

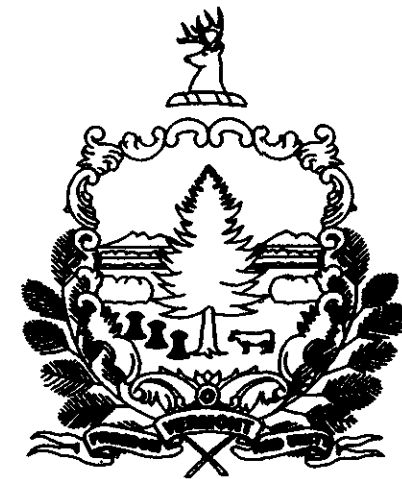
INDEX OF SHEETS

- 1 TITLE SHEET
- 2-4 PROJECT TYPICAL SHEETS
- 5 ASPHALTIC PLUG JOINT DETAIL SHEET
- 6-7 QUANTITY SHEETS
- 8-13 ITEM DETAIL SUMMARY SHEETS
- 14-15 DRIVE DETAIL SHEETS
- 16 DITCH CLEANING DETAIL SHEET
- 17-51 PROJECT LAYOUT SHEETS
- 52-61 SUPERELEVATION BANKING DIAGRAMS
- 62-69 TRAFFIC SIGN SUMMARY SHEETS
- 70 TRAFFIC SIGN DETAIL SHEET
- 71-73 GUARDRAIL DETAIL SHEETS
- 74-76 BRIDGE DETAIL SHEETS
- 77 CULVERT INVENTORY & MISCELLANEOUS DETAIL SHEET
- 78 PROJECT LOCATION TIE SHEET
- 79 TEMPORARY TRAFFIC CONTROL PLAN SHEET

VAOT STANDARDS

- B-1 06-01-94
- C-10 02-11-08
- D-3 06-01-94
- D-6 06-01-94
- D-8 01-03-00
- D-15 06-01-94
- D-16 06-01-94
- E-100 01-02-04
- E-100A 01-02-04
- E-101 05-30-03
- E-102 06-30-03
- E-102A 05-01-04
- E-103 03-01-04
- E-106 03-01-04
- E-107 06-30-03
- E-107A 06-08-09
- E-108 06-08-09
- E-108A 06-08-09
- E-110 08-08-95
- E-120 08-08-95
- E-121 08-08-95
- E-123 03-16-04
- E-134 08-08-95
- E-136B 08-08-95
- E-138 05-30-03
- E-141 09-20-95
- E-150 05-01-04
- E-151 05-01-04
- E-154 05-01-04
- E-160 05-20-99
- E-164 06-08-09
- E-191 02-01-99
- E-192 10-12-00
- E-193 08-18-95
- G-1 01-03-00
- G-1d 01-03-00
- G-19 11-15-02
- J-3 08-07-95
- B-71 07-08-10

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**



**PROPOSED IMPROVEMENT
TOWNS OF WESTFORD & FAIRFAX
COUNTIES OF CHITTENDEN & FRANKLIN
VT ROUTE 128**

BEGINNING IN THE TOWN OF WESTFORD ON VT ROUTE 128 AT STA. 68+85.12 (MM 1.304) AND EXTENDING NORTHERLY ALONG VT ROUTE 128 FOR A DISTANCE OF 31,092.16 FEET (5.889 MILES) TO FAIRFAX STA. 33+05.28 (MM 0.626). PROJECT ALSO INCLUDES VT ROUTE 128 APPROACH BEGINNING IN THE TOWN OF FAIRFAX AT STA. 0+12.00 (MM 0.002) AND EXTENDING EASTERLY ALONG VT ROUTE 128 APPROACH FOR A DISTANCE OF 496.00 FEET (0.094 MILE) TO VT ROUTE 128 APPROACH STA. 5+08.00 (MM 0.096).

PROJECT DATA:	LENGTH (FEET)	LENGTH (MILES)
TOWN OF WESTFORD		
VT ROUTE 128		
STA. 68+85.12 TO 346+72.00	27,786.88	
MM 1.304 TO 6.567		5.263
TOWN OF FAIRFAX		
VT ROUTE 128		
STA. 0+00.00 TO 33+05.28	3,305.28	
MM 0.000 TO 0.626		0.626
TOWN OF FAIRFAX		
VT ROUTE 128 APPROACH		
STA. 0+12.00 TO 5+08.00	496.00	
MM 0.002 TO 0.096		0.094
TOTAL LENGTH OF PROJECT:	31,588.16	= 5.983 MILES
TOTAL LENGTH OF ROADWAY:	31,588.16	= 5.983 MILES

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES COLD PLANNING, RECLAIMING AND RESURFACING OF THE EXISTING HIGHWAY WITH A RECLAIMED STABILIZED BASE, LEVELING COURSE AND WEARING COURSE, NEW PAVEMENT MARKINGS, GUARDRAIL, SIGNS AND OTHER INCIDENTAL ITEMS.

TRAFFIC DATA
VT ROUTE 128

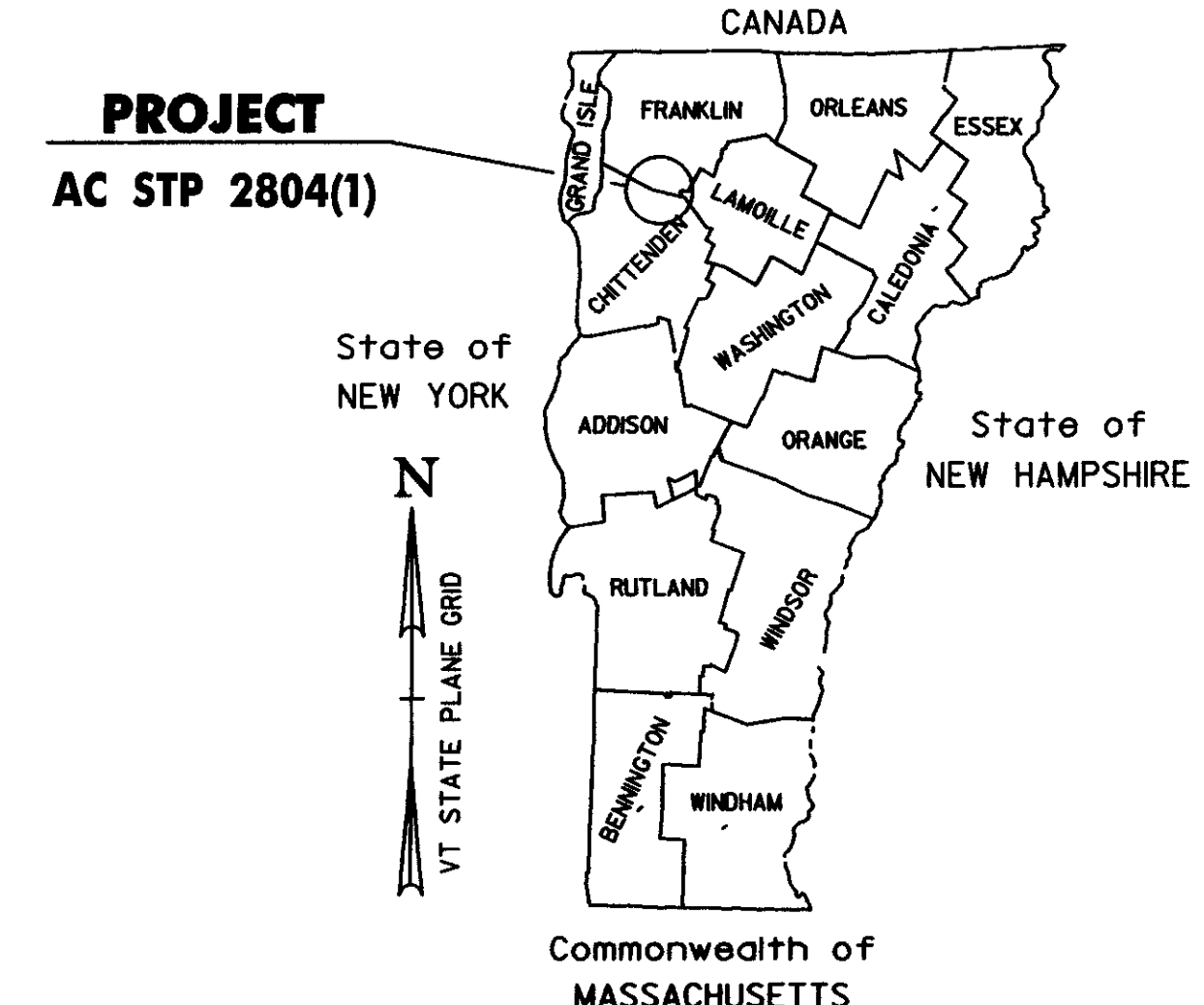
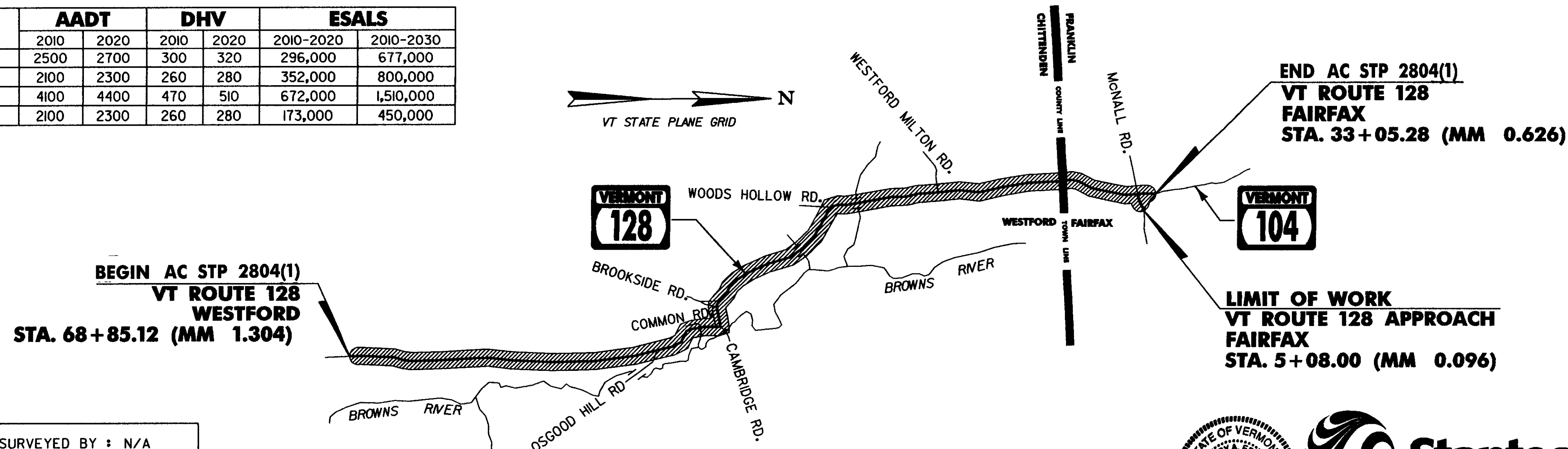
LOCATION	AADT		DHV		ESALS	
	2010	2020	2010	2020	2010-2020	2010-2030
VT 128: BEGIN PROJECT TO CAMBRIDGE ROAD	2500	2700	300	320	296,000	677,000
CAMBRIDGE ROAD TO MILTON-WESTFORD ROAD	2100	2300	260	280	352,000	800,000
MILTON-WESTFORD ROAD TO VT 128: END PROJECT	4100	4400	470	510	672,000	1,510,000
VT 128 APPROACH: BEGIN PROJECT TO END PROJECT	2100	2300	260	280	173,000	450,000

CONVENTIONAL SYMBOLS

- COUNTY LINE
- TOWN LINE
- LIMITS OF ACCESS
- POINT OF ACCESS
- FENCE LINE
- STONE WALL
- TRAVELED WAY
- GUARDRAIL
- 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

SURVEYED BY : N/A
SURVEYED DATE : N/A

DATUM
VERTICAL N/A
HORIZONTAL N/A



RECORD PLANS

CONTRACTOR F.W. WHITCOMB CONSTRUCTION CORP - WALPOLE, NH

RESIDENT ENGINEER DELVIN WARNER

CONSTRUCTION BEGAN JUNE 1, 2010

CONSTRUCTION COMPLETE NOVEMBER 4, 2010

RECORD PLANS BY DELVIN WARNER & CRAIG PIERCE

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN

BY Delvin Warner RESIDENT ENGINEER
DATE 02/22/10

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

SUPERPAVE BITUMINOUS CONCRETE PAVEMENT MIXTURE DESIGN CRITERIA

DESIGN LANE/DESIGN LIFE ESALS	755,000
DESIGN NUMBER OF GYRATIONS	65
PERFORMANCE GRADE ASPHALT BINDER	SEE SECTION 490 GENERAL SPECIAL PROVISIONS

RIGHT-OF-WAY LIMITS, IF APPLICABLE, ARE PROVIDED SOLELY FOR THE CONVENIENCE OF THE STATE AND ITS CONTRACTOR DURING THE COURSE OF THIS PAVING PROJECT. ANY REFERENCES TO OFFSETS ON THESE PLANS ARE APPROXIMATE AND SHOULD NOT BE RELIED UPON FOR ANY PURPOSES.

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 2006, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JUNE 15, 2006 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, ALL DRAWINGS AND DETAILS ON THESE PLANS ARE DRAWN "NOT TO SCALE".

Stantec
Stantec Consulting Services Inc.
55 Green Mountain Drive
South Burlington VT U.S.A. 05403
Tel. 802.864.0223
Fax. 802.864.0165
www.stantec.com

DIRECTOR OF PROGRAM DEVELOPMENT

APPROVED Kevin Marsha DATE 2-22-10

PROJECT MANAGER : KEVIN MARSHA

PROJECT NAME : WESTFORD - FAIRFAX

PROJECT NUMBER : AC STP 2804 (1)

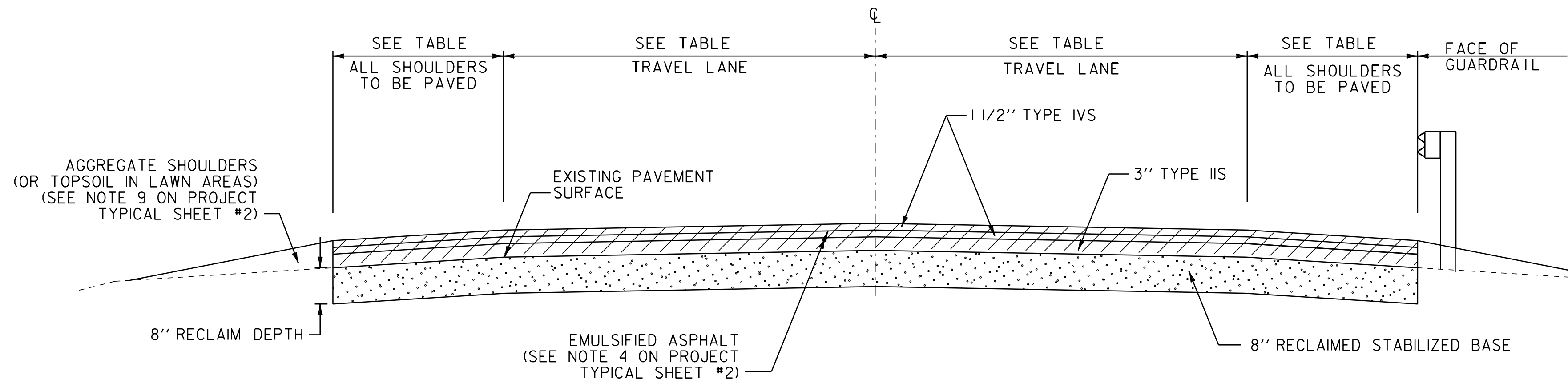
SHEET 1 OF 79 SHEETS

PROJECT PAVING LIMITS

TOWN & ROUTE	BEGIN STATION	END STATION	LANE TYPICAL	WEARING DEPTH	LEVELING DEPTH	NOTES
WESTFORD VT ROUTE 128	68+85.12	193+87	4 - II - II - 4	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	193+87	194+12	VARIES-SEE PLANS	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	194+12	194+86	5 - II - II - 5	1 1/4"	-	BRIDGE NO. 5 COLD PLANE 1 1/4" + 1 1/4" TYPE IVS
WESTFORD VT ROUTE 128	194+86	197+91	VARIES-SEE PLANS	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	197+91	209+08.80	2 - II - II - 2	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	209+08.80	210+00	2 - II - II - 2	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	210+00	210+25	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	210+25	319+75	1.5 - II - II - 1.5	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	319+75	320+00	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	320+00	345+97	2 - II - II - 2	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
WESTFORD VT ROUTE 128	345+97	346+72	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	0+00	8+45	5 - II - II - 5	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	8+45	8+65	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	8+65	9+39	5.5 - II - II - 5.5	1 1/4"	-	BRIDGE NO. 8 COLD PLANE 1 1/4" + 1 1/4" TYPE IVS
FAIRFAX VT ROUTE 128	9+39	9+69	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	9+69	14+25	5 - II - II - 5	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	14+25	15+00	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	15+00	18+00	2 - II - II - 2	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	18+00	18+25	VARIES-SEE PLANS	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	18+25	27+65.00	1 - II - II - 1	1 1/2"	-	RECLAIM 8" + 3" TYPE IIS + 1 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	27+65.00	32+48	1 - II - II - 1	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128	32+48	33+05.28	1 - II - II - 6	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS
FAIRFAX VT ROUTE 128 APPROACH	0+12	5+08	1.5 - II - II - 1.5	1 1/2"	1/2"	COLD PLANE 1 1/2", LEVEL 1/2" + 1 1/2" TYPE IVS

RECLAIM TYPICAL SECTION

VT ROUTE 128 WESTFORD STA. 209+08.80 TO FAIRFAX 8+65.00
 VT ROUTE 128 FAIRFAX STA. 9+39.00 TO 27+65.00
 (INCLUDES TRANSITIONS)



SEEDING FORMULA

RATE: DOUBLE IF HYDROSEEDING

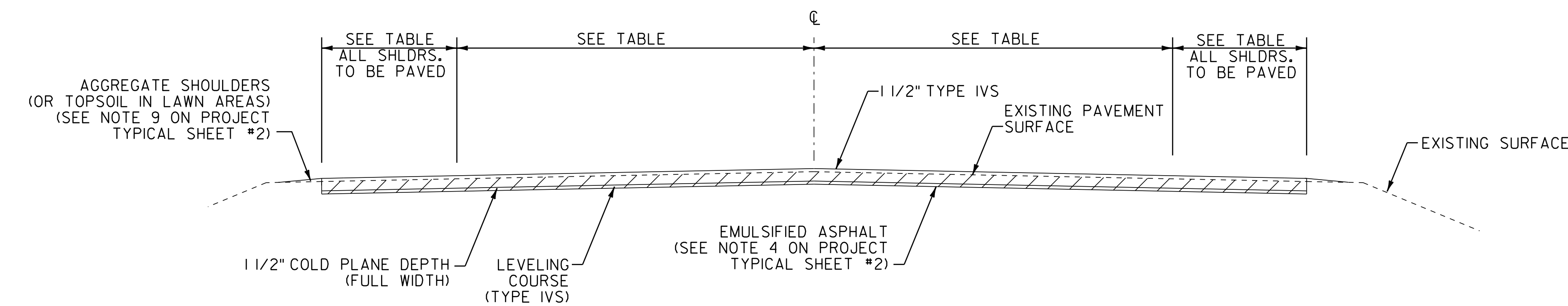
% WT.	LBS./A.	NAME	PUR %	GERM %
38	32	CREEPING RED FESCUE	98	90
29	24	SPARTAN HARD FESCUE	95	85
15	12	AZAY SHEEP'S FESCUE	95	87
15	12	ANNUAL RYE GRASS	95	90
3	--	INERTS	--	--
100.0	80 LB/A			

NOTES

- SEED MIXTURE: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- SEED ITEM 651.15: TO BE APPLIED PER SEEDING FORMULAS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- FERTILIZER ITEM 651.18: FORMULA 10-20-10, TO BE USED WITH SEED, APPLIED AT THE RATE OF 500 LBS./ACRE. (HYDRO SEEDERS MAY USE 19-19-19 FORMULA)
- AGRICULTURAL LIMESTONE ITEM 651.20: TO BE APPLIED AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE RESIDENT ENGINEER.
- HAY MULCH ITEM 651.25: TO BE PLACED ON THE EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, OR AS DIRECTED BY THE RESIDENT ENGINEER.
- TOPSOIL ITEM 651.35: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE RESIDENT ENGINEER.
- GRADES LESS THAN 1 PERCENT SHALL USE ITEM 651.15, SEED AND ITEM 651.25, HAY MULCH. GRADES BETWEEN 1 AND 2.5 PERCENT SHALL USE ITEM 651.25, HAY MULCH OR ITEM 653.20, TEMPORARY EROSION MATTING AS DIRECTED BY THE RESIDENT ENGINEER. GRADES OVER 2.5 PERCENT SHALL USE ITEM 649.31, GEOTEXTILE UNDER STONE FILL AND ITEM 613.10, STONE FILL TYPE I AS DIRECTED BY THE RESIDENT ENGINEER.
- PIPE INLET AND OUTLET AREAS, AND DITCH CLEANING THROUGHOUT THE PROJECT, SHALL BE PERFORMED AT LOCATIONS INDICATED ON THIS SHEET AND AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT WILL BE UNDER THE APPLICABLE EQUIPMENT RENTAL ITEM(S).

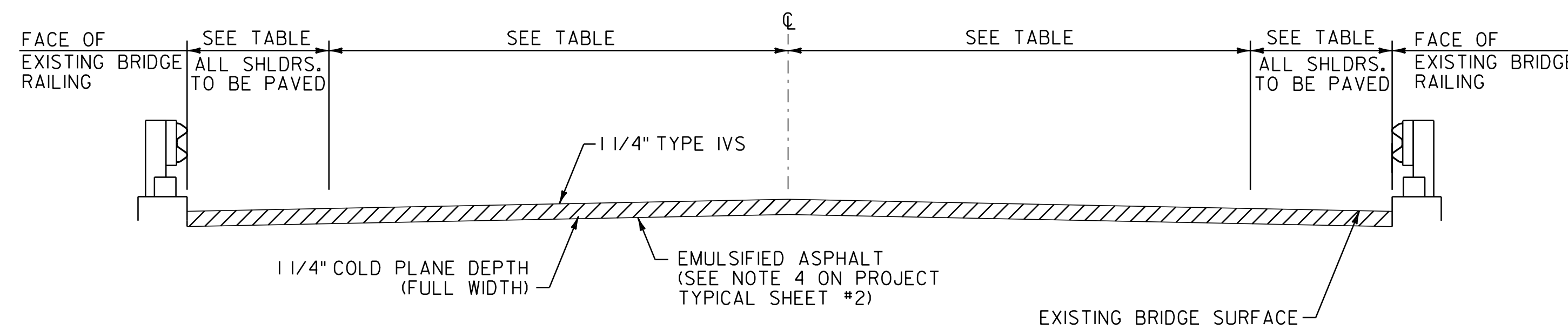
COLD PLANE TYPICAL SECTION

VT ROUTE 128 WESTFORD STA. 68+85.12 TO 194+12.00
 VT ROUTE 128 WESTFORD STA. 194+86.00 TO 209+08.80
 VT ROUTE 128 FAIRFAX STA. 27+65.00 TO 33+05.28
 VT ROUTE 128 APPROACH FAIRFAX STA. 0+12.00 TO 5+08.00



COLD PLANE TYPICAL SECTION - BRIDGE

BR*5 VT ROUTE 128 WESTFORD STA. 194+12 TO 194+86
 BR*8 VT ROUTE 128 FAIRFAX STA. 8+65 TO 9+39



NOT TO SCALE

PROJECT TYPICAL SHEET #1

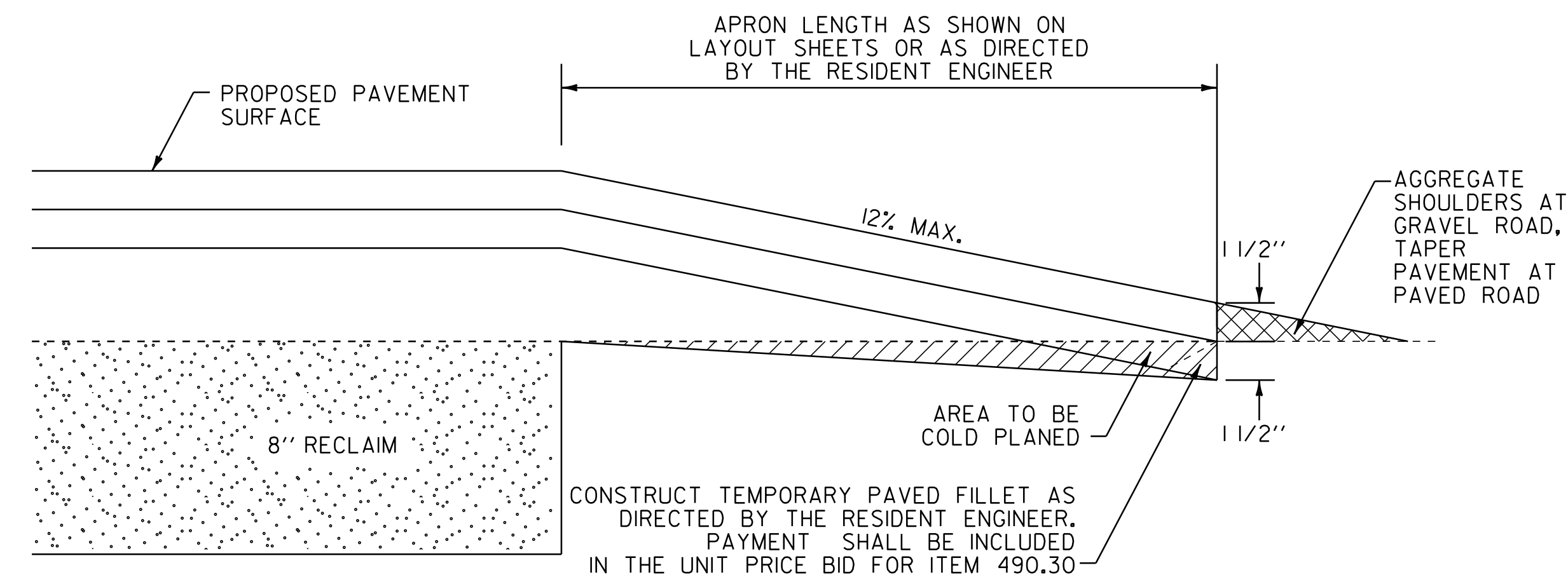
PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn PLOT DATE: 31-OCT-2012 13:56
 PROJECT LEADER: JLL DRAWN BY: STANTEC
 DESIGNED BY: STANTEC CHECKED BY: JLL
 IPARM FILE: p08c212pts01.i SHEET 2 OF 79



NOTES

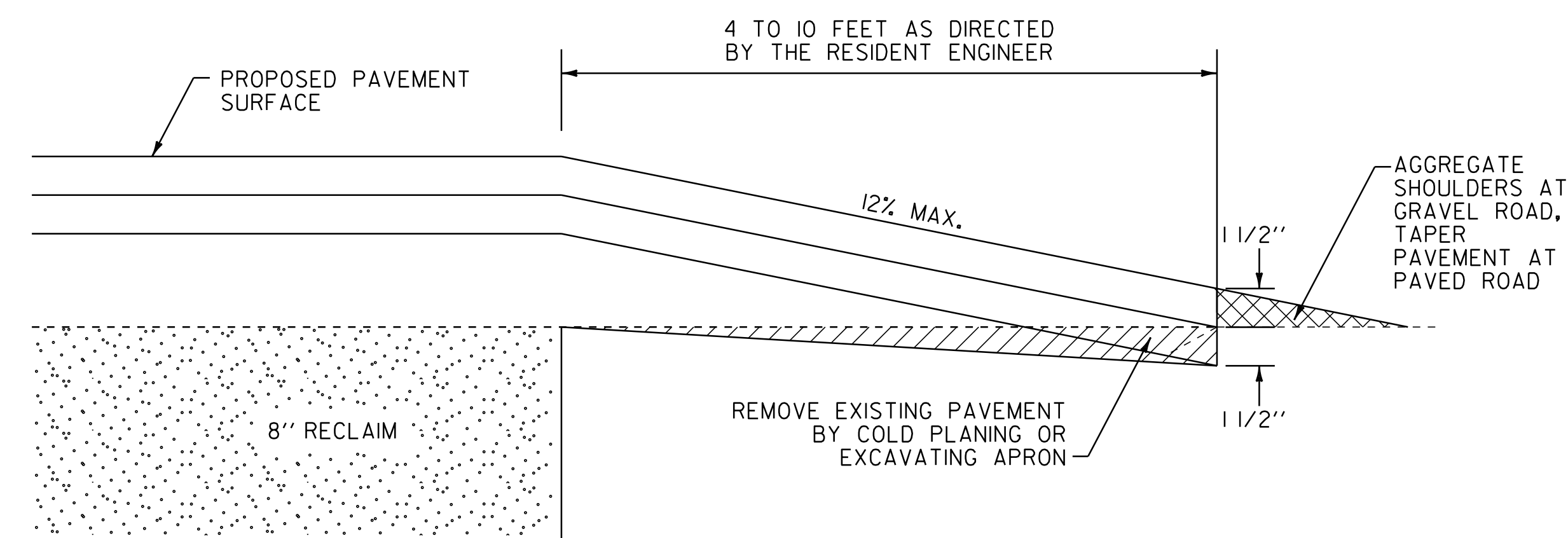
- THE PAVEMENT WEARING COURSE SHALL BE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS. THE ESTIMATED 1/2" LEVELING COURSE SHALL BE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TYPE IVS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- GRASS GROWING ADJACENT TO PAVEMENT OR THROUGH CRACKS IN THE PAVEMENT WHICH MAY HAMPER THE PLACEMENT OF NEW BITUMINOUS CONCRETE SHALL BE REMOVED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL NOT BE MADE DIRECTLY, BUT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 490.30 SUPERPAVE BITUMINOUS CONCRETE PAVEMENT.
- SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TOLERANCE = ±1/4". (TOTAL THICKNESS EXCLUDING LEVELING)
- EMULSIFIED ASPHALT, TYPE RS-1, SHALL BE APPLIED ON ALL EXISTING PAVEMENT SURFACES, ON COLD PLANED SURFACES AND BETWEEN ALL COURSES OF PAVEMENT (NOT INCLUDING RECLAIMED SURFACES) AT THE RATE OF 0.025 GAL/SY OR AS DIRECTED BY THE RESIDENT ENGINEER. PAID AS ITEM 404.65, EMULSIFIED ASPHALT.
- AN ESTIMATED THICKNESS OF 2" OF ITEM 900.680 SPECIAL PROVISION (SUBBASE, RAP FOR RECLAIMING), HAS BEEN INCLUDED FOR THE PROVISION OF IMPROVING GRADATION DEFICIENCIES AND/OR CORRECTING SUPERELEVATION, AS NECESSARY, OR AS DIRECTED BY THE RESIDENT ENGINEER. IF THERE IS NOT A SUFFICIENT AMOUNT OF COLD PLANE GRINDINGS AVAILABLE TO COMPLETE THESE REPAIRS, THE CONTRACTOR SHALL OBTAIN COLD PLANE GRINDINGS FROM ANOTHER SOURCE. THE COST ASSOCIATED WITH PROVIDING ADDITIONAL COLD PLANE GRINDINGS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.680 SPECIAL PROVISION (SUBBASE, RAP FOR RECLAIMING). THIS MATERIAL SHALL BE RECLAIMED INTO THE RECLAIMED STABILIZED BASE. PAYMENT FOR THIS SECOND RECLAIMING OPERATION WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.680 SPECIAL PROVISION (SUBBASE, RAP FOR RECLAIMING).
- PRIOR TO RECLAIMING, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE RESIDENT ENGINEER WILL BE EXCAVATED TO THE DEPTH OF RECLAIMING OR AS DIRECTED BY THE RESIDENT ENGINEER. EXCAVATED MATERIAL WILL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AS DIRECTED BY THE RESIDENT ENGINEER. THIS WORK WILL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPROVED BY THE RESIDENT ENGINEER PRIOR TO ANY WORK BEING DONE.
- PRIOR TO PAVING IN COLD PLANE AREAS, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE RESIDENT ENGINEER SHALL BE EXCAVATED TO A DEPTH OF 3" OR AS DIRECTED BY THE RESIDENT ENGINEER. EXCAVATION WILL BE PAID FOR AS ALL PURPOSE EXCAVATOR RENTAL, TYPE I. MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.26 SUBBASE OF CRUSHED GRAVEL, FINE GRADED. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AREA AS DIRECTED BY THE RESIDENT ENGINEER.
- COLD PLANING TO BE COMPLETED ACCORDING TO TYPICAL OR AS NOTED OTHERWISE ON THE PLANS. THE COLD PLANING AND PAVING SHALL MATCH THE EXISTING CONDITIONS AT THE BEGINNING AND END OF CONSTRUCTION AREAS BY THE USE OF A VERTICAL COLD PLANE JOINT. SEE DETAIL ON PROJECT TYPICAL SHEET #3.
- ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDERS AS DIRECTED BY THE RESIDENT ENGINEER AND WILL BE PAID FOR UNDER ITEM 402.12 AGGREGATE SHOULDERS.
- ESTIMATED QUANTITIES OF ITEMS 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I, ITEM 608.37 TRUCK RENTAL AND ITEM 608.40 LOADER RENTAL, TYPE I HAVE BEEN INCLUDED FOR THE PROVISION OF CONSTRUCTING GUARDRAIL END SECTION FLARES WITH EXCAVATED DITCHING MATERIAL. AN ESTIMATED QUANTITY OF ITEM 203.30 EARTH BORROW HAS BEEN INCLUDED IN THE CASE THAT THE DITCHING MATERIAL IS NOT SUITABLE TO USE IN THE GUARDRAIL END SECTION FLARE AREA. 25 CUBIC YARDS OF EARTH BORROW HAVE BEEN ESTIMATED FOR EACH NEW GUARDRAIL END SECTION FLARE. ITEM 653.20 TEMPORARY EROSION MATTING SHALL BE PLACED ON ALL SLOPES CREATED BY THE GUARDRAIL END SECTION FLARE. THE QUANTITIES INCLUDED REFLECT 25 SY OF ITEM 653.20 TEMPORARY EROSION MATTING FOR EACH NEW GUARDRAIL END SECTION FLARE TO BE USED AS DIRECTED BY THE RESIDENT ENGINEER.
- THE PROPOSED GUARDRAIL SHALL BE INSTALLED IN A LOCATION THAT MAXIMIZES THE DISTANCE FROM THE CENTER OF THE ROAD TO THE FACE OF GUARDRAIL AS DIRECTED BY THE RESIDENT ENGINEER.
- ALL DRIVES SHALL RECEIVE A PAVED APRON AS DIRECTED BY THE RESIDENT ENGINEER. SEE THE DRIVE DETAIL SHEETS FOR LOCATIONS, DETAILS AND PAYMENT PROVISIONS.
- AN ESTIMATED QUANTITY OF ITEM 619.17 YIELDING MARKER POSTS HAS BEEN INCLUDED TO DELINEATE PIPE INLETS, PIPE OUTLETS AND DROP INLETS LOCATED OUTSIDE OF THE PAVEMENT SURFACE OR AS DIRECTED BY THE RESIDENT ENGINEER.
- STEEL BEAM GUARDRAIL WITH STEEL POSTS SHALL BE USED ON THIS PROJECT.
- A QUANTITY FOR ITEM 604.412 REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I HAS BEEN INCLUDED TO BE USED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER. ALL D'S SHALL BE RAISED OR REHABILITATED SUCH THAT THE NEW GRATE ELEVATION IS EVEN WITH THE SURROUNDING TERRAIN.
- AN ESTIMATED QUANTITY OF ITEM 601.0910 15" CPEP HAS BEEN INCLUDED FOR USE AS DIRECTED BY THE RESIDENT ENGINEER WHEN BURYING GUARDRAIL ENDS INTO BACKSLOPES. FOR DETAILS, SEE GUARDRAIL DETAIL SHEET #1.



SIDE ROAD AREA DETAIL - TOWN HIGHWAYS
FULL WIDTH OF TOWN HIGHWAY

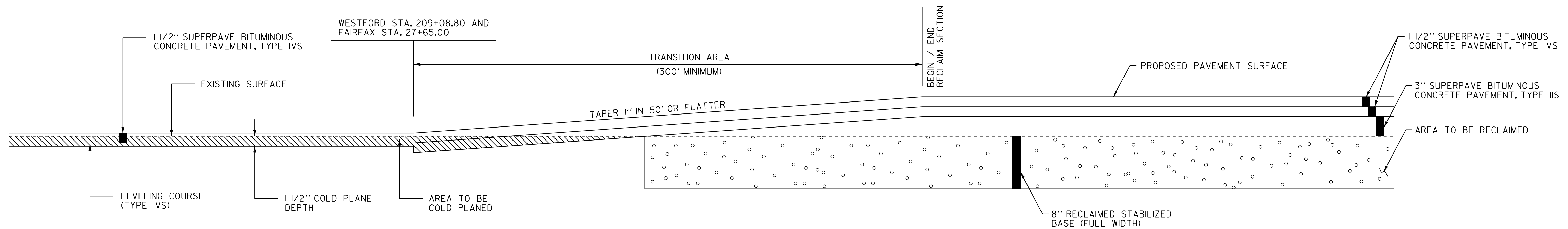
NOTE: THIS DETAIL SHALL BE USED FOR THE SIDE ROADS LISTED BELOW AS DIRECTED BY THE RESIDENT ENGINEER.

WOODS HOLLOW ROAD (T.H. 7) WESTFORD STA. 264+88, LT
WESTFORD-MILTON ROAD (T.H. 2) WESTFORD STA. 303+24, LT



DRIVEWAY TRANSITION DETAIL AT RECLAIM AREAS

NOTE: THIS DETAIL SHALL BE USED FOR ALL DRIVES WITHIN THE RECLAIM AREA AS DIRECTED BY THE RESIDENT ENGINEER.



COLD PLANE / RECLAIM TRANSITION AREA DETAIL

FULL ROADWAY WIDTH

WESTFORD STA. 209+08.80 TO 212+08.8
FAIRFAX STA. 24+65.00 TO 27+65.00



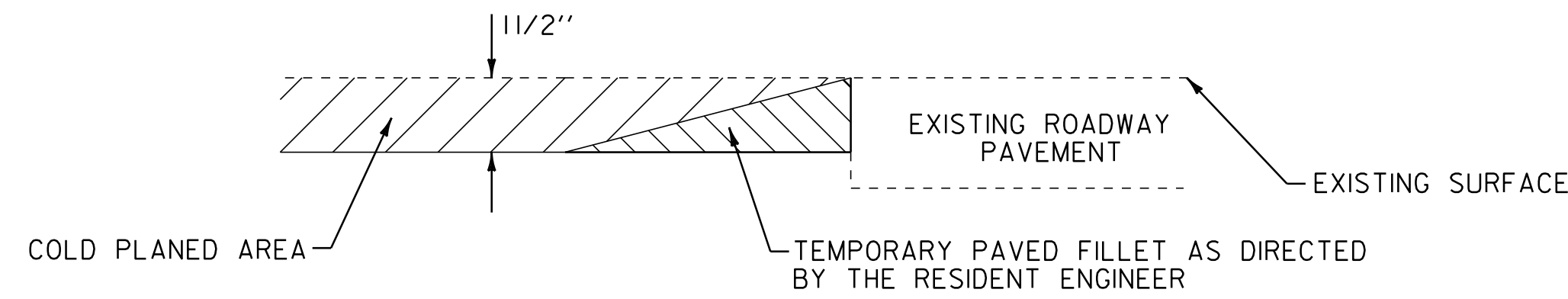
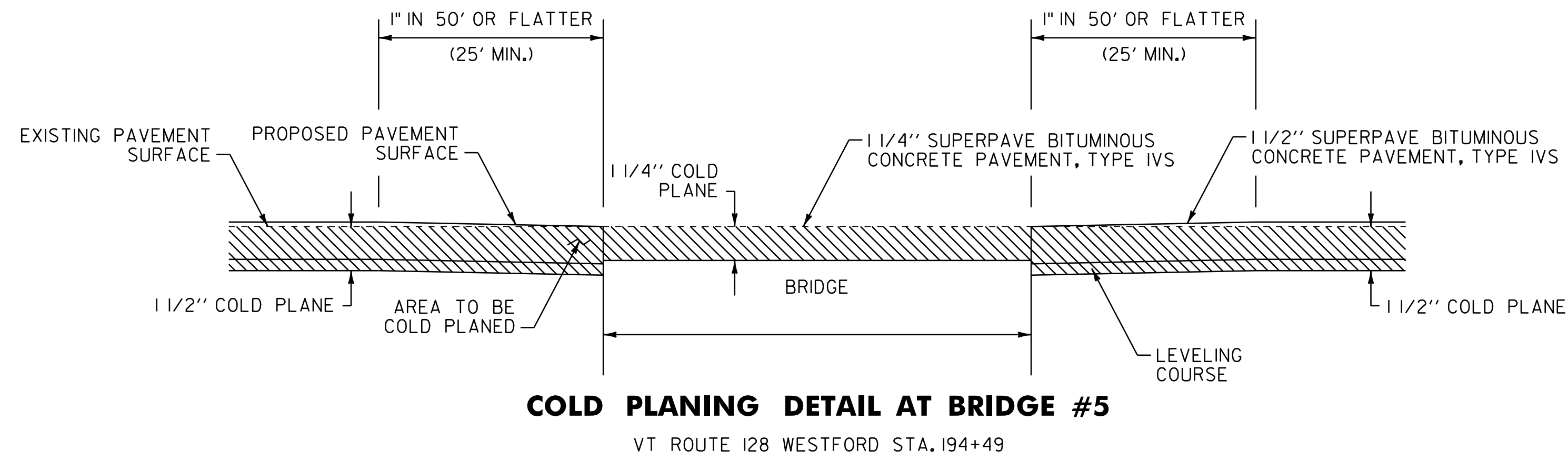
NOT TO SCALE

**PROJECT
TYPICAL
SHEET #2**

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212pts02.i

PLOT DATE: 31-OCT-2012 13:56
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 3 OF 79



DETAIL AT VERTICAL COLD PLANE JOINTS (1 1/2" DEPTH)

NOTE: THIS DETAIL SHALL BE USED AT THE LOCATIONS LISTED BELOW AND AT ALL DRIVES BETWEEN WESTFORD STA. 68+85.12 AND STA. 209+08.80, BETWEEN FAIRFAX STA. 27+65.00 AND 33+05.28, AND ON THE VT 128 APPROACH AS DIRECTED BY THE RESIDENT ENGINEER. PAYMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 210.10.

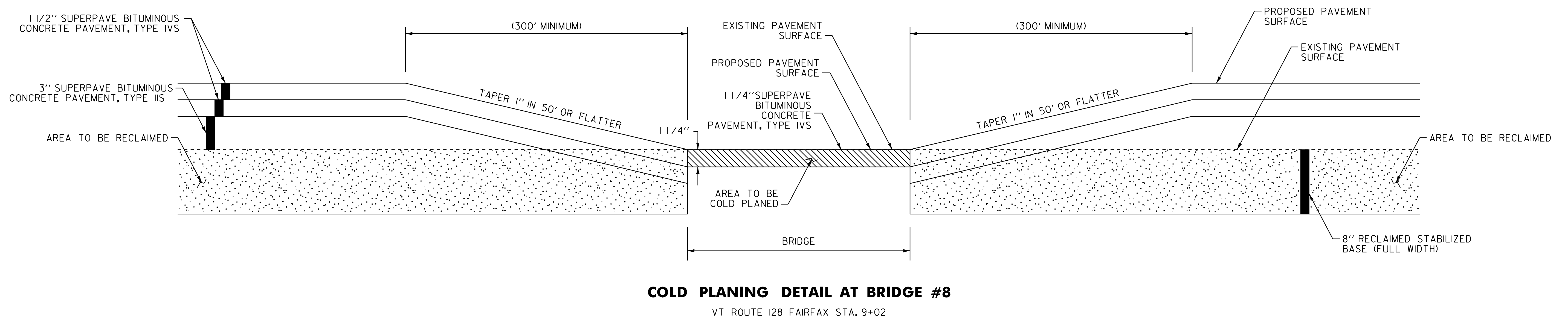
FULL ROADWAY WIDTH

WESTFORD STA. 68+85.12 (BEGIN PROJECT)
OSGOOD HILL ROAD WESTFORD STA. 177+27, RT
COMMON ROAD WESTFORD STA. 199+28, LT
CAMBRIDGE ROAD WESTFORD STA. 201+14, RT
BROOKSIDE ROAD WESTFORD STA. 208+28, LT

MCNALL ROAD FAIRFAX STA. 28+21, LT
MCNALL ROAD FAIRFAX STA. 28+80, LT
FAIRFAX STA. 33+05.28 (END PROJECT)

VT ROUTE 128 APPROACH
FAIRFAX STA. 5+08.00 (LIMIT OF WORK)

PAVEMENT CORE DATA			
CORE #	LOCATION	DEPTH (INCHES)	PCC
WESTFORD			
1	137+81	3 1/4	NO
2	137+81	5	NO
3	137+91	3 1/4	NO
4	204+18	11	NO
5	224+61	3	NO
6	250+06	4	NO
7	272+03	3 1/2	NO
8	295+68	4	NO
9	323+35	4	NO
FAIRFAX			
10	4+02	4 1/4	NO



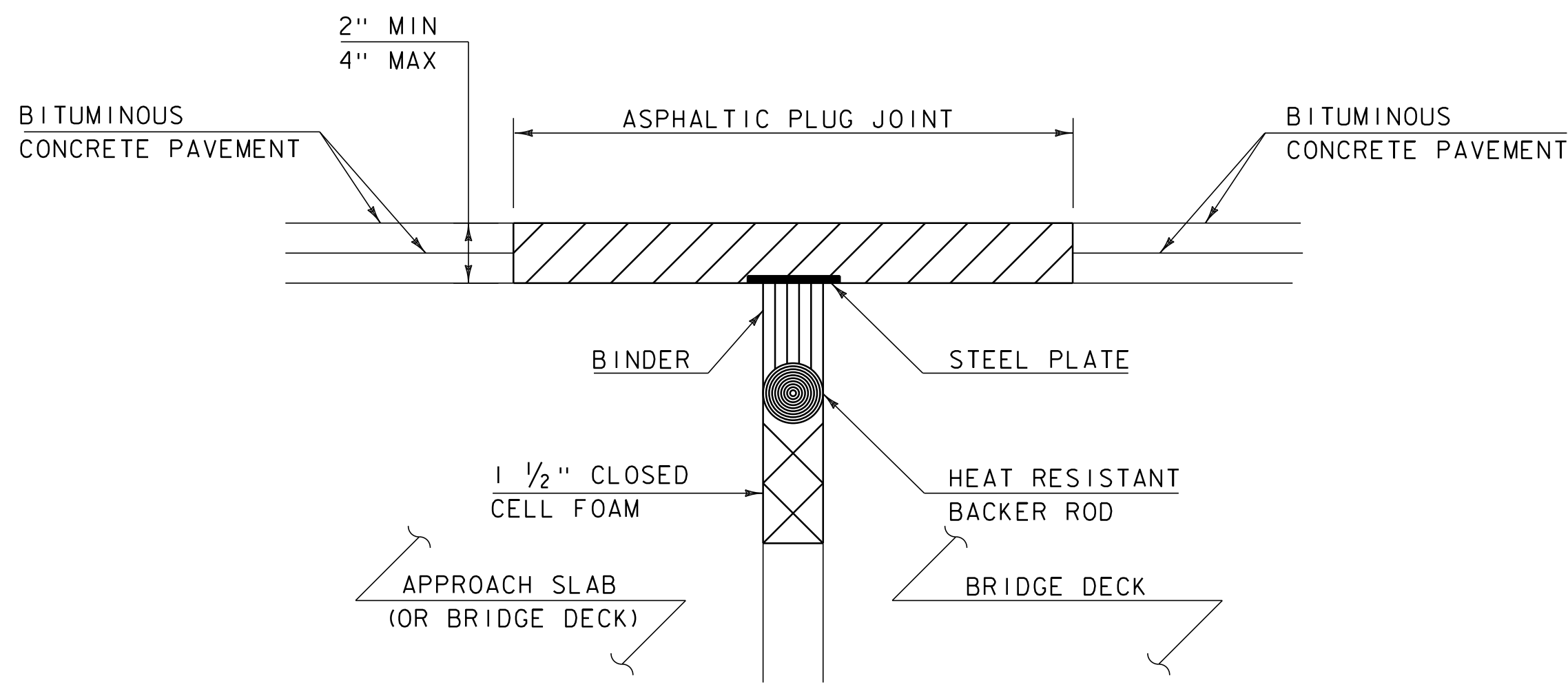
NOT TO SCALE

**PROJECT
TYPICAL
SHEET #3**

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212pts03.i

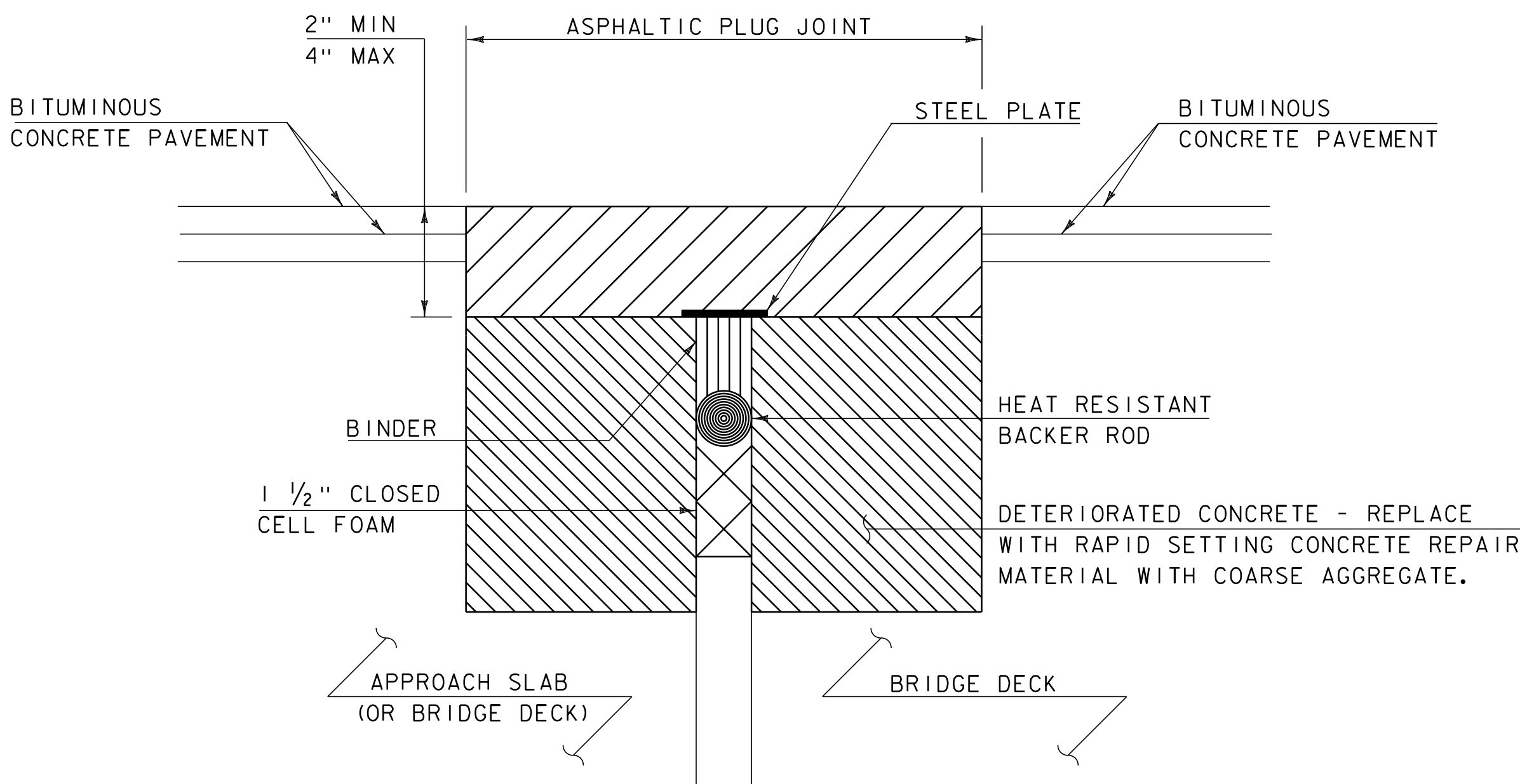
PLOT DATE: 31-OCT-2012 13:56
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 4 OF 79



ASPHALTIC PLUG-TYPE JOINT DETAIL

(NOT TO SCALE)

BR 5	VT ROUTE 128	WESTFORD STA. 194+12	(32 LF)
BR 5	VT ROUTE 128	WESTFORD STA. 194+86	(32 LF)
BR 8	VT ROUTE 128	FAIRFAX STA. 8+65	(34 LF)
BR 8	VT ROUTE 128	FAIRFAX STA. 9+39	(34 LF)

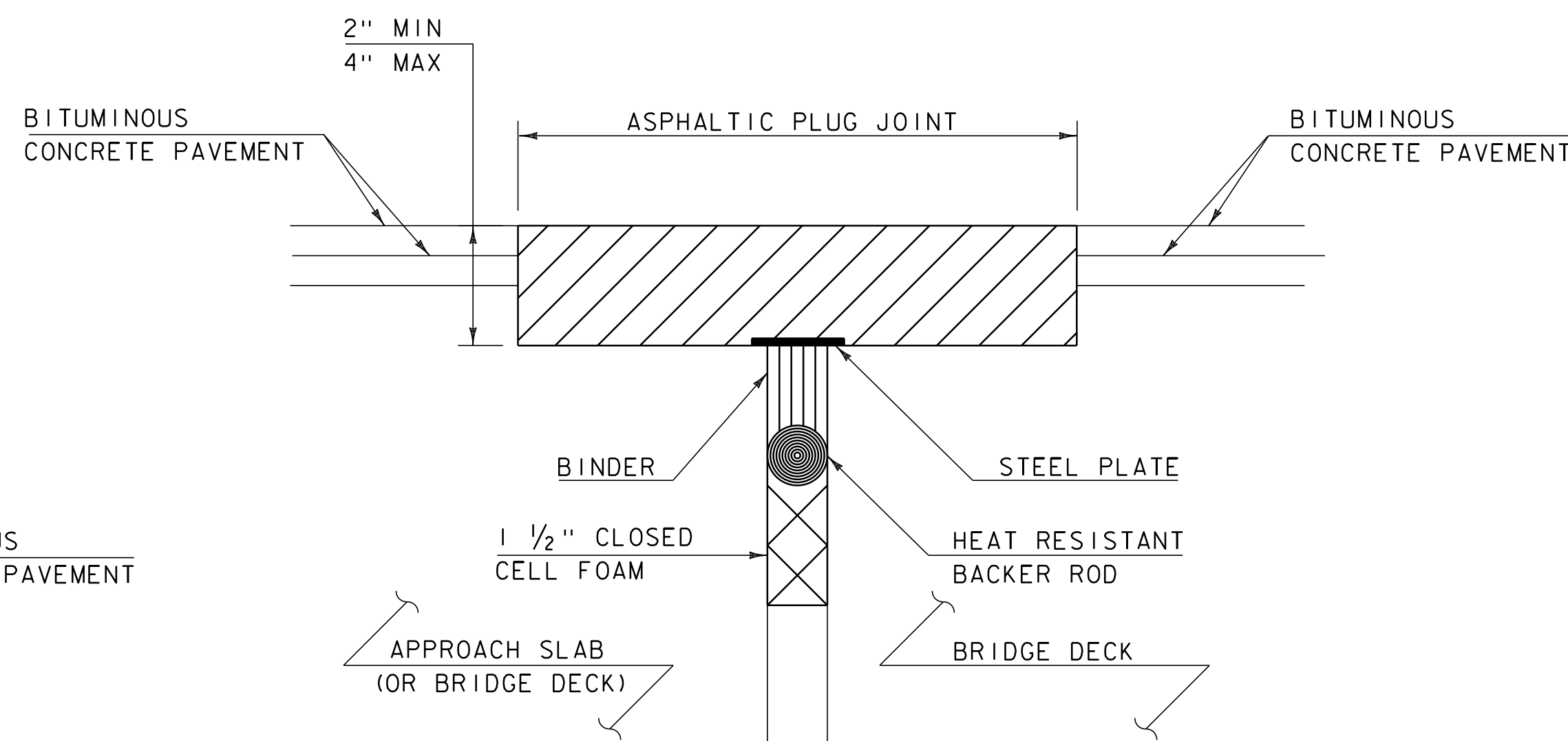


**ASPHALTIC PLUG-TYPE JOINT DETAIL
REMOVAL OF > 2" DETERIORATED CONCRETE**

(NOT TO SCALE)

NOTES:

- UPON ENCOUNTERING GREATER THAN 2" AVERAGE OF DETERIORATED CONCRETE, THE CONTRACTOR SHALL REMOVE THE DETERIORATED MATERIAL AND REPLACE IT WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE FORMED TO EXISTING ELEVATION.
- REMOVAL OF THE DETERIORATED CONCRETE WILL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 580.20 "RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE".
- REINFORCING STEEL NOT SHOWN FOR CLARITY.



**ASPHALTIC PLUG-TYPE JOINT DETAIL
REMOVAL OF < 2" DETERIORATED CONCRETE**

(NOT TO SCALE)

NOTES:

- UPON ENCOUNTERING UP TO 2" AVERAGE OF DETERIORATED CONCRETE, THE CONTRACTOR SHALL REMOVE THE DETERIORATED MATERIAL AND REPLACE IT WITH THE ASPHALTIC PLUG JOINT MATERIAL AS DIRECTED BY THE RESIDENT ENGINEER.
- REMOVAL OF THE DETERIORATED CONCRETE WILL NOT BE PAID SEPARATELY BUT WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR THE ITEM 516.10. THE ADDITIONAL PLUG JOINT MATERIAL BELOW THE DESIGN DEPTH TO REPLACE THE DETERIORATED CONCRETE WILL BE CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR THE ITEM 516.10.

ASPHALTIC PLUG JOINT NOTES

I. INSTALLATION

- LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
 - 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.
 - BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
 - REPAIR SPALLED AND DEFECTIVE CONCRETE WITH AN APPROVED MATERIAL AS AGREED UPON BY THE ENGINEER.
 - PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
 - HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
 - 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 PRESTAMPED 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.
 - HEAT AND MIX THE BINDER MATERIAL AND AGGREGATE AS RECOMMENDED BY THE MANUFACTURER.
 - INSTALLATION OF MATERIAL, COMPACTION, AND TOP COATING SHALL BE AS RECOMMENDED BY THE MANUFACTURER.
 - IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.
 - ONCE THE JOINT REACHES 82 DEG C (180 DEG F) +/-, WATER MAY BE USED TO EXPEDITE THE COOLING PROCESS.
 - PROTECT JOINT FROM TRAFFIC UNTIL THE MATERIAL HAS COOLED TO 51 DEG C (125 DEG F) +/-.
- 2. WEATHER LIMITATIONS.** (APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER):
- THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
 - THE ROAD SURFACE IS DRY.
 - WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.

ASPHALTIC PLUG JOINT DETAIL SHEET	PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:56
	PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
	FILE NAME: p08c212.dgn	CHECKED BY: JLL
	PROJECT LEADER: JLL DESIGNED BY: STANTEC IPARM FILE: p08c212apjds.i	SHEET 5 OF 79

QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES					TOTALS	DESCRIPTIONS			
ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUND	
225				225	CY	EARTH BORROW	203.30	-	
1				1	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-	
51000				51000	SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	122	
1080				1080	CY	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.26	9	
48500				48500	SY	RECLAIMED STABILIZED BASE	310.20	240	
1850				1850	TON	AGGREGATE SHOULDERS	402.12	9	
415				415	CWT	EMULSIFIED ASPHALT	404.65	4	
1				1	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-	
23000				23000	TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	490.30	163	
1				1	LU	AIR VOIDS PAY ADJUSTMENT (N.A.B.I.)	490.31	-	
1				1	LU	MAT DENSITY PAY ADJUSTMENT (N.A.B.I.)	490.32	-	
1				1	LU	SURFACE TOLERANCE PAY ADJUSTMENT (N.A.B.I.)	490.33	-	
1				1	LU	LONGITUDINAL JOINT COMPACTION PAY ADJUSTMENT (N.A.B.I.)	490.34	-	
		135		135	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	3	
		100		100	CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	EST.	
40				40	LF	15" CPEP	601.0910	EST.	
1				1	EA	REHAB. DROP INLETS, CATCH BASINS, OR MANHOLES, CLASS I	604.412	EST.	
300				300	HR	POWER GRADER RENTAL	608.15	EST.	
300				300	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.	
100				100	HR	POWER BROOM RENTAL, TYPE I	608.30	EST.	
160				160	HR	POWER BROOM RENTAL, TYPE II	608.31	EST.	
160				160	HR	TRUCK RENTAL	608.37	EST.	
160				160	HR	LOADER RENTAL, TYPE I	608.40	EST.	
	1520			1520	CY	STONE FILL, TYPE I	613.10	13.9	
	50			50	CY	STONE FILL, TYPE II	613.11	EST.	
220				220	LF	TREATED TIMBER CURB	616.35	7	
2				2	TON	BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS	616.47	0.4	
40				40	EA	RELOCATE MAILBOX, SINGLE SUPPORT	617.10	-	
3				3	EA	RELOCATE MAILBOX, MULTIPLE SUPPORT	617.12	-	
66				66	EA	YIELDING MARKER POSTS	619.17	2	
2800				2800	LF	STEEL BEAM GUARDRAIL, GALVANIZED	621.20	7.5	
300				300	LF	STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS	621.205	12.5	
50				50	LF	STEEL BEAM GUARDRAIL, GALVANIZED / NESTED W/8 FEET POSTS	621.207	-	
150				150	LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	2.5	
9				9	EA	MANUFACTURED TERMINAL SECTION, FLARED	621.50	-	
17				17	EA	ANCHOR FOR STEEL BEAM RAIL	621.60	-	
4				4	EA	GUARDRAIL APPROACH SECTION, GALVANIZED TYPE I	621.70	-	

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		COLD PLANING - BITUMINOUS PAVEMENT
49424	SY	MAINLINE
534	SY	BRIDGES
920	SY	SIDEROADS
122	SY	ROUNDING
51000	SY	TOTAL
		RECLAIMED STABILIZED BASE
38841	SY	WESTFORD MAINLINE
8671	SY	FAIRFAX MAINLINE
748	SY	SIDEROADS
240	SY	ROUNDING
48500	SY	TOTAL
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
12665	TON	MAINLINE WEARING COURSE (TYPE IVS)
210	TON	SIDEROAD WEARING COURSE (TYPE IVS)
40	TON	BRIDGE WEARING COURSE (TYPE IVS)
8314	TON	MAINLINE BASE COURSE (TYPE IIS)
130	TON	SIDEROAD BASE COURSE (TYPE IIS)
1478	TON	LEVELING (TYPE IVS)
163	TON	ROUNDING
23000	TON	TOTAL
		STONE FILL, TYPE I
1482	CY	DITCH CLEANING
24.1	CY	SLOPE EROSION REPAIR
13.9	CY	ROUNDING
1520	CY	TOTAL

PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:56
PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
FILE NAME: p08c212.dgn	CHECKED BY: JLL
PROJECT LEADER: JLL	SHEET 6 OF 79
DESIGNED BY: STANTEC	
IPARM FILE: p08c212qs01.i	

QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES					TOTALS	DESCRIPTIONS			
	ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUND
	2665				2665	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	-
	1520				1520	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
	4560				4560	HR	FLAGGERS	630.15	EST.
				1	1	LS	FIELD OFFICE, ENGINEERS	631.10	-
				1	1	LS	TESTING EQUIPMENT, CONCRETE	631.16	-
				1	1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-
				1	1	LU	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.25	-
	1				1	LS	MOBILIZATION/DEMOBILIZATION	635.11	-
	1				1	LS	TRAFFIC CONTROL	641.10	-
	1				1	LS	PUBLIC RELATIONS OFFICER	641.12	-
	2				2	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-
	63400				63400	LF	DURABLE 4 INCH WHITE LINE, THERMOPLASTIC	646.402	146
	54200				54200	LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	85
	250				250	LF	DURABLE 24 INCH STOP BAR, THERMOPLASTIC	646.482	3
	53				53	EA	DURABLE LETTER OR SYMBOL, THERMOPLASTIC	646.492	-
	126700				126700	LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	192
	108400				108400	LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	170
	500				500	LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	6
	106				106	EA	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-
	3000				3000	EA	LINE STRIPING TARGETS	646.76	28
		7600			7600	SY	GEOTEXTILE UNDER STONE FILL	649.31	47
		250			250	SY	GEOTEXTILE FOR SILT FENCE	649.51	EST.
		40			40	LB	SEED	651.15	EST.
		250			250	LB	FERTILIZER	651.18	EST.
		1			1	TON	AGRICULTURAL LIMESTONE	651.20	EST.
		1			1	TON	HAY MULCH	651.25	EST.
		25			25	CY	TOPSOIL	651.35	EST.
		850			850	SY	TEMPORARY EROSION MATTING	653.20	50
	315				315	SF	TRAFFIC SIGNS, TYPE A	675.20	3.31
	1190				1190	LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341	10
	103				103	EA	REMOVING SIGNS	675.50	-
	18				18	EA	ERECTING SALVAGED SIGNS	675.60	-
	24				24	EA	DELINEATOR WITH STEEL POST	676.10	-
	16				16	EA	REMOVAL OF EXISTING DELINEATOR	676.12	-
	1				1	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-
	1780				1780	SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)	900.675	22
	5650				5650	TON	SPECIAL PROVISION (SUBBASE, RAP FOR RECLAIMING)	900.680	8

DETAILED SUMMARY OF QUANTITIES		
QUANTITIES	UNIT	ITEMS
		GEOTEXTILE UNDER STONE FILL
6672	SY	DITCH CLEANING
881	SY	SLOPE EROSION REPAIR
47	SY	ROUNDING
7600	SY	TOTAL
		TEMPORARY EROSION MATTING
375	SY	DITCH CLEANING
225	SY	M.T.S. CONSTRUCTION
200	SY	SEED PROTECTION (EST.)
50	SY	ROUNDING
850	SY	TOTAL

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212qs02.i

PLOT DATE: 31-OCT-2012 13:56
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 7 OF 79

ITEM DETAIL SUMMARY SHEET 1

LOCATION			GUARDRAIL							MISCELLANEOUS										REMARKS		
BEGIN MILE STA.	END MILE STA.	POS.	621.20	621.205	621.207	621.21	621.50	621.60	621.70	621.80	203.30	402.12	601.0910	604.412	613.10	613.11	616.35	616.47	617.10		617.12	619.17
			S.B. G.R. GALV. LF	S.B. G.R. GALV. 8' POST LF	S.B. G.R. GALV./NEST. W/8' POSTS LF	H.D. S.B. G.R. GALV. LF	MTS, FLARED EA	ANCHOR FOR S.B. RAIL EA	G.R. APP. SECTION GALV. TYPE I EA	REMOVAL & DISPOSAL OF GUARDRAIL LF	EARTH BORROW CY	AGG. SHLDRS. TON	15" CPEP LF	REHAB DI, CB, OR MH, CLASS I EA	STONE FILL, TYPE I CY	STONE FILL, TYPE II CY	TREATED TIMBER CURB LF	BIT. CONC. GUT. & TRAFF. ISL. TON	RELOC. MAILBOX, SNGL. SUPP. EACH		RELOC. MAILBOX, MULT. SUPP. EACH	YIELDING MARKER POSTS EACH
VT ROUTE 128 WESTFORD FAIRFAX 68+85 33+06 LT&RT												1963				50					64	QUANTITIES FOR USE AS DIRECTED BY THE RESIDENT ENGINEER.
WESTFORD 112+95 117+45 RT			375				2			341	50											INSTALL M.T.S., FLARED @ 112+95,RT AND 117+07.5, RT
113+75 117+25 LT			275				2			303	50											INSTALL M.T.S., FLARED @ 113+75, LT AND 116+87.5, LT
170+35 170+55 RT														3.7								ITEMS TO BE USED WITH SLOPE EROSION REPAIR.
192+74.5 195+54.75 RT			154			73.75		2		154						29	1.1					INSTALL ANCHORS AT 192+74.5, RT AND 195+54.75, RT; CONNECT NEW HDSB RAIL TO EXISTING BRIDGE RAIL AT 194+12 AND 194+86, RT; INSTALL TREATED TIMBER CURB FROM 193+83 TO 194+12, RT; CONSTRUCT BITUMINOUS CONCRETE GUTTER FROM 193+85 TO 194+12, RT; SEE BRIDGE DETAIL SHEET #2
193+68.25 196+11 LT			116.5			73.75		2		134												INSTALL ANCHORS AT 193+68.25, LT AND 196+11, LT; CONNECT NEW HDSB RAIL TO EXISTING BRIDGE RAIL AT 194+12 AND 194+86, LT; SEE BRIDGE DETAIL SHEET #2
193+85 RT													1									REHAB DI'S, CB'S or MH'S
211+60 RT																			1			
211+62 RT																				1		
220+10 LT															1.1							ITEMS TO BE USED WITH SLOPE EROSION REPAIR.
220+30 LT															1.1							ITEMS TO BE USED WITH SLOPE EROSION REPAIR.
221+44 LT															1.1							ITEMS TO BE USED WITH SLOPE EROSION REPAIR.
225+04 RT																				1		
225+06 RT																				1		
226+70.5 230+08 RT			341.5					2		180						60						INSTALL ANCHORS @ 226+70.5, RT AND 230+08, RT; INSTALL TREATED TIMBER CURB FROM 229+00 TO 229+60, RT
238+59 RT																					1	
238+61 RT																					1	
238+63 RT																					1	
244+85 248+97.5 LT			412.5					2		136					5.6							INSTALL ANCHOR @ 244+85, LT AND 248+97.5, LT INSTALL SLOPE EROSION REPAIR FROM 244+80 TO 245+10, LT (SEE MISCELLANEOUS DETAIL SHEET)
245+79 248+29 RT			204	50				2		213			20		9.3							INSTALL ANCHORS @ 245+79, RT AND 248+29, RT (SEE BURIED END DETAIL ON GUARDRAIL DETAIL SHEET #1) INSTALL SLOPE EROSION REPAIR FROM 246+00 TO 246+50, RT (SEE MISC. DETAIL SHEET)
249+96 RT																					1	
250+53 RT																					1	
250+55 RT																					1	
251+52 RT															1.1							ITEMS TO BE USED WITH SLOPE EROSION REPAIR.
251+75 RT																					1	
253+46 RT																					1	
257+18 RT																					1	
260+27 RT																					1	
264+31 265+31 LT			104					2														INSTALL ANCHORS @ 264+31 AND 265+31, LT
267+70 RT																					1	
SHEET SUBTOTALS:			1982.5	50	-	147.5	4	12	-	1461	100	1963	20	1	23	50	89	1.1	15	-	64	

ITEM DETAIL SUMMARY SHEET #1	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:56
DESIGNED BY: STANTEC	DRAWN BY: STANTEC
CHECKED BY: JLL	SHEET 8 OF 79
IPARM FILE: p08c212ids01.i	

ITEM DETAIL SUMMARY SHEET 2

LOCATION			MISCELLANEOUS																	REMARKS		
BEGIN MILE STA.	END MILE STA.	POS.	649.3I	649.5I	653.20	676J0	676J2															
			GEO. UNDER STONE FILL SY	GEO. FOR SILT FENCE SY	TEMP. EROSION MATTING SY	DEL.W/ STEEL POST EACH	REMOVAL OF EXIST. DEL. EACH															
VT ROUTE 128																						
WESTFORD 68+85	FAIRFAX 33+06	LT&RT		250																		
WESTFORD																						
112+95	117+45	RT			50	2																
113+62.5	117+25	LT			50	2																
170+35	170+55	RT	179																			
192+74.5	195+54.75	RT				2	2															
193+68.25	196+23.5	LT				2																
193+85		RT																				
211+60		RT																				
211+62		RT																				
220+10		LT	7.2																			
220+30		LT	7.2																			
221+44		LT	7.2																			
225+04		RT																				
225+06		RT																				
227+45.5	230+08	RT				2																
238+59		RT																				
238+61		RT																				
238+63		RT																				
244+47.5	249+22.5	LT	260			2	2															
245+79	248+41.5	RT	406			2	2															
249+96		RT																				
250+53		RT																				
250+55		RT																				
251+52		RT	7.2																			
251+75		RT																				
253+46		RT																				
257+18		RT																				
260+27		RT																				
264+31	265+31	LT																				
267+70		RT																				
SHEET SUBTOTALS:			873.8	250	100	14	6															

ITEM DETAIL SUMMARY SHEET #2	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:56
PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL
IPARM FILE: p08c212ids02.i	SHEET 9 OF 79

ITEM DETAIL SUMMARY SHEET 3

LOCATION			GUARDRAIL							MISCELLANEOUS											REMARKS		
BEGIN MILE STA.	END MILE STA.	POS.	621.20	621.205	621.207	621.21	621.50	621.60	621.70	621.80	203.30	402.12	601.0910	604.412	613.10	613.11	616.35	616.47	617.10	617.12		619.17	
			S.B. G.R. GALV. LF	S.B. G.R. GALV. 8' POST LF	S.B. G.R. GALV./NEST. W/8' POSTS LF	H.D. S.B. G.R. GALV. LF	MTS, FLARED EA	ANCHOR FOR S.B. RAIL EA	G.R. APP. SECTION GALV. TYPE I EA	REMOVAL & DISPOSAL OF GUARDRAIL LF	EARTH BORROW CY	AGG. SHLDRS. TON	15" CPEP LF	REHAB DI, CB, OR MH, CLASS I EA	STONE FILL, TYPE I CY	STONE FILL, TYPE II CY	TREATED TIMBER CURB LF	BIT. CONC. GUT. & TRAFF. ISL. TON	RELOC. MAILBOX, SNGL. SUPP. EACH	RELOC. MAILBOX, MULT. SUPP. EACH		YIELDING MARKER POSTS EACH	
VT ROUTE 128																							
WESTFORD	FAIRFAX																						
271+24		RT																					
272+14		LT																					
273+31.5	279+06.5	LT	354	200	25			2		365			20								1	INSTALL ANCHOR @ 273+31.5, LT AND 279+06.5, LT (SEE BOTH DETAILS ON GUARDRAIL DETAIL SHEET #1) RELOCATE MAILBOX MULTIPLE SUPPORT AT STA. 274+58, LT	
274+81.5	277+31.5	RT	152	37.5	25		1	1		190	25											INSTALL ANCHOR @ 274+81.5, RT, INSTALL M.T.S., FLARED @ 276+94, RT (SEE GUARDRAIL AT LARGE CULVERT DETAIL ON GUARDRAIL DETAIL SHEET #1)	
275+07		LT													1.1							ITEMS TO BE USED WITH SLOPE EROSION REPAIR.	
279+55		LT																					
281+40		LT																					
282+05		LT																					
285+20		RT																					
288+25		LT																					
302+93	303+93	RT	104					2		98							89						INSTALL ANCHOR @ 302+93, RT AND 303+93, RT; INSTALL TREATED TIMBER CURB @ STA. 303+00 TO 303+89, RT
304+17		RT																					
304+27		RT																					
318+30		LT																					
322+24		RT																					
329+93		RT																					
335+22		LT																					
335+89		RT																					
337+55		LT																					
337+57		LT																					
341+76		RT																					
342+21		LT																					
344+76		LT																					
344+80		LT																					
344+82		LT																					
345+65		LT																					
FAIRFAX																							
0+38		RT																					
2+07		LT																					
3+11		LT																					
7+44	11+02	LT	100					2	2	284	50						35	0.5					INSTALL M.T.S., FLARED @ 7+44, LT AND 10+56.5, LT; SEE BRIDGE DETAIL SHEET NO.3; INSTALL TREATED TIMBER CURB FROM 9+44 TO 9+79, LT; CONSTRUCT BITUMINOUS CONCRETE GUTTER FROM 9+44 TO 9+79, LT
SHEET SUBTOTALS:			710	237.5	50	-	3	5	2	937	75	-	20	-	1.1	-	124	0.5	24	2	-		

ITEM DETAIL SUMMARY SHEET #3	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:56
DESIGNED BY: STANTEC	DRAWN BY: STANTEC
IPARM FILE: p08c212ids03.i	CHECKED BY: JLL
	SHEET 10 OF 79

ITEM DETAIL SUMMARY SHEET 4

LOCATION			MISCELLANEOUS																	REMARKS	
BEGIN MILE STA.	END MILE STA.	POS.	649.3I	649.5I	653.20	676.I0	676.I2														
			GEO. UNDER STONE FILL SY	GEO. FOR SILT FENCE SY	TEMP. EROSION MATTING SY	DEL.W/ STEEL POST EACH	REMOVAL OF EXIST. DEL. EACH														
VT ROUTE 128																					
WESTFORD	FAIRFAX																				
271+24		RT																			
272+14		LT																			
273+06.5	279+06.5	LT					2	2												INSTALL ANCHOR @ 273+31.5, LT AND 279+06.5, LT (SEE BOTH DETAILS ON GUARDRAIL DETAIL SHEET #1) RELOCATE MAILBOX MULTIPLE SUPPORT AT STA. 274+58, LT	
274+81.5	277+44.0	RT			25		2	2												INSTALL ANCHOR @ 274+81.5, RT, INSTALL M.T.S., FLARED @ 276+94, RT (SEE GUARDRAIL AT LARGE CULVERT DETAIL ON GUARDRAIL DETAIL SHEET #1)	
275+07		LT	7.2																	ITEMS TO BE USED WITH SLOPE EROSION REPAIR.	
279+55		LT																			
281+40		LT																			
282+05		LT																			
285+20		RT																			
288+25		LT																			
302+93	303+93	RT					2	2												INSTALL ANCHOR @ 302+93, RT AND 303+93, RT; INSTALL TREATED TIMBER CURB @ STA. 303+00 TO 303+89, RT	
304+17		RT																			
304+27		RT																			
318+30		LT																			
322+24		RT																			
329+93		RT																			
335+22		LT																			
335+89		RT																			
337+55		LT																			
337+57		LT																			
341+76		RT																			
342+21		LT																			
344+76		LT																			
344+80		LT																			
344+82		LT																			
345+65		LT																			
FAIRFAX																					
0+38		RT																			
2+07		LT																			
3+11		LT																			
7+44	11+02	LT			50		2	2												INSTALL M.T.S., FLARED @ 7+44, LT AND 10+56.5, LT; SEE BRIDGE DETAIL SHEET NO.3; INSTALL TREATED TIMBER CURB FROM 9+44 TO 9+79, LT; CONSTRUCT BITUMINOUS CONCRETE GUTTER FROM 9+44 TO 9+79, LT	
SHEET SUBTOTALS:			-	7.2	-	75	8	8													

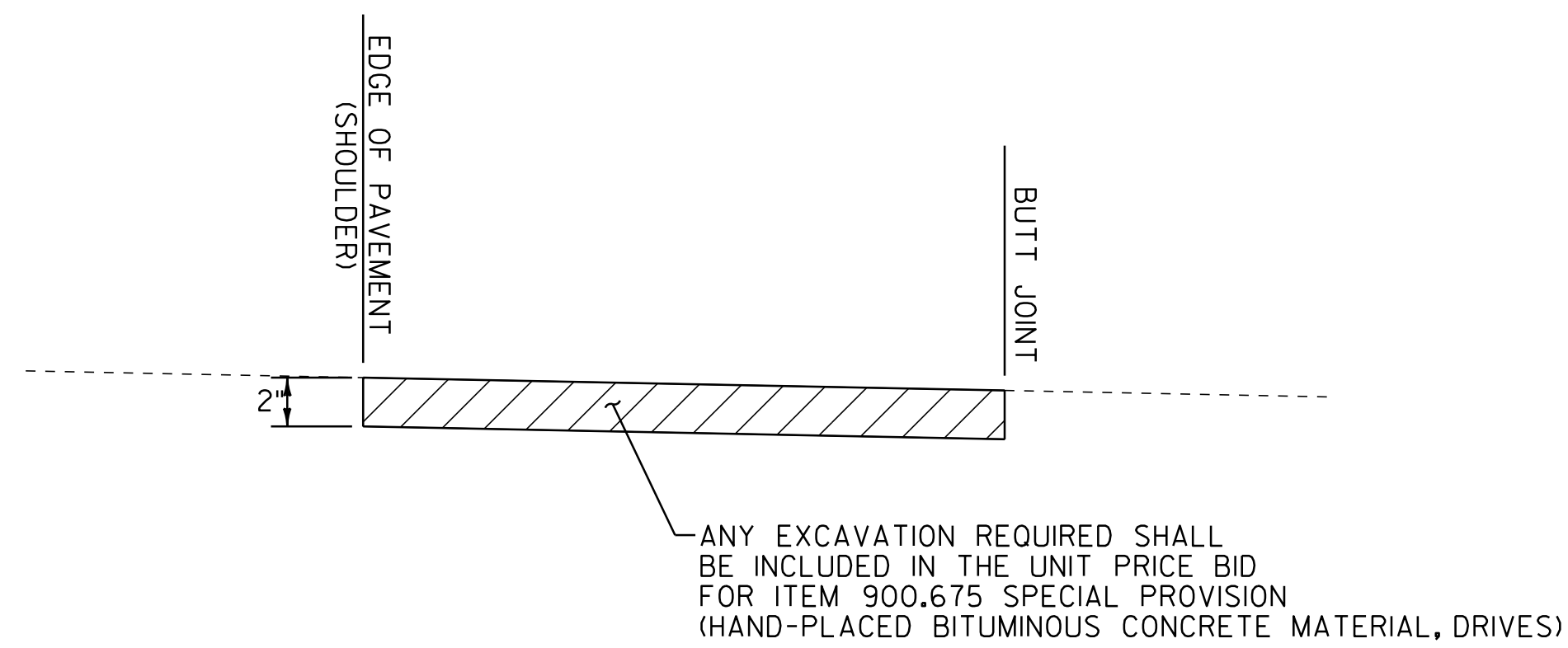
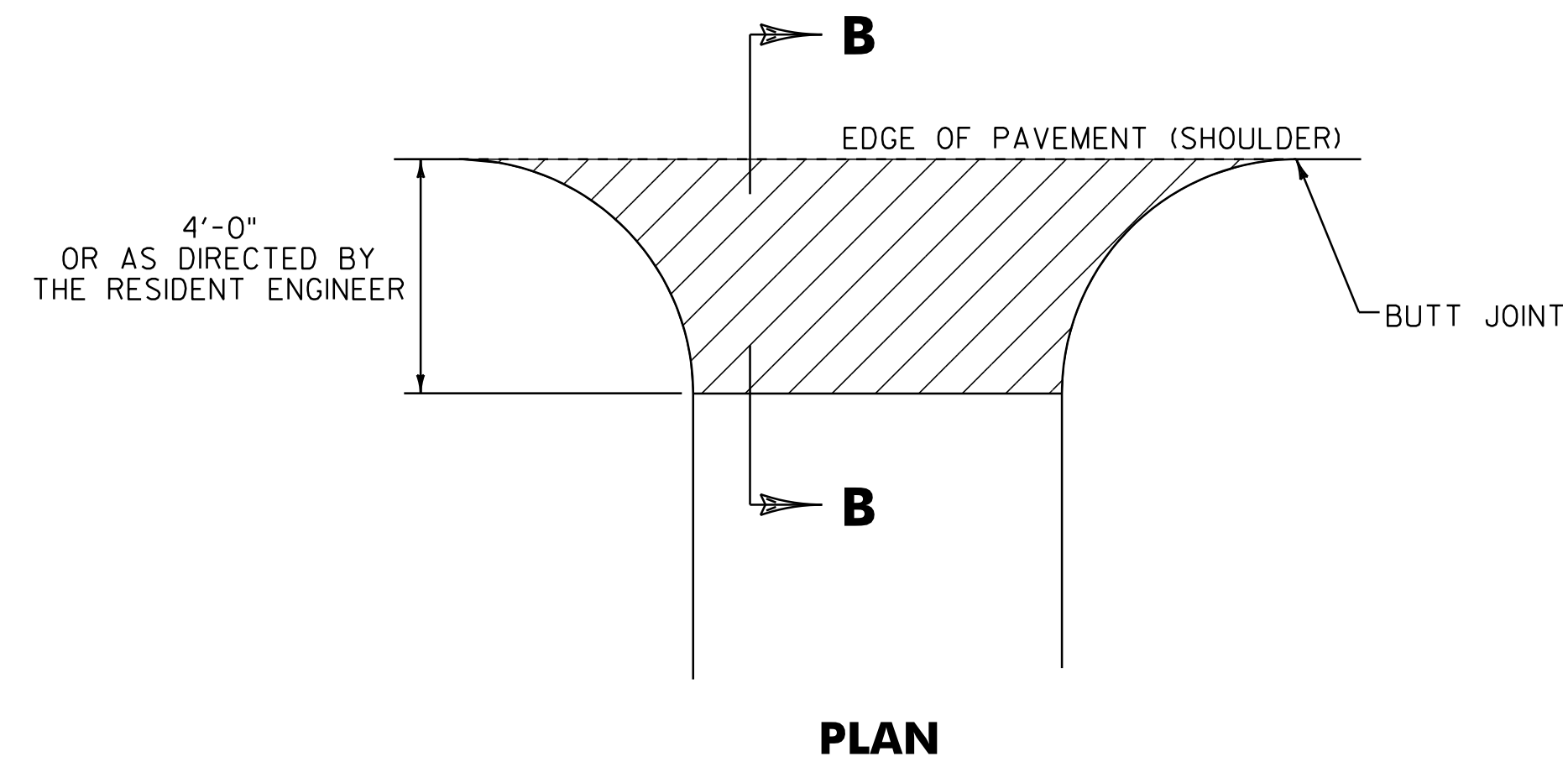
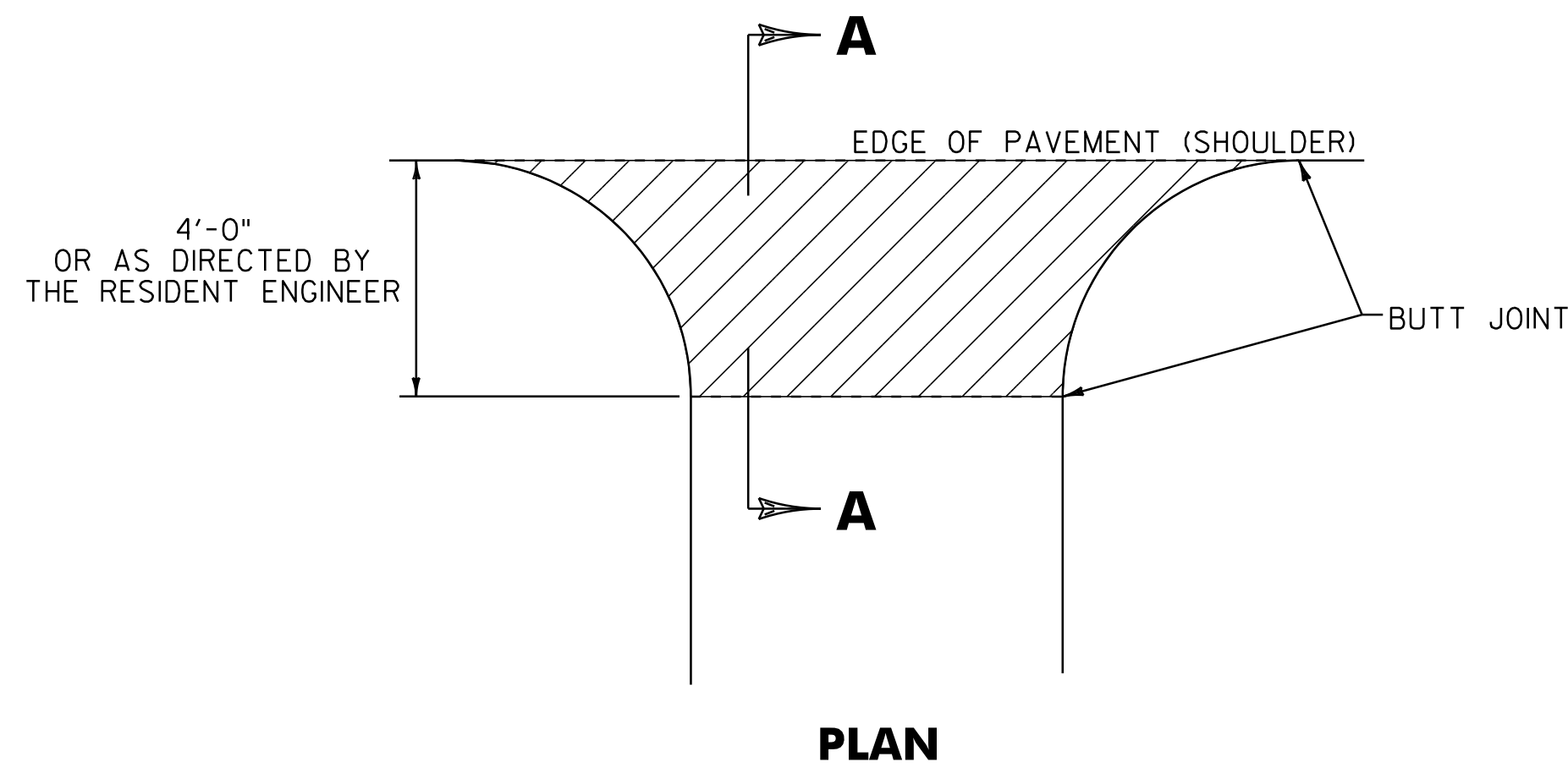
ITEM DETAIL SUMMARY SHEET #4	PROJECT NAME: WESTFORD - FAIRFAX	
	PROJECT NUMBER: STP 2804(1)	
	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:56
	PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL	
IPARM FILE: p08c212ids04.i	SHEET 11 OF 79	

ITEM DETAIL SUMMARY SHEET 5

LOCATION			GUARDRAIL							MISCELLANEOUS											REMARKS		
BEGIN MILE STA.	END MILE STA.	POS.	621.20	621.205	621.207	621.21	621.50	621.60	621.70	621.80	203.30	402.12	601.0910	604.412	613.10	613.11	616.35	616.47	617.10	617.12		619.17	
			S.B. G.R. GALV. LF	S.B. G.R. GALV. 8' POST LF	S.B. G.R. GALV./NEST. W/8' POSTS LF	H.D. S.B. G.R. GALV. LF	MTS, FLARED EA	ANCHOR FOR S.B. RAIL EA	G.R. APP. SECTION GALV. TYPE I EA	REMOVAL & DISPOSAL OF GUARDRAIL LF	EARTH BORROW CY	AGG. SHLDRS. TON	15" CPEP LF	REHAB DI, CB, OR MH, CLASS I EA	STONE FILL, TYPE I CY	STONE FILL, TYPE II CY	TREATED TIMBER CURB LF	BIT. CONC. GUT. & TRAFF. ISL. TON	RELOC. MAILBOX, SNGL. SUPP. EACH	RELOC. MAILBOX, MULT. SUPP. EACH		YIELDING MARKER POSTS EACH	
VT ROUTE 128 FAIRFAX (CONT.)																							
7+46	10+96.5	RT	100				2		2	267	50												INSTALL M.T.S., FLARED @ 7+48.5, RT AND 10+59, RT; SEE BRIDGE DETAIL SHEET NO. 3
21+56		LT																			1		
25+37		LT																			1		
SHEET 1 SUBTOTALS:			1982.5	50	-	147.5	4	12	-	1461	100	1963	20	1	23	50	89	1.1	15	-	64		
SHEET 3 SUBTOTALS:			710	237.5	50	-	3	5	2	937	75	-	20	-	1.1	-	124	0.5	24	2	-		* THESE TOTALS ARE CARRIED FORWARD TO THE DETAILED SUMMARY OF QUANTITIES ON THE QUANTITY SHEETS
SHEET 5 SUBTOTALS:			100	-	-	-	2	-	2	267	50	-	-	-	-	-	-	-	1	1	-		
PROJECT SUBTOTALS:			2792.5	287.5	50	147.5	9	17	4	2665	225	1963	40	1	24.1	50	213	1.6	40	3	64		
ROUNDINGS:			7.5	12.5	-	2.5	-	-	-	-	-	17	-	-	-	-	7	0.4	-	-	-	2	
TOTALS:			2800	300	50	150	9	17	4	2665	225	1980	40	1	24.1*	50	220	2	40	3	66		

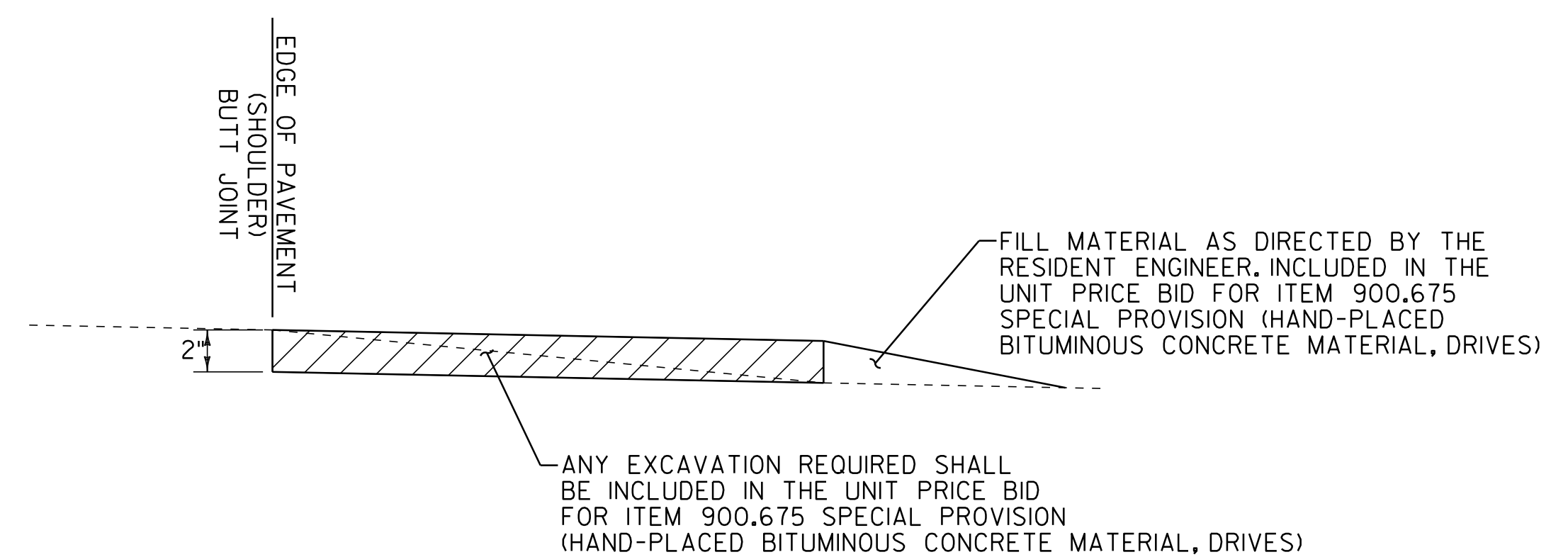
**ITEM
DETAIL
SUMMARY
SHEET #5**

PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:56
PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
FILE NAME: p08c212.dgn	CHECKED BY: JLL
DESIGNED BY: STANTEC	SHEET 12 OF 79
IPARM FILE: p08c212idss05.i	



SECTION A-A

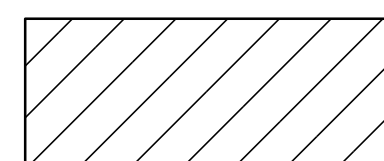
HANDWORK DETAILS FOR PAVED DRIVES



SECTION B-B

HANDWORK DETAILS FOR GRAVEL DRIVES

LEGEND



ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)

NOTES:

1. PAVING LIFT SHALL BE A MINIMUM OF 1 1/2 " AND A MAXIMUM OF 2".
2. THE COST OF PROVIDING AND PLACING SUBBASE MATERIAL, CLEANING EXISTING PAVED SURFACES, INCLUDING POWER EQUIPMENT, AND FOR FILLING JOINTS, CRACKS AND HOLES WILL NOT BE PAID DIRECTLY BUT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).
3. EXCAVATION NEEDED TO ACHIEVE PROPER DRIVE SLOPES WILL NOT BE PAID DIRECTLY BUT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).

NOT TO SCALE

**DRIVE
DETAIL
SHEET #1**

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212ds01.i

PLOT DATE: 31-OCT-2012 13:56
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 14 OF 79

DRIVE LOCATION SUMMARY – ITEM 900.675 SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES)

STATION	POSITION	900.675 (SY)
WESTFORD		
VT ROUTE 128 - COLD PLANE AREA		
83+82	RT	13
90+73	LT	10
93+36	LT	9
99+00	LT	8
100+91	RT	8
103+52	RT	10
105+29	RT	12
106+95	RT	20
107+86	RT	10
110+06	LT	8
112+65	RT	10
117+47	LT	9
122+40	RT	7
124+19	LT	11
131+94	RT	9
136+57	RT	11
137+03	LT	10
137+53	LT	13
137+59	RT	8
141+57	RT	8
145+50	LT	21
146+60	LT	5
147+77	LT	8
148+71	RT	16
151+69	LT	7
152+32	RT	14
161+10	LT	8
161+13	RT	5
162+56	RT	14
165+77	LT	8
177+58	LT	8
177+95	RT	6
178+09	LT	9
180+68	RT	10
182+30	RT	15
182+59	LT	7
185+71	RT	10
188+15	RT	7
188+32	LT	11
189+68	LT	10
192+04	RT	5
193+32	LT	18
195+90	RT	8
197+26	LT	8
197+29	RT	5
SUBTOTAL		447

STATION	POSITION	900.675 (SY)
WESTFORD (CONT.)		
VT ROUTE 128 - COLD PLANE AREA (CONT.)		
197+56	RT	6
197+77	RT	6
199+10	RT	7
200+14	RT	4
200+95	RT	6
203+68	RT	7
205+65	RT	31
207+11	RT	9
207+70	RT	9
208+77	RT	16
VT ROUTE 128 - RECLAIM AREA		
211+37	RT	20
211+92	RT	30
212+13	LT	19
216+43	RT	15
221+63	LT	12
222+28	RT	13
223+71	LT	8
224+89	RT	13
229+20	LT	7
230+38	RT	22
238+97	LT	28
239+07	RT	33
245+57	RT	15
250+15	LT	10
250+30	RT	22
251+93	RT	17
253+64	RT	14
257+07	RT	10
259+90	RT	23
259+99	LT	13
267+90	LT	33
267+92	RT	15
271+39	RT	12
272+30	LT	13
274+62	RT	18
278+82	RT	9
279+40	LT	12
281+23	LT	9
281+54	RT	10
282+30	LT	18
283+81	RT	14
285+07	RT	8
286+28	RT	69
288+00	LT	9
SUBTOTAL		694

STATION	POSITION	900.675 (SY)
WESTFORD (CONT.)		
VT ROUTE 128 - RECLAIM AREA (CONT.)		
288+51	LT	8
297+48	LT	7
304+04	RT	8
304+74	RT	36
306+12	RT	21
306+98	LT	21
318+19	LT	15
322+42	RT	15
325+63	RT	15
329+00	LT	16
330+08	RT	15
331+68	RT	9
335+37	LT	19
336+11	RT	14
337+67	LT	27
341+95	RT	14
342+40	LT	10
344+33	LT	13
345+68	RT	10
FAIRFAX VT ROUTE 128 - RECLAIM AREA		
0+18	RT	10
2+21	LT	9
2+98	LT	9
4+59	LT	50
6+69	LT	74
7+26	RT	10
7+32	LT	14
11+86	LT	28
21+78	LT	12
23+65	LT	11
24+66	LT	9
25+22	LT	13
FAIRFAX VT ROUTE 128 - COLD PLANE AREA		
31+99	RT	39
FAIRFAX VT ROUTE 128 APP. - C. P. AREA		
1+24	RT	17
2+57	LT	19
SUBTOTAL		617
COLUMN 1		447
COLUMN 2		694
COLUMN 3		617
SUBTOTAL		1758
ROUNDING		22
TOTAL		1780

NOTE:
FOR DRIVE DETAILS SEE DRIVE DETAIL SHEET 1
AND THE DRIVEWAY TRANSITION DETAIL AT
RECLAIM AREAS ON PROJECT TYPICAL SHEET #2.

NOT TO SCALE

**DRIVE
DETAIL
SHEET #2**

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212ds02.i

PLOT DATE: 31-OCT-2012 13:56
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 15 OF 79



646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 68+85 TO 72+00, SOLID LT & RT

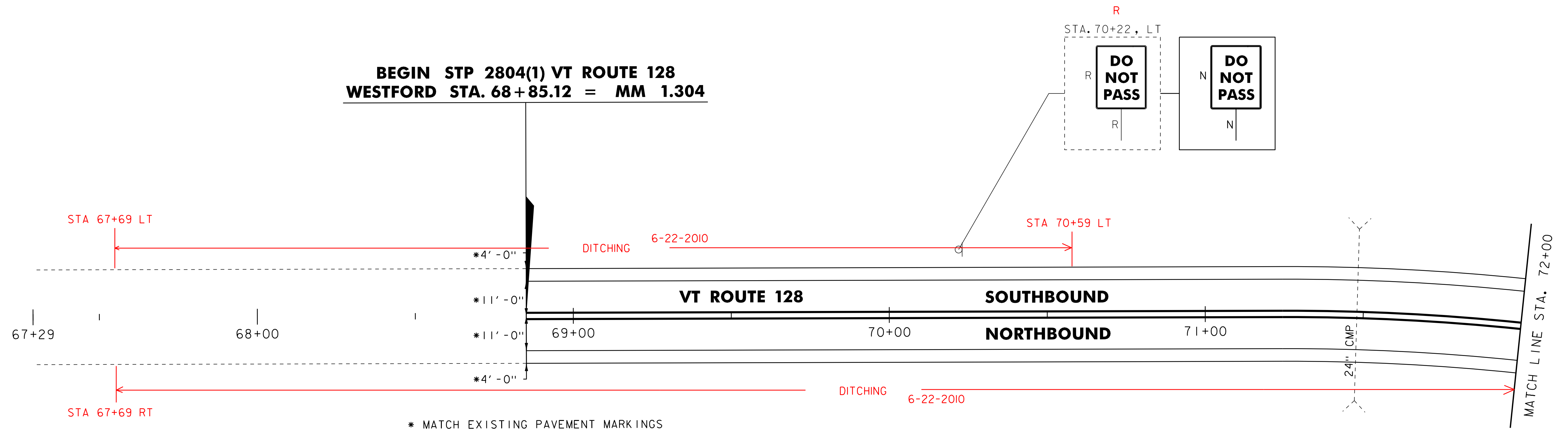
646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE G BREAKS FOR SIDE ROADS)
 STA. 68+85 TO 72+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 68+85 TO 72+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE G BREAKS FOR SIDE ROADS)
 STA. 68+85 TO 72+00, SOLID LT & RT

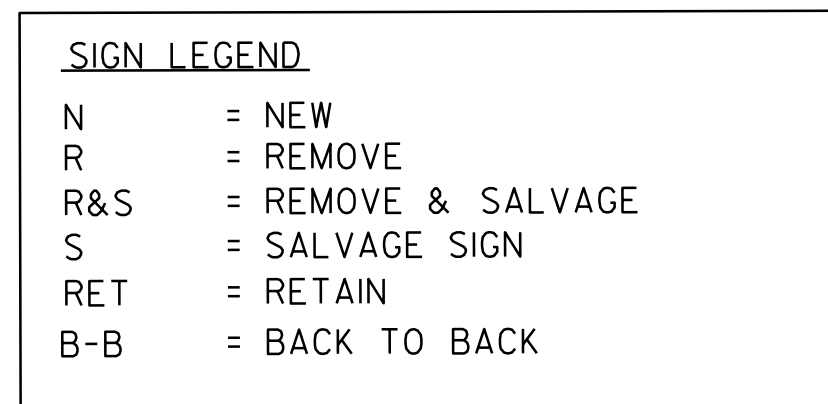
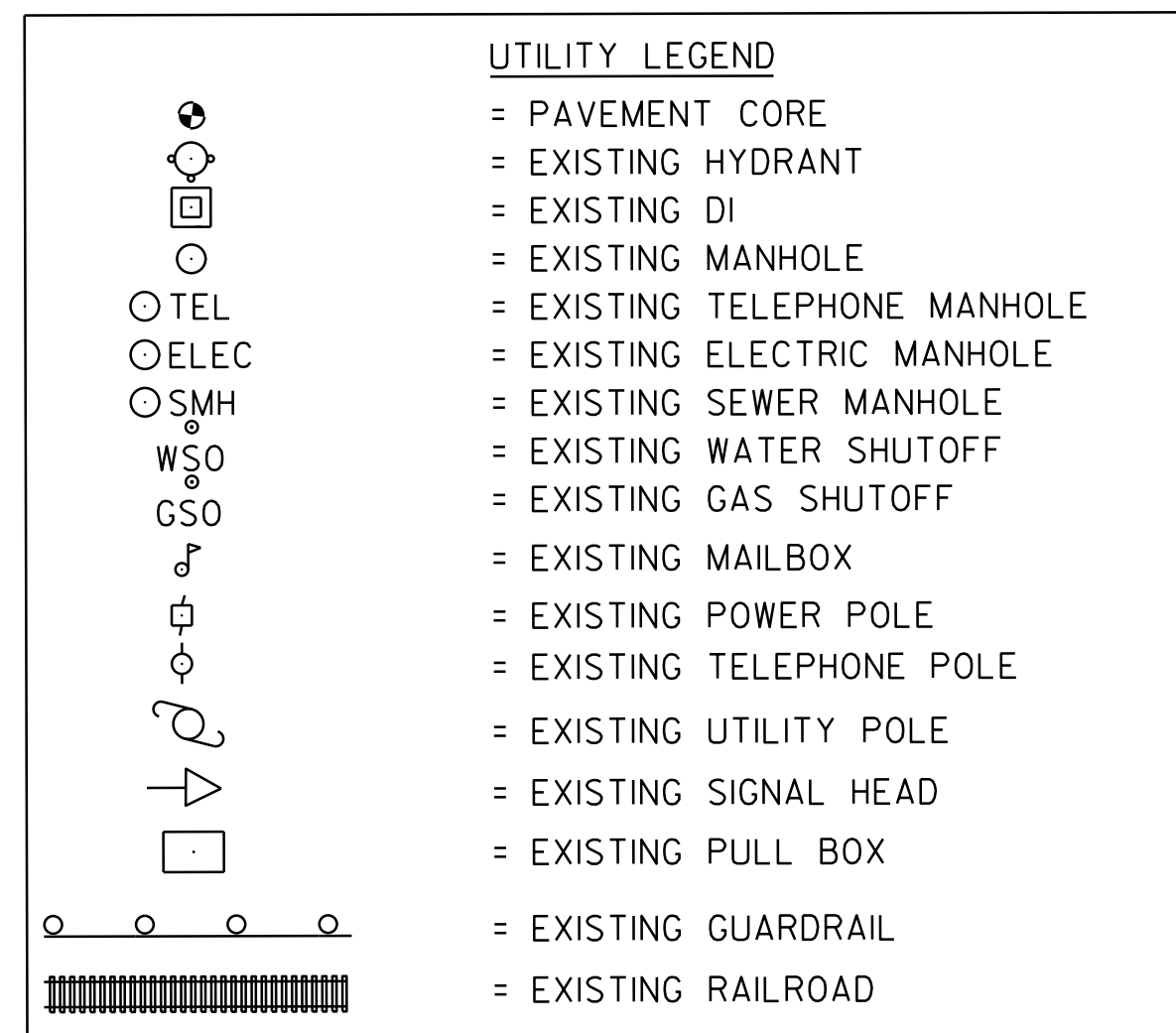
675.50 REMOVING SIGNS
 AS SHOWN - I

**BEGIN STP 2804(1) VT ROUTE 128
 WESTFORD STA. 68+85.12 = MM 1.304**



* MATCH EXISTING PAVEMENT MARKINGS

CURVE #1
 PC = 71+25
 PT = 72+67
 R = 716'
 $\Delta = 11^{\circ}23'28''$, RT
 D = 8'00'00"
 e = 3.55
 L = 142'
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #1



R=I

NOTE:
 ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
NOT TO SCALE

PROJECT LAYOUT SHEET #1	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	IPARM FILE: p08c212101.i
PROJECT LEADER: JLL	PLOT DATE: 31-OCT-2012 13:57
DESIGNED BY: STANTEC	DRAWN BY: STANTEC
	CHECKED BY: JLL
	SHEET 17 OF 79

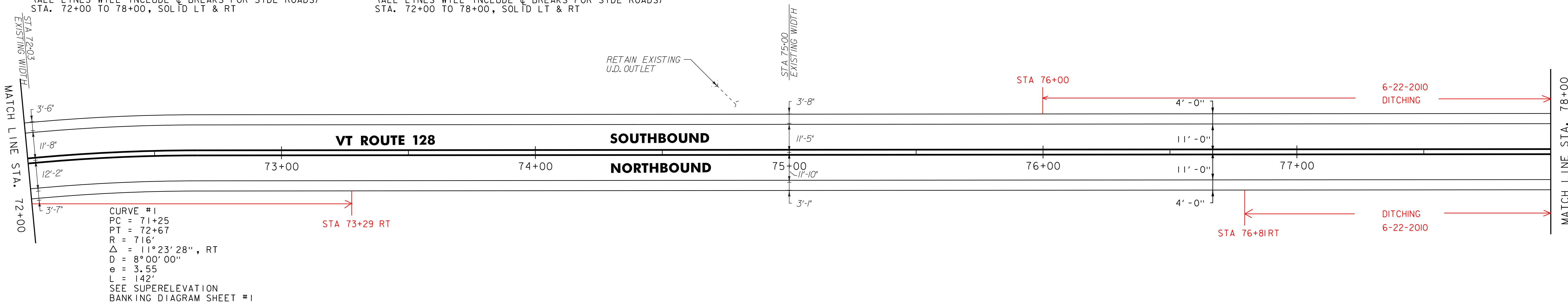


646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 72+00 TO 78+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 72+00 TO 78+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 72+00 TO 78+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 72+00 TO 78+00, SOLID LT & RT



646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 78+00 TO 84+00, SOLID LT & RT

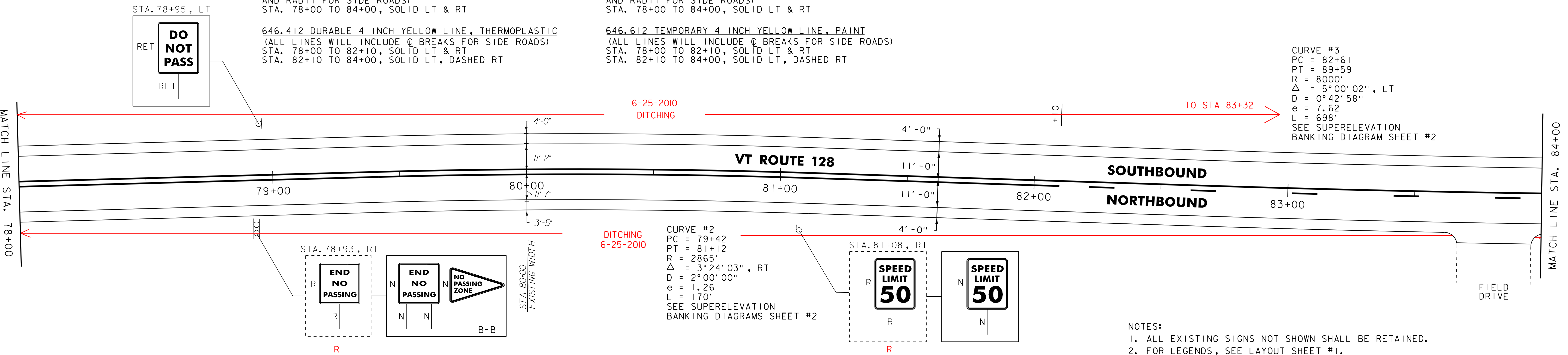
646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 78+00 TO 84+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 2

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 78+00 TO 82+10, SOLID LT & RT
 STA. 82+10 TO 84+00, SOLID LT, DASHED RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 78+00 TO 82+10, SOLID LT & RT
 STA. 82+10 TO 84+00, SOLID LT, DASHED RT

CURVE #3
 PC = 82+61
 PT = 89+59
 R = 8000'
 $\Delta = 5^\circ 00' 02''$, LT
 D = 0°42'58"
 e = 7.62
 L = 698'
 SEE SUPERELEVATION BANKING DIAGRAM SHEET #2



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #2

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212102.i

PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 18 OF 79



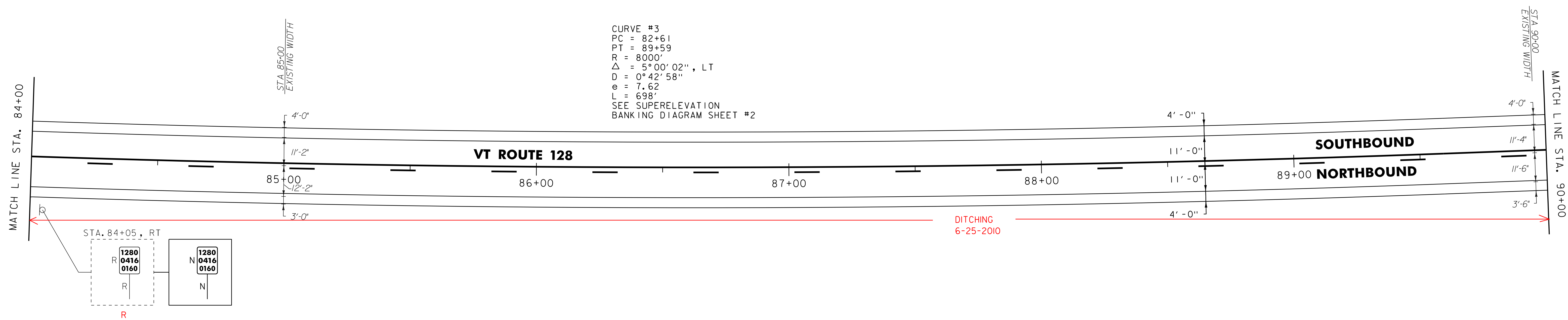
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 84+00 TO 90+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 84+00 TO 90+00, SOLID LT, DASHED RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 84+00 TO 90+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 84+00 TO 90+00, SOLID LT, DASHED RT

675.50 REMOVING SIGNS
 AS SHOWN - 1



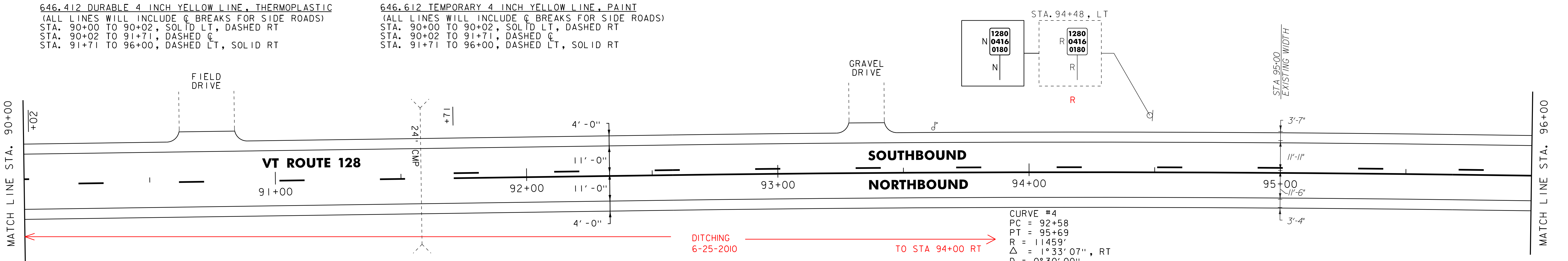
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 90+00 TO 96+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 90+00 TO 90+02, SOLID LT, DASHED RT
 STA. 90+02 TO 91+71, DASHED C
 STA. 91+71 TO 96+00, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 90+00 TO 96+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 90+00 TO 90+02, SOLID LT, DASHED RT
 STA. 90+02 TO 91+71, DASHED C
 STA. 91+71 TO 96+00, DASHED LT, SOLID RT

675.50 REMOVING SIGNS
 AS SHOWN - 1



CURVE #4
 PC = 92+58
 PT = 95+69
 R = 11459'
 $\Delta = 1^{\circ}33'07''$, RT
 D = 0°30'00"
 e = 1.05
 L = 310'
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #3

- NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE



PROJECT LAYOUT SHEET #3

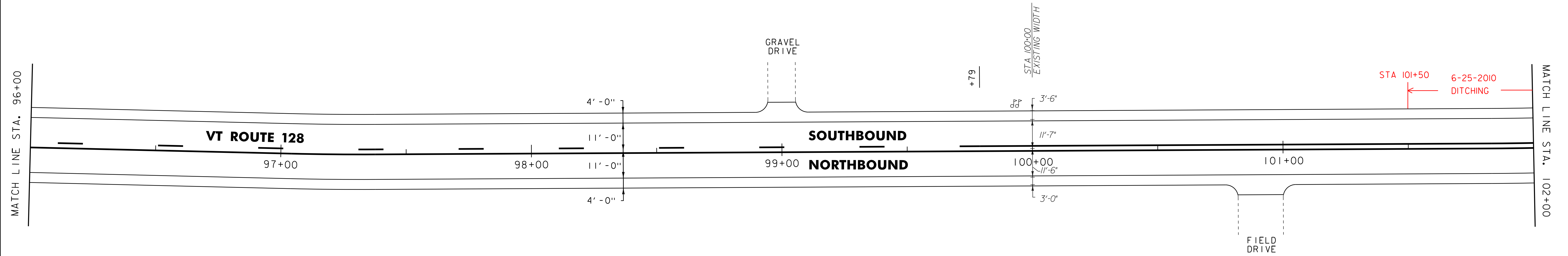
PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:57
PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
FILE NAME: p08c212.dgn	CHECKED BY: JLL
PROJECT LEADER: JLL	SHEET 19 OF 79
DESIGNED BY: STANTEC	
IPARM FILE: p08c212103.i	

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 96+00 TO 102+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 96+00 TO 99+79, DASHED LT, SOLID RT
 STA. 99+79 TO 102+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 96+00 TO 102+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 96+00 TO 99+79, DASHED LT, SOLID RT
 STA. 99+79 TO 102+00, SOLID LT & RT



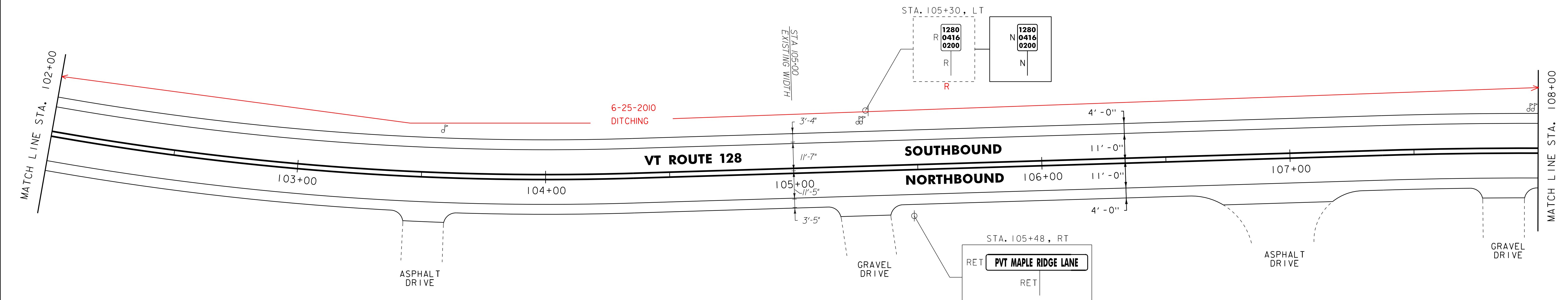
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 102+00 TO 108+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 102+00 TO 108+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 102+00 TO 108+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 102+00 TO 108+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 1



- NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

**PROJECT
 LAYOUT
 SHEET #4**

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
IPARM FILE: p08c212104.i

PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 20 OF 79



621.20 STEEL BEAM GUARDRAIL, GALVANIZED
STA. 113+32.5 TO 114+00, RT

621.50 MANUFACTURED TERMINAL SECTION, FLARED
STA. 112+95 TO 113+32.5, RT
STA. 113+75 TO 114+00, LT

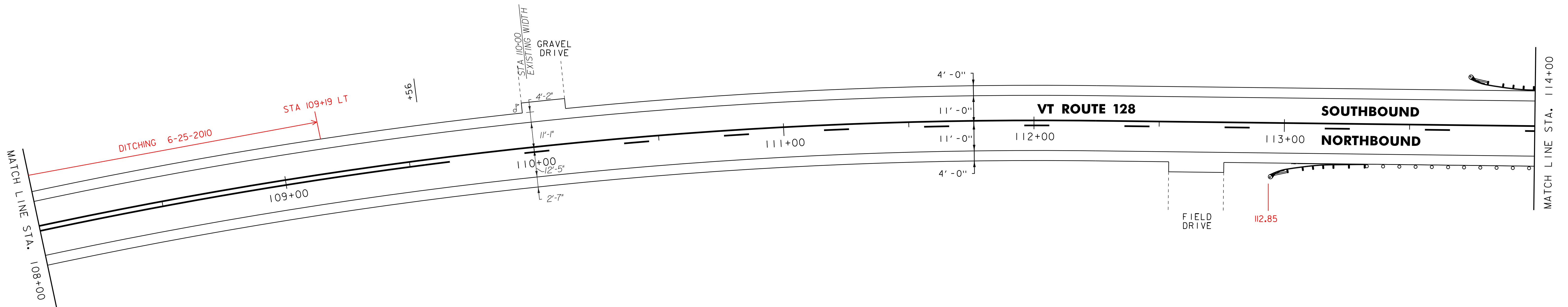
621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 112+96 TO 114+00, RT
STA. 113+97 TO 114+00, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 108+00 TO 114+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 108+00 TO 109+56, SOLID LT & RT
STA. 109+56 TO 114+00, SOLID LT, DASHED RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 108+00 TO 114+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 108+00 TO 109+56, SOLID LT & RT
STA. 109+56 TO 114+00, SOLID LT, DASHED RT



NOTES:

1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.

NOT TO SCALE



**PROJECT
LAYOUT
SHEET #5**

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212105.i

PLOT DATE: 31-OCT-2012 13:57
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 21 OF 79

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
 STA. 114+12.5 TO 116+87.5, LT
 STA. 114+00 TO 117+07.5, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 114+00 TO 120+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 114+00 TO 120+00, SOLID LT & RT

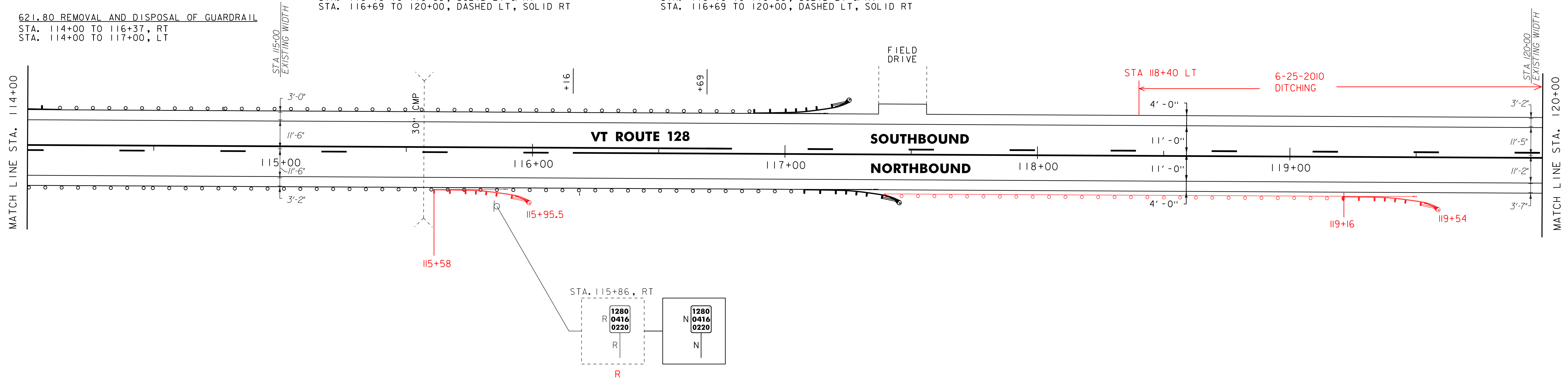
675.50 REMOVING SIGNS
 AS SHOWN - 1

621.50 MANUFACTURED TERMINAL SECTION, FLARED
 STA. 114+00 TO 114+12.5, LT
 STA. 116+87.5 TO 117+25, LT
 STA. 117+07.5 TO 117+45, RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 114+00 TO 116+16, SOLID LT, DASHED RT
 STA. 116+16 TO 116+69, SOLID LT & RT
 STA. 116+69 TO 120+00, DASHED LT, SOLID RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 114+00 TO 116+16, SOLID LT, DASHED RT
 STA. 116+16 TO 116+69, SOLID LT & RT
 STA. 116+69 TO 120+00, DASHED LT, SOLID RT

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
 STA. 114+00 TO 116+37, RT
 STA. 114+00 TO 117+00, LT

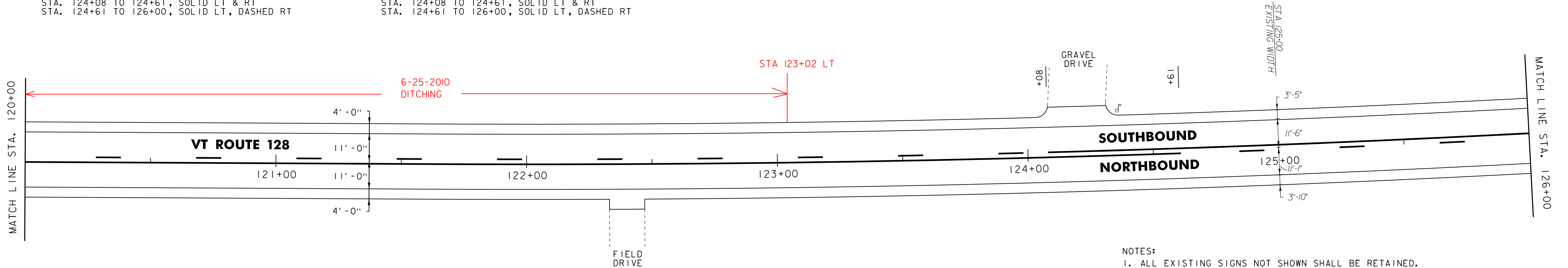


646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 120+00 TO 126+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 120+00 TO 126+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 120+00 TO 124+08, DASHED LT, SOLID RT
 STA. 124+08 TO 124+61, SOLID LT & RT
 STA. 124+61 TO 126+00, SOLID LT, DASHED RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 120+00 TO 124+08, DASHED LT, SOLID RT
 STA. 124+08 TO 124+61, SOLID LT & RT
 STA. 124+61 TO 126+00, SOLID LT, DASHED RT



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #6

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212106.i

PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 22 OF 79



R=I

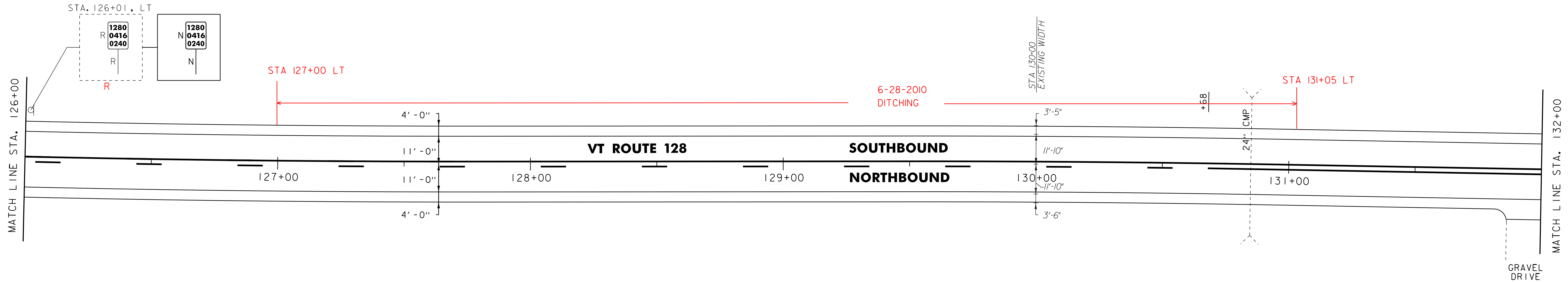
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 126+00 TO 132+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 126+00 TO 130+68, SOLID LT, DASHED RT
 STA. 130+68 TO 132+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 126+00 TO 132+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 126+00 TO 130+68, SOLID LT, DASHED RT
 STA. 130+68 TO 132+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 1



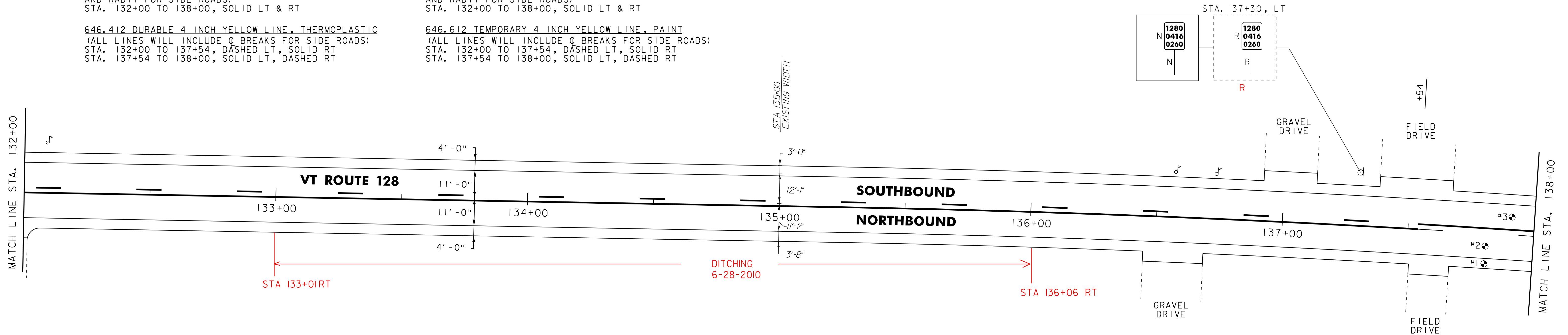
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 132+00 TO 138+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 132+00 TO 138+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 1

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 132+00 TO 137+54, DASHED LT, SOLID RT
 STA. 137+54 TO 138+00, SOLID LT, DASHED RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 132+00 TO 137+54, DASHED LT, SOLID RT
 STA. 137+54 TO 138+00, SOLID LT, DASHED RT



- NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
1	3 1/4"	NO	
2	5"	NO	
3	3 1/4"	NO	

R=1



PROJECT LAYOUT SHEET #7

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212107.i

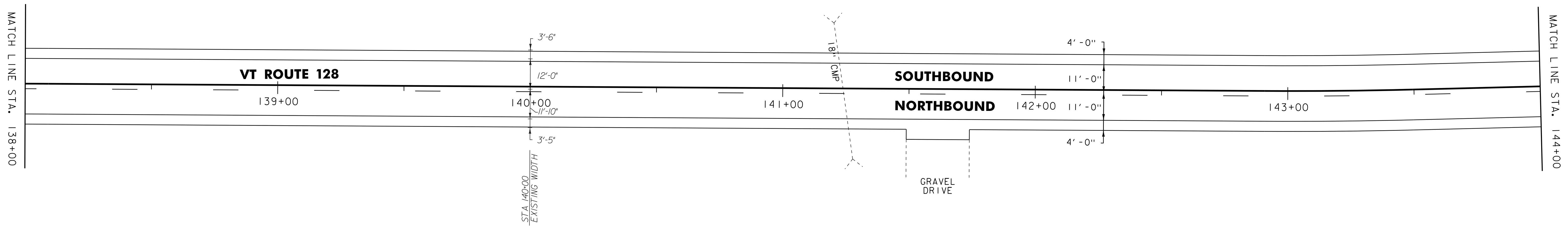
PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 23 OF 79

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 138+00 TO 144+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 138+00 TO 144+00, SOLID LT, DASHED RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 138+00 TO 144+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 138+00 TO 144+00, SOLID LT, DASHED RT

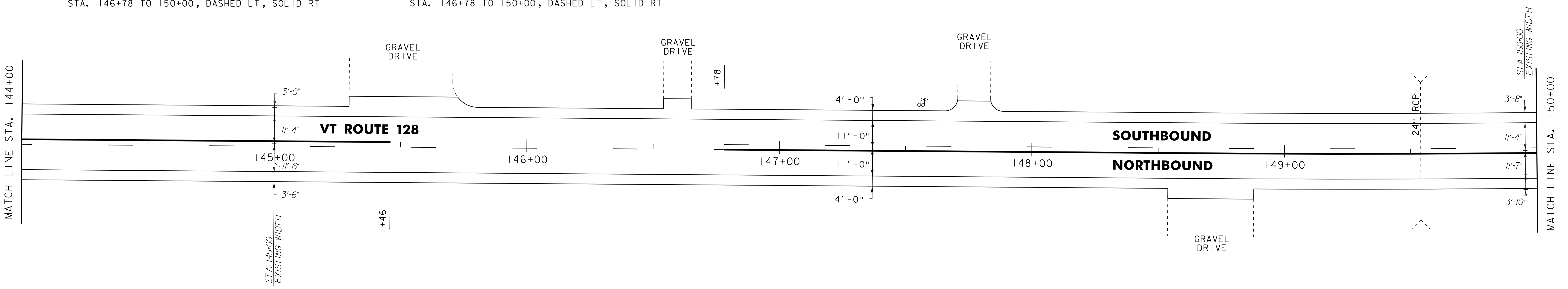


646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 144+00 TO 150+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 144+00 TO 145+46, SOLID LT, DASHED RT
 STA. 145+46 TO 146+78, DASHED C
 STA. 146+78 TO 150+00, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 144+00 TO 150+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 144+00 TO 145+46, SOLID LT, DASHED RT
 STA. 145+46 TO 146+78, DASHED C
 STA. 146+78 TO 150+00, DASHED LT, SOLID RT



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE



PROJECT LAYOUT SHEET #8

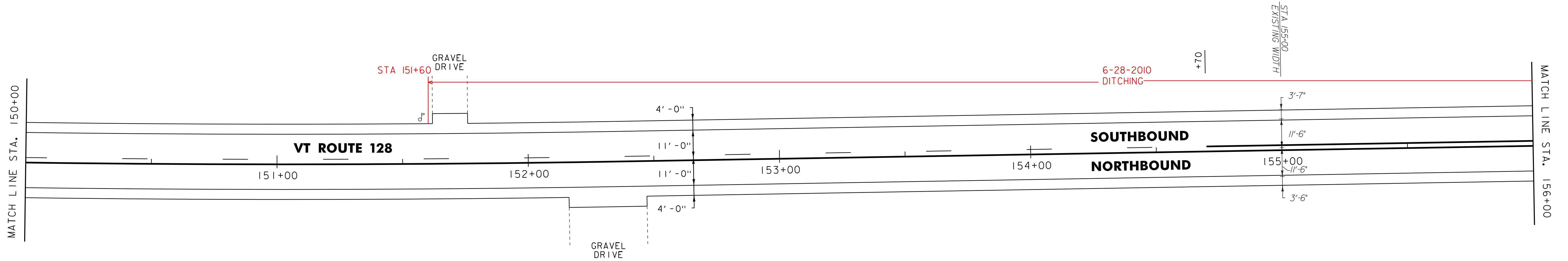
PROJECT NAME: WESTFORD - FAIRFAX	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:57
PROJECT NUMBER: STP 2804(1)	PROJECT LEADER: JLL	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC	CHECKED BY: JLL
	IPARM FILE: p08c212108.i	SHEET 24 OF 79

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 150+00 TO 156+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 150+00 TO 154+70, DASHED LT, SOLID RT
 STA. 154+70 TO 156+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 150+00 TO 156+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 150+00 TO 154+70, DASHED LT, SOLID RT
 STA. 154+70 TO 156+00, SOLID LT & RT

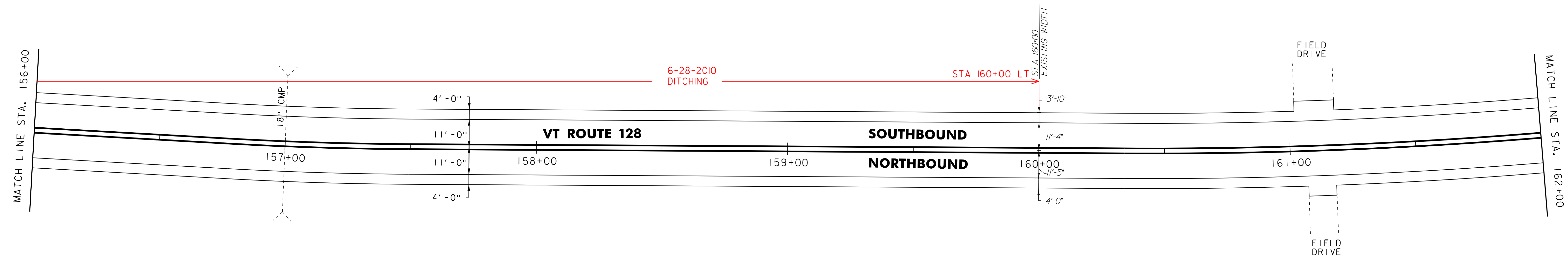


646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 156+00 TO 162+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 156+00 TO 162+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 156+00 TO 162+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 156+00 TO 162+00, SOLID LT & RT



- NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE



PROJECT LAYOUT SHEET #9

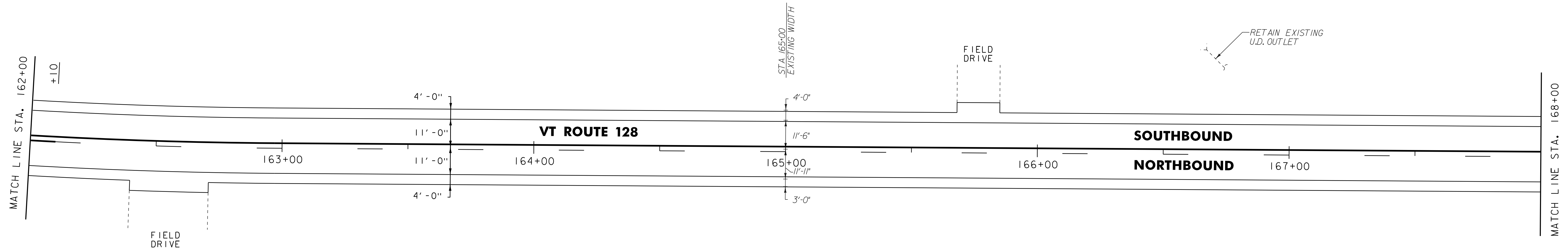
PROJECT NAME: WESTFORD - FAIRFAX	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:57
PROJECT NUMBER: STP 2804(1)	PROJECT LEADER: JLL	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC	CHECKED BY: JLL
	IPARM FILE: p08c212109.i	SHEET 25 OF 79

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 162+00 TO 168+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 162+00 TO 162+10, SOLID LT & RT
 STA. 162+10 TO 168+00, SOLID LT, DASHED RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 162+00 TO 168+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 162+00 TO 162+10, SOLID LT & RT
 STA. 162+10 TO 168+00, SOLID LT, DASHED RT



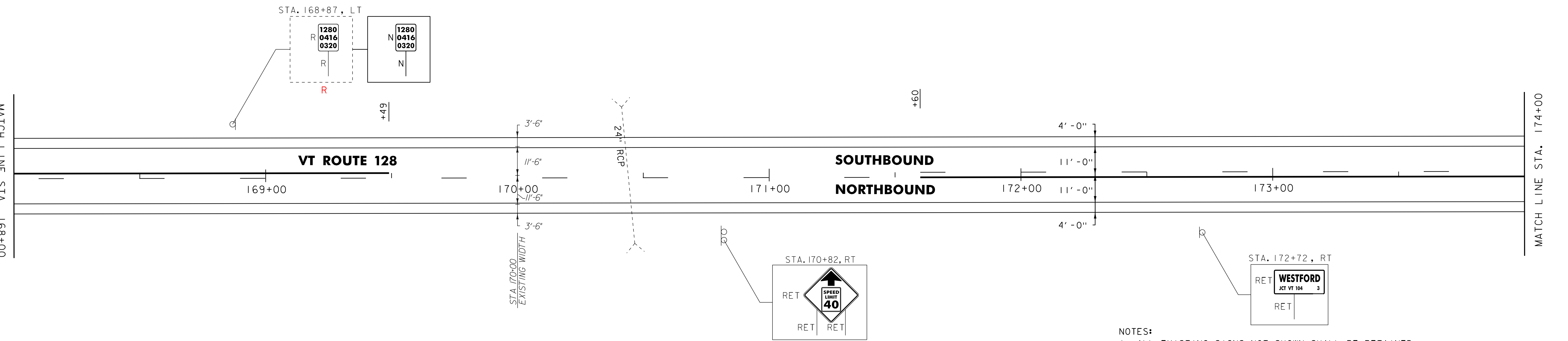
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 168+00 TO 174+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 168+00 TO 169+49, SOLID LT, DASHED RT
 STA. 169+49 TO 171+60, DASHED C
 STA. 171+60 TO 174+00, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 168+00 TO 174+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 168+00 TO 169+49, SOLID LT, DASHED RT
 STA. 169+49 TO 171+60, DASHED C
 STA. 171+60 TO 174+00, DASHED LT, SOLID RT

675.50 REMOVING SIGNS
 AS SHOWN - 1



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #10	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:57
PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL
IPARM FILE: p08c212110.i	SHEET 26 OF 79



R=1

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 174+00 TO 180+00, SOLID LT & RT
 STA. 177+27, SOLID RT (TH 19 EDGELINES)

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 174+00 TO 176+77, DASHED LT, SOLID RT
 STA. 176+77 TO 180+00, SOLID LT & RT
 STA. 177+27, DOUBLE SOLID RT (TH 19)

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 174+00 TO 180+00, SOLID LT & RT
 STA. 177+27, SOLID RT (TH 19 EDGELINES)

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 174+00 TO 176+77, DASHED LT, SOLID RT
 STA. 176+77 TO 180+00, SOLID LT & RT
 STA. 177+27, DOUBLE SOLID RT (TH 19)

646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 STA. 177+27, RT (TH 19)

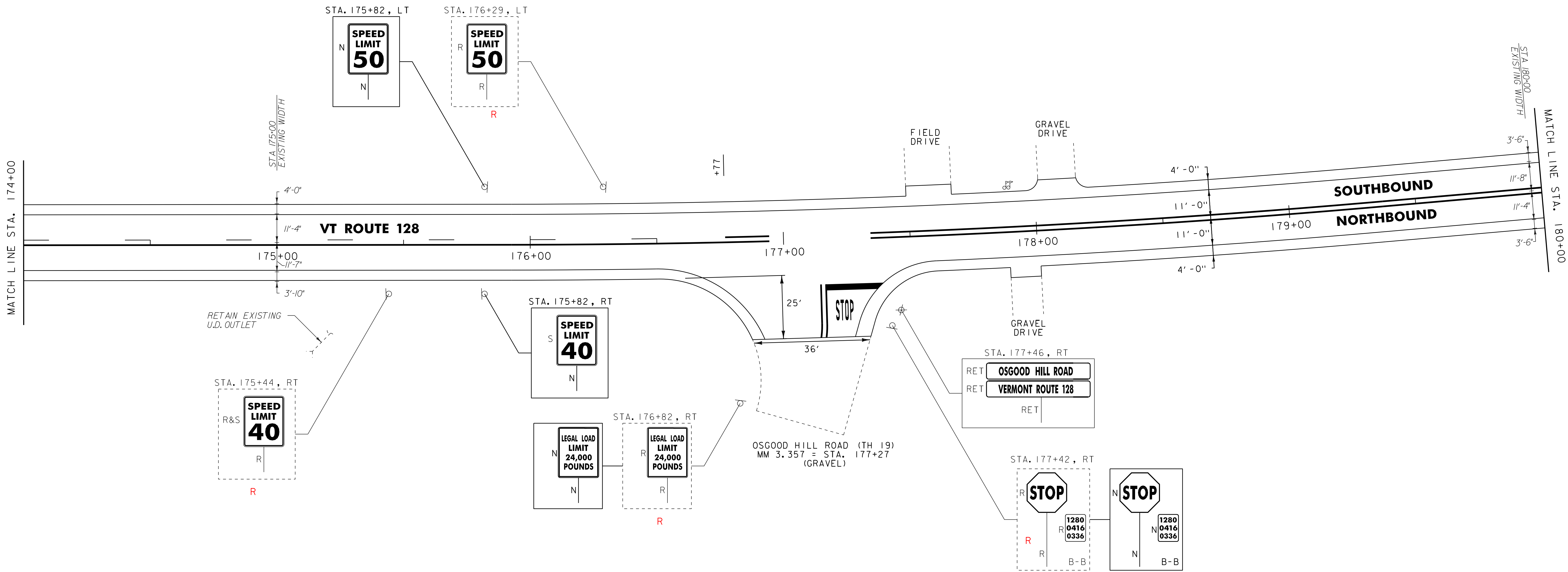
646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 STA. 177+27, RT - "STOP"

646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 STA. 177+27, RT (TH 19)

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 STA. 177+27, RT - "STOP"

675.50 REMOVING SIGNS
 AS SHOWN - 5

675.60 ERECTING SALVAGED SIGNS
 AS SHOWN - 1



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #11

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212111.i

PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 27 OF 79



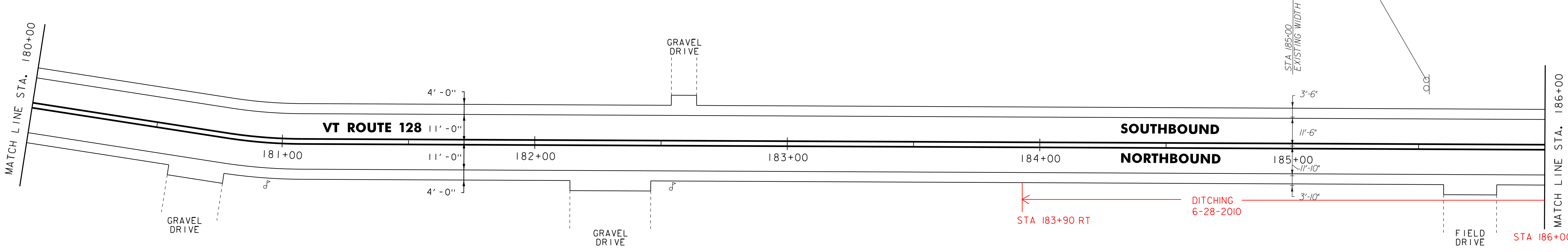
R=4

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 180+00 TO 186+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 180+00 TO 186+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 180+00 TO 186+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 180+00 TO 186+00, SOLID LT & RT



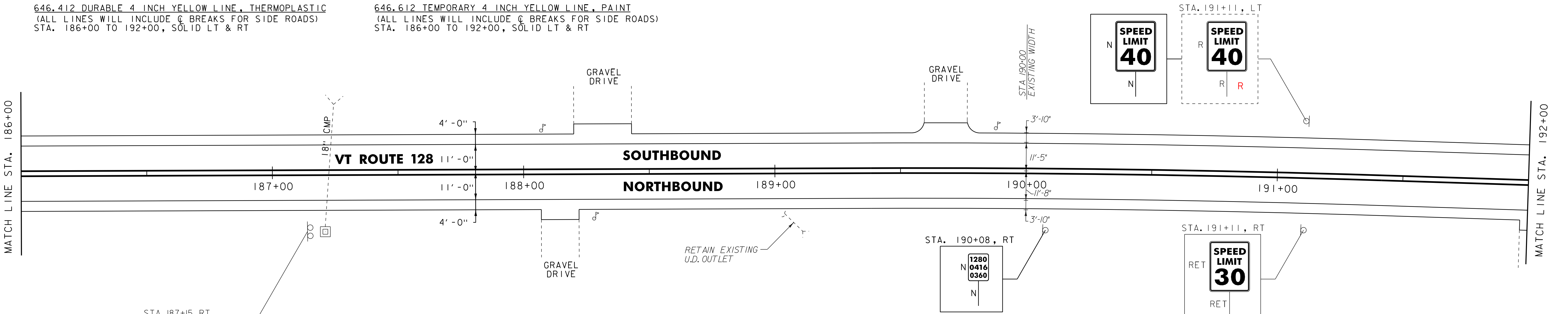
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 186+00 TO 192+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 186+00 TO 192+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 1

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 186+00 TO 192+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 186+00 TO 192+00, SOLID LT & RT



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #12	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:57
PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL
IPARM FILE: p08c212112.i	SHEET 28 OF 79



R=I

604.412 REHAB. DI'S, CB'S OR MH'S, CLASS I
STA. 193+85, RT

616.35 TREATED TIMBER CURB
STA. 193+83 TO 194+12, RT

616.47 BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
STA. 193+85 TO 194+12, RT
(SEE DETAIL ON MISCELLANEOUS DETAIL SHEET)

621.20 STEEL BEAM GUARDRAIL, GALVANIZED

193+25 STA. +92+74.5 TO 193+87, RT
193+00 STA. +93+68.25 TO 193+80.75, LT
194+87 STA. +95+11 TO +96+11, LT 194+99
195+11 STA. +95+17.25 TO +95+54.75, RT 195+42

621.21 HD STEEL BEAM GUARDRAIL, GALVANIZED
193+87 STA. +93+80.75 TO 194+12, LT
STA. 193+87 TO 194+12, RT
STA. 194+86.7 TO +95+11, LT 194+99
STA. 194+86 TO 195+17.25, RT

621.60 ANCHOR FOR STEEL BEAM RAIL
STA. 192+74.5, RT
STA. 193+68.25, LT
STA. 195+54.75, RT
STA. 196+11, LT

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 193+17 TO 194+12, RT
STA. 193+70 TO 194+12, LT
STA. 194+86 TO 195+45, RT
STA. 194+86 TO 195+78, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 192+00 TO 198+00, SOLID LT & RT

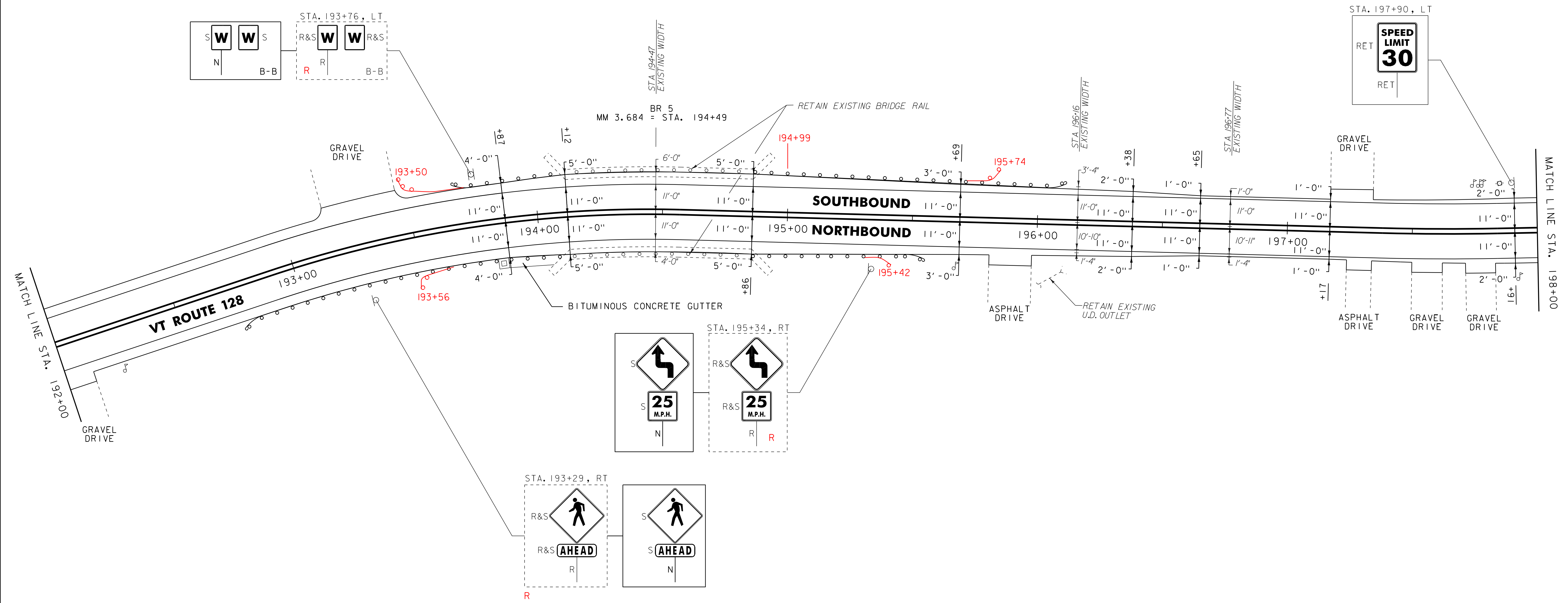
646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 192+00 TO 198+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 192+00 TO 198+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 192+00 TO 198+00, SOLID LT & RT

675.50 REMOVING SIGNS
AS SHOWN - 6

675.60 ERECTING SALVAGED SIGNS
AS SHOWN - 6



NOTES:
1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #13	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:57
	PROJECT LEADER: JLL
	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC
	CHECKED BY: JLL
	IPARM FILE: p08c212113.i
	SHEET 29 OF 79



R-3

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 198+00 TO 203+00, SOLID LT & RT
 STA. 199+28, SOLID LT (TH 33 EDGELINES)
 STA. 201+14, SOLID RT (TH 3 EDGELINES)

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 198+00 TO 203+00, SOLID LT & RT
 STA. 199+28, DOUBLE SOLID LT (TH 33)
 STA. 201+14, DOUBLE SOLID RT (TH 3)

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 198+00 TO 203+00, SOLID LT & RT
 STA. 199+28, SOLID LT (TH 33 EDGELINES)
 STA. 201+14, SOLID RT (TH 3 EDGELINES)

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 198+00 TO 203+00, SOLID LT & RT
 STA. 199+28, DOUBLE SOLID LT (TH 33)
 STA. 201+14, DOUBLE SOLID RT (TH 3)

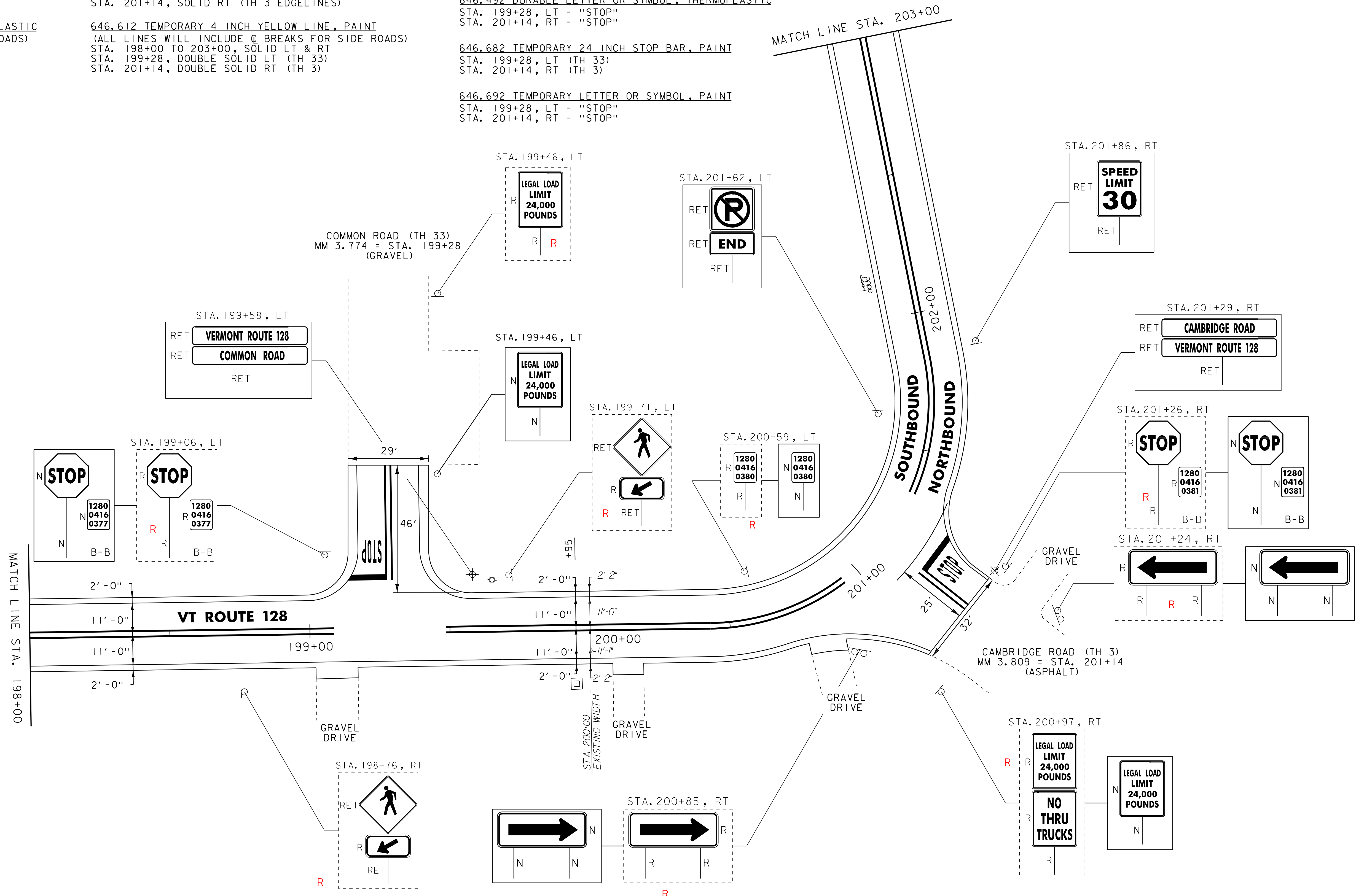
646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 STA. 199+28, LT (TH 33)
 STA. 201+14, RT (TH 3)

646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 STA. 199+28, LT - "STOP"
 STA. 201+14, RT - "STOP"

646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 STA. 199+28, LT (TH 33)
 STA. 201+14, RT (TH 3)

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 STA. 199+28, LT - "STOP"
 STA. 201+14, RT - "STOP"

675.50 REMOVING SIGNS
 AS SHOWN - 12



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #14	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:57
	PROJECT LEADER: JLL
	DESIGNED BY: STANTEC
	IPARM FILE: p08c212114.i
	DRAWN BY: STANTEC
	CHECKED BY: JLL
	SHEET 30 OF 79



R=9

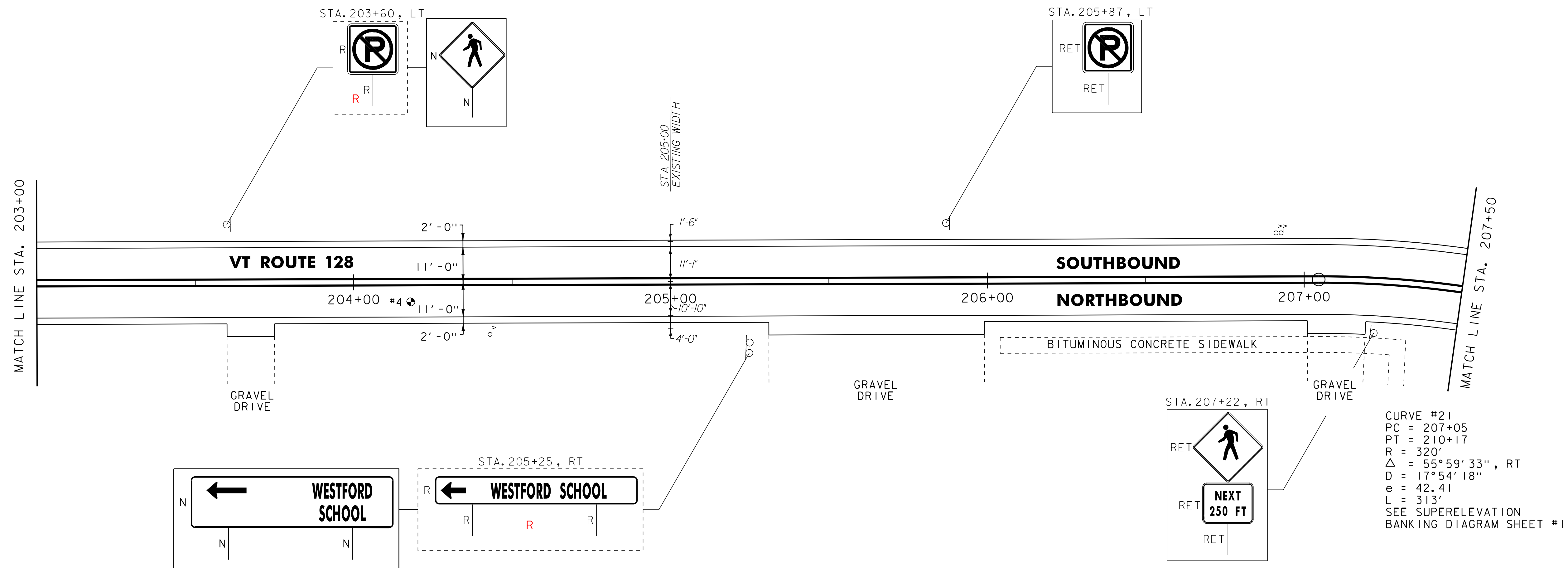
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 203+00 TO 207+50, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 203+00 TO 207+50, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 2

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 203+00 TO 207+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 203+00 TO 207+50, SOLID LT & RT



- NOTES:
- ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 - FOR LEGENDS, SEE LAYOUT SHEET #1.
- NOT TO SCALE**

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
4	11"	NO	

R=2



PROJECT LAYOUT SHEET #15

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212115.i

PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 31 OF 79

617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 211+60, RT
 STA. 211+62, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADIUS FOR SIDE ROADS)
 STA. 207+50 TO 213+00, SOLID LT & RT
 STA. 208+28, SOLID LT (TH I EDGELINES)

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 207+50 TO 213+00, SOLID LT & RT
 STA. 208+28, DOUBLE SOLID LT (TH I)

646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 STA. 208+28, LT (TH I)

646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 STA. 208+28, LT - "STOP"

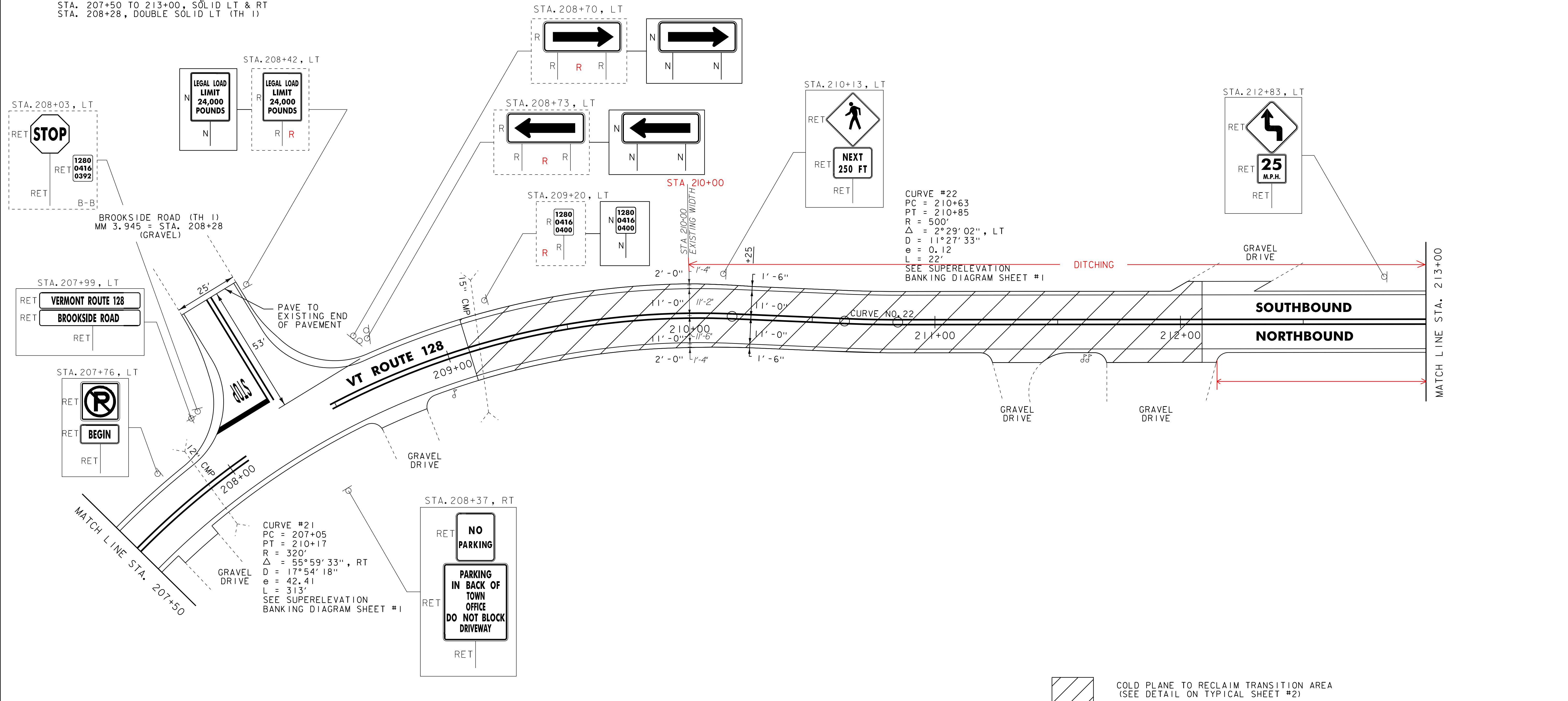
646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADIUS FOR SIDE ROADS)
 STA. 207+50 TO 213+00, SOLID LT & RT
 STA. 208+28, SOLID LT (TH I EDGELINES)

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 207+50 TO 213+00, SOLID LT & RT
 STA. 208+28, DOUBLE SOLID LT (TH I)

646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 STA. 208+28, LT (TH I)

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 STA. 208+28, LT - "STOP"

675.50 REMOVING SIGNS
 AS SHOWN - 4



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #16	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:57
	PROJECT LEADER: JLL
	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC
	CHECKED BY: JLL
	IPARM FILE: p08c212116.i
	SHEET 32 OF 79



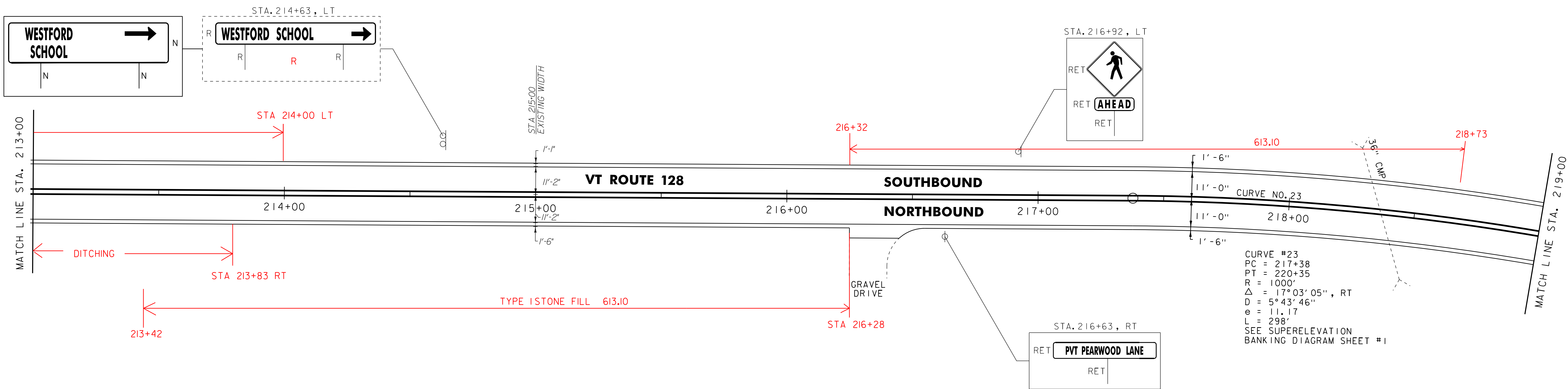
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 213+00 TO 219+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 213+00 TO 219+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 213+00 TO 219+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 213+00 TO 219+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 1



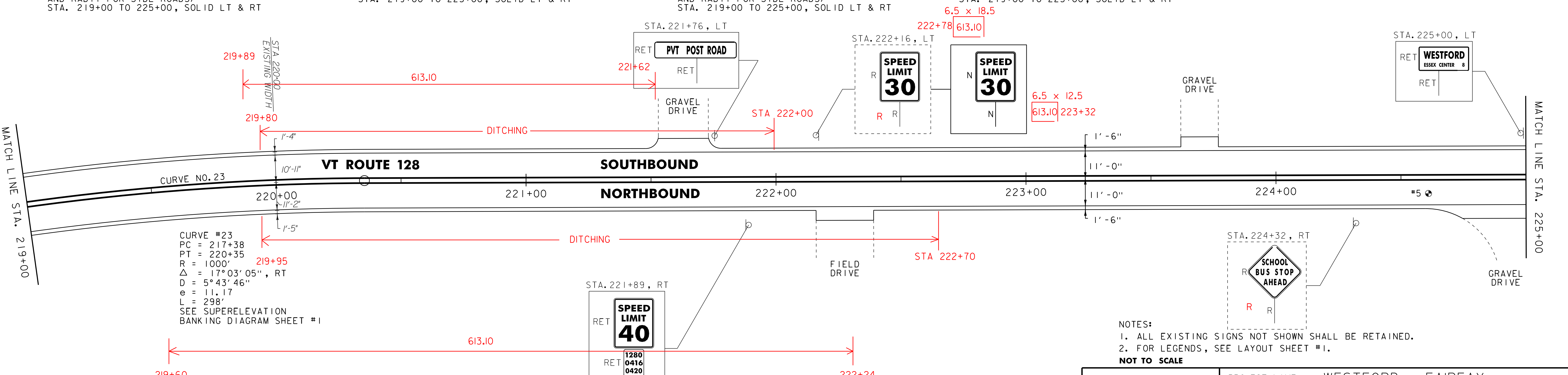
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 219+00 TO 225+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 219+00 TO 225+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 219+00 TO 225+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 219+00 TO 225+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 2



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

TOO CONGESTED ON THE LEFT,
 NO PLACE TO PLOT THIS

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
5	3"	NO	



PROJECT LAYOUT SHEET #17

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)
 FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212117.i
 PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 33 OF 79

616.35 TREATED TIMBER CURB
STA. 229+00 TO 229+60, RT

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 228+28 TO 230+08, RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 225+00 TO 231+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 225+00 TO 231+00, SOLID LT & RT

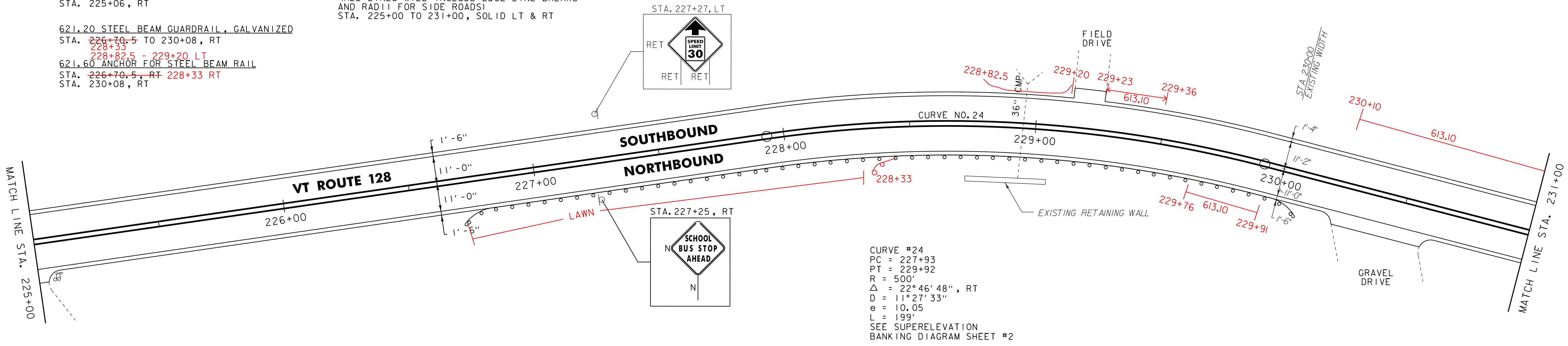
646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 225+00 TO 231+00, SOLID LT & RT

617.10 RELOCATE MAILBOX, SINGLE SUPPORT
STA. 225+04, RT
STA. 225+06, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 225+00 TO 231+00, SOLID LT & RT

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
STA. 226+70.5 TO 230+08, RT
228+33

621.60 ANCHOR FOR STEEL BEAM RAIL
STA. 226+70.5, RT 228+33 RT
STA. 230+08, RT



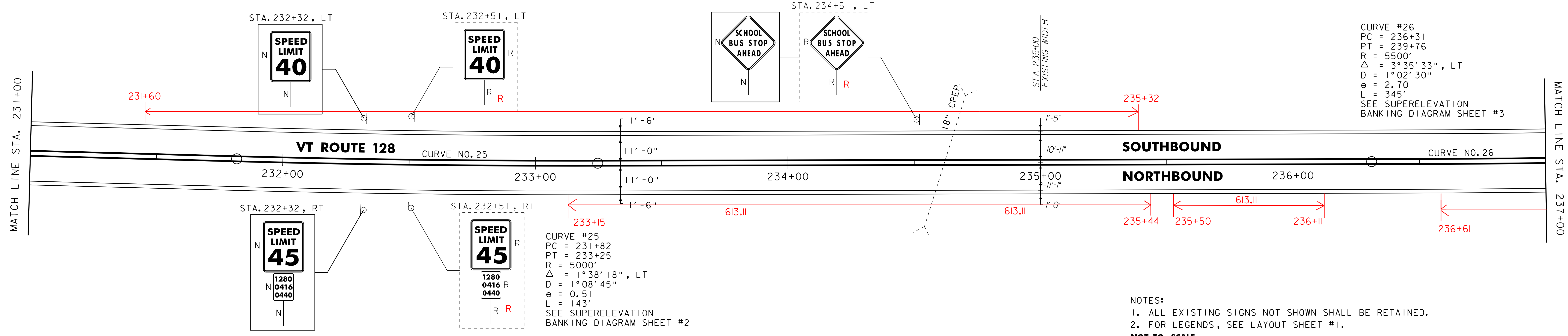
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 231+00 TO 237+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 231+00 TO 237+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 231+00 TO 237+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 231+00 TO 237+00, SOLID LT & RT

675.50 REMOVING SIGNS
AS SHOWN - 4



- NOTES:
1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #18



PROJECT NAME: WESTFORD - FAIRFAX	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:57
PROJECT NUMBER: STP 2804(1)	PROJECT LEADER: JLL	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC	CHECKED BY: JLL
	IPARM FILE: p08c212118.i	SHEET 34 OF 79

R=3

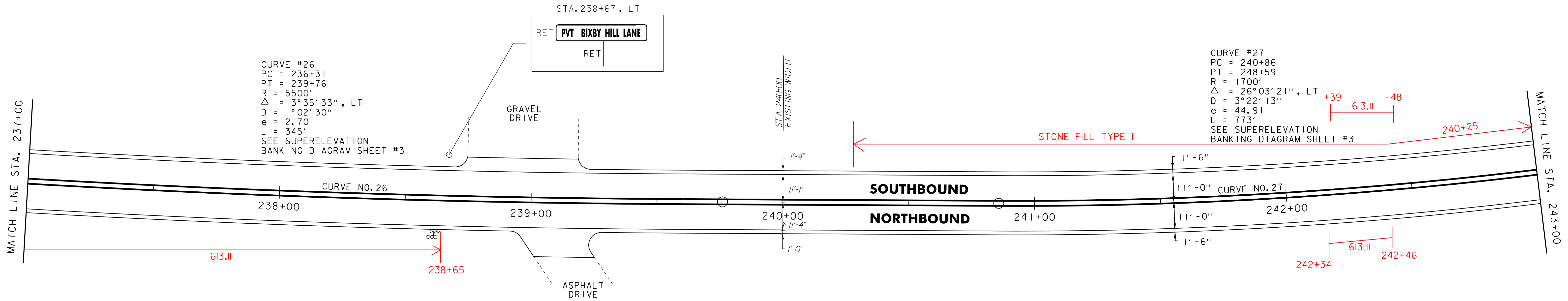
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 238+59, RT
 STA. 238+61, RT
 STA. 238+63, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 237+00 TO 243+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 237+00 TO 243+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 237+00 TO 243+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 237+00 TO 243+00, SOLID LT & RT



CURVE #26
 PC = 236+31
 PT = 239+76
 R = 5500'
 $\Delta = 3^\circ 35' 33''$, LT
 $D = 1^\circ 02' 30''$
 $e = 2.70$
 $L = 345'$
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #3

CURVE #27
 PC = 240+86
 PT = 248+59
 R = 1700'
 $\Delta = 26^\circ 03' 21''$, LT
 $D = 3^\circ 22' 13''$
 $e = 44.91$
 $L = 773'$
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #3

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
 STA. 244+85 TO 249+00, LT 246+04 TO 247+42 LT
 STA. 245+79 TO 246+29, RT
 STA. 246+79 TO 248+29, RT (BURIED END)

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
 STA. 245+86 TO 247+99, RT
 STA. 246+06 TO 247+42, LT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 243+00 TO 249+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 243+00 TO 249+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 5

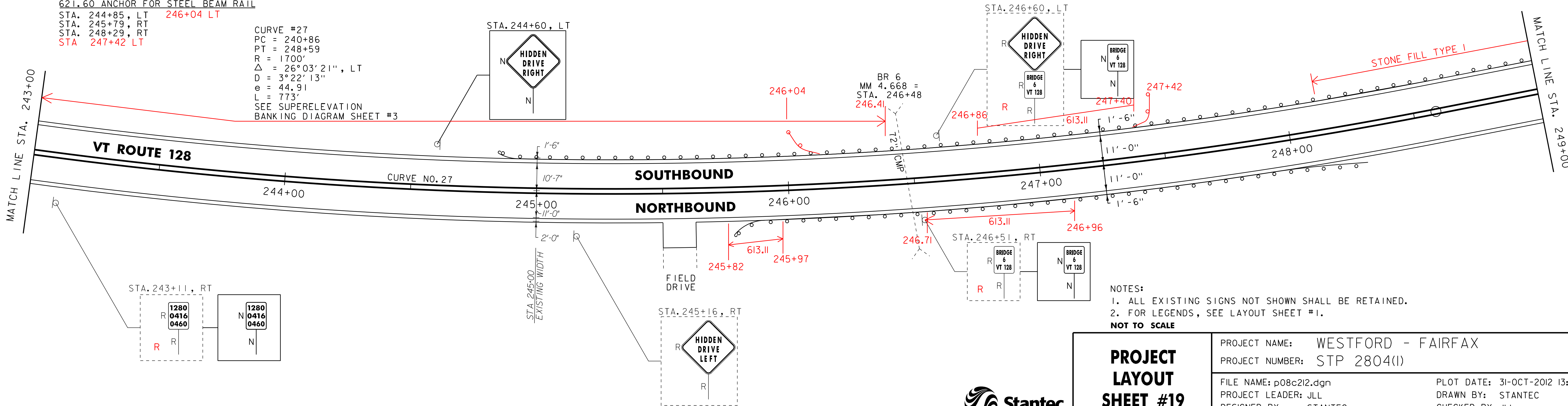
621.205 STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS
 STA. 246+29 TO 246+79, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 243+00 TO 249+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 243+00 TO 249+00, SOLID LT & RT

621.60 ANCHOR FOR STEEL BEAM RAIL
 STA. 244+85, LT 246+04 LT
 STA. 245+79, RT
 STA. 248+29, RT
 STA. 247+42 LT

CURVE #27
 PC = 240+86
 PT = 248+59
 R = 1700'
 $\Delta = 26^\circ 03' 21''$, LT
 $D = 3^\circ 22' 13''$
 $e = 44.91$
 $L = 773'$
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #3



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #19



PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212119.i

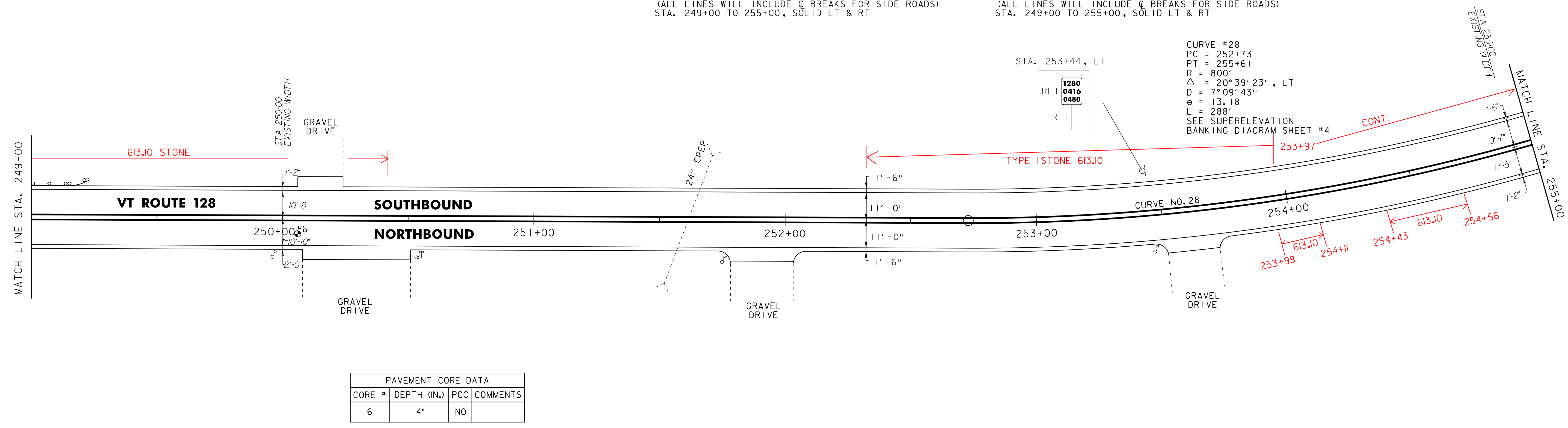
PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 35 OF 79

617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 249+96, RT
 STA. 250+53, RT
 STA. 250+55, RT
 STA. 251+75, RT
 STA. 253+46, RT

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
 STA. 249+00 TO 249+22.5, LT
 621.60 ANCHOR FOR STEEL BEAM RAIL
 STA. 249+22.5, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 249+00 TO 255+00, SOLID LT & RT
 646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 249+00 TO 255+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 249+00 TO 255+00, SOLID LT & RT
 646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 249+00 TO 255+00, SOLID LT & RT



CURVE #28
 PC = 252+73
 PT = 255+61
 R = 800'
 $\Delta = 20^\circ 39' 23''$, LT
 D = $7^\circ 09' 43''$
 e = 13.18
 L = 288'
 SEE SUPERELEVATION BANKING DIAGRAM SHEET #4

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
6	4"	NO	

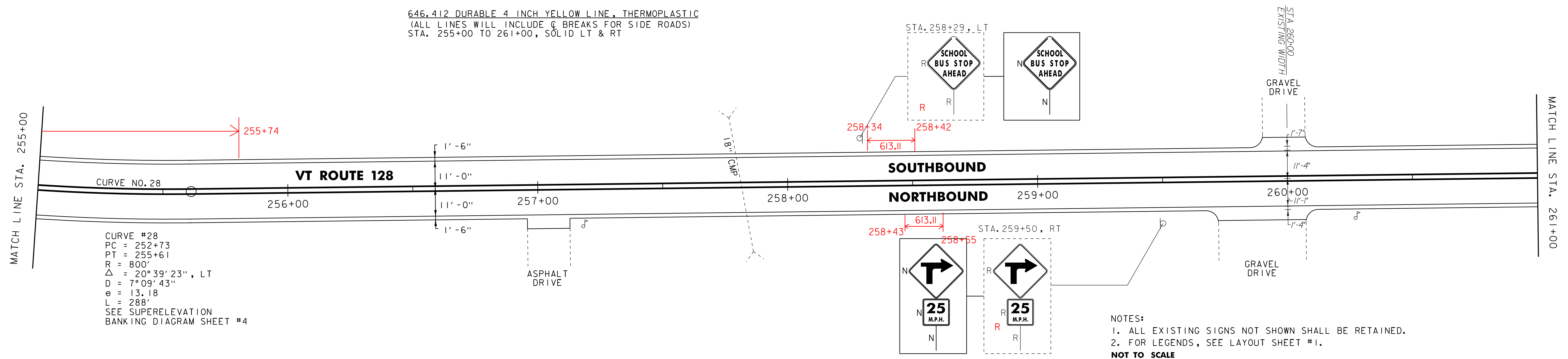
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 257+18, RT
 STA. 260+27, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 255+00 TO 261+00, SOLID LT & RT
 646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 255+00 TO 261+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 STA. 255+00 TO 261+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 255+00 TO 261+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 3



CURVE #28
 PC = 252+73
 PT = 255+61
 R = 800'
 $\Delta = 20^\circ 39' 23''$, LT
 D = $7^\circ 09' 43''$
 e = 13.18
 L = 288'
 SEE SUPERELEVATION BANKING DIAGRAM SHEET #4

NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #20	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:57
DESIGNED BY: STANTEC	DRAWN BY: STANTEC
IPARM FILE: p08c212120.i	CHECKED BY: JLL
	SHEET 36 OF 79



R=2

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
 STA. 264+31 TO 265+31, LT

621.60 ANCHOR FOR STEEL BEAM RAIL
 STA. 264+31, LT
 STA. 265+31, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADIUS FOR SIDE ROADS)
 STA. 261+00 TO 267+00, SOLID LT & RT
 STA. 264+68, SOLID LT (TH 7 EDGELINES)

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 261+00 TO 267+00, SOLID LT & RT
 STA. 264+68, DOUBLE SOLID LT (TH 7)

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADIUS FOR SIDE ROADS)
 STA. 261+00 TO 267+00, SOLID LT & RT
 STA. 264+68, SOLID LT (TH 7 EDGELINES)

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 261+00 TO 267+00, SOLID LT & RT
 STA. 264+68, DOUBLE SOLID LT (TH 7)

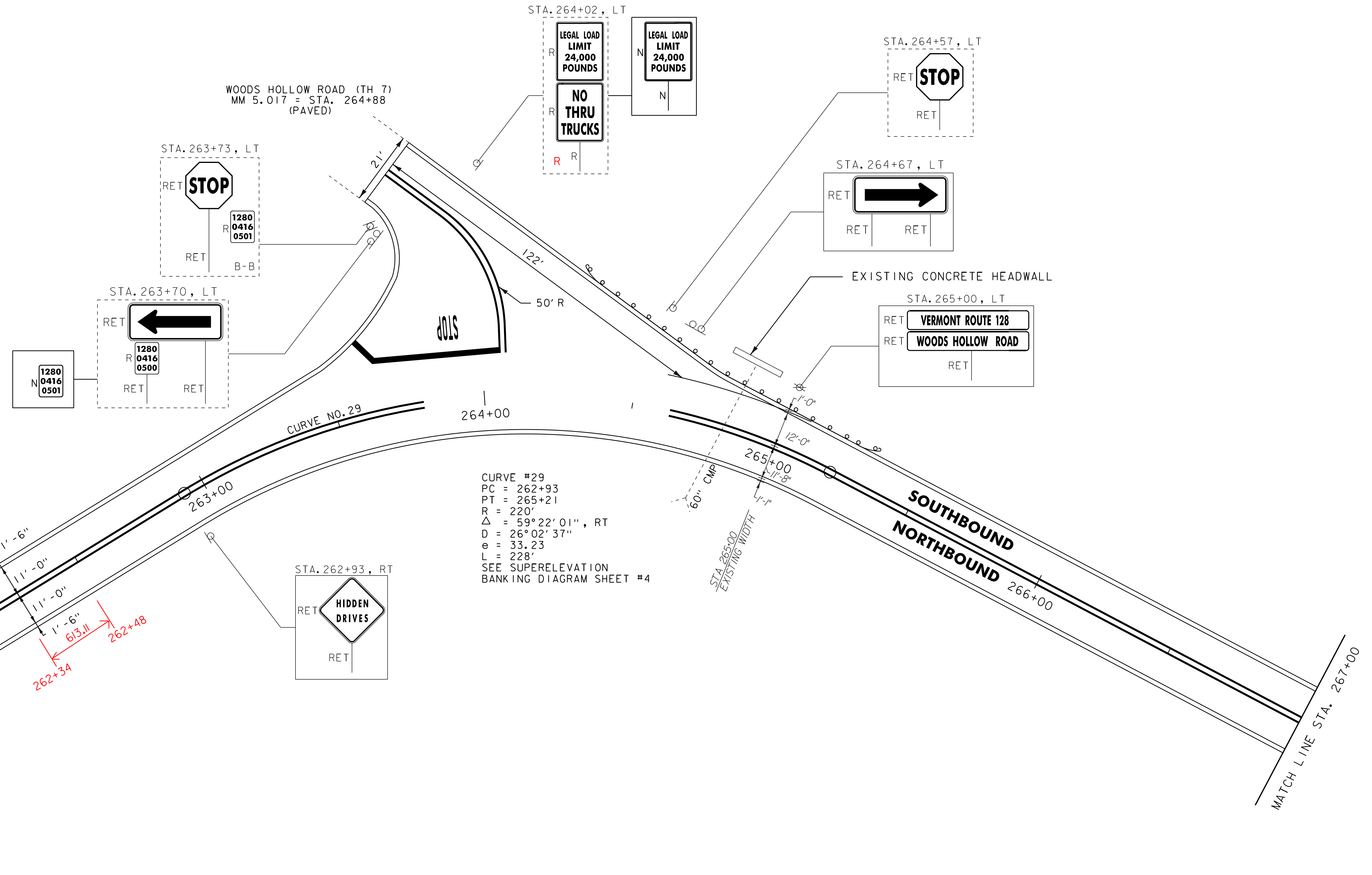
646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 STA. 264+88, LT (TH 4)

646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 STA. 264+88, LT - "STOP"

646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 STA. 264+88, LT (TH 4)

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 STA. 264+88, LT - "STOP"

675.50 REMOVING SIGNS
 AS SHOWN - 4



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #21

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212121.i

PLOT DATE: 31-OCT-2012 13:57
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 37 OF 79



R=1

617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 267+70, RT
 STA. 271+24, RT
 STA. 272+14, LT

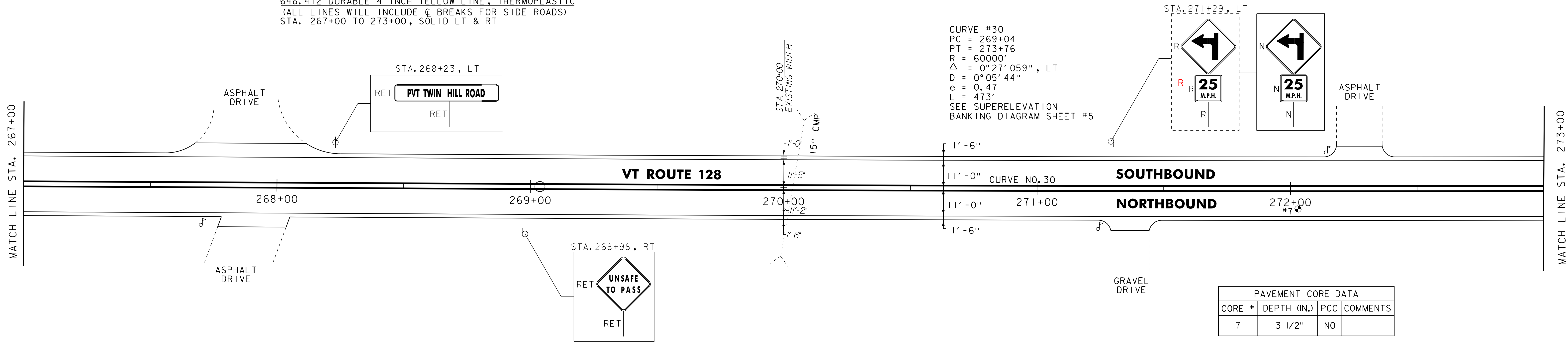
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 267+00 TO 273+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 267+00 TO 273+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE @ BREAKS FOR SIDE ROADS)
 STA. 267+00 TO 273+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 2

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE @ BREAKS FOR SIDE ROADS)
 STA. 267+00 TO 273+00, SOLID LT & RT



617.12 RELOCATE MAILBOX, MULTIPLE SUPPORT
 STA. 274+58, LT

621.205 STEEL BEAM GUARDRAIL, GALVANIZED W/8 FEET POSTS
 STA. 274+94 TO 275+06.5, RT
 STA. 274+94 TO 275+06.5, LT
 STA. 275+31.5 TO 275+56.5, RT
 STA. 275+31.5 TO 277+19, LT

621.50 MANUFACTURED TERMINAL SECTION, FLARED
 STA. 276+94 TO 277+31.5, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 273+00 TO 279+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 273+00 TO 279+00, SOLID LT & RT

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
 STA. 273+31.5 TO 274+94, LT
 STA. 274+81.5 TO 274+94, RT
 STA. 275+56.5 TO 277+06.5, RT
 STA. 277+19 TO 279+00, LT
 (SEE GUARDRAIL DETAIL SHEET #1)

621.207 STEEL BEAM GUARDRAIL, GALVANIZED/NESTED W/8 FEET POSTS
 STA. 275+06.5 TO 275+31.5, LT
 STA. 275+06.5 TO 275+31.5, RT
 (SEE GUARDRAIL DETAIL SHEET #1)

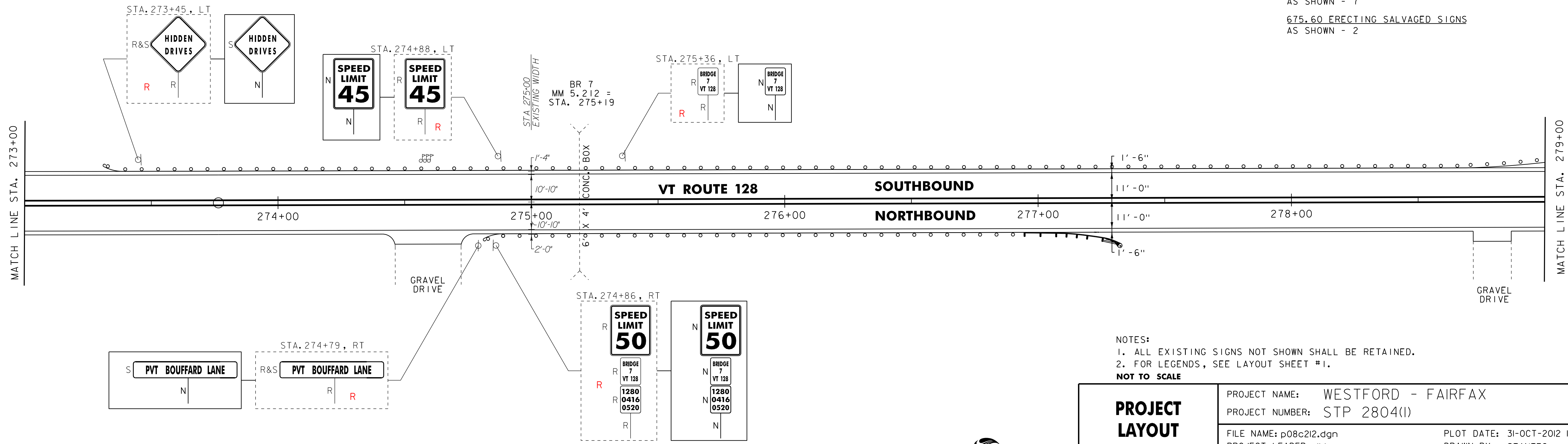
621.60 ANCHOR FOR STEEL BEAM RAIL
 STA. 273+31.5, LT
 STA. 274+81.5, RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE @ BREAKS FOR SIDE ROADS)
 STA. 273+00 TO 279+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE @ BREAKS FOR SIDE ROADS)
 STA. 273+00 TO 279+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 7

675.60 ERECTING SALVAGED SIGNS
 AS SHOWN - 2



NOTES:

- ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
- FOR LEGENDS, SEE LAYOUT SHEET #1.

NOT TO SCALE

PROJECT LAYOUT SHEET #22

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212122.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 38 OF 79



617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 279+55, LT
 STA. 282+05, LT

617.12 RELOCATE MAILBOX, MULTIPLE SUPPORT
 STA. 281+40, LT

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
 STA. 279+00 TO 279+06.5, LT (BURIED END)
 (SEE GUARDRAIL DETAIL SHEET)

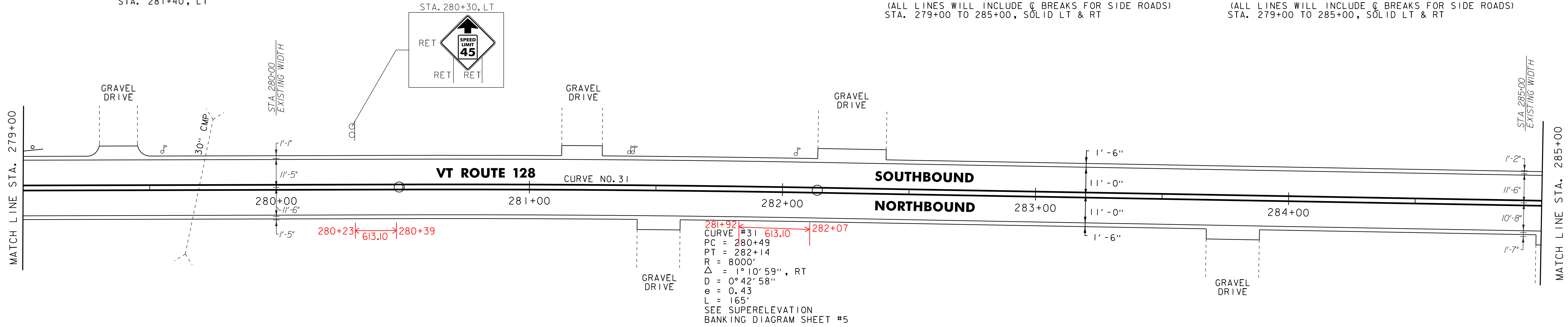
621.60 ANCHOR FOR STEEL BEAM RAIL
 STA. 279+06.5, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 279+00 TO 285+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 279+00 TO 285+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 279+00 TO 285+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 279+00 TO 285+00, SOLID LT & RT



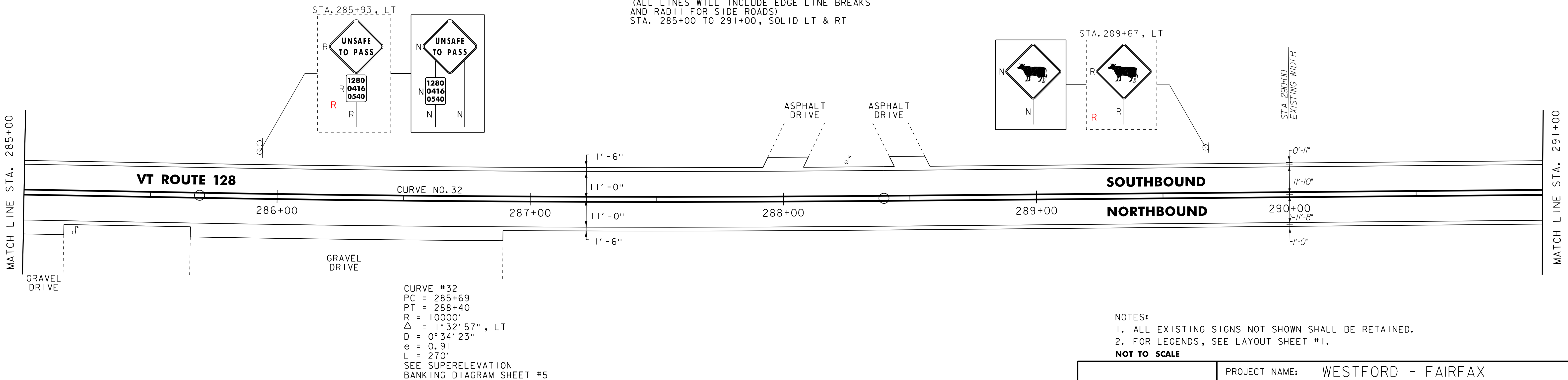
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 285+20, RT
 STA. 288+25, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 285+00 TO 291+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 285+00 TO 291+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 285+00 TO 291+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 3



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #23

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212123.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 39 OF 79



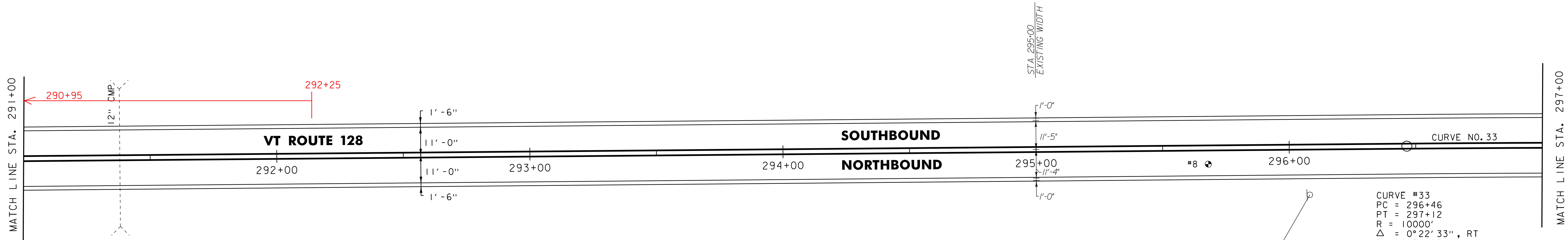
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 291+00 TO 297+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 291+00 TO 297+00, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 1

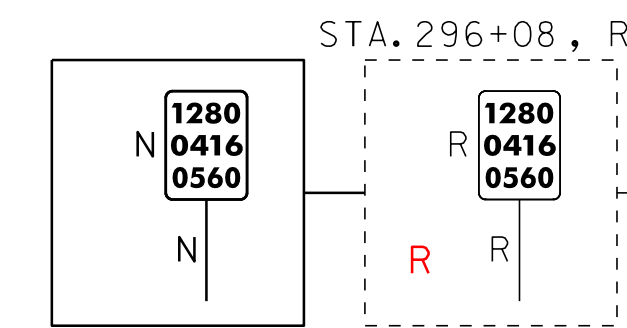
646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 291+00 TO 297+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 291+00 TO 297+00, SOLID LT & RT



CURVE #33
 PC = 296+46
 PT = 297+12
 R = 10000'
 $\Delta = 0^\circ 22' 33''$, RT
 D = 0°34'23"
 e = 0.05
 L = 66'
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #6

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
8	4"	NO	

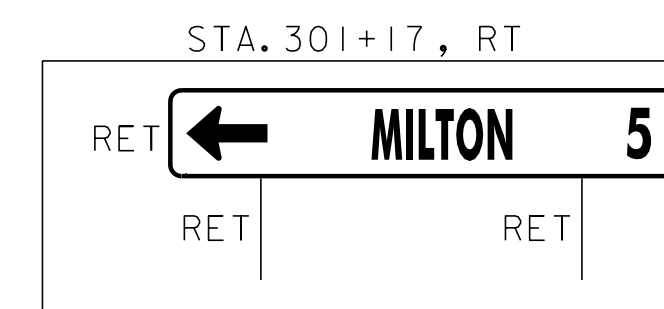
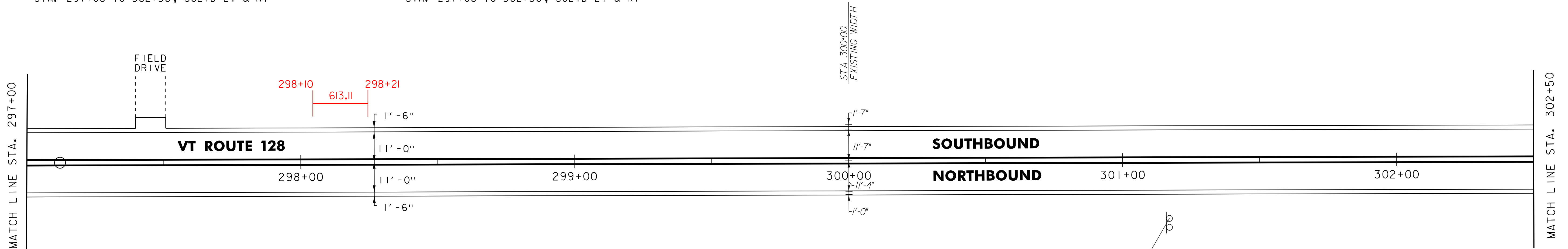


646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 297+00 TO 302+50, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 297+00 TO 302+50, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 297+00 TO 302+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 297+00 TO 302+50, SOLID LT & RT



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

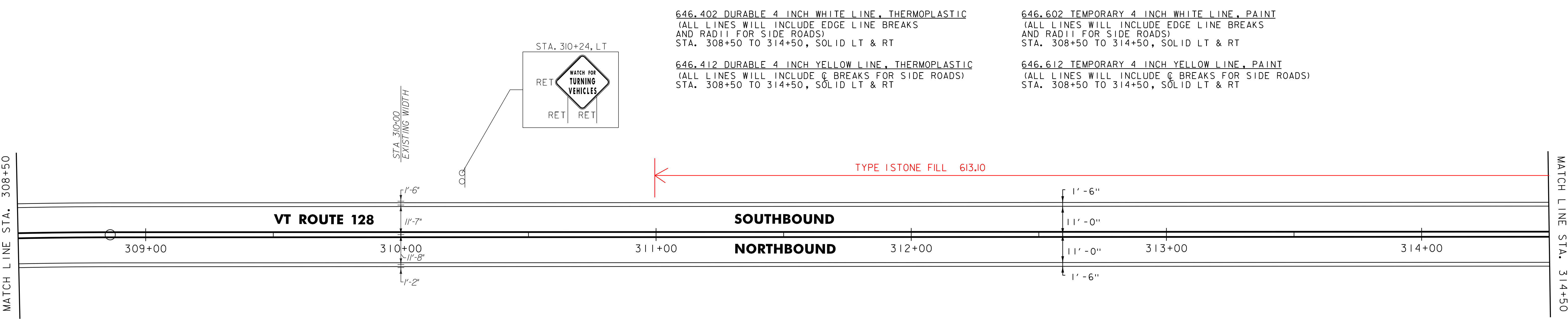
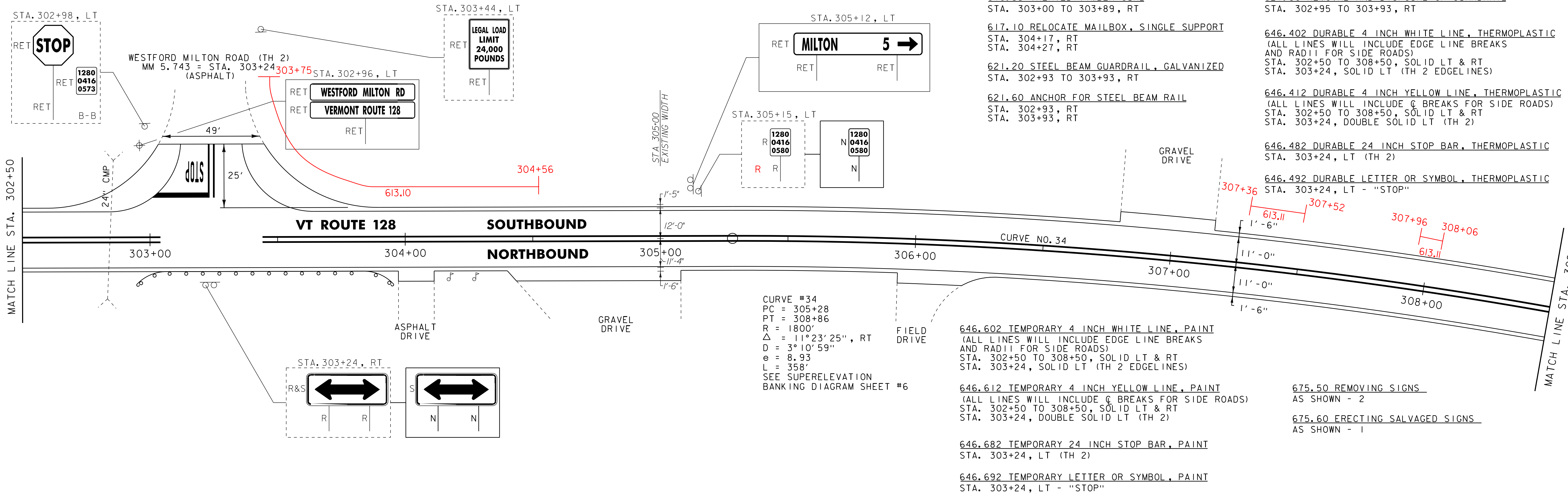


**PROJECT
 LAYOUT
 SHEET #24**

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212124.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 40 OF 79



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #25	PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:58
	PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
	FILE NAME: p08c212.dgn	CHECKED BY: JLL
	IPARM FILE: p08c212125.i	SHEET 41 OF 79



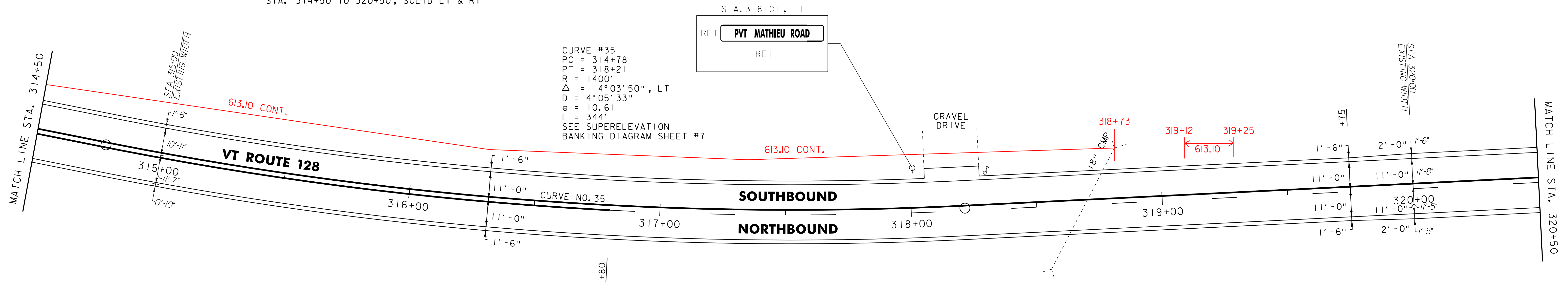
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
STA. 318+30, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 314+50 TO 320+50, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 314+50 TO 316+80, SOLID LT & RT
STA. 316+80 TO 320+50, SOLID LT, DASHED RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 314+50 TO 320+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 314+50 TO 316+80, SOLID LT & RT
STA. 316+80 TO 320+50, SOLID LT, DASHED RT



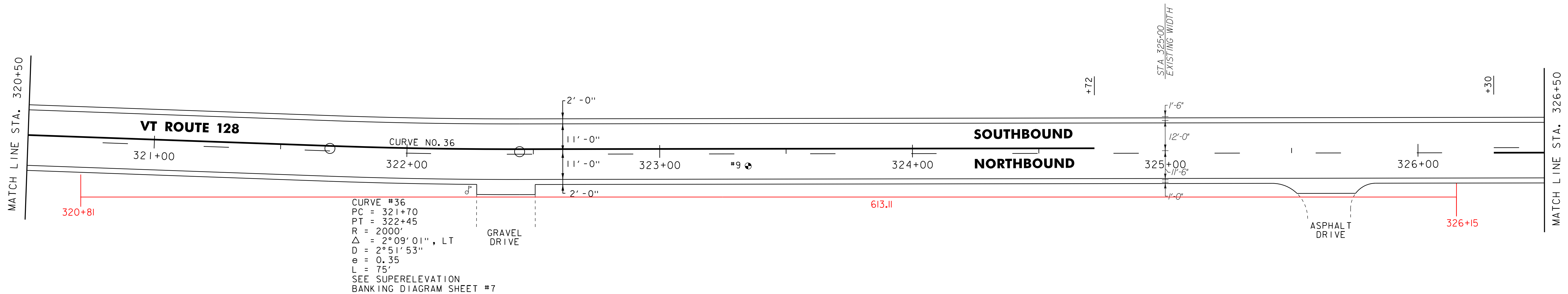
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
STA. 322+24, RT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 320+50 TO 326+50, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 320+50 TO 324+72, SOLID LT, DASHED RT
STA. 324+72 TO 326+30, DASHED C
STA. 326+30 TO 326+50, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 320+50 TO 326+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 320+50 TO 324+72, SOLID LT, DASHED RT
STA. 324+72 TO 326+30, DASHED C
STA. 326+30 TO 326+50, DASHED LT, SOLID RT



- NOTES:
1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.

NOT TO SCALE

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
9	4"	NO	



PROJECT LAYOUT SHEET #26

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212126.i

PLOT DATE: 31-OCT-2012 13:58
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 42 OF 79

617.10 RELOCATE MAILBOX, SINGLE SUPPORT
STA. 329+93, RT

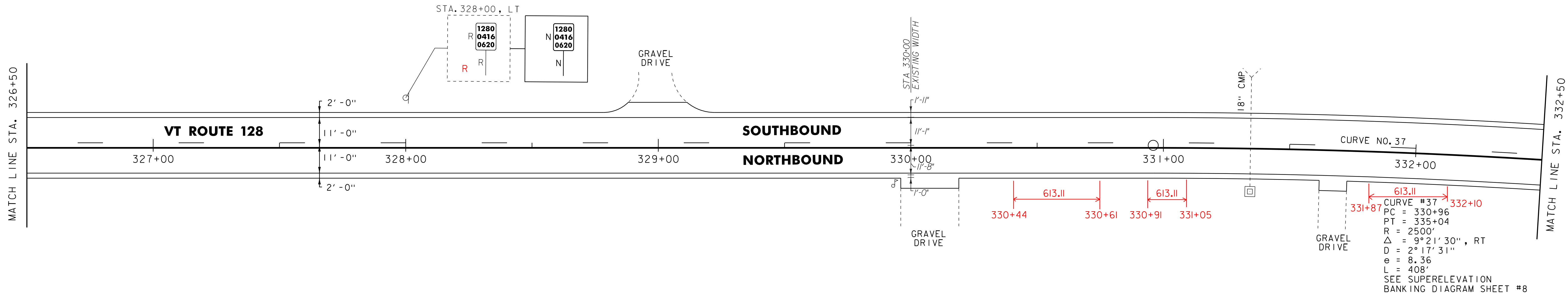
646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 326+50 TO 332+50, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 326+50 TO 332+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 326+50 TO 332+50, DASHED LT, SOLID RT

675.50 REMOVING SIGNS
AS SHOWN - 1

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 326+50 TO 332+50, SOLID LT & RT



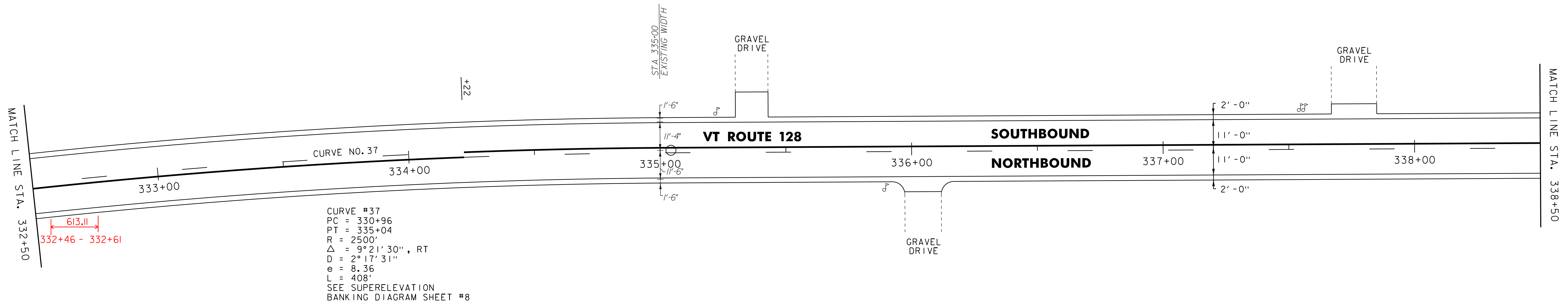
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
STA. 335+22, LT
STA. 335+89, RT
STA. 337+55, LT
STA. 337+57, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 332+50 TO 338+50, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 332+50 TO 334+22, DASHED LT, SOLID RT
STA. 334+22 TO 338+50, SOLID LT, DASHED RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 332+50 TO 338+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 332+50 TO 334+22, DASHED LT, SOLID RT
STA. 334+22 TO 338+50, SOLID LT, DASHED RT



- NOTES:
1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #27	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:58
PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL
IPARM FILE: p08c212127.i	SHEET 43 OF 79



R=1

617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 STA. 341+76, RT
 STA. 342+21, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 338+50 TO 344+50, SOLID LT & RT

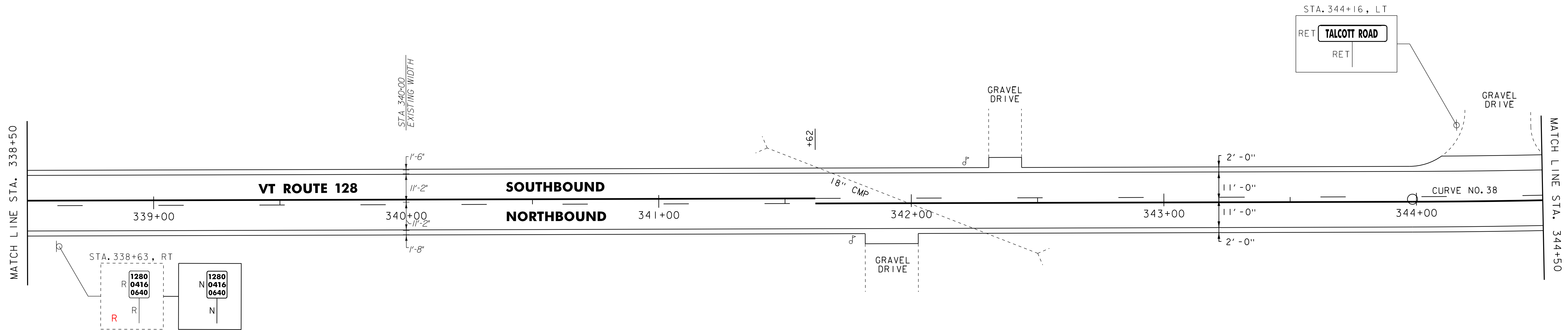
646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 338+50 TO 341+62, SOLID LT, DASHED RT
 STA. 341+62 TO 344+50, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 338+50 TO 344+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 338+50 TO 341+62, SOLID LT, DASHED RT
 STA. 341+62 TO 344+50, DASHED LT, SOLID RT

675.50 REMOVING SIGNS
 AS SHOWN - 1

CURVE #38
 PC = 343+98
 PT = 346+02
 R = 3000'
 $\Delta = 3^{\circ}52'53''$, LT
 D = $1^{\circ}54'35''$
 e = 1.72
 L = 203'
 SEE SUPERELEVATION
 BANKING DIAGRAM #9



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #28	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:58
PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL
IPARM FILE: p08c212128.i	SHEET 44 OF 79



R=1

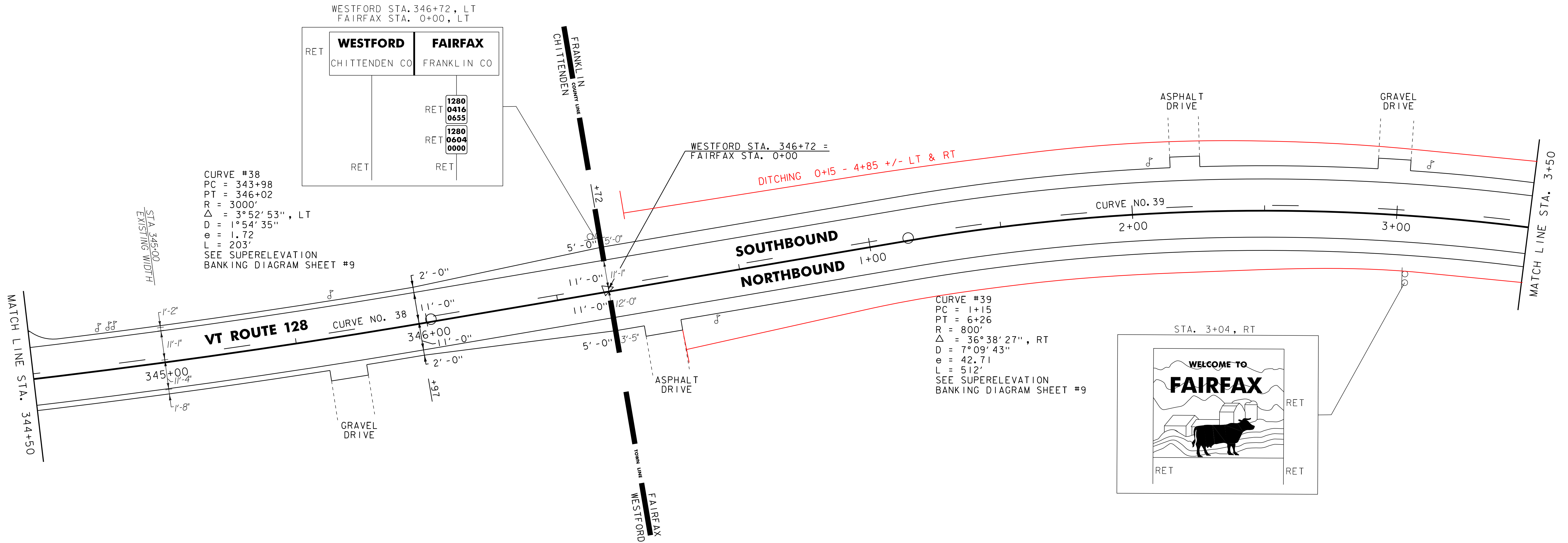
617.10 RELOCATE MAILBOX, SINGLE SUPPORT
 WESTFORD
 STA. 344+76, LT
 STA. 344+80, LT
 STA. 344+82, LT
 STA. 345+65, LT
 FAIRFAX
 STA. 0+38, RT
 STA. 2+07, LT
 STA. 3+11, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 WESTFORD
 STA. 344+50 TO 346+72 SOLID LT & RT
 FAIRFAX
 STA. 0+00 TO 3+50, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE @ BREAKS FOR SIDE ROADS)
 WESTFORD
 STA. 344+50 TO 346+72 DASHED LT, SOLID RT
 FAIRFAX
 STA. 0+00 TO 3+50, DASHED LT, SOLID RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 WESTFORD
 STA. 344+50 TO 346+72 SOLID LT & RT
 FAIRFAX
 STA. 0+00 TO 3+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE @ BREAKS FOR SIDE ROADS)
 WESTFORD
 STA. 344+50 TO 346+72 DASHED LT, SOLID RT
 FAIRFAX
 STA. 0+00 TO 3+50, DASHED LT, SOLID RT



CURVE #38
 PC = 343+98
 PT = 346+02
 R = 3000'
 Δ = 3°52'53", LT
 D = 1°54'35"
 e = 1.72
 L = 203'
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #9

CURVE #39
 PC = 1+15
 PT = 6+26
 R = 800'
 Δ = 36°38'27", RT
 D = 7°09'43"
 e = 42.71
 L = 512'
 SEE SUPERELEVATION
 BANKING DIAGRAM SHEET #9

NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #29	PROJECT NAME: WESTFORD - FAIRFAX	
	PROJECT NUMBER: STP 2804(1)	
	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:58
	PROJECT LEADER: JLL	DRAWN BY: STANTEC
DESIGNED BY: STANTEC	CHECKED BY: JLL	
IPARM FILE: p08c212129.i	SHEET 45 OF 79	



616.35 TREATED TIMBER CURB
STA. 9+44 TO 9+50, LT

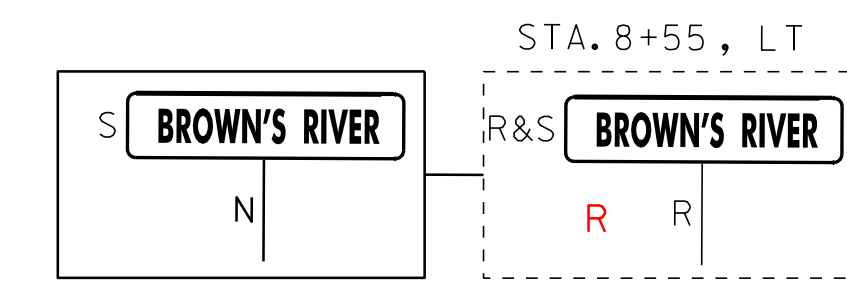
616.47 BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
STA. 9+44 TO 9+50, LT
(SEE DETAIL ON MISCELLANEOUS DETAIL SHEET)

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
STA. 7+81.5 TO 8+19, LT
STA. 7+86 TO 8+11, RT

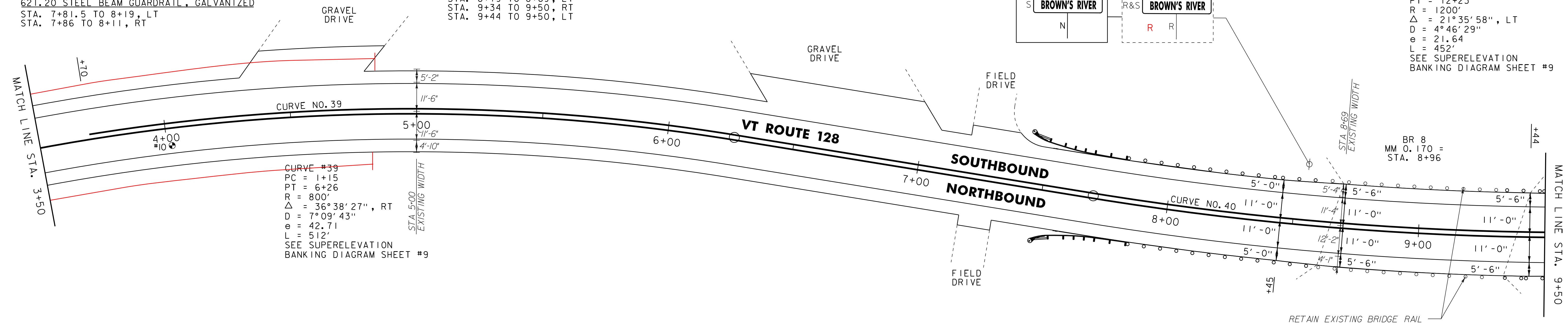
621.50 MANUFACTURED TERMINAL SECTION, FLARED
STA. 7+44 TO 7+81.5, LT
STA. 7+48.5 TO 7+86, RT

621.70 GUARDRAIL APPROACH SECTION, GALVANIZED TYPE I
STA. 8+11 TO 8+61, RT
STA. 8+19 TO 8+69, LT
STA. 9+34 TO 9+50, RT
STA. 9+44 TO 9+50, LT

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 7+43.5 TO 8+69, LT
STA. 7+46 TO 8+61, RT
STA. 9+34 TO 9+50, RT
STA. 9+44 TO 9+50, LT



CURVE #40
PC = 7+70
PT = 12+23
R = 1200'
 $\Delta = 21^\circ 35' 58''$, LT
D = 4° 46' 29"
e = 21.64
L = 452'
SEE SUPERELEVATION BANKING DIAGRAM SHEET #9



CURVE #39
PC = 1+15
PT = 6+26
R = 800'
 $\Delta = 36^\circ 38' 27''$, RT
D = 7° 09' 43"
e = 42.71
L = 512'
SEE SUPERELEVATION BANKING DIAGRAM SHEET #9

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
10	4 1/4"	NO	

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 3+50 TO 9+50, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 3+50 TO 9+50, SOLID LT & RT

675.50 REMOVING SIGNS
AS SHOWN - I

675.60 ERECTING SALVAGED SIGNS
AS SHOWN - I

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE \odot BREAKS FOR SIDE ROADS)
STA. 3+50 TO 3+70, DASHED LT, SOLID RT
STA. 3+70 TO 9+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE \odot BREAKS FOR SIDE ROADS)
STA. 3+50 TO 3+70, DASHED LT, SOLID RT
STA. 3+70 TO 9+50, SOLID LT & RT

616.35 TREATED TIMBER CURB
STA. 9+50 TO 9+79, LT

616.47 BITUMINOUS CONCRETE GUTTERS AND TRAFFIC ISLANDS
STA. 9+50 TO 9+79, LT

621.20 STEEL BEAM GUARDRAIL, GALVANIZED
STA. 9+84 TO 10+59, RT
STA. 9+94 TO 10+56.5, LT

621.50 MANUFACTURED TERMINAL SECTION, FLARED
STA. 10+56.5 TO 10+94, LT
STA. 10+59 TO 10+96.5, RT

621.70 GUARDRAIL APPROACH SECTION, GALVANIZED TYPE I
STA. 9+50 TO 9+84, RT
STA. 9+50 TO 9+94, LT

621.80 REMOVAL AND DISPOSAL OF GUARDRAIL
STA. 9+50 TO 10+86, RT
STA. 9+50 TO 11+02, LT

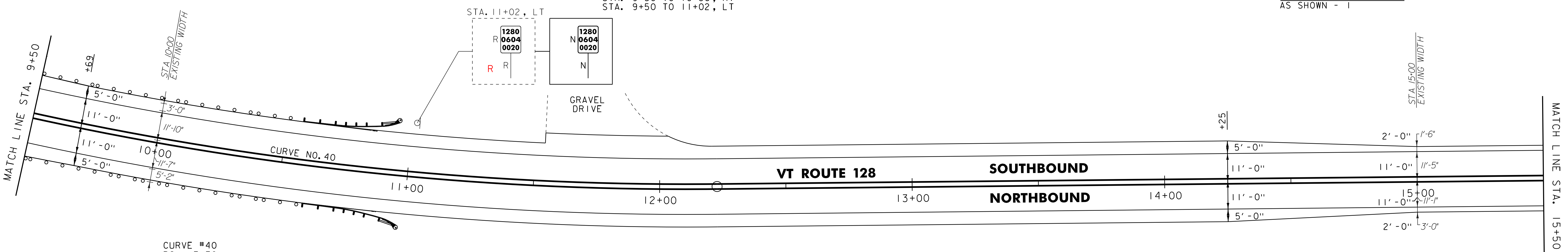
646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 9+50 TO 15+50, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE \odot BREAKS FOR SIDE ROADS)
STA. 9+50 TO 15+50, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
STA. 9+50 TO 15+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE \odot BREAKS FOR SIDE ROADS)
STA. 9+50 TO 15+50, SOLID LT & RT

675.50 REMOVING SIGNS
AS SHOWN - I



CURVE #40
PC = 7+70
PT = 12+23
R = 1200'
 $\Delta = 21^\circ 35' 58''$, LT
D = 4° 46' 29"
e = 21.64
L = 452'
SEE SUPERELEVATION BANKING DIAGRAM SHEET #9

NOTES:
1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PROJECT LAYOUT SHEET #30	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	PLOT DATE: 31-OCT-2012 13:58
	DRAWN BY: STANTEC
	CHECKED BY: JLL
	SHEET 46 OF 79



646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 15+50 TO 21+50, SOLID LT & RT

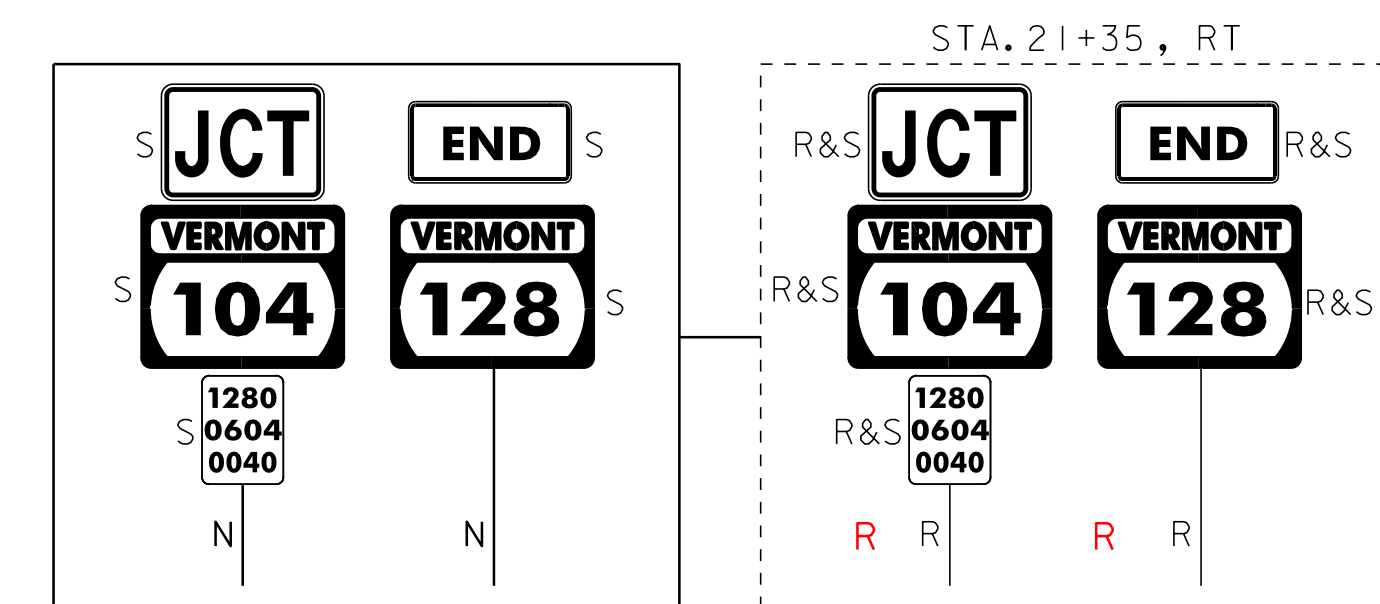
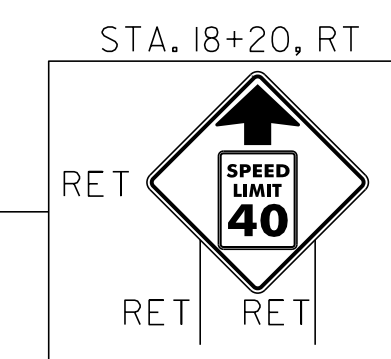
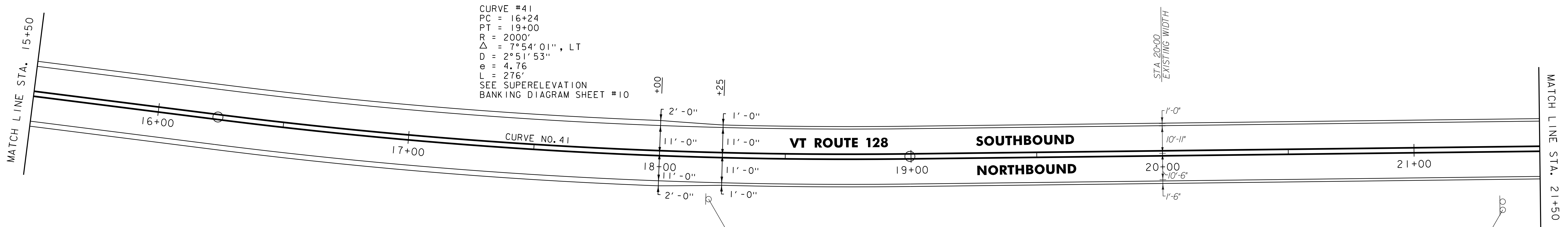
646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 15+50 TO 21+50, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 15+50 TO 21+50, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 15+50 TO 21+50, SOLID LT & RT

675.50 REMOVING SIGNS
 AS SHOWN - 5

675.60 ERECTING SALVAGED SIGNS
 AS SHOWN - 5



NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #31

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212131.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 47 OF 79



617.10 RELOCATE MAILBOX, SINGLE SUPPORT
STA. 25+37, LT

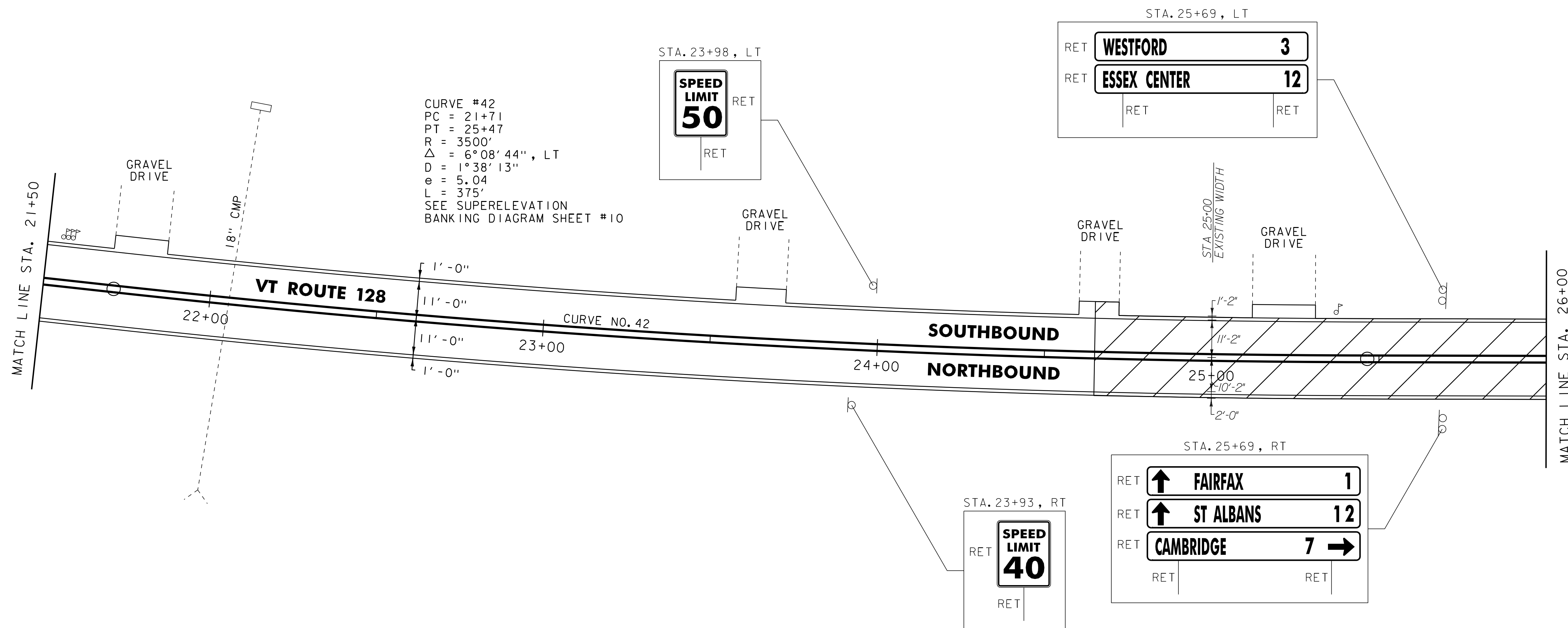
617.12 RELOCATE MAILBOX, MULTIPLE SUPPORT
STA. 21+56, LT

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 21+50 TO 26+00, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 21+50 TO 26+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
(ALL LINES WILL INCLUDE EDGE LINE BREAKS
AND RADII FOR SIDE ROADS)
STA. 21+50 TO 26+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
(ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
STA. 21+50 TO 26+00, SOLID LT & RT



 RECLAIM TO COLD PLANE TRANSITION AREA
(SEE DETAIL ON TYPICAL SHEET #2)

NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE



PROJECT LAYOUT SHEET #32

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212132.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 48 OF 79

646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 VT ROUTE 128 STA. 26+00 TO 32+00, SOLID LT & RT
 VT ROUTE 128 STA. 28+21, SOLID LT (TH 33 EDGELINES)
 VT ROUTE 128 STA. 28+80, SOLID LT (TH 33 EDGELINES)
 VT ROUTE 128 APPROACH STA. 0+12 TO 1+00, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS AND RADII FOR SIDE ROADS)
 VT ROUTE 128 STA. 26+00 TO 32+00, SOLID LT & RT
 VT ROUTE 128 STA. 28+21, SOLID LT (TH 33 EDGELINES)
 VT ROUTE 128 STA. 28+80, SOLID LT (TH 33 EDGELINES)
 VT ROUTE 128 APPROACH STA. 0+12 TO 1+00, SOLID LT & RT

646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 VT ROUTE 128 STA. 28+21, LT (TH 33) - "STOP"
 VT ROUTE 128 STA. 28+80, LT (TH 33)
 VT ROUTE 128 APPROACH STA. 0+17, LT

646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 VT ROUTE 128 STA. 28+21, LT (TH 33) - "STOP"
 VT ROUTE 128 STA. 28+80, LT (TH 33)
 VT ROUTE 128 APPROACH STA. 0+17, LT

675.50 REMOVING SIGNS
 AS SHOWN - 7

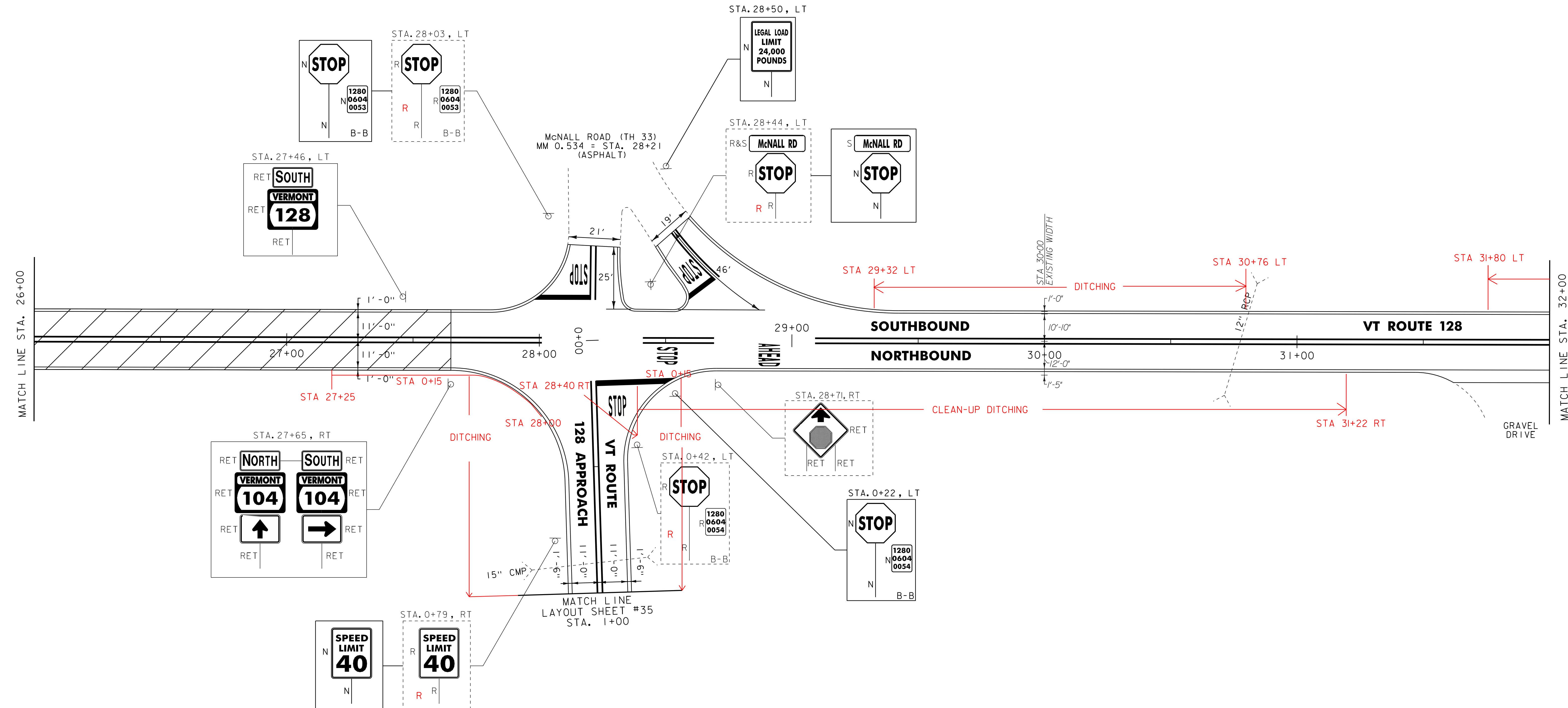
675.60 ERECTING SALVAGED SIGNS
 AS SHOWN - 1

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 VT ROUTE 128 STA. 26+00 TO 32+00, SOLID LT & RT
 VT ROUTE 128 STA. 28+21, DOUBLE SOLID LT (TH 33)
 VT ROUTE 128 STA. 28+80, DOUBLE SOLID LT (TH 33)
 VT ROUTE 128 APPROACH STA. 0+16 TO 1+00, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 VT ROUTE 128 STA. 26+00 TO 32+00, SOLID LT & RT
 VT ROUTE 128 STA. 28+21, DOUBLE SOLID LT (TH 33)
 VT ROUTE 128 STA. 28+80, DOUBLE SOLID LT (TH 33)
 VT ROUTE 128 APPROACH STA. 0+16 TO 1+00, SOLID LT & RT

646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 VT ROUTE 128 STA. 28+21, LT (TH 33) - "STOP"
 VT ROUTE 128 STA. 28+51, RT - "STOP"
 VT ROUTE 128 STA. 28+80, LT (TH 33) - "STOP"
 VT ROUTE 128 STA. 28+91, RT - "AHEAD"
 VT ROUTE 128 APPROACH STA. 0+26, LT - "STOP"

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 VT ROUTE 128 STA. 28+21, LT (TH 33) - "STOP"
 VT ROUTE 128 STA. 28+51, RT - "STOP"
 VT ROUTE 128 STA. 28+80, LT (TH 33) - "STOP"
 VT ROUTE 128 STA. 28+91, RT - "AHEAD"
 VT ROUTE 128 APPROACH STA. 0+26, LT - "STOP"



RECLAIM TO COLD PLANE TRANSITION AREA
 (SEE DETAIL ON TYPICAL SHEET #2)

NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
 NOT TO SCALE

PROJECT LAYOUT SHEET #33	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn PROJECT LEADER: JLL DESIGNED BY: STANTEC IPARM FILE: p08c212133.i
	PLOT DATE: 31-OCT-2012 13:58 DRAWN BY: STANTEC CHECKED BY: JLL SHEET 49 OF 79



646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 32+00 TO 33+05, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 32+00 TO 33+05, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 32+00 TO 33+05, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE C BREAKS FOR SIDE ROADS)
 STA. 32+00 TO 33+05, SOLID LT & RT

646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 STA. 33+04, RT

646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 STA. 32+95, RT - "STOP"

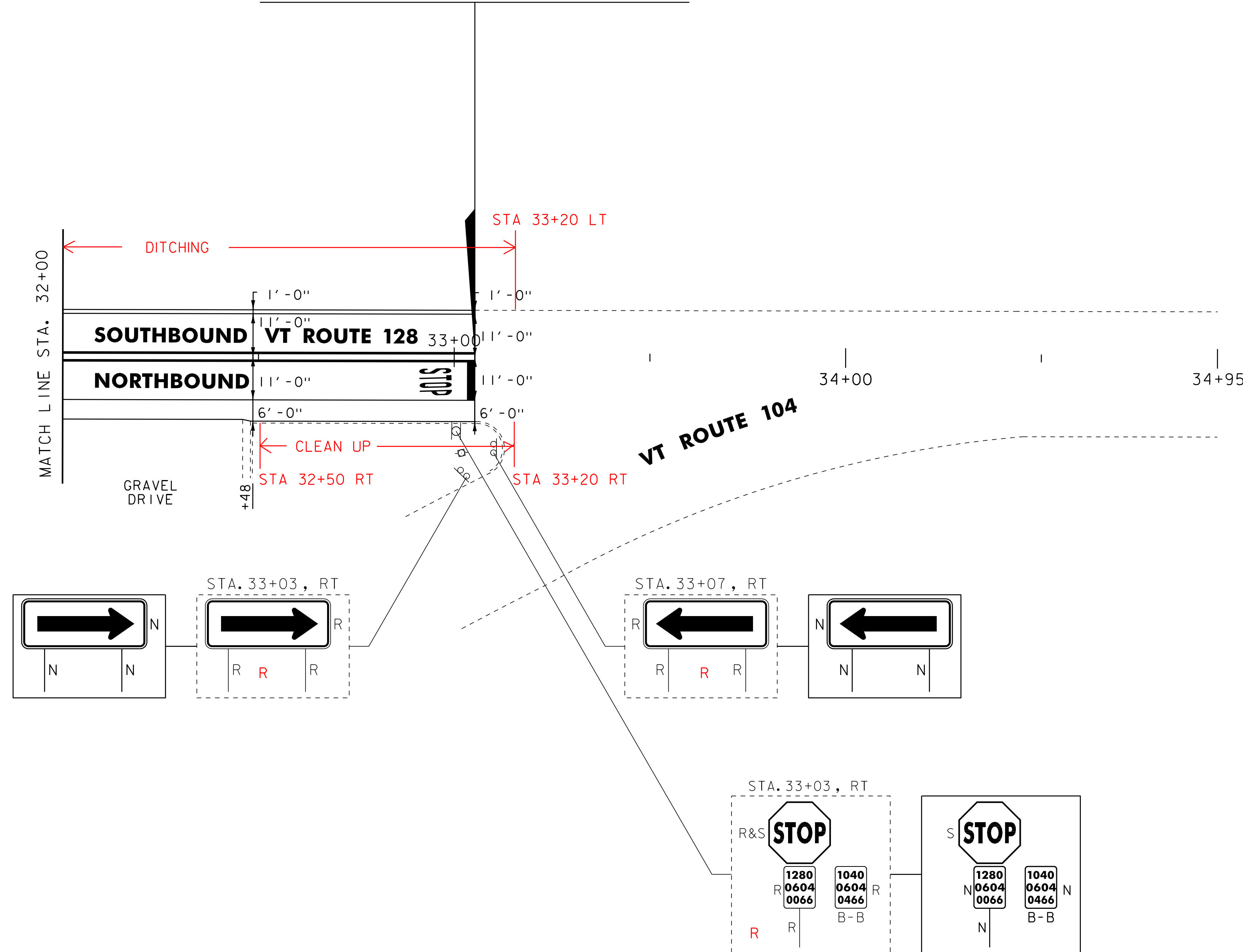
646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 STA. 33+04, RT

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 STA. 32+95, RT - "STOP"

675.50 REMOVING SIGNS
 AS SHOWN - 5

675.60 ERECTING SALVAGED SIGNS
 AS SHOWN - 1

**END STP 2804(1) VT ROUTE 128
 FAIRFAX STA. 33+05.28 = MM 0.626**



NOTES:

1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
2. FOR LEGENDS, SEE LAYOUT SHEET #1.

NOT TO SCALE

**PROJECT
 LAYOUT
 SHEET #34**

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212134.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 50 OF 79



646.402 DURABLE 4 INCH WHITE LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 1+00 TO 5+08, SOLID LT & RT

646.412 DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC
 (ALL LINES WILL INCLUDE \emptyset BREAKS FOR SIDE ROADS)
 STA. 1+00 TO 5+08, SOLID LT & RT

646.602 TEMPORARY 4 INCH WHITE LINE, PAINT
 (ALL LINES WILL INCLUDE EDGE LINE BREAKS
 AND RADII FOR SIDE ROADS)
 STA. 1+00 TO 5+08, SOLID LT & RT

646.612 TEMPORARY 4 INCH YELLOW LINE, PAINT
 (ALL LINES WILL INCLUDE \emptyset BREAKS FOR SIDE ROADS)
 STA. 1+00 TO 5+08, SOLID LT & RT

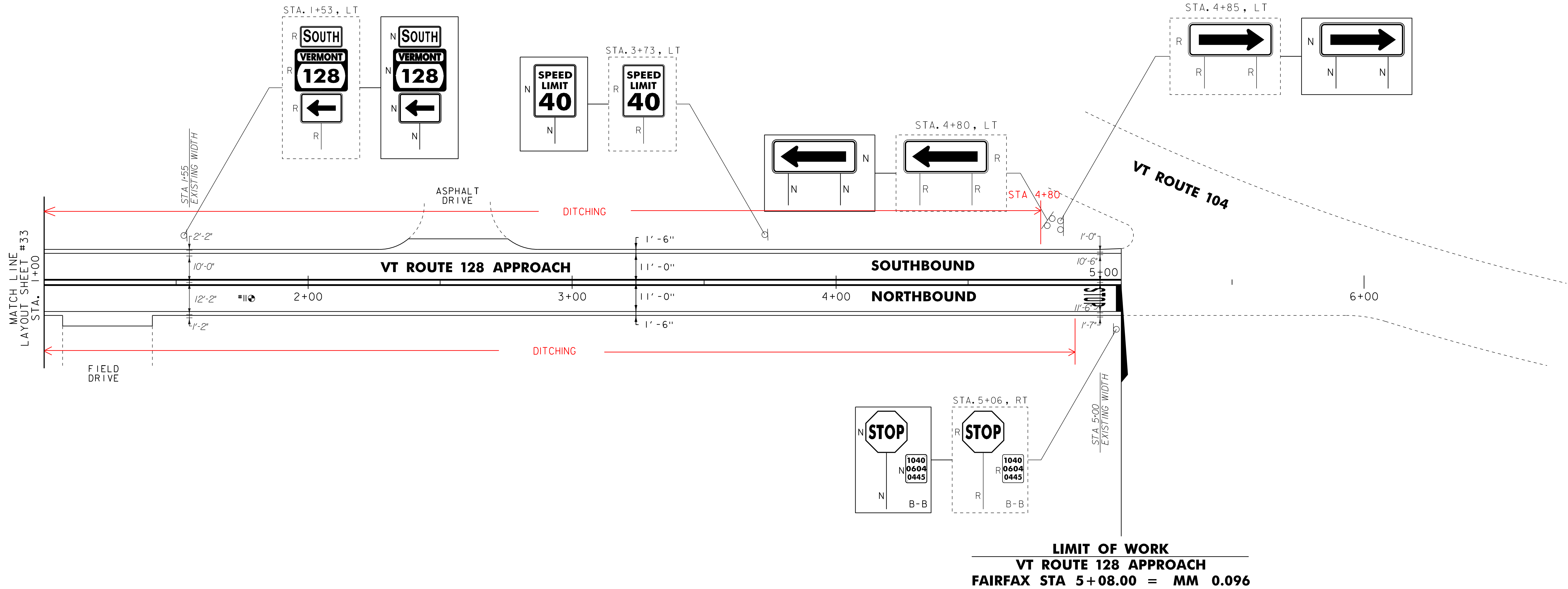
646.482 DURABLE 24 INCH STOP BAR, THERMOPLASTIC
 STA. 5+07, RT

646.492 DURABLE LETTER OR SYMBOL, THERMOPLASTIC
 STA. 4+98, RT - "STOP"

646.682 TEMPORARY 24 INCH STOP BAR, PAINT
 STA. 5+07, RT

646.692 TEMPORARY LETTER OR SYMBOL, PAINT
 STA. 4+98, RT - "STOP"

675.50 REMOVING SIGNS
 AS SHOWN - 8



LIMIT OF WORK
VT ROUTE 128 APPROACH
FAIRFAX STA 5+08.00 = MM 0.096

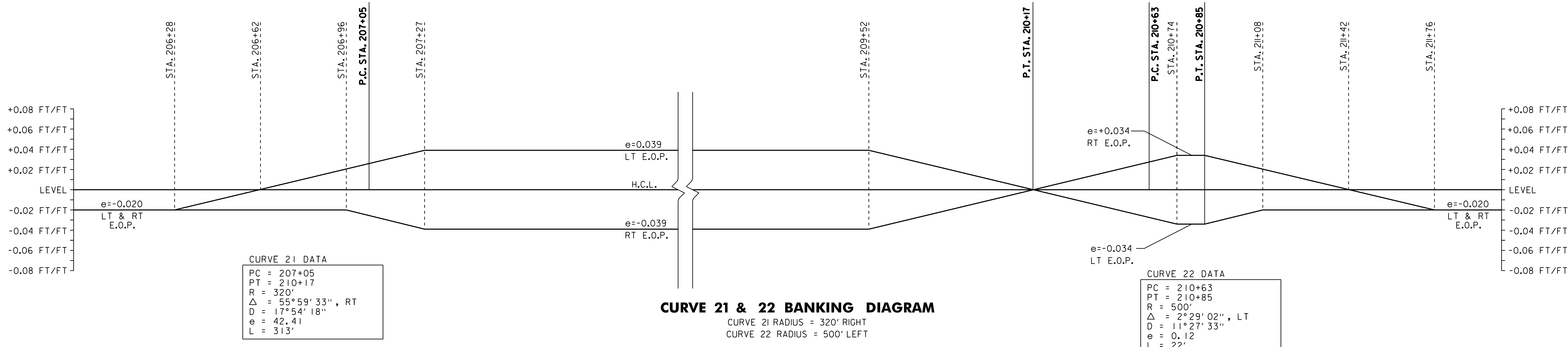
NOTES:
 1. ALL EXISTING SIGNS NOT SHOWN SHALL BE RETAINED.
 2. FOR LEGENDS, SEE LAYOUT SHEET #1.
NOT TO SCALE

PAVEMENT CORE DATA			
CORE #	DEPTH (IN.)	PCC	COMMENTS
II	2 3/4"	NO	



PROJECT LAYOUT SHEET #35

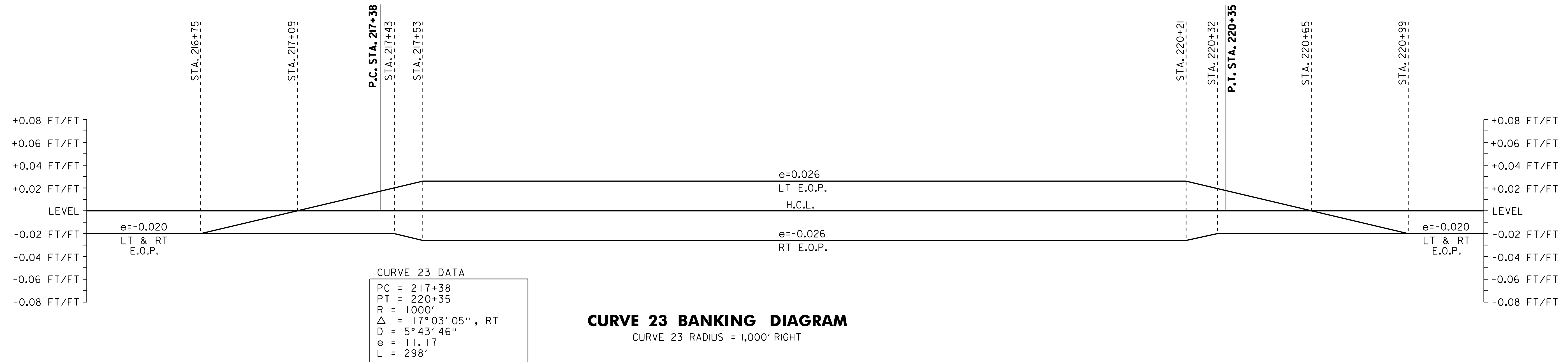
PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)
 FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212135.i
 PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 51 OF 79



CURVE 21 DATA
 PC = 207+05
 PT = 210+17
 R = 320'
 Δ = 55° 59' 33" , RT
 D = 17° 54' 18"
 e = 42.41
 L = 313'

CURVE 21 & 22 BANKING DIAGRAM
 CURVE 21 RADIUS = 320' RIGHT
 CURVE 22 RADIUS = 500' LEFT

CURVE 22 DATA
 PC = 210+63
 PT = 210+85
 R = 500'
 Δ = 2° 29' 02" , LT
 D = 11° 27' 33"
 e = 0.12
 L = 22'



CURVE 23 DATA
 PC = 217+38
 PT = 220+35
 R = 1000'
 Δ = 17° 03' 05" , RT
 D = 5° 43' 46"
 e = 11.17
 L = 298'

CURVE 23 BANKING DIAGRAM
 CURVE 23 RADIUS = 1,000' RIGHT

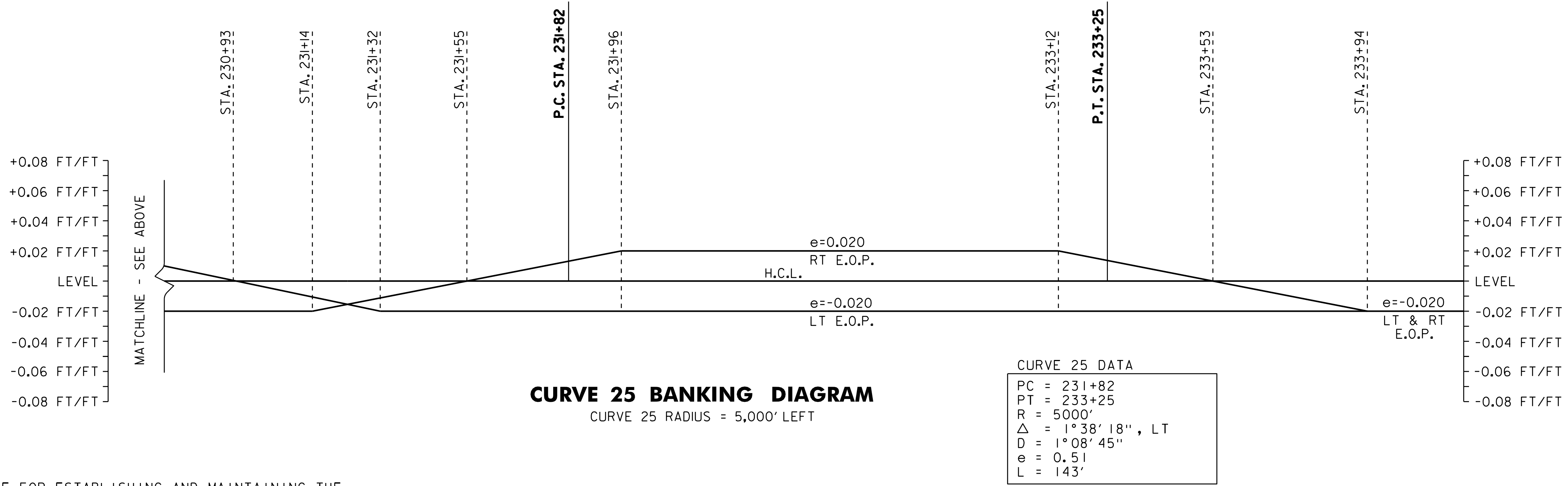
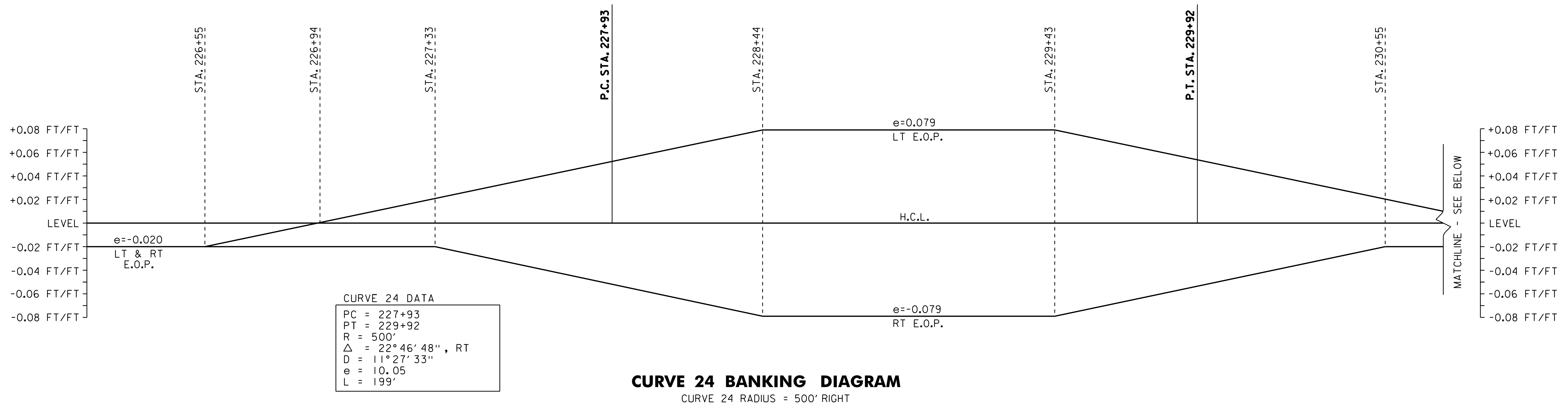
SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



NOT TO SCALE
SUPERELEVATION BANKING DIAGRAMS SHEET #1

PROJECT NAME: WESTFORD - FAIRFAX	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:58
PROJECT NUMBER: STP 2804(1)	PROJECT LEADER: JLL	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC	CHECKED BY: JLL
	IPARM FILE: p08c212sbd1.i	SHEET 52 OF 79



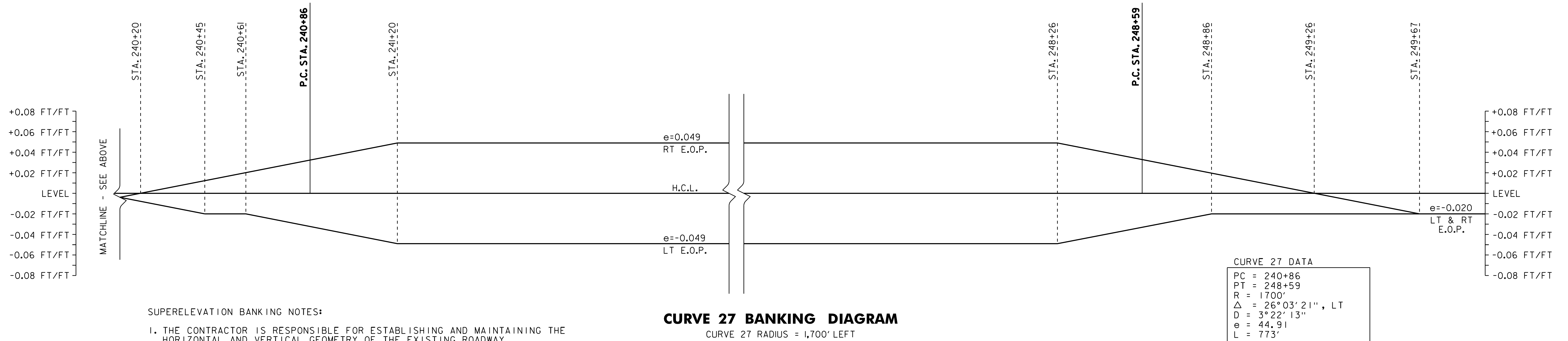
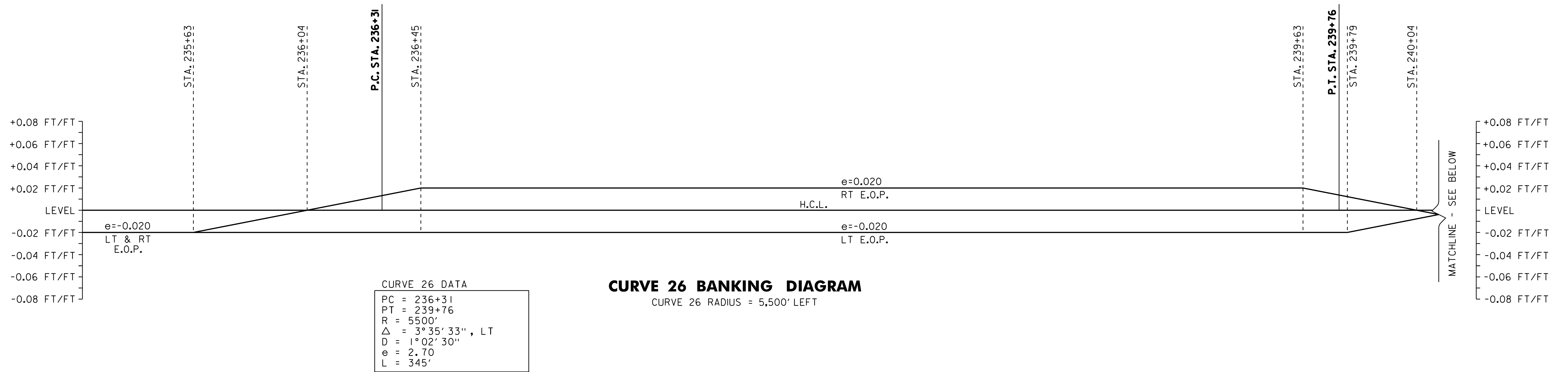
SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



NOT TO SCALE
SUPERELEVATION BANKING DIAGRAMS SHEET #2

PROJECT NAME:	WESTFORD - FAIRFAX	PLOT DATE:	31-OCT-2012 13:58
PROJECT NUMBER:	STP 2804(1)	DRAWN BY:	STANTEC
FILE NAME:	p08c212.dgn	CHECKED BY:	JLL
PROJECT LEADER:	JLL	SHEET	53 OF 79
DESIGNED BY:	STANTEC		
IPARM FILE:	p08c212sbd2.i		



SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



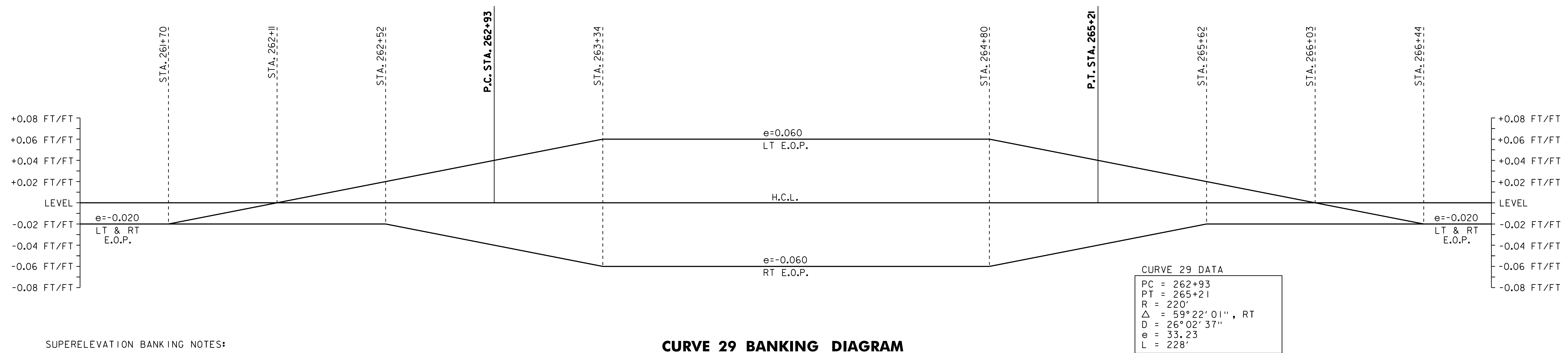
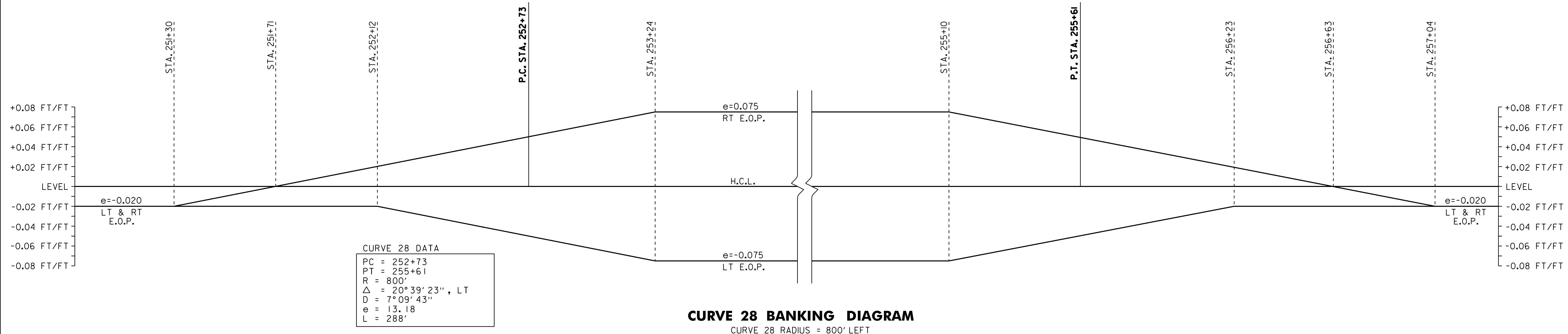
SUPERELEVATION BANKING DIAGRAMS SHEET #3

NOT TO SCALE

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212sbd3.i

PLOT DATE: 31-OCT-2012 13:58
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 54 OF 79



SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



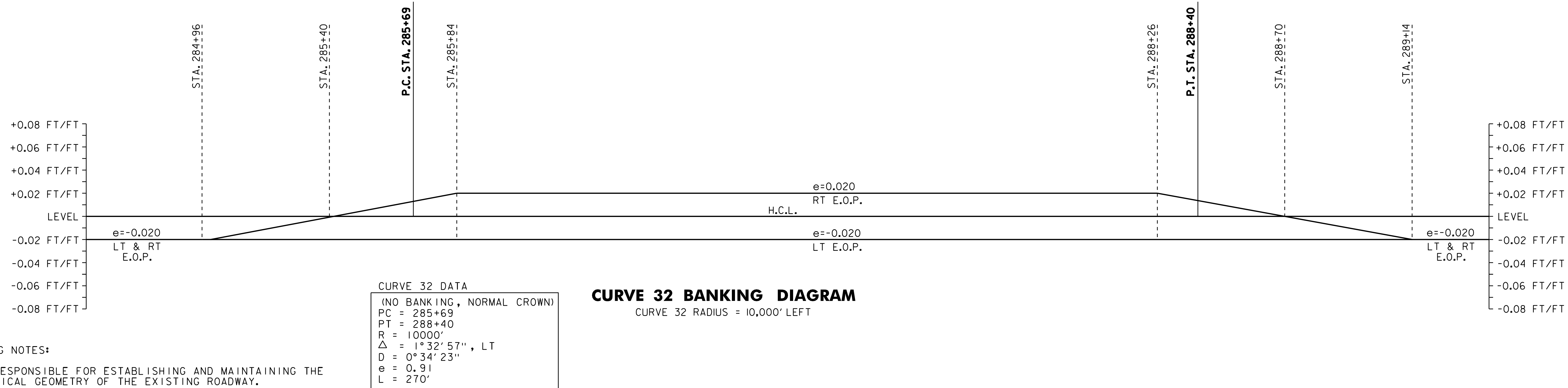
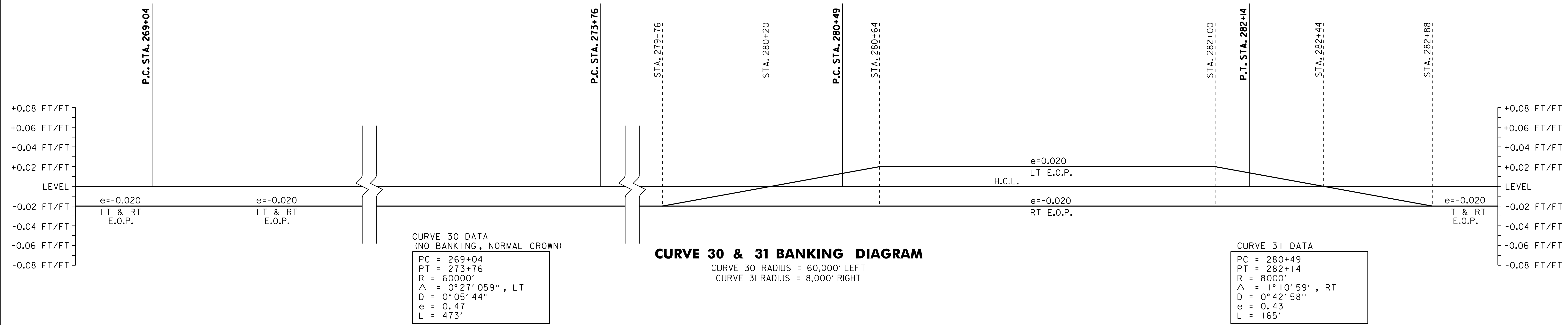
SUPERELEVATION BANKING DIAGRAMS SHEET #4

NOT TO SCALE

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212sbd4.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 55 OF 79



SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



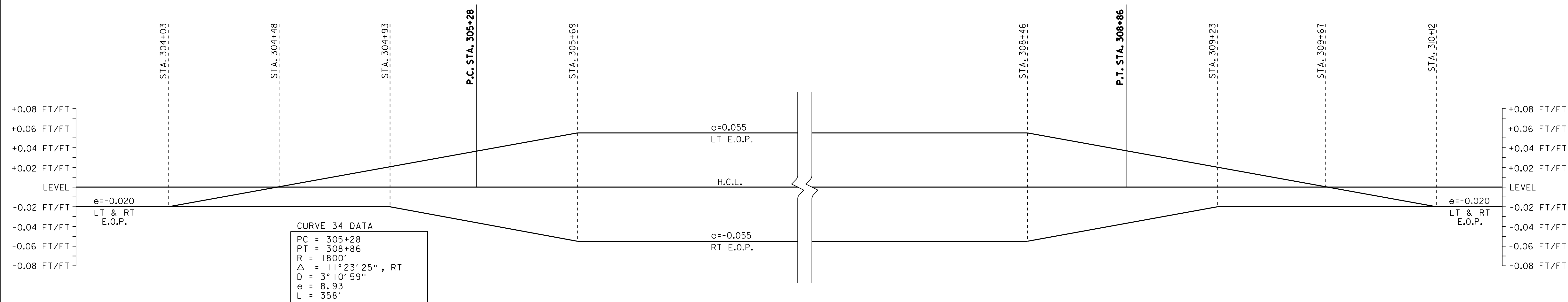
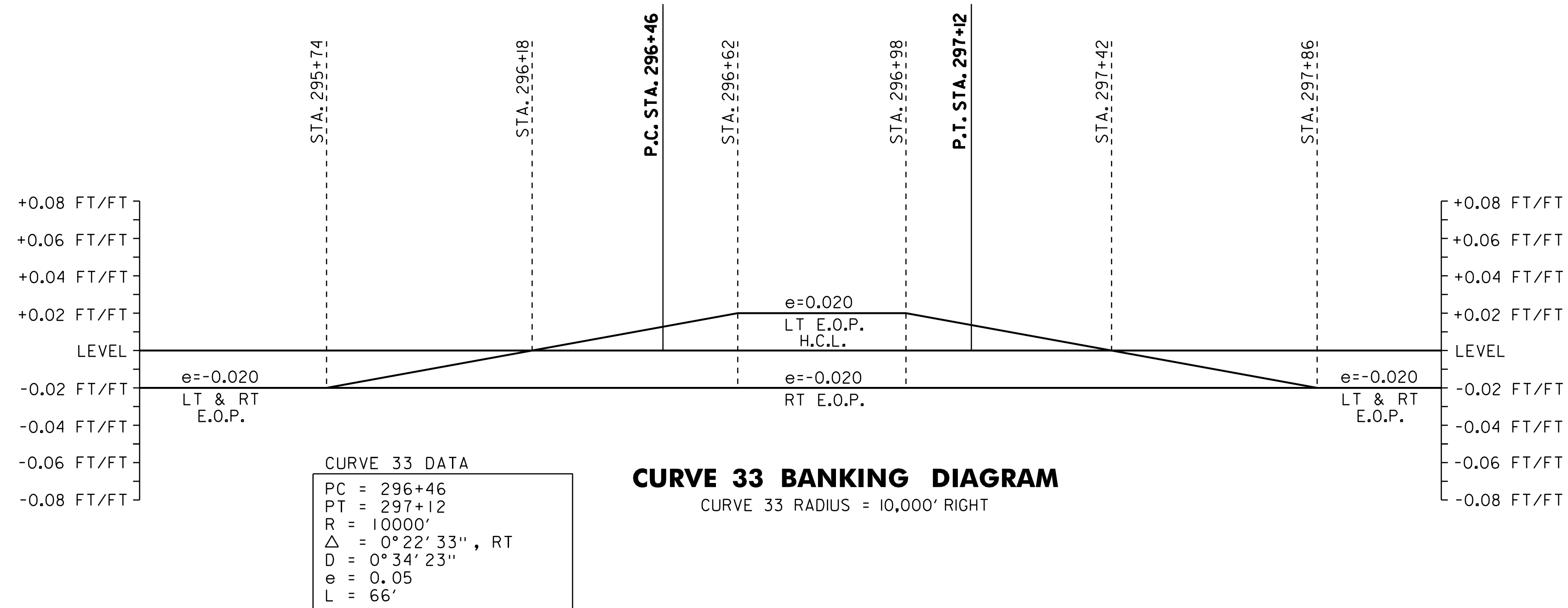
SUPERELEVATION BANKING DIAGRAMS SHEET #5

NOT TO SCALE

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212sbd5.i

PLOT DATE: 31-OCT-2012 13:58
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 56 OF 79



SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.

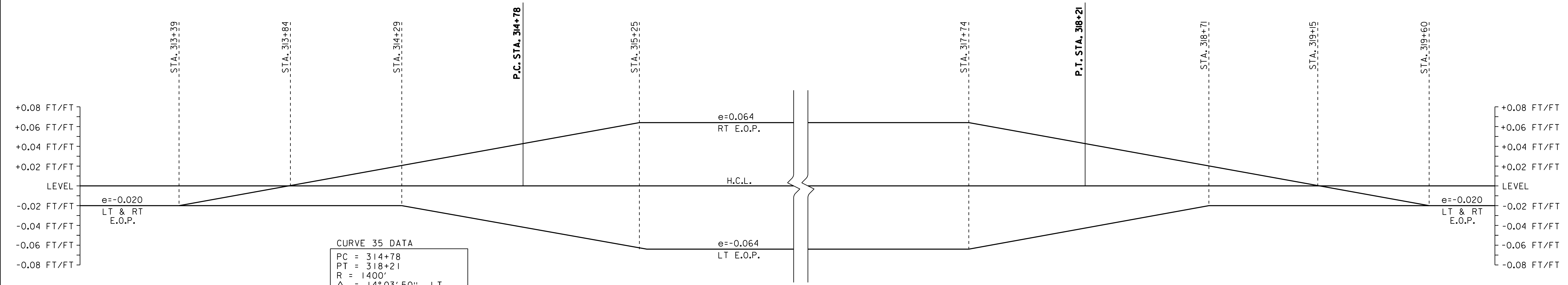


NOT TO SCALE
SUPERELEVATION BANKING DIAGRAMS SHEET #6

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212sbd6.i

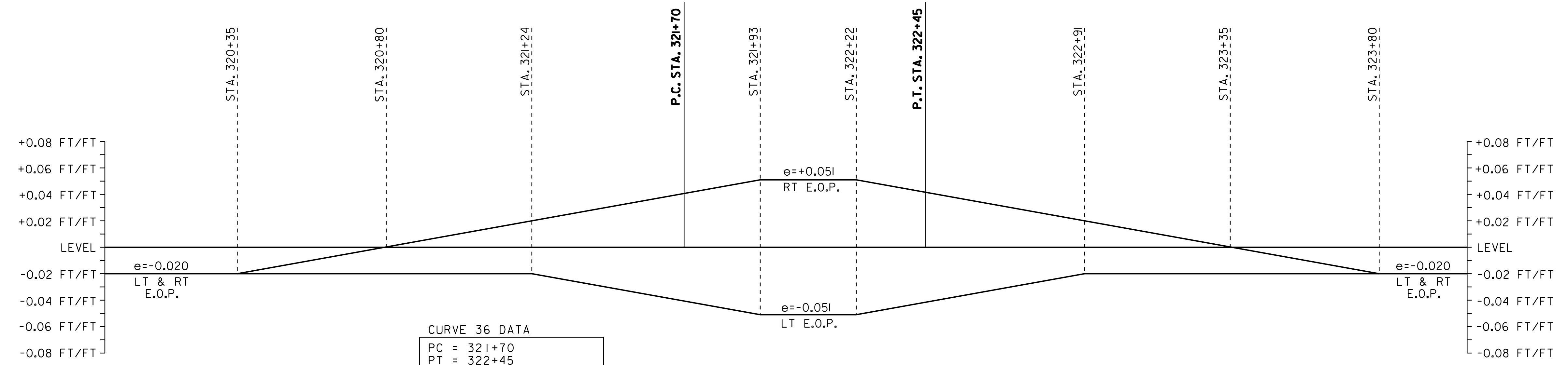
PLOT DATE: 31-OCT-2012 13:59
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 57 OF 79



CURVE 35 DATA

PC = 314+78
 PT = 318+21
 R = 1400'
 Δ = 14°03'50", LT
 D = 4°05'33"
 e = 10.61
 L = 344'

CURVE 35 BANKING DIAGRAM
 CURVE 35 RADIUS = 1,400' LEFT



CURVE 36 DATA

PC = 321+70
 PT = 322+45
 R = 2000'
 Δ = 2°09'01", LT
 D = 2°51'53"
 e = 0.35
 L = 75'

CURVE 36 BANKING DIAGRAM
 CURVE 36 RADIUS = 2,000' LEFT

SUPERELEVATION BANKING NOTES:

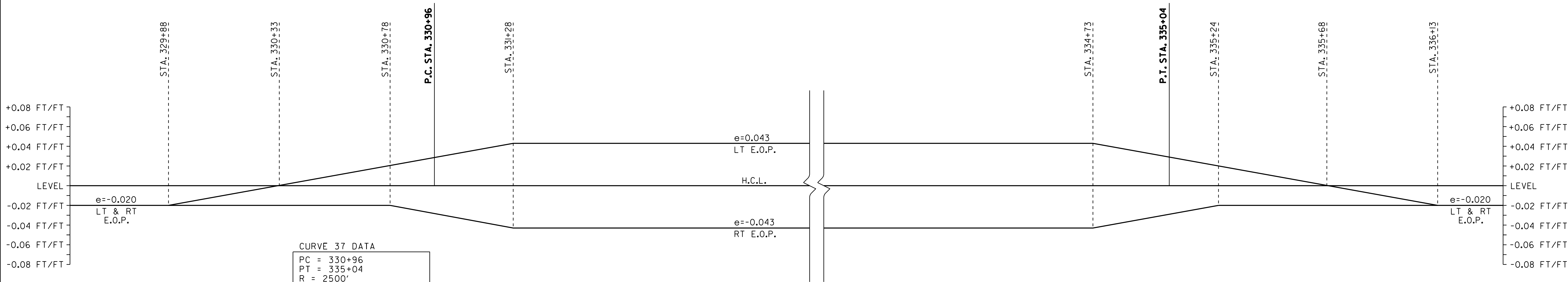
1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



NOT TO SCALE

SUPERELEVATION BANKING DIAGRAMS SHEET #7

PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:59
PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
FILE NAME: p08c212.dgn	CHECKED BY: JLL
DESIGNED BY: STANTEC	SHEET 58 OF 79
IPARM FILE: p08c212sbd7.i	



CURVE 37 DATA
 PC = 330+96
 PT = 335+04
 R = 2500'
 $\Delta = 9^{\circ}21'30''$, RT
 D = 2°17'31"
 e = 8.36
 L = 408'

CURVE 37 BANKING DIAGRAM
 CURVE 37 RADIUS = 2,500' RIGHT

SUPERELEVATION BANKING NOTES:

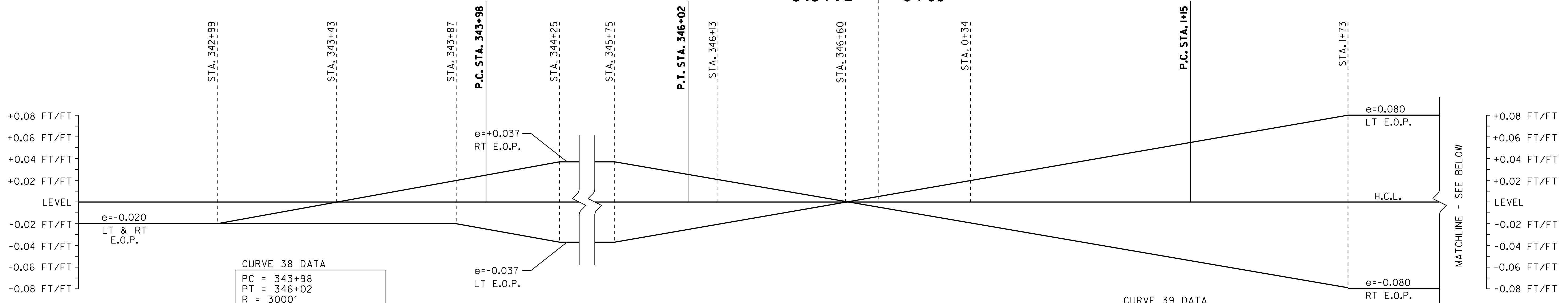
1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



NOT TO SCALE
SUPERELEVATION BANKING DIAGRAMS SHEET #8

PROJECT NAME: WESTFORD - FAIRFAX	FILE NAME: p08c212.dgn	PLOT DATE: 31-OCT-2012 13:59
PROJECT NUMBER: STP 2804(1)	PROJECT LEADER: JLL	DRAWN BY: STANTEC
	DESIGNED BY: STANTEC	CHECKED BY: JLL
	IPARM FILE: p08c212sbd8.i	SHEET 59 OF 79

WESTFORD = FAIRFAX
346+72 = 0+00

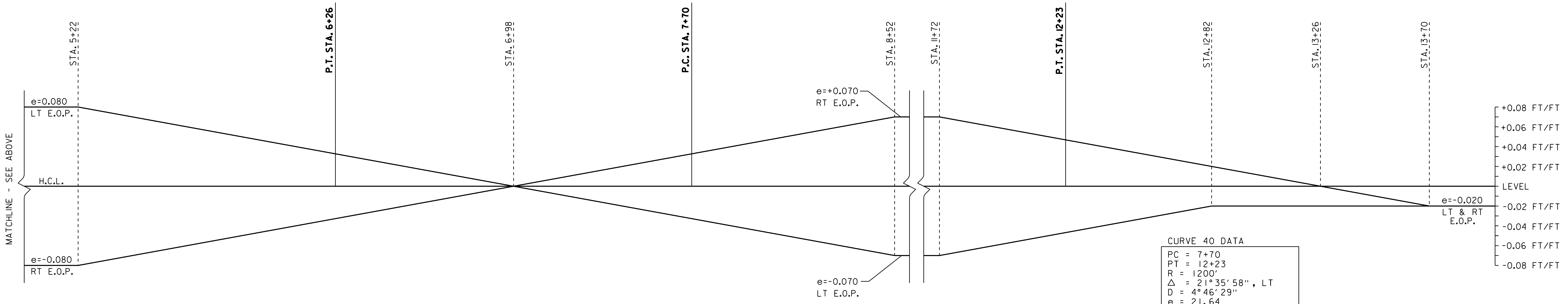


CURVE 38 DATA
 PC = 343+98
 PT = 346+02
 R = 3000'
 $\Delta = 3^\circ 52' 53''$, LT
 D = $1^\circ 54' 35''$
 e = 1.72
 L = 203'

CURVE 38, 39 & 40 BANKING DIAGRAMS

CURVE 38 RADIUS = 3,000' LEFT
 CURVE 39 RADIUS = 800' RIGHT
 CURVE 40 RADIUS = 1,200' LEFT

CURVE 39 DATA
 PC = 1+15
 PT = 6+26
 R = 800'
 $\Delta = 36^\circ 38' 27''$, RT
 D = $7^\circ 09' 43''$
 e = 42.71
 L = 512'



CURVE 40 DATA
 PC = 7+70
 PT = 12+23
 R = 1200'
 $\Delta = 21^\circ 35' 58''$, LT
 D = $4^\circ 46' 29''$
 e = 21.64
 L = 452'

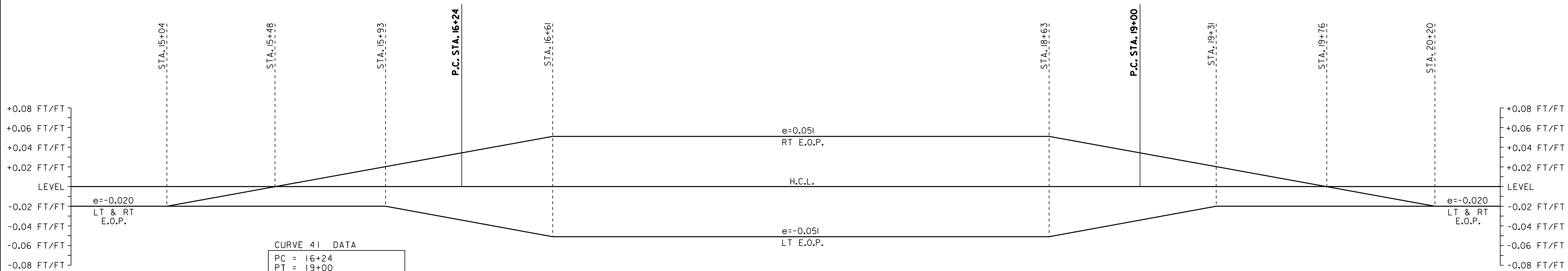
SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



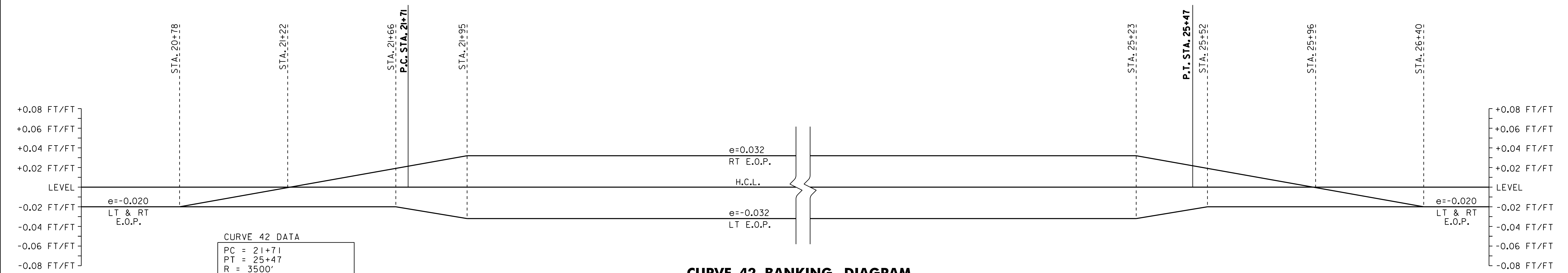
NOT TO SCALE
SUPERELEVATION BANKING DIAGRAMS SHEET #9

PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:59
PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
FILE NAME: p08c212.dgn	CHECKED BY: JLL
DESIGNED BY: STANTEC	SHEET 60 OF 79
IPARM FILE: p08c212sbd9.i	



CURVE 41 DATA
 PC = 16+24
 PT = 19+00
 R = 2000'
 $\Delta = 7^\circ 54' 01''$, LT
 D = 2° 51' 53"
 e = 4.76
 L = 276'

CURVE 41 BANKING DIAGRAM
 CURVE 41 RADIUS = 2,000' LEFT



CURVE 42 DATA
 PC = 21+71
 PT = 25+47
 R = 3500'
 $\Delta = 6^\circ 08' 44''$, LT
 D = 1° 38' 13"
 e = 5.04
 L = 375'

CURVE 42 BANKING DIAGRAM
 CURVE 42 RADIUS = 3,500' LEFT

SUPERELEVATION BANKING NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING AND MAINTAINING THE HORIZONTAL AND VERTICAL GEOMETRY OF THE EXISTING ROADWAY.
2. THE MAXIMUM ROLL-OVER BETWEEN LANE AND SHOULDER CROSS SLOPES ON THE OUTSIDE (HIGH SIDE) OF A SUPERELEVATED CURVE SHALL BE SEVEN PERCENT. SHOULDER CROSS SLOPE ON THE INSIDE (LOW SIDE) OF A SUPERELEVATED CURVE SHALL BE A MINIMUM OF SIX PERCENT AND MATCH THE ADJACENT LANE CROSS SLOPE WHEN THE LANE CROSS SLOPE EXCEEDS SIX PERCENT.
3. SUPERELEVATION RATES AND RUNOFF LENGTHS WERE DETERMINED USING A DESIGN SPEED EQUAL TO THE POSTED SPEED. A MAXIMUM SUPERELEVATION RATE OF 0.08 IS USED IN AREAS WITH A POSTED SPEED ABOVE 30 MPH. IN THE 30 MPH ZONE A MAXIMUM SUPERELEVATION RATE OF 0.04 WAS USED. IN AREAS WITH AN INTERSECTING SIDE ROAD A MAXIMUM SUPERELEVATION RATE OF 0.06 WAS USED. SEE VAOT STANDARD B-1 FOR MORE INFORMATION.



NOT TO SCALE
SUPERELEVATION BANKING DIAGRAMS SHEET #10

PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:59
PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
FILE NAME: p08c212.dgn	CHECKED BY: JLL
DESIGNED BY: STANTEC	SHEET 61 OF 79
IPARM FILE: p08c212sbd10.i	

TRAFFIC SIGN SUMMARY SHEET 01

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAINED	NO. OF POSTS	NEW SIGN POSTS																REMARKS	SIGN DETAIL			
				"A"	"B"	SALV SIGN	SALV TIS			FLANGED CHANNEL			SQUARE STEEL (in)			TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)				W-SHAPE STEEL		REQUIREMENTS		DETAIL ON SHEET NUMBER	STD. SHEET NUMBER		
		1.2	2.0							3.0	1.75	2.0	2.5	3.0	4.0	4.0 MOD	FOUND-ATION	3.0	3.5	4.0	5.0	FTG. SIZE	WEIGHT	POST SIZE						
		lb/ft			lb/ft					lb/ft			24"	30"																
WESTFORD																														
70+22, LT		I	24	30	5.00				I																			SIGN ID CODE R4-1	SEE FHWA SHS	
78+93, RT		I	30	30	6.25				2																			SIGN ID CODE VR-417 SIGN ID CODE W14-3	MOUNT SIGNS BACK TO BACK	E-141 SEE FHWA SHS
81+08, RT		I	24	30	5.00				I																			SIGN ID CODE R2-1	SEE FHWA SHS	
84+05, RT		I	6	10	0.42				I																					E-138
94+48, LT		I	6	10	0.42				I																					E-138
105+30, LT		I	6	10	0.42				I																					E-138
115+86, RT		I	6	10	0.42				I																					E-138
126+01, LT		I	6	10	0.42				I																					E-138
137+30, LT		I	6	10	0.42				I																					E-138
168+87, LT		I	6	10	0.42				I																					E-138
175+82, LT		I	24	30	5.00				I																			SIGN ID CODE R2-1	SEE FHWA SHS	
175+82, RT									I																			MOUNT SALVAGED SIGN ON NEW POST	-	
176+82, RT		I	24	30	5.00				I																			SIGN ID CODE VR-017	E-141	

105.28 237.16

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."

TOTALS	SF	SF	EA.	SF		FT	FT	FT	FT	FT	EA	LB	LB	LB	EA.	LB	EA.	EA.	LB
	33.36		I			154	161	342.44 *											

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(I)

FILE NAME: p08c212.dgn
DESIGNED BY: STANTEC
IPARM FILE: p08c212tss01.i

PLOT DATE: 31-OCT-2012 13:55
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 62 OF 79

TRAFFIC SIGN SUMMARY SHEET 02

MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS		NEW & SALVAGED SIGNS				EXIST POST RETAIN	NO. OF POSTS	NEW SIGN POSTS													REMARKS	SIGN DETAIL							
		E A	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN			SALV TIS	FLANGED CHANNEL			SQUARE STEEL (in)			TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)				W-SHAPE STEEL		REQUIRE SIGNMENT	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER			
											lb/ft			lb/ft			lb/ft			lb/ft				FTG. SIZE					WEIGHT	POST SIZE	
											1.2	2.0	3.0	1.75	2.0	2.5	3.0	4.0	4.0 MOD	3.0	3.5	4.0		5.0	24"						30"
177+42, RT		I	30	30	6.25				I																			SIGN ID CODE RI-1 MOUNT MILE MARKER PLAQUE BACK-TO-BACK AND BELOW STOP SIGN	SEE FHWA SHS E-138		
190+08, RT		I	6	10	0.42				I																				E-138		
191+11, LT		I	24	30	5.00				I																			SIGN ID CODE R2-1	SEE FHWA SHS		
193+29, RT									I																			MOUNT SALVAGED SIGN ON NEW POST	-		
193+76, LT									I																			MOUNT SALVAGED SIGNS BACK-TO-BACK ON NEW POST	-		
195+34, RT									I																			MOUNT SALVAGED SIGN ON NEW POST	-		
199+06, LT		I	30	30	6.25				I																			SIGN ID CODE RI-1 MOUNT MILE MARKER PLAQUE BACK-TO-BACK AND BELOW STOP SIGN	SEE FHWA SHS E-138		
199+46, LT		I	24	30	5.00				I																			SIGN ID CODE VR-017	E-141		
200+59, LT		I	6	10	0.42				I																				E-138		
										48.88	203.20																				

FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."



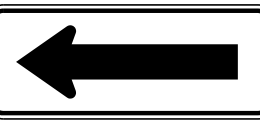
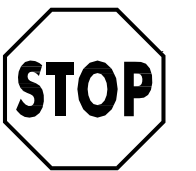
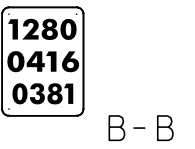


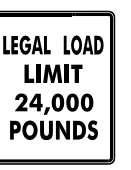
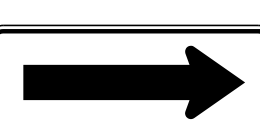

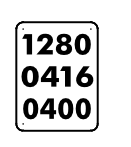



TOTALS	SF	SF	EA.	SF		FT	110	FT	114	252.08	EA.	LB	EA.	EA.	LB
---------------	----	----	-----	----	--	----	-----	----	-----	--------	-----	----	-----	-----	----

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(I)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212tss02.i

PLOT DATE: 31-OCT-2012 13:55
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 63 OF 79

TRAFFIC SIGN SUMMARY SHEET 03


MILEMARKER, STATION, OR SIGN NUMBER	SIGN LEGEND	SIGN DIMENSIONS			NEW & SALVAGED SIGNS				EXIST POST RETAIN	NO. OF POSTS	NEW SIGN POSTS													REMARKS	SIGN DETAIL									
		E A	WIDTH (in)	HEIGHT (in)	"A"	"B"	SALV SIGN	SALV TIS			FLANGED CHANNEL			SQUARE STEEL (in)		ANCHOR	SLEEVE	TUBULAR ALUMINUM Ø (in)			TUBULAR STEEL Ø (in)				W-SHAPE STEEL		FRUSTRATED	DETAIL ON SHEET NUMBER	STD. SHEET NUMBER					
											lb/ft			1.75	2.0			2.5	3.0	4.0	4.0 MOD	FOUND-ATION	3.0		3.5	4.0				5.0	FTG. SIZE		WEIGHT	POST SIZE
											1.12	2.0	3.0	1.88	2.42			3.35	1.3	1.7	1.7		3.0		3.5	4.0				5.0	24"	30"		
200+85, RT		I	48	24	8.00					2																	SIGN ID CODE WI-6	SEE FHWA SHS						
200+97, RT		I	24	30	5.00					1																	SIGN ID CODE VR-017	E-141						
201+24, RT		I	48	24	8.00					2																	SIGN ID CODE WI-6	SEE FHWA SHS						
201+26, RT	 	I	30	30	6.25					1																	SIGN ID CODE RI-1	SEE FHWA SHS						
203+60, LT		I	30	30	6.25					1																	SIGN ID CODE WII-2	SEE FHWA SHS						
205+25, RT		I	72	20	10.00					2																	SIGN ID CODE DI-2 (L)	SEE FHWA SHS						
208+42, LT		I	24	30	5.00					1																	SIGN ID CODE VR-017	E-141						
208+70, LT		I	48	24	8.00					2																	SIGN ID CODE WI-6	SEE FHWA SHS						
208+73, LT		I	48	24	8.00					2																	SIGN ID CODE WI-6	SEE FHWA SHS						
209+20, LT		I	6	10	0.42					1																		E-138						
214+63, LT		I	72	20	10.00					2																	SIGN ID CODE DI-2 (R)	E-123						
222+16, LT		I	24	30	5.00					1																	SIGN ID CODE R2-1	SEE FHWA SHS						
227+25, RT		I	30	30	6.25					1																	SIGN ID CODE S3-1	SEE FHWA SHS						

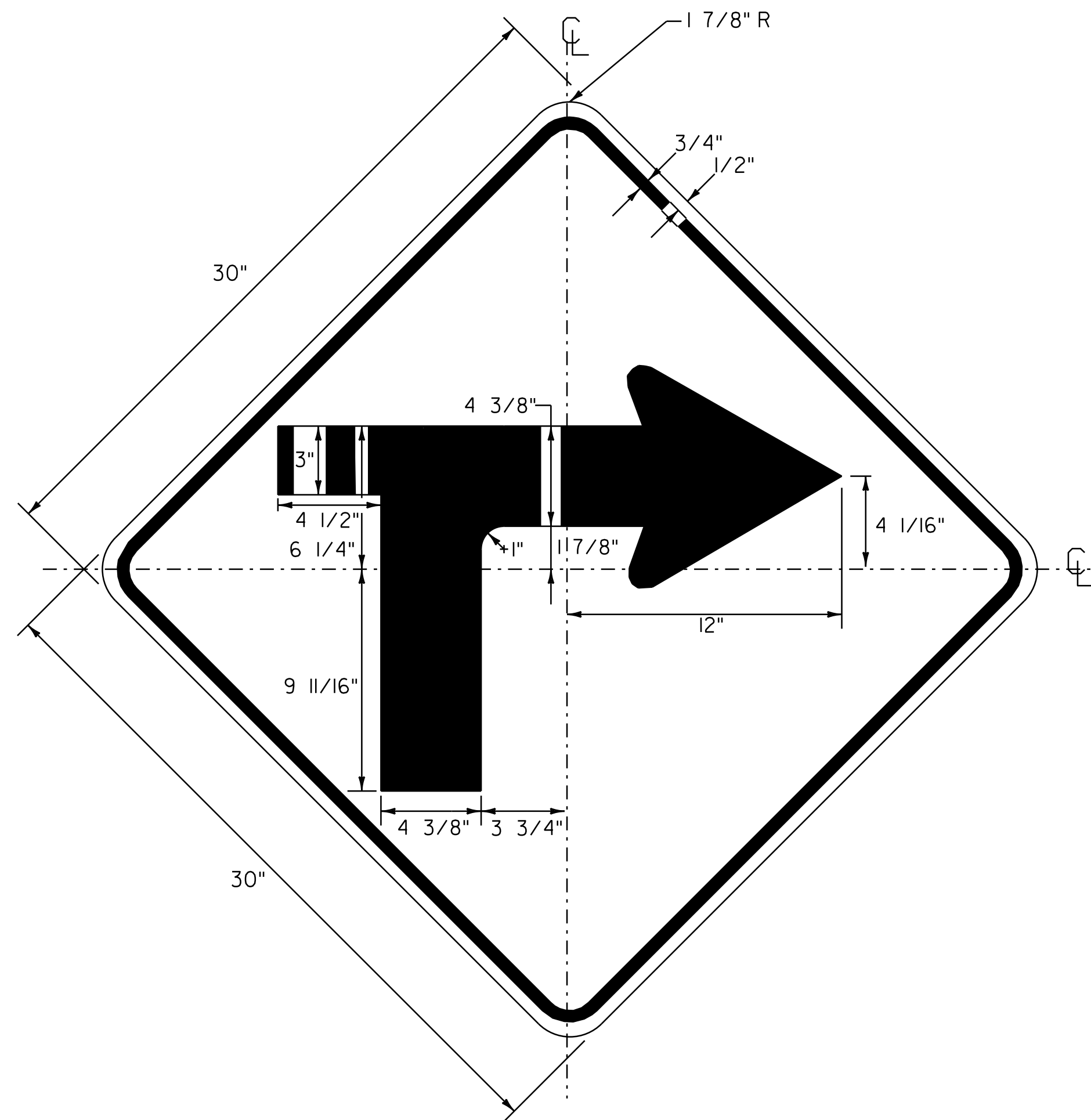
<p>FINAL POST LENGTHS ARE TO BE DETERMINED IN THE FIELD. POST SIZES ARE COMPUTED BASED ON INFORMATION FURNISHED ON THE STANDARD SHEETS AND THE VTRANS "SIGN POST DESIGN GUIDELINE."</p>										FT	FT	FT	FT	FT	FT	EA	LB	LB	LB	EA.	LB	EA.	EA.	LB				
										8	250	270																
										15.04	605.00																	
										258	278	620.04																

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(I)

FILE NAME: p08c212.dgn
DESIGNED BY: STANTEC
IPARM FILE: p08c212tss03.i

PLOT DATE: 31-OCT-2012 13:55
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 64 OF 79

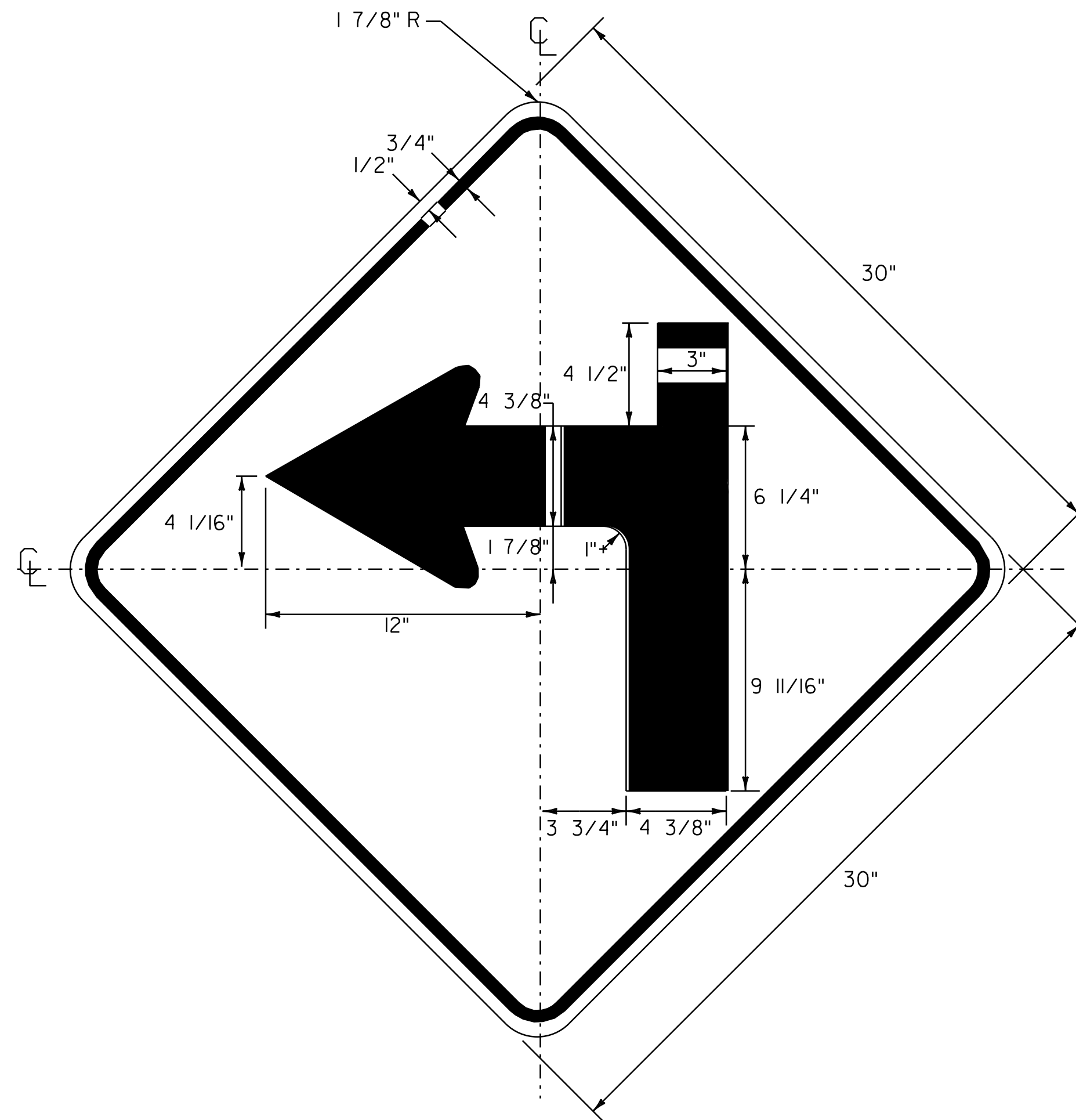




W1-1MaR
 BLACK BORDER & SYMBOL
 WITH YELLOW (RETROREFLECTIVE) BACKGROUND
 SEE VTRANS STANDARD E-150 FOR MATERIALS

LOCATIONS

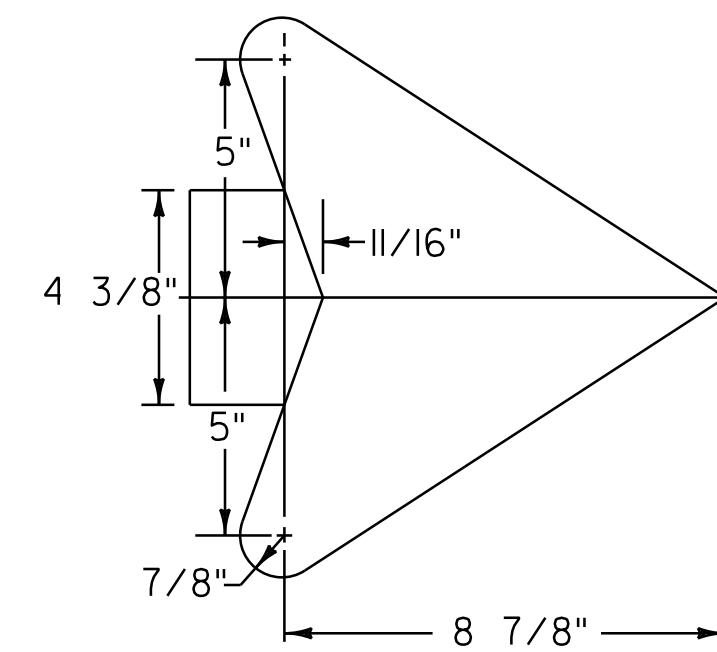
WESTFORD STA. 259+50, RT



W1-1MbL
 BLACK BORDER & SYMBOL
 WITH YELLOW (RETROREFLECTIVE) BACKGROUND
 SEE VTRANS STANDARD E-150 FOR MATERIALS

LOCATIONS

WESTFORD STA. 271+29, LT



ARROW DETAIL

NOT TO SCALE

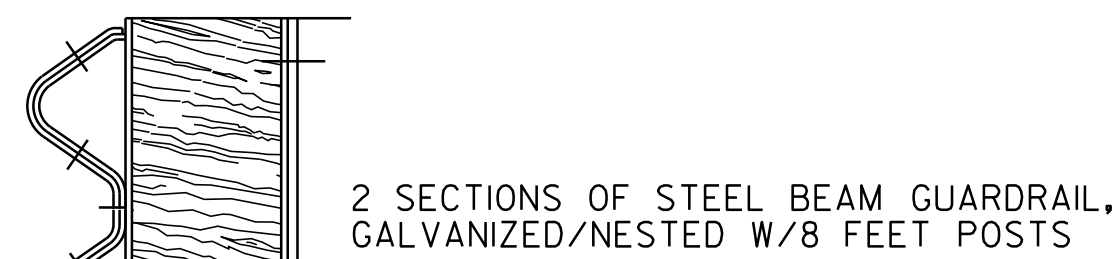
**TRAFFIC
 SIGN
 DETAIL
 SHEET**

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)

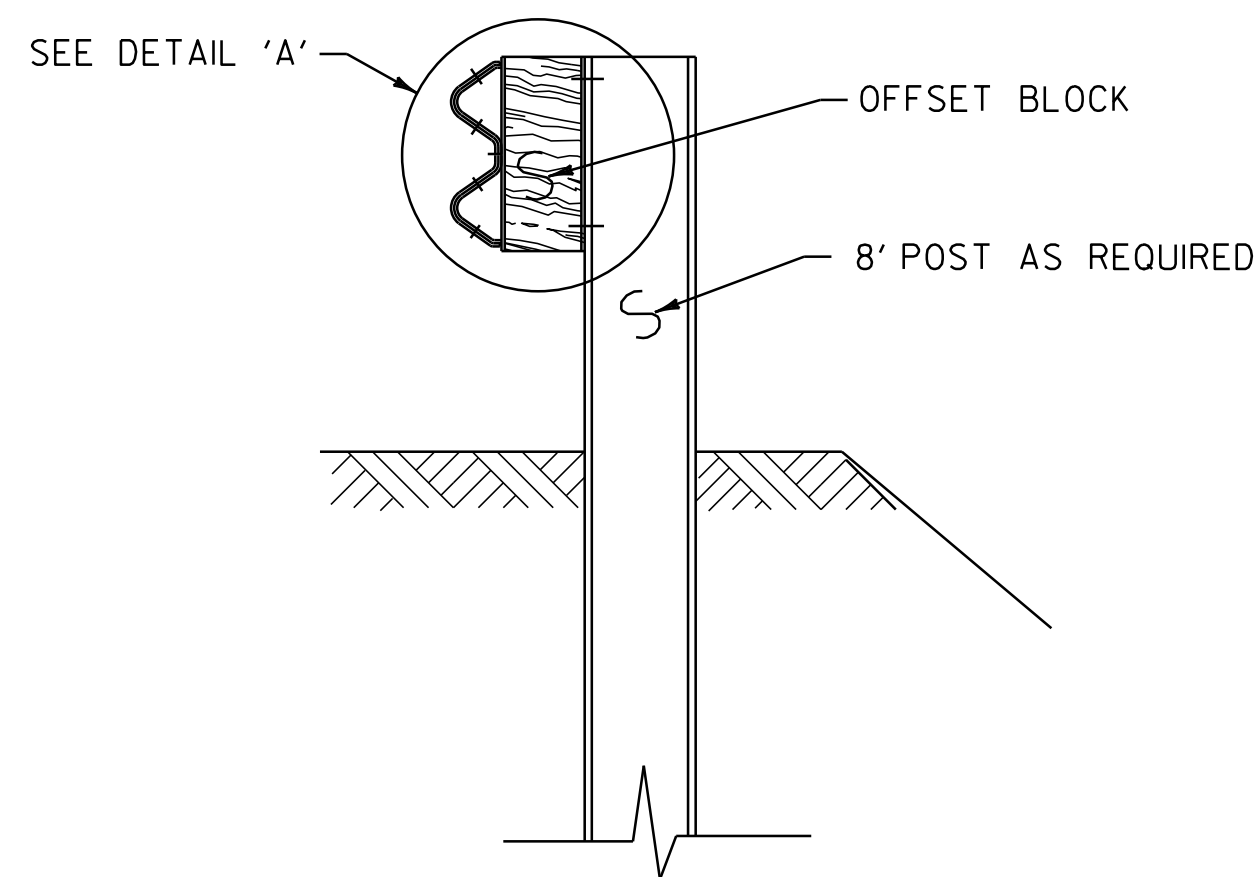
FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212tsd.i

PLOT DATE: 31-OCT-2012 13:59
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 70 OF 79

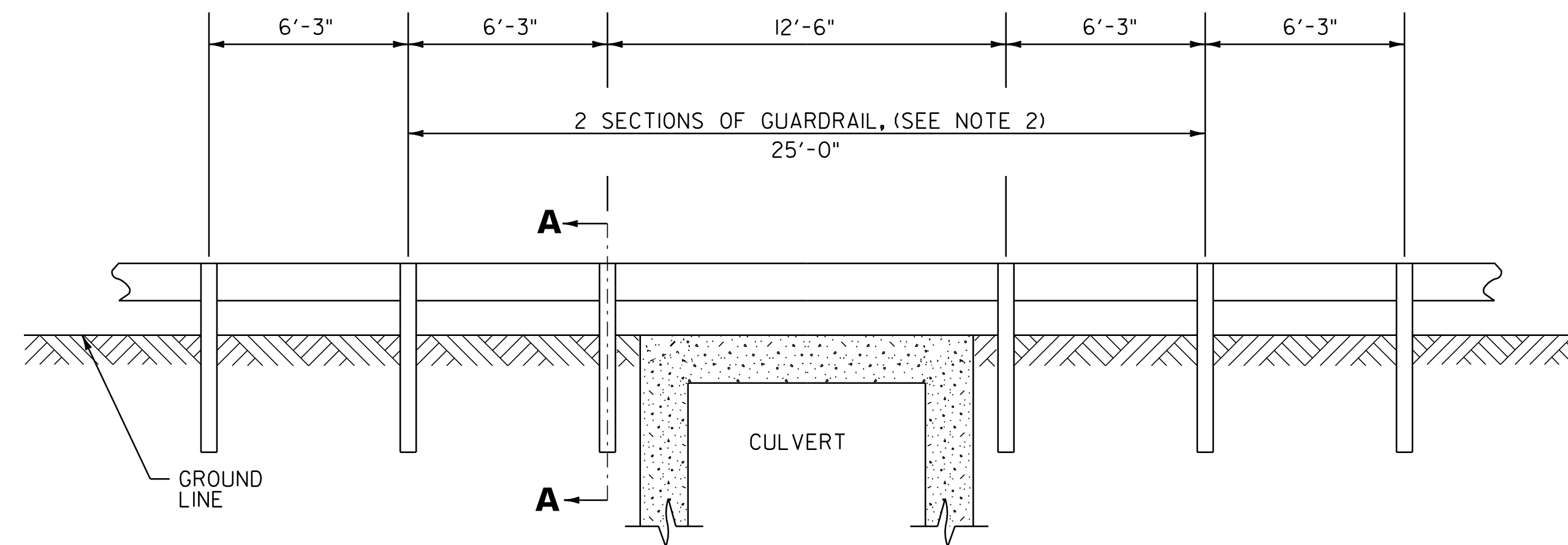




DETAIL A



SECTION A-A

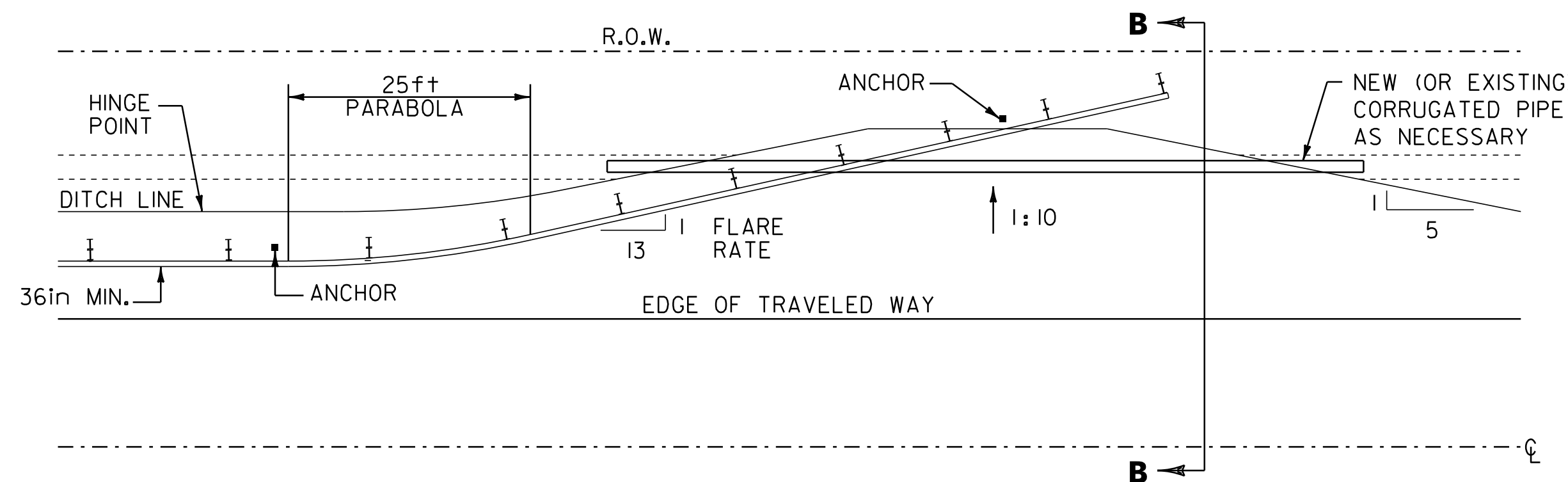


**DETAIL OF STEEL BEAM GUARDRAIL
AT LARGE CULVERTS (BRIDGE #7)**

WESTFORD STA. 275+19, LT
WESTFORD STA. 275+19, RT

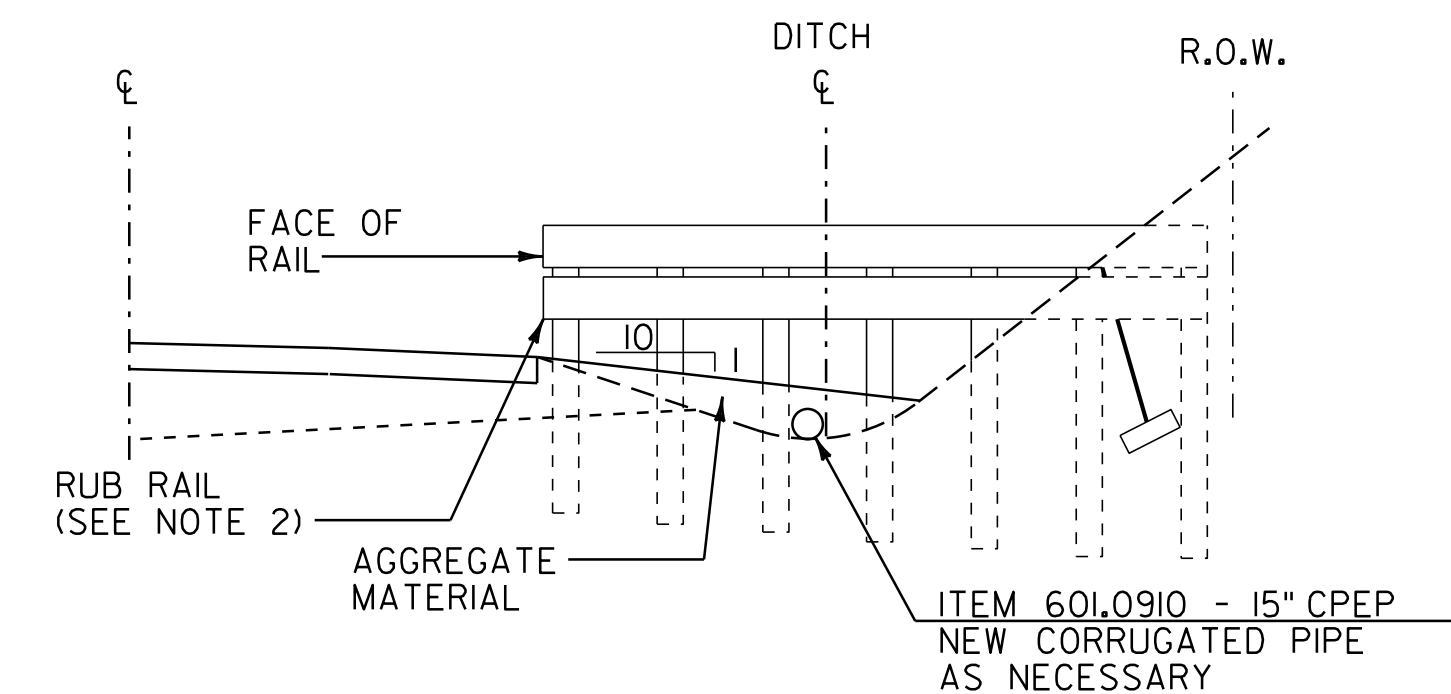
NOTES:

1. SEE VAOT STANDARDS G-1 & G-1d FOR STEEL BEAM GUARDRAIL DETAILS
2. THIS WORK SHALL BE PAID UNDER ITEM 62L207, STEEL BEAM GUARDRAIL, GALVANIZED/NESTED W/8 FEET POSTS
3. THIS DETAIL TO BE USED AS INDICATED ON THE ITEM DETAIL SUMMARY SHEET OR AS DIRECTED BY THE RESIDENT ENGINEER.



**DETAIL FOR BURIED GUARDRAIL
ENDS INTO BACKSLOPES**

WESTFORD STA. 248+29, RT
WESTFORD STA. 279+06.5, LT



SECTION B-B

NOTES:

1. PRIMARY RAIL SHALL REMAIN AT A CONSTANT HEIGHT (LEVEL) RELATIVE TO THE HEIGHT OF RAIL AT THE EDGE OF SHOULDER.
2. ADDITION OF RUB RAIL IS REQUIRED WHEN OPENING BENEATH PRIMARY RAIL EXCEEDS 18". RUB RAIL EXTENDS FROM THE EDGE OF SHOULDER TO THE BACK SLOPE.
3. AN ESTIMATED 20 LF OF ITEM 60L0910 15" CPEP HAS BEEN INCLUDED AT EACH LOCATION FOR USE AS DIRECTED BY THE RESIDENT ENGINEER.

NOT TO SCALE

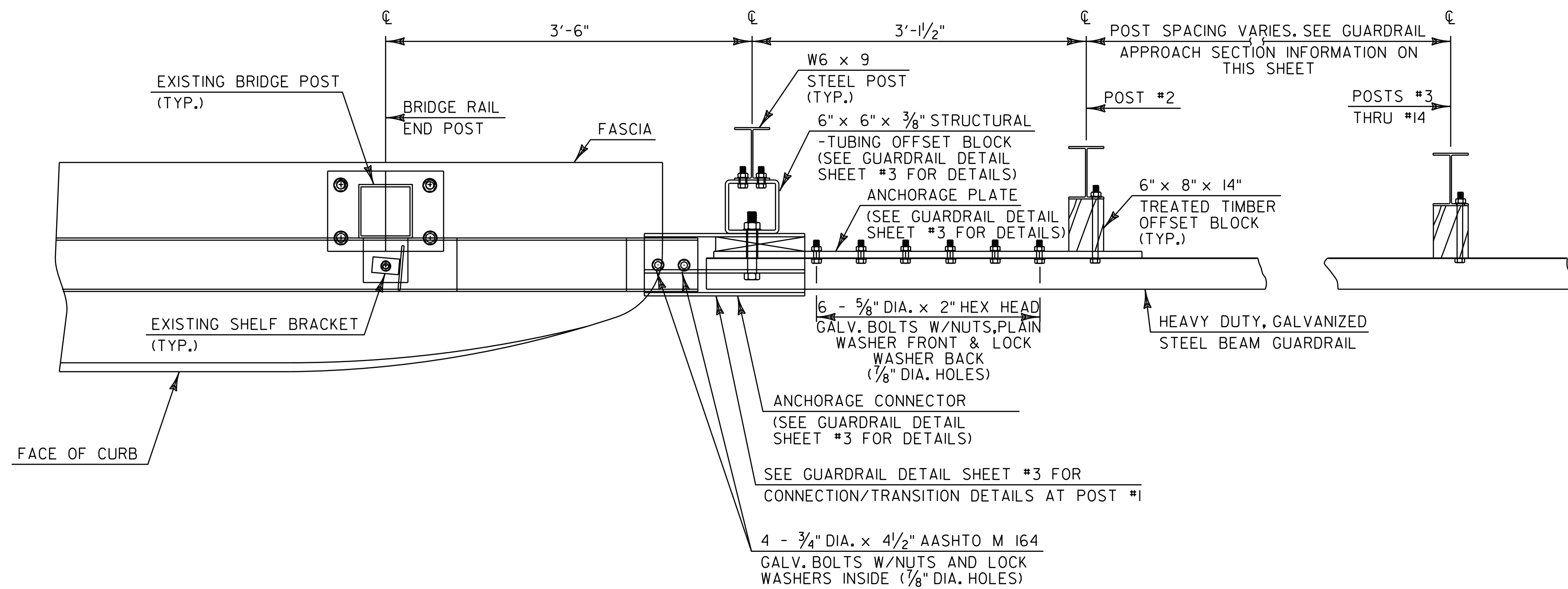
**GUARDRAIL
DETAIL
SHEET #1**

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212gds01.i

PLOT DATE: 31-OCT-2012 13:59
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 71 OF 79

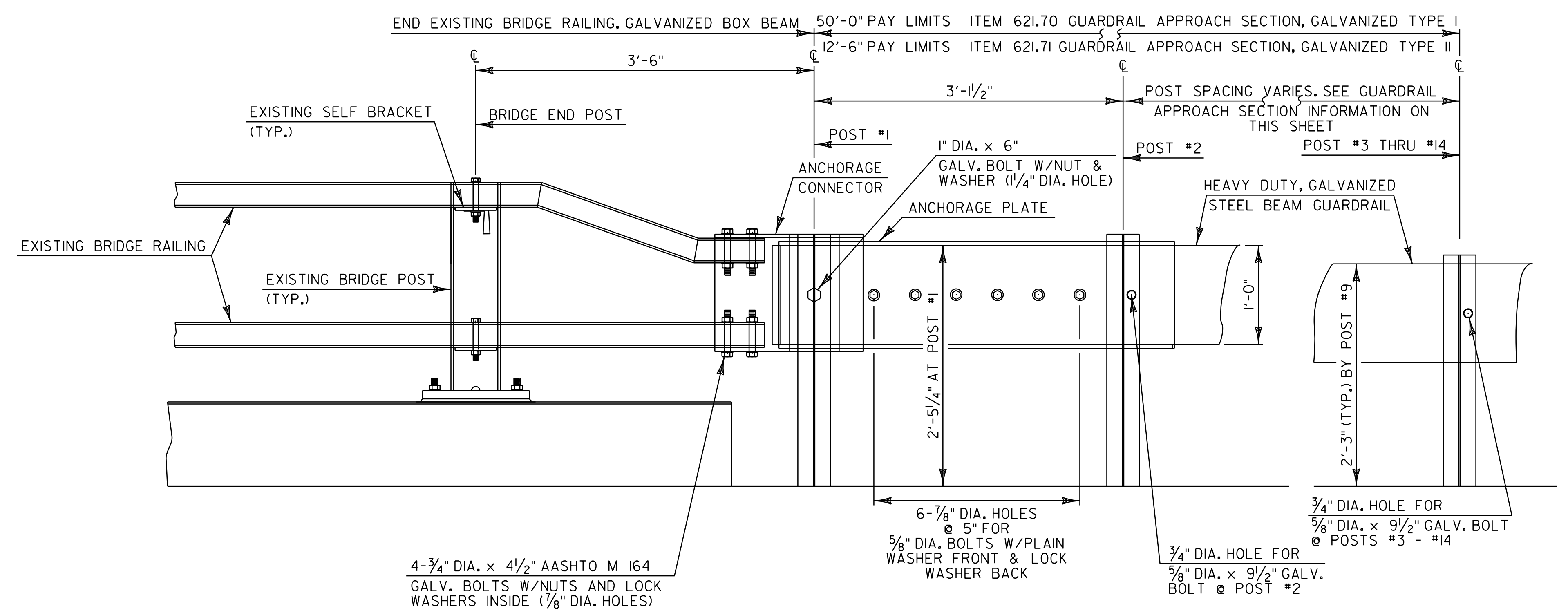
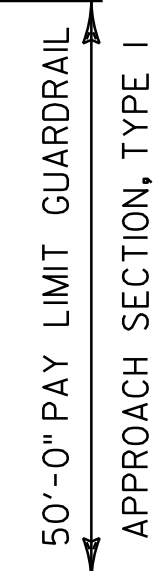




PLAN

**ITEM 621.70
GUARDRAIL
APPROACH SECTION,
TYPE I**

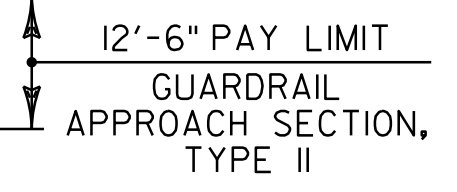
POST NO.	SPACING
1	3'-1 1/2"
2	3'-1 1/2"
3	3'-1 1/2"
4	3'-1 1/2"
5	3'-1 1/2"
6	3'-1 1/2"
7	3'-1 1/2"
8	3'-1 1/2"
9	3'-1 1/2"
10	4'-2"
11	4'-2"
12	4'-2"
13	6'-3"
14	6'-3"



ELEVATION

**ITEM 621.71
GUARDRAIL
APPROACH SECTION,
TYPE II**

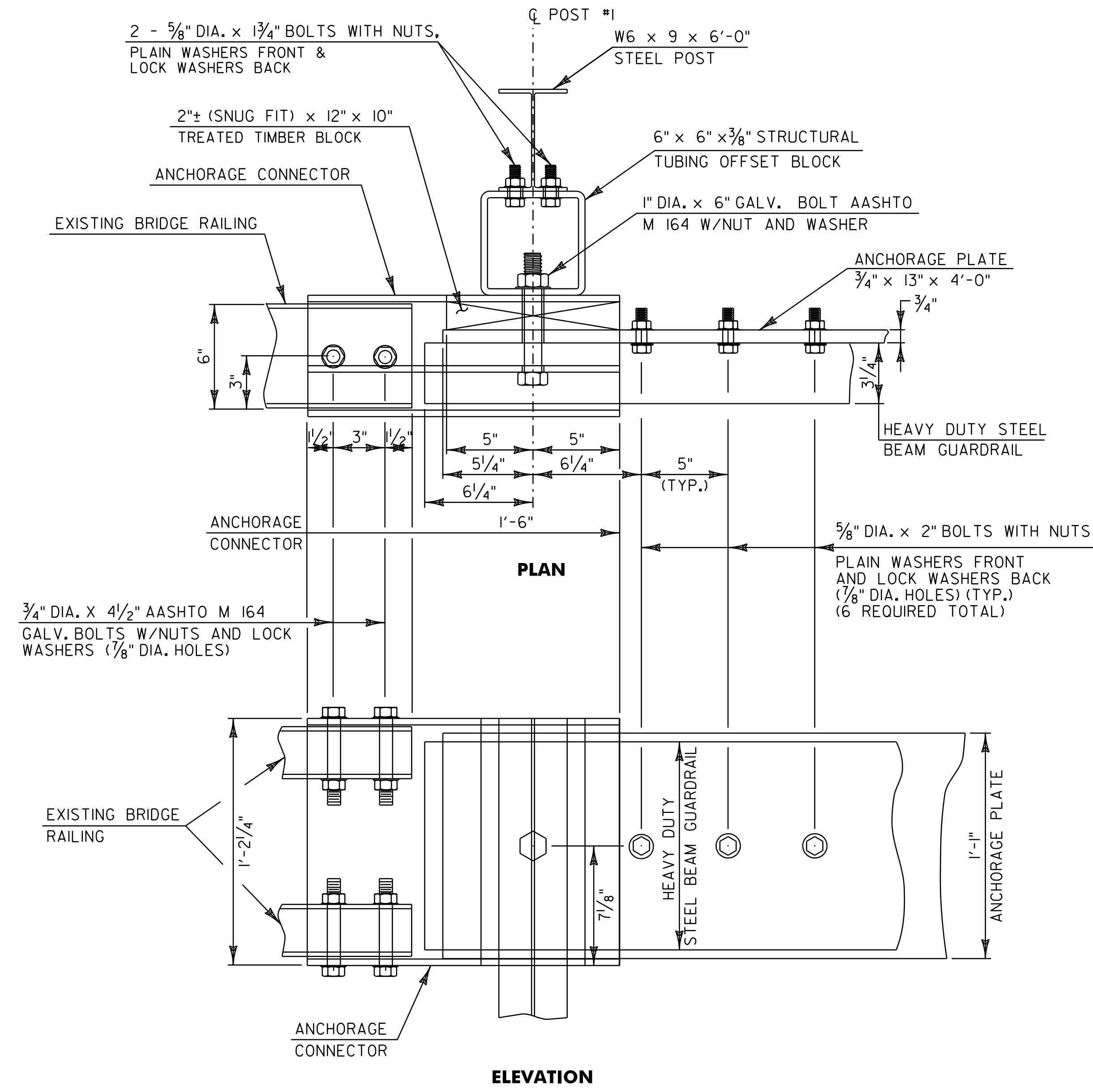
POST NO.	SPACING
1	3'-1 1/2"
2	4'-8 1/4"
3	4'-8 1/4"
4	4'-8 1/4"



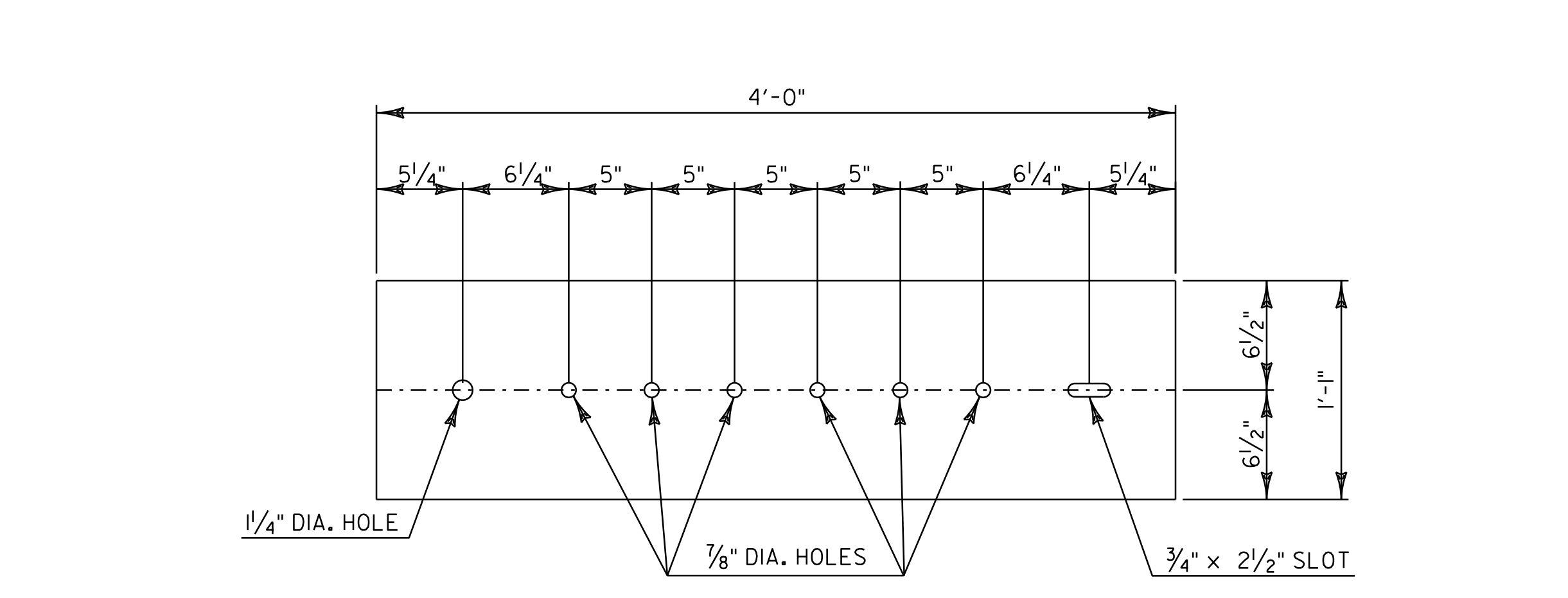
GUARDRAIL APPROACH SECTION DETAIL

**GUARDRAIL
DETAIL
SHEET #2**

PROJECT NAME: WESTFORD - FAIRFAX
 PROJECT NUMBER: STP 2804(1)
 FILE NAME: p08c212.dgn
 PROJECT LEADER: JLL
 DESIGNED BY: STANTEC
 IPARM FILE: p08c212gds02.i
 PLOT DATE: 31-OCT-2012 13:59
 DRAWN BY: STANTEC
 CHECKED BY: JLL
 SHEET 72 OF 79

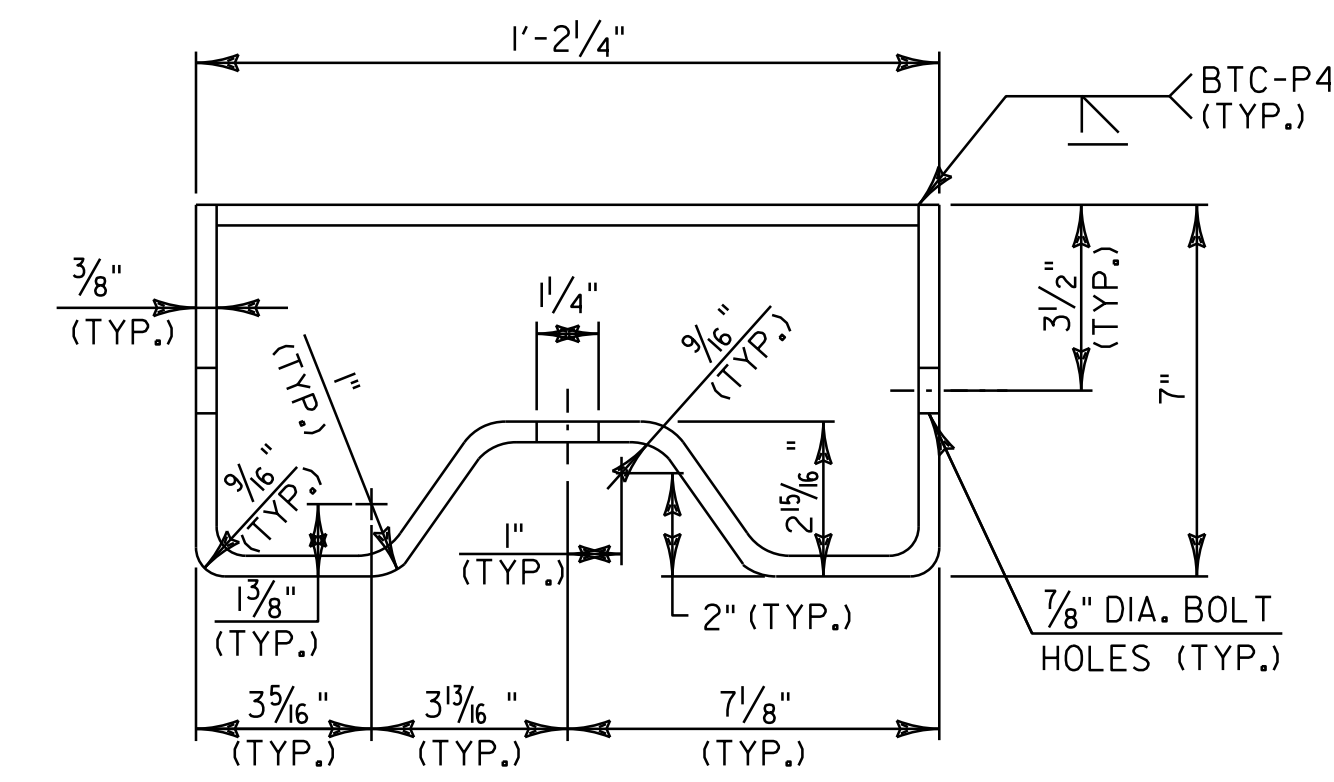


CONNECTION DETAILS AT POST #1

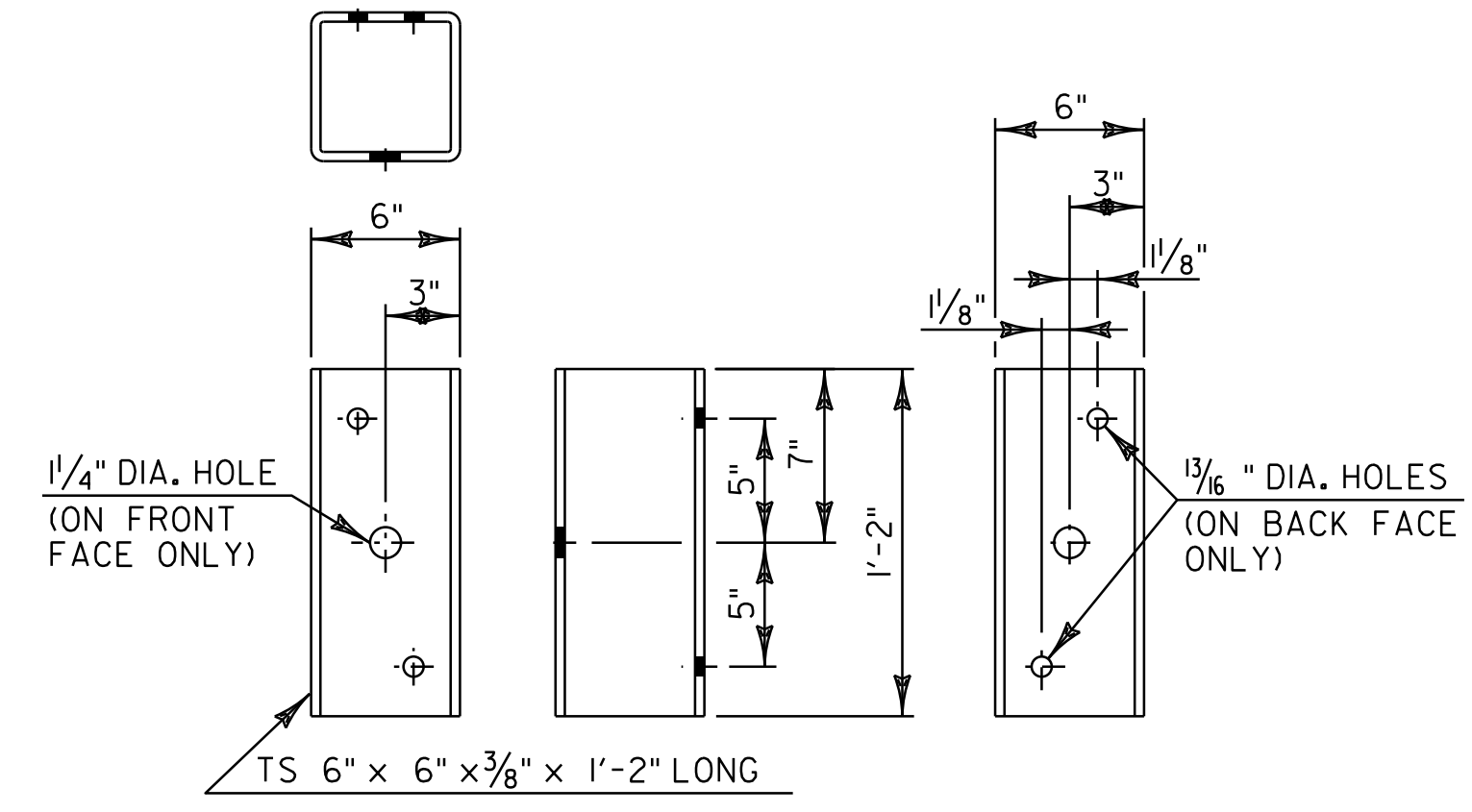


ANCHORAGE PLATE DETAIL

- NOTES**
1. REFER TO STANDARD G-1 FOR ADDITIONAL RAIL DETAILS.
 2. ALL POSTS FOR HEAVY DUTY STEEL BEAM GUARDRAIL SHALL BE STEEL IN ACCORDANCE WITH SECTION 728 "GUARDRAIL, GUIDE POSTS AND BARRIERS" UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.
 3. APPROACH RAIL SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
 4. ANCHORAGE CONNECTOR AND ANCHORAGE PLATE SHALL BE AASHTO M 270M/M 270, GRADE 250 GALVANIZED TO AASHTO M 111M/M 111 AFTER FABRICATION.
 5. ALL BOLTS, NUTS AND WASHERS SHALL BE AASHTO M 164 GALVANIZED TO AASHTO M 232M/M 232 AFTER FABRICATION.
 6. STRUCTURAL TUBING OFFSET BLOCK SHALL BE AASHTO M 270M/M 270, GRADE 250(36) GALVANIZED TO AASHTO M 111M/M 111 AFTER FABRICATION.
 7. APPROACH RAILING SHALL BE HEAVY DUTY STEEL BEAM FOR 50'-0" FROM THE Q OF POST #1 FOR TYPE I AND 12'-6" FROM THE Q OF POST #1 FOR TYPE II.
 8. ALLOWABLE DIMENSIONAL TOLERANCE FOR BENT SECTIONS IS $\pm 1/16$ "
 9. THE UNIT PRICES BID FOR EITHER TYPE OF GUARDRAIL APPROACH SECTION SHALL INCLUDE ANCHORAGE CONNECTOR, ANCHORAGE PLATE, HEAVY DUTY STEEL BEAM GUARDRAIL, POSTS, OFFSET BLOCKS, BLOCKING, BOLTS, AND ALL NECESSARY HARDWARE.

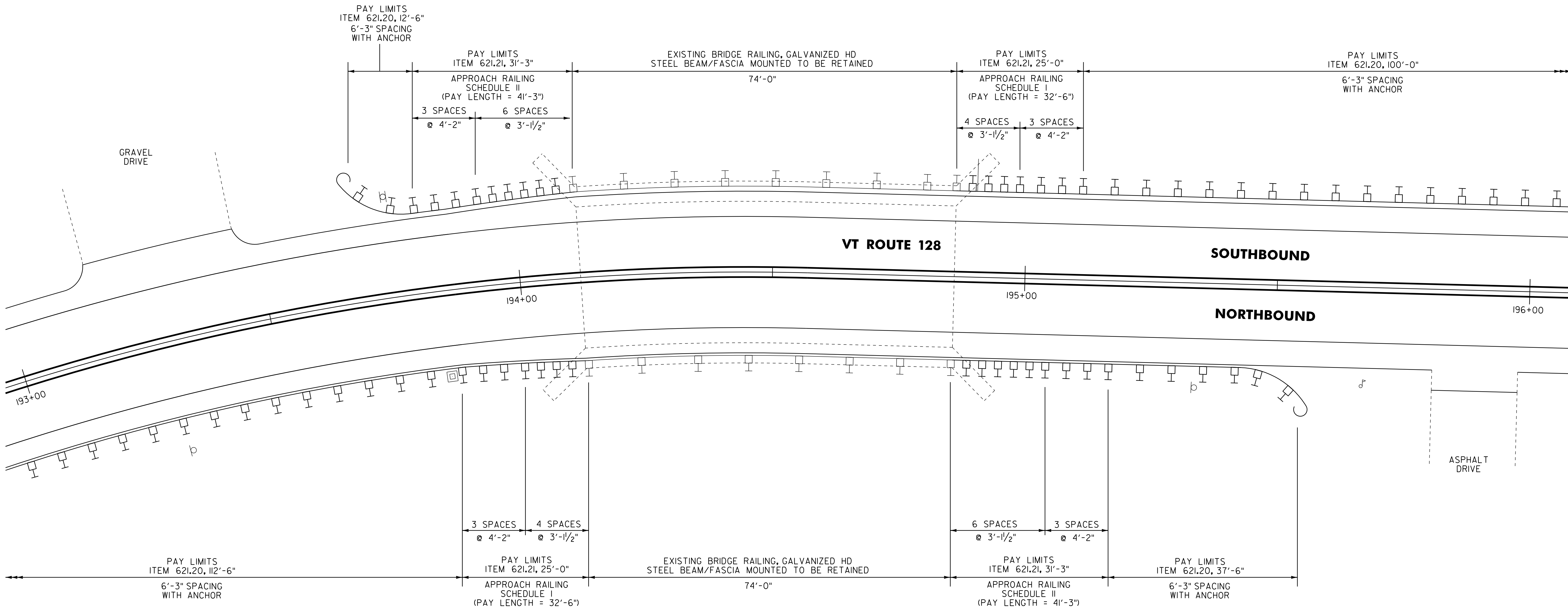


ANCHORAGE CONNECTOR DETAIL
(SEE NOTE 8)



STRUCTURAL TUBING OFFSET BLOCK DETAILS
(OCCURS AT POST #1 WHEN USING APPROACH RAIL UTILIZING STEEL POSTS)

GUARDRAIL DETAIL SHEET #3	PROJECT NAME: WESTFORD - FAIRFAX	PLOT DATE: 31-OCT-2012 13:59
	PROJECT NUMBER: STP 2804(1)	DRAWN BY: STANTEC
	FILE NAME: p08c212.dgn	CHECKED BY: JLL
	PROJECT LEADER: JLL DESIGNED BY: STANTEC IPARM FILE: p08c212gds03.i	SHEET 73 OF 79



BR 5 WESTFORD MM 3.684 = STA. 194+49

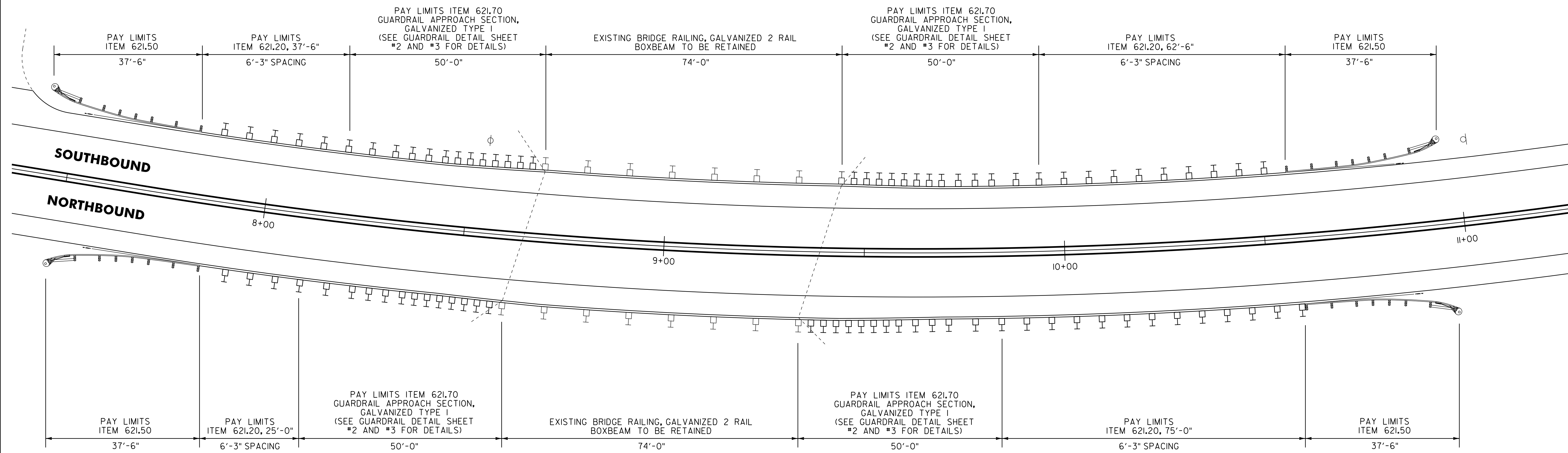
NOTES

1. SEE VAOT STANDARD SHEETS G-1 AND G-1d FOR ADDITIONAL DETAILS.
2. BRIDGE APPROACH RAIL HEIGHT SHALL BE TRANSITIONED TO NORMAL ROADWAY RAIL HEIGHT IN 25'.
3. APPROACH RAILING SHALL BE GALVANIZED HD STEEL BEAM FOR AT LEAST 25' FROM THE ENDS OF THE BRIDGE.
4. SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
5. SEE VAOT STANDARD SHEET G-1 FOR DELINEATION DETAILS AND PLACEMENT.
6. ERECT DELINEATORS ON EVERY FIFTH POST OR APPROXIMATELY 29.5' APART. PAYMENT SHALL BE INCIDENTAL TO OTHER ITEMS.

NOT TO SCALE

BRIDGE DETAIL SHEET #2	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
PROJECT LEADER: JLL	PLOT DATE: 31-OCT-2012 13:59
DESIGNED BY: STANTEC	DRAWN BY: STANTEC
IPARM FILE: p08c212bds2.i	CHECKED BY: JLL
	SHEET 75 OF 79





BR 8 FAIRFAX MM 0.170 = STA. 8+96

NOTES

1. SEE VAOT STANDARD SHEETS G-1 AND G-1d FOR ADDITIONAL DETAILS.
2. BRIDGE APPROACH RAIL HEIGHT SHALL BE TRANSITIONED TO NORMAL ROADWAY RAIL HEIGHT IN 25'.
3. APPROACH RAILING SHALL BE GALVANIZED HD STEEL BEAM FOR AT LEAST 25' FROM THE ENDS OF THE BRIDGE.
4. SPLICES SHALL LAP IN DIRECTION OF TRAFFIC FLOW.
5. SEE VAOT STANDARD SHEET G-1 FOR DELINEATION DETAILS AND PLACEMENT.
6. ERECT DELINEATORS ON EVERY FIFTH POST OR APPROXIMATELY 29.5' APART. PAYMENT SHALL BE INCIDENTAL TO OTHER ITEMS.

NOT TO SCALE

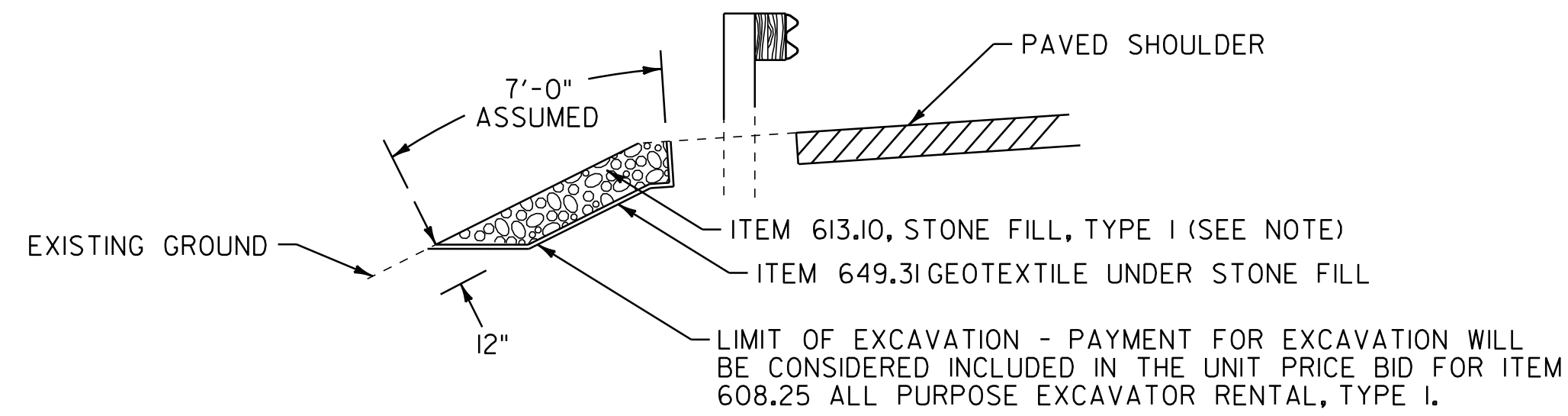
**BRIDGE
DETAIL SHEET
#3**



PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212bds3.i

PLOT DATE: 31-OCT-2012 13:59
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 76 OF 79



SLOPE EROSION REPAIR DETAIL

(ASSUME A 6' LENGTH AND 7' WIDTH UNLESS OTHERWISE NOTED)

WESTFORD STA. 170+35 TO 170+55, RT (20 FT)

STA. 220+10, LT

STA. 220+30, LT

STA. 221+44, LT

STA. 244+80 TO 245+10, LT (30 FT)

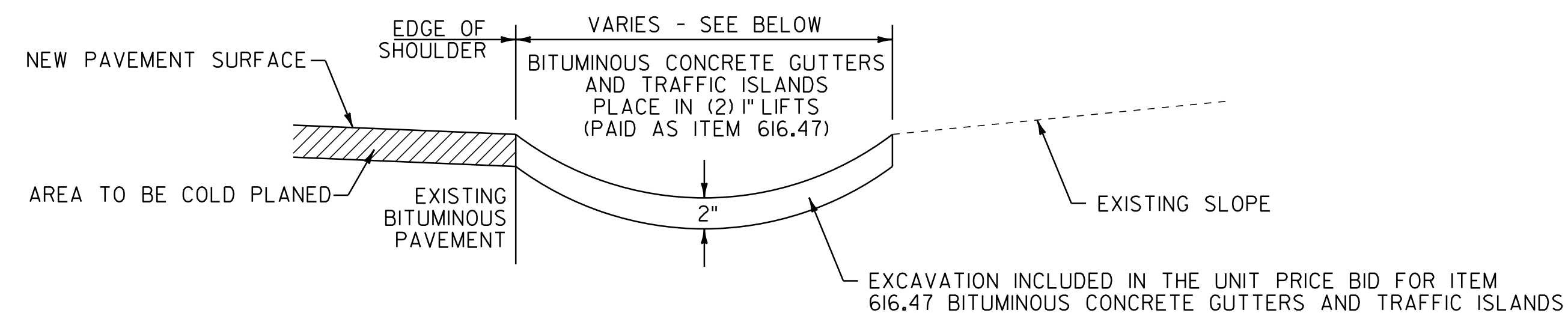
STA. 246+00 TO 246+50, RT (50 FT)

STA. 251+52, RT

STA. 275+07, LT

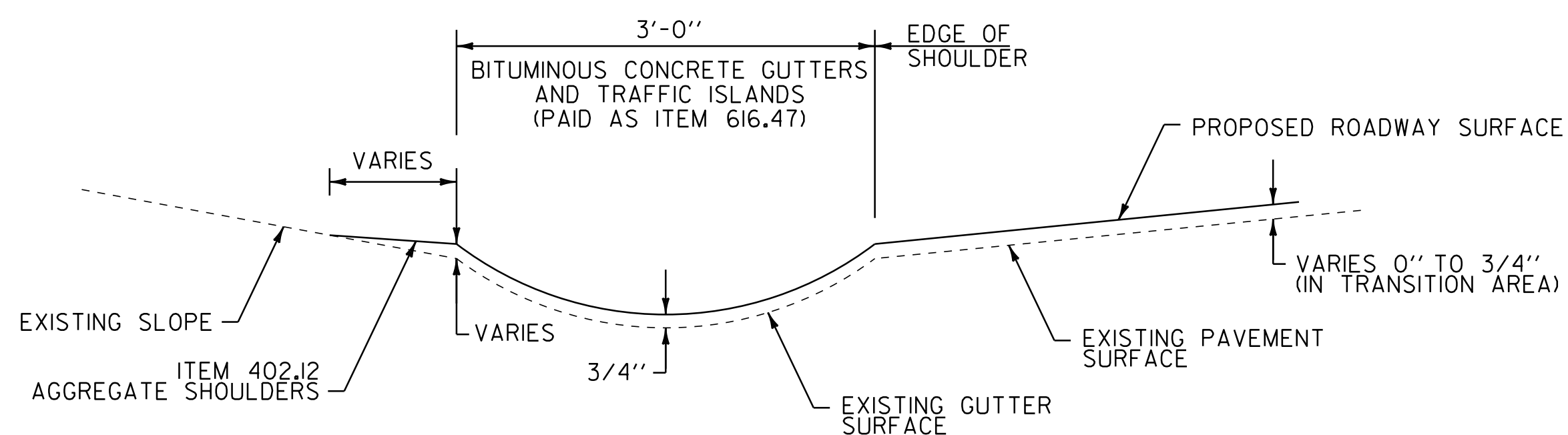
NOTE:

AN ESTIMATED QUANTITY OF ITEM 613.11 STONE FILL, TYPE II HAS BEEN INCLUDED FOR USE AS DIRECTED BY THE RESIDENT ENGINEER. IF ITEM 613.11 IS NECESSARY, THE ADDITIONAL EXCAVATION DEPTH REQUIRED WILL NOT BE PAID SEPARATELY BUT WILL BE CONSIDERED INCLUDED IN THE UNIT PRICE BID FOR ITEM 608.25 ALL PURPOSE EXCAVATOR RENTAL, TYPE I



BITUMINOUS CONCRETE GUTTER DETAIL (COLD PLANE AREA)

WESTFORD STA. 193+85 TO 194+12, RT (2' WIDE)



BITUMINOUS CONCRETE GUTTER DETAIL (RECLAIM TRANSITION AREA AT BRIDGE #8)

FAIRFAX STA. 9+44 TO 9+79, LT (3' WIDE)

EXISTING CULVERT INVENTORY TABLE

STATION	CULVERT SIZE	CULVERT MATERIAL	APPROX. DEPTH (FT)	COMMENT
WESTFORD				
71+48	24"	CMP	4	
91+58	24"	CMP	4	
115+57	30"	CMP	8	
130+85	24"	CMP	4.5	
141+24	18"	CMP	6	
149+54	24"	RCP	4.5	
157+00	18"	CMP	5	
170+44	24"	RCP	5	
187+22	18"	CMP	5	
207+87	12"	CMP	1.5	
209+13	15"	CMP	3	
218+37	36"	CMP	6	
228+95	36"	CMP	2	
234+62	18"	CPEP	2.3	
246+48	72"	CMP	6	BR #6
251+62	24"	CPEP	3	
257+82	18"	CMP	2.5	
261+77	36"	CMP	3	
264+81	60"	CMP	3.5	
270+04	15"	CMP	2.5	
275+19	6'x4'	CONC. BOX	1	BR #7
279+70	30"	CMP	5	
291+38	12"	CMP	3	
302+84	24"	CMP	2.5	
318+69	18"	CMP	2	
331+35	18"	CMP	2.5	
341+97	18"	CMP	3	
FAIRFAX				
22+05	18"	CMP	3	
30+78	12"	RCP	2	
APPROACH				
0+88	15"	CMP	1.3	

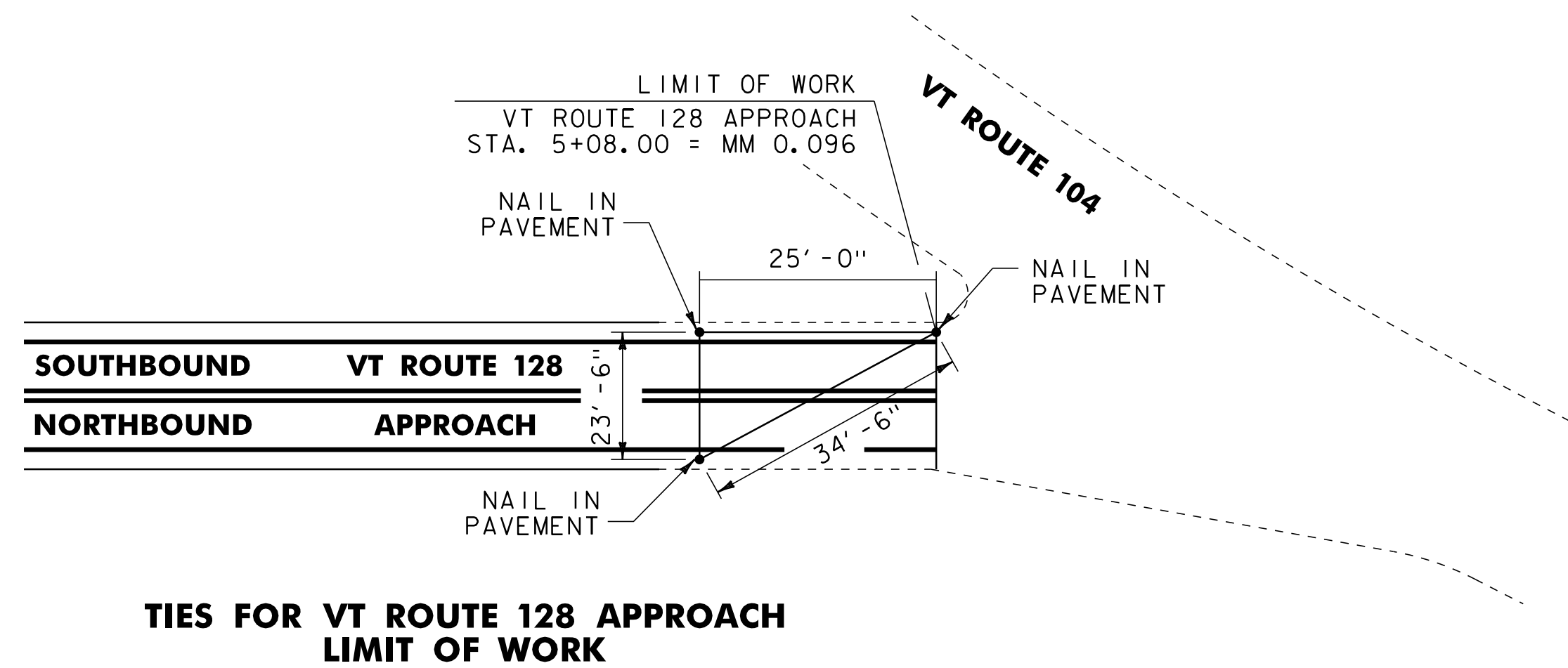
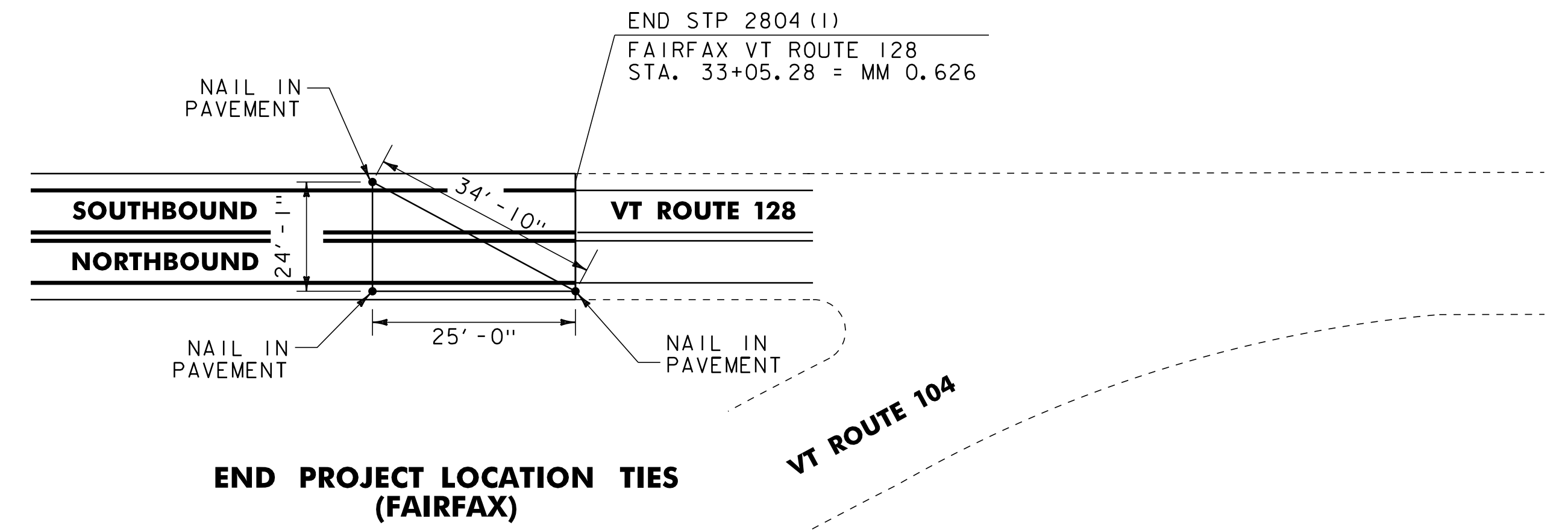
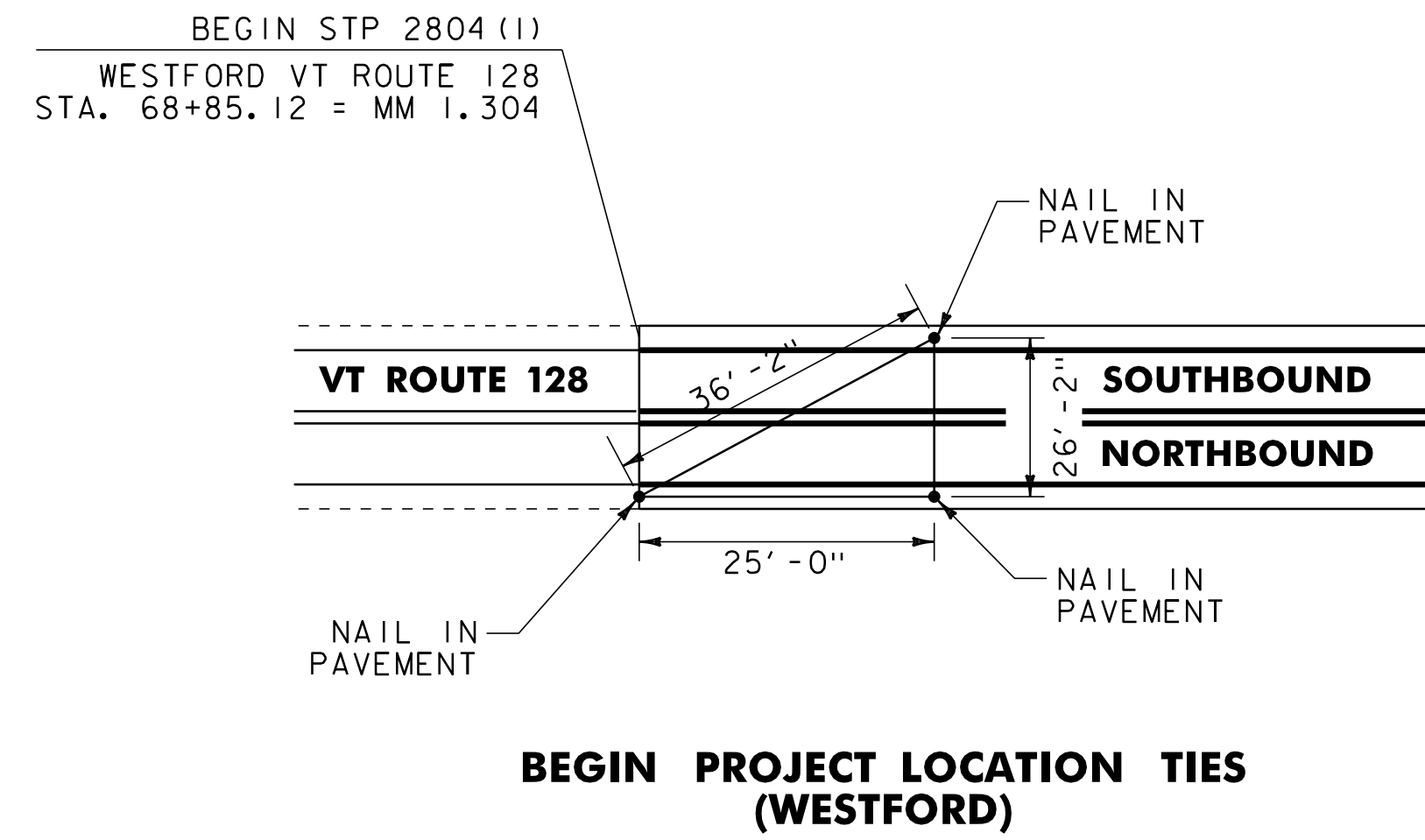


CULVERT INVENTORY & MISCELLANEOUS DETAIL SHEET

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

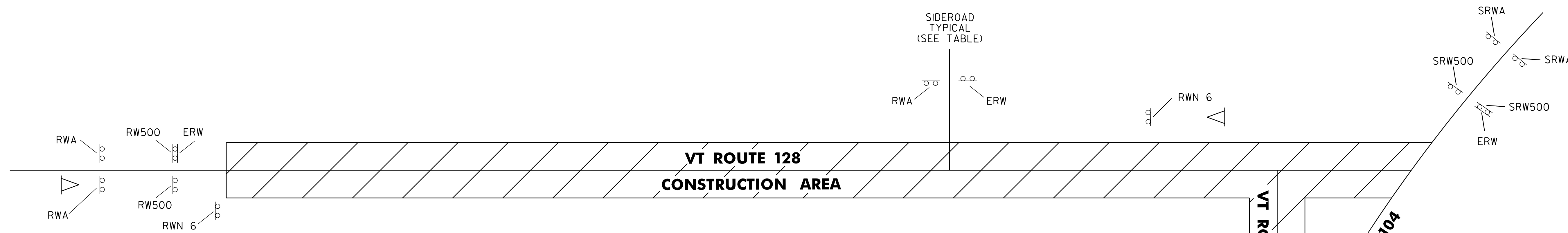
FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212csd.i

PLOT DATE: 31-OCT-2012 13:59
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 77 OF 79



NOT TO SCALE

PROJECT LOCATION TIE SHEET	PROJECT NAME: WESTFORD - FAIRFAX
	PROJECT NUMBER: STP 2804(1)
	FILE NAME: p08c212.dgn
	DESIGNED BY: STANTEC
	PLOT DATE: 31-OCT-2012 14:00
	DRAWN BY: STANTEC
	CHECKED BY: JLL
	SHEET 78 OF 79



SEE VAOT STANDARDS E-100 AND E-100A FOR SIGN PLACEMENT.

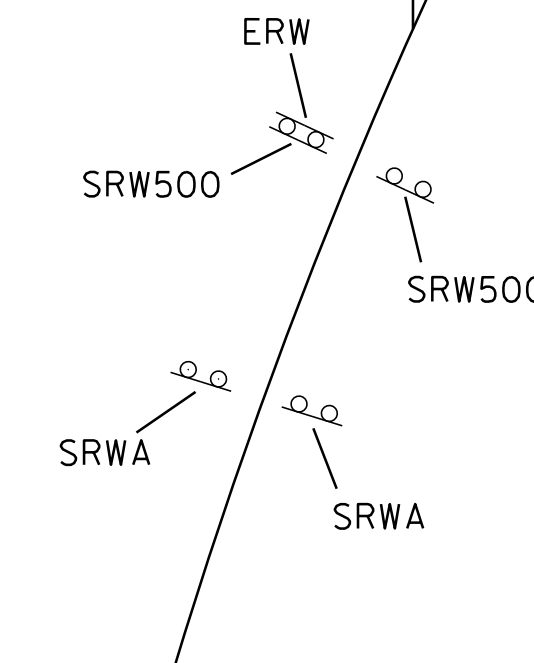
LOCATION	ERW	RW500	RWA	SRWA	SRW500	RWN 6	▶
WESTFORD							
VT ROUTE 128 - BEGIN PROJECT	1	2	2			1	1
OSGOOD HILL ROAD T.H. 19	1		1				
COMMON ROAD T.H. 33	1		1				
CAMBRIDGE ROAD T.H. 3	1		1				
BROOKSIDE ROAD T.H. 1	1		1				
WOODS HOLLOW ROAD T.H. 7	1		1				
WESTFORD MILTON ROAD T.H. 2	1		1				
FAIRFAX							
McNALL ROAD T.H. 33	1		1				
VT ROUTE 128 - END PROJECT						1	1
VT ROUTE 104	2			4	4		
TOTAL	10	2	9	4	4	2	2

LEGEND

- ERW = END ROAD WORK
- RW500 = ROAD WORK 500 FT
- RWA = ROAD WORK AHEAD
- SRWA = SIDE ROAD WORK AHEAD
- SRW500 = SIDE ROAD WORK 500 FT
- RWN 6 = ROAD WORK NEXT 6 MILES
- ▶ = PORTABLE CHANGEABLE MESSAGE SIGN

NOTES:

- THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, TRAFFIC CONTROL.
- PORTABLE CHANGEABLE MESSAGE SIGNS ARE OPTIONAL AND ARE TO BE USED AS DIRECTED BY THE VAOT RESIDENT ENGINEER. CONTRACTOR SHALL POSITION PORTABLE CHANGABLE MESSAGE BOARDS WARNING MOTORISTS OF THE EXPECTED ROADWAY CONDITIONS AHEAD. THE MESSAGE TO BE DISPLAYED SHALL BE SUBMITTED TO THE RESIDENT ENGINEER IN ADVANCE FOR APPROVAL. THE COST OF PROVIDING THESE MESSAGE BOARDS SHALL BE PAID UNDER ITEM 641.15, PORTABLE CHANGABLE MESSAGE SIGN.
- THE BID PRICE FOR TRAFFIC CONTROL, ITEM 641.10, SHALL INCLUDE ALL OF THE FOLLOWING, AS NEEDED: APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE FLASHING ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VTRANS STANDARDS. ALL ADJUSTING, RELOCATING AND REMOVING OF THESE DEVICES AS DIRECTED BY THE RESIDENT ENGINEER SHALL ALSO BE INCLUDED.
- THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SHALL BE THE STANDARD FOR ALL TRAFFIC CONTROL DEVICES. EXISTING SIGNS AND MARKING SHALL BE VALID UNTIL SUCH TIME AS THEY ARE REPLACED OR RECONSTRUCTED. WHEN NEW TRAFFIC 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 SUCH STANDARDS.
- 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 TOWN HIGHWAYS.
- THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH STANDARD E-103. PAYMENT FOR PROVIDING THIS PACKAGE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, TRAFFIC CONTROL.
- SEE VAOT STANDARD E-100 FOR ADDITIONAL SIGN PLACEMENT DETAILS.
- CONSTRUCTION ZONE SIGN LAYOUT SHALL BE IN ACCORDANCE WITH SECTION 6 OF THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- CONSTRUCTION SIGNS SHALL BE IN NEW OR LIKE NEW CONDITION PER VAOT STANDARDS AND SPECIAL PROVISIONS.
- DIAMOND SHAPED SIGNS SHALL BE 4' X 4' WITH BLACK TEXT AND BORDER ON A RETROFLECTIVE FLUORESCENT ORANGE BACKGROUND.
- RETROFLECTIVE SHEETING SHALL BE TYPE III OR VIII AS NOTED ON VAOT STANDARD E-100 AND IN THE SPECIAL PROVISIONS.
- CONSTRUCTION ZONE SIGNS SHALL BE INSTALLED AS OUTLINED IN THE SPECIAL PROVISIONS.
- WHERE TEMPORARY SIGNS ARE PLACED BEHIND GUARDRAIL, THEY SHALL BE ADJUSTED SUCH THAT THE BOTTOM OF THE SIGNS ARE ABOVE THE TOP OF GUARDRAIL.
- AS THE PAVING OPERATION MOVES, FLAGGER SIGNS SHALL BE MOVED ACCORDINGLY. AT NO TIME SHOULD THE FLAGGER SYMBOL SIGN BE MORE THAN 1000 FEET FROM THE FLAGGER STATION. FLAGGER SIGNS SHALL BE COVERED OR TURNED AWAY FROM TRAFFIC WHEN FLAGGING OPERATIONS CEASE FOR LONGER THAN 15 MINUTES.
- CONES SHALL BE USED TO CLEARLY DEFINE THE TRAVEL SPACE AND PROVIDE SEPARATION FROM THE WORK SPACE ALONG ITS ENTIRE LENGTH.



NOT TO SCALE
TEMPORARY TRAFFIC CONTROL PLAN SHEET

PROJECT NAME: WESTFORD - FAIRFAX
PROJECT NUMBER: STP 2804(1)

FILE NAME: p08c212.dgn
PROJECT LEADER: JLL
DESIGNED BY: STANTEC
IPARM FILE: p08c212tcp.i

PLOT DATE: 31-OCT-2012 14:00
DRAWN BY: STANTEC
CHECKED BY: JLL
SHEET 79 OF 79

