

- INDEX OF SHEETS**
1. TITLE SHEET
  2. TYPICAL SECTION - ALTERNATE A
  3. TYPICAL SECTION - ALTERNATE B
  4. NOTES & DETAILS COMMON TO BOTH ALTERNATES
  - 5.-13. BRIDGE DETAIL SHEETS 1-9
  14. TYPICAL INTERCHANGE CONSTRUCTION DETAILS
  - 15.-16. QUANTITY SHEETS 1 & 2
  - 17.-18. PAVEMENT MARKING DETAIL SHEETS 1 & 2 MAINLINE
  - 19.-21. PAVEMENT MARKING DETAIL SHEETS 3 - 5 EXIT I2
  - 22.-23. PAVEMENT MARKING DETAIL SHEETS 6 & 7 EXIT I2
  - 24.-27. PAVEMENT MARKING DETAIL SHEETS 8 - 11 EXIT I4
  28. PAVEMENT MARKING DETAIL SHEET 12 EXIT I6
  - 29.-30. PAVEMENT MARKING DETAIL SHEETS 13 & 14 EXIT I6
  - 31.-32. PAVEMENT MARKING DETAIL SHEETS 15 & 16 WILLISTON REST AREAS
  33. PAVEMENT MARKING DETAIL SHEET I7
  34. VIDEO VEHICLE DETECTION SYSTEM DETAILS
  35. CONSTRUCTION APPROACH SIGNING SHEET
  36. CONSTRUCTION APPROACH SIGNING SHEET NOTES
  37. ROUGHNESS DATA INFORMATION SHEET NB
  38. ROUGHNESS DATA INFORMATION SHEET SB
  39. RUTTING DATA INFORMATION SHEET NB
  40. RUTTING DATA INFORMATION SHEET SB

**STRUCTURES DETAIL SHEET**  
SD-SIG-0 BRIDGE JOINT ASPHALTIC PLUG

**VAOT STANDARDS**

E-100	01/02/04
E-101	05/30/03
E-102	06/30/03
E-102A	05/01/04
E-103	03/01/04
E-105	03/01/04
E-106	03/01/04
E-107A	06/08/09
E-108A	06/08/09
E-191	02/01/99
E-192	10/12/00
E-193	08/18/95

STATE OF VERMONT  
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT  
TOWNS OF RICHMOND, WILLISTON,  
SOUTH BURLINGTON, WINOOSKI  
& COLCHESTER  
COUNTY OF CHITTENDEN  
INTERSTATE ROUTE 89 (NHS)

IM SURF (38) NORTHBOUND:  
BEGINNING IN THE TOWN OF RICHMOND AT MILE MARKER 79.000 AND EXTENDING NORTHERLY ALONG INTERSTATE ROUTE 89 (NORTHBOUND LANE) FOR A DISTANCE OF 68,006.40 FT (12.880 MILES) TO MILE MARKER 91.880 IN THE TOWN OF COLCHESTER.

LENGTH OF ROADWAY = 68,006.40 FT = (12.880 MILES)

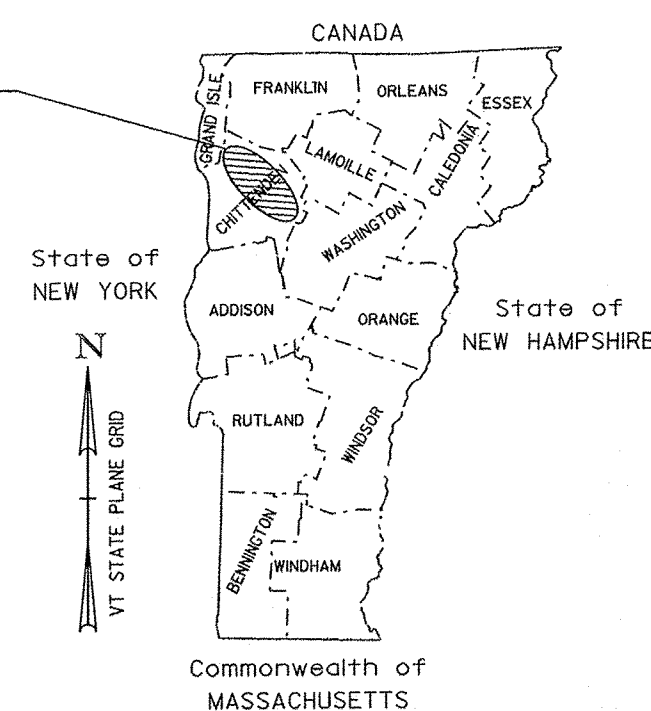
IM SURF (38) SOUTHBOUND:  
BEGINNING IN THE TOWN OF RICHMOND AT MILE MARKER 79.000 AND EXTENDING NORTHERLY ALONG INTERSTATE ROUTE 89 (SOUTHBOUND LANE) FOR A DISTANCE OF 68,006.40 FT (12.880 MILES) TO MILE MARKER 91.880 IN THE TOWN OF COLCHESTER.

LENGTH OF ROADWAY = 68,006.40 FT = (12.880 MILES)

LENGTH OF PROJECT = 68,006.40 FT = (12.880 MILES)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR, CRACK SEALING AND OVERLAYING WITH A THIN BITUMINOUS CONCRETE WEARING SURFACE ON THE EXISTING INTERSTATE TYPICAL, AND APPLICABLE PAVEMENT MARKINGS.

PROJECT LOCATION  
RICHMOND - COLCHESTER IM SURF (38)



**RECORD PLANS**

CONTRACTOR: F.W. WHITCOMB CONSTRUCTION CORP. - WALPOLE, NH  
RESIDENT ENGINEER: JOSH HULETT  
CONSTRUCTION BEGAN: APRIL 20, 2014  
CONSTRUCTION COMPLETE: OCTOBER 14, 2014  
RECORD PLANS BY: JOSH HULETT & JENNA HYDE  
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.  
BY: *Josh Hulett* RESIDENT ENGINEER  
DATE: March 3, 2016

NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archive.

**TRAFFIC DATA**

I-89 NB	2013 AADT	2013 ADOT	2013 DHV	2023 DHV	FLEXIBLE (2013-2023)	FLEXIBLE (2013-2033)
BEGIN PROJECT TO EXIT I2	14,800	16,300	1,700	1,900	3,107,000	5,869,000
EXIT I2 TO EXIT I3	19,900	22,400	2,600	2,900	4,565,000	8,427,000
EXIT I3 TO EXIT I4	20,200	22,300	2,600	2,900	3,807,000	9,603,000
EXIT I4 TO EXIT I5	27,800	30,800	3,600	4,000	4,275,000	10,712,000
EXIT I5 TO END PROJECT	18,200	20,500	2,900	3,300	5,754,000	15,046,000

I-89 SB	2013 AADT	2013 ADOT	2013 DHV	2023 DHV	FLEXIBLE (2013-2023)	FLEXIBLE (2013-2033)
BEGIN PROJECT TO EXIT I2	14,800	16,300	1,800	2,000	3,169,000	7,578,000
EXIT I2 TO EXIT I3	19,900	22,400	2,600	2,900	3,920,000	9,946,000
EXIT I3 TO EXIT I4	20,200	22,300	2,700	3,000	3,583,000	9,003,000
EXIT I4 TO EXIT I5	27,800	30,800	3,700	4,000	4,484,000	11,247,000
EXIT I5 TO END PROJECT	18,200	20,500	3,300	3,800	5,289,000	13,794,000

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.  
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.  
UNLESS OTHERWISE NOTED THE DRAWINGS AND DETAILS ON THESE PLANS ARE DRAWN NOT TO SCALE.

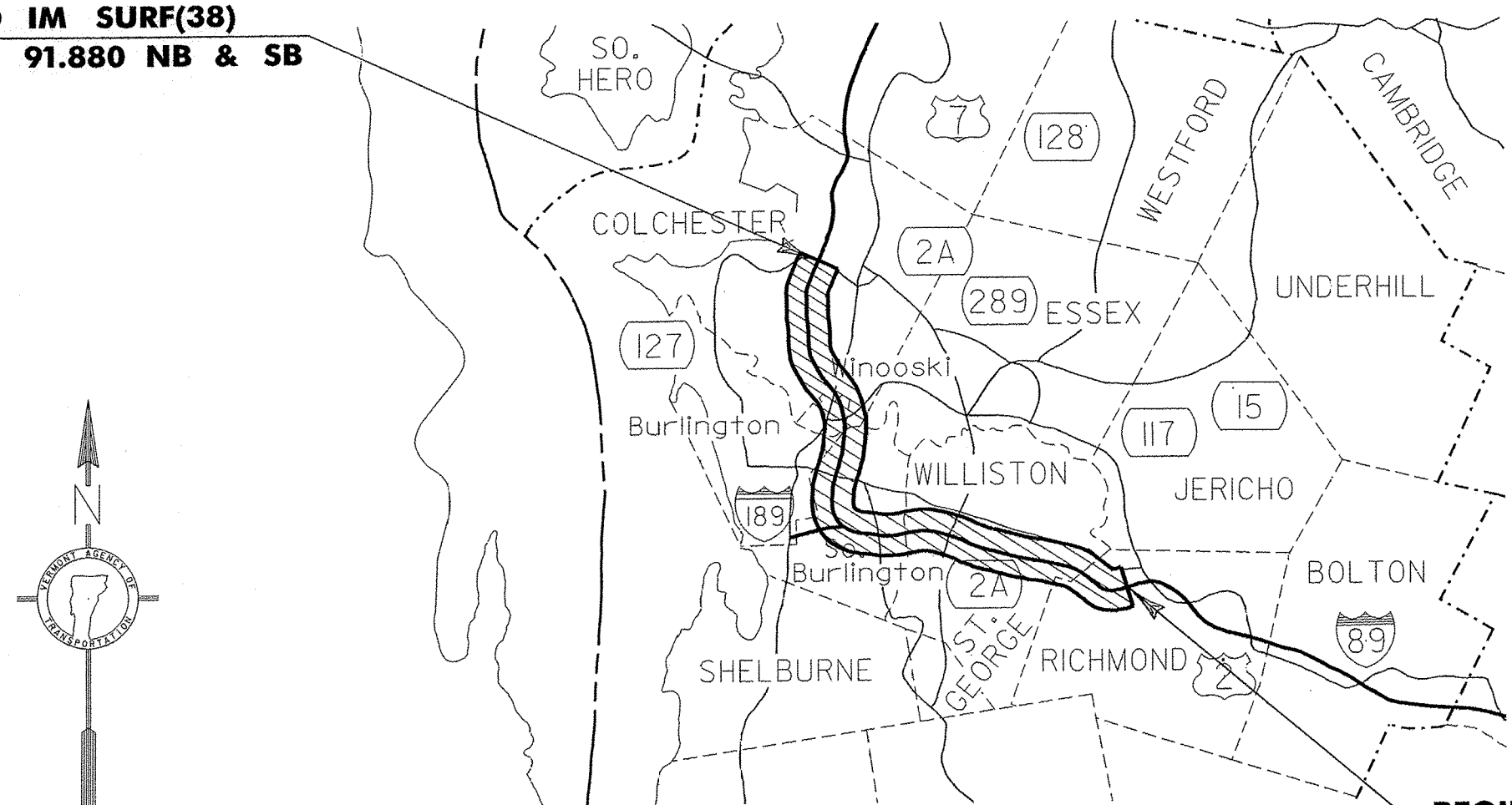
DIRECTOR OF PROGRAM DEVELOPMENT  
APPROVED: *Richard Fitchman* DATE: 9-25-15  
PROJECT MANAGER: MIKE FOWLER, P.E.  
PROJECT NAME: RICHMOND - COLCHESTER  
PROJECT NUMBER: IM SURF (38)  
SHEET 1 OF 40 SHEETS

QUALITY ASSURANCE PROGRAM LEVEL I

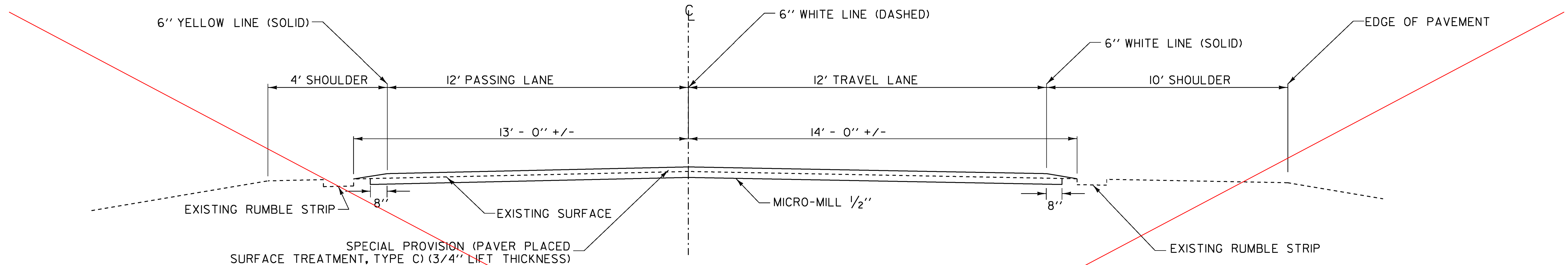
**CONVENTIONAL SYMBOLS**

COUNTY LINE	— — — — —
TOWN LINE	— — — — —
LIMITS OF ACCESS	— — — — —
POINT OF ACCESS	X
FENCE LINE	X — X — X — X —
STONE WALL	— — — — —
TRAVELED WAY	— — — — —
GUARD RAIL	— — — — —
RAILROAD	— — — — —
SURVEY LINE	— — — — —
CULVERT	— — — — —
POWER POLE	⊕
TELEPHONE POLE	⊕
TREES	⊕
CONTROL OF ACCESS	— — — — —
PROPERTY LINE	— — — — —
R.O.W. TAKING LINE	— — — — —
SLOPE RIGHTS	— — — — —
TOP OF CUT	— — — — —
TOE OF SLOPE	— — — — —

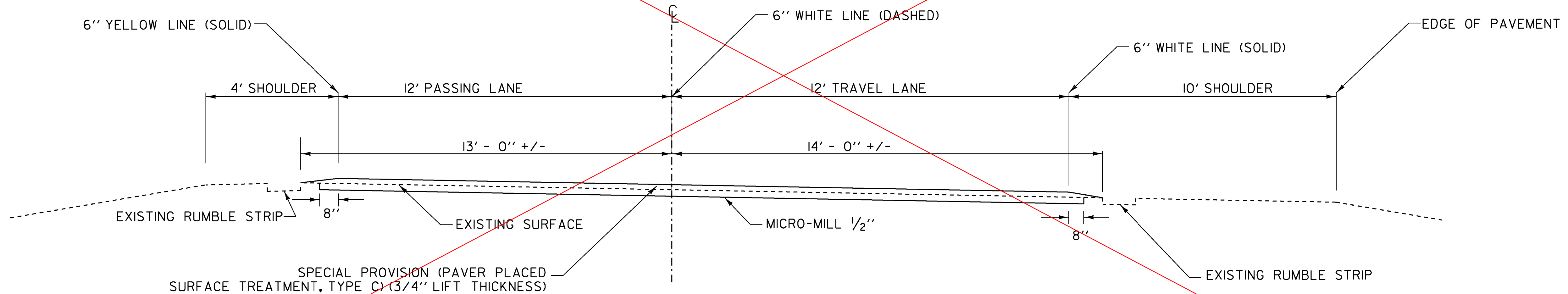
END IM SURF(38)  
MM 91.880 NB & SB



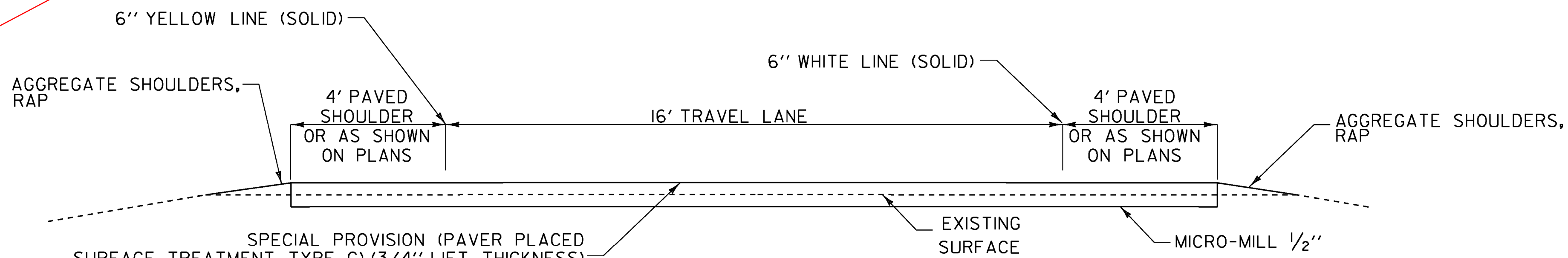
BEGIN IM SURF(38)  
MM 79.000 NB & SB



**ROADWAY TYPICAL NORMAL SECTION**  
**ALTERNATE A**  
 NOT TO SCALE



**ROADWAY TYPICAL BANKED SECTION**  
**ALTERNATE A**  
 NOT TO SCALE



**TYPICAL RAMP SECTION**  
**ALTERNATE A**  
 NOT TO SCALE

**ROADWAY PROJECT TYPICAL SECTIONS - ALTERNATE A**

**I-89 NORTHBOUND RICHMOND M.M. 79.000 - COLCHESTER M.M. 91.880**  
**I-89 SOUTHBOUND RICHMOND M.M. 79.000 - COLCHESTER M.M. 91.880**

NOTES:

1. PERFORMANCE GRADED BINDER SHALL BE PG 70-28.

**TYPICAL SECTION - ALTERNATE A**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\pl3a136.dgn

PROJECT LEADER: M. FOWLER

DESIGNED BY: LOCKE

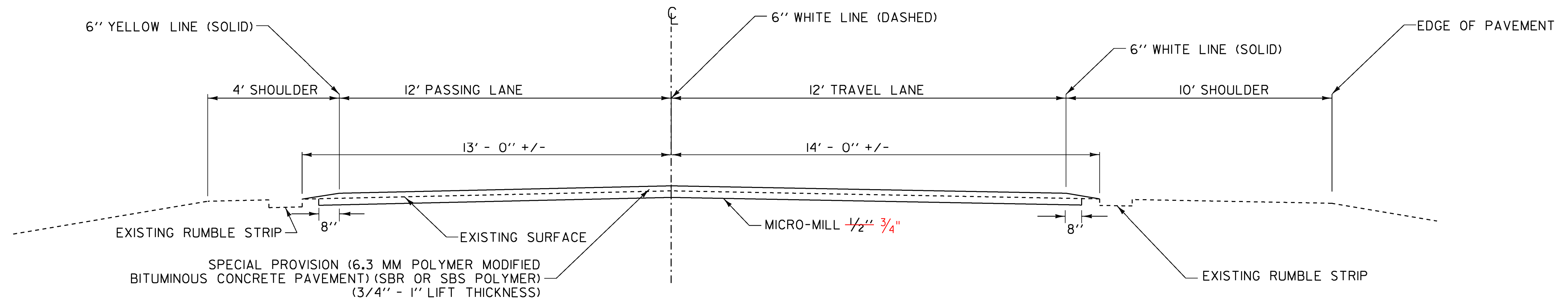
IPARM FILE NAME: pl3a136+yp1.i

PLOT DATE: 17-JAN-2014

DRAWN BY: LOCKE

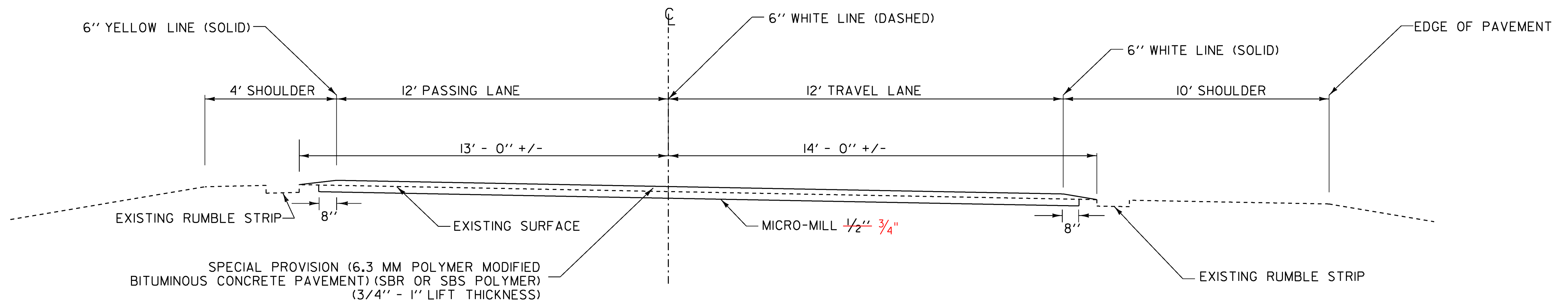
CHECKED BY: FOWLER

SHEET 2 OF 41



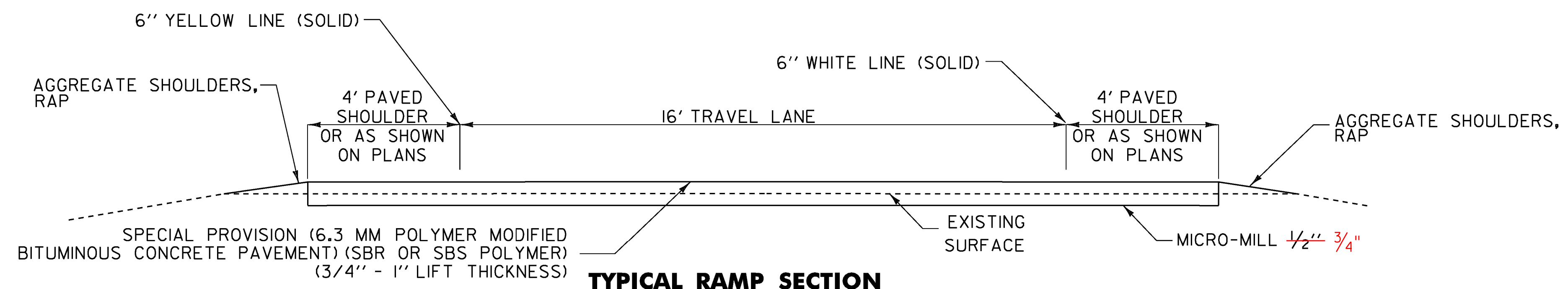
**ROADWAY TYPICAL NORMAL SECTION**

**ALTERNATE B**  
NOT TO SCALE



**ROADWAY TYPICAL BANKED SECTION**

**ALTERNATE B**  
NOT TO SCALE



**TYPICAL RAMP SECTION**

**ALTERNATE B**  
NOT TO SCALE

**ROADWAY PROJECT TYPICAL SECTION - ALTERNATE B**

**I-89 NORTHBOUND RICHMOND M.M. 79.000 - COLCHESTER M.M. 91.880**  
**I-89 SOUTHBOUND RICHMOND M.M. 79.000 - COLCHESTER M.M. 91.880**

**NOTES:**

- PRIOR TO THE PLACEMENT OF THE 6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT, EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL EXISTING PAVEMENT SURFACES AND ON ALL COLD PLANED SURFACES AT A RATE OF 0.080 GAL/SY (+/- 0.01GAL/SY) OR AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT SHALL BE RS-IH OR CRS-IH PER THE MANUFACTURER'S RECOMMENDATION AND PAID UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-IH OR CRS-IH).
- THE GYRATION SPECIFICATION FOR THE 6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT SHALL BE 80. PERFORMANCE GRADED BINDER SHALL BE PG 70-28.

**TYPICAL SECTION - ALTERNATE B**

PROJECT NAME: RICHMOND - COLCHESTER	
PROJECT NUMBER: IM SURF (38)	
FILE NAME: I3a136\p13a136.dgn	PLOT DATE: 17-JAN-2014
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: p13a136+yp2.i	SHEET 3 OF 41

**NOTES:**

1. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK-SEALING SHALL BE PERFORMED PRIOR TO APPLICATION OF THE FINAL SURFACE TREATMENT. ALL CRACKS GREATER THAN 0.10" AND UP TO 1.0" IN WIDTH SHALL BE SEALED USING THE "BLOW AND GO" FILL METHOD. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE PAID FOR UNDER ITEM 417.20, BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD. THE PATCHING OF ALL CRACKS GREATER THAN 1.0" AND ALL OTHER PATCHING AND POTHOLE REPAIR SHALL BE COMPLETED USING BITUMINOUS CONCRETE PAVEMENT IN ACCORDANCE WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE 1). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED TO COVER ALL COSTS ASSOCIATED WITH THIS WORK.

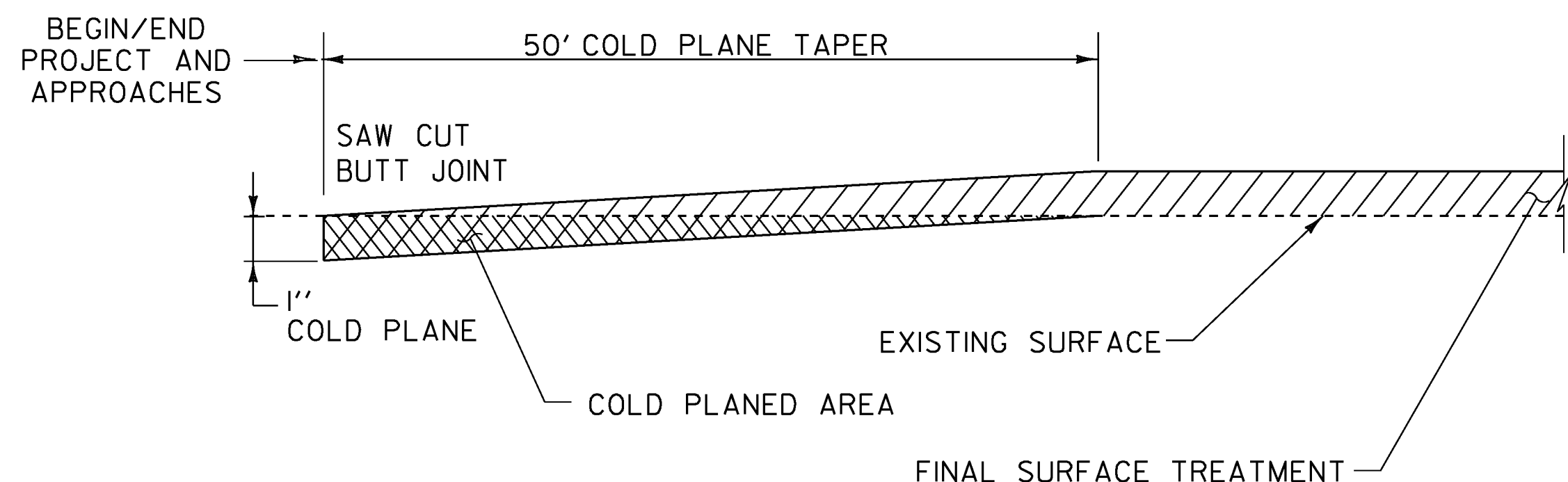
2. EXISTING SHOULDER PAVEMENT SURFACES BEYOND THE LIMITS OF THE FINAL SURFACE TREATMENT SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS.

3. FOLLOWING COMPLETION OF COLD PLANING, THE MILLED SURFACE FOR ALL BRIDGES TO BE COLD PLANED SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, AS DIRECTED BY THE ENGINEER.

4. A 50' COLD PLANED WEDGE SHALL BE CONSTRUCTED AT THE PROJECT BEGIN, PROJECT END, RAMPS, AND AT ALL BRIDGE APPROACHES OR AS DIRECTED BY THE ENGINEER. THE LONGITUDINAL EDGES OF THE SURFACE TREATMENT SHALL BE FEATHERED AS SHOWN ON THE TYPICAL SECTION, OR AS DIRECTED BY THE ENGINEER. ANY SAWCUTTING AT BUTT JOINTS SHALL BE PAID INCIDENTAL TO ITEM 210.10, COLD PLANING, BITUMINOUS PAVEMENT.

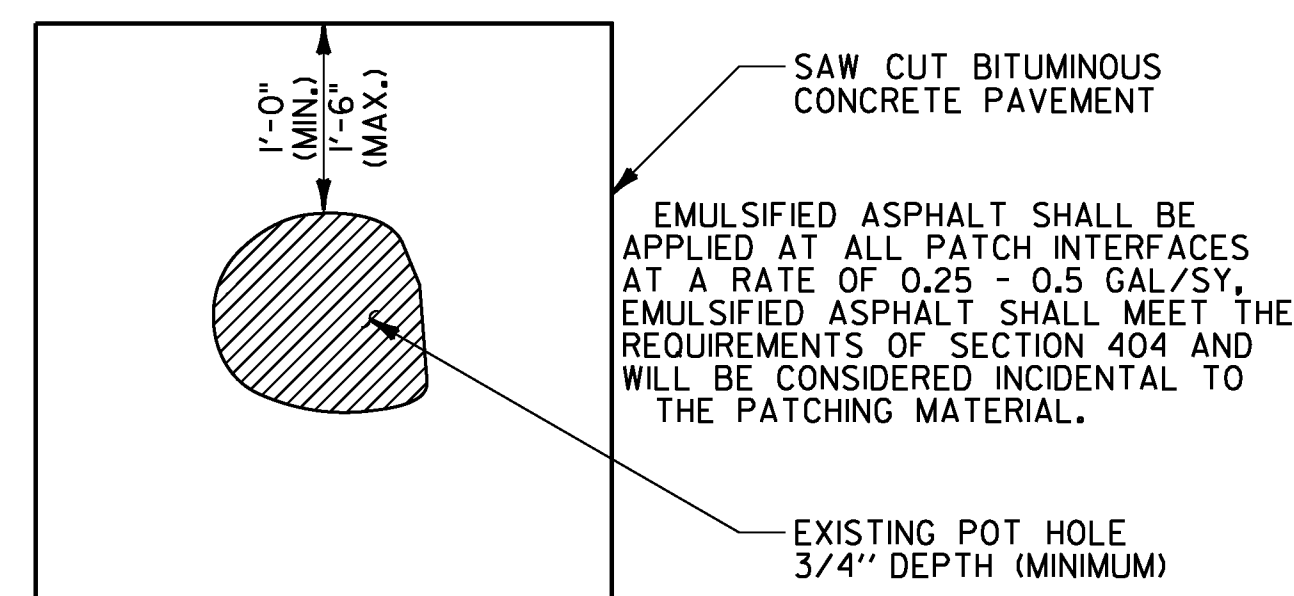
5. AN ESTIMATED QUANTITY OF ITEM 203.40 SHOULDER BERM REMOVAL HAS BEEN INCLUDED FOR THE REMOVAL OF BUILT UP SAND, SOD ETC. ADJACENT TO THE SHOULDER, IN GUARDRAIL AREAS, TO ALLOW FREE DRAINAGE OFF THE SHOULDER AS DIRECTED BY THE ENGINEER.

6. THERE ARE R.W.I.S. SENSORS IN THE PAVEMENT AT M.M. 81.350 NORTHBOUND THAT MAY BE IMPACTED BY CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONTACT MARK GERRISH, FIBER OPTIC PROJECT MANAGER, VTRANS OPERATIONS DIVISION AT 802-461-5570 48 HOURS PRIOR TO BEGINNING ANY WORK IN THIS AREA SO THAT MARK, OR HIS REPRESENTATIVE, CAN REMOVE THESE SENSORS. INSTALLATION OF NEW SENSORS WILL BE PERFORMED BY OTHERS FOLLOWING COMPLETION OF THE PROJECT.



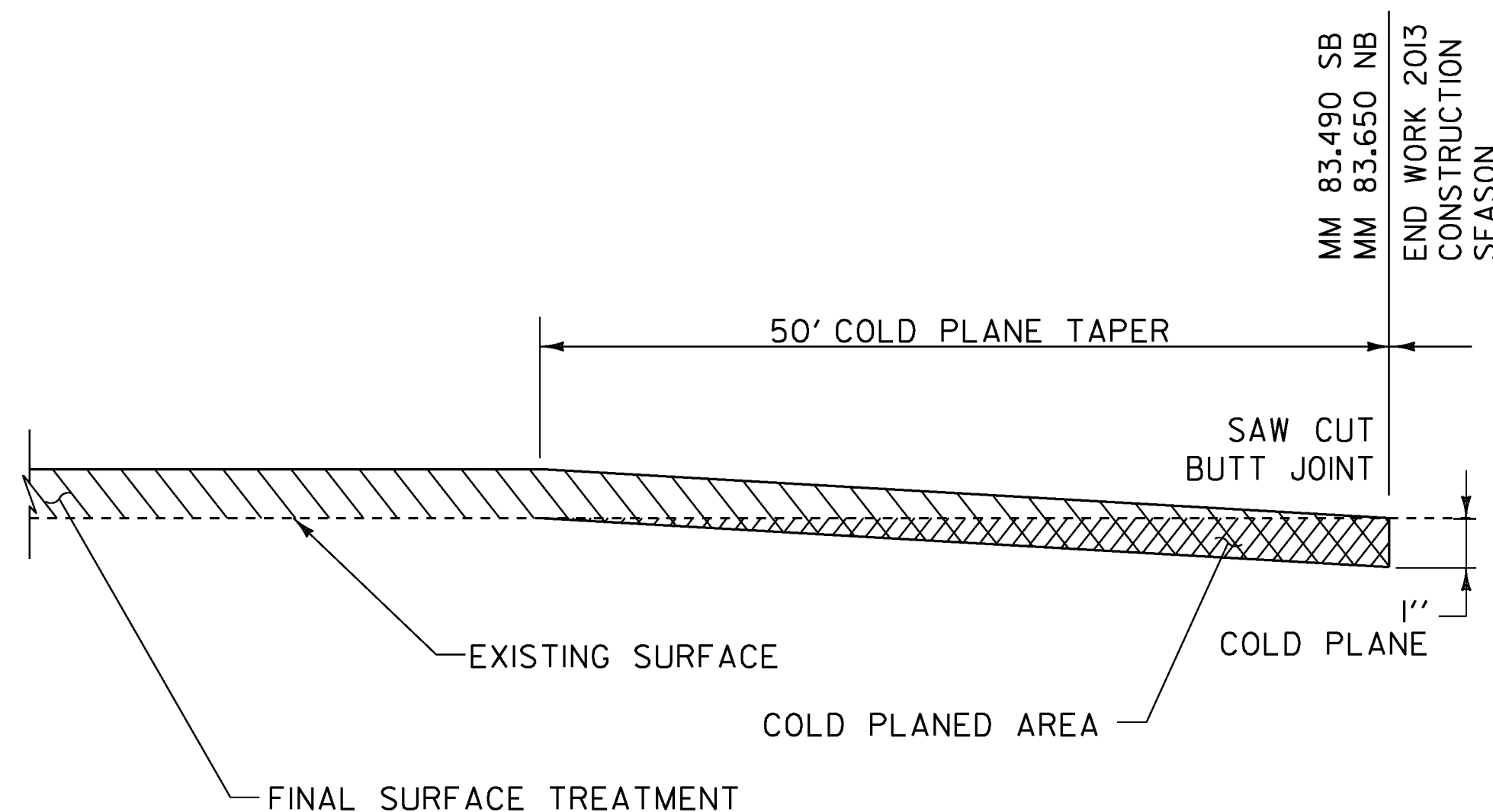
**TYPICAL APPROACH AREA DETAIL MAINLINE & RAMPS**

NOT TO SCALE



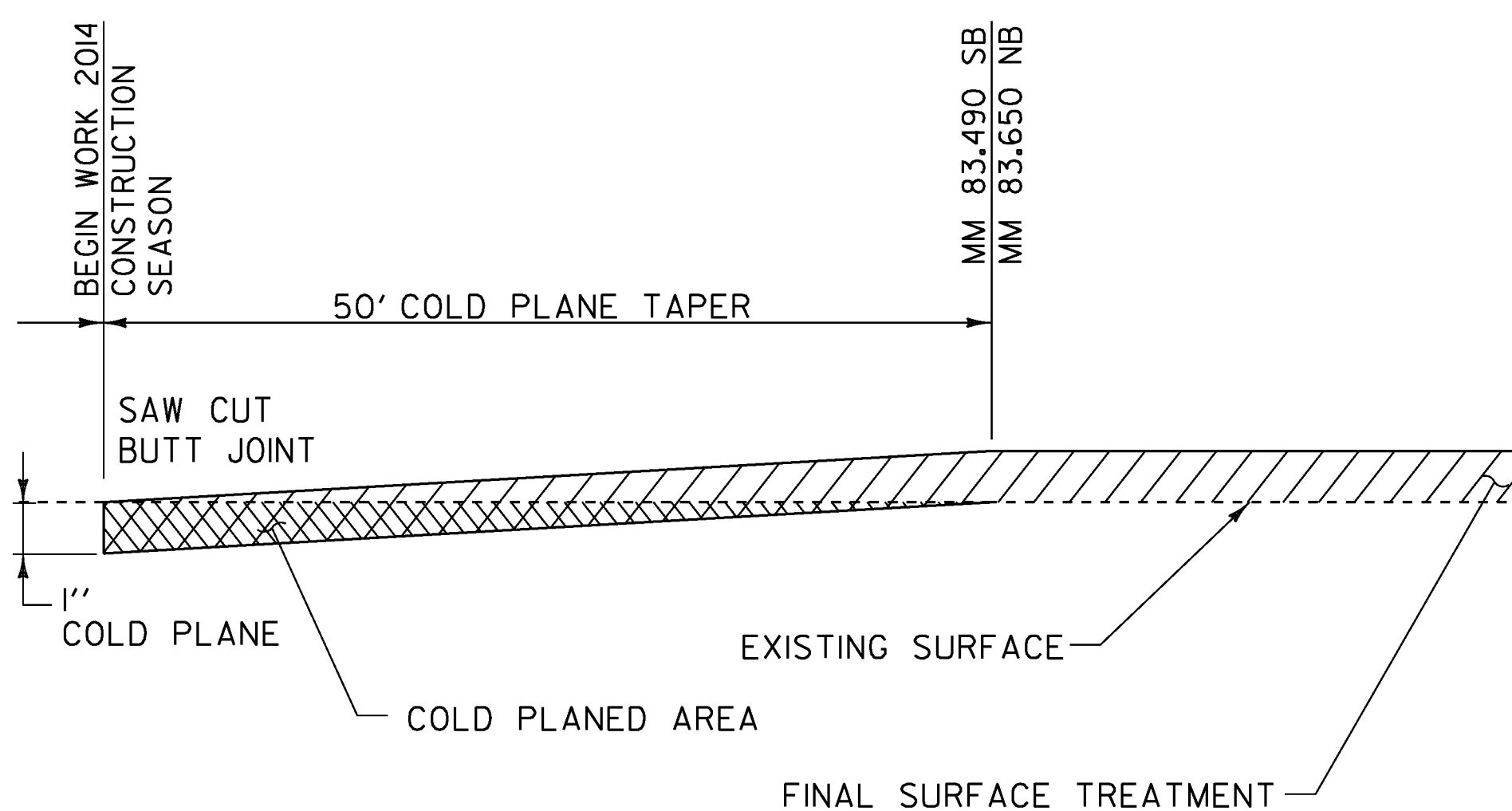
**TYPICAL POT HOLE REPAIR**

NOT TO SCALE



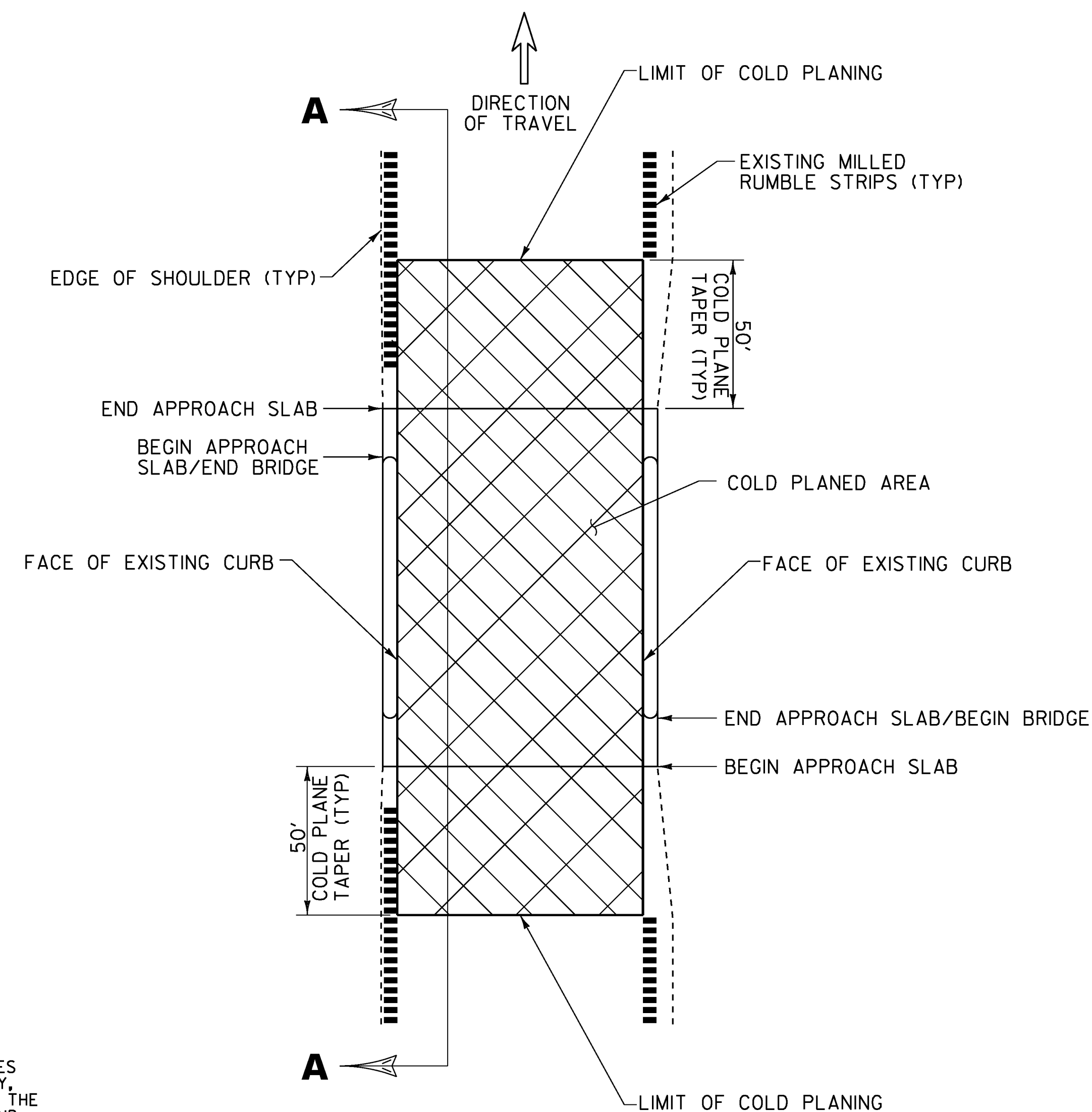
**TYPICAL APPROACH AREA DETAIL MAINLINE**

NOT TO SCALE



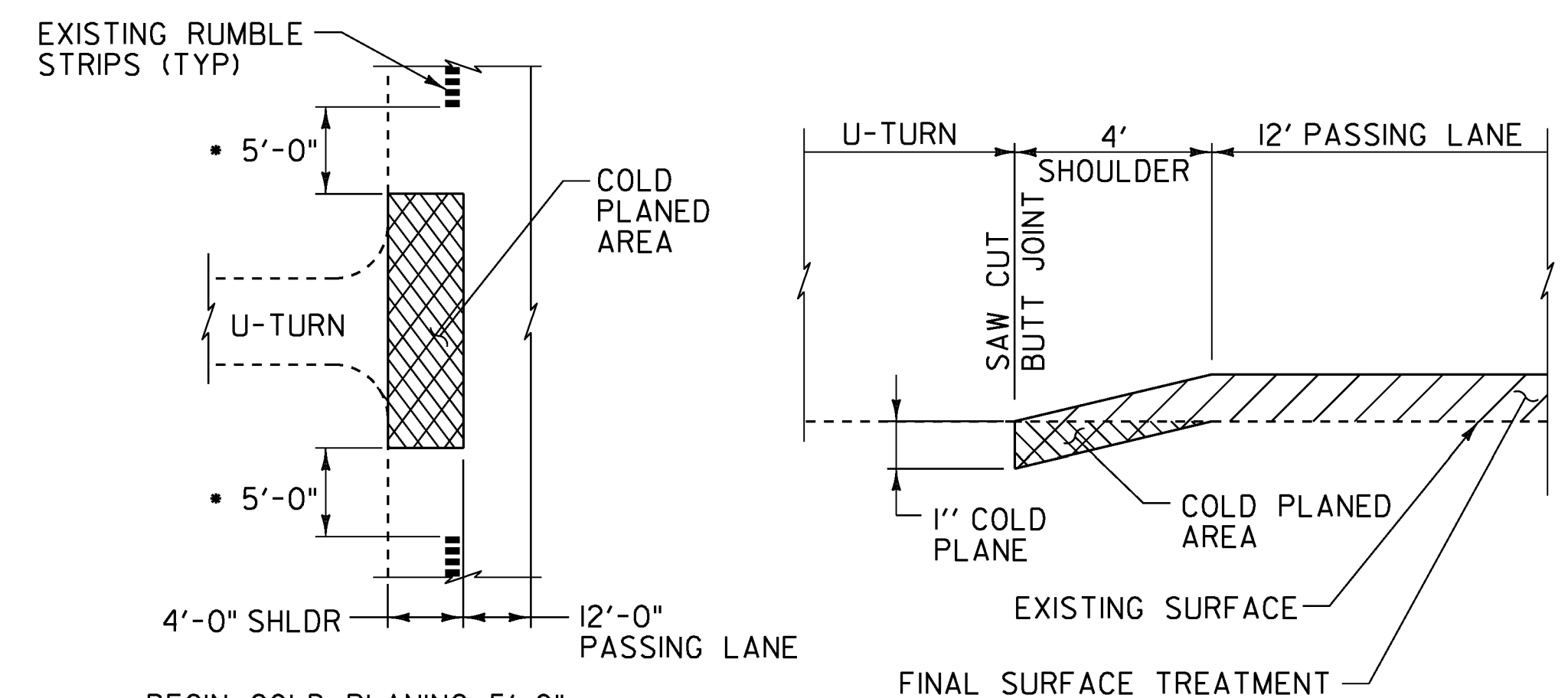
**TYPICAL APPROACH AREA DETAIL MAINLINE**

NOT TO SCALE



**BRIDGE COLD PLANE TYPICAL PLAN**

NOT TO SCALE



**COLD PLANE DETAIL AT U-TURNS**

NOT TO SCALE

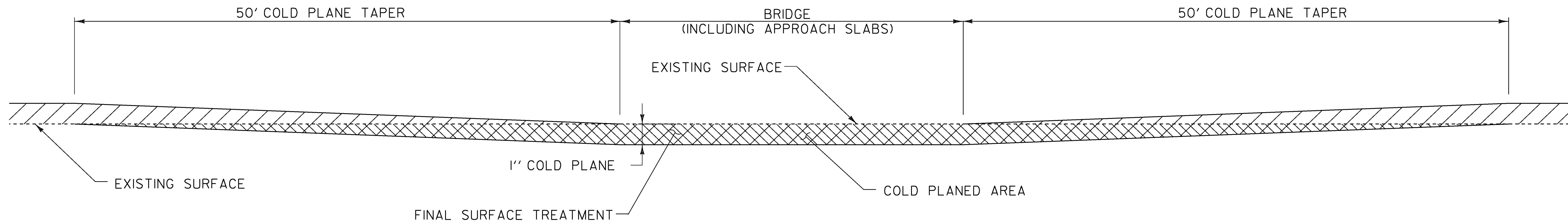
- BEGIN COLD PLANING 5'-0" AFTER RUMBLE STRIPS END, AND END COLD PLANING 5'-0" BEFORE RUMBLE STRIPS BEGIN

**NOTES & DETAILS COMMON TO BOTH ALTERNATES**

PROJECT NAME: RICHMOND - COLCHESTER  
PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\pl3a136.dgn  
PROJECT LEADER: M. FOWLER  
DESIGNED BY: LOCKE  
IPARM FILE NAME: pl3a136+yp3.1

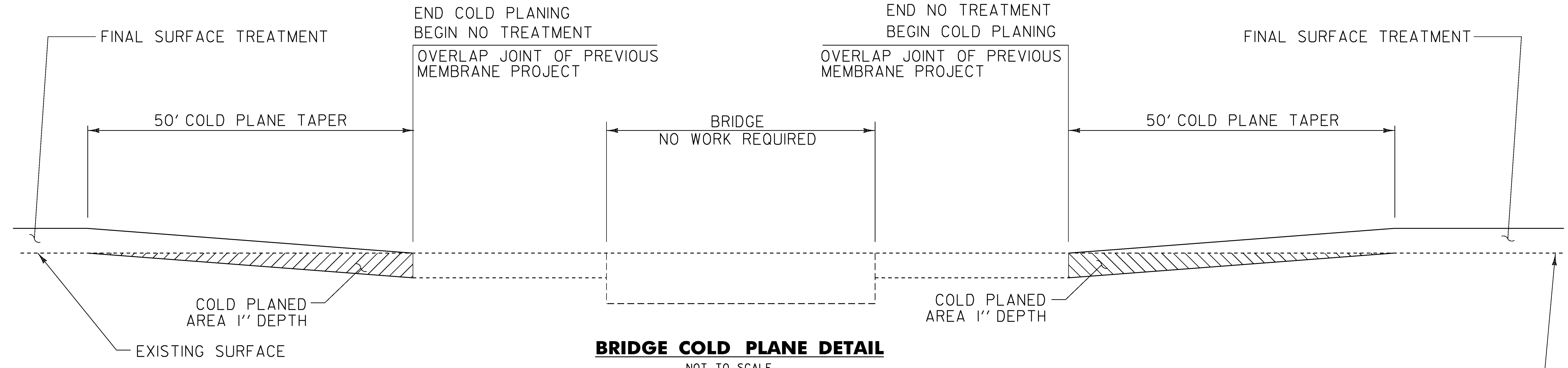
PLOT DATE: 19-DEC-2013  
DRAWN BY: LOCKE  
CHECKED BY: FOWLER  
SHEET 4 OF 41



**BRIDGE COLD PLANE DETAIL**  
NOT TO SCALE

LOCATIONS

BRIDGE 61 N M.M. 83.958	BRIDGE 61 S M.M. 83.958
BRIDGE 65 N M.M. 87.205	BRIDGE 65 S M.M. 87.205
BRIDGE 66 N M.M. 87.397	BRIDGE 66 S M.M. 87.397
BRIDGE 70 N M.M. 89.989	BRIDGE 70 S M.M. 89.989
BRIDGE 71 N M.M. 90.289	BRIDGE 71 S M.M. 90.289
BRIDGE 72 N M.M. 90.475	BRIDGE 72 S M.M. 90.475
BRIDGE 73 N M.M. 90.615	BRIDGE 73 S M.M. 90.615
BRIDGE 74 N M.M. 91.488	BRIDGE 74 S M.M. 91.488



**BRIDGE COLD PLANE DETAIL**  
NOT TO SCALE

LOCATIONS

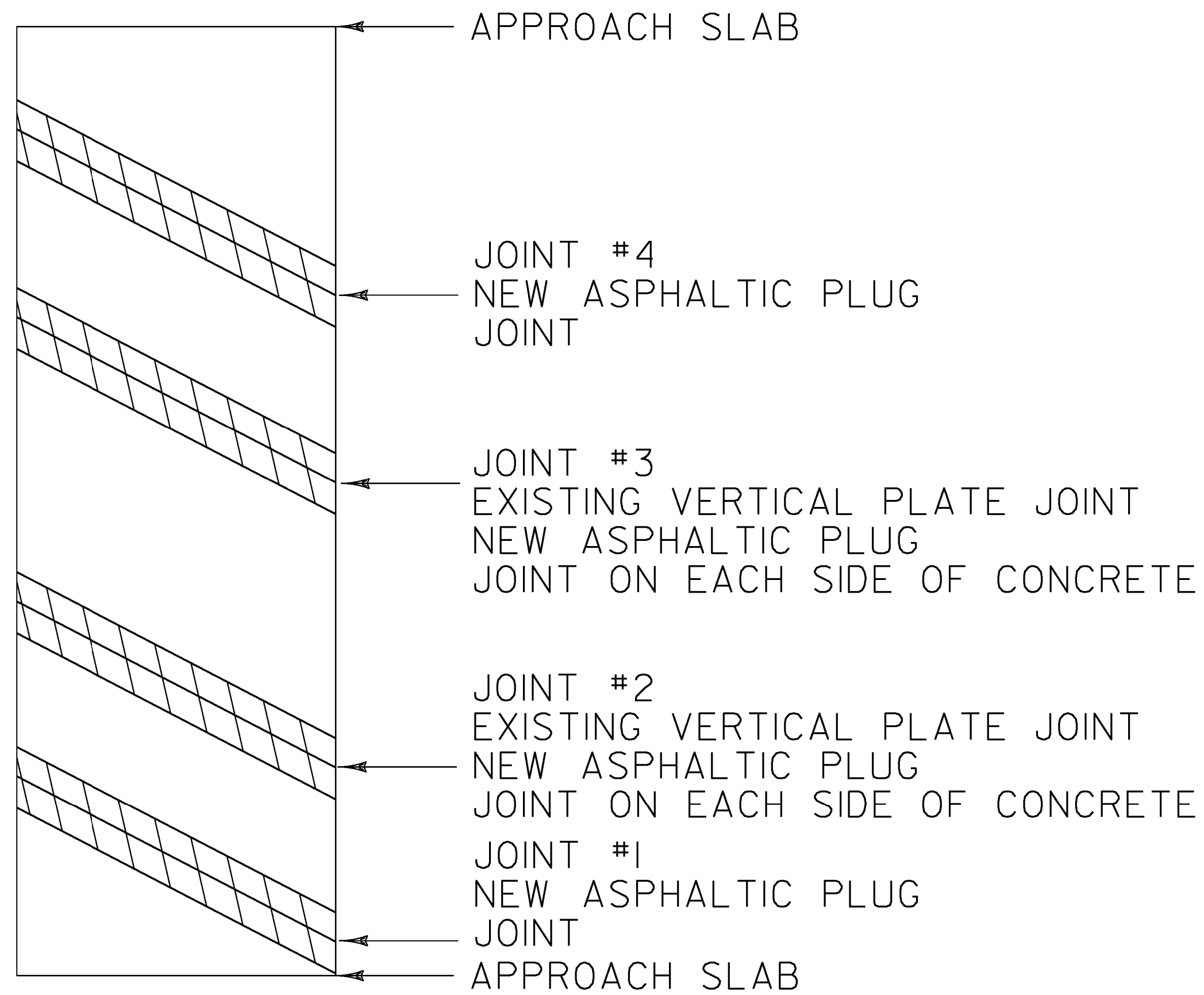
BRIDGE 63 N M.M. 84.991
BRIDGE 63 S M.M. 84.991

**NOTES:**

- REFER TO ASPHALTIC PLUG JOINT DETAIL SHEET, SD-516.10. ALL NEW JOINTS TO BE PAID FOR UNDER ITEM 516.10, "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG."
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING DRAINAGE STRUCTURES AND EXPANSION JOINTS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE.
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID THE ACCUMULATION OF DEBRIS IN THE DRAINAGE STRUCTURES LOCATED AT CURB LINE AND IN THE EXPANSION JOINTS. THE CONTRACTOR SHALL EXAMINE THESE BRIDGE FEATURES ON A DAILY BASIS TO ENSURE THAT DEBRIS HAS NOT ACCUMULATED. ANY DEBRIS WHICH IS PRESENT SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE STATE.
- THE CONTRACTOR SHALL USE CAUTION WHEN COLD PLANING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS THE ENGINEER SHALL CONTACT THE VTRANS CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.

<b>BRIDGE DETAIL SHEET # 1</b>	PROJECT NAME: RICHMOND - COLCHESTER	
	PROJECT NUMBER: IM SURF (38)	
	FILE NAME: I3a136\pl3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE	
DESIGNED BY: LOCKE	CHECKED BY: FOWLER	
IPARM FILE NAME: pl3a136bdl.i	SHEET 5 OF 41	

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 61N**

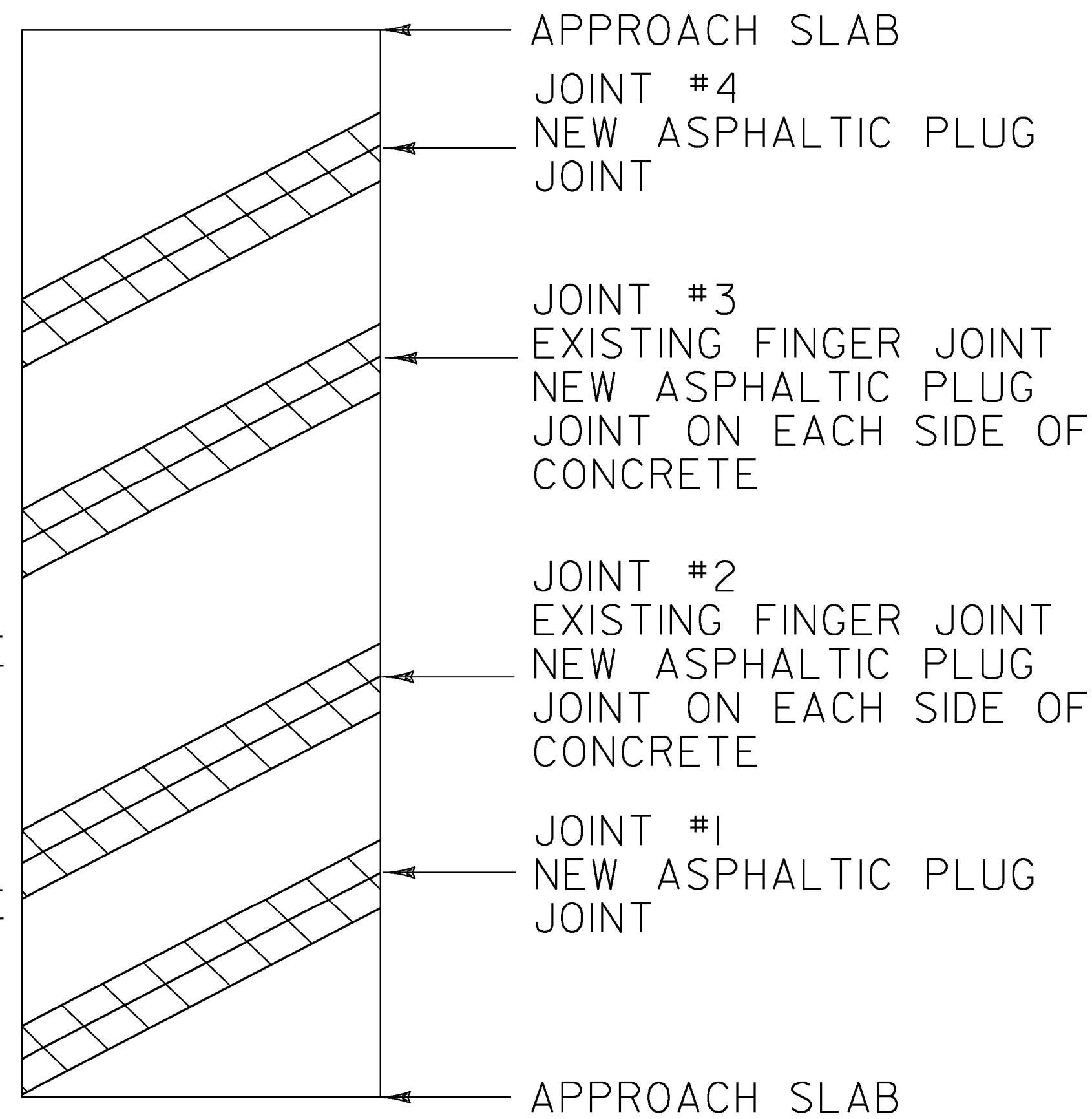
MM 83.958

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - 30'  
JOINT #2 - ~~3130'~~ X 2 = ~~6260'~~  
JOINT #3 - ~~3130'~~ X 2 = ~~6260'~~  
JOINT #4 - 30'

~~TOTAL = 180'~~

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 65N**

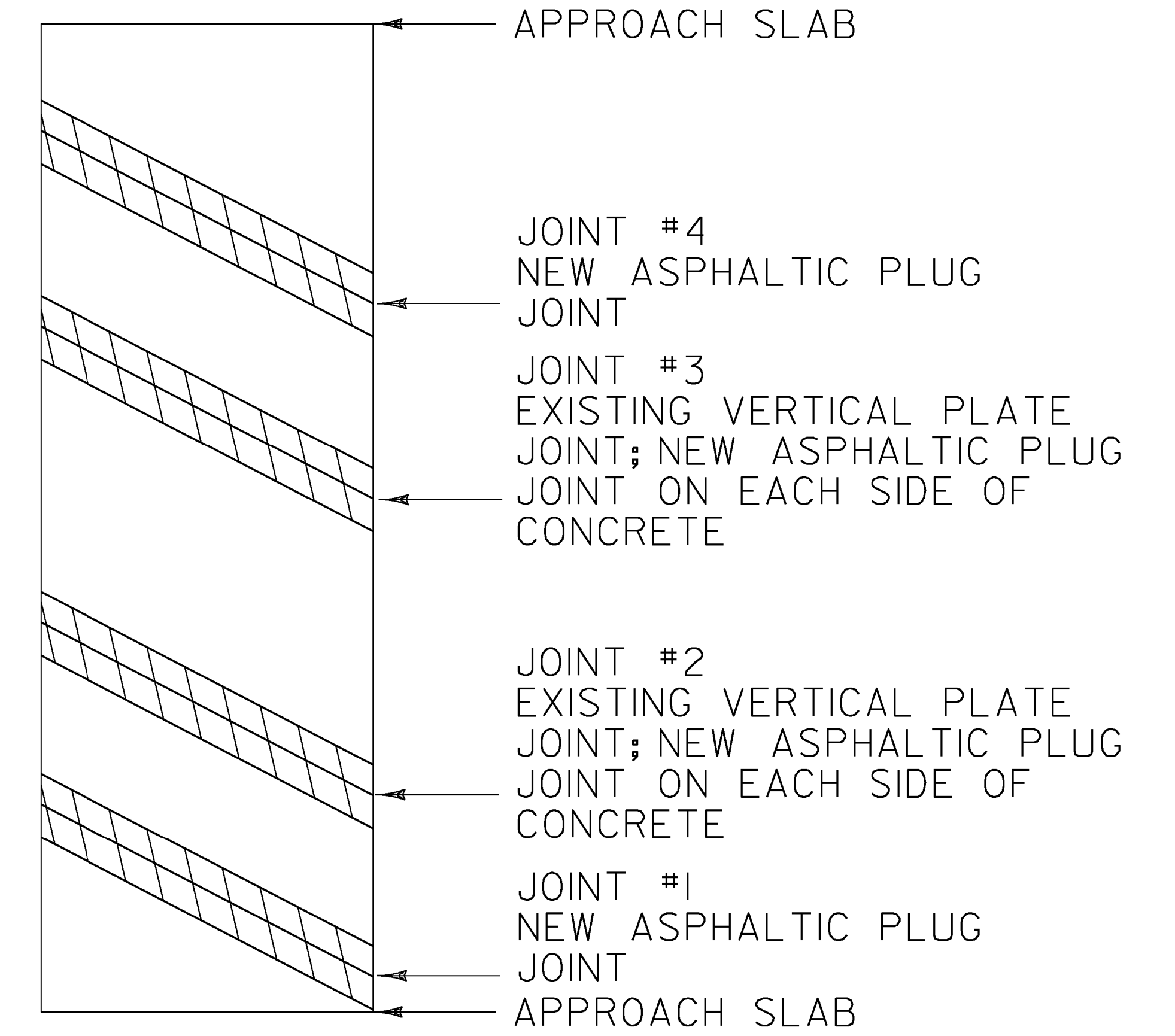
MM 87.205

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~36'34~~  
JOINT #2 - ~~3436'~~ X 2 = ~~72'68~~  
JOINT #3 - ~~3436'~~ X 2 = ~~72'68~~  
JOINT #4 - ~~36'34~~

~~TOTAL = 216'~~

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 66N**

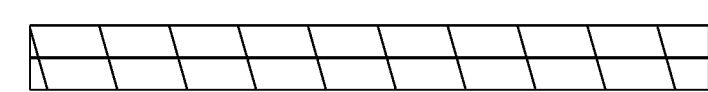
MM 87.397

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~34'30~~  
JOINT #2 - ~~3034'~~ X 2 = 68'  
JOINT #3 - ~~3034'~~ X 2 = 68'  
JOINT #4 - ~~34'30~~

~~TOTAL = 204'~~

**LEGEND**



EXISTING BRIDGE JOINTS TO BE REPAIRED WITH ASPHALTIC PLUG JOINT. SEE SHEETS 12 & 13 FOR ARMORED JOINT DETAILS.

**BRIDGE  
DETAIL SHEET  
# 2**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\p13a136.dgn

PROJECT LEADER: M. FOWLER

DESIGNED BY: LOCKE

IPARM FILE NAME: p13a136bd2.i

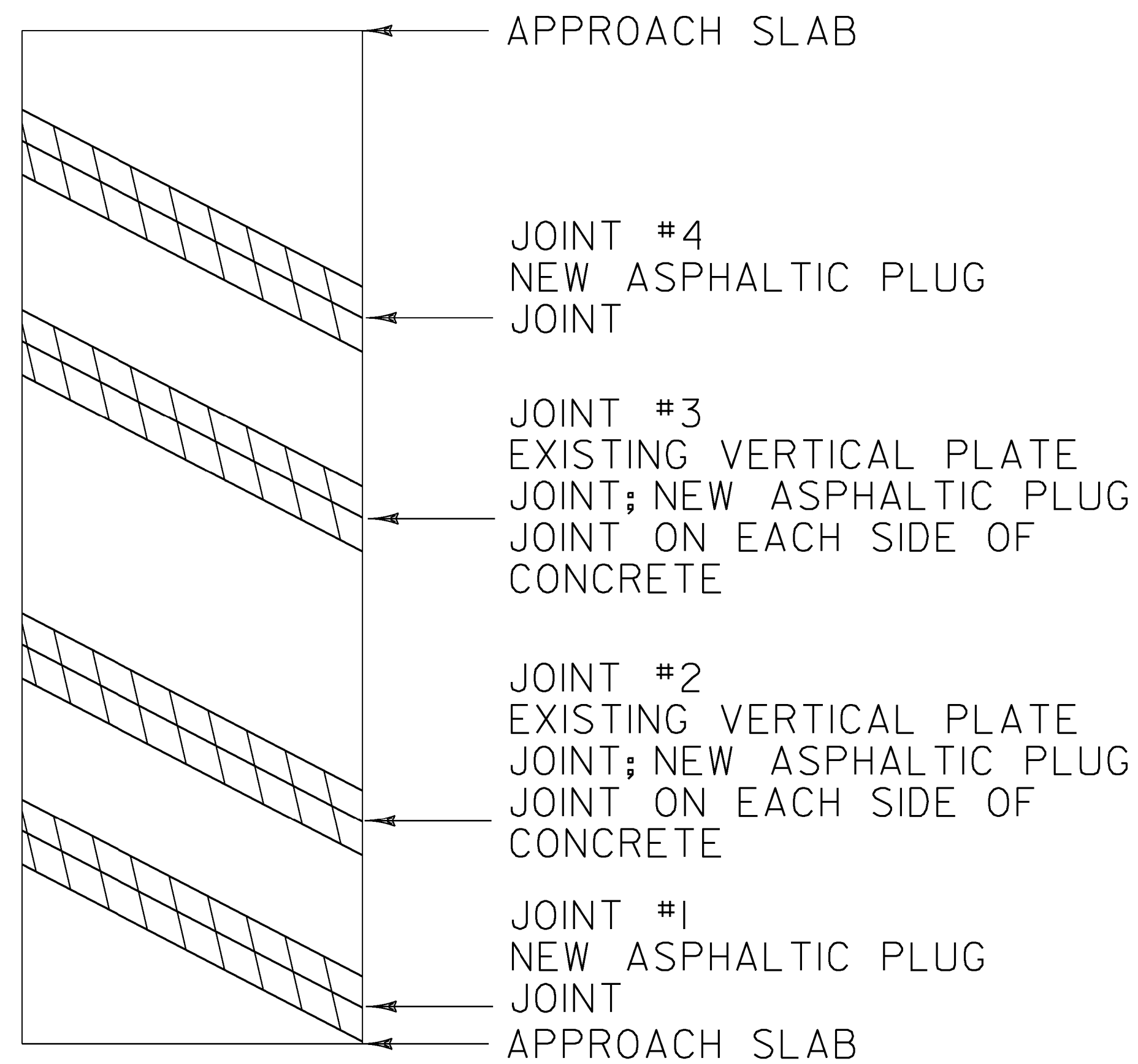
PLOT DATE: 19-DEC-2013

DRAWN BY: LOCKE

CHECKED BY: FOWLER

SHEET 6 OF 41

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 61S**

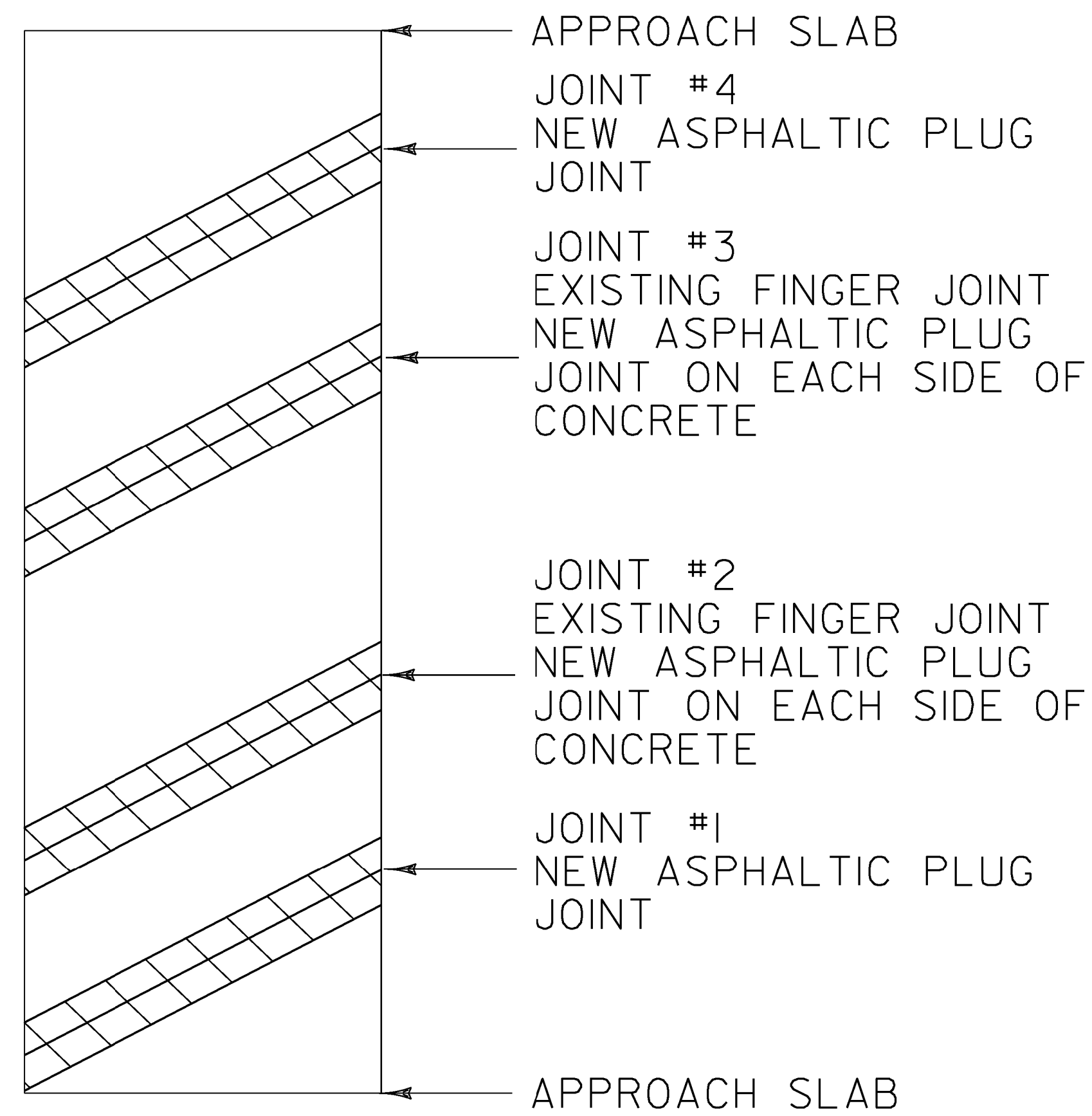
MM 83.958

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - 30'  
JOINT #2 - 3130' X 2 = 6260'  
JOINT #3 - 3130' X 2 = 6260'  
JOINT #4 - 30'

~~TOTAL = 180'~~

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 65S**

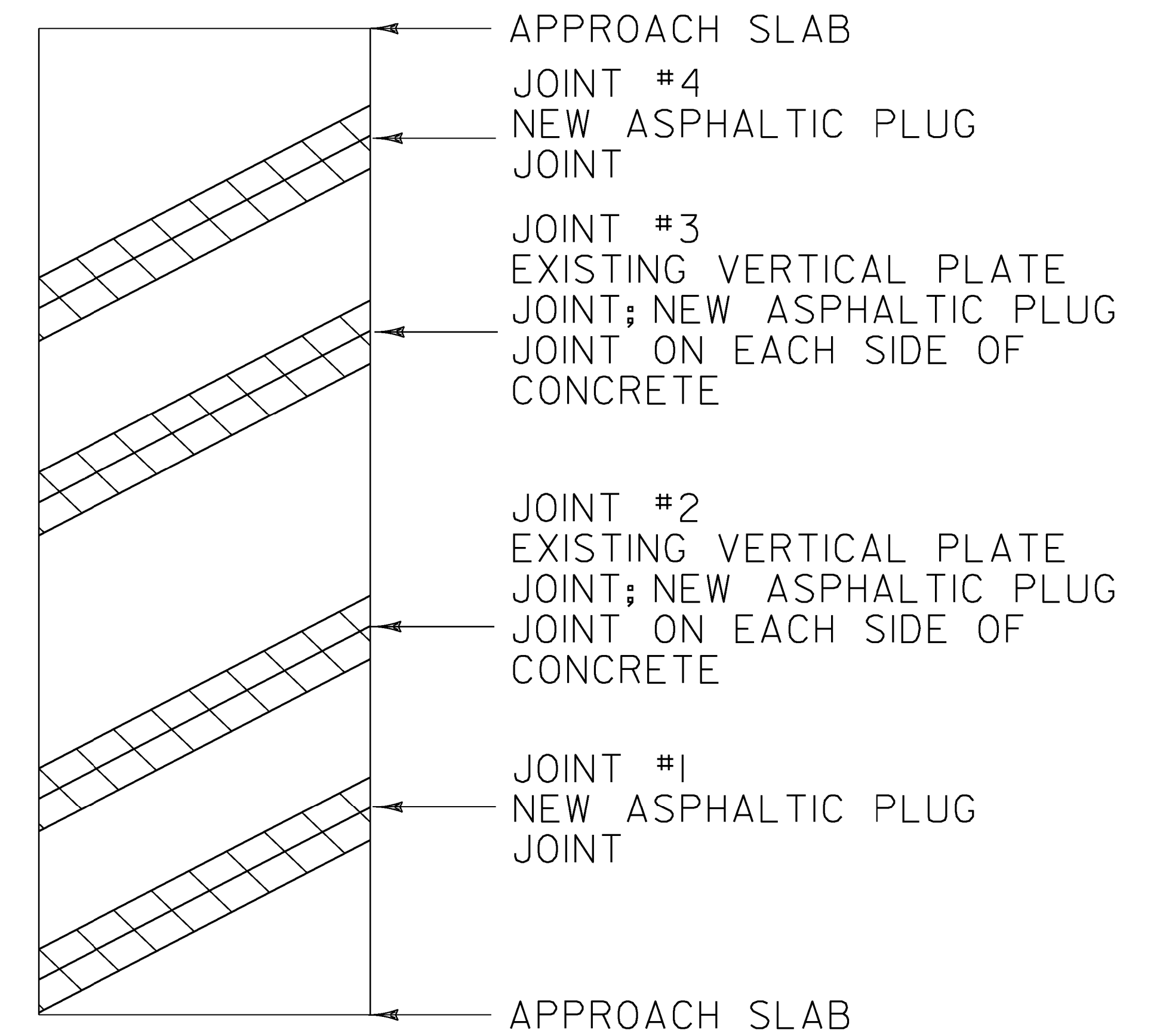
MM 87.205

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - 36'48"  
JOINT #2 - 4836' X 2 = 72'96"  
JOINT #3 - 4836' X 2 = 72'96"  
JOINT #4 - 36'48"

~~TOTAL = 216'~~

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 66S**

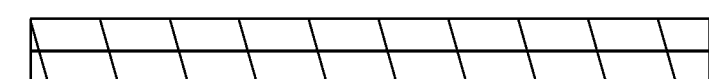
MM 87.397

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - 50'30"  
JOINT #2 - 3050' X 2 = 100'60"  
JOINT #3 - 3050' X 2 = 100'60"  
JOINT #4 - 50'30"

~~TOTAL = 300'~~

**LEGEND**



EXISTING BRIDGE JOINTS TO BE  
REPAIRED WITH ASPHALTIC PLUG JOINT.  
SEE SHEETS 12 & 13 FOR ARMORED JOINT  
DETAILS.

**BRIDGE  
DETAIL SHEET  
# 3**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\p13a136.dgn

PROJECT LEADER: M. FOWLER

DESIGNED BY: LOCKE

IPARM FILE NAME: p13a136bd3.i

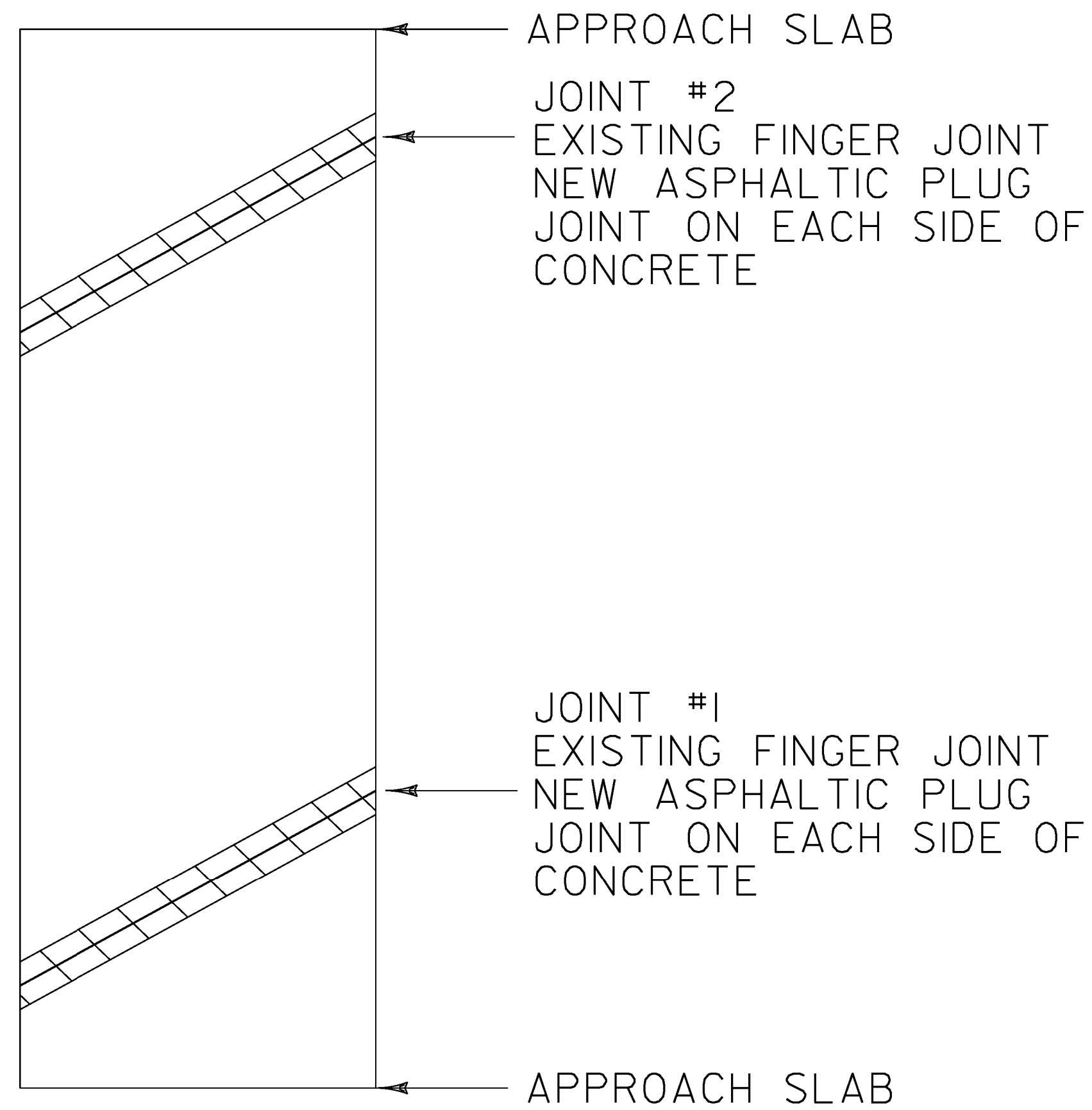
PLOT DATE: 19-DEC-2013

DRAWN BY: LOCKE

CHECKED BY: FOWLER

SHEET 7 OF 41

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 70N**

MM 89.989

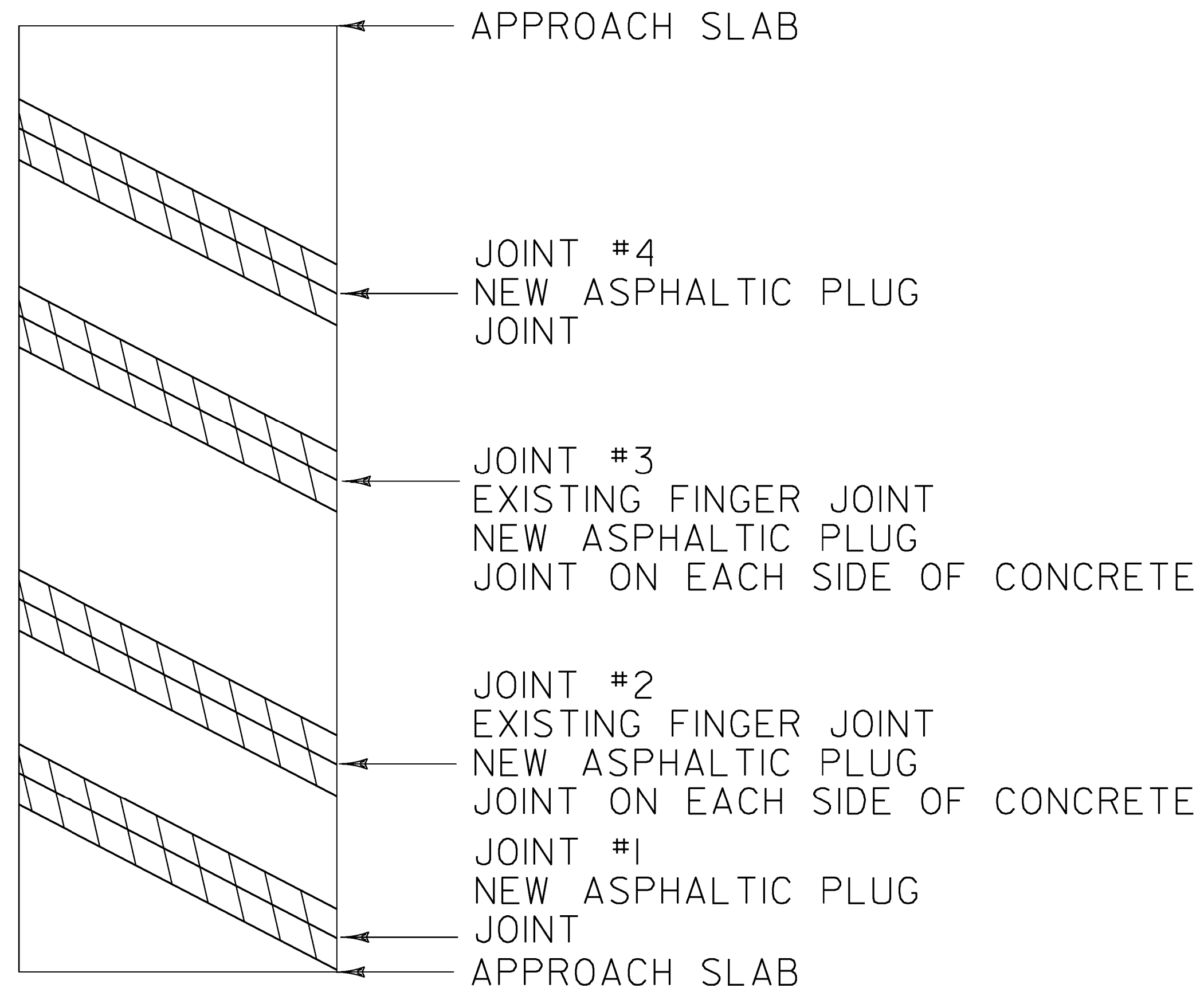
LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~6880'~~ X 2 = ~~160'136~~

JOINT #2 - ~~6880'~~ X 2 = ~~160'136~~

~~TOTAL = 320'~~

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 71N**

MM 90.289

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~50'48~~

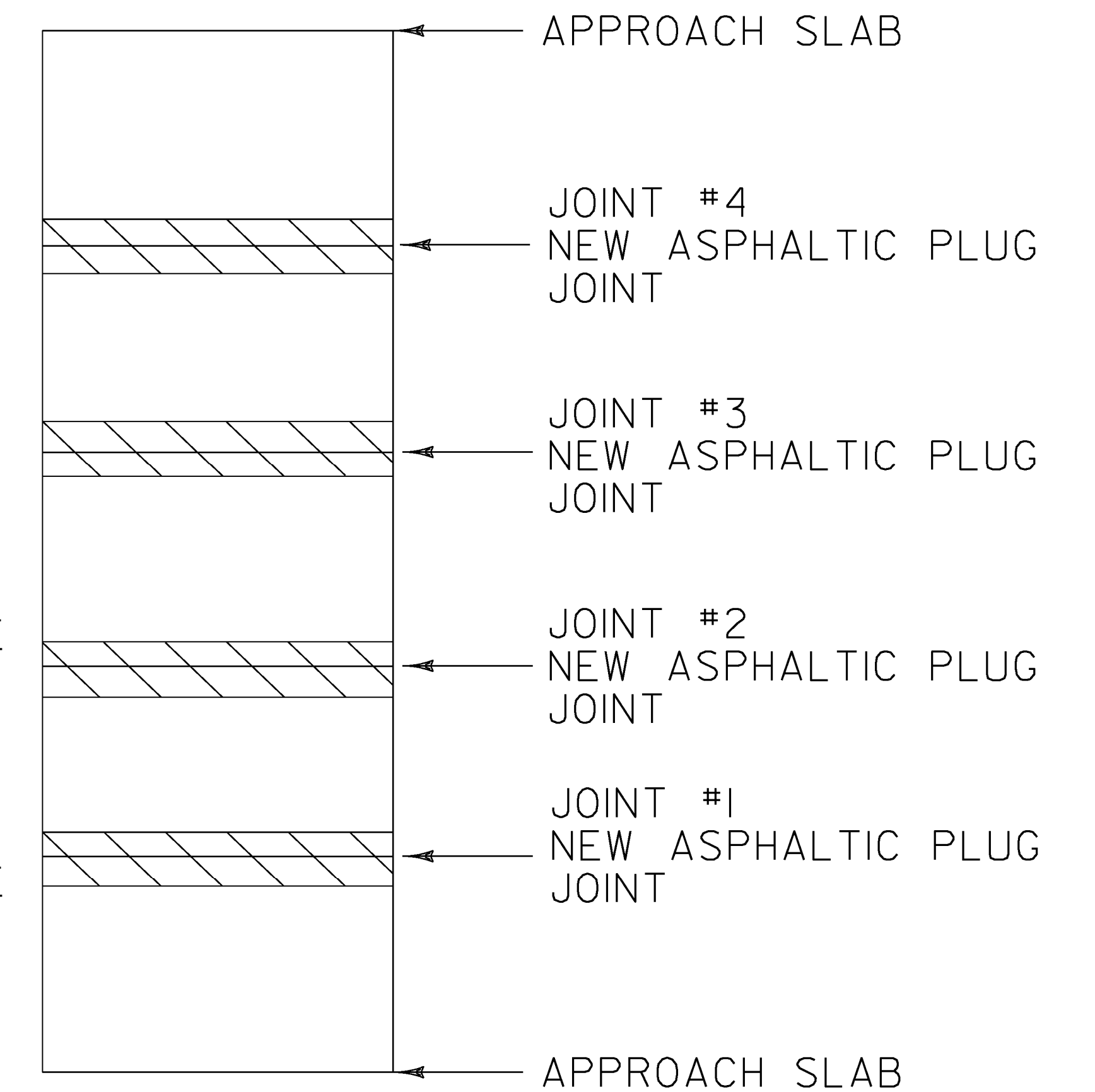
JOINT #2 - ~~4850'~~ X 2 = ~~100'96~~

JOINT #3 - ~~4850'~~ X 2 = ~~100'96~~

JOINT #4 - ~~50'48~~

~~TOTAL = 300'~~

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 72N**

MM 90.475

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~38'30~~

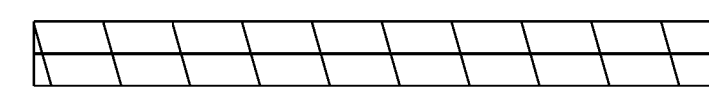
JOINT #2 - ~~38'30~~

JOINT #3 - ~~38'30~~

JOINT #4 - ~~38'30~~

TOTAL = ~~152'120~~

**LEGEND**



EXISTING BRIDGE JOINTS TO BE  
REPAIRED WITH ASPHALTIC PLUG JOINT.  
SEE SHEETS 12 & 13 FOR ARMORED JOINT  
DETAILS.

**BRIDGE  
DETAIL SHEET  
# 4**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\p13a136.dgn

PROJECT LEADER: M. FOWLER

DESIGNED BY: LOCKE

IPARM FILE NAME: p13a136bd4.i

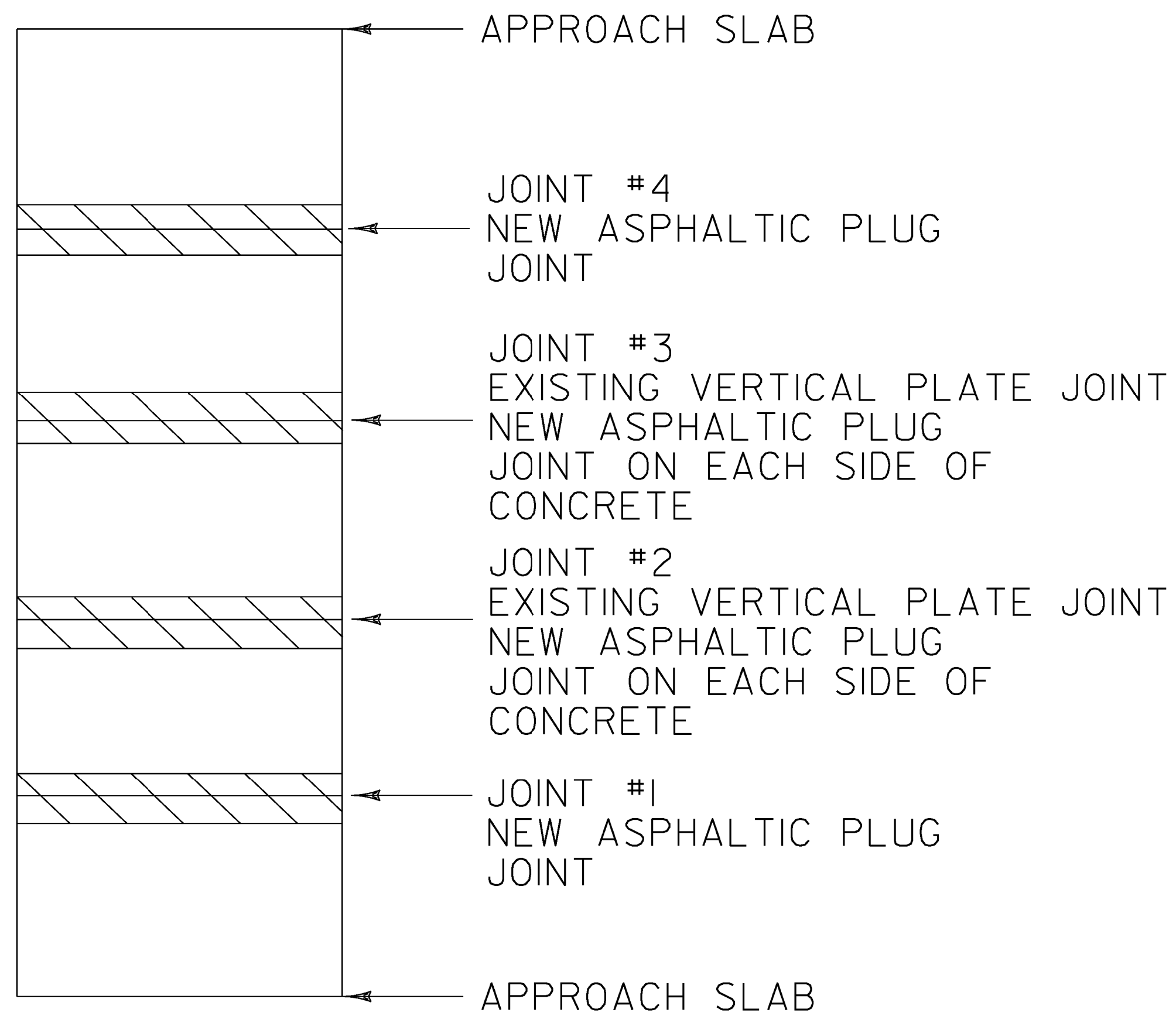
PLOT DATE: 19-DEC-2013

DRAWN BY: LOCKE

CHECKED BY: FOWLER

SHEET 8 OF 41

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 73N**

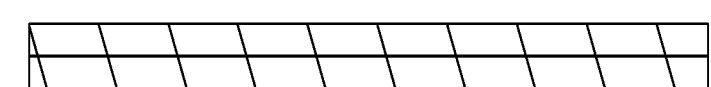
MM 90.615

LENGTH OF ASPHALTIC PLUG JOINTS:

- JOINT #1 - 38'
- JOINT #2 - 38' X 2 = 76'
- JOINT #3 - 38' X 2 = 76'
- JOINT #4 - 38'

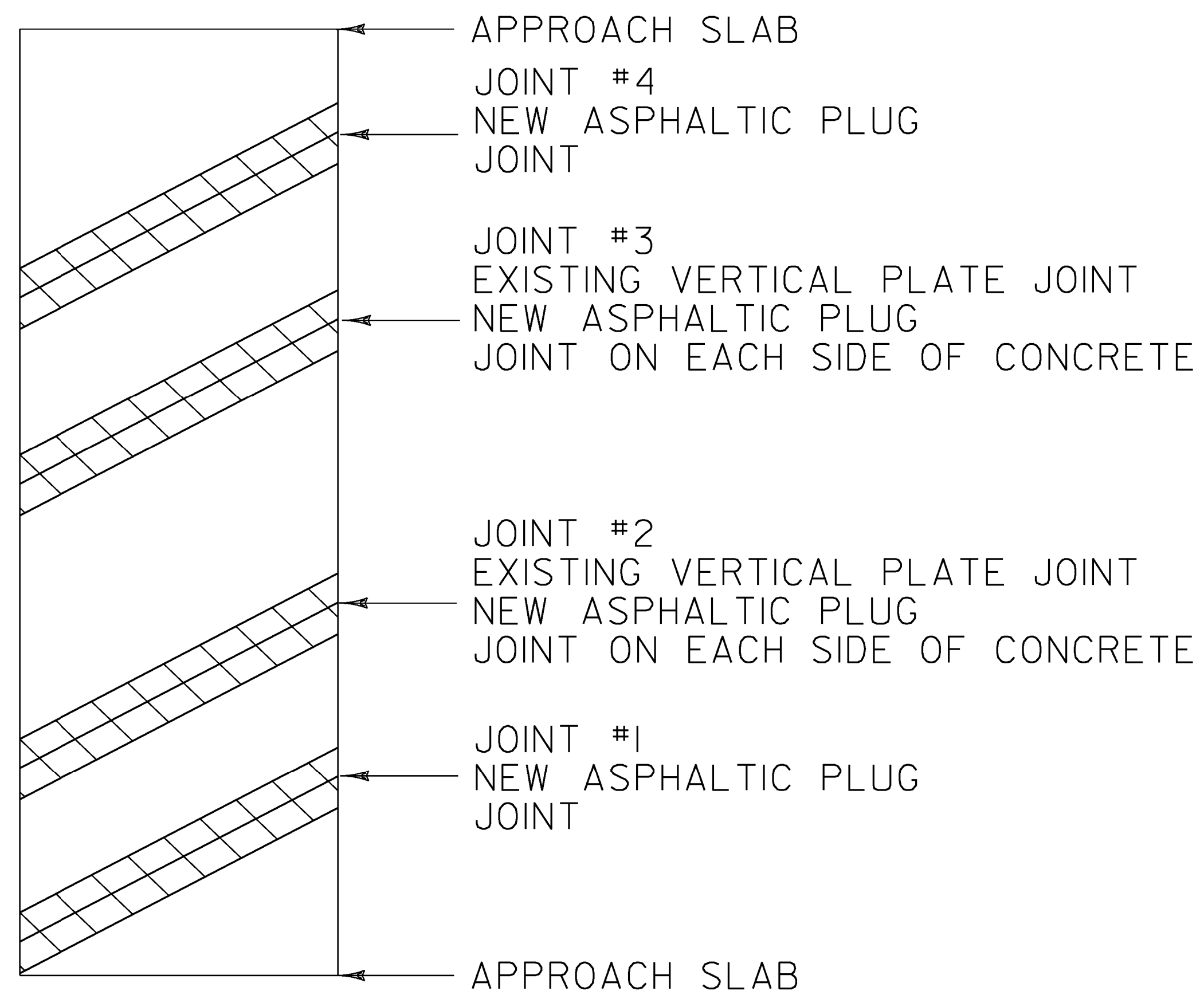
TOTAL = 228'

**LEGEND**



EXISTING BRIDGE JOINTS TO BE REPAIRED WITH ASPHALTIC PLUG JOINT. SEE SHEETS 12 & 13 FOR ARMORED JOINT DETAILS.

↑  
NORTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 74N**

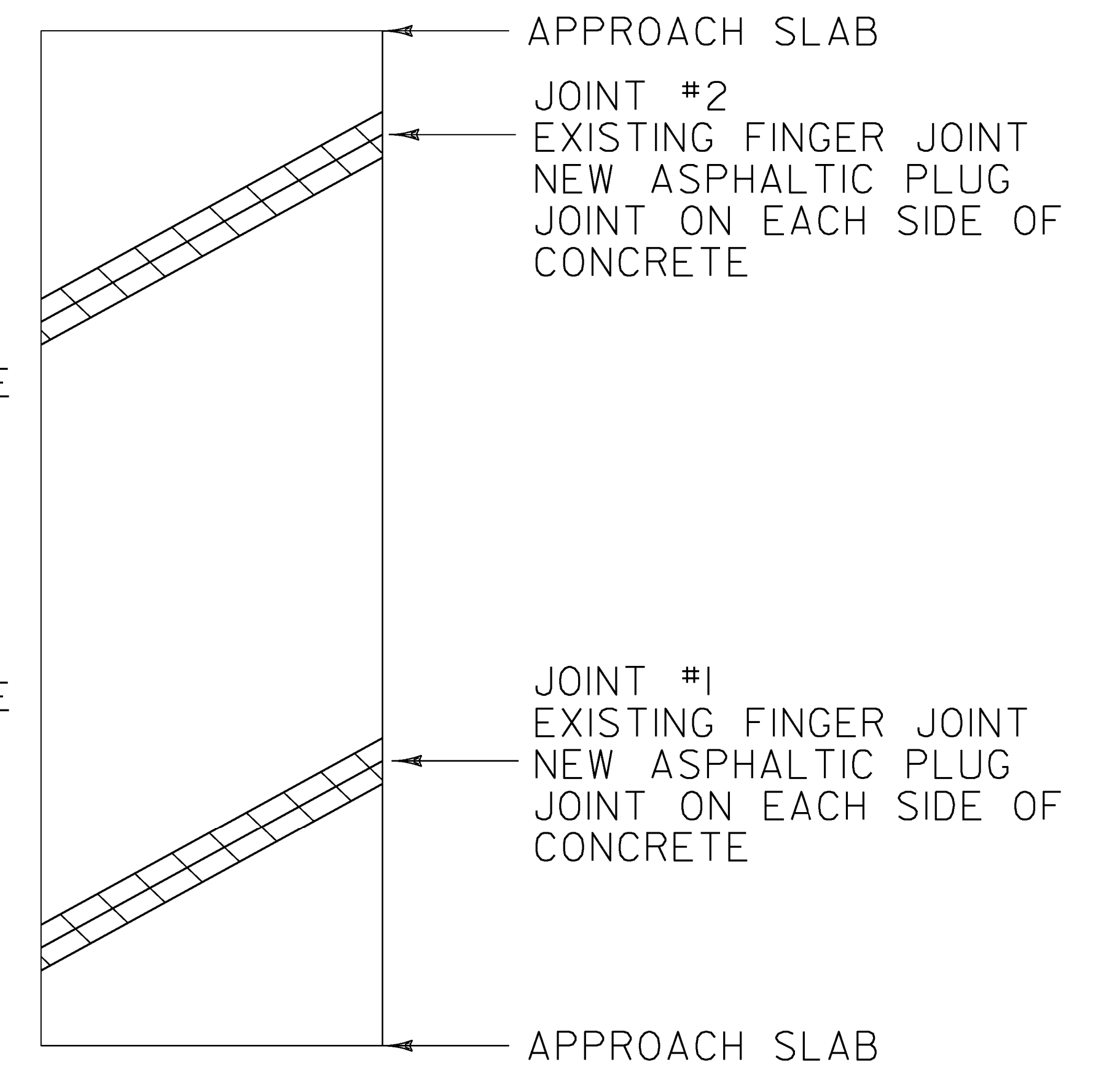
MM 91.488

LENGTH OF ASPHALTIC PLUG JOINTS:

- JOINT #1 - ~~39'~~ 30.5
- JOINT #2 ~~39'~~ 30.5 X 2 = ~~78'~~ 61
- JOINT #3 ~~39'~~ 30.5 X 2 = ~~78'~~ 61
- JOINT #4 - ~~39'~~ 30.5

~~TOTAL = 234'~~

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 70S**

MM 89.989

LENGTH OF ASPHALTIC PLUG JOINTS:

- JOINT #1 - ~~80'~~ 68 X 2 = ~~160'~~ 136
- JOINT #2 - ~~80'~~ 68 X 2 = ~~160'~~ 136

~~TOTAL = 320'~~

**BRIDGE  
DETAIL SHEET  
# 5**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\p13a136.dgn

PROJECT LEADER: M. FOWLER

DESIGNED BY: LOCKE

IPARM FILE NAME: p13a136bd5.i

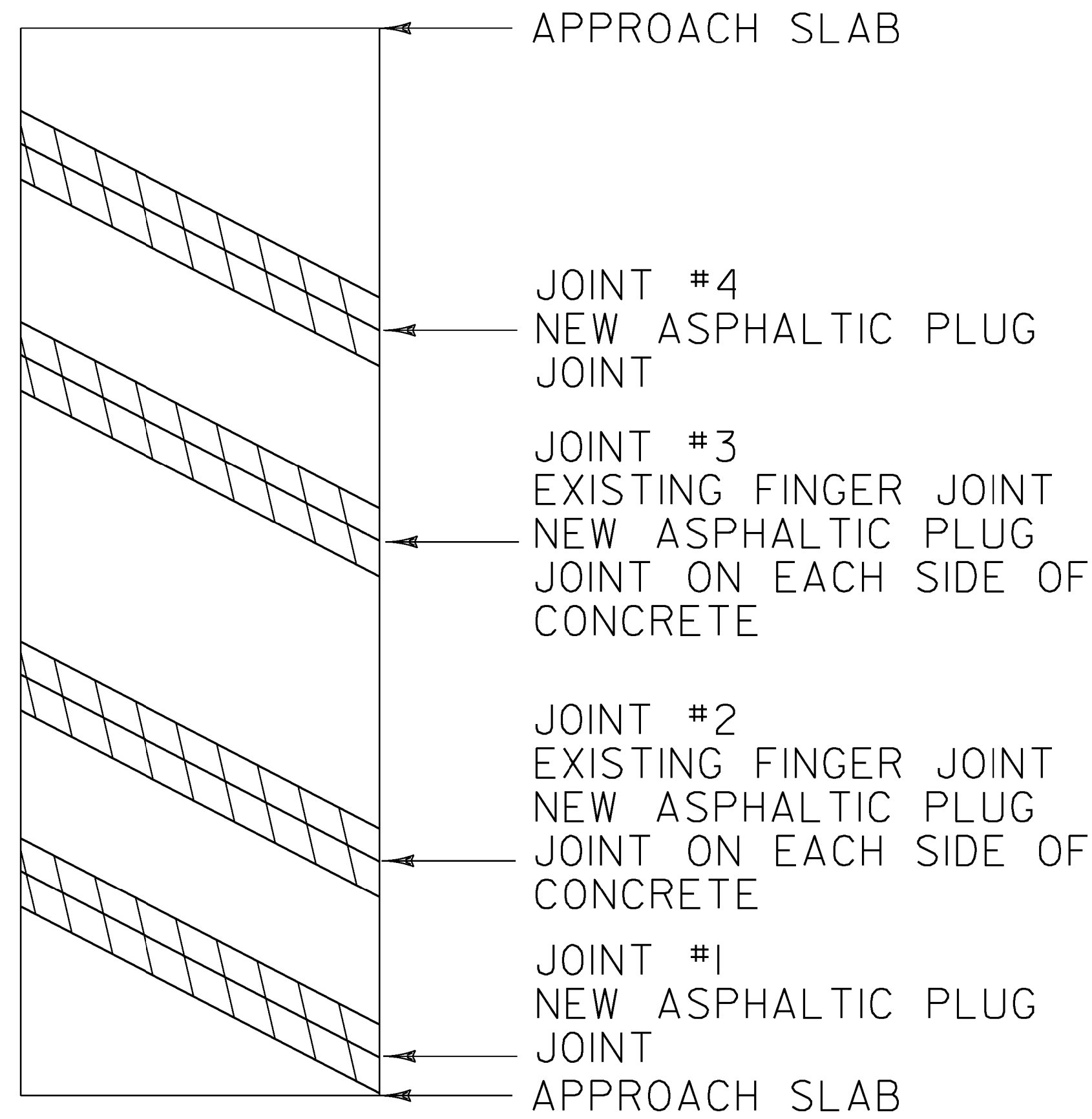
PLOT DATE: 19-DEC-2013

DRAWN BY: LOCKE

CHECKED BY: FOWLER

SHEET 9 OF 41

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 71S**

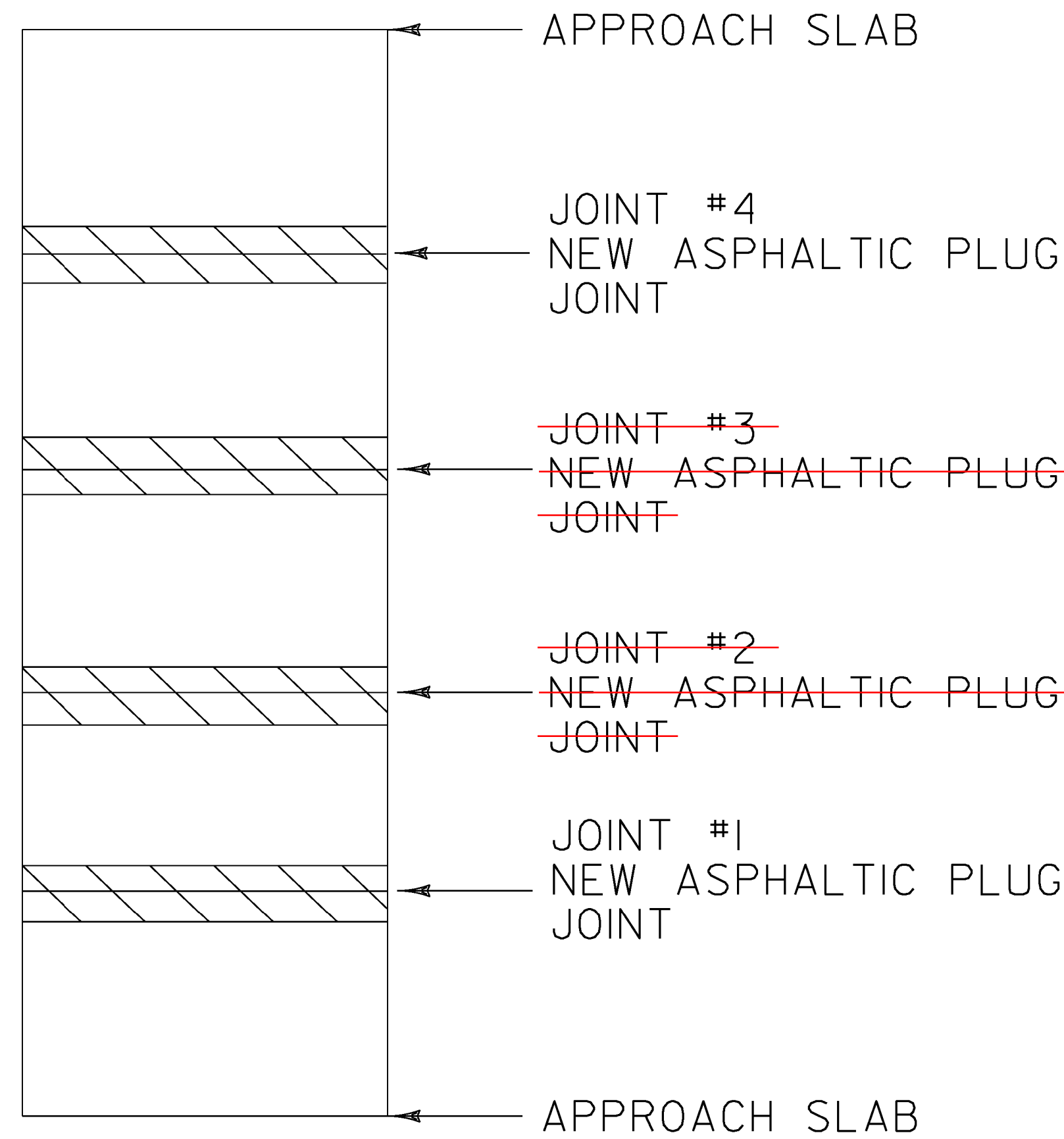
MM 90.289

LENGTH OF ASPHALTIC PLUG JOINTS:

- JOINT #1 - 50'
- JOINT #2 - 50' X 2 = 100'
- JOINT #3 - 50' X 2 = 100'
- JOINT #4 - 50'

TOTAL = 300'

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 72S**

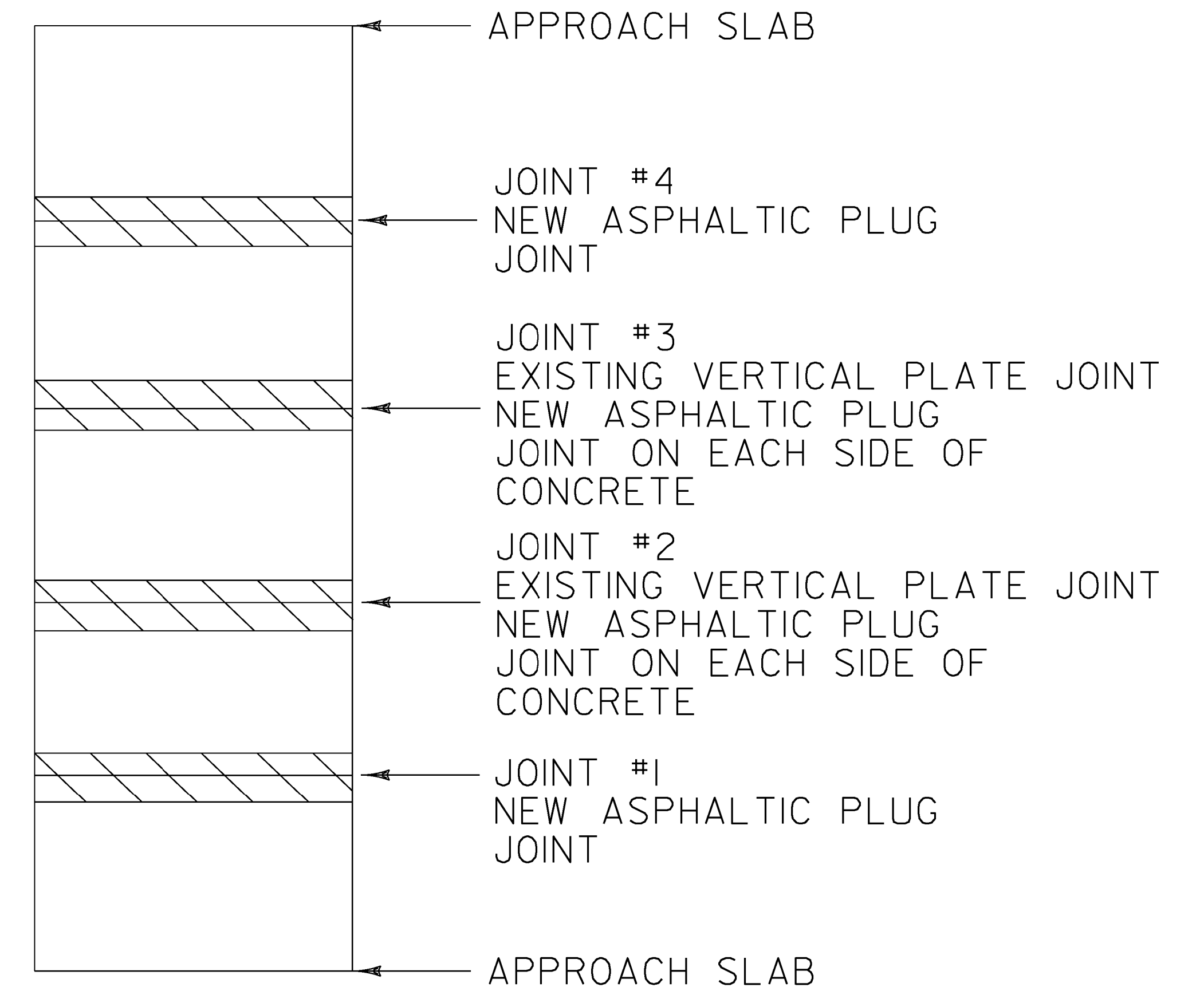
MM 90.475

LENGTH OF ASPHALTIC PLUG JOINTS:

- JOINT #1 - 38'
- ~~JOINT #2 - 38'~~
- ~~JOINT #3 - 38'~~
- JOINT #4 - 38'

TOTAL = 152'

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 73S**

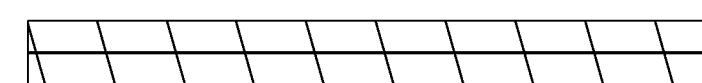
MM 90.615

LENGTH OF ASPHALTIC PLUG JOINTS:

- JOINT #1 - 38'
- JOINT #2 - 38' X 2 = 76'
- JOINT #3 - 38' X 2 = 76'
- JOINT #4 - 38'

TOTAL = 228'

**LEGEND**



EXISTING BRIDGE JOINTS TO BE REPAIRED WITH ASPHALTIC PLUG JOINT. SEE SHEETS 12 & 13 FOR ARMORED JOINT DETAILS.

**BRIDGE  
DETAIL SHEET  
# 6**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\p13a136.dgn

PROJECT LEADER: M. FOWLER

DESIGNED BY: LOCKE

IPARM FILE NAME: p13a136bd6.i

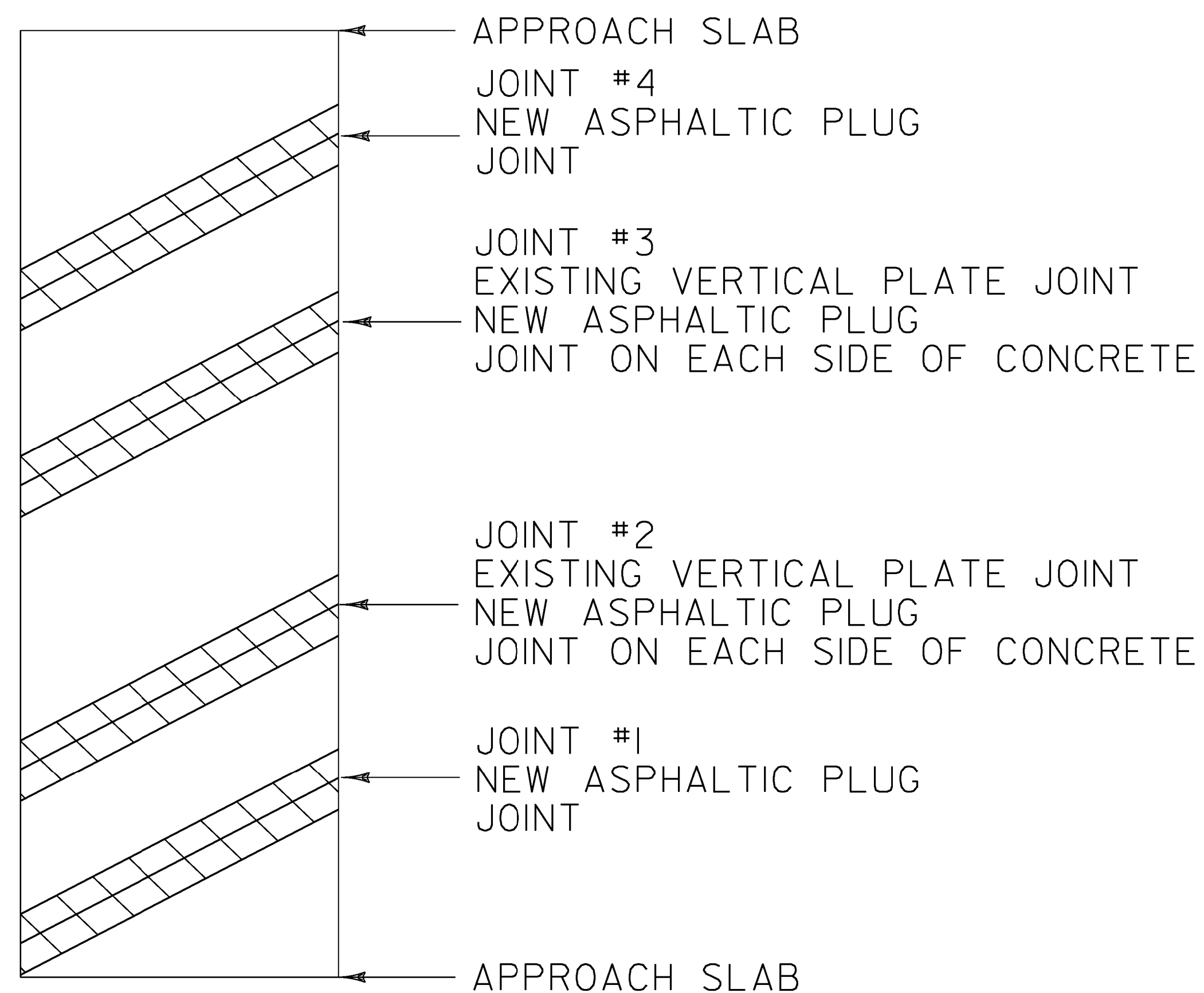
PLOT DATE: 19-DEC-2013

DRAWN BY: LOCKE

CHECKED BY: FOWLER

SHEET 10 OF 41

↑  
SOUTHBOUND  
DIRECTION OF TRAVEL



**BRIDGE 74S**

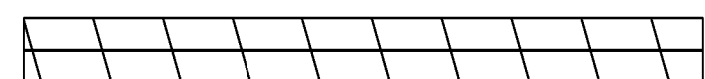
MM 91.488

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~39'~~ 30.5  
 JOINT #2 <sup>30.5</sup>39' X 2 = 78' 6"  
 JOINT #3 <sup>30.5</sup>39' X 2 = 78' 6"  
 JOINT #4 - ~~39'~~ 30.5

~~TOTAL = 234'~~

**LEGEND**



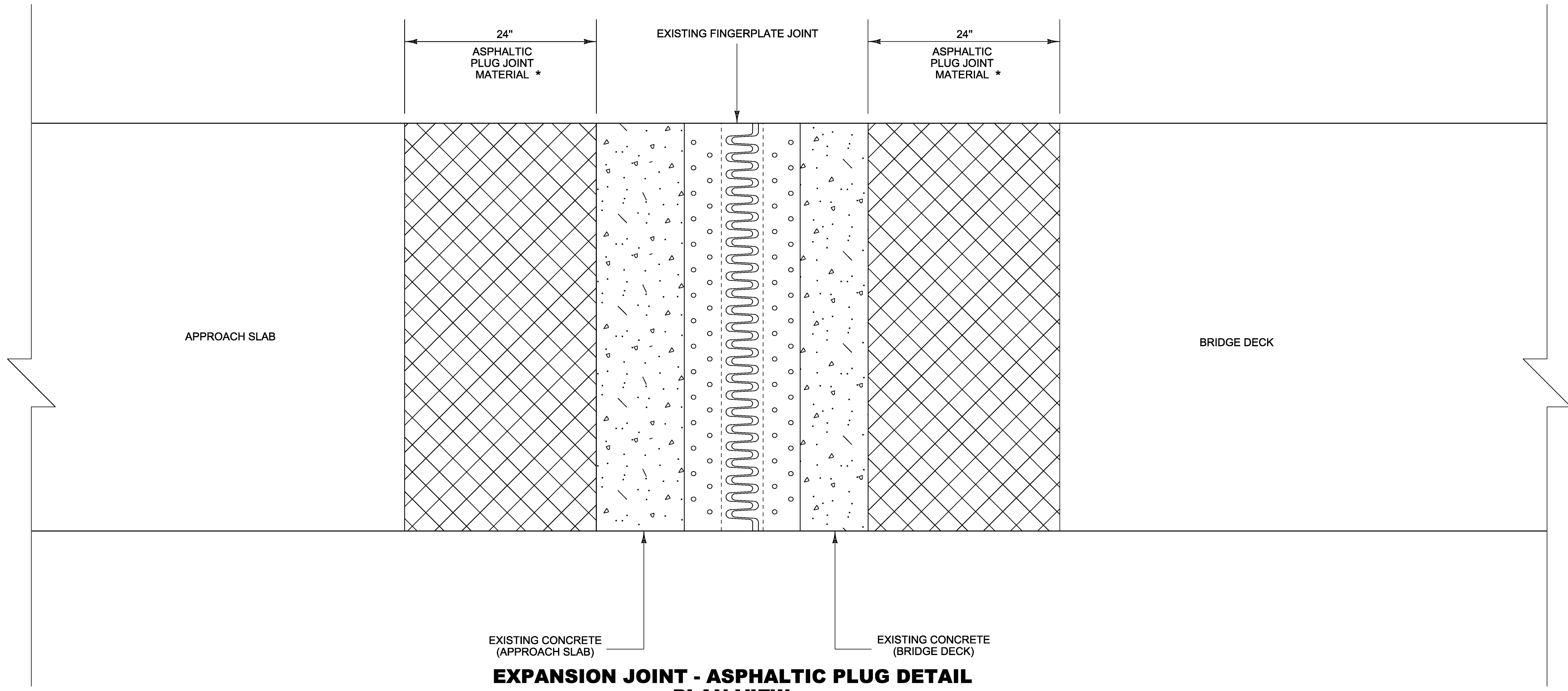
EXISTING BRIDGE JOINTS TO BE  
REPAIRED WITH ASPHALTIC PLUG JOINT.  
SEE SHEETS 12 & 13 FOR ARMORED JOINT  
DETAILS.

**BRIDGE  
DETAIL SHEET  
# 7**

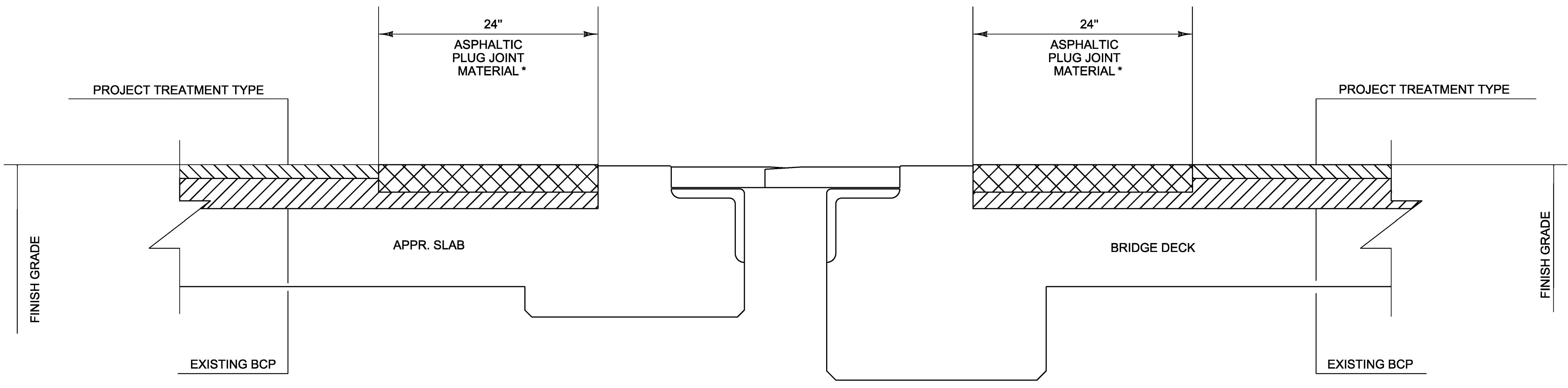
PROJECT NAME: RICHMOND - COLCHESTER  
PROJECT NUMBER: IM SURF (38)

FILE NAME: I3a136\p13a136.dgn  
PROJECT LEADER: M. FOWLER  
DESIGNED BY: LOCKE  
IPARM FILE NAME: p13a136bd7.i

PLOT DATE: 19-DEC-2013  
DRAWN BY: LOCKE  
CHECKED BY: FOWLER  
SHEET 11 OF 41



**EXPANSION JOINT - ASPHALTIC PLUG DETAIL  
PLAN VIEW  
(FINGER PLATE JOINT)**



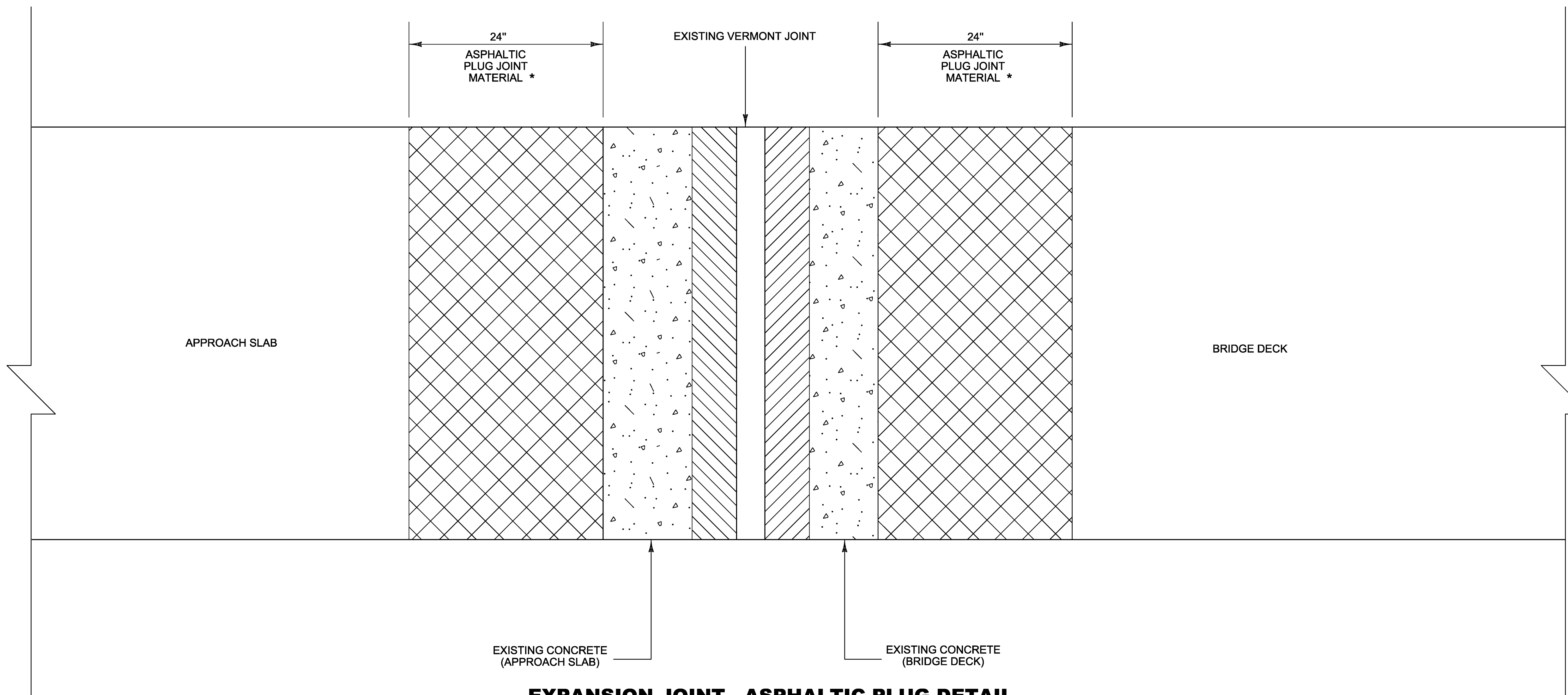
\* 2" MINIMUM DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER

**EXPANSION JOINT - ASPHALTIC PLUG DETAIL  
CROSS SECTION VIEW  
(FINGER PLATE JOINT)**

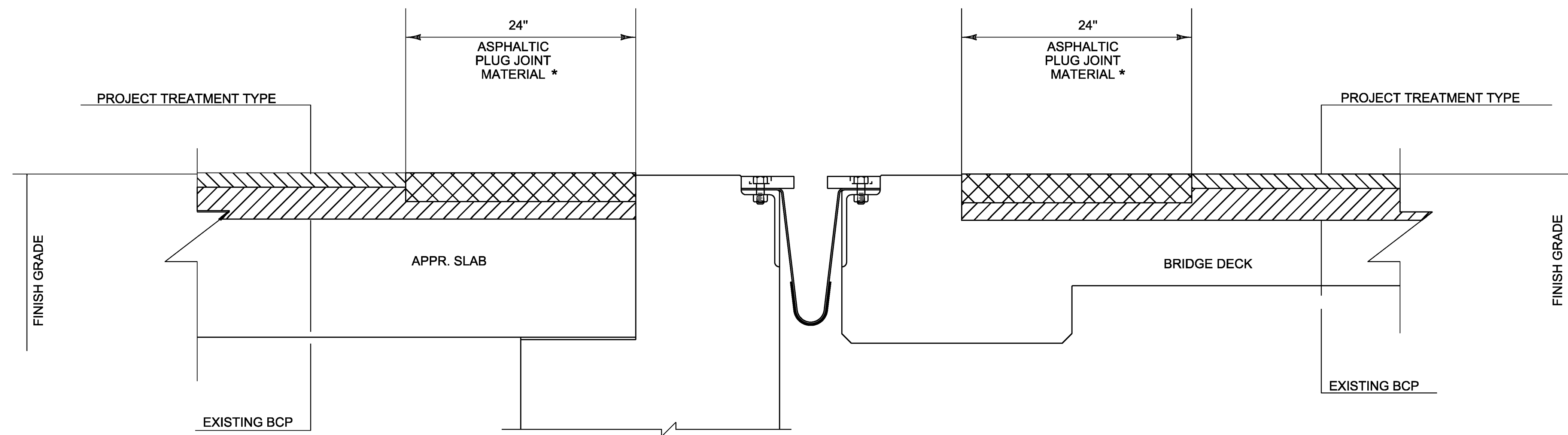
NOT TO SCALE

**BRIDGE  
DETAIL SHEET  
# 8**

PROJECT NAME: RICHMOND - COLCHESTER	
PROJECT NUMBER: IM SURF (38)	
FILE NAME: I3a136\pl3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3a136bd8.1	SHEET 12 OF 41



**EXPANSION JOINT - ASPHALTIC PLUG DETAIL  
PLAN VIEW  
(VERMONT OR VERTICAL PLATE JOINT)**



\* 2" MINIMUM DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER

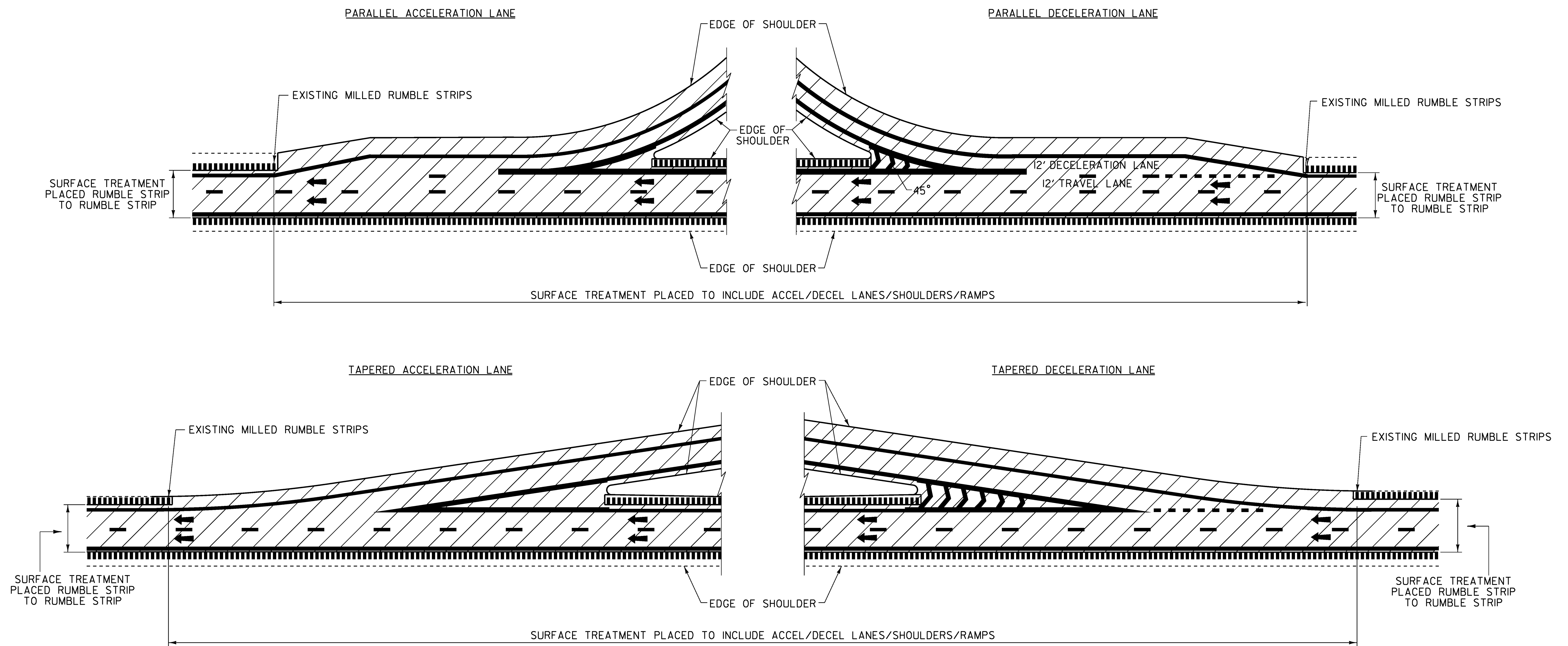
**EXPANSION JOINT - ASPHALTIC PLUG DETAIL  
CROSS SECTION VIEW  
(VERMONT OR VERTICAL PLATE JOINT)**

NOT TO SCALE

**BRIDGE  
DETAIL SHEET  
# 9**

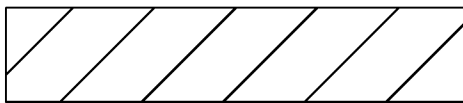


PROJECT NAME: RICHMOND - COLCHESTER	
PROJECT NUMBER: IM SURF (38)	
FILE NAME: I3a136\pl3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3a136bd9.1	SHEET 13 OF 41

**TYPICAL INTERCHANGE CONSTRUCTION DETAILS**  
NOT TO SCALE



NOTES:  
I. LINE STRIPING SHOWN FOR REFERENCE ONLY.

**LEGEND**

-  SURFACE TREATMENT
-  DIRECTION OF TRAFFIC FLOW
-  EXISTING MILLED RUMBLE STRIPS

**TYPICAL INTERCHANGE CONSTRUCTION DETAILS**

PROJECT NAME: RICHMOND - COLCHESTER  
PROJECT NUMBER: IM SURF (38)

FILE NAME: I3aI36\pl3aI36.dgn  
PROJECT LEADER: M. FOWLER  
DESIGNED BY: LOCKE  
IPARM FILE NAME: pl3aI36+1cd.t

PLOT DATE: 19-DEC-2013  
DRAWN BY: LOCKE  
CHECKED BY: FOWLER  
SHEET 14 OF 41



# QUANTITY SHEET 2

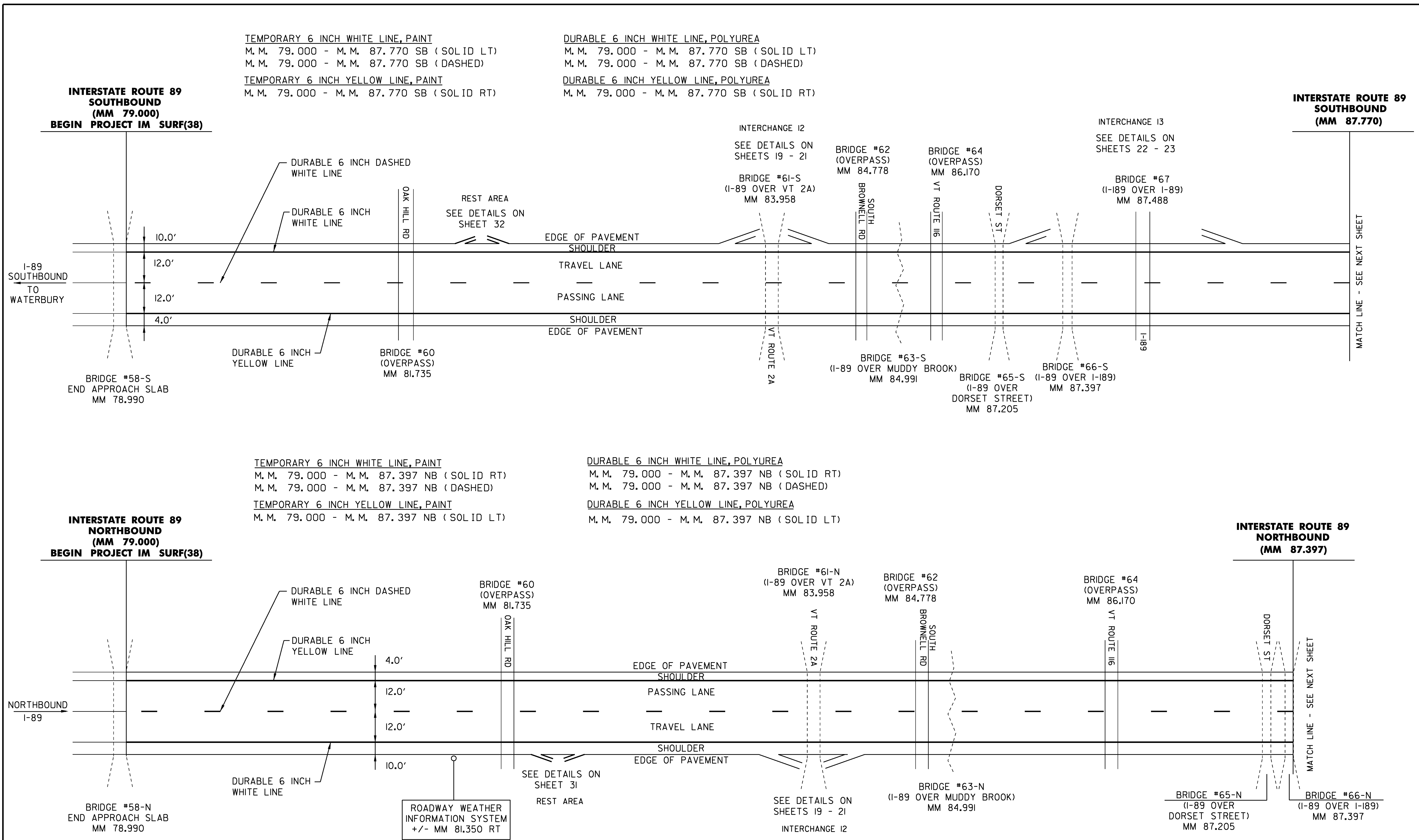
**STATE OF VERMONT  
AGENCY OF TRANSPORTATION**

SUMMARY OF ESTIMATED QUANTITIES									
ROADWAY (ALT. A)	ROADWAY (ALT. B)	BRIDGE	ROADWAY	FULL C.E.	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
			I		I	EA	SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM) (I-89 EXIT I2 RAMP A @ VT 2A)	900.620	-
			I		I	EA	SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM) (I-89 EXIT I2 RAMP C @ VT 2A)	900.620	-
			488,500		488,500	SY	SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT)	900.675	422
			500		500	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680	EST
			100		100	CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-IH OR CRS-IH)	900.683	EST
							END ITEMS COMMON TO ALL ALTERNATES		
							BEGIN ALTERNATE A		
520,000					520,000	SY	SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C)	900.675	1,682
							END ALTERNATE A		
							BEGIN ALTERNATE B		
	I				I	LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-
	30,750				30,750	TON	SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT)(SBR OR SBS POLYMER)	900.680	513
	3,500				3,500	CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-IH OR CRS-IH)	900.683	5.6
							END ALTERNATE B		

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT)
202,498	SY	MAINLINE NORTHBOUND
202,527	SY	MAINLINE SOUTHBOUND
23,113	SY	EXIT I2 RAMPS
13,454	SY	EXIT I3 RAMPS
22,574	SY	EXIT I4 RAMPS
4,857	SY	EXIT I5 RAMPS
11,341	SY	EXIT I6 RAMPS
4,008	SY	NORTHBOUND REST AREA
3,706	SY	SOUTHBOUND REST AREA
422	SY	ROUNDING
488,500	SY	TOTAL
		ALTERNATE A
		SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT, TYPE C)
202,920	SY	MAINLINE NORTHBOUND
202,949	SY	MAINLINE SOUTHBOUND
1,034	SY	BRIDGE 61N & APPROACHES
1,034	SY	BRIDGE 61S & APPROACHES
1,072	SY	BRIDGE 65 N & APPROACHES
1,072	SY	BRIDGE 65 S & APPROACHES
1,106	SY	BRIDGE 66 N & APPROACHES
1,089	SY	BRIDGE 66 S & APPROACHES
5,989	SY	BRIDGE 70 N & APPROACHES
5,989	SY	BRIDGE 70 S & APPROACHES
967	SY	BRIDGE 71N & APPROACHES
967	SY	BRIDGE 71S & APPROACHES
1,089	SY	BRIDGE 72 N & APPROACHES
1,089	SY	BRIDGE 72 S & APPROACHES
912	SY	BRIDGE 73 N & APPROACHES
891	SY	BRIDGE 73 S & APPROACHES
1,013	SY	BRIDGE 74 N & APPROACHES
1,013	SY	BRIDGE 74 S & APPROACHES
23,880	SY	EXIT I2 RAMPS
13,810	SY	EXIT I3 RAMPS
23,286	SY	EXIT I4 RAMPS
5,291	SY	EXIT I5 RAMPS
11,786	SY	EXIT I6 RAMPS
4,186	SY	WILLISTON REST AREA NB
3,884	SY	WILLISTON REST AREA SB
1,682	SY	ROUNDING
520,000	SY	TOTAL

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		ALTERNATE B
		SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT)(SBR OR SBS POLYMER)
11,837	TON	MAINLINE NORTHBOUND
11,839	TON	MAINLINE SOUTHBOUND
60	TON	BRIDGE 61N & APPROACHES
60	TON	BRIDGE 61S & APPROACHES
63	TON	BRIDGE 65 N & APPROACHES
63	TON	BRIDGE 65 S & APPROACHES
65	TON	BRIDGE 66 N & APPROACHES
64	TON	BRIDGE 66 S & APPROACHES
349	TON	BRIDGE 70 N & APPROACHES
349	TON	BRIDGE 70 S & APPROACHES
56	TON	BRIDGE 71N & APPROACHES
56	TON	BRIDGE 71S & APPROACHES
64	TON	BRIDGE 72 N & APPROACHES
64	TON	BRIDGE 72 S & APPROACHES
53	TON	BRIDGE 73 N & APPROACHES
52	TON	BRIDGE 73 S & APPROACHES
59	TON	BRIDGE 74 N & APPROACHES
59	TON	BRIDGE 74 S & APPROACHES
1,393	TON	EXIT I2 RAMPS
806	TON	EXIT I3 RAMPS
1,358	TON	EXIT I4 RAMPS
309	TON	EXIT I5 RAMPS
688	TON	EXIT I6 RAMPS
244	TON	WILLISTON REST AREA NB
227	TON	WILLISTON REST AREA SB
513	TON	ROUNDING
30,750	TON	TOTAL

PROJECT NAME: RICHMOND - COLCHESTER  
 PROJECT NUMBER: IM SURF (38)  
 FILE NAME: I3a136\p13a136.dgn PLOT DATE: 19-DEC-2013  
 PROJECT LEADER: M. FOWLER DRAWN BY: LOCKE  
 DESIGNED BY: LOCKE CHECKED BY: FOWLER  
 IPARM FILE NAME: p13a136qs2.i SHEET 16 OF 41



TEMPORARY 6 INCH WHITE LINE, PAINT  
 M. M. 79.000 - M. M. 87.770 SB ( SOLID LT)  
 M. M. 79.000 - M. M. 87.770 SB ( DASHED)  
 TEMPORARY 6 INCH YELLOW LINE, PAINT  
 M. M. 79.000 - M. M. 87.770 SB ( SOLID RT)

DURABLE 6 INCH WHITE LINE, POLYUREA  
 M. M. 79.000 - M. M. 87.770 SB ( SOLID LT)  
 M. M. 79.000 - M. M. 87.770 SB ( DASHED)  
 DURABLE 6 INCH YELLOW LINE, POLYUREA  
 M. M. 79.000 - M. M. 87.770 SB ( SOLID RT)

TEMPORARY 6 INCH WHITE LINE, PAINT  
 M. M. 79.000 - M. M. 87.397 NB ( SOLID RT)  
 M. M. 79.000 - M. M. 87.397 NB ( DASHED)  
 TEMPORARY 6 INCH YELLOW LINE, PAINT  
 M. M. 79.000 - M. M. 87.397 NB ( SOLID LT)

DURABLE 6 INCH WHITE LINE, POLYUREA  
 M. M. 79.000 - M. M. 87.397 NB ( SOLID RT)  
 M. M. 79.000 - M. M. 87.397 NB ( DASHED)  
 DURABLE 6 INCH YELLOW LINE, POLYUREA  
 M. M. 79.000 - M. M. 87.397 NB ( SOLID LT)

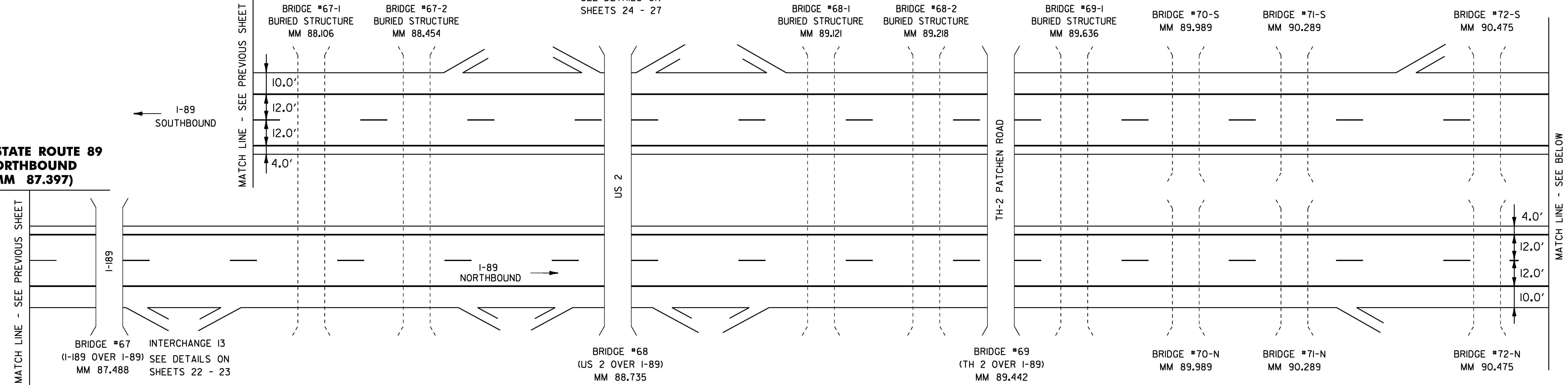
<b>PAVEMENT MARKING DETAIL SHEET 1 MAINLINE</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
	FILE NAME: pl3a136.dgn
	PLOT DATE: 19-DEC-2013
	PROJECT LEADER: M. FOWLER
	DESIGNED BY: LOCKE
	IPARM FILE NAME: pl3a136pmdl.1
	DRAWN BY: LOCKE
	CHECKED BY: FOWLER
	SHEET 17 OF 41

**INTERSTATE ROUTE 89  
SOUTHBOUND  
(MM 87.770)**

INTERCHANGE 14  
SEE DETAILS ON  
SHEETS 24 - 27

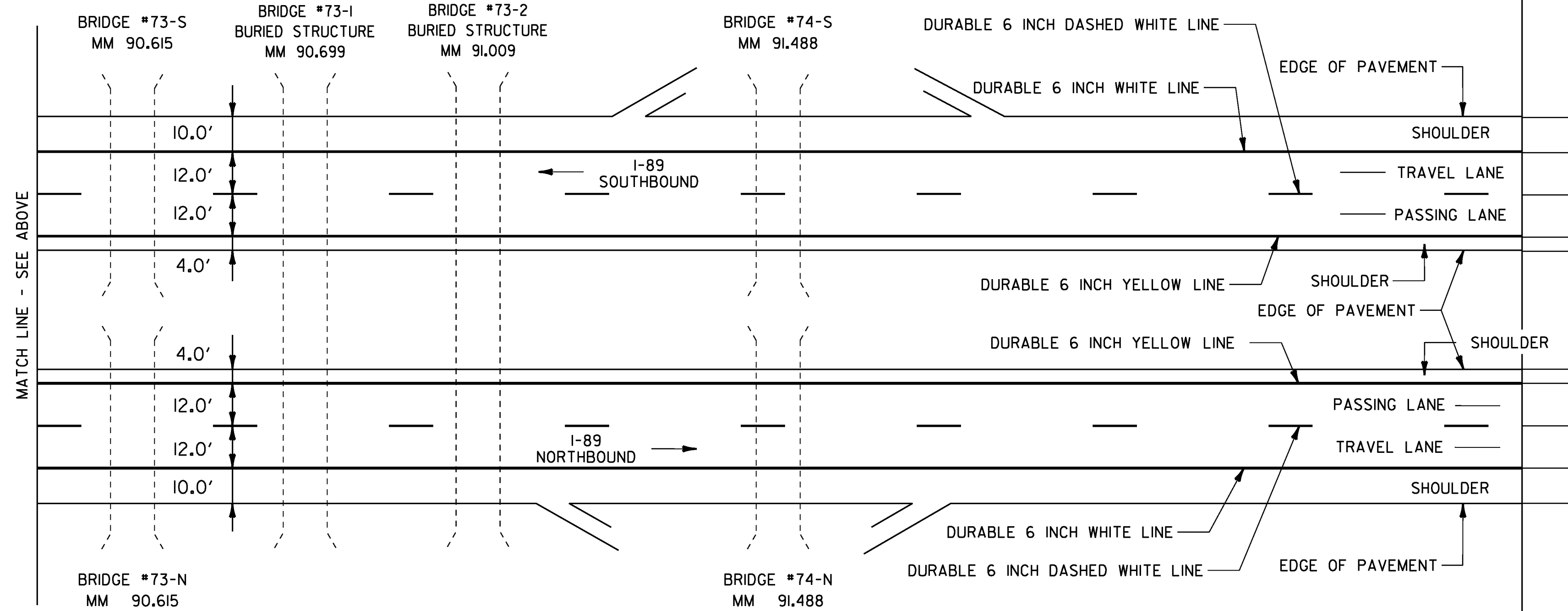
INTERCHANGE 15  
SEE DETAILS ON  
SHEET 28

**INTERSTATE ROUTE 89  
NORTHBOUND  
(MM 87.397)**



**INTERSTATE ROUTE 89  
NORTHBOUND & SOUTHBOUND  
(MM 91.880)  
END PROJECT IM SURF(38)**

INTERCHANGE 16  
SEE DETAILS ON  
SHEET 29 - 30



**TEMPORARY 6 INCH WHITE LINE, PAINT**

M. M. 87.397 - M. M. 91.880 NB (SOLID RT)  
M. M. 87.397 - M. M. 91.880 NB (DASHED)  
M. M. 87.770 - M. M. 91.880 SB (SOLID LT)  
M. M. 87.770 - M. M. 91.880 SB (DASHED)

**TEMPORARY 6 INCH YELLOW LINE, PAINT**

M. M. 87.397 - M. M. 91.880 NB (SOLID LT)  
M. M. 87.770 - M. M. 91.880 SB (SOLID RT)

**DURABLE 6 INCH WHITE LINE, POLYUREA**

M. M. 87.397 - M. M. 91.880 NB (SOLID RT)  
M. M. 87.397 - M. M. 91.880 NB (DASHED)  
M. M. 87.770 - M. M. 91.880 SB (SOLID LT)  
M. M. 87.770 - M. M. 91.880 SB (DASHED)

**DURABLE 6 INCH YELLOW LINE, POLYUREA**

M. M. 87.397 - M. M. 91.880 NB (SOLID LT)  
M. M. 87.770 - M. M. 91.880 SB (SOLID RT)

TO  
ST. ALBANS

NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 2 MAINLINE</b>	PROJECT NAME:	RICHMOND - COLCHESTER
	PROJECT NUMBER:	IM SURF (38)
	FILE NAME:	pl3a136.dgn
	PROJECT LEADER:	M. FOWLER
	DESIGNED BY:	LOCKE
	IPARM FILE NAME:	pl3a136pmd2.1
	PLOT DATE:	19-DEC-2013
	DRAWN BY:	LOCKE
	CHECKED BY:	FOWLER
	SHEET	18 OF 41

**TEMPORARY 6 INCH WHITE LINE, PAINT**

EXIT 12  
 NORTHBOUND OFF RAMP A SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE  
 NORTHBOUND OFF RAMP A SOLID LANE LINE  
 NORTHBOUND ON RAMP D SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE

**TEMPORARY 6 INCH YELLOW LINE, PAINT**

EXIT 12  
 NORTHBOUND OFF RAMP A SOLID LT EDGE LINE  
 NORTHBOUND ON RAMP D SOLID LT EDGE LINE

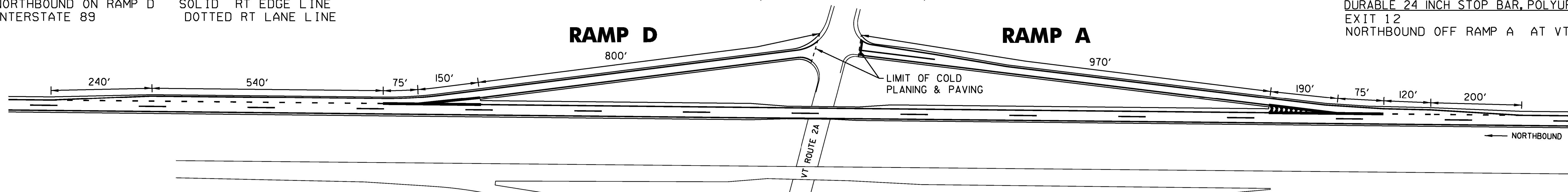
**INTERCHANGE #12  
(NORTHBOUND)**

**TEMPORARY 24 INCH STOP BAR, PAINT**

EXIT 12  
 NORTHBOUND OFF RAMP A AT VT 2A

**DURABLE 24 INCH STOP BAR, POLYUREA**

EXIT 12  
 NORTHBOUND OFF RAMP A AT VT 2A



**DURABLE 6 INCH WHITE LINE, POLYUREA**

EXIT 12  
 NORTHBOUND OFF RAMP A SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE  
 NORTHBOUND OFF RAMP A SOLID LANE LINE  
 NORTHBOUND ON RAMP D SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE

**DURABLE 6 INCH YELLOW LINE, POLYUREA**

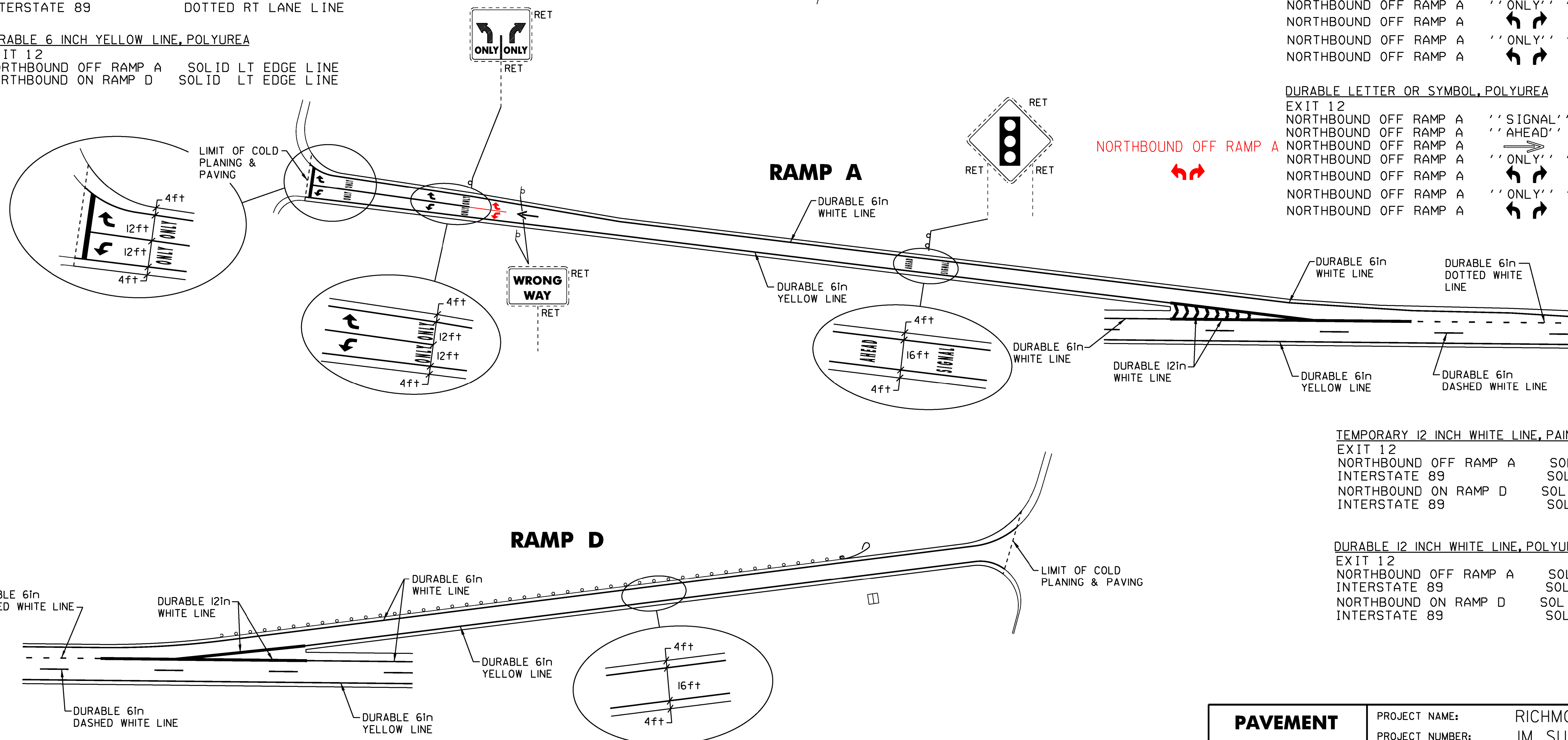
EXIT 12  
 NORTHBOUND OFF RAMP A SOLID LT EDGE LINE  
 NORTHBOUND ON RAMP D SOLID LT EDGE LINE

**TEMPORARY LETTER OR SYMBOL, PAINT**

EXIT 12  
 NORTHBOUND OFF RAMP A "SIGNAL"  
 NORTHBOUND OFF RAMP A "AHEAD"  
 NORTHBOUND OFF RAMP A [arrow symbol]  
 NORTHBOUND OFF RAMP A "ONLY" "ONLY"  
 NORTHBOUND OFF RAMP A [left/right arrows symbol]  
 NORTHBOUND OFF RAMP A "ONLY" "ONLY"  
 NORTHBOUND OFF RAMP A [left/right arrows symbol]

**DURABLE LETTER OR SYMBOL, POLYUREA**

EXIT 12  
 NORTHBOUND OFF RAMP A "SIGNAL"  
 NORTHBOUND OFF RAMP A "AHEAD"  
 NORTHBOUND OFF RAMP A [arrow symbol]  
 NORTHBOUND OFF RAMP A "ONLY" "ONLY"  
 NORTHBOUND OFF RAMP A [left/right arrows symbol]  
 NORTHBOUND OFF RAMP A "ONLY" "ONLY"  
 NORTHBOUND OFF RAMP A [left/right arrows symbol]



**TEMPORARY 12 INCH WHITE LINE, PAINT**

EXIT 12  
 NORTHBOUND OFF RAMP A SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA  
 NORTHBOUND ON RAMP D SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA

**DURABLE 12 INCH WHITE LINE, POLYUREA**

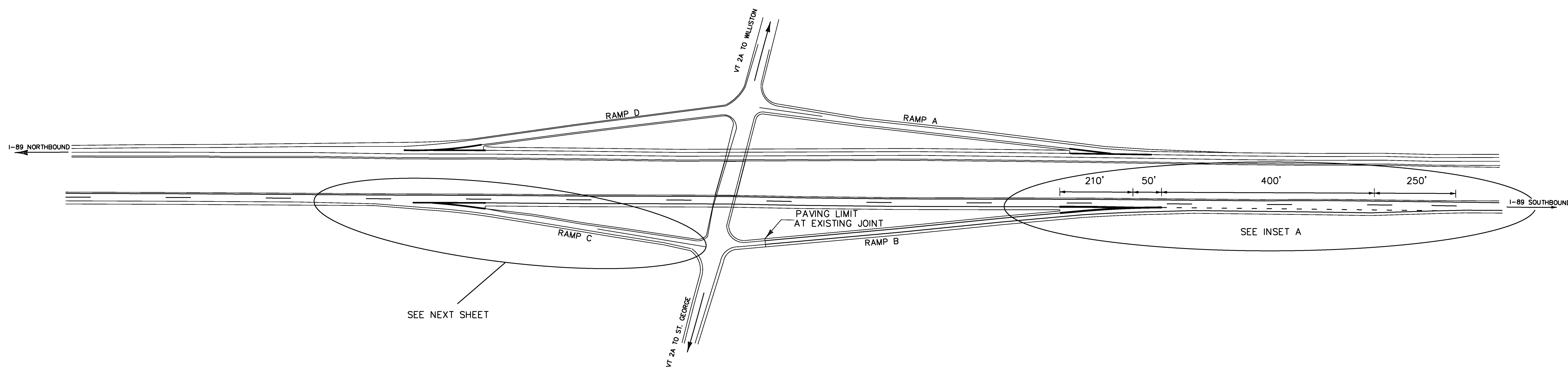
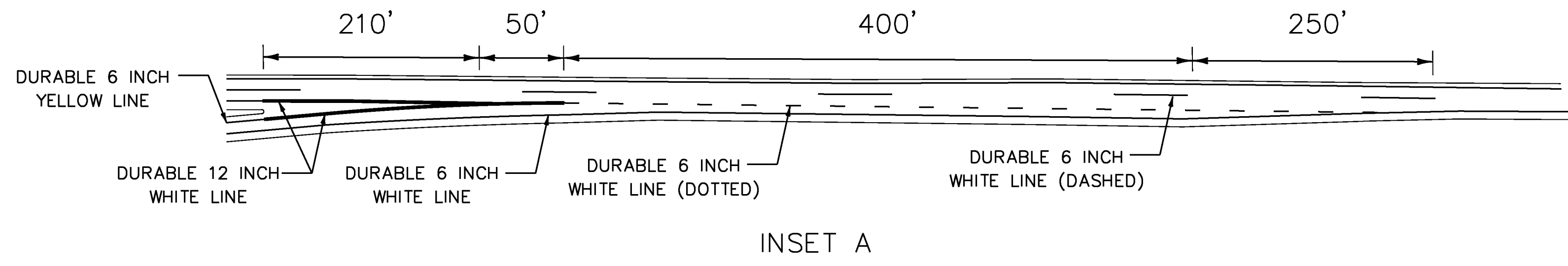
EXIT 12  
 NORTHBOUND OFF RAMP A SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA  
 NORTHBOUND ON RAMP D SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA

NOT TO SCALE

**PAVEMENT  
MARKING  
DETAIL SHEET 3  
EXIT 12 NB**

PROJECT NAME: RICHMOND - COLCHESTER  
 PROJECT NUMBER: IM SURF (38)  
 FILE NAME: pl3al36.dgn  
 PROJECT LEADER: M. FOWLER  
 DESIGNED BY: LOCKE  
 IPARM FILE NAME: pl3al36pmd3.i  
 PLOT DATE: 19-DEC-2013  
 DRAWN BY: LOCKE  
 CHECKED BY: FOWLER  
 SHEET 19 OF 41

**INTERCHANGE #12  
(SOUTHBOUND)**



TEMPORARY 6 INCH WHITE LINE, PAINT  
 EXIT 12  
 SOUTHBOUND ON RAMP B SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE

TEMPORARY 6 INCH YELLOW LINE, PAINT  
 EXIT 12  
 SOUTHBOUND ON RAMP B SOLID LT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, PAINT  
 EXIT 12  
 SOUTHBOUND ON RAMP B SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA

DURABLE 6 INCH WHITE LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND ON RAMP B SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE

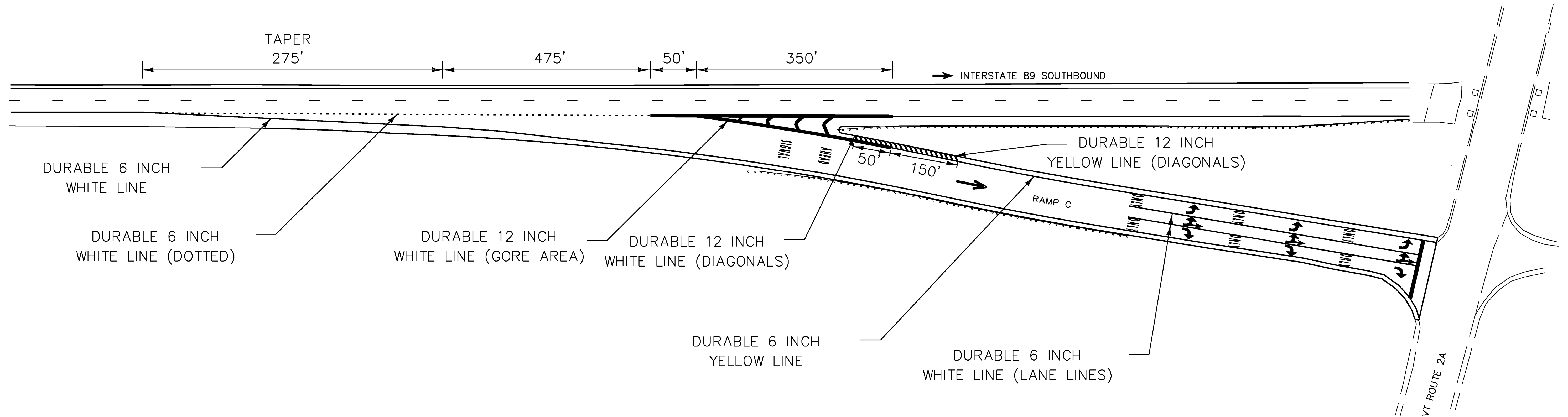
DURABLE 6 INCH YELLOW LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND ON RAMP B SOLID LT EDGE LINE

DURABLE 12 INCH WHITE LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND ON RAMP B SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA

NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 4 EXIT 12 SB</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
	FILE NAME: pi3a136.dgn
	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pi3a136pmd4.1	SHEET 20 OF 41

# INTERCHANGE #12 (SOUTHBOUND)



TEMPORARY 6 INCH WHITE LINE, PAINT  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE  
 SOUTHBOUND OFF RAMP C SOLID LANE LINES

TEMPORARY 6 INCH YELLOW LINE, PAINT  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID LT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, PAINT  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA  
 SOUTHBOUND OFF RAMP C SOLID LT DIAGONALS

TEMPORARY 12 INCH YELLOW LINE, PAINT  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID LT DIAGONALS

TEMPORARY LETTER OR SYMBOL, PAINT  
 EXIT 12  
 SOUTHBOUND OFF RAMP C "SIGNAL"  
 SOUTHBOUND OFF RAMP C "AHEAD"  
 SOUTHBOUND OFF RAMP C [Symbol: Arrow pointing right]  
 SOUTHBOUND OFF RAMP C "ONLY" "ONLY"  
 SOUTHBOUND OFF RAMP C [Symbol: Three arrows pointing right]  
 SOUTHBOUND OFF RAMP C "ONLY" "ONLY"  
 SOUTHBOUND OFF RAMP C [Symbol: Three arrows pointing right]  
 SOUTHBOUND OFF RAMP C "ONLY" "ONLY"  
 SOUTHBOUND OFF RAMP C [Symbol: Three arrows pointing right]

TEMPORARY 24 INCH STOP BAR, PAINT  
 EXIT 12  
 SOUTHBOUND OFF RAMP C AT VT 2A

DURABLE 6 INCH WHITE LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE  
 SOUTHBOUND OFF RAMP C SOLID LANE LINES

DURABLE 6 INCH YELLOW LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID LT EDGE LINE

DURABLE 12 INCH WHITE LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA  
 SOUTHBOUND OFF RAMP C SOLID LT DIAGONALS

DURABLE 12 INCH YELLOW LINE, POLYUREA  
 EXIT 12  
 SOUTHBOUND OFF RAMP C SOLID LT DIAGONALS

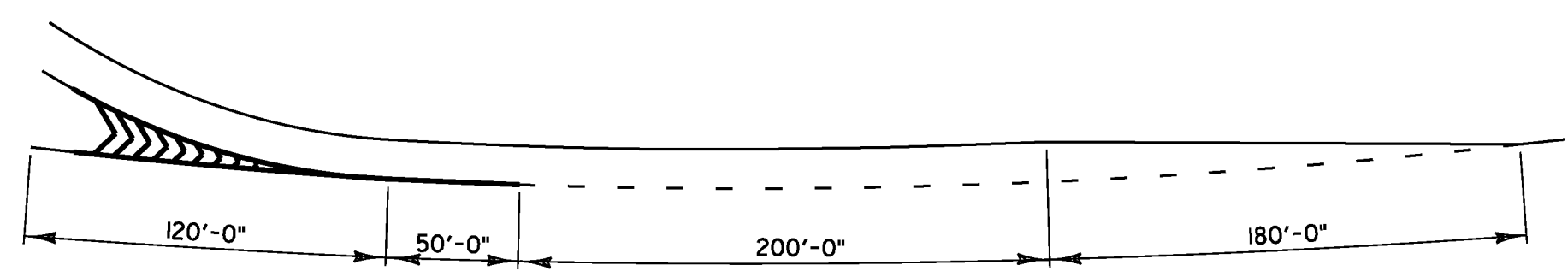
DURABLE LETTER OR SYMBOL, POLYUREA  
 EXIT 12  
 SOUTHBOUND OFF RAMP C "SIGNAL"  
 SOUTHBOUND OFF RAMP C "AHEAD"  
 SOUTHBOUND OFF RAMP C [Symbol: Arrow pointing right]  
~~SOUTHBOUND OFF RAMP C "ONLY" "ONLY"~~  
 SOUTHBOUND OFF RAMP C [Symbol: Three arrows pointing right]  
 SOUTHBOUND OFF RAMP C "ONLY" "ONLY"  
 SOUTHBOUND OFF RAMP C [Symbol: Three arrows pointing right]  
 SOUTHBOUND OFF RAMP C "ONLY" "ONLY"  
 SOUTHBOUND OFF RAMP C [Symbol: Three arrows pointing right]

DURABLE 24 INCH STOP BAR, POLYUREA  
 EXIT 12  
 SOUTHBOUND OFF RAMP C AT VT 2A

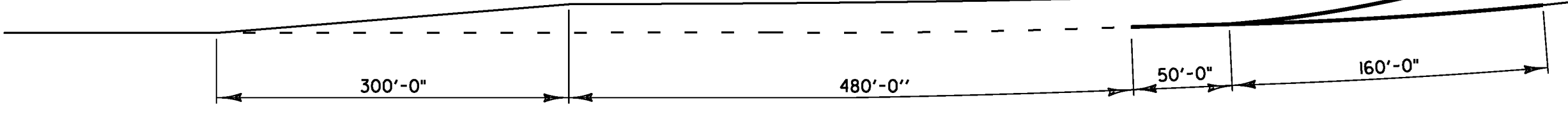
NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 5 EXIT 12 SB</b>	PROJECT NAME: RICHMOND - COLCHESTER	PLOT DATE: 19-DEC-2013
	PROJECT NUMBER: IM SURF (38)	DRAWN BY: LOCKE
	FILE NAME: pl3al36.dgn	CHECKED BY: FOWLER
	PROJECT LEADER: M. FOWLER	SHEET 21 OF 41
	DESIGNED BY: LOCKE	
	IPARM FILE NAME: pl3al36pmd5.i	

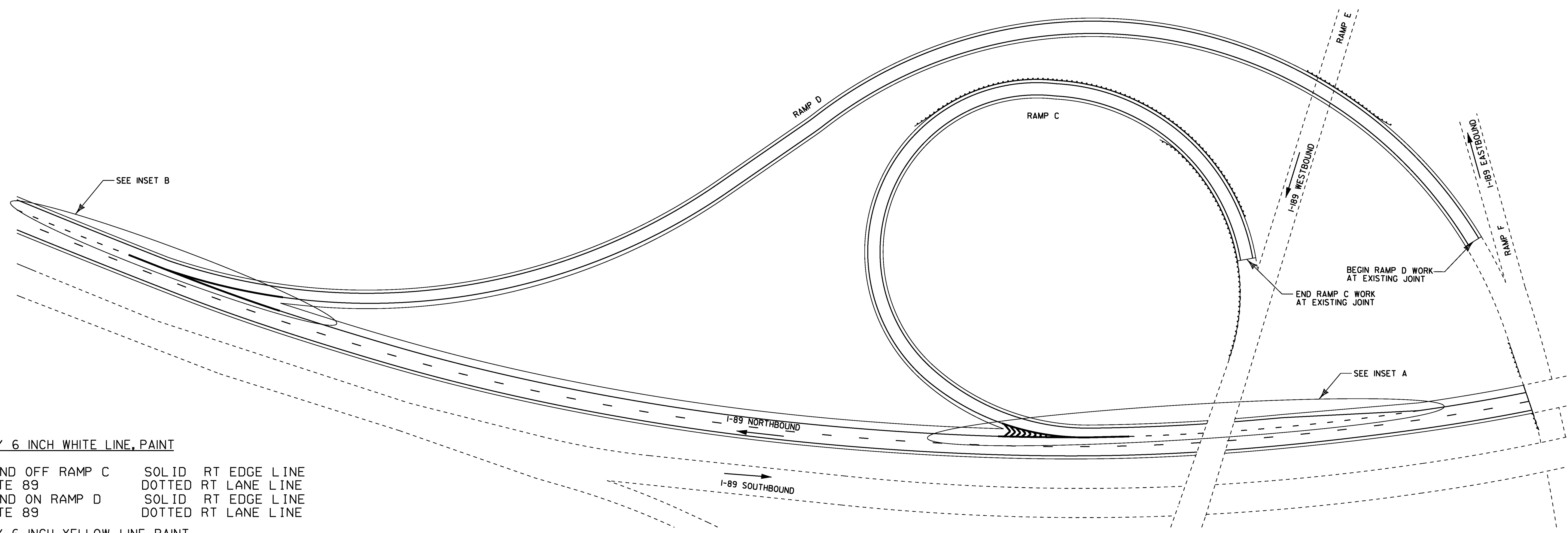
# INTERCHANGE #13 (NORTHBOUND)



INSET A - GORE DETAIL AT EXIT 13 RAMP C



INSET B - GORE DETAIL AT EXIT 13 RAMP D



**TEMPORARY 6 INCH WHITE LINE, PAINT**  
 EXIT 13  
 NORTHBOUND OFF RAMP C SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE  
 NORTHBOUND ON RAMP D SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE

**TEMPORARY 6 INCH YELLOW LINE, PAINT**  
 EXIT 13  
 NORTHBOUND OFF RAMP C SOLID LT EDGE LINE  
 NORTHBOUND ON RAMP D SOLID LT EDGE LINE

**TEMPORARY 12 INCH WHITE LINE, PAINT**  
 EXIT 13  
 NORTHBOUND OFF RAMP C SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA  
 NORTHBOUND ON RAMP D SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA

**DURABLE 6 INCH WHITE LINE, POLYUREA**  
 EXIT 13  
 NORTHBOUND OFF RAMP C SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE  
 NORTHBOUND ON RAMP D SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE

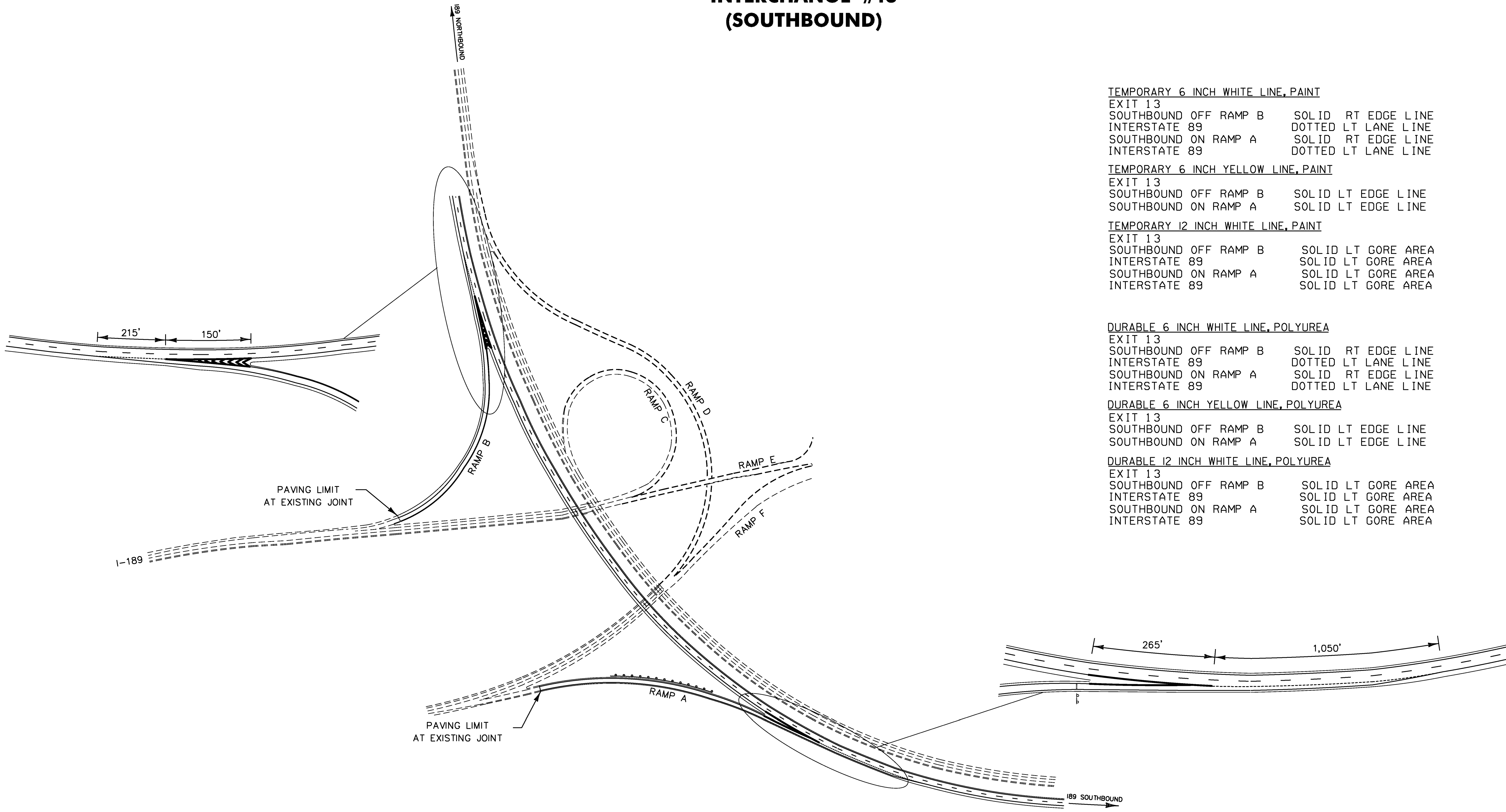
**DURABLE 6 INCH YELLOW LINE, POLYUREA**  
 EXIT 13  
 NORTHBOUND OFF RAMP C SOLID LT EDGE LINE  
 NORTHBOUND ON RAMP D SOLID LT EDGE LINE

**DURABLE 12 INCH WHITE LINE, POLYUREA**  
 EXIT 13  
 NORTHBOUND OFF RAMP C SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA  
 NORTHBOUND ON RAMP D SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA

NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 6 EXIT 13 NB</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
FILE NAME: pl3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3a136pmd6.1	SHEET 22 OF 41

# INTERCHANGE #13 (SOUTHBOUND)



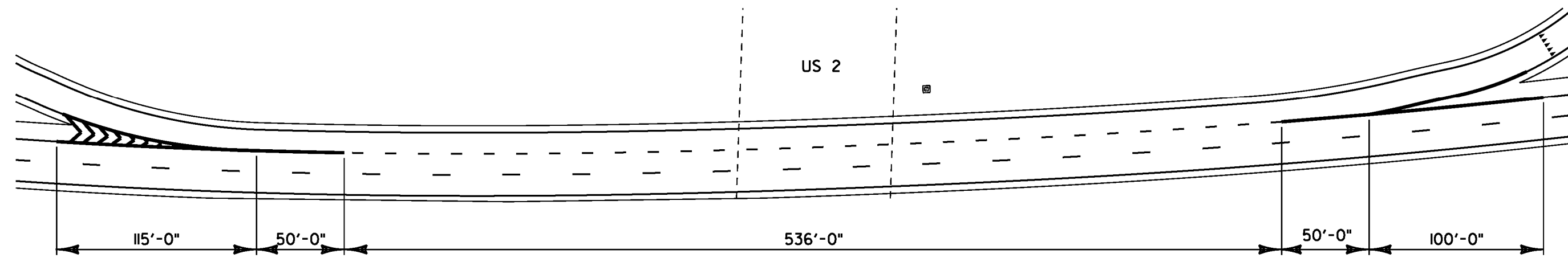
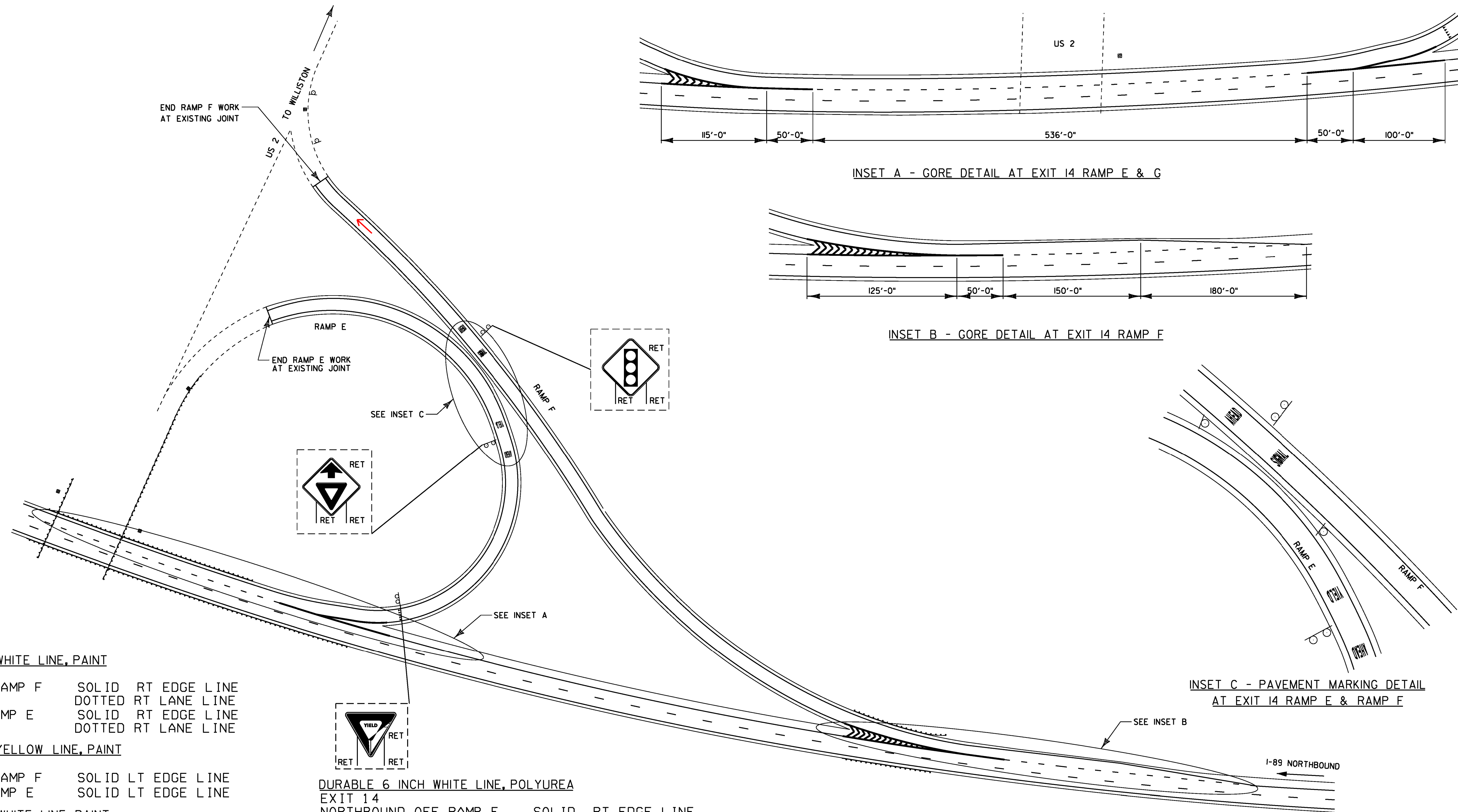
<u>TEMPORARY 6 INCH WHITE LINE, PAINT</u>	
EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND ON RAMP A	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
<u>TEMPORARY 6 INCH YELLOW LINE, PAINT</u>	
EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP A	SOLID LT EDGE LINE
<u>TEMPORARY 12 INCH WHITE LINE, PAINT</u>	
EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA
SOUTHBOUND ON RAMP A	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

<u>DURABLE 6 INCH WHITE LINE, POLYUREA</u>	
EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND ON RAMP A	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
<u>DURABLE 6 INCH YELLOW LINE, POLYUREA</u>	
EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP A	SOLID LT EDGE LINE
<u>DURABLE 12 INCH WHITE LINE, POLYUREA</u>	
EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA
SOUTHBOUND ON RAMP A	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

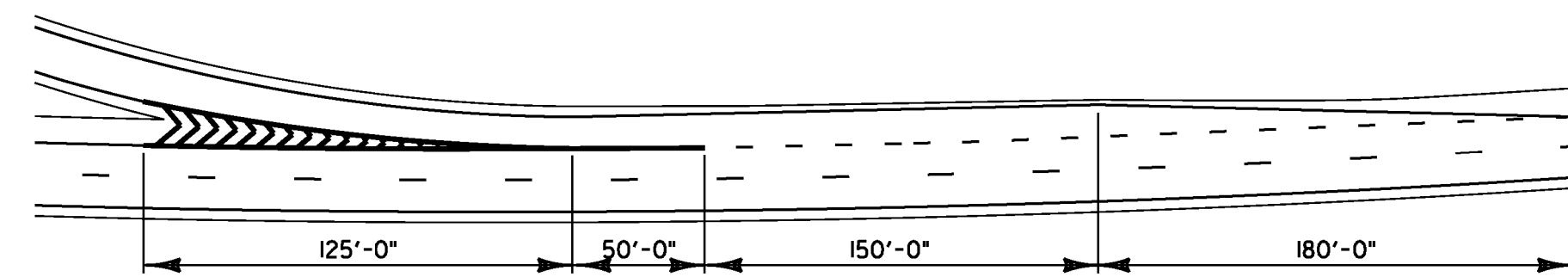
NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 7 EXIT 13 SB</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
	FILE NAME: pi3a136.dgn
PROJECT LEADER: M. FOWLER	PLOT DATE: 19-DEC-2013
DESIGNED BY: LOCKE	DRAWN BY: LOCKE
IPARM FILE NAME: pi3a136pmd7.1	CHECKED BY: FOWLER
	SHEET 23 OF 41

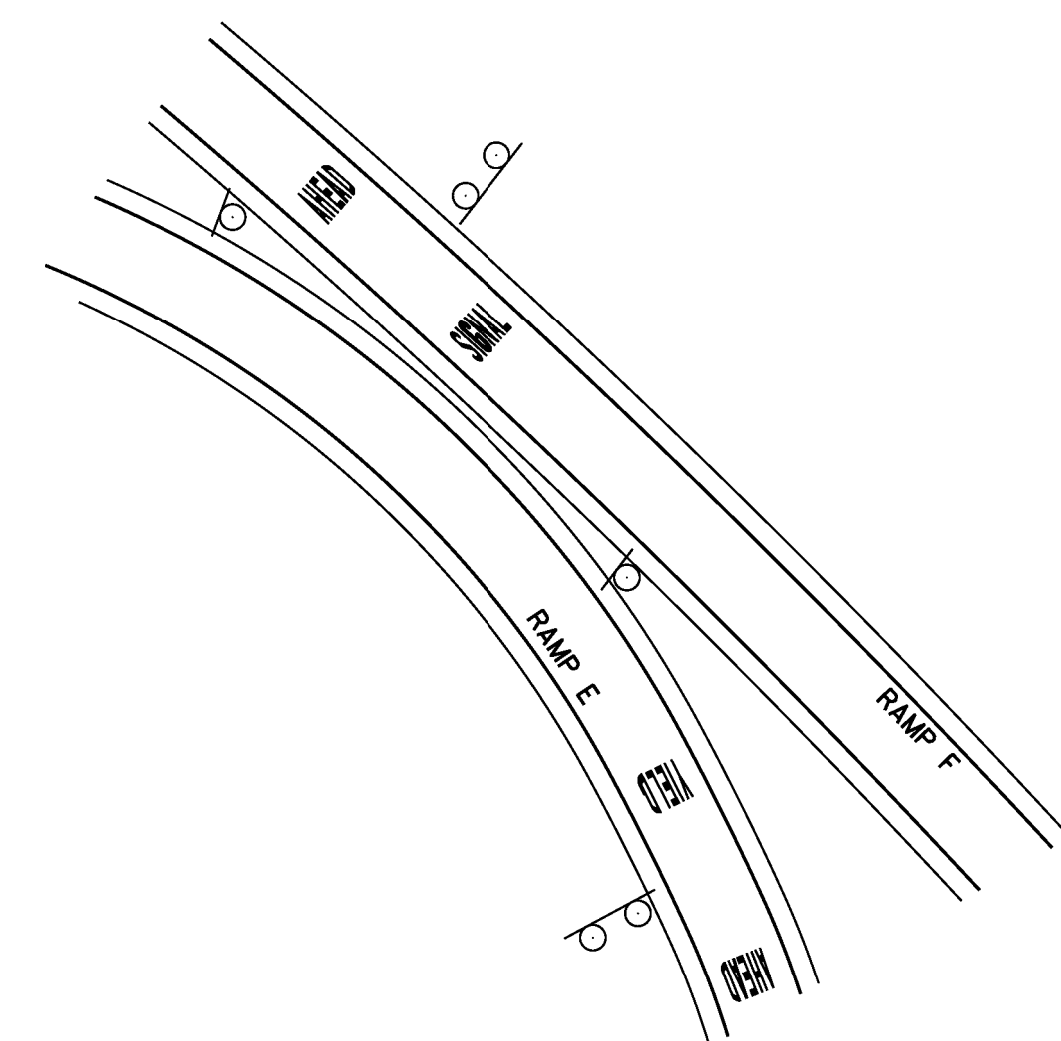
# INTERCHANGE #14 (NORTHBOUND)



INSET A - GORE DETAIL AT EXIT 14 RAMP E & G



INSET B - GORE DETAIL AT EXIT 14 RAMP F



INSET C - PAVEMENT MARKING DETAIL AT EXIT 14 RAMP E & RAMP F

**TEMPORARY 6 INCH WHITE LINE, PAINT**

EXIT 14		
NORTHBOUND OFF RAMP F	SOLID RT EDGE LINE	
INTERSTATE 89	DOTTED RT LANE LINE	
NORTHBOUND ON RAMP E	SOLID RT EDGE LINE	
INTERSTATE 89	DOTTED RT LANE LINE	

**TEMPORARY 6 INCH YELLOW LINE, PAINT**

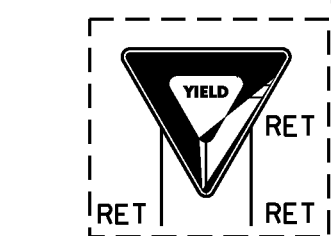
EXIT 14		
NORTHBOUND OFF RAMP F	SOLID LT EDGE LINE	
NORTHBOUND ON RAMP E	SOLID LT EDGE LINE	

**TEMPORARY 12 INCH WHITE LINE, PAINT**

EXIT 14		
NORTHBOUND OFF RAMP F	SOLID LT GORE AREA	
INTERSTATE 89	SOLID RT GORE AREA	
NORTHBOUND ON RAMP E	SOLID LT GORE AREA	
INTERSTATE 89	SOLID RT GORE AREA	

**TEMPORARY LETTER OR SYMBOL, PAINT**

EXIT 14		
NORTHBOUND OFF RAMP F	'' SIGNAL ''	
NORTHBOUND OFF RAMP F	'' AHEAD ''	
NORTHBOUND OFF RAMP F	➔	
NORTHBOUND ON RAMP E	'' YIELD ''	
NORTHBOUND ON RAMP E	'' AHEAD ''	
NORTHBOUND ON RAMP E	YIELD TRIANGLES (5 EACH)	



**DURABLE 6 INCH WHITE LINE, POLYUREA**

EXIT 14		
NORTHBOUND OFF RAMP F	SOLID RT EDGE LINE	
INTERSTATE 89	DOTTED RT LANE LINE	
NORTHBOUND ON RAMP E	SOLID RT EDGE LINE	
INTERSTATE 89	DOTTED RT LANE LINE	

**DURABLE 6 INCH YELLOW LINE, POLYUREA**

EXIT 14		
NORTHBOUND OFF RAMP F	SOLID LT EDGE LINE	
NORTHBOUND ON RAMP E	SOLID LT EDGE LINE	

**DURABLE 12 INCH WHITE LINE, POLYUREA**

EXIT 14		
NORTHBOUND OFF RAMP F	SOLID LT GORE AREA	
INTERSTATE 89	SOLID RT GORE AREA	
NORTHBOUND ON RAMP E	SOLID LT GORE AREA	
INTERSTATE 89	SOLID RT GORE AREA	

**DURABLE LETTER OR SYMBOL, POLYUREA**

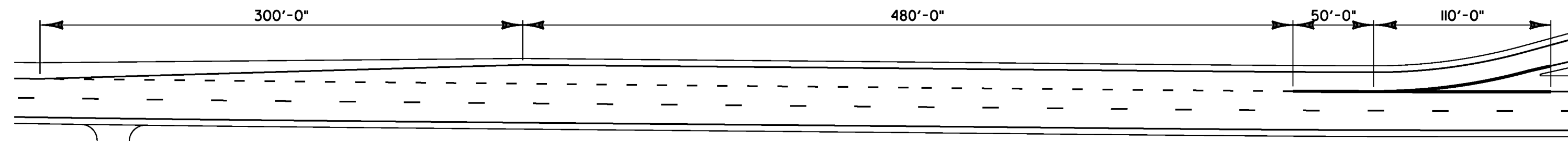
EXIT 14		
NORTHBOUND OFF RAMP F	'' SIGNAL ''	
NORTHBOUND OFF RAMP F	'' AHEAD ''	
NORTHBOUND OFF RAMP F	➔	
NORTHBOUND ON RAMP E	'' YIELD ''	
NORTHBOUND ON RAMP E	'' AHEAD ''	
NORTHBOUND OFF RAMP E	YIELD TRIANGLES (5 EA.)	

NOT TO SCALE

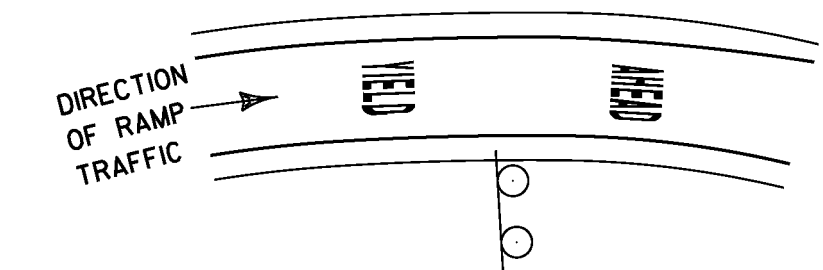
**PAVEMENT MARKING  
DETAIL SHEET 8  
EXIT 14 NB**

PROJECT NAME:	RICHMOND - COLCHESTER
PROJECT NUMBER:	IM SURF (38)
FILE NAME:	pl3al36.dgn
PROJECT LEADER:	M. FOWLER
DESIGNED BY:	LOCKE
IPARM FILE NAME:	pl3al36pmd8.i
PLOT DATE:	19-DEC-2013
DRAWN BY:	LOCKE
CHECKED BY:	FOWLER
SHEET	24 OF 41

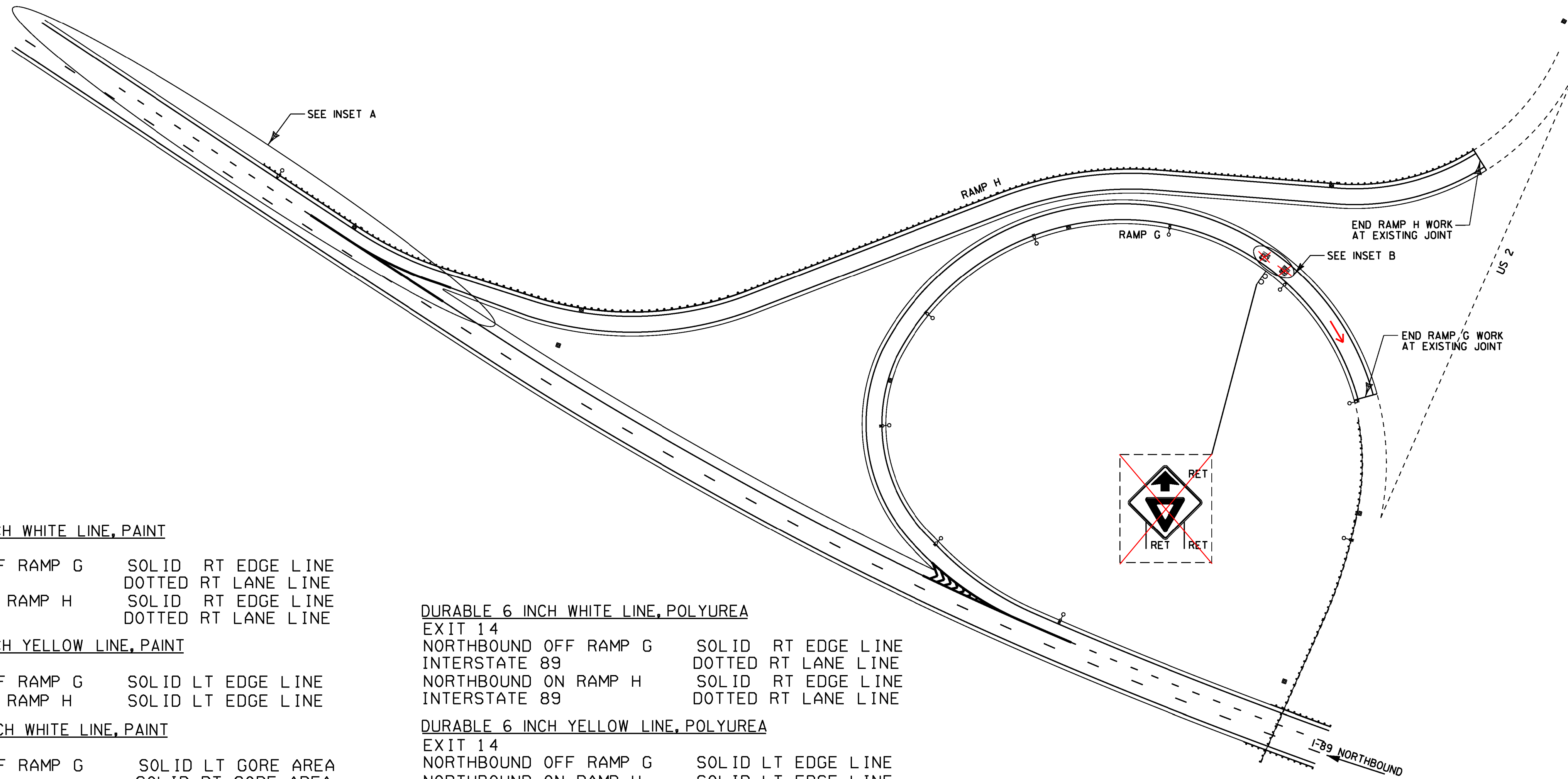
# INTERCHANGE #14 (NORTHBOUND)



INSET A - GORE DETAIL AT EXIT 14 RAMP H



INSET B - PAVEMENT MARKING DETAIL



TEMPORARY 6 INCH WHITE LINE, PAINT

EXIT 14  
 NORTHBOUND OFF RAMP G SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE  
 NORTHBOUND ON RAMP H SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE

TEMPORARY 6 INCH YELLOW LINE, PAINT

EXIT 14  
 NORTHBOUND OFF RAMP G SOLID LT EDGE LINE  
 NORTHBOUND ON RAMP H SOLID LT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, PAINT

EXIT 14  
 NORTHBOUND OFF RAMP G SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA  
 NORTHBOUND ON RAMP H SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA

TEMPORARY LETTER OR SYMBOL, PAINT

EXIT 14  
 NORTHBOUND OFF RAMP G "YIELD"  
 NORTHBOUND OFF RAMP G "AHEAD"  
 NORTHBOUND OFF RAMP G →

DURABLE 6 INCH WHITE LINE, POLYUREA

EXIT 14  
 NORTHBOUND OFF RAMP G SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE  
 NORTHBOUND ON RAMP H SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED RT LANE LINE

DURABLE 6 INCH YELLOW LINE, POLYUREA

EXIT 14  
 NORTHBOUND OFF RAMP G SOLID LT EDGE LINE  
 NORTHBOUND ON RAMP H SOLID LT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, POLYUREA

EXIT 14  
 NORTHBOUND OFF RAMP G SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA  
 NORTHBOUND ON RAMP H SOLID LT GORE AREA  
 INTERSTATE 89 SOLID RT GORE AREA

DURABLE LETTER OR SYMBOL, POLYUREA

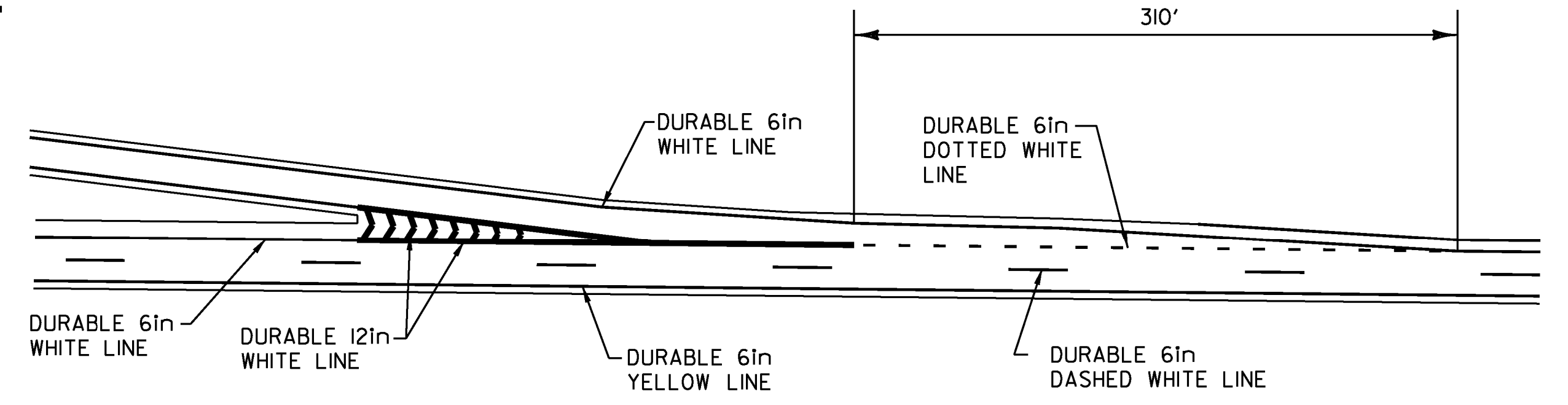
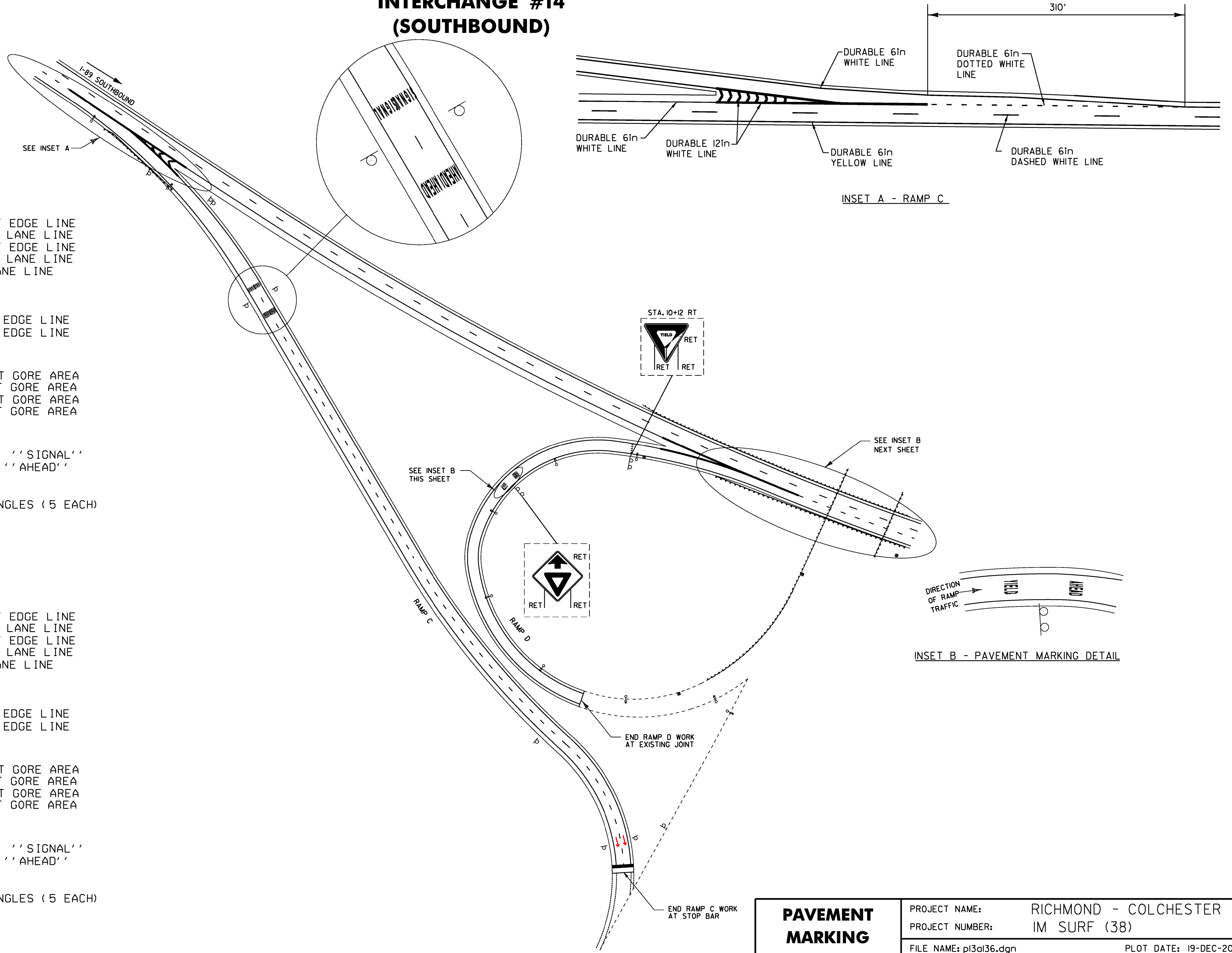
EXIT 14  
~~NORTHBOUND OFF RAMP G "YIELD"~~  
~~NORTHBOUND OFF RAMP G "AHEAD"~~  
 NORTHBOUND OFF RAMP G →

NOT TO SCALE

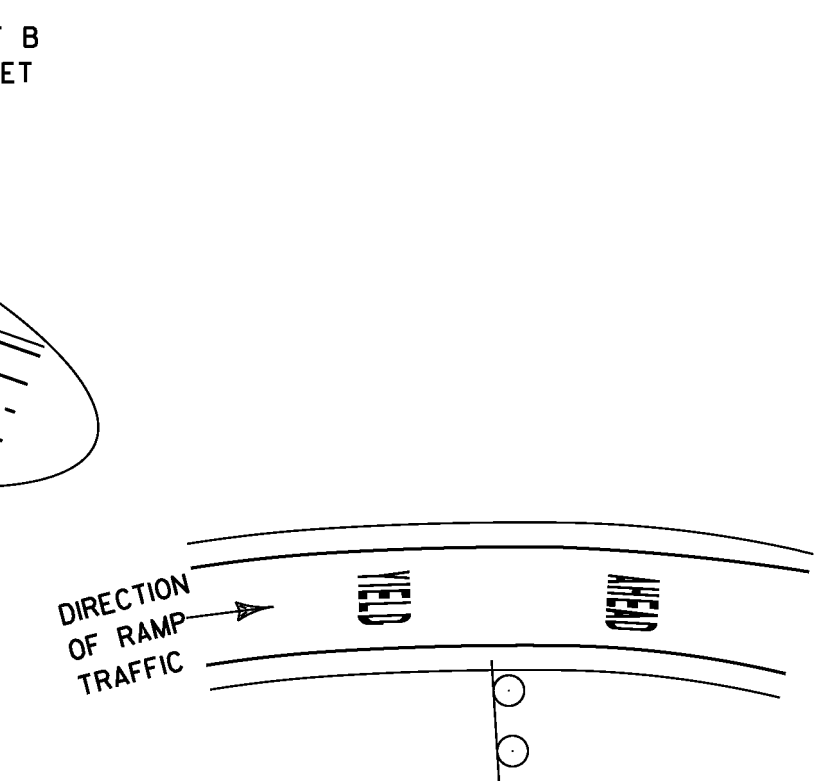
**PAVEMENT  
MARKING  
DETAIL SHEET 9  
EXIT 14 NB**

PROJECT NAME: RICHMOND - COLCHESTER	
PROJECT NUMBER: IM SURF (38)	
FILE NAME: pl3al36.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3al36pmd9.i	SHEET 25 OF 41

# INTERCHANGE #14 (SOUTHBOUND)



INSET A - RAMP C



INSET B - PAVEMENT MARKING DETAIL

**TEMPORARY 6 INCH WHITE LINE, PAINT**

EXIT 14

SOUTHBOUND OFF RAMP C	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND ON RAMP D	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND OFF RAMP C	DASHED LANE LINE

**TEMPORARY 6 INCH YELLOW LINE, PAINT**

EXIT 14

SOUTHBOUND OFF RAMP C	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP D	SOLID LT EDGE LINE

**TEMPORARY 12 INCH WHITE LINE, PAINT**

EXIT 14

SOUTHBOUND OFF RAMP C	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA
SOUTHBOUND ON RAMP D	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

**TEMPORARY LETTER OR SYMBOL, PAINT**

EXIT 14

SOUTHBOUND OFF RAMP C	'' SIGNAL''	'' SIGNAL''
SOUTHBOUND OFF RAMP C	'' AHEAD''	'' AHEAD''
SOUTHBOUND ON RAMP D	'' YIELD''	
SOUTHBOUND ON RAMP D	'' AHEAD''	
SOUTHBOUND ON RAMP D	YIELD TRIANGLES (5 EACH)	

**TEMPORARY 24 INCH STOP BAR, PAINT**

EXIT 14

SOUTHBOUND OFF RAMP C	AT US 2
-----------------------	---------

**DURABLE 6 INCH WHITE LINE, POLYUREA**

EXIT 14

SOUTHBOUND OFF RAMP C	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND ON RAMP D	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND OFF RAMP C	DASHED LANE LINE

**DURABLE 6 INCH YELLOW LINE, POLYUREA**

EXIT 14

SOUTHBOUND OFF RAMP C	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP D	SOLID LT EDGE LINE

**DURABLE 12 INCH WHITE LINE, POLYUREA**

EXIT 14

SOUTHBOUND OFF RAMP C	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA
SOUTHBOUND ON RAMP D	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

**DURABLE LETTER OR SYMBOL, POLYUREA**

EXIT 14

SOUTHBOUND OFF RAMP C	'' SIGNAL''	'' SIGNAL''
SOUTHBOUND OFF RAMP C	'' AHEAD''	'' AHEAD''
SOUTHBOUND ON RAMP D	'' YIELD''	
SOUTHBOUND ON RAMP D	'' AHEAD''	
SOUTHBOUND ON RAMP D	YIELD TRIANGLES (5 EACH)	
<b>SOUTHBOUND ON RAMP C</b>	<b>→ → →</b>	

**DURABLE 24 INCH STOP BAR, POLYUREA**

EXIT 14

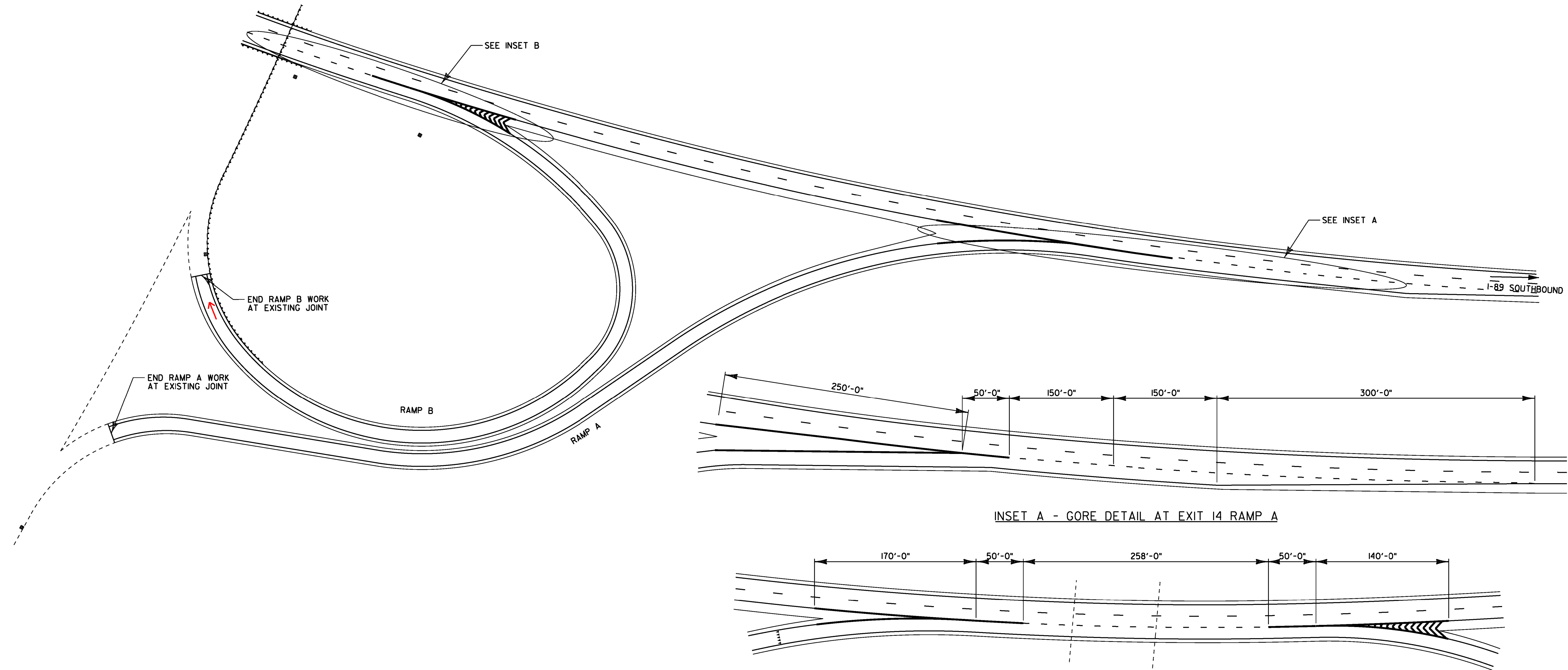
SOUTHBOUND OFF RAMP C	AT US 2
-----------------------	---------

**PAVEMENT  
MARKING  
DETAIL SHEET 10  
EXIT 14 SB**

NOT TO SCALE

PROJECT NAME:	RICHMOND - COLCHESTER
PROJECT NUMBER:	IM SURF (38)
FILE NAME: pl3al36.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3al36pmd10.i	SHEET 26 OF 41

# INTERCHANGE #14 (SOUTHBOUND)



**TEMPORARY 6 INCH WHITE LINE, PAINT**

EXIT 14  
 SOUTHBOUND OFF RAMP B SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE  
 SOUTHBOUND ON RAMP A SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE

**TEMPORARY 6 INCH YELLOW LINE, PAINT**

EXIT 14  
 SOUTHBOUND OFF RAMP B SOLID LT EDGE LINE  
 SOUTHBOUND ON RAMP A SOLID LT EDGE LINE

**TEMPORARY 12 INCH WHITE LINE, PAINT**

EXIT 14  
 SOUTHBOUND OFF RAMP B SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA  
 SOUTHBOUND ON RAMP A SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA

**DURABLE 6 INCH WHITE LINE, POLYUREA**

EXIT 14  
 SOUTHBOUND OFF RAMP B SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE  
 SOUTHBOUND ON RAMP A SOLID RT EDGE LINE  
 INTERSTATE 89 DOTTED LT LANE LINE

**DURABLE 6 INCH YELLOW LINE, POLYUREA**

EXIT 14  
 SOUTHBOUND OFF RAMP B SOLID LT EDGE LINE  
 SOUTHBOUND ON RAMP A SOLID LT EDGE LINE

**DURABLE 12 INCH WHITE LINE, POLYUREA**

EXIT 14  
 SOUTHBOUND OFF RAMP B SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA  
 SOUTHBOUND ON RAMP A SOLID LT GORE AREA  
 INTERSTATE 89 SOLID LT GORE AREA

**INSET B - GORE DETAIL AT EXIT 14 RAMP B & D**

**DURABLE LETTER OR SYMBOL, POLYUREA**

EXIT 14  
 SOUTHBOUND OFF RAMP B →

**PAVEMENT  
MARKING  
DETAIL SHEET 11  
EXIT 14 SB**

PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: pl3al36.dgn  
 PROJECT LEADER: M. FOWLER  
 DESIGNED BY: LOCKE  
 IPARM FILE NAME: pl3al36pmdl.l

PLOT DATE: 19-DEC-2013  
 DRAWN BY: LOCKE  
 CHECKED BY: FOWLER  
 SHEET 27 OF 41

NOT TO SCALE



# INTERCHANGE #16

## TEMPORARY 6 INCH WHITE LINE, PAINT

EXIT 16	
NORTHBOUND OFF RAMP D	SOLID RT EDGE LINE
NORTHBOUND OFF RAMP D	SOLID RT LANE LINE
NORTHBOUND OFF RAMP D	SOLID RT LANE LINE
INTERSTATE 89	DOTTED RT LANE LINE
SOUTHBOUND ON RAMP C	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
NORTHBOUND ON RAMP B	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED RT LANE LINE
SOUTHBOUND OFF RAMP A	SOLID RT EDGE LINE
SOUTHBOUND OFF RAMP A	SOLID RT LANE LINE
INTERSTATE 89	DOTTED LT LANE LINE

## TEMPORARY 6 INCH YELLOW LINE, PAINT

EXIT 16	
NORTHBOUND OFF RAMP D	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP C	SOLID LT EDGE LINE
NORTHBOUND ON RAMP B	SOLID LT EDGE LINE
SOUTHBOUND OFF RAMP A	SOLID LT EDGE LINE

## TEMPORARY 12 INCH WHITE LINE, PAINT

EXIT 16	
NORTHBOUND OFF RAMP D	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
SOUTHBOUND ON RAMP C	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA
NORTHBOUND OFF RAMP B	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
SOUTHBOUND OFF RAMP A	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

## TEMPORARY LETTER OR SYMBOL, PAINT

EXIT 16	
NORTHBOUND OFF RAMP D	“ SIGNAL ”
NORTHBOUND OFF RAMP D	“ AHEAD ”
NORTHBOUND OFF RAMP D	→
NORTHBOUND OFF RAMP D	“ ONLY ” “ ONLY ” “ ONLY ”
NORTHBOUND OFF RAMP D	↩ ↪ ↪
NORTHBOUND OFF RAMP D	“ ONLY ” “ ONLY ” “ ONLY ”
NORTHBOUND OFF RAMP D	↩ ↪ ↪
NORTHBOUND OFF RAMP D	“ ONLY ” “ ONLY ” “ ONLY ”
NORTHBOUND OFF RAMP D	↩ ↪ ↪
SOUTHBOUND OFF RAMP A	“ SIGNAL ”
SOUTHBOUND OFF RAMP A	“ AHEAD ”
SOUTHBOUND OFF RAMP A	→
SOUTHBOUND OFF RAMP A	“ ONLY ”
SOUTHBOUND OFF RAMP A	↩ ↪ ↪
SOUTHBOUND OFF RAMP A	“ ONLY ”
SOUTHBOUND OFF RAMP A	↩ ↪ ↪
SOUTHBOUND OFF RAMP A	↩ ↪ ↪

## DURABLE LETTER OR SYMBOL, POLYUREA

EXIT 16	
NORTHBOUND OFF RAMP D	“ SIGNAL ”
NORTHBOUND OFF RAMP D	“ AHEAD ”
NORTHBOUND OFF RAMP D	→
NORTHBOUND OFF RAMP D	“ ONLY ” “ ONLY ” “ ONLY ”
NORTHBOUND OFF RAMP D	↩ ↪ ↪
NORTHBOUND OFF RAMP D	“ ONLY ” “ ONLY ” “ ONLY ”
NORTHBOUND OFF RAMP D	↩ ↪ ↪
NORTHBOUND OFF RAMP D	“ ONLY ” “ ONLY ” “ ONLY ”
NORTHBOUND OFF RAMP D	↩ ↪ ↪
SOUTHBOUND OFF RAMP A	“ SIGNAL ”
SOUTHBOUND OFF RAMP A	“ AHEAD ”
SOUTHBOUND OFF RAMP A	→
SOUTHBOUND OFF RAMP A	“ ONLY ”
SOUTHBOUND OFF RAMP A	↩ ↪ ↪
SOUTHBOUND OFF RAMP A	“ ONLY ”
SOUTHBOUND OFF RAMP A	↩ ↪ ↪
SOUTHBOUND OFF RAMP A	↩ ↪ ↪

## DURABLE 6 INCH WHITE LINE, POLYUREA

EXIT 16	
NORTHBOUND OFF RAMP D	SOLID RT EDGE LINE
NORTHBOUND OFF RAMP D	SOLID RT LANE LINE
NORTHBOUND OFF RAMP D	SOLID RT LANE LINE
INTERSTATE 89	DOTTED RT LANE LINE
SOUTHBOUND ON RAMP C	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE
NORTHBOUND ON RAMP B	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED RT LANE LINE
SOUTHBOUND OFF RAMP A	SOLID RT EDGE LINE
SOUTHBOUND OFF RAMP A	SOLID RT LANE LINE
INTERSTATE 89	DOTTED LT LANE LINE

## DURABLE 12 INCH WHITE LINE, POLYUREA

EXIT 16	
NORTHBOUND OFF RAMP D	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
SOUTHBOUND ON RAMP C	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA
NORTHBOUND OFF RAMP B	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
SOUTHBOUND OFF RAMP A	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

## TEMPORARY 24 INCH STOP BAR, PAINT

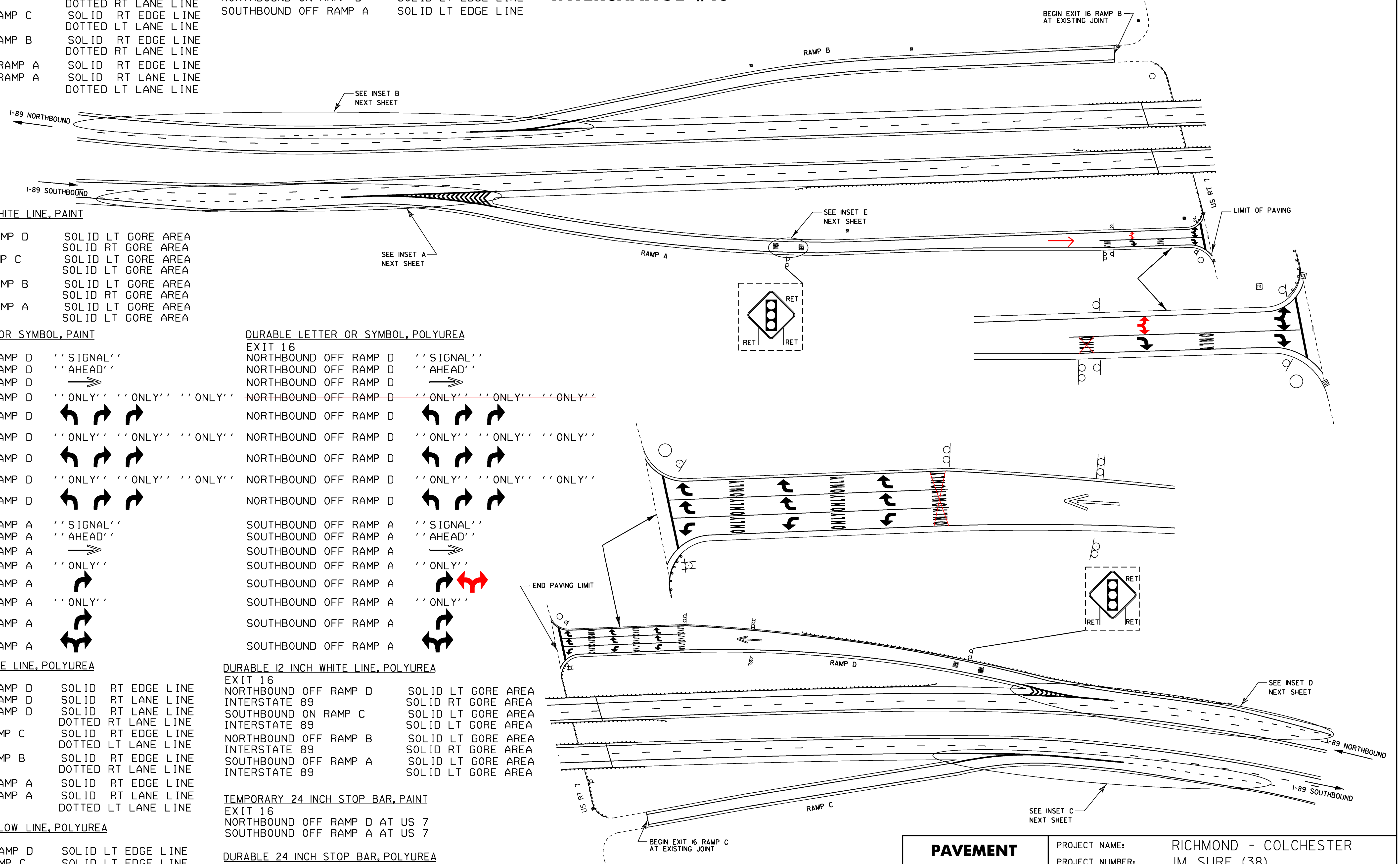
EXIT 16	
NORTHBOUND OFF RAMP D AT US 7	
SOUTHBOUND OFF RAMP A AT US 7	

## DURABLE 24 INCH STOP BAR, POLYUREA

EXIT 16	
NORTHBOUND OFF RAMP D AT US 7	
SOUTHBOUND OFF RAMP A AT US 7	

## DURABLE 6 INCH YELLOW LINE, POLYUREA

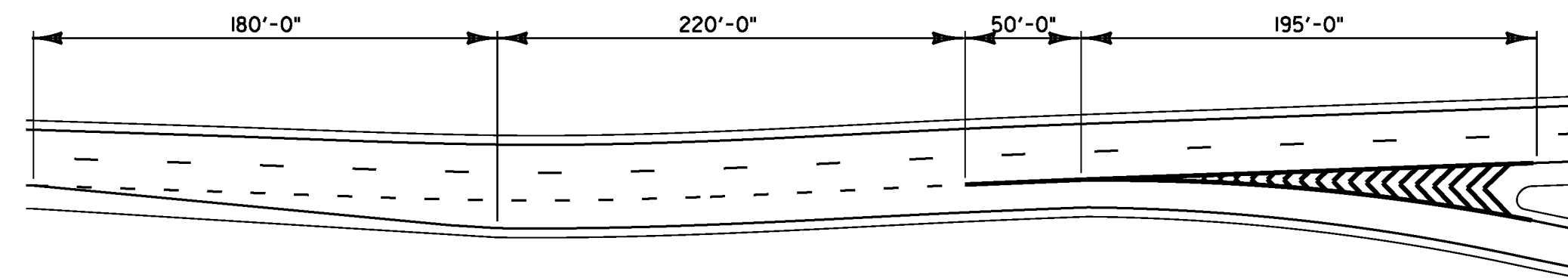
EXIT 16	
NORTHBOUND OFF RAMP D	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP C	SOLID LT EDGE LINE
NORTHBOUND ON RAMP B	SOLID LT EDGE LINE
SOUTHBOUND OFF RAMP A	SOLID LT EDGE LINE



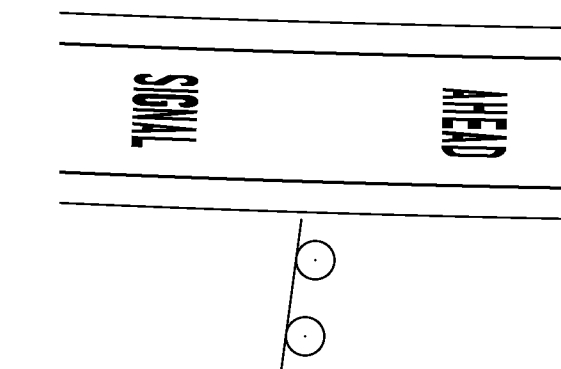
<b>PAVEMENT MARKING DETAIL SHEET 13 EXIT 16</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
	FILE NAME: pl3al36.dgn
	DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmd13.i	PLOT DATE: 19-DEC-2013
	DRAWN BY: LOCKE
	CHECKED BY: FOWLER
	SHEET 29 OF 41

NOT TO SCALE

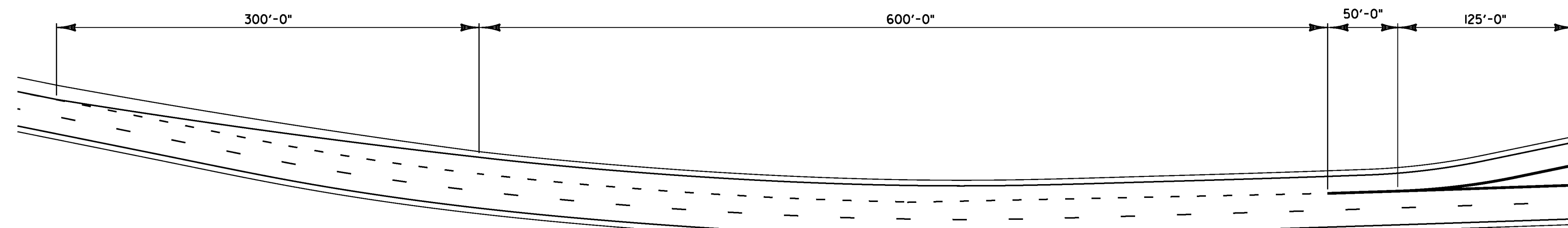
# INTERCHANGE #16



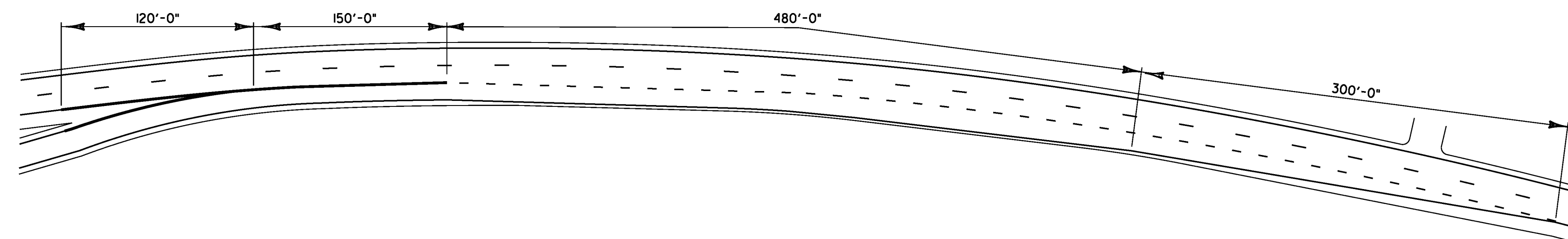
INSET A - GORE DETAIL AT EXIT 16 RAMP A



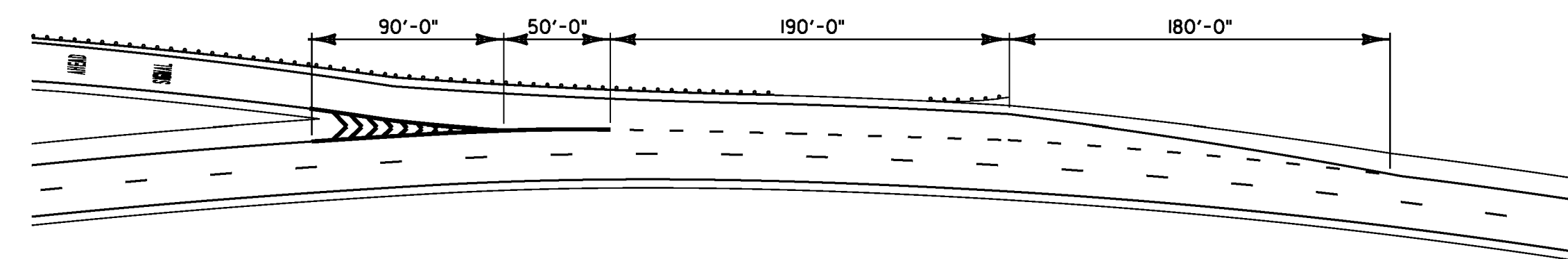
INSET E - EXIT 16 RAMP A



INSET B - GORE DETAIL AT EXIT 16 RAMP B



INSET C - GORE DETAIL AT EXIT 16 RAMP C

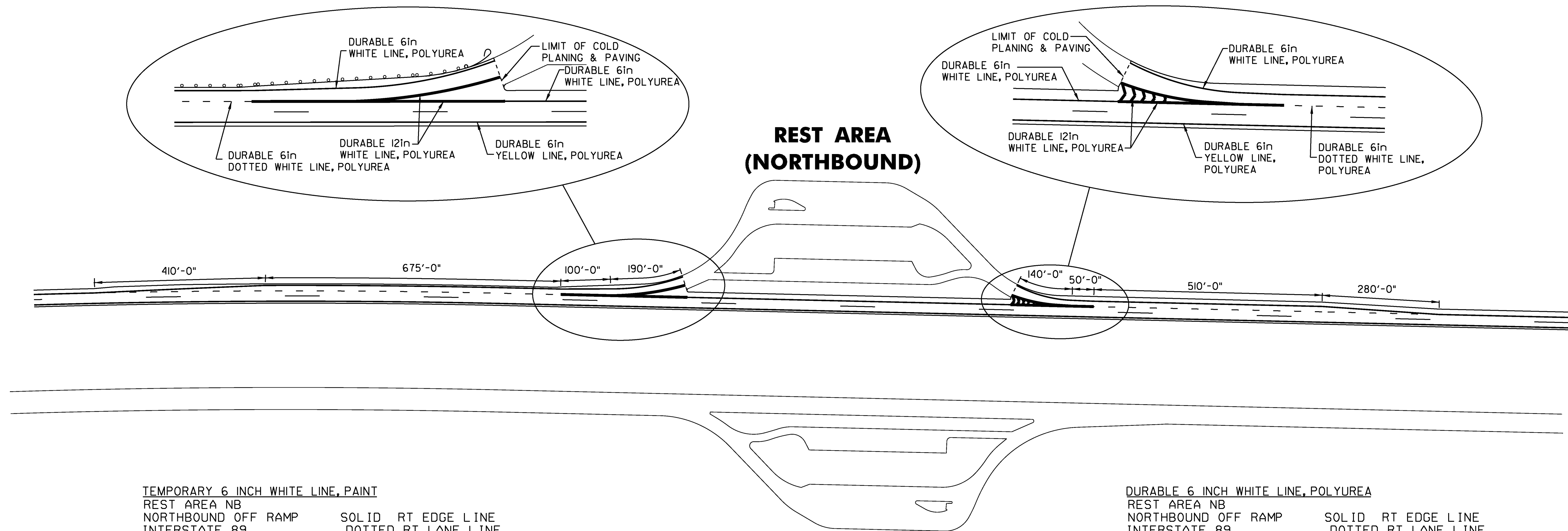


INSET D - GORE DETAIL AT EXIT 16 RAMP D

NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 14 EXIT 16</b>	PROJECT NAME: RICHMOND - COLCHESTER	PLOT DATE: 19-DEC-2013
	PROJECT NUMBER: IM SURF (38)	DRAWN BY: LOCKE
	FILE NAME: pl3a136.dgn	CHECKED BY: FOWLER
	PROJECT LEADER: M. FOWLER	SHEET 30 OF 41
	DESIGNED BY: LOCKE	
	IPARM FILE NAME: pl3a136pmd14.1	

# WILLISTON REST AREA



**TEMPORARY 6 INCH WHITE LINE, PAINT**  
 REST AREA NB  
 NORTHBOUND OFF RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89         DOTTED RT LANE LINE  
 NORTHBOUND ON RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89         DOTTED RT LANE LINE

**TEMPORARY 12 INCH WHITE LINE, PAINT**  
 REST AREA NB  
 NORTHBOUND OFF RAMP    SOLID LT GORE AREA  
 INTERSTATE 89         SOLID RT GORE AREA  
 NORTHBOUND ON RAMP    SOLID LT GORE AREA  
 INTERSTATE 89         SOLID RT GORE AREA

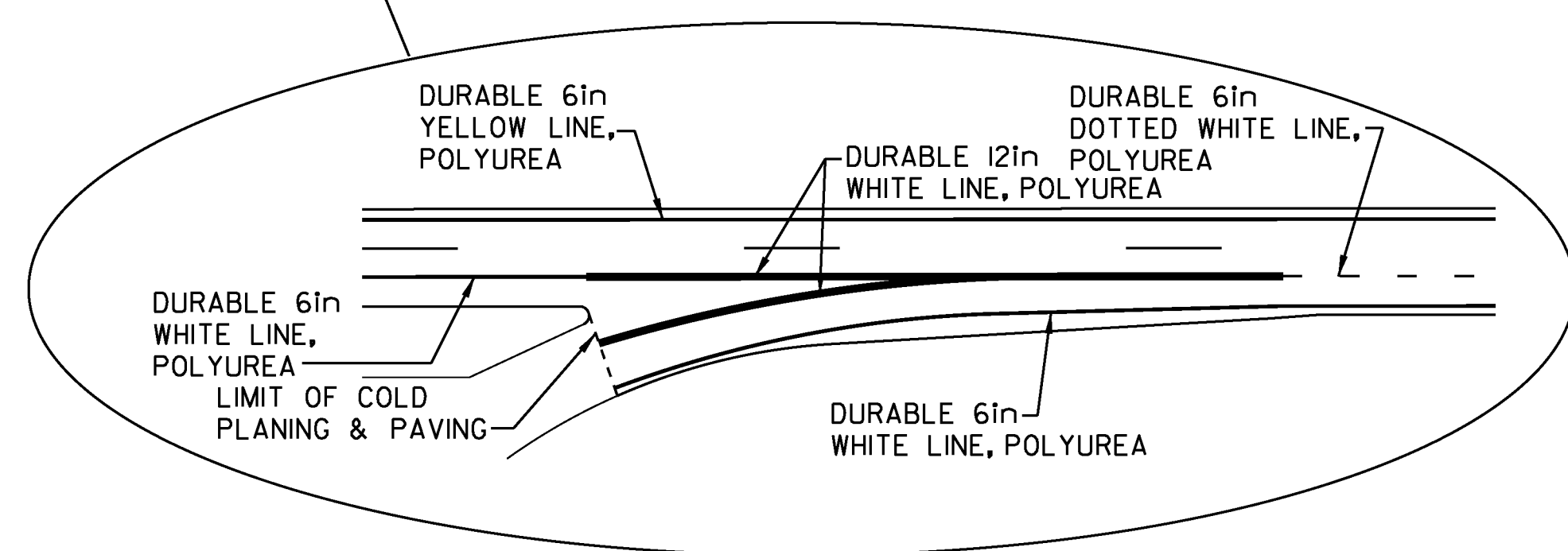
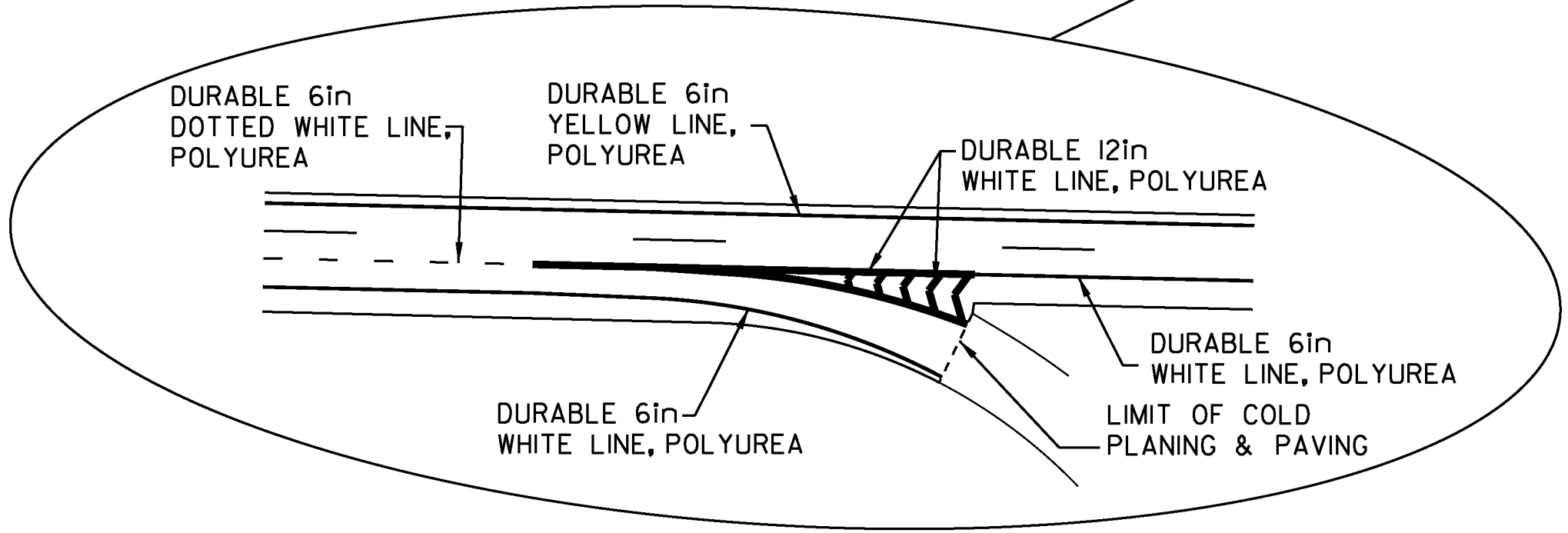
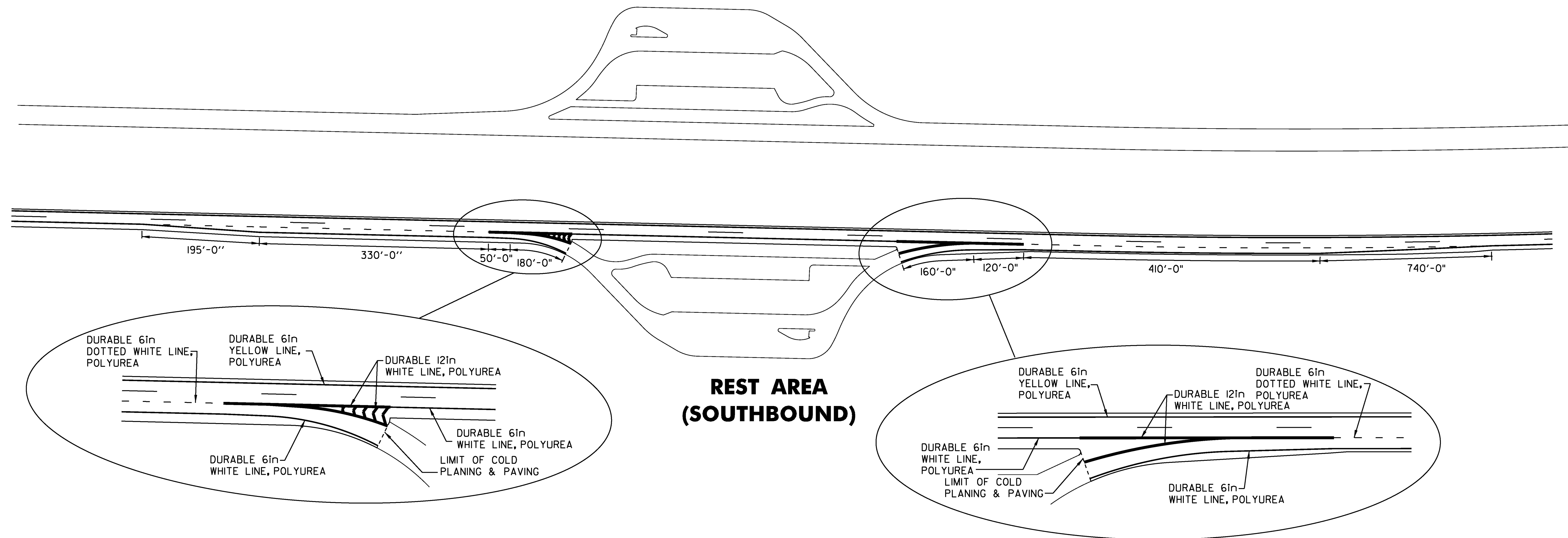
**DURABLE 6 INCH WHITE LINE, POLYUREA**  
 REST AREA NB  
 NORTHBOUND OFF RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89         DOTTED RT LANE LINE  
 NORTHBOUND ON RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89         DOTTED RT LANE LINE

**DURABLE 12 INCH WHITE LINE, POLYUREA**  
 REST AREA NB  
 NORTHBOUND OFF RAMP    SOLID LT GORE AREA  
 INTERSTATE 89         SOLID RT GORE AREA  
 NORTHBOUND ON RAMP    SOLID LT GORE AREA  
 INTERSTATE 89         SOLID RT GORE AREA

NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 15 REST AREA</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
FILE NAME: pl3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3a136pmd15.1	SHEET 31 OF 41

# WILLISTON REST AREA



## REST AREA (SOUTHBOUND)

TEMPORARY 6 INCH WHITE LINE, PAINT  
 REST AREA SB  
 SOUTHBOUND OFF RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89            DOTTED RT LANE LINE  
 SOUTHBOUND ON RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89            DOTTED RT LANE LINE

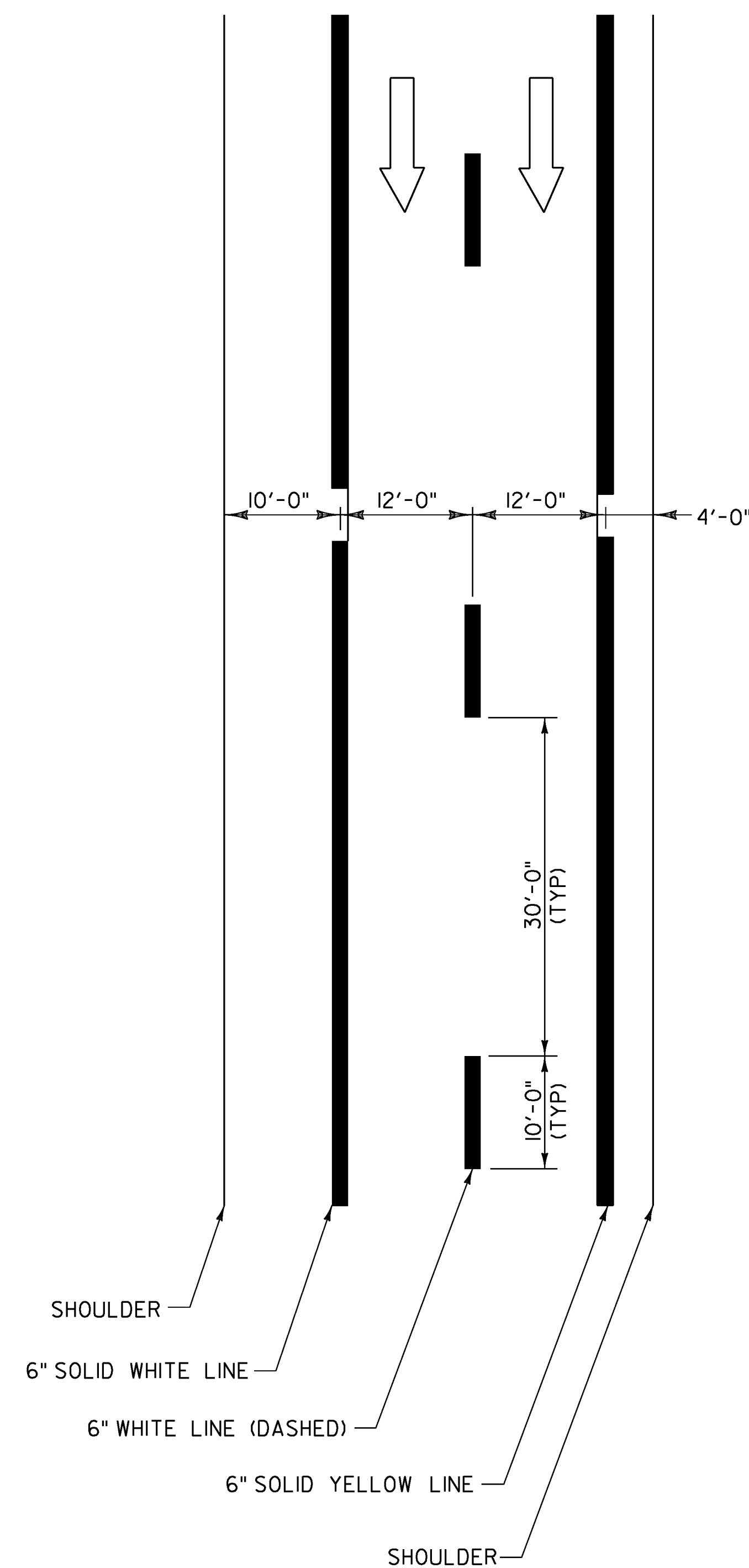
TEMPORARY 12 INCH WHITE LINE, PAINT  
 REST AREA SB  
 SOUTHBOUND OFF RAMP    SOLID LT GORE AREA  
 INTERSTATE 89            SOLID RT GORE AREA  
 SOUTHBOUND ON RAMP    SOLID LT GORE AREA  
 INTERSTATE 89            SOLID RT GORE AREA

DURABLE 6 INCH WHITE LINE, POLYUREA  
 REST AREA SB  
 SOUTHBOUND OFF RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89            DOTTED RT LANE LINE  
 SOUTHBOUND ON RAMP    SOLID RT EDGE LINE  
 INTERSTATE 89            DOTTED RT LANE LINE

DURABLE 12 INCH WHITE LINE, POLYUREA  
 REST AREA SB  
 SOUTHBOUND OFF RAMP    SOLID LT GORE AREA  
 INTERSTATE 89            SOLID RT GORE AREA  
 SOUTHBOUND ON RAMP    SOLID LT GORE AREA  
 INTERSTATE 89            SOLID RT GORE AREA

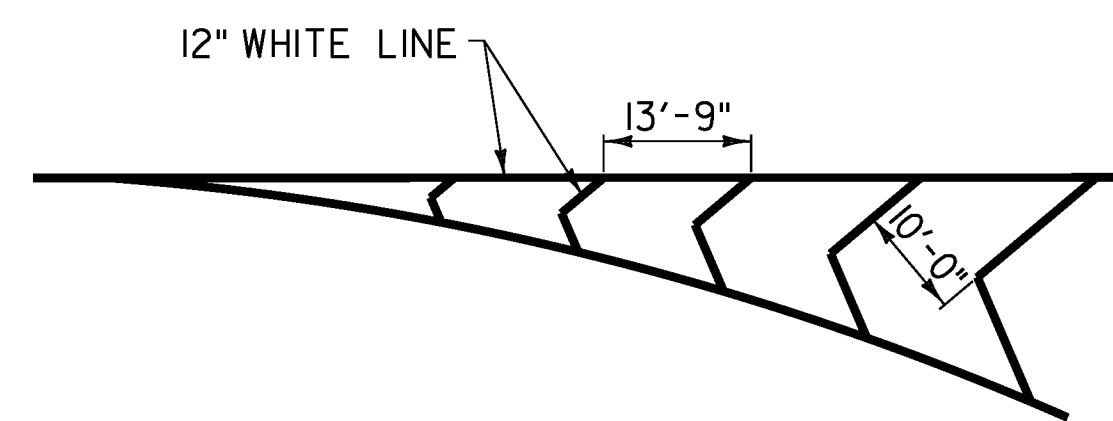
NOT TO SCALE

<b>PAVEMENT MARKING DETAIL SHEET 16 REST AREA</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
	FILE NAME: pl2a398.dgn      PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl2a398pmdl6.1	SHEET 32 OF 41

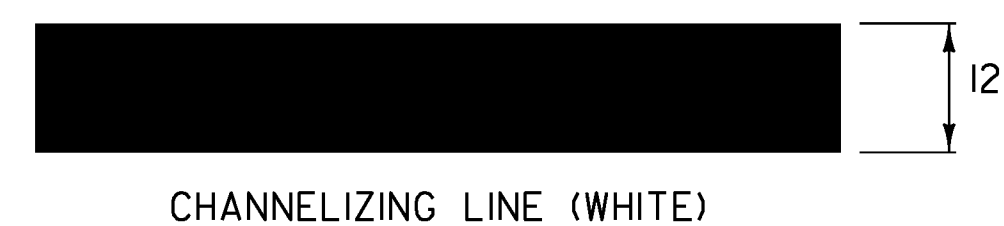
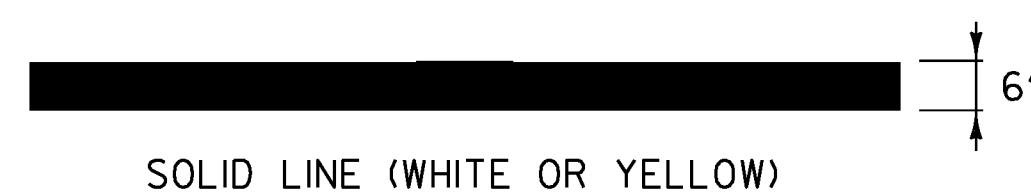
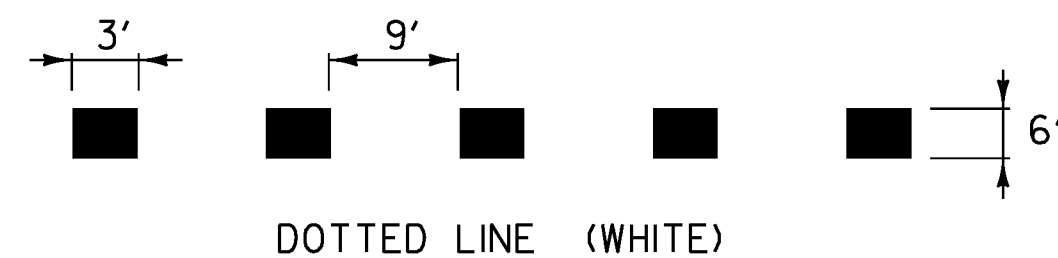


**TYPICAL MAINLINE MARKING PLAN**  
NOT TO SCALE

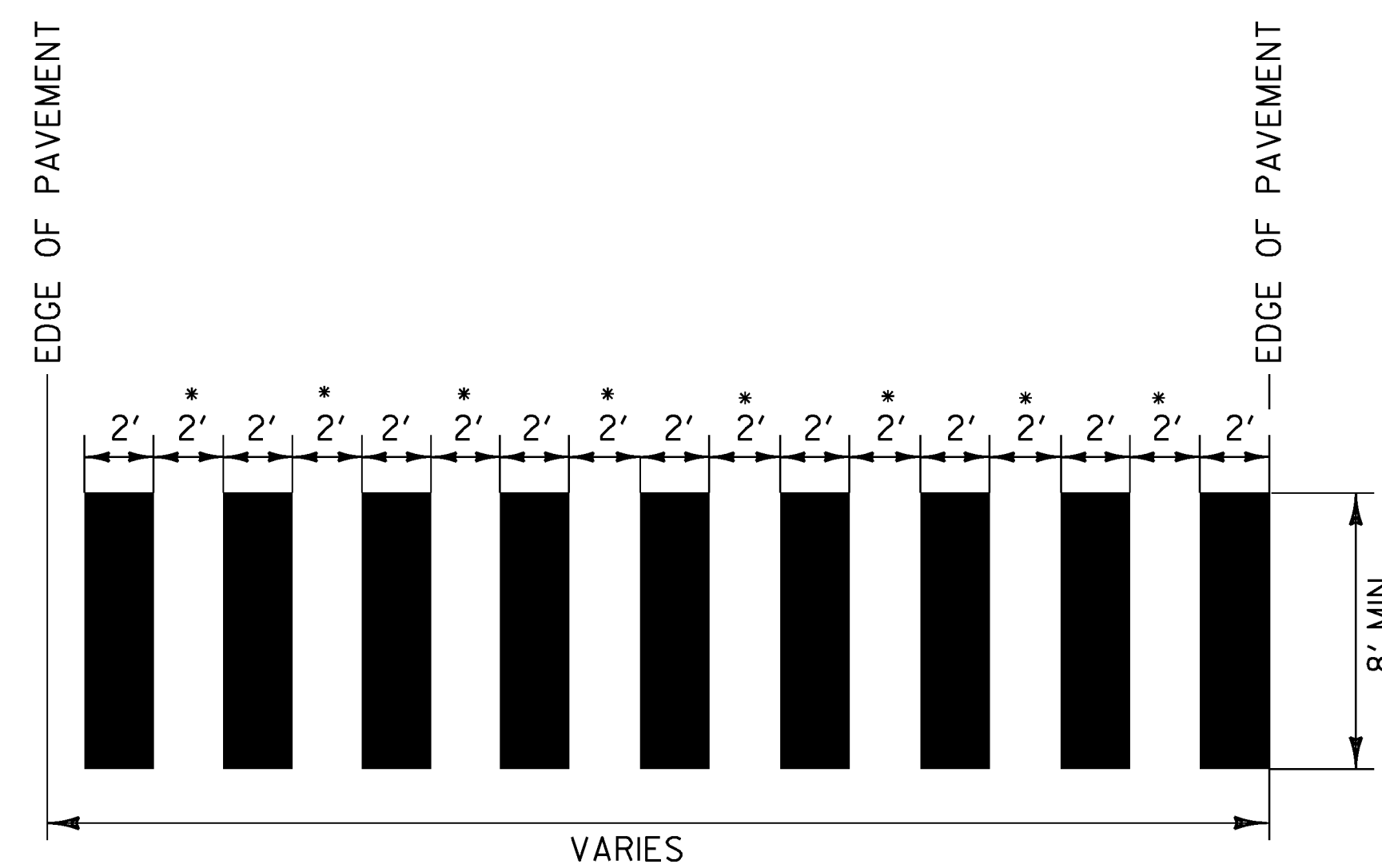
**LEGEND**  
← DIRECTION OF TRAFFIC FLOW



**GORE MARKING DETAIL**  
NOT TO SCALE

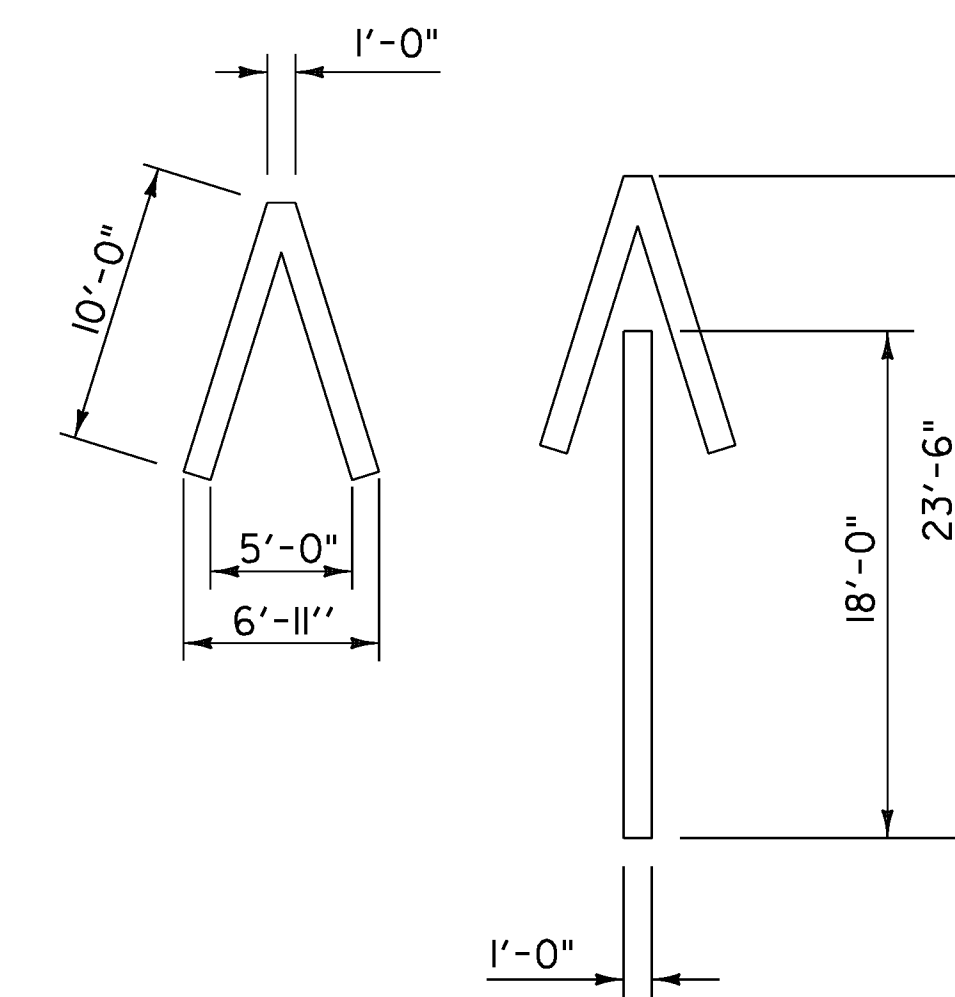


**PAVEMENT MARKING LINE DETAILS**  
NOT TO SCALE



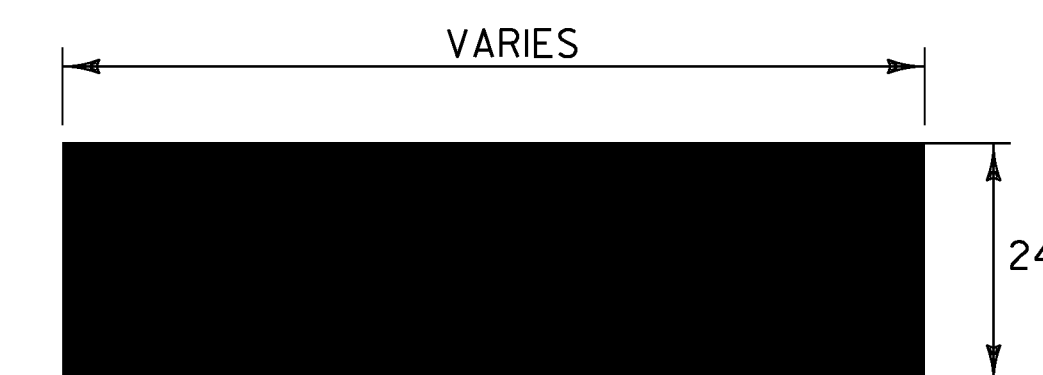
• ADJUST SPACING (12"-24") TO AVOID WHEEL PATHS

**BLOCK PATTERN CROSSWALK DETAIL**

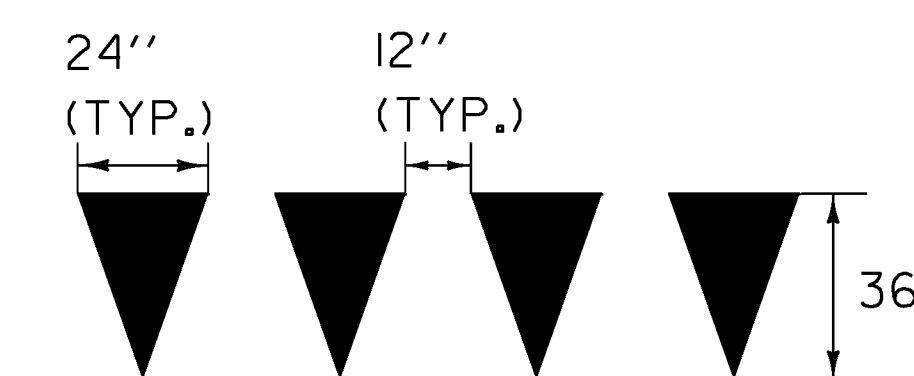


**WRONG WAY ARROW**  
NOT TO SCALE

MARKINGS TO BE PLACED AT EXISTING WRONG WAY SIGN



**STOP BAR DETAIL**  
NOT TO SCALE



**YIELD LINE DETAILS**  
NOT TO SCALE

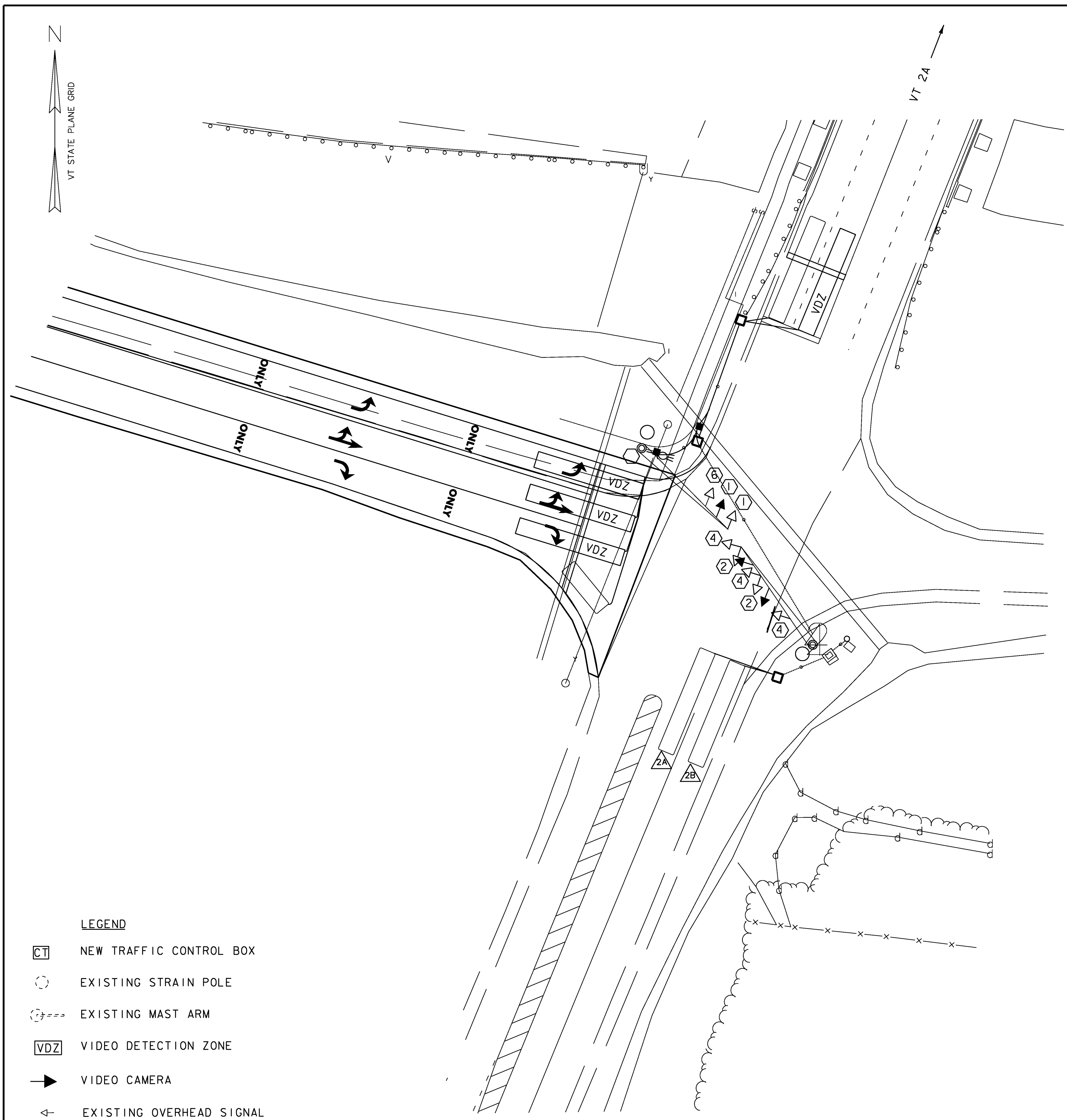
TO BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.  
TO BE PAID AS ONE LETTER OR SYMBOL PER TRIANGLE.

**PAVEMENT MARKING SHEET 17**

PROJECT NAME: RICHMOND - COLCHESTER  
PROJECT NUMBER: IM SURF (38)

FILE NAME: pl3a136.dgn  
PROJECT LEADER: M. FOWLER  
DESIGNED BY: LOCKE  
IPARM FILE NAME: pl3a136pmd17.1

PLOT DATE: 19-DEC-2013  
DRAWN BY: LOCKE  
CHECKED BY: FOWLER  
SHEET 33 OF 41



**VIDEO VEHICLE DETECTION SYSTEM NOTES:**

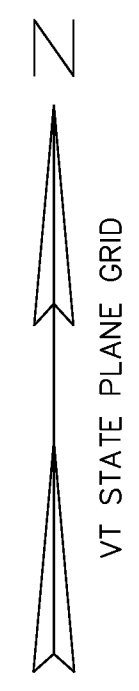
1. VIDEO VEHICLE DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT AFFECTED.
2. VIDEO VEHICLE DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR.
3. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE EXISTING CONDUIT AND CONTROLLER FOR VIDEO VEHICLE DETECTION CABLE AND EQUIPMENT.
4. ANY OTHER MISCELLANEOUS EQUIPMENT AND LABOR NECESSARY TO PROVIDE A FULLY FUNCTIONAL VIDEO VEHICLE DETECTION SYSTEM SHALL BE INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM).
5. ALL EXISTING VEHICLE DETECTOR LOOPS BEING REPLACED WITH VIDEO DETECTION ARE TO BE DISCONNECTED AT THE EXISTING PULLBOX LOCATIONS AND WIRING REMOVED BACK TO THE CABINET.
6. VIDEO VEHICLE DETECTION SYSTEM SHALL BE ONE OF THE MANUFACTURERS LISTED IN THE SPECIAL PROVISIONS OR APPROVED EQUAL.
7. EXISTING CONTROLLER TIMINGS SHALL BE RETAINED.
8. PRIOR TO COLD PLANING, THE CONTRACTOR SHALL DISCONNECT THE VEHICLE DETECTOR LOOP IN THE CONTROLLER CABINET AND CUT IT AT THE CURB OR SHOULDER. ONCE THE VEHICLE DETECTOR LOOP IS DISCONNECTED, THE SIGNAL PHASE THAT IT WAS CALLING SHALL BE SET ON MAXIMUM RECALL OR THE SIGNAL SHALL BE SET TO FLASH WHILE TRAFFIC IS BEING CONTROLLED BY A UNIFORMED TRAFFIC OFFICER. DETECTOR AND SIGNAL WORK SHALL BE INCIDENTAL TO PAY ITEM 900.620 SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM). UNIFORMED TRAFFIC OFFICERS WILL BE PAID FOR UNDER CONTRACT ITEM 630.10, UNIFORMED TRAFFIC OFFICERS.
9. A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.
10. ALL ELECTRICAL WIRING SHALL BE DONE BY A LICENSED ELECTRICIAN AND OVERSEEN BY A MASTER ELECTRICIAN.

ITEM 900.620 SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM) (I-89 EXIT 12 RAMP C @ VT 2A)	
LIST OF MAJOR EQUIPMENT	QUANTITY
VIDEO VEHICLE DETECTION CAMERAS	3

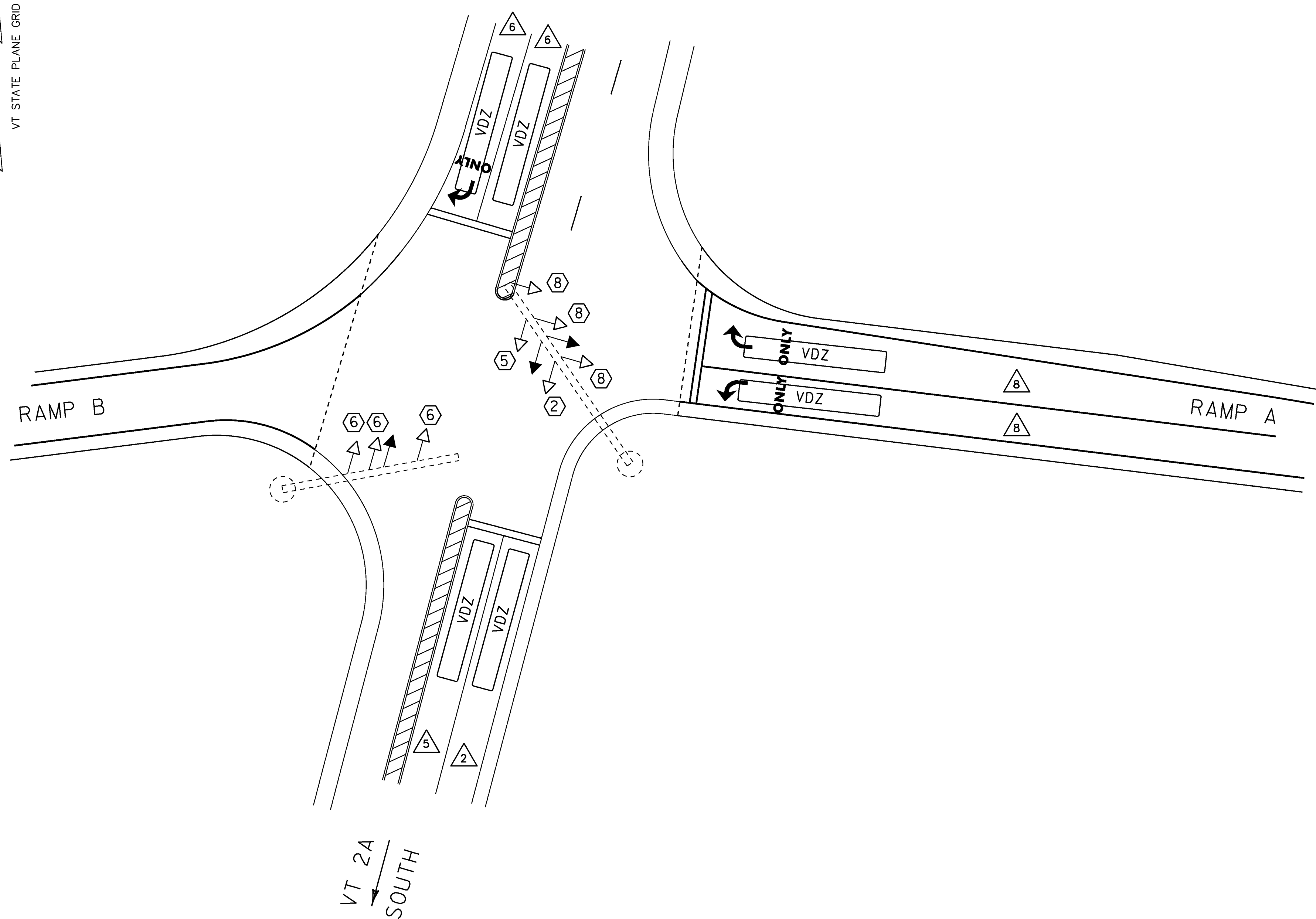
- LEGEND**
- NEW TRAFFIC CONTROL BOX
  - EXISTING STRAIN POLE
  - EXISTING MAST ARM
  - VIDEO DETECTION ZONE
  - VIDEO CAMERA
  - EXISTING OVERHEAD SIGNAL

**EXIT 12 SOUTHBOUND OFF RAMP C**

<b>VIDEO VEHICLE DETECTION SYSTEM DETAILS 1</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pi3a136vid.1	SHEET 34 OF 41



VT 2A  
NORTH



**VIDEO VEHICLE DETECTION SYSTEM NOTES:**

1. VIDEO VEHICLE DETECTORS SHALL BE PLACED SO THAT OCCLUSION IS MINIMIZED AND PHASING IS NOT AFFECTED.
2. VIDEO VEHICLE DETECTION AREAS SHALL EXTEND FIVE FEET PAST THE STOP BAR.
3. THE CONTRACTOR SHALL VERIFY IN THE FIELD THAT THERE IS ADEQUATE SPACE IN THE EXISTING CONDUIT AND CONTROLLER FOR VIDEO VEHICLE DETECTION CABLE AND EQUIPMENT.
4. ANY OTHER MISCELLANEOUS EQUIPMENT AND LABOR NECESSARY TO PROVIDE A FULLY FUNCTIONAL VIDEO VEHICLE DETECTION SYSTEM SHALL BE INCIDENTAL TO ITEM 900.620 SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM).
5. ALL EXISTING VEHICLE DETECTOR LOOPS BEING REPLACED WITH VIDEO DETECTION ARE TO BE DISCONNECTED AT THE EXISTING PULLBOX LOCATIONS AND WIRING REMOVED BACK TO THE CABINET.
6. VIDEO VEHICLE DETECTION SYSTEM SHALL BE ONE OF THE MANUFACTURERS LISTED IN THE SPECIAL PROVISIONS OR APPROVED EQUAL.
7. EXISTING CONTROLLER TIMINGS SHALL BE RETAINED.
8. PRIOR TO COLD PLANING, THE CONTRACTOR SHALL DISCONNECT THE VEHICLE DETECTOR LOOP IN THE CONTROLLER CABINET AND CUT IT AT THE CURB OR SHOULDER. ONCE THE VEHICLE DETECTOR LOOP IS DISCONNECTED, THE SIGNAL PHASE THAT IT WAS CALLING SHALL BE SET ON MAXIMUM RECALL OR THE SIGNAL SHALL BE SET TO FLASH WHILE TRAFFIC IS BEING CONTROLLED BY A UNIFORMED TRAFFIC OFFICER. DETECTOR AND SIGNAL WORK SHALL BE INCIDENTAL TO PAY ITEM 900.620 SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM). UNIFORMED TRAFFIC OFFICERS WILL BE PAID FOR UNDER CONTRACT ITEM 630.10, UNIFORMED TRAFFIC OFFICERS.
9. A UNIFORMED TRAFFIC OFFICER WITH A BLUE LIGHT SHALL BE PRESENT DURING ALL LANE CLOSURES.
10. ALL ELECTRICAL WIRING SHALL BE DONE BY A LICENSED ELECTRICIAN AND OVERSEEN BY A MASTER ELECTRICIAN.
11. EXISTING VIDEO DETECTION CAMERA SHALL BE SALVAGED TO DISTRICT 5. PLEASE CONTACT STEVE GUYETTE AT 802-655-1580.

**LEGEND**

- NEW TRAFFIC CONTROL BOX
- EXISTING STRAIN POLE
- EXISTING MAST ARM
- VIDEO DETECTION ZONE
- VIDEO CAMERA
- EXISTING OVERHEAD SIGNAL

ITEM 900.620 SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM) (I-89 EXIT 12 RAMP A @ VT 2A)

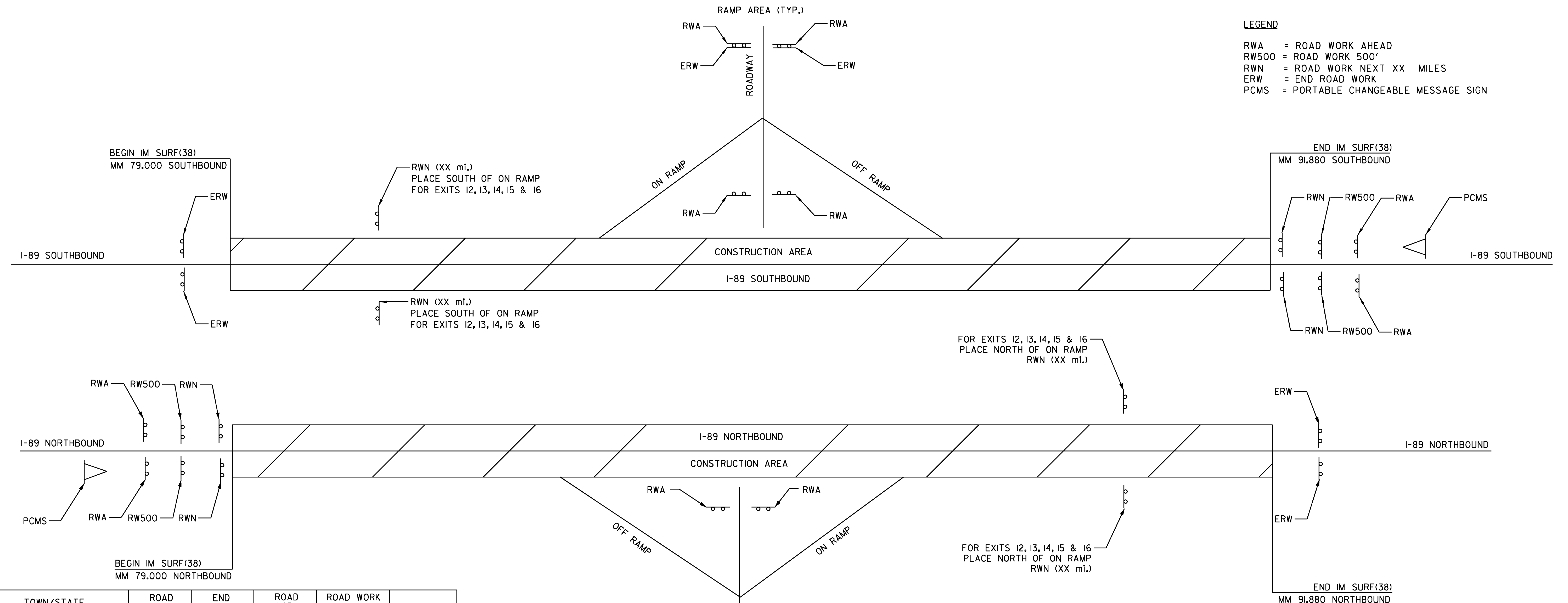
LIST OF MAJOR EQUIPMENT	QUANTITY
VIDEO VEHICLE DETECTION CAMERAS	3

**EXIT 12 NORTHBOUND OFF RAMP A**

<b>VIDEO VEHICLE DETECTION SYSTEM DETAILS 2</b>	PROJECT NAME: RICHMOND - COLCHESTER
	PROJECT NUMBER: IM SURF (38)
FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pi3a136vid2.1	SHEET 35 OF 41

**LEGEND**

- RWA = ROAD WORK AHEAD
- RW500 = ROAD WORK 500'
- RWN = ROAD WORK NEXT XX MILES
- ERW = END ROAD WORK
- PCMS = PORTABLE CHANGEABLE MESSAGE SIGN



TOWN/STATE HIGHWAY NAME	ROAD WORK AHEAD	END ROAD WORK	ROAD WORK 500'	ROAD WORK NEXT XX MILES	PCMS
I-89 NORTHBOUND					
BEGINNING OF PROJECT	2		2	2	1
EXIT 12 INTERCHANGE	4	2		2	1
EXIT 13 INTERCHANGE	4	2		2	1
EXIT 14 INTERCHANGE	4	2		2	1
EXIT 15 INTERCHANGE	4	2		2	1
EXIT 16 INTERCHANGE	4	2		2	1
END OF PROJECT		2			
<b>TOTAL</b>	<b>22</b>	<b>12</b>	<b>2</b>	<b>12</b>	<b>6</b>

TOWN/STATE HIGHWAY NAME	ROAD WORK AHEAD	END ROAD WORK	ROAD WORK 500'	ROAD WORK NEXT XX MILES	PCMS
I-89 SOUTHBOUND					
BEGINNING OF PROJECT	2		2	2	1
EXIT 12 INTERCHANGE	4	2		2	1
EXIT 13 INTERCHANGE	4	2		2	1
EXIT 14 INTERCHANGE	4	2		2	1
EXIT 15 INTERCHANGE	4	2		2	1
EXIT 16 INTERCHANGE	4	2		2	1
END OF PROJECT		2			
<b>TOTAL</b>	<b>22</b>	<b>12</b>	<b>2</b>	<b>12</b>	<b>6</b>

**CONSTRUCTION  
APPROACH  
SIGNING  
SHEET**

PROJECT NAME: RICHMOND - COLCHESTER  
PROJECT NUMBER: IM SURF (38)

FILE NAME: pi3a136.dgn  
PROJECT LEADER: M. FOWLER  
DESIGNED BY: LOCKE  
IPARM FILE NAME: pi3a136cas.1

PLOT DATE: 19-DEC-2013  
DRAWN BY: LOCKE  
CHECKED BY: FOWLER  
SHEET 36 OF 41

1. THE 2009 MUTCD SHALL BE THE STANDARD FOR ALL TRAFFIC CONTROL DEVICES. EXISTING SIGNS, SIGNALS AND MARKINGS SHALL BE VALID UNTIL SUCH TIME AS THEY ARE REPLACED OR RECONSTRUCTED. WHEN NEW TRAFFIC CONTROL DEVICES ARE ERECTED OR PLACED OR EXISTING TRAFFIC CONTROL DEVICES ARE REPLACED OR REPAIRED THE EQUIPMENT, DESIGN, METHOD OF INSTALLATION, PLACEMENT OR REPAIR SHALL CONFORM WITH THE MUTCD.

2. ADDITIONAL RAMP SIGNING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.

3. THE BID PRICE FOR "TRAFFIC CONTROL", ITEM 641.10, SHALL INCLUDE ALL APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VAOT STANDARDS. ALL ADJUSTING, RELOCATING, AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED. THE FOLLOWING ITEMS WILL BE PAID FOR SEPARATELY:

- 630.10 AND 630.15 - UNIFORMED TRAFFIC OFFICERS AND FLAGGERS
- 646.622 TEMPORARY 6 INCH WHITE LINE, PAINT
- 646.632 TEMPORARY 6 INCH YELLOW LINE, PAINT
- 646.662 TEMPORARY 12 INCH WHITE LINE, PAINT
- 646.682 TEMPORARY 24 INCH STOP BAR, PAINT
- 646.692 TEMPORARY LETTER OR SYMBOL, PAINT
- 646.76 LINE STRIPING TARGETS

4. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PROVIDED FOR USE ALONG THIS PROJECT. THE PLACEMENT OF THESE UNITS AS WELL AS THE MESSAGE WILL BE APPROVED BY THE ENGINEER. THESE SIGNS WILL BE PAID FOR UNDER ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN".

PCMS SHOULD NOT REPLACE ANY OF THE SIGNING DETAILED IN THE MUTCD AND SHOULD NOT BE USED IF STANDARD TRAFFIC CONTROL DEVICES ADEQUATELY PROVIDE THE INFORMATION THE MOTORISTS NEED TO TRAVEL SAFELY.

THE PCMS SHALL CONSIST OF EITHER ONE OR TWO PHASES. TYPICALLY, A PHASE SHALL CONSIST OF UP TO THREE LINES OF EIGHT CHARACTERS PER LINE. THE PCMS SHOULD BE USED AS A SUPPLEMENT AND NOT AS A SUBSTITUTE FOR CONVENTIONAL SIGNS AND PAVEMENT MARKINGS.

THE PCMS SHOULD COMMUNICATE WHAT INFORMATION MOTORISTS NEED TO KNOW. UNNECESSARY INFORMATION SHOULD BE AVOIDED. MESSAGES SHOULD BE UPDATED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS.

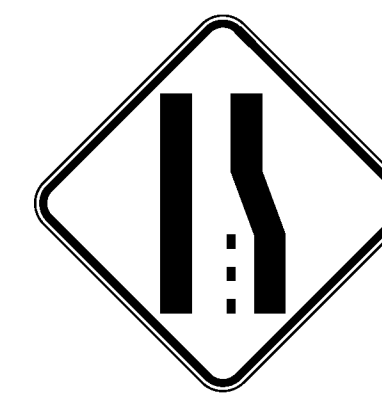
5. IN ADVANCE OF ANY PROPOSED INTERCHANGE RAMP CLOSURES THE CONTRACTOR SHALL SUBMIT A PLAN THAT WILL DEPICT HOW ADVANCED WARNING TO THE TRAVELING PUBLIC WILL BE ACCOMMODATED DURING THE CLOSURE. ADVANCED WARNING SHALL BE DEFINED AS PROVIDING ADVANCED WARNINGS SIGNS, BOTH STATIC AND PCMS, THAT PROVIDE INFORMATION FOR MOTORISTS TO SAFELY UTILIZE THE REGIONALLY ACCEPTABLE OPPORTUNITIES FOR SEEKING AN ALTERNATE ROUTE PRIOR TO APPROACHING THE INTERCHANGE INVOLVING RAMP CLOSURES. THE PLAN WILL NEED TO BE SUBMITTED FOR REVIEW AND COMMENT BY THE PROJECT MANAGER A MINIMUM OF 7 CALENDAR DAYS AHEAD OF ANY PLANNED CLOSURE. APPROVAL OF THE PLAN SHALL BE IN PLACE 72 HOURS BEFORE WORK MAY BEGIN. INSTALLATION OF THE PCMS NETWORK SHALL BE DONE 48 HOURS BEFORE WORK MAY BEGIN. ELEMENTS OF THE PLAN SHALL INCLUDE BUT WILL NOT BE LIMITED TO THE LOCATION OF PCMS AND ASSOCIATED MESSAGES, ANY OTHER NECESSARY SIGNAGE, LOCATIONS FOR DEPLOYMENT OF UNIFORMED TRAFFIC OFFICERS AND FLAGGERS, AND SEQUENCING AND DURATION OF CLOSURE FOR EACH RAMP WITHIN THE RESPECTIVE INTERCHANGE. NO MORE THAN ONE INTERCHANGE PER WORK PERIOD MAY HAVE RAMP CLOSURES. FOR ANY GIVEN NIGHT WORK PERIOD, NO ACTIVITIES INVOLVING THE CLOSURE OF RAMPS MAY BEGIN BEFORE 9:00 PM AND THE RAMP SHALL BE REOPENED TO TRAFFIC BY 5:00 AM. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) SHALL NOT BE PAID SEPARATELY BUT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, TRAFFIC CONTROL.

6. THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN APPROACH PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH VAOT STANDARDS. PAYMENT FOR PROVIDING THIS PACKAGE SHALL BE INCIDENTAL TO ITEM 641.10, "TRAFFIC CONTROL". ADD G20-5aP "WORK ZONE" PLAQUE AND R2-6aP "FINES DOUBLED" PLAQUE TO SPEED LIMIT SIGNS (SEE FIG. 6F-3 OF MUTCD). OMIT VR-355 "FINES DOUBLED FOR SPEEDING IN WORK ZONE" SIGN.

7. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE, AND CORNER SIGHT DISTANCE FROM DRIVES AND INTERSECTING HIGHWAYS.

8. REFER TO VT. STATE STANDARDS, THE SPECIAL PROVISIONS, AND THE MUTCD FOR TEMPORARY TRAFFIC CONTROL SIGN DIMENSIONS AND COLORS.

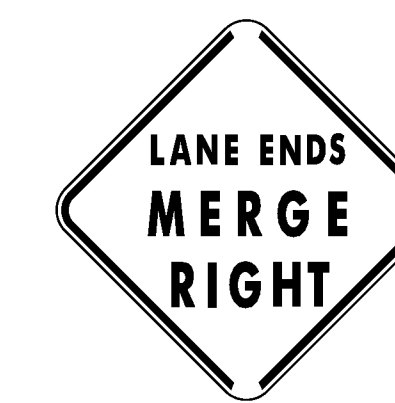
9. SIGN W4-2 MAY BE REPLACED WITH W9-2:



W4-2



W9-2

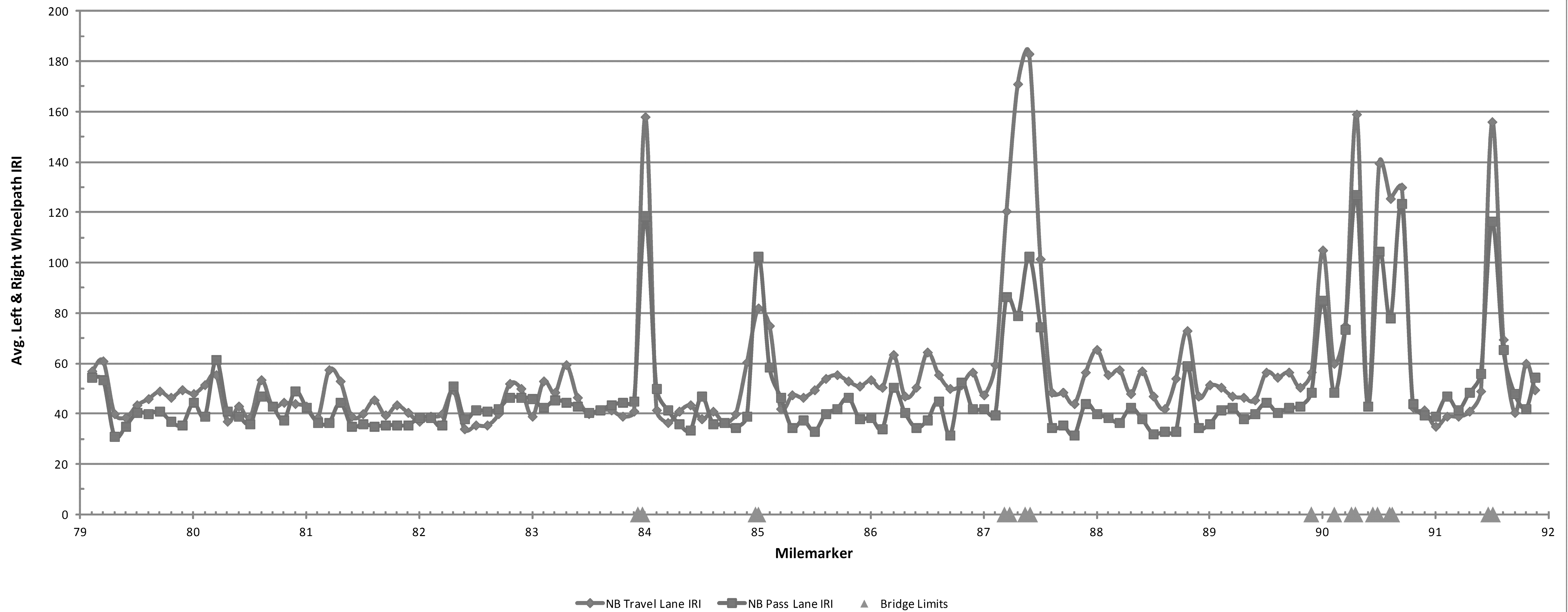


<b>CONSTRUCTION APPROACH SIGNING SHEET NOTES</b>	PROJECT NAME:	RICHMOND - COLCHESTER
	PROJECT NUMBER:	IM SURF (38)
	FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
	PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER	
IPARM FILE NAME: pi3a136casn.1	SHEET 37 OF 41	

### I 89 NB Richmond-Colchester IM SURF(38) IRI Profile

Profiled 9/27/2013

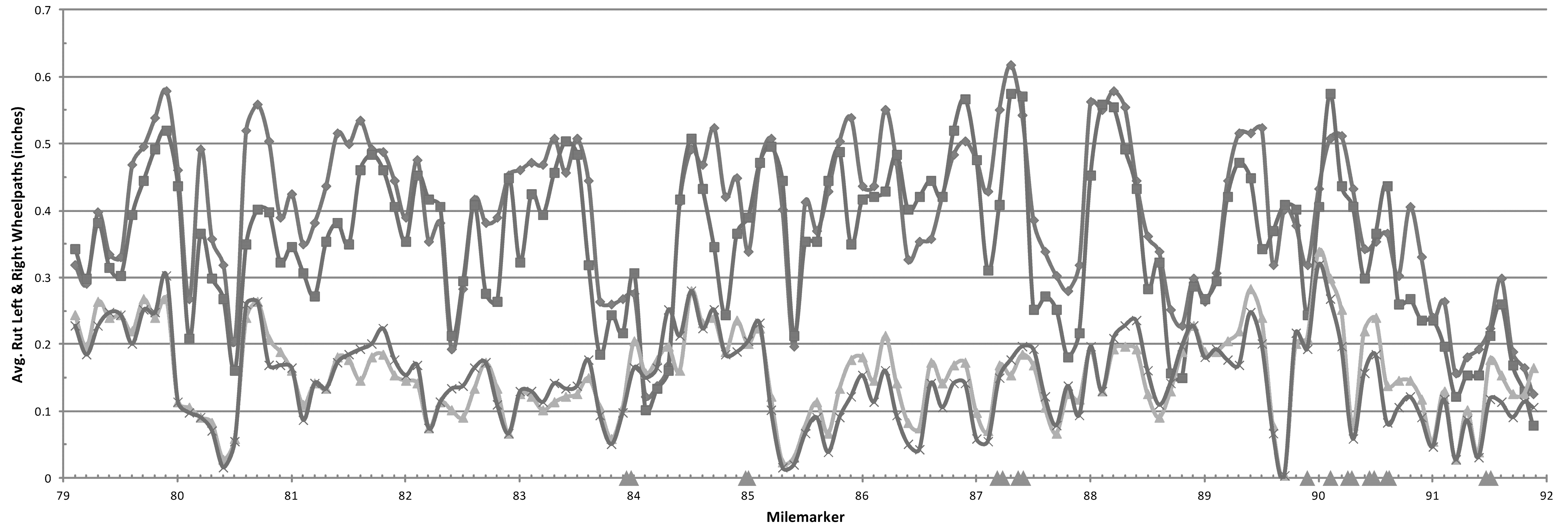
NB Travel Lane Avg. IRI = 56.4 NB Pass Lane Avg. IRI = 47.2



**FOR INFORMATIONAL PURPOSES ONLY**

<b>ROUGHNESS DATA INFORMATION SHEET NB</b>	PROJECT NAME:	RICHMOND - COLCHESTER
	PROJECT NUMBER:	IM SURF (38)
	FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
	PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER	
IPARM FILE NAME: pi3a136rufnb.l	SHEET 38 OF 41	

**I 89 NB Richmond-Colchester IM SURF(38) Rut Profile**  
 Profiled 9/27/2013



◆ NB Travel Lane LWP Rut    
 ■ NB Travel Lane RWP Rut    
 ▲ NB Pass Lane LWP Rut    
 ✕ NB Pass Lane RWP Rut    
 ▲ Bridge Limits

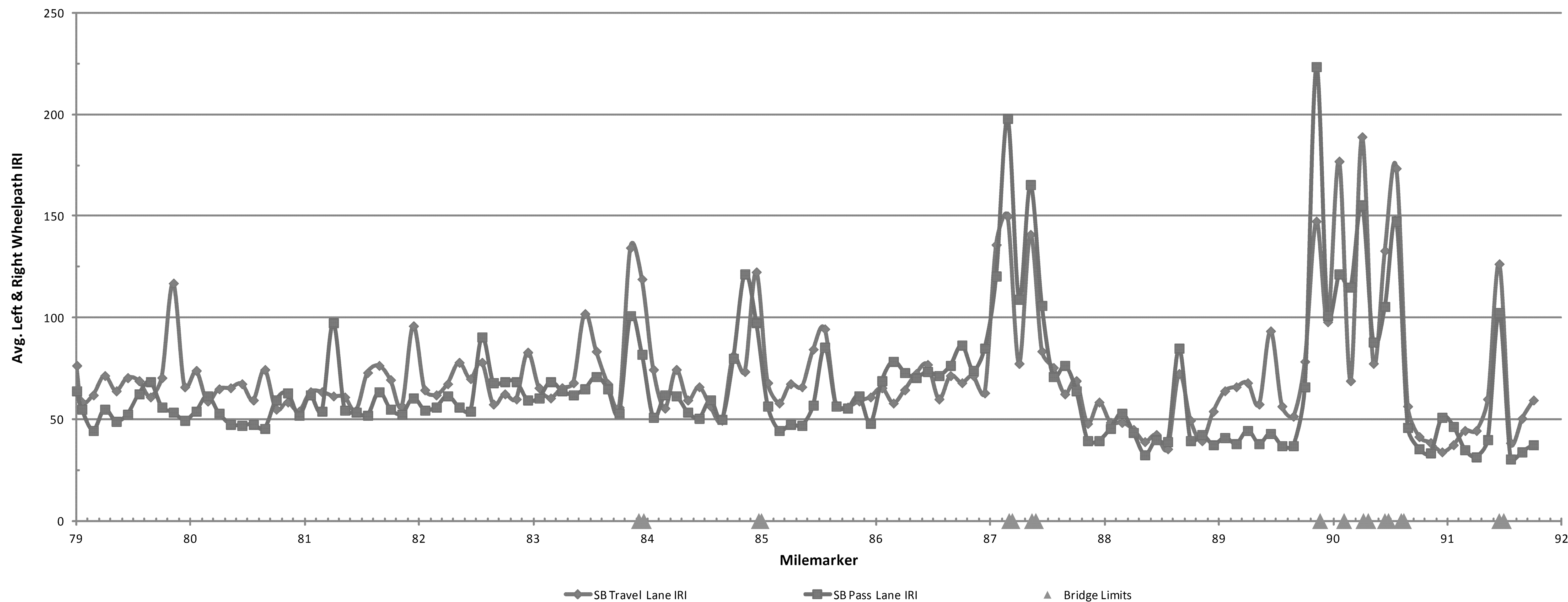
**FOR INFORMATIONAL PURPOSES ONLY**

<b>RUTTING DATA INFORMATION SHEET NB</b>	PROJECT NAME:	RICHMOND - COLCHESTER
	PROJECT NUMBER:	IM SURF (38)
	FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE	
DESIGNED BY: LOCKE	CHECKED BY: FOWLER	
IPARM FILE NAME: pi3a136rutnb.i	SHEET 39 OF 41	

### I 89 SB Richmond-Colchester IM SURF(38) IRI Profile

Profiled 9/27/2013

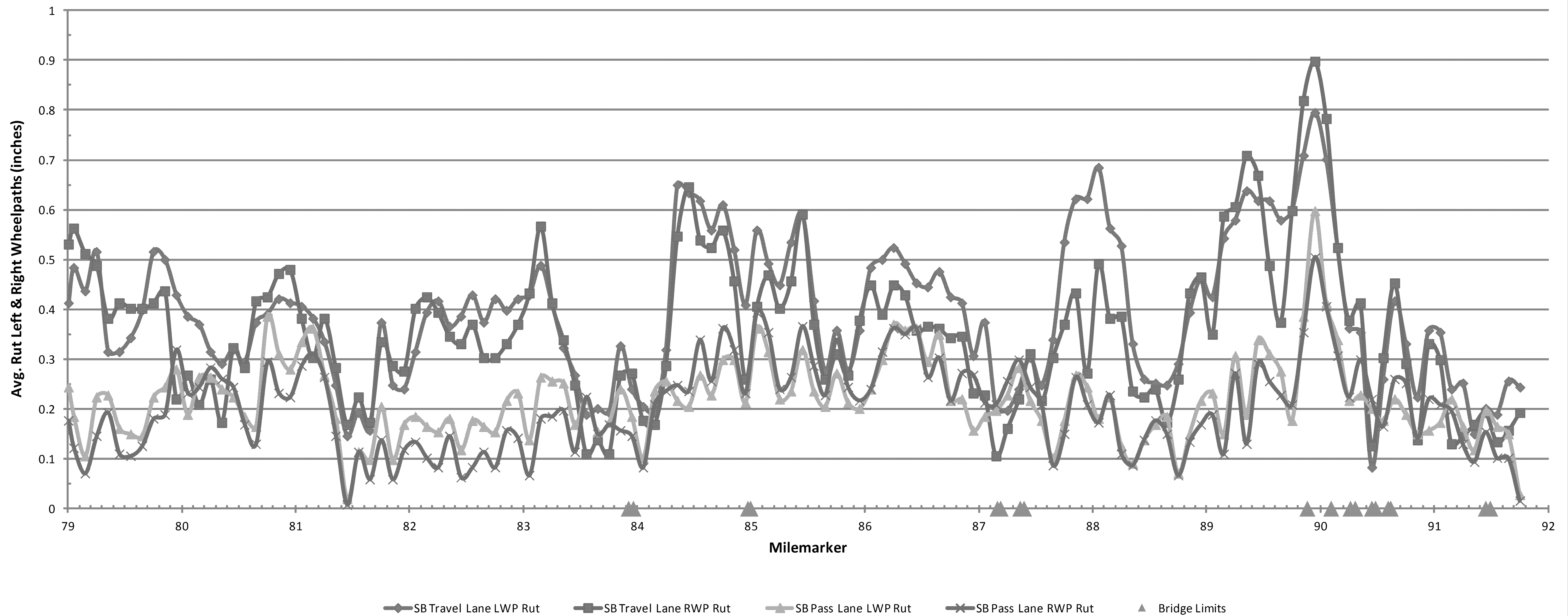
SB Travel Lane Avg. IRI = 71.8 SB Pass Lane Avg. IRI = 65.5



**FOR INFORMATIONAL PURPOSES ONLY**

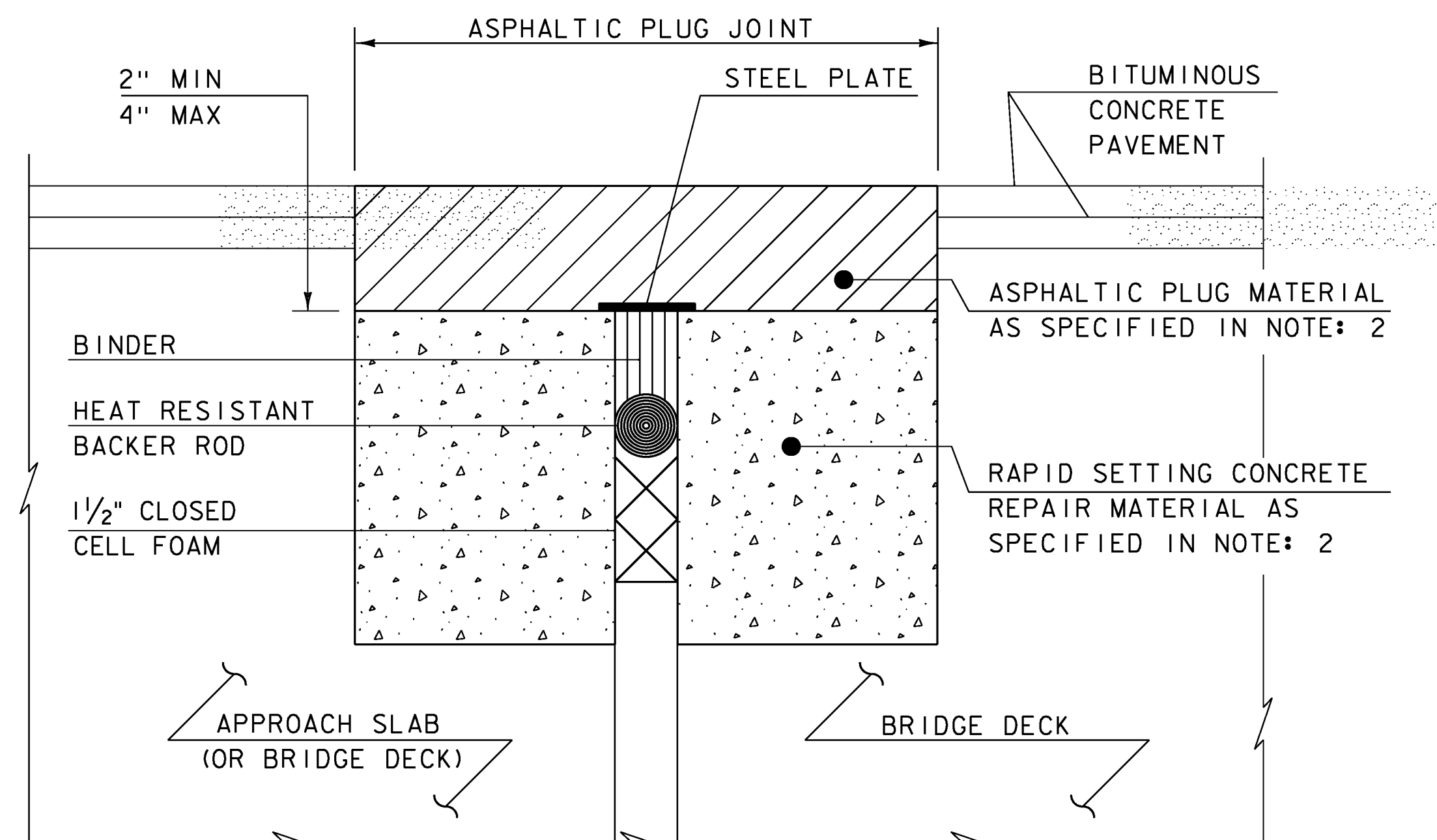
<b>ROUGHNESS DATA INFORMATION SHEET SB</b>	PROJECT NAME:	RICHMOND - COLCHESTER
	PROJECT NUMBER:	IM SURF (38)
	FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
	PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER	
IPARM FILE NAME: pi3a136rufsb.1	SHEET 40 OF 41	

**I 89 SB Richmond-Colchester IM SURF(38) Rut Profile**  
 Profiled 9/27/2013



**FOR INFORMATIONAL PURPOSES ONLY**

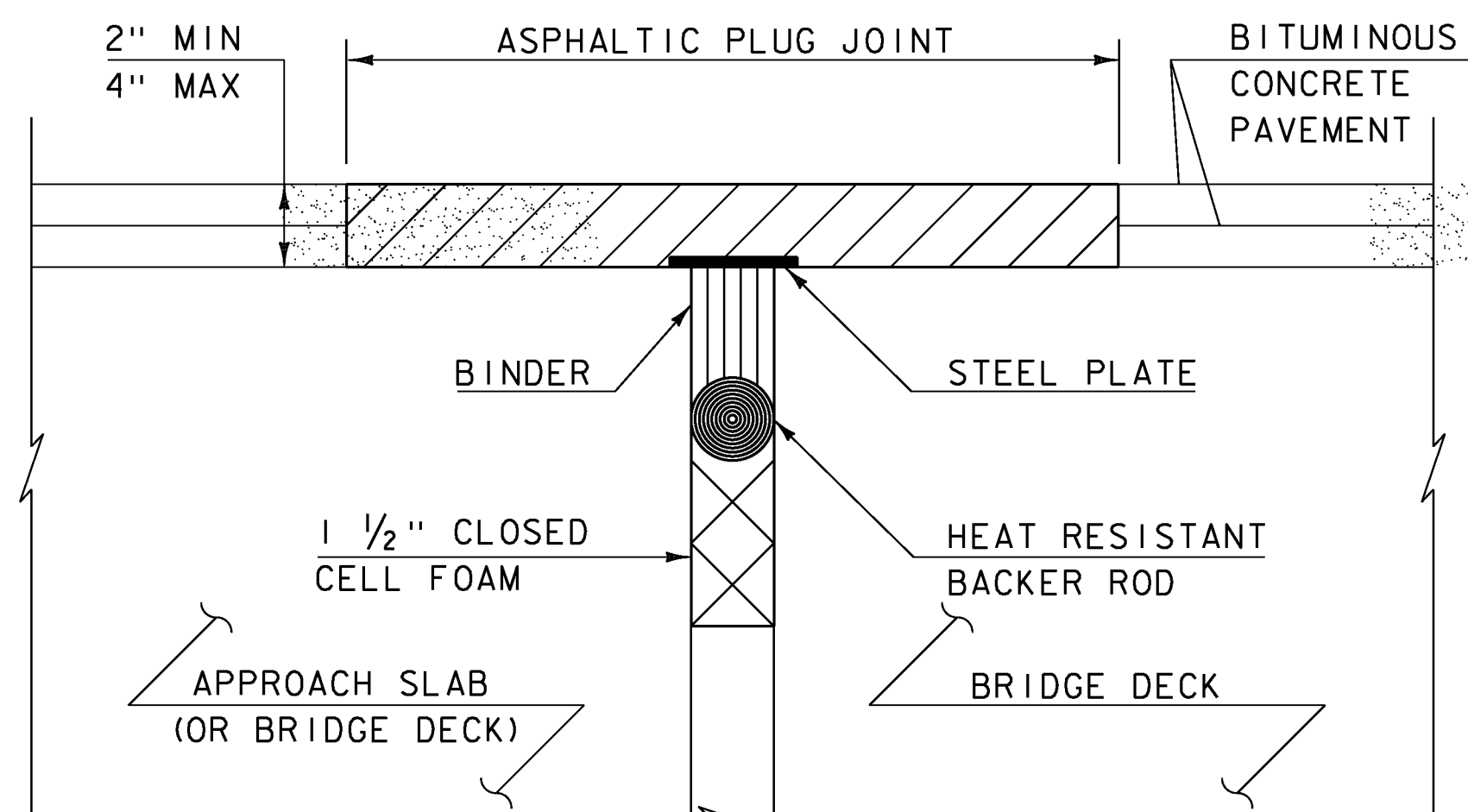
<b>RUTTING DATA INFORMATION SHEET SB</b>	PROJECT NAME:	RICHMOND - COLCHESTER
	PROJECT NUMBER:	IM SURF (38)
	FILE NAME: pi3a136.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE	
DESIGNED BY: LOCKE	CHECKED BY: FOWLER	
IPARM FILE NAME: pi3a136rutsb.1	SHEET 41	OF 41



**ASPHALTIC PLUG-JOINT DETAIL - REHAB**

NOTES: (NOT TO SCALE)

1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COURSE AGGREGATE.
2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COURSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.



**ASPHALTIC PLUG-JOINT DETAIL - NEW**

(NOT TO SCALE)

**ASPHALTIC PLUG JOINT NOTES**

**INSTALLATION:**

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. REPAIR MATERIAL GREATER THAN 4 INCHES FROM FINISHED GRADE WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COURSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
5. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
6. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
7. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.
8. HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
9. INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
10. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
11. ONCE THE JOINT REACHES 82 DEG C (180 DEG F) +/-, WATER MAY BE USED TO EXPEDITE THE COOLING PROCESS.
12. PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.

**WEATHER LIMITATIONS**

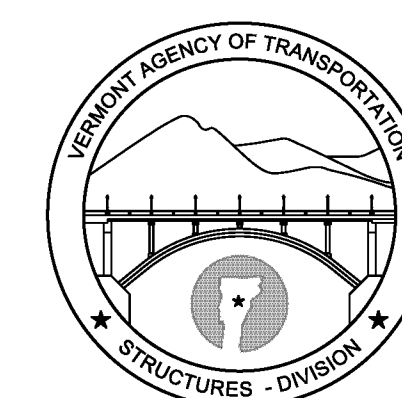
APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
2. THE ROAD SURFACE IS DRY.
3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

**REVISIONS**

MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION

**BRIDGE JOINT  
ASPHALTIC PLUG**



**STRUCTURES  
DETAIL  
SD-516.10**