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SD-516.10 BRIDGE JOINT ASPHALTIC PLUG

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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)

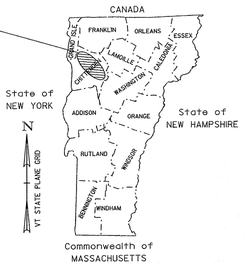
IM SURF (38) SOUTHBOUND:
BEGINNING IN THE TOWN OF RICHMOND AT MILE MARKER 79.000 AND EXTENDING NORTHERLY ALONG INTERSTATE ROUTE 89 (SOUTHBOUND LANE) FOR A DISTANCE OF 68,006.40 FT (12.880 MILES) TO MILE MARKER 91.880 IN THE TOWN OF COLCHESTER.

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

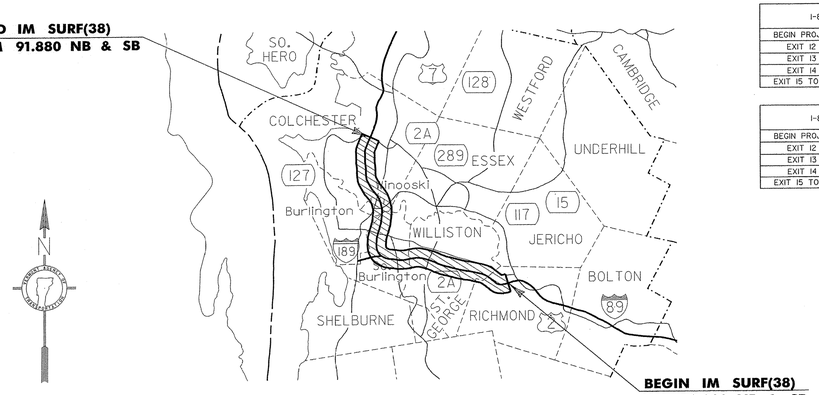
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

TRAFFIC DATA

I-89 NB	2013 AADT	2023 AADT	2013 DHV	2023 DHV	FLEXIBLE ESALS (2013-2023)	FLEXIBLE ESALS (2013-2033)
BEGIN PROJECT TO EXIT 12	14,800	16,300	1,700	1,900	3,707,000	8,869,000
EXIT 12 TO EXIT 13	19,900	22,100	2,600	2,900	4,565,000	11,427,000
EXIT 13 TO EXIT 14	20,200	22,300	2,600	2,900	3,807,000	9,603,000
EXIT 14 TO EXIT 15	27,800	30,800	3,600	4,000	4,275,000	10,712,000
EXIT 15 TO END PROJECT	18,200	20,500	2,900	3,300	5,754,000	15,046,000

I-89 SB	2013 AADT	2023 AADT	2013 DHV	2023 DHV	FLEXIBLE ESALS (2013-2023)	FLEXIBLE ESALS (2013-2033)
BEGIN PROJECT TO EXIT 12	14,800	16,300	1,800	2,000	3,169,000	7,578,000
EXIT 12 TO EXIT 13	19,900	22,100	2,600	2,900	3,920,000	9,946,000
EXIT 13 TO EXIT 14	20,200	22,300	2,700	3,000	3,583,000	9,013,000
EXIT 14 TO EXIT 15	27,800	30,800	3,700	4,100	4,484,000	11,247,000
EXIT 15 TO END PROJECT	18,200	20,500	3,300	3,800	5,289,000	13,794,000

END IM SURF(38)
MM 91.880 NB & SB



BEGIN IM SURF(38)
MM 79.000 NB & SB

QUALITY ASSURANCE PROGRAM LEVEL I

CONVENTIONAL SYMBOLS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
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

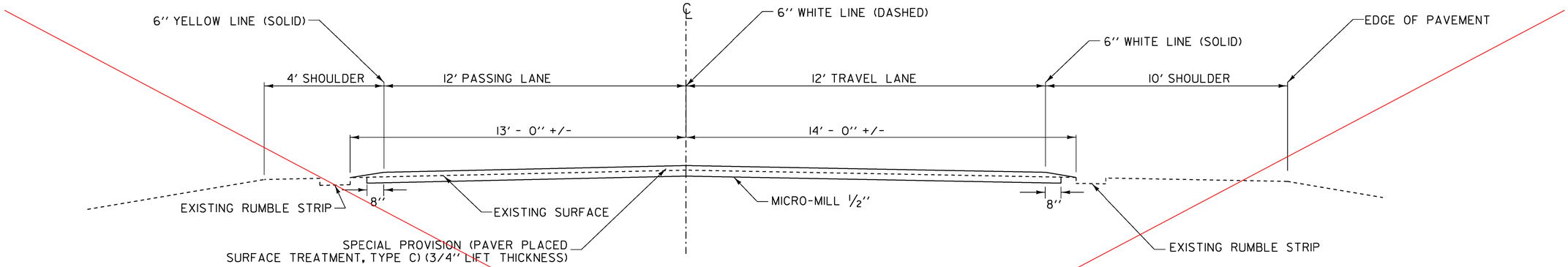
THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.
CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL 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 Tetreault DATE 9-15-15

PROJECT MANAGER : MIKE FOWLER, P.E.

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

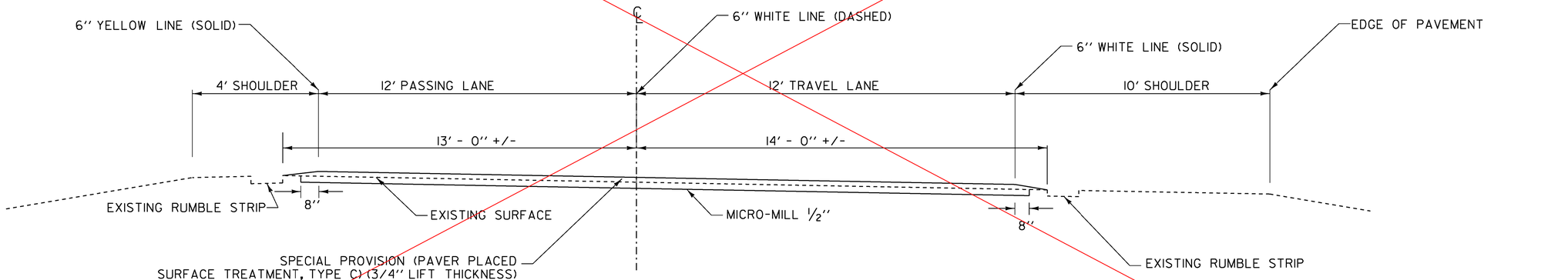
SHEET 1 OF 40 SHEETS



ROADWAY TYPICAL NORMAL SECTION

ALTERNATE A

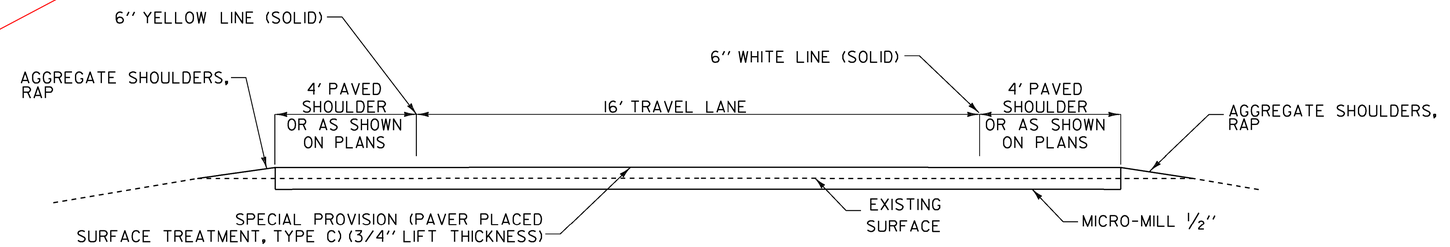
NOT TO SCALE



ROADWAY TYPICAL BANKED SECTION

ALTERNATE A

NOT TO SCALE



TYPICAL RAMP SECTION

ALTERNATE A

NOT TO SCALE

NOTES:

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

ROADWAY PROJECT TYPICAL SECTIONS – ALTERNATE A

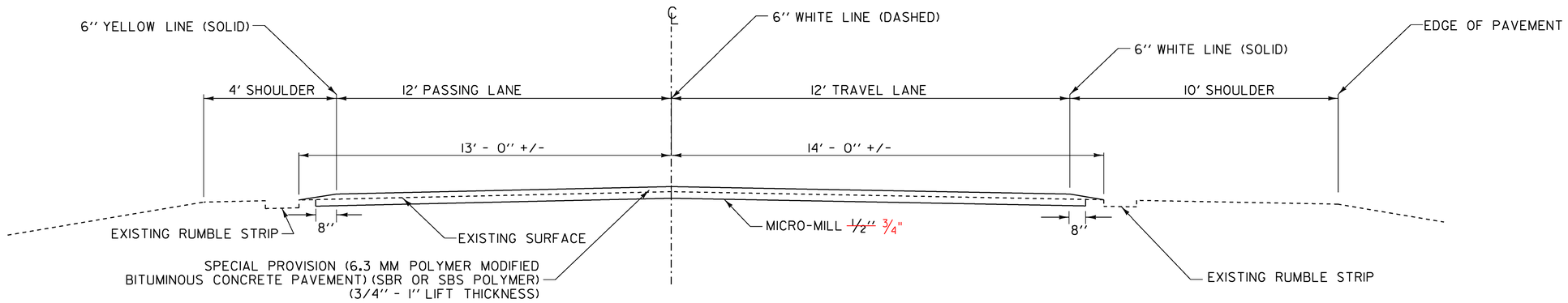
I-89 NORTHBOUND RICHMOND M.M. 79.000 – COLCHESTER M.M. 91.880
I-89 SOUTHBOUND RICHMOND M.M. 79.000 – COLCHESTER M.M. 91.880

TYPICAL SECTION – ALTERNATE A

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136typ1.i

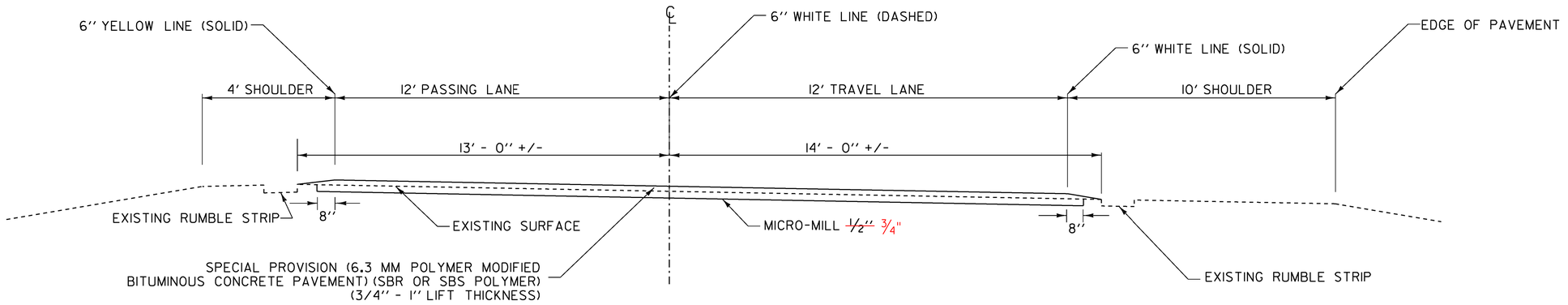
PLOT DATE: 17-JAN-2014
DRAWN BY: LOCKE
CHECKED BY: FOWLER



ROADWAY TYPICAL NORMAL SECTION

ALTERNATE B

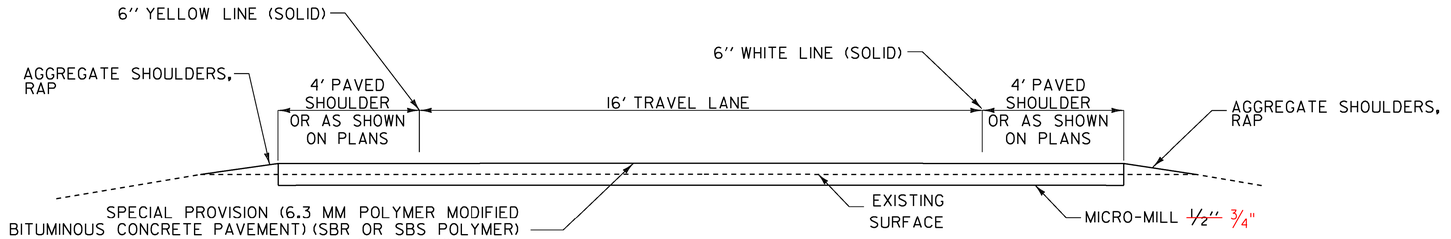
NOT TO SCALE



ROADWAY TYPICAL BANKED SECTION

ALTERNATE B

NOT TO SCALE



TYPICAL RAMP SECTION

ALTERNATE B

NOT TO SCALE

NOTES:

1. 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 (+/- 0.01 GAL/SY) OR AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT SHALL BE RS-1H OR CRS-1H PER THE MANUFACTURER'S RECOMMENDATION AND PAID UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H).

2. THE GYRATION SPECIFICATION FOR THE 6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT SHALL BE 80. PERFORMANCE GRADED BINDER SHALL BE PG 70-28.

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

TYPICAL SECTION – ALTERNATE B

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136typ2.1

PLOT DATE: 17-JAN-2014
DRAWN BY: LOCKE
CHECKED BY: FOWLER
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 I). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED TO COVER ALL COSTS ASSOCIATED WITH THIS WORK.

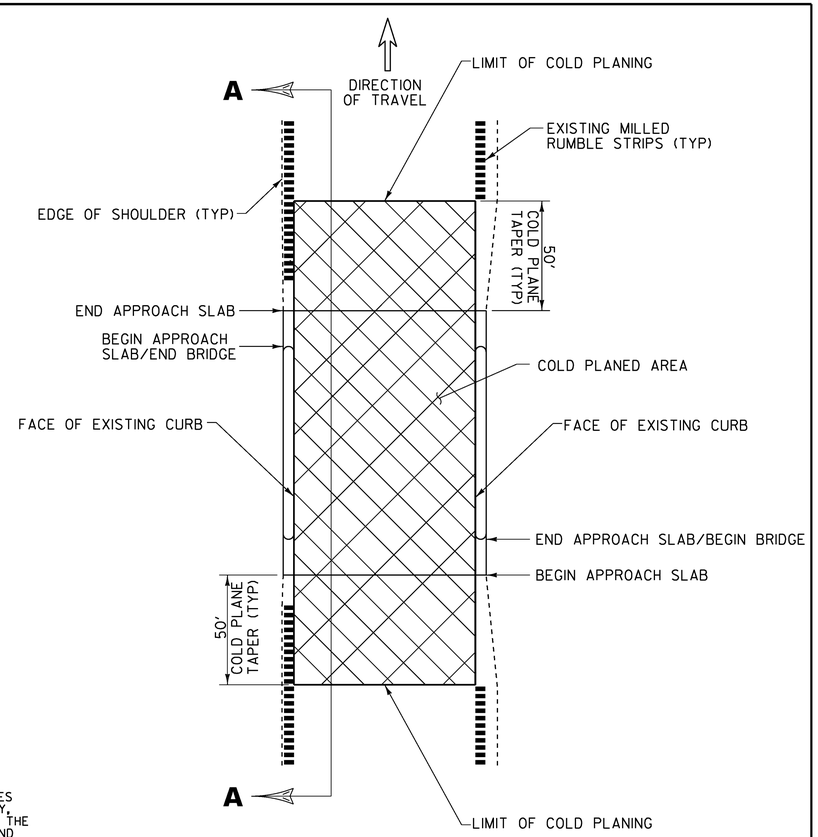
2. EXISTING SHOULDER PAVEMENT SURFACES BEYOND THE LIMITS OF THE FINAL SURFACE TREATMENT SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS.

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.

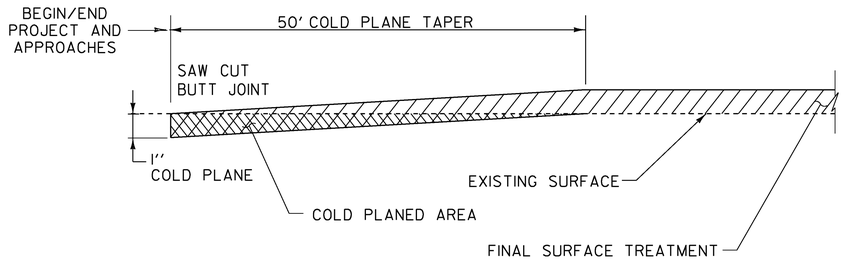
5. AN ESTIMATED QUANTITY OF ITEM 203.40 SHOULDER BERM REMOVAL HAS BEEN INCLUDED FOR THE REMOVAL OF BUILT UP SAND, SOD ETC. ADJACENT TO THE SHOULDER, IN GUARDRAIL AREAS, TO ALLOW FREE DRAINAGE OFF THE SHOULDER AS DIRECTED BY THE ENGINEER.

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.



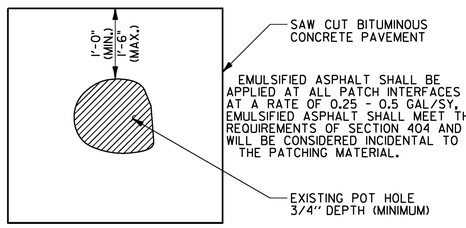
BRIDGE COLD PLANE TYPICAL PLAN

NOT TO SCALE



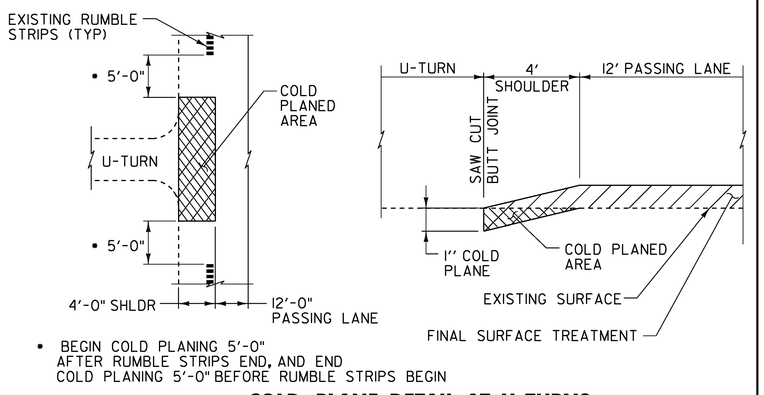
TYPICAL APPROACH AREA DETAIL MAINLINE & RAMPS

NOT TO SCALE



TYPICAL POT HOLE REPAIR

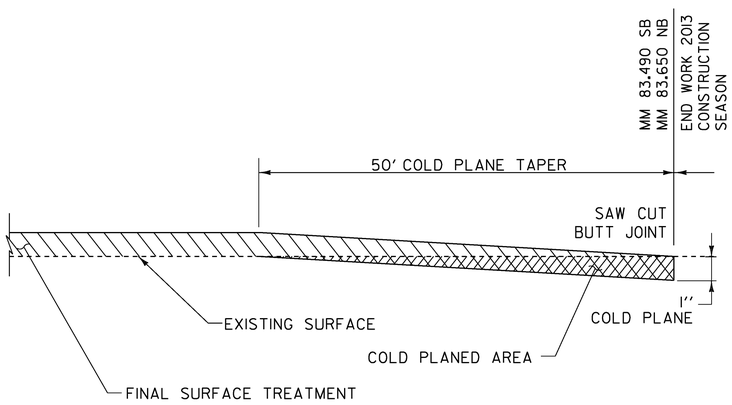
NOT TO SCALE



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

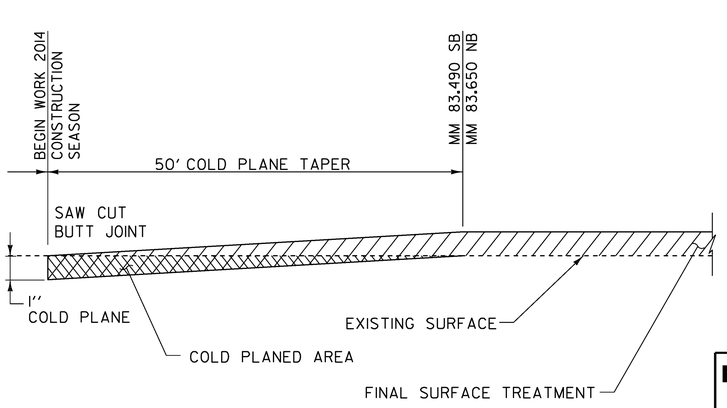
COLD PLANE DETAIL AT U-TURNS

NOT TO SCALE



TYPICAL APPROACH AREA DETAIL MAINLINE

NOT TO SCALE



TYPICAL APPROACH AREA DETAIL MAINLINE

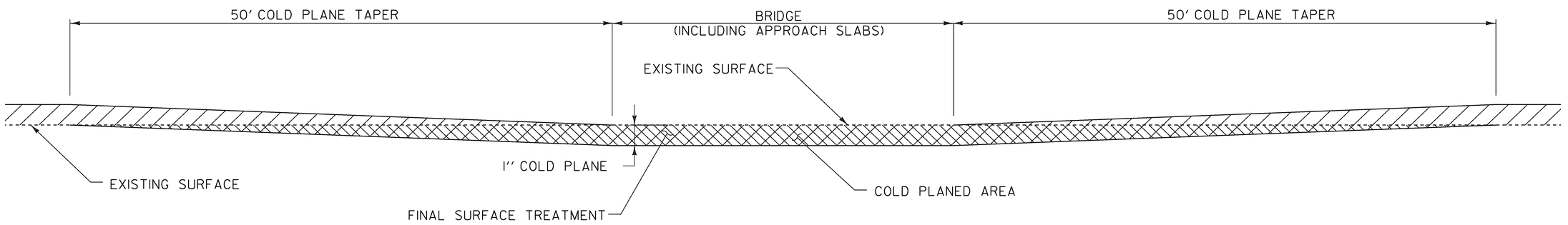
NOT TO SCALE

NOTES & DETAILS COMMON TO BOTH ALTERNATES

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136typ3.1

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

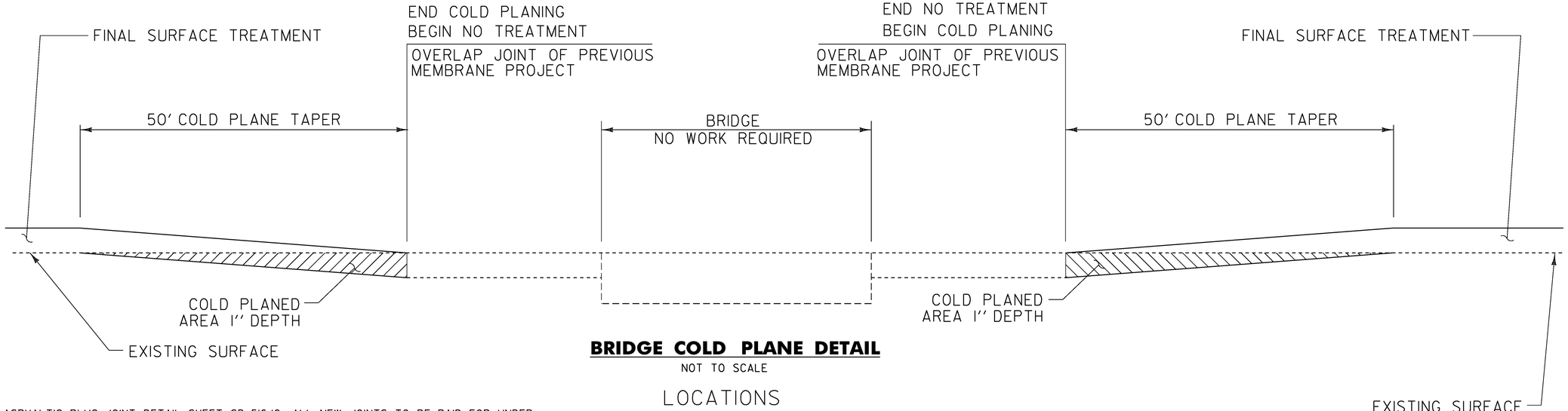


BRIDGE COLD PLANE DETAIL

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:

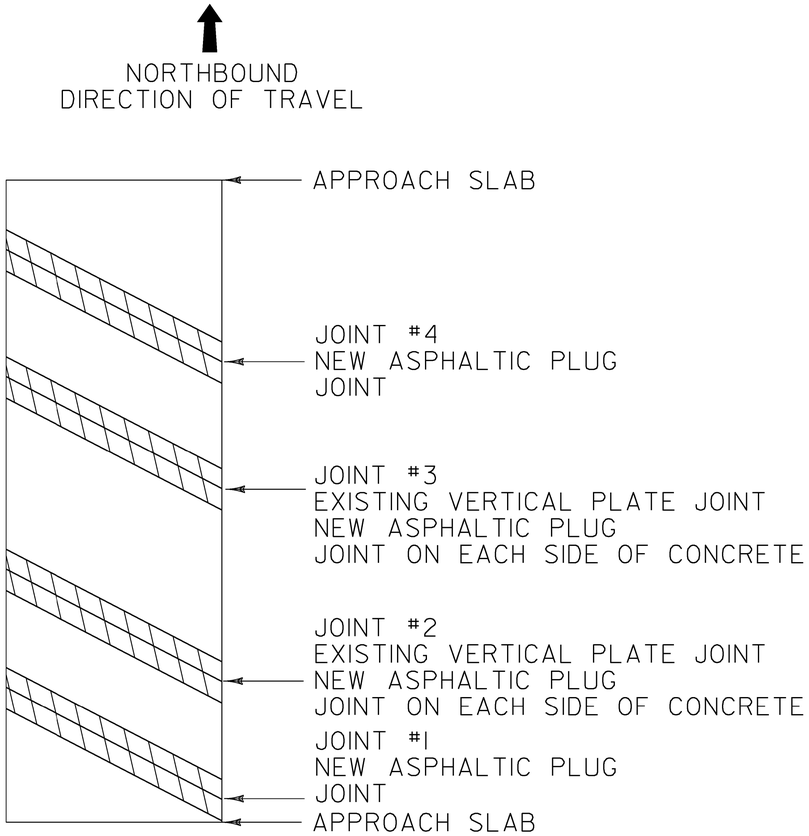
1. REFER TO ASPHALTIC PLUG JOINT DETAIL SHEET, SD-516.10. ALL NEW JOINTS TO BE PAID FOR UNDER ITEM 516.10, "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG."
2. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING DRAINAGE STRUCTURES AND EXPANSION JOINTS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE.
3. 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.
4. 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.

BRIDGE DETAIL SHEET # 1

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bdl.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 5 OF 41

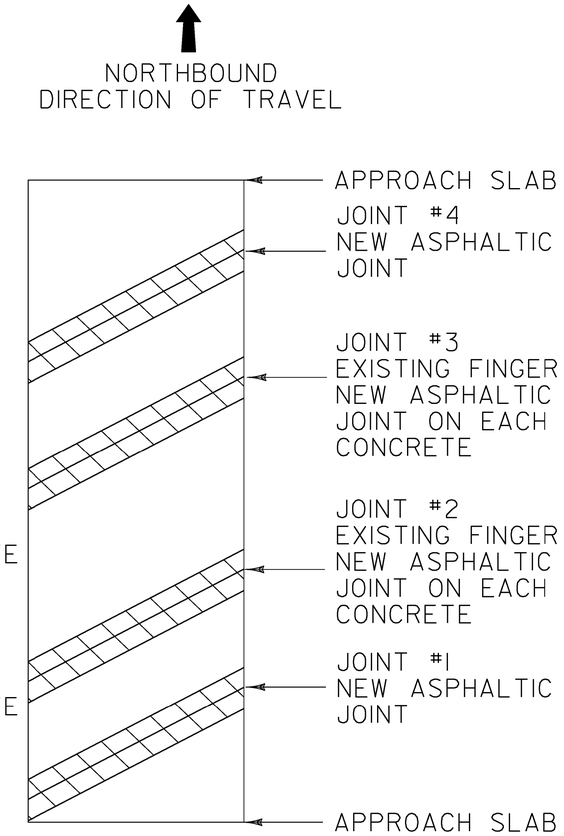


BRIDGE 61N

MM 83.958

LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - 30'
JOINT #2 ~~-31~~ ~~30'~~ X 2 = ~~62~~ ~~60'~~
JOINT #3 ~~-31~~ ~~30'~~ X 2 = ~~62~~ ~~60'~~
JOINT #4 - 30'

~~TOTAL = 180'~~

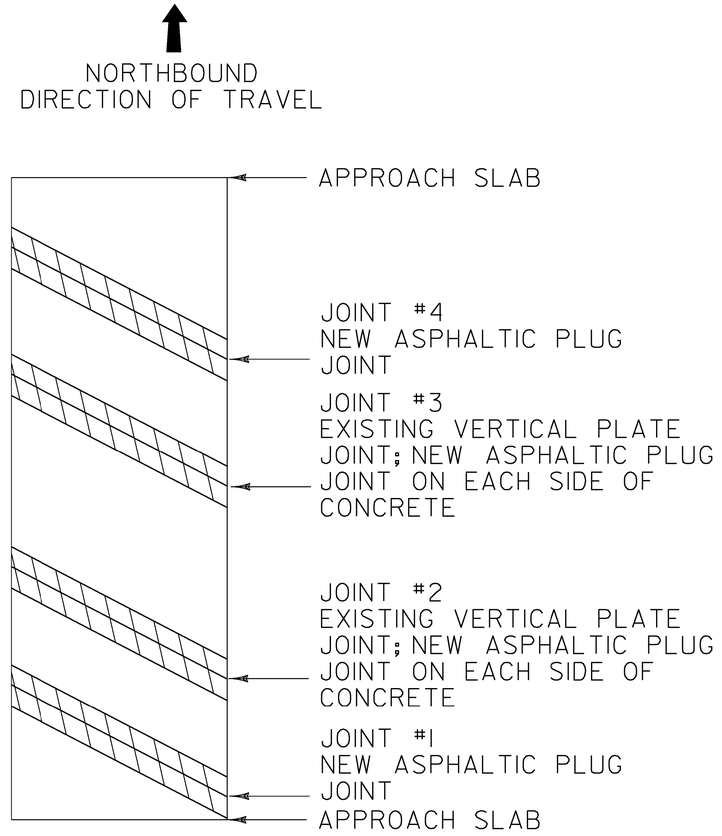


BRIDGE 65N

MM 87.205

LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - ~~36'~~ 34
JOINT #2 ~~-34~~ ~~36'~~ X 2 = ~~72'~~ 68
JOINT #3 ~~-34~~ ~~36'~~ X 2 = ~~72'~~ 68
JOINT #4 - ~~36'~~ 34

~~TOTAL = 216'~~



BRIDGE 66N

MM 87.397

LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - ~~34'~~ 30
JOINT #2 ~~-30~~ ~~34'~~ X 2 = 68'
JOINT #3 ~~-30~~ ~~34'~~ 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.

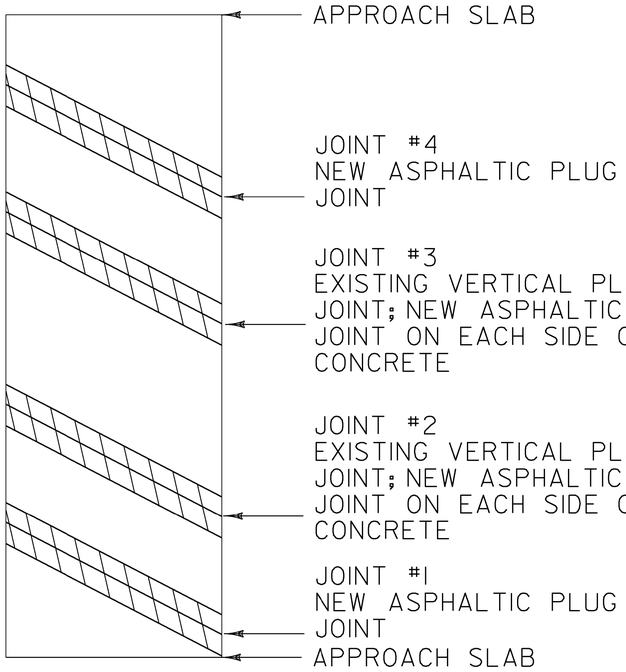
BRIDGE DETAIL SHEET # 2

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd2.1

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 6 OF 41

SOUTHBOUND
DIRECTION OF TRAVEL



BRIDGE 61S

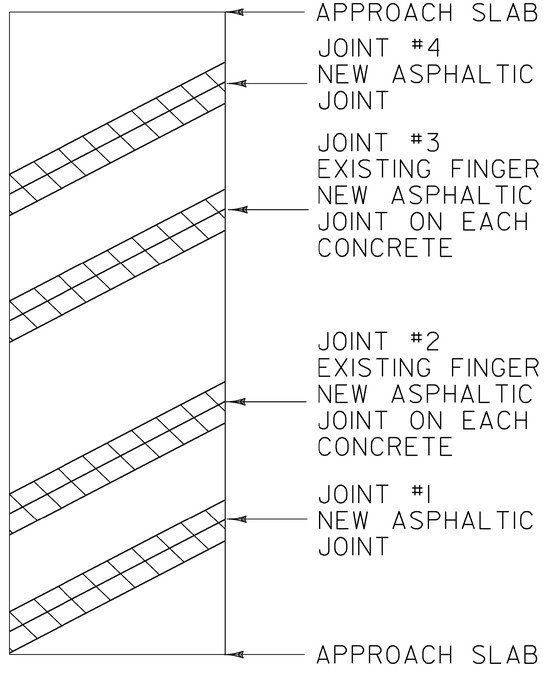
MM 83.958

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - 30'
JOINT #2 - ~~31~~ ~~30'~~ X 2 = ~~62~~ ~~60'~~
JOINT #3 - ~~31~~ ~~30'~~ X 2 = ~~62~~ ~~60'~~
JOINT #4 - 30'

~~TOTAL = 180'~~

SOUTHBOUND
DIRECTION OF TRAVEL



BRIDGE 65S

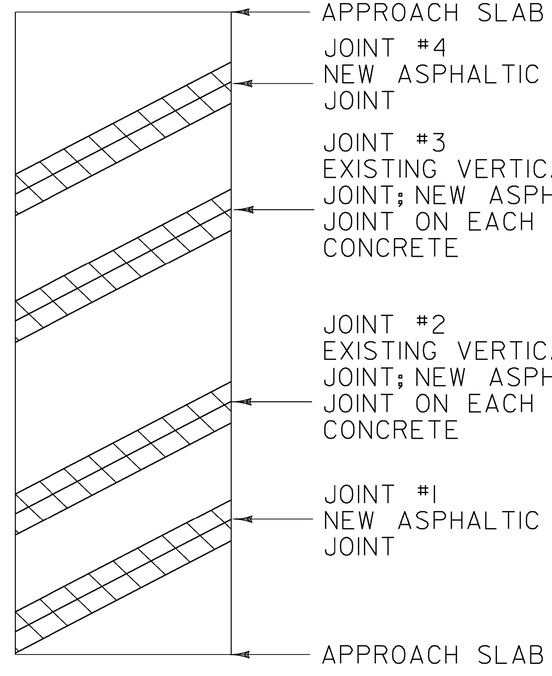
MM 87.205

LENGTH OF ASPHALTIC PLUG JOINTS:

JOINT #1 - ~~36'~~ 48
JOINT #2 - ~~48~~ ~~36'~~ X 2 = ~~72'~~ 96
JOINT #3 - ~~48~~ ~~36'~~ 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 - ~~30~~ ~~50'~~ X 2 = ~~100'~~ 60
JOINT #3 - ~~30~~ ~~50'~~ X 2 = ~~100'~~ 60
JOINT #4 - ~~50'~~ 30

~~TOTAL = 300'~~

LEGEND

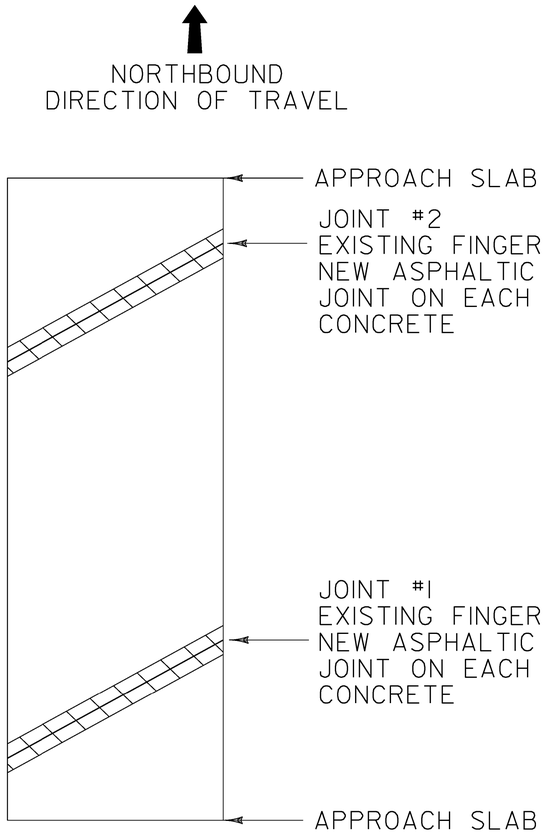
EXISTING BRIDGE JOINTS TO BE REPAIRED WITH ASPHALTIC PLUG JOINT. SEE SHEETS 12 & 13 FOR ARMORED JOINT DETAILS.

BRIDGE DETAIL SHEET # 3

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd3.1

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 7 OF 41



BRIDGE 70N

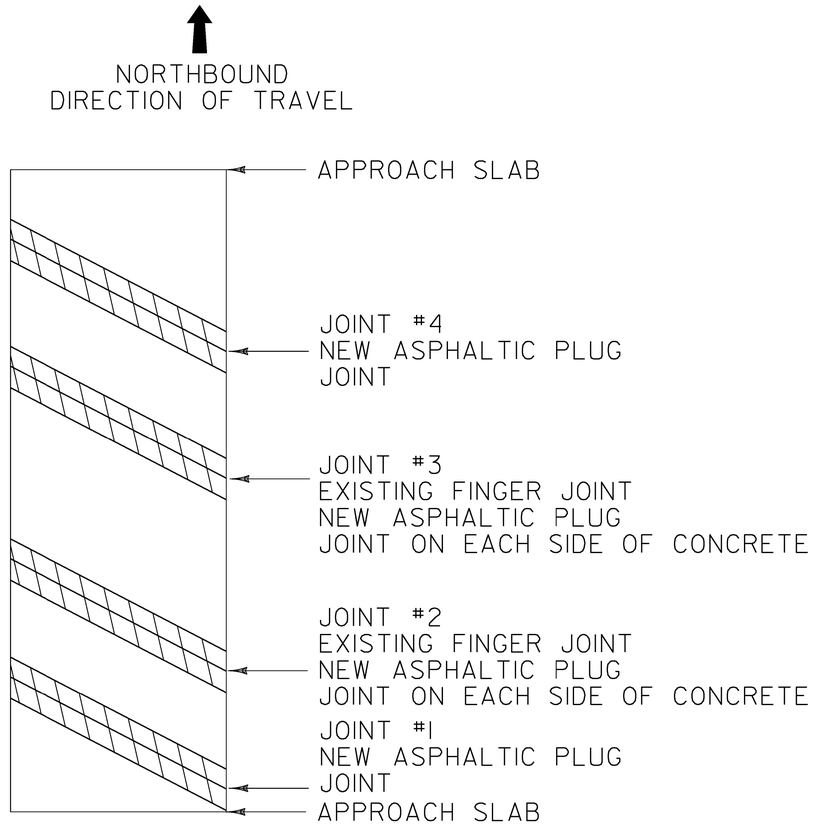
MM 89.989

LENGTH OF ASPHALTIC PLUG JOINTS:

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

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

~~TOTAL = 320'~~



BRIDGE 71N

MM 90.289

LENGTH OF ASPHALTIC PLUG JOINTS:

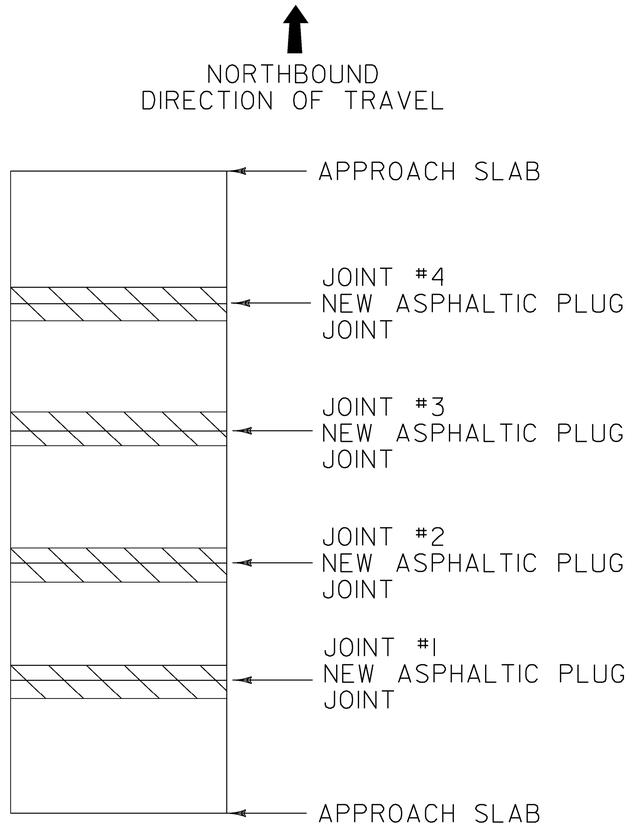
JOINT #1 - ~~50'~~ 48

JOINT #2 -48~~50'~~ X 2 = ~~100'~~ 96

JOINT #3 -48~~50'~~ X 2 = ~~100'~~ 96

JOINT #4 - ~~50'~~ 48

~~TOTAL = 300'~~



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

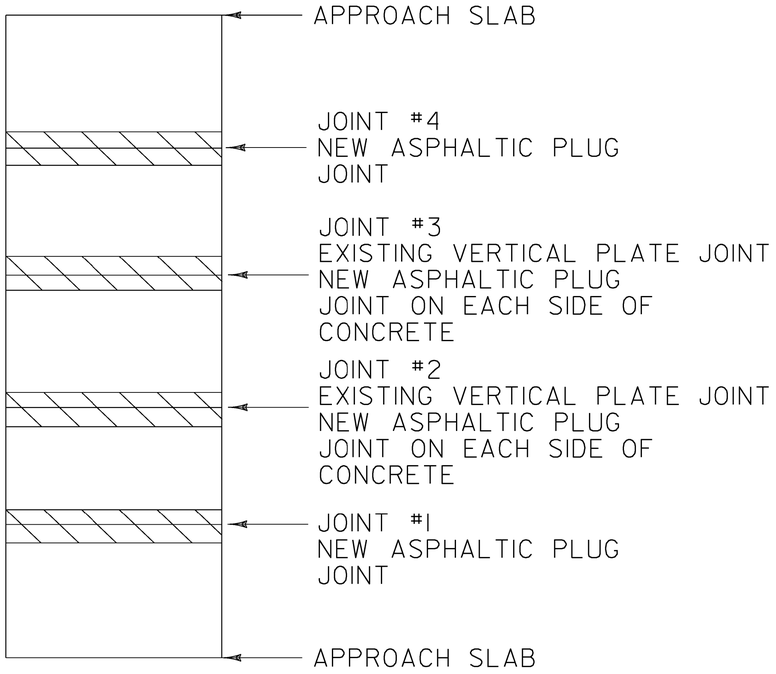
PROJECT NAME: RICHMOND - COLCHESTER

PROJECT NUMBER: IM SURF (38)

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd4.1

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 8 OF 41

NORTHBOUND
DIRECTION OF TRAVEL



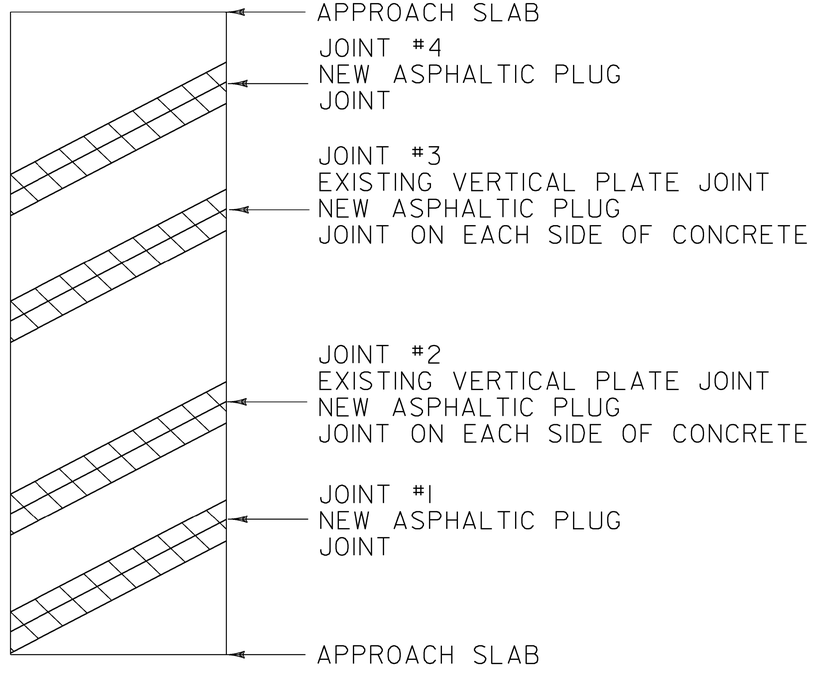
BRIDGE 73N

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'

NORTHBOUND
DIRECTION OF TRAVEL



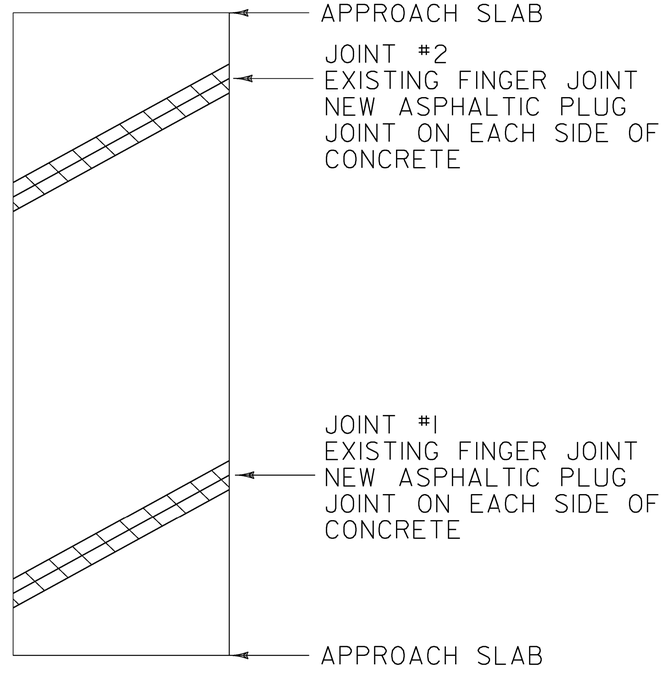
BRIDGE 74N

MM 91.488

LENGTH OF ASPHALTIC PLUG JOINTS:
JOINT #1 - ~~39'~~ 30.5
JOINT #2 30.5 ~~39'~~ X 2 = ~~78'~~ 61
JOINT #3 30.5 ~~39'~~ 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'~~

LEGEND

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

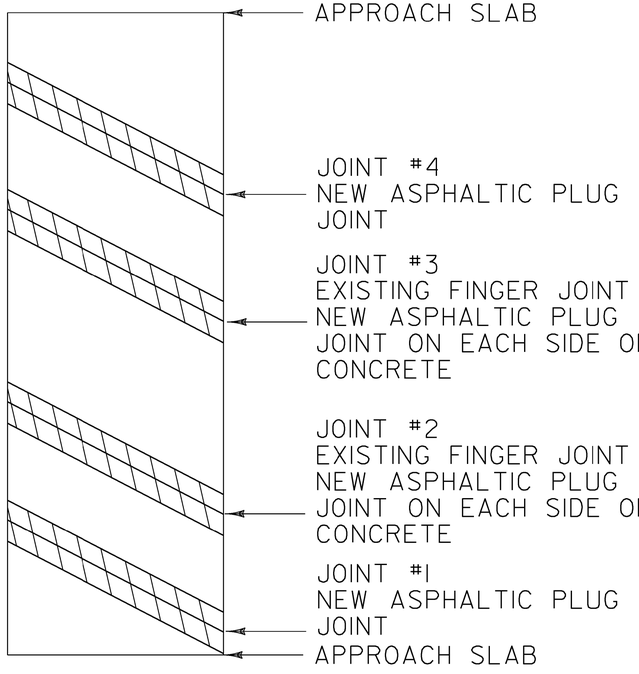
BRIDGE DETAIL SHEET # 5

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd5.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 9 OF 41

SOUTHBOUND
DIRECTION OF TRAVEL



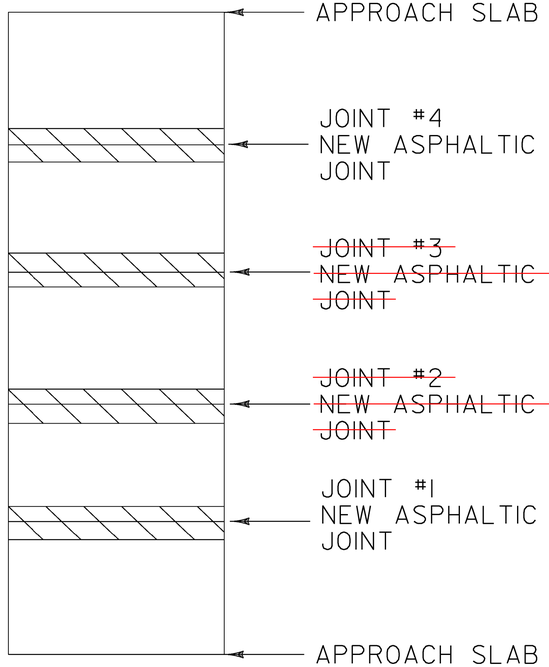
BRIDGE 71S

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



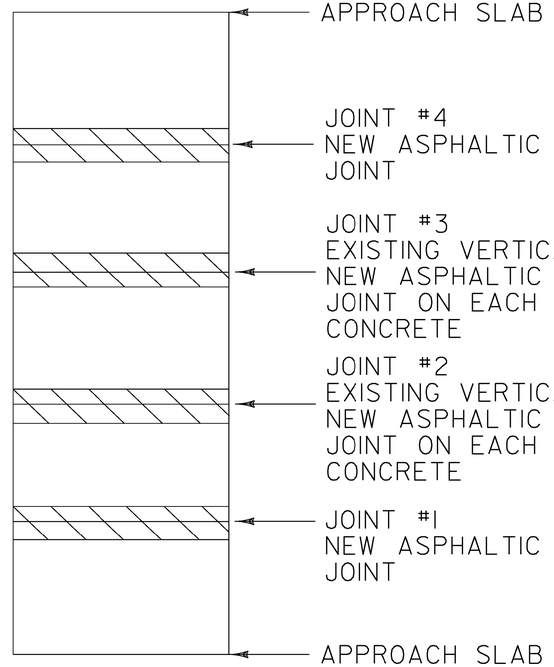
BRIDGE 72S

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



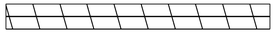
BRIDGE 73S

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.

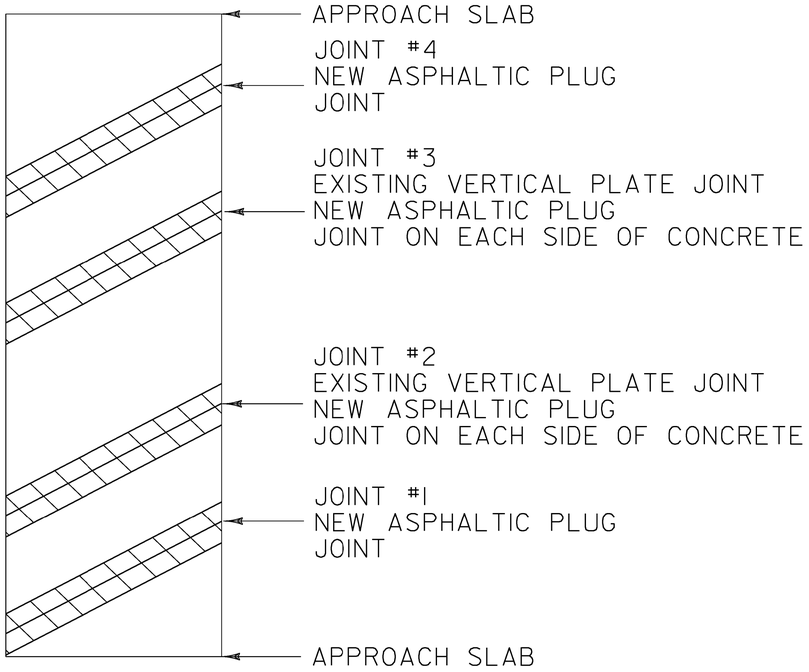
BRIDGE DETAIL SHEET # 6

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd6.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 ~~39' X 2 = 78'~~ 30.5 61

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

JOINT #4 - ~~39'~~ 30.5

~~TOTAL = 234'~~

LEGEND

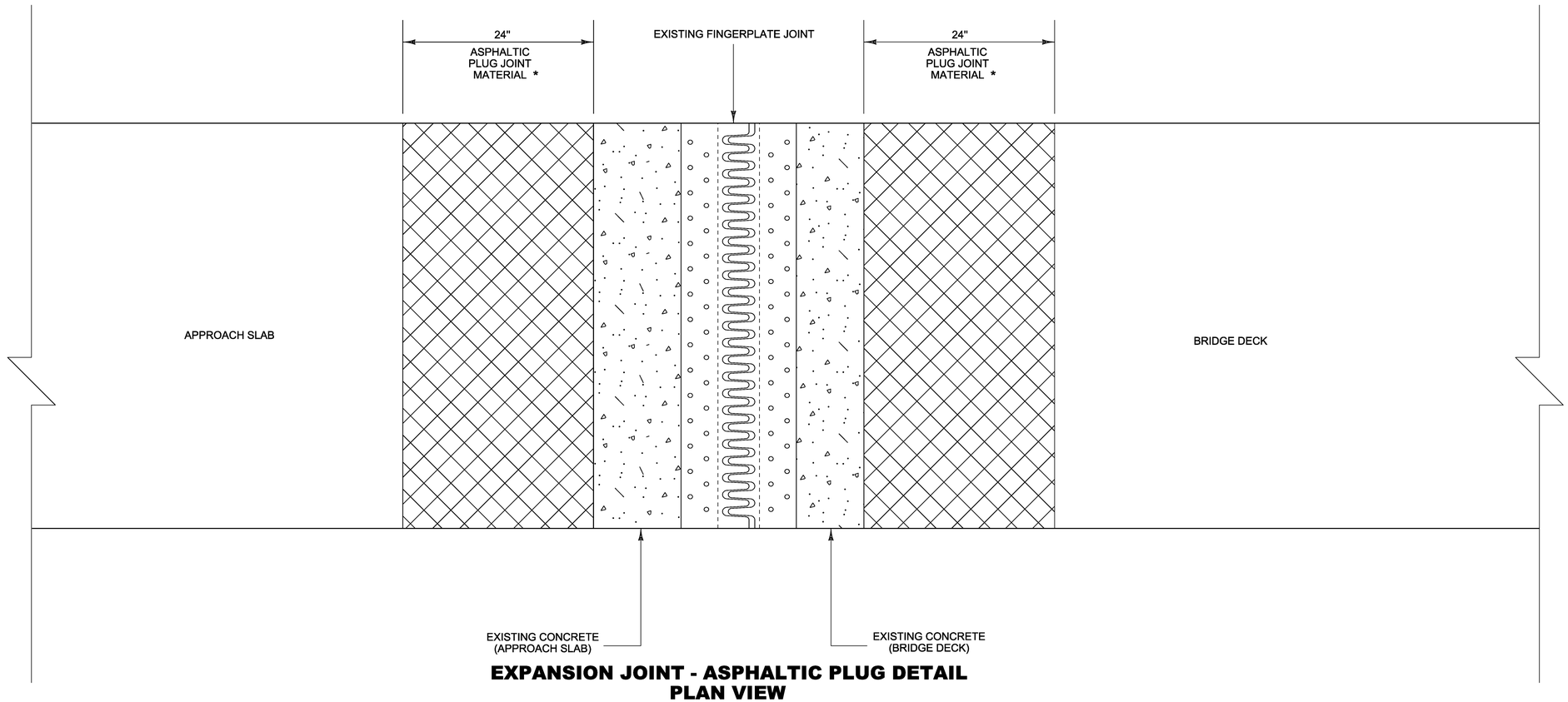
EXISTING BRIDGE JOINTS TO BE REPAIRED WITH ASPHALTIC PLUG JOINT. SEE SHEETS 12 & 13 FOR ARMORED JOINT DETAILS.

BRIDGE DETAIL SHEET # 7

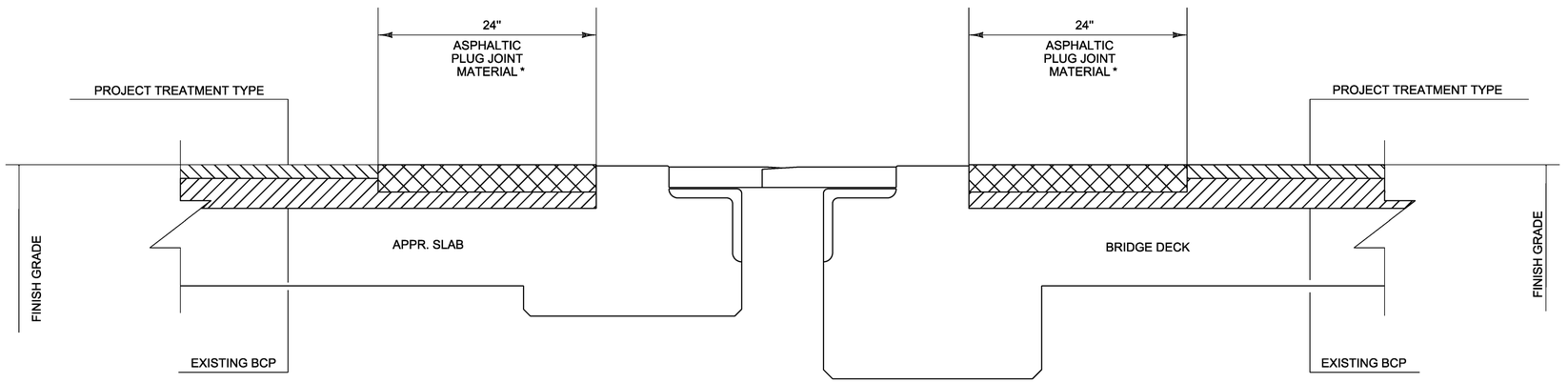
PROJECT NAME: RICHMOND - COLCHESTER
PROJECT NUMBER: IM SURF (38)

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd7.1

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)



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

* 2" MINIMUM DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER

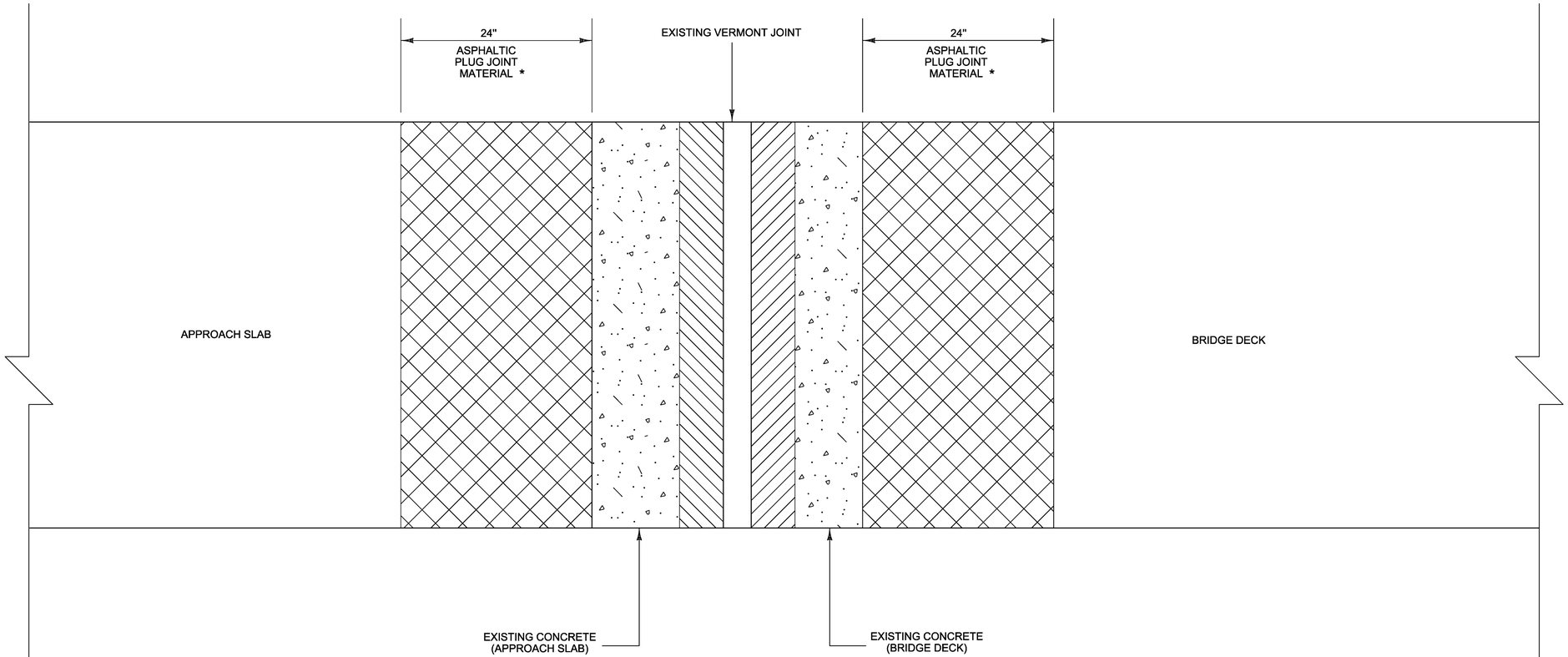
NOT TO SCALE

BRIDGE DETAIL SHEET # 8

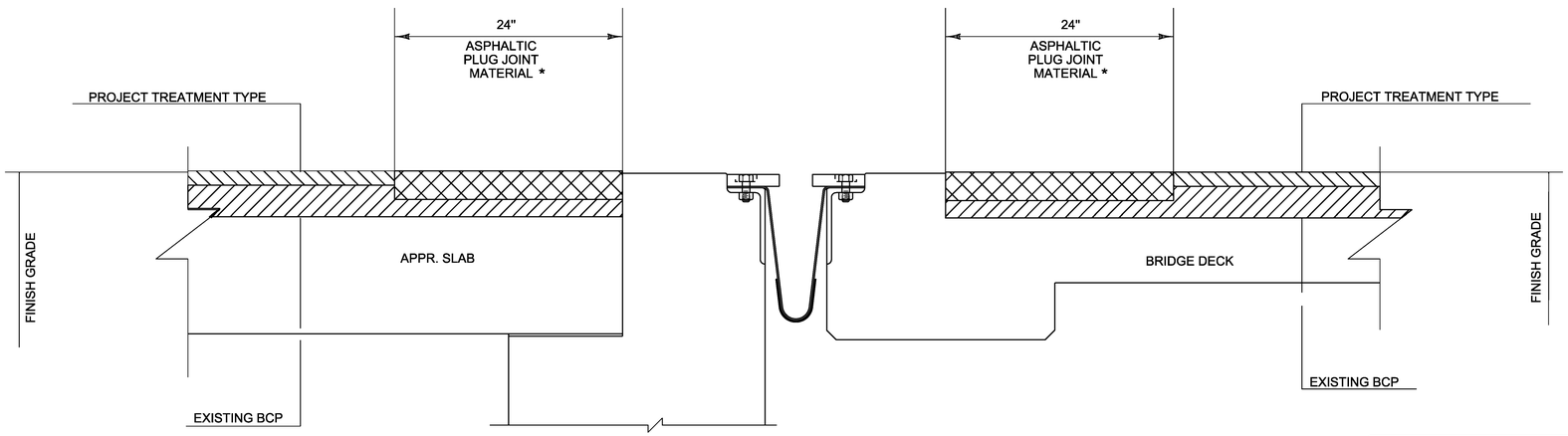
PROJECT NAME: RICHMOND - COLCHESTER
PROJECT NUMBER: IM SURF (38)

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd8.1

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
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)

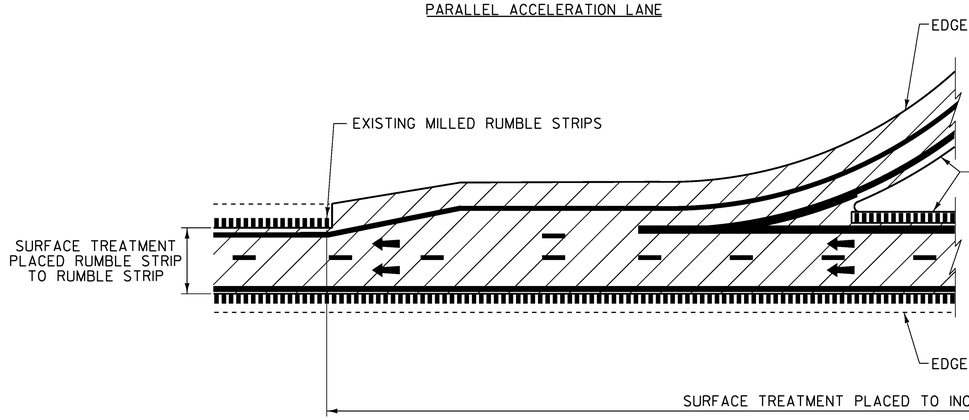
FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136bd9.1

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 13 OF 41

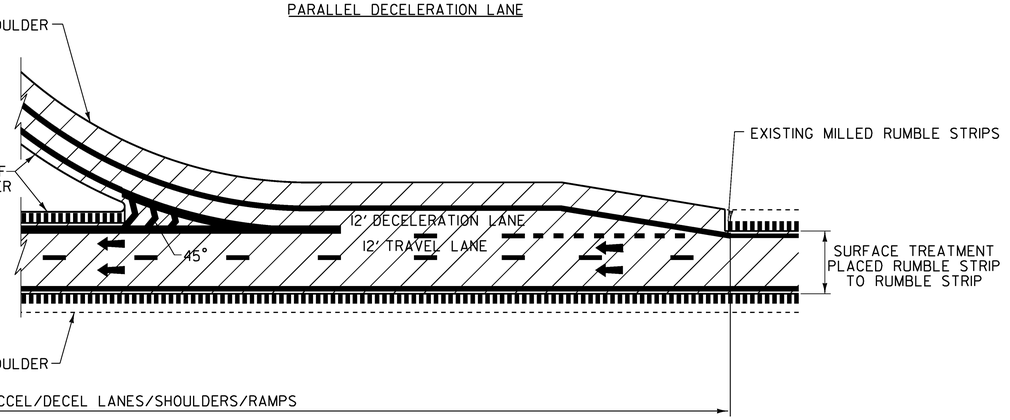
TYPICAL INTERCHANGE CONSTRUCTION DETAILS

NOT TO SCALE

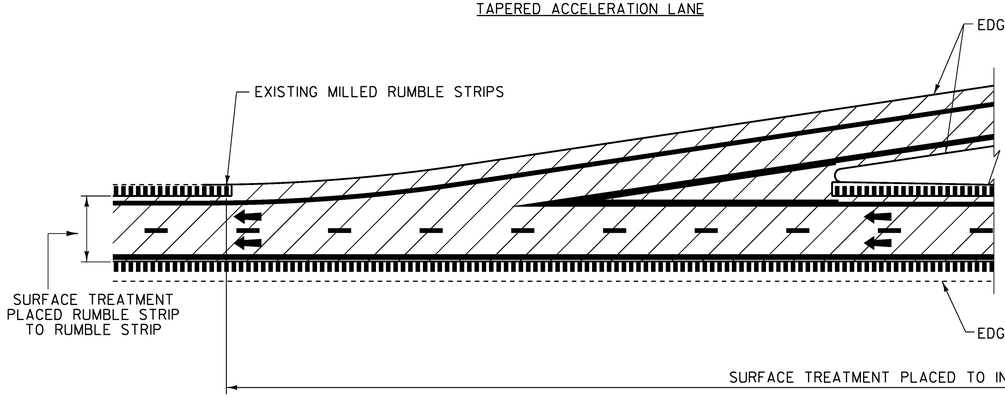
PARALLEL ACCELERATION LANE



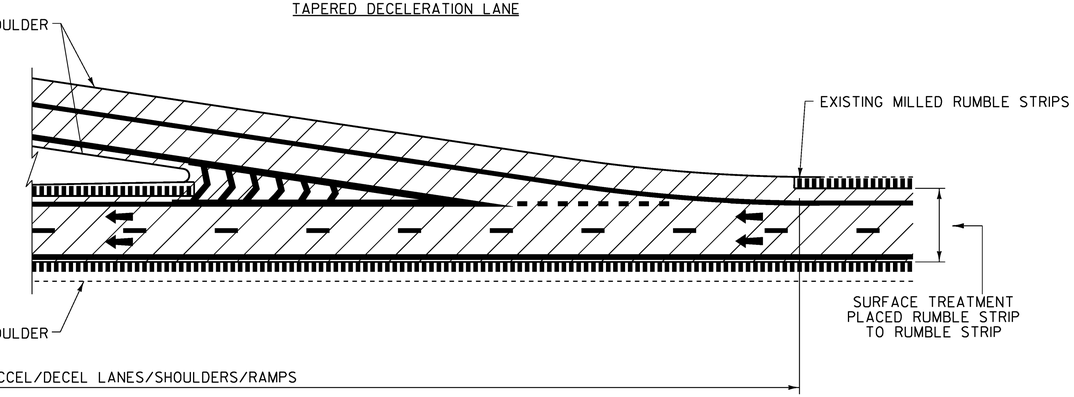
PARALLEL DECELERATION LANE



TAPERED ACCELERATION LANE



TAPERED DECELERATION LANE



NOTES:
1. 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: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136ticd.i

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

QUANTITY SHEET 1

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
							BEGIN ITEMS COMMON TO ALL ALTERNATES		
			70,250		70,250	LF	SHOULDER BERM REMOVAL	203.40	EST
			1		1	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
			31,500		31,500	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	66
			500		500	TON	AGGREGATE SHOULDERS, RAP	402.13	41
			1		1	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
			65,000		65,000	LB	BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD (AASHTO M 324 (ASTM D 6690) TYPE II)	417.20	EST
		1,250			1,250	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	6
		2,550			2,550	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG (@ FINGER PLATE/VERMONT JOINT)	516.10	30
		100			100	CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	EST
			200		200	HR	POWER BROOM RENTAL, TYPE II	608.31	EST
			200		200	HR	TRUCK RENTAL	608.37	EST
			1,500		1,500	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST
			750		750	HR	FLAGGERS	630.15	EST
				1	1	LS	FIELD OFFICE, ENGINEERS	631.10	-
				1	1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-
				3,000	3,000	DL	FIELD OFFICE, TELEPHONE (N.A.B.I.)	631.26	-
			1		1	LS	MOBILIZATION/DEMOBILIZATION	635.11	-
			1		1	LS	TRAFFIC CONTROL	641.10	-
			12		12	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	EST
			195,000		195,000	LF	DURABLE 6 INCH WHITE LINE, POLYUREA	646.424	884
			155,500		155,500	LF	DURABLE 6 INCH YELLOW LINE, POLYUREA	646.434	267.2
			15,000		15,000	LF	DURABLE 12 INCH WHITE LINE, POLYUREA	646.464	265
			250		250	LF	DURABLE 12 INCH YELLOW LINE, POLYUREA	646.474	EST
			265		265	LF	DURABLE 24 INCH STOP BAR, POLYUREA	646.484	15
			274		274	EA	DURABLE LETTER OR SYMBOL, POLYUREA	646.494	-
			92		92	LF	DURABLE CROSSWALK MARKING, POLYUREA	646.504	-
			195,000		195,000	LF	TEMPORARY 6 INCH WHITE LINE, PAINT	646.622	884
			155,500		155,500	LF	TEMPORARY 6 INCH YELLOW LINE, PAINT	646.632	267.2
			15,000		15,000	LF	TEMPORARY 12 INCH WHITE LINE, PAINT	646.662	265
			250		250	LF	TEMPORARY 12 INCH YELLOW LINE, PAINT	646.672	EST
			265		265	LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	15
			274		274	EA	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-
			92		92	LF	TEMPORARY CROSSWALK MARKING, PAINT	646.702	-
			10,200		10,200	EA	LINE STRIPING TARGETS	646.76	EST
			1		1	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		COLD PLANING, BITUMINOUS PAVEMENT
422	SY	MAINLINE NORTHBOUND BEGIN & END APPROACHES
422	SY	MAINLINE SOUTHBOUND BEGIN & END APPROACHES
350	SY	U-TURNS
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
422	SY	BRIDGE 63 N APPROACHES
422	SY	BRIDGE 63 S APPROACHES
767	SY	EXIT 12 RAMPS
356	SY	EXIT 13 RAMPS
712	SY	EXIT 14 RAMPS
434	SY	EXIT 15 RAMPS
445	SY	EXIT 16 RAMPS
178	SY	NORTHBOUND REST AREA
178	SY	SOUTHBOUND REST AREA
66	SY	ROUNDING
31,500	SY	TOTAL

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS

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

FILE NAME: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136qsl.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 15 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
			1		1	EA	SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM)	900.620	-
							(I-89 EXIT 12 RAMP A @ VT 2A)		
			1		1	EA	SPECIAL PROVISION (VIDEO VEHICLE DETECTION SYSTEM)	900.620	-
							(I-89 EXIT 12 RAMP C @ VT 2A)		
			488,500		488,500	SY	SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE	900.675	422
							PAVEMENT)		
			500		500	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT	900.680	EST
							SURFACE PREPARATION, TYPE I)		
			100		100	CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	900.683	EST
							END ITEMS COMMON TO ALL ALTERNATES		
							BEGIN ALTERNATE A		
520,000					520,000	SY	SPECIAL PROVISION (PAVER PLACED SURFACE TREATMENT,	900.675	1,682
							TYPE C)		
							END ALTERNATE A		
							BEGIN ALTERNATE B		
	1				1	LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-
	30,750				30,750	TON	SPECIAL PROVISION (6.3 MM POLYMER MODIFIED BITUMINOUS	900.680	513
							CONCRETE PAVEMENT)(SBR OR SBS POLYMER)		
	3,500				3,500	CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	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 12 RAMPS
13,454	SY	EXIT 13 RAMPS
22,574	SY	EXIT 14 RAMPS
4,857	SY	EXIT 15 RAMPS
11,341	SY	EXIT 16 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 12 RAMPS
13,810	SY	EXIT 13 RAMPS
23,286	SY	EXIT 14 RAMPS
5,291	SY	EXIT 15 RAMPS
11,786	SY	EXIT 16 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 12 RAMPS
806	TON	EXIT 13 RAMPS
1,358	TON	EXIT 14 RAMPS
309	TON	EXIT 15 RAMPS
688	TON	EXIT 16 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: 13a136\pl3a136.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3a136qs2.i

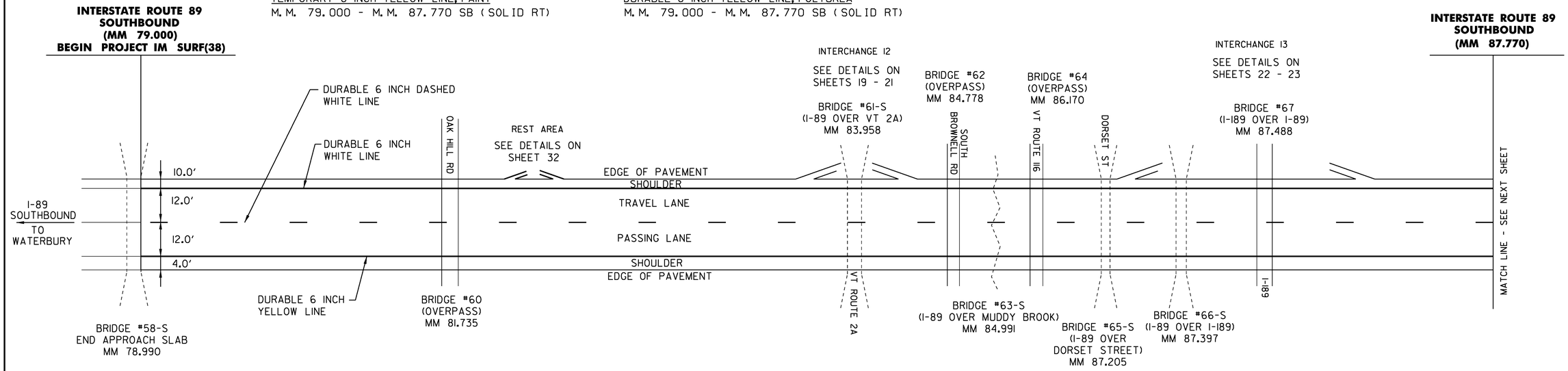
PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 16 OF 41

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)

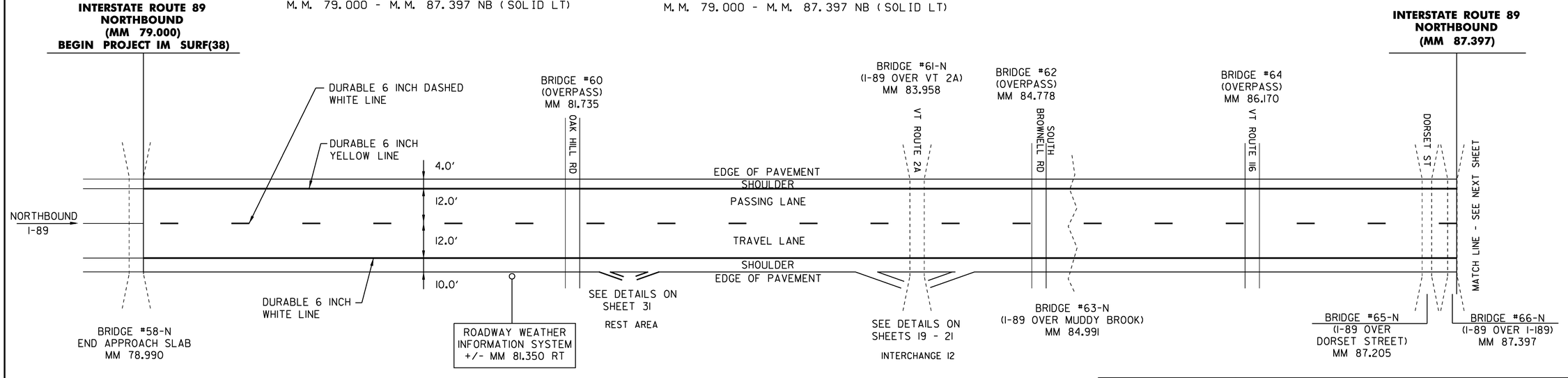


TEMPORARY 6 INCH WHITE LINE, PAINT
M. M. 79.000 - M. M. 87.397 NB (SOLID RT)
M. M. 79.000 - M. M. 87.397 NB (DASHED)

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)



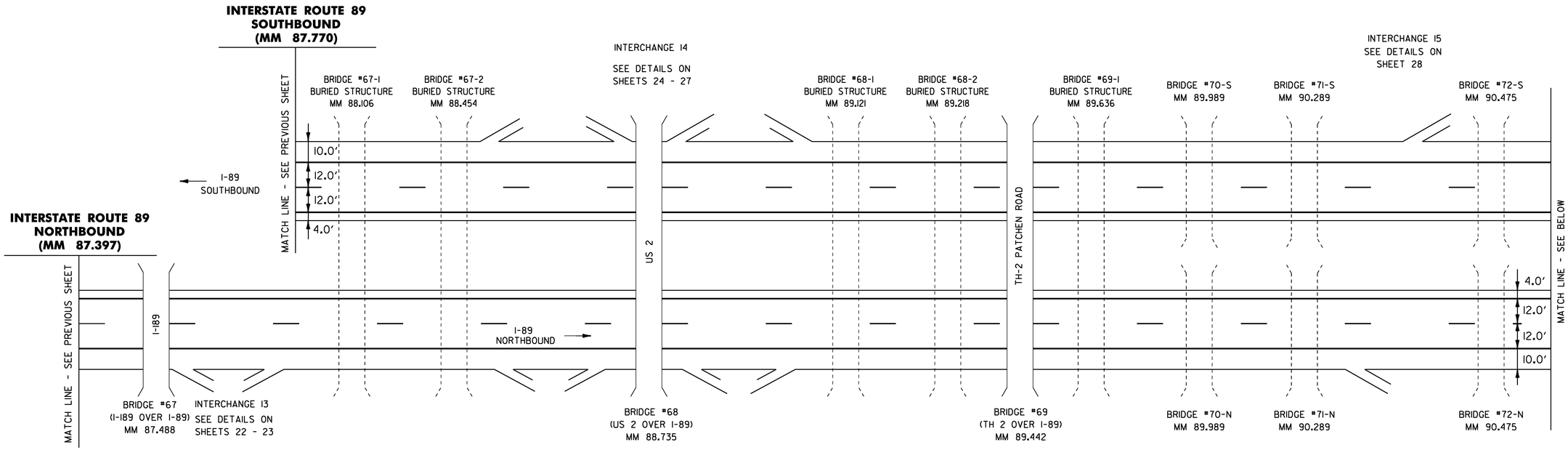
NOT TO SCALE

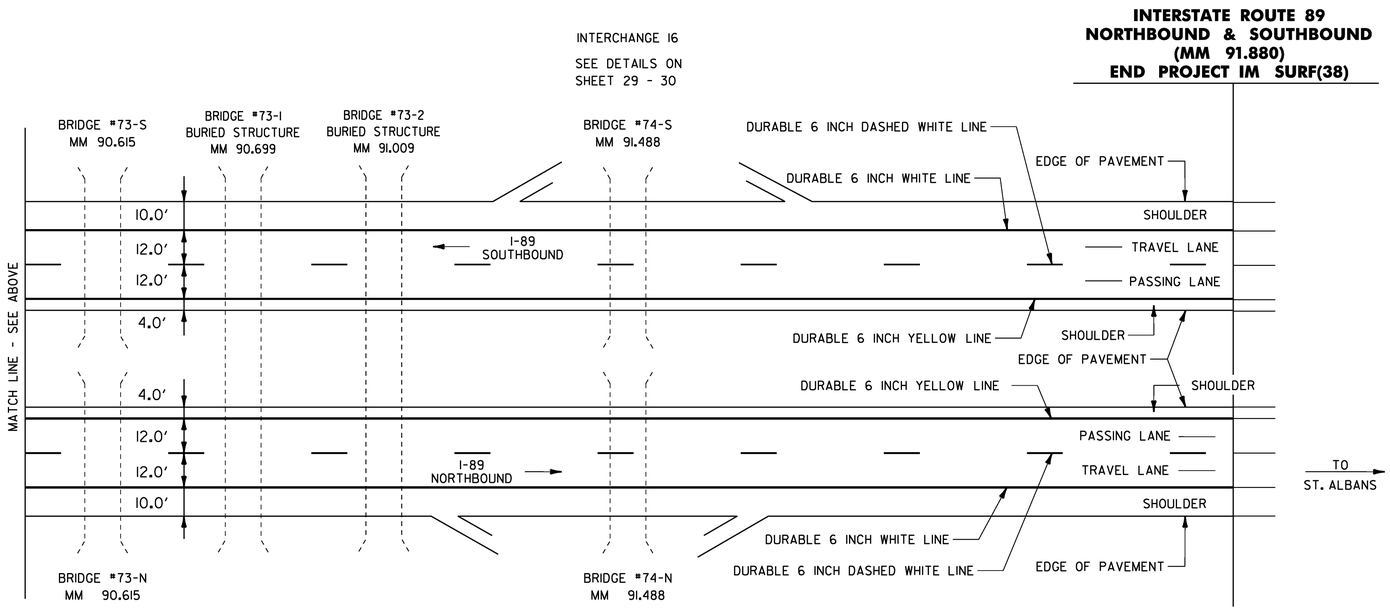
PAVEMENT MARKING DETAIL SHEET 1 MAINLINE

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

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

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 17 OF 41





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)

NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 2 MAINLINE

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmd2.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 18 OF 41

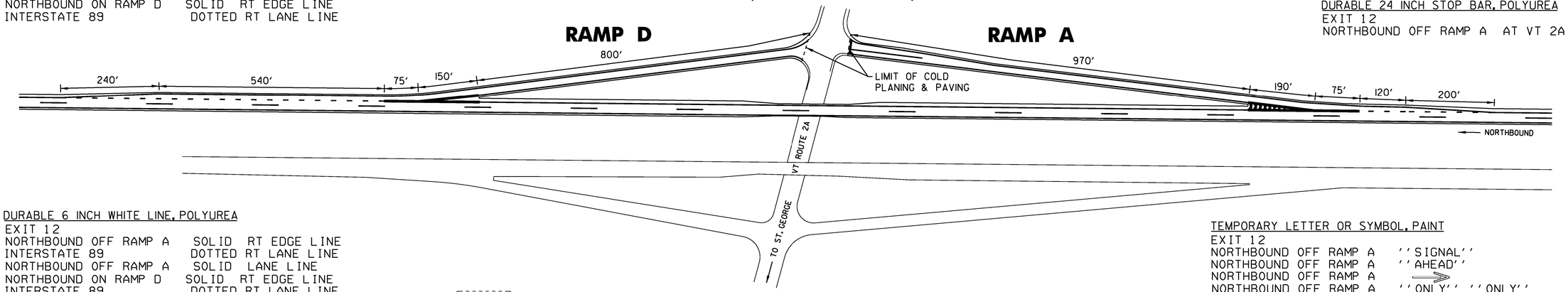
TEMPORARY 6 INCH WHITE LINE, PAINT
EXIT 12
NORTHBOUND OFF RAMP A SOLID RT EDGE LINE
INTERSTATE 89 DOTTED RT LANE LINE
NORTHBOUND OFF RAMP A SOLID LANE LINE
NORTHBOUND ON RAMP D SOLID RT EDGE LINE
INTERSTATE 89 DOTTED RT LANE LINE

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

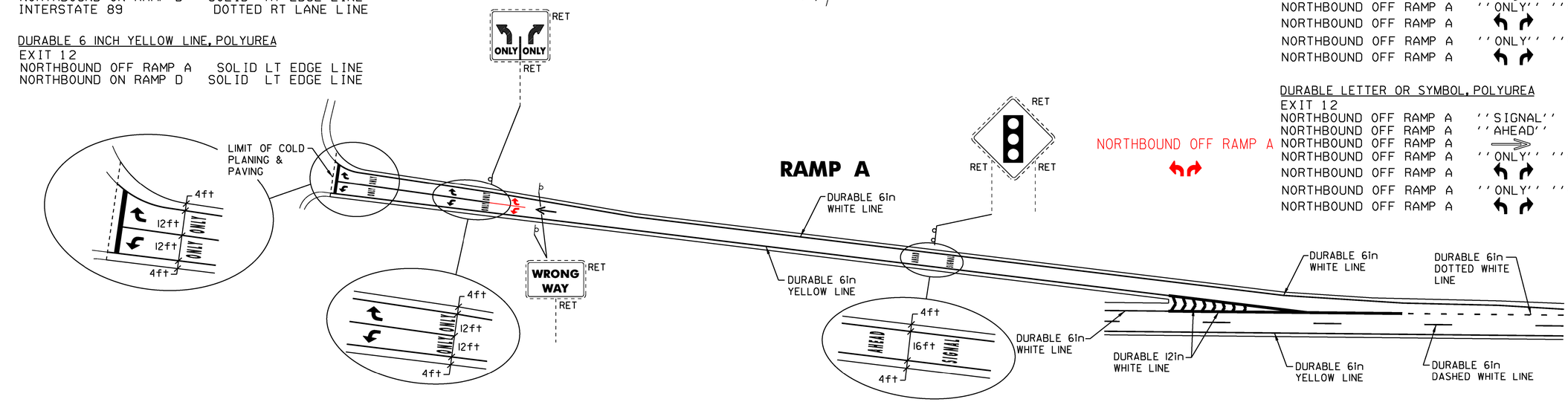


DURABLE 6 INCH WHITE LINE, POLYUREA
EXIT 12
NORTHBOUND OFF RAMP A SOLID RT EDGE LINE
INTERSTATE 89 DOTTED RT LANE LINE
NORTHBOUND OFF RAMP A SOLID LANE LINE
NORTHBOUND ON RAMP D SOLID RT EDGE LINE
INTERSTATE 89 DOTTED RT LANE LINE

DURABLE 6 INCH YELLOW LINE, POLYUREA
EXIT 12
NORTHBOUND OFF RAMP A SOLID LT EDGE LINE
NORTHBOUND ON RAMP D SOLID LT EDGE LINE

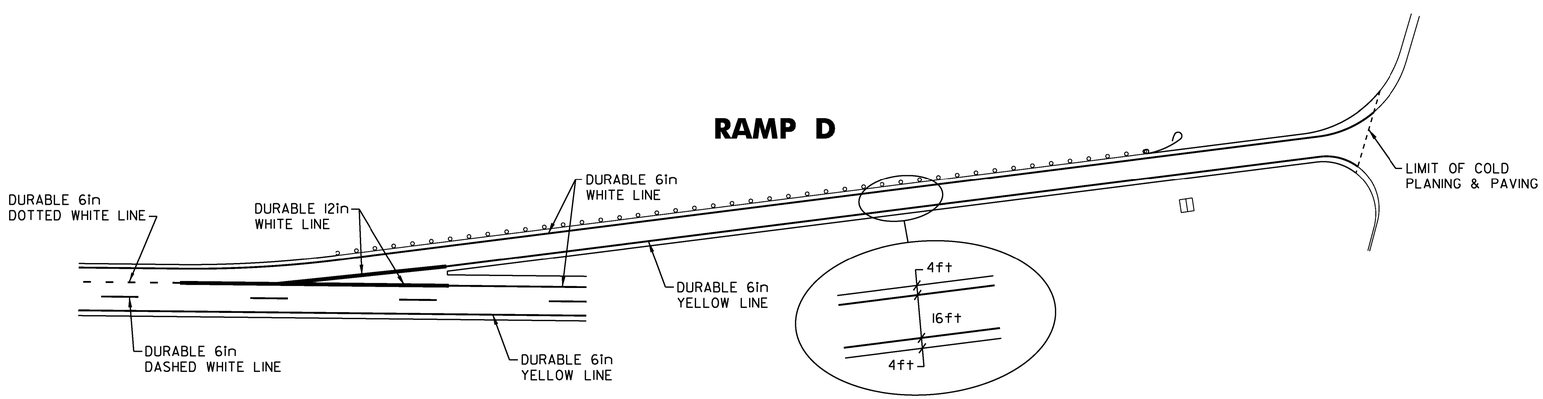
TEMPORARY LETTER OR SYMBOL, PAINT
EXIT 12
NORTHBOUND OFF RAMP A ''SIGNAL''
NORTHBOUND OFF RAMP A ''AHEAD''
NORTHBOUND OFF RAMP A
NORTHBOUND OFF RAMP A ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP A
NORTHBOUND OFF RAMP A ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP A

DURABLE LETTER OR SYMBOL, POLYUREA
EXIT 12
NORTHBOUND OFF RAMP A ''SIGNAL''
NORTHBOUND OFF RAMP A ''AHEAD''
NORTHBOUND OFF RAMP A
NORTHBOUND OFF RAMP A ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP A
NORTHBOUND OFF RAMP A ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP A



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



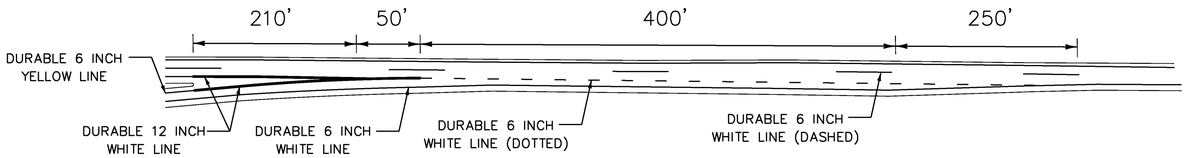
NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 3 EXIT 12 NB

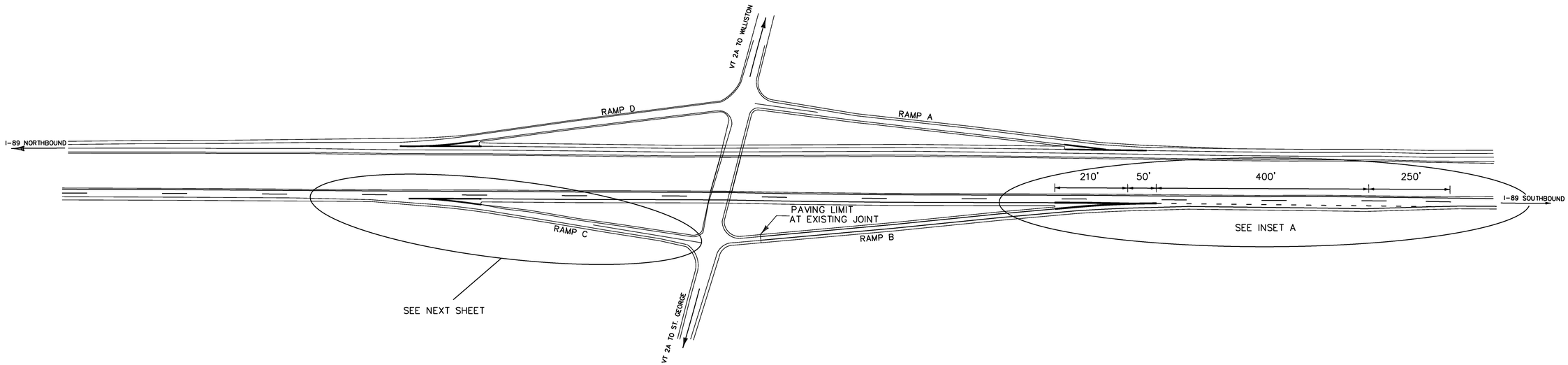
PROJECT NAME: RICHMOND - COLCHESTER
PROJECT NUMBER: IM SURF (38)

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)



INSET A



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

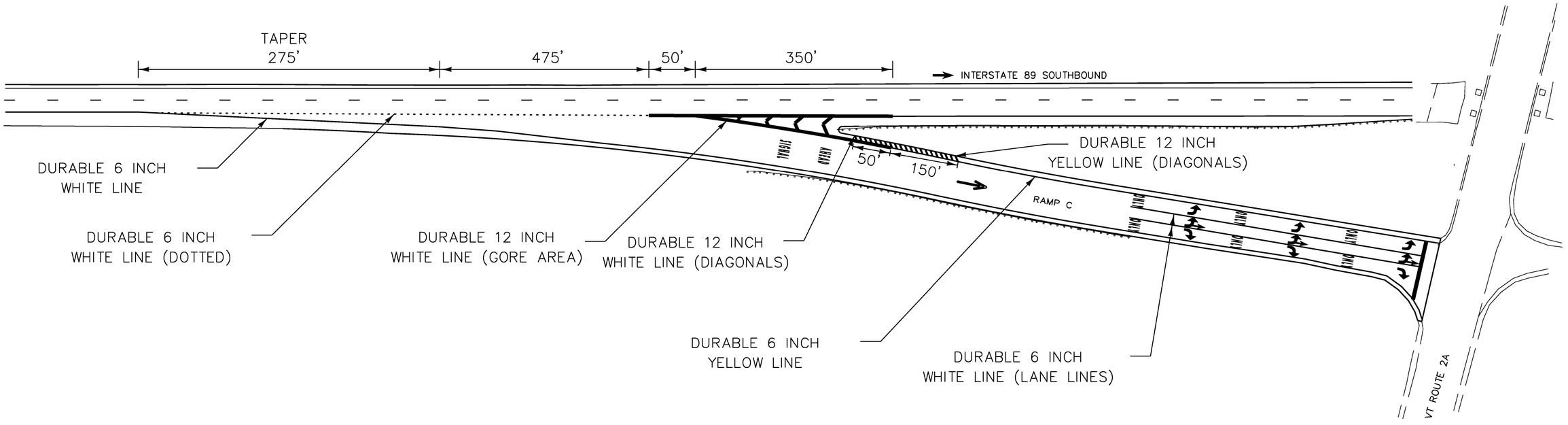
PAVEMENT MARKING DETAIL SHEET 4
EXIT 12 SB

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmd4.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
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
SOUTHBOUND OFF RAMP C ''ONLY'' ''ONLY''
SOUTHBOUND OFF RAMP C
SOUTHBOUND OFF RAMP C ''ONLY'' ''ONLY''
SOUTHBOUND OFF RAMP C
SOUTHBOUND OFF RAMP C ''ONLY'' ''ONLY''
SOUTHBOUND OFF RAMP C

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
SOUTHBOUND OFF RAMP C ''ONLY'' ''ONLY''
SOUTHBOUND OFF RAMP C
SOUTHBOUND OFF RAMP C ''ONLY'' ''ONLY''
SOUTHBOUND OFF RAMP C
SOUTHBOUND OFF RAMP C ''ONLY'' ''ONLY''
SOUTHBOUND OFF RAMP C

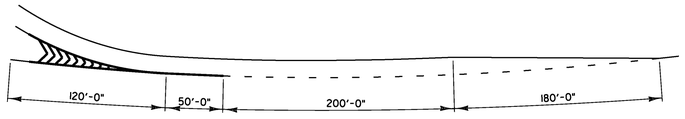
DURABLE 24 INCH STOP BAR, POLYUREA
EXIT 12
SOUTHBOUND OFF RAMP C AT VT 2A

NOT TO SCALE

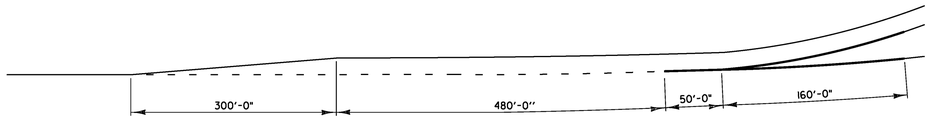
PAVEMENT MARKING DETAIL SHEET 5 EXIT 12 SB

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: pl3al36pmd5.i	SHEET 21 OF 41

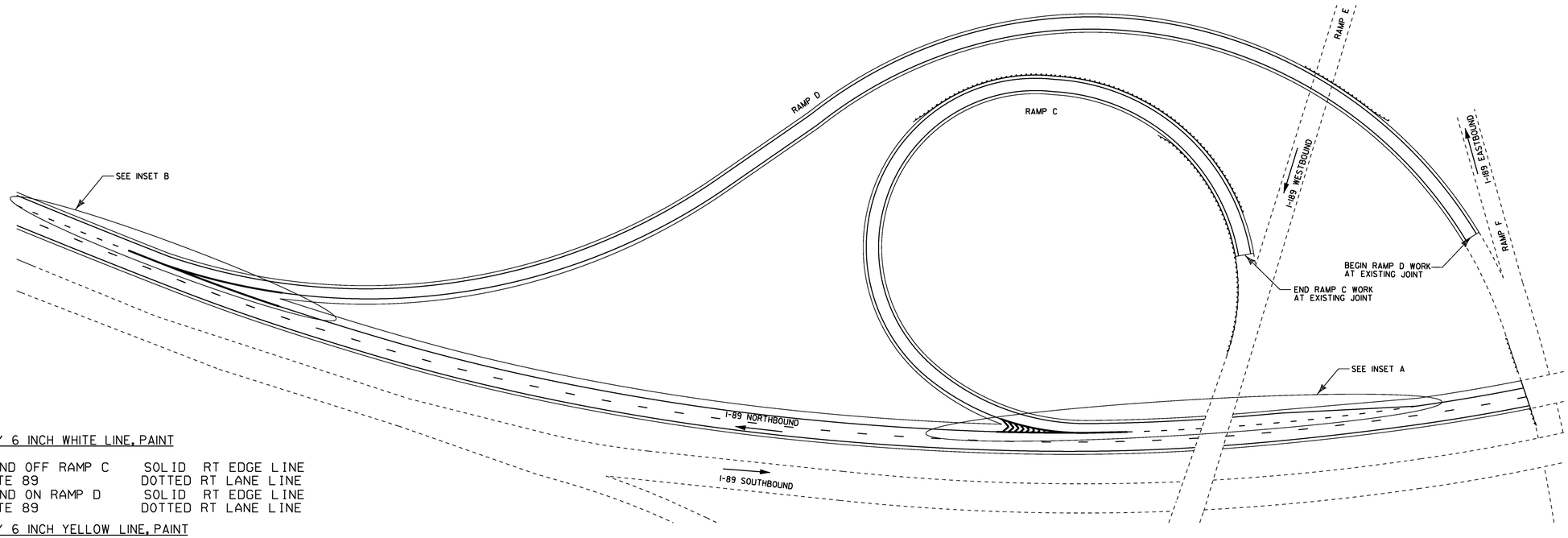
INTERCHANGE #13
(NORTHBOUND)



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

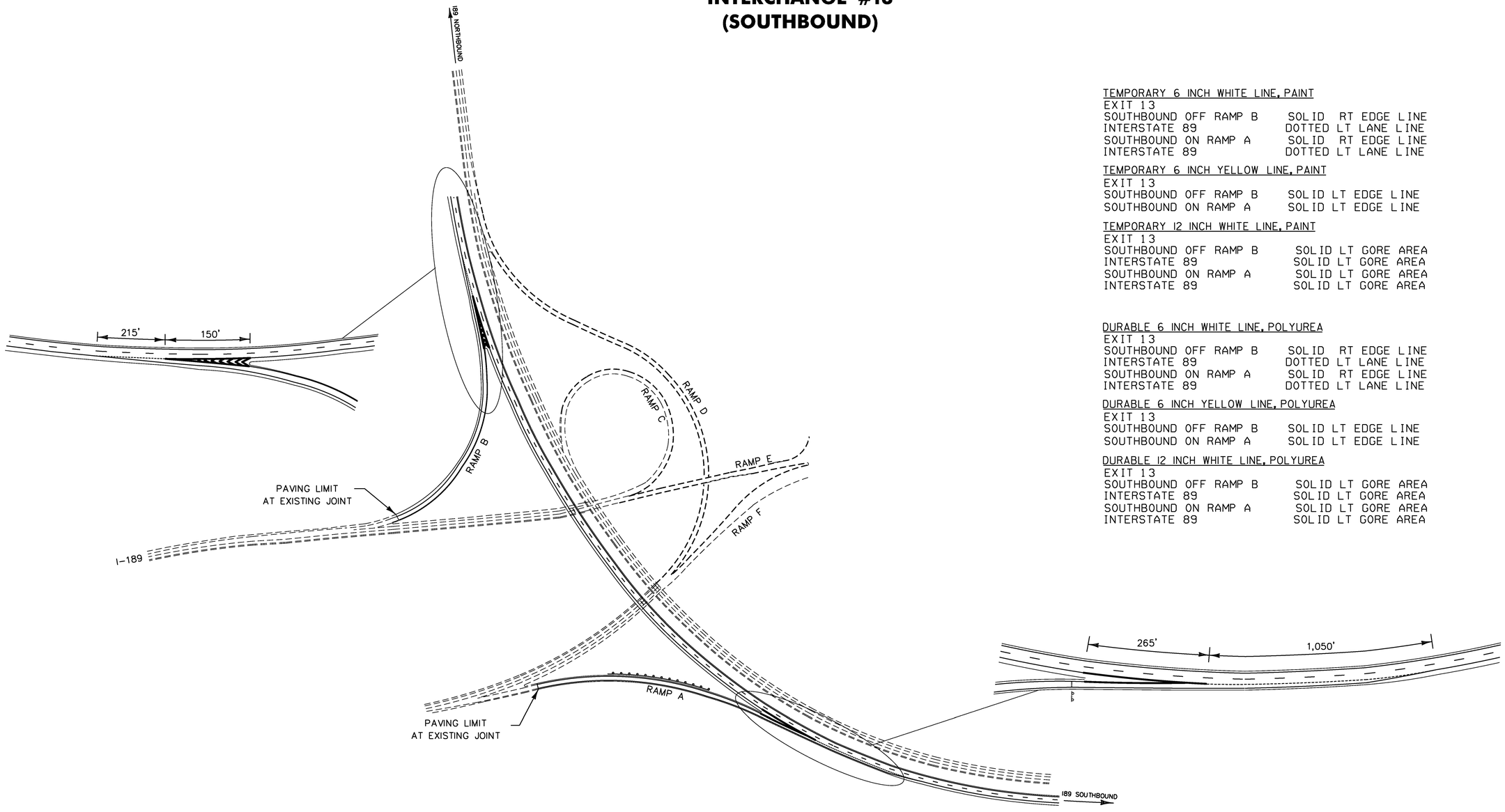
EXIT 13	
NORTHBOUND OFF RAMP C	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
NORTHBOUND ON RAMP D	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA

NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 6 EXIT 13 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: pl3al36pmd6.1	SHEET 22 OF 41

INTERCHANGE #13
(SOUTHBOUND)



TEMPORARY 6 INCH WHITE LINE, PAINT

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

TEMPORARY 6 INCH YELLOW LINE, PAINT

EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP A	SOLID LT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, PAINT

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

DURABLE 6 INCH WHITE LINE, POLYUREA

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

DURABLE 6 INCH YELLOW LINE, POLYUREA

EXIT 13	
SOUTHBOUND OFF RAMP B	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP A	SOLID LT EDGE LINE

DURABLE 12 INCH WHITE LINE, POLYUREA

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

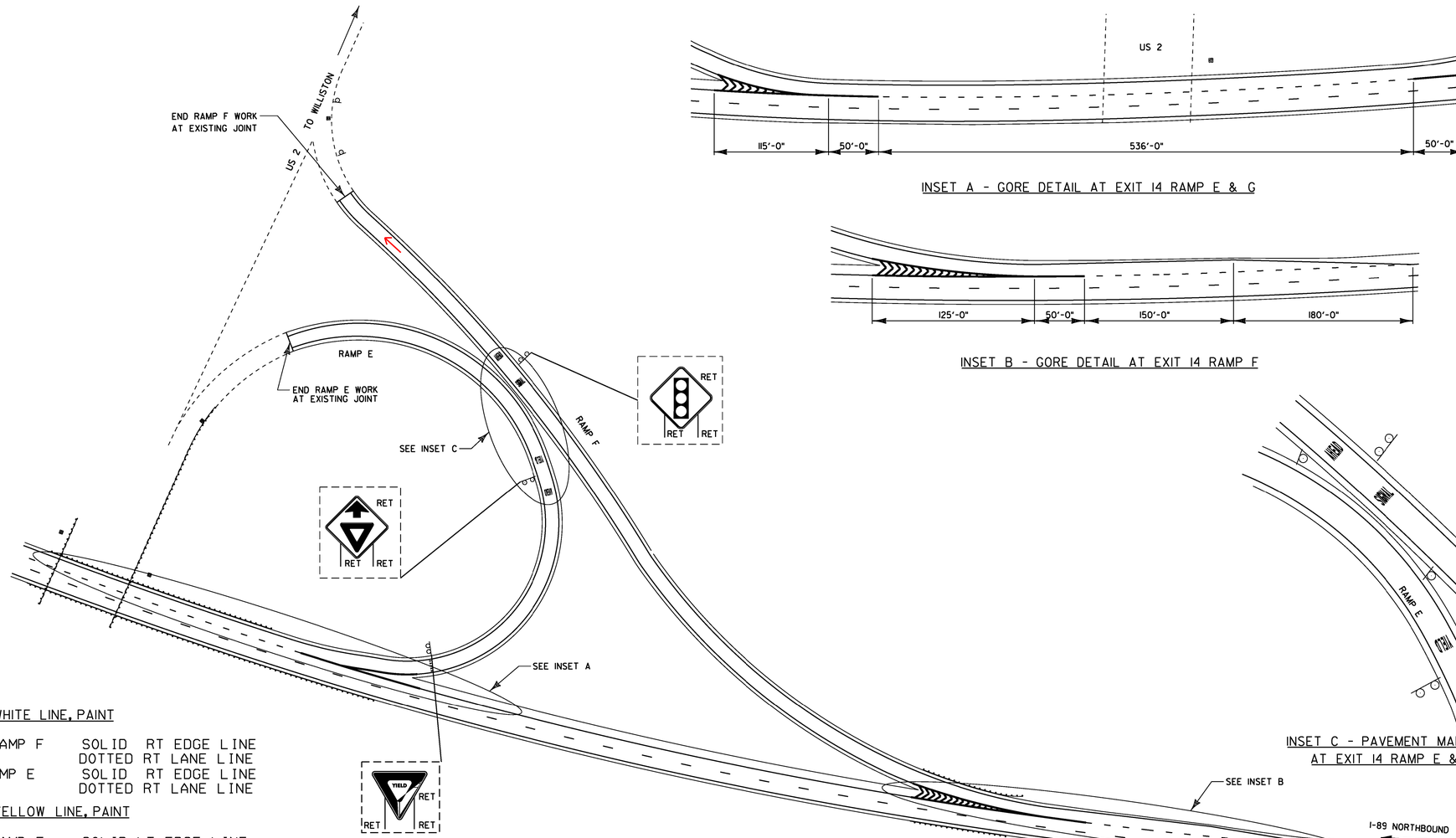
PAVEMENT MARKING DETAIL SHEET 7 EXIT 13 SB

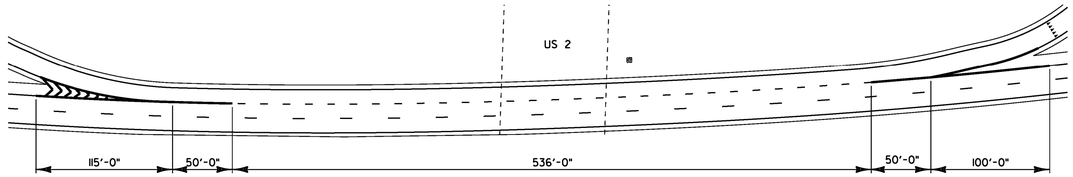
PROJECT NAME: RICHMOND - COLCHESTER
PROJECT NUMBER: IM SURF (38)

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmd7.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 23 OF 41

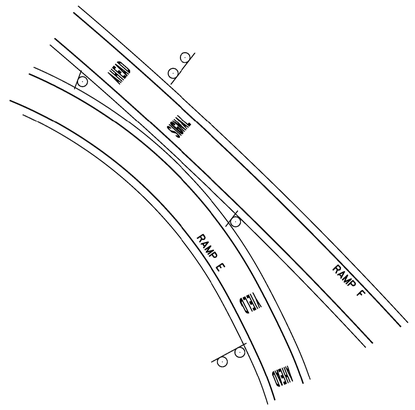
INTERCHANGE #14
(NORTHBOUND)





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

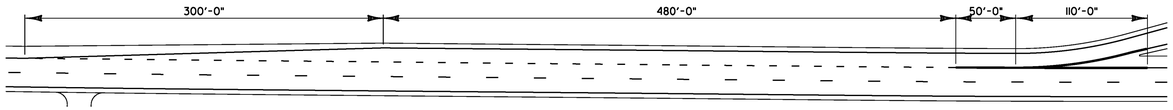
DURABLE LETTER OR SYMBOL, POLYUREA
EXIT 14
NORTHBOUND OFF RAMP F ''SIGNAL''
NORTHBOUND OFF RAMP F ''AHEAD''
NORTHBOUND OFF RAMP F ⟹
NORTHBOUND ON RAMP E ''YIELD''
NORTHBOUND ON RAMP E ''AHEAD''
NORTHBOUND OFF RAMP E YIELD TRIANGLES (5 EA.)

NOT TO SCALE

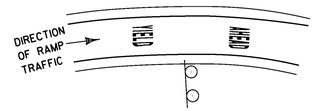
PAVEMENT MARKING DETAIL SHEET 8 EXIT 14 NB

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

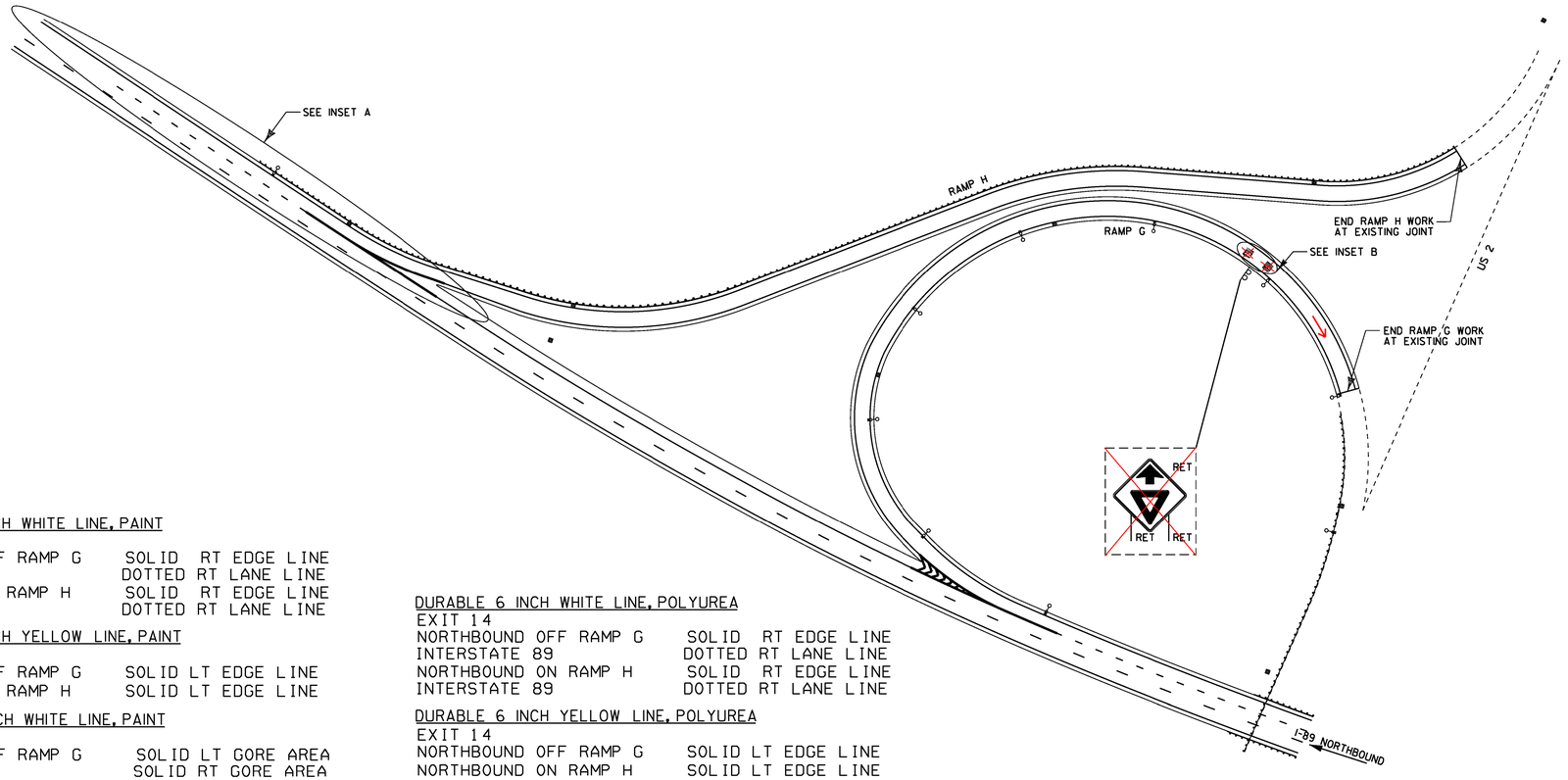
INTERCHANGE #14
(NORTHBOUND)



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

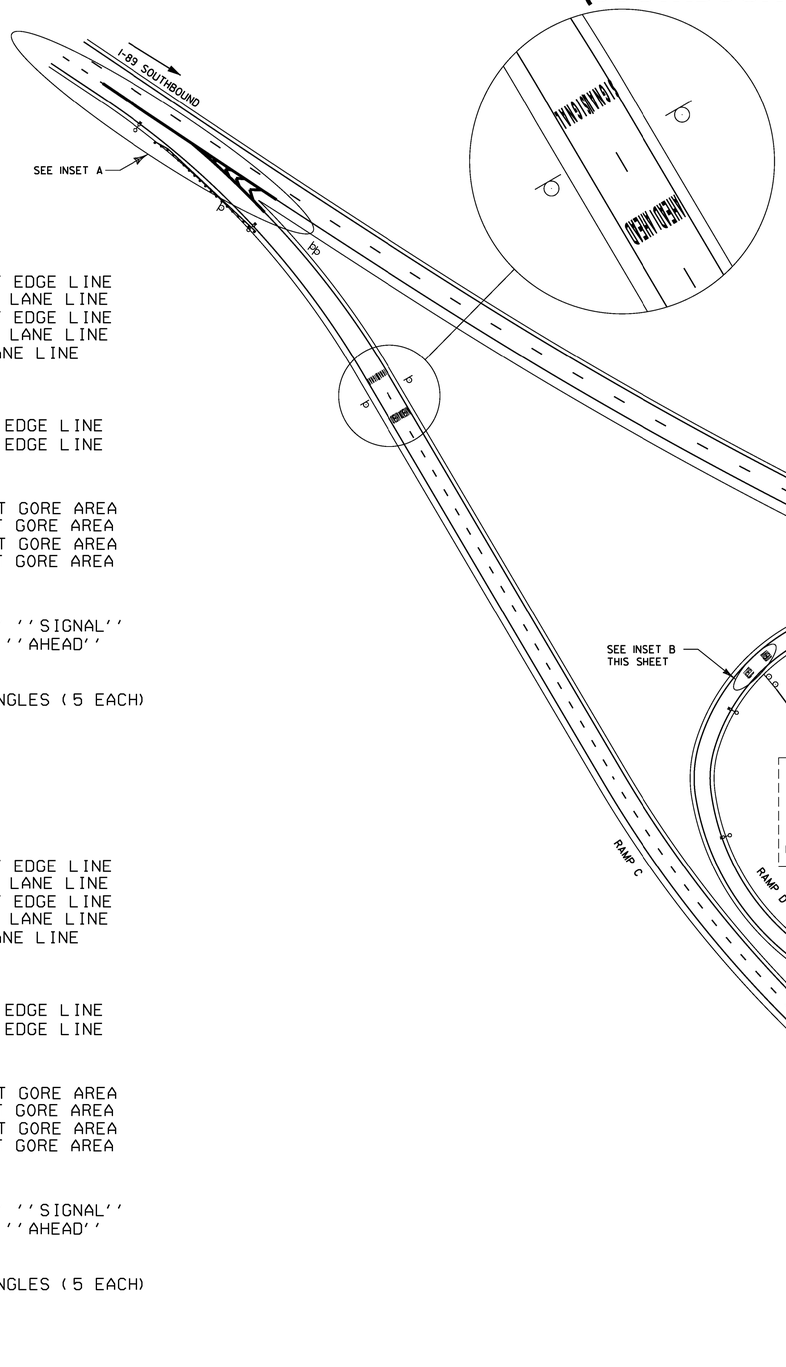
~~NORTHBOUND OFF RAMP G~~	~~''YIELD''~~
~~NORTHBOUND OFF RAMP G~~	~~''AHEAD''~~
NORTHBOUND OFF RAMP G	⟹

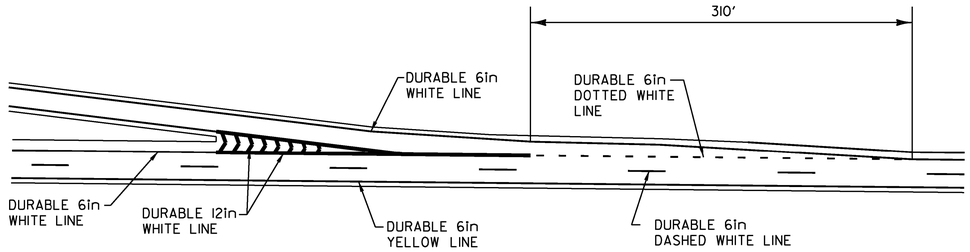
NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 9 EXIT 14 NB

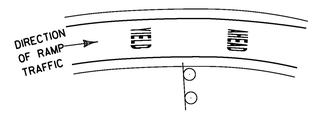
PROJECT NAME:	RICHMOND - COLCHESTER
PROJECT NUMBER:	IM SURF (38)
FILE NAME: pl3al36.dgn	PLOT DATE: 19-DEC-2013
PROJECT LEADER: M. FOWLER	DRAWN BY: LOCKE
DESIGNED BY: LOCKE	CHECKED BY: FOWLER
IPARM FILE NAME: pl3al36pmd9.i	SHEET 25 OF 41

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)
SOUTHBOUND ON RAMP C ⟶ ⟶

DURABLE 24 INCH STOP BAR, POLYUREA
EXIT 14
SOUTHBOUND OFF RAMP C AT US 2

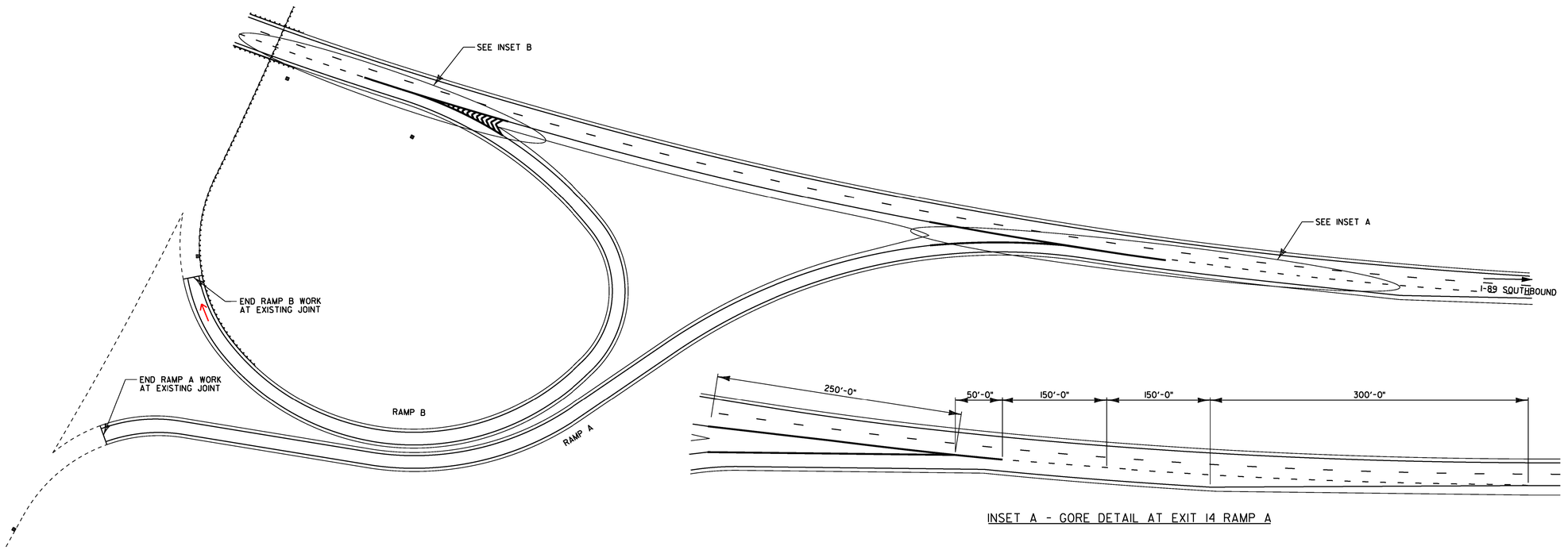
NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 10 EXIT 14 SB

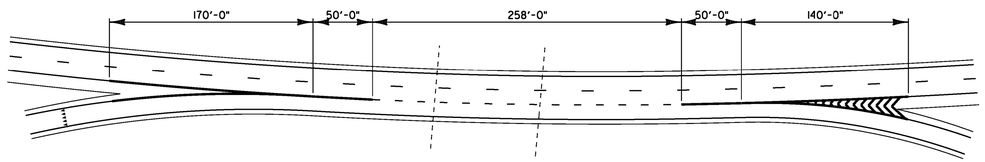
PROJECT NAME: RICHMOND - COLCHESTER
PROJECT NUMBER: IM SURF (38)

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmdl0.i
PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 26 OF 41

INTERCHANGE #14
(SOUTHBOUND)



INSET A - GORE DETAIL AT EXIT 14 RAMP A



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

DURABLE LETTER OR SYMBOL, POLYUREA
EXIT 14
SOUTHBOUND OFF RAMP B →

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

NOT TO SCALE

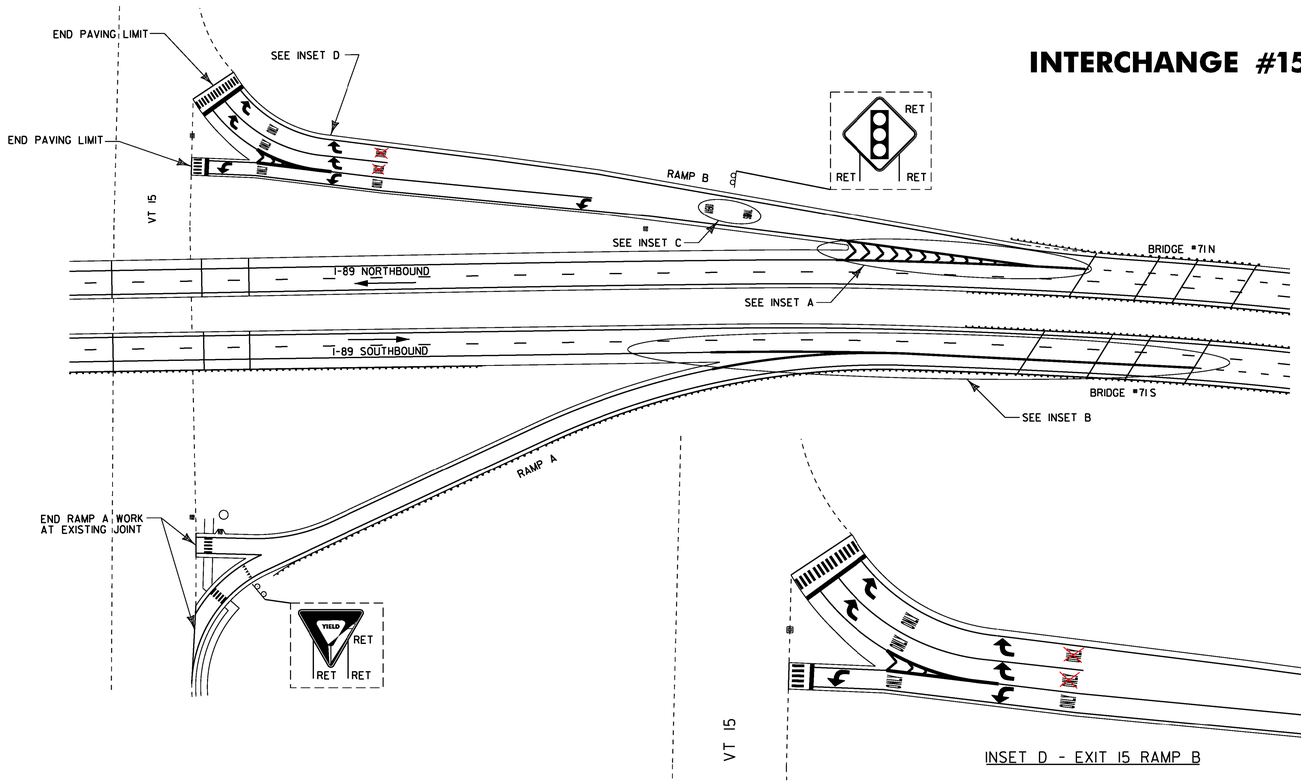
PAVEMENT MARKING DETAIL SHEET 11 EXIT 14 SB

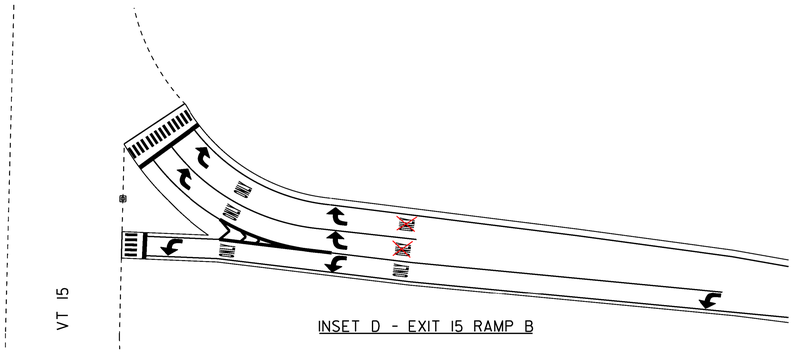
PROJECT NAME: RICHMOND - COLCHESTER
PROJECT NUMBER: IM SURF (38)

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmdll.i

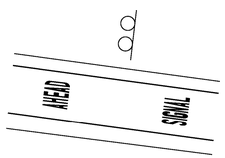
PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 27 OF 41

INTERCHANGE #15

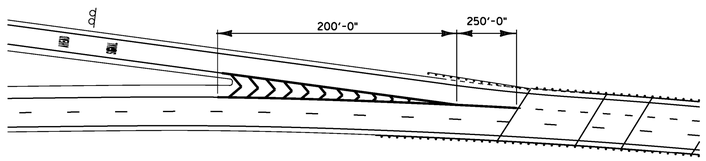




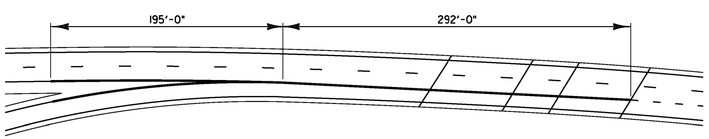
INSET D - EXIT 15 RAMP B



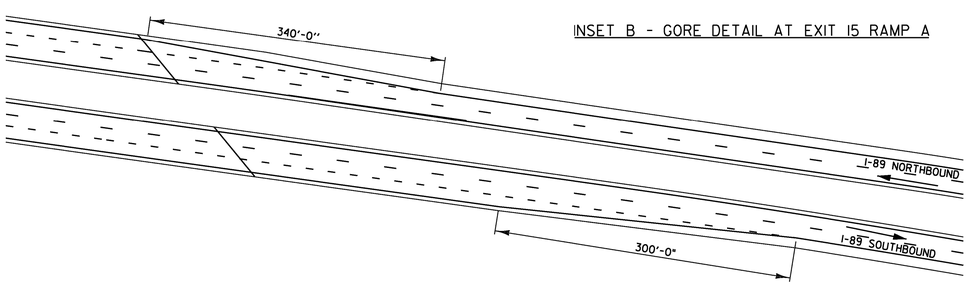
INSET C - EXIT 15 RAMP B



INSET A - GORE DETAIL AT EXIT 15 RAMP B



INSET B - GORE DETAIL AT EXIT 15 RAMP A



ACCEL/DECEL LANE DETAIL, EXIT 15

NOT TO SCALE

TEMPORARY CROSSWALK MARKING, PAINT
EXIT 15
SOUTHBOUND ON RAMP A
NORTHBOUND OFF RAMP B
NORTHBOUND OFF RAMP B

TEMPORARY 24 INCH STOP BAR, PAINT
EXIT 15
NORTHBOUND OFF RAMP B
NORTHBOUND OFF RAMP B

TEMPORARY 6 INCH WHITE LINE, PAINT
EXIT 15

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

TEMPORARY 6 INCH YELLOW LINE, PAINT
EXIT 15

NORTHBOUND OFF RAMP B	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP A	SOLID LT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, PAINT
EXIT 15

NORTHBOUND OFF RAMP B	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
NORTHBOUND OFF RAMP B	GORE AREA AT VT 15
SOUTHBOUND ON RAMP A	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

TEMPORARY LETTER OR SYMBOL, PAINT
EXIT 15

NORTHBOUND OFF RAMP B	''SIGNAL''
NORTHBOUND OFF RAMP B	''AHEAD''
NORTHBOUND OFF RAMP B	
NORTHBOUND OFF RAMP B	''ONLY'' ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP B	
NORTHBOUND OFF RAMP B	''ONLY'' ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP B	
NORTHBOUND OFF RAMP B	''ONLY'' ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP B	
SOUTHBOUND ON RAMP A	YIELD TRIANGLES (5 EACH)

DURABLE 6 INCH WHITE LINE, POLYUREA
EXIT 15

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

DURABLE 6 INCH YELLOW LINE, POLYUREA
EXIT 15

NORTHBOUND OFF RAMP B	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP A	SOLID LT EDGE LINE

DURABLE 12 INCH WHITE LINE, POLYUREA
EXIT 15

NORTHBOUND OFF RAMP B	SOLID LT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
NORTHBOUND OFF RAMP B	GORE AREA AT VT 15
SOUTHBOUND ON RAMP A	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA

DURABLE LETTER OR SYMBOL, POLYUREA
EXIT 15

NORTHBOUND OFF RAMP B	''SIGNAL''
NORTHBOUND OFF RAMP B	''AHEAD''
NORTHBOUND OFF RAMP B	
~~NORTHBOUND OFF RAMP B~~	~~''ONLY'' ''ONLY'' ''ONLY''~~
~~NORTHBOUND OFF RAMP B~~	
NORTHBOUND OFF RAMP B	''ONLY'' ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP B	
NORTHBOUND OFF RAMP B	''ONLY'' ''ONLY'' ''ONLY''
NORTHBOUND OFF RAMP B	
SOUTHBOUND ON RAMP A	YIELD TRIANGLES (5 EACH)
NORTHBOUND OFF RAMP B	

DURABLE CROSSWALK MARKING, POLYUREA
EXIT 15
SOUTHBOUND ON RAMP A
NORTHBOUND OFF RAMP B
NORTHBOUND OFF RAMP B

DURABLE 24 INCH STOP BAR, POLYUREA
EXIT 15
NORTHBOUND OFF RAMP B
NORTHBOUND OFF RAMP B

PAVEMENT MARKING DETAIL SHEET 12 EXIT 15

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmdl2.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER

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 6 INCH YELLOW LINE, POLYUREA
EXIT 16

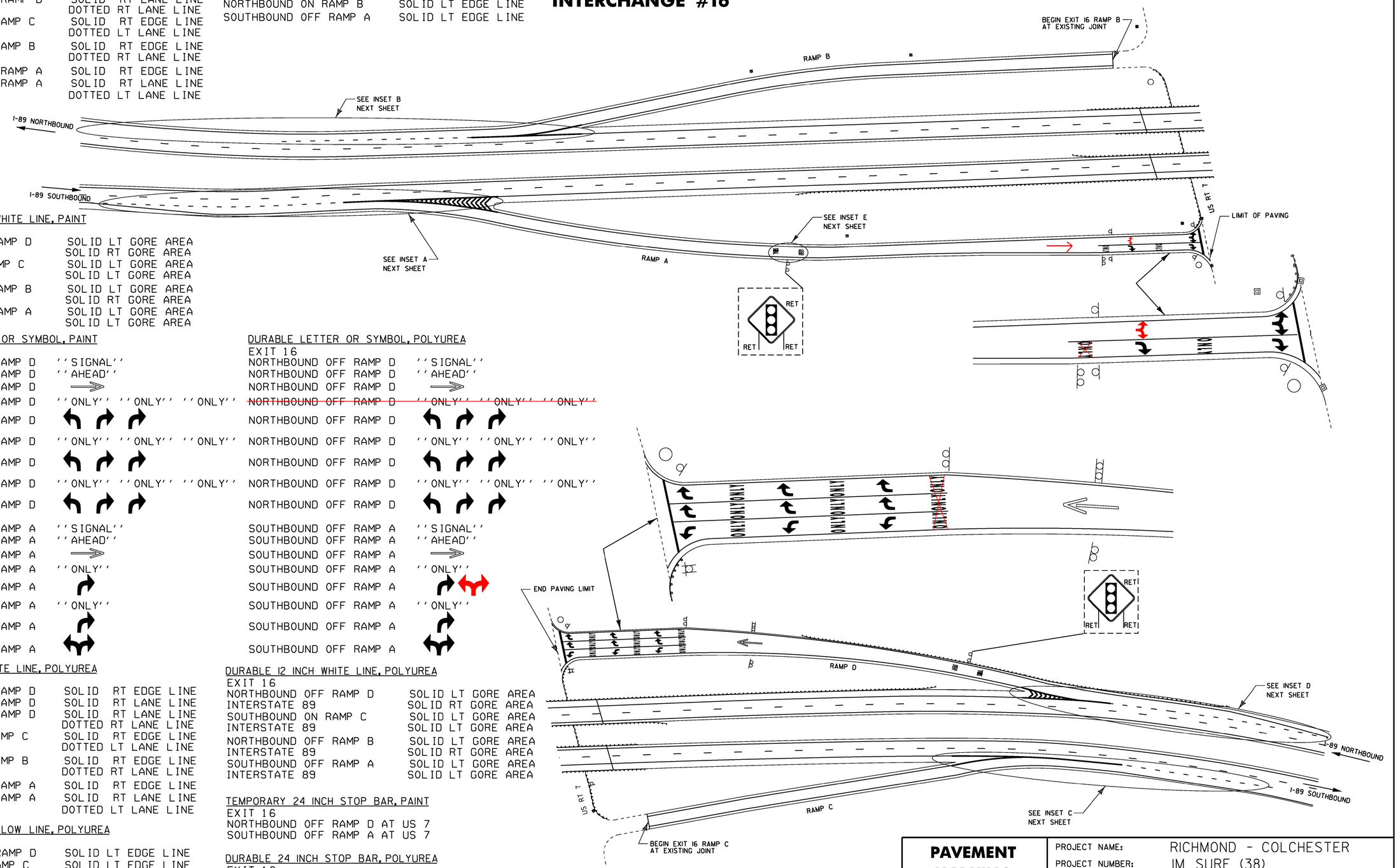
NORTHBOUND OFF RAMP D	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP C	SOLID LT EDGE LINE
NORTHBOUND ON RAMP B	SOLID LT EDGE LINE
SOUTHBOUND OFF RAMP A	SOLID LT EDGE LINE

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



NOT TO SCALE

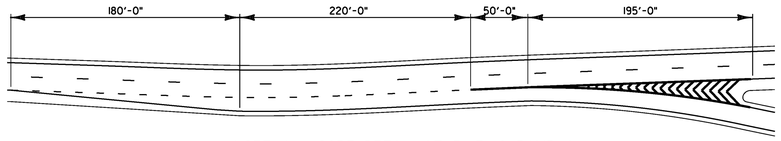
PAVEMENT MARKING DETAIL SHEET 13 EXIT 16

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

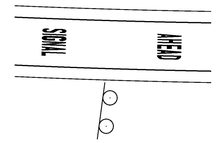
FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmdl3.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 29 OF 41

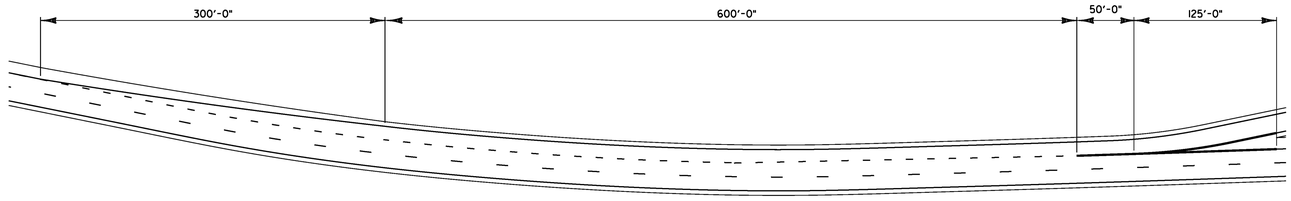
INTERCHANGE #16



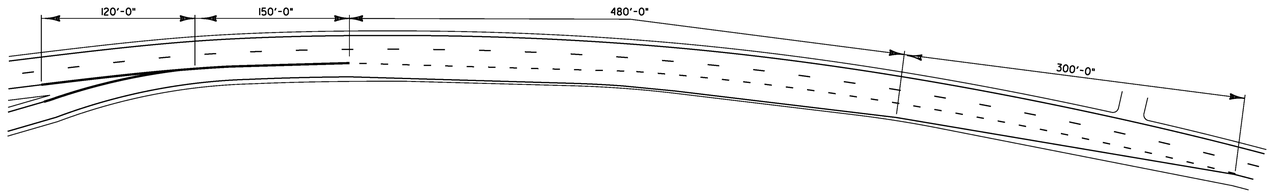
INSET A - GORE DETAIL AT EXIT 16 RAMP A



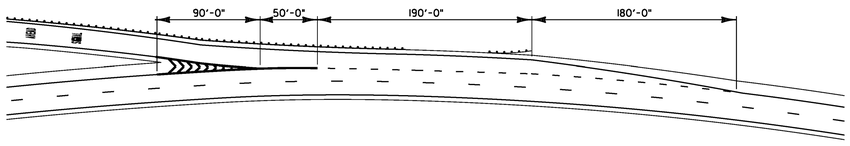
INSET E - EXIT 16 RAMP A



INSET B - GORE DETAIL AT EXIT 16 RAMP B



INSET C - GORE DETAIL AT EXIT 16 RAMP C



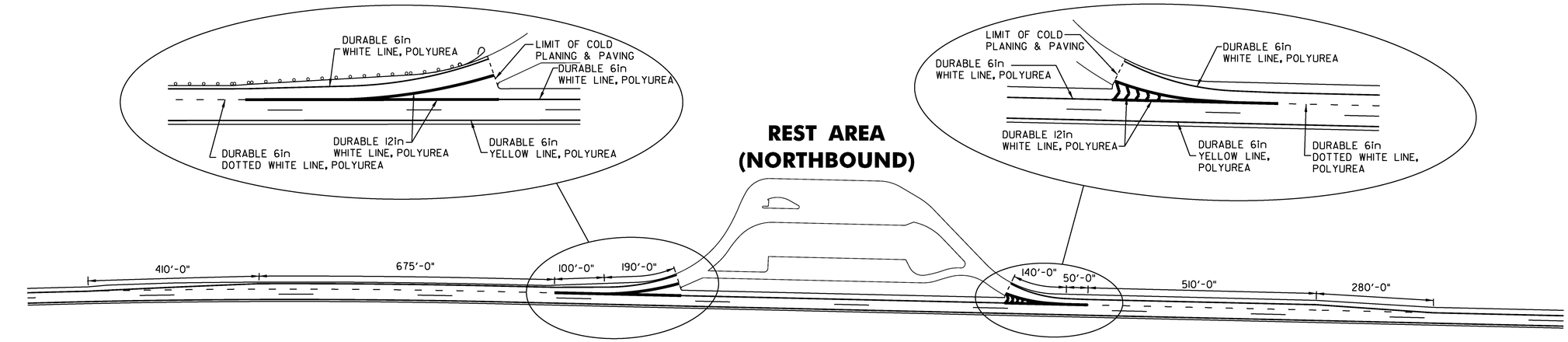
INSET D - GORE DETAIL AT EXIT 16 RAMP D

NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 14 EXIT 16

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: pl3al36pmdl4.i	SHEET 30 OF 41

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

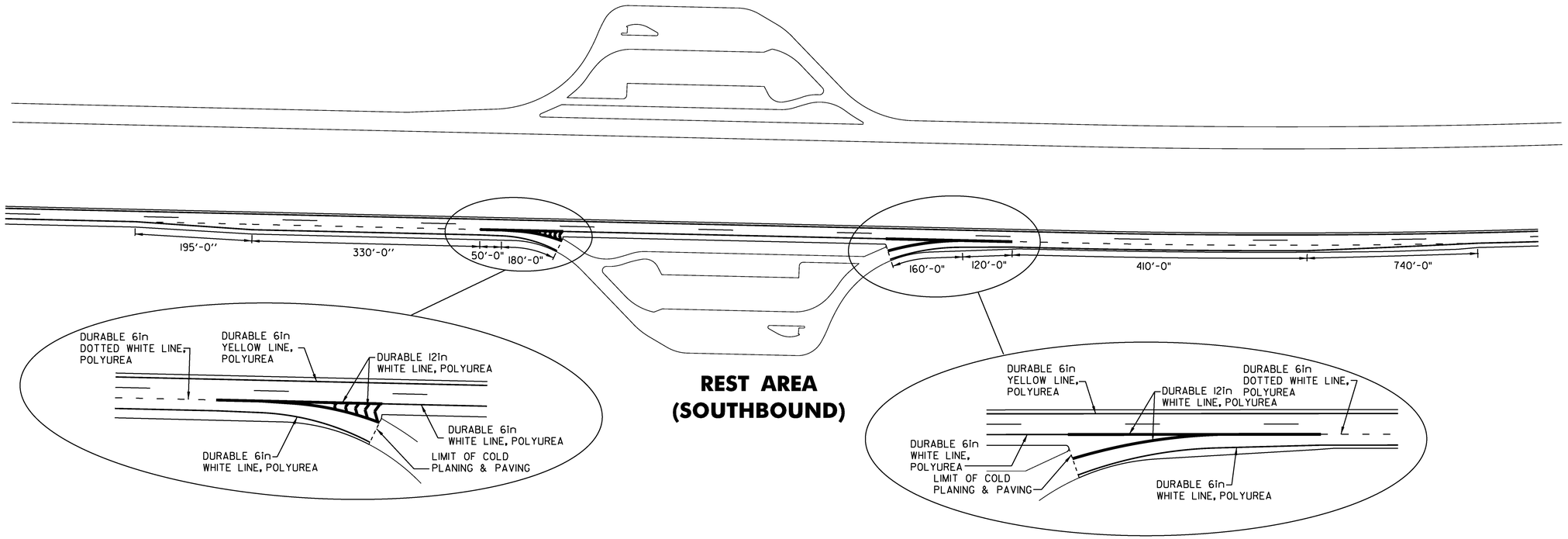
PAVEMENT MARKING DETAIL SHEET 15 REST AREA

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmdl5.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
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

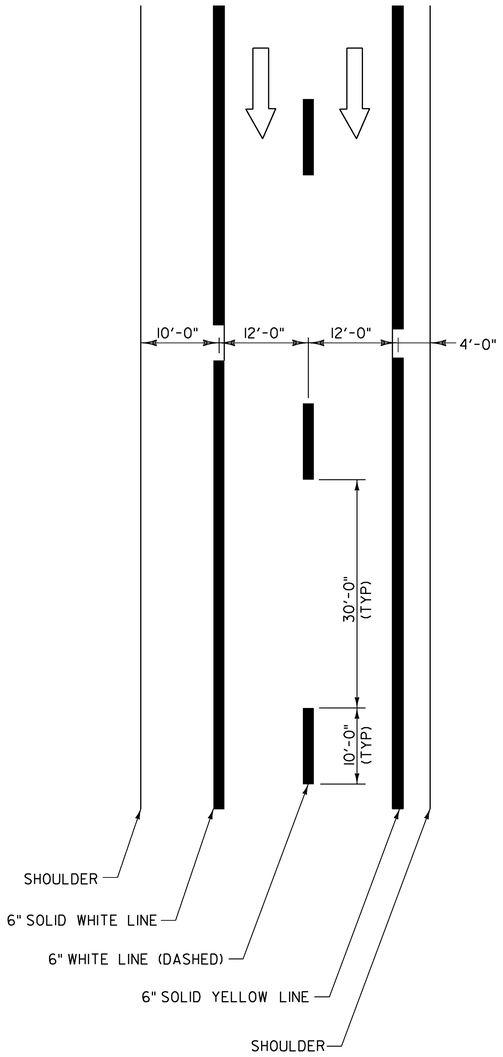
NOT TO SCALE

PAVEMENT MARKING DETAIL SHEET 16 REST AREA

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

FILE NAME: p12a398.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: p12a398pmdl6.i

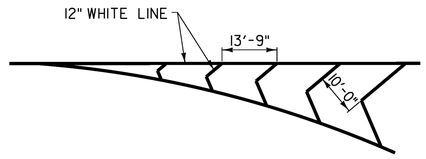
PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 32 OF 41



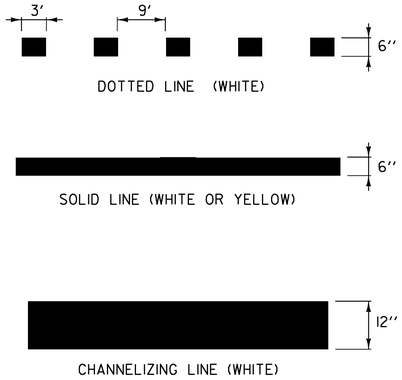
TYPICAL MAINLINE MARKING PLAN
NOT TO SCALE

LEGEND

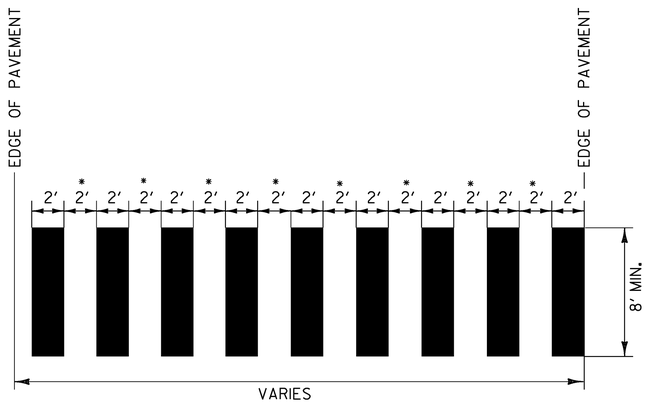
DIRECTION OF TRAFFIC FLOW



GORE MARKING DETAIL
NOT TO SCALE

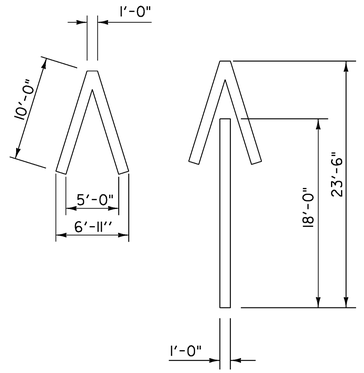


PAVEMENT MARKING LINE DETAILS
NOT TO SCALE

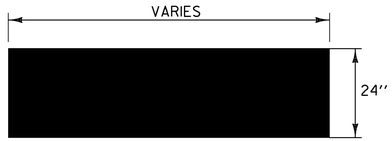


* ADJUST SPACING (12''-24'') TO AVOID WHEEL PATHS

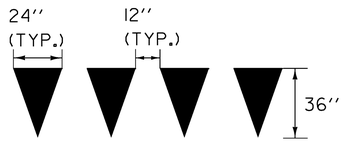
BLOCK PATTERN CROSSWALK DETAIL



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

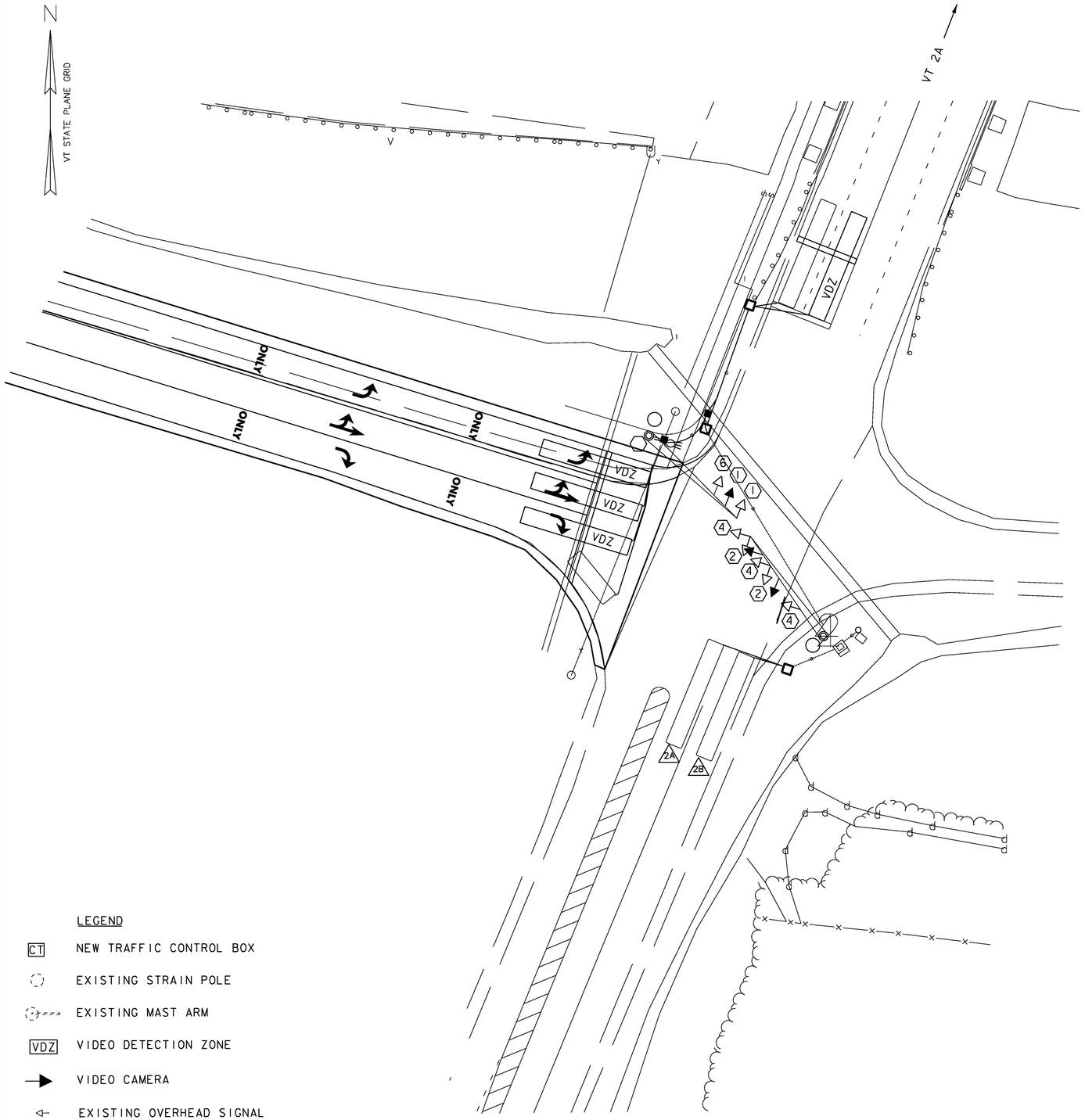
TO BE INSTALLED ONLY AT THE DIRECTION OF THE ENGINEER.
TO BE PAID AS ONE LETTER OR SYMBOL PER TRIANGLE.

PAVEMENT MARKING DETAIL SHEET 17

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36pmdl7.i

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



LEGEND

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

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

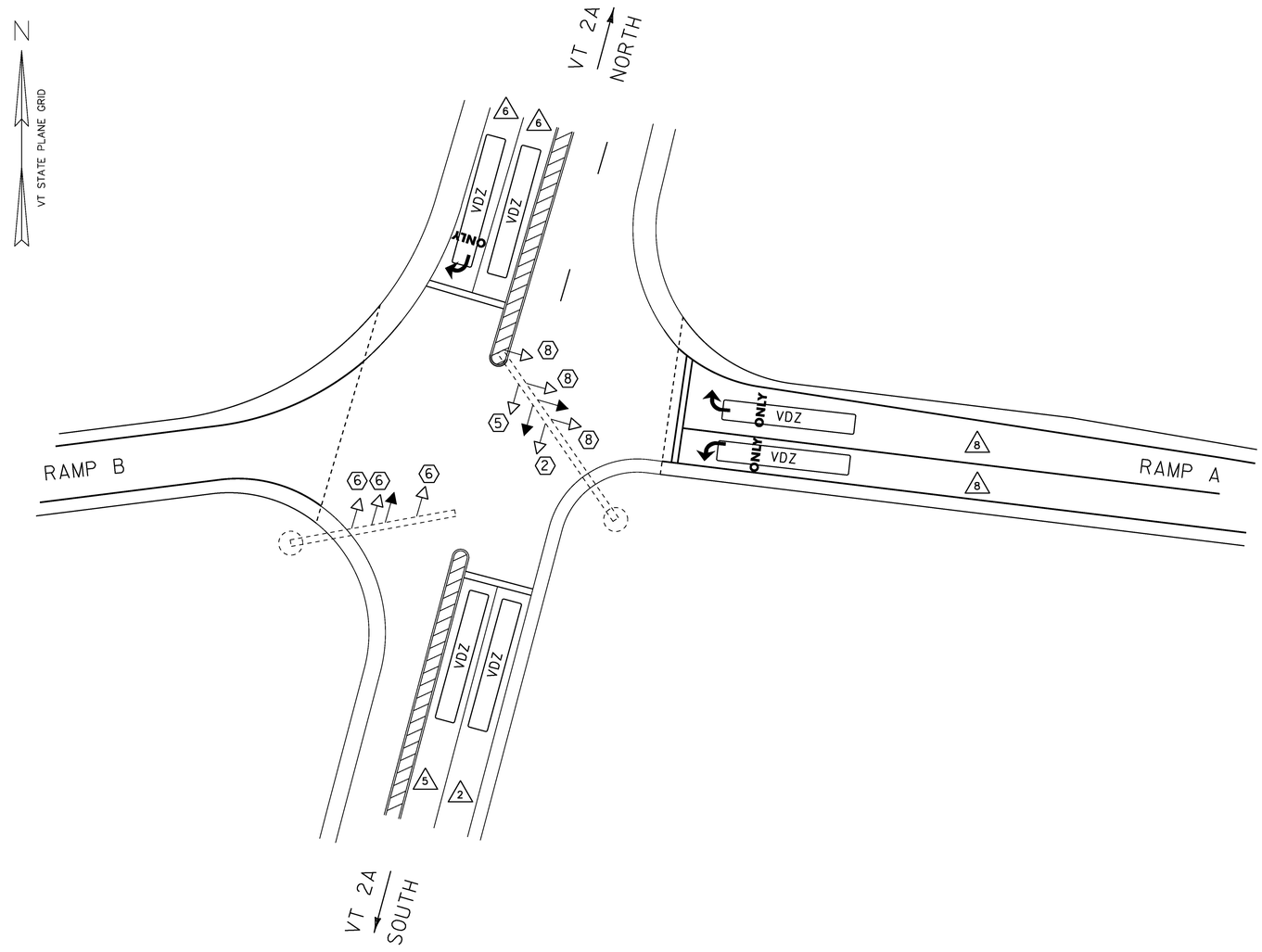
EXIT 12 SOUTHBOUND OFF RAMP C

VIDEO VEHICLE DETECTION SYSTEM DETAILS 1

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36vid.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 34 OF 41



LEGEND

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

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.

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

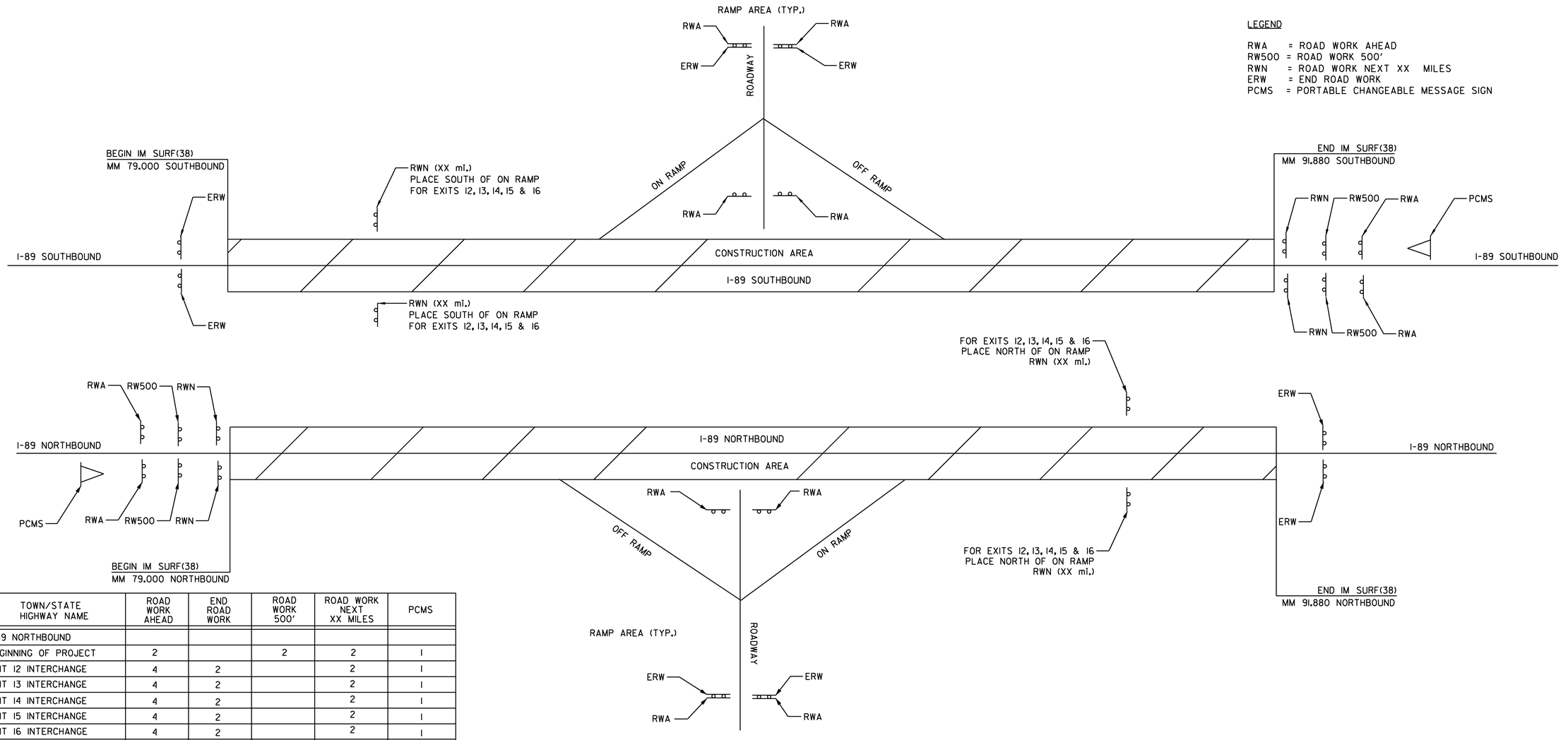
EXIT 12 NORTHBOUND OFF RAMP A

VIDEO VEHICLE DETECTION SYSTEM DETAILS 2

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36vid2.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
SHEET 35 OF 41



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			
TOTAL	22	12	2	12	6

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			
TOTAL	22	12	2	12	6

CONSTRUCTION APPROACH SIGNING SHEET

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

FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36cas.i

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.

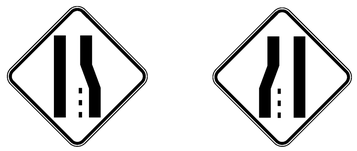
5. IN ADVANCE OF ANY PROPOSED INTERCHANGE RAMP CLOSURES THE CONTRACTOR SHALL SUBMIT A PLAN THAT WILL DEPICT HOW ADVANCED WARNING TO THE TRAVELING PUBLIC WILL BE ACCOMMODATED DURING THE CLOSURE. ADVANCED WARNING SHALL BE DEFINED AS PROVIDING ADVANCED WARNINGS SIGNS, BOTH STATIC AND PCMS, THAT PROVIDE 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

CONSTRUCTION APPROACH SIGNING SHEET NOTES

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

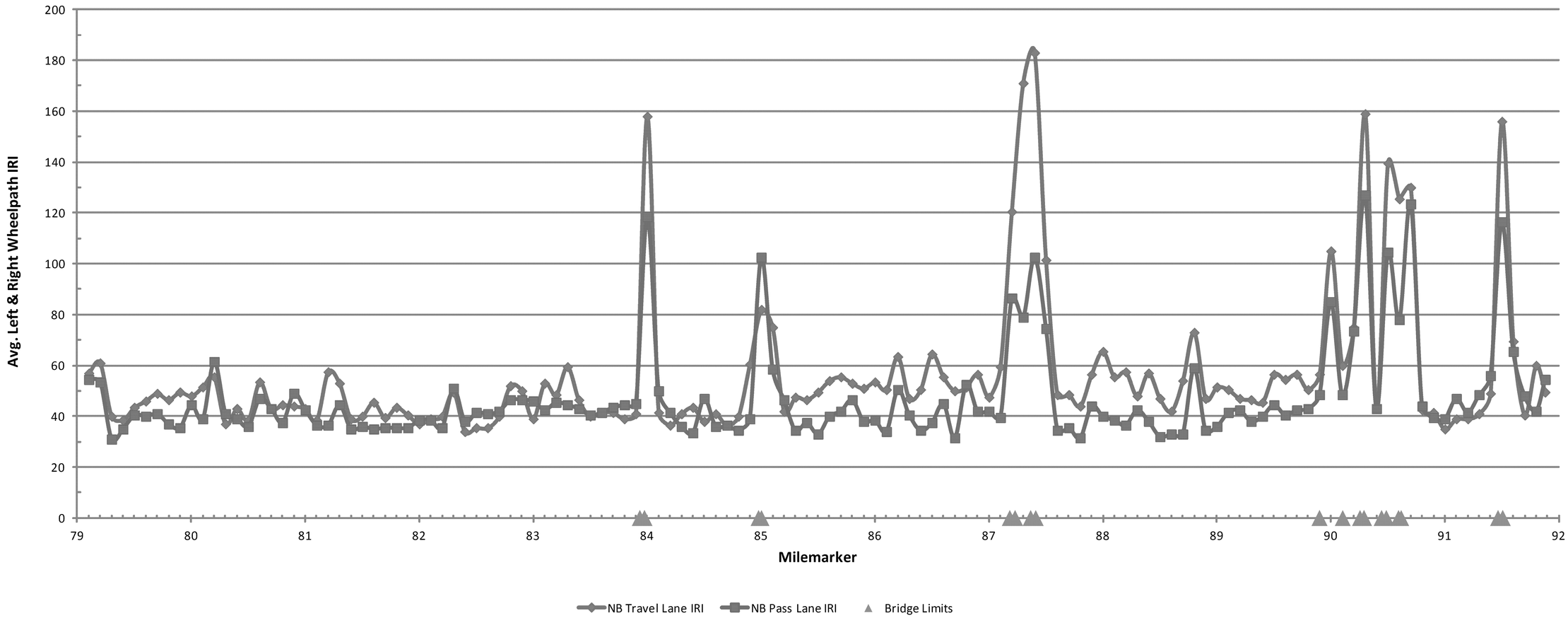
FILE NAME: pl3al36.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: LOCKE
IPARM FILE NAME: pl3al36casn.i

PLOT DATE: 19-DEC-2013
DRAWN BY: LOCKE
CHECKED BY: FOWLER
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

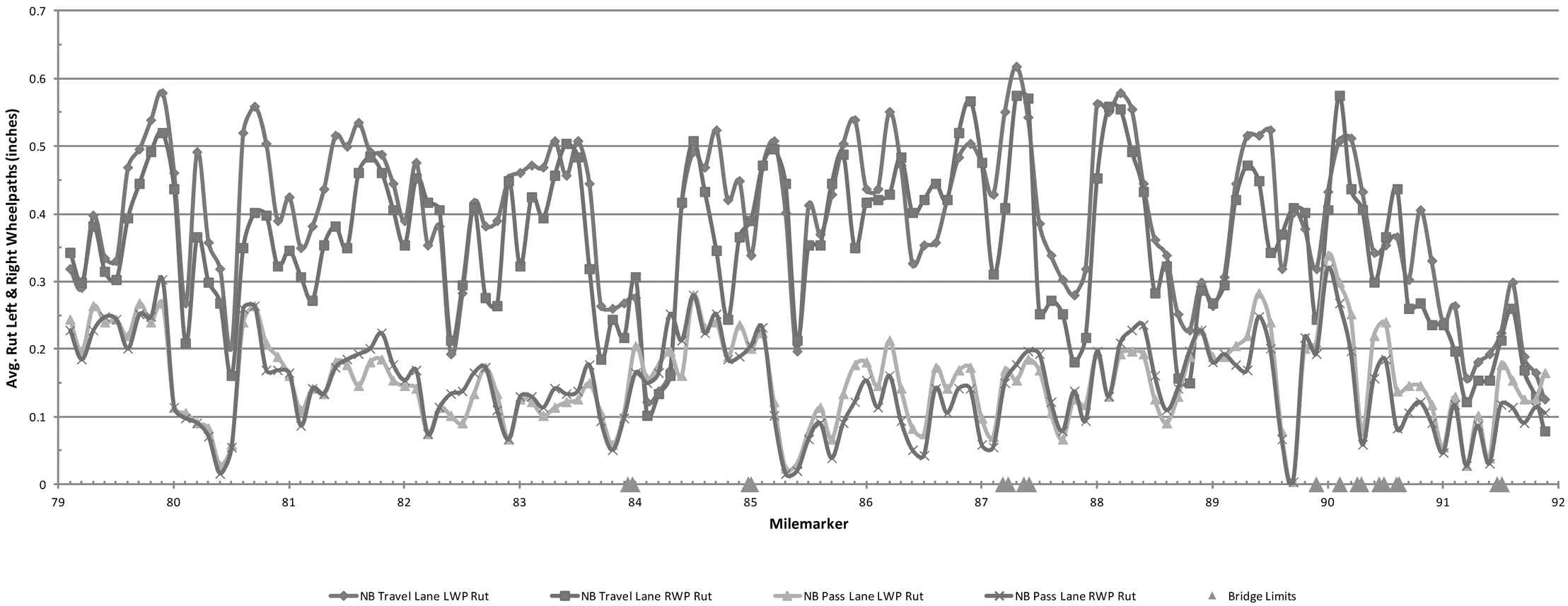


FOR INFORMATIONAL PURPOSES ONLY

ROUGHNESS DATA INFORMATION SHEET NB	PROJECT NAME: RICHMOND - COLCHESTER PROJECT NUMBER: IM SURF (38)
FILE NAME: pl3al36.dgn PROJECT LEADER: M. FOWLER DESIGNED BY: LOCKE IPARM FILE NAME: pl3al36rufnb.i	PLOT DATE: 19-DEC-2013 DRAWN BY: LOCKE CHECKED BY: FOWLER SHEET 38 OF 41

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

Profiled 9/27/2013



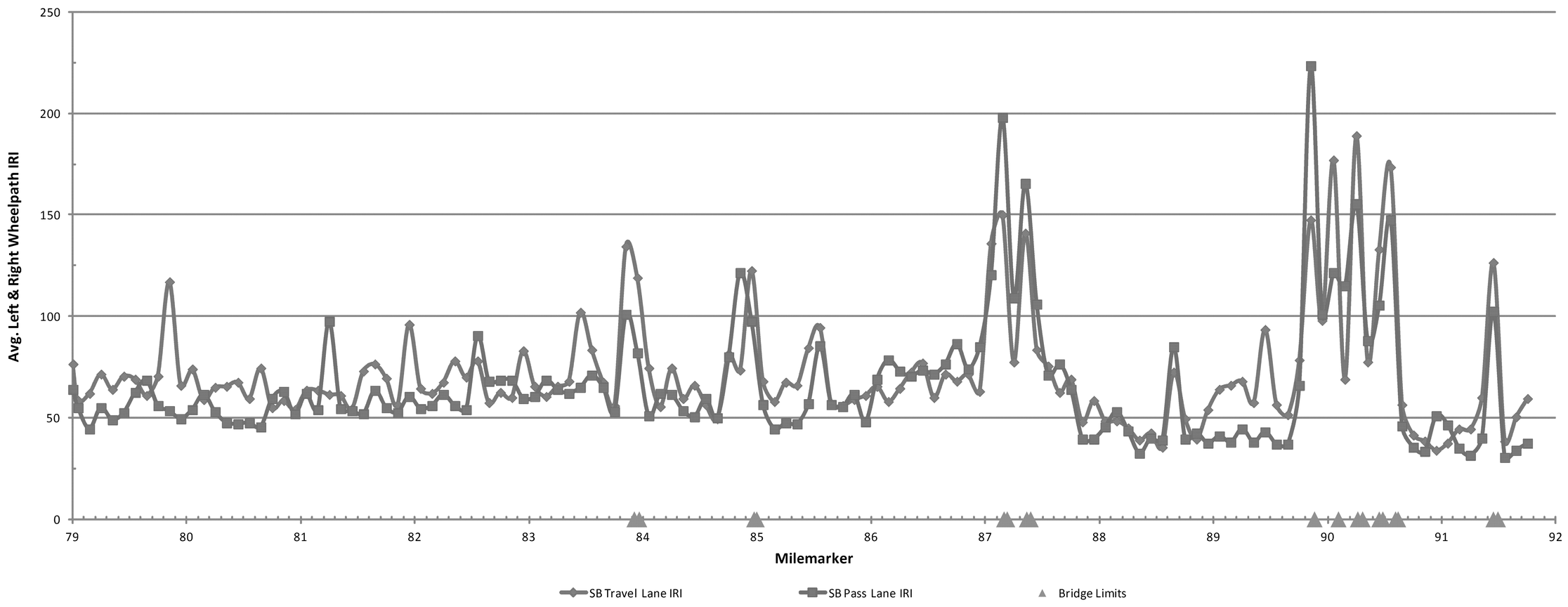
FOR INFORMATIONAL PURPOSES ONLY

RUTTING DATA INFORMATION SHEET NB	PROJECT NAME: RICHMOND - COLCHESTER PROJECT NUMBER: IM SURF (38)	
	FILE NAME: pl3al36.dgn PROJECT LEADER: M. FOWLER DESIGNED BY: LOCKE IPARM FILE NAME: pl3al36rutnb.i	PLOT DATE: 19-DEC-2013 DRAWN BY: LOCKE CHECKED BY: FOWLER 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

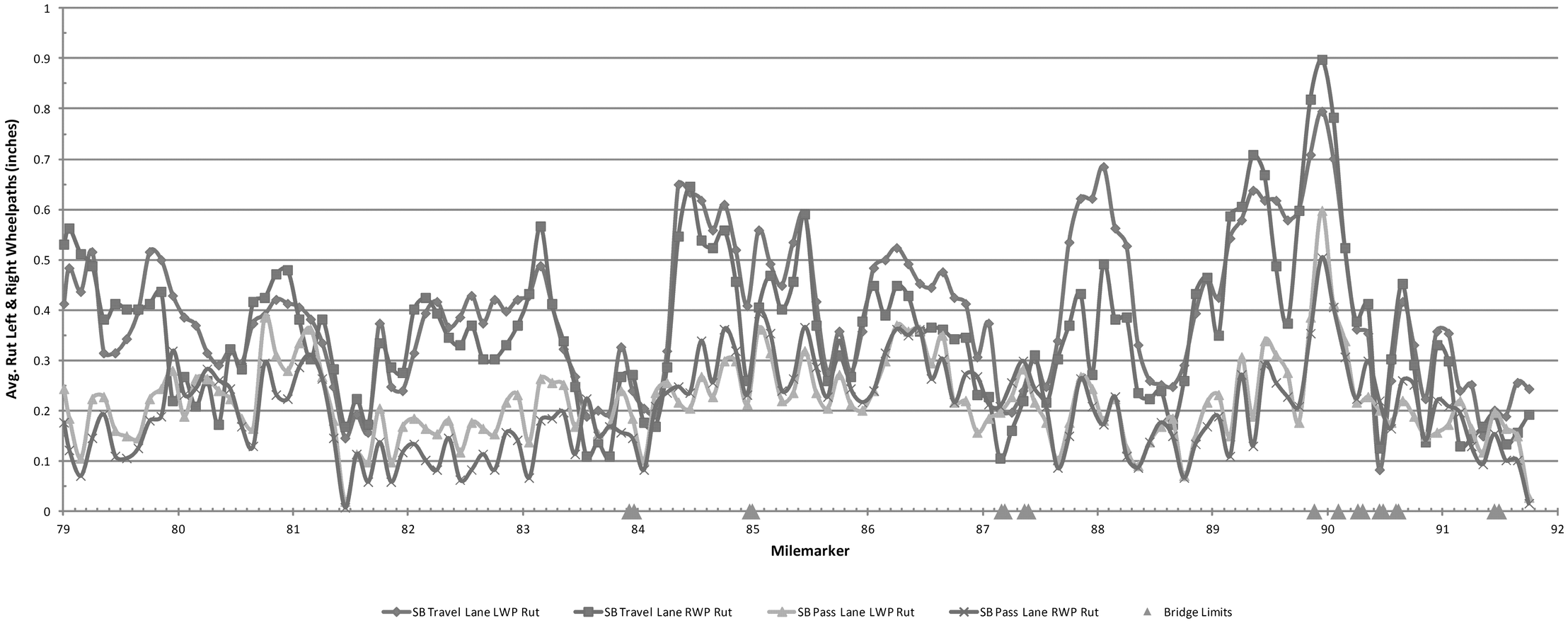


FOR INFORMATIONAL PURPOSES ONLY

ROUGHNESS DATA INFORMATION SHEET SB	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: pl3al36rufsb.i	SHEET 40 OF 41

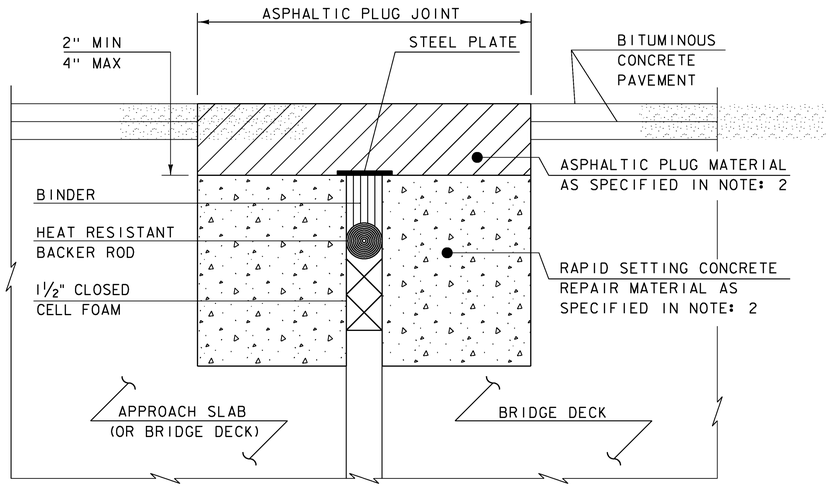
I 89 SB Richmond-Colchester IM SURF(38) Rut Profile

Profiled 9/27/2013



FOR INFORMATIONAL PURPOSES ONLY

RUTTING DATA INFORMATION SHEET SB	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: pl3al36rutsb.i	SHEET 41 OF 41



ASPHALTIC PLUG-TYPE JOINT DETAIL - REHAB

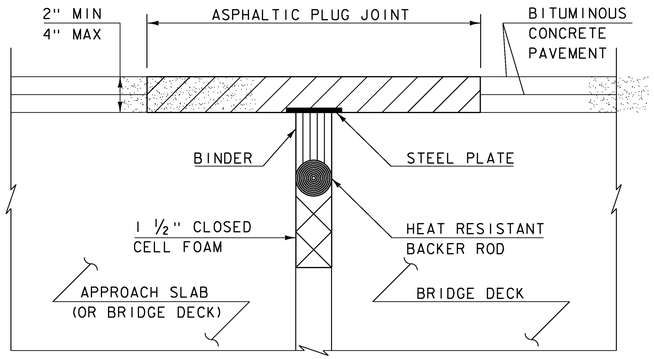
(NOT TO SCALE)

NOTES:

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 COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.

3. REINFORCING STEEL NOT SHOWN FOR CLARITY.



ASPHALTIC PLUG-TYPE 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 COARSE 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

VERMONT AGENCY OF TRANSPORTATION
STRUCTURES - DIVISION

STRUCTURES DETAIL
SD-516.10