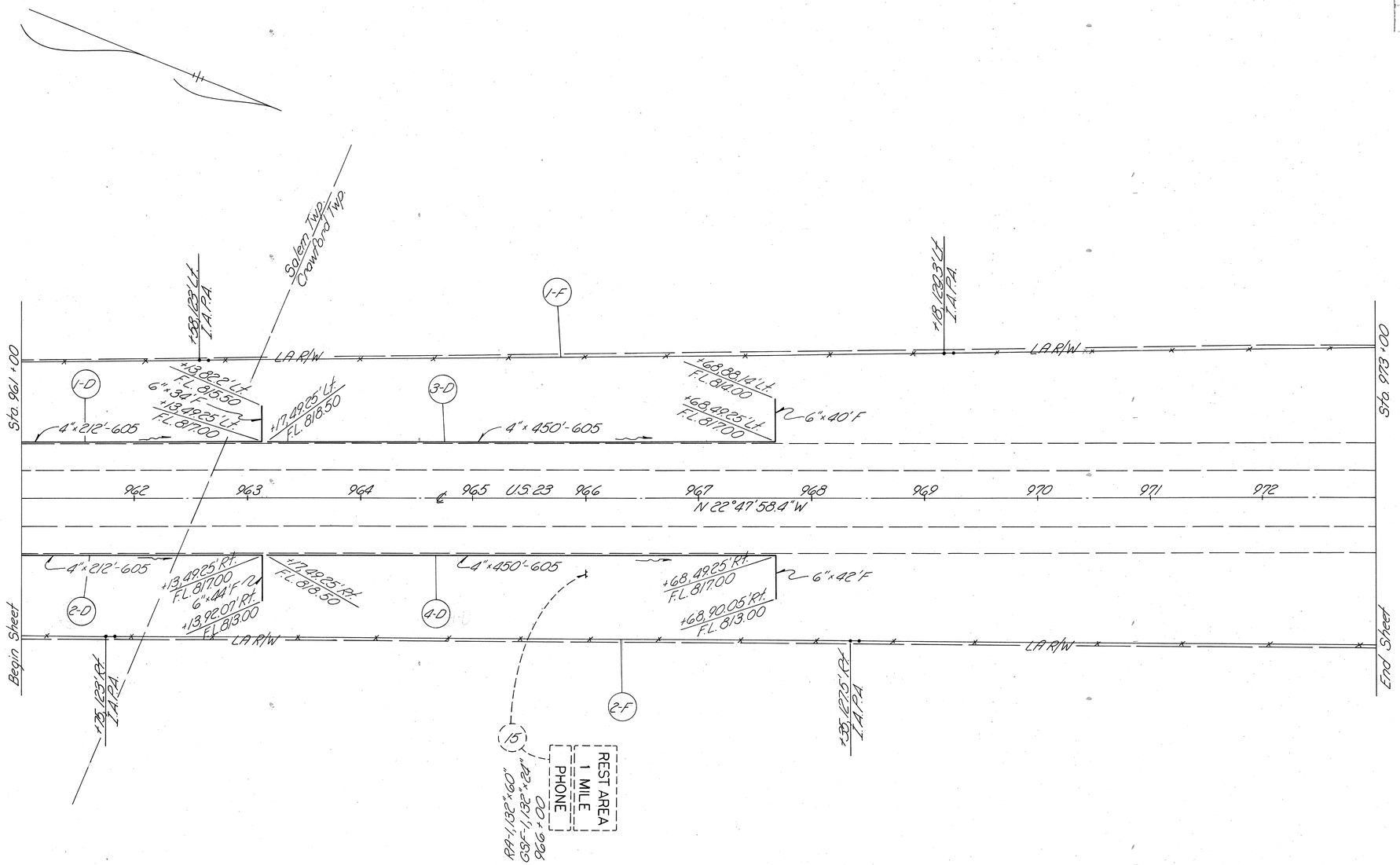
WYANDOT COUNTY
WYA. - 23 - 10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	961+00	973+00	Lt.	12000
2-F	961+00	973+00	Rt.	12000
	Totals			24000

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unclassified Pipe Underdrains Lin. Ft.
1-D	961+00	963+13	Lt.	34		212
2-D	961+00	963+13	Rt.	44		212
3-D	963+17	967+68	Lt.	40		450
4-D	963+17	967+68	Rt.	42		450
	Totals			160		1,324

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta. 961+00 to Sta. 973+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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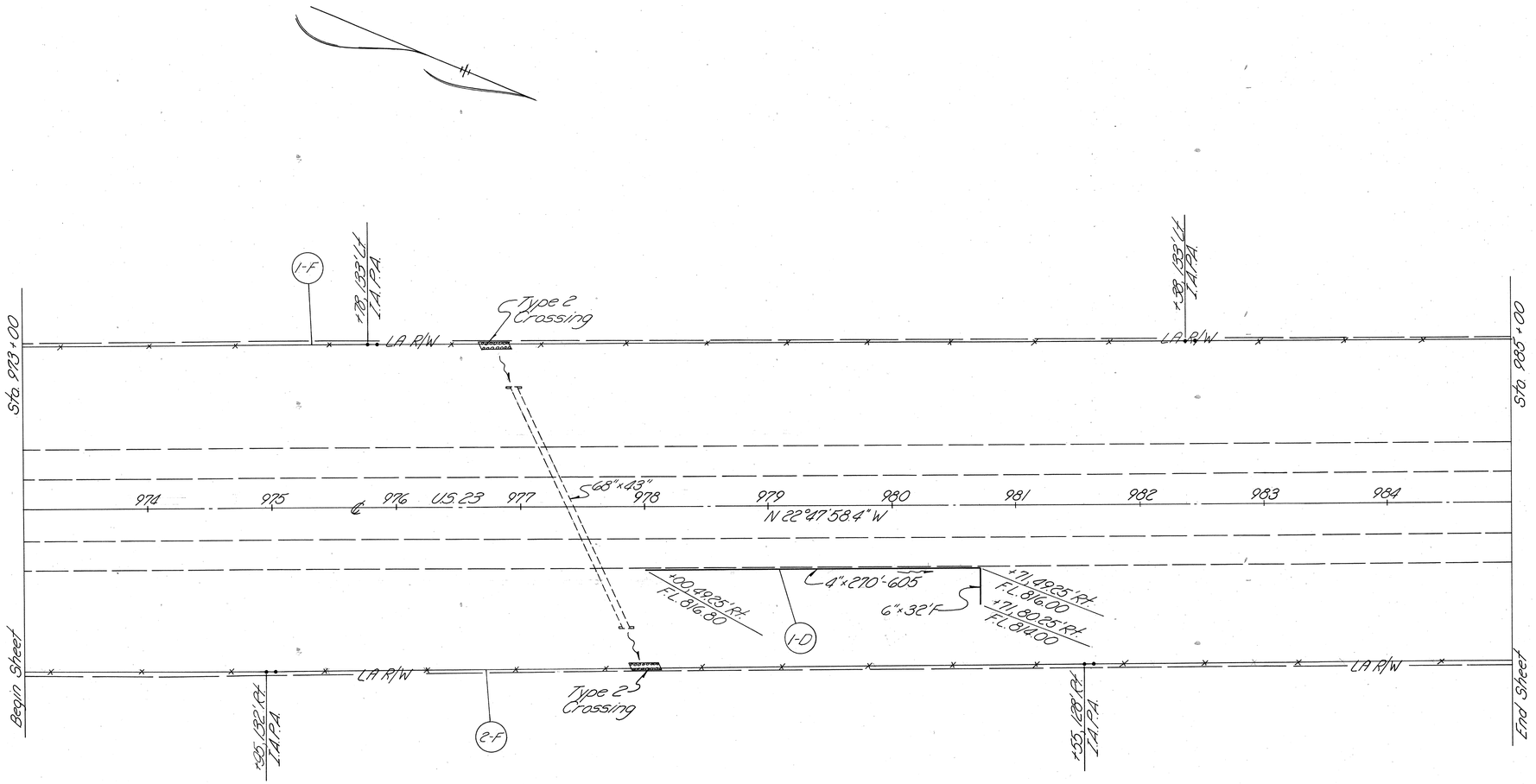
WYANDOT COUNTY
WYA - 23 - 10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	601 Rock Channel Protection Type B w/Bedding Cu. Yd.	607 Fence Type 47 Lin. Ft.
1-F	973+00	985+00	Lt.	10.67	1200.0
2-F	973+00	985+00	Rt.	10.66	1200.0
	Totals			21.33	2400.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Undoss-ified Pipe Underdrains Lin. Ft.
1-D	978+00	980+71	Rt.	32		270
	Totals			32		270

Sta. 973+00 to Sta. 985+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials ____ Date ____

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA.-23-10.40

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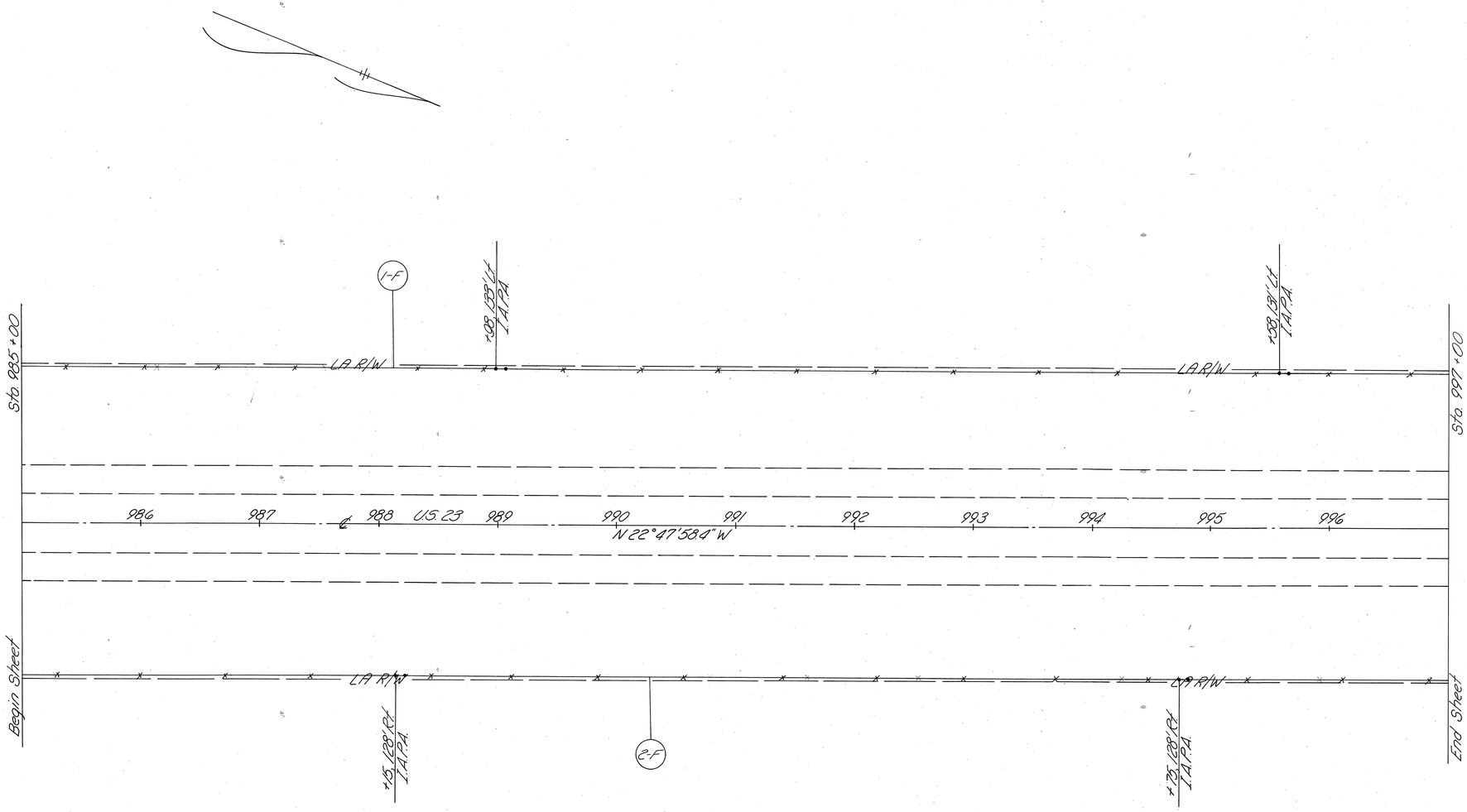

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	935+00	997+00	Lt.	1200.0
2-F	935+00	997+00	Rt.	1200.0
	Totals			2400.0

Sta. 935+00 to Sta. 997+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA. - 23-10.40

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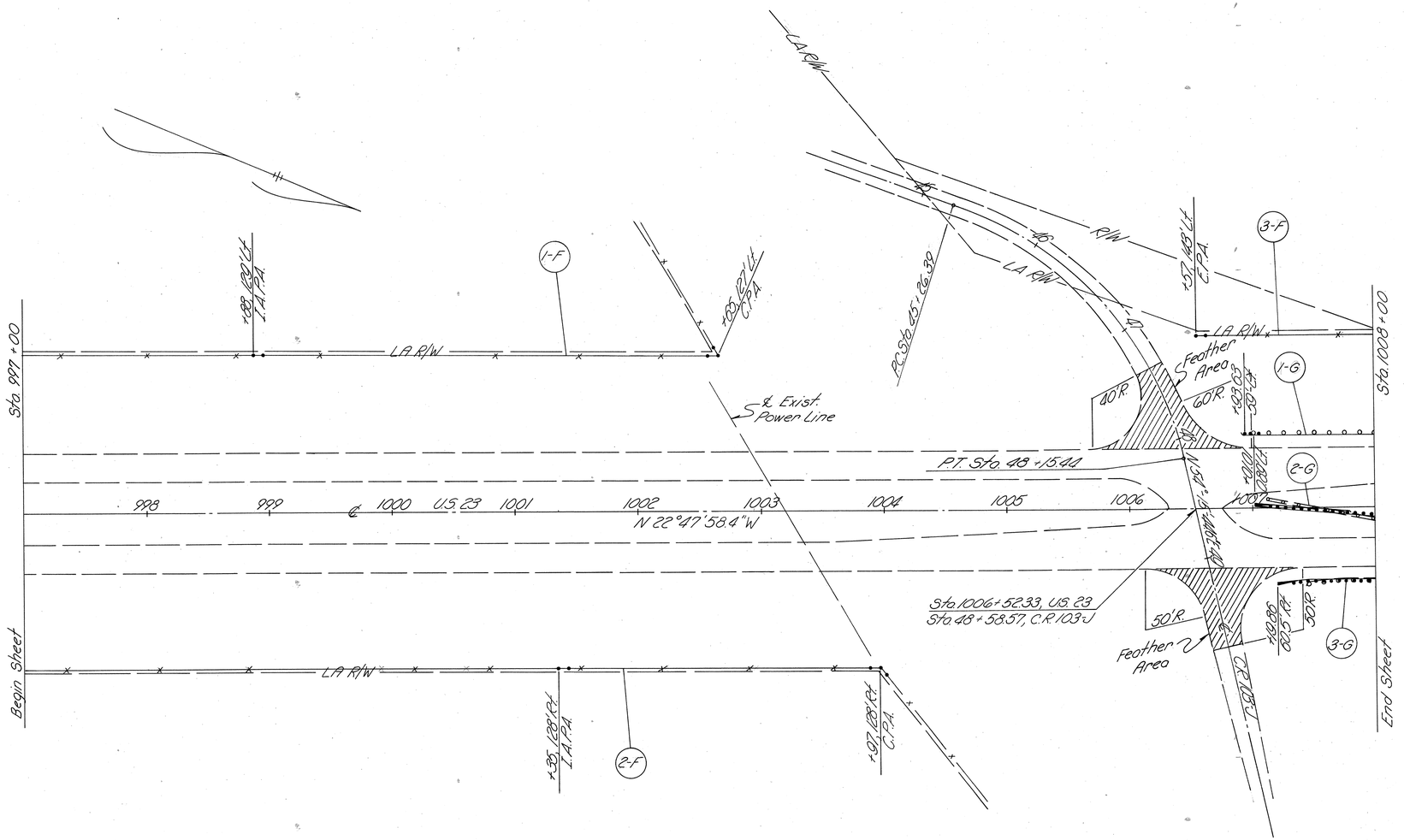

ESTIMATED QUANTITIES

Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.	606 Guard Rail Type 5 Lin. Ft.	606 Guard Rail Type 5 Barrier Design Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type A Barrier Design Each	606 Anchor Assemblies Type T Each	607 Fence Type 4FF
									Each
997+00	1002+65	Lt.							3650
997+00	1003+97	Rt.							6970
1006+57	1008+00	Lt.	100.12	93.87	50.00		1	1	1430
1006+83.63	1008+00	Lt. & Rt.	172.32	22.32					
1007+01.10	1008+00	Rt.	55.41	55.41		1			
1007+19.86	1008+00	Rt.			50.00	1	1	1	4105.0
		Totals	327.60	171.35	50.00	1	1	1	

Ref. No.	From	To
1-F	997+00	1002+65
2-F	997+00	1003+97
3-F	1006+57	1008+00
1-G	1006+83.63	1008+00
2-G	1007+01.10	1008+00
3-G	1007+19.86	1008+00

Sta. 997+00 to Sta. 1008+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials G W R Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

WYANDOT COUNTY
WYA.-23-10.40

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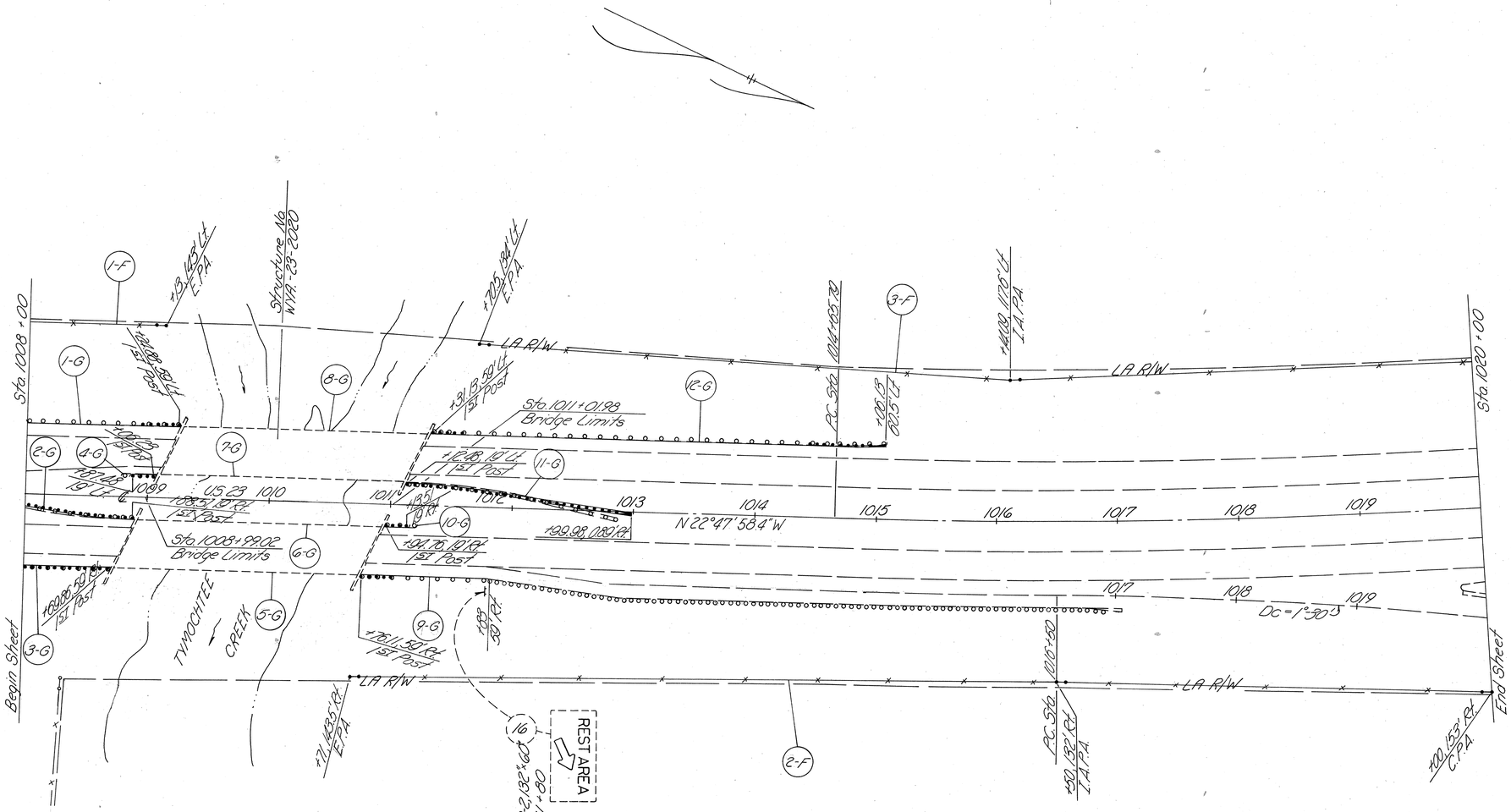

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	622 Guard Rail Removed for Storage Lin. Ft.	510 Railing (O.B.R. w/ Steel Tub-ular Back-up, Type 2 Posts Lin. Ft.	Guard Rail Type 5 Lin. Ft.	Guard Rail Type 5 Bonnet Design Lin. Ft.	606 Anchor Assemblies Type A Type A Bonnet Design Each	606 Anchor Assemblies Type T Each	Bridge Terminal Assemblies Type B Each	607 Fence Type 47 Lin. Ft.
											1130
											2010
											816.0
1-G	1008+00	1009+26.53	Lt.	126.53		126.53				1	
2-G	1008+00	1008+90.16	Rt.	90.16		90.16				1	
3-G	1008+00	1008+71.51	Rt.	71.51		71.51				1	
4-G	1008+83.23	1009+07.87	Lt.	24.64					1		
5-G	1008+71.51	1010+44.11	Rt.	202.96	202.96						
6-G	1008+90.16	1010+93.12	Rt.	202.96	202.96						
7-G	1009+07.87	1011+10.82	Lt.	202.96	202.96						
8-G	1009+26.53	1011+29.49	Rt.	202.96	202.96						
9-G	1010+44.11	1011+83	Rt.	108.53		108.53				1	
10-G	1010+93.12	1011+99.76	Lt.	26.64		7.89				1	
11-G	1011+10.82	1012+39.08	Lt.	264.12		141.14				1	
12-G	1011+29.49	1015+06.13	Lt.	376.64		351.64				1	
			Totals	1902.63	811.84	838.29	50.00	1	2	8	1850.0

Sta. 1008+00 to Sta. 1020+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials GWR Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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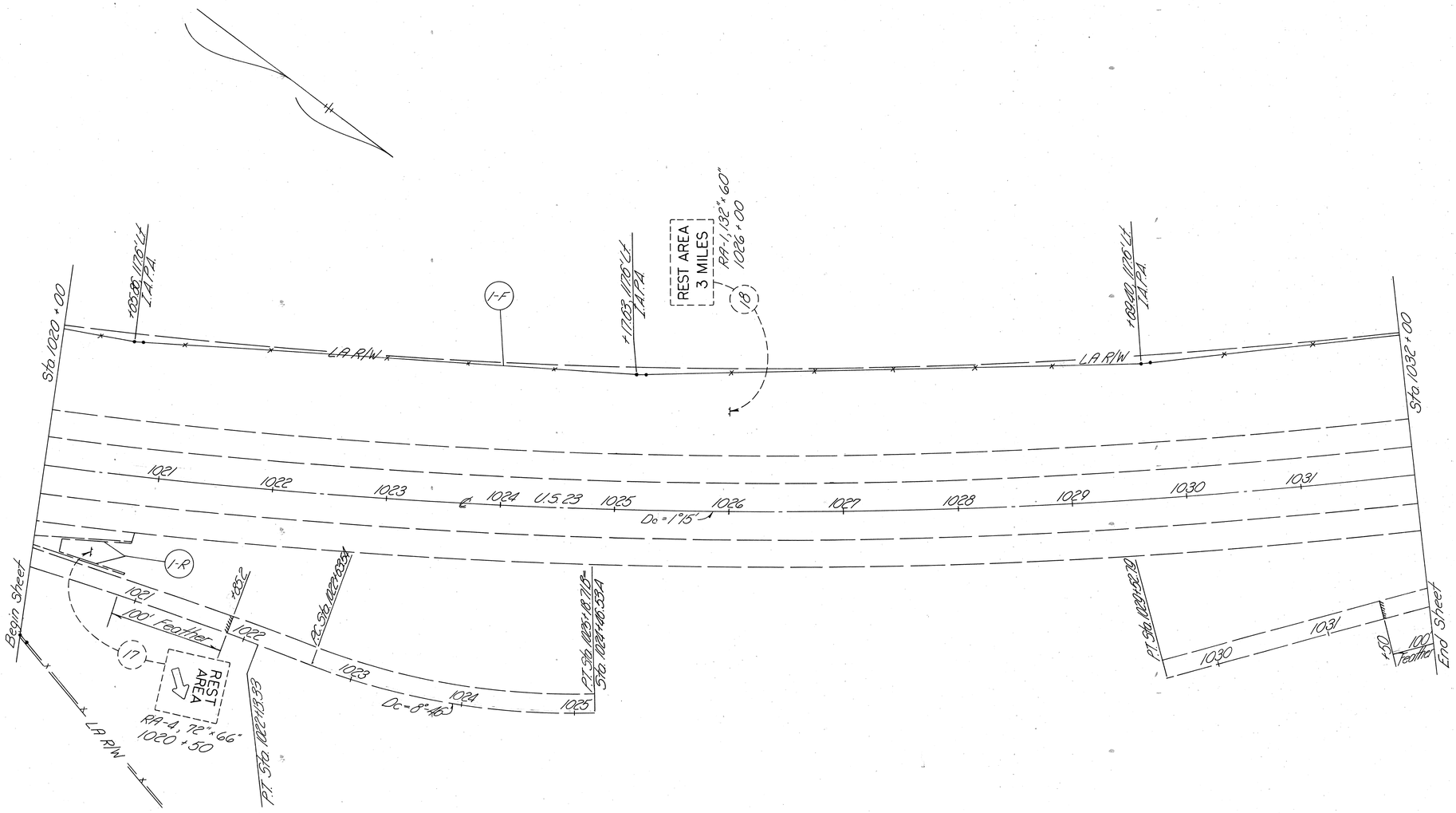
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed Lin. Ft.	607 Fence Type 47 Lin. Ft.
I-F	1020+00	1032+00	Lt.		1169.0
I-R	1019+82	1020+85	Rt.	125.0	
	Totals			125.0	1169.0

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta. 1020+00 to Sta. 1032+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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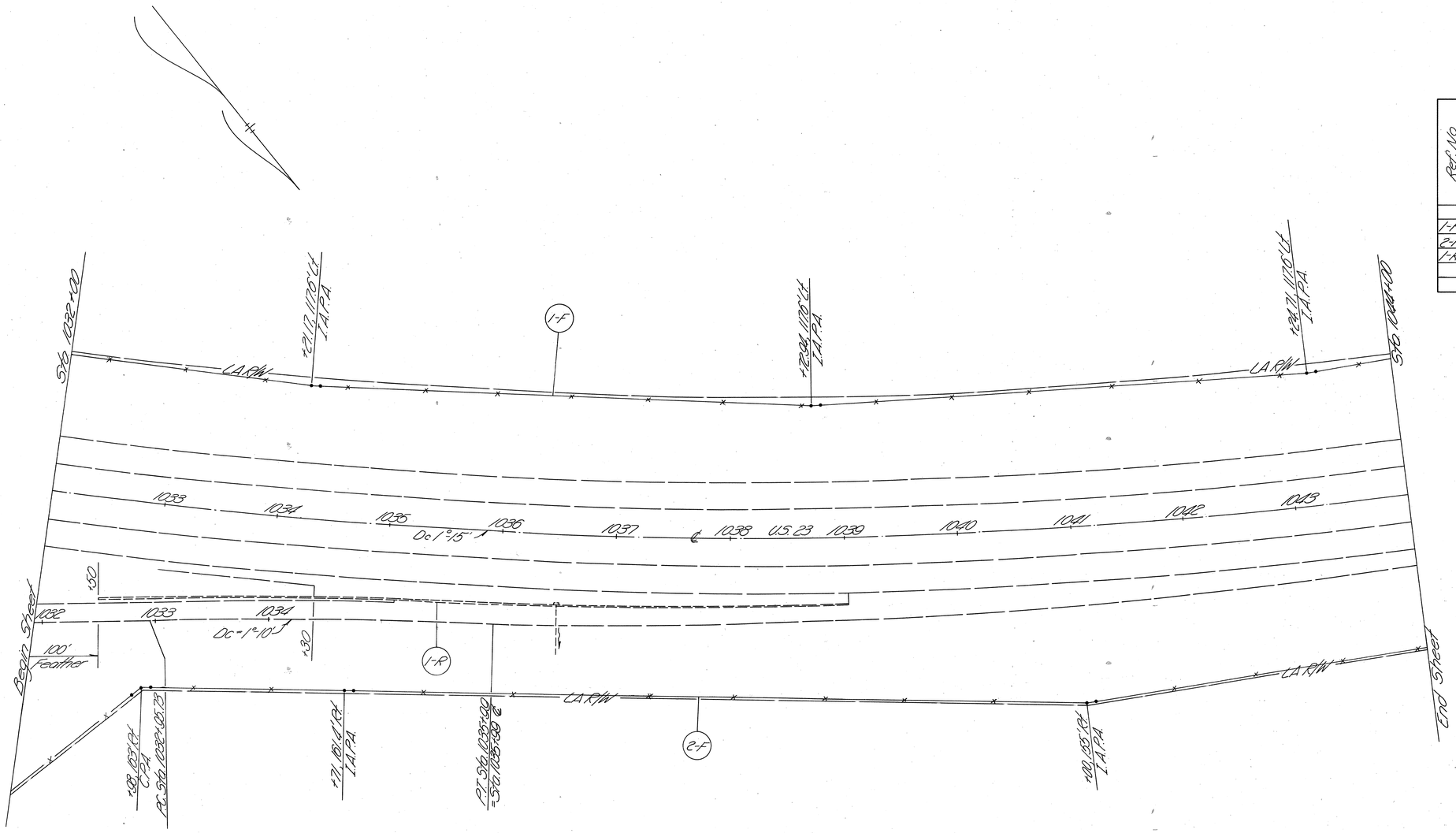
WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Curb Removed Lin. Ft.	604 Catch Basin Adjusted to Grade Each	607 Fence Type 47 Lin. Ft.
1-F	1032+00	1044+00	Lt.			1171.0
2-F	1032+98	1044+00	Rt.			1146.0
1-R	1032+50	1039+00	Rt.	665.0	1	
	Totals			665.0	1	2317.0

Sta 1032+00 to Sta. 1044+00

Computations By
Initials J.S.S. Date 1/11/82
Computations Checked By
Initials J.W.R. Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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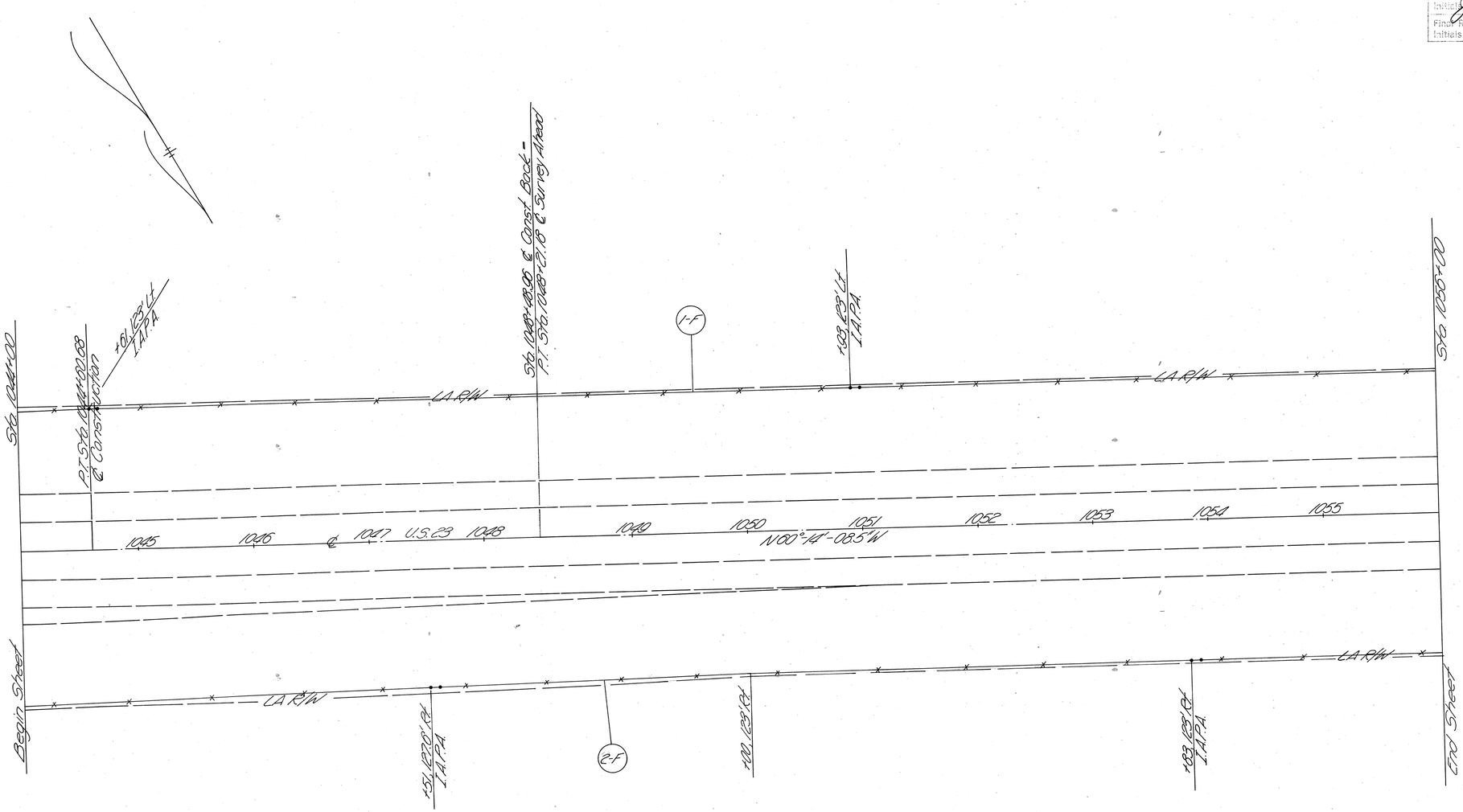
WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin Ft
1-F	1044+00	1056+00	Lt.	1228.0
2-F	1044+00	1056+00	Rt.	1231.0
	Totals			2461.0

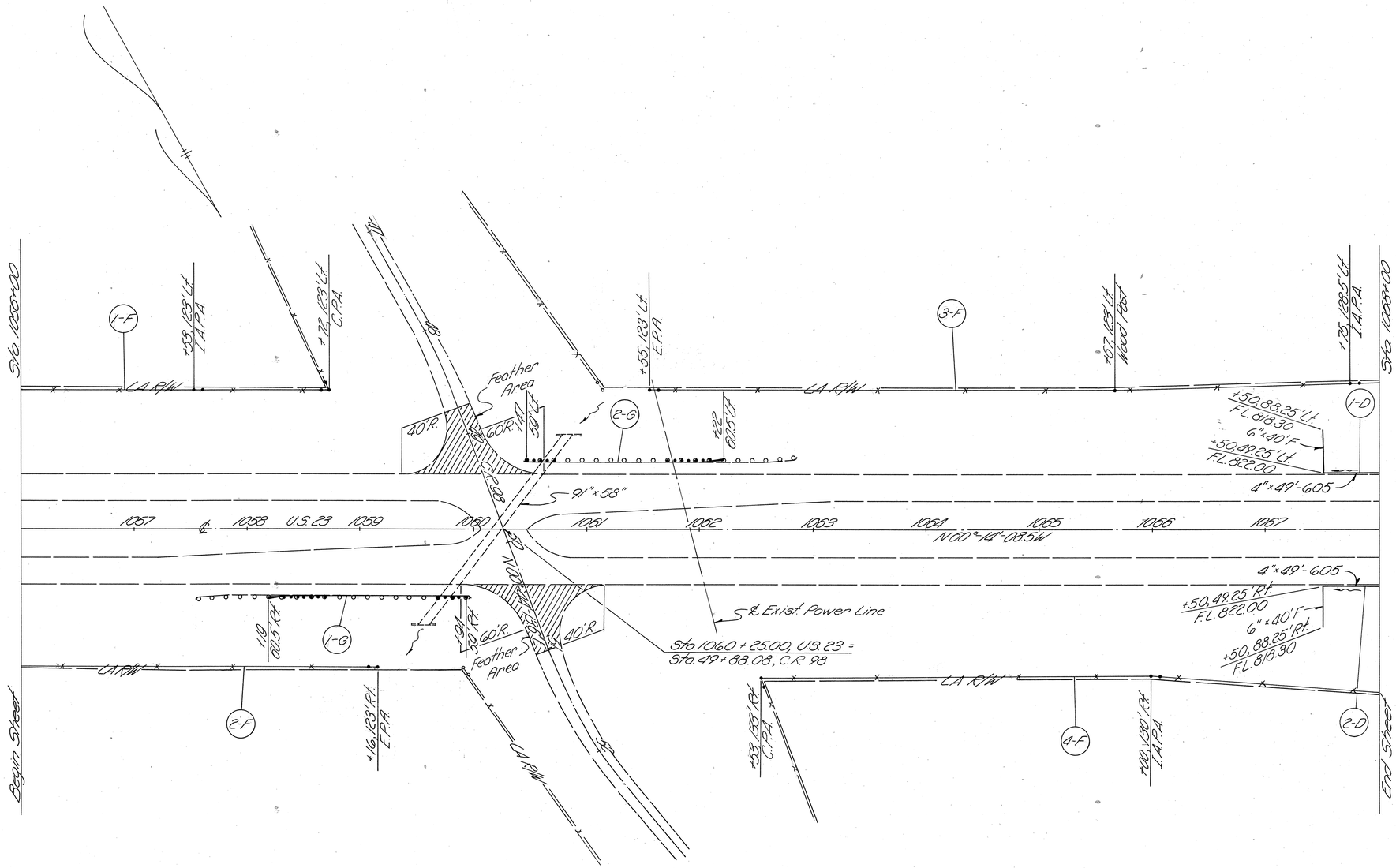
Sta 1044+00 to Sta 1056+00

Computations By
Initials J.S.S. Date 1/11/82
Computations Checked By
Initials J.W.R. Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

79
108

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 4D Lin. Ft.	606 Anchor Assemblies Type F Each	606 Anchor Assemblies Type 9 Each	606 Guard Rail Type 5 Lin. Ft.	202 Guard Rail Removed for Storage Lin. Ft.
1-F	1056+00	1058+72	Lt.	272.0	1	1	137.5	237.5
2-F	1056+00	1059+16	Rt.	316.0	1	1	137.5	237.5
3-F	1061+55	1063+00	Lt.	645.0			275.0	475.0
4-F	1062+53	1068+00	Rt.	547.0				
1-G	1057+56.5	1059+94	Rt.		1	1	137.5	237.5
2-G	1060+47	1062+84.5	Lt.		1	1	137.5	237.5
Totals				1780.0	2	2	275.0	475.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	605 4" Unclassified Pipe Underdrains Lin. Ft.
1-D	1067+50	1068+00	Lt.	40	49
2-D	1067+50	1068+00	Rt.	40	49
Totals				80	98

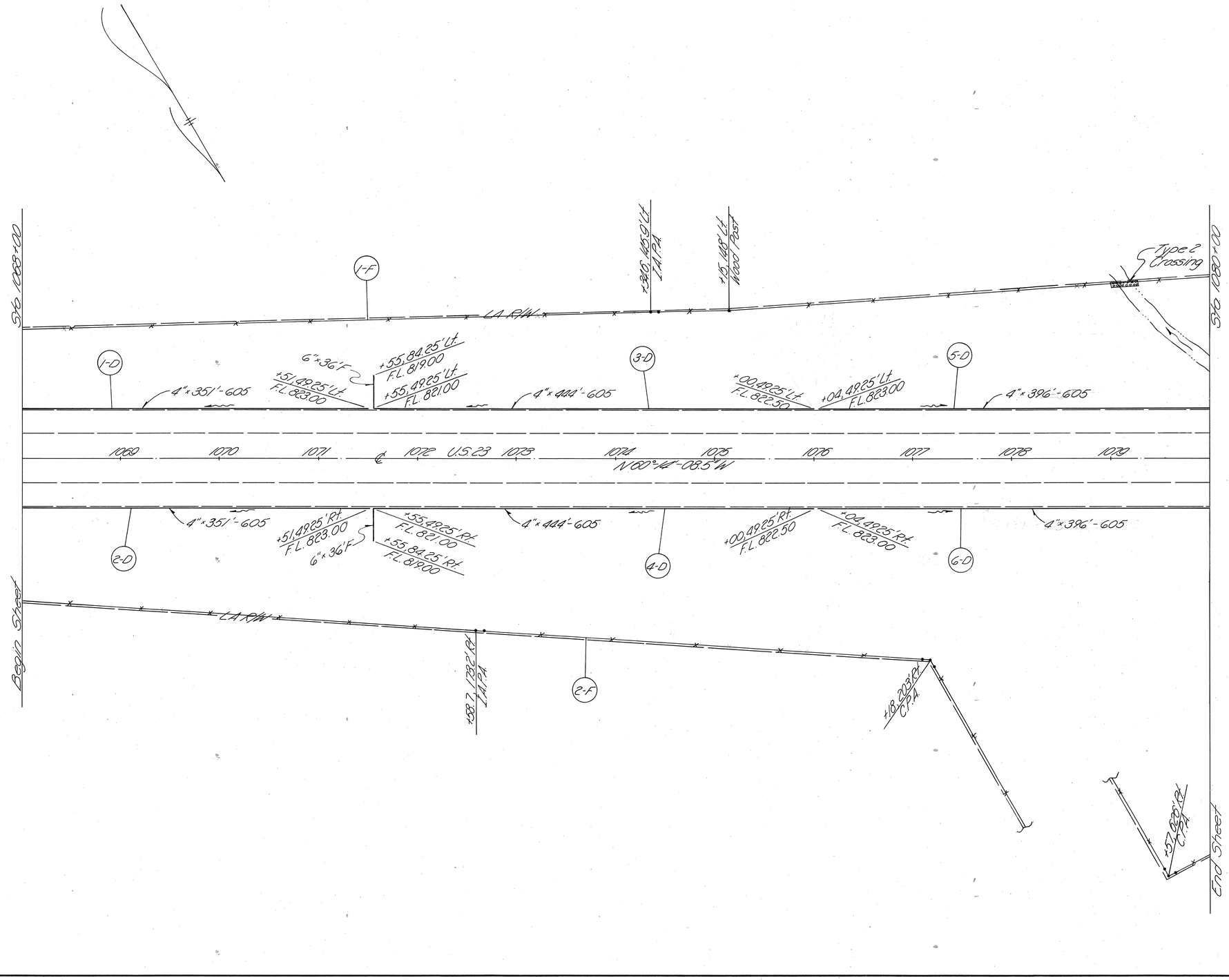
Sta. 1056+00 to Sta. 1068+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

80
108

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	601 Rock Channel Protection Type B w/Bedding Cu. Yd.	607 Fence Type 47 Lin. Ft.
1-F	1068+00	1080+00	Lt.	12.44	1203.0
2-F	1068+00	1080+00	Rt.		1456.0
Totals				12.44	2659.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 4" Unclass-ified Pipe Underdrains Lin. Ft.
1-D	1068+00	1071+51	Lt.			351
2-D	1068+00	1071+51	Rt.			351
3-D	1071+55	1076+00	Lt.	36		444
4-D	1071+55	1076+00	Rt.	36		444
5-D	1076+04	1080+00	Lt.			396
6-D	1076+04	1080+00	Rt.			396
Totals				72		2382

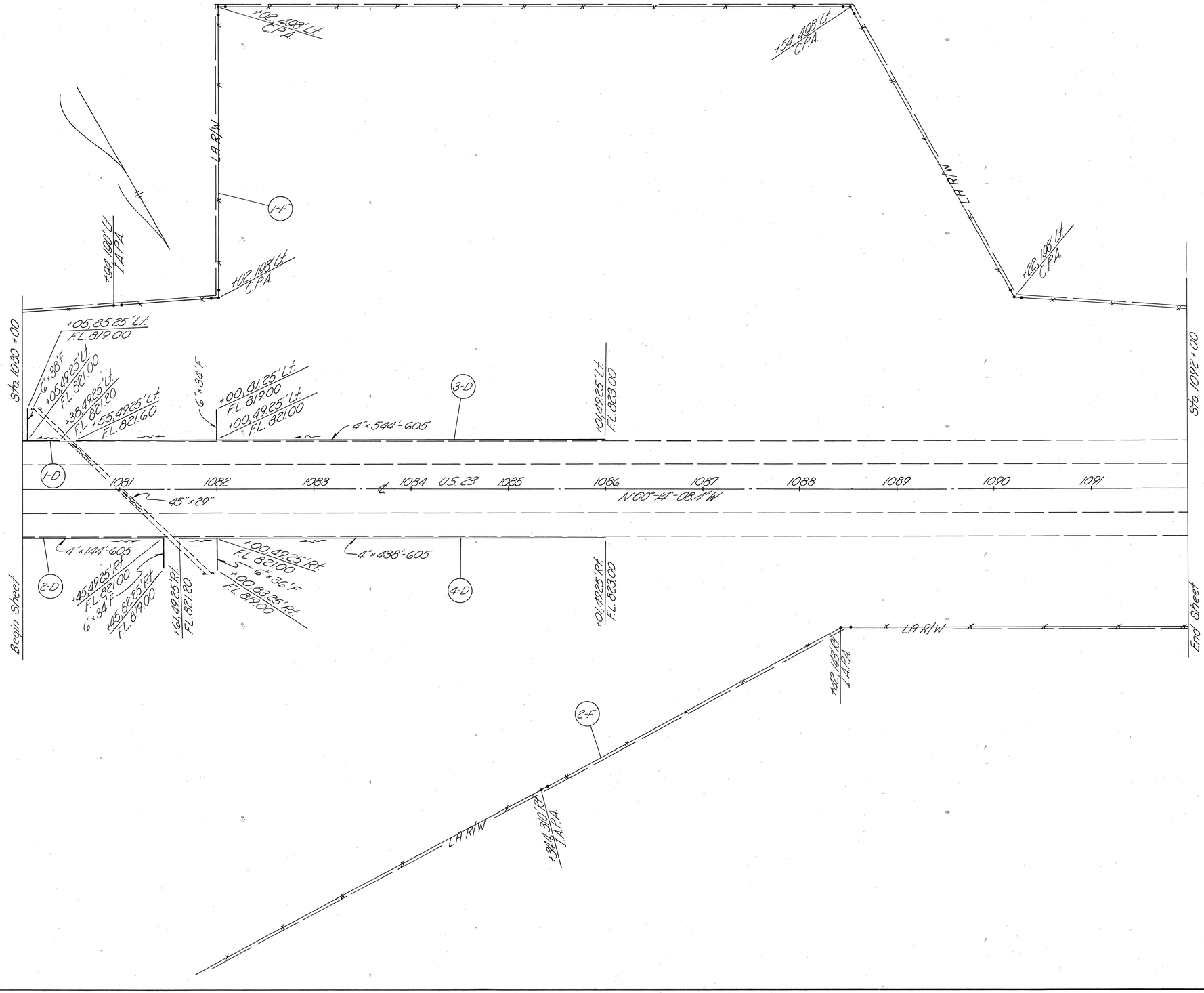
Sta. 1068+00 to Sta. 1080+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials JWR Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

81/108

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	1080+00	1092+00	Lt.	1677.0
2-F	1080+00	1092+00	Rt.	1320.0
	Totals			2997.0

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"		605 Underdrains 4" Perforated Pipe Lin. Ft.
1-D	1080+00	1080+38	Lt.	38		36
2-D	1080+00	1081+45	Rt.	34		144
3-D	1080+55	1086+01	Lt.	34		544
4-D	1081+61	1086+01	Rt.	36		438
	Totals			142		1162

Sta 1080+00 to Sta 1092+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials gwk Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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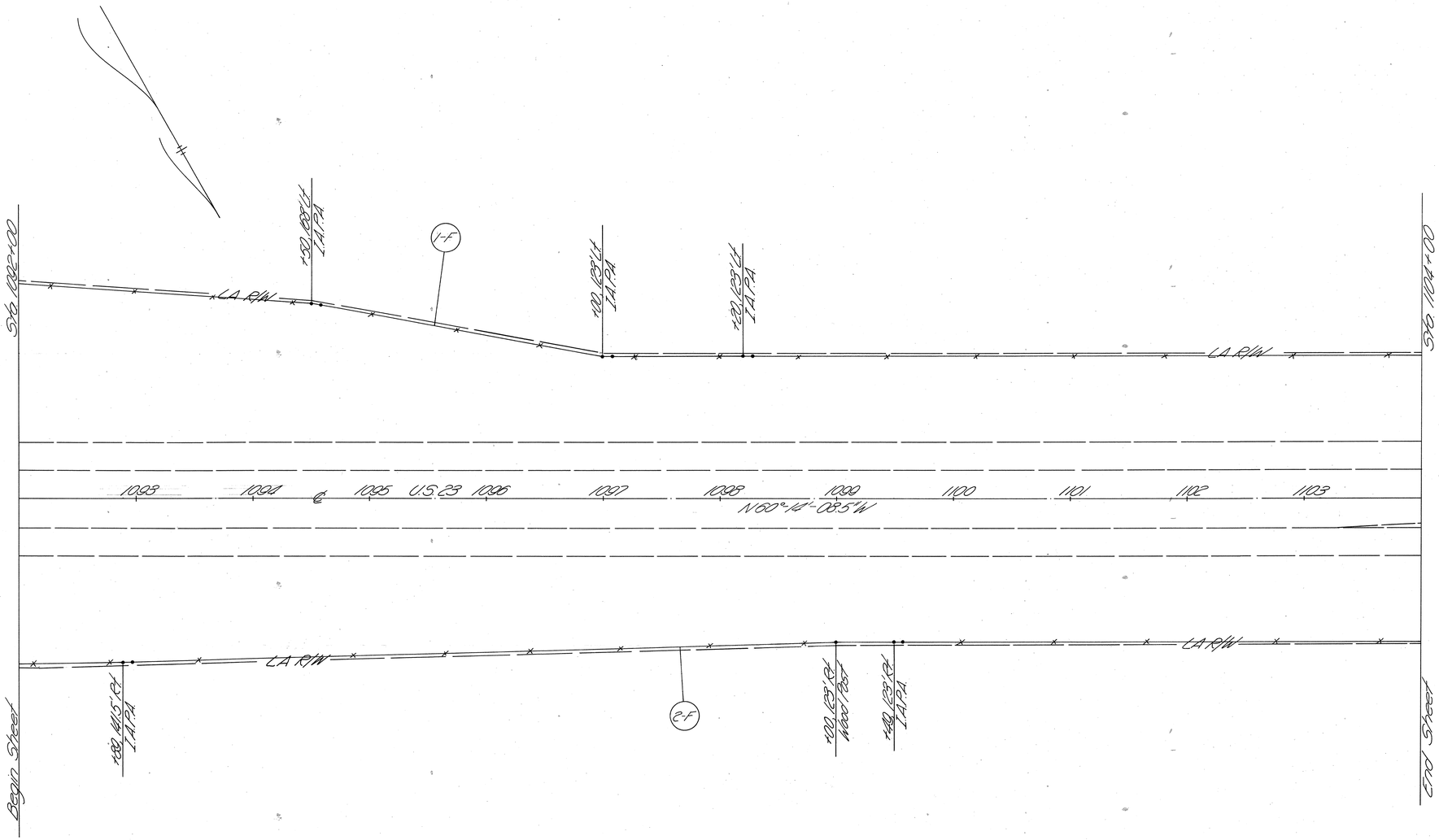
WYANDOT COUNTY
W.Y.A. -23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	607 Fence Type 47 Lin. Ft.
1-F	1092+00	1104+00	Lt.	1200.0
2-F	1092+00	1104+00	Rt.	1200.0
	Totals			2400.0

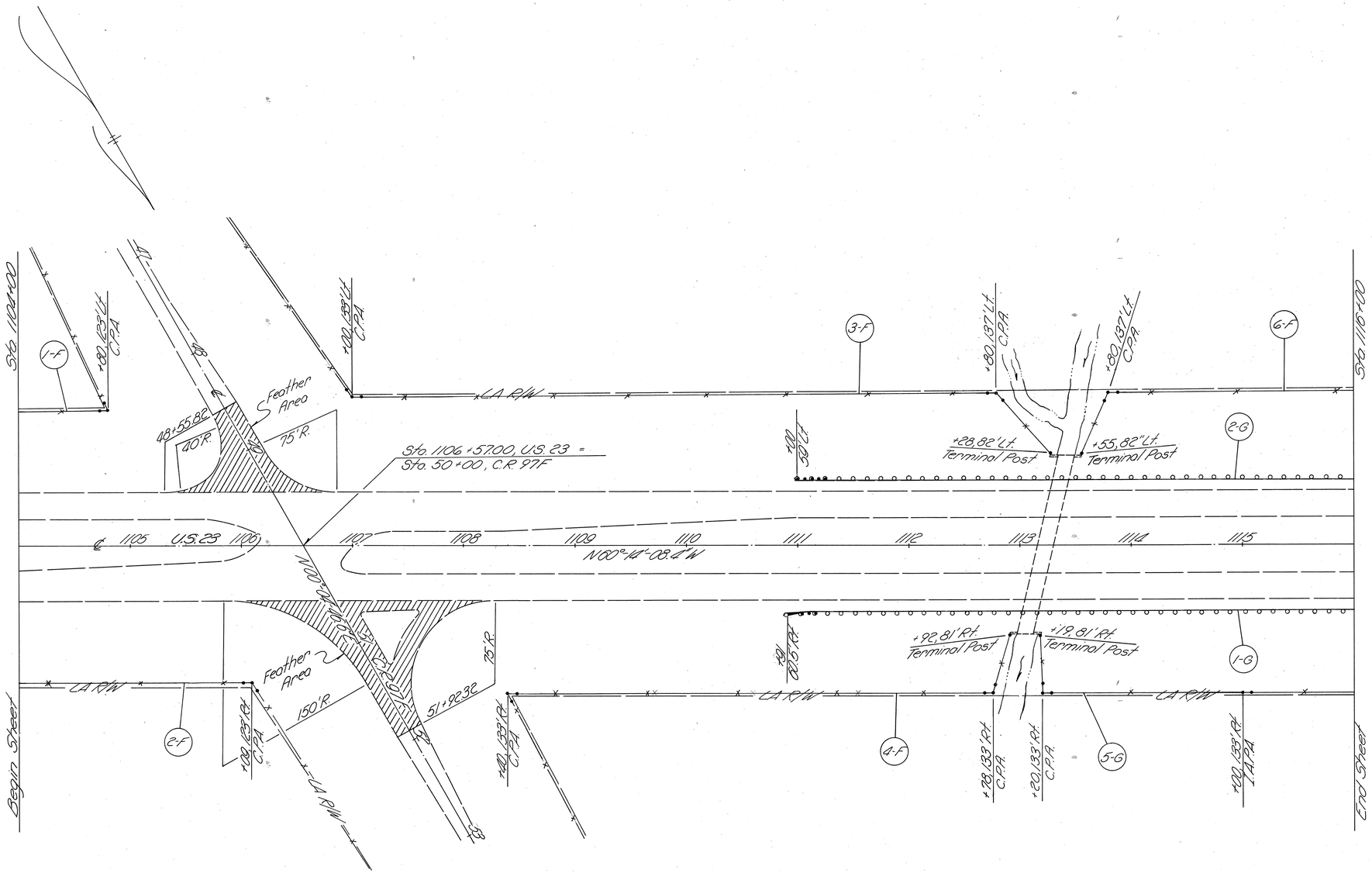
Sta. 1092+00 to Sta. 1104+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

83/108

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.	606 Guard Rail Type 5 Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type T Each	607 Fence Type 47 Lin. Ft.
1-F	1104+00	1104+80	Lt.					800
2-F	1104+00	1106+09	Rt.					2090
3-F	1107+00	1113+28	Lt.					6540
4-F	1108+40	1112+92	Rt.					4920
5-F	1113+19	1116+00	Rt.					330
6-F	1113+55	1116+00	Lt.		484.00	1		2800
1-G	1110+91	1116+00	Rt.	509.00	487.50		1	
2-G	1111+00	1116+00	Lt.	500.00		1		
Totals				1009.00	971.50	1	1	20770

Sta 1104+00 to Sta 1116+00

Computations By Initials J.S.S. Date 1/11/82
Computations Checked By Initials J.W.R. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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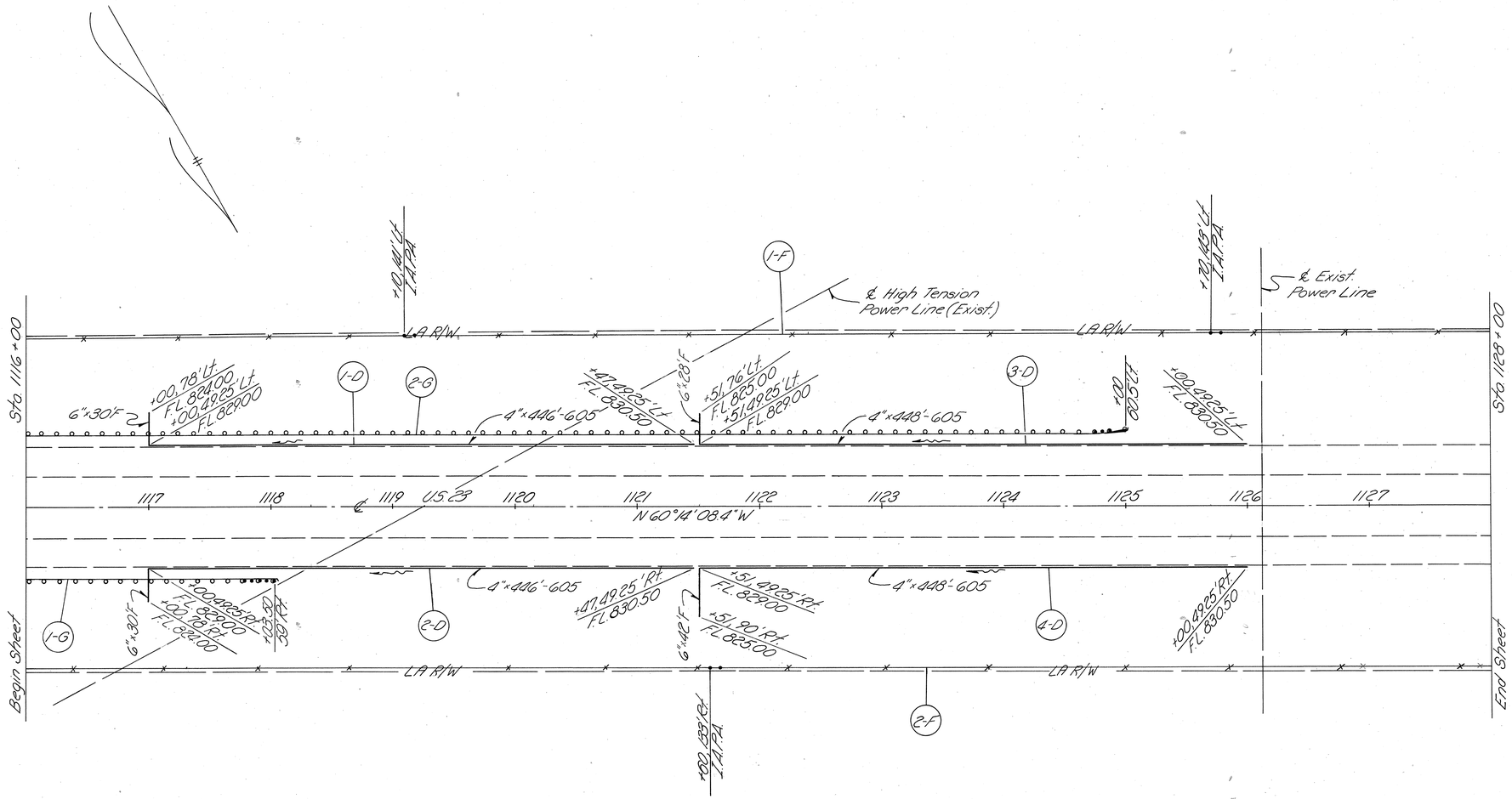
108

WYANDOT COUNTY
WYA. -23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	607 Fence Type 47 Lin. Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type J Each	606 Guard Rail Type S Lin. Ft.	202 Guard Rail Removed for Storage Lin. Ft.	Side	Totals
1-F	1116+00	1128+00	1200.0					Lt.	
2-F	1116+00	1128+00	1200.0					Rt.	
1-G	1116+00	1118+23.50			1	19.00	223.50	Rt.	
2-G	1116+00	1125+00		1		875.00	900.00	Lt.	
Totals			2400.0	1	1	1066.00	1103.50		

DRAINAGE "D"

Ref. No.	Station From	Station To	Side	603 Conduit Lin. Ft. Type F 6"	605 6" Unclassified Pipe Underdrains Lin. Ft.
1-D	1117+00	1121+47	Lt.	30	446
2-D	1117+00	1121+47	Rt.	30	446
3-D	1121+51	1126+00	Lt.	28	448
4-D	1121+51	1126+00	Rt.	42	448
Totals				130	1788

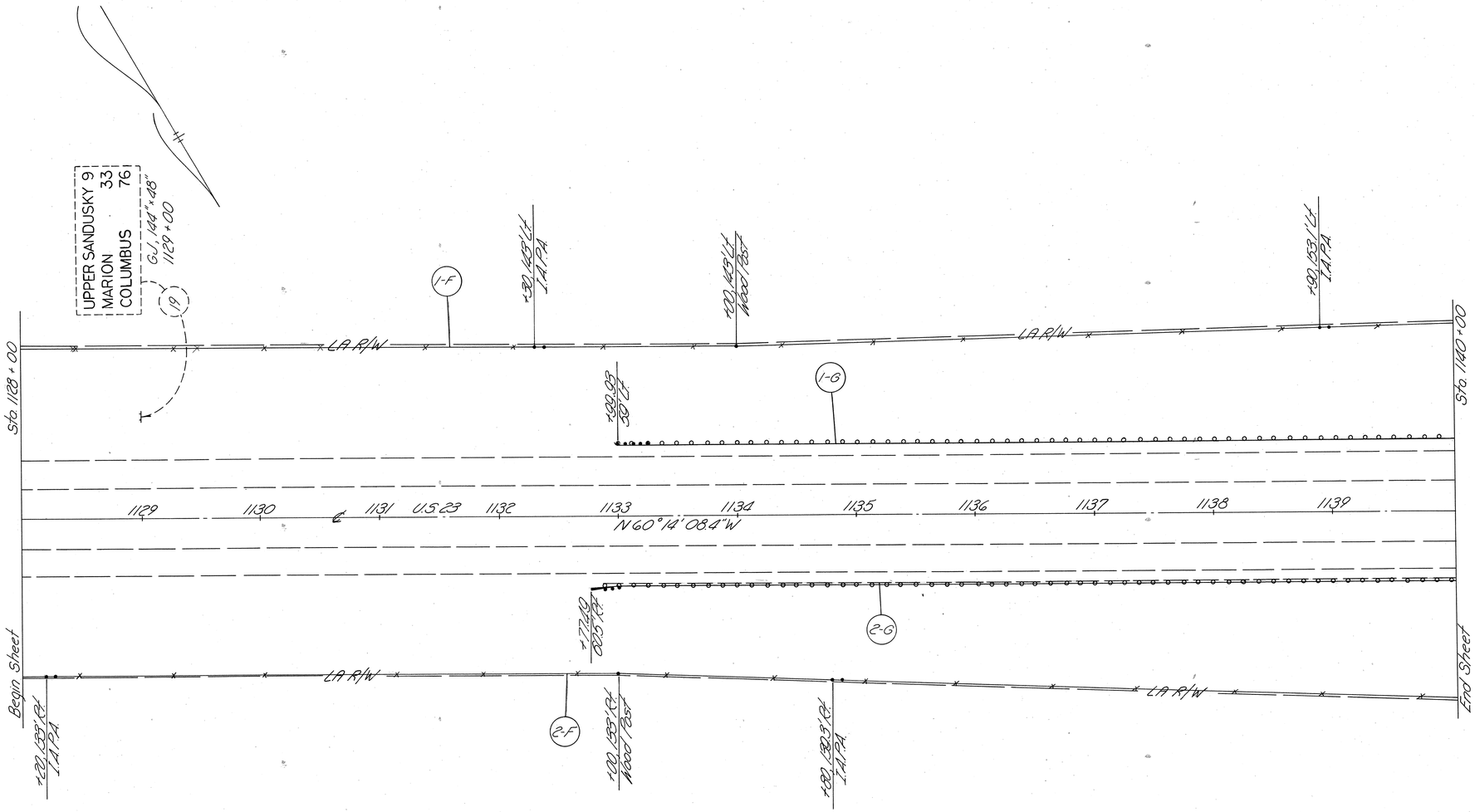
Sta 1116+00 to Sta 1128+00

Computations By Initials J.S.S. Date 1/1/82
Computations Checked By Initials JWR Date 1/2/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

85/108

WYANDOT COUNTY
WYA.-23-10.40



ESTIMATED QUANTITIES

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin.Ft.	606 Guard Rail Type 5 Lin.Ft.	606 Anchor Assemblies Type A Each	606 Anchor Assemblies Type T Each	607 Fence Type 47 Lin.Ft.
1-F	1128+00	1140+00	Lt.					12000
2-F	1128+00	1140+00	Rt.					12000
1-G	1132.98	1140+00	Lt.	700.20	687.57		1	
2-G	1132.98	1140+00	Rt.	710.20	697.51	1		
	Totals			1410.40	1385.08	1	1	24000

SIGN LEGEND

Existing sign shall be removed and erected on new Breakaway Posts

Sta. 1128+00 to Sta. 1140+00

Computations By
Initials J.S.S. Date 1/11/82
Computations Checked By
Initials JWK Date 1/12/82
Final Revisions By
Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

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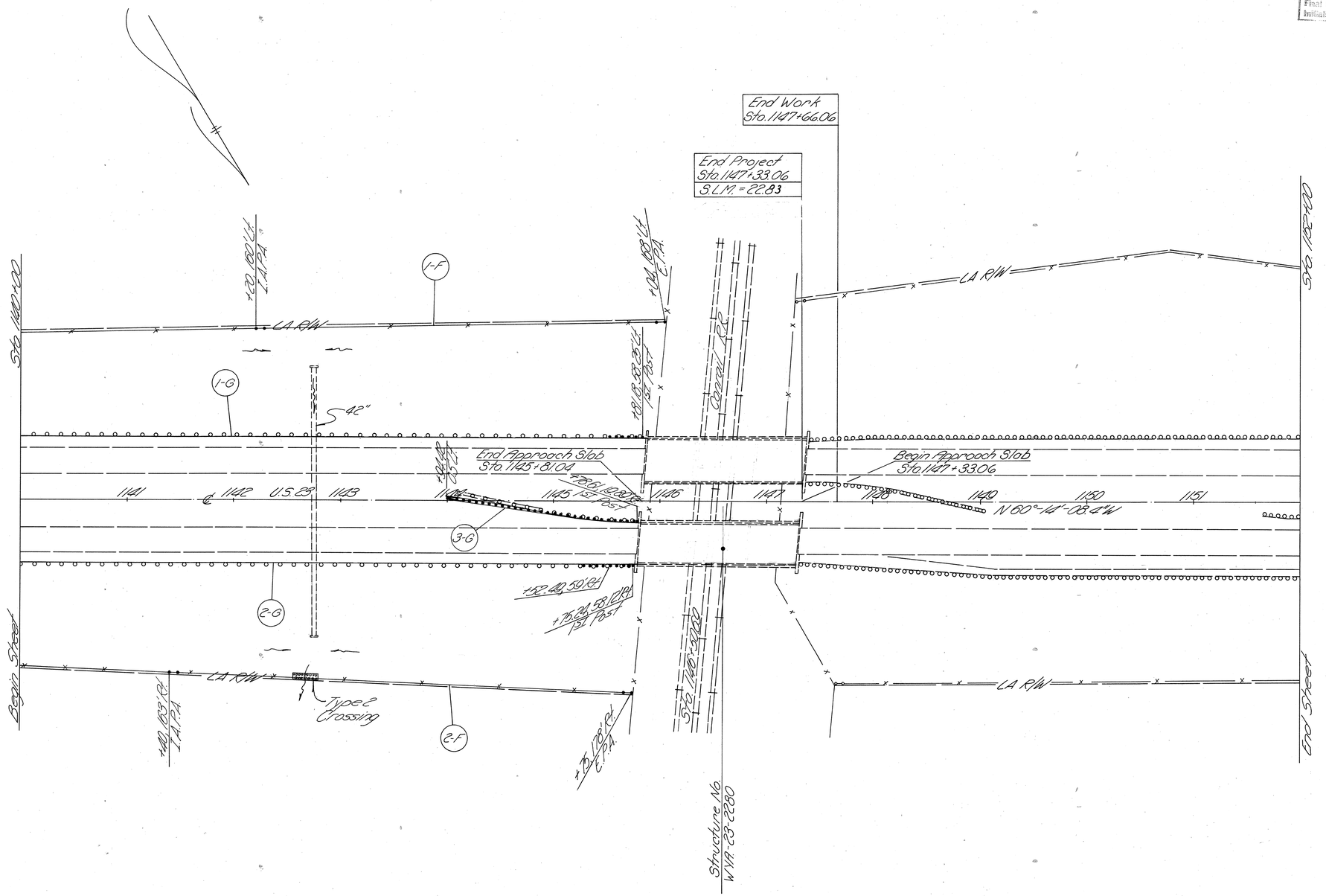
108

WYANDOT COUNTY
WYA-23-10.40



ESTIMATED QUANTITIES

606

Ref. No.	Station From	Station To	Side	202 Guard Rail Removed for Storage Lin. Ft.	607 Rock Channel Protection Type B w/Bedding Cu. Yd.	606 Guard Rail Type 5 Lin. Ft.	606 Guard Rail Type 5 Barrier Design Lin. Ft.	606 Anchor Assembly Type A Barrier Design Each	606 Bridge Terminal Assemblies Type E Each	606 Bridge Terminal Assemblies Type J Each	607 Fence Type 47 Lin. Ft.
1-F	1140+00	1146+04	Lt.								6040
2-F	1140+00	1145+75	Rt.	587.30	10.67	587.43				/	5750
1-G	1140+00	1145+81.16	Lt.	577.30		577.49					
2-G	1140+00	1145+78.66	Rt.			112.50	50.00	/	/		
3-G	1143+92.42	1145+82.23	Lt.	262.50							
				1427.10	10.67	277.42	50.00	/	2	/	11790
						To 06					

Rev. 4-26-82

Sta. 1140+00 to Sta. 1152+00

FED.-RD. DIVISION	STATE	PROJECT	
2	OHIO		

87/108

WYANDOT COUNTY
WYA-23-10.40

Computations By Initials D.K.S Date 1-12-82
Computations Checked By Initials J.S.S. Date 1/12/82
Final Revisions By Initials Date

SEEDING				END AREA		VOLUME	
END WIDTH	SC 103			CUT	FILL	CUT	FILL
0		667+00	844.64	0	0		
	233	Guard Rail Ends Sta. 666+33.5				0	100
42				0	54		
	467	666+00	844.88			0	226
42		Pier		0	68		
	467	665+00	845.12			0	228
42		Guard Rail Begins Sta. 663+46		0	55		
	233	664+00	845.36			0	102
0				0	0		
		663+00	845.60				
	1400	Total				Total	0 656

Sta. 663+00 to Sta. 667+00

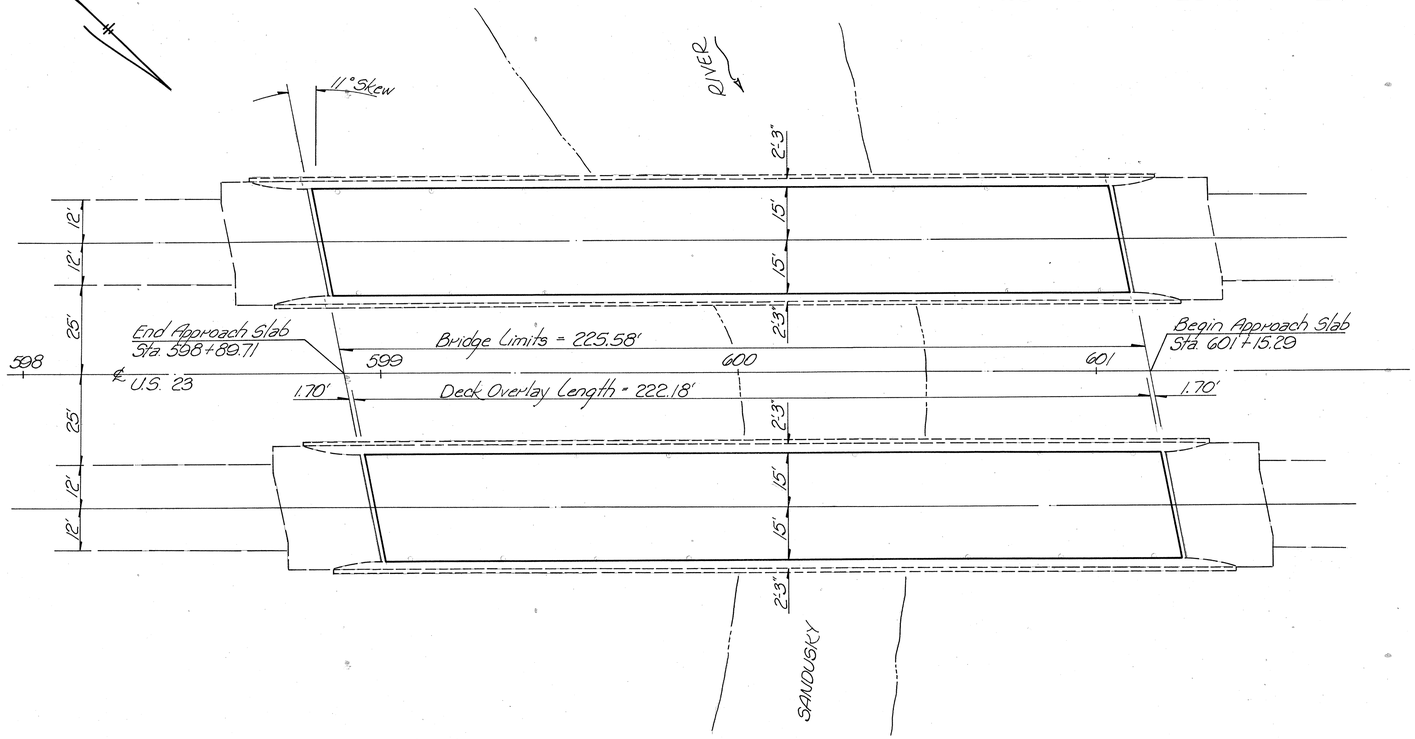
Computations By Initials J. S. S. Date 10/31/81
Computations Checked By Initials W.B.P. Date 1-13-82
Final Revisions By Initials Date

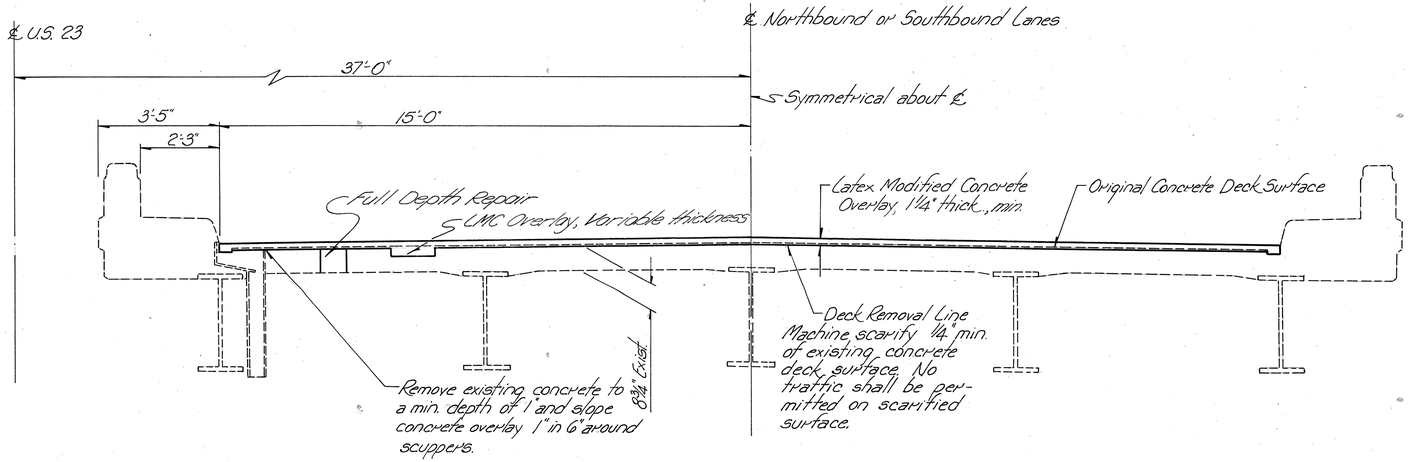
FHWA REGION	STATE	PROJECT	
5	OHIO		

88/108

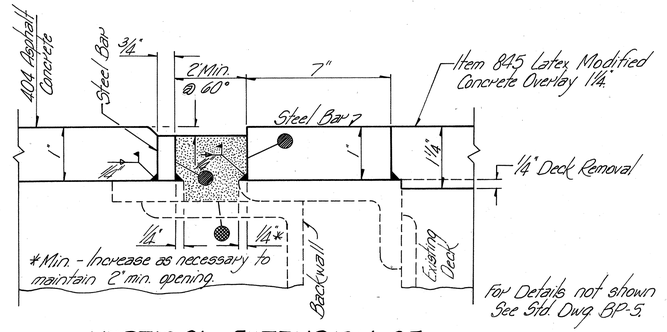
WYANDOT COUNTY
WYA-23-10.40

BRIDGES WYA-23-1244 L&R





TYPICAL DECK SECTION



VERTICAL EXTENSION OF STRUCTURAL EXPANSION JOINTS

- = Surfaces indicated thus shall be sandblasted and wiped clean. Joints shall be filled before rust forms. If rust forms, surface shall be re-sand blasted.
- = Bond to this horizonal surface shall be prevented by use of foil or other suitable bond-breaker barrier satisfactory to the Engineer. Care shall be taken not to displace this barrier when placing joint sealer.
- = Joint Sealer. Material shall be a hot-applied bridge deck waterproofing material which meets the requirements of 705.01.

Cost of cleaning the steel and furnishing and placing the joint sealer shall be included in this item.

MAINTENANCE OF TRAFFIC ~ Generally the bars shall be welded while the lane is closed for resurfacing. However if traffic is routed over the bars before resurfacing temporary ramps shall constructed to the tops of bars using 402 or 404 feathering at a maximum slope of ¼" per ft. The ramps shall be removed prior to resurfacing. Cost of planning and removing the ramps shall be included with Item 614 for payment.

ESTIMATED QUANTITIES (Carried to General Summary)

Structure	516		845		
	Vertical Extension of Structural Expansion Joints		Latex Modified Concrete Overlay (1¼" thick)	Latex Modified Concrete Overlay (Variable thickness)	Full-Depth Repair
	Lin. Ft.		Sq. Yd.	Cu. Yd.	Cu. Yd.
WYA-23-1244 L.	61.1		740.6	12.3	18.0
WYA-23-1244 R.	61.1		740.6	12.3	18.0
Totals	122.2		1481.2	24.6	36.0

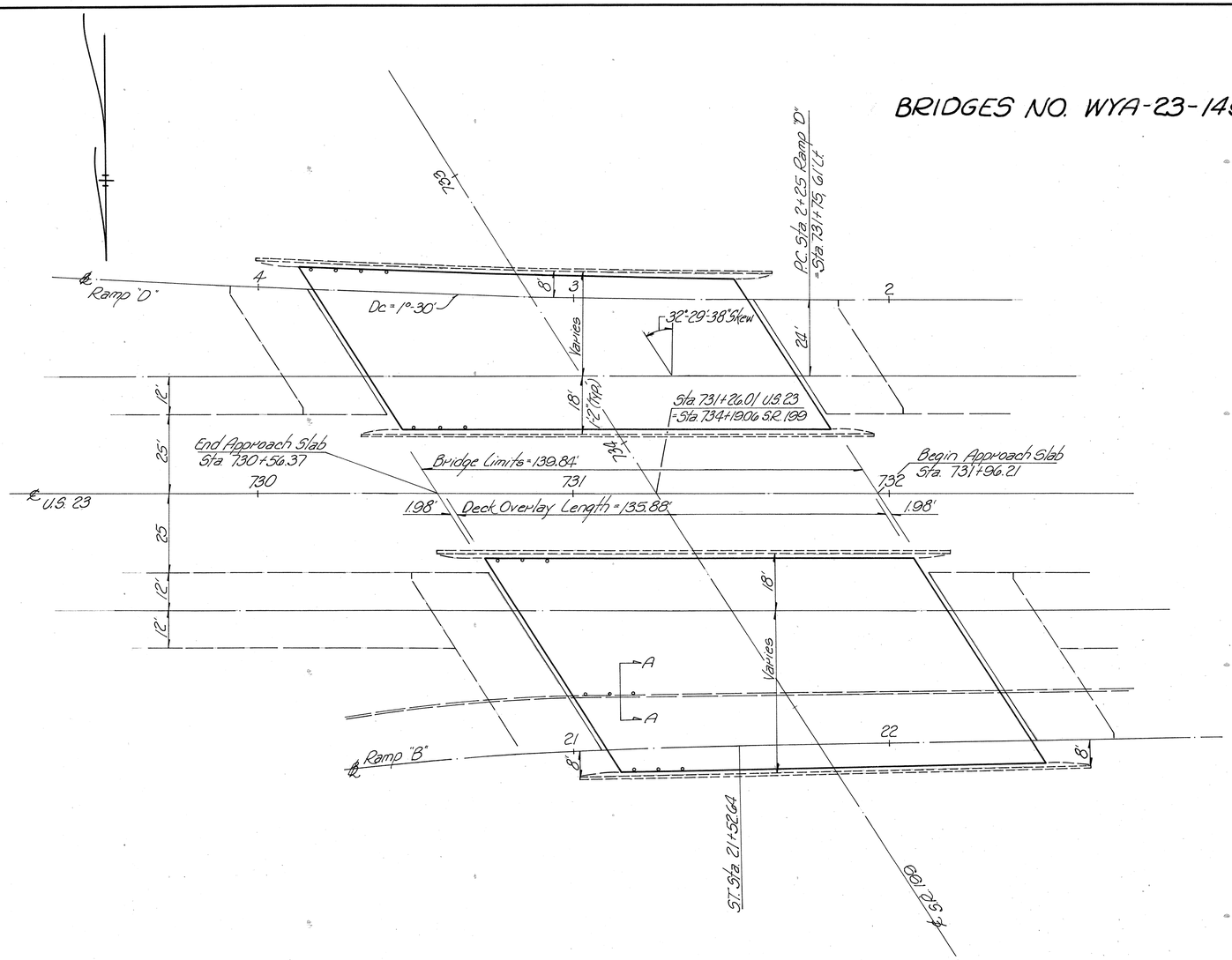
Computations By Initials J.S.S. Date 10/31/81
Computations Checked By Initials W.S.P. Date 1-13-82
Final Revisions By Initials Date

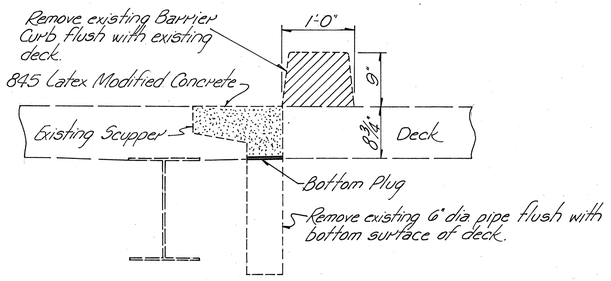
FHWA REGION	STATE	PROJECT	
5	OHIO		

89/108

WYANDOT COUNTY
WYA-23-10.40

BRIDGES NO. WYA-23-1494 L&R





SECTION A-A

ITEM SPECIAL - SCUPPERS ABANDONED — Work to be included with this item shall consist of removing the existing down pipe flush with the bottom of the deck, providing and installing a plug at the bottom of the remaining scupper section, and filling the remaining scupper with 845 Latex Modified Concrete. Payment for all of the above shall be included in the unit price bid for each, Item Special - Scuppers Abandoned

ITEM SPECIAL - BARRIER CURB REMOVED — Work included with this item includes the removal of the existing barrier curb across the structure and along Ramp "B" to an elevation flush with the existing deck. Payment for the above shall be included in the unit price bid per lineal foot, Item Special - Barrier Curb Removed

Note: For details for Vertical Extension of Structural Expansion Joints, see sheet 88

ESTIMATED QUANTITIES (Carried to General Summary)

Structure	516	845				Special	
	Vertical Extension of Structural Expansion Joints	Latex Modified Concrete Overlay (1½" Thick)	Latex Modified Concrete Overlay (Var. Thick.)	Full Depth Repair		Scuppers Abandoned	Barrier Curb Removed
	Lin. Ft.	Sq. Yd.	Cu. Yd.	Cu. Yd.		Each	Lin. Ft.
WYA-23-1494 L	117.2	739.9	12.3	18.0			
WYA-23-1494 R	157.4	1002.0	16.7	24.4		3	136
Totals	274.6	1741.9	29.0	42.4		3	136

FHWA REGION	STATE	PROJECT	
5	OHIO		

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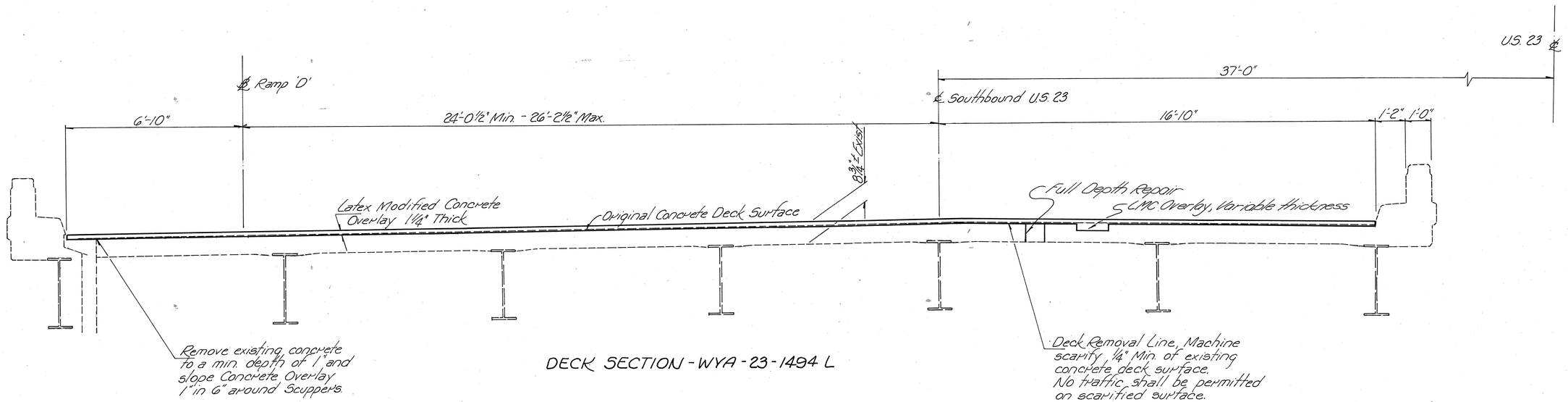
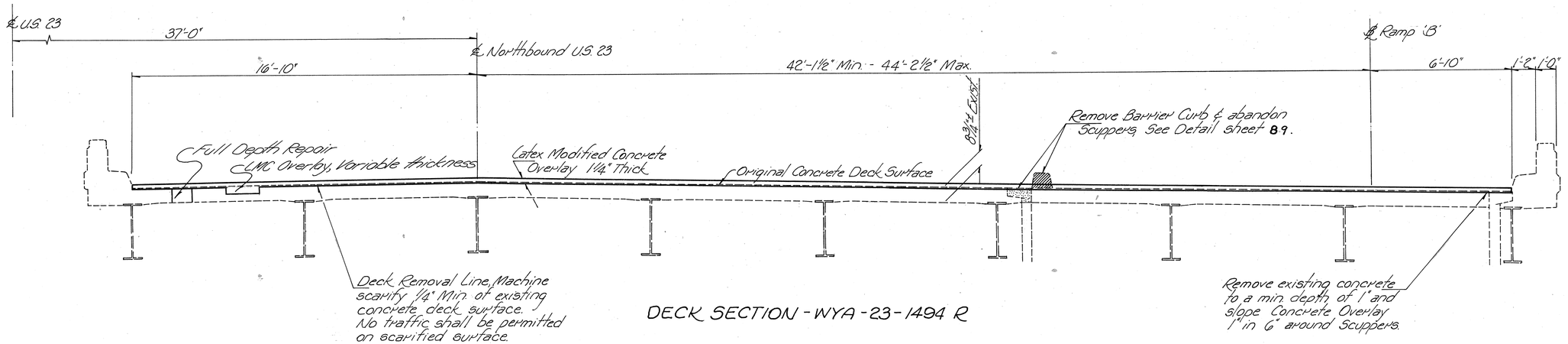
108

WYANDOT COUNTY
WYA-23-10.40



DECK SECTION - WYA-23-1494 L



DECK SECTION - WYA-23-1494 R

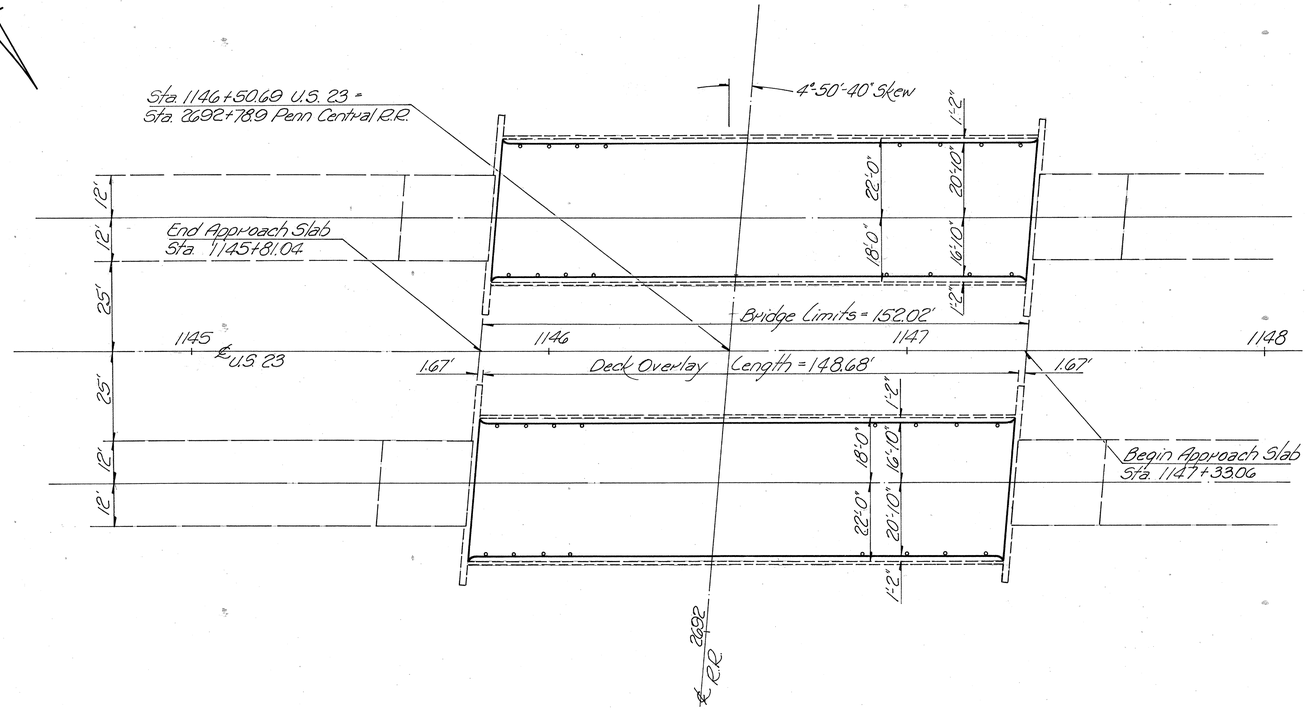
Computations By Initials J.S.S. Date 10/31/81
Computations Checked By Initials W.S.R. Date 1-13-82
Final Revisions By Initials Date

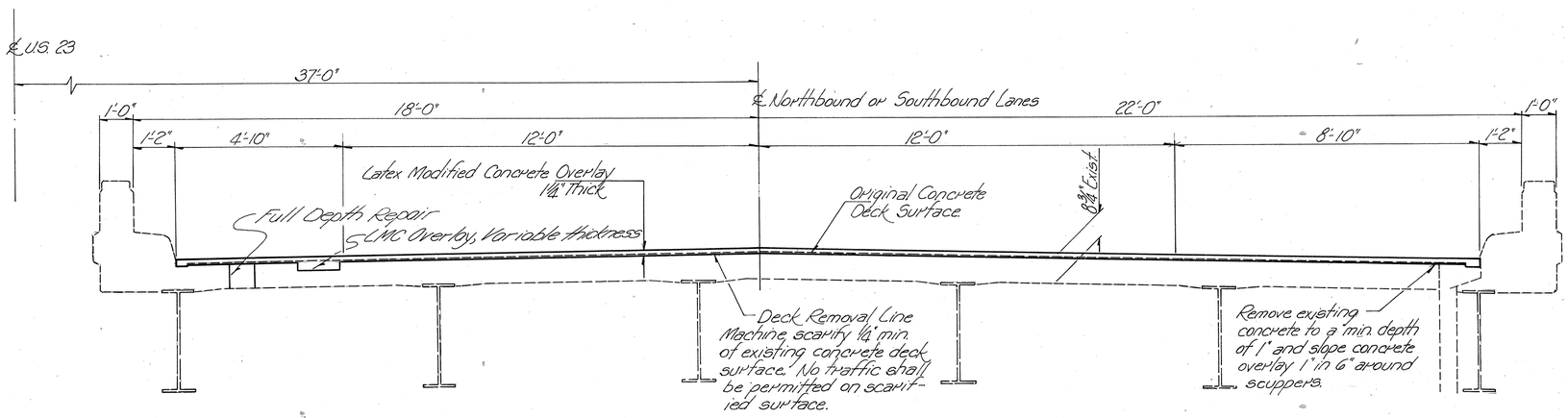
FHWA REGION	STATE	PROJECT	
5	OHIO		

91/108

WYANDOT COUNTY
WYA-23-10.40

BRIDGES WYA-23-2280 L & R
(Built as WYA-15-0364 L&R)





TYPICAL DECK SECTION

ESTIMATED QUANTITIES (Carried to General Summary)

Structure	516 Vertical Extension of Structural Expansion Joints		845 Latex Modified Concrete Overlay (1½" Thick)	845 Latex Modified Concrete Overlay (Variable Thickness)	845 Full Depth Repair
	Lin. Ft.		Sq. Yd.	Cu. Yd.	Cu. Yd.
WYA-23-2280 L	75.6		622.3	10.4	15.1
WYA-23-2280 R	75.6		622.3	10.4	15.1
Total	151.2		1244.6	20.8	30.2

Note: For details for Vertical Extension of Structural Expansion Joints, see sheet 88

ITEM 614 TEMPORARY PAVEMENT MARKING

Computations By Initials	R.J.Q. Date 1-12-82
Computations Checked By Initials	J.S.S. Date 1/12/82
Final Revisions By Initials	Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

92/108

WYANDOT COUNTY
WYA-23-10.40

LANE LINE 4"×12"(40'c/c)

Location	Station	Lin. Ft.
U.S. 23 N.B.	491+00 to 583+96	18,592
" " " " "	584+90 to 617+35	6,490
" " " " "	618+20 to 644+60	5,280
" " " " "	645+90 to 787+10	28,240
" " " " "	789+18 to 845+78	11,320
" " " " "	847+00 to 903+60	11,320
" " " " "	904+93 to 946+70	8,354
" " " " "	948+07 to 1006+10	11,606
" " " " "	1007+20 to 1048+48.96 (Bk.)	8,258
" " " " "	1048+21.18 to 1059+85 (Ah.)	2,328
" " " " "	1061+17 to 1105+85	8,936
" " " " "	1107+30 to 1148+33	8,206
U.S. 23 S.B.	491+00 to 583+25	18,450
" " " " "	584+55 to 616+80	6,450
" " " " "	617+10 to 645+00	5,580
" " " " "	647+00 to 735+21.67 (Bk.)	17,644
" " " " "	735+50 to 794+70 (Ah.)	11,840
" " " " "	796+25 to 802+85.49 (Bk.)	1,322
" " " " "	796+29.39 to 846+20 (Ah.)	9,980
" " " " "	848+00 to 904+00	11,200
" " " " "	905+60 to 947+17	8,314
" " " " "	948+90 to 1005+60	11,340
" " " " "	1007+10 to 1048+48.96 (Bk.)	8,278
" " " " "	1048+21.18 to 1059+35 (Ah.)	2,228
" " " " "	1060+87 to 1105+65	8,956
" " " " "	1107+00 to 1148+33	8,266
Off Ramp N.B.	495+40 to 499+60	420
On " " "	536+80 to 540+55	750
Off " " "	651+40 to 656+10	470
Off " " "	715+93 to 720+10	417
On " " "	737+00 to 741+23	846
Off " " "	1015+40 to 1019+30	390
On " " "	1042+00 to 1045+28	656
On Ramp S.B.	491+00 to 493+33	466
Off " " "	542+15 to 544+55	240
On " " "	647+00 to 650+60	720
On " " "	707+25 to 710+60	670
Off " " "	727+65 to 731+87	422
On " " "	852+25 to 854+00	350
Off " " "	875+40 to 879+72	432
	Total Lin. Ft.	266,027
	Total Miles	50.38

CHANNELIZING LINE 4"×12"(20'c/c)

Location	Station	Lin. Ft.
On Ramp N.B.	535+00 to 536+80	360
" " " "	734+42 to 735+21.67 (Bk.)	160
" " " "	735+50 to 737+00 (Ah.)	300
" " " "	1039+00 to 1042+00	600
On Ramp S.B.	493+33 to 495+75	484
" " " "	650+60 to 653+05	490
" " " "	710+60 to 713+17	514
" " " "	854+00 to 856+53	506
	Total Lin. Ft.	3,414
	Total Miles	.65

GORE LINES 2-4"×50' CONTINUOUS

Location	Station	Lin. Ft.
Off Ramp N.B.	499+60 to 500+10	200
" " " "	656+10 to 656+60	200
" " " "	720+10 to 720+60	200
" " " "	1019+30 to 1019+80	200
Off Ramp S.B.	541+65 to 542+15	200
" " " "	727+15 to 727+65	200
" " " "	874+90 to 875+40	200
	Total Lin. Ft.	1,400

Note:
Quantities Shown are for
Two Course Application
First Course Application will be class II, "Paint"
Second " " " " " ", Tape"

Computations By Initials R.A.A. Date 1-15-82
Computations Checked By Initials J.S.S. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

93/108

WYANDOT COUNTY
WYA-23-1040

620 DELINEATORS

Location	Station	Side	Interval	Type A Each	Type C Each	Type D Each	No. to be Removed	No. to be Replaced
U.S. 23 N.B.	500+50 to 520+50	Rt.	400	6			12	6
" " " "	524+50 to 528+50	"	400	2*			1	2*
" " " "	546+00 to 600+00	"	400	14*			15	14*
" " " "	604+00 to 644+00	"	400	11			14	11
" " " "	658+50 to 710+50	"	400	14			15	14
" " " "	722+50 to 730+50	"	400	3			3	3
" " " "	746+00 to 748+00	"					1	
" " " "	750+00 to 946+00	"	400	50			51	50
" " " "	950+00 to 1010+00	"	400	16*			17	16*
" " " "	1021+50 to 1033+50	"	400	4			6	4
" " " "	1053+50 to 1145+50	"	400	24			25	24
30 Inter.								
Ramp "C" N.B.	492+00 M.L. to 22+00 R.	"	200		11		21	11
" " " "	23+00 to 27+80	"	80		7		11	7
" " " "	27+80 to 33+80	"	200		3		6	3
Ramp "B" N.B.	2+50 to 4+50	Rt.	50		5		5	5
" " " "	4+50 to 6+90	Lt.	80			4	3	4
" " " "	10+00 Ramp to 546+00 M.L.	Rt.	200		9		14	9
" " " "	7+70 to 10+00	Lt.	80			4	6	4
S.R. 53 Inter.								
Ramp "D" N.B.	648+00 M.L. to 8+00 Ramp	Rt.	200		6		11	6
" " " "	8+00 to 13+60	Lt.	80			8	12	8
" " " "	13+60 to 14+60	Rt.	50		3		5	3
S.R. 199 Inter.								
Ramp "A" N.B.	712+50 M.L. to 22+50 Ramp	Rt.	200		6		10	6
" " " "	22+50 to 24+50	Lt.	200			2	5	2
" " " "	24+50 to 29+30	Rt.	80		7		5	7
" " " "	29+90 to 33+50	Rt.	60		7		10	7
" " " "	34+10 to 35+30	Rt.	120		2		2	2
S.R. 199 Inter.								
Ramp "B" N.B.	9+20 to 11+70	Rt.	50		6		10	6
" " " "	11+70 to 20+00	Lt.	50			18	26	18
" " " "	20+00 Ramp to 746+00 M.L.	Rt.	200		9*		5	9*
N.B. Exit Ramp								
Rest Area	1012+00 to 1022+00	Rt.	200		6		8	6
On Ramp R.A.	1029+50 to 1035+50	Lt.	200			4	6	4
" " " "	1035+50 to 1049+50	Rt.	200		8		10	8
U.S. 23 S.B.	500+00 to 540+00	Rt.	400	11*			10	11*
" " " "	550+00 to 638+00	Rt.	400	23			20	23
" " " "	660+00 to 700+00	Rt.	400	11			12	11
" " " "	718+00 to 726+00	Rt.	400	3			3	3
" " " "	739+00 to 843+00	Rt.	400	27			43	27
" " " "	860+00 to 872+00	Rt.	400	4			3	4
" " " "	887+00 to 1143+00	Rt.	400	65*			63	65*
30 Inter.								
Ramp "F" S.B.	3+50 to 7+50	Rt.	200		3		5	3
" " " "	8+00 to 9+00	Rt.	50		3		5	3
" " " "	9+60 to 11+40	Rt.	60		4		4	4
" " " "	11+40 to 19+40	Rt.	200		4		9	4
" " " "	19+40 to 27+40	Lt.	200			5	11	5
" " " "	27+40 to 493+40 M.L.	Rt.	200		5		9	5
30 Inter.								
Ramp "A" S.B.	2+00 to 24+00	Rt.	200		12		22	12
" " " "	18+00 to 24+00	Lt.	200			4	6	4
S.R. 53 Inter.								
Ramp "A" S.B.	10+50 to 12+50	Rt.	50		5		8	5
" " " "	12+50 to 18+00	Lt.	50			12	12	12
" " " "	18+00 to 642+00 M.L.	Rt.	200		9		11	9

"Continued"

620 DELINEATORS (Continued)

Location	Station	Side	Interval	Type A Each	Type C Each	Type D Each	No. to be Removed	No. to be Replaced
S.R. 199 Inter.								
Ramp "C" S.B.	3+90 to 7+50	Rt.	60		7		5	7
" " " "	7+50 to 14+00	Lt.	50			14	12	14
" " " "	14+00 Ramp to 702+00 M.L.	Rt.	200		9		17	9
S.R. 199 Inter.								
Ramp "D" S.B.	8+00 to 9+50	Lt.	50			4	4	4
" " " "	9+50 to 12+50	Lt.	50			6	11	6
" " " "	13+00 to 15+00	Lt.	50			5	3	5
" " " "	735+00 M.L. to 8+00 Ramp	Rt.	200		6*		3	6*
" " " "	8+00 to 13+00	Rt.	50		10		18	10
" " " "	13+80 to 15+40	Rt.	80		3		2	3
" " " "	14+10 to 14+90	Rt.					2	
Off Ramp R Area	875+00 to 883+00	Rt.	200		5		9	5
On " " "	848+00 to 860+00	Rt.	200		7		13	7
	Totals			288	187	90	706	565

* 1-Req'd. Bracket Mounted

ITEM 621 TRAFFIC ZONE PAVEMENT MARKING

Computations By Initials R.A. Date 1-12-82
Computations Checked By Initials J.S.S. Date 1/12/82
Final Revisions By Initials Date

FHWA REGION	STATE	PROJECT	
5	OHIO		

94/108

WYANDOT COUNTY
WYA-23-1040

4" EDGE LINE

Location	Station	White	Yellow
U.S.23 N.B. R.S.	491+00 to 492+00	100	
" " " " " "	500+10 to 536+80	3,670	
" " " " " "	546+86 to 583+96	3,710	
" " " " " "	585+28 to 617+00	3,172	
" " " " " "	618+25 to 644+45	2,620	
" " " " " "	645+90 to 648+00	210	
" " " " " "	656+60 to 712+50	5,590	
" " " " " "	720+60 to 735+21.67 (BK.)	1,462	
" " " " " "	735+50 to 737+00 (AH.)	150	
" " " " " "	746+65 to 787+09	4,044	
" " " " " "	788+55 to 845+65	5,710	
" " " " " "	847+15 to 903+50	5,635	
" " " " " "	904+93 to 946+70	4,177	
" " " " " "	948+07 to 1006+00	5,793	
" " " " " "	1007+40 to 1011+80	440	
" " " " " "	1019+80 to 1042+00	2,220	
" " " " " "	1051+00 to 1059+85	885	
" " " " " "	1061+17 to 1105+85	4,468	
" " " " " "	1108+35 to 1148+33	3,998	
U.S.23 N.B. L.S.	491+00 to 583+96		9,296
" " " " " "	584+52 to 617+35		3,283
" " " " " "	617+80 to 645+38		2,758
" " " " " "	645+90 to 787+94		14,204
" " " " " "	789+18 to 846+57		5,739
" " " " " "	847+00 to 904+47		5,747
" " " " " "	904+93 to 947+60		4,267
" " " " " "	948+07 to 1006+32		5,825
" " " " " "	1006+75 to 1048+48.96(BK.)		4,174
" " " " " "	1048+21.18 to 1060+08 (AH.)		1,187
" " " " " "	1060+45 to 1106+18		4,573
" " " " " "	1106+90 to 1148+33		4,143
U.S.23 S.B. R.S.	493+32 to 541+65	4,833	
" " " " " "	548+00 to 583+25	3,525	
" " " " " "	584+55 to 616+80	3,225	
" " " " " "	618+10 to 645+38	2,728	
" " " " " "	650+60 to 701+70	5,110	
" " " " " "	710+60 to 727+15	1,655	
" " " " " "	735+05 to 735+21.67 (BK.)	17	
" " " " " "	735+50 to 802+85.49 (AH.)	6,736	
" " " " " "	796+29.39 to 846+50 (AH.)	5,020	
" " " " " "	854+00 to 874+90	2,090	
" " " " " "	883+00 to 904+30	2,130	
" " " " " "	906+00 to 947+45	4,145	
" " " " " "	948+90 to 1005+60	5,670	
" " " " " "	1007+10 to 1059+35	5,225	
" " " " " "	1060+75 to 1105+25	4,450	
" " " " " "	1107+00 to 1148+33	4,133	
U.S.23 S.B. L.S.	491+00 to 583+96		9,296
" " " " " "	584+52 to 617+35		3,283
" " " " " "	617+80 to 645+38		2,758
" " " " " "	645+90 to 735+21.67 (BK.)		8,932
" " " " " "	735+50 to 794+57 (AH.)		5,907
" " " " " "	795+85 to 802+85.49 (BK.)		701
" " " " " "	796+29.39 to 846+50 (AH.)		5,020
" " " " " "	847+00 to 904+47		5,747
" " " " " "	904+93 to 947+45		4,252
" " " " " "	948+07 to 1005+32		5,725
" " " " " "	1006+75 to 1048+48.96(BK.)		4,174
" " " " " "	1048+21.18 to 1060+08 (AH.)		1,187
" " " " " "	1060+45 to 1106+18		4,573
" " " " " "	1106+90 to 1148+33		4,143
	"Continued"		

4" EDGE LINE - CONTINUED

Location	Station	White	Yellow
Off Ramp C N.B.	492+00 M.L. to 34+80 Ramp	3,282	
On " B " "	1+80 Ramp to 546+86 M.L.	2,506	
Off " D " "	648+00 M.L. to 15+67 Ramp	1,627	
" " A " "	712+50 M.L. to 35+68 "	2,342	
On " B " "	9+00 Ramp to 746+65 M.L.	2,738	
Off " Rest A. " "	1011+80 to 1021+90	1,010	
On " " " "	1031+50 to 1042+00	1,050	
On Ramp F S.B.	491+00 M.L. to 3+00 Ramp	3,500	
Off " A " "	2+00 to 23+55 "	2,155	
On " A " "	10+08 Ramp to 647+00 M.L.	1,892	
" " O " "	3+45 " to 701+70 " "	2,685	
Off " O " "	735+05 M.L. to 15+63 Ramp	1,668	
On " Rest A. " "	847+75 to 863+20	1,545	
Off " " " "	872+90 to 883+00	1,010	
Off Ramp C N.B.	500+10 M.L. to 34+80 Ramp		2,472
On " B " "	1+80 to 15+00 "		1,320
Off " D " "	6+60 to 15+67 "		907
" " A " "	20+60 to 35+68 "		1,508
On " B " "	9+50 to 21+50 "		1,200
Off " Rest A. " "	1019+80 to 1021+37 "		157
On " " " "	1031+50 to 1039+00		750
On Ramp F S.B.	495+25 M.L. to 3+00 Ramp		3,025
Off " A " "	8+37 to 23+55 "		1,518
On " A " "	10+08 Ramp to 647+00 M.L.		1,287
" " O " "	3+45 to 18+82 Ramp		1,537
Off " D " "	6+85 to 15+63 "		878
On " Rest A. " "	856+53 to 863+20		667
Off " " " "	872+90 to 874+90		200
C.R. 47	Median Nose on Lt.		164
" "	" " Rt.		154
C.R. 97F	Island Edge		160
S.R. 199	" "		500
	"Continued"		

8" CHANNELIZING LINE

Location	Station	Lin. Ft.
Off Ramp N.B.	497+70 to 500+10	480
On " " "	535+00 to 536+80	180
Off " " "	654+00 to 656+60	520
" " "	718+65 to 720+60	390
On " " "	734+42 to 735+21.67 (BK)	80
" " "	735+50 to 737+00 (AH.)	150
Off " " "	1017+80 to 1019+80	400
On " " "	1039+00 to 1042+00	300
On Ramp S.B.	493+33 to 495+75	242
Off " " "	541+65 to 543+45	360
On " " "	650+60 to 653+05	245
" " "	710+60 to 713+17	257
Off " " "	727+15 to 729+60	490
On " " "	854+00 to 856+53	253
Off " " "	874+90 to 877+40	500
	Total Lin. Ft.	4,847

4" WHITE LANE LINE (10'-30')

Location	Station	Lin. Ft.
U.S. 23 N.B.	491+00 to 583+96	9,296
" " " "	584+90 to 617+35	3,245
" " " "	618+20 to 644+60	2,640
" " " "	645+90 to 787+10	14,120
" " " "	789+18 to 845+78	5,660
" " " "	847+00 to 903+60	5,660
" " " "	904+93 to 946+70	4,177
" " " "	948+07 to 1006+10	5,803
" " " "	1007+20 to 1048+48.96 (BK.)	4,129
" " " "	1048+21.18 to 1059+85 (AH.)	1,164
" " " "	1061+17 to 1105+85	4,468
" " " "	1107+30 to 1148+33	4,103
U.S. 23 S.B.	491+00 to 583+25	9,225
" " " "	584+55 to 616+80	3,225
" " " "	618+10 to 645+38	2,728
" " " "	647+00 to 735+21.67 (BK.)	8,822
" " " "	735+50 to 794+70 (AH.)	5,920
" " " "	796+25 to 802+85.49 (BK.)	661
" " " "	796+29.39 to 846+50 (AH.)	5,020
" " " "	848+00 to 904+57	5,657
" " " "	905+60 to 947+60	4,200
" " " "	948+90 to 1005+60	5,670
" " " "	1007+10 to 1048+48.96 (BK.)	4,139
" " " "	1048+21.18 to 1059+35 (AH.)	1,114
" " " "	1060+87 to 1105+65	4,478
" " " "	1107+00 to 1148+33	4,133
Off Ramp N.B.	495+40 to 497+70	230
On " " "	536+80 to 540+55	375
Off " " "	651+40 to 654+00	260
" " "	715+93 to 718+65	272
On " " "	737+00 to 741+23	423
Off " " "	1015+40 to 1017+80	240
On " " "	1042+00 to 1045+28	328
On Ramp S.B.	491+00 to 493+33	233
Off " " "	543+45 to 544+55	110
On " " "	647+00 to 650+60	360
" " "	707+25 to 710+60	335
Off " " "	729+60 to 731+87	227
On " " "	852+25 to 854+00	175
Off " " "	877+40 to 879+72	232
	Total Lin. Ft.	133,257
	Total Miles	25.24

24" TRANSVERSE LINES

Location	Station	Lin. Ft.
Off Ramp N.B.	497+70 to 500+10	378
" " " "	654+00 to 656+60	451
" " " "	718+65 to 720+60	255
" " " "	1017+80 to 1019+80	283
Off Ramp S.B.	541+65 to 543+45	228
" " " "	727+15 to 729+60	378
" " " "	874+90 to 877+40	415
	Total Lin. Ft.	2,388

4" EDGE LINE - CONTINUED

Location	Station	White	Yellow
C.R. 42 E.S.	51+27 to 52+03	152	
" " " W.S.	49+30 to 50+03	146	
" " 44 E.S.	50+72 to 51+38	132	
" " " W.S.	48+65 to 49+28	126	
" " 47 E.S.	51+60 to 52+28	136	
" " " W.S.	48+86 to 49+68	164	
" " 50 E.S.	50+72 to 51+00	56	
" " " W.S.	49+00 to 49+28	56	
S.R. 67 E.S.	49+90 to 49+27	126	
" " " W.S.	47+00 to 47+60	120	
C.R. 97F E.S.	50+65 to 52+00	270	
" " " W.S.	48+55 to 49+18 R.S.	63	
" " " " "	48+55 to 49+00 L.S.	45	
" " 98 E.S.	50+62 to 51+10 R.S.	48	
" " " " "	50+80 to 51+10 L.S.	30	
" " " W.S.	48+70 to 49+13 R.S.	86	
" " 103-J E.S.	49+32 to 49+80 R.S.	48	
" " " " "	49+45 to 49+80 L.S.	35	
" " " W.S.	47+30 to 47+85 R.S.	55	
" " " " "	47+30 to 47+60 L.S.	30	
" " 121 E.S.	50+80 to 51+40 R.S.	60	
" " " " "	50+70 to 51+40 L.S.	70	
" " 4 E.S.	51+62 to 52+25 R.S.	126	
" " " W.S.	49+60 to 50+18 R.S.	116	
" " 121 " "	48+60 to 49+28 R.S.	68	
" " " " "	48+60 to 49+35 L.S.	75	
	Total Lin. Ft.	150,195	149,298
	Total Lin. Ft.	299,493	
	Total Miles	56.72	

DOUBLE YELLOW CENTER LINE

Location	Station	Lin. Ft.
C.R. 42 E.S.	51+27 to 52+03	76
" " W.S.	49+30 to 50+03	73
" " 44 E.S.	50+72 to 51+38	66
" " " W.S.	48+65 to 49+28	63
" " 47 E.S.	51+60 to 52+28	68
" " " W.S.	48+86 to 49+68	82
" " 50 E.S.	50+72 to 51+00	28
" " " W.S.	49+00 to 49+28	28
S.R. 67 E.S.	49+27 to 49+90	63
" " " W.S.	47+00 to 47+60	60
C.R. 97F E.S.	50+82 to 52+00	118
" " " W.S.	48+55 to 49+18	63
" " 98 E.S.	50+62 to 51+10	48
" " " W.S.	48+70 to 49+13	43
" " 103-J E.S.	49+32 to 49+80	48
" " " W.S.	47+30 to 47+85	55
" " 4 E.S.	51+62 to 52+25	63
" " " W.S.	49+60 to 50+18	58
" " 121 E.S.	50+82 to 51+40	58
" " " W.S.	48+60 to 49+28	68
	Total Lin. Ft.	1,229
	Total Miles	0.23

ITEM 621 TRAFFIC ZONE PAVEMENT MARKING

Computations By Initials R.J.A. Date 1-12-82
Computations Checked By Initials J.S.S. Date 1/12/82
Final Revisions By Initials ____ Date ____

FHWA REGION	STATE	PROJECT	
5	OHIO		

95/108

WYANDOT COUNTY
WYA-23-10.40

24" STOP LINE

Location	Station	Lin. Ft.
Off Ramp C	34+82 N.B. (30)	24
" " A	23+57 S.B. (30)	24
" " D	15+67 N.B. (53)	95
" " D	15+65 (199)	25
" " A	35+70 (199)	35
C.R. 121 E.S.	50+80	33
" " " W.S.	49+30	35
" " 4 E.S.	51+60	15
" " " W.S.	50+20	15
" " 103-J E.S.	49+30	30
" " " W.S.	47+87	35
" " 98 E.S.	50+60	32
" " " W.S.	49+15	30
" " 97F E.S.	50+65	30
" " " " "	50+80	13
" " " W.S.	49+20	40
S.R. 67 E.S.	49+25	13
C.R. " W.S.	47+62	13
" " 50 E.S.	50+70	23
" " " W.S.	49+30	23
" " 47 E.S.	51+58	13
" " " W.S.	49+30	13
" " 44 E.S.	50+70	13
" " " W.S.	49+30	13
" " 42 E.S.	51+25	20
" " " W.S.	50+05	20
	Total Lin. Ft.	725

PAVEMENT ARROWS

Location	Station	Each
Off Ramp C	34+32 N.B. (30)	1
" " D	15+15 " " (53)	1
" " A	35+20 " " (199)	1
" " A	23+07 S.B. (30)	1
" " D	15+15 " " (199)	1
	Total	5

PRISMATIC CASTING & REFLECTOR QUANTITIES

Location	Station	Two-Way Plowable Castings	Reflectors					
			Yellow Yellow	Yellow Red	White Red	White	Yellow	White White
U.S. 23 Laneline	491+25 to 583+70 N.B.	87			87			
" " " "	585+55 to 598+45 " "	17			17			
" " " "	601+60 to 617+10 " "	20			20			
" " " "	617+45 to 644+35 " "	34			34			
" " " "	646+15 to 730+25 " "	107			107			
" " " "	732+60 to 747+40 " "	20			20			
" " " "	750+20 to 780+85 " "	39			39			
" " " "	782+45 to 786+80 " "	7			7			
" " " "	789+45 to 845+50 " "	71			71			
" " " "	847+25 to 903+35 " "	72			72			
" " " "	905+15 to 946+55 " "	53			53			
" " " "	948+30 to 1005+85 " "	73			73			
" " " "	1007+45 to 1008+25 " "	2			2			
" " " "	1011+45 to 1059+65 " "	62			62			
" " " "	1061+40 to 1105+60 " "	56			56			
" " " "	1107+45 to 1145+25 " "	49			49			
" " " "	1147+65	1			1			
U.S. 23 Laneline	491+25 to 523+35 S.B.	41			41			
" " " "	525+30 to 583+00 " "	58			58			
" " " "	584+80 to 598+45 " "	18			18			
" " " "	601+65 to 616+60 " "	20			20			
" " " "	618+35 to 645+15 " "	34			34			
" " " "	647+25 to 729+85 " "	104			104			
" " " "	732+25 to 746+90 " "	19			19			
" " " "	749+70 to 784+90 " "	31			31			
" " " "	786+50 to 794+45 " "	12			12			
" " " "	796+50 to 846+25 " "	71			71			
" " " "	848+25 to 904+20 " "	71			71			
" " " "	905+85 to 947+35 " "	53			53			
" " " "	949+15 to 1005+35 " "	71			71			
" " " "	1007+35 to 1008+95 " "	3			3			
" " " "	1011+70 to 1059+10 " "	60			60			
" " " "	1061+10 to 1105+45 " "	56			56			
" " " "	1107+25 to 1145+65 " "	49			49			
" " " "	1147+60 " "	1			1			
Off Ramp "C"	Std. Gore Lighting N.B.	29				29		
On " "B"	" Ent. " " "	14				14		
Off " "D"	" Gore " " "	31				31		
" " "A"	" " " " "	25				25		
On " "B"	" Ent. " " "	18				18		
Off " R. Area	" Gore " " "	27				27		
On " " "	" Ent. " " "	20				20		
On Ramp "F"	Std. Ent. Lighting S.B.	16				16		
Off " "A"	" Gore " " "	23				23		
On " "A"	" Ent. " " "	18				18		
" " "C"	" " " " "	20				20		
Off " "D"	" Gore " " "	31				31		
On " R. Area	" Ent. " " "	18				18		
Off " " "	" Gore " " "	31				31		
	Total Castings	1,863						
	Total Reflectors				••1,542	•321		

•• Two Way
• One Way

GENERAL SUMMARY

SIGNING

Computations By Initials R.E.H. Date 11/16/82
Computations Checked By Initials J. S.S. Date 1/12/82
Final Revisions By Initials Date

CALC. BY DATE
CHKD. BY DATE

OHIO
FHWA REGION 5

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WYANDOT COUNTY
WYA. - 23 - 1040

ITEM	SHEET NUMBER 98
630	42
630	14
630	7
630	395
630	266
630	49
630	38
630	21.9

ITEM	QUANT.	UNIT	DESCRIPTION
			SIGNING
630	42	Each	Removal of Ground Mounted Post Support
630	14	Each	Removal of Ground Mounted Sign and Re-erection
630	7	Each	Removal of Ground Mounted Major Sign and Re-erection
630	395	Lin.Ft.	Ground Mounted Supports, S4×7.7 Beam
630	266	Lin.Ft.	Ground Mounted Supports, W10×11.5 Beam
630	49	Lin.Ft.	Ground Mounted Supports, W8×17 Beam
630	38	Each	Breakaway Beam Connection
630	21.9	Cu.Yd.	Concrete For Embedded Foundation

TRAFFIC CONTROL QUANTITIES

CALCULATIONS
MADE BY R.E.H. DATE 1/12/82
CHECKED J.S.S. DATE 1/12/82

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WYANDOT COUNTY
WYA - 23 - 10.40

GROUND MOUNTED SIGNS

630

GROUND MOUNTED SIGN SUPPORTS

NO.	STATION	SIDE OF ROAD	SIGN DESIGNATION	SIGN AREA SQ. FT.	SHEET POST SQ. FT.	S4x7.7 Lin. Ft.	W10x11.5 Lin. Ft.	W8x17 Lin. Ft.	CONCRETE F/S EMBEDDED FOUNDATION CU. YD.	BREAKAWAY BEAM CONNECTION EACH	REMOVAL OF GRD. MTD. SIGN AND REERECTION EACH	REMOVAL OF GRD. MTD. MAJOR SIGN AND REERECTION EACH	REMOVAL OF GRD. MTD. BEAM SUPPORT EACH	REMOVAL OF GRD. MTD. POST SUPPORT EACH
1	500+61	Rt.	GF	72"x60"	30.0	16.5/16.5			.27/.27	2	1			2
2	541+09	Lt.	GF	72"x60"	30.0	17.0/17.0			.27/.27	2	1			2
3	623+19	Rt.	GSH	96"x36"	24.0	16.5/16.0			.27/.27	2	1			2
4	634+57	Rt.												2
4-A	635+57	Rt.	GSC	96"x36"	24.0	16.0/17.0			.27/.27	2	1			
5	657+19	Rt.	GF	72"x60"	30.0	16.5/16.5			.27/.27	2	1			2
6	666+86	Lt.	GSH	96"x36"	24.0	15.0/15.0			.27/.27	2	1			2
7	669+54	Lt.	GSC	96"x36"	24.0	15.0/14.5			.27/.27	2	1			2
8	721+96	Rt.												2
8-A	721+00	Rt.	GF	72"x60"	30.0	17.0/17.0			.27/.27	2	1			
9	726+80	Lt.	GF	72"x60"	30.0	16.5/16.5			.27/.27	2	1			2
10	774+72	Lt.(SB)	GS-96	96"x48"	32.0	17.0/18.0			.27/.27	2	1			2
11	854+69	Rt.	RA-1	132"x60"	55.0		21.5/23.0		1.10/1.10	2		1		3
12	873+30	Lt.												2
12-A	874+30	Lt.	RA-A	72"x66"	33.0	17.5/17.0			.27/.27	2	1			
13	883+00	Lt.	RA-2	132"x60"	55.0		23.5/21.0		1.10/1.10	2		1		2
14	928+00	Lt.	RA-1	132"x60"	55.0									
			GSF-1	132"x24"	22.0			25.0/23.5	1.10/1.10	2	1	1		3
15	966+00	Rt.	RA-1	132"x60"	55.0									
			GSF-1	132"x24"	22.0		23.0/25.0		1.10/1.10	2	1	1		3
16	1011+80	Rt.	RA-2	132"x60"	55.0		22.5/24.5		1.10/1.10	2		1		3
17	1020+50	Rt.	RA-A	72"x66"	33.0	16.5/16.5			.27/.27	2	1			2
18	1026+00	Lt.	RA-1	132"x60"	55.0		19.0/20.5		1.10/1.10	2		1		2
19	1129+00	Lt.	GJ	144"x48"	48.0		22.0/20.0		1.10/1.10	2		1		2
	Total				766.0	394.5	265.5	48.5	21.88	38	14	7		42

NOTE:
This Column
For Information
Only

GROUND MOUNTED SIGN QUANTITIES

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WYANDOT COUNTY
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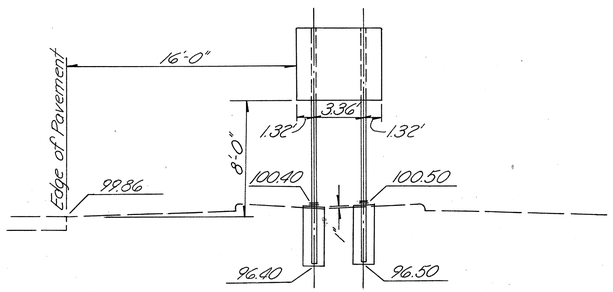
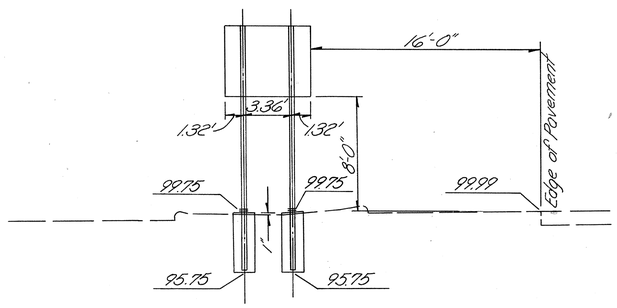
SIGNING

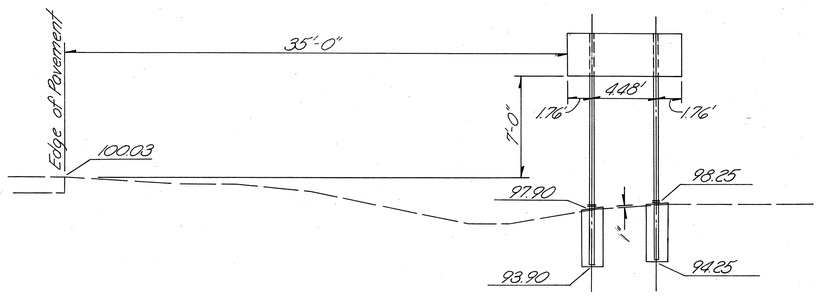
SIGN #1
BREAKAWAY SUPPORTS Sta. 500+61, 16' Rt., U.S. 23
2-S4x7.7 Sign Area ~ 6'x5' = 30 Sq. Ft.



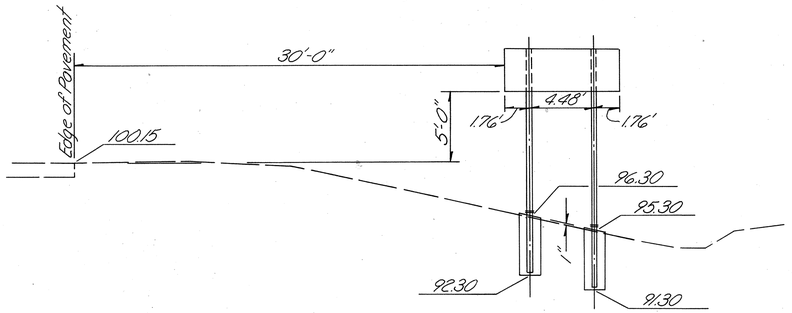
SIGN #2
BREAKAWAY SUPPORTS Sta. 541+09, 16' Lt., U.S. 23
2-S4x7.7 Sign Area ~ 6'x5' = 30 Sq. Ft.



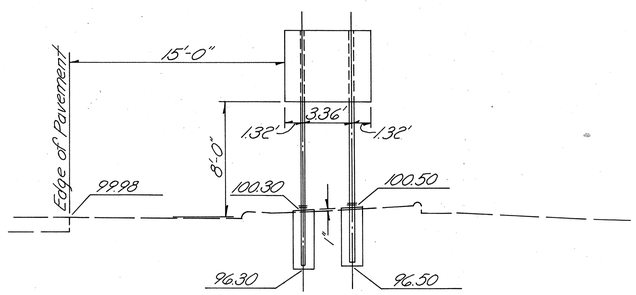
SIGN #3
BREAKAWAY SUPPORTS Sta. 623+19, 35' Rt., U.S. 23
2-S4x7.7 Sign Area ~ 8'x3' = 24 Sq. Ft.



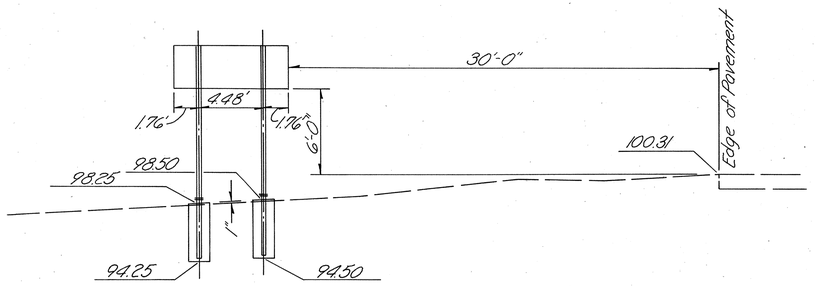
SIGN #4A
BREAKAWAY SUPPORTS Sta. 635+57, 30' Rt., U.S. 23
2-S4x7.7 Sign Area ~ 8'x3' = 24 Sq. Ft.



SIGN #5
BREAKAWAY SUPPORTS Sta. 657+19, 15' Rt., U.S. 23
2-S4x7.7 Sign Area ~ 6'x5' = 30 Sq. Ft.



SIGN #6
BREAKAWAY SUPPORTS Sta. 666+86, 30' Lt., U.S. 23
2-S4x7.7 Sign Area ~ 8'x3' = 24 Sq. Ft.



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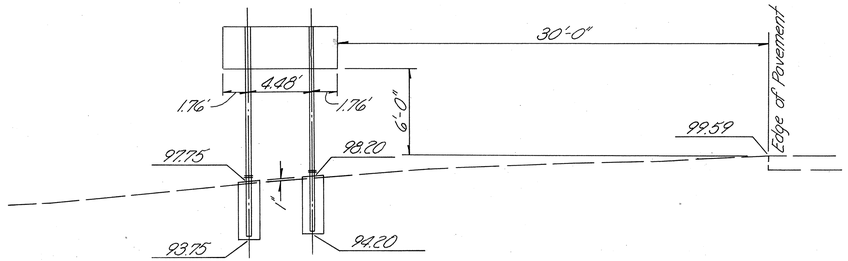
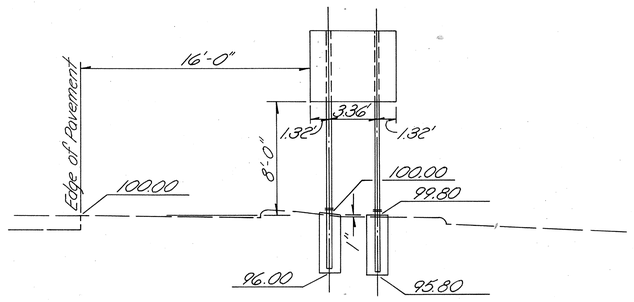
WYANDOT COUNTY
WYA. - 23 - 10.40

SIGNING

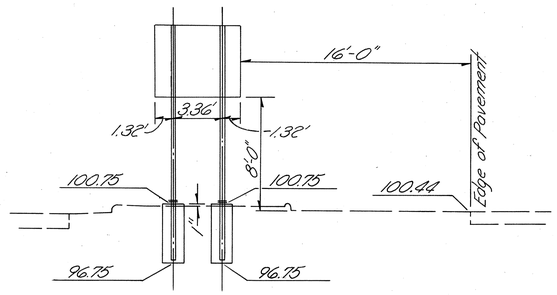
SIGN #7
BREAKAWAY SUPPORTS 2 - S4 x 7.7
Sta. 669+54, 30' Lt., US 23
Sign Area ~ 8' x 3' = 24 Sq. Ft.



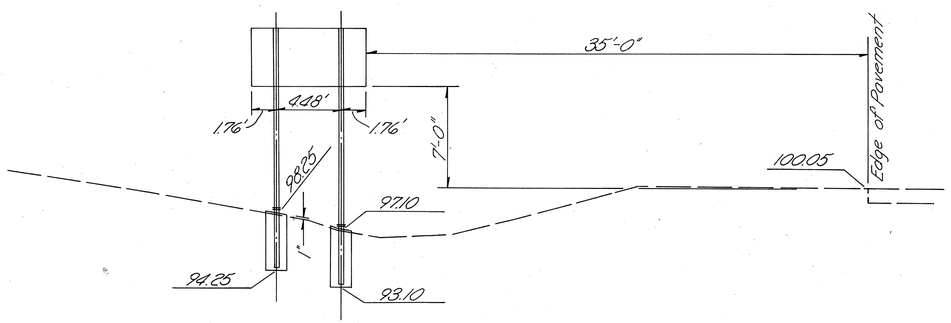
SIGN #8A
BREAKAWAY SUPPORTS 2 - S4 x 7.7
Sta. 721+00, 16' Rt., US 23
Sign Area ~ 6' x 5' = 30 Sq. Ft.



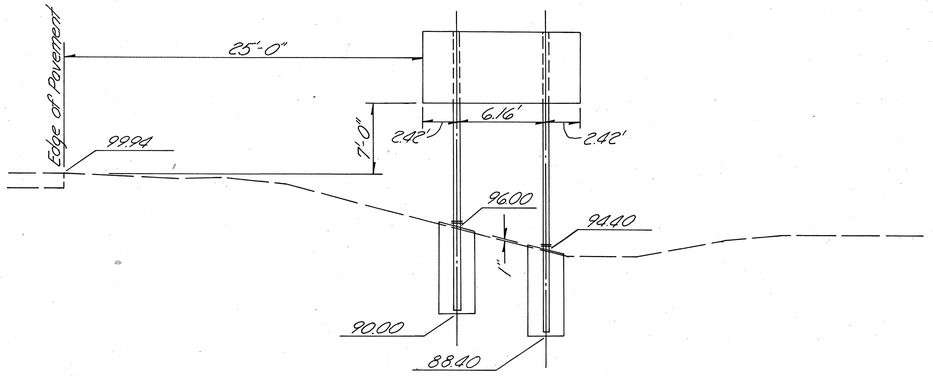
SIGN #9
BREAKAWAY SUPPORTS 2 - S4 x 7.7
Sta. 726+00, 16' Lt., US 23
Sign Area ~ 6' x 5' = 30 Sq. Ft.



SIGN #10
BREAKAWAY SUPPORTS 2 - S4 x 7.7
Sta. 774+72, 35' Lt., US 23 (S.B. Lane)
Sign Area ~ 8' x 4' = 32 Sq. Ft.



SIGN #11
BREAKAWAY SUPPORTS 2 - W10 x 11.5
Sta. 854+69, 25' Rt., US 23
Sign Area ~ 11' x 5' = 55 Sq. Ft.



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WYANDOT COUNTY
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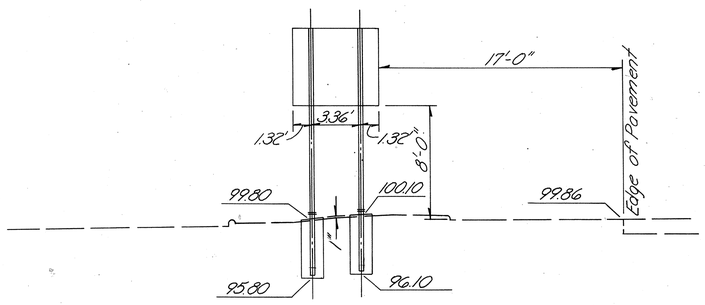
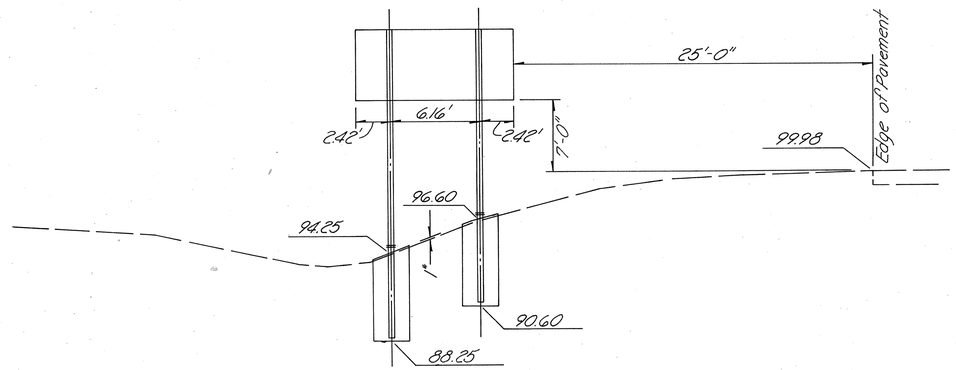
SIGNING

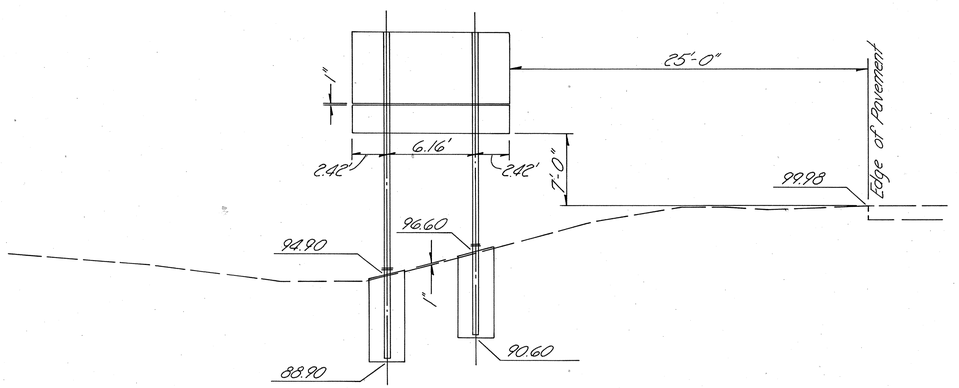
SIGN #12A
BREAKAWAY SUPPORTS 2-S4×7.7
Sta. 874+30, 17' Lt., U.S. 23
Sign Area ~ 6'×5.5' = 33 Sq. Ft.



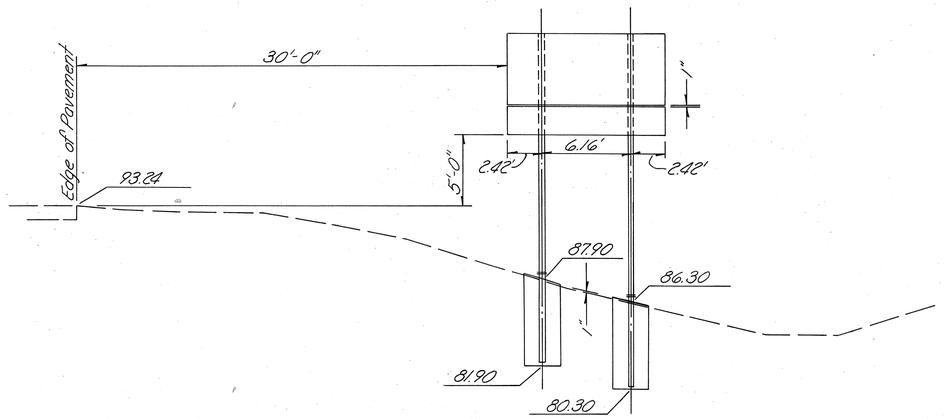
SIGN #13
BREAKAWAY SUPPORTS 2-W10×11.5
Sta. 883+00, 25' Lt., U.S. 23
Sign Area ~ 11'×5' = 55 Sq. Ft.



SIGN #14
BREAKAWAY SUPPORTS 2-W8×17
Sta. 928+00, 25' Lt., U.S. 23
Sign Area ~ 11'×5' = 55 Sq. Ft.
11'×2' = 22 Sq. Ft.



SIGN #15
BREAKAWAY SUPPORTS 2-W10×11.5
Sta. 966+00, 30' Rt., U.S. 23
Sign Area ~ 11'×5' = 55 Sq. Ft.
11'×2' = 22 Sq. Ft.



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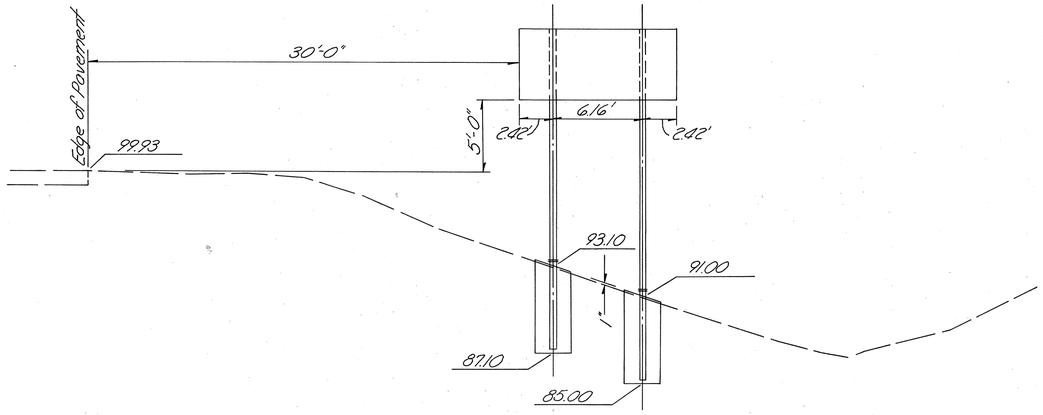
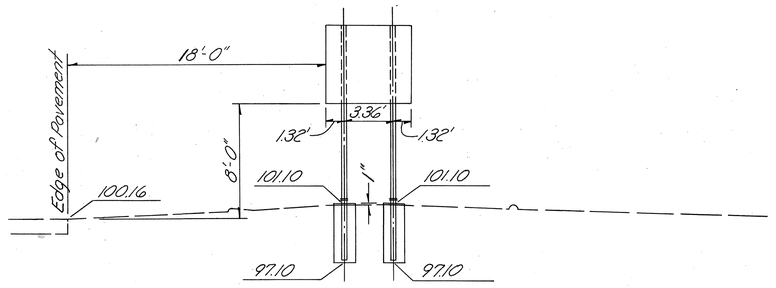
SIGNING

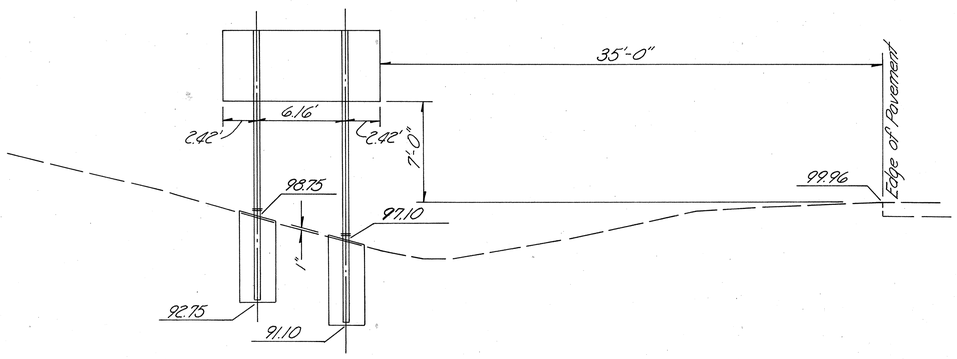
SIGN #16
BREAKAWAY SUPPORTS Sta. 1011+80, 30' Rt., U.S. 23
2-W10×11.5 Sign Area ~ 11'×5' = 55 Sq. Ft.



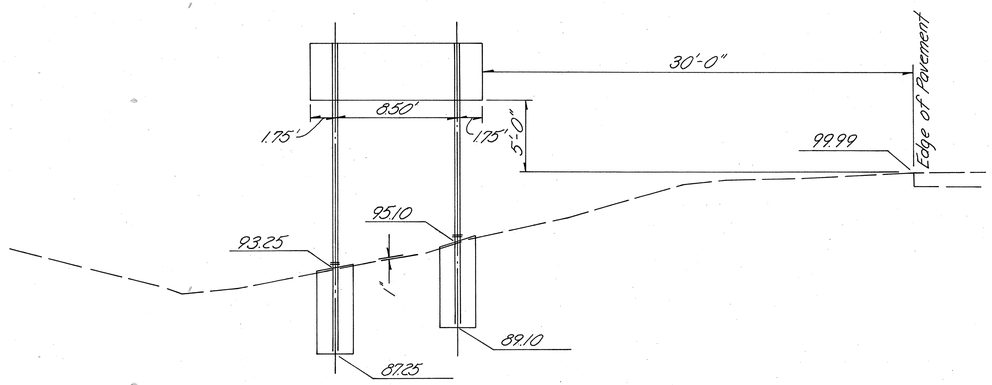
SIGN #17
BREAKAWAY SUPPORTS Sta. 1020+50, 18' Rt., U.S. 23
2-S4×7.7 Sign Area ~ 6'×5.5' = 33 Sq. Ft.



SIGN #18
BREAKAWAY SUPPORTS Sta. 1026+00, 35' Lt., U.S. 23
2-W10×11.5 Sign Area ~ 11'×5' = 55 Sq. Ft.



SIGN #19
BREAKAWAY SUPPORTS Sta. 1129+00, 30' Lt., U.S. 23
2-W10×11.5 Sign Area ~ 12'×4' = 48 Sq. Ft.



WYANDOT COUNTY
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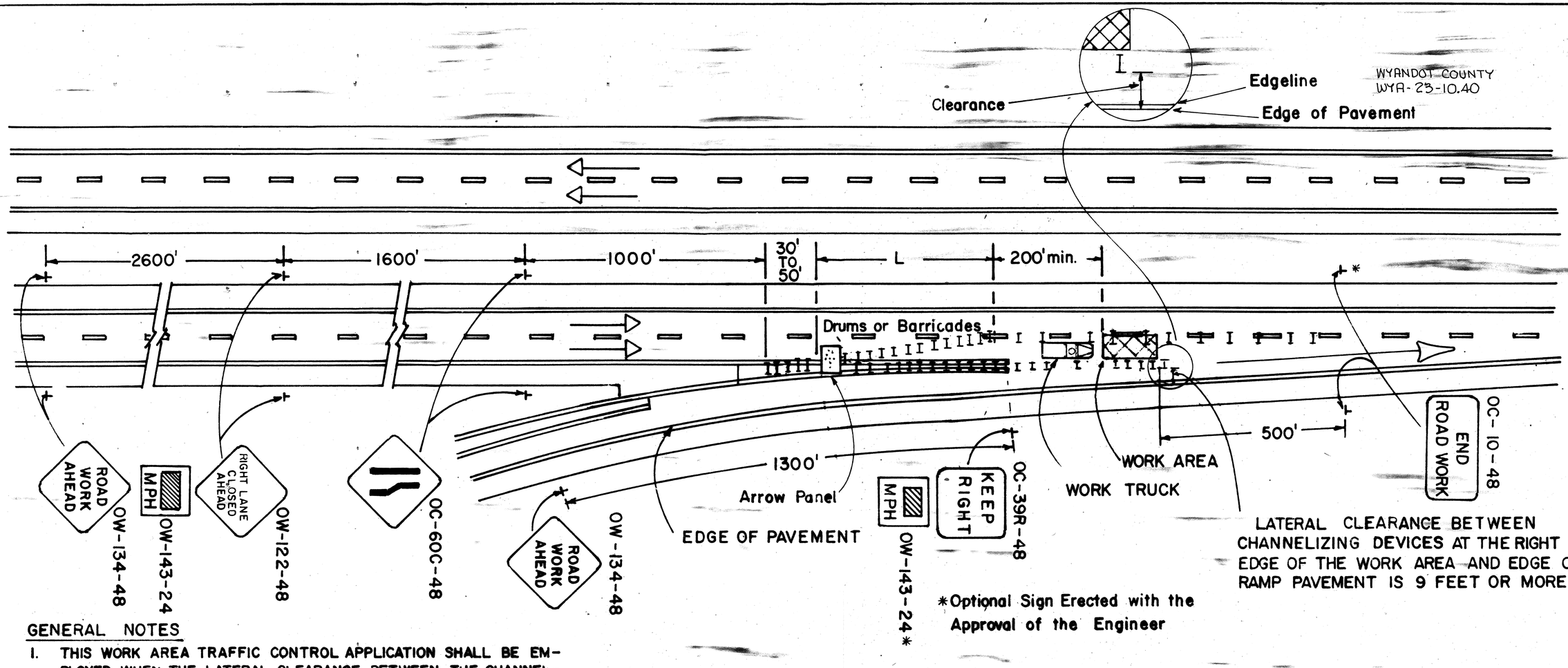


*Optional Sign Erected with the Approval of the Engineer

GENERAL NOTES

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL BE EMPLOYED WHEN THE LATERAL CLEARANCE BETWEEN THE CHANNELIZING DEVICES AT THE RIGHT EDGE OF THE WORK AREA AND THE EDGE OF THE RAMP PAVEMENT IS 9 FEET OR MORE. WHEN THE CLEARANCE IS LESS THAN 9 FEET, THE TRAFFIC CONTROL ON "LANE CLOSURE AT ENTRANCE RAMP: PLAN B" SHOULD BE USED, OR THE RAMP SHOULD BE CLOSED, OR ALLOWING RAMP TRAFFIC TO USE THE BERM SHOULD BE CONSIDERED PROVIDED THE OPERATION IS "SHORT" IN DURATION. 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 ONLY.

3. RAMP SIGNS SHALL BE DUAL MOUNTED ON MULTILANE RAMPS.

4. THE FLASHING OR SEQUENCING ARROW PANEL SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING 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 WORKMAN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED IMPACT ATTENUATOR MAY BE EMPLOYED.

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. TAPER FORMULAE:

   $L = S \times W$ FOR SPEEDS OF 45 OR MORE.
   $L = WS^2/60$ FOR SPEEDS OF 40 OR LESS.

   WHERE:

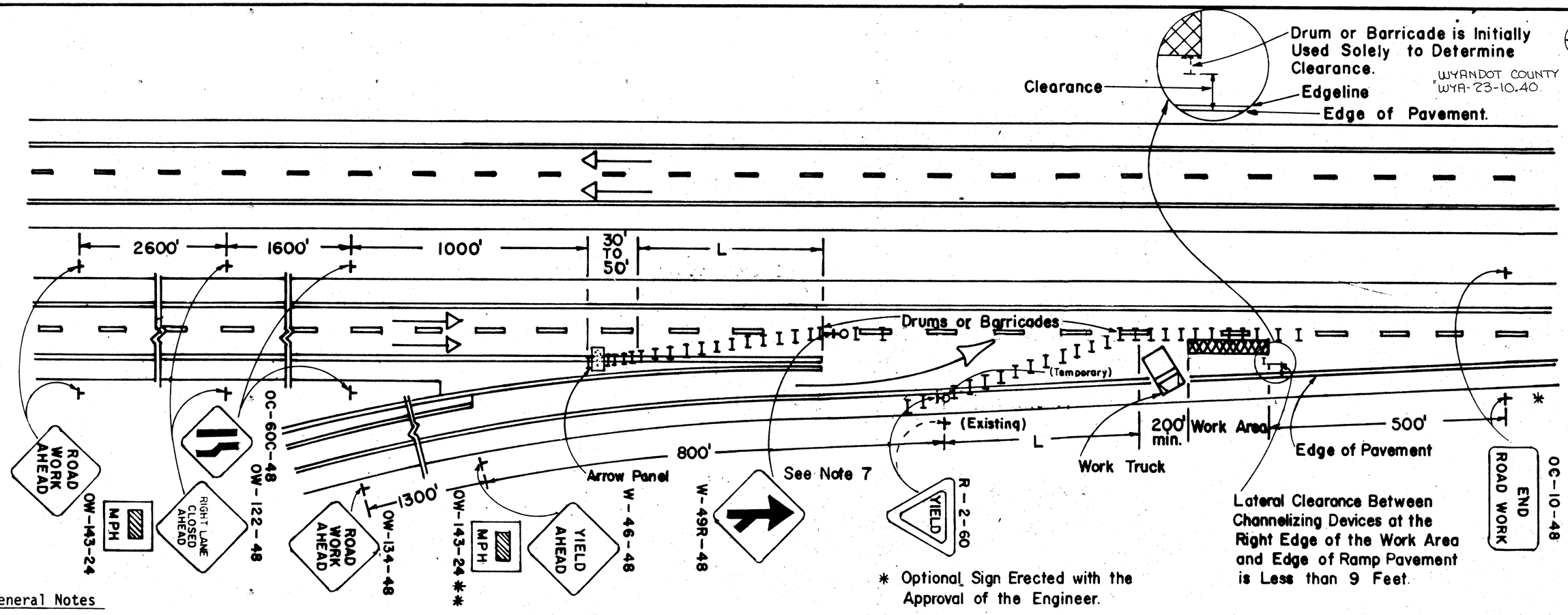
   L = MINIMUM LENGTH OF TAPER.
   S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85 PERCENTILE SPEED.
   W = WIDTH OF OFFSET.

8. 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 TNAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE AT ENTRANCE RAMP: PLAN A	DATE 8-3-79

WYANDOT COUNTY
WYA-23-10.40



* 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 only.

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 or sequencing arrow panel shall be in accordance with Standard Construction Drawing 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:

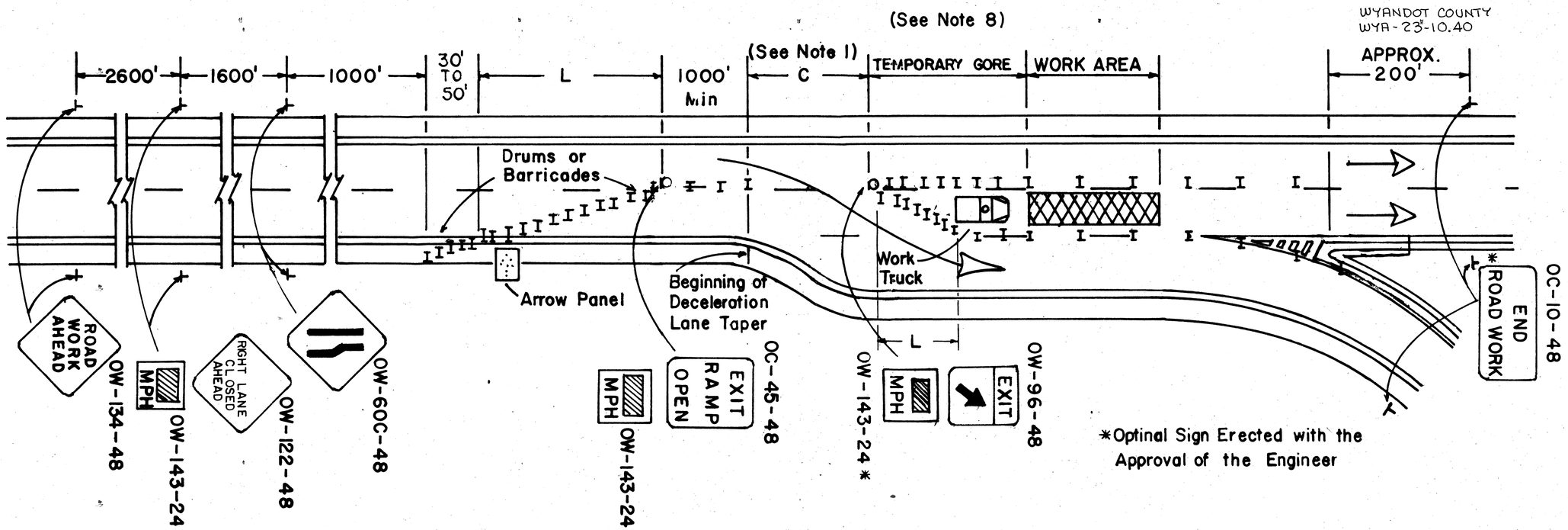
   L = Minimum length of taper.
   S = Numerical value of posted speed limit prior to work or 85 percentile speed.
   W = Width of offset.

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 8-3-79

WYANDOT COUNTY
WYA-23-10.40



GENERAL NOTES

1. **THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY BE USED WHEN THE DISTANCE "C" IS 100 FEET OR GREATER. WHEN "C" IS LESS THAN 100 FEET, THE TRAFFIC CONTROL SHOWN ON THE "LANE CLOSURE BEFORE EXIT GORE" DETAIL SHOULD BE USED, OR THE EXIT SHOULD BE CLOSED, OR THE TRAFFIC CONTROL ON THIS DRAWING MAY BE USED WITH APPROVAL OF THE ENGINEER. WHEN THE EXIT IS CLOSED, APPROPRIATE DETOUR SIGNS SHALL BE PROVIDED.**

2. WHEN WORK IS BEING PERFORMED IN ONLY THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY, REFER TO THE TYPICAL WORK AREA TRAFFIC CONTROL SHOWN IN FIGURE C-21 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

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. A TRUCK MOUNTED IMPACT ATTENUATOR MAY BE EMPLOYED.

4. THE FLASHING OR SEQUENCING ARROW PANEL SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING TC-35.10.

5. 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 ONLY.

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. TAPER FORMULAE:

   $L = S \times W$ FOR SPEEDS OF 45 OR MORE.
   $L = WS^2/60$ FOR SPEEDS OF 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.

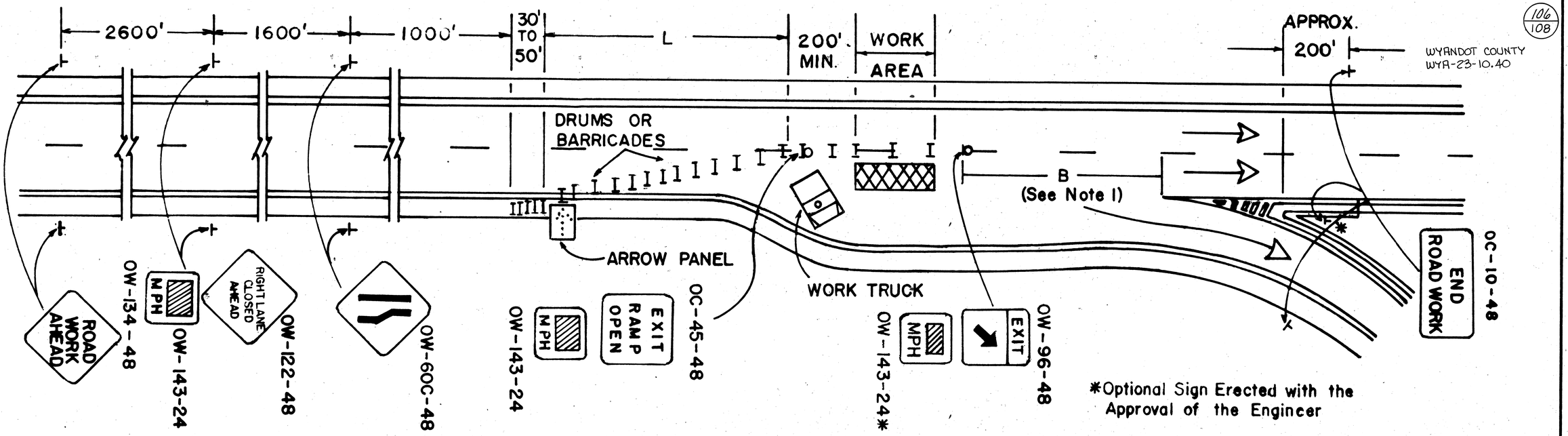
8. WHEN CREATING A TEMPORARY GORE, CHANNELIZING DEVICES SHOULD BE SPACED 25' CENTER TO CENTER SO AS TO CREATE A "SOLID GORE" **EFFECT.**

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 EXIT GORE

DATE 8-3-79



GENERAL NOTES

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY BE USED WHEN THE DISTANCE "B" IS 100 FEET OR GREATER. WHEN "B" IS LESS THAN 100 FEET, THE TRAFFIC CONTROL SHOWN ON THE "LANE CLOSURE AT EXIT GORE" DETAIL SHOULD BE USED, OR THE EXIT SHOULD BE CLOSED, OR THE TRAFFIC CONTROL ON THIS DRAWING MAY BE USED WITH APPROVAL OF THE ENGINEER. WHEN THE EXIT IS CLOSED, APPROPRIATE DETOUR SIGNS SHALL BE PROVIDED.

2. WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY, REFER TO THE TYPICAL WORK AREA TRAFFIC CONTROL SHOWN IN FIGURE C-21 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

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. THE FLASHING OR SEQUENCING ARROW PANEL SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING TC-35.10.

5. 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 ONLY.

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. TAPER FORMULAE:

   $L = S \times W$ FOR SPEEDS OF 45 OR MORE.
   $L = WS^2/60$ FOR SPEEDS OF 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.

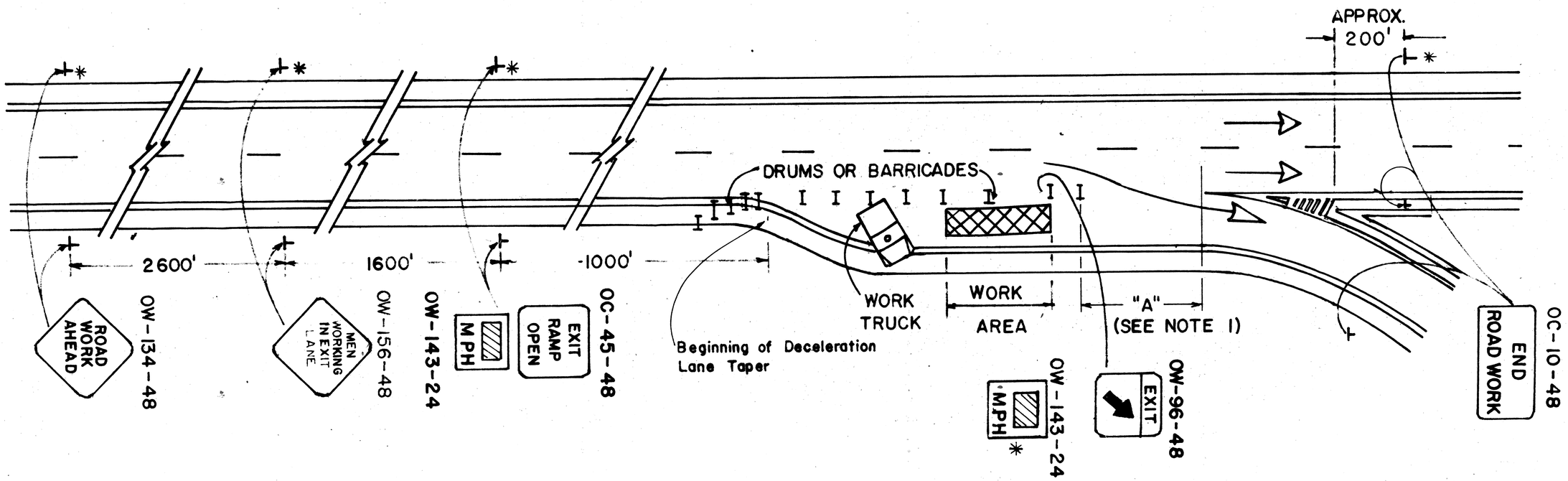
8. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE BEFORE EXIT GORE

DATE 8-3-79

WYANDOT COUNTY
WYA-23-10.40



* OPTIONAL SIGN ERECTED WITH THE APPROVAL OF THE ENGINEER.

GENERAL NOTES.

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY APPLY WHEN THE DISTANCE "A" IS GREATER THAN 100'. WHEN DISTANCE "A" IS LESS THAN 100', THE RAMP SHALL BE CLOSED. WHEN THE RAMP IS CLOSED, THE TRAFFIC CONTROL SHALL INCLUDE DETOUR SIGNING FOR EXIT RAMP CLOSURES IN ACCORDANCE WITH OMUTCD.

2. 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 ONLY.

3. 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.

4. 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.

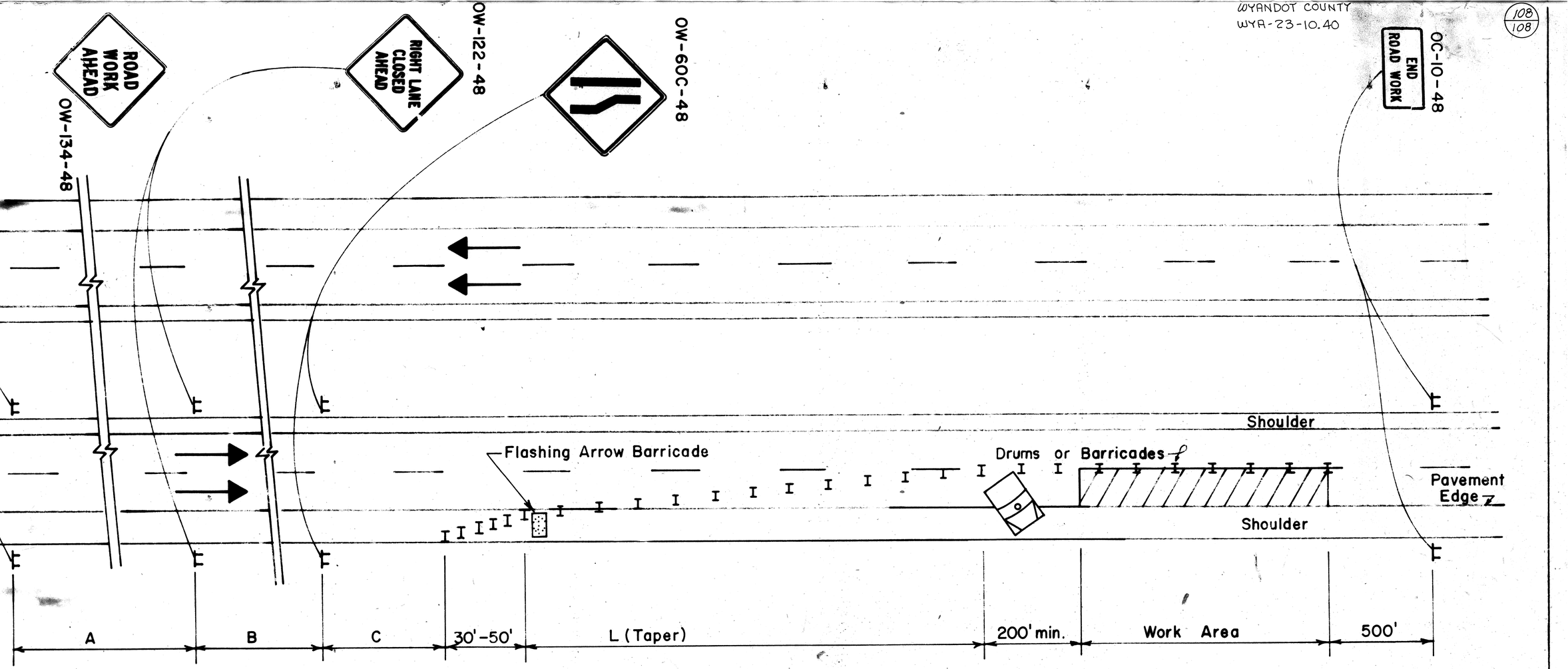
5. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE IN DECELERATION LANE

DATE 8-3-79

WYANDOT COUNTY
WYA-23-10.40



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 SUBSTITUTED FOR THE BARRICADES OR 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. ~~THE FLASHING ARROW BARRICADE SHALL BE IN ACCORDANCE WITH APPLICATION STANDARD DRAWING TD-1.~~

5. 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.

DISTANCE	A	B	C	L
URBAN	200	200	200	425
MAJOR STANDARD	500	500	500	600
FREEWAY AND EXPRESSWAY	2600	1600	1000	720

OHIO DEPARTMENT OF TRANSPORTATION

CLOSING ONE LANE OF A FOUR LANE DIVIDED HIGHWAY

DATE 7/77 7/80