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STRUCTURES DETAIL SHEET

SD-516.10 BRIDGE JOINT ASPHALTIC PLUG

VAOT STANDARDS

E-191	02/01/99
E-192	10/12/00
E-193	08/18/95
T-1	08/06/12
T-10	08/06/12
T-11	08/06/12
T-12	08/06/12
T-13	08/06/12
T-16	08/06/12
T-17	08/06/12
T-22	08/06/12
T-23	08/06/12
T-28	08/06/12
T-29	08/06/12
T-30	08/06/12
T-31	08/06/12
T-33	08/06/12
T-36	08/06/12

STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
TOWNS OF BETHEL, RANDOLPH & BROOKFIELD
COUNTIES OF WINDSOR & ORANGE
INTERSTATE ROUTE 89 (PRINCIPAL ARTERIAL - NHS)

BEGINNING IN THE TOWN OF BETHEL AT MM 25.344 AND EXTENDING NORTHERLY
ALONG INTERSTATE ROUTE 89 (NORTHBOUND LANE) FOR A DISTANCE OF
65,250.24 FEET (12.358 MILES) TO MM 37.702 IN THE TOWN OF BROOKFIELD.

BEGINNING IN THE TOWN OF BETHEL AT MM 25.400 AND EXTENDING NORTHERLY
ALONG INTERSTATE ROUTE 89 (SOUTHBOUND LANE) FOR A DISTANCE OF
60,894.24 FEET (11.533) TO MM 36.933 IN THE TOWN BROOKFIELD.

LENGTH OF ROADWAY = 65,250.24 FEET (12.358 MILES)
LENGTH OF PROJECT = 65,250.24 FEET (12.358 MILES)

WORK TO BE PERFORMED UNDER THIS PROJECT INCLUDES MICRO-MILLING, SURFACE PREPARATION INVOLVING PATCHING, POT HOLE REPAIR,
CRACK SEALING, OVERLAYING WITH A THIN BITUMINOUS SURFACE TREATMENT, TRAFFIC MARKINGS AND OTHER HIGHWAY RELATED ITEMS.

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.

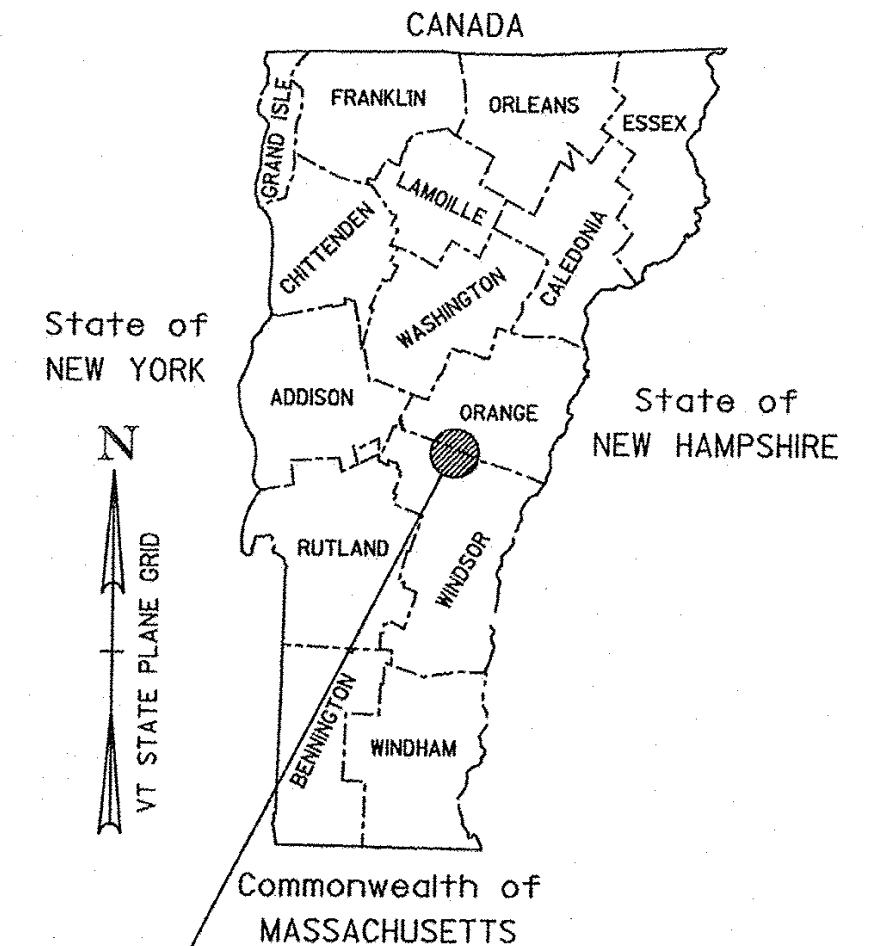
QUALITY ASSURANCE PROGRAM : LEVEL 1

SURVEYED BY : NA
SURVEYED DATE : NA

DATUM
VERTICAL NA
HORIZONTAL NA

TRAFFIC DATA

	AADT		DHV		%T		%D		ADTT		FLEXIBLE ESALs (2015-2025)	FLEXIBLE ESALs (2015-2035)
	2015	2025	2015	2025	2015	2025	2015	2025	2015	2025		
I-89 NB (MM 25.344 - MM 30.900)	7,300	7,900	1,100	1,100	15.5%	19.3%	100	100	1,500	2,000	4,462,000	10,362,000
I-89 NB (MM 30.900 - MM 37.702)	6,900	7,500	990	1,100	13.4%	16.6%	100	100	1,200	1,600	3,991,000	9,343,000
I-89 SB (MM 25.400 - MM 30.900)	7,300	7,900	1,100	1,200	12.4%	15.5%	100	100	1,300	1,700	3,090,000	7,146,000
I-89 SB (MM 30.900 - MM 36.933)	6,900	7,500	1,100	1,200	10.6%	13.3%	100	100	1,200	1,600	3,513,000	8,232,000



PROJECT LOCATION
BETHEL-BROOKFIELD
IM SURF(54)

BUILT AS DESIGNED

RECORD PLANS

CONTRACTOR: PIKE INDUSTRIES, INC. - BERLIN, VT
RESIDENT ENGINEER: JOHN SLADYK
CONSTRUCTION BEGAN: JUNE 25, 2015
CONSTRUCTION COMPLETE: AUGUST 12, 2015
RECORD PLANS BY: JOHN SLADYK & AARON JAMES

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

BY *John Sladyk* RESIDENT ENGINEER

DATE 8-2-16

NOTE: Any further information concerning final quantities, amounts or other details
relative to this project may be found by contacting Vtrans Records Management.

DIRECTOR OF PROJECT DELIVERY:

APPROVED: *John Sladyk* DATE: 2/11/2015

PROJECT MANAGER : MICHAEL J. FOWLER, P.E.

PROJECT NAME : BETHEL-BROOKFIELD

PROJECT NUMBER : IM SURF(54)

SHEET 1 OF 22

NOT TO SCALE

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 ——— PDF ———	PROJECT DEMARCATION FENCE
BF — x — x — BF — x — x —	BARRIER FENCE
xxxxxxxxxxxxxxxxxxxx	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.
—— / ——	STATE ROW (LIMITED ACCESS)
—— ———	STATE ROW
—— ———	TOWN ROW
— · — · — · — · — ·	PERMANENT EASEMENT LINE (P)
— — — — —	TEMPORARY EASEMENT LINE (T)
— — — — —	SURVEY LINE
— · — — — — · — —	PROPERTY LINE (P/L)
△ SR — ○ — SR — △ SR — ○	SLOPE RIGHTS
6f ————— 6f ———	6F PROPERTY BOUNDARY
4f ————— 4f ———	4F PROPERTY BOUNDARY
HAZ ————— HAZ ———	HAZARDOUS WASTE

EPSC LAYOUT PLAN SYMBOLGY

EPSC MEASURES	
ONNOONNOONNO	FILTER CURTAIN
— x — x — x — x —	SILT FENCE
— x — x — x — x —	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 ——— 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

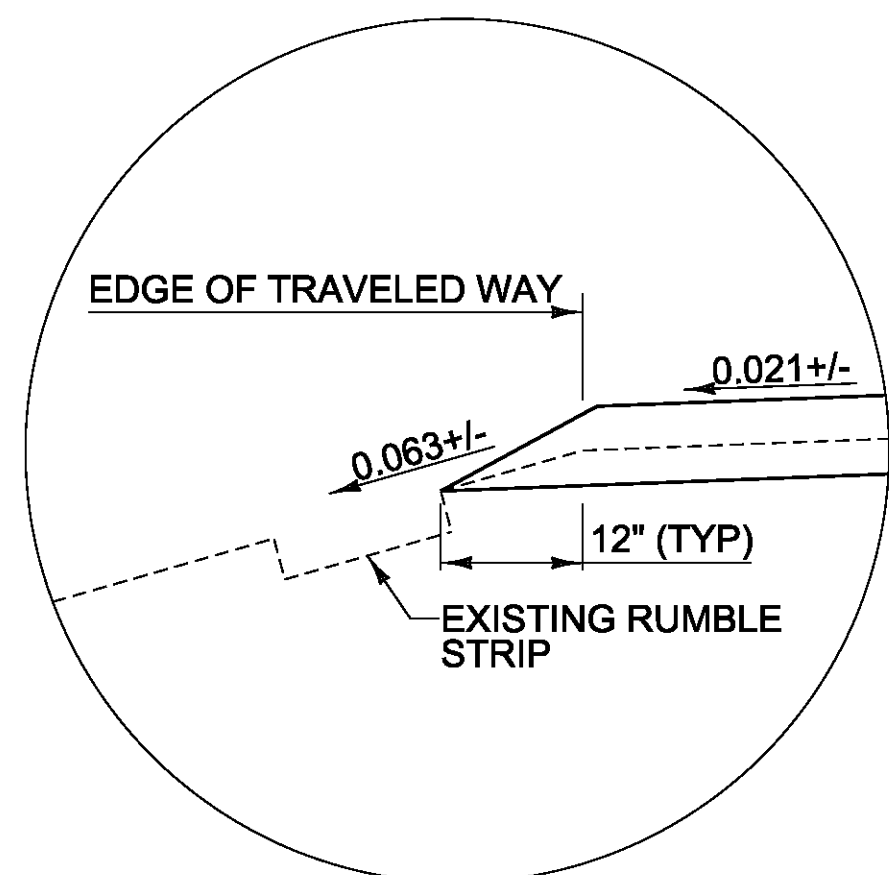
-----	ARCHEOLOGICAL BOUNDARY
-----	HISTORIC DISTRICT BOUNDARY
-----	HISTORIC AREA
Ⓜ	HISTORIC STRUCTURE

CONVENTIONAL TOPOGRAPHIC SYMBOLGY

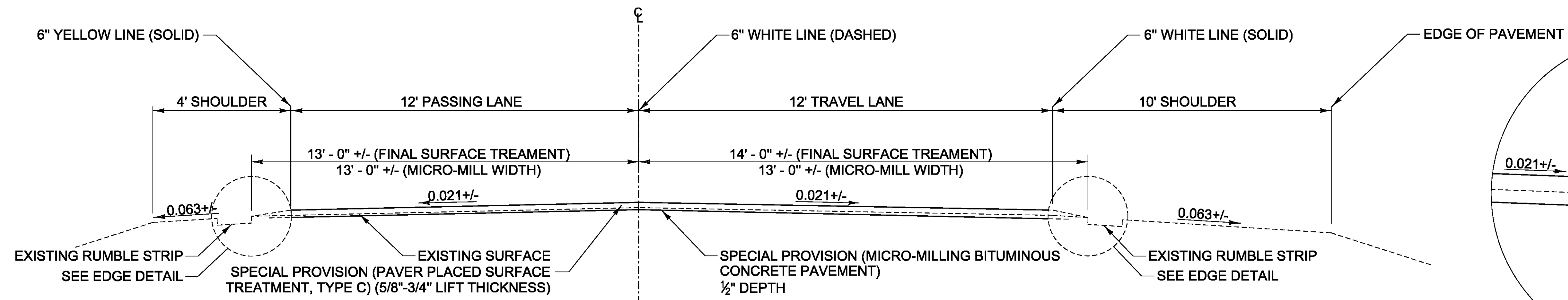
EXISTING FEATURES	
-----	ROAD EDGE PAVEMENT
-----	ROAD EDGE GRAVEL
-----	DRIVEWAY EDGE
-----	DITCH
-----	FOUNDATION
x — x — x — x —	FENCE (EXISTING)
□ — □ — □ — □ —	FENCE WOOD POST
○ — ○ — ○ — ○ —	FENCE STEEL POST
~~~~~	GARDEN
○ — ○ — ○ — ○ —	ROAD GUARDRAIL
	RAILROAD TRACKS
-----	CULVERT (EXISTING)
ooooo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

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

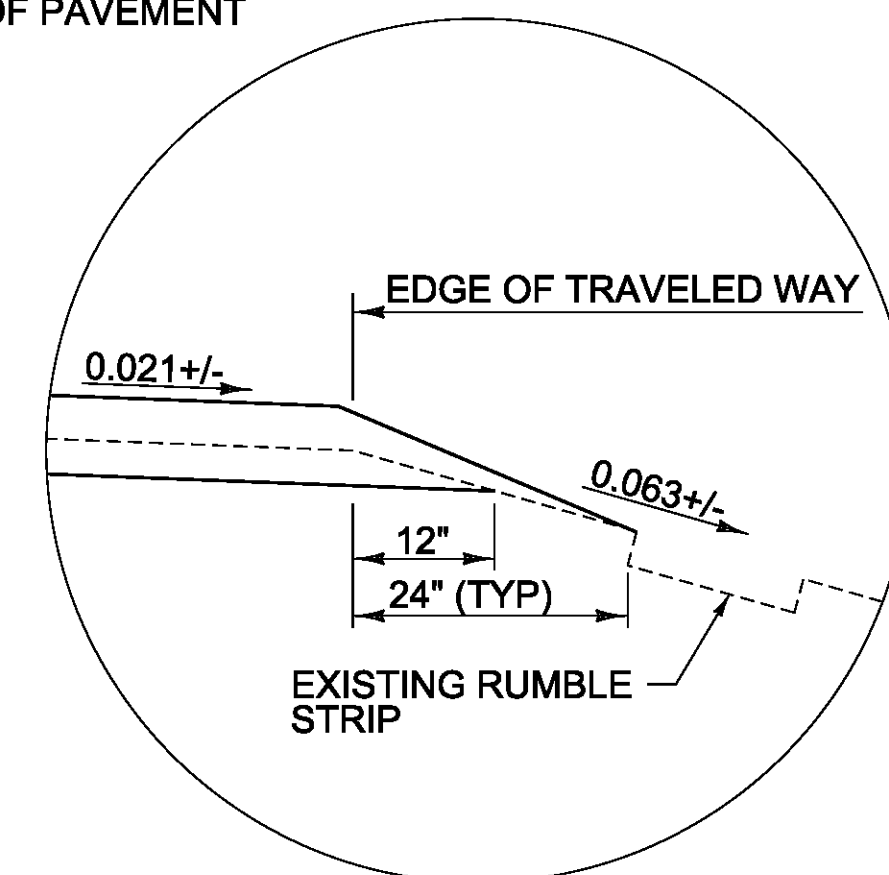
FILE NAME: pl4v206wrk.dgn	PLOT DATE: 2/10/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
CONVENTIONAL SYMBOLGY SHEET	SHEET 2 OF 22



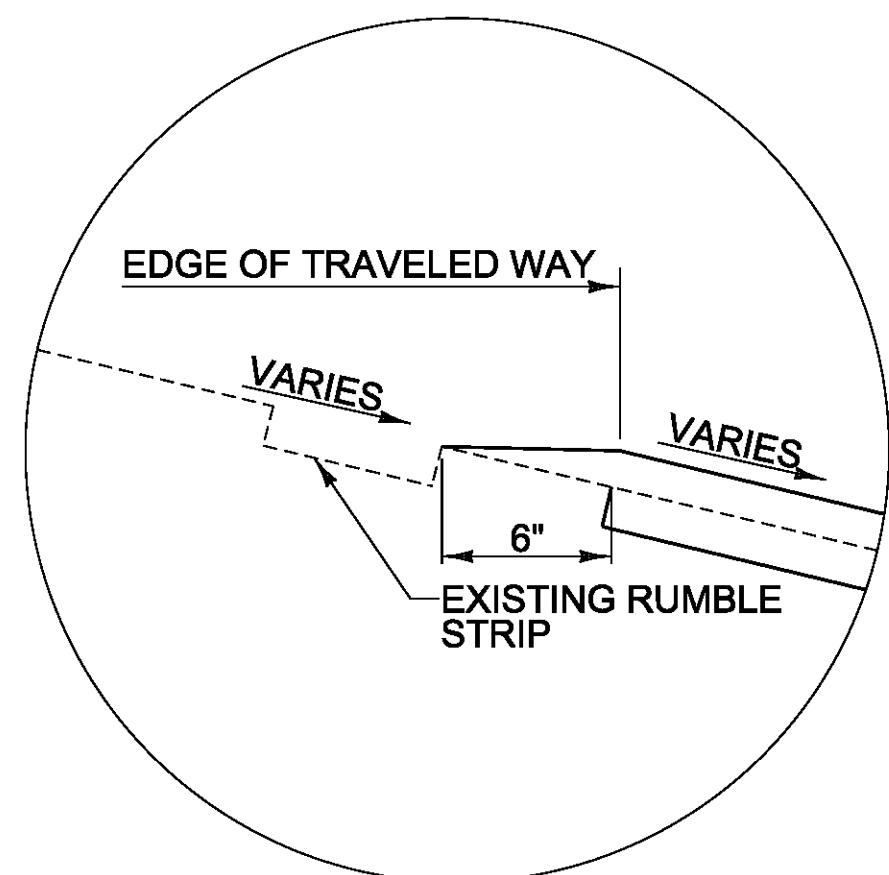
**EDGE DETAIL
NORMAL CROWN SECTION**



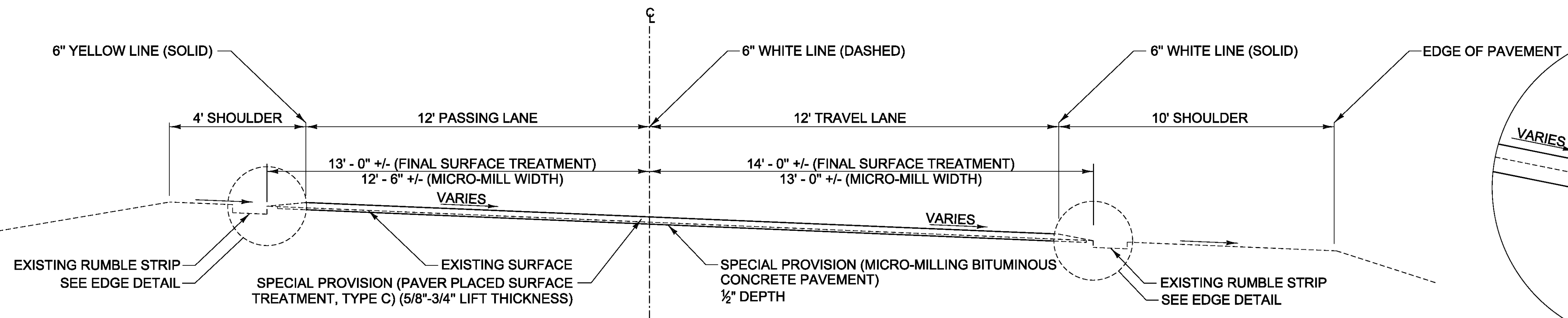
**ROADWAY TYPICAL NORMAL SECTION
ALTERNATE A
NOT TO SCALE**



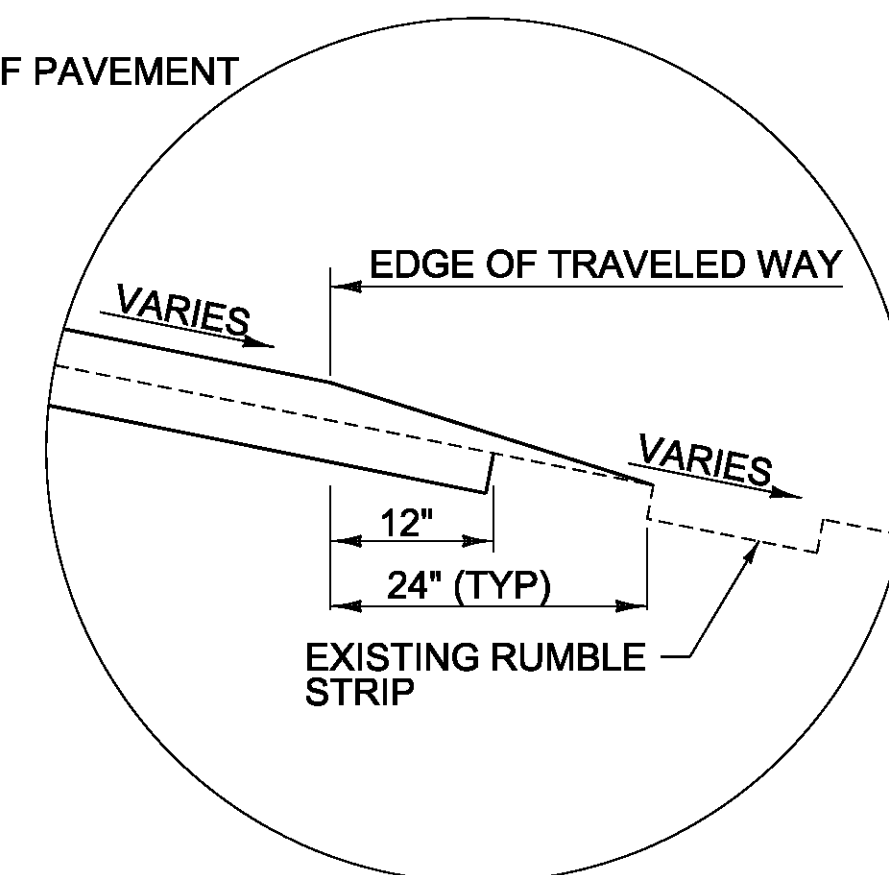
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NORMAL CROWN SECTION**



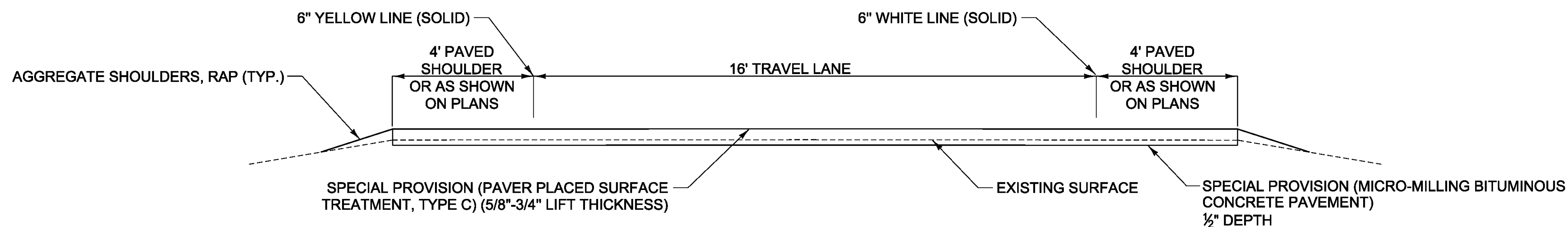
**EDGE DETAIL
MAX BANK SECTION**



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



**EDGE DETAIL
MAX BANK SECTION**



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

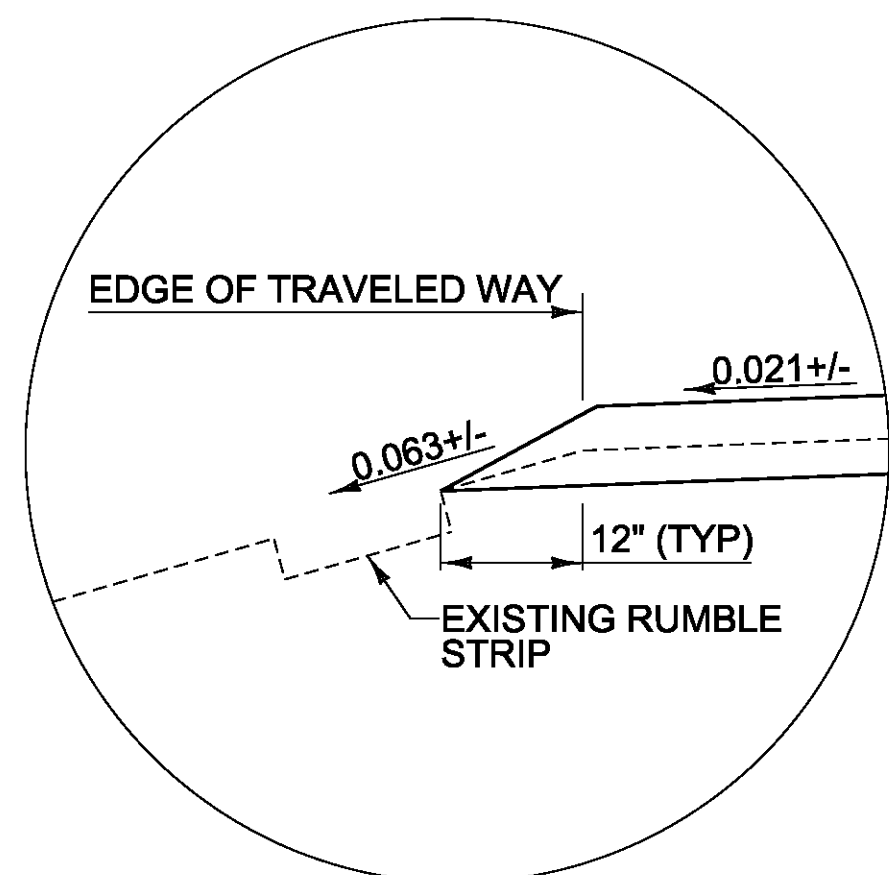
NOTE:

1. PERFORMANCE GRADED BINDER SHALL BE PG 58-28.

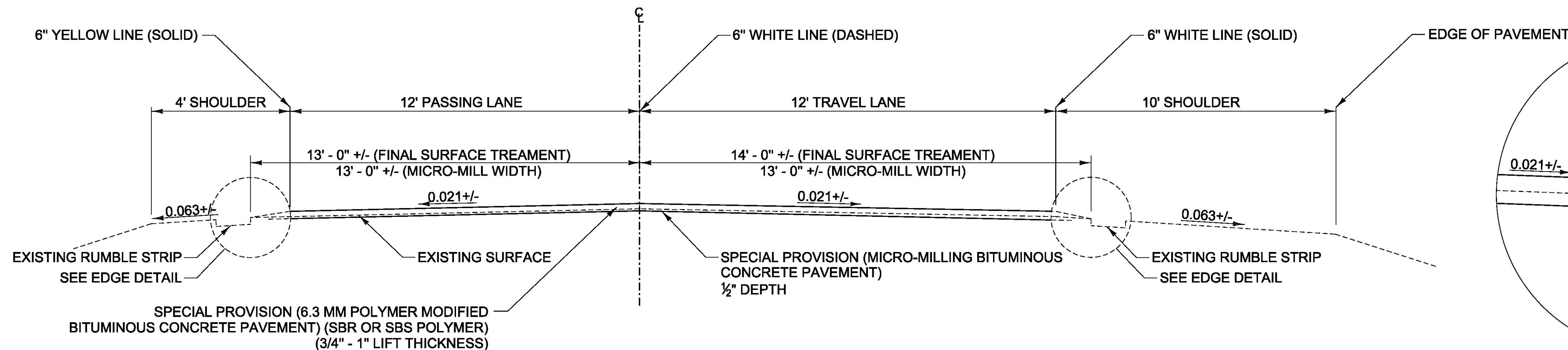
PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TYPICAL SECTIONS - ALTERNATE A

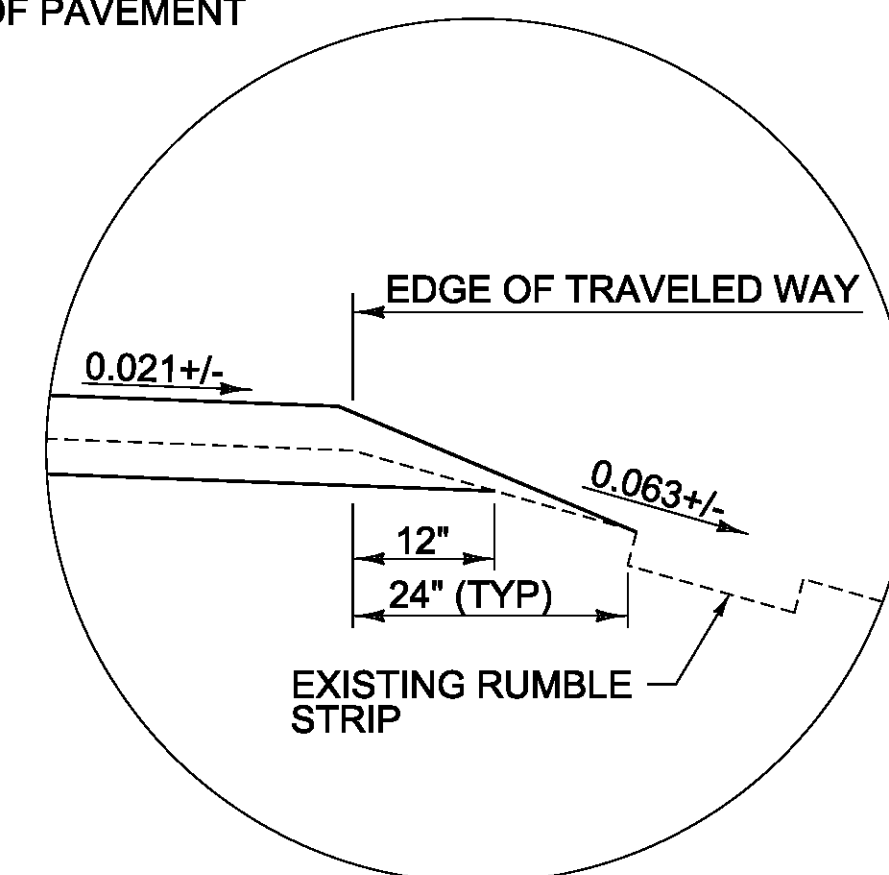
PLOT DATE: 2/17/2015
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 3 OF 22



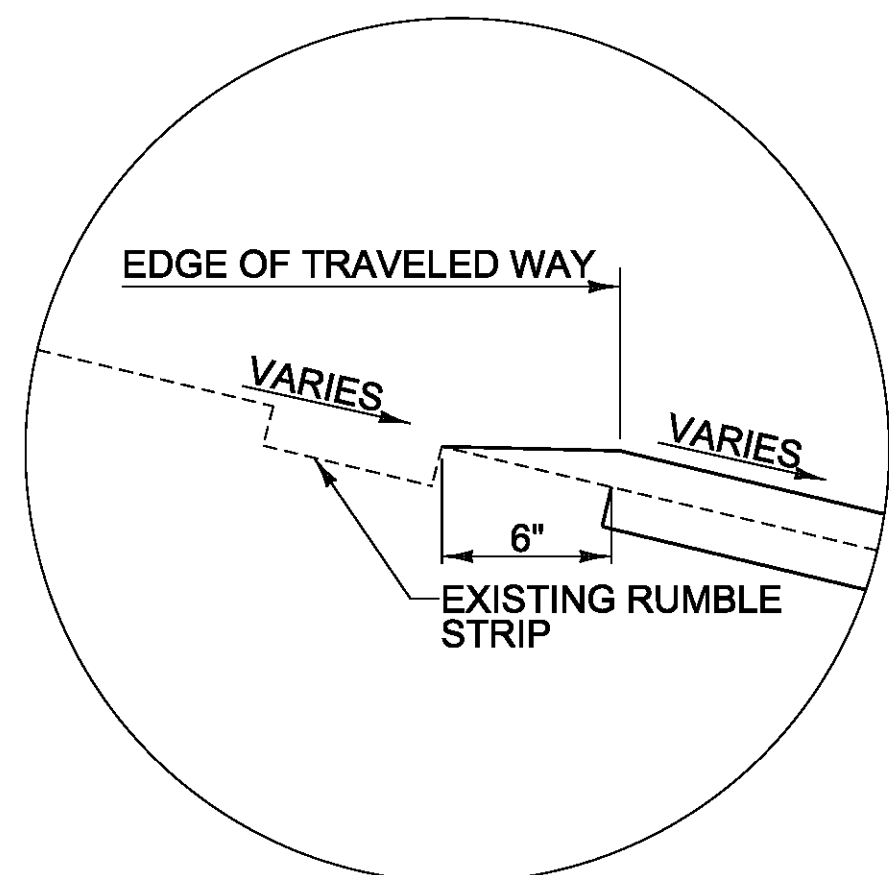
**EDGE DETAIL
NORMAL CROWN SECTION**



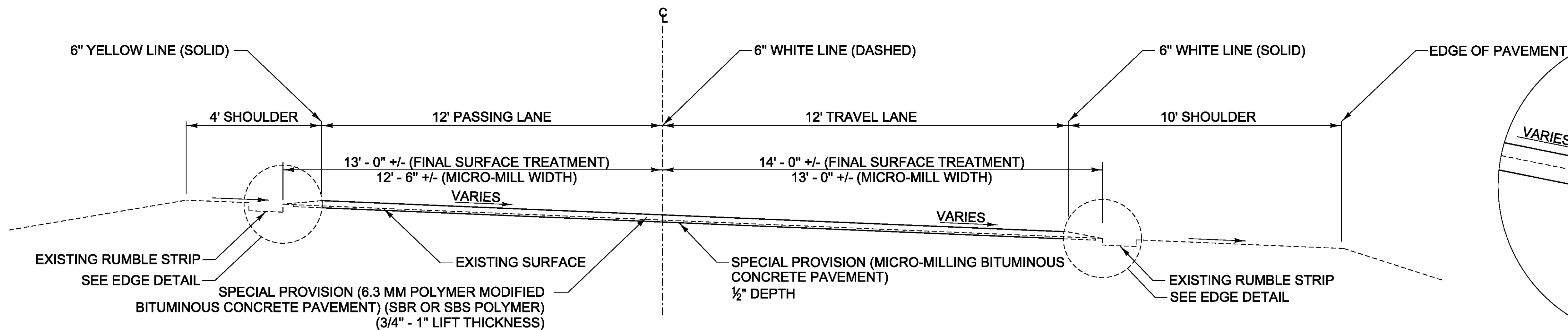
**ROADWAY TYPICAL NORMAL SECTION
ALTERNATE B
NOT TO SCALE**



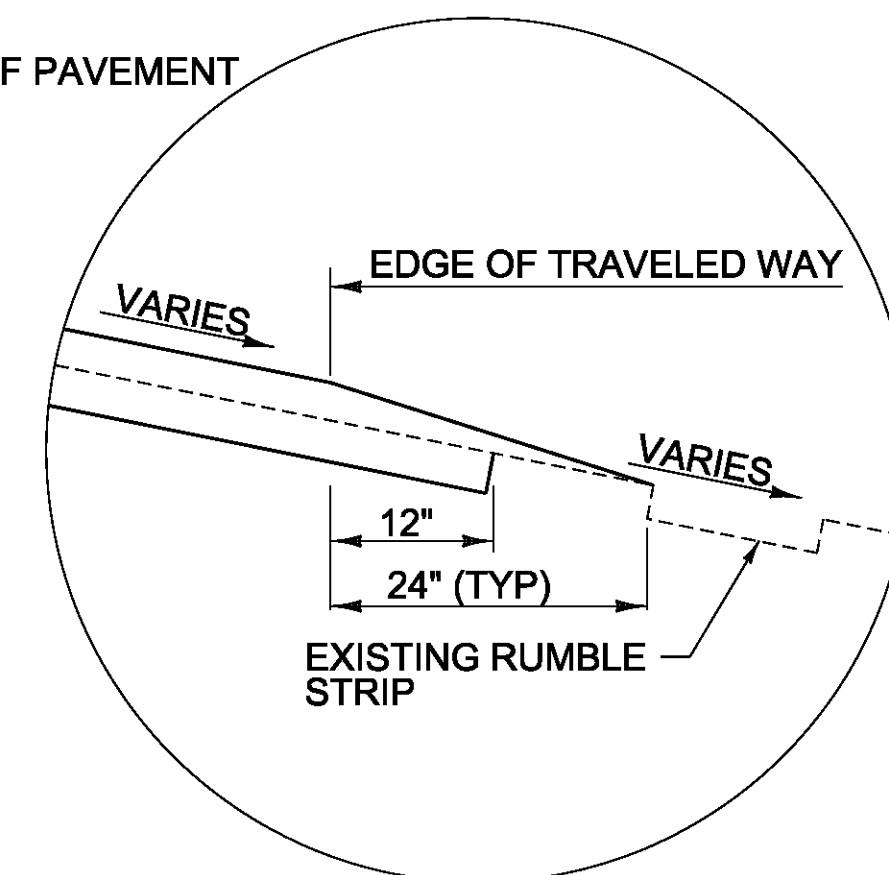
**EDGE DETAIL
NORMAL CROWN SECTION**



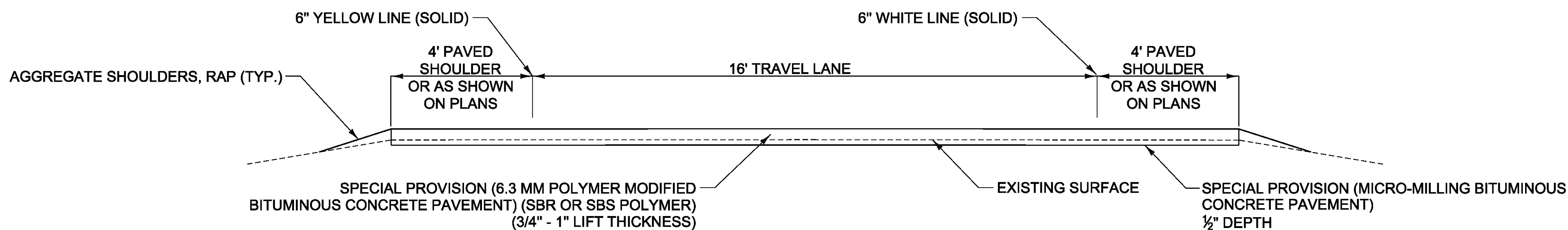
**EDGE DETAIL
MAX BANK SECTION**



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



**EDGE DETAIL
MAX BANK SECTION**



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

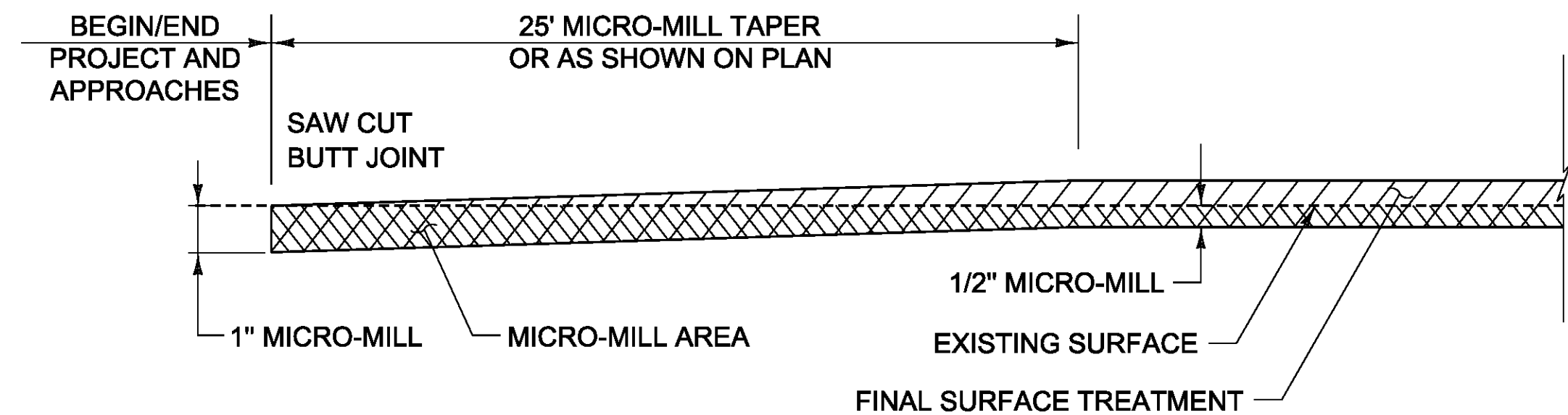
NOTES:

1. PRIOR TO THE PLACEMENT OF THE 6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT, EMULSIFIED ASPHALT SHALL BE APPLIED TO ALL EXISTING PAVEMENT SURFACES AND ON ALL COLD PLANED SURFACES AT A RATE OF 0.080 GAL/SY (+/- 0.01 GAL/SY) OR AS DIRECTED BY THE ENGINEER. EMULSIFIED ASPHALT SHALL BE RS-1H OR CRS-1H PER THE MANUFACTURER'S RECOMMENDATION AND PAID UNDER ITEM 900.683 SPECIAL PROVISION (EMULSIFIED ASPHALT) (RS-1H OR CRS-1H).
2. THE GYRATION SPECIFICATION FOR THE 6.3 MM POLYMER MODIFIED BITUMINOUS CONCRETE PAVEMENT SHALL BE 65. PERFORMANCE GRADED BINDER SHALL BE PG 58-28.

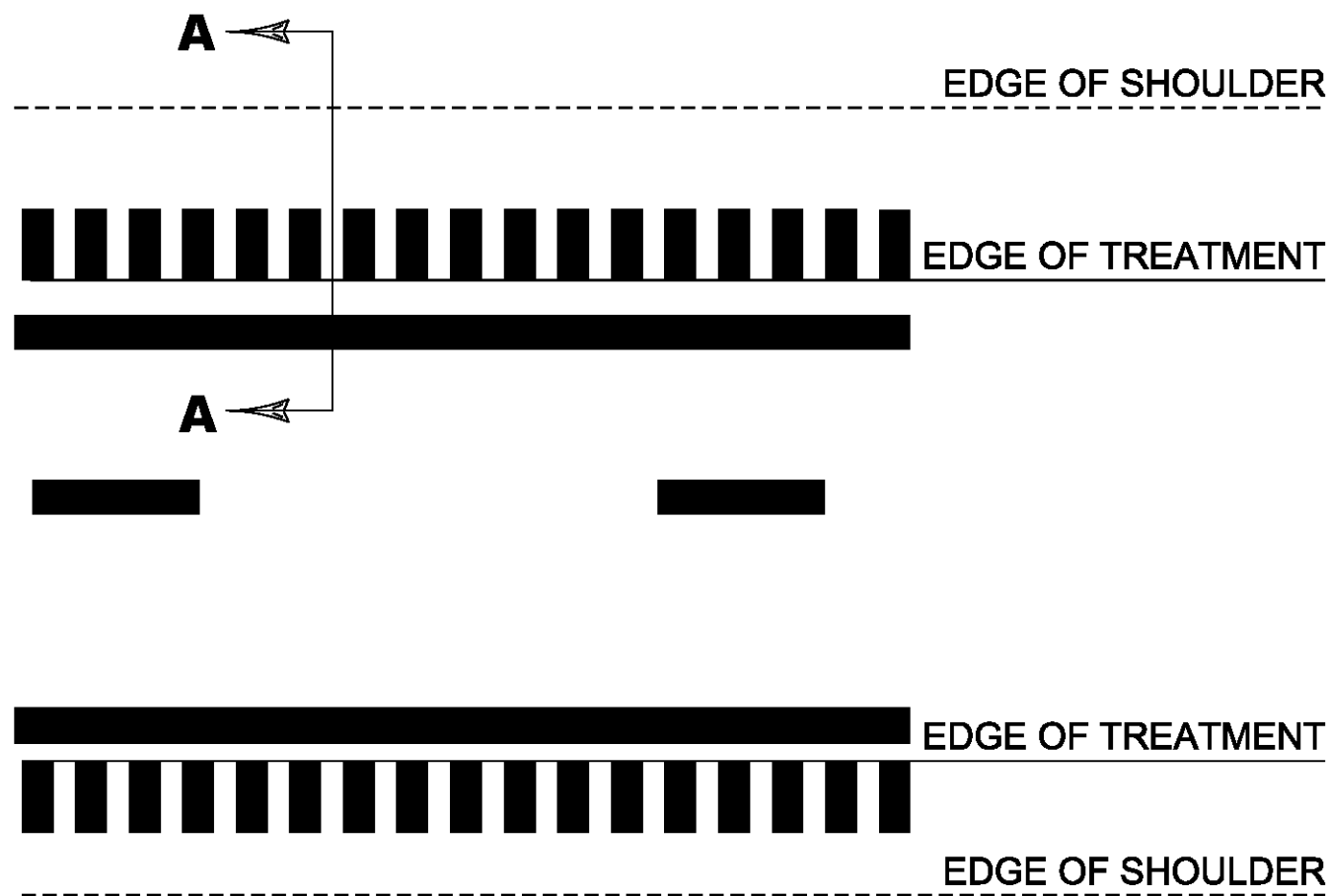
PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TYPICAL SECTIONS - ALTERNATE B

PLOT DATE: 2/17/2015
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 4 OF 22

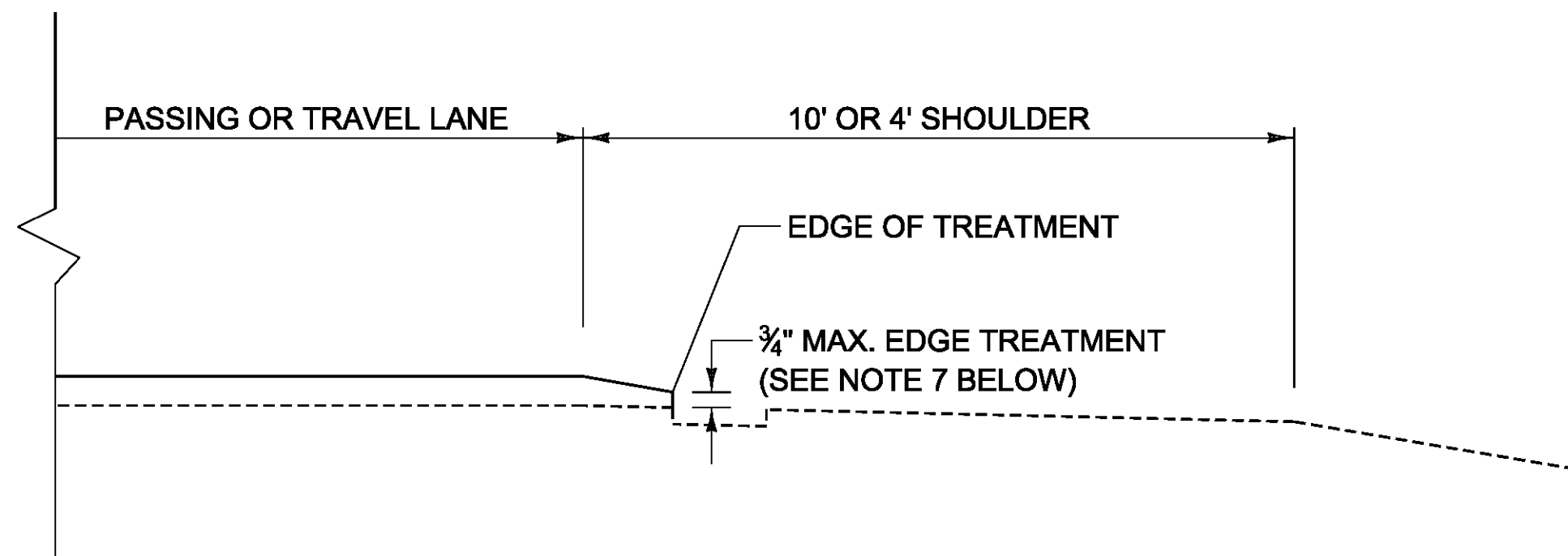


TYPICAL APPROACH AREA DETAIL MAINLINE & RAMPS



EDGE OF TREATMENT TYPICAL PLAN

NOT TO SCALE



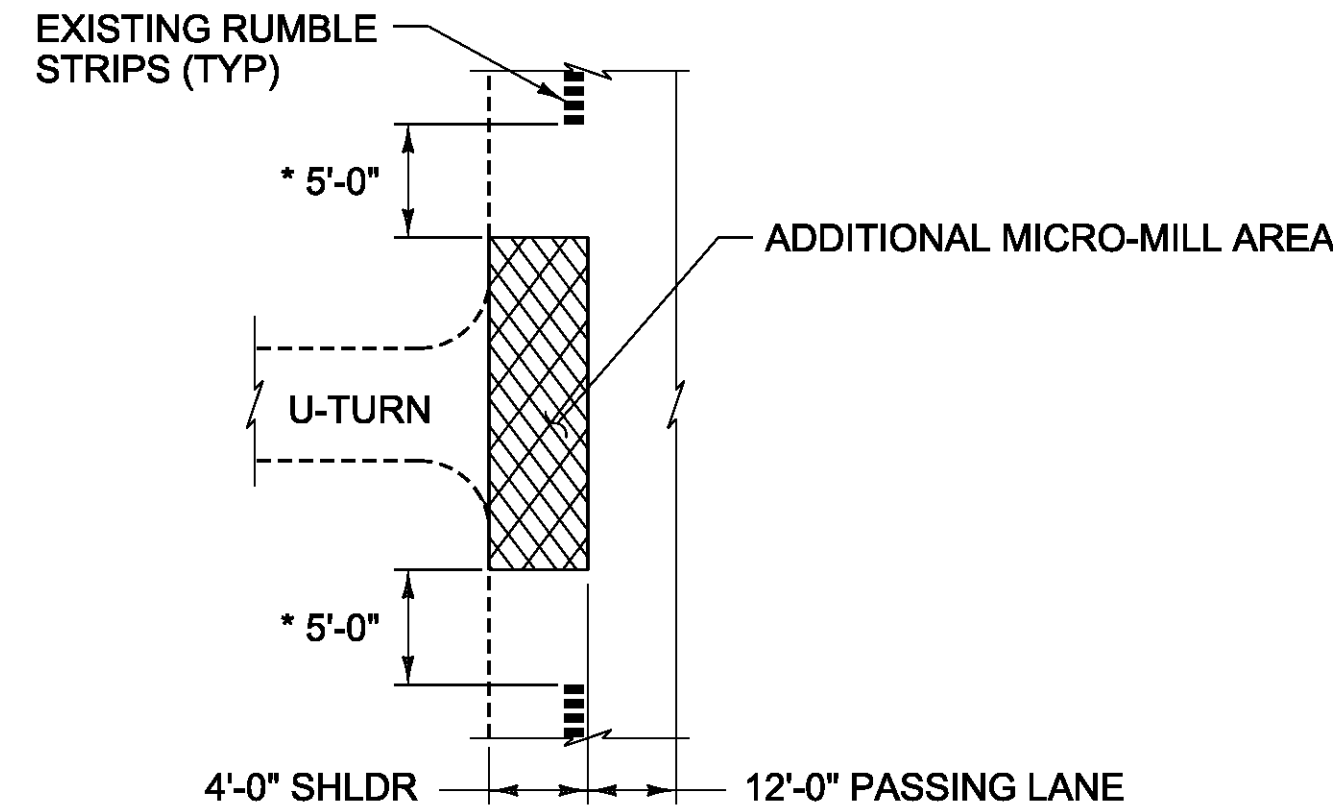
EDGE OF TREATMENT TYPICAL SECTION A-A

NOT TO SCALE

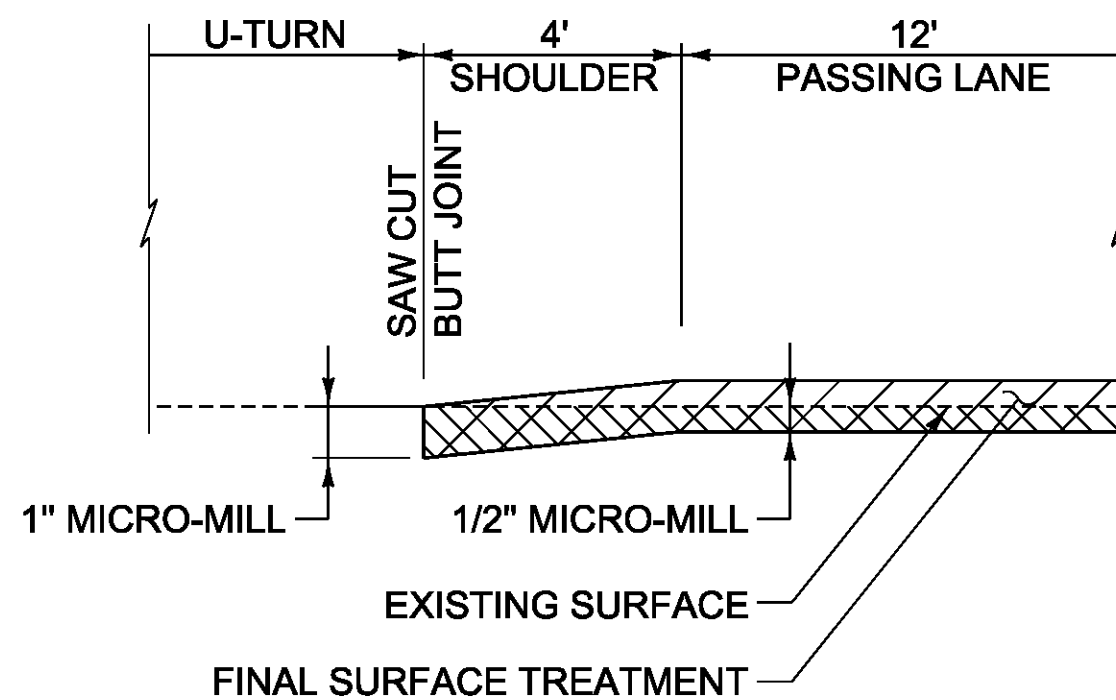
NOTES:

1. ALL NECESSARY SURFACE PREPARATION INVOLVING PATCHING, POTHOLE REPAIR, AND CRACK-SEALING SHALL BE PERFORMED PRIOR TO APPLICATION OF THE FINAL SURFACE TREATMENT. ALL CRACKS GREATER THAN 0.10" AND UP TO 1.0" IN WIDTH SHALL BE SEALED USING THE "BLOW AND GO" FILL METHOD. ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE PAID FOR UNDER ITEM 417.20, BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD. THE PATCHING OF ALL CRACKS GREATER THAN 1.0" AND ALL OTHER PATCHING AND POTHOLE REPAIR SHALL BE COMPLETED USING BITUMINOUS CONCRETE PAVEMENT IN ACCORDANCE WITH ITEM 900.680 SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I). AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN INCLUDED TO COVER ALL COSTS ASSOCIATED WITH THIS WORK.
2. EXISTING SHOULDER PAVEMENT SURFACES BEYOND THE LIMITS OF THE FINAL SURFACE TREATMENT SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS.
3. FOLLOWING COMPLETION OF MICRO-MILLING, THE MILLED SURFACE FOR ALL BRIDGES TO BE MILLED SHALL ALSO RECEIVE CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, AS DIRECTED BY THE ENGINEER.
4. ALL LANE DELINEATION IS TO BE MAINTAINED DURING CONSTRUCTION BY THE USE OF LINE STRIPING TARGETS OR TEMPORARY PAINT.
5. A 25' MICRO-MILLED WEDGE SHALL BE CONSTRUCTED AT THE PROJECT BEGIN, PROJECT END, RAMPS, AND AT ALL BRIDGE APPROACHES OR AS DIRECTED BY THE ENGINEER. THE LONGITUDINAL EDGES OF THE SURFACE TREATMENT SHALL BE FEATHERED AS SHOWN ON THE TYPICAL SECTION, OR AS DIRECTED BY THE ENGINEER. ANY SAWCUTTING AT BUTT JOINTS SHALL BE PAID INCIDENTAL TO ITEM 900.675, SPECIAL PROVISION(MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT).
6. IF IT IS DETERMINED BY THE ENGINEER IN AREAS ALONG THE BASE OF THE GUARDRAIL THAT WINTER SAND AND OTHER DEBRIS HAS ACCUMULATED SUFFICIENTLY TO AFFECT PROPER CRACK-SEALING AND RELATED PATCHING AND POTHOLE REPAIR TREATMENTS, THIS MATERIAL SHALL BE REMOVED PRIOR TO CRACK-SEALING, PATCHING, AND POTHOLE REPAIR AS DIRECTED BY THE ENGINEER. AN ESTIMATED QUANTITY FOR ITEM 203.40 SHOULDER BERM REMOVAL HAS BEEN INCLUDED TO COVER THE COSTS ASSOCIATED WITH THIS WORK.
7. THE SCREED OF THE PAVER SHALL BREAK AT THE BREAK POINT OF THE SHOULDER SUCH THAT THE DESIGNED NOMINAL THICKNESS IS CARRIED ON TO THE SHOULDER AND BROKEN OR PINCHED BY ROLLING. EDGE HEIGHT SHALL BE MEASURED AT A MINIMUM OF FIVE RANDOMLY SPACED POINTS PER TENTH OF A MILE. IF IT IS FOUND THAT THE AVERAGE EDGE HEIGHT IS GREATER THAN 3/4" OVER THE TENTH OF A MILE, WORK SHALL BE PERFORMED SUCH THAT THE 3/4" AVERAGE HEIGHT IS ACHIEVED. THIS APPLIES TO BOTH THE 10' AND 4' SHOULDER SIDES OF THE HIGHWAY.

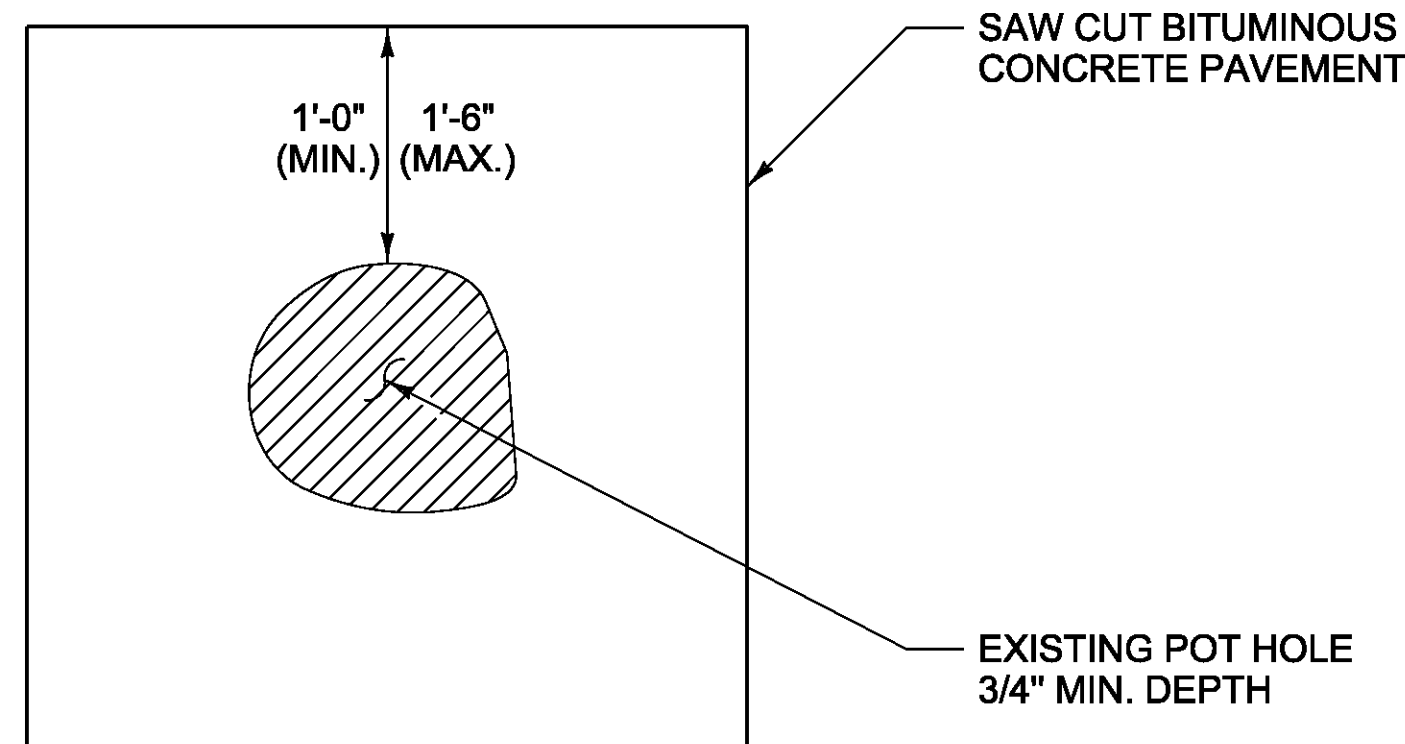
NOT TO SCALE



* BEGIN MICRO-MILL 5'-0" AFTER RUMBLE STRIPS END, AND END MICRO-MILL 5'-0" BEFORE RUMBLE STRIPS BEGIN



MICRO-MILL DETAIL AT U-TURNS



TYPICAL - POT HOLE REPAIR

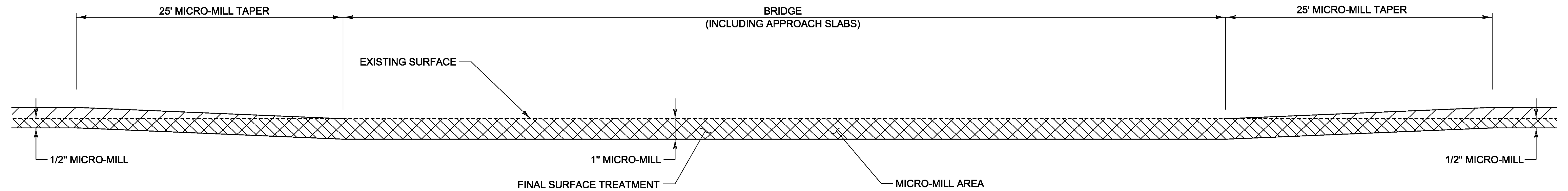
NOTE:

EMULSIFIED ASPHALT SHALL BE APPLIED AT ALL PATCH INTERFACES AT A RATE OF 0.25 - 0.50 GAL/SY. EMULSIFIED ASPHALT SHALL MEET THE REQUIREMENTS OF SECTION 404 AND WILL BE CONSIDERED INCIDENTAL TO SPECIAL PROVISION(BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)

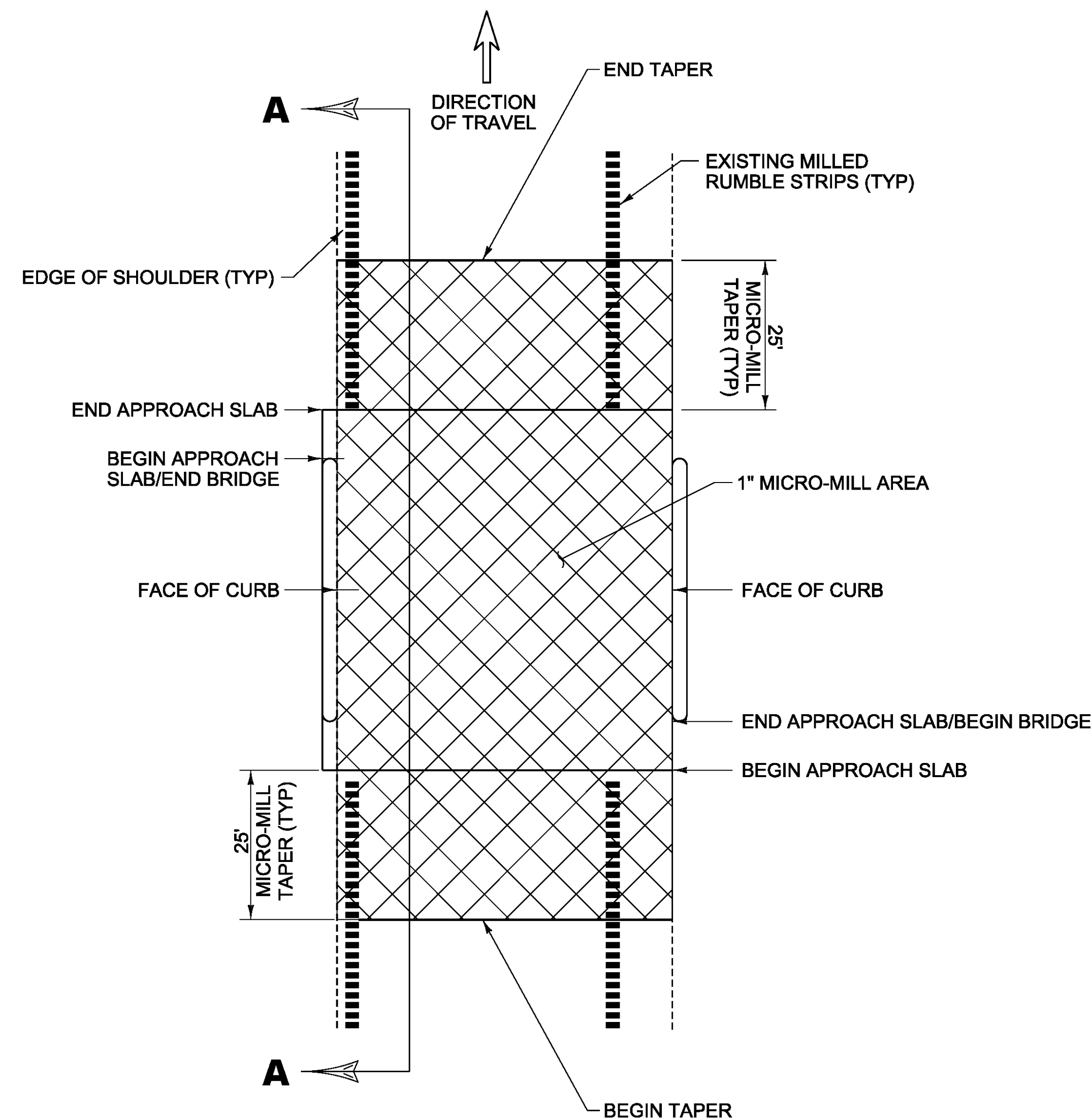
PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
NOTES & DETAILS COMMON TO BOTH ALTERNATES SHEET 5 OF 22

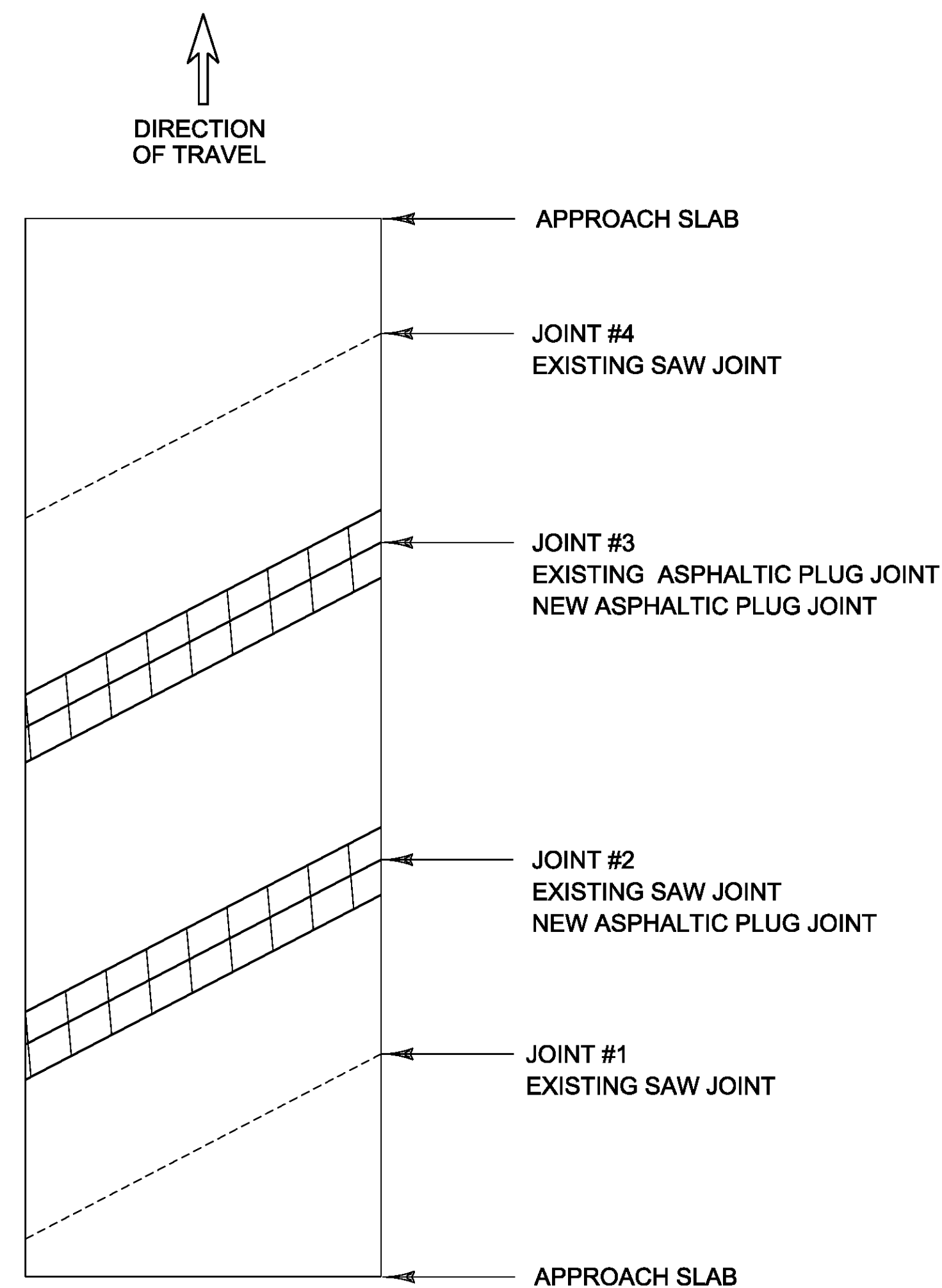
PLOT DATE: 2/10/2015
DRAWN BY: B. KIPP
CHECKED BY: PVT. MGT.



BRIDGE #32-N MICRO-MILL DETAIL
NOT TO SCALE



BRIDGE MICRO-MILL TYPICAL PLAN
NOT TO SCALE



BRIDGE #32-N
MM 36.580
LENGTH OF NEW ASPHALTIC PLUG JOINTS:
JOINT #2 = 41'
JOINT #3 = 41'
TOTAL = 82'

NOTES:

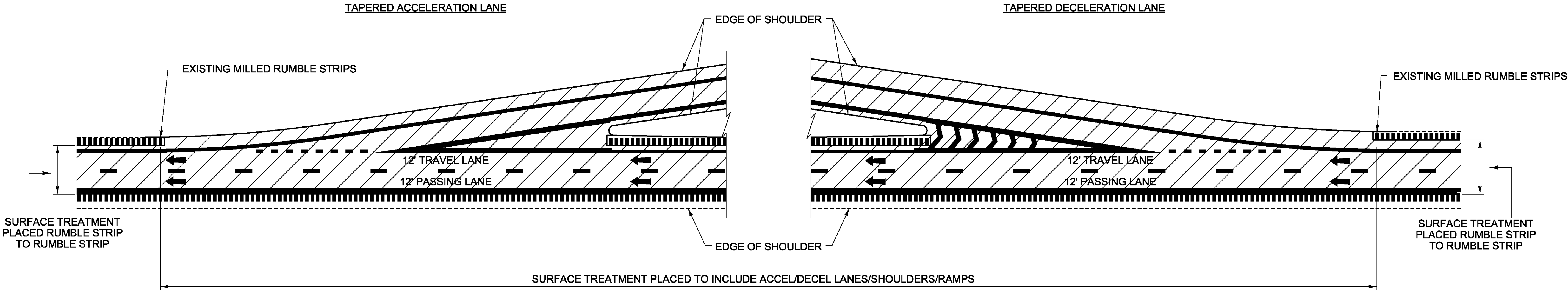
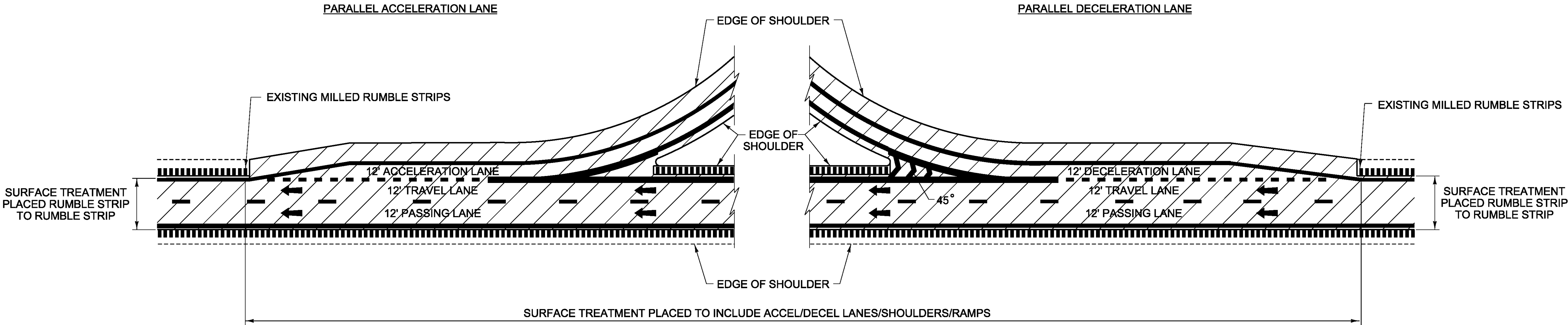
1. REFER TO BRIDGE DETAIL SHEET 2. ALL NEW JOINTS TO BE PAID FOR UNDER ITEM 516.10, "BRIDGE EXPANSION JOINT, ASPHALTIC PLUG."
2. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID DAMAGING DRAINAGE STRUCTURES AND EXPANSION JOINTS. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID THE ACCUMULATION OF DEBRIS IN THE DRAINAGE STRUCTURES LOCATED AT CURB LINE AND IN THE EXPANSION JOINTS. THE CONTRACTOR SHALL EXAMINE THESE BRIDGE FEATURES ON A DAILY BASIS TO ENSURE THAT DEBRIS HAS NOT ACCUMULATED. ANY DEBRIS WHICH IS PRESENT SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE STATE.
4. THE CONTRACTOR SHALL USE CAUTION WHEN 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.

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF (54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
BRIDGE DETAIL SHEET

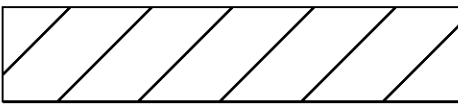
PLOT DATE: 2/10/2015
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 6 OF 22

TYPICAL INTERCHANGE CONSTRUCTION DETAILS # 1



NOTES:
1. LINE STRIPING SHOWN FOR REFERENCE ONLY.

LEGEND

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

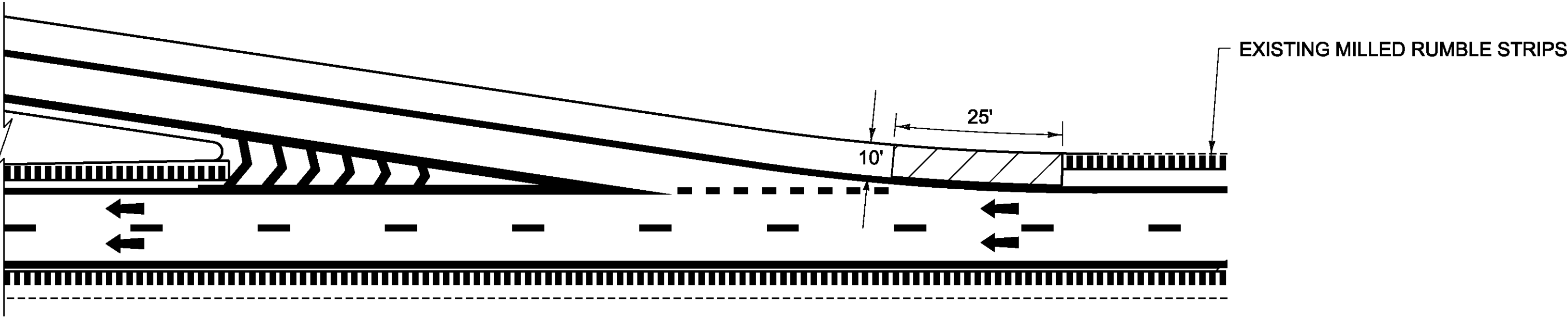
NOT TO SCALE

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

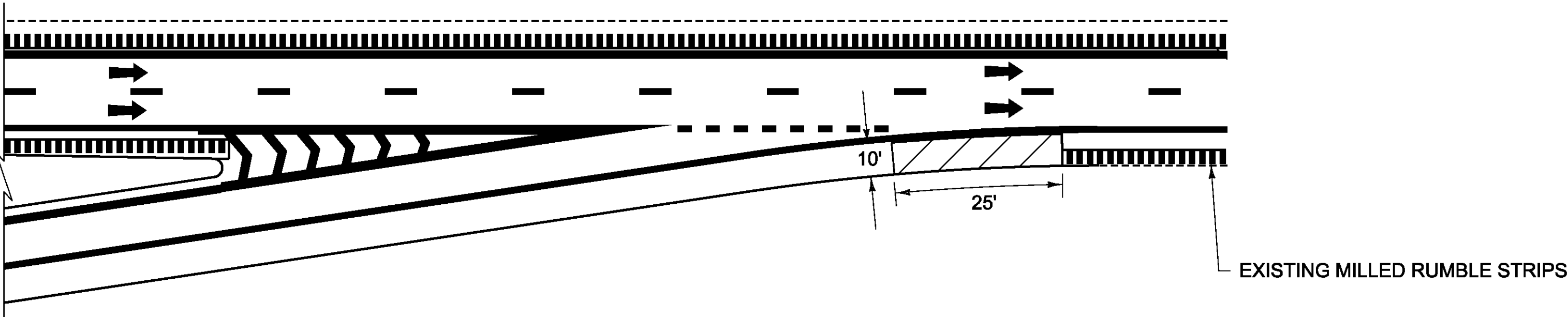
FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
TYPICAL INTERCHANGE CONSTRUCTION DETAILS | SHEET 7 OF 22

PLOT DATE: 2/10/2015
DRAWN BY: B. KIPP
CHECKED BY:

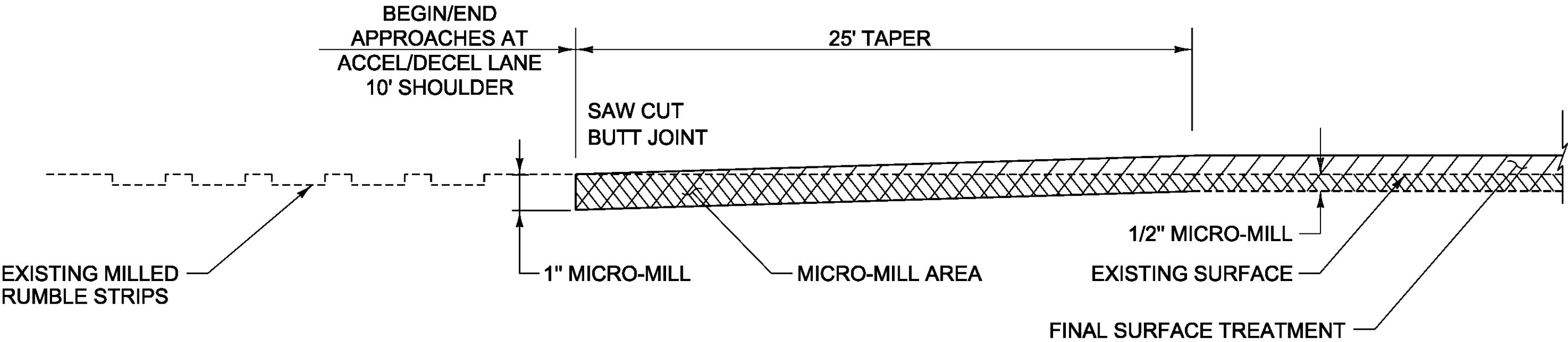
TYPICAL INTERCHANGE CONSTRUCTION DETAILS # 2



DECELERATION LANE

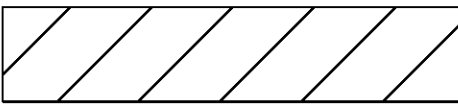


ACCELERATION LANE



TYPICAL APPROACH AREA DETAIL AT ACCEL/DECEL LANE 10 FT SHOULDER

LEGEND

-  AREA TO BE MICRO-MILLED
-  DIRECTION OF TRAFFIC FLOW
-  EXISTING MILLED RUMBLE STRIPS

NOT TO SCALE

PROJECT NAME:	BETHEL-BROOKFIELD
PROJECT NUMBER:	IM SURF(54)
FILE NAME:	pl4v206wrk.dgn
PROJECT LEADER:	M. FOWLER
DESIGNED BY:	B. KIPP
TYPICAL INTERCHANGE CONSTRUCTION DETAILS 2 SHEET	8 OF 22
PLOT DATE:	2/18/2015
DRAWN BY:	B. KIPP
CHECKED BY:	PVT. MGT.

QUANTITY SHEET 1

STATE OF VERMONT
AGENCY OF TRANSPORTATION

SUMMARY OF ESTIMATED QUANTITIES									
ROADWAY (ALT. A)	ROADWAY (ALT. B)	BRIDGE	ROADWAY	FULL C.E.	QUANTITIES GRAND TOTAL	UNIT	ITEMS	ITEM NO.	ROUNDING
							BEGIN ITEMS COMMON TO ALL ALTERNATES		
			60,700		60,700	LF	SHOULDER BERM REMOVAL	203.40	87
			I		I	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	-
			350		350	TON	AGGREGATE SHOULDERS, RAP	402.13	EST.
			I		I	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	-
			60,000		60,000	LB	BITUMINOUS CRACK SEALING, "BLOW AND GO" METHOD (AASHTO M 324 (ASTM D 6690) TYPE II)	417.20	EST.
		82			82	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	EST.
		100			100	CF	RAPID SETTING CONCRETE REPAIR MATERIAL WITH COARSE AGGREGATE	580.20	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.
			200		200	HR	TRUCK MOUNTED ATTENUATOR	608.45	EST.
			100		100	HR	TRUCK MOUNTED ATTENUATOR, AMV/PV	608.50	EST.
			900		900	HR	UNIFORMED TRAFFIC OFFICERS	630.10	EST.
			500		500	HR	FLAGGERS	630.15	EST.
				I	I	LS	FIELD OFFICE, ENGINEERS	631.10	-
				I	I	LS	TESTING EQUIPMENT, BITUMINOUS	631.17	-
				3,000	3,000	DL	FIELD OFFICE, TELEPHONE (N.A.B.I.)	631.26	-
			I		I	LS	MOBILIZATION/DEMOBILIZATION	635.11	-
			I		I	LS	TRAFFIC CONTROL	641.10	-
			4		4	EA	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	EST.
			169,000		169,000	LF	DURABLE 6 INCH WHITE LINE, POLYUREA	646.424	726
			131,000		131,000	LF	DURABLE 6 INCH YELLOW LINE, POLYUREA	646.434	168
			4,500		4,500	LF	DURABLE 12 INCH WHITE LINE, POLYUREA	646.464	90
			160		160	LF	DURABLE 24 INCH STOP BAR, POLYUREA	646.484	10
			30		30	EA	DURABLE LETTER OR SYMBOL, POLYUREA	646.494	-
			169,000		169,000	LF	TEMPORARY 6 INCH WHITE LINE, PAINT	646.622	726
			131,000		131,00	LF	TEMPORARY 6 INCH YELLOW LINE, PAINT	646.632	168
			4,500		4,500	LF	TEMPORARY 12 INCH WHITE LINE, PAINT	646.662	40
			160		160	LF	TEMPORARY 24 INCH STOP BAR, PAINT	646.682	10
			30		30	EA	TEMPORARY LETTER OR SYMBOL, PAINT	646.692	-
			9,900		9,900	EA	LINE STRIPING TARGETS	646.76	133
			I		I	LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50	-
			413,600		413,600	SY	SPECIAL PROVISION (MICRO-MILLING BITUMINOUS CONCRETE PAVEMENT)	900.675	132
			100		100	TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT SURFACE PREPARATION, TYPE I)	900.680	EST.
							END ITEMS COMMON TO ALL ALTERNATES		

[illegible][illegible]

QUANTITY SHEET 2

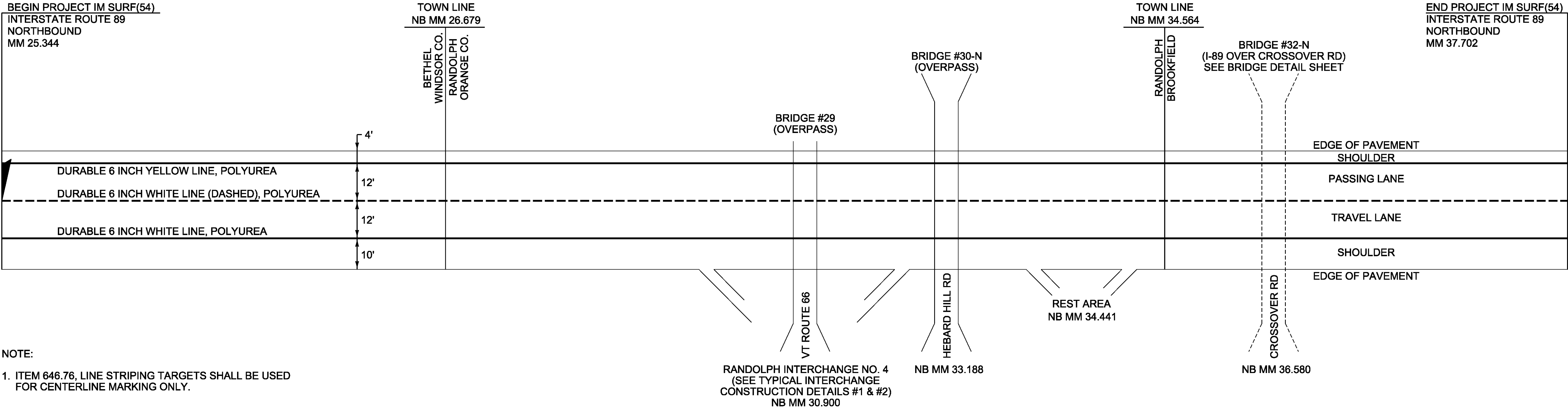
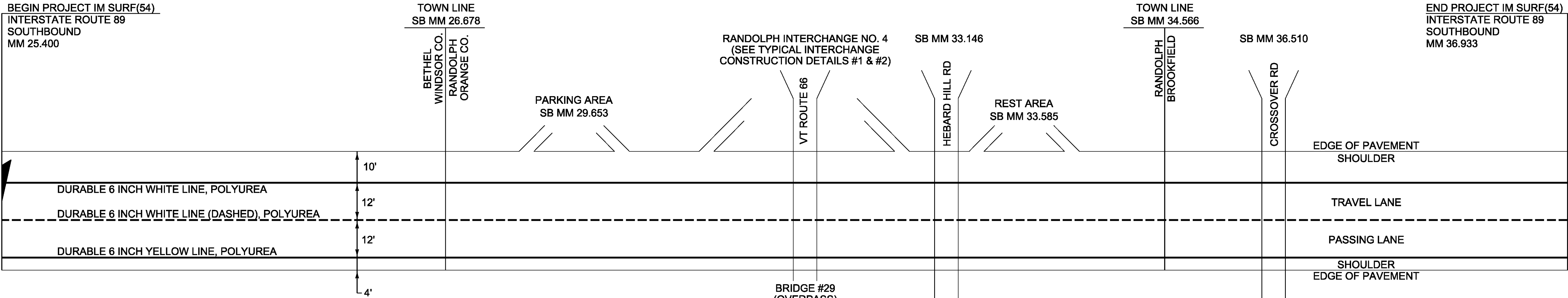
STATE OF VERMONT
AGENCY OF TRANSPORTATION

[illegible][illegible][illegible]

PROJECT NAME: BETHEL -BROOKFIELD	
PROJECT NUMBER: IM SURF(54)	
FILE NAME: pi4v206wrk.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
QUANTITY SHEET 2	SHEET 10 OF 22

DURABLE 6 INCH WHITE LINE, POLYUREA
TEMPORARY 6 INCH WHITE LINE, PAINT
MM 25.344 - MM 37.702 (NB, SOLID RT)
MM 25.344 - MM 37.702 (NB, DASHED CENTERLINE)
MM 25.400 - MM 36.933 (SB, SOLID LT)
MM 25.400 - MM 36.933 (SB, DASHED CENTERLINE)

DURABLE 6 INCH YELLOW LINE, POLYUREA
TEMPORARY 6 INCH YELLOW LINE, PAINT
MM 25.344 - MM 37.702 (NB, SOLID LT)
MM 25.400 - MM 36.933 (SB, SOLID RT)



NOTE:
1. ITEM 646.76, LINE STRIPING TARGETS SHALL BE USED
FOR CENTERLINE MARKING ONLY.

NOT TO SCALE

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
PAVEMENT MARKING DETAIL SHEET I

PLOT DATE: 2/17/2015
DRAWN BY: B. KIPP
CHECKED BY:
SHEET II OF 22

DURABLE 6 INCH WHITE LINE, POLYUREA
RAMP A:
STA. A1+00.0 - STA. A21+02.0 (EDGE LINE RT)
STA. A13+00.0 - STA. A21+02.0 (DOTTED LANE LINE LT)

RAMP B:
STA. B1+00.0 - STA. B21+32.0 (EDGE LINE RT)
STA. B1+00.0 - STA. B6+80.0 (DOTTED LANE LINE LT)

DURABLE 6 INCH YELLOW LINE, POLYUREA
RAMP A:
STA. A1+00.0 - STA. A8+88.0 (EDGE LINE LT)

RAMP B:
STA. B8+50.0 - STA. B21+32.0 (EDGE LINE LT)

DURABLE 12 INCH WHITE LINE, POLYUREA
RAMP A:
STA. A8+88.0 - STA. A13+15.0 (SOLID GORE LINES LT)

RAMP B:
STA. B6+45.0 - STA. B8+25.0 (SOLID GORE LINES LT)
STA. B7+15.0 - STA. B8+25.0 (GORE HATCHING LT)

TEMPORARY 6 INCH WHITE LINE, PAINT
RAMP A:
STA. A1+00.0 - STA. A21+02.0 (EDGE LINE RT)
STA. A13+00.0 - STA. A21+02.0 (DOTTED LANE LINE LT)

RAMP B:
STA. B1+00.0 - STA. B21+32.0 (EDGE LINE RT)
STA. B1+00.0 - STA. B6+80.0 (DOTTED LANE LINE LT)

TEMPORARY 6 INCH YELLOW LINE, PAINT
RAMP A:
STA. A1+00.0 - STA. A8+88.0 (EDGE LINE LT)

RAMP B:
STA. B8+50.0 - STA. B21+32.0 (EDGE LINE LT)

TEMPORARY 12 INCH WHITE LINE, PAINT
RAMP A:
STA. A8+88.0 - STA. A13+15.0 (SOLID GORE LINES LT)

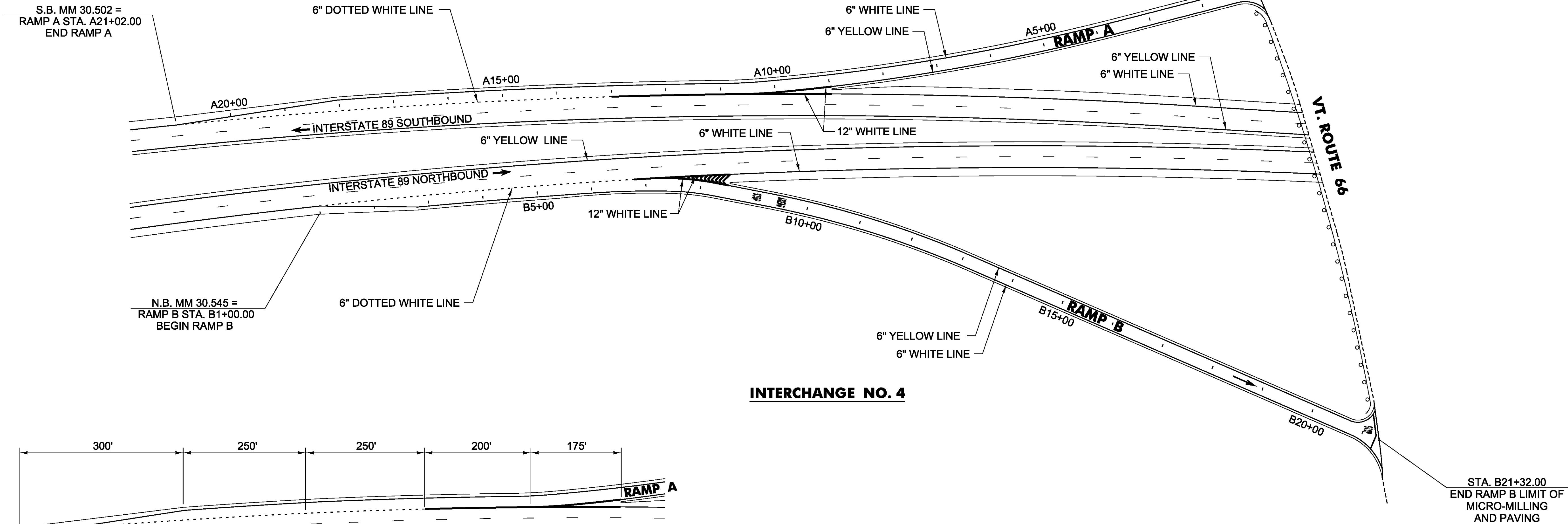
RAMP B:
STA. B6+45.0 - STA. B8+25.0 (SOLID GORE LINES LT)

DURABLE 24 INCH STOP BAR, POLYUREA
RAMP B:
STA. B21+25.0 LT/RT

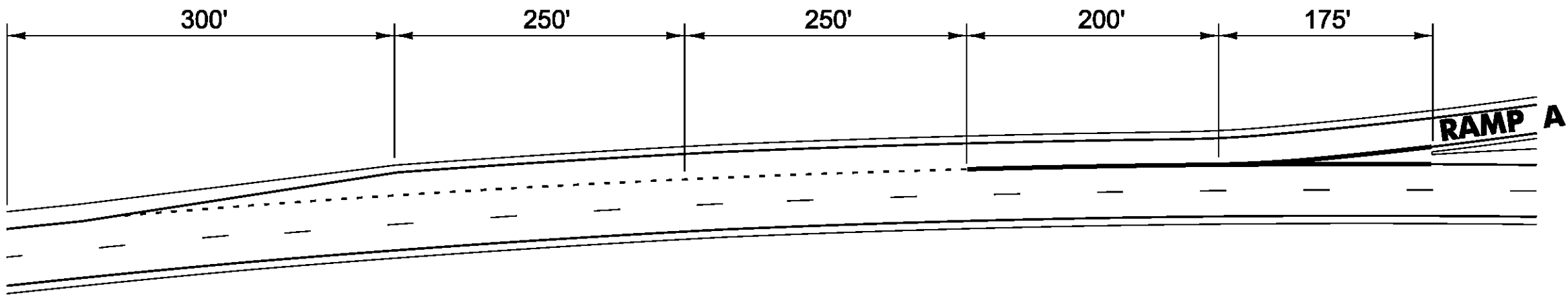
DURABLE LETTER OR SYMBOL, POLYUREA
RAMP B:
STA. B9+07.0 CL "STOP" (4 EA)
STA. B9+47.0 CL "AHEAD" (5 EA)
STA. B18+53.0 CL WRONG WAY ARROW (1 EA)
STA. B21+20.0 CL "STOP" (4 EA)

TEMPORARY 24 INCH STOP BAR, PAINT
RAMP B:
STA. B21+25.0 LT/RT

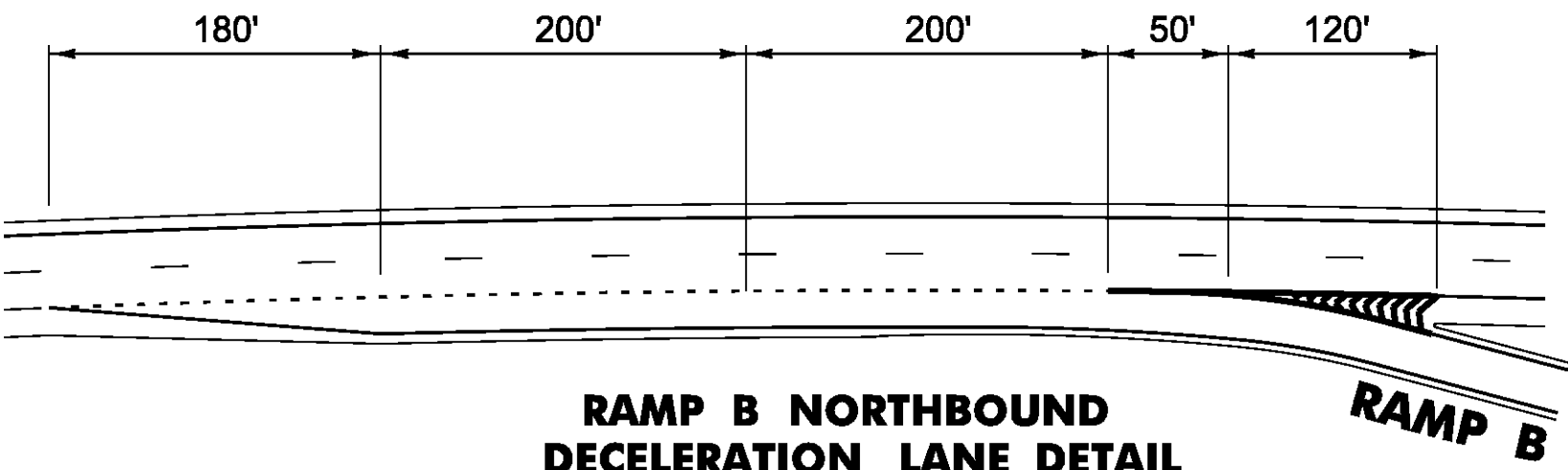
TEMPORARY LETTER OR SYMBOL, PAINT
RAMP B:
STA. B9+07.0 CL "STOP" (4 EA)
STA. B9+47.0 CL "AHEAD" (5 EA)
STA. B18+53.0 CL WRONG WAY ARROW (1 EA)
STA. B21+20.0 CL "STOP" (4 EA)



INTERCHANGE NO. 4



**SOUTHBOUND RAMP A
ACCELERATION LANE DETAIL**



**RAMP B NORTHBOUND
DECELERATION LANE DETAIL**

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
PAVEMENT MARKING DETAIL SHEET 2

PLOT DATE: 2/10/2015
DRAWN BY: B. KIPP
CHECKED BY:
SHEET 12 OF 22

DURABLE 6 INCH WHITE LINE, POLYUREA
RAMP C:
STA. C1+00.0 - STA. C16+86.0 (EDGE LINE RT)
STA. C1+00.0 - STA. C6+00.0 (DOTTED LANE LINE LT)

RAMP D:
STA. D1+00.0 - STA. D26+84.0 (EDGE LINE RT)
STA. D17+84.0 - STA. D26+84.0 (DOTTED LANE LINE LT)

DURABLE 6 INCH YELLOW LINE, POLYUREA
RAMP C:
STA. C7+50.0 - STA. C16+86.0 (EDGE LINE LT)

RAMP D:
STA. D1+00.0 - STA. D14+34.0 (EDGE LINE LT)

DURABLE 12 INCH WHITE LINE, POLYUREA
RAMP C:
STA. C6+00.0 - STA. C7+11.0 (SOLID GORE LINES LT)
STA. C6+00.0 - STA. C6+61.0 (GORE HATCHING LT)

RAMP D:
STA. D14+35.0 - STA. D17+85.0 (SOLID GORE LINES LT)

TEMPORARY 6 INCH WHITE LINE, PAINT
RAMP C:
STA. C1+00.0 - STA. C16+86.0 (EDGE LINE RT)
STA. C1+00.0 - STA. C6+00.0 (DOTTED LANE LINE LT)

RAMP D:
STA. D1+00.0 - STA. D26+84.0 (EDGE LINE RT)
STA. D17+84.0 - STA. D26+84.0 (DOTTED LANE LINE LT)

TEMPORARY 6 INCH YELLOW LINE, PAINT
RAMP C:
STA. C7+50.0 - STA. C16+86.0 (EDGE LINE LT)

RAMP D:
STA. D1+00.0 - STA. D14+34.0 (EDGE LINE LT)

TEMPORARY 12 INCH WHITE LINE, PAINT
RAMP C:
STA. C6+00.0 - STA. C7+11.0 (SOLID GORE LINES LT)

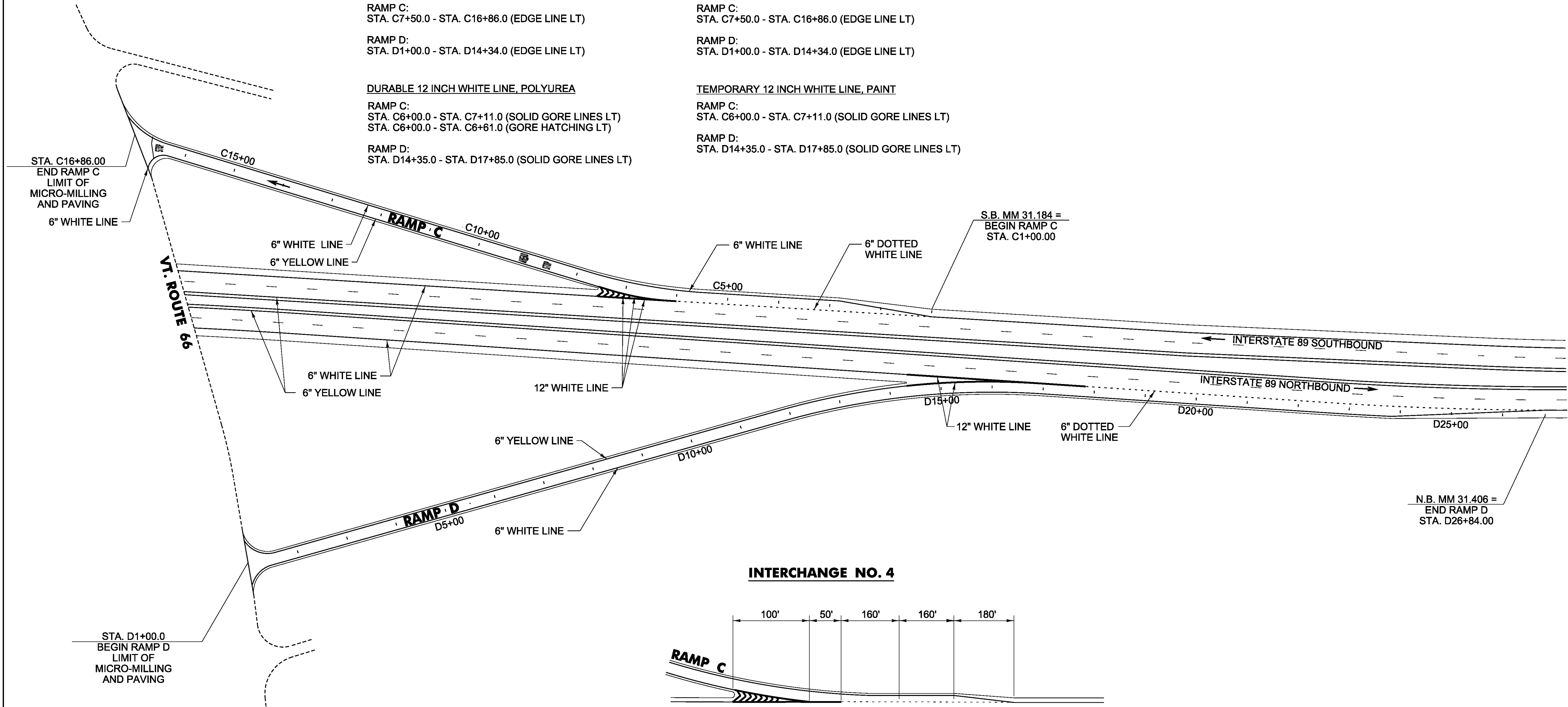
RAMP D:
STA. D14+35.0 - STA. D17+85.0 (SOLID GORE LINES LT)

DURABLE 24 INCH STOP BAR, POLYUREA
RAMP C:
STA. C16+83.0 LT/RT

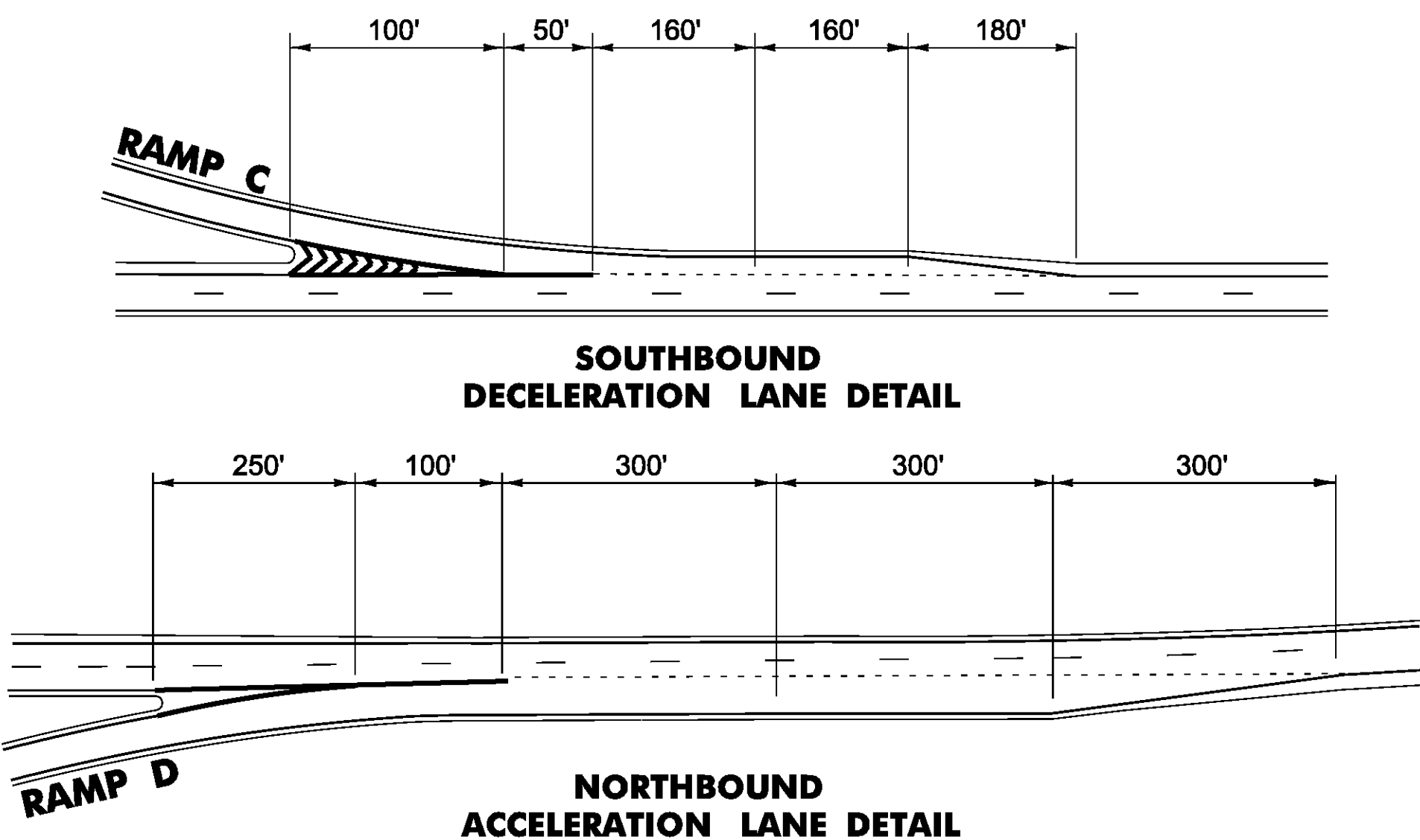
DURABLE LETTER OR SYMBOL, POLYUREA
RAMP C:
STA. C8+65.0 CL "STOP" (4 EA)
STA. C9+52.0 CL "AHEAD" (5 EA)
STA. C14+00.0 CL WRONG WAY ARROW (1 EA)
STA. C16+74.0 CL "STOP" (4 EA)

TEMPORARY 24 INCH STOP BAR, PAINT
RAMP C:
STA. C16+83.0 LT/RT

TEMPORARY LETTER OR SYMBOL, PAINT
RAMP C:
STA. C8+64.8 CL "STOP" (4 EA)
STA. C9+52.2 CL "AHEAD" (5 EA)
STA. C14+00.0 CL WRONG WAY ARROW (1 EA)
STA. C16+73.7 CL "STOP" (4 EA)



INTERCHANGE NO. 4



PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn	PLOT DATE: 2/10/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY:
PAVEMENT MARKING DETAIL SHEET 3	SHEET 13 OF 22

REST AREA
NORTHBOUND

MM 34.441

TEMPORARY 6 INCH WHITE LINE, PAINT

REST AREA	
NORTHBOUND OFF RAMP	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED RT LANE LINE
NORTHBOUND ON RAMP	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED RT LANE LINE

TEMPORARY 6 INCH YELLOW LINE, PAINT

REST AREA	
NORTHBOUND OFF RAMP	SOLID RT EDGE LINE
NORTHBOUND ON RAMP	SOLID RT EDGE LINE

TEMPORARY 12 INCH WHITE LINE, PAINT

REST AREA	
NORTHBOUND OFF RAMP	SOLID RT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
NORTHBOUND ON RAMP	SOLID RT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA

DURABLE 6 INCH WHITE LINE, POLYUREA

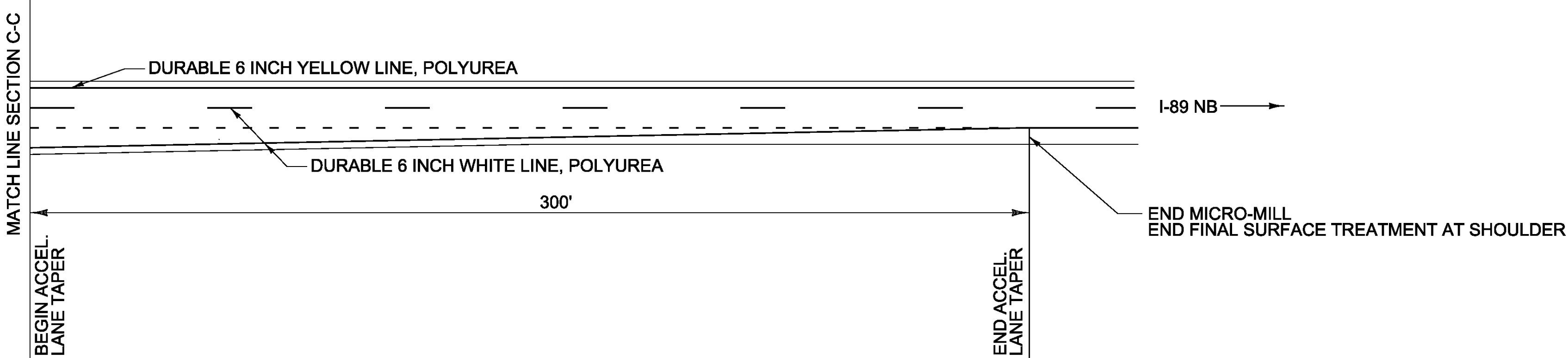
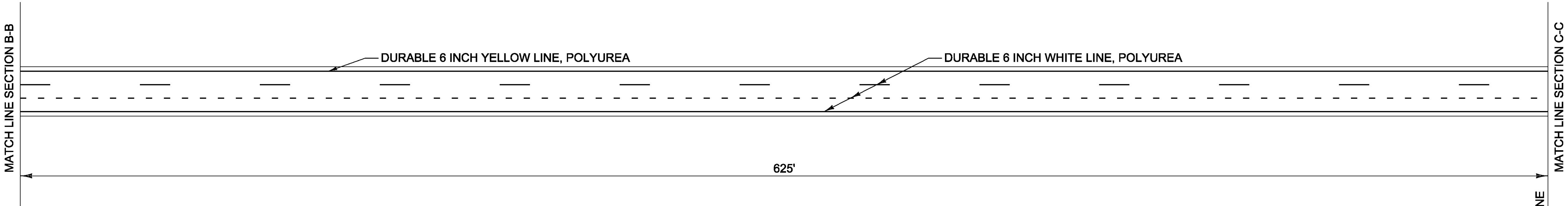
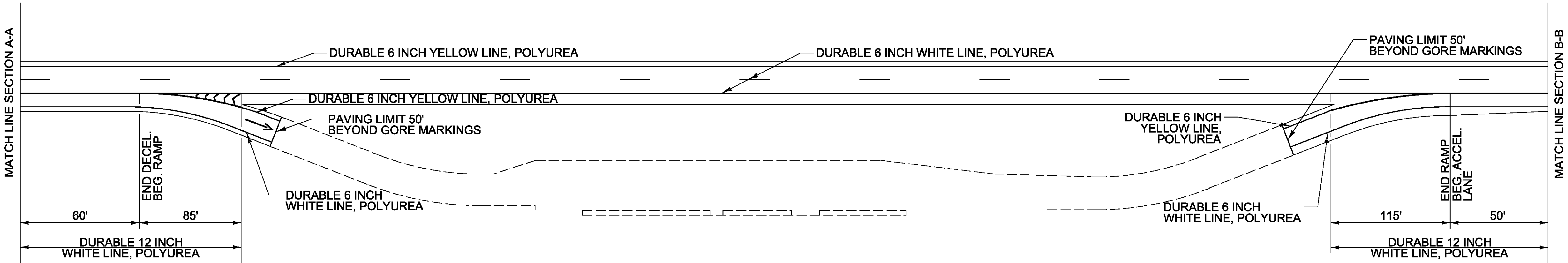
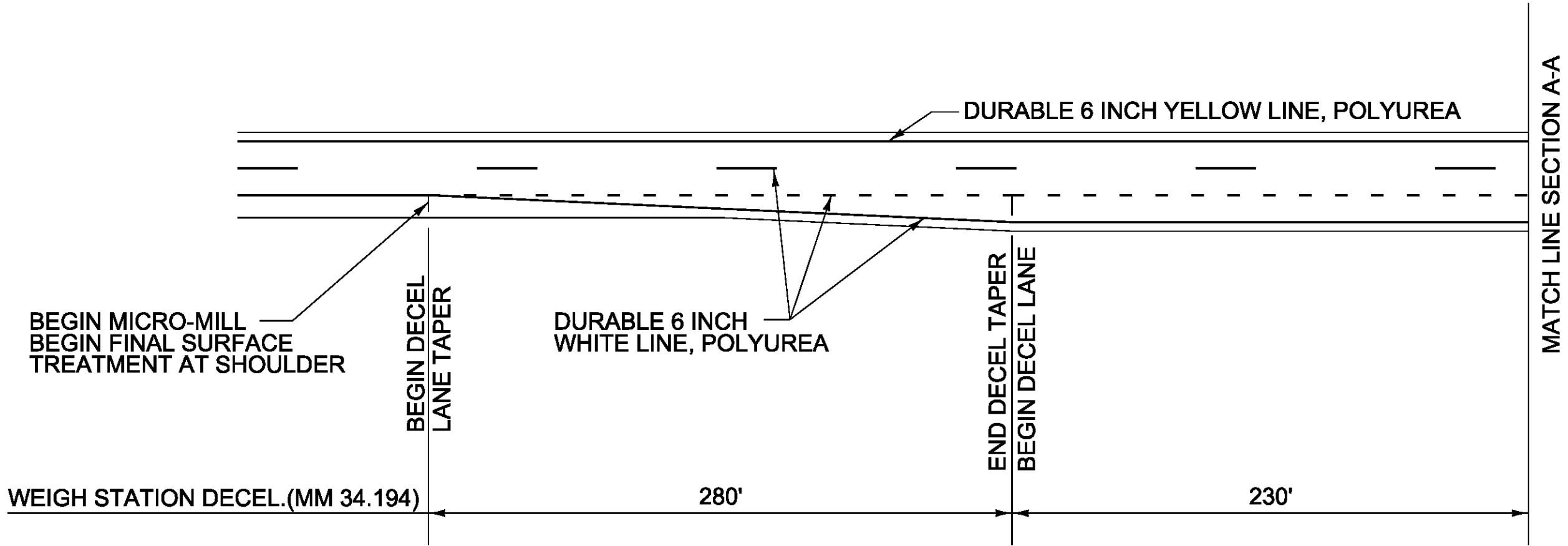
REST AREA	
NORTHBOUND OFF RAMP	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED RT LANE LINE
NORTHBOUND ON RAMP	SOLID RT EDGE LINE
INTERSTATE 89	DOTTED RT LANE LINE

DURABLE 6 INCH YELLOW LINE, POLYUREA

REST AREA	
NORTHBOUND OFF RAMP	SOLID RT EDGE LINE
NORTHBOUND ON RAMP	SOLID RT EDGE LINE

DURABLE 12 INCH WHITE LINE, POLYUREA

REST AREA	
NORTHBOUND OFF RAMP	SOLID RT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA
NORTHBOUND ON RAMP	SOLID RT GORE AREA
INTERSTATE 89	SOLID RT GORE AREA



NOT TO SCALE

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
PAVEMENT MARKING DETAIL SHEET 4

PLOT DATE: 2/17/2015
DRAWN BY: B. KIPP
CHECKED BY:
SHEET 14 OF 22

PARKING AREA
REST AREA
SOUTHBOUND

MM 29.653 (PARKING AREA)
MM 33.585 (REST AREA)

DURABLE 6 INCH WHITE LINE, POLYUREA		DURABLE 6 INCH WHITE LINE, POLYUREA	
PARKING AREA:		PARKING AREA:	
SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE	SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE	INTERSTATE 89	DOTTED LT LANE LINE
PARKING AREA	SOLID LT EDGE LINE	PARKING AREA	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP	SOLID LT EDGE LINE	SOUTHBOUND ON RAMP	SOLID LT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE	INTERSTATE 89	DOTTED LT LANE LINE
REST AREA:		REST AREA:	
SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE	SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE	INTERSTATE 89	DOTTED LT LANE LINE
SOUTHBOUND ON RAMP	SOLID LT EDGE LINE	SOUTHBOUND ON RAMP	SOLID LT EDGE LINE
INTERSTATE 89	DOTTED LT LANE LINE	INTERSTATE 89	DOTTED LT LANE LINE
DURABLE 6 INCH YELLOW LINE, POLYUREA		DURABLE 6 INCH YELLOW LINE, POLYUREA	
PARKING AREA:		PARKING AREA:	
SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE	SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE
PARKING AREA	SOLID LT EDGE LINE	PARKING AREA	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP	SOLID LT EDGE LINE	SOUTHBOUND ON RAMP	SOLID LT EDGE LINE
REST AREA:		REST AREA:	
SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE	SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE
SOUTHBOUND ON RAMP	SOLID LT EDGE LINE	SOUTHBOUND ON RAMP	SOLID LT EDGE LINE
DURABLE 12 INCH WHITE LINE, POLYUREA		DURABLE 12 INCH WHITE LINE, POLYUREA	
PARKING AREA/REST AREA		PARKING AREA/REST AREA	
SOUTHBOUND OFF RAMP	SOLID LT GORE AREA	SOUTHBOUND OFF RAMP	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA	INTERSTATE 89	SOLID LT GORE AREA
SOUTHBOUND ON RAMP	SOLID LT GORE AREA	SOUTHBOUND ON RAMP	SOLID LT GORE AREA
INTERSTATE 89	SOLID LT GORE AREA	INTERSTATE 89	SOLID LT GORE AREA

DURABLE LETTER OR SYMBOL, POLYUREA

PARKING AREA:			
SB OFF RAMP	WRONG WAY ARROW	(1 EA)	
REST AREA:			
SB OFF RAMP	WRONG WAY ARROW	(1 EA)	

TEMPORARY LETTER OR SYMBOL, PAINT

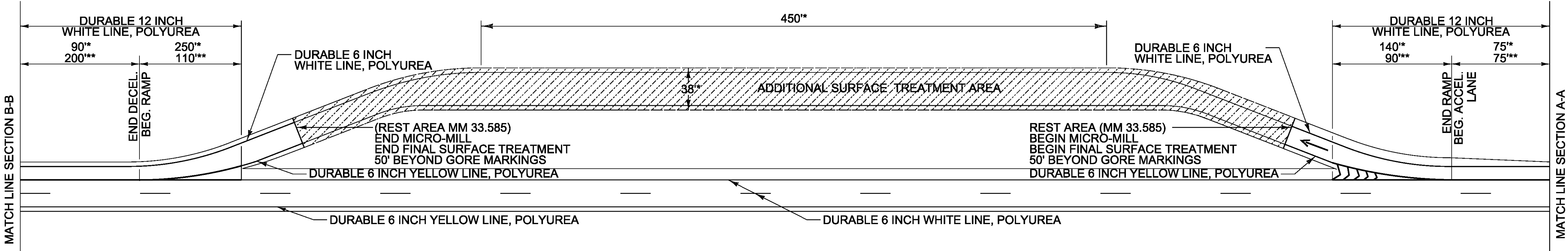
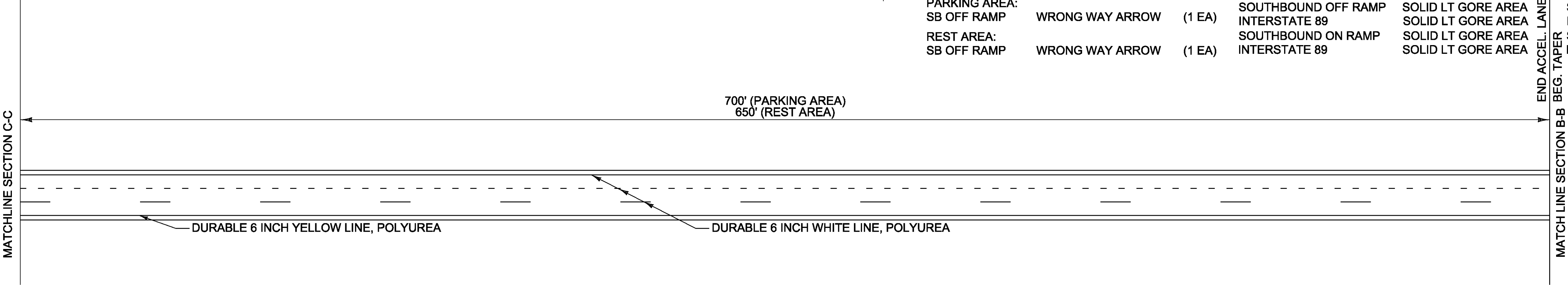
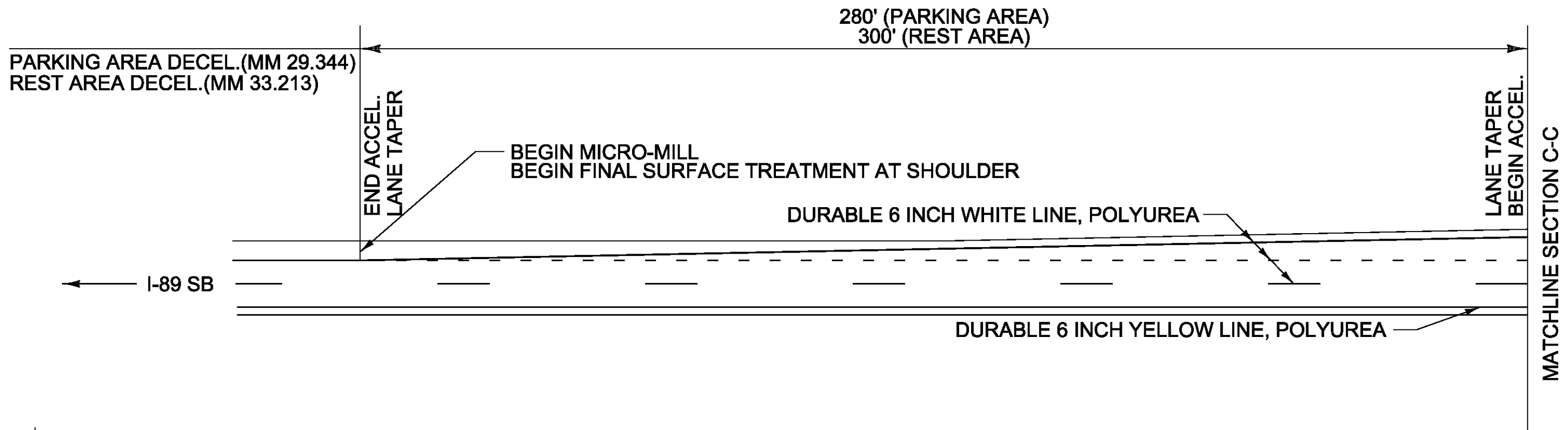
PARKING AREA:			
SB OFF RAMP	WRONG WAY ARROW	(1 EA)	
REST AREA:			
SB OFF RAMP	WRONG WAY ARROW	(1 EA)	

DURABLE 6 INCH YELLOW LINE, POLYUREA

PARKING AREA:			
SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE		
PARKING AREA	SOLID LT EDGE LINE		
SOUTHBOUND ON RAMP	SOLID LT EDGE LINE		
REST AREA:			
SOUTHBOUND OFF RAMP	SOLID LT EDGE LINE		
SOUTHBOUND ON RAMP	SOLID LT EDGE LINE		

DURABLE 12 INCH WHITE LINE, POLYUREA

PARKING AREA/REST AREA			
SOUTHBOUND OFF RAMP	SOLID LT GORE AREA		
INTERSTATE 89	SOLID LT GORE AREA		
SOUTHBOUND ON RAMP	SOLID LT GORE AREA		
INTERSTATE 89	SOLID LT GORE AREA		



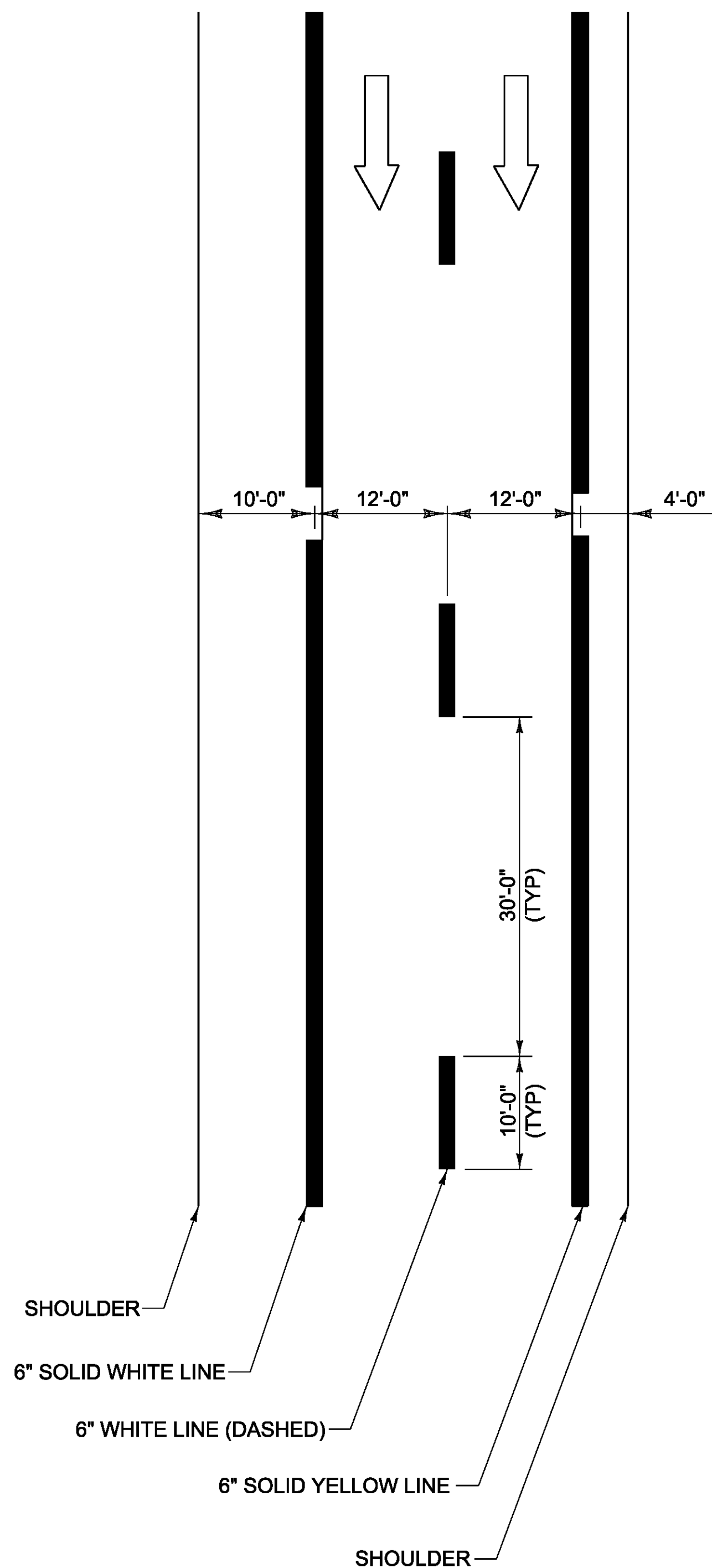
KEY	
*	PARKING AREA DIMENSION
**	REST AREA DIMENSION
	PARKING AREA SURFACE TREATMENT AREA

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
PAVEMENT MARKING DETAIL SHEET 5

PLOT DATE: 2/17/2015
DRAWN BY: B. KIPP
CHECKED BY:
SHEET 15 OF 22

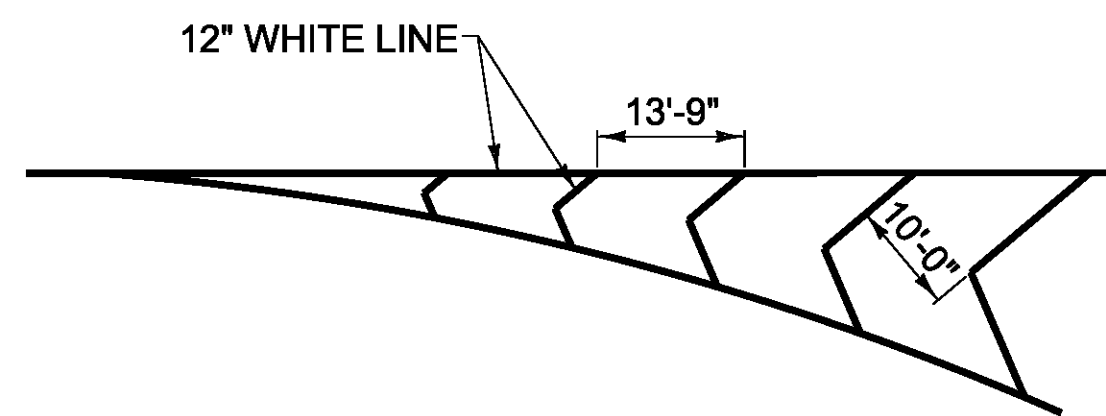
NOT TO SCALE



TYPICAL MAINLINE MARKING PLAN
NOT TO SCALE

LEGEND

← DIRECTION OF TRAFFIC FLOW



GORE MARKING DETAIL
NOT TO SCALE



DOTTED LINE (WHITE)



SOLID LINE (WHITE OR YELLOW)

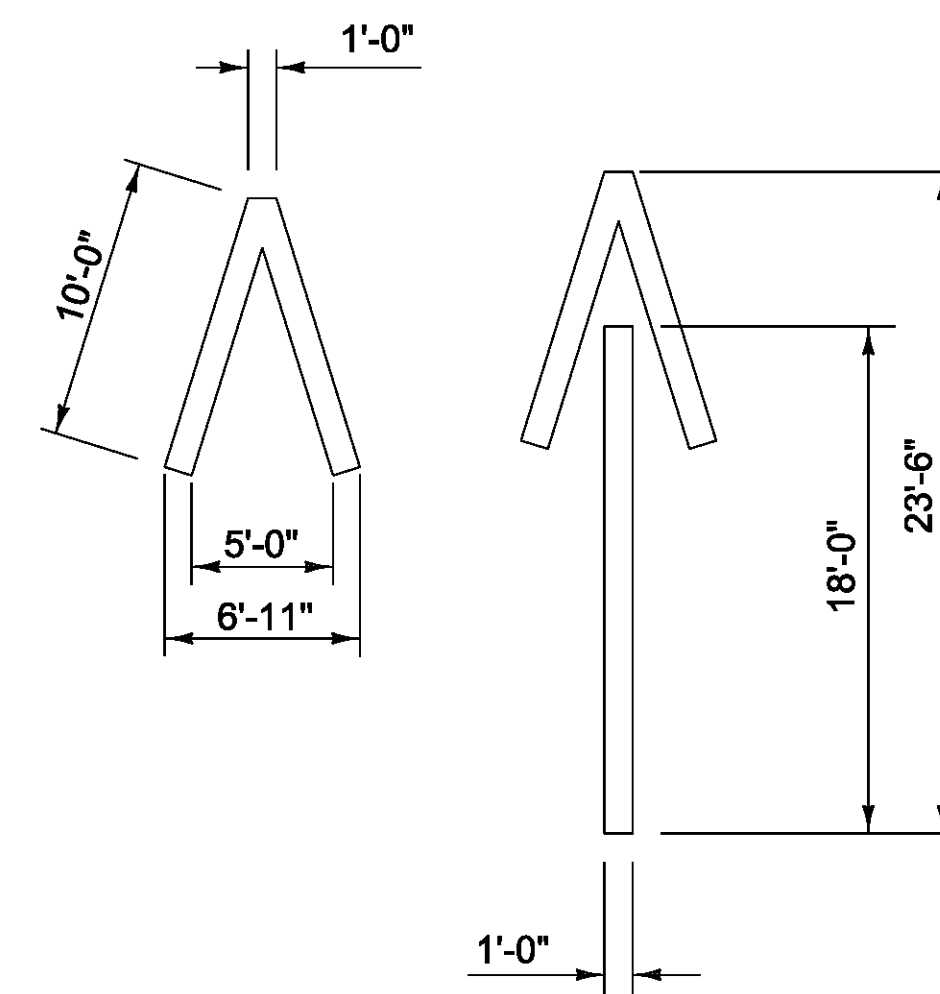


CHANNELIZING LINE (WHITE)

PAVEMENT MARKING LINE DETAILS
NOT TO SCALE



STOP BAR DETAIL
NOT TO SCALE

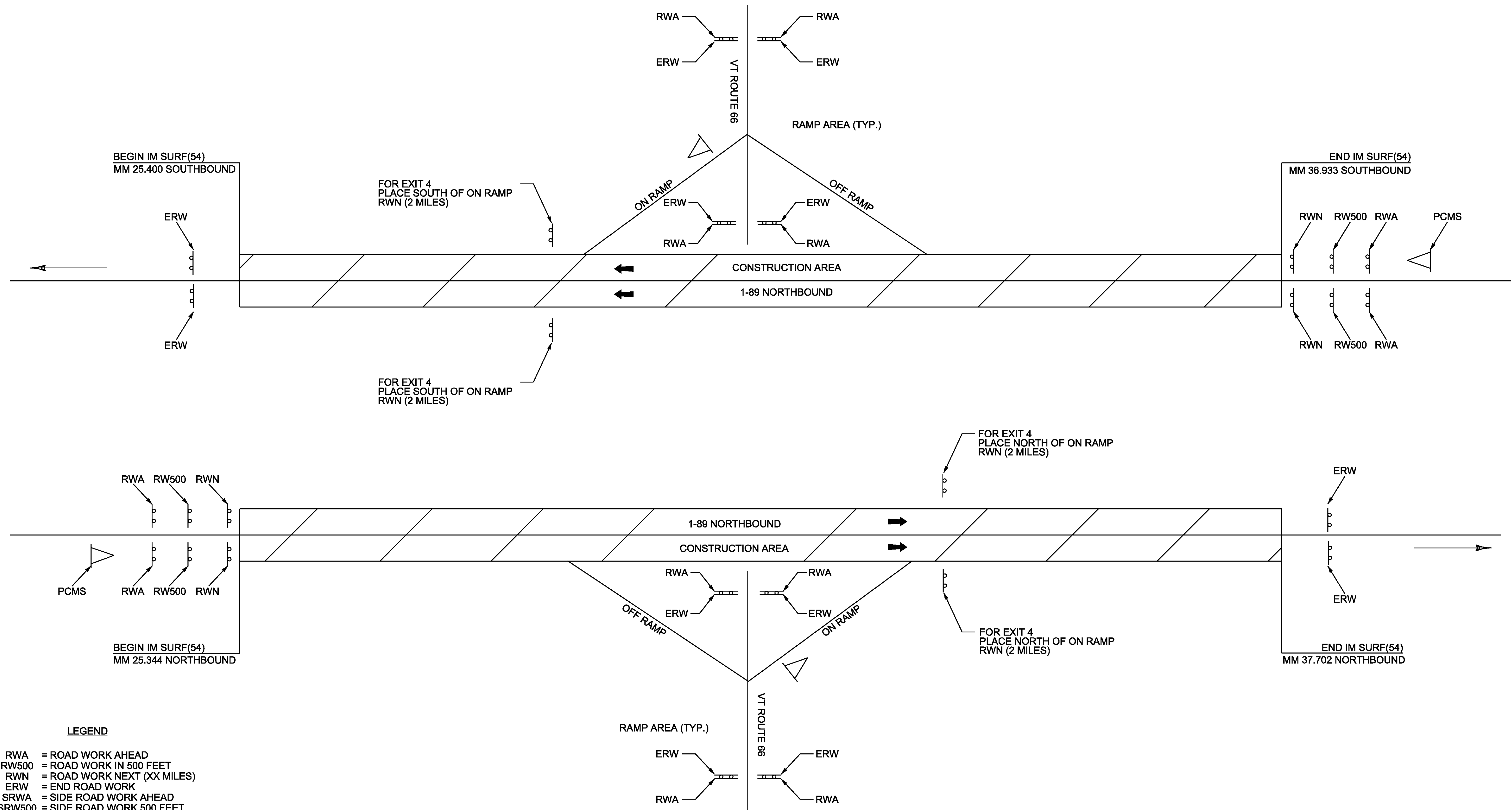


WRONG WAY ARROW
NOT TO SCALE
MARKINGS TO BE PLACED AT EXISTING WRONG WAY SIGN

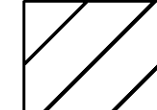
PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
PAVEMENT MARKING DETAIL SHEET 6

PLOT DATE: 2/10/2015
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 16 OF 22



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
-  = WORK AREA
-  = DIRECTION OF TRAFFIC FLOW

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: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn	PLOT DATE: 2/17/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
CONSTRUCTION APPROACH SIGNING SHEET	SHEET 17 OF 22

1. THE CONTRACTOR SHALL SUBMIT A SITE SPECIFIC TRAFFIC CONTROL PLAN TO THE ENGINEER 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 2009 MUTCD, WITH REVISIONS, SHALL BE THE STANDARD FOR ALL TRAFFIC CONTROL DEVICES. EXISTING SIGNS, SIGNALS AND MARKINGS SHALL BE VALID UNTIL SUCH TIME AS THEY ARE REPLACED OR RECONSTRUCTED. WHEN NEW TRAFFIC CONTROL DEVICES ARE ERECTED OR PLACED OR EXISTING TRAFFIC CONTROL DEVICES ARE REPLACED OR REPAIRED THE EQUIPMENT, DESIGN, METHOD OF INSTALLATION, PLACEMENT OR REPAIR SHALL CONFORM WITH THE MUTCD.
3. ADDITIONAL RAMP SIGNING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
4. THE BID PRICE FOR "TRAFFIC CONTROL", ITEM 641.10, SHALL INCLUDE ALL APPROACH AND ON-PROJECT CONSTRUCTION SIGNING, PORTABLE ARROW BOARDS, BARRIERS, BARRELS, CONES, BARRICADES, TEMPORARY REGULATORY AND WARNING SIGNS, AND POSTS AS DETAILED IN VAOT STANDARDS. ALL ADJUSTING, RELOCATING, AND REMOVING OF THESE DEVICES AS DIRECTED BY THE ENGINEER SHALL ALSO BE INCLUDED. THE FOLLOWING ITEMS WILL BE PAID FOR SEPARATELY:
- 630.10 AND 630.15 - UNIFORMED TRAFFIC OFFICERS AND FLAGGERS
- 646.622 TEMPORARY 6 INCH WHITE LINE, PAINT
- 646.632 TEMPORARY 6 INCH YELLOW LINE, PAINT
- 646.662 TEMPORARY 12 INCH WHITE LINE, PAINT
- 646.682 TEMPORARY 24 INCH STOP BAR, PAINT
- 646.692 TEMPORARY LETTER OR SYMBOL, PAINT
- 646.76 LINE STRIPING TARGETS
5. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE PROVIDED FOR USE ALONG THIS PROJECT. THE PLACEMENT OF THESE UNITS AS WELL AS THE MESSAGE WILL BE APPROVED BY THE ENGINEER. THESE SIGNS WILL BE PAID FOR UNDER ITEM 641.15, "PORTABLE CHANGEABLE MESSAGE SIGN".
- PCMS SHOULD NOT REPLACE ANY OF THE SIGNING DETAILED IN THE MUTCD AND SHOULD NOT BE USED IF STANDARD TRAFFIC CONTROL DEVICES ADEQUATELY PROVIDE THE INFORMATION THE MOTORISTS NEED TO TRAVEL SAFELY.
- THE PCMS SHALL CONSIST OF EITHER ONE OR TWO PHASES. TYPICALLY, A PHASE SHALL CONSIST OF UP TO THREE LINES OF EIGHT CHARACTERS PER LINE. THE PCMS SHOULD BE USED AS A SUPPLEMENT AND NOT AS A SUBSTITUTE FOR CONVENTIONAL SIGNS AND PAVEMENT MARKINGS.
- THE PCMS SHOULD COMMUNICATE WHAT INFORMATION MOTORISTS NEED TO KNOW. UNNECESSARY INFORMATION SHOULD BE AVOIDED. MESSAGES SHOULD BE UPDATED PERIODICALLY TO DESCRIBE THE WORK ACTIVITY OCCURRING SO THAT THE PCMS CONTINUES TO COMMAND THE ATTENTION OF MOTORISTS.
6. THE CONTRACTOR SHALL INCLUDE A CONSTRUCTION SIGN APPROACH PACKAGE FOR EXPECTED LANE CLOSURES AND WORK ZONE SPEED REDUCTIONS IN COMPLIANCE WITH VAOT STANDARDS. PAYMENT FOR PROVIDING THIS PACKAGE SHALL BE INCIDENTAL TO ITEM 641,10, "TRAFFIC CONTROL". ADD G20-5aP "WORK ZONE" PLAQUE AND R2-6aP "FINES DOUBLED" PLAQUE TO SPEED LIMIT SIGNS (SEE FIG. 6F-3 OF MUTCD). OMIT VR-355 "FINES DOUBLED FOR SPEEDING IN WORK ZONE" SIGN. IF LANE CLOSURES ARE USED THEY SHOULD NOT EXCEED 3 MILES AT ANY GIVEN PERIOD OF TIME. IF LANE CLOSURES REDUCE THE TRAVEL LANE BELOW 12 FEET DMV MUST BE NOTIFIED TO DETOUR WIDE LOAD PERMITTED VEHICLES.
7. NO CONSTRUCTION SIGNS SHALL BE INSTALLED AS TO INTERFERE OR OBSTRUCT THE VIEW OF EXISTING TRAFFIC CONTROL DEVICES, STOPPING SIGHT DISTANCE, AND CORNER SIGHT DISTANCE FROM DRIVES AND INTERSECTING HIGHWAYS.
8. REFER TO VT. STATE STANDARDS, THE SPECIAL PROVISIONS, AND THE MUTCD FOR TEMPORARY TRAFFIC CONTROL SIGN DIMENSIONS AND COLORS.

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



W4-2



W9-2



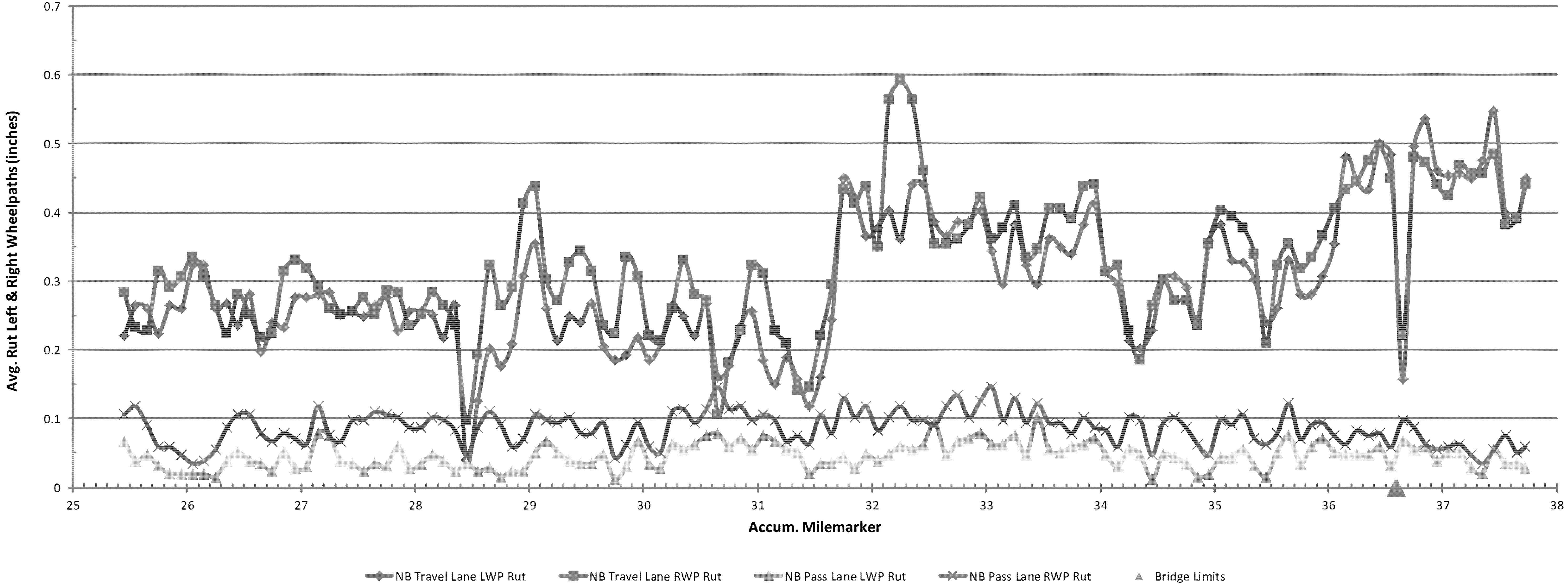
10. IN ADVANCE OF ANY PROPOSED INTERCHANGE RAMP CLOSURES THE CONTRACTOR SHALL SUBMIT A PLAN THAT WILL DEPICT HOW ADVANCED WARNING TO THE TRAVELING PUBLIC WILL BE ACCOMMODATED DURING THE CLOSURE. ADVANCED WARNING SHALL BE DEFINED AS PROVIDING ADVANCED WARNING SIGNS, BOTH STATIC AND PCMS, THAT PROVIDE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

PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn PLOT DATE: 2/17/2015
PROJECT LEADER: M. FOWLER DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP CHECKED BY: M. FOWLER
CONSTRUCTION APPROACH SIGNING SHEET NOTES SHEET 18 OF 22

I 89 NB Bethel-Brookfield IM SURF(54) Pre Con Ruts

Profiled 11/10/2014



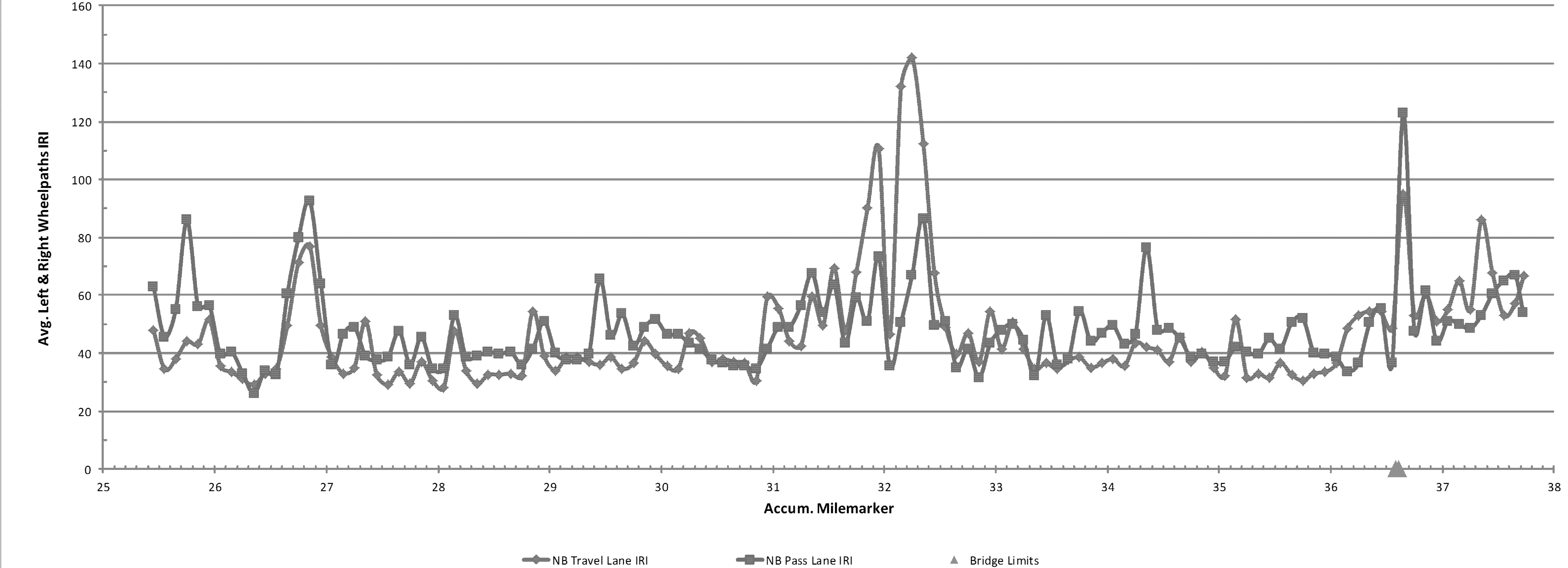
PROJECT NAME: BETHEL-BROOKFIELD
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FILE NAME: pl4v206wrk.dgn	PLOT DATE: 2/10/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
RUTTING DATA INFORMATION SHEET NB	SHEET 19 OF 22

I 89 NB Bethel-Brookfield IM SURF(54) Pre Con IRI

Profiled 11/10/2014

NB Travel Lane Avg. IRI = 46.3 NB Pass Lane Avg. IRI = 47.8

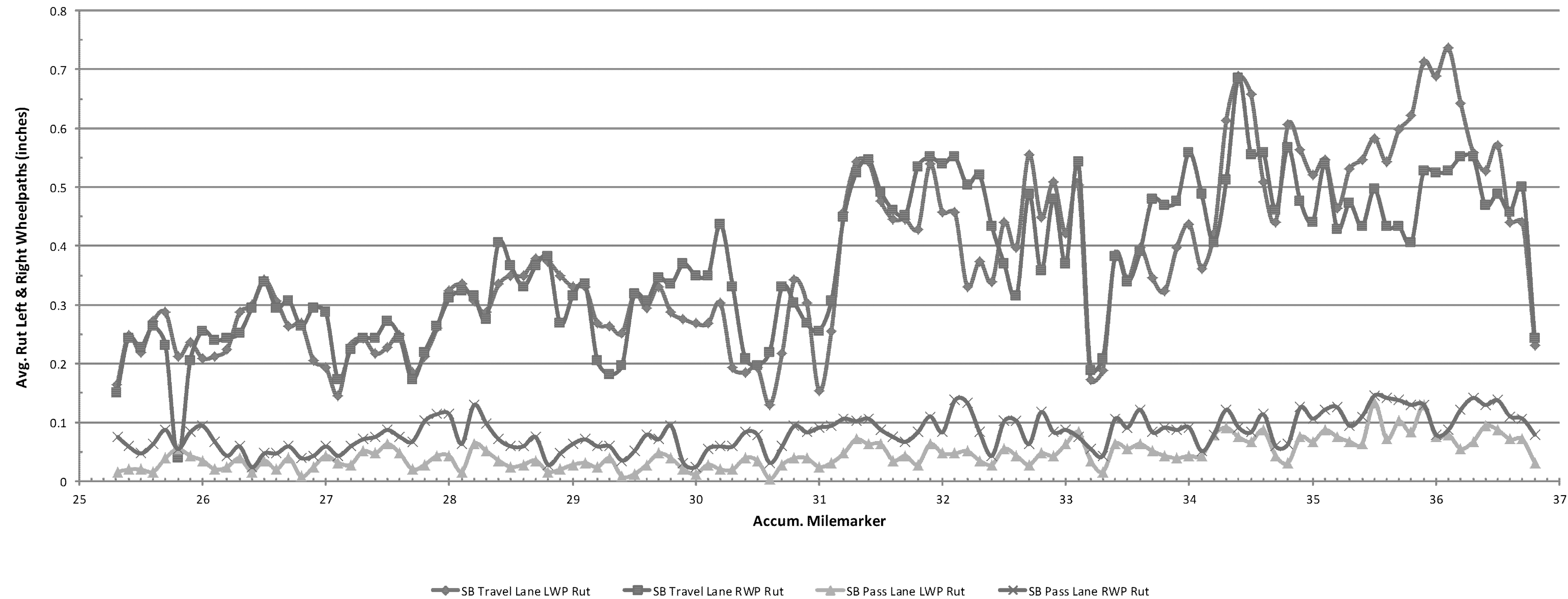


PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

FILE NAME: pl4v206wrk.dgn	PLOT DATE: 2/10/2015
PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
ROUGHNESS DATA INFORMATION SHEET NB	SHEET 20 OF 22

I 89 SB Bethel-Brookfield IM SURF(54) Pre Con Ruts

Profiled 11/10/2014



PROJECT NAME: BETHEL-BROOKFIELD
PROJECT NUMBER: IM SURF(54)

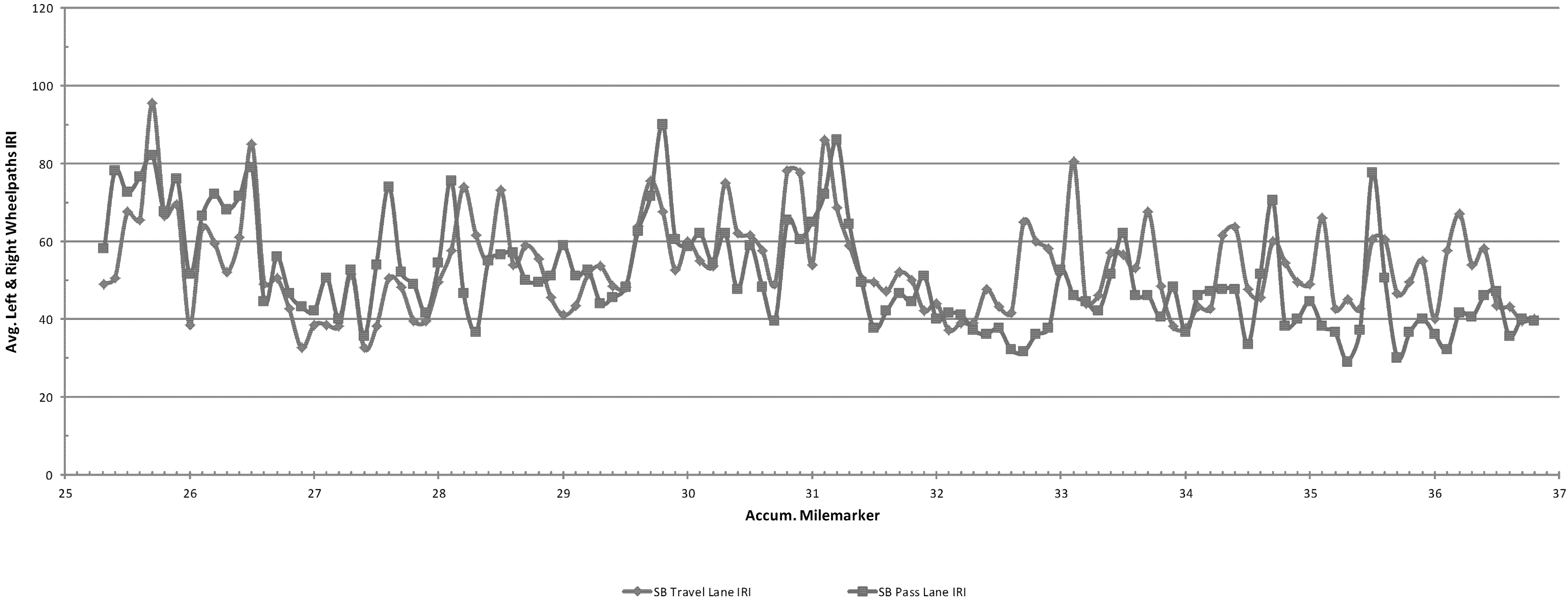
FILE NAME: pl4v206wrk.dgn
PROJECT LEADER: M. FOWLER
DESIGNED BY: B. KIPP
RUTTING DATA INFORMATION SHEET SB

PLOT DATE: 2/10/2015
DRAWN BY: B. KIPP
CHECKED BY: M. FOWLER
SHEET 21 OF 22

I 89 SB Bethel-Brookfield IM SURF(54) Pre Con IRI

Profiled 11/10/2014

SB Travel Lane Avg. IRI = 53.6 SB Pass Lane Avg. IRI = 51.0



PROJECT NAME: BETHEL-BROOKFIELD
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PROJECT LEADER: M. FOWLER	DRAWN BY: B. KIPP
DESIGNED BY: B. KIPP	CHECKED BY: M. FOWLER
ROUGHNESS DATA INFORMATION SHEET SB	SHEET 22 OF 22

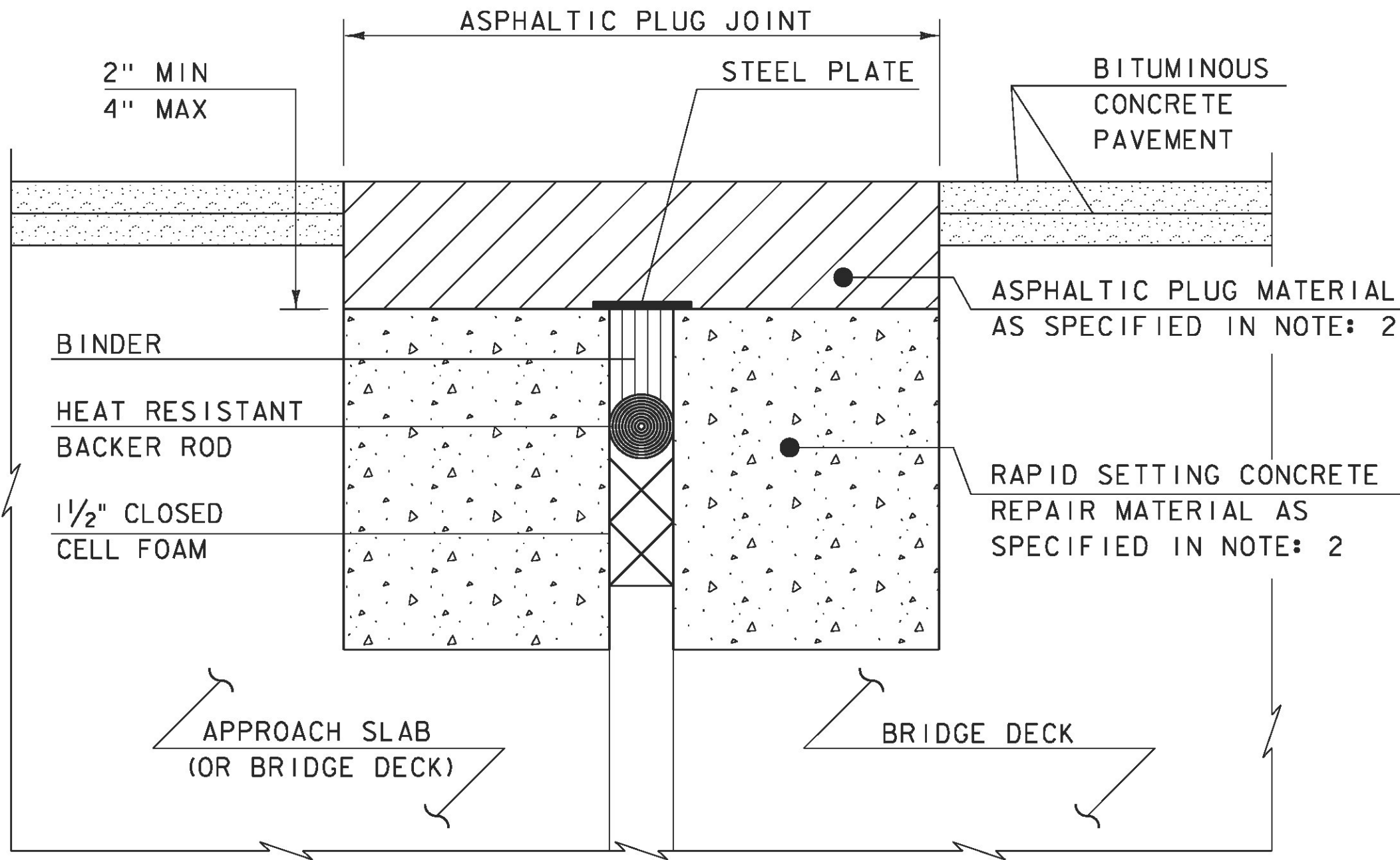
ASPHALTIC PLUG JOINT NOTES

INSTALLATION:

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

WEATHER LIMITATIONS

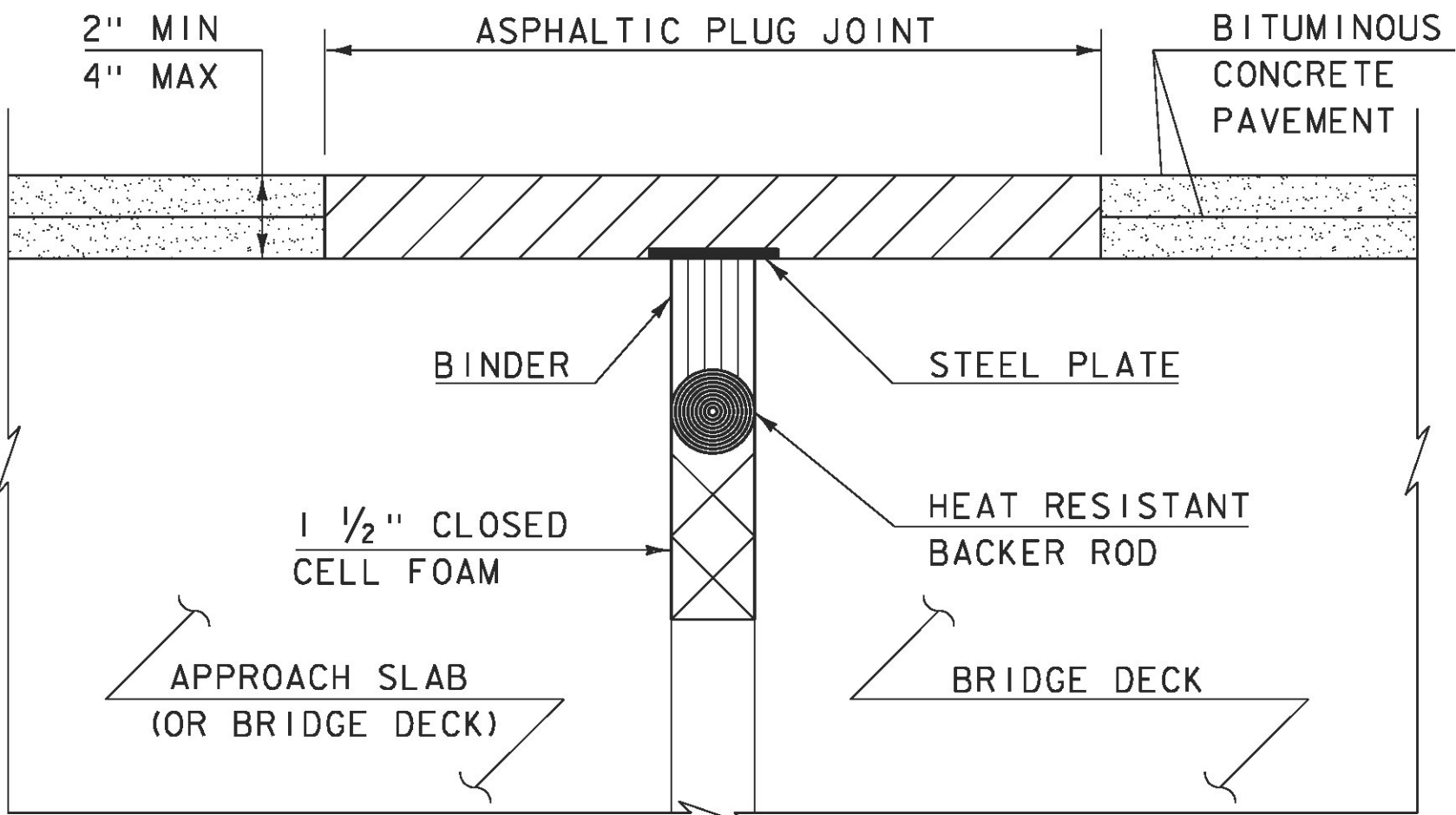
- APPLY BINDER MATERIAL ONLY WHEN THE FOLLOWING CONDITIONS PREVAIL OR AS RECOMMENDED BY THE MANUFACTURER:
1. THE AMBIENT AIR TEMPERATURE IS AT LEAST 10 DEG C (50 DEG F) AND RISING.
 2. THE ROAD SURFACE IS DRY.
 3. WEATHER CONDITIONS OR OTHER CONDITIONS ARE FAVORABLE AND ARE EXPECTED TO REMAIN SO FOR THE PERFORMANCE OF SATISFACTORY WORK.



ASPHALTIC PLUG-JOINT DETAIL - REHAB

NOTES: (NOT TO SCALE)

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

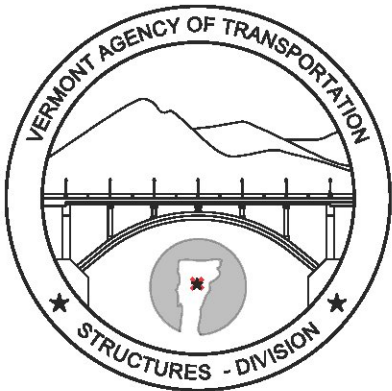


ASPHALTIC PLUG-JOINT DETAIL - NEW

(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION

BRIDGE JOINT
ASPHALTIC PLUG



STRUCTURES
DETAIL
SD-516.10