

STATE OF VERMONT AGENCY OF TRANSPORTATION

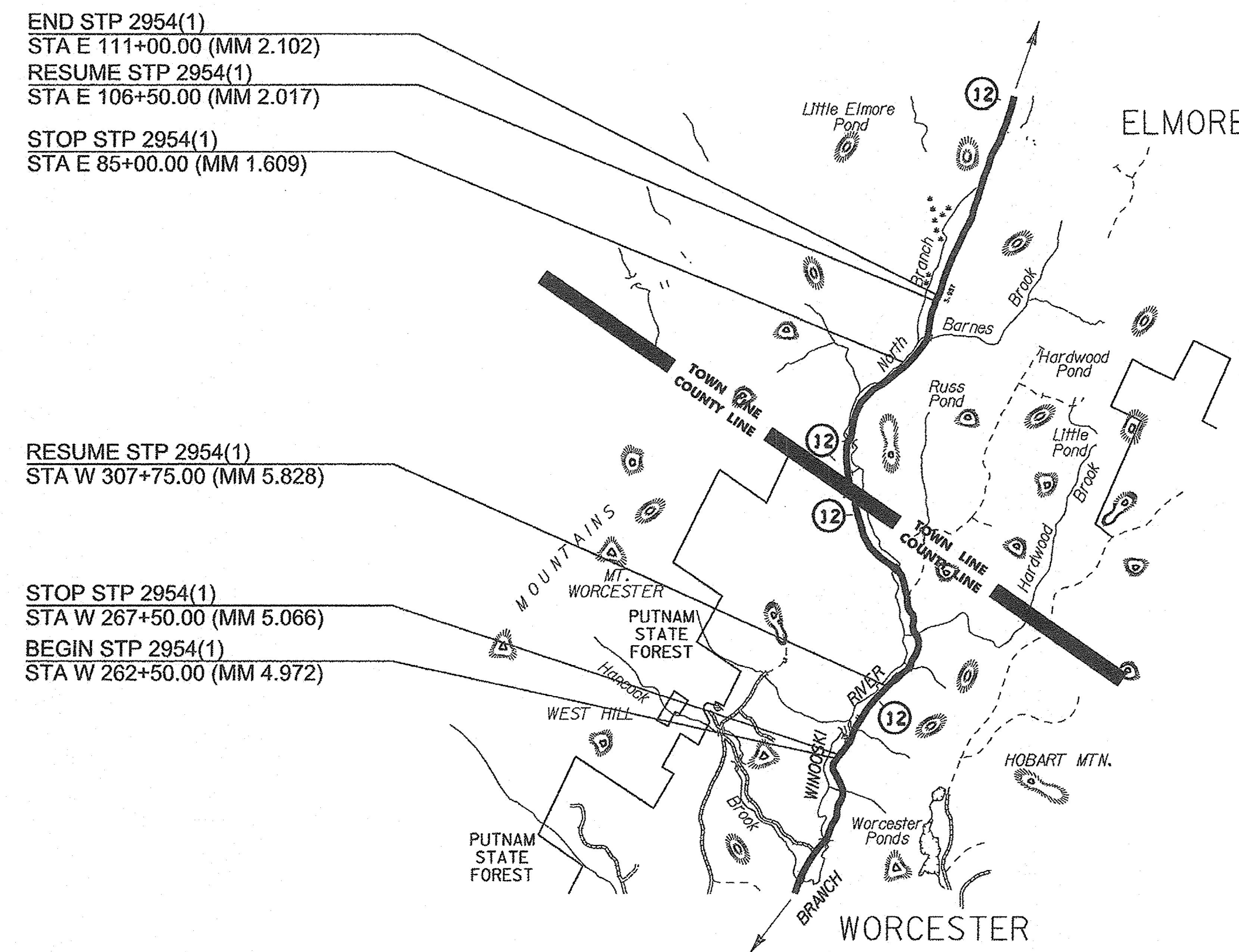


PROPOSED IMPROVEMENT TOWNS OF WORCESTER AND ELMORE COUNTIES OF WASHINGTON AND LAMOILLE VT ROUTE 12 (MAJOR COLLECTOR)

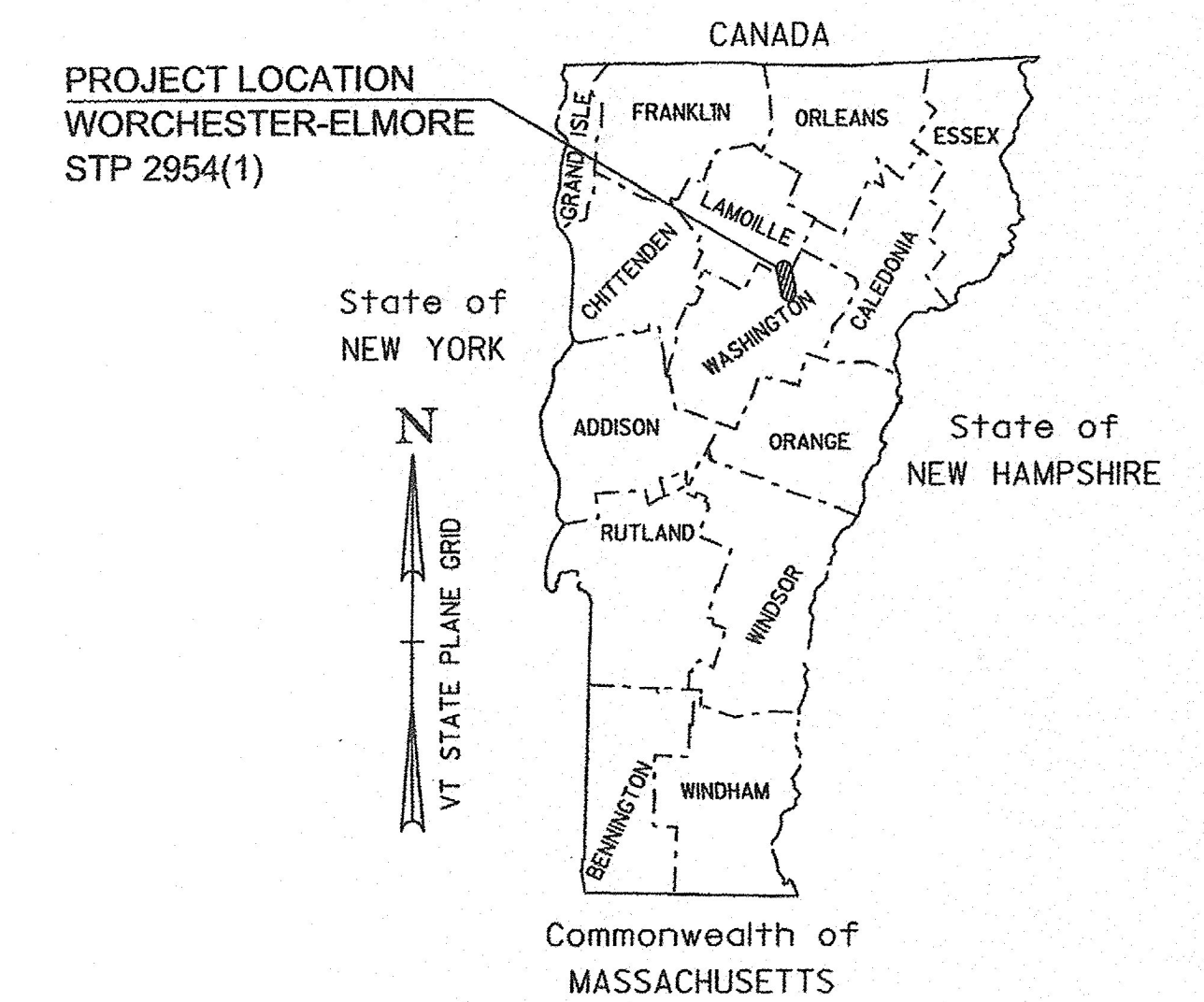
BEGINNING IN THE TOWN OF WORCESTER ON VT ROUTE 12 AT MM 4.972 AND EXTENDING NORTHERLY
ALONG VT ROUTE 12 FOR A DISTANCE OF APPROXIMATELY 500.00 FEET (0.095 MILES) AND STOPPING AT MM 5.066 IN THE TOWN OF WORCESTER.
RESUMING IN THE TOWN OF WORCESTER ON VT ROUTE 12 AT MM 5.828 AND EXTENDING NORTHERLY
ALONG VT ROUTE 12 FOR A DISTANCE OF APPROXIMATELY 19,188.87 FEET (3.634 MILES) AND STOPPING AT MM 1.609 IN THE TOWN OF ELMORE.
RESUMING IN THE TOWN OF ELMORE ON VT ROUTE 12 AT MM 2.017 AND EXTENDING NORTHERLY
ALONG VT ROUTE 12 FOR A DISTANCE OF APPROXIMATELY 450.00 FEET (0.086 MILES) AND ENDING AT MM 2.102 IN THE TOWN OF ELMORE.

LENGTH OF ROADWAY = 19,188.87 FEET (3.634 MILES)
LENGTH OF PROJECT = 20,038.87 FEET (3.795 MILES)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR, CRACK SEALING, COLD PLANING, MICRO-MILLING, PAVING, RECLAIMING, ROADWAY CRACK TREATMENTS, TRAFFIC MARKINGS AND OTHER HIGHWAY RELATED ITEMS.



NOT TO SCALE



RECORD PLANS	
CONTRACTOR:	PIKE INDUSTRIES, INC. - BERLIN, VT
RESIDENT ENGINEER:	JEFF COTA
CONSTRUCTION BEGAN:	AUGUST 30, 2016
CONSTRUCTION COMPLETE:	NOVEMBER 09, 2016
RECORD PLANS BY:	JEFF COTA & AARON WEAVER
I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.	
BY	RESIDENT ENGINEER
DATE	6/6/18
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found by contacting Vtrans Records Management.	

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

QUALITY ASSURANCE PROGRAM : LEVEL 2	
SURVEYED BY :	NA
SURVEYED DATE :	NA
DATUM	
VERTICAL	NA
HORIZONTAL	NA

STATION LEGEND: W = WORCESTER
E = ELMORE

DIRECTOR OF PROJECT DELIVERY	
APPROVED	DATE 5/9/2018
PROJECT MANAGER : JONATHAN C. HARRINGTON, P.E.	
PROJECT NAME : WORCESTER-ELMORE	
PROJECT NUMBER : STP 2954(1)	
SHEET 1 OF 33 SHEETS	

INDEX OF SHEETS

INDEX OF SHEETS

1. TITLE SHEET
2. INDEX OF SHEETS
3. CONVENTIONAL SYMBOLOGY LEGEND SHEET
4. PROJECT NOTES
5. TYPICAL SECTIONS SHEET
- 6.-8. DETAIL SHEETS (1-3)
- 9.-10. QUANTITY SHEETS (1-2)
- 11.-30. PLAN SHEETS (1-20)
31. BANKING SHEET
32. TRAFFIC CONTROL NOTES
33. CONSTRUCTION APPROACH SIGNING SHEET

STRUCTURES DETAIL SHEETS

SD-516.10 - BRIDGE JOINT ASPHALTIC PLUG

HIGHWAY SAFETY AND DESIGN DETAIL SHEETS

HSD - 400.01 - SAFETY EDGE DETAILS

TRAFFIC DATA

VT ROUTE 12	AADT		DHV		%T		%D		ADTT		ESALs	
	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025	(2015~2025)	(2015~2025)
MM 3.946 (ELMORE) - MM 3.520 (WORCESTER)	1000	1000	140	140	1.5	1.9	58	58	45	55	124,000	302,000

POSTED SPEED ZONES

VT ROUTE 12	TOWN	SPEED (MPH)
MM 3.946 - MM 7.853	WORCESTER	50
MM 0.000 - MM 3.520	ELMORE	50

BITUMINOUS CONCRETE PAVEMENT SUPERPAVE MIXTURE DESIGN CRITERIA	
DESIGN LANE / DESIGN LIFE ESAL	175,160
DESIGN NUMBER OF GYRATIONS	65
PERFORMANCE GRADE ASPHALT BINDER	58-34

VAOT DESIGN STANDARDS

E-170	11-04-99
E-171A	08-09-95
E-171B	08-09-95
E-173	08-09-95
E-190	06-30-03
E-191	02-01-99
E-192	10-12-00
E-193	08-18-95
T-1	04-25-16
T-10	08-06-12
T-11	08-06-12
T-13	08-06-12
T-17	08-06-12
T-24	08-06-12
T-28	08-06-12
T-29	08-06-12
T-30	08-06-12
T-31	08-06-12
T-36	08-06-12

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn

PROJECT LEADER: J. HARRINGTON

DESIGNED BY: B. KIPP

INDEX OF SHEETS

PLOT DATE: 13-MAY-2016

DRAWN BY: B. KIPP

CHECKED BY: N. PAPPAS

SHEET 2 OF 33

GENERAL INFORMATION

SYMBOLGY LEGEND NOTE

THE SYMBOLGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLGY. THE SYMBOLGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

R.O.W. ABBREVIATIONS (CODES) & SYMBOLS

POINT CODE	DESCRIPTION
CH	CHANNEL EASEMENT
CONST	CONSTRUCTION EASEMENT
CUL	CULVERT EASEMENT
D&C	DISCONNECT & CONNECT
DIT	DITCH EASEMENT
DR	DRAINAGE EASEMENT
DRIVE	DRIVEWAY EASEMENT
EC	EROSION CONTROL
I&M	INSTALL & MAINTAIN EASEMENT
LAND	LANDSCAPE EASEMENT
R&RES	REMOVE & RESET
R&REP	REMOVE & REPLACE
SR	SLOPE RIGHT
UE	UTILITY EASEMENT
(P)	PERMANENT EASEMENT
(T)	TEMPORARY EASEMENT
■	BNDNS BOUND SET
▣	BNDNS BOUND TO BE SET
●	IPNS IRON PIN SET
⊙	IPNS IRON PIN TO BE SET
⊗	CALC EXISTING ROW POINT
○	PROW PROPOSED ROW POINT
[LENGTH]	LENGTH CARRIED ON NEXT SHEET

COMMON TOPOGRAPHIC POINT SYMBOLS

POINT CODE	DESCRIPTION
⊕	APL BOUND APPARENT LOCATION
◻	BM BENCH MARK
▣	BND BOUND
⊞	CB CATCH BASIN
⊕	COMB COMBINATION POLE
⊞	DITHR DROP INLET THROATED DNC
⊕	EL ELECTRIC POWER POLE
◦	FPOLE FLAGPOLE
⊙	GASFIL GAS FILLER
⊙	GP GUIDE POST
⊗	GSO GAS SHUT OFF
◦	GUY GUY POLE
◦	GUYW GUY WIRE
⊗	GV GATE VALUE
⊕	H TREE HARDWOOD
△	HCTRL CONTROL HORIZONTAL
▲	HVCTRL CONTROL HORIZ. & VERTICAL
◇	HYD HYDRANT
◦	IP IRON PIN
◦	IPIPE IRON PIPE
⊕	LI LIGHT - STREET OR YARD
⊕	MB MAILBOX
◦	MH MANHOLE (MH)
▣	MM MILE MARKER
◦	PM PARKING METER
▣	PMK PROJECT MARKER
◦	POST POST STONE/WOOD
⊕	RRSIG RAILROAD SIGNAL
⊕	RRSL RAILROAD SWITCH LEVER
⊕	S TREE SOFTWOOD
⊕	SAT SATELLITE DISH
⊕	SHRUB SHRUB
⊕	SIGN SIGN
⊕	STUMP STUMP
⊕	TEL TELEPHONE POLE
◦	TIE TIE
⊕	TSIGN SIGN W/DOUBLE POST
⊕	VCTRL CONTROL VERTICAL
◦	WELL WELL
⊗	WSO WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

PROPOSED GEOMETRY CODES

CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
AH	AHEAD STATION SUFFIX
BK	BACK STATION SUFFIX
D	CURVE DEGREE OF (100FT)
R	CURVE RADUIS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE

UTILITY SYMBOLGY

UNDERGROUND UTILITIES

— UT —	TELEPHONE
— UE —	ELECTRIC
— UC —	CABLE (TV)
— UEC —	ELECTRIC+CABLE
— UET —	ELECTRIC+TELEPHONE
— UCT —	CABLE+TELEPHONE
— UECT —	ELECTRIC+CABLE+TELEP.
— G —	GAS LINE
— W —	WATER LINE
— S —	SANITARY SEWER (SEPTIC)

ABOVE GROUND UTILITIES (AERIAL)

— T —	TELEPHONE
— E —	ELECTRIC
— C —	CABLE (TV)
— EC —	ELECTRIC+CABLE
— ET —	ELECTRIC+TELEPHONE
— AER E&T —	ELECTRIC+TELEPHONE
— CT —	CABLE+TELEPHONE
— ECT —	ELECTRIC+CABLE+TELEP.
—	UTILITY POLE GUY WIRE

PROJECT CONSTRUCTION SYMBOLGY

PROJECT DESIGN & LAYOUT SYMBOLGY

—	CLEAR ZONE
—	PLAN LAYOUT MATCHLINE

PROJECT CONSTRUCTION FEATURES

▲	TOP OF CUT SLOPE
○	TOE OF FILL SLOPE
⊕	STONE FILL
---	BOTTOM OF DITCH L
---	CULVERT PROPOSED
---	STRUCTURE SUBSURFACE
PDF	PROJECT DEMARCATION FENCE
BF	BARRIER FENCE
XXXXXX	TREE PROTECTION ZONE (TPZ)
////	STRIPING LINE REMOVAL
~~~~	SHEET PILES

**CONVENTIONAL BOUNDARY SYMBOLGY**

**BOUNDARY LINES**

—	TOWN LINE	TOWN BOUNDARY LINE
—	COUNTY LINE	COUNTY BOUNDARY LINE
—	STATE LINE	STATE BOUNDARY LINE
---	PROPOSED STATE R.O.W. (LIMITED ACCESS)	PROPOSED STATE R.O.W. (LIMITED ACCESS)
---	STATE ROW (LIMITED ACCESS)	STATE ROW (LIMITED ACCESS)
---	STATE ROW	STATE ROW
---	TOWN ROW	TOWN ROW
---	PERMANENT EASEMENT LINE (P)	PERMANENT EASEMENT LINE (P)
---	TEMPORARY EASEMENT LINE (T)	TEMPORARY EASEMENT LINE (T)
---	SURVEY LINE	SURVEY LINE
---	PROPERTY LINE (P/L)	PROPERTY LINE (P/L)
SR	SLOPE RIGHTS	SLOPE RIGHTS
6f	6F PROPERTY BOUNDARY	6F PROPERTY BOUNDARY
4f	4F PROPERTY BOUNDARY	4F PROPERTY BOUNDARY
HAZ	HAZARDOUS WASTE	HAZARDOUS WASTE

**EPSC LAYOUT PLAN SYMBOLGY**

**EPSC MEASURES**

ONNOONNOONNO	FILTER CURTAIN
—	SILT FENCE
—	SILT FENCE WOVEN WIRE
—	CHECK DAM
▣	DISTURBED AREAS REQUIRING RE-VEGETATION
⊕	EROSION MATTING

**ENVIRONMENTAL RESOURCES**

—	WETLAND BOUNDARY
---	RIPARIAN BUFFER ZONE
---	WETLAND BUFFER ZONE
---	SOIL TYPE BOUNDARY
---	THREATENED & ENDANGERED SPECIES
HAZ	HAZARDOUS WASTE AREA
---	AGRICULTURAL LAND
---	FISH & WILDLIFE HABITAT
---	FLOOD PLAIN
---	ORDINARY HIGH WATER (OHW)
---	STORM WATER
---	USDA FOREST SERVICE LANDS
---	WILDLIFE HABITAT SUIT/CONN

**ARCHEOLOGICAL & HISTORIC**

---	ARCHEOLOGICAL BOUNDARY
---	HISTORIC DISTRICT BOUNDARY
---	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

**CONVENTIONAL TOPOGRAPHIC SYMBOLGY**

**EXISTING FEATURES**

---	ROAD EDGE PAVEMENT
---	ROAD EDGE GRAVEL
---	DRIVEWAY EDGE
---	DITCH
---	FOUNDATION
x	FENCE (EXISTING)
□	FENCE WOOD POST
○	FENCE STEEL POST
---	GARDEN
---	ROAD GUARDRAIL
	RAILROAD TRACKS
---	CULVERT (EXISTING)
---	STONE WALL
---	WALL
---	WOOD LINE
---	BRUSH LINE
---	HEDGE
---	BODY OF WATER EDGE
---	LEDGE EXPOSED

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn

PLOT DATE: 13-MAY-2016

PROJECT LEADER: J. HARRINGTON

DRAWN BY: B. KIPP


DESIGNED BY: B. KIPP


CHECKED BY: N. PAPPAS

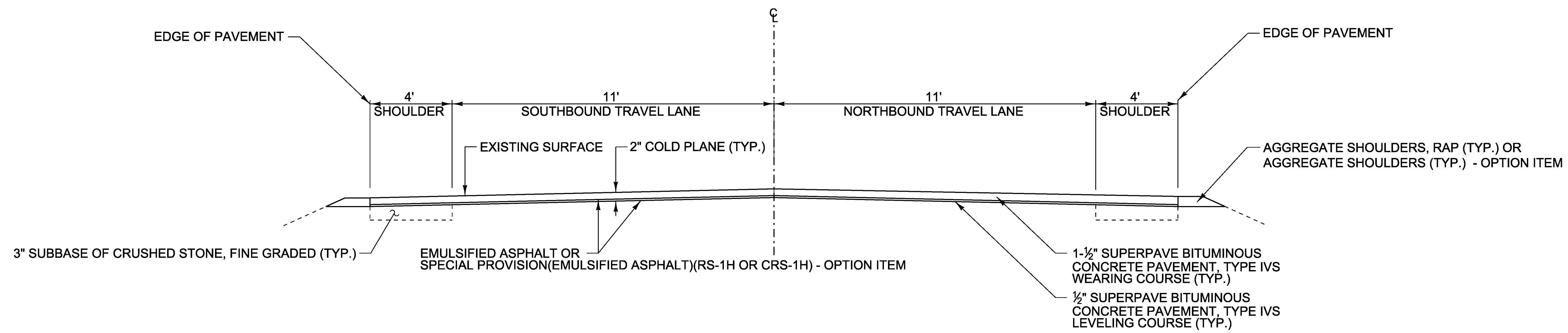
CONVENTIONAL SYMBOLGY LEGEND SHEET

SHEET 3 OF 33

**PROJECT NOTES**

1. ALL PROPOSED WORK TO BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY.
2. AN ESTIMATED QUANTITY OF ITEM 203.40 - SHOULDER BERM REMOVAL HAS BEEN INCLUDED FOR THE REMOVAL OF BUILT UP SAND, SOD ETC ADJACENT TO THE SHOULDER, IN RETAINED GUARDRAIL AREAS, TO ALLOW FREE DRAINAGE OFF THE SHOULDER.
3. COLD PLANING AND MICRO-MILLING SHALL BE COMPLETED ACCORDING TO THE TYPICAL SECTIONS OR AS DENOTED OTHERWISE ON THE PLANS. A FULL DEPTH BUTT JOINT SHALL BE CONSTRUCTED AT THE PROJECT BEGIN AND END, AND ALL PAVED SIDE ROAD APPROACHES AS SHOWN ON THE PROJECT PLANS OR AS OTHERWISE DIRECTED BY THE ENGINEER. ALL JOINTS SHALL BE SAW CUT, INCIDENTAL TO ITEM 210.10 - COLD PLANING, BITUMINOUS PAVEMENT OR ITEM 900.675 - SPECIAL PROVISION(MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT) AS APPLICABLE.
4. COLD PLANING FOR DRIVES WILL MEET THE REQUIREMENTS OF SECTION 210 AS APPLICABLE. PAYMENT FOR COLD PLANED AREA REQUIRED FOR DRIVES WILL BE CONSIDERED INCIDENTAL TO ITEM 900.675 - SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES).
5. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR, AND CRACK SEALING SHALL BE PERFORMED FOLLOWING COLD PLANING OR MICRO-MILLING AND PRIOR TO PAVING. THE PATCHING OF ALL CRACKS GREATER THAN ONE INCH AND POT HOLE REPAIR SHALL BE COMPLETED USING ITEM 900.680 - SPECIAL PROVISION(BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED.
6. THE CONTRACTOR SHALL USE CAUTION WHEN MICRO-MILLING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THE CONTRACTORS OPERATIONS THE ENGINEER SHALL CONTACT THE VAOT CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.
7. PRIOR TO PAVING, ANY EXISTING SHOULDER MATERIAL DEEMED UNSUITABLE BY THE ENGINEER SHALL BE EXCAVATED TO A DEPTH OF THREE INCHES OR AS DIRECTED BY THE ENGINEER. EXCAVATION SHALL BE PAID FOR USING THE APPROPRIATE RENTAL ITEMS. THE METHOD OF REMOVAL AND THE USE OF RENTAL ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK BEING DONE. MATERIAL REMOVED SHALL BE REPLACED WITH ITEM 301.28 - SUBBASE OF CRUSHED GRAVEL, FINE GRADED. EXCAVATED MATERIAL SHALL BE SPREAD ON THE ADJACENT SLOPES OR REMOVED FROM THE PROJECT AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE DONE BEFORE THE LEVELING COURSE IS PLACED.
8. GRASS GROWING ADJACENT TO THE PAVEMENT OR THROUGH CRACKS IN THE PAVEMENT, WHICH MAY HAMPER THE PLACEMENT OF NEW BITUMINOUS CONCRETE PAVEMENT, SHALL BE REMOVED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK WILL NOT BE MADE DIRECTLY, BUT WILL BE CONSIDERED INCIDENTAL TO ITEM 490.30 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34).
9. SUPERPAVE BITUMINOUS CONCRETE PAVEMENT TOLERANCE = 1/4" +/- (TOTAL THICKNESS EXCLUDING LEVELING COURSE).
10. EMULSIFIED ASPHALT SHALL BE APPLIED AS A TACK COAT ON ALL EXISTING, COLD PLANED OR MICRO-MILLED PAVEMENT SURFACES AT THE RATE OF 0.080 GAL/SY AND BETWEEN ALL COURSES OF BITUMINOUS CONCRETE PAVEMENT AT THE RATE OF 0.025 TO 0.040 GAL/SY. EMULSIFIED ASPHALT WILL BE OPTIONED AND PAID UNDER ITEM 404.65 - EMULSIFIED ASPHALT(RS-1) OR ITEM 900.683 - SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H).
11. THE WEARING AND LEVELING COURSES WILL BE TYPE IVS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT AND THE INTERMEDIATE COURSE WILL BE TYPE IIS SUPERPAVE BITUMINOUS CONCRETE PAVEMENT. ALL PG GRADED ASPHALT CEMENT USED IN THE SUPERPAVE BITUMINOUS CONCRETE PAVEMENT SHALL BE PG 58-34.
12. EDGES OF PAVEMENT SHALL INCLUDE A SAFETY EDGE AS SHOWN IN HSD-400.01.
13. ALL EDGES OF PAVEMENT SHALL BE BACKED UP TO FULL HEIGHT WITH AGGREGATE SHOULDER MATERIAL AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE OPTIONED AND PAID UNDER ITEM - 402.12 AGGREGATE SHOULDERS OR ITEM 402.13 - AGGREGATE SHOULDERS, RAP. IN LAWN AREAS, A MINIMUM ONE FOOT WIDTH OF AGGREGATE SHOULDER MATERIAL SHALL BE INSTALLED BETWEEN THE EDGE OF PAVEMENT AND TOPSOIL.
14. ALL PAVED AND GRAVEL RESIDENTIAL DRIVES SHALL RECEIVE A FOUR FOOT PAVED APRON AND ALL FIELD AND WOODS DRIVES SHALL RECEIVE A TWO FEET PAVED APRON UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL REQUIRED EXCAVATION AND ASSOCIATED DRIVE GRADING IN DRIVE AREAS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE NEW BITUMINOUS DRIVE SURFACE SHALL BE CONSTRUCTED AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR UNDER ITEM 900.675 - SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES). BITUMINOUS CONCRETE MATERIAL PLACED BY MECHANICAL METHODS AT THESE LOCATIONS IS EXCLUDED. ALL OTHER BITUMINOUS MATERIALS PLACED WITHIN THE PROJECT LIMITS, WHETHER BY HAND OR MECHANICAL METHODS, WILL BE PAID UNDER THE APPROPRIATE CONTRACT PAY ITEM FOR SUPERPAVE BITUMINOUS CONCRETE PAVEMENT.
15. THE CULVERT PIPES SHOWN IN THE PLANS ARE TO BE USED FOR INFORMATIONAL PURPOSES ONLY. THE ENGINEER SHALL DETERMINE WHETHER THE COMPACTION EFFORT OVER EXISTING CULVERTS SHOULD BE REDUCED. ALL CULVERTS ARE TO BE RETAINED.
16. ASPHALTIC PLUG-TYPE JOINT SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS. SEE BRIDGE JOINT ASPHALTIC PLUG (STRUCTURES DETAIL SD-516.10)  
  
 VT ROUTE 12  
 PLUG JOINT DETAIL - NO. 1 (SEE DETAIL SHEET 1 AND PLAN SHEET 1)  
 BRIDGE #1 - E 26+72.00 (MM 0.506) 39' ASPHALTIC JOINT
17. COMPACTION, GRADING, AND CLEAN UP OF ITEM 402.12 - AGGREGATE SHOULDERS, ITEM 402.13 - AGGREGATE SHOULDERS, RAP, IS TO BE INCLUDED IN THE CONTRACT UNIT PRICE OF EACH ITEM.
18. ESTIMATED QUANTITIES OF ITEM 608.15 - POWER GRADER RENTAL, ITEM 608.25 - ALL PURPOSE EXCAVATOR RENTAL, TYPE I, AND ITEM 608.37 - TRUCK RENTAL HAVE BEEN INCLUDED FOR REMOVING BUILT UP SAND, SOD ETC. ADJACENT TO THE SHOULDER, IN NON-GUARDRAIL AREAS, TO ALLOW FREE DRAINAGE OFF THE SHOULDER AS DIRECTED BY THE ENGINEER.
19. A QUANTITY OF ITEM 609.15 - DUST AND ICE CONTROL WITH CALCIUM CHLORIDE HAS BEEN ESTIMATED IN THE CONTRACT TO MINIMIZE DUST DURING CONSTRUCTION ACTIVITIES WITHIN THE RECLAIM SECTION OF THE PROJECT.
20. ITEM 608.30 - POWER BROOM RENTAL, TYPE I AND ITEM 608.31 - POWER BROOM RENTAL, TYPE II WILL BE USED IN AREAS OF COLD PLANING AND IN AREAS OF PAVEMENT RECLAMATION. AREAS OF MICRO-MILLING WILL REQUIRE POWER BROOM RENTAL, TYPE III AS SPECIFIED IN ITEM 900.675 - SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT).
21. ITEM 646.76 - LINE STRIPING TARGETS SHALL BE PLACED AS OUTLINED IN THE VAOT STANDARD SPECIFICATIONS FOR CONSTRUCTION FOR THE PLACEMENT OF THE WHITE EDGE LINES AND YELLOW CENTER LINES.
22. AN ADDITIONAL QUANTITY OF 301.28 - "SUBBASE OF CRUSHED GRAVEL, FINE GRADED" HAS BEEN INCLUDED TO CORRECT SUPERELEVATION AND GRADATION DEFICIENCIES WITHIN THE RECLAIMED SECTION OF THE PROJECT.
23. WITH IN THE RECLAIM SECTION THE RECLAIM PROCESS WILL AFFECT THE EXISTING TREATED TIMBER CURB. AN ESTIMATED AMOUNT OF ITEM 616.35 - TREATED TIMBER CURB HAS BEEN ADDED TO THE PLANS. AN ESTIMATED AMOUNT FOR THE REMOVAL OF THE TREATED TIMBER CURB AND ASPHALT WEDGE WILL BE PAID UNDER ITEM 616.41 - REMOVAL OF EXISTING CURB, SEE DETAIL SHEET 3. 
24. WITHIN THE RECLAIM SECTION THE RECLAIM PROCESS COULD AFFECT THE GUARDRAIL HEIGHT. ITEM 621.79 - ADJUST HEIGHT OF GUARDRAIL HAS BEEN ADDED TO THE PLANS.

ADDED	DATE	DESCRIPTION	BY
	6-29-2016	NOTES REVISED	NHP
PROJECT NAME: WORCESTER-ELMORE			
PROJECT NUMBER: STP 2954(I)			
FILE NAME: pl4v23lwrk.dgn		PLOT DATE: 29-JUN-2016	
PROJECT LEADER: M. FOWLER		DRAWN BY: B. KIPP	
DESIGNED BY: B. KIPP		CHECKED BY: N. PAPPAS	
PROJECT NOTES		SHEET 4 OF 33	

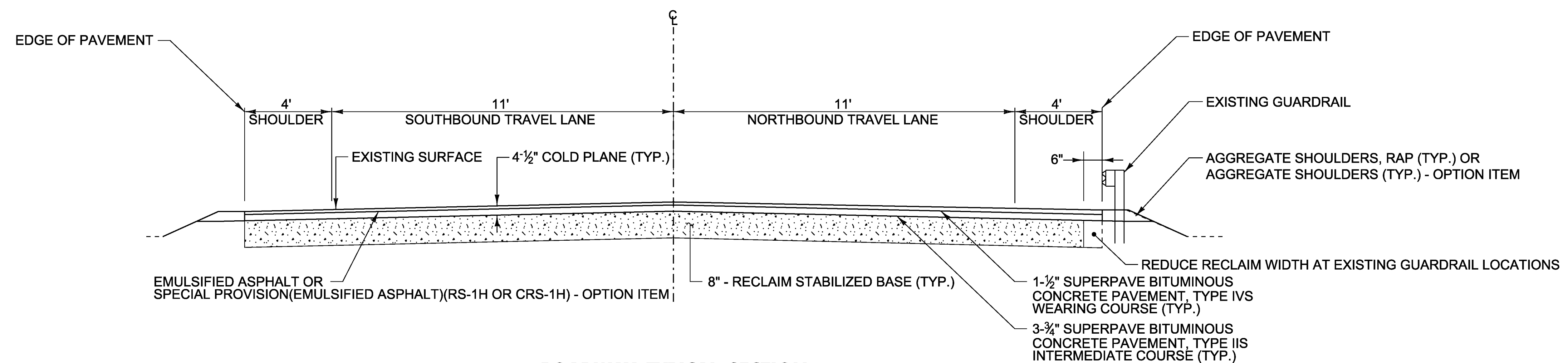


**ROADWAY TYPICAL SECTION**

NOT TO SCALE

WORCESTER:

MM 5.828 - MM 6.903 (STA W 307+75 - STA W 364+50)

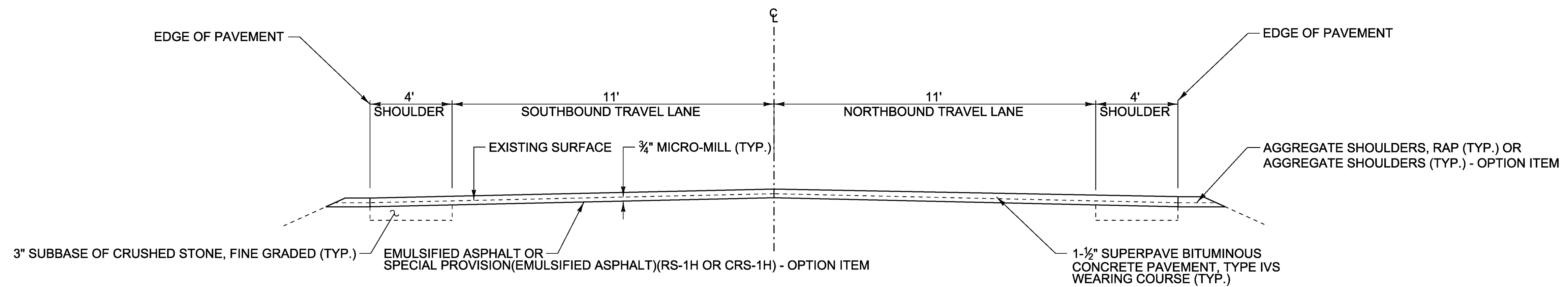


**ROADWAY TYPICAL SECTION**

NOT TO SCALE

WORCESTER:

MM 6.903 - MM 7.848/MM 0.000 (STA W 364+50 - STA W 414+64/E 0+00)



**ROADWAY TYPICAL SECTION**

NOT TO SCALE

ELMORE:

MM 7.848/MM 0.000 - MM 1.609 (STA W 414+64/E 0+00 - E 85+00)

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn

PROJECT LEADER: J. HARRINGTON

DESIGNED BY: B. KIPP

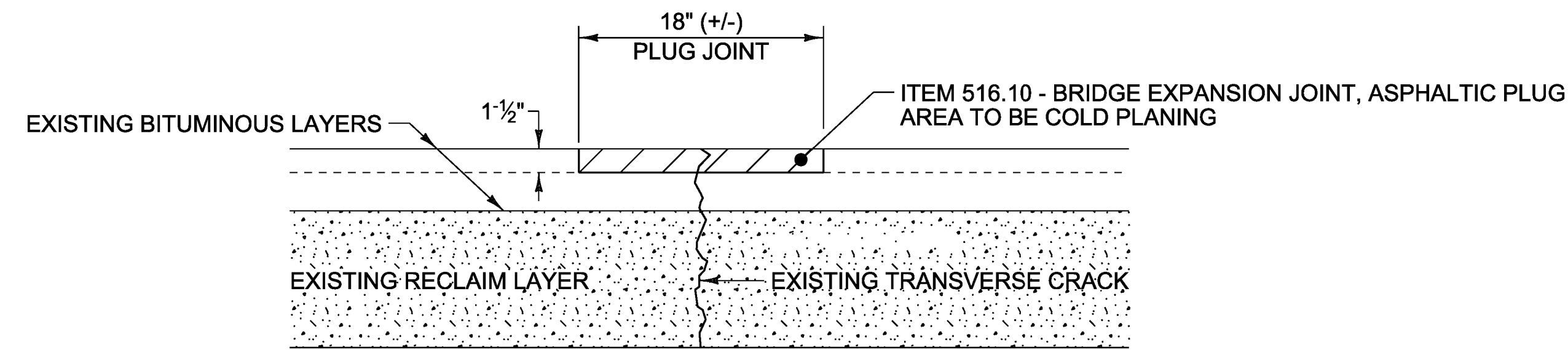
TYPICAL SECTIONS SHEET

PLOT DATE: 13-MAY-2016

DRAWN BY: B. KIPP

CHECKED BY: N. PAPPAS

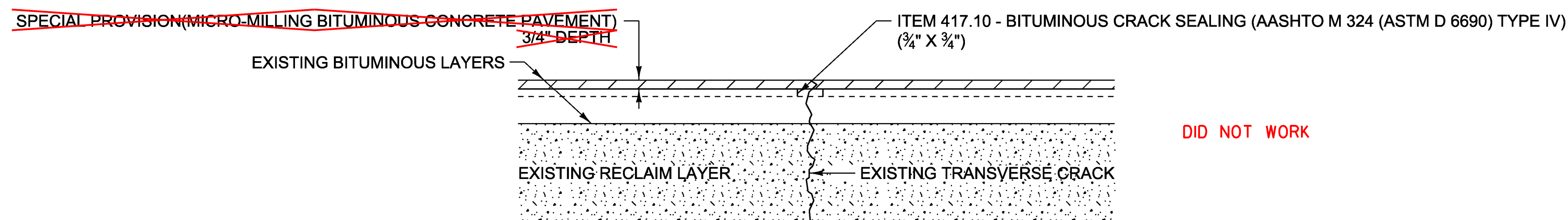
SHEET 5 OF 33



**CRACK TREATMENT DETAIL - NO. 1**

NOT TO SCALE

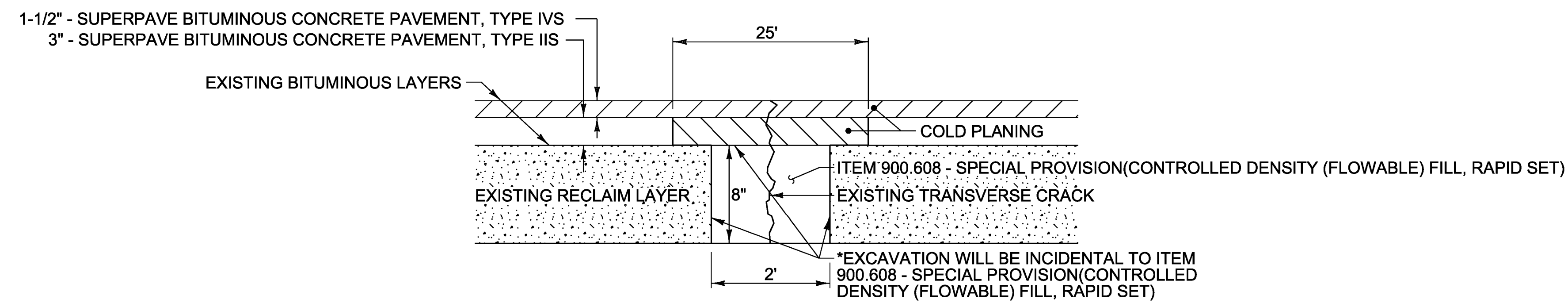
WORCESTER:  
(SEE PLAN SHEET 1 FOR LOCATIONS)



**CRACK TREATMENT DETAIL - NO. 2**

NOT TO SCALE

WORCESTER:  
(SEE PLAN SHEET 1 FOR LOCATIONS)



**CRACK TREATMENT DETAIL - NO. 3**

NOT TO SCALE

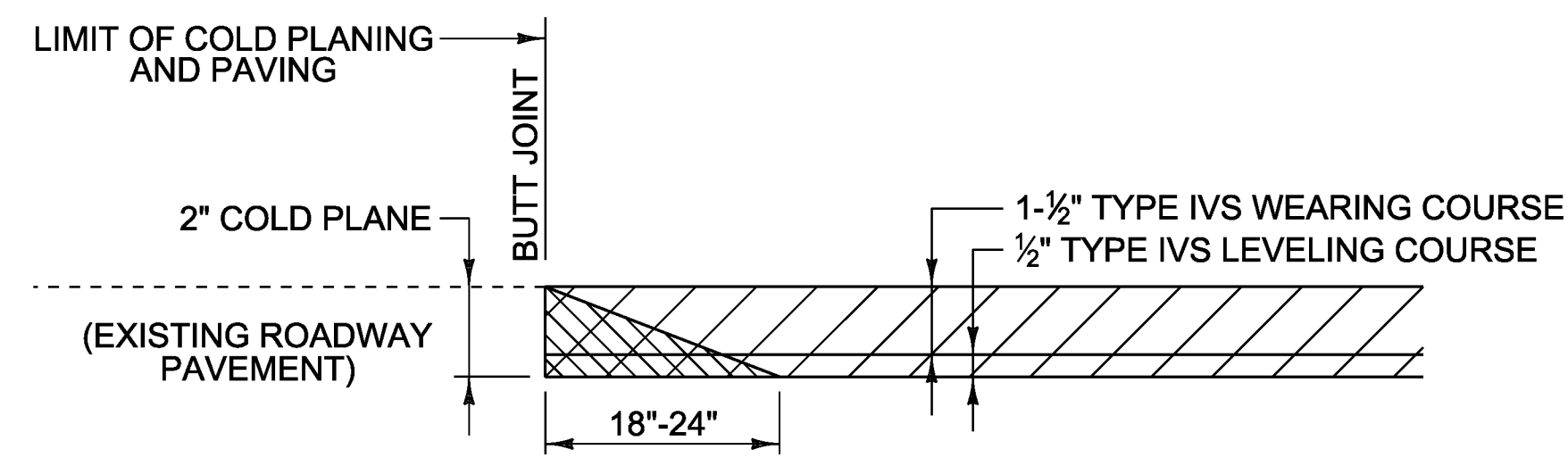
ELMORE:  
(SEE PLAN SHEET 20 FOR LOCATIONS)

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

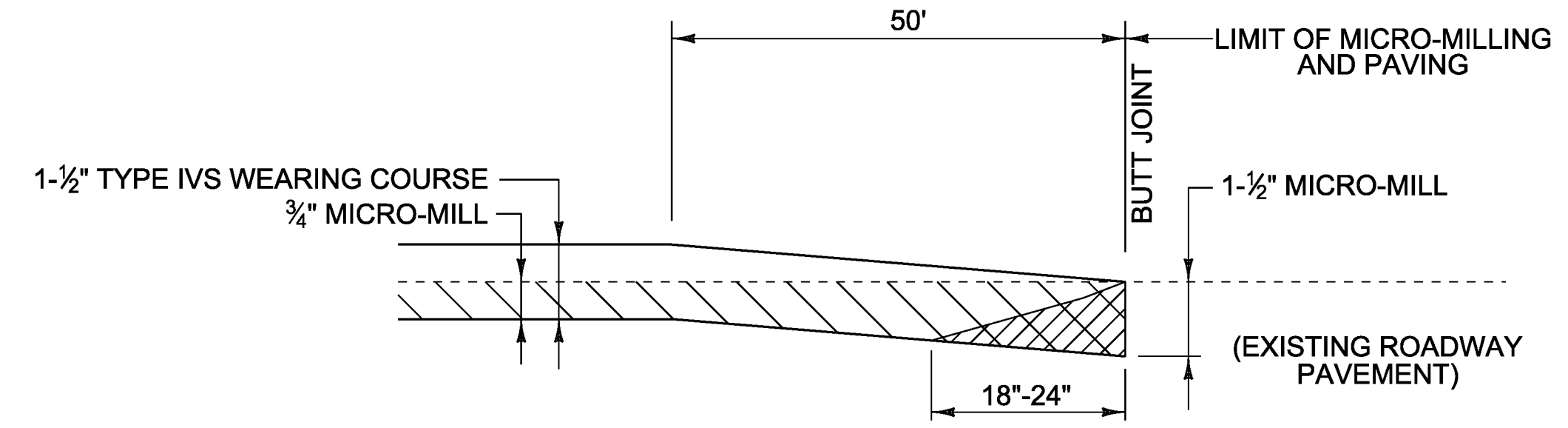
FILE NAME: pl4v23lwrk.dgn  
PROJECT LEADER: J. HARRINGTON  
DESIGNED BY: B. KIPP  
DETAIL SHEET 1

PLOT DATE: 13-MAY-2016  
DRAWN BY: B. KIPP  
CHECKED BY: N. PAPPAS  
SHEET 6 OF 33



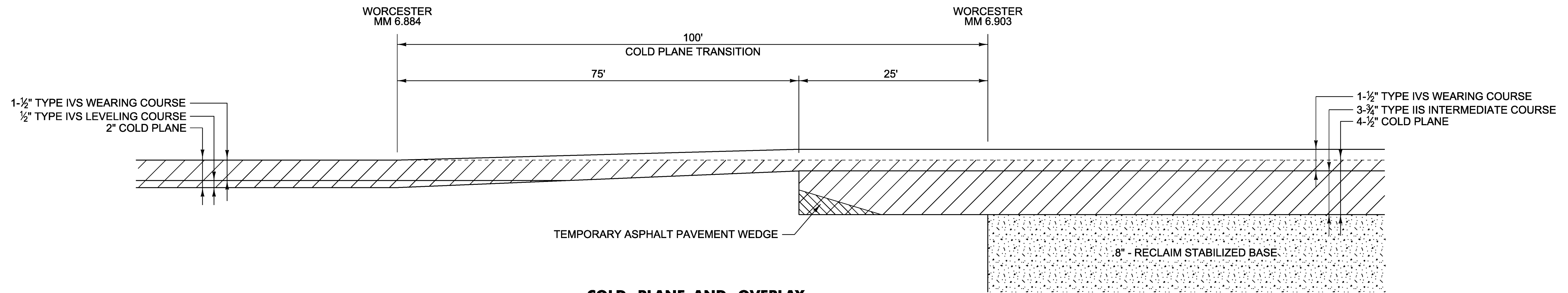
**COLD PLANE APPROACH  
AREA DETAIL**

WORCESTER:  
MM 5.828

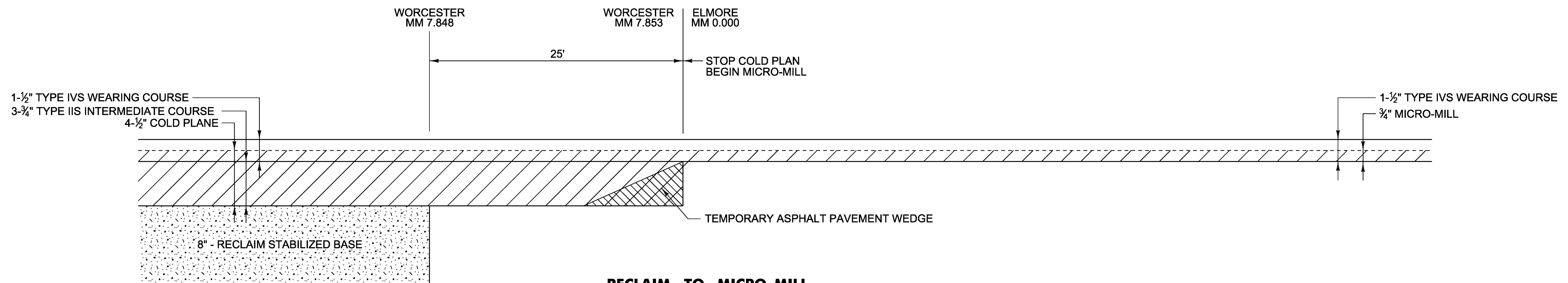


**MICRO-MILL APPROACH  
AREA DETAIL**

ELMORE:  
MM 1.611



**COLD PLANE AND OVERLAY  
TO RECLAIM DETAIL**



**RECLAIM TO MICRO-MILL  
AND OVERLAY DETAIL**

**NOTE:**

TEMPORARY ASPHALT WEDGE SHALL BE REMOVED PRIOR TO PAVING. COST WILL BE CONSIDERED INCIDENTAL TO ITEM 490.30 - SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34).

**NOT TO SCALE**

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn

PLOT DATE: 13-MAY-2016

PROJECT LEADER: J. HARRINGTON

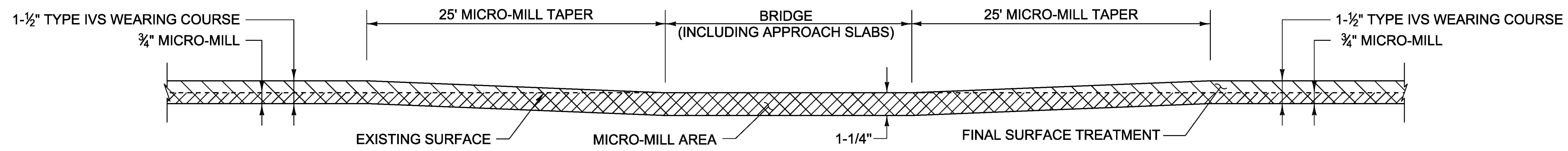
DRAWN BY: B. KIPP

DESIGNED BY: B. KIPP

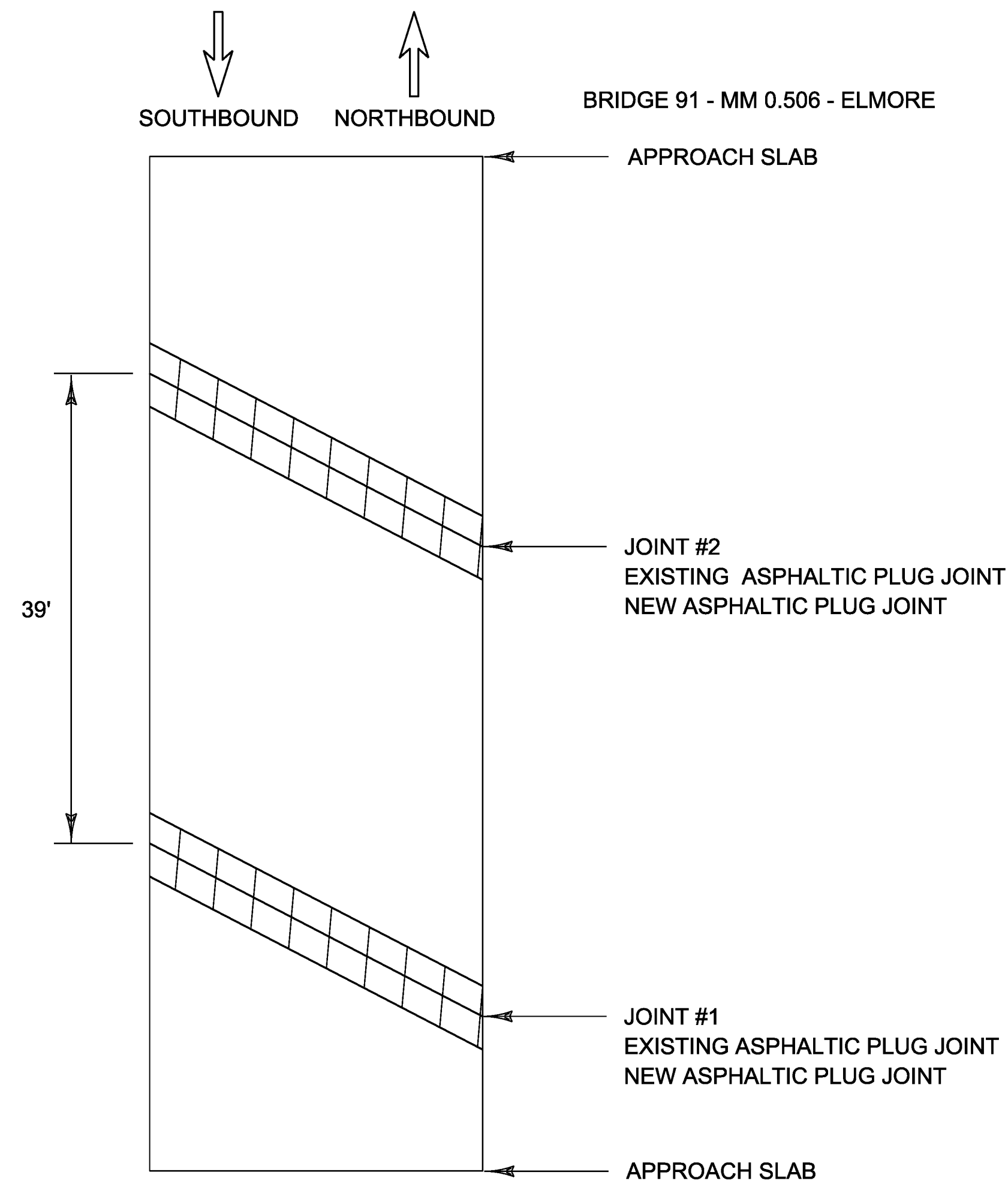
CHECKED BY: N. PAPPAS

DETAIL SHEET 2

SHEET 7 OF 33



**BRIDGE MICRO-MILL DETAIL**

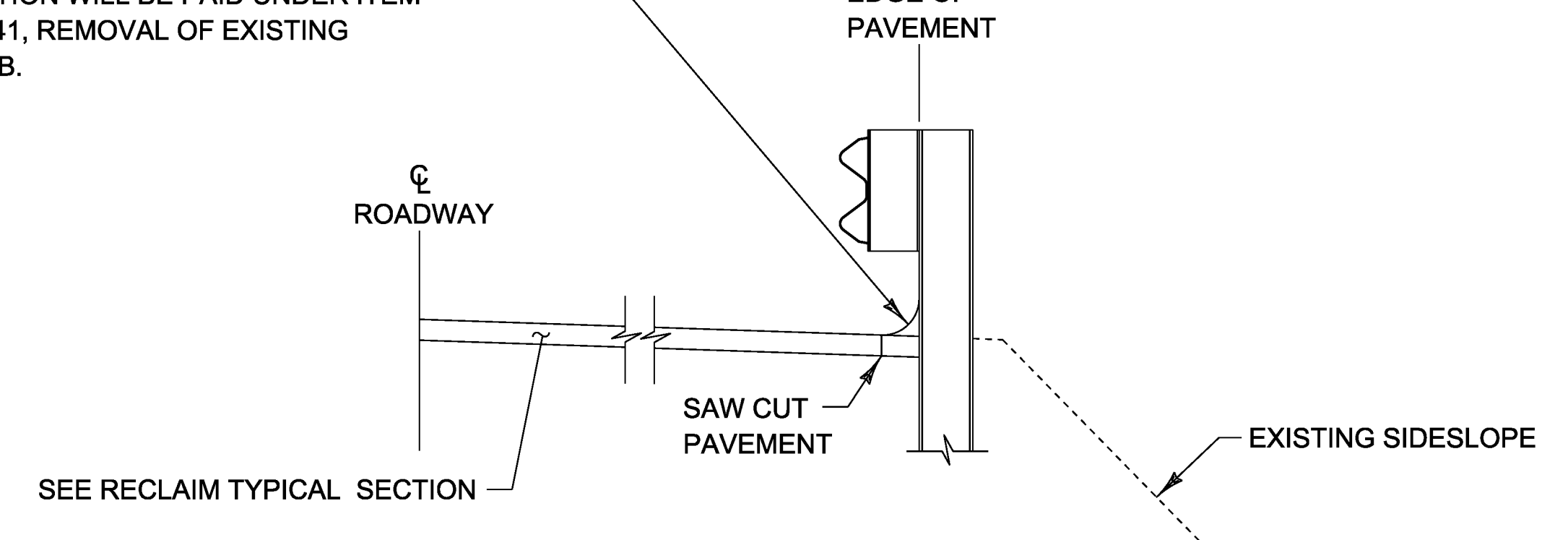


**BRIDGE #91**

MM 0.506 - ELMORE

LENGTH OF NEW ASPHALTIC PLUG JOINTS:  
 JOINT #1 = 35'  
 JOINT #2 = 35'  
 TOTAL = 70'

REMOVAL OF EXISTING TREATED  
 TIMBER CURB AND ASPHALT  
 WEDGE IN AREAS OF THE RECLAIM  
 SECTION WILL BE PAID UNDER ITEM  
 616.41, REMOVAL OF EXISTING  
 CURB.



**TIMBER CURB REMOVAL DETAIL  
 FOR RECLAIM SECTION**

**NOTES:**

- REFER TO ASPHALTIC PLUG JOINT DETAIL SHEET, SD-516.10 FOR BRIDGE JOINT APPLICATION. ALL NEW BRIDGE JOINTS WILL BE PAID FOR UNDER ITEM 516.10, "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG."
- THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING DRAINAGE STRUCTURES AND EXPANSION JOINTS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE.
- THE CONTRACTOR SHALL USE CAUTION WHEN MICRO-MILLING AND PAVING OPERATIONS OCCUR ON BRIDGE DECKS. SHOULD ANY DAMAGE OCCUR TO THE DECK OR MEMBRANE AS A RESULT OF THESE OPERATIONS THE ENGINEER SHALL CONTACT THE VTRANS CONSTRUCTION STRUCTURES ENGINEER TO PROVIDE AN ASSESSMENT OF THE DAMAGE AND RECOMMEND ANY NECESSARY REPAIRS. THE CONSTRUCTION STRUCTURES ENGINEER WILL ALSO DETERMINE IF THE DAMAGE WAS AVOIDABLE. IF THE CONTRACTOR IS DETERMINED BY THE ENGINEER TO BE AT FAULT FOR THE DAMAGE, THE RECOMMENDED REPAIRS SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE STATE.

ADDED	DATE	DESCRIPTION	BY
△	6-29-2016	NEW DETAIL ADDED	NHP
PROJECT NAME: WORCESTER-ELMORE			
PROJECT NUMBER: STP 2954(I)			
FILE NAME: pl4v23lwrk.dgn		PLOT DATE: 29-JUN-2016	
PROJECT LEADER: J. HARRINGTON		DRAWN BY: B. KIPP	
DESIGNED BY: B. KIPP		CHECKED BY: N. PAPPAS	
DETAIL SHEET 3		SHEET 8 OF 33	

# QUANTITY SHEET 1

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
								7800			7800		LF	SHOULDER BERM REMOVAL	203.40	4			
								1			1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-			
								36600			36600		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10	107			
								1000	△		1000	△	TON	SUBBASE OF CRUSHED GRAVEL, FINE GRADED	301.28	4			
								17900			17900		SY	RECLAIMED STABILIZED BASE	310.20	73			
														BEGIN OPTION AA					
								1600			1600		TON	AGGREGATE SHOULDERS	402.12	13			
								1600			1600		TON	AGGREGATE SHOULDERS, RAP	402.13	13			
														END OPTION AA					
														BEGIN OPTION BB					
								560			560		CWT	EMULSIFIED ASPHALT	404.65	EST.			
								560			560		CWT	SPECIAL PROVISION (EMULSIFIED ASPHALT)(RS-1H OR CRS-1H)	900.683	EST.			
														END OPTION BB					
								1			1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-			
								100			100		LB	BITUMINOUS CRACK SEALING (AASHTO M 324 (ASTM D 6690) TYPE IV)	417.10	EST.			
								10100			10100		TON	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT (PG 58-34)	490.30	18			
								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	-			
								100			100		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG (ROADWAY)	516.10	EST.			
									70		70		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	EST.			
									50		50		CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	EST.			
								100			100		HR	POWER GRADER RENTAL	608.15	EST.			
								100			100		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	EST.			
								200			200		HR	POWER BROOM RENTAL, TYPE I	608.30	EST.			
								200			200		HR	POWER BROOM RENTAL, TYPE II	608.31	EST.			
								200			200		HR	TRUCK RENTAL	608.37	EST.			
								5			5		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15	EST.			
								800			800		LF	TREATED TIMBER CURB	616.35	EST.			
								800			800		LF	REMOVAL OF EXISTING CURB	616.41	EST.			
								2125			2125		LF	ADJUST HEIGHT OF GUARDRAIL	621.79	18			
								700			700		HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.			
								2500			2500		HR	FLAGGERS	630.15	EST.			
										1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-			
								1			1		LS	MOBILIZATION/DEMobilIZATION	635.11	-			
								1			1		LS	TRAFFIC CONTROL	641.10	-			
								2			2		EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	-			

ADDED	DATE	DESCRIPTION	BY	PROJECT NAME:	WORCESTER-ELMORE
△	6-29-2016	QUANTITY REVISED	NHP	PROJECT NUMBER:	STP 2954(I)
△	6-29-2016	NEW ITEM	NHP	FILE NAME:	pl4v23lwrk.dgn
△	6-29-2016	NEW ITEM	NHP	PROJECT LEADER:	J. HARRINGTON
△	6-29-2016	NEW ITEM	NHP	DESIGNED BY:	B. KIPP
				QUANTITY SHEET 1	PLOT DATE: 29-JUN-2016
					DRAWN BY: B. KIPP
					CHECKED BY: N. PAPPAS
					SHEET 9 OF 33

# QUANTITY SHEET 2

SUMMARY OF ESTIMATED QUANTITIES										TOTALS		DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES			
								ROADWAY	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS
														BEGIN OPTION DD					
								31100			31100		LF	DURABLE 4 INCH YELLOW LINE, THERMOPLASTIC	646.412	43			
								31100			31100		LF	SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, EPOXY PAINT)(28 MILS)	900.640	43			
								31100			31100		LF	SPECIAL PROVISION (DURABLE 4 INCH YELLOW LINE, POLYUREA)(28 MILS)	900.640	43			
														END OPTION DD					
								60000			60000		LF	TEMPORARY 4 INCH WHITE LINE, PAINT	646.602	244			
								48300			48300		LF	TEMPORARY 4 INCH YELLOW LINE, PAINT	646.612	126			
								7600			7600		EACH	LINE STRIPING TARGETS	646.76	79			
								1			1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-			
								10			10		CY	SPECIAL PROVISION (CONTROLLED DENSITY (FLOWABLE) FILL, RAPID SET)	900.608	EST.			
								200			200		SY	SPECIAL PROVISION (HAND-PLACED BITUMINOUS CONCRETE PAVEMENT, DRIVES)	900.675	EST.			
								29200			29200		SY	SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT)	900.675	117			
								100			100		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680	EST.			
								10100			10100		TON	SPECIAL PROVISION (MATERIAL TRANSFER VEHICLE)	900.680	17			

PROJECT NAME: WORCESTER-ELMORE  
 PROJECT NUMBER: STP 2954(I)  
 FILE NAME: pl4v23lwrk.dgn  
 PROJECT LEADER: J. HARRINGTON  
 DESIGNED BY: B. KIPP  
 QUANTITY SHEET 2  
 PLOT DATE: 13-MAY-2016  
 DRAWN BY: B. KIPP  
 CHECKED BY: N. PAPPAS  
 SHEET 10 OF 33

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 265+25 TO W 267+50 RT & LT

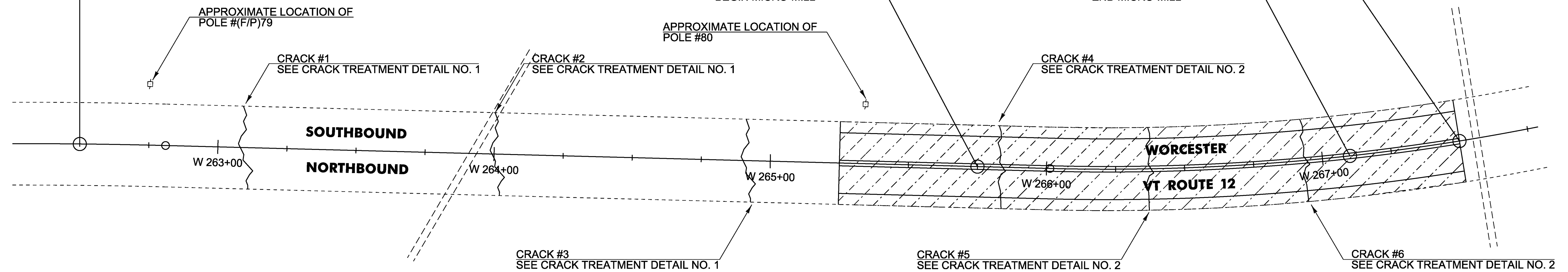
DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 265+25 TO W 267+50 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 265+25 TO W 267+50 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 265+25 TO W 267+50 RT & LT

BEGIN WORCESTER-ELMORE STP 2954(1)  
STA W 262+50.00 (MM 4.972)

STA W 267+50.00 (MM 5.066)  
STOP WORCESTER-ELMORE STP 2954(1)



NOTES:

- 1.) CRACK TREATMENT LOCATIONS SHOWN ON THE PLANS HAVE BEEN LOCATED AND MEASURED FROM EXISTING TOPOGRAPHIC FEATURES WHICH ARE LOCATED WITHIN THE LIMITS MM 4.972 AND MM 5.066 ON VT ROUTE 12 IN THE TOWN OF WORCESTER.
- 2.) STATIONING ASSOCIATED WITH EACH CRACK TREATMENT ARE FOR GRAPHICAL REPRESENTATION ONLY. CRACK LOCATIONS MUST BE MEASURED AND VERIFIED IN THE FIELD USING THE PROVIDED TOPOGRAPHIC FEATURES LISTED BELOW.

CRACK LOCATION MATRIX		
	MEASURED DISTANCE (FT)	CRACK MEASURED (NORTH) FROM FEATURE
CRACK #1	34'	POLE #(F/P)79
CRACK #2	125'	POLE #(F/P)79
CRACK #3	216'	POLE #(F/P)79
POLE #80	259'	POLE #(F/P)79
CRACK #4	49'	POLE #80
CRACK #5	103'	POLE #80
CRACK #6	160'	POLE #80

NOT TO SCALE

PROJECT NAME: WORCESTER-ELMORE  
PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn  
PROJECT LEADER: J. HARRINGTON  
DESIGNED BY: B. KIPP  
PLAN SHEET I

PLOT DATE: 13-MAY-2016  
DRAWN BY: B. KIPP  
CHECKED BY: N. PAPPAS  
SHEET II OF 33

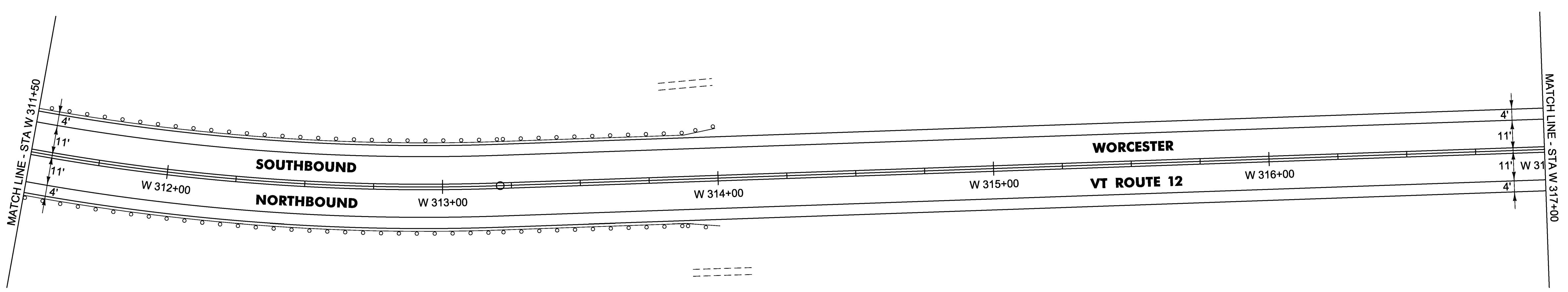
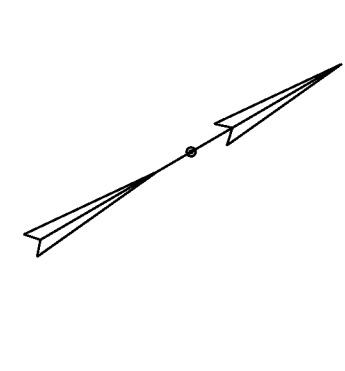
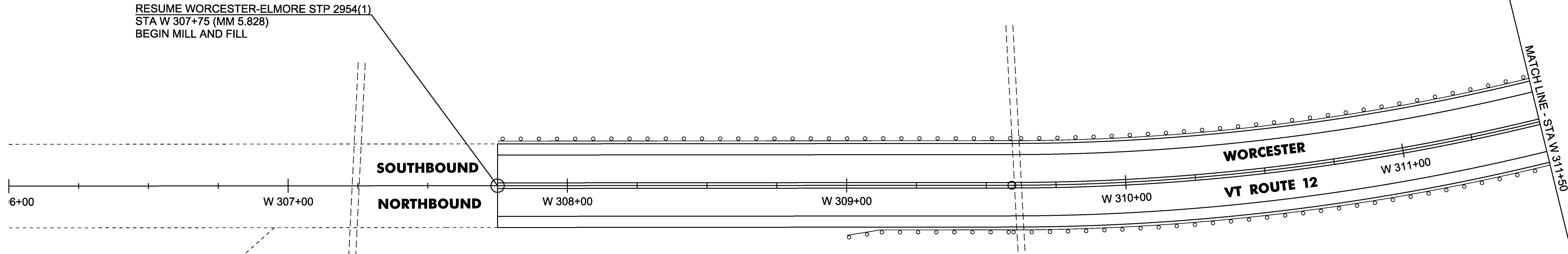
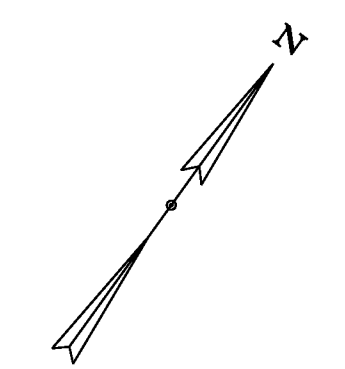
DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 306+00 TO W 317+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 306+00 TO W 317+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 306+00 TO W 317+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 306+00 TO W 317+00 RT & LT

RESUME WORCESTER-ELMORE STP 2954(1)  
STA W 307+75 (MM 5.828)  
BEGIN MILL AND FILL

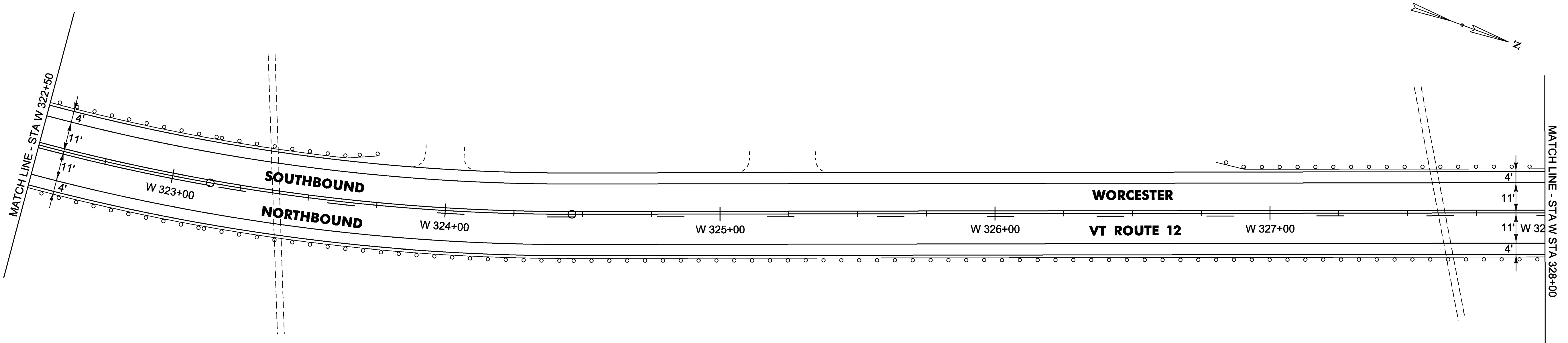
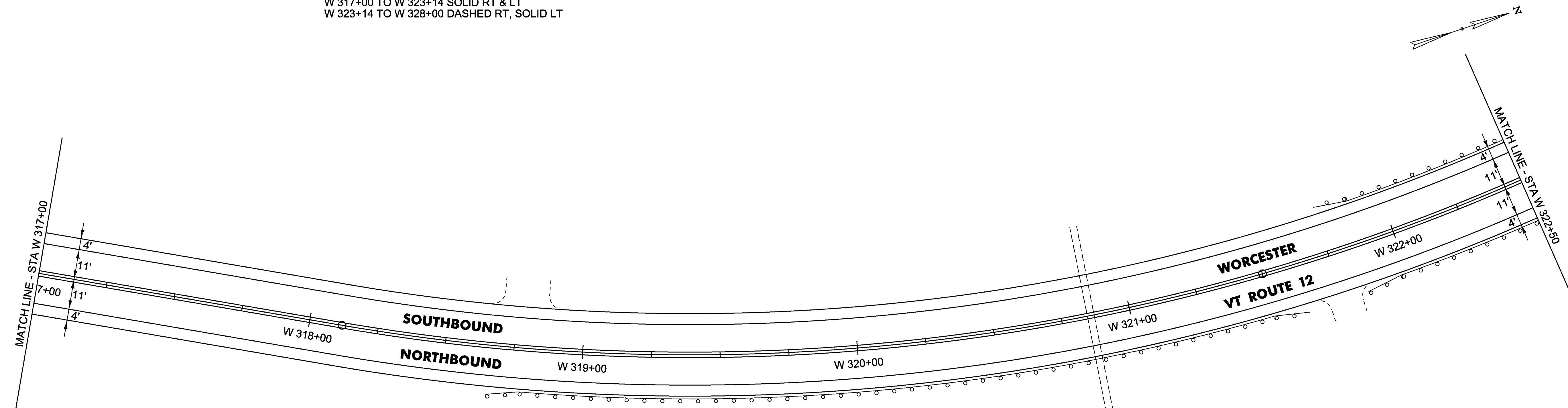


NOT TO SCALE

PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(1)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 12 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 2	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 317+00 TO W 328+00 RT & LT  
TEMPORARY 4 INCH WHITE LINE, PAINT  
W 317+00 TO W 328+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 317+00 TO W 323+14 SOLID RT & LT  
W 323+14 TO W 328+00 DASHED RT, SOLID LT  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 317+00 TO W 323+14 SOLID RT & LT  
W 323+14 TO W 328+00 DASHED RT, SOLID LT



**NOT TO SCALE**

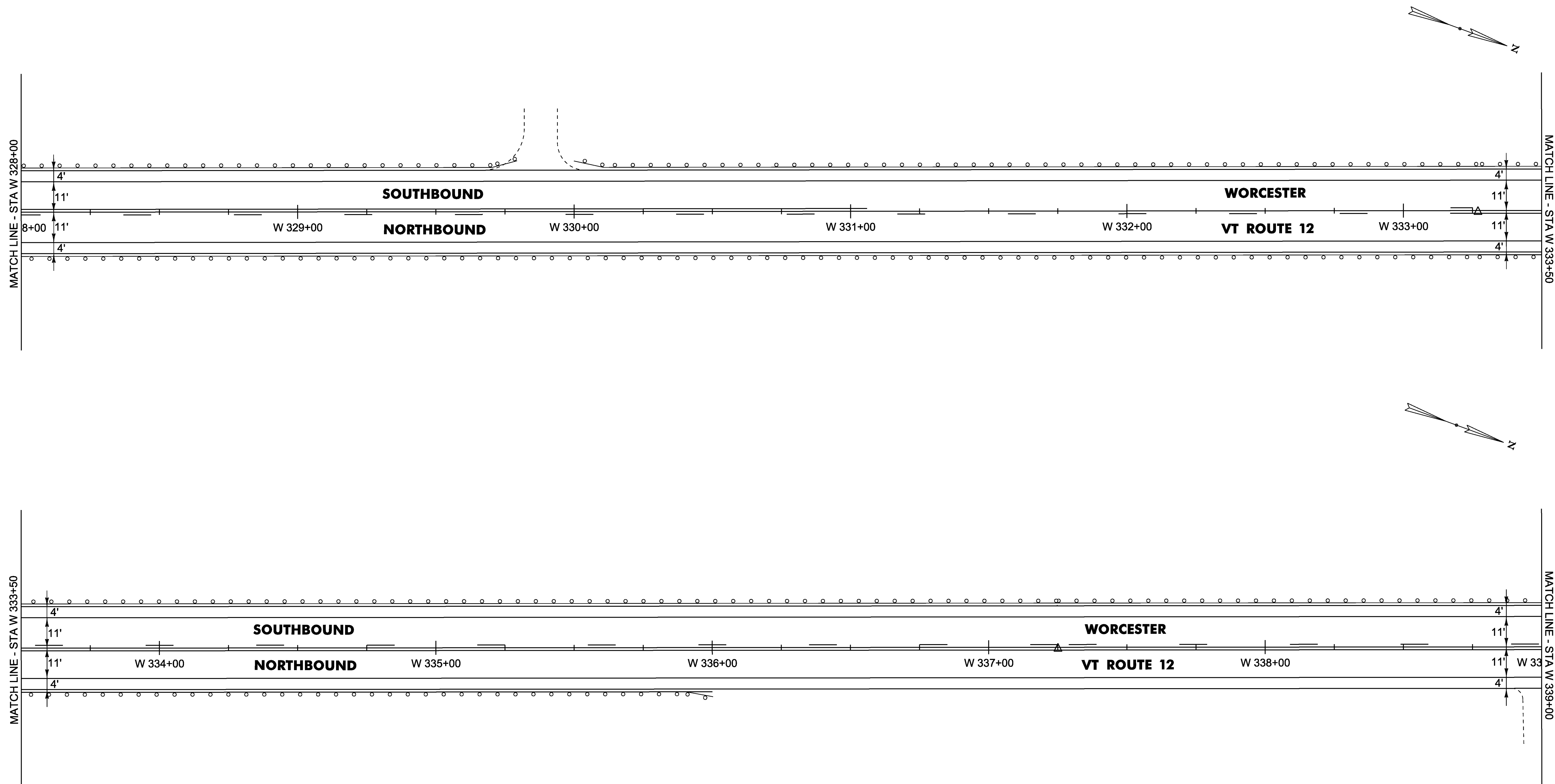
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 13 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 3	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 328+00 TO W 339+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 328+00 TO W 339+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 328+00 TO W 331+06 DASHED RT, SOLID LT  
W 331+06 TO W 333+17 DASHED CL  
W 333+17 TO W 339+00 SOLID RT, DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 328+00 TO W 331+06 DASHED RT, SOLID LT  
W 331+06 TO W 333+17 DASHED CL  
W 333+17 TO W 339+00 SOLID RT, DASHED LT



**NOT TO SCALE**

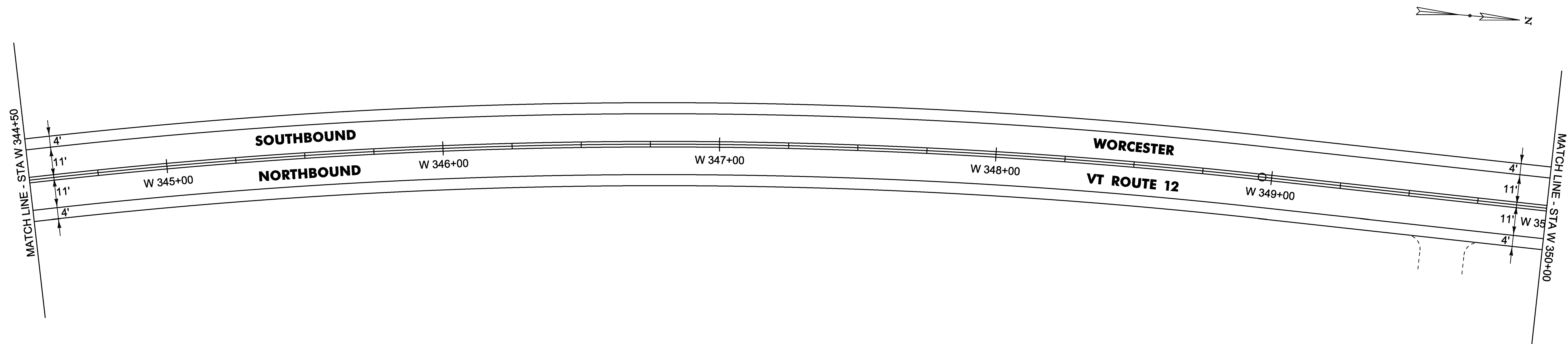
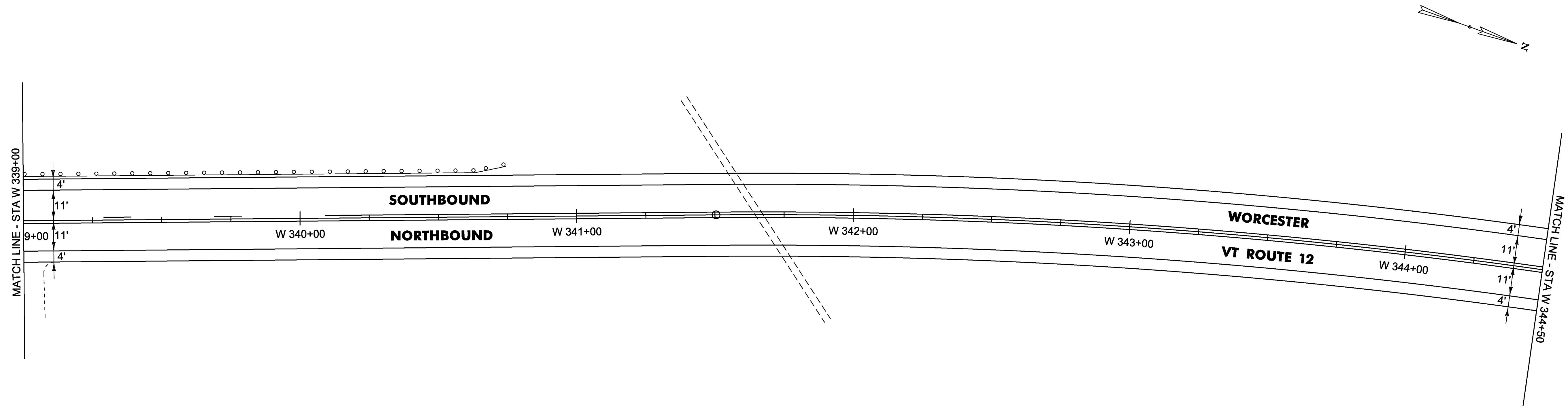
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 14 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 4	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 339+00 TO W 350+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 339+00 TO W 350+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 339+00 TO W 340+09 SOLID RT, DASHED LT  
W 340+09 TO W 350+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 339+00 TO W 340+09 SOLID RT, DASHED LT  
W 340+09 TO W 350+00 SOLID RT & LT



**NOT TO SCALE**

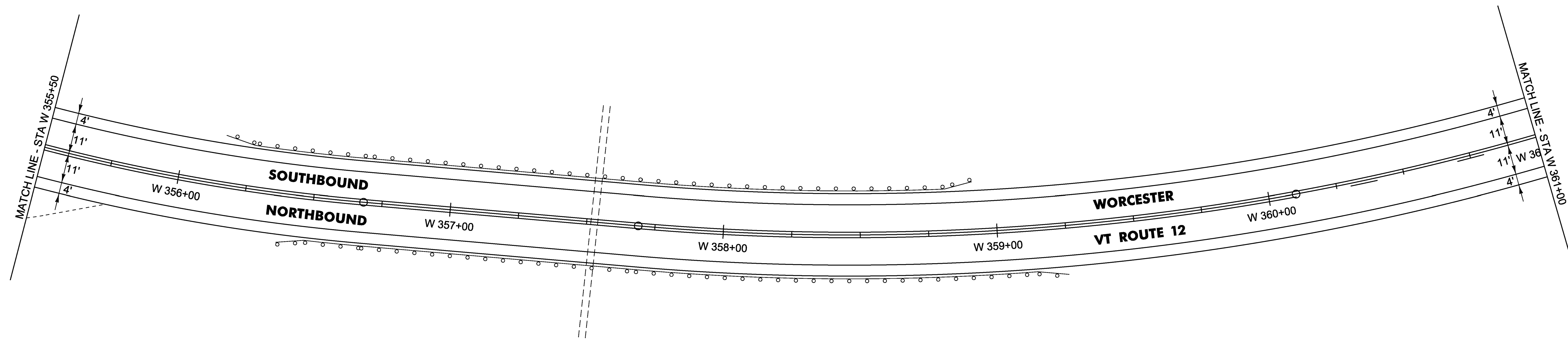
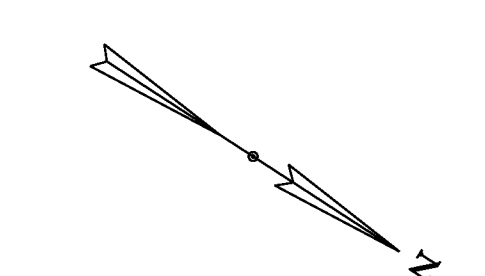
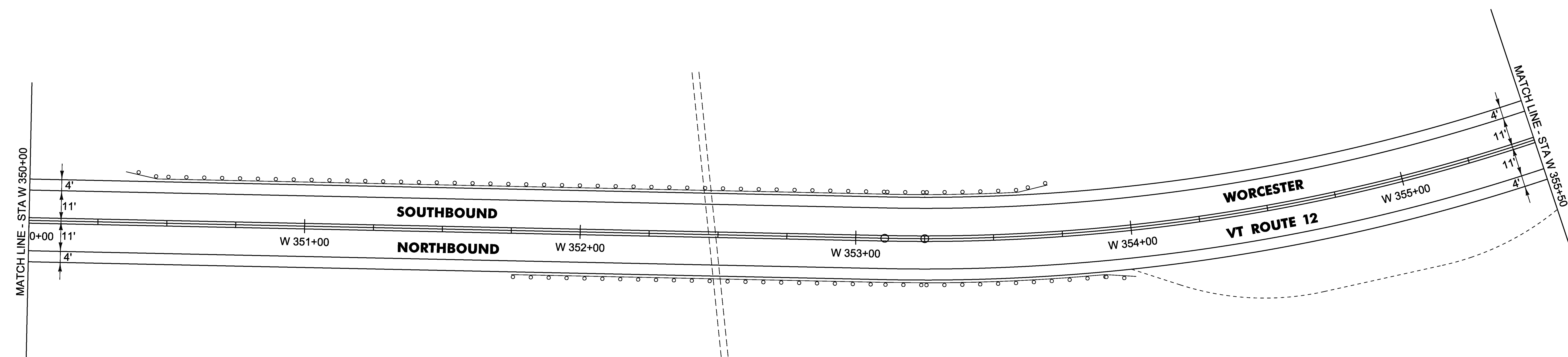
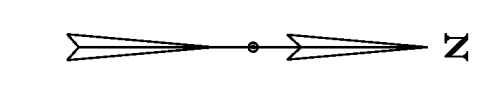
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 15 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 5	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 350+00 TO W 361+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 350+00 TO W 361+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 350+00 TO W 360+10 SOLID RT & LT  
W 360+10 TO W 361+00 DASHED RT, SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 350+00 TO W 360+10 SOLID RT & LT  
W 360+10 TO W 361+00 DASHED RT, SOLID LT



**NOT TO SCALE**

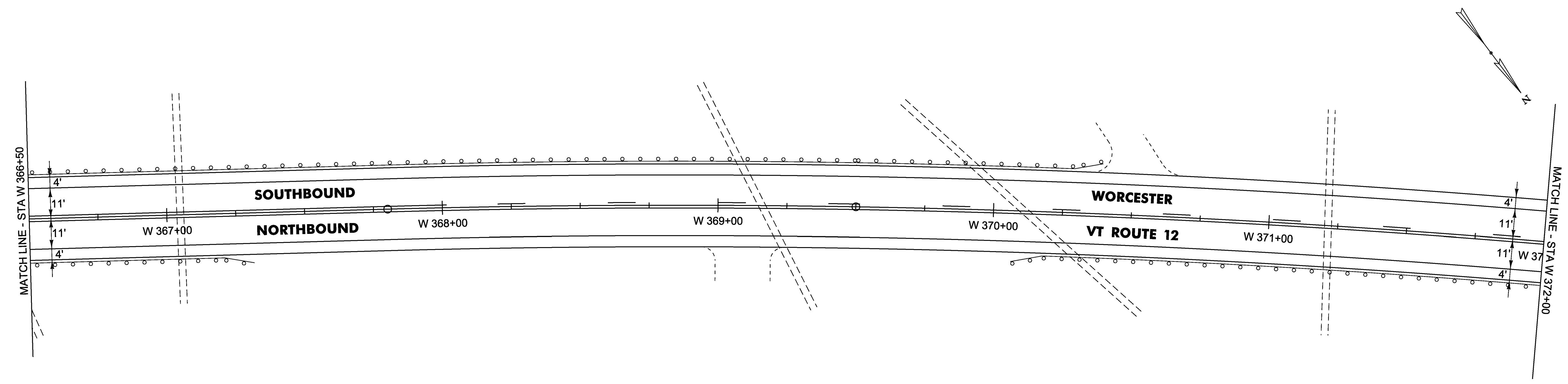
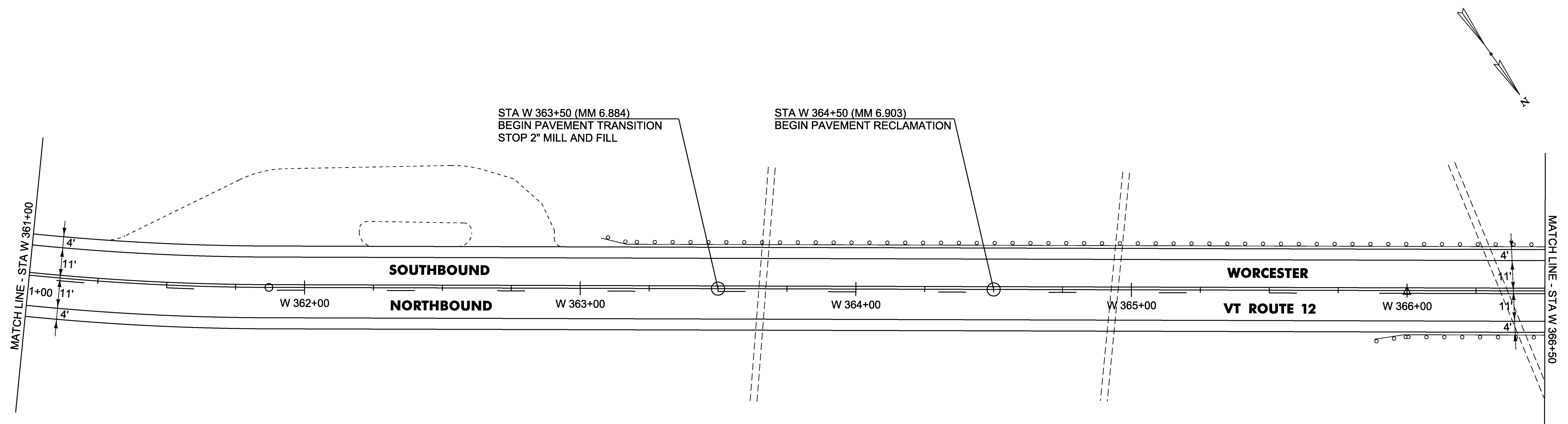
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 16 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 6	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 361+00 TO W 372+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 361+00 TO W 372+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 361+00 TO W 365+90 DASHED RT, SOLID LT  
W 365+90 TO W 368+00 SOLID RT & LT  
W 368+00 TO W 372+00 SOLID RT, DASHED LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 361+00 TO W 365+90 DASHED RT, SOLID LT  
W 365+90 TO W 368+00 SOLID RT & LT  
W 368+00 TO W 372+00 SOLID RT, DASHED LT



**NOT TO SCALE**

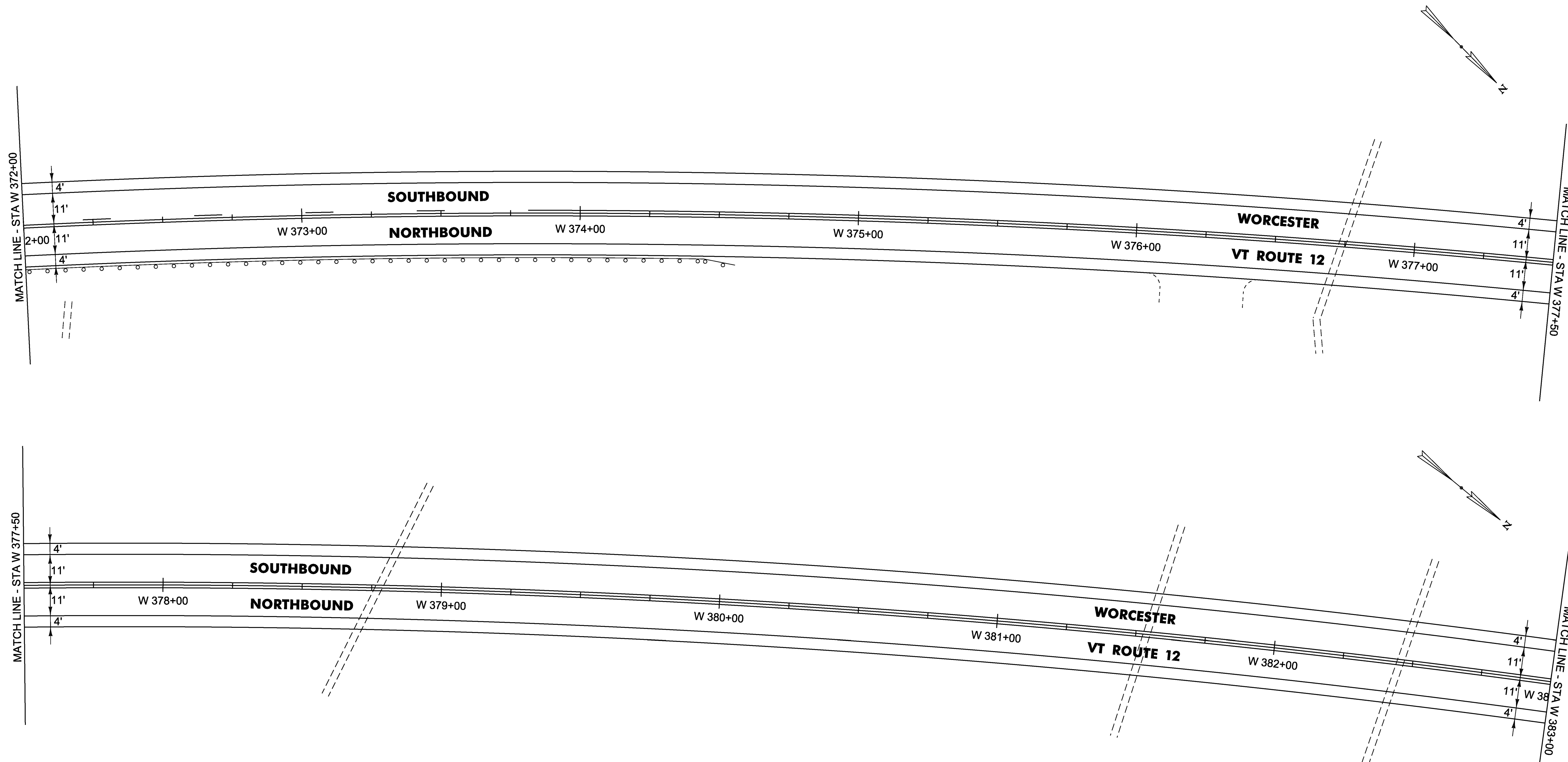
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 17 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 7	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 372+00 TO W 383+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 372+00 TO W 383+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 372+00 TO W 373+80 SOLID RT, DASHED LT  
W 373+80 TO W 383+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 372+00 TO W 373+80 SOLID RT, DASHED LT  
W 373+80 TO W 383+00 SOLID RT & LT



**NOT TO SCALE**

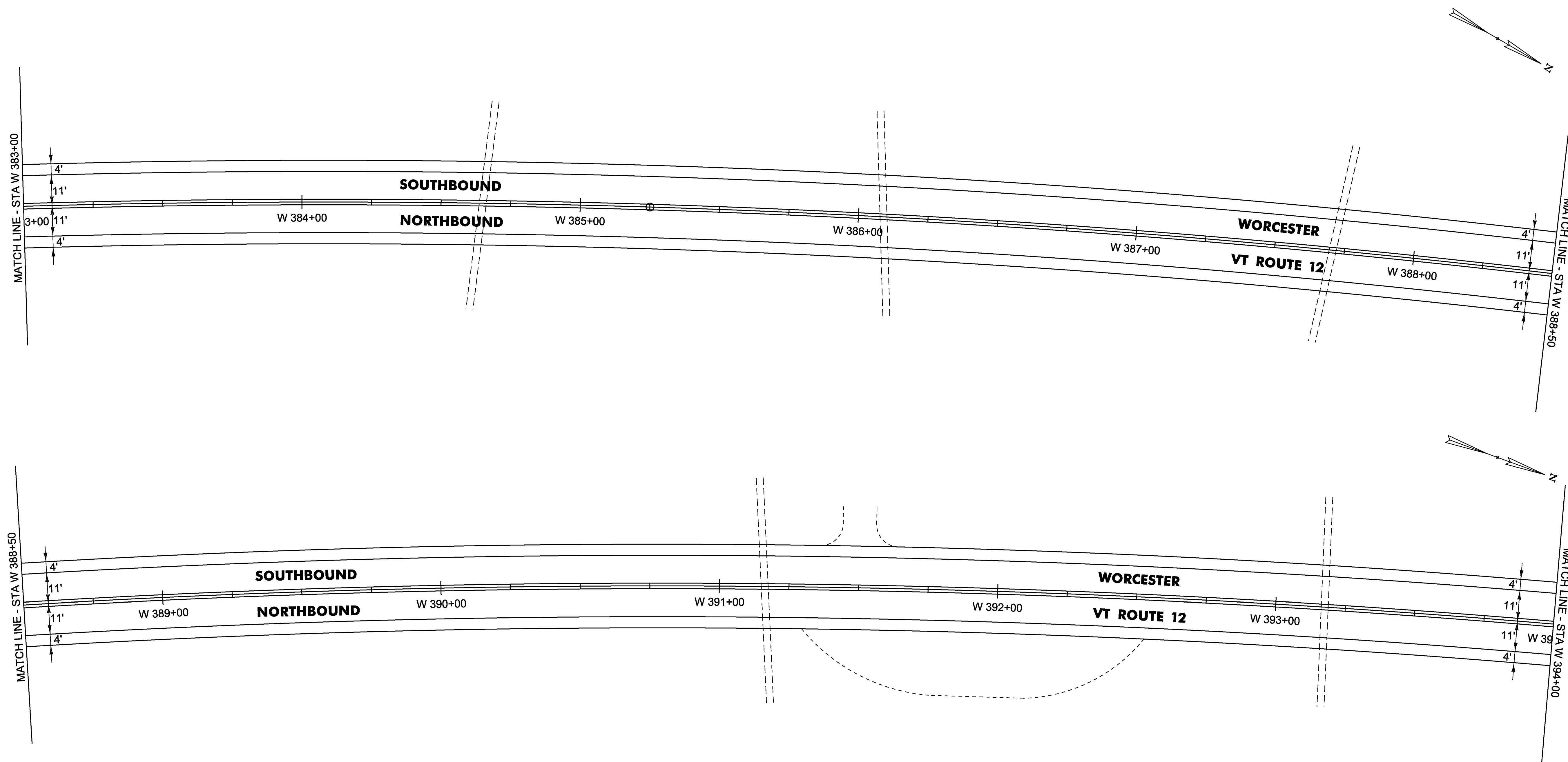
PROJECT NAME:	WORCESTER-ELMORE	PLOT DATE:	13-MAY-2016
PROJECT NUMBER:	STP 2954(I)	PROJECT LEADER:	J. HARRINGTON
FILE NAME:	pl4v23lwrk.dgn	DRAWN BY:	B. KIPP
DESIGNED BY:	B. KIPP	CHECKED BY:	N. PAPPAS
PLAN SHEET 8		SHEET 18	OF 33

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 383+00 TO W 394+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 383+00 TO W 394+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 383+00 TO W 394+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 383+00 TO W 394+00 SOLID RT & LT



NOT TO SCALE

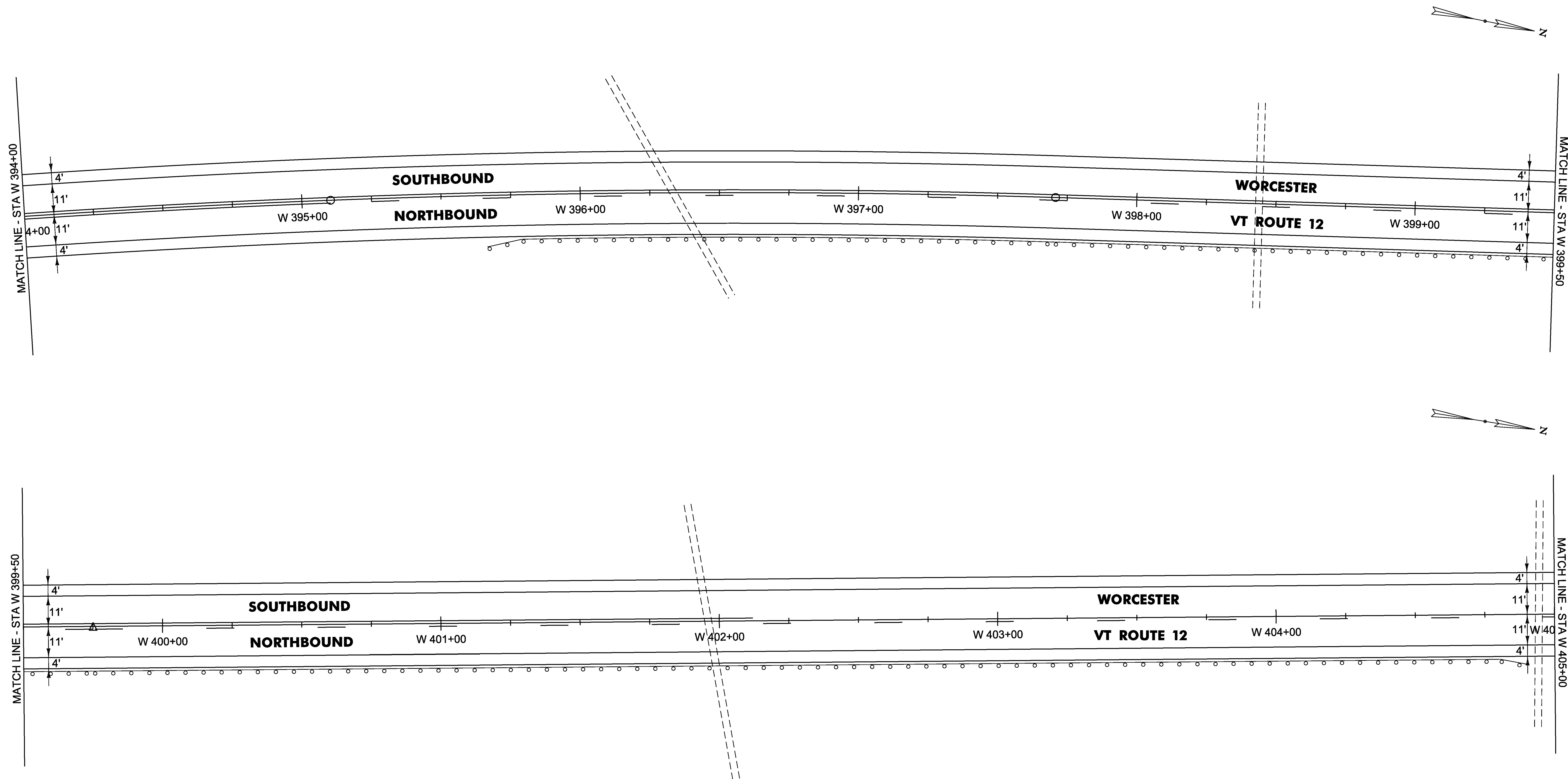
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 19 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 9	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 394+00 TO W 405+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
W 394+00 TO W 405+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 394+00 TO W 395+10 SOLID RT & LT  
W 395+10 TO W 402+12 DASHED RT, SOLID LT  
W 402+12 TO W 405+00 DASHED CL

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 394+00 TO W 395+10 SOLID RT & LT  
W 395+10 TO W 402+12 DASHED RT, SOLID LT  
W 402+12 TO W 405+00 DASHED CL



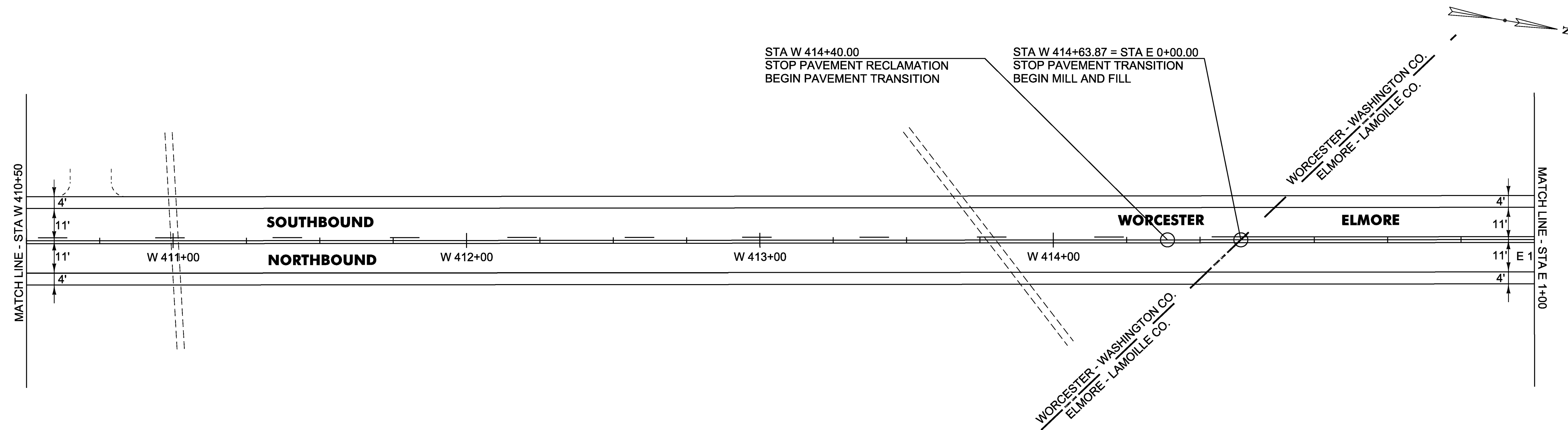
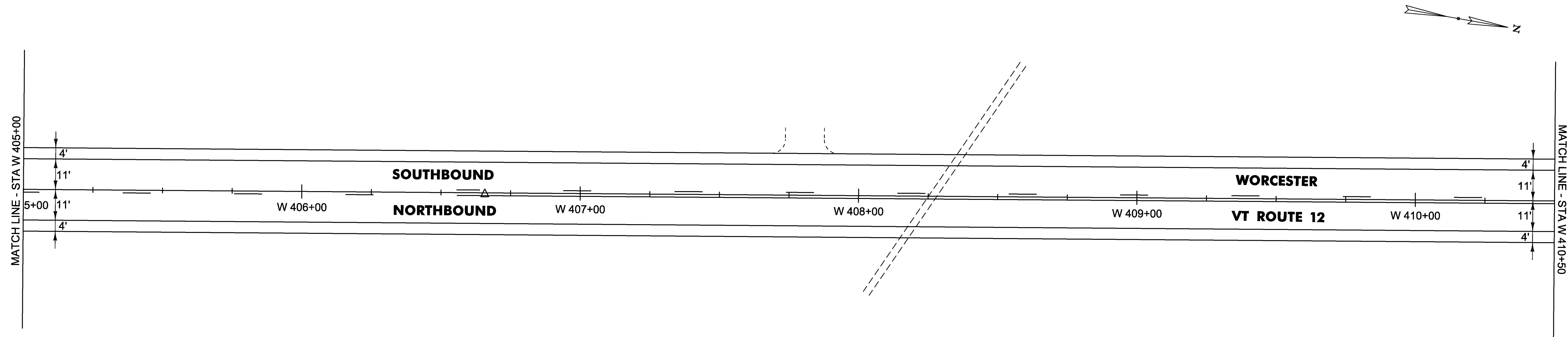
**NOT TO SCALE**

PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 20 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 10	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
W 405+00 TO W 414+64 RT & LT  
E 0+00 TO E 1+00 RT & LT  
TEMPORARY 4 INCH WHITE LINE, PAINT  
W 405+00 TO W 414+64 RT & LT  
E 0+00 TO E 1+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
W 405+00 TO 406+55 DASHED CL  
W 406+55 TO 414+64 SOLID RT, DASHED LT  
E 0+00 TO E 1+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
W 405+00 TO 406+55 DASHED CL  
W 406+55 TO 414+64 SOLID RT, DASHED LT  
E 0+00 TO E 1+00 SOLID RT & LT



STA W 414+40.00  
STOP PAVEMENT RECLAMATION  
BEGIN PAVEMENT TRANSITION

STA W 414+63.87 = STA E 0+00.00  
STOP PAVEMENT TRANSITION  
BEGIN MILL AND FILL

**NOT TO SCALE**

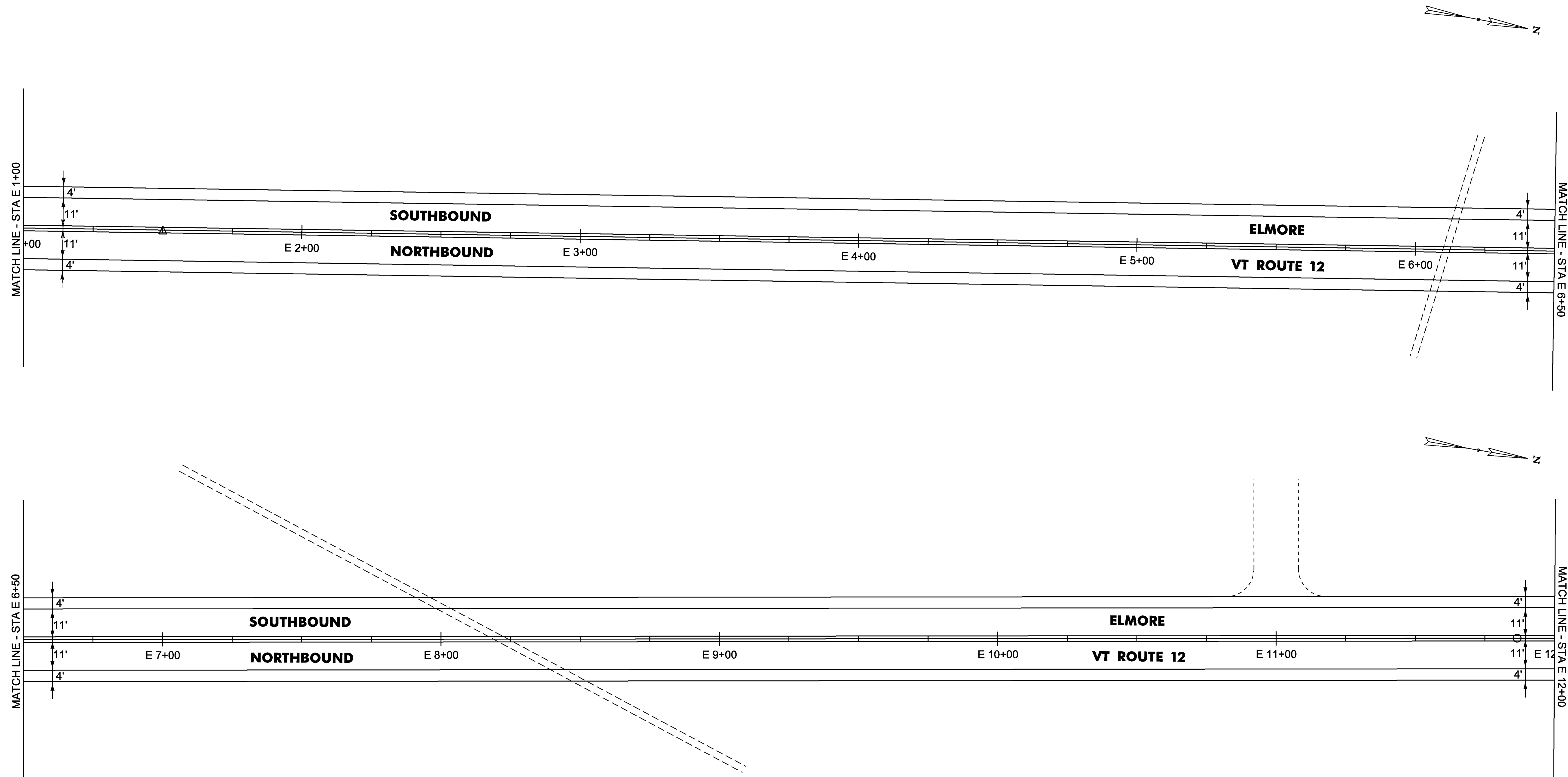
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 21 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET II	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 1+00 TO E 12+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 1+00 TO E 12+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 1+00 TO E 12+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 1+00 TO E 12+00 SOLID RT & LT



NOT TO SCALE

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn

PLOT DATE: 13-MAY-2016

PROJECT LEADER: J. HARRINGTON

DRAWN BY: B. KIPP

DESIGNED BY: B. KIPP

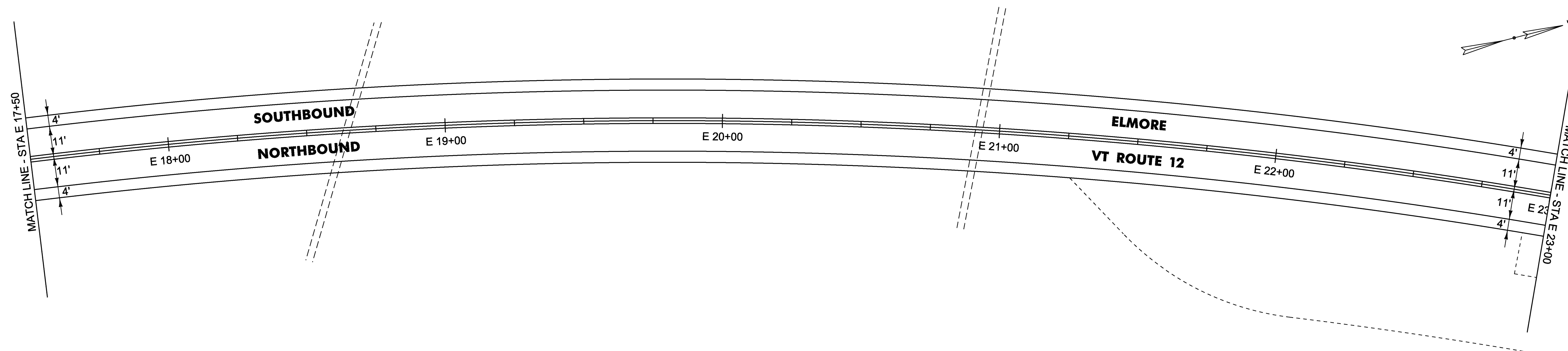
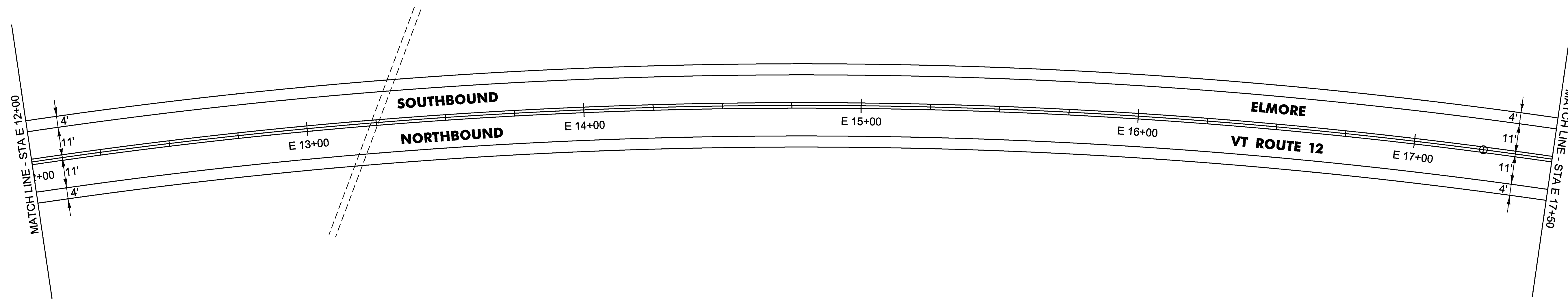
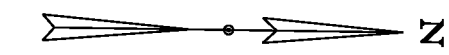
CHECKED BY: N. PAPPAS

PLAN SHEET 12

SHEET 22 OF 33

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 12+00 TO E 23+00 RT & LT  
TEMPORARY 4 INCH WHITE LINE, PAINT  
E 12+00 TO E 23+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 12+00 TO E 23+00 SOLID RT & LT  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 12+00 TO E 23+00 SOLID RT & LT



NOT TO SCALE

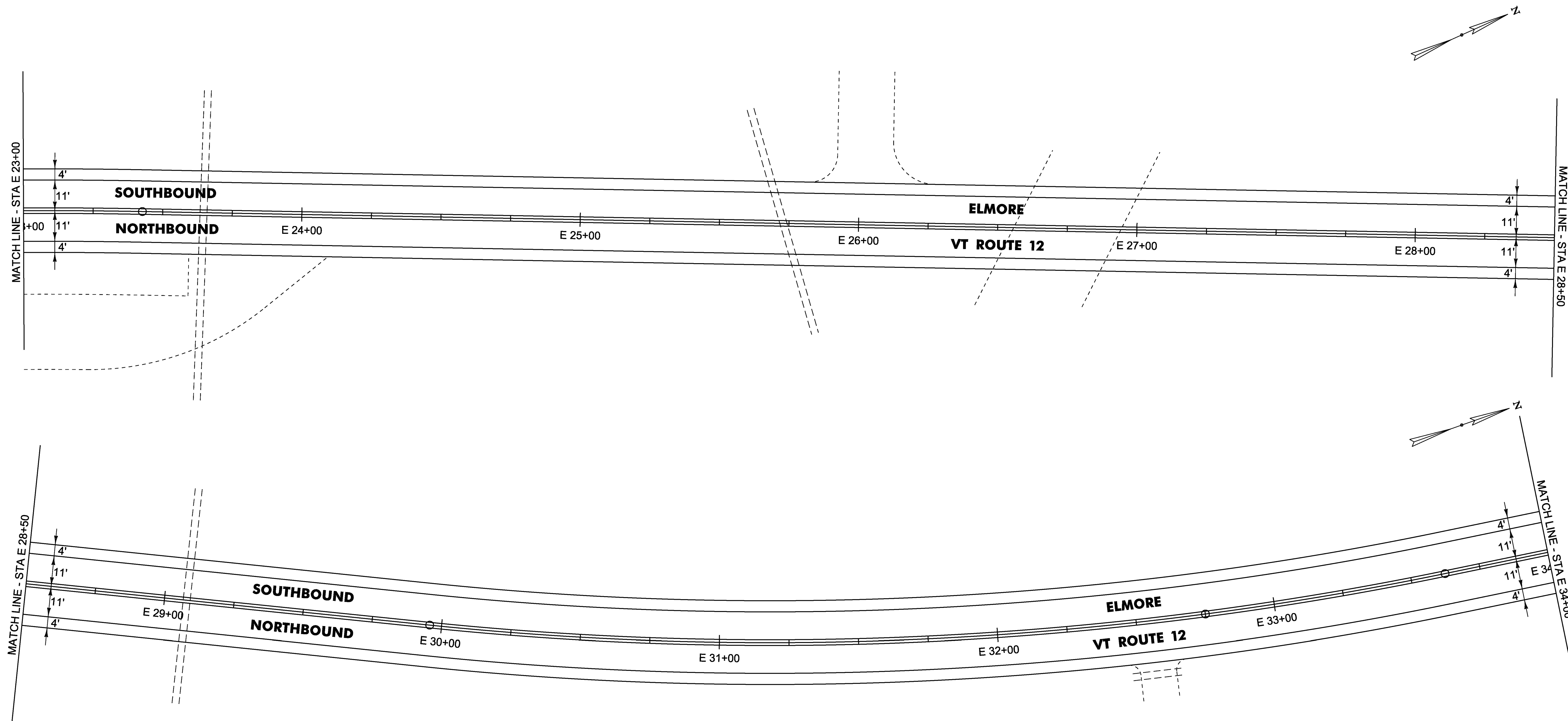
PROJECT NAME:	WORCESTER-ELMORE	PLOT DATE:	13-MAY-2016
PROJECT NUMBER:	STP 2954(I)	DRAWN BY:	B. KIPP
FILE NAME:	pl4v23lwrk.dgn	CHECKED BY:	N. PAPPAS
PROJECT LEADER:	J. HARRINGTON	SHEET	23 OF 33
DESIGNED BY:	B. KIPP	PLAN SHEET	I3

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 23+00 TO E 34+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 23+00 TO E 34+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 23+00 TO E 34+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 23+00 TO E 34+00 SOLID RT & LT



NOT TO SCALE

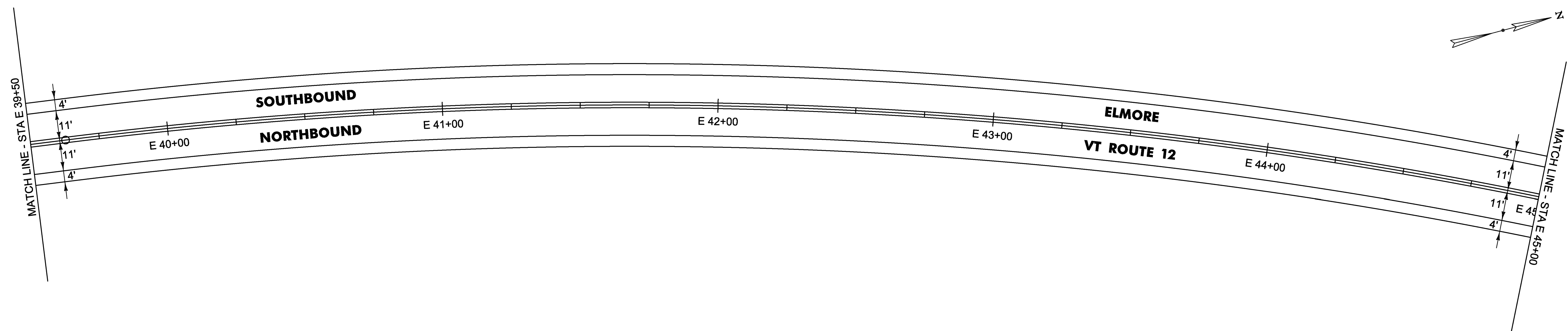
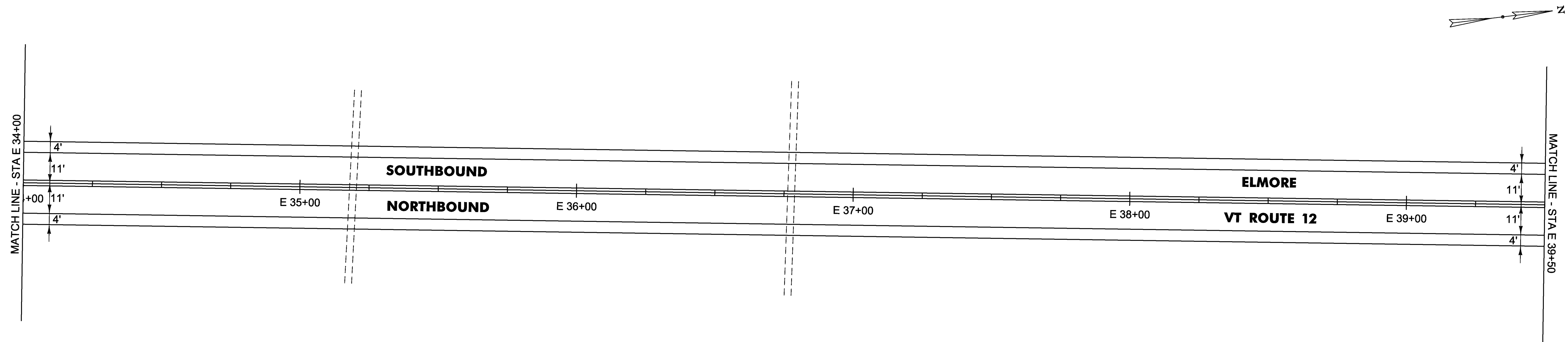
PROJECT NAME:	WORCESTER-ELMORE	PLOT DATE:	13-MAY-2016
PROJECT NUMBER:	STP 2954(I)	DRAWN BY:	B. KIPP
FILE NAME:	pl4v23lwrk.dgn	CHECKED BY:	N. PAPPAS
PROJECT LEADER:	J. HARRINGTON	SHEET	24 OF 33
DESIGNED BY:	B. KIPP	PLAN SHEET	14

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 34+00 TO E 45+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 34+00 TO E 45+00 SOLID RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 34+00 TO E 45+00 RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 34+00 TO E 45+00 SOLID RT & LT



NOT TO SCALE

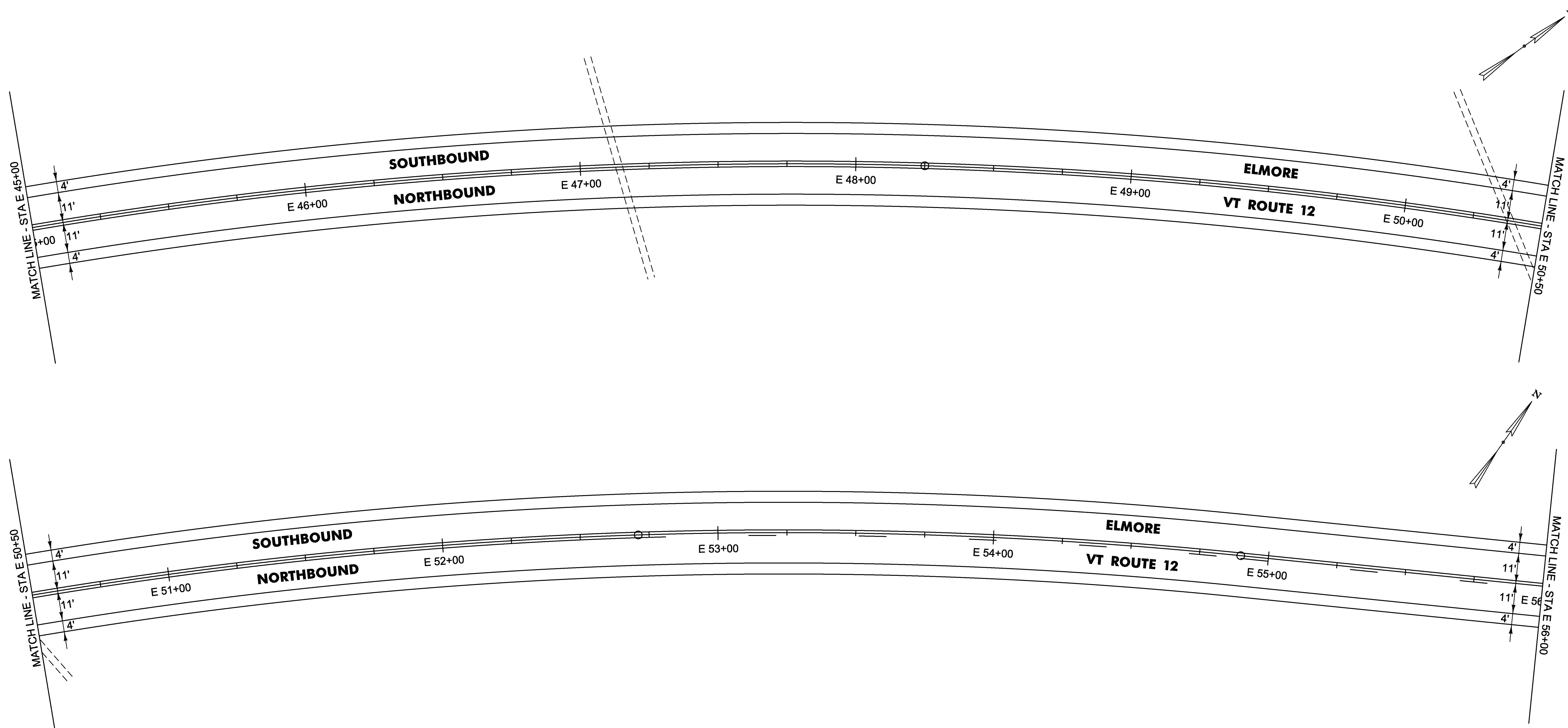
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 25 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 15	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 45+00 TO E 56+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 45+00 TO E 56+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 45+00 TO E 52+81 SOLID RT & LT  
E 52+81 TO E 56+00 DASHED RT, SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 45+00 TO E 52+81 SOLID RT & LT  
E 52+81 TO E 56+00 DASHED RT, SOLID LT



**NOT TO SCALE**

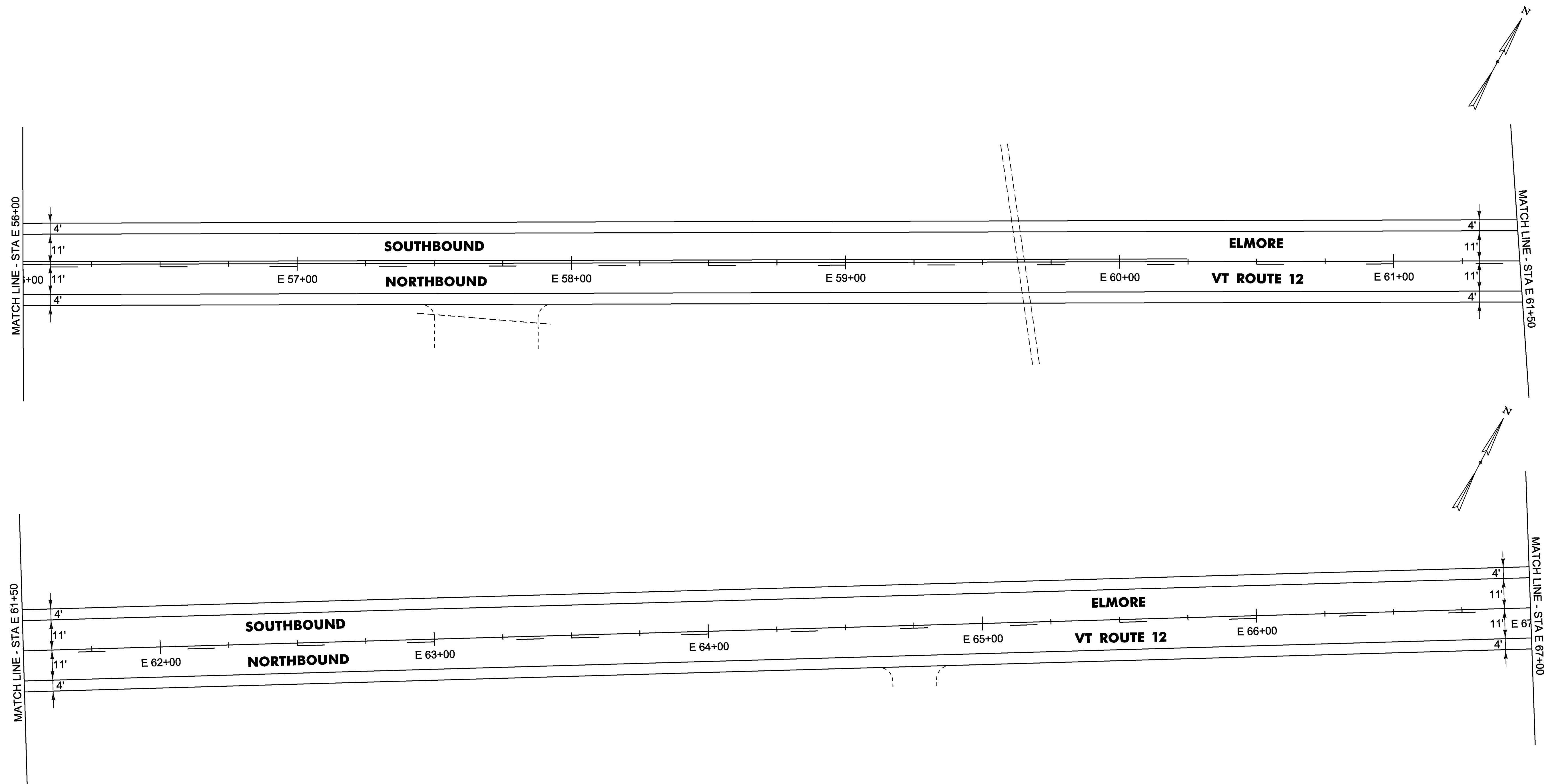
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 26 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET I6	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 56+00 TO E 67+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 56+00 TO E 67+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 56+00 TO E 60+25 DASHED RT, SOLID LT  
E 60+25 TO E 67+00 DASHED CL

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 56+00 TO E 60+25 DASHED RT, SOLID LT  
E 60+25 TO E 67+00 DASHED CL



**NOT TO SCALE**

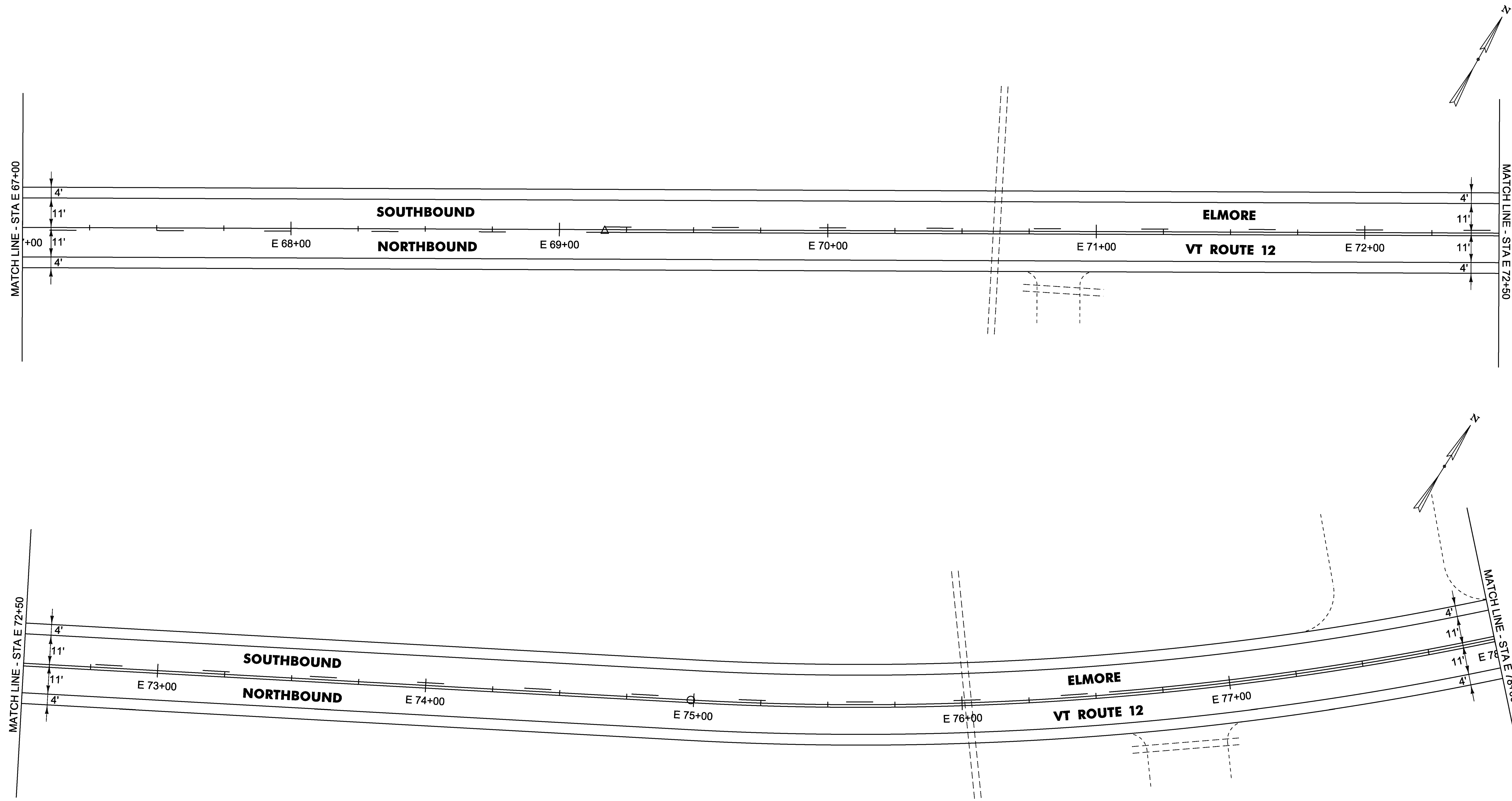
PROJECT NAME: WORCESTER-ELMORE	PLOT DATE: 13-MAY-2016
PROJECT NUMBER: STP 2954(I)	DRAWN BY: B. KIPP
FILE NAME: pl4v23lwrk.dgn	CHECKED BY: N. PAPPAS
PROJECT LEADER: J. HARRINGTON	SHEET 27 OF 33
DESIGNED BY: B. KIPP	
PLAN SHEET 17	

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 67+00 TO E 78+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 67+00 TO E 78+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 67+00 TO 69+17 DASHED CL  
E 69+17 TO 76+55 SOLID RT, DASHED LT  
E 76+55 TO 78+00 SOLID RT & LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 67+00 TO 69+17 DASHED CL  
E 69+17 TO 76+55 SOLID RT, DASHED LT  
E 76+55 TO 78+00 SOLID RT & LT



**NOT TO SCALE**

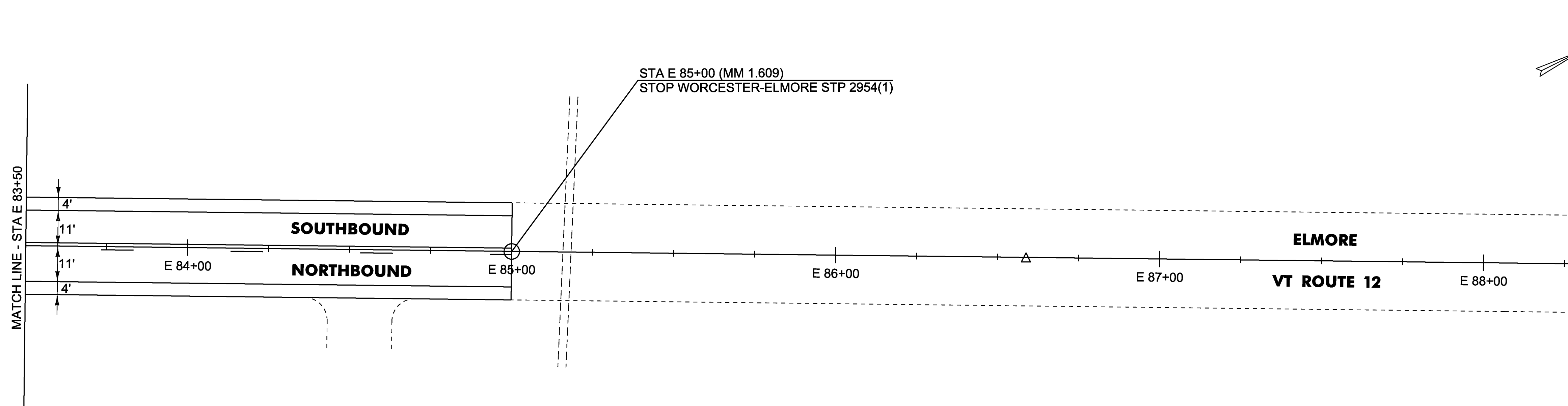
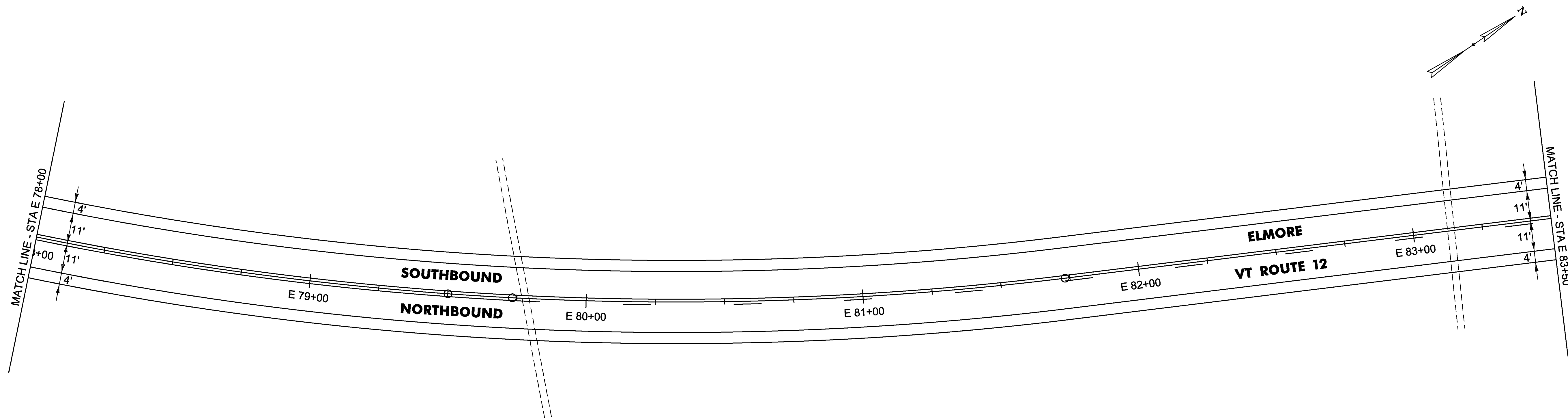
PROJECT NAME:	WORCESTER-ELMORE	PLOT DATE:	13-MAY-2016
PROJECT NUMBER:	STP 2954(I)	DRAWN BY:	B. KIPP
FILE NAME:	pl4v23lwrk.dgn	CHECKED BY:	N. PAPPAS
PROJECT LEADER:	J. HARRINGTON	SHEET	28 OF 33
DESIGNED BY:	B. KIPP	PLAN SHEET	18

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
E 78+00 TO E 88+00 RT & LT

TEMPORARY 4 INCH WHITE LINE, PAINT  
E 78+00 TO E 88+00 RT & LT

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
E 78+00 TO E 79+83 SOLID RT & LT  
E 79+83 TO E 86+55 DASHED RT, SOLID LT

TEMPORARY 4 INCH YELLOW LINE, PAINT  
E 78+00 TO E 79+83 SOLID RT & LT  
E 79+83 TO E 86+55 DASHED RT, SOLID LT



NOT TO SCALE

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2954(I)

FILE NAME: pl4v23lwrk.dgn

PROJECT LEADER: J. HARRINGTON

DESIGNED BY: B. KIPP

PLAN SHEET 19

PLOT DATE: 13-MAY-2016

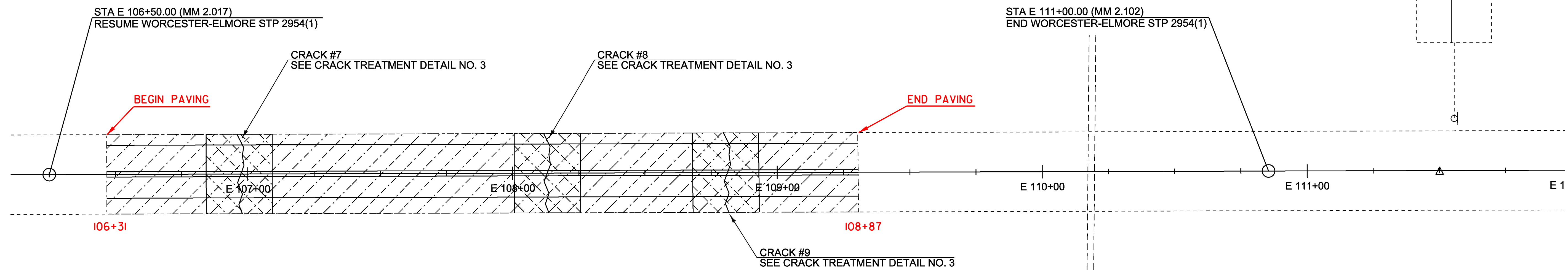
DRAWN BY: B. KIPP

CHECKED BY: N. PAPPAS

SHEET 29 OF 33

DURABLE 4 INCH WHITE LINE (OPTION BID ITEM)  
~~E 106+71 TO E 109+30 RT & LT~~  
 106+31 - 108+87  
TEMPORARY 4 INCH WHITE LINE, PAINT  
~~E 106+71 TO E 109+30 RT & LT~~  
 106+31 - 108+87

DURABLE 4 INCH YELLOW LINE (OPTION BID ITEM)  
~~E 106+71 TO E 109+30 RT & LT~~  
 106+31 - 108+87  
TEMPORARY 4 INCH YELLOW LINE, PAINT  
~~E 106+71 TO E 109+30 RT & LT~~  
 106+31 - 108+87



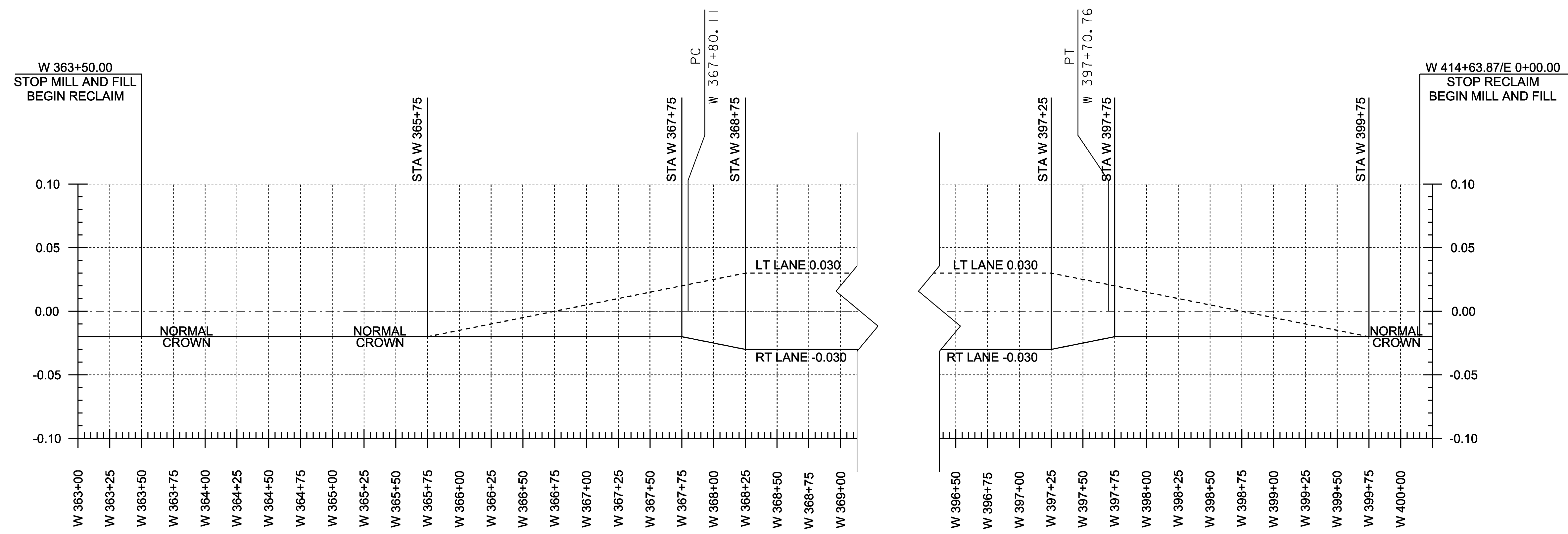
NOTES:

- 1.) CRACK TREATMENT LOCATIONS SHOWN ON THE PLANS HAVE BEEN LOCATED AND MEASURED FROM EXISTING TOPOGRAPHIC FEATURES WHICH ARE LOCATED WITHIN THE LIMITS MM 2.017 AND MM 2.102 ON VT ROUTE 12 IN THE TOWN OF ELMORE.
- 2.) STATIONING ASSOCIATED WITH EACH CRACK TREATMENT ARE FOR GRAPHICAL REPRESENTATION ONLY. CRACK LOCATIONS MUST BE MEASURED AND VERIFIED IN THE FIELD USING THE PROVIDED TOPOGRAPHIC FEATURES LISTED BELOW.

CRACK LOCATION MATRIX		
	MEASURED DISTANCE (FT)	CRACK MEASURED (SOUTH) FROM FEATURE
CULVERT	137'	"MOOSE - NEXT HALF MILE SIGN" ~ MM 2.108
CRACK #9	275'	"MOOSE - NEXT HALF MILE SIGN" ~ MM 2.108
CRACK #8	343'	"MOOSE - NEXT HALF MILE SIGN" ~ MM 2.108
CRACK #7	459'	"MOOSE - NEXT HALF MILE SIGN" ~ MM 2.108

NOT TO SCALE

PROJECT NAME:	WORCESTER-ELMORE
PROJECT NUMBER:	STP 2954(I)
FILE NAME:	pl4v23lwrk.dgn
PROJECT LEADER:	J. HARRINGTON
DESIGNED BY:	B. KIPP
PLAN SHEET	20
PLOT DATE:	13-MAY-2016
DRAWN BY:	B. KIPP
CHECKED BY:	N. PAPPAS
SHEET	30 OF 33



**BANKING DIAGRAM**

PROJECT NAME:	WORCESTER-ELMORE
PROJECT NUMBER:	STP 2956(I)
FILE NAME: pl4v23lwrk.dgn	PLOT DATE: 13-MAY-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
BANKING SHEET	SHEET 31 OF 33

NOTES:

1. THE CONTRACTOR SHALL SUBMIT A SITE-SPECIFIC TRAFFIC CONTROL PLAN TO THE PROJECT MANAGER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION. THE COST OF PREPARING THIS PLAN (AND MAKING CHANGES IF NECESSARY) WILL NOT BE PAID SEPARATELY BUT WILL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 641.10, TRAFFIC CONTROL.
2. THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN APPROACH PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH VAOT STANDARD T-17 AND THE LATEST EDITION OF THE MUTCD. PAYMENT FOR PROVIDING THIS PACKAGE WILL BE CONSIDERED INCIDENTAL TO ITEM 641.10, TRAFFIC CONTROL.
3. THE BID PRICE FOR TRAFFIC CONTROL, ITEM 641.10, WILL INCLUDE ALL APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VTRANS STANDARDS. ALL ADJUSTING, RELOCATING, AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED. THE FOLLOWING ITEMS WILL BE PAID FOR SEPARATELY: 630.10 - UNIFORMED TRAFFIC OFFICERS, AND 630.15 - FLAGGERS, 646.602 - TEMPORARY 4 INCH WHITE LINE, PAINT, 646.612 - TEMPORARY 4 INCH YELLOW LINE, PAINT AND 646.76 - LINE STRIPING TARGETS.
4. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PROVIDED FOR USE ALONG THIS PROJECT. THE PLACEMENT OF THESE UNITS AS WELL AS THE MESSAGE WILL BE APPROVED BY THE ENGINEER. THESE SIGNS WILL BE PAID FOR UNDER ITEM 641.15, PORTABLE CHANGEABLE MESSAGE SIGN.

FOR THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL POSITION A PCMS PRIOR TO THE BEGIN AND END PROJECT LIMITS WARNING MOTORISTS OF EXPECTED ROADWAY CONDITIONS AND REDUCED ROADWAY WIDTHS.

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

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

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

5. 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.
6. REFER TO VT. STATE STANDARDS AND THE LATEST EDITION OF THE MUTCD FOR TEMPORARY TRAFFIC CONTROL SIGN COLORS.
7. EXISTING SPEED LIMIT SIGNS SHALL BE COVERED WHEN REDUCED SPEED SIGNS ARE POSTED. KEEP RECORDS WHEN POSTING THE WORK ZONE SPEED LIMIT FOR LEGAL PURPOSES; DOCUMENTING DATES, TIMES, AND LOCATIONS OF SIGNS. WHEN WORK ZONE SPEED LIMIT IS NOT IN USE ALL ASSOCIATED SIGNS SHALL BE COVERED, TURNED AND/OR LAID FLAT SO AS THE MOTORING PUBLIC CANNOT READ THESE SIGNS.
8. PORTABLE OR STATIONARY WORK ZONE SPEED LIMIT SIGNS SHOULD BE SPACED EVERY 1.5 TO 2 MILES WHERE APPLICABLE AND AFTER INTERSECTIONS AS A REMINDER TO THE MOTORIST TRAVELING THROUGH THE WORK ZONE WHAT SPEED THEY SHOULD BE TRAVELING.
9. WHEN REDUCED REGULATORY SPEED LIMIT SIGNS ARE USED, THE RESUMPTION OF THE USUAL SPEED LIMIT SHALL BE INDICATED BY AN APPROPRIATE SPEED LIMIT SIGN AT THE END OF THE WORK ZONE.

PROJECT NAME: WORCESTER-ELMORE

PROJECT NUMBER: STP 2956(I)

FILE NAME: pl4v23lwrk.dgn

PLOT DATE: 13-MAY-2016

PROJECT LEADER: J. HARRINGTON

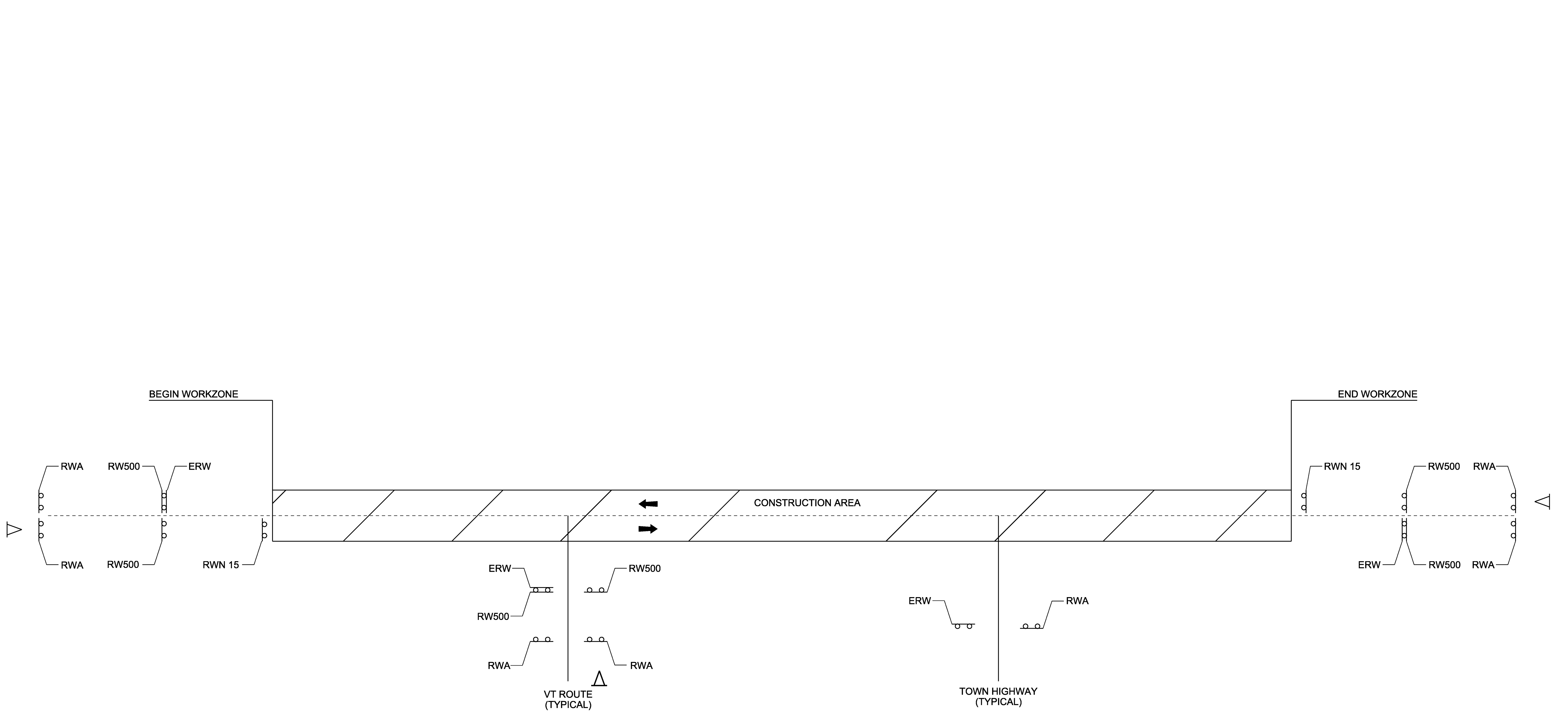
DRAWN BY: B. KIPP

DESIGNED BY: B. KIPP

CHECKED BY: M. FOWLER

TRAFFIC CONTROL NOTES SHEET

SHEET 32 OF 33



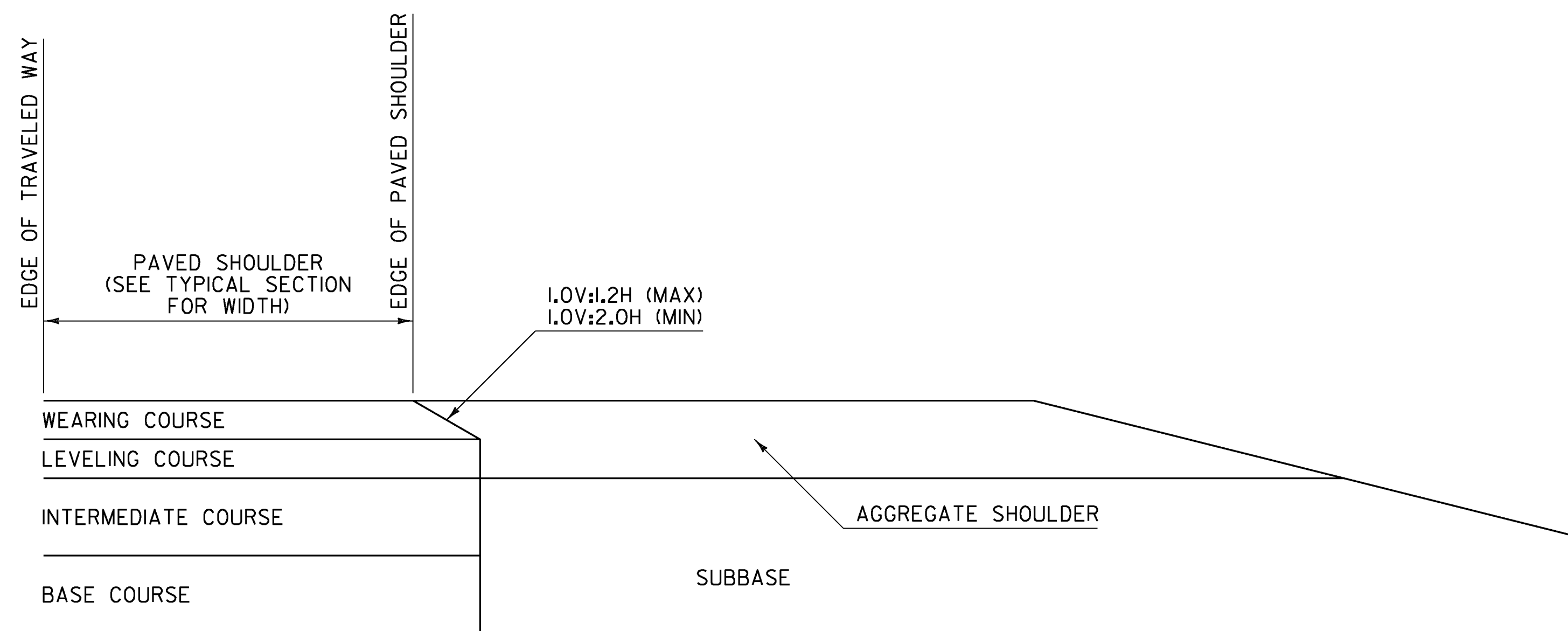
**TYPICAL CONSTRUCTION APPROACH SIGNING FOR  
CONVENTIONAL TWO-WAY HIGHWAY**

**LEGEND**

- RWA = ROAD WORK AHEAD
- RW500 = ROAD WORK IN 500 FEET
- RWN = ROAD WORK NEXT (XX MILES)
- ERW = END ROAD WORK
- SRWA = SIDE ROAD WORK AHEAD
- SRW500 = SIDE ROAD WORK 500 FEET
- △ = PORTABLE CHANGEABLE MESSAGE SIGN
- [Hatched Box] = WORK AREA
- ← = DIRECTION OF TRAFFIC FLOW

**NOTE:**  
SEE VAOT STANDARDS T-1, T-10, T-11 AND T-13 FOR SIGN PLACEMENT.  
CONSTRUCTION APPROACH SIGNING SHALL BE PLACED AS NOT TO INTERFERE WITH EXISTING TRAFFIC CONTROL DEVICES.  
SEE CONSTRUCTION APPROACH SIGNING NOTES SHEET.

PROJECT NAME:	WORCESTER-ELMORE
PROJECT NUMBER:	STP 2954(I)
FILE NAME: pl4v23lwrk.dgn	PLOT DATE: 13-MAY-2016
PROJECT LEADER: J. HARRINGTON	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 33 OF 33

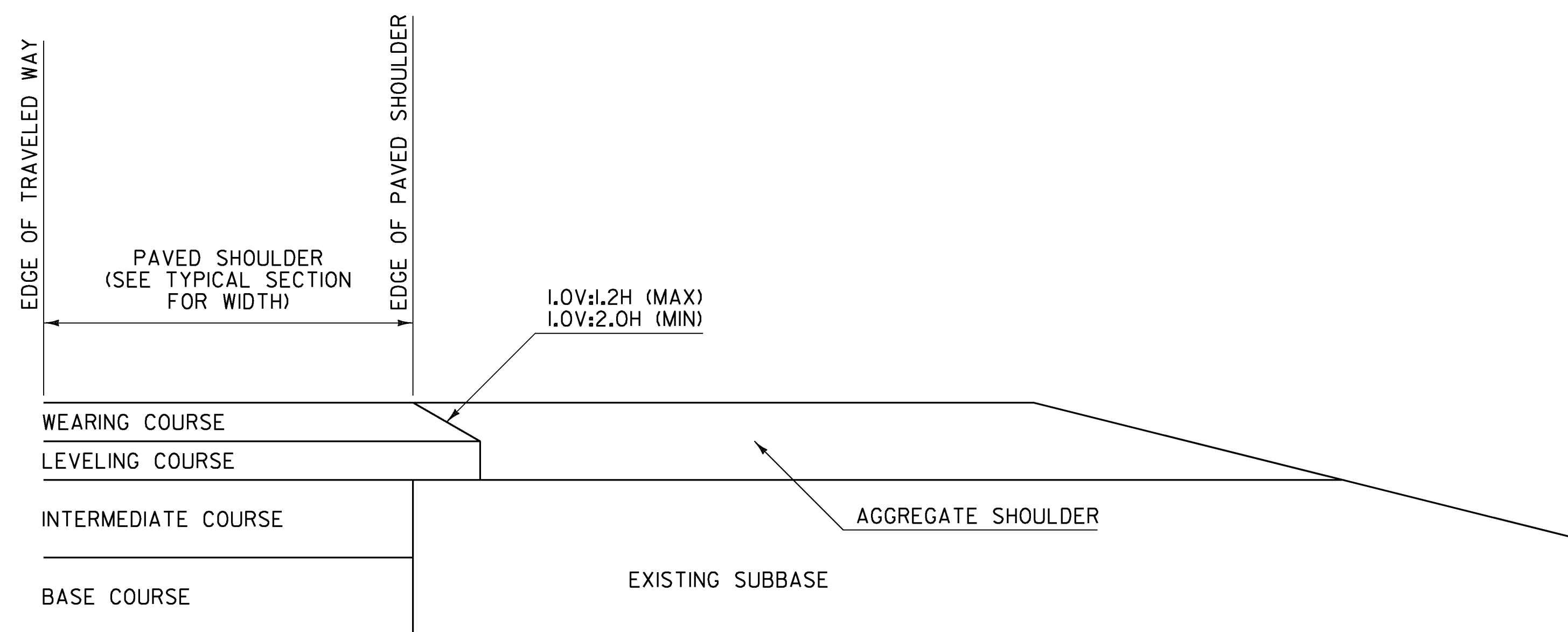


**NOTES:**

1. THIS DETAIL IS INTENDED FOR WHEN PAVING EXTENDS BELOW THE WEARING COURSE.
2. PRIOR TO PLACEMENT OF THE LEVELING AND/OR WEARING COURSE, THE SUBBASE LOCATED BENEATH THE AGGREGATE SHOULDER SHALL BE PREPARED FLUSH WITH THE BOTTOM OF THE LEVELING COURSE.
3. BASE COURSE LIMITS MAY VARY, SEE TYPICAL SECTIONS FOR WIDTH.

**SAFETY EDGE DETAIL  
FOR PAVING BELOW WEARING COURSE**

SAFETY EDGE WIDTH BASED ON WEARING COURSE THICKNESS AND A 1V:1.6H SLOPE	
WEARING COURSE THICKNESS (INCHES)	NOMINAL SAFETY EDGE WIDTH (INCHES)
1.25	2.000
1.50	2.375
1.75	2.750
2.00	3.125
2.25	3.500
2.50	4.000



**NOTES:**

1. THIS DETAIL IS INTENDED FOR WHEN ONLY THE LEVELING AND/OR WEARING COURSE IS TO BE PLACED.
2. PAVEMENT COURSES MAY VARY, SEE TYPICAL SECTIONS FOR ACTUAL PAVEMENT COURSES REQUIRED.

**SAFETY EDGE DETAIL  
FOR PAVING WEARING COURSE ONLY**

**GENERAL NOTES:**

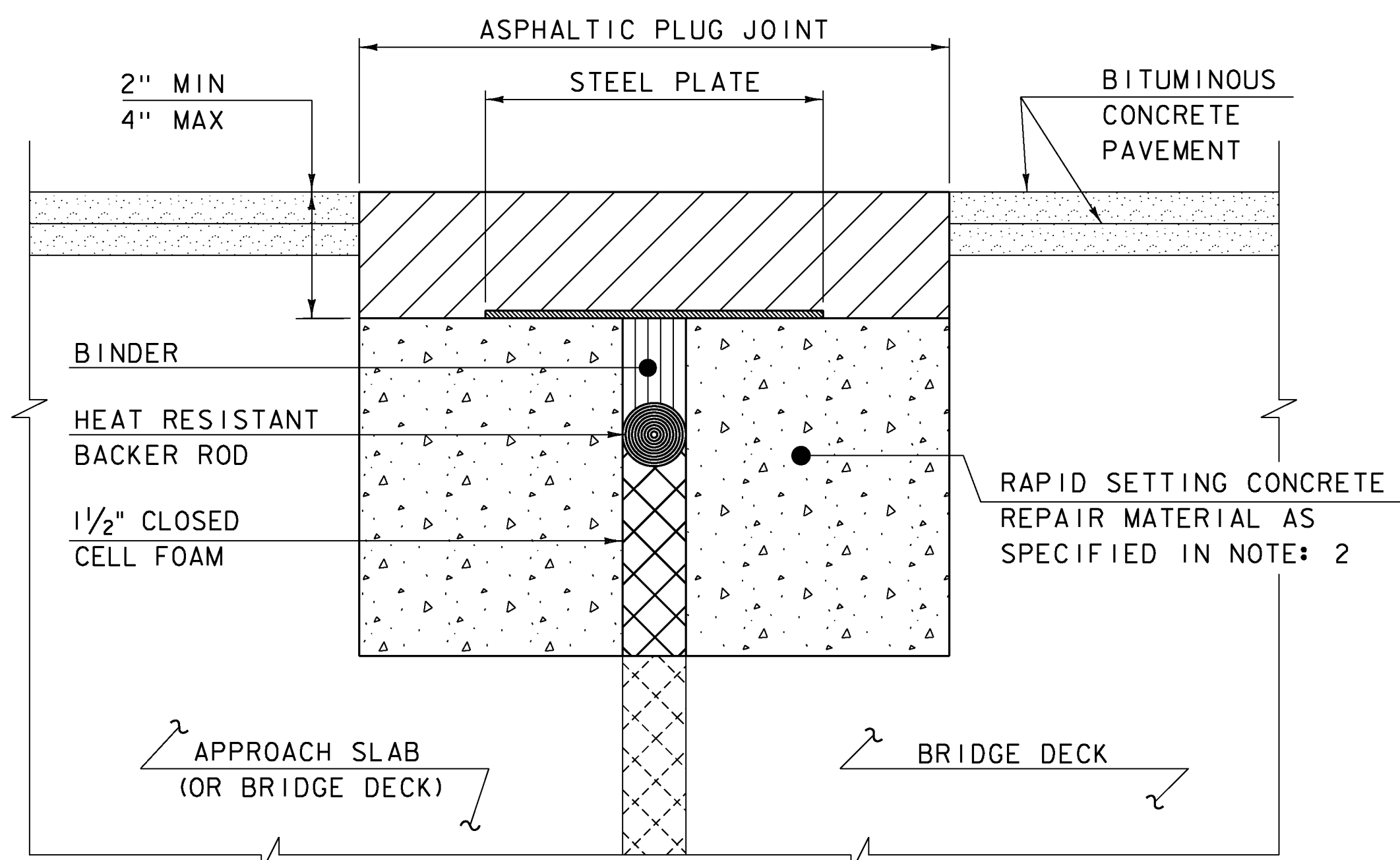
1. PLACEMENT OF THE WEARING COURSE SHALL INCLUDE THE SAFETY EDGE, UNLESS THE FOLLOWING APPLIES:
  - A. THE ADJACENT SLOPE IS STEEPER THAN THE SAFETY EDGE.
  - B. THE EDGE OF PAVEMENT BEING PLACED ABUTS BOUND MATERIAL.
  - C. VEHICLES ARE RESTRICTED FROM LEAVING THE PAVED SURFACE (EXAMPLE: GUARDRAIL).
2. THE SAFETY EDGE SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE SLOPE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
3. THE SAFETY EDGE SHALL NOT BE CONSIDERED PART OF THE PAVED SHOULDER.
4. THIS WORK SHALL BE INCIDENTAL TO THE RESPECTIVE BITUMINOUS CONCRETE PAVEMENT ITEM.

REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL
OTHER DETAILS REQUIRED: NONE		
DETAILS APPROVED FOR USE BY HIGHWAY SAFETY & DESIGN		

SAFETY EDGE DETAILS



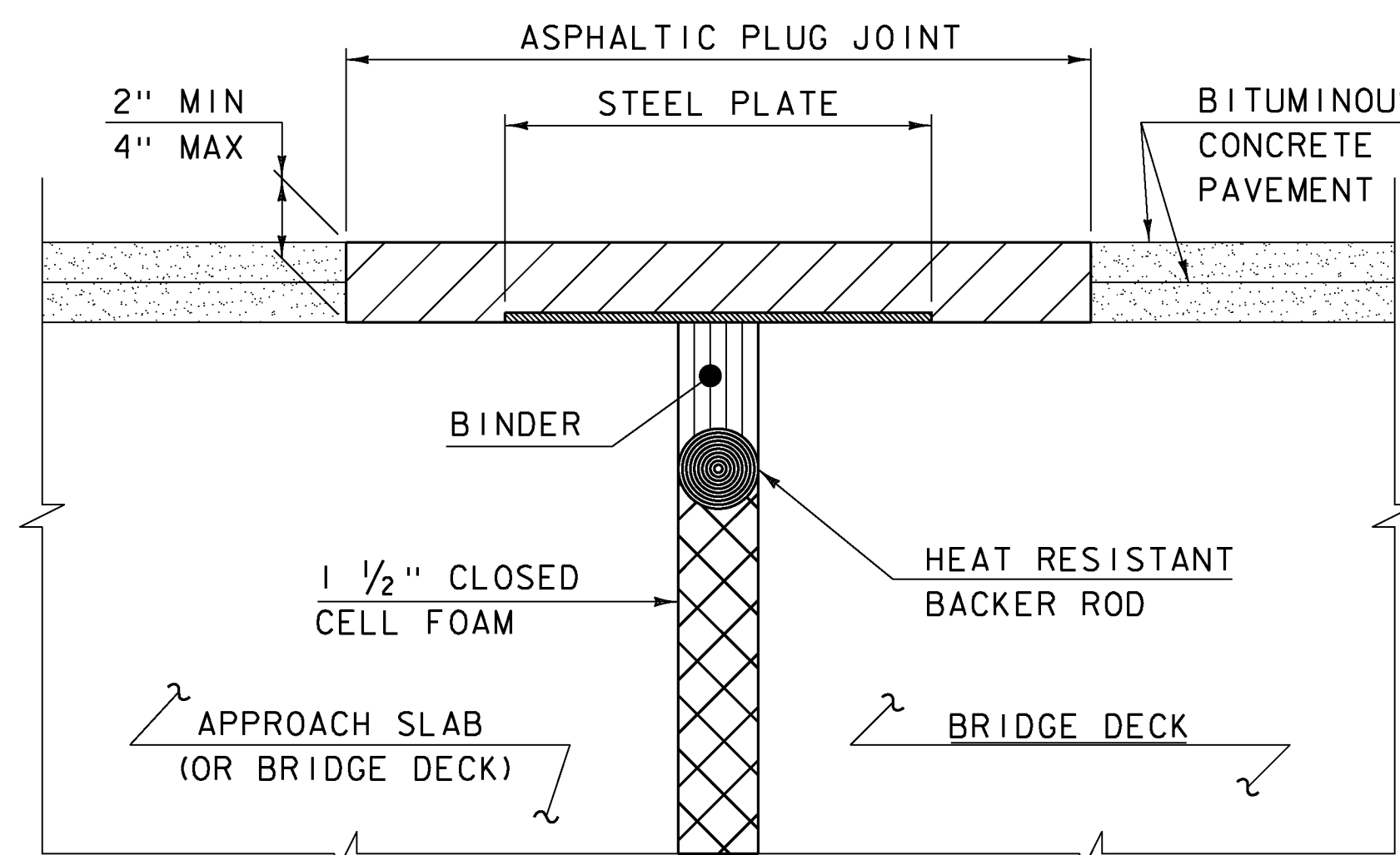
HIGHWAY SAFETY  
& DESIGN DETAIL  
HSD-400.01



ASPHALTIC PLUG JOINT DETAIL - REHAB

NOTES:

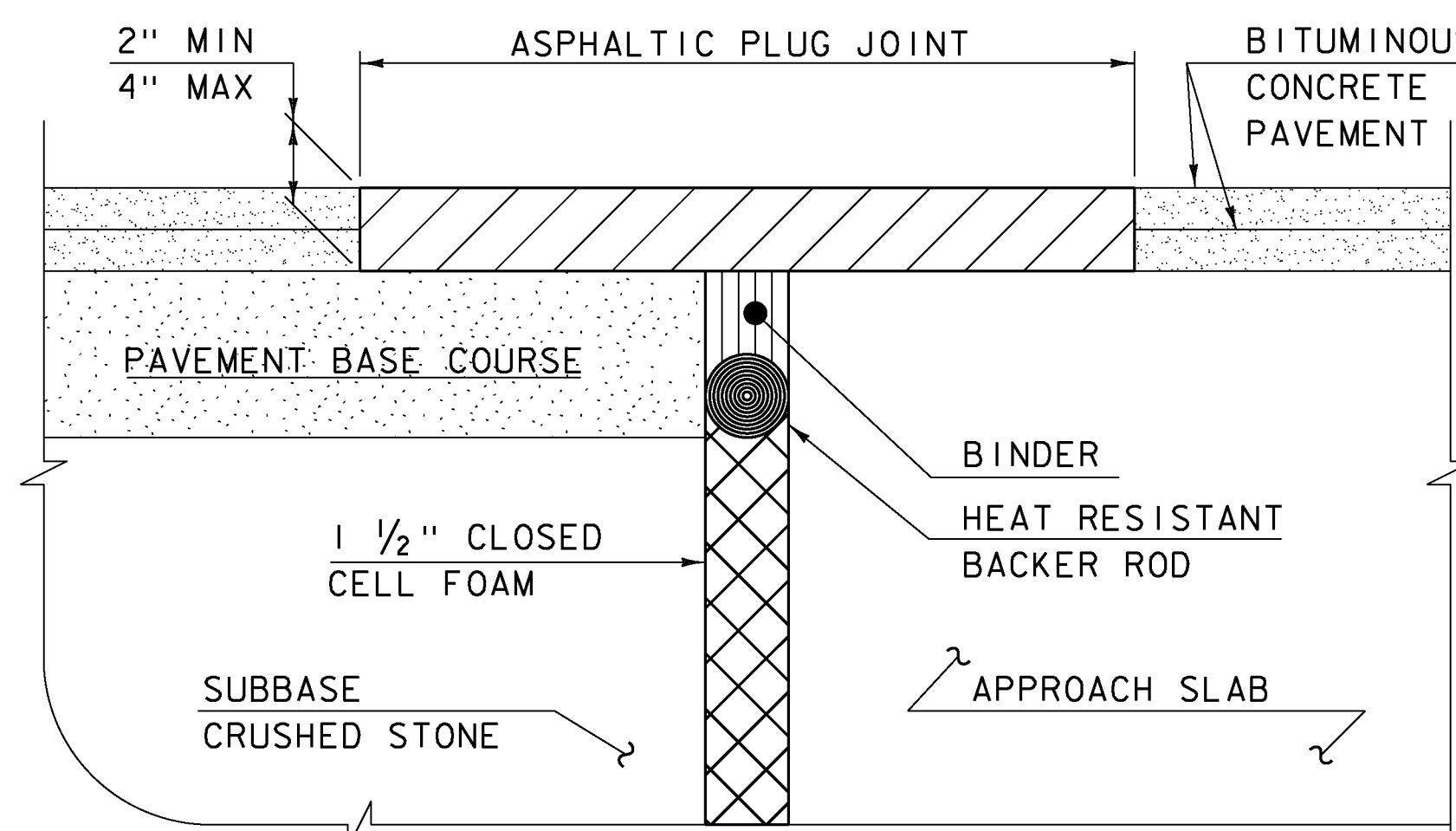
1. THE CONTRACTOR SHALL REMOVE ALL ASPHALTIC PLUG JOINT MATERIAL AND DETERIORATED CONCRETE AS DIRECTED BY THE ENGINEER. REMOVAL OF THE FIRST 4 INCHES OF MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 516.10 BRIDGE EXPANSION JOINT, ASPHALTIC PLUG. ANY REMOVAL OF MATERIAL GREATER THAN 4 INCHES SHALL BE INCLUDED IN THE BID PRICE OF ITEM 580.20 RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE.
2. THE CONTRACTOR SHALL REPLACE REMOVED MATERIAL THAT IS LESS THAN 4" FROM FINISHED GRADE WITH ASPHALTIC PLUG JOINT MATERIAL MEETING THE REQUIREMENTS OF SUBSECTION 707.15. ALL REMOVED MATERIAL THAT IS GREATER THAN 4 INCHES FROM FINISHED GRADE SHALL BE REPLACED WITH RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE MEETING THE REQUIREMENTS OF SUBSECTION 780.04.
3. REINFORCING STEEL NOT SHOWN FOR CLARITY.
4. PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER. THE STEEL PLATES MAY BE OMITTED WHERE THE ENGINEER DETERMINES THAT THE APPROACH SLAB OR BRIDGE DECK WILL PROVIDE INADEQUATE SUPPORT AND WHERE VERTICAL MOVEMENT OF THE PLATES MIGHT OCCUR.



ASPHALTIC PLUG JOINT DETAIL "A" - NEW

NOTE:

PLACE 1/4" THICK BY 8" WIDE SECTIONS OF STEEL PLATE OVER THE CENTER OF THE MOVEMENT GAP. SECURE THE PLATES FROM MOVING BY INSERTING LOCATING PINS THROUGH THE PRE-STAMPED HOLES INTO BACKER ROD AND COVER WITH HOT BINDER.



ASPHALTIC PLUG JOINT DETAIL "B" - NEW

ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

1. LOCATE THE JOINT CENTRALLY OVER THE DECK OVERLAY EXPANSION GAP OR FIXED JOINT, MARKED OUT TO THE MANUFACTURER'S RECOMMENDED WIDTH.
2. REMOVE THE BITUMINOUS CONCRETE PAVEMENT FULL DEPTH AS SHOWN ON THE PLANS. THE PAVEMENT SHALL BE DRY AND SAW CUT TO THE LIMITS REQUIRED TO PLACE THE JOINT. A PNEUMATIC HAMMER AND CHISEL MAY BE USED ADJACENT TO THE CURB ONLY WHEN SAW CUTTING IS NOT POSSIBLE.
3. BLAST CLEAN THE JOINT AREA OF DEBRIS, ASPHALT AND SHEET MEMBRANE. THOROUGHLY DRY THE JOINT AREA WITH COMPRESSED AIR PRIOR TO APPLYING BINDER MATERIAL.
4. PLACE PROPERLY SIZED HEAT RESISTANT BACKER ROD IN THE MOVEMENT GAP ALLOWING FOR 1" +/- OF BINDER ABOVE THE ROD.
5. HEAT AND PLACE THE BINDER MATERIAL AS RECOMMENDED BY THE MANUFACTURER.
6. IMMEDIATELY AFTER TOP COATING, CAST AN ANTI-SKID MATERIAL OVER THE JOINT TO REDUCE THE RISK OF TRACKING.

WEATHER LIMITATIONS

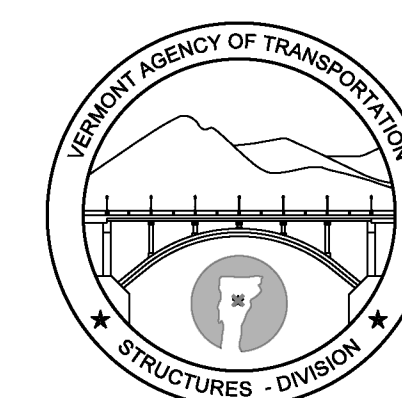
APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:

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

DETAILS ON THIS SHEET ARE NOT TO SCALE.

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
AUGUST 29, 2011	ADD DETAIL "B" AND REV. NOTES

BRIDGE JOINT  
ASPHALTIC PLUG



STRUCTURES  
DETAIL  
SD-516.10