

MICROFILMED
FEB 1 1996

DESIGN DESIGNATION

Current Year A.D.T.(1989) = 47,828 V.P.D.
 Design Year A.D.T.(2009) = 62,148 V.P.D.
 D.H.V. = 9,322 V.P.H.
 D = 50%-50%
 T = 15%
 Design Speed = 70 M.P.H.
 Legal Speed = 55 M.P.H.
 Functional Classification = Interstate (Urban)
 Design Exception for Structural Capacity Approved 2-26-90

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

PART I
FOR PART 2, SEE FRA-270-52.72 (TOWER LIGHTING)
FOR PART 3, SEE FRA-270-54.95 (TOWER LIGHTING)

FRA-270-52.16
IR-270-4 (38) IOI
OHIO
FHWA REGION 5
FEDERAL PROJECT

FRA-270-52.16 PART I

**HAMILTON AND JACKSON TOWNSHIPS
FRANKLIN COUNTY**

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.

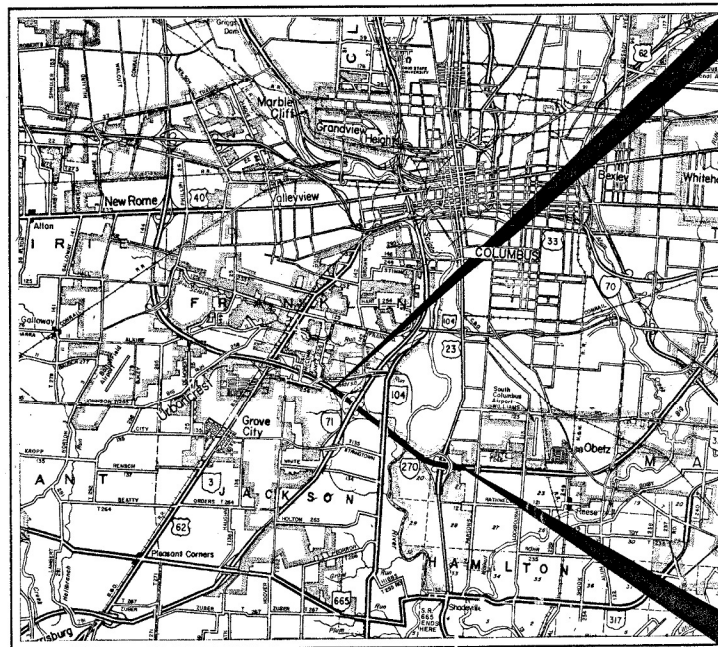
CONVENTIONAL SIGNS

County Line _____
 Township Line _____
 Section Line _____
 Corporation Line _____ or _____
 Fence Line (existing) —x— (proposed) —x—
 Center Line _____
 Trees (to be removed) ⊗ ⊗
 Utility Poles: Telephone φ, Power φ, Light φ

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)—x—
 Railroad —or—
 Guardrail (existing) —(proposed)—

INDEX OF SHEETS

Title Sheet	1	Traffic Maintenance	53-69, 56A10
Schematic	2-4	Miscellaneous Details	70-73, 73A
Typical Sections	5-18	Joint Repair	74-76
Grading Details	19-24	Saw And Seal	77
General Notes	25-28	Guardrail	78-83
Maintenance of Traffic		Drainage	84-110
General Notes	29-30		
Paving Quantities	31-46	Erosion Control	111-113
Grading Quantities	47-49	Structures	114-130
General Summary	50-52	Pavement Marking	131-137
		Overhead Signs	138-147



END PROJECT
STA. = 350+00
S.L.M. = 0.60

BEGIN PROJECT
STA. = 530+00
S.L.M. = 52.16

SLM-STATIONING

Due to changes in the SLM System on I-270, the SLM now runs from east to west in the project area rather than from west to east as the original construction stationing ran. For SLM update purposes this project will be viewed as beginning at SLM 52.16 and ending at SLM 0.60. Through out the plan, however, the original stationing and left, right orientation will be followed. This makes the eastbound lanes right of the centerline and the westbound lanes left of the centerline.

1989 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, except as noted on Sheet 29, and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved W. Howard Towse
Date 12-6-89 District Deputy Director of Transportation

CURVE DATA

All horizontal and vertical curves equal or exceed the requirements for the design speed of 70 mph.

LINE DATA

Begin Project Sta. 530+00
 End Project Sta. 350+00

Net Length of Project = 18,000 Lin. Ft. or 3.409 Miles

Begin Work Sta. 532+25
 End Work Sta. 347+75

Net Length of Work = 18,450 Lin. Ft. or 3.494 Miles

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG

Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS
MUST BE CALLED DIRECTLY

Portion to be Improved _____
 State & Federal Routes _____
 Other Roads _____

SCALES

Plan _____
 Profile: _____ Horizontal _____ Vertical _____

SUPPLEMENTAL SPECIFICATIONS - PARTS I, II & III			
802	4-13-90	953	8-21-80
803	10-2-89	956	6-26-78
845	5-31-88	962	1-23-90
847	10-17-83	952	12-14-88
853	6-26-78	940	6-10-87
862	12-16-88	944	6-24-89
905	5-2-89	942	11-27-89
931	6-18-85		
947	10-17-83		

Approved B. D. Hanklman
Date 3-28-90 Engineer, Bureau of Bridges and Structural Design

APPROVED Chadwick J. Still
DATE 5/22/90 CHIEF ENGINEER, PLANNING AND DESIGN

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

Approved Arnold O. Hurst
Date 5/22/90 Director, Department of Transportation

Revised 10-19-90
Revised 7-31-90

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS - PARTS I, II & III											
BP-2	I-II-85	MC-4	7-26-76	TC-21.4	3-1-79	MT-95.30	10-10-88	HL-30.21	5-1-87	HL-30.31	5-1-87
BP-4	10-1-87	MC-5	6-12-75	TC-22.10	3-1-79			HL-30.22	5-1-87	HL-30.32	5-1-87
BP-5	10-1-87	MC-9	1-30-84	TC-22.20	3-1-79	TC-76.5	3-1-79	HL-40.10	5-1-87	HL-30.33	5-1-87
BP-7	10-1-87	MC-9A	1-11-85	TC-31.21	3-6-79	TC-31.20	3-1-79	HL-60.11	5-1-87	HL-50.11	5-1-87
BP-13	1-23-90	MC-10	5-1-76	TC-32.10	3-8-79	TC-51.11	1-20-84	HL-60.21	5-1-87	HL-50.21	5-1-87
BR-1	5-29-79	CB-2-2A&B	5-1-79	TC-35.10	8-29-84	TC-41.10	8-29-84	HL-60.31	5-1-87	HL-60.12	5-1-87
SD-1-69	6-12-69	CB-4	11-10-83	TC-51.10	1-20-84	TC-41.20	3-26-79	HL-10.11	5-1-87	TC-22.10	3-1-79
GR-1	1-11-85	CB-5	11-10-83	TC-61.10	4-5-82	HL-10.31	5-1-87	HL-10.12	5-1-87	TC-32.10	3-8-79
GR-2B	2-5-82	CB-8	11-10-83	TC-65.10	2-26-82	HL-20.11	5-1-87	HL-10.13	5-1-87	TC-83.10	1-20-84
GR-3	1-21-85	HW-D	6-1-65	TC-65.11	4-5-82	HL-20.21	5-1-87	HL-20.13	5-1-87		
GR-4	2-5-82	1-3A&B	4-1-80	TC-72.20	2-26-82	HL-20.22	5-1-87	HL-20.14	5-1-87		
GR-5	2-5-82	MH-1	12-18-84	MT-99.10	11-14-86	HL-20.23	5-1-87	HL-20.15	5-1-87		
GR-6	2-5-82	TC-21.10	1-20-84	MT-99.20	4-29-88	HL-30.11	5-1-87	HL-20.31	5-1-87		

Plan Prepared By:
Planning & Design
District No. Six
Ohio Department
Of Transportation

SEAL

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

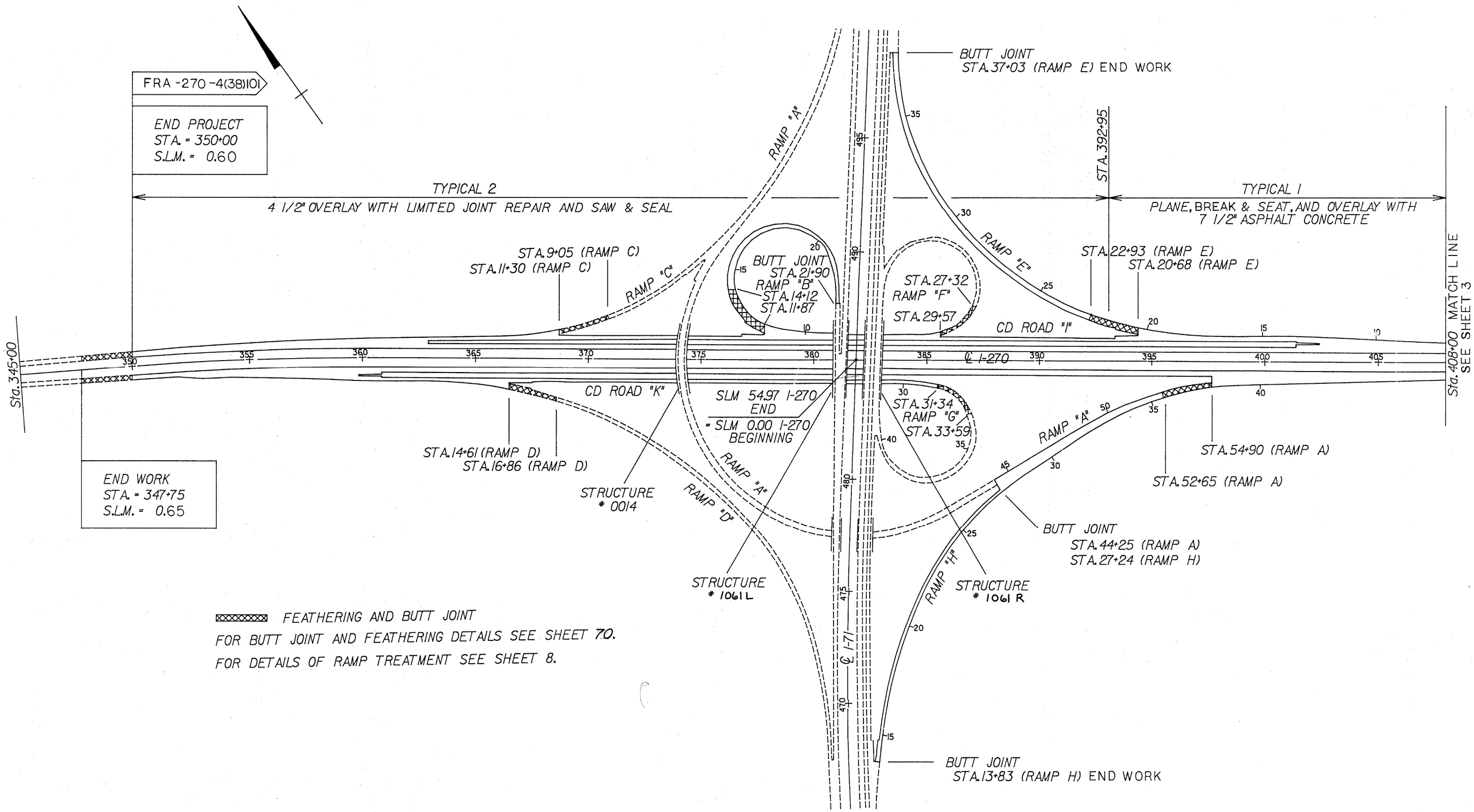
APPROVED: _____
 DIVISION ADMINISTRATOR DATE _____

SCHEMATIC PLAN

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

2
147

FRA-270-52.16



FRA -270 -4(38)101
END PROJECT
STA. = 350+00
S.L.M. = 0.60

END WORK
STA. = 347+75
S.L.M. = 0.65

▨▨▨▨▨ FEATHERING AND BUTT JOINT
FOR BUTT JOINT AND FEATHERING DETAILS SEE SHEET 70.
FOR DETAILS OF RAMP TREATMENT SEE SHEET 8.

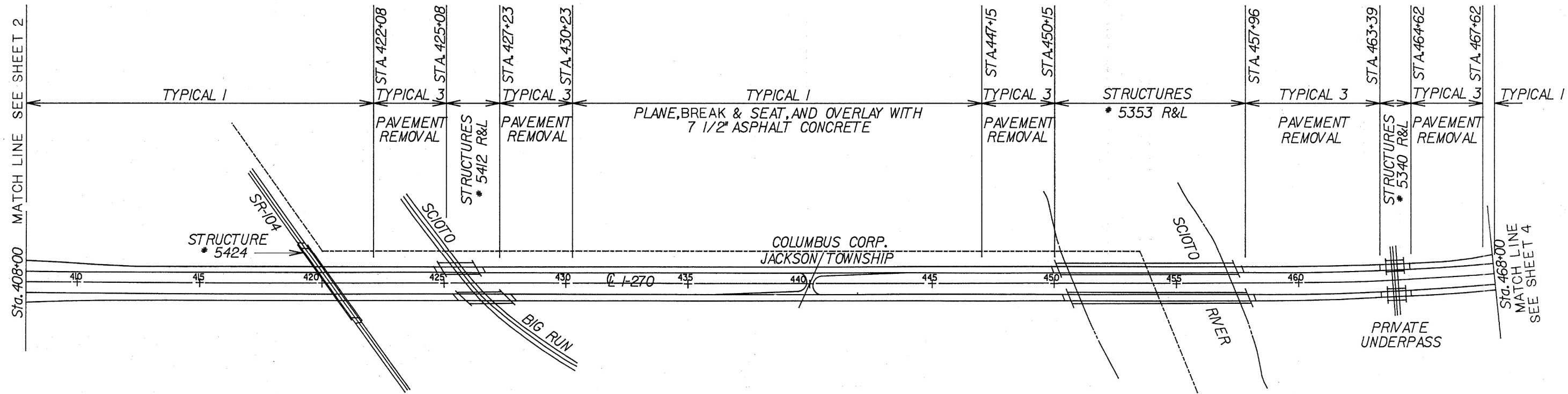
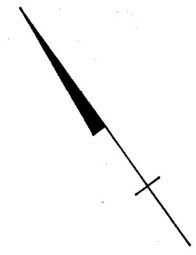
Sta. 408+00 MATCH LINE
SEE SHEET 3

SCHEMATIC PLAN

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

3
147

FRA-270-52.16



SCHEMATIC PLAN

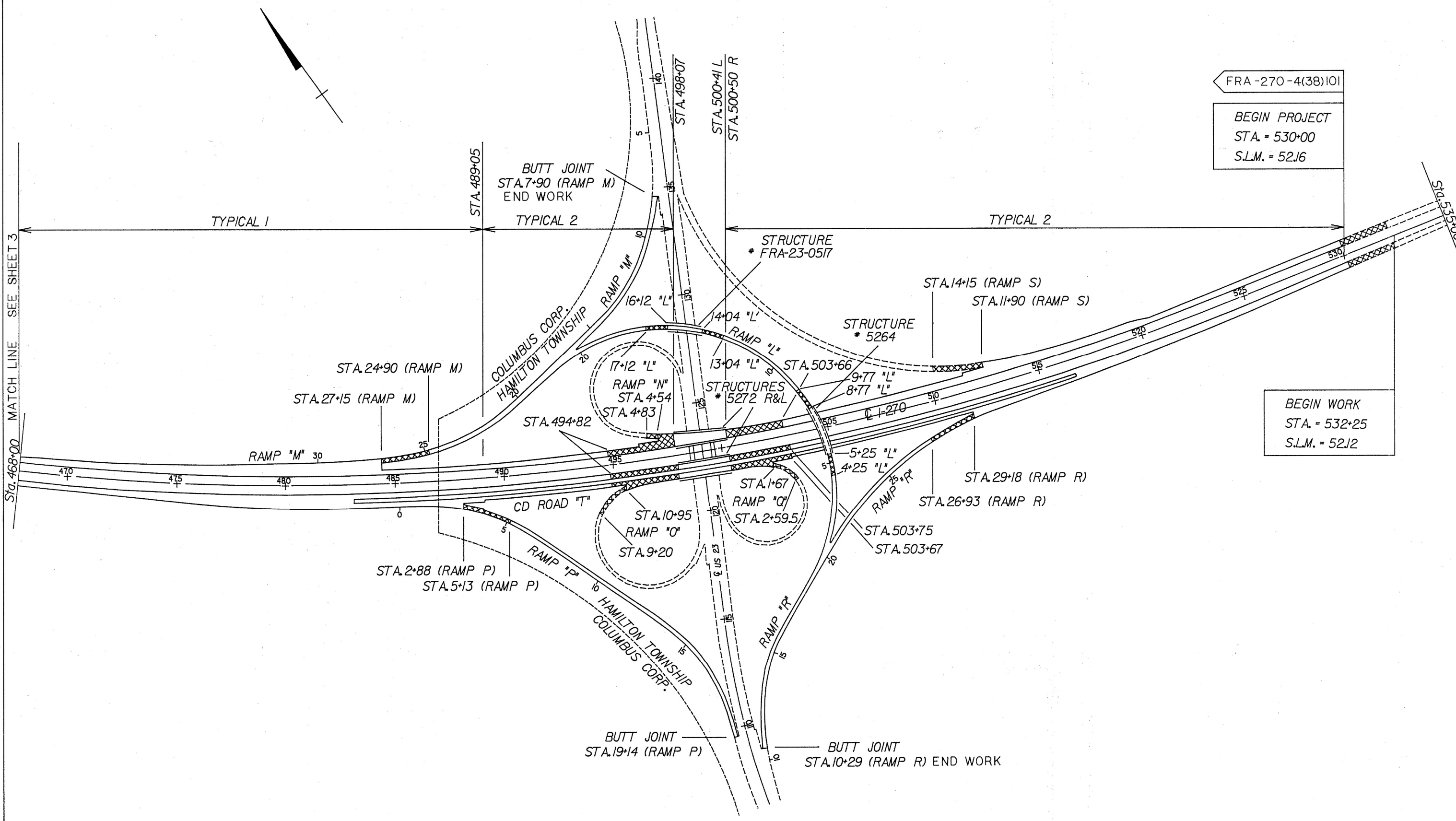
F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

4
147

FRA-270-52.16

FRA-270-4(38)101
BEGIN PROJECT
STA. = 530+00
S.L.M. = 52.16

BEGIN WORK
STA. = 532+25
S.L.M. = 52.12



MATCH LINE SEE SHEET 3

TYPICAL SECTIONS 1

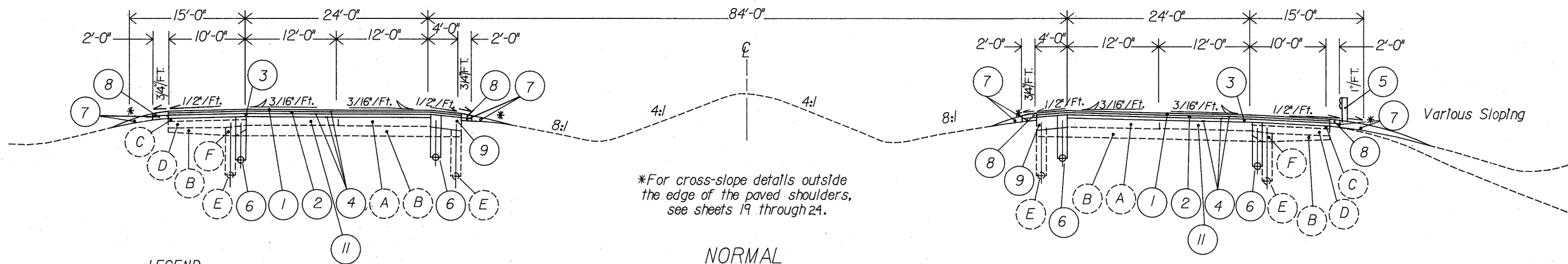
TYPE 446

(PLANE, BREAK AND SEAT, AND OVERLAY WITH 7 1/2" ASPHALT CONCRETE)

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

5
147

FRA-270-52.16



*For cross-slope details outside the edge of the paved shoulders, see sheets 19 through 24.

NORMAL

Sta. 392+95 to Sta. 422+08
Sta. 430+23 to Sta. 447+15
Sta. 467+62 to Sta. 489+05

(See CD Road Typicals for adjoining CD Roads and Ramps)

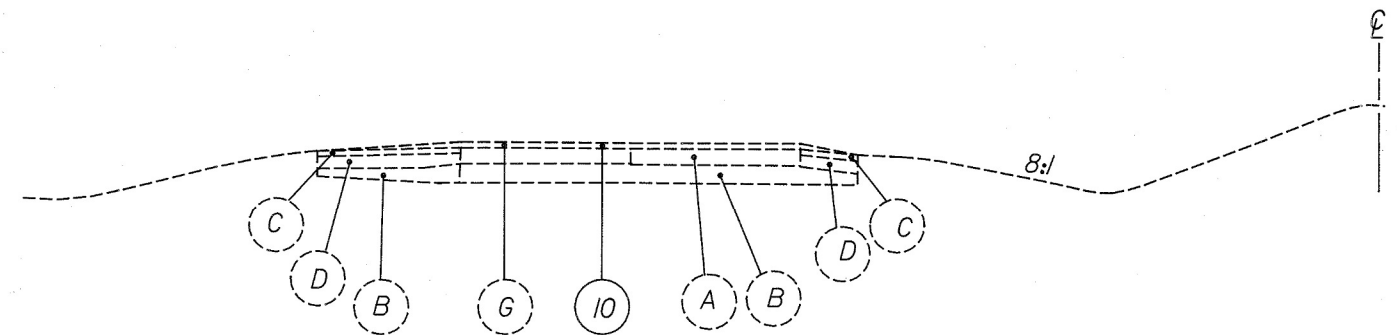
LEGEND

PROPOSED

- ① ITEM 446 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20
- ② ITEM 446 1 3/4" Asphalt Concrete Intermediate Course, Type 2, AC-20
- ③ ITEM 301 4 1/2" Bituminous Aggregate Base, AC-20
- ④ ITEM 407 Tack Coat, (See General Notes)
- ⑤ ITEM 606 Guardrail, Type 5
- ⑥ ITEM 605 Shallow Underdrains, as per plan
- ⑦ ITEM 203 Embankment
- ⑧ ITEM 617 Compacted Aggregate, Type A (2' x 4')
- ⑨ Reconstructed Median Shoulder - See Details on Sheet 71
- ⑩ ITEM 202 Wearing Course Removed, as per plan (See Item "G")
- ⑪ ITEM Spec. Break and Seat

EXISTING

- (A) ITEM 451 9" Reinforced Portland Cement Concrete Pavement
- (B) ITEM 310 Subbase
- (C) ITEM 301 3" Bituminous Aggregate Base
- (D) ITEM 304 Aggregate Base, as per plan
- (E) ITEM 605 6" Pipe Underdrain
- (F) ITEM Spec. No. 8 Aggregate
- (G) ITEM 404 3" Asphalt Concrete (To be removed using Item 202 - Wearing Course Removed, as per plan. Shoulders are to be returned to their "as constructed" cross section. Original plans are on file at the District 6 Office if more details are needed.)



EXISTING OVERLAY DETAIL

TYPICAL SECTIONS 2

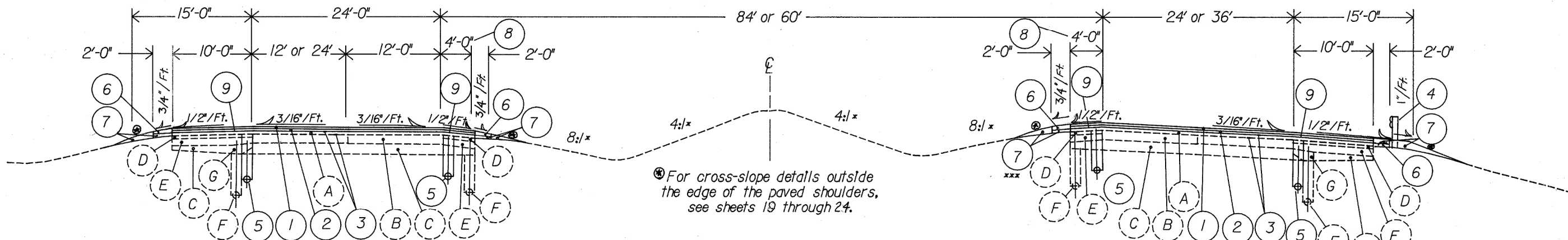
TYPE 446

(4 1/2" OVERLAY WITH LIMITED JOINT REPAIR AND SAW AND SEAL)

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

6
147

FRA-270-52.16



NORMAL

SUPERELEVATED

Sta. 530+00 to Sta. 500+41 (3 lanes L)
 Sta. 530+00 to Sta. 500+50 (3 lanes R)
 Sta. 498+07 to Sta. 489+05 (3 lanes L and R)
 Sta. 392+95 to Sta. 362+89 (2 lanes L and R)
 Sta. 362+89 to Sta. 359+88 (2 lanes R, 3 lanes L)
 Sta. 359+88 to Sta. 350+00 (3 lanes L and R)
 Sta. 500+41 to Sta. 498+07 (Bridge)

(See CD Road and Typical for adjoining CD Roads and Ramps)

LEGEND

PROPOSED

- ① ITEM 446 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20
- ② ITEM 446 3 1/4" Asphalt Concrete Intermediate Course, Type 2, AC-20
- ③ ITEM 407 Tack Coat (See General Notes)
- ④ ITEM 606 Guardrail, Type 5
- ⑤ ITEM 605 Shallow Underdrains, as per plan
- ⑥ ITEM 617 Compacted Aggregate, Type A
- ⑦ ITEM 203 Embankment

- ⑧ Median Shoulder Widening

The median shoulders are to be widened to 10' in the six lane sections. See Sheet 67 for details and exact location.

- ⑨ Shoulder Levelling Courses

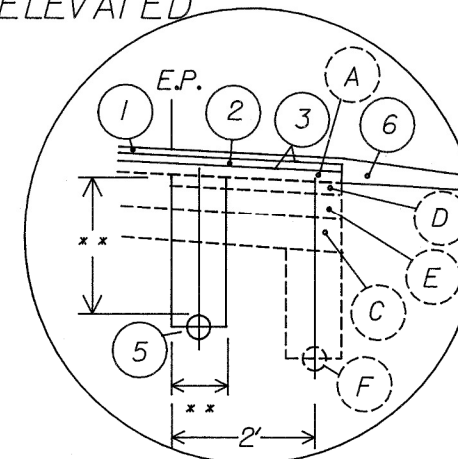
The slope of the shoulders in these areas must be corrected by means of an Item 403 Levelling Course as detailed on Sheet 67.

EXISTING

- (A) ITEM 848 Asphalt Concrete
- (B) ITEM 451 9" Reinforced Portland Cement Concrete Pavement (Joints to be repaired as necessary.)
- (C) ITEM 310 Subbase
- (D) ITEM 301 3" Bituminous Aggregate Base
- (E) ITEM 304 Aggregate Base, as per plan
- (F) ITEM 605 6" Pipe Underdrain (30" Cover in cut, 50" Cover in fill)
- (G) ITEM SPEC. No. 8 Aggregate

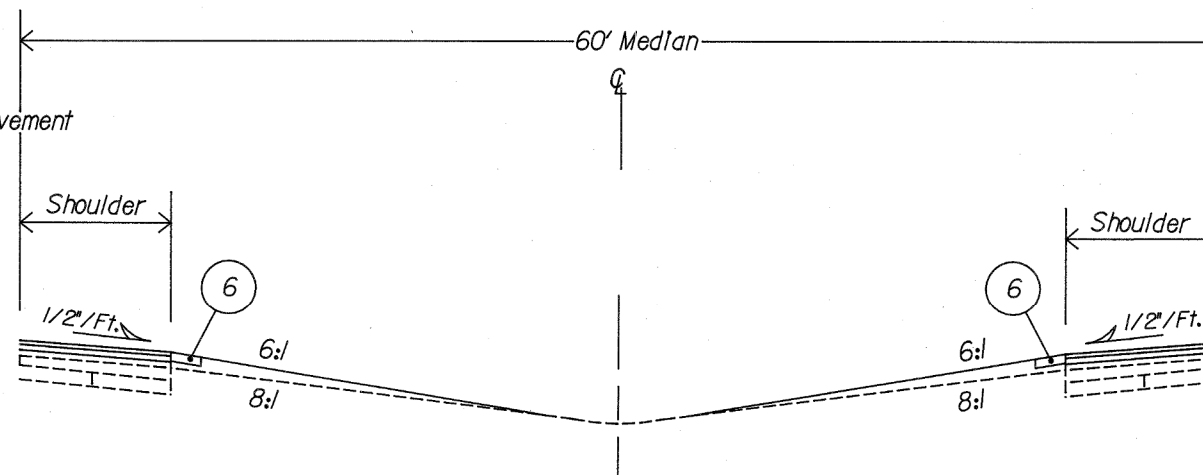
* Except as noted in the grading details.

*** Underdrains exist on the high side of the super-elevated section between Sta. 489+05 and Sta. 459+50.



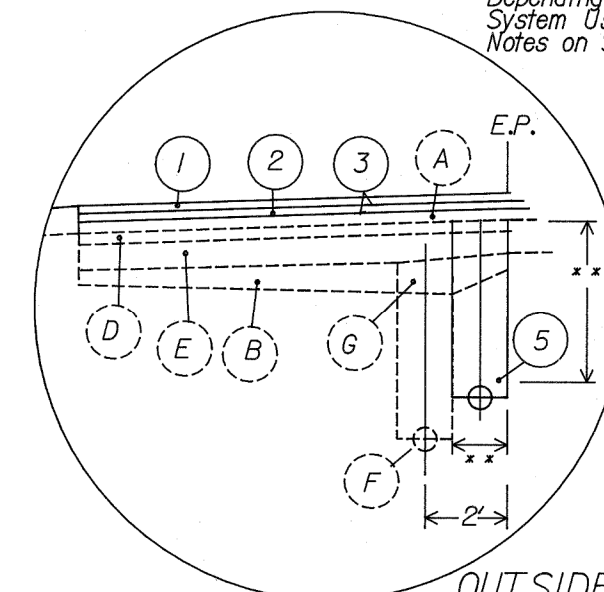
INSIDE UNDERDRAIN DETAIL LEFT SIDE

* * * Depth and Width Varies Depending on the Underdrain System Used (See Details & Notes on Sheet 88.)



DEPRESSED MEDIAN DETAIL

Sta. 530+00 to Sta. 506+00
 Sta. 369+00 to Sta. 350+00



OUTSIDE SHOULDER, UNDERDRAIN DETAIL LEFT SIDE

TYPICAL SECTIONS

TYPICAL SECTIONS 3

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

7
147

FRA-270-52.16

LEGEND
PROPOSED

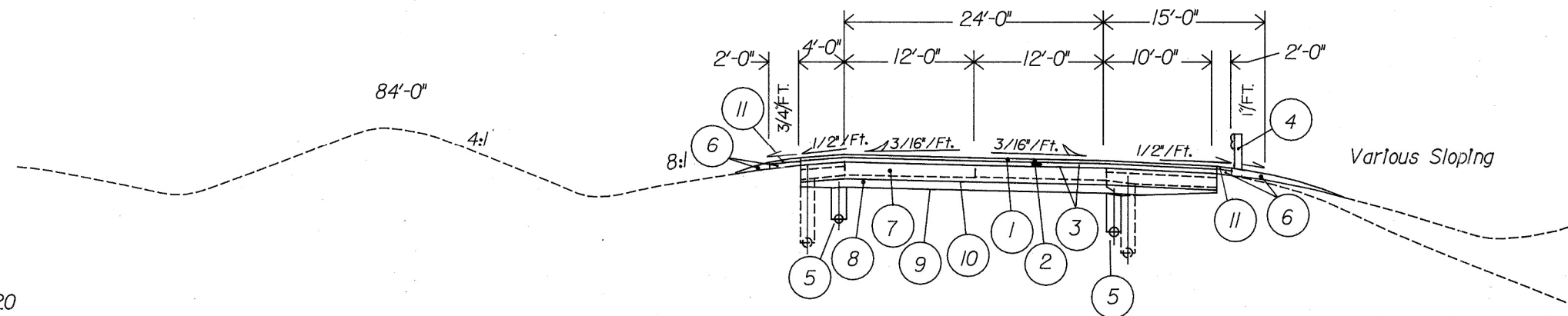
- ① ITEM 446 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20
- ② ITEM 446 1 3/4" Asphalt Concrete Intermediate Course, Type 2, AC-20
- ③ ITEM 407 Tack Coat, (See General Note)
- ④ ITEM 606 Guardrail, Type 5
- ⑤ ITEM 605 4" SHALLOW PIPE UNDERDRAINS
- ⑥ ITEM 203 Embankment
- ⑦ ITEM 301 10" Bituminous Aggregate Base
- ⑧ ITEM 304 4" Aggregate Base, as per plan.
- ⑨ ITEM 203 Subbase Compaction
- ⑩ ITEM 408 Bituminous Prime Coat
- ⑪ ITEM 617 Compacted Aggregate, Type A

The removal areas noted occur prior to the beginning and end of structures 5412, 5353 and 5340 and are proposed for both the E.B. & W.B. lanes, even though only W.B. is detailed on this sheet.

See sheet 66 for median shoulder reconstruction for traffic maintenance.

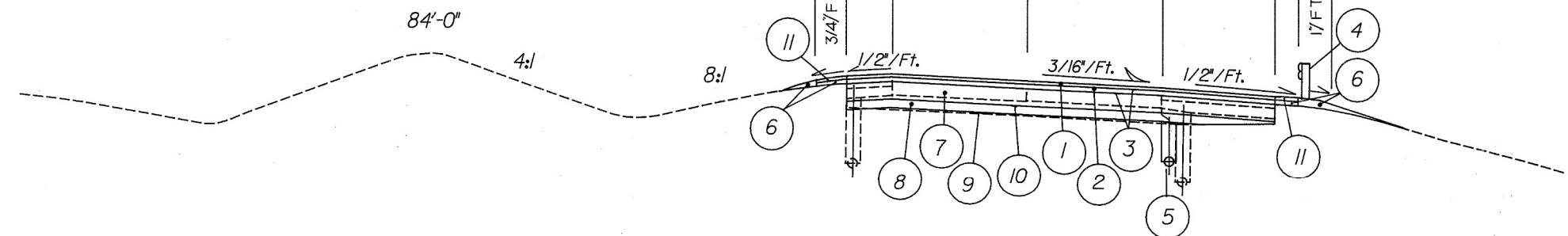
See structure transition diagrams and pavement replacement diagrams for areas of Item 203 Excavation not including embankment construction.

For cross-slopes outside the edge of the paved shoulders, see the grading details.



FULL DEPTH REMOVAL NORMAL

Sta. 422+08 to Sta. 425+08
Sta. 427+23 to Sta. 430+23
Sta. 447+15 to Sta. 450+15



FULL DEPTH REMOVAL SUPERELEVATED

Sta. 457+96 to Sta. 463+39
Sta. 464+62 to Sta. 467+62

TYPICAL SECTIONS 4, 5 & 6

TYPE 446

(PLANE TO BARE CONCRETE, REBUILD SHOULDERS, DRAIN, LIMITED JOINT REPAIR, OVERLAY WITH 3" OF ITEM 446 AND SAW AND SEAL)

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

FRA-270-52.16

LEGEND

PROPOSED

- ① ITEM 446 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20
- ② ITEM 446 1 3/4" Asphalt Concrete Intermediate Course, Type 2, AC-20
- ③ ITEM 407 Tack Coat
- ④ ITEM 606 Guardrail, Type 5
- ⑤ ITEM 617 Compacted Aggregate, Type A
- ⑥ ITEM 305 9" Concrete Base, as per plan (with ties every 30")
See General Notes
- ⑦ ITEM 304 3" Aggregate Base, as per plan
- ⑧ ITEM 203 Subgrade Compaction
- ⑨ ITEM 203 Embankment
- ⑩ ITEM 605 4" Shallow Pipe Underdrain

EXISTING

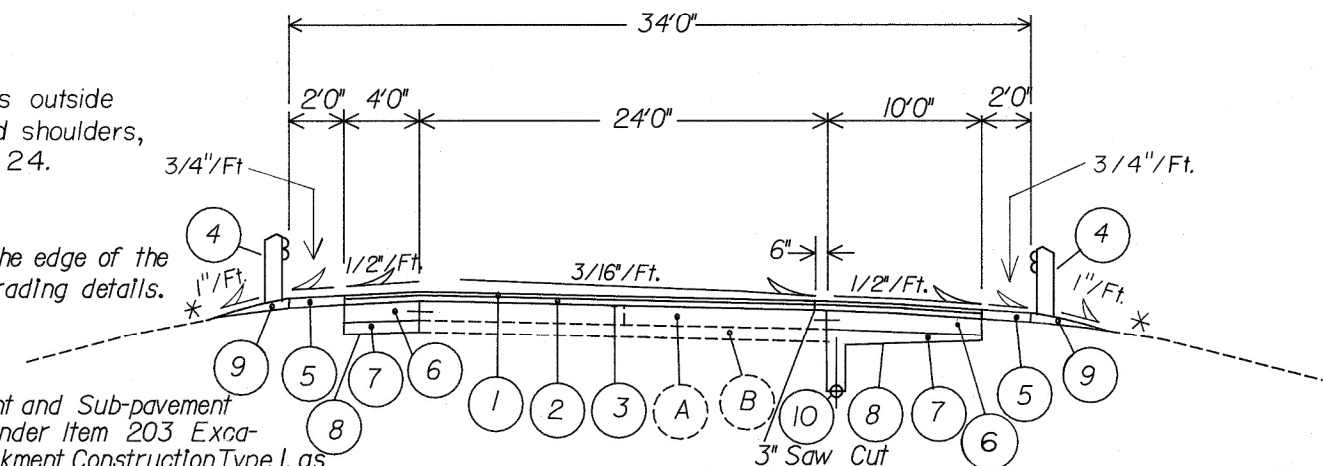
- (A) ITEM 451 9" Reinforced Portland Cement Concrete Pavement
- (B) ITEM 310 Subbase
- (C) ITEM 301 3" Bituminous Aggregate Base
- (D) ITEM 304 Aggregate Base

*For cross-sloped details outside the edge of the paved shoulders, see sheets 19 through 24.

For cross-slopes outside the edge of the paved shoulders, see the grading details.

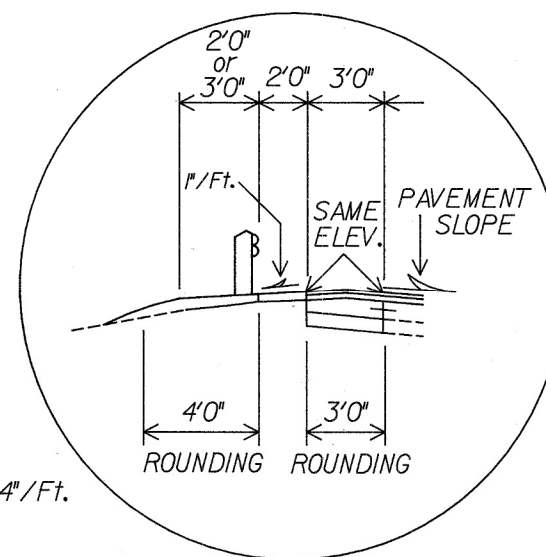
Existing Shoulder Pavement and Sub-pavement Materials to be Removed under Item 203 Excavation not including Embankment Construction Type I, as per plan. The 3" Saw Cuts shown on this sheet are to be included in this Item also.

If pavement slope is greater than 1"/ft. or .059% then round shoulders as below.

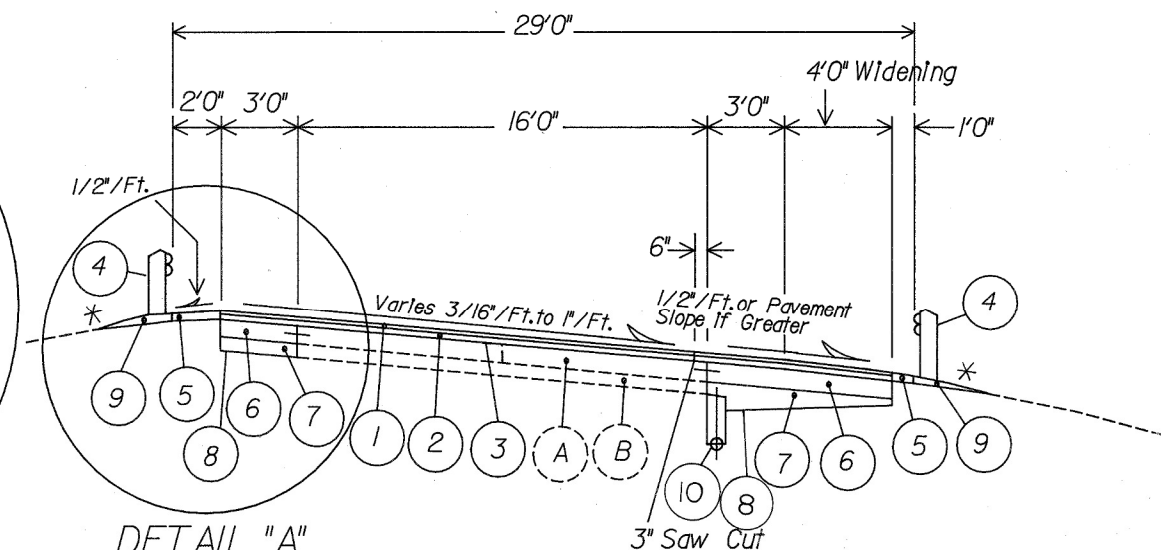


SUPERELEVATED RAMP - 2 LANE
TYPICAL 5

RAMP M Sta. 19+00 to Sta. 27+15
RAMP A Sta. 47+25 to Sta. 54+90
RAMP E Sta. 20+68 to Sta. 37+03



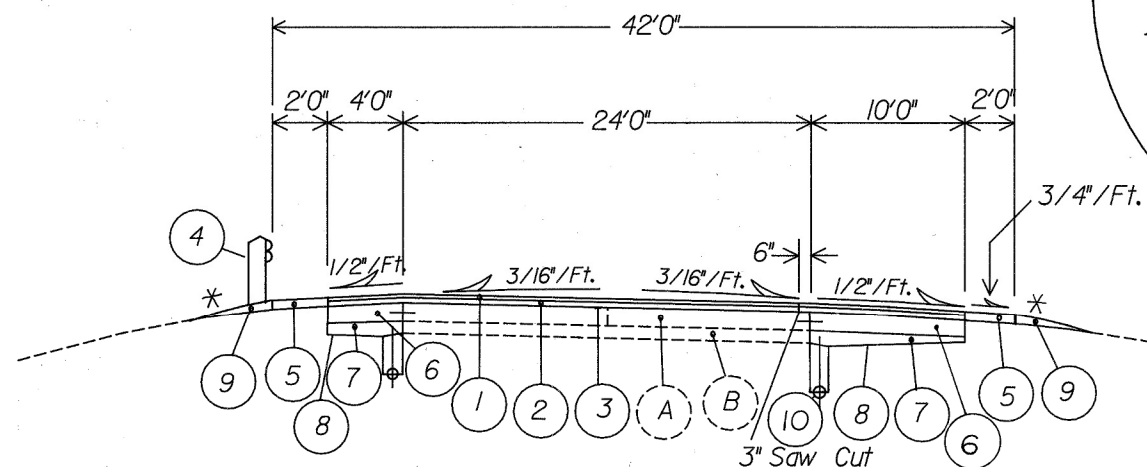
DETAIL "A"



DETAIL "A"

SUPERELEVATED RAMP WITH WIDENING - 1 LANE
TYPICAL 6

RAMP R Sta. 10+29 to Sta. 29+18
RAMP L Sta. 2+10 to Sta. 5+01
Sta. 9+02 to Sta. 13+79
Sta. 16+37 to Sta. 21+34
RAMP M Sta. 7+90 to Sta. 17+22
RAMP P Sta. 2+88 to Sta. 18+34
RAMP H Sta. 13+83 to Sta. 27+08
RAMP B Sta. 11+87 to Sta. 21+90



NORMAL RAMP - 2 LANE
TYPICAL 4

RAMP M Sta. 17+22 to Sta. 19+00
RAMP A Sta. 44+25 to Sta. 47+25

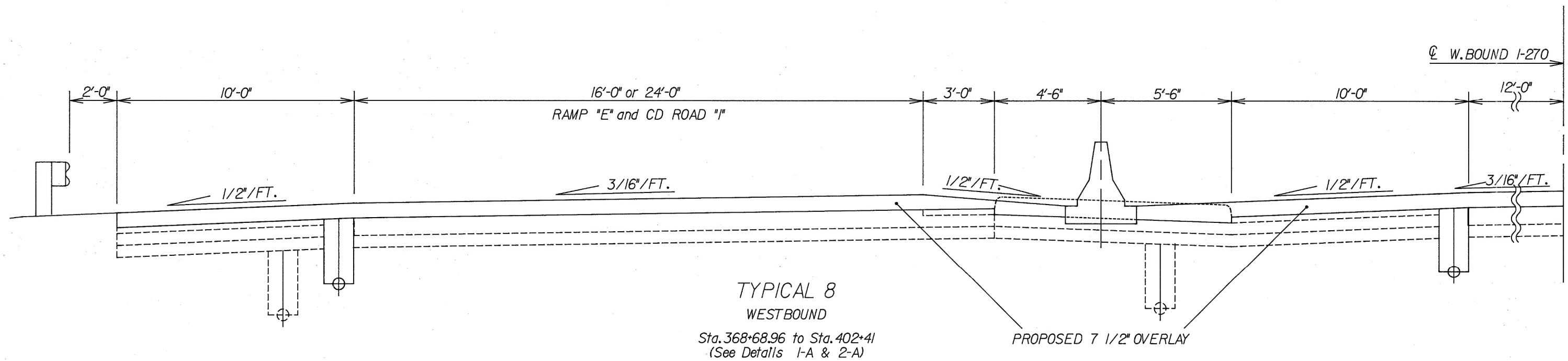
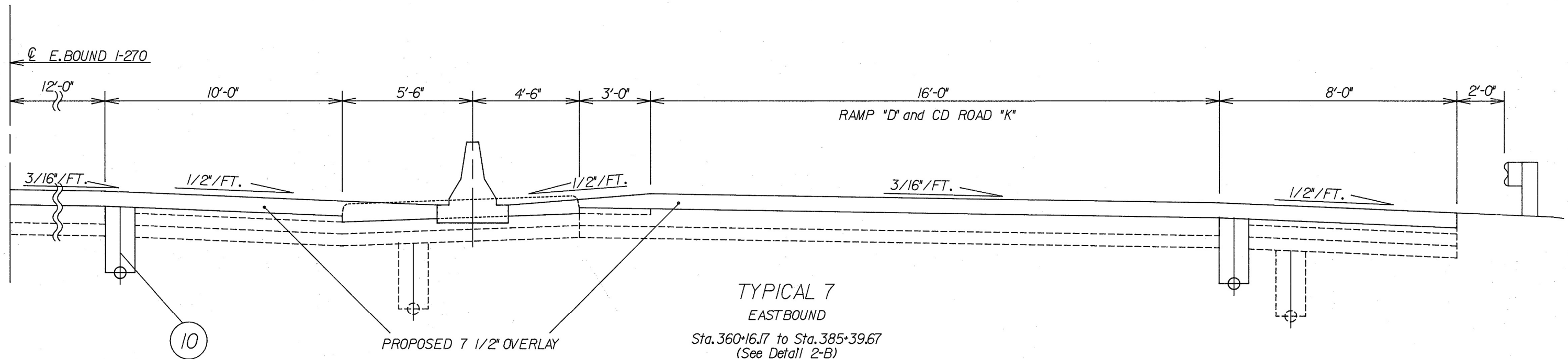
CD ROAD

(ADJOIN MAINLINE PAVEMENT, SEE TYPICALS 1 & 2)

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

9
147

FRA-270-52.16



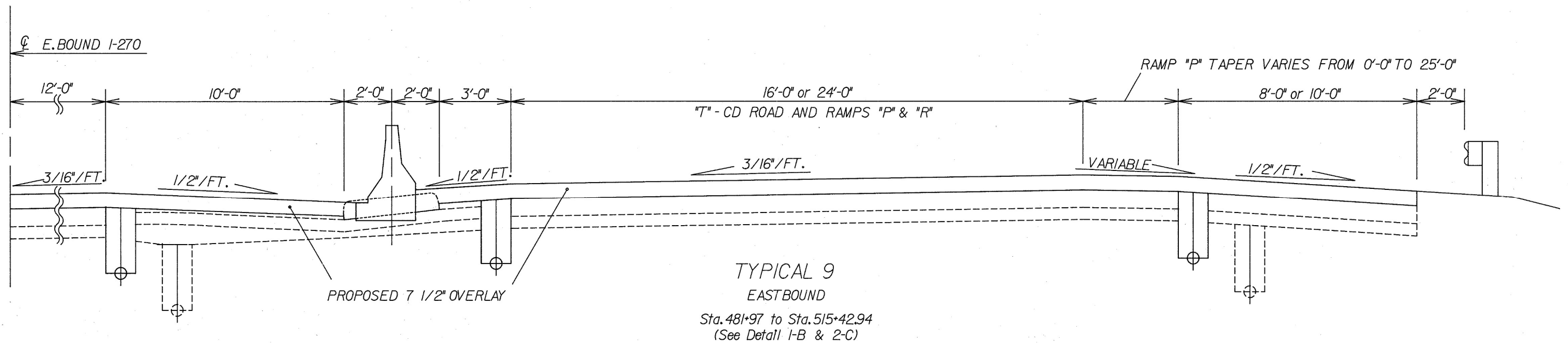
CD ROAD

(ADJOIN MAINLINE PAVEMENT, SEE TYPICALS 1 & 2)

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

10
147

FRA-270-52.16



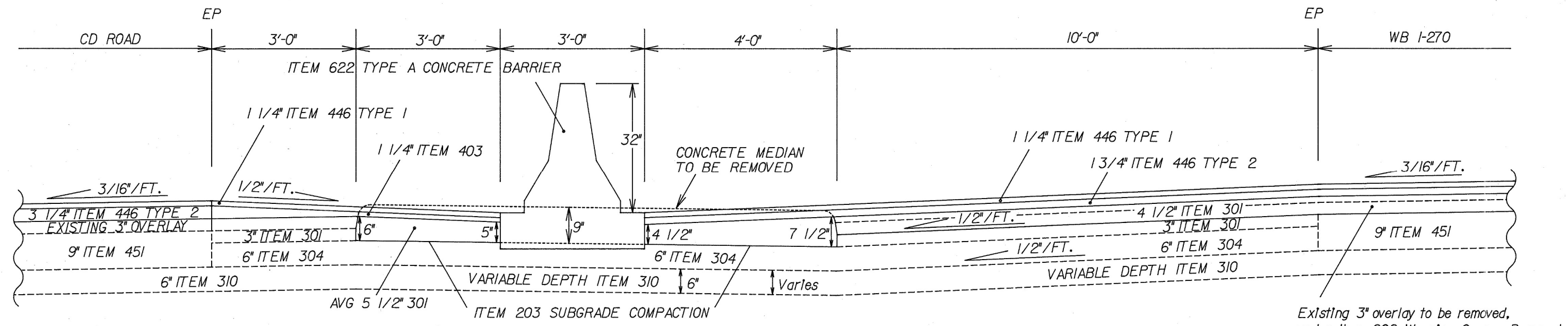
CONCRETE BARRIER AND PAVEMENT DETAILS

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

11
147

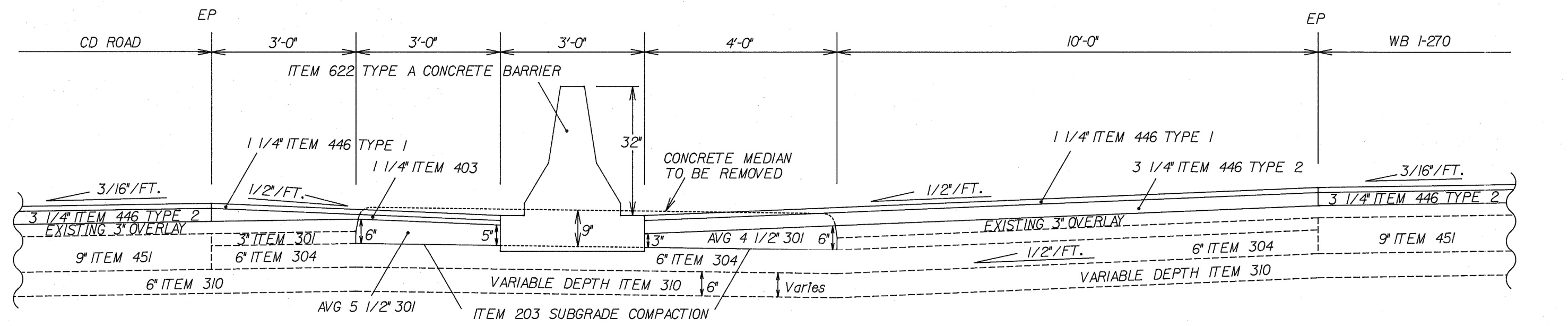
FRA-270-52.16

WESTBOUND
(SEE SHEET 9 FOR LOCATION OF UNDERDRAINS)



Existing 3" overlay to be removed, under Item 202 Wearing Course Removed

DETAIL 1-A (ADJOINS TYPICAL 1)
Sta. 392+95 to Sta. 401+33
Sta. 401+33 to Sta. 402+41 (Existing Median Narrows from 10' to approx. 4' and Ends at Sta. 402+35)



DETAIL 2-A (ADJOINS TYPICAL 2)
Sta. 368+68.96 to Sta. 371+75.75 (Median Width Varies from 6' to 10')
Sta. 371+75.75 to Sta. 392+95

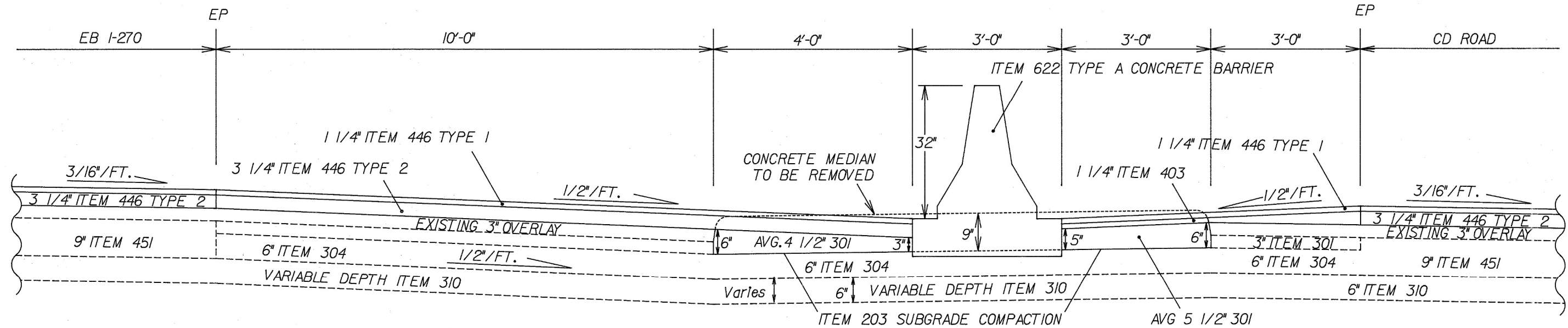
CONCRETE BARRIER AND PAVEMENT DETAILS

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

12
147

FRA-270-52.16

EASTBOUND
(SEE SHEET 9 FOR LOCATION OF UNDERDRAINS)



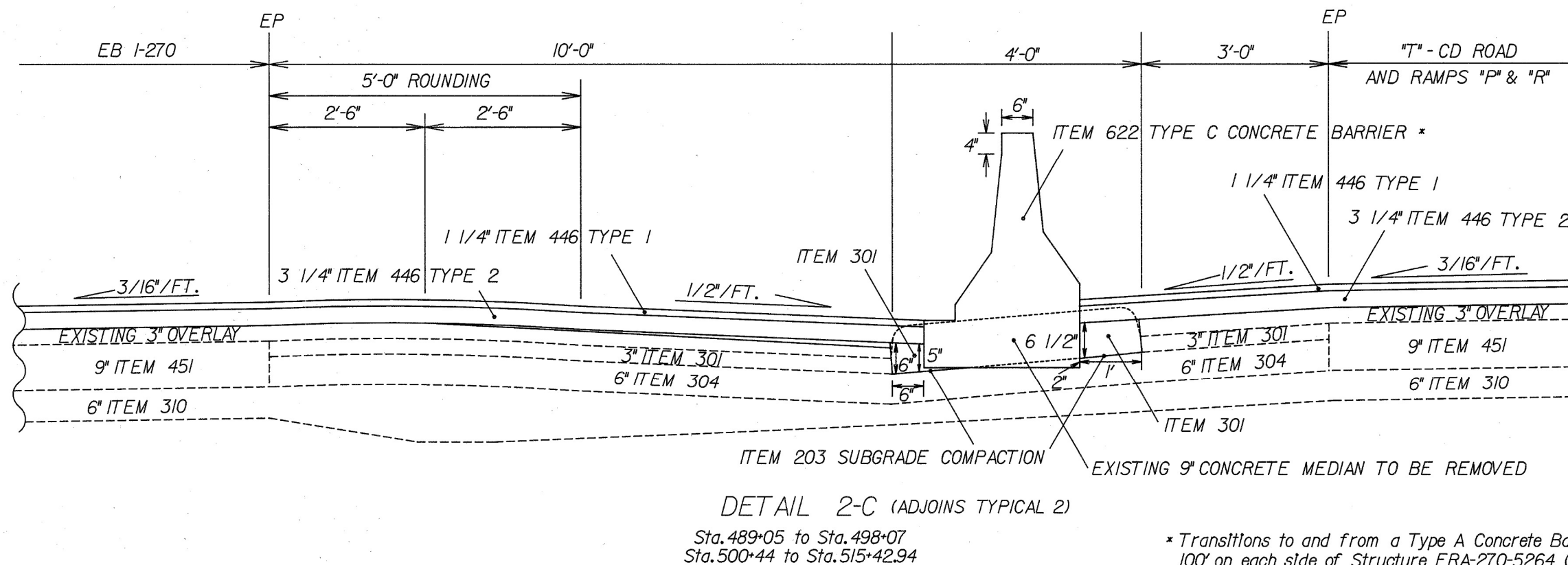
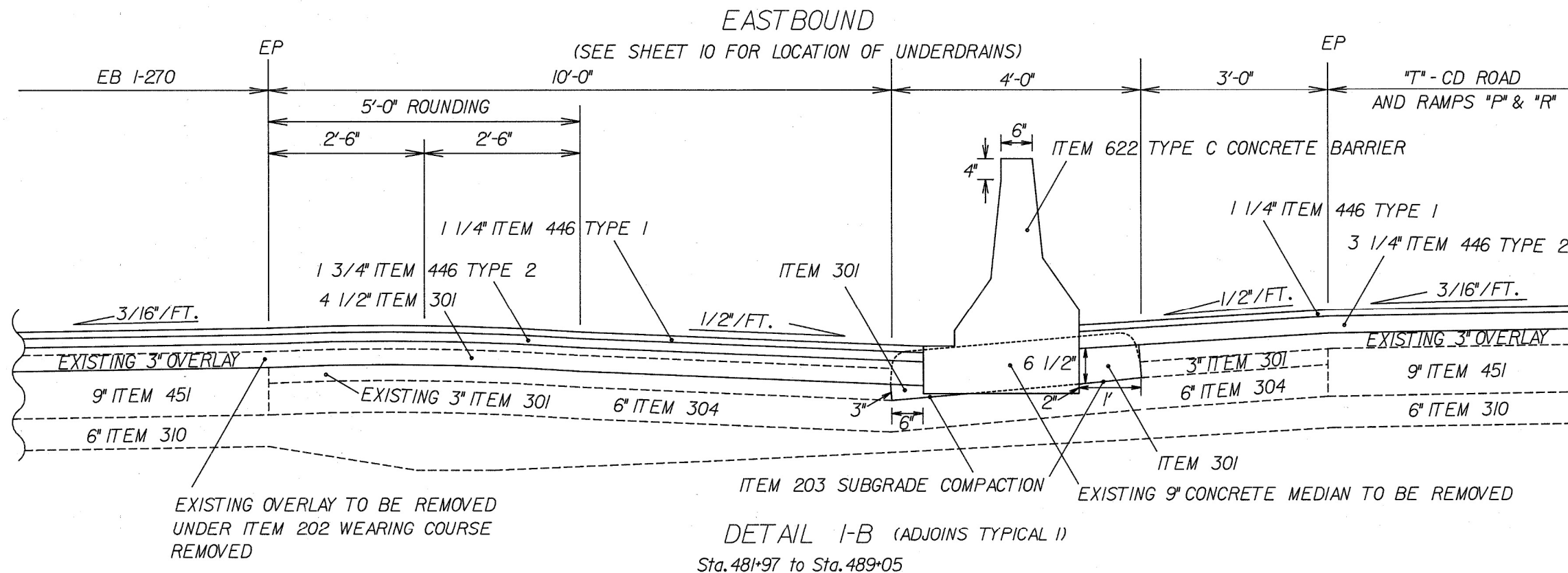
DETAIL 2-B (ADJOINS TYPICAL 2)
Sta. 360+16.17 to Sta. 385+39.67

CONCRETE BARRIER AND PAVEMENT DETAILS

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

13
147

FRA-270-52.16



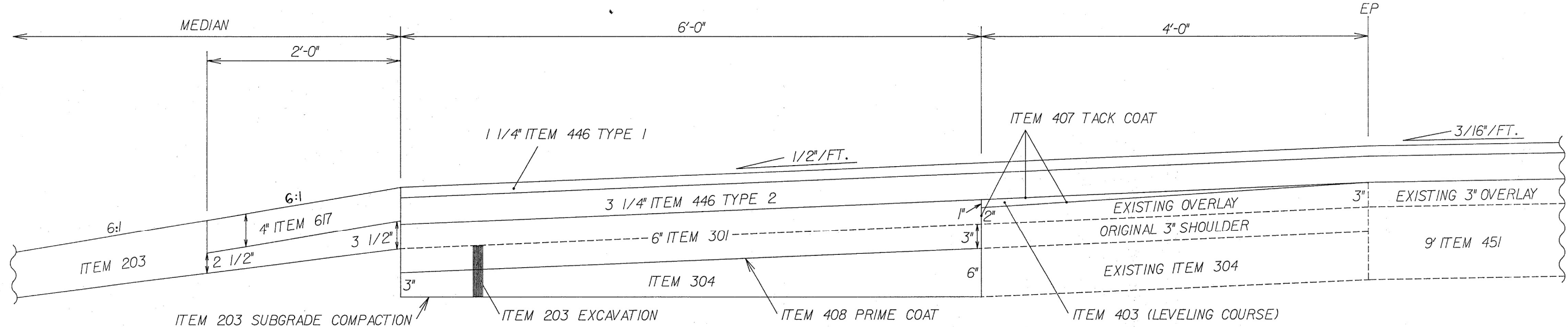
* Transitions to and from a Type A Concrete Barrier in approximately 100' on each side of Structure FRA-270-5264 (over US-23). Type A Barrier is needed for the structure due to the lack of elevation differential between the CD road and mainline pavement there.

MEDIAN SHOULDER WIDENING AND LEVELING DETAIL

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

14
147

FRA-270-52.16

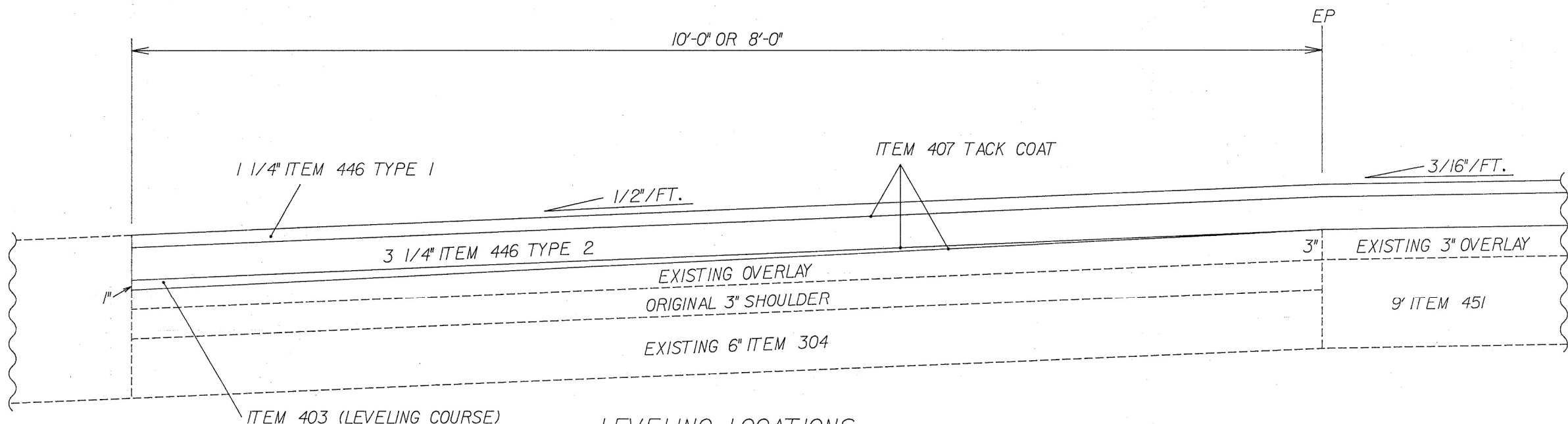


WIDENING LOCATIONS
 Sta. 350+00 to Sta. 362+89
 Sta. 506+00 to Sta. 530+00

LEVELING LOCATIONS
 Sta. 350+00 to Sta. 392+95
 Sta. 489+05 to Sta. 498+07 *
 Sta. 500+49 to Sta. 530+00 *

* SEE SHEET 17 FOR FEATHERING DETAIL AT STRUCTURES FRA-270-5272 R&L

OUTSIDE SHOULDER LEVELING DETAIL



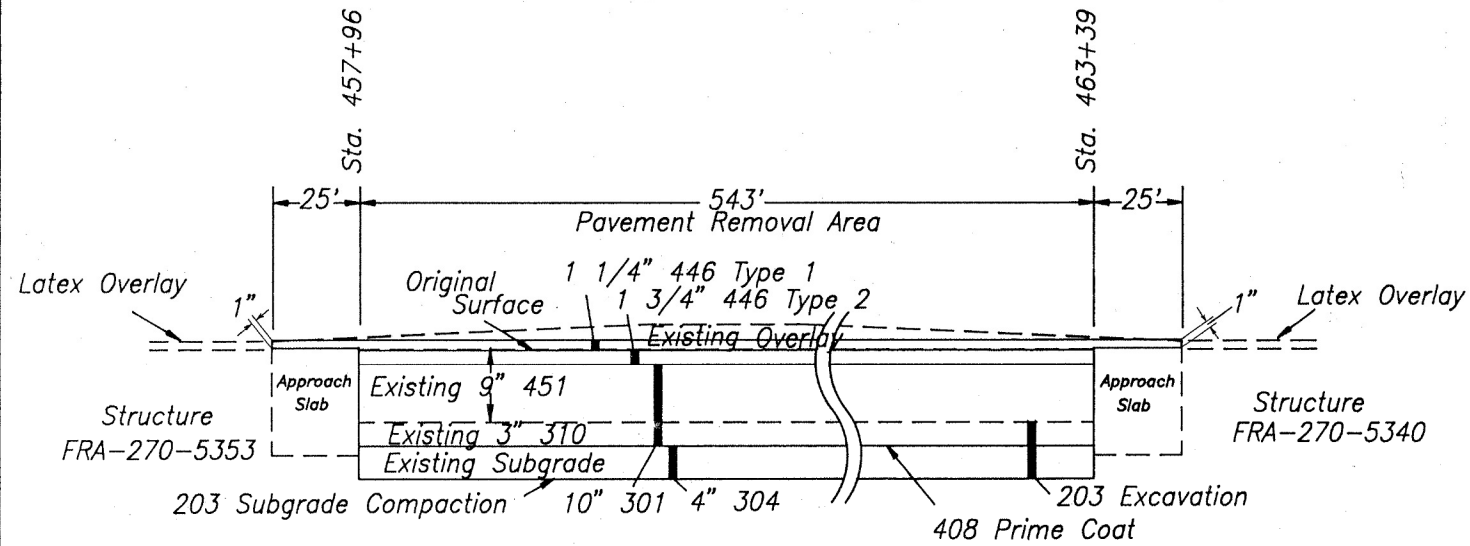
LEVELING LOCATIONS
 (SEE QUANTITY SHEET FOR EXACT LOCATIONS)

Pavement Details

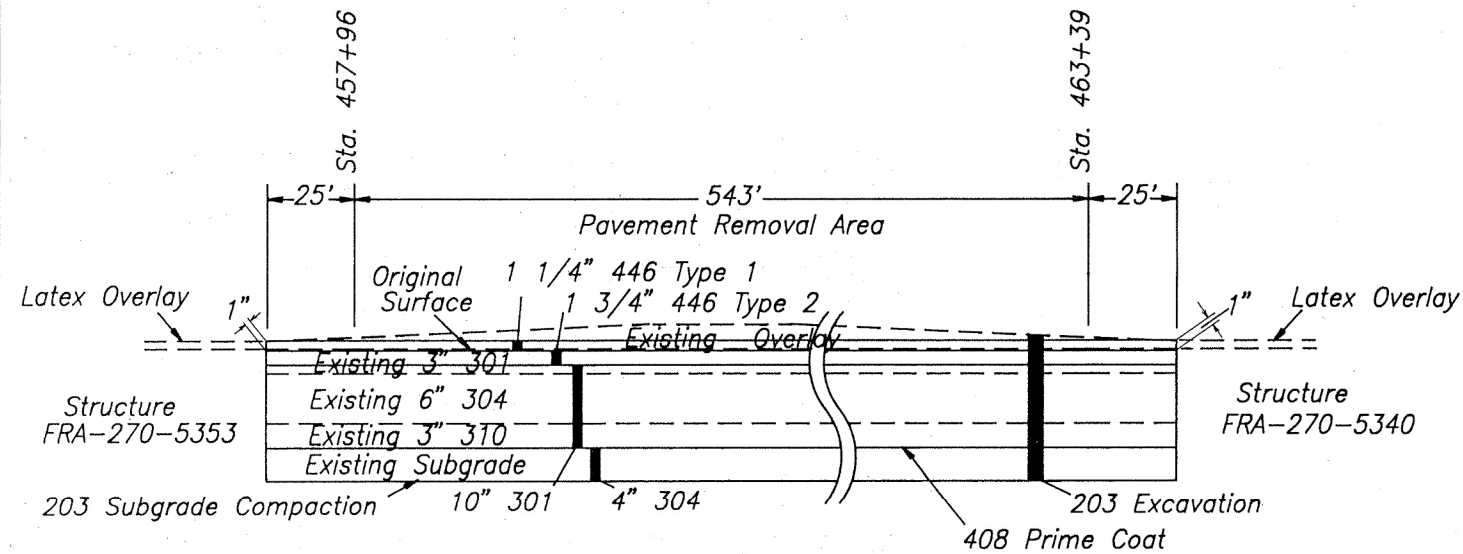
FHWA REGION	STATE	PROJECT	
5	OHIO		

FRA-270-52.16

Pavement Replacement Diagrams

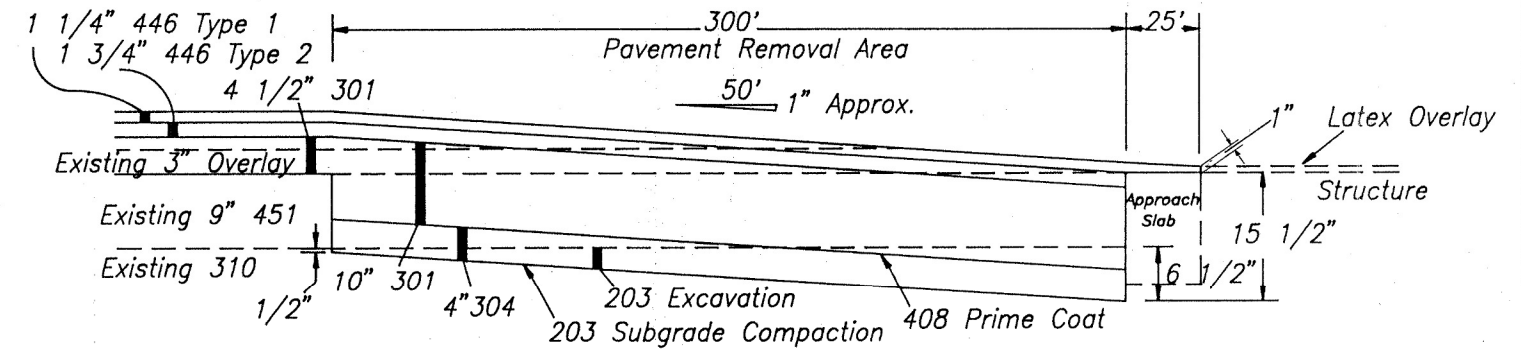


Pavement Replacement Between Structures 5353 & 5340

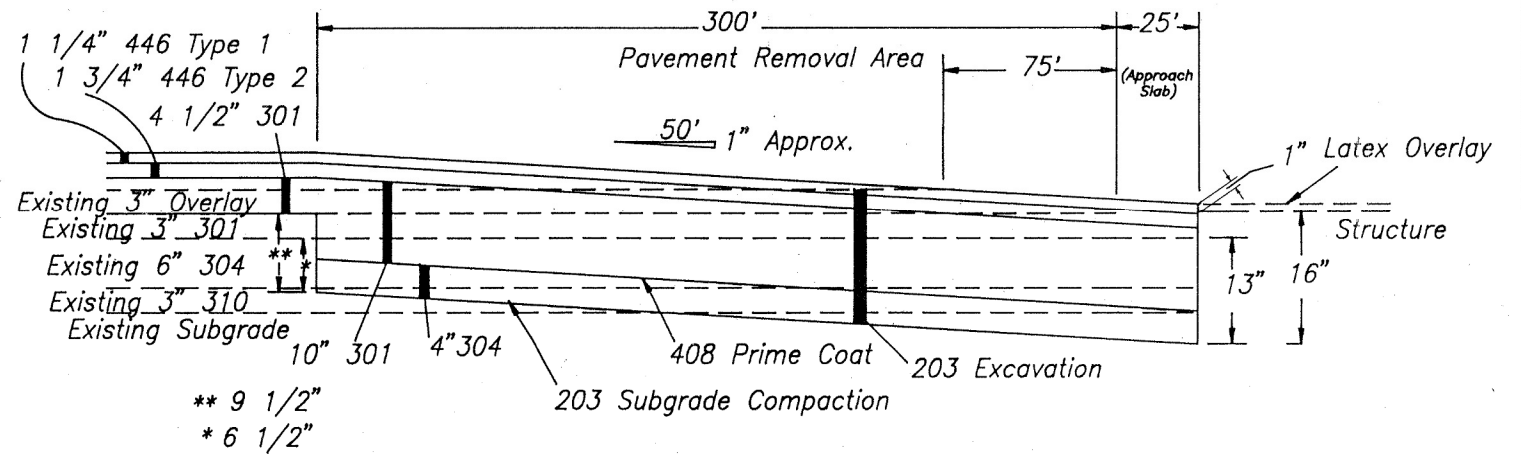


Shoulder Replacement Between Structures 5353 & 5340

Structure Transition Diagrams



Pavement Transition at Structures 5412, 5353 (West Side) and 5340 (East Side)



Shoulder Transition at Structures (Listed Above)

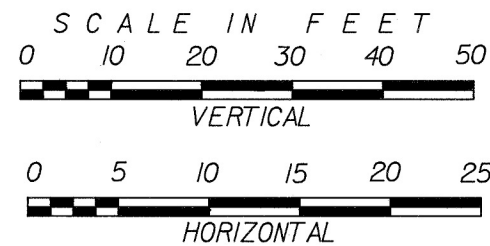
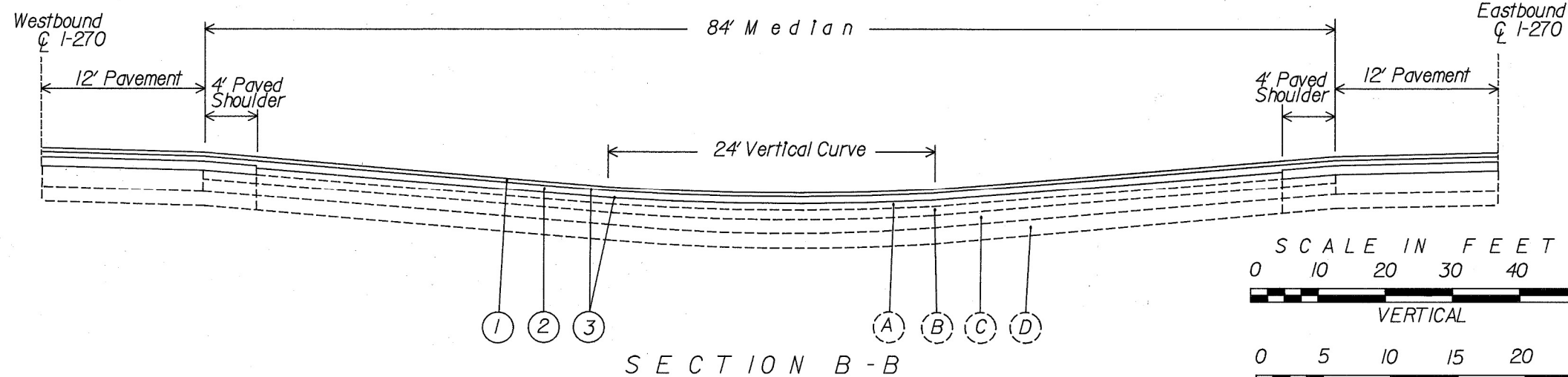
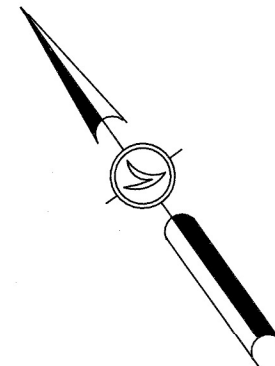
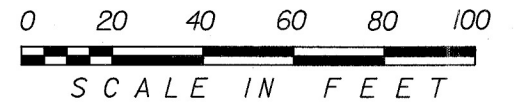
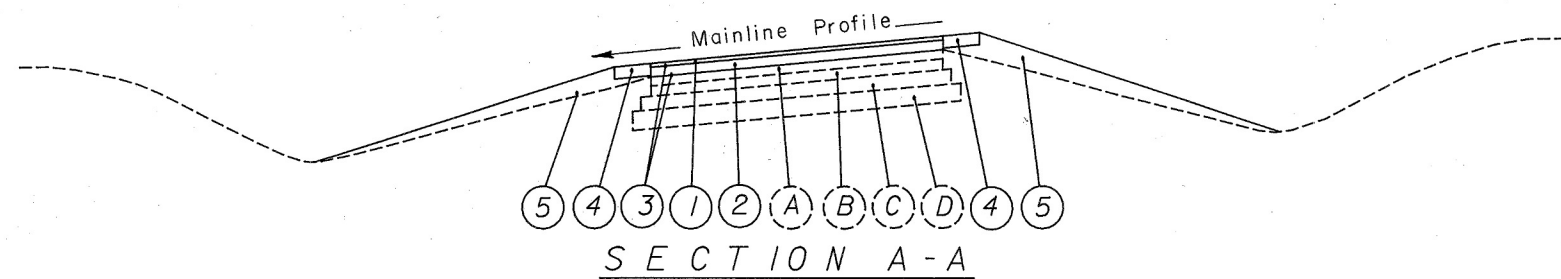
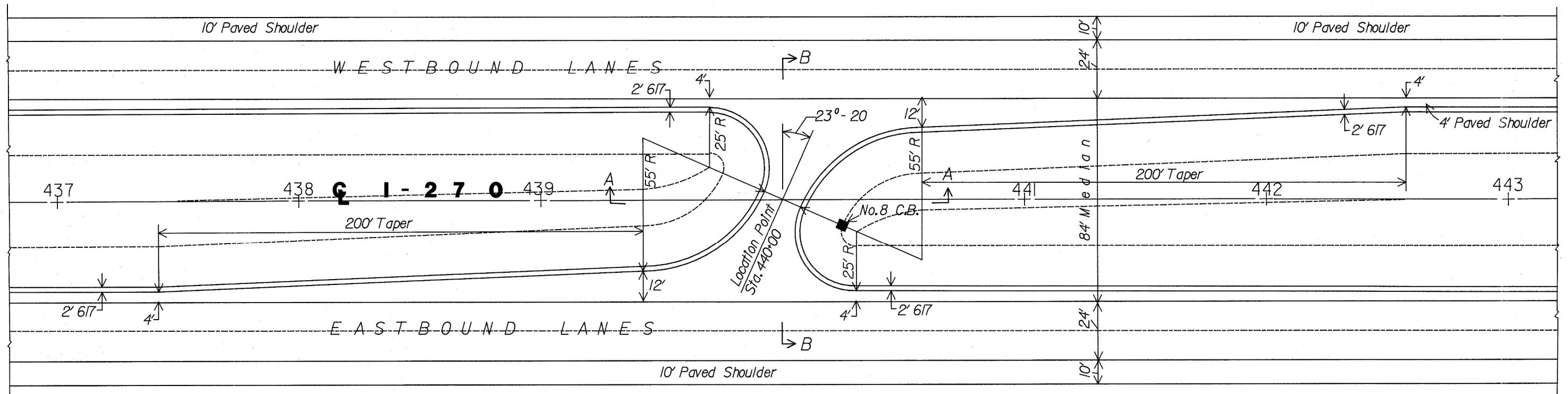
NOTES:

Existing Shoulder Pavement and Sub-pavement Materials to be Removed under Item 203 Excavation not including Embankment Construction.

U - TURN MEDIAN OPENING (STA. 440 00)

FHWA REGION	STATE	PROJECT
5	OHIO	

FRA-270-52J6



- LEGEND**
- Proposed
- ① ITEM 446 - 1 1/4" Asphalt Concrete Surface Course, Type 1, AC-20
 - ② ITEM 446 - 3 1/4" Asphalt Concrete Intermediate Course, Type 2, AC-20
 - ③ ITEM 407 - Tack Coat
 - ④ ITEM 617 - 4" Compacted Aggregate, Type A
 - ⑤ ITEM 203 - Embankment
- Existing
- Ⓐ ITEM 404 - 3" Asphalt Concrete
 - Ⓑ ITEM 301 - 3" Bituminous Aggregate Base
 - Ⓒ ITEM 304 - 5" Aggregate Base
 - Ⓓ ITEM 310 - 6" Subbase

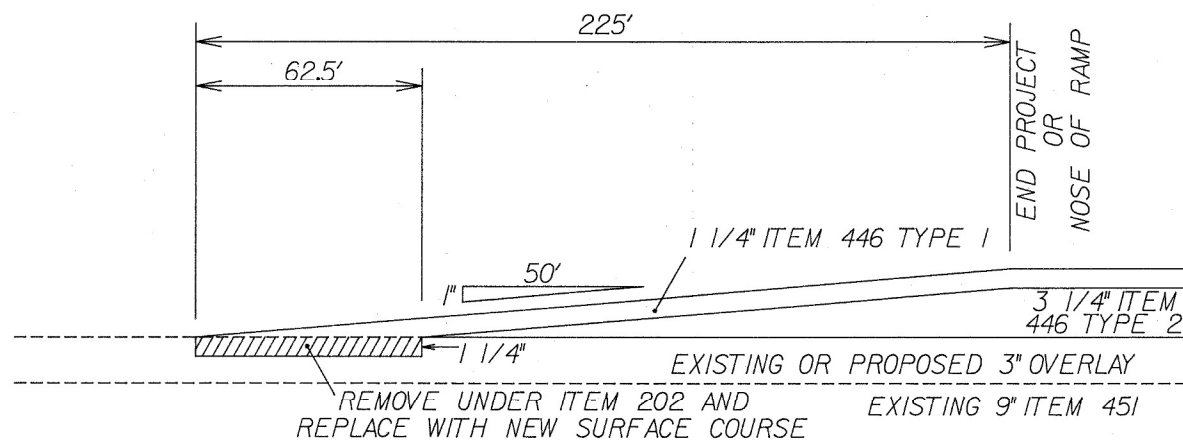
BUTT JOINT AND FEATHERING DETAILS

(SEE S.C.D.BP-5 FOR ANY DETAILS NOT SHOWN)

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

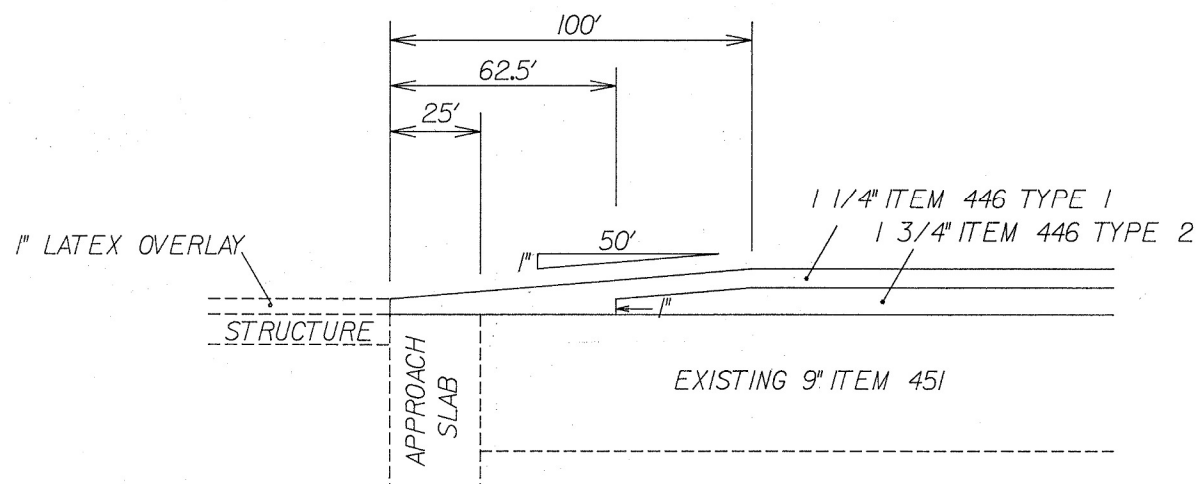
17
147

FRA-270-52.16

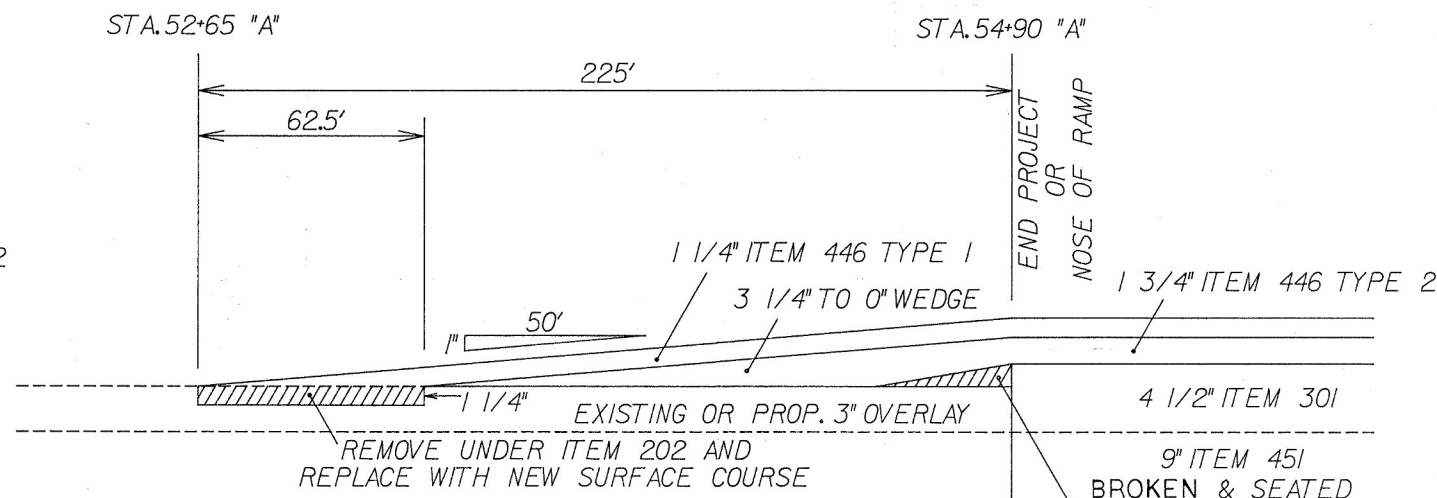


APPLIES TO EACH END OF THE PROJECT MAINLINE AND TO RAMPS S,R,P,M,D,F, AND G WHERE THEY MEET THE MAINLINE. * THE REMAINING RAMP ENDS MAY BE BUTT JOINTED TO EXISTING OVERLAYS AT THE RAMP NOSES SINCE THE TREATMENT FOR THESE RAMPS IS TO REMOVE AND REPLACE AN EQUAL AMOUNT OF PAVEMENT.

* RAMPS O AND Q WILL BE TREATED SIMILARLY EXCEPT THAT THE LENGTH OF THE FEATHERING SHALL BE 175' AND 92.5' RESPECTIVELY.

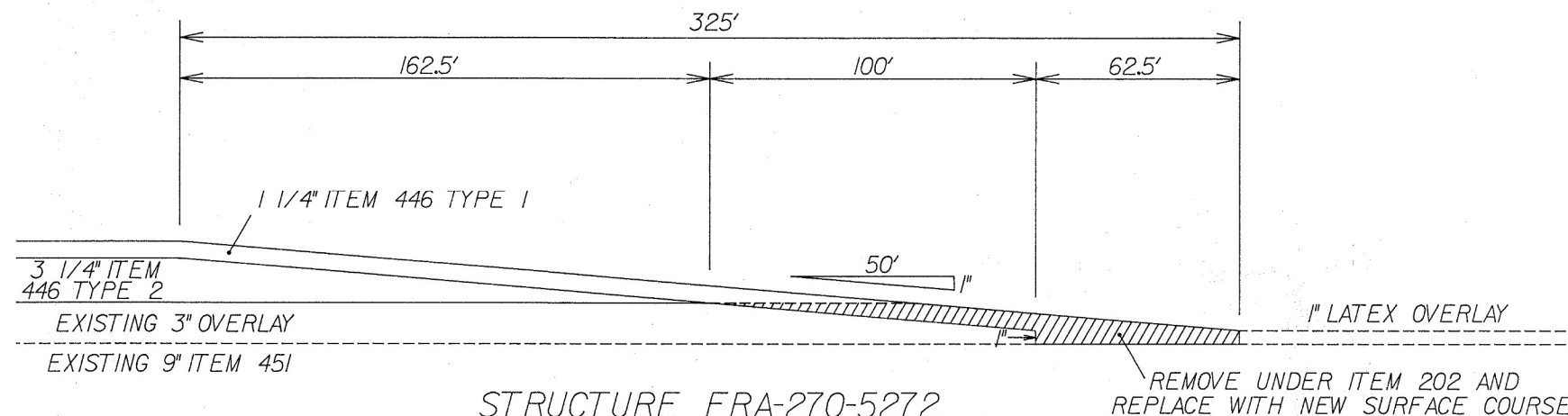


FEATHERING DETAILS FOR STRUCTURES ON RAMP "L".



THIS DIAGRAM IS TO BE USED WHERE RAMP "A" MEETS THE BROKEN AND SEATED MAINLINE.

TEMPORARY FEATHERING AS PER BP-5. QUANTITIES OF ITEM 404 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC ARE INCLUDED FOR THIS PURPOSE.

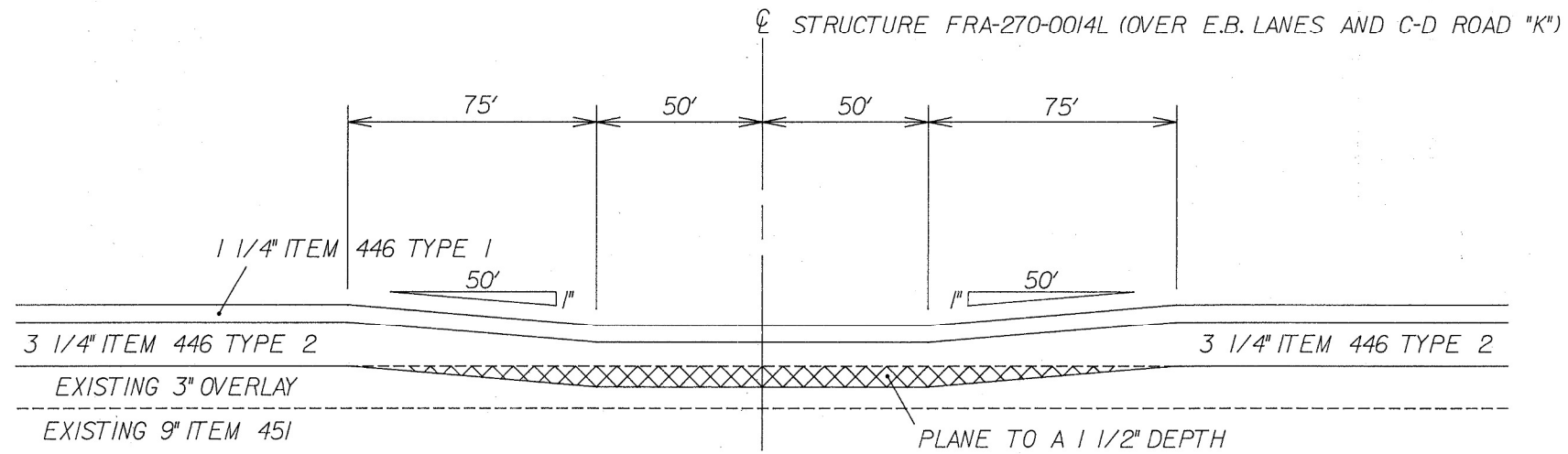


STRUCTURE FRA-270-5272
(APPLIES TO BOTH ENDS OF BOTH STRUCTURES)

WEARING COURSE REMOVAL

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

FRA-270-52.16



ITEM 202 - WEARING COURSE REMOVAL

1" DEPTH REMOVAL

I-270 W.B. UNDER RAMP "L" (STR. 5264R) 1,245 SQ.YD.

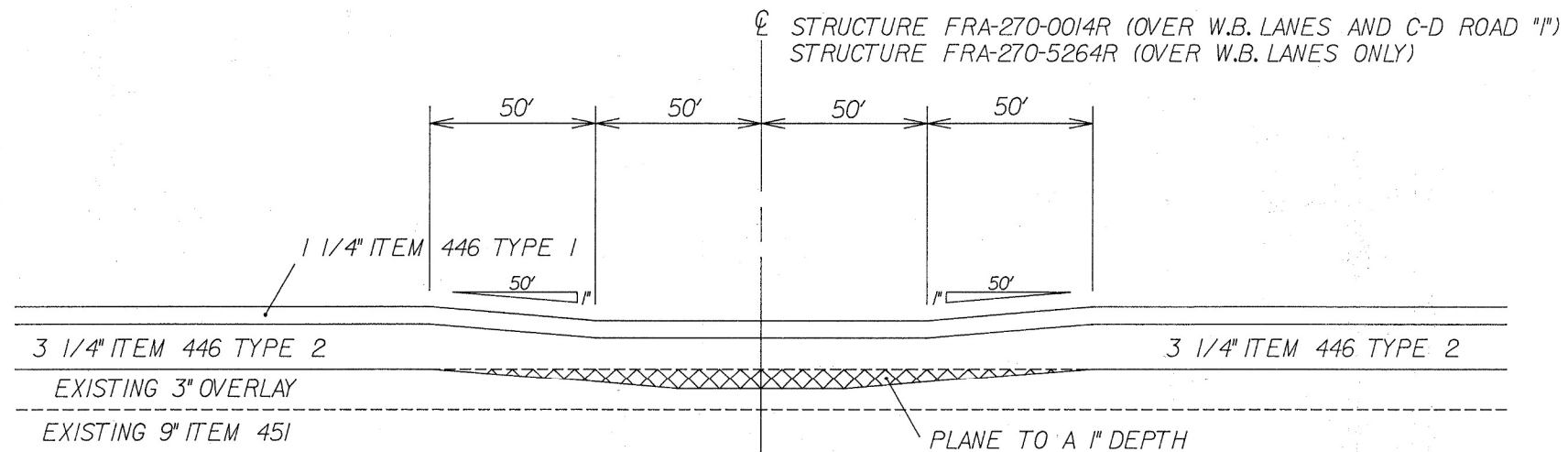
I-270 W.B. UNDER RAMP "A" (STR. 0014R) 1,444 SQ.YD.

1 1/2" DEPTH REMOVAL

I-270 E.B. UNDER RAMP "A" (STR. 0014L) 1,806 SQ.YD.

TOTAL CARRIED TO THE GENERAL SUMMARY

4,495 SQ.YD.



WEARING COURSE REMOVAL DIAGRAMS

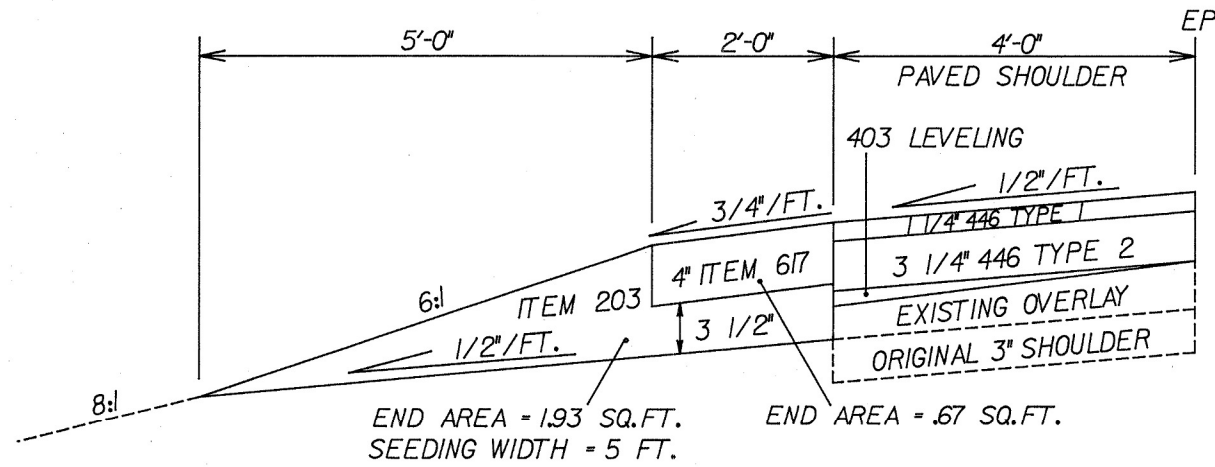
THESE DIAGRAMS SHOW THE METHOD TO BE USED TO MAINTAIN A MINIMUM 16' CLEARANCE FOR I-270.

MEDIAN GRADING

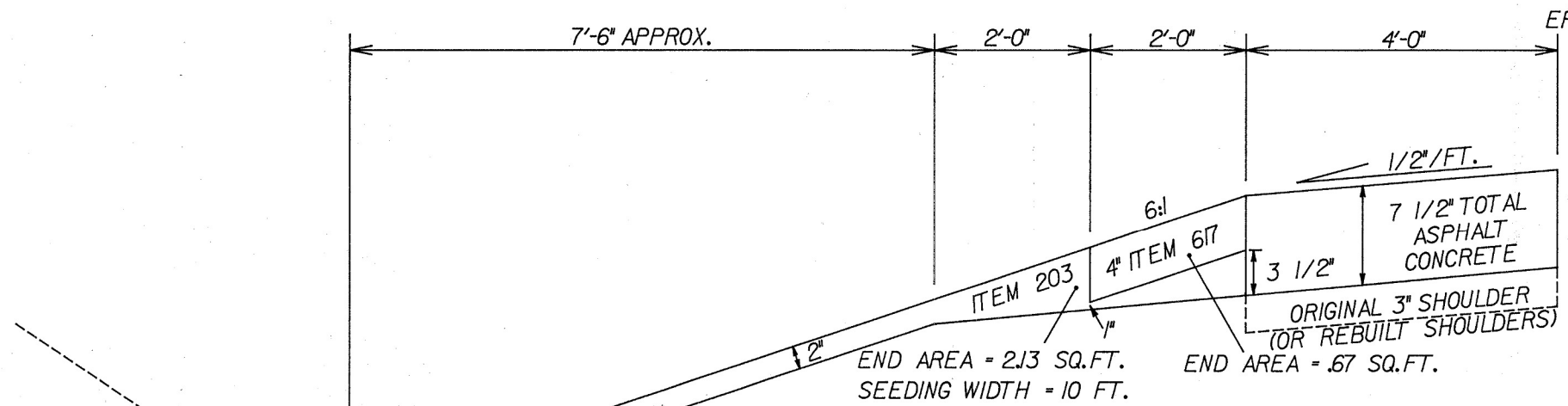
F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

19
147

FRA-270-52.16



Sta. 489+05 to Sta. 498+07
 Sta. 500+41 to Sta. 506+00 (W.B.)
 Sta. 500+50 to Sta. 506+00 (E.B.)



Sta. 362+89 to Sta. 425+33
 Sta. 426+98 to Sta. 450+15
 *
 Sta. 464+37 to Sta. 489+05

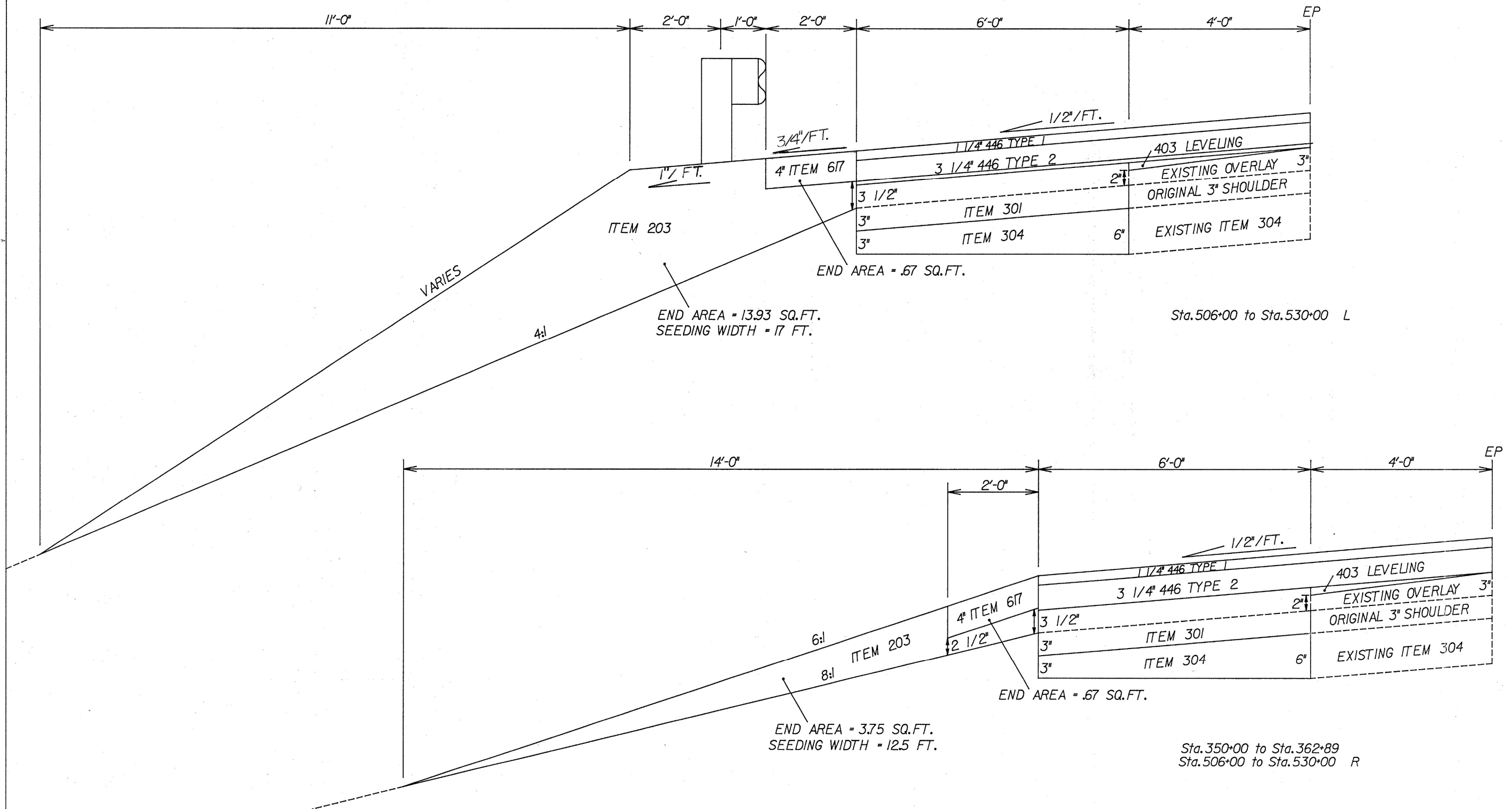
* Between Sta. 457+71 to Sta. 463+64 is a complete removal area and will require only 2' x 1" of Item 617.

MEDIAN GRADING

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

20
147

FRA-270-52.16



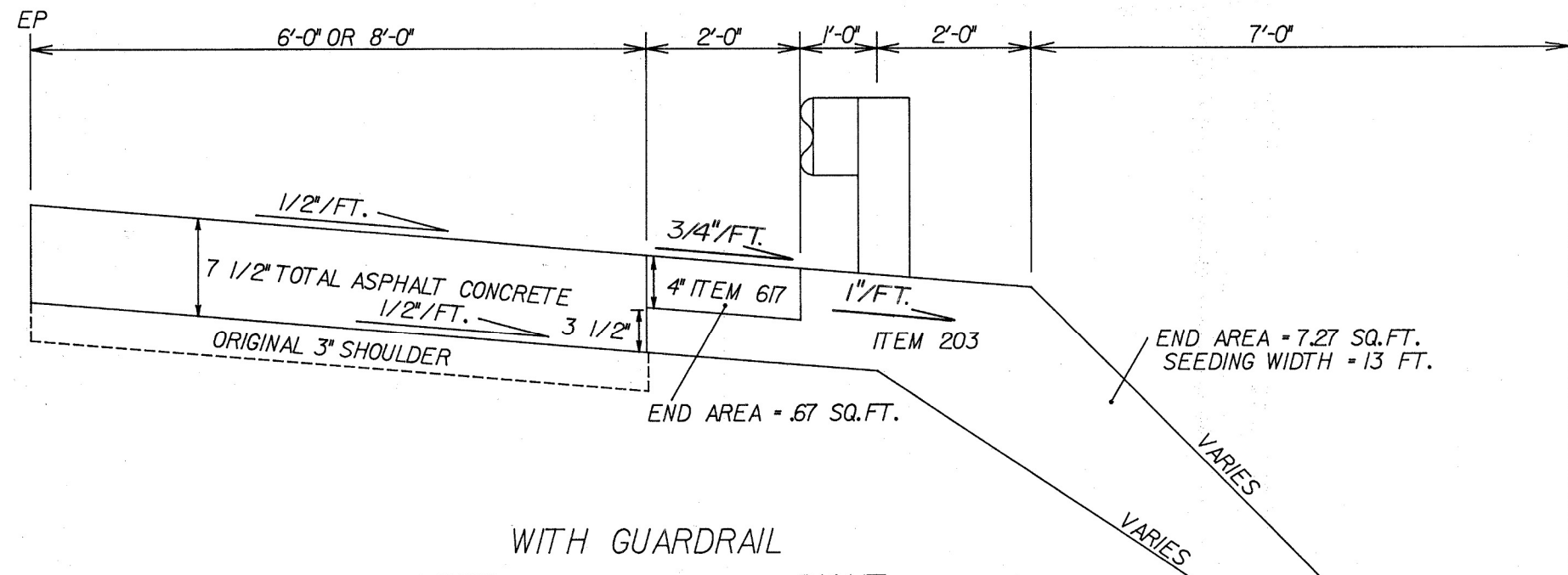
F.H.W.A. REGION	STATE	PROJECT
5	OHIO	

21
147

FRA-270-52.16

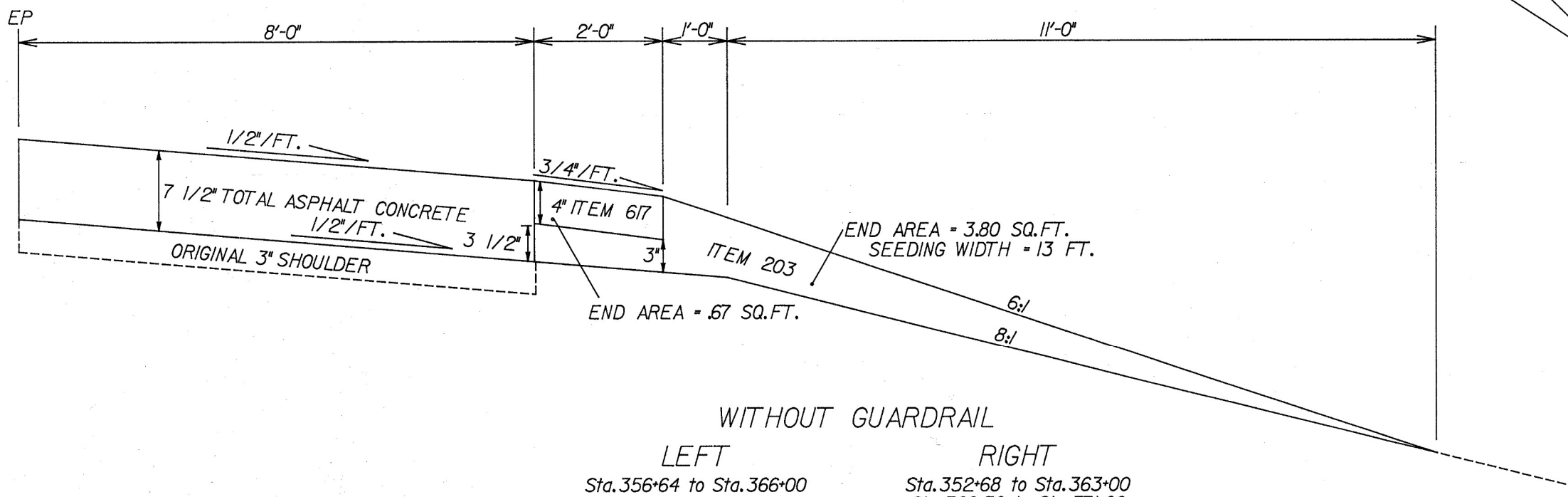
OUTSIDE SHOULDER GRADING

(ADJACENT TO RAMP TAPERS)



WITH GUARDRAIL

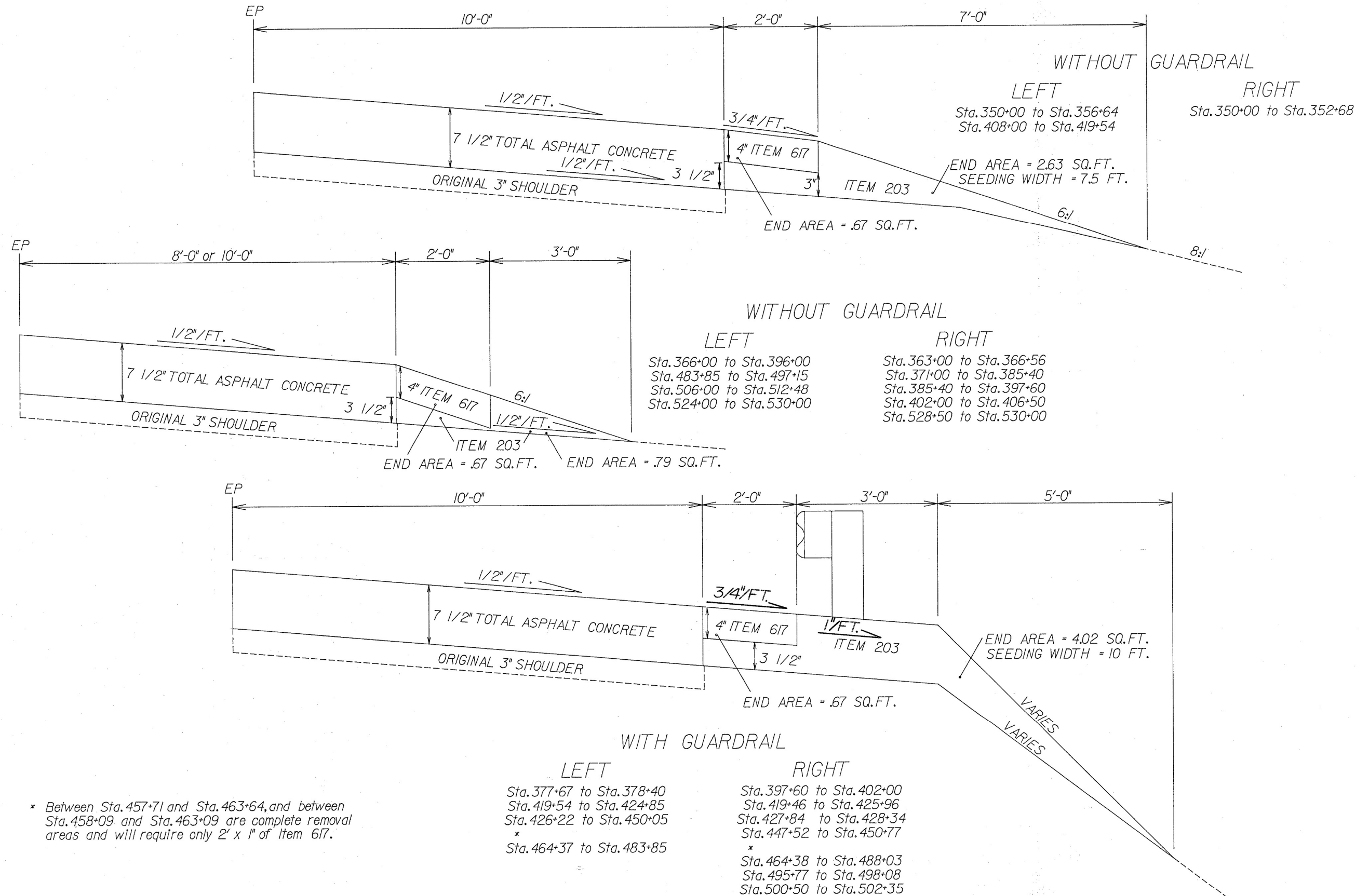
LEFT	RIGHT
Sta. 497+33 to Sta. 498+07	Sta. 488+03 to Sta. 495+25
Sta. 500+41 to Sta. 506+00	Sta. 502+35 to Sta. 511+32
Sta. 512+48 to Sta. 524+00	Sta. 511+97 to Sta. 528+50



WITHOUT GUARDRAIL

LEFT	RIGHT
Sta. 356+64 to Sta. 366+00	Sta. 352+68 to Sta. 363+00
	Sta. 366+56 to Sta. 371+00
	Sta. 406+50 to Sta. 419+46
	Sta. 428+34 to Sta. 447+52

OUTSIDE SHOULDER GRADING

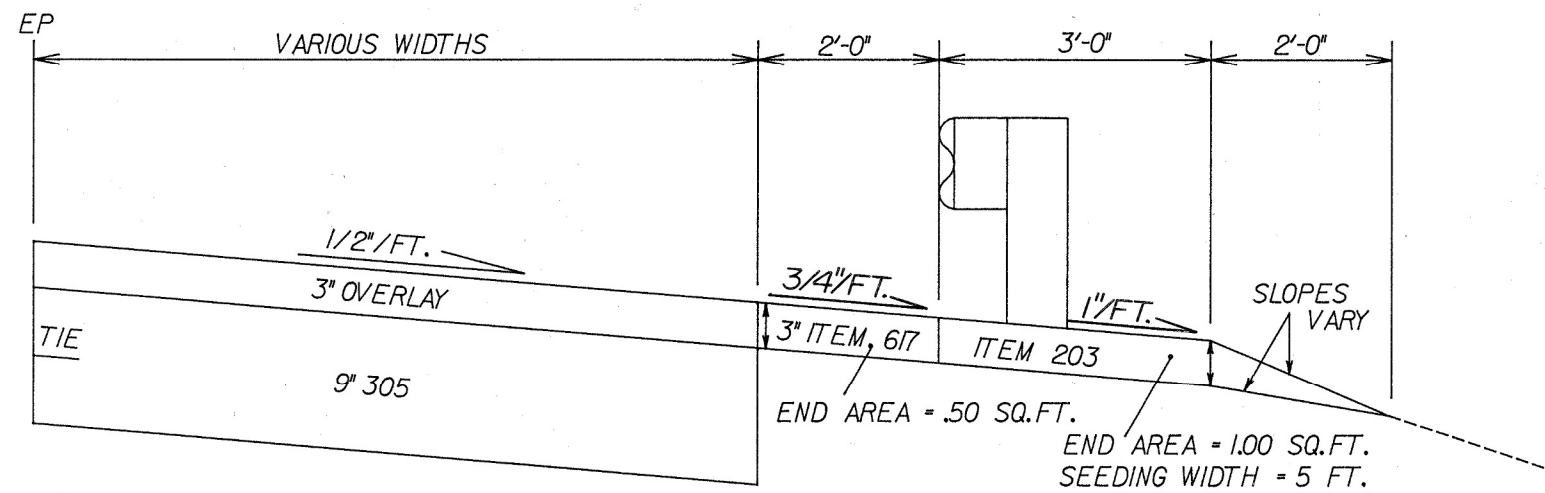


RAMP SHOULDER GRADING

(NO WIDENING)

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

FRA-270-52.16

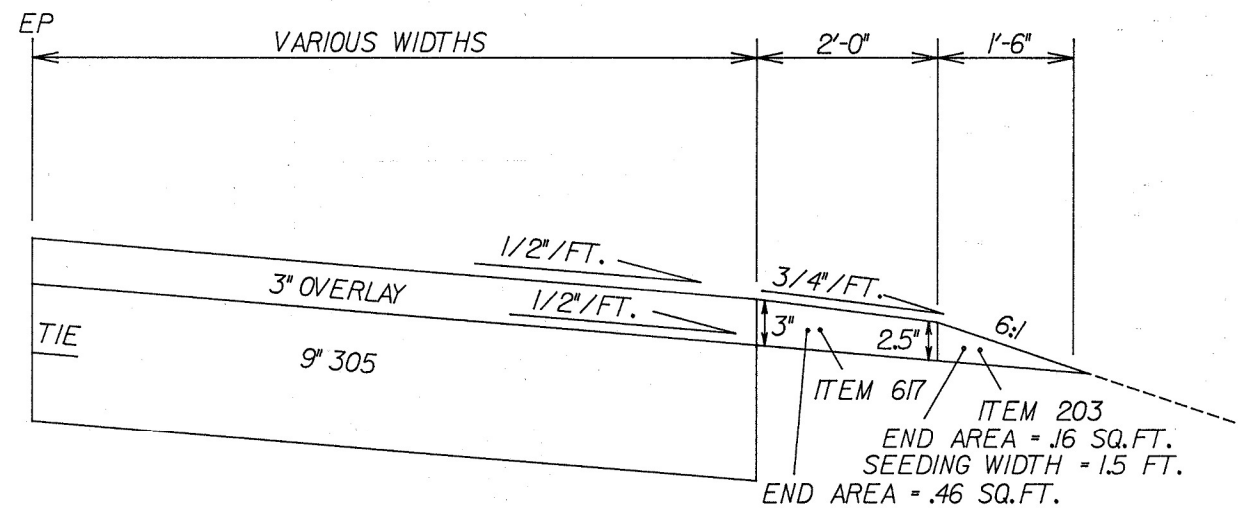


WITH GUARDRAIL

LEFT

RIGHT

- Ramp R Sta. 13+00 to Sta. 27+75
- Ramp L Sta. 2+10 to Sta. 5+07
- Sta. 8+99 to Sta. 13+87
- Sta. 16+25 to Sta. 23+24.5 (Ramp M)
- Ramp M Sta. 10+25 to Sta. 15+25
- Ramp P Sta. 4+75 to Sta. 7+75
- Ramp H Sta. 15+75 to Sta. 22+75
- Ramp A Sta. 44+25 to Sta. 52+25
- Ramp E Sta. 27+70 to Sta. 29+80
- Sta. 17+22 to Sta. 27+15
- Sta. 51+19 to Sta. 54+90

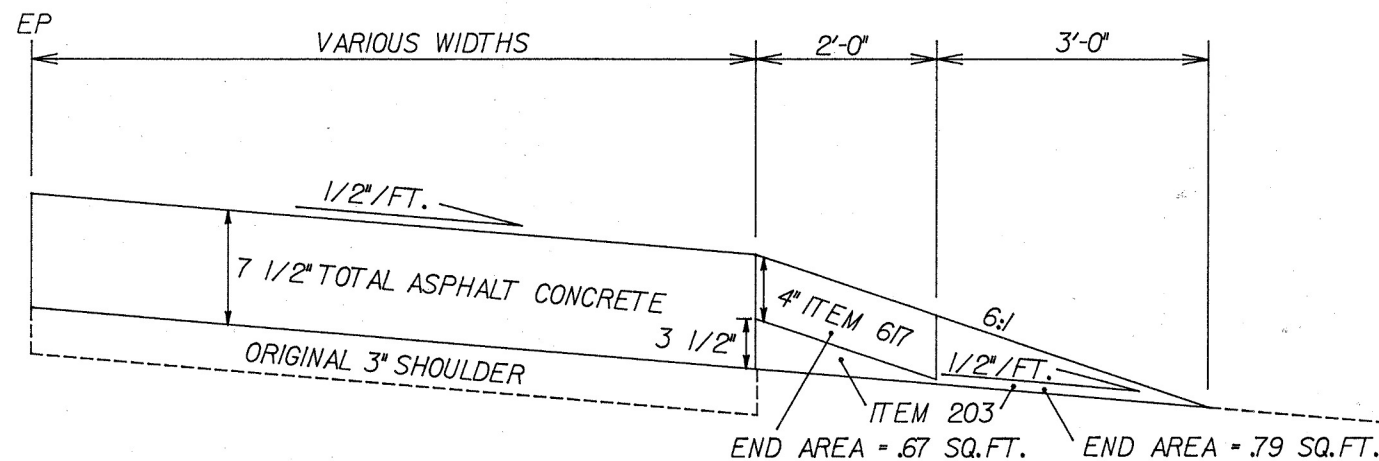


WITHOUT GUARDRAIL

LEFT

RIGHT

- Ramp R Sta. 10+29 to Sta. 13+00
- Sta. 27+75 to Sta. 29+18
- Ramp M Sta. 7+90 to Sta. 10+25
- Sta. 15+25 to Sta. 16+43
- Sta. 23+24.5 to Sta. 27+15
- Ramp P Sta. 2+88 to Sta. 4+75
- Sta. 7+75 to Sta. 18+33
- Ramp H Sta. 13+83 to Sta. 15+75
- Sta. 22+75 to Sta. 27+24
- Ramp A Sta. 52+25 to Sta. 54+90
- Ramp B Sta. 11+87 to Sta. 21+90
- Ramp E Sta. 20+68 to Sta. 27+70
- Sta. 29+80 to Sta. 37+03
- Sta. 20+68 to Sta. 37+03



THIS DETAIL HAS BEEN USED TO ESTIMATE THE GORE SIDE OF THE FEATHERED AREAS OF THE RAMPS THAT ARE NOT BEING REPAVED.

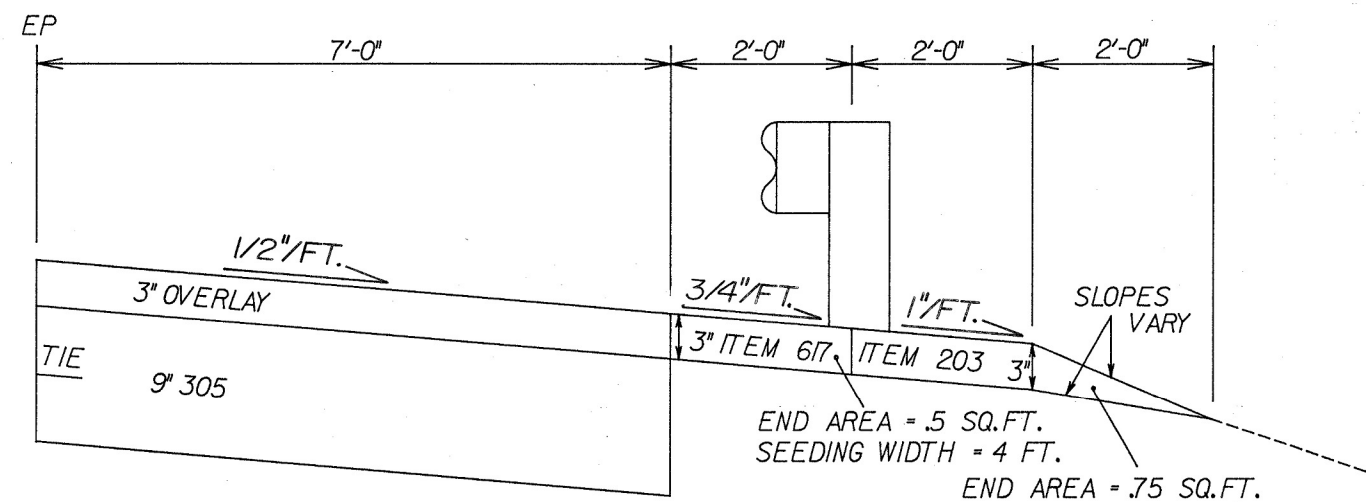
LEFT

RIGHT

- Ramp C Sta. 9+05 to Sta. 11+30
- Ramp D Sta. 14+61 to Sta. 16+86
- Ramp F Sta. 27+32 to Sta. 29+57
- Ramp G Sta. 31+34 to Sta. 33+59
- Ramp O Sta. 9+20 to Sta. 10+95
- Ramp Q Sta. 1+67 to Sta. 2+59
- Ramp S Sta. 11+90 to Sta. 14+15

RAMP SHOULDER GRADING

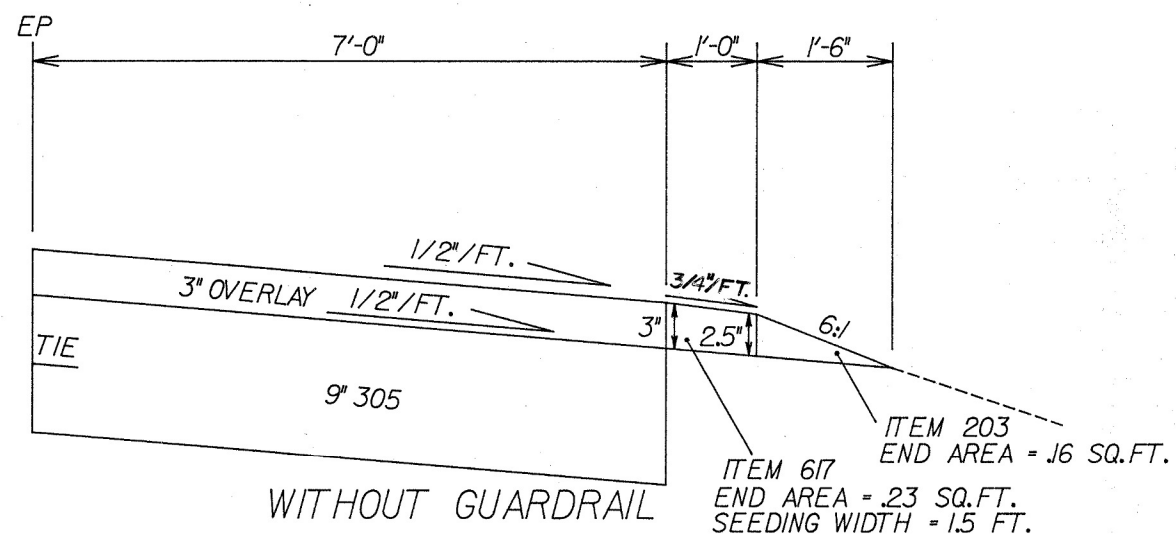
(WITH WIDENING)



WITH GUARDRAIL

RIGHT

- Ramp R Sta. 12+75 to Sta. 29+84
- Ramp L Sta. 3+04 to Sta. 5+04
- Sta. 8+90 to Sta. 13+97
- Sta. 16+32 to Sta. 20+00
- Ramp M Sta. 7+90 to Sta. 17+22
- Ramp P Sta. 2+88 to Sta. 6+74
- Ramp H Sta. 16+25 to Sta. 22+25
- Ramp A Sta. 47+77 to Sta. 51+19
- Ramp B Sta. 11+87 to Sta. 12+44



WITHOUT GUARDRAIL

RIGHT

- Ramp R Sta. 10+29 to Sta. 12+75
- Ramp L Sta. 2+10 to Sta. 3+04
- Sta. 20+00 to Sta. 20+56
- Ramp P Sta. 6+74 to Sta. 19+94
- Ramp H Sta. 13+83 to Sta. 16+25
- Sta. 22+25 to Sta. 27+24
- Ramp A Sta. 44+25 to Sta. 47+77
- Ramp B Sta. 12+44 to Sta. 21+90