

WKE

PROJECT ID: 4890-00-73
WITH:

COUNTY: SOUTHEAST REGION

MAY 2017

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 38

END CONSTRUCTION

STH 164 (WAUKESHA COUNTY LINE)

RACINE



DESIGN DESIGNATION

A.A.D.T.	=
A.A.D.T.	=
D.H.V.	=
D.D.	=
T.	=
DESIGN SPEED	=
ESALS	=

CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	---
LOT LINE	---
LIMITED HIGHWAY EASEMENT	---
EXISTING RIGHT OF WAY	---
PROPOSED OR NEW R/W LINE	---

SLOPE INTERCEPT	---
REFERENCE LINE	---
EXISTING CULVERT	---
PROPOSED CULVERT (Box or Pipe)	---

COMBUSTIBLE FLUIDS



MARSH AREA



WOODED OR SHRUB AREA



PROFILE

GRADE LINE	---
ORIGINAL GROUND	---
MARSH OR ROCK PROFILE (To be noted as such)	---
SPECIAL DITCH	---

GRADE ELEVATION

CULVERT (Profile View)	---
UTILITIES	---
COMMUNICATION OVERHEAD	OH
COMMUNICATION UNDERGROUND	C
ELECTRIC OVERHEAD	OH
ELECTRIC UNDERGROUND	FO
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
WATER	W
UTILITY PEDESTAL	---
POWER POLE	---
TELEPHONE POLE	---

ROCK	---
LABEL	---
SECT	---
OH	---
C	---
OH	---
FO	---
G	---
SAN	---
SS	---
W	---
---	---
---	---
---	---

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

VARIOUS LOCATIONS

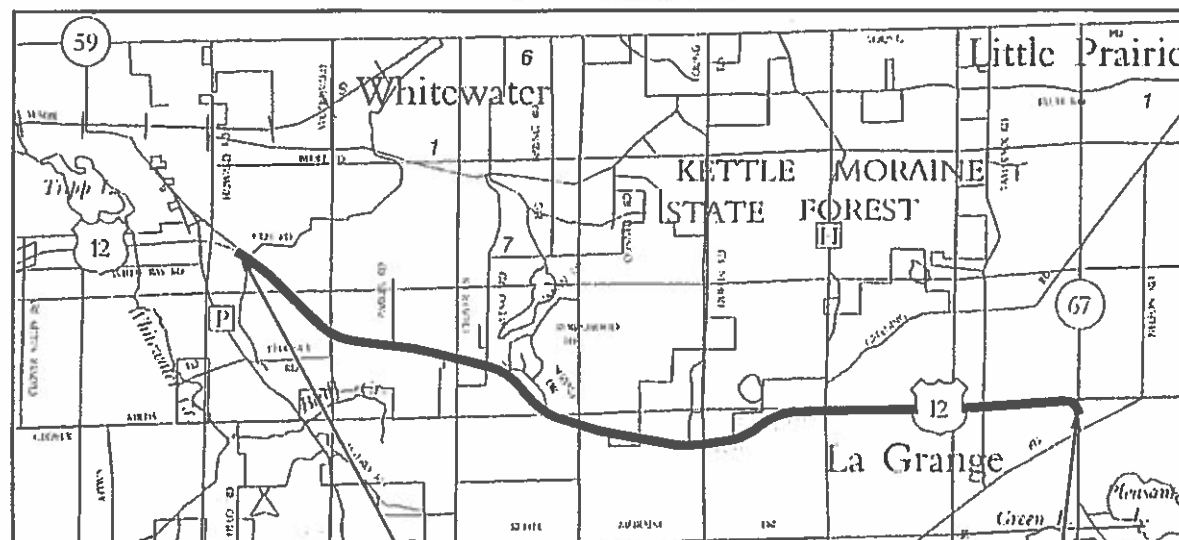
CRACK SEALING-FY 2018

VAR HWY

SOUTHEAST REGION WIDE

STATE PROJECT NUMBER
4890-00-73BEGIN CONSTRUCTION
STH 20 (USH 45)END CONSTRUCTION
STH 20 (2500' EAST OF CTH C)BEGIN CONSTRUCTION
STH 164 (STH 36)

WALWORTH

LAYOUT
SCALE 0

TOTAL NET LENGTH OF CENTERLINE =

BEGIN CONSTRUCTION
USH 12 (200' WEST OF COX ROAD)END CONSTRUCTION
USH 12 (STH 67)

STATE PROJECT

4890-00-73

FEDERAL PROJECT

PROJECT

CONTRACT

RACINE

ORIGINAL PLANS PREPARED BY
SPANN
& ASSOCIATES
Consulting Engineers1/23/17
(Date) (Signature)STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NA
Designer	SPANN & ASSOCIATES
Project Manager	DOUG CAIN
Regional Examiner	
Regional Supervisor	BENEDICT ERUCHALU

APPROVED FOR THE DEPARTMENT

DATE 1-23-17 (Signature)

E

SE REGION STATE HIGHWAY MAINTENANCE CONTACTS

PAUL AMBROSE
MAINTENANCE PROGRAM ENGINEER
WISDOT SE REGION
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 548-6730

RACINE COUNTY
GAIL LANTZ
AREA MAINTENANCE COORDINATOR
WISDOT SE REGION
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (414) 750-0994

WALWORTH COUNTY
DENNIS SCHMUNCK
AREA MAINTENANCE COORDINATOR
WISDOT SE REGION
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (414) 750-1563

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS

DNR CONTACTS

RACINE COUNTY
KRISTINA BETZOLD
DNR SOUTHEAST REGION HQ
2300 DR. MARTIN LUTER KING JR. DR
MILWAUKEE, WI 53212
PHONE: (414) 263-8517
kristina.betzold@wisconsin.gov

WALWORTH COUNTY
CRAIG WEBSTER
141 NW BARSTOW ST. RM:180
WAUKESHA, WI 53188
PHONE: (262) 574-2141
craig.webster@wisconsin.gov

OTHER CONTACTS
DOUGLAS CAIN
WISDOT PROJECT MANAGER
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 548-5603

DAVID CAVERSON
SPANN & ASSOCIATES, LLC
W175 N11086 STONEWOOD DRIVE, SUITE B
GERMANTOWN, WI 53022
PHONE: (414) 779-1419

GENERAL NOTES

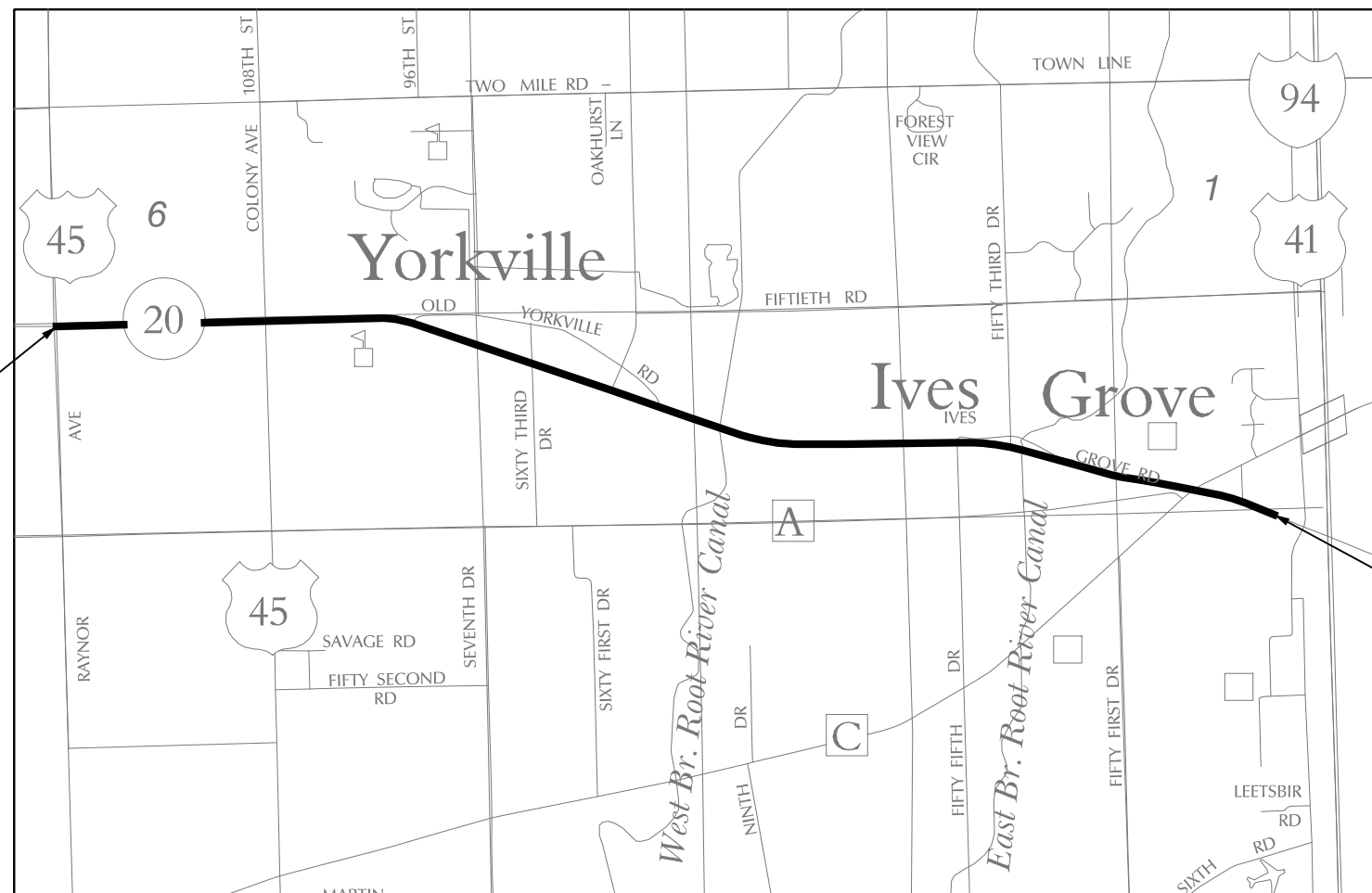
- NO UTILITY FACILITIES ARE IDENTIFIED IN THE PLAN. CONTRACTOR IS RESPONSIBLE TO CONFIRM THIS.
- IDENTIFY ALL UTILITIES IN THE AREA BY CONTACTING DIGGERS HOTLINE.
- NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- QUANTITY FOR ROUTE AND SEAL IS ESTIMATED AT 3 LF PER 1 LB OF MATERIAL.
- QUANTITY FOR CRACK SEALING IS ESTIMATED AT 4 LF PER 1 LB OF MATERIAL.
- EPOXY PAVEMENT MARKINGS WILL BE CONTINUOUS WITHIN THE PROJECT LIMITS.
- ROUTE, CRACK AND SEAL MODIFIED LOCATIONS ARE APPROXIMATE AND WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ROUTE, CRACK AND SEAL MODIFIED AREA INCLUDES MAINLINE TRAVEL LANES, SHOULDERS, TURN LANES, AUXILIARY LANES AND TAPER SECTIONS.
- TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
- A RUMBLE STRIP RUNS ALONG THE MAJORITY OF THE USH 12 CENTERLINE WITHIN THE PROJECT LIMITS. REPAIR WITH CRACK SEALING ONLY ON THE RUMBLE STRIP. IN AREAS WHERE THERE IS NO RUMBLE STRIP, REPAIR WITH ROUTE AND SEAL WHERE APPROPRIATE.

DIGGERSHOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

BEGIN CONSTRUCTION
STH 20 (USH 45)



END CONSTRUCTION
 STH 20 (2500' EAST OF CTH C)
 (AT PAVEMENT SECTION CHANGE)

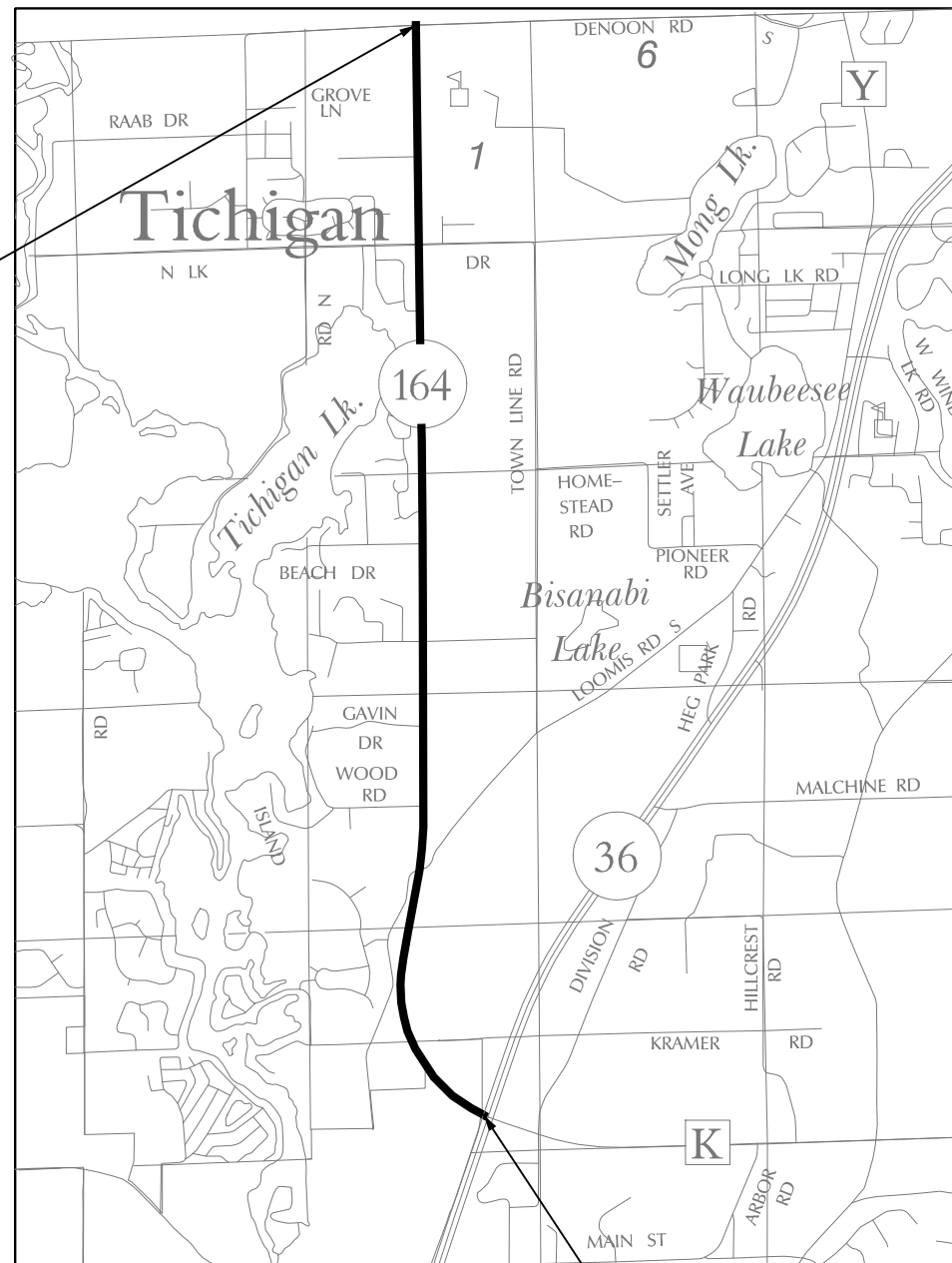
UTILIZE SDD 15D37-2 TRAFFIC CONTROL,
2-LANE ROUNDABOUT

NET MILES - 5.98



STH 164 RACINE COUNTY

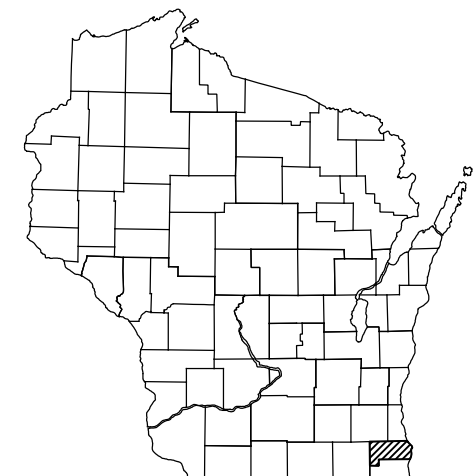
END CONSTRUCTION
STH 164 (975' N. OF WAUKESHA COUNTY LINE)
(AT PAVEMENT CHANGE)



BEGIN CONSTRUCTION
STH 164 (STH 36)

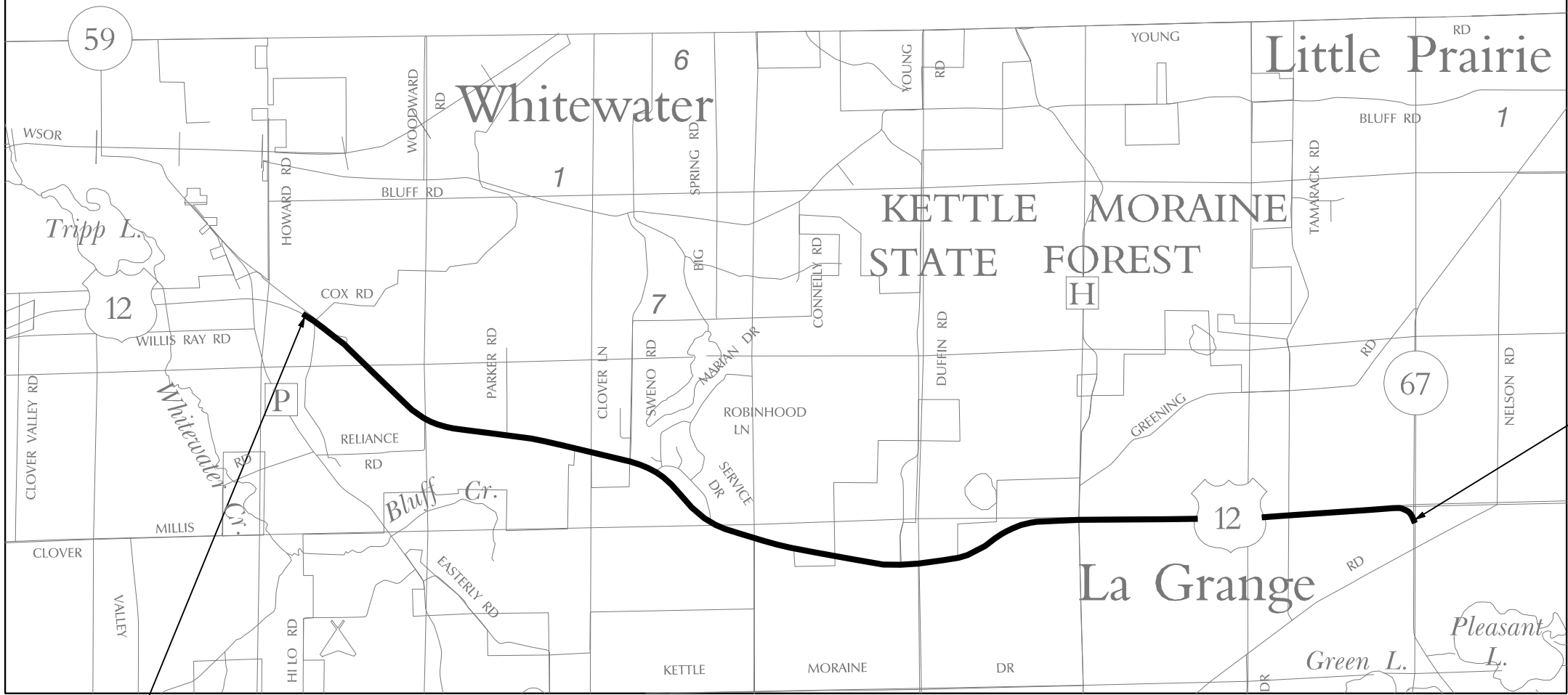
NOTES:
UTILIZE SDD 15C12-5 TRAFFIC CONTROL,
FOR LANE CLOSURES (SUITABLE FOR MOVING
OPERATIONS)

NET MILES - 5.08



USH 12

WALWORTH COUNTY



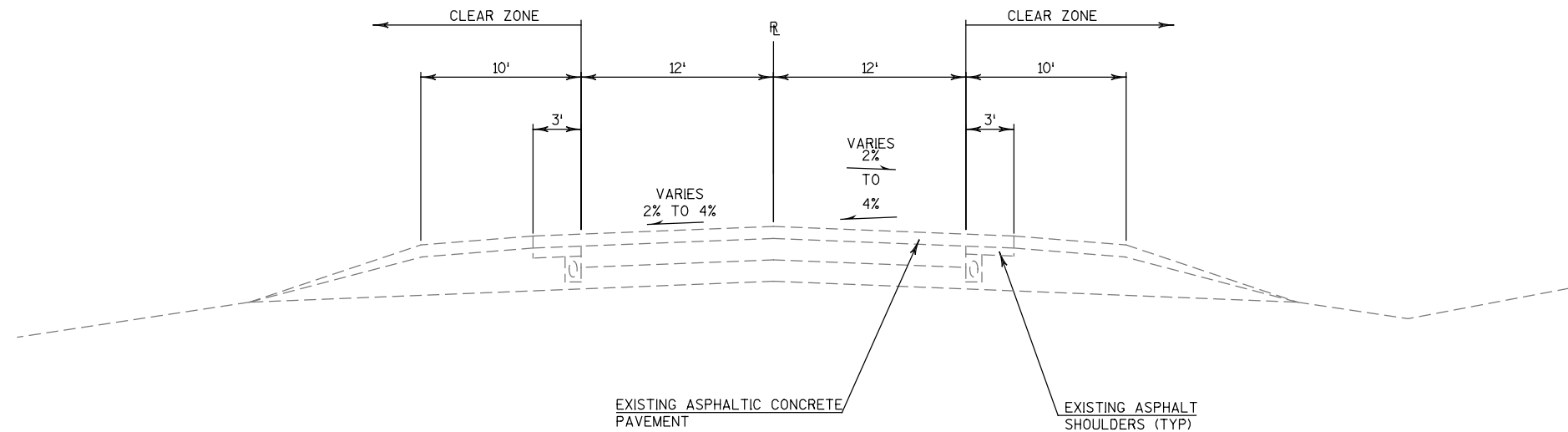
BEGIN CONSTRUCTION
USH 12 (200' WEST OF COX ROAD)
(AT PAVEMENT CHANGE)

END CONSTRUCTION
USH 12 (STH 67)
(AT BEGINNING OF GORE)

NOTES:
UTILIZE SDD 15C12-5 TRAFFIC CONTROL,
FOR LANE CLOSURES (SUITABLE FOR MOVING
OPERATIONS)

NET MILES - 6.98



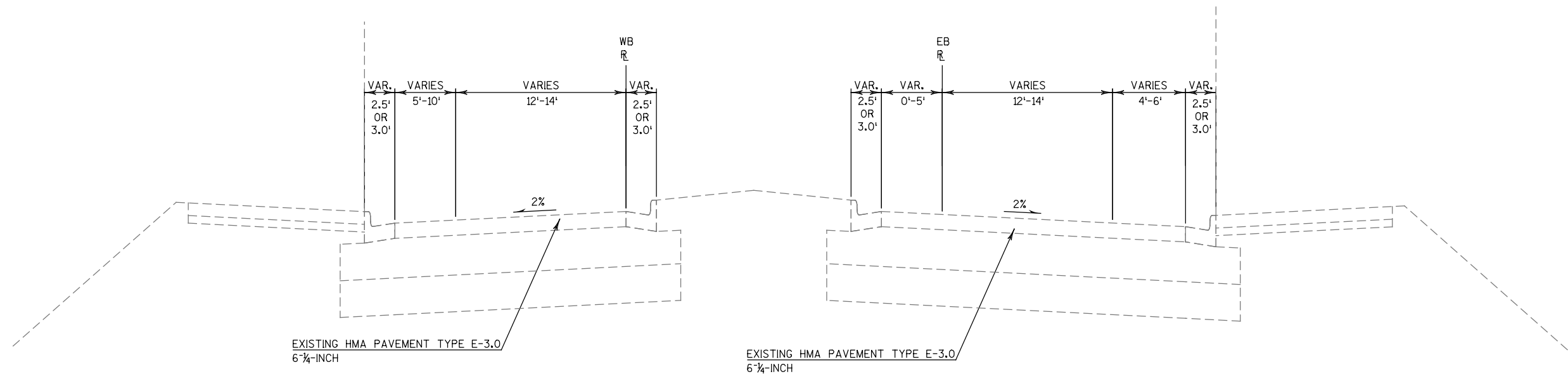


EXISTING TYPICAL SECTION

STH 20

USH 45 (NORTH LEG) - LIMITS OF WEST LEG OF ROUNDABOUT
LIMITS OF EAST LEG OF ROUNDABOUT - 100' WEST OF IVES GROVE ROAD WEST

FOR INFORMATION ONLY

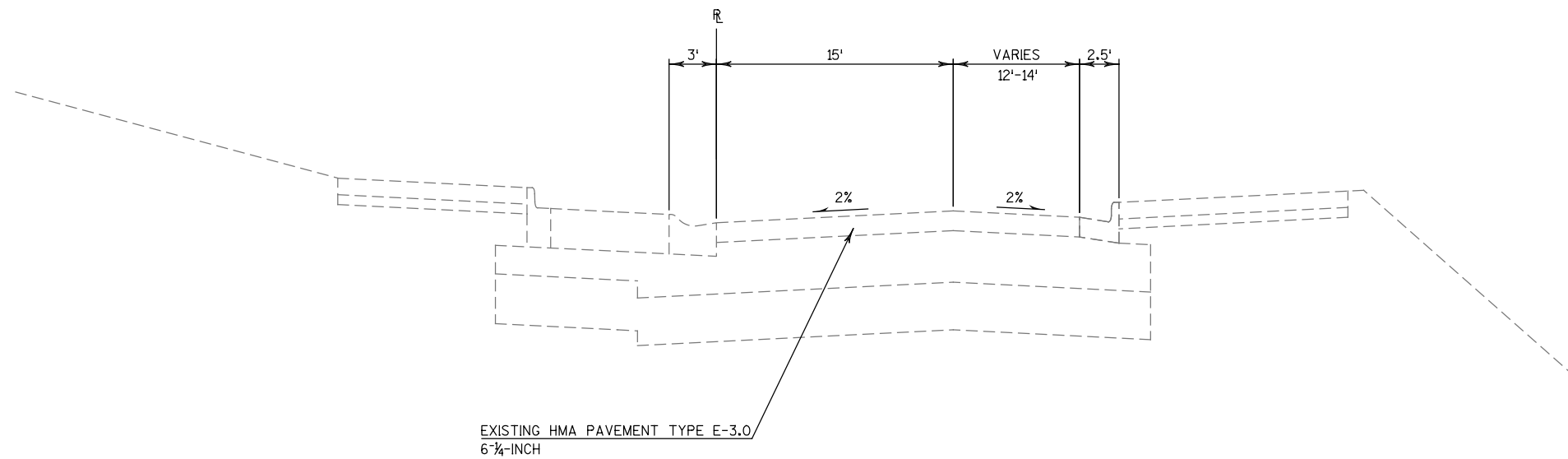


EXISTING TYPICAL SECTION

STH 20

LIMITS OF WEST LEG OF ROUNDABOUT - ROUNDABOUT
ROUNDABOUT - LIMITS OF EAST LEG OF ROUNDABOUT

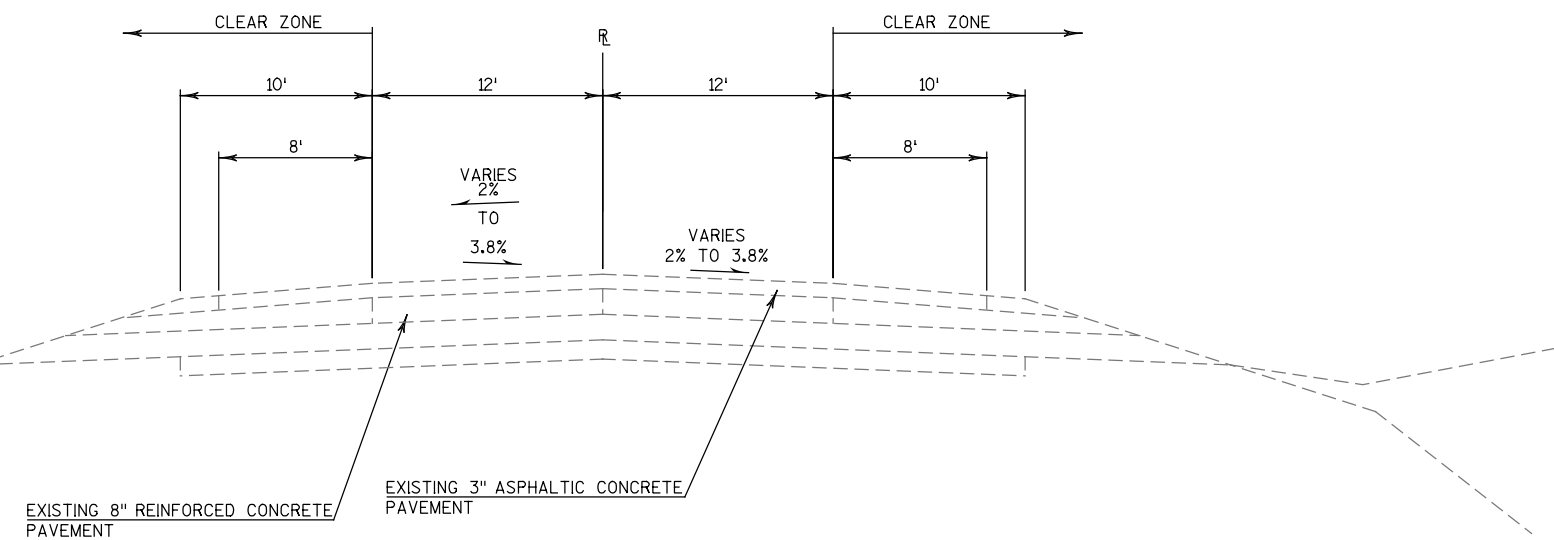
FOR INFORMATION ONLY



EXISTING TYPICAL SECTION

STH 20
ROUNDAABOUT

FOR INFORMATION ONLY

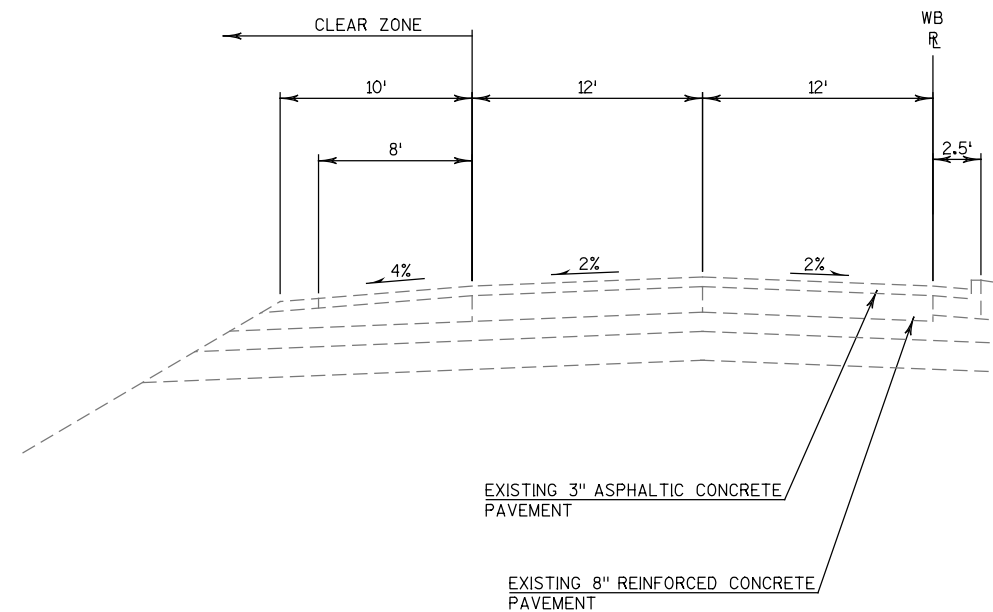


EXISTING TYPICAL SECTION

STH 20
100' WEST OF IVES GROVE ROAD WEST - IVES GROVE ROAD EAST

FOR INFORMATION ONLY

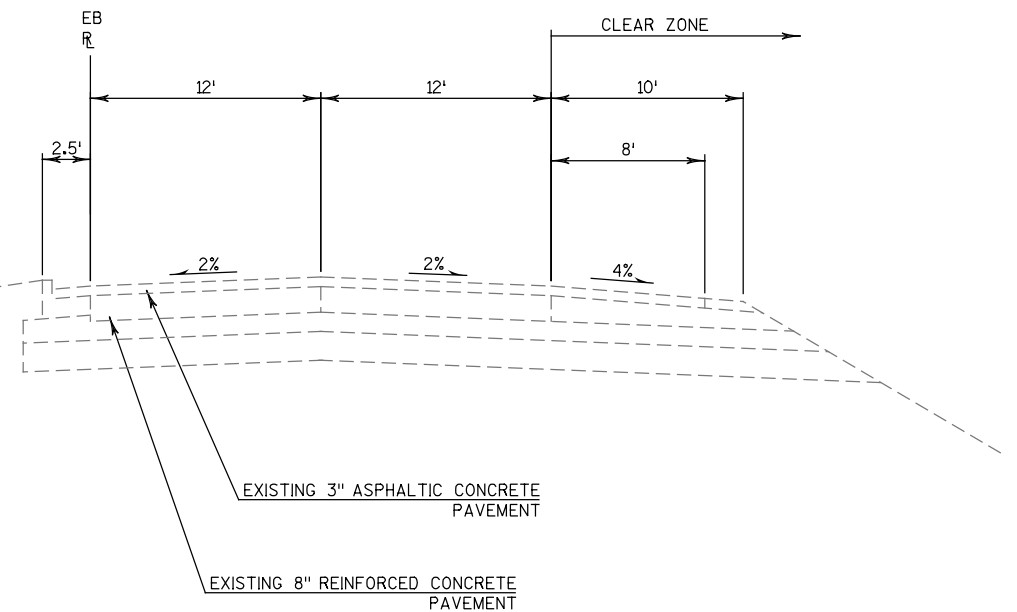
2



EXISTING 3" ASPHALTIC CONCRETE
PAVEMENT

EXISTING 8" REINFORCED CONCRETE
PAVEMENT

2

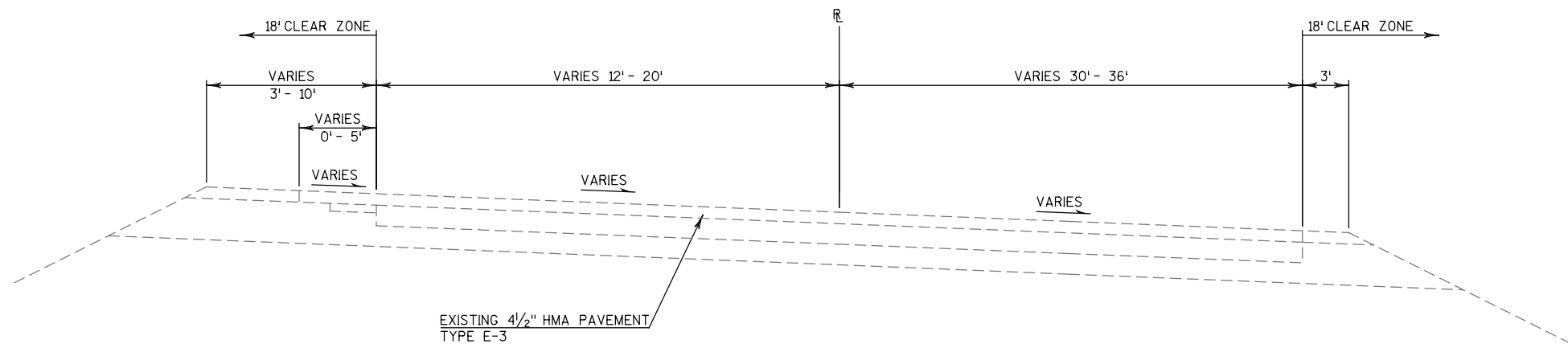


EXISTING 3" ASPHALTIC CONCRETE
PAVEMENT

EXISTING 8" REINFORCED CONCRETE
PAVEMENT

EXISTING TYPICAL SECTION

STH 20
IVES GROVE ROAD EAST - 2500' EAST OF CTH C
FOR INFORMATION ONLY

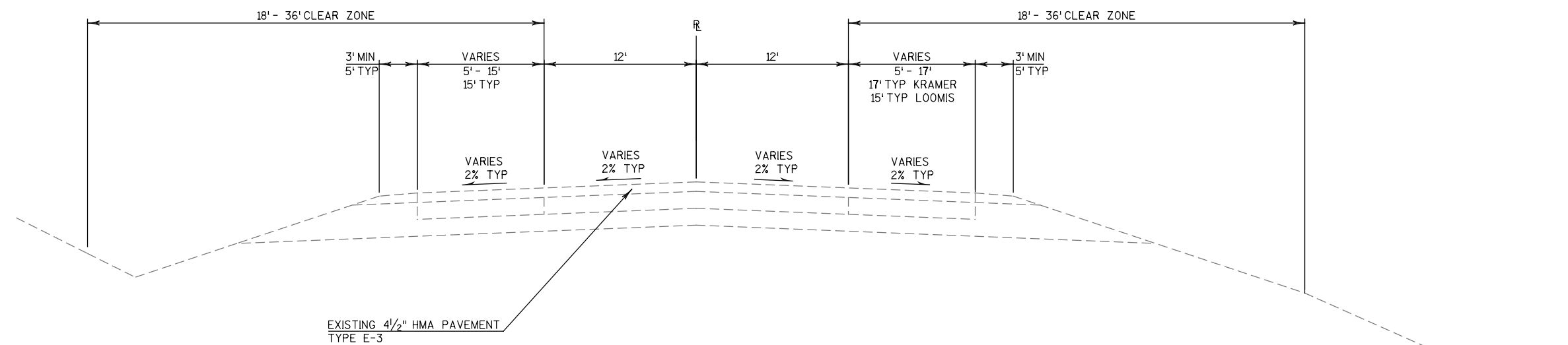


EXISTING TYPICAL SECTION

STH 164

STH 36 - CORNERSTONE CROSSING

FOR INFORMATION ONLY

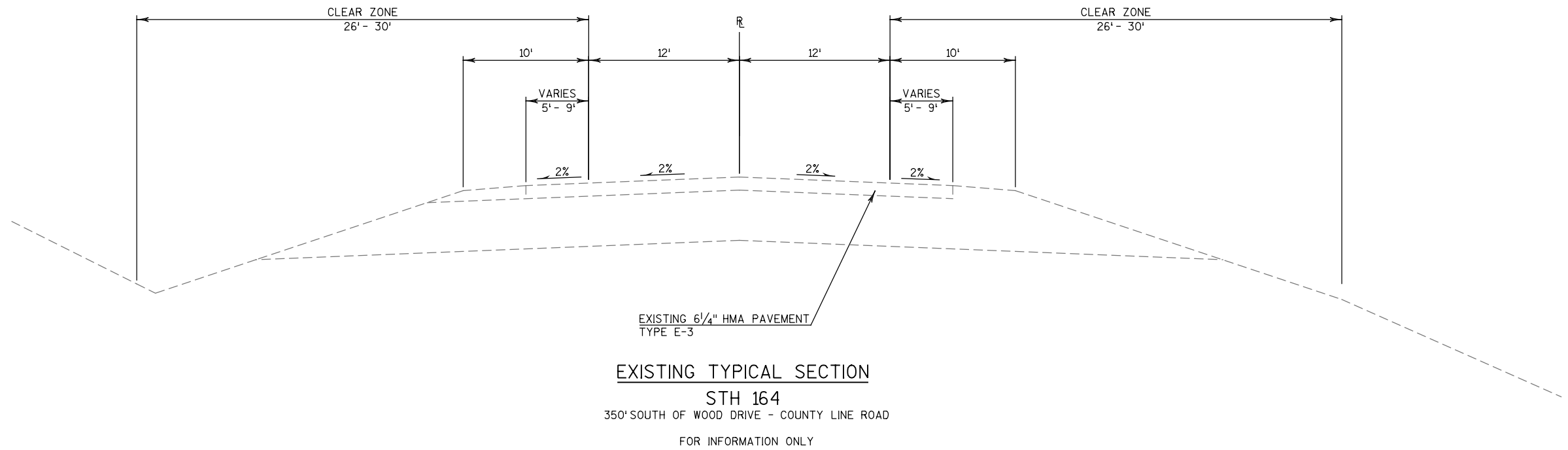


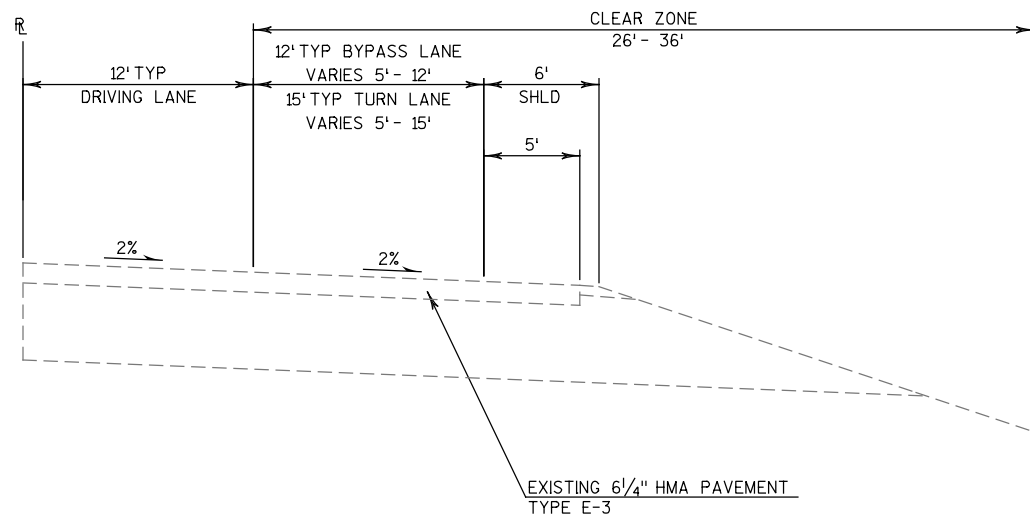
EXISTING TYPICAL SECTION

STH 164

CORNERSTONE CROSSING - 350' SOUTH OF WOOD DRIVE (RT)

FOR INFORMATION ONLY





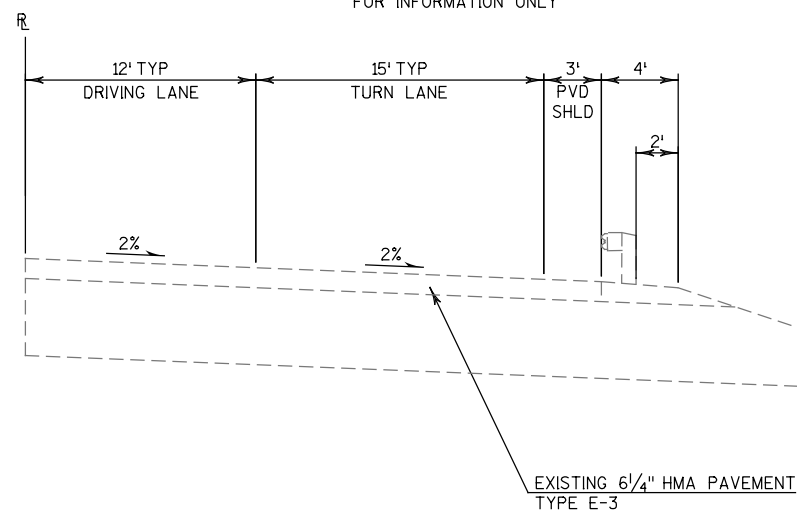
EXISTING TYPICAL SECTION - RURAL TURN/BYPASS LANE

STH 164

(LEFT IS MIRROR IMAGE OF RIGHT)

400' SOUTH OF WOOD DRIVE - 400' NORTH OF WOOD DRIVE (RT)
WOOD DRIVE - 475' NORTH OF WOOD DRIVE (LT)
350' SOUTH OF GAWIN DRIVE - 450' NORTH OF GAWIN DRIVE (RT)
GAWIN DRIVE - 100' NORTH OF GAWIN DRIVE (LT)
600' SOUTH OF EAST BAY DRIVE - EAST BAY DRIVE (RT)
EAST BAY DRIVE - 500' NORTH OF EAST BAY DRIVE (LT)
400' SOUTH OF BEACH DRIVE - 1150' NORTH OF BEACH DRIVE (RT)
BEACH DRIVE - 400' NORTH OF BEACH DRIVE (LT)
SANDY LANE - 400' NORTH OF SANDY LANE (LT)
375' SOUTH OF DORIE LANE - 425' NORTH OF DORIE LANE (RT)
DORIE LANE - 500' NORTH OF DORIE LANE (LT)
450' SOUTH OF GREENHAVEN TERRACE - GREENHAVEN TERRACE (RT)
GREENHAVEN TERRACE - 400' NORTH OF GREENHAVEN TERRACE (LT)
450' NORTH OF GREENHAVEN TERRACE - 560' NORTH OF GREENHAVEN TERRACE (RT)
600' SOUTH OF NORTH LAKE DRIVE - LAKE DRIVE (RT)
NORTH LAKE DRIVE - 400' NORTH OF NORTH LAKE DRIVE (RT)
375' SOUTH OF JENSON PARKWAY - 425' NORTH OF JENSON PARKWAY (RT)
JENSON PARKWAY - 400' NORTH OF JENSON PARKWAY (LT)
500' SOUTH OF COUNTY LINE ROAD - COUNTY LINE ROAD (RT)

FOR INFORMATION ONLY

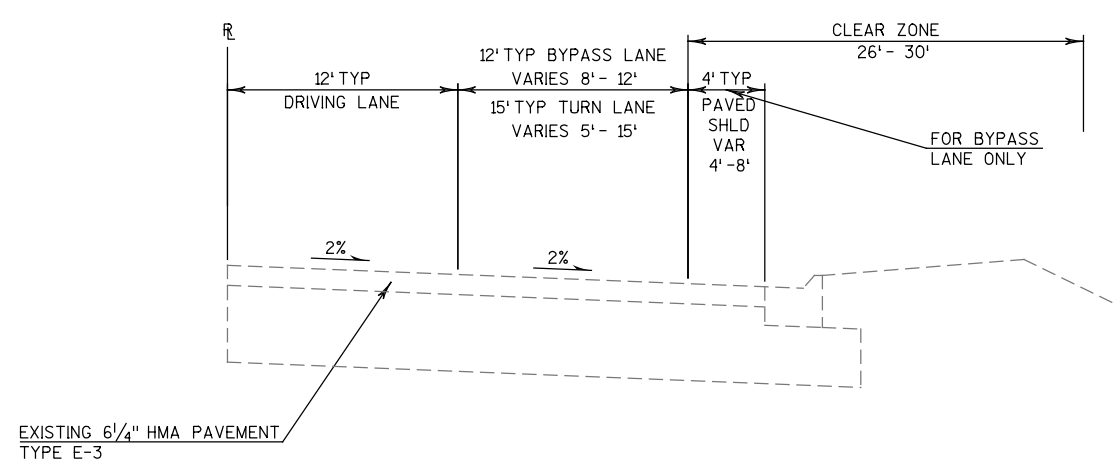


EXISTING TYPICAL SECTION - RURAL RIGHT TURN LANE WITH BEAM GUARD

STH 164

350' SOUTH OF COUNTY LINE ROAD - 100' SOUTH OF COUNTY LINE ROAD

FOR INFORMATION ONLY



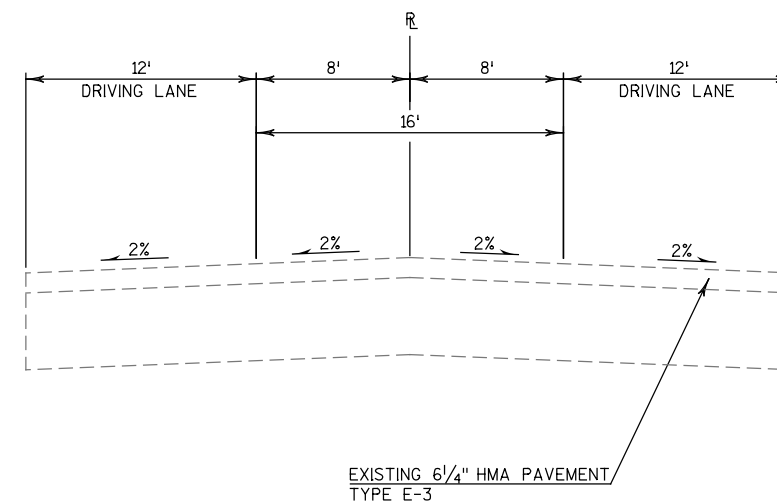
EXISTING TYPICAL SECTION - URBAN TURN/BYPASS LANE

STH 164

(LEFT IS MIRROR IMAGE OF RIGHT)

DORIE LANE - 400' NORTH OF DORIE LANE (LT)
GREENHAVEN TERRACE - 450' NORTH OF GREENHAVEN TERRACE (RT)
GREENHAVEN TERRACE - 400' NORTH OF GREENHAVEN TERRACE (LT)
175' SOUTH OF NORTH LAKE DRIVE - NORTH LAKE DRIVE (RT)

FOR INFORMATION ONLY

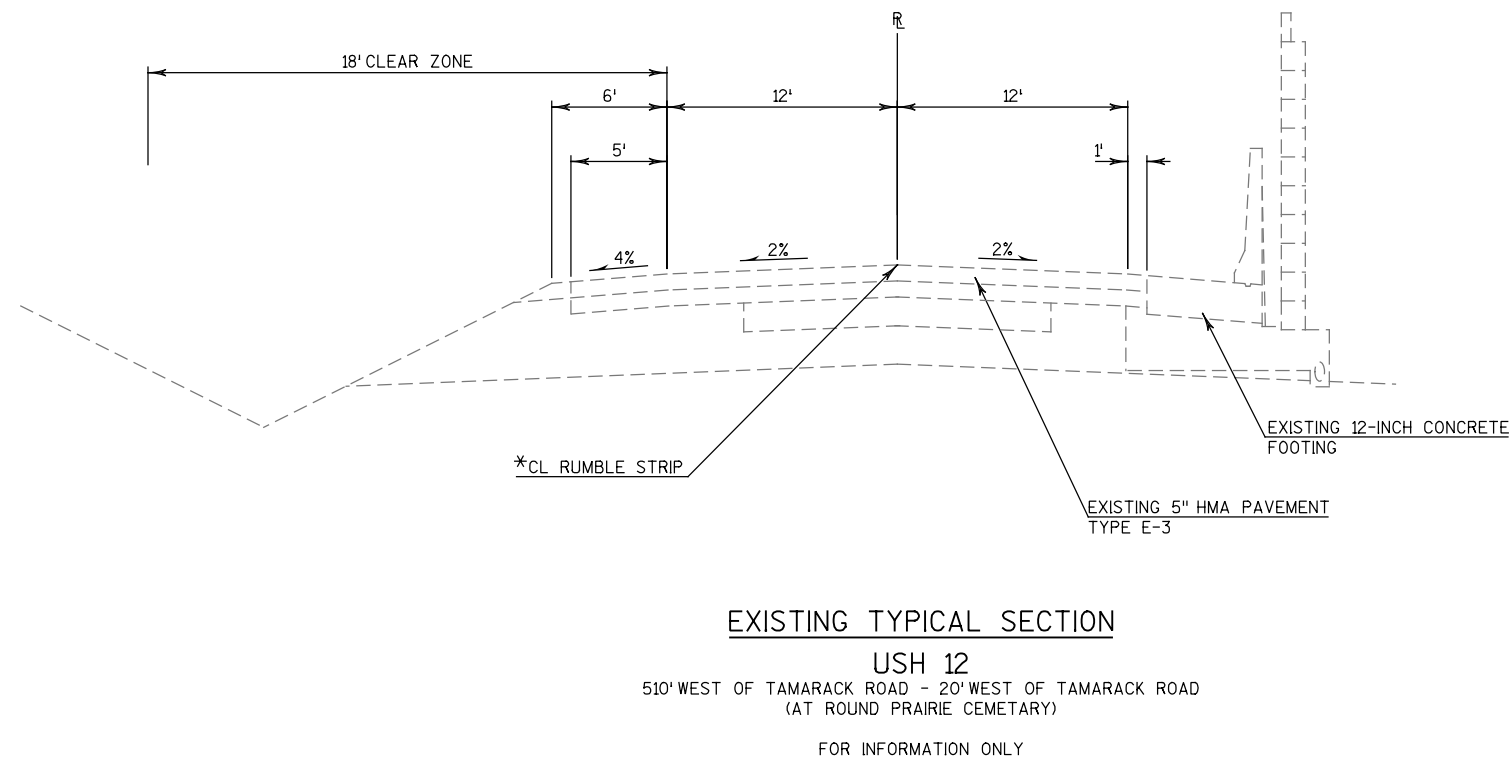
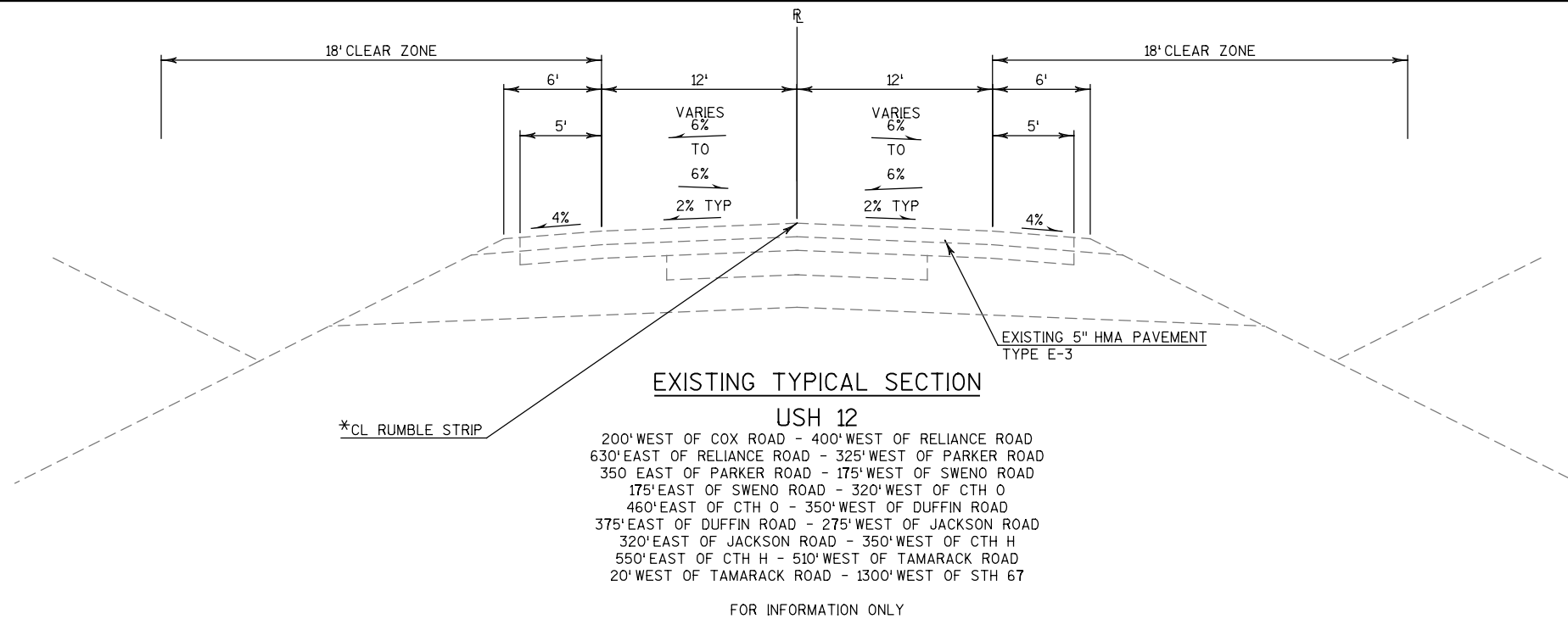


MEDIAN LEFT TURN LANE

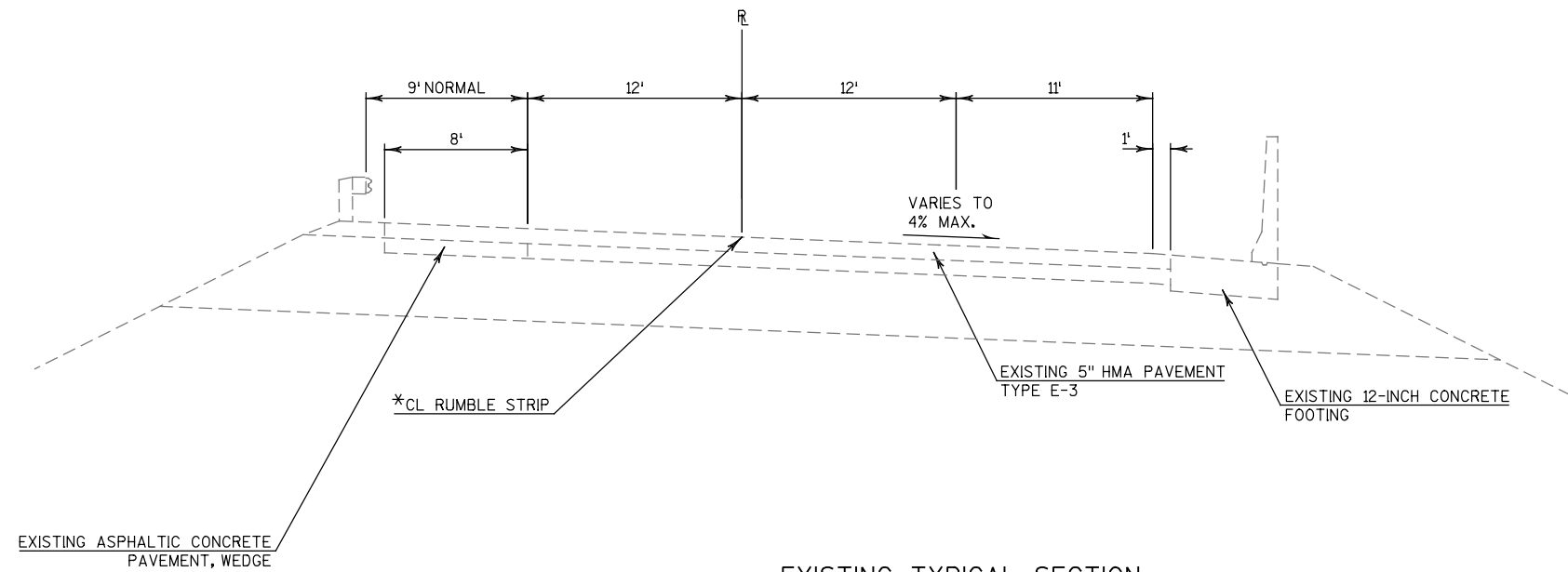
STH 164

600' SOUTH OF NORTH LAKE DRIVE - 650' NORTH OF NORTH LAKE DRIVE

FOR INFORMATION ONLY

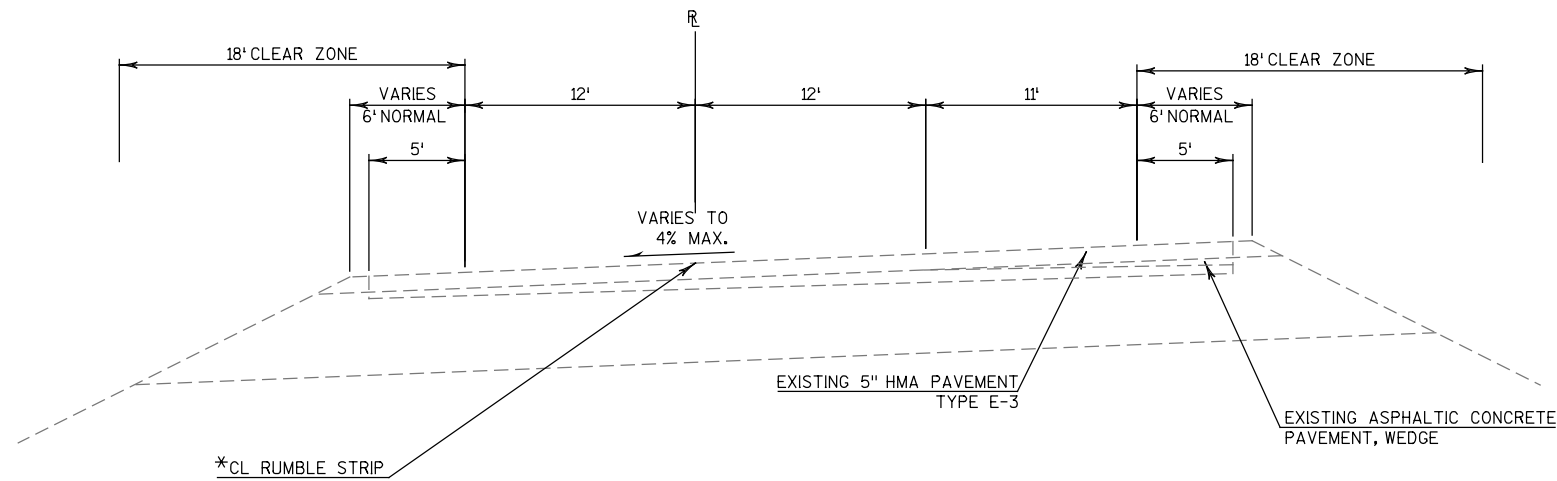


*NOTE:
THERE IS A RUMBLE STRIP THAT RUNS ALONG THE MAJORITY OF THE USH 12 CENTERLINE WITHIN THE PROJECT LIMITS. REPAIR WITH CRACK SEALING ONLY ON THE RUMBLE STRIP. IN AREAS WHERE THERE IS NO RUMBLE STRIP, REPAIR WITH ROUTE AND SEAL WHERE APPROPRIATE.



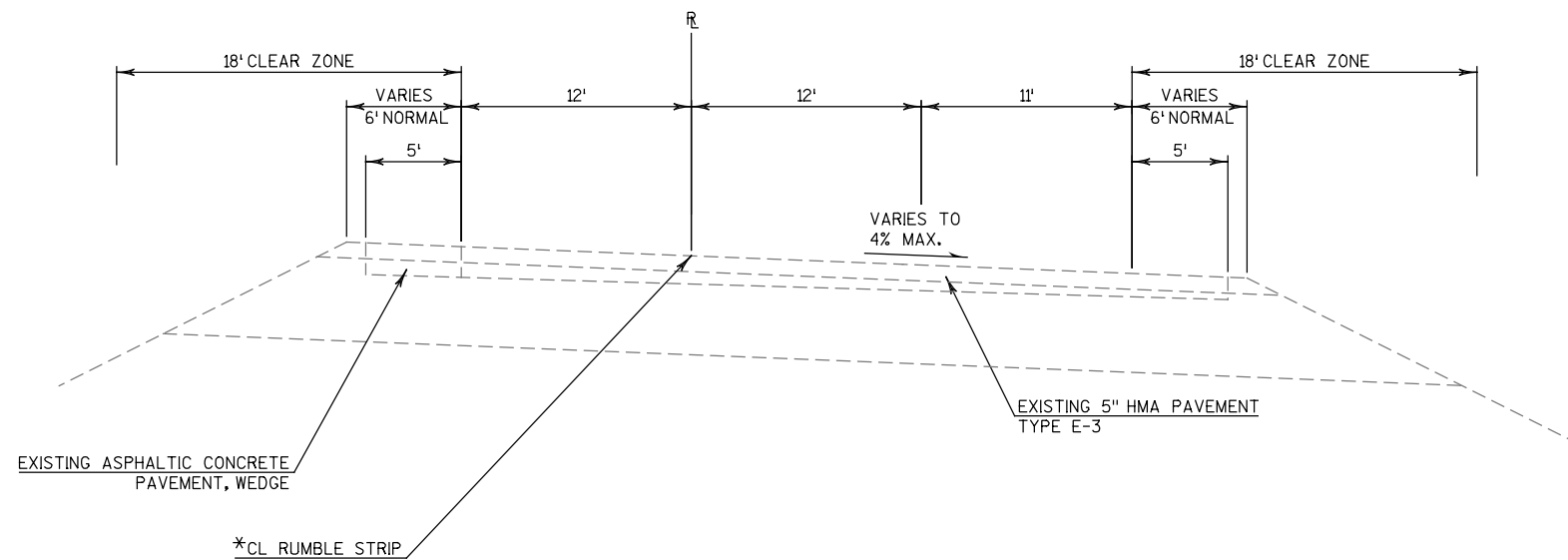
EXISTING TYPICAL SECTION
USH 12
WITH TRUCK CLIMING LANE AND BEAMGUARD
1050' EAST OF SWENO ROAD - 1915' EAST OF SWENO ROAD
FOR INFORMATION ONLY

*NOTE:
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OF THE USH 12 CENTERLINE WITHIN THE PROJECT LIMITS.
REPAIR WITH CRACK SEALING ONLY ON THE RUMBLE STRIP. IN
AREAS WHERE THERE IS NO RUMBLE STRIP, REPAIR WITH ROUTE
AND SEAL WHERE APPROPRIATE.



EXISTING TYPICAL SECTION

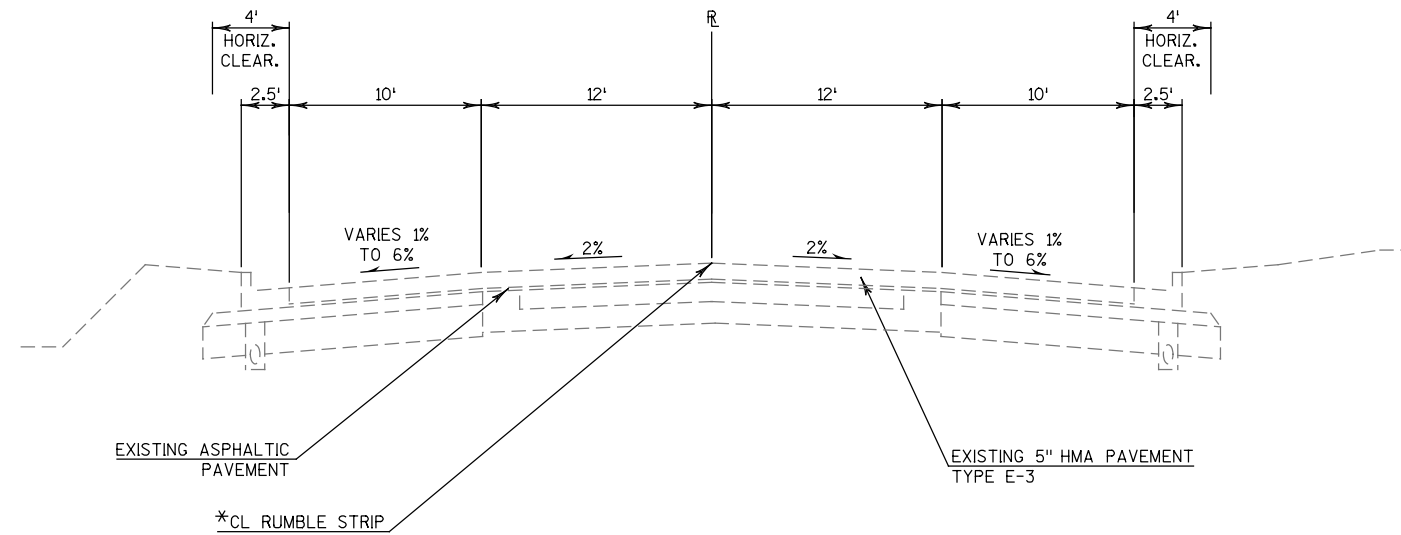
USH 12
WITH TRUCK CLIMBING LANE
1915' EAST OF SWENO ROAD - 850' WEST OF CTH 0
FOR INFORMATION ONLY



EXISTING TYPICAL SECTION

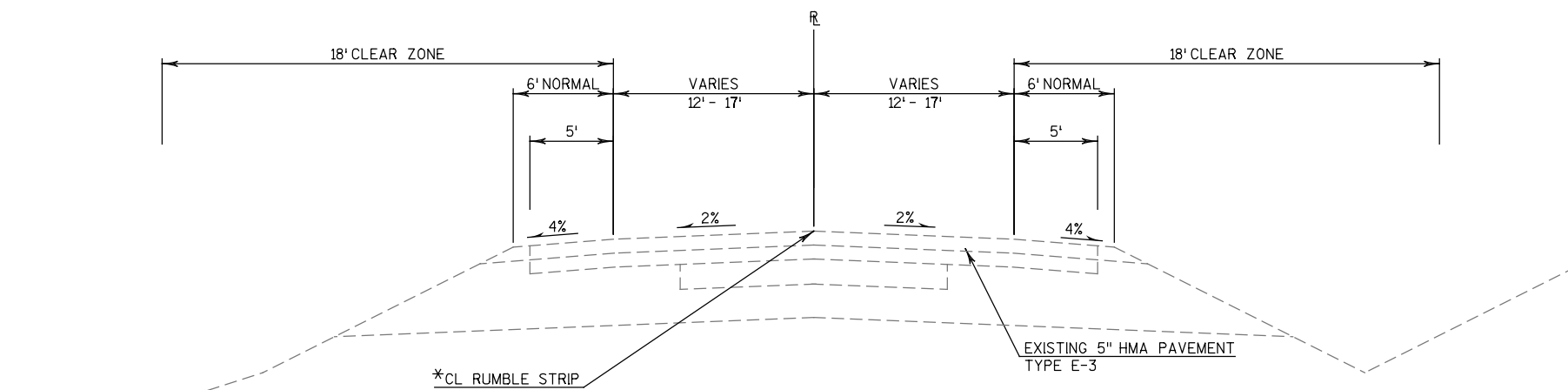
USH 12
WITH TRUCK CLIMBING LANE
175' WEST OF SWENO ROAD - 1050' EAST OF SWENO ROAD
FOR INFORMATION ONLY

*NOTE:
THERE IS A RUMBLE STRIP THAT RUNS ALONG THE MAJORITY
OF THE USH 12 CENTERLINE WITHIN THE PROJECT LIMITS.
REPAIR WITH CRACK SEALING ONLY ON THE RUMBLE STRIP. IN
AREAS WHERE THERE IS NO RUMBLE STRIP, REPAIR WITH ROUTE
AND SEAL WHERE APPROPRIATE.



EXISTING TYPICAL SECTION

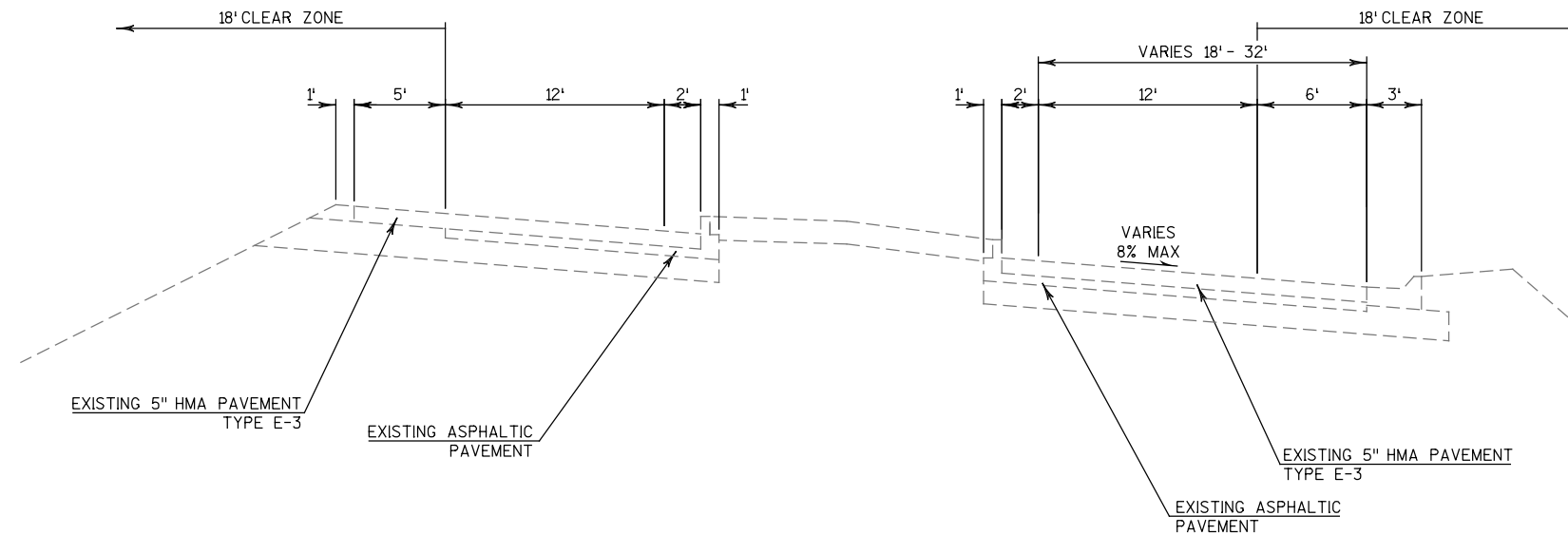
USH 12
200' WEST OF CTH H - CTH H (LT)
350' WEST OF CTH H - 550' EAST OF CTH H (RT)
FOR INFORMATION ONLY



EXISTING TYPICAL SECTION

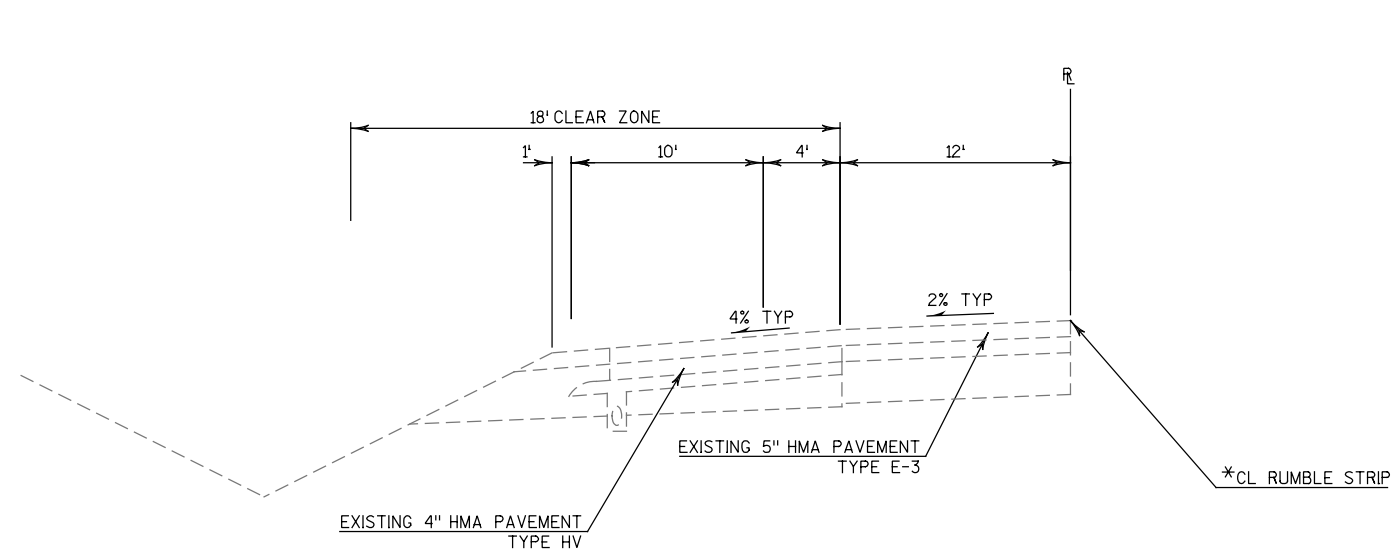
USH 12
1300' WEST OF STH 67 - 920' WEST OF STH 67
275' WEST OF STH 67 - STH 67
FOR INFORMATION ONLY

*NOTE:
THERE IS A RUMBLE STRIP THAT RUNS ALONG THE MAJORITY
OF THE USH 12 CENTERLINE WITHIN THE PROJECT LIMITS.
REPAIR WITH CRACK SEALING ONLY ON THE RUMBLE STRIP. IN
AREAS WHERE THERE IS NO RUMBLE STRIP, REPAIR WITH ROUTE
AND SEAL WHERE APPROPRIATE.



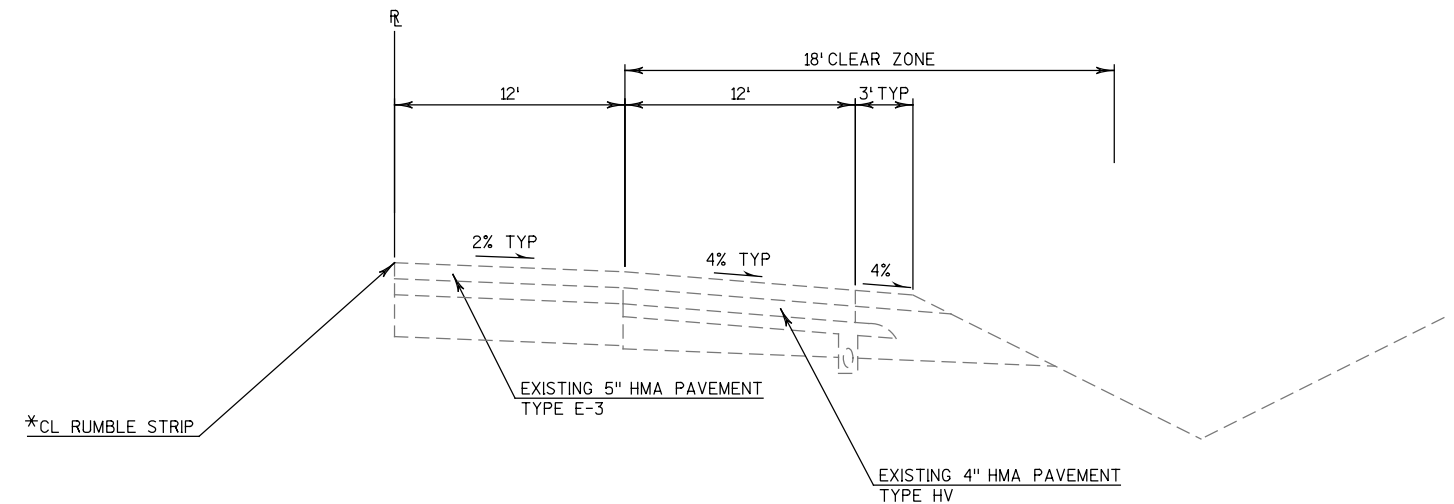
EXISTING TYPICAL SECTION

USH 12
920' WEST OF STH 67 - 275' OF STH 67
FOR INFORMATION ONLY



EXISTING TYPICAL SECTION - RIGHT TURN LANE

USH 12
PARKER ROAD - 175' EAST OF PARKER ROAD (LT)
225' WEST OF CTH 0 - CTH 0 (RT)
FOR INFORMATION ONLY

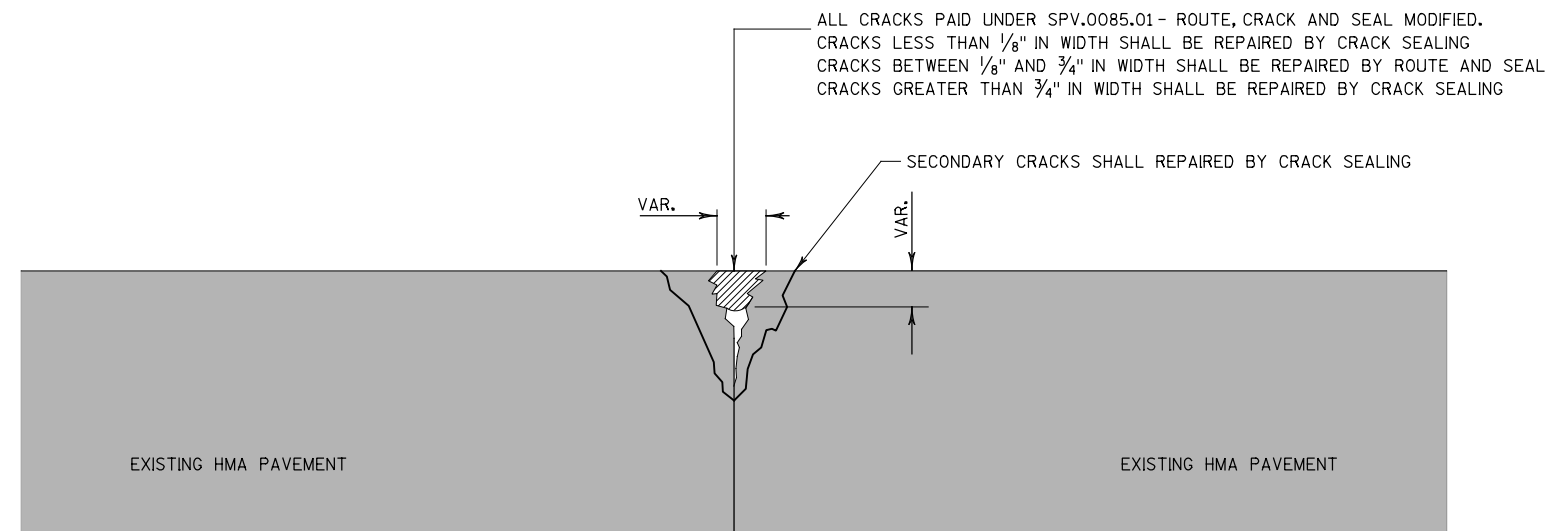


EXISTING TYPICAL SECTION - AUXILIARY PASSING LANE

USH 12
400' WEST OF RELIANCE ROAD - 630' EAST OF RELIANCE ROAD (LT)
325' WEST OF PARKER ROAD - 350' EAST OF PARKER ROAD (RT)
320' WEST OF CTH 0 - 460' EAST OF CTH 0 (LT)
350' WEST OF DUFFIN ROAD - 375' EAST OF DUFFIN ROAD (RT)
275' WEST OF JACKSON ROAD - 320' EAST OF JACKSON ROAD (LT)

FOR INFORMATION ONLY

*NOTE:
THERE IS A RUMBLE STRIP THAT RUNS ALONG THE MAJORITY
OF THE USH 12 CENTERLINE WITHIN THE PROJECT LIMITS.
REPAIR WITH CRACK SEALING ONLY ON THE RUMBLE STRIP. IN
AREAS WHERE THERE IS NO RUMBLE STRIP, REPAIR WITH ROUTE
AND SEAL WHERE APPROPRIATE.



LONGITUDINAL AND / OR TRANSVERSE
CRACK SEALING DETAIL

Estimate Of Quantities

4890-00-73					
Line	Item	Item Description	Unit	Total	Qty
0010	213.0100	Finishing Roadway (project) 04. 4890-00-73	EACH	1.000	1.000
0020	619.1000	Mobilization	EACH	1.000	1.000
0030	624.0100	Water	MGAL	30.000	30.000
0040	643.0100	Traffic Control (project) 01. 4890-00-73	EACH	1.000	1.000
0050	643.0300	Traffic Control Drums	DAY	628.000	628.000
0060	643.0420	Traffic Control Barricades Type III	DAY	35.000	35.000
0070	643.0705	Traffic Control Warning Lights Type A	DAY	45.000	45.000
0080	643.0715	Traffic Control Warning Lights Type C	DAY	98.000	98.000
0090	643.0800	Traffic Control Arrow Boards	DAY	15.000	15.000
0100	643.0900	Traffic Control Signs	DAY	738.000	738.000
0110	643.1050	Traffic Control Signs PCMS	DAY	58.000	58.000
0120	646.0106	Pavement Marking Epoxy 4-Inch	LF	141,054.000	141,054.000
0130	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	78,908.000	78,908.000
0140	646.2308.S	Pavement Marking Grooved Wet Reflective Epoxy 8-Inch	LF	3,115.000	3,115.000
0150	SPV.0085	Special 01. Route, Crack and Seal Modified	LB	134,428.000	134,428.000

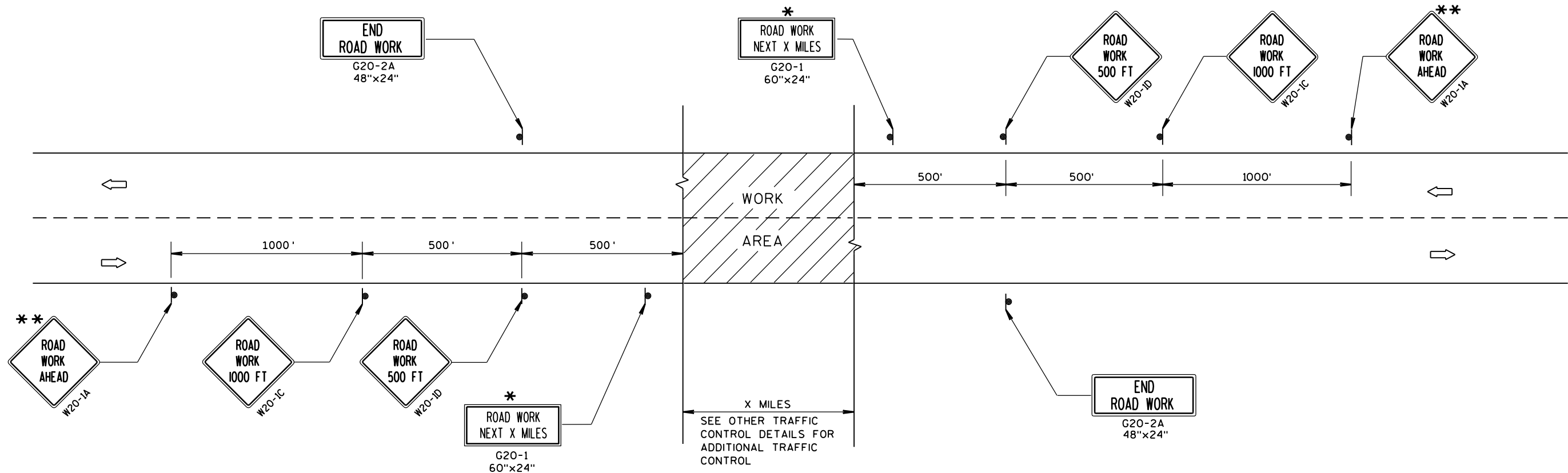
ROUTE, CRACK AND SEAL									
LIMIT		LIMIT	HIGHWAY	NUMBER OF LANES	ROUTE AND SEAL LENGTH (LF)	SPV.0085.01 ROUTE, CRACK AND SEAL MODIFIED (LB) ANTICIPATED ROUTE AND SEAL	CRACK SEALING LENGTH (LF)	SPV.0085.01 ROUTE, CRACK AND SEAL MODIFIED (LB) ANTICIPATED CRACK SEALING	624.0100 WATER (MGAL)
USH 45 N. LEG		- RAB WEST LIMITS	STH 20	2	7,976	3,456	5,337	1,735	
RAB WEST LIMITS		- RAB EAST LIMITS	STH 20	2	2,020	875	1,713	557	
RAB EAST LIMITS		- OLD YORKVILLE ROAD WEST	STH 20	2	8,380	3,631	1,350	439	
OLD YORKVILLE ROAD WEST		- 63RD DRIVE	STH 20	2	5,040	2,184	480	156	
63RD DRIVE		- CTH U	STH 20	2	3,340	1,447	630	205	
CTH U		- OLD YORKVILLE ROAD EAST	STH 20	2	1,990	862	360	117	
OLD YORKVILLE ROAD EAST		- IVES GROVE ROAD WEST	STH 20	2	27,450	11,895	16,890	5,489	
IVES GROVE ROAD WEST		- 2500' EAST OF CTH C	STH 20	4	39,624	17,170	14,443	4,694	
STH 20 SUB-TOTAL			STH 20			41,522		13,391	
UNDISTRIBUTED			STH 20			10,381		4,017	10
STH 20 TOTAL			STH 20			51,903		17,408	
STH 36		- KRAMER DRIVE	STH 164	2 W/TURN LANES	2,802	1,214	372	121	
KRAMER DRIVE		- S. LOOMIS ROAD	STH 164	2	4,315	1,870	170	55	
S. LOOMIS ROAD		- EAST RIVER BAY DR.	STH 164	2	5,707	2,473	238	77	
EAST RIVER BAY DR.		- SANDY LANE	STH 164	2	3,132	1,357	238	77	
SANDY LANE		- DORIE LANE	STH 164	2	2,237	969	170	55	
DORIE LANE		- GREENHAVEN TERRACE	STH 164	2	2,714	1,176	272	88	
GREENHAVEN TERRACE		- SOUTH OF N. LAKE DRIVE	STH 164	2	1,510	654	238	77	
SOUTH OF N. LAKE DRIVE		- NORTH OF N. LAKE DRIVE	STH 164	2 W/TURN LANES	412	179	362	118	
NORTH OF N. LAKE DRIVE		- JENSON PKWY	STH 164	2	2,052	889	136	44	
JENSON PKWY		- 675' N. OF COUNTY LINE DR.	STH 164	2	3,308	1,433	272	88	
STH 164 SUB-TOTAL			STH 164			12,215		802	
UNDISTRIBUTED			STH 164			3,054		241	10
STH 164 TOTAL			STH 164			15,269		1,043	
200' WEST OF COX RD.		- RELIANCE ROAD	USH 12	2	0	0	11,744	3,817	
RELIANCE ROAD		- PARKER ROAD	USH 12	2	0	0	7,966	2,589	
PARKER ROAD		- SWENO ROAD	USH 12	2	0	0	12,114	3,937	
SWENO ROAD		- CTH O	USH 12	2	528	229	14,780	4,804	
CTH O		- JACKSON ROAD	USH 12	2	1,584	686	14,986	4,870	
JACKSON ROAD		- CTH H	USH 12	2	2,112	915	12,470	4,053	
CTH H		- TAMARACK ROAD	USH 12	2	2,112	915	18,500	6,013	
TAMARACK ROAD		- START OF 2 LN ROAD	USH 12	2	0	0	10,406	3,382	
START OF 2 LN ROAD		- STH 67	USH 12	2	0	0	4,426	1,438	
USH 12 SUB-TOTAL			USH 12			2,746		34,902	
UNDISTRIBUTED			USH 12			686		10,471	10
USH 12 TOTAL			USH 12			3,432		45,373	
TOTALS					130,345	70,604	151,063	63,824	30
TOTAL ROUTE, CRACK AND SEAL						134,428			

TRAFFIC CONTROL														

PAVEMENT MARKING															
				646.0106		646.0106		646.2304.S		646.2304.S		646.2304.S		646.2308.S	
				PAVEMENT MARKING		PAVEMENT MARKING		PAVEMENT MARKING		PAVEMENT MARKING		PAVEMENT MARKING		PAVEMENT MARKING	
				EPOXY 4-INCH		EPOXY 4-INCH		GROOVED WET REFLECTIVE		GROOVED WET REFLECTIVE		GROOVED WET REFLECTIVE		GROOVED WET REFLECTIVE	
				(SOLID YELLOW)		(DASHED YELLOW)		EPOXY		EPOXY		EPOXY		EPOXY	
								4-INCH		4-INCH		4-INCH		8-INCH	
								(SOLID WHITE)		(DASHED WHITE - 12.5' LINE)		(DASHED WHITE - 3' LINE)		(SOLID WHITE)	
				LF		LF		LF		LF		LF		LF	
USH 45 N. LEG	-	IVES GROVE ROAD WEST	STH 20	2	20,588	4,345		49,973		442		74		1,122	
VES GROVE ROAD WEST	-	2500' EAST OF CTH C	STH 20	4	9,415	--		10,100		2,537		--		1,370	
STH 36	-	675' N. OF COUNTY LINE DR.	STH 164	2	27,039	4,759		--		--		--		--	
200' WEST OF COX RD.	-	STH 67	USH 12	2	41,311	5,386		--		--		--		--	
SUB-TOTAL					98,353	14,490		60,073		2,979		74		2,492	
UNDISTRIBUTED					24,588	3,623		15,018		745		19		623	
TOTALS					141,054			78,908			3,115				

Standard Detail Drawing List

15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C08-17A	LONGI TUDI NAL MARKI NG (MAINLINE)
15C08-17B	PAVEMENT MARKING (TURN LANES)
15C08-17C	PAVEMENT MARKING (ISLANDS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C19-04C	MOVING PAVEMENT MARKING OPERATION MULTI -LANE DIVIDED ROADWAY
15C21-06	SIGNING AND MARKING FOR TWO LANE TO FOUR LANE DIVIDED TRANSITIONS
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15C35-01B	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15C35-01C	PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D21-04	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D37-02	TRAFFIC CONTROL, 2-LANE ROUNDABOUT



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

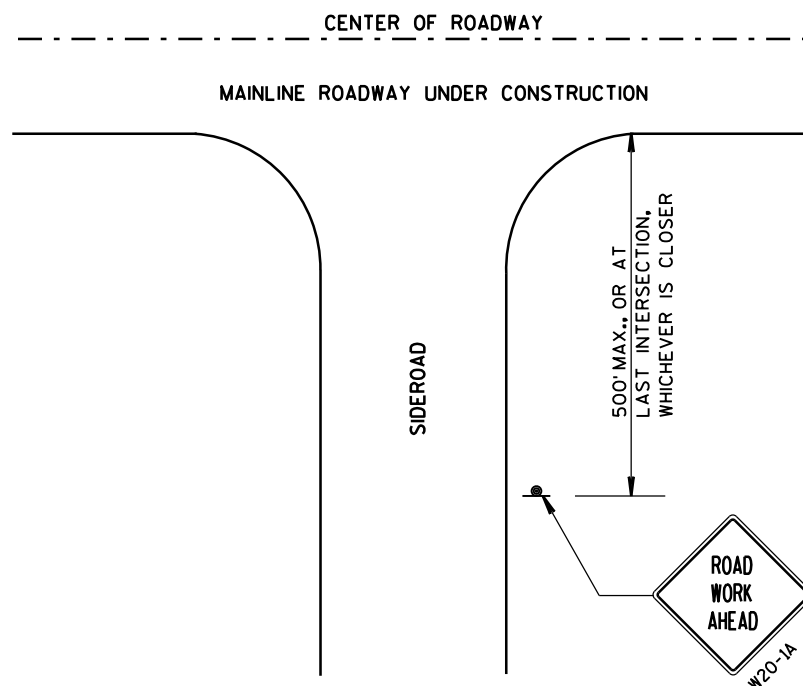
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



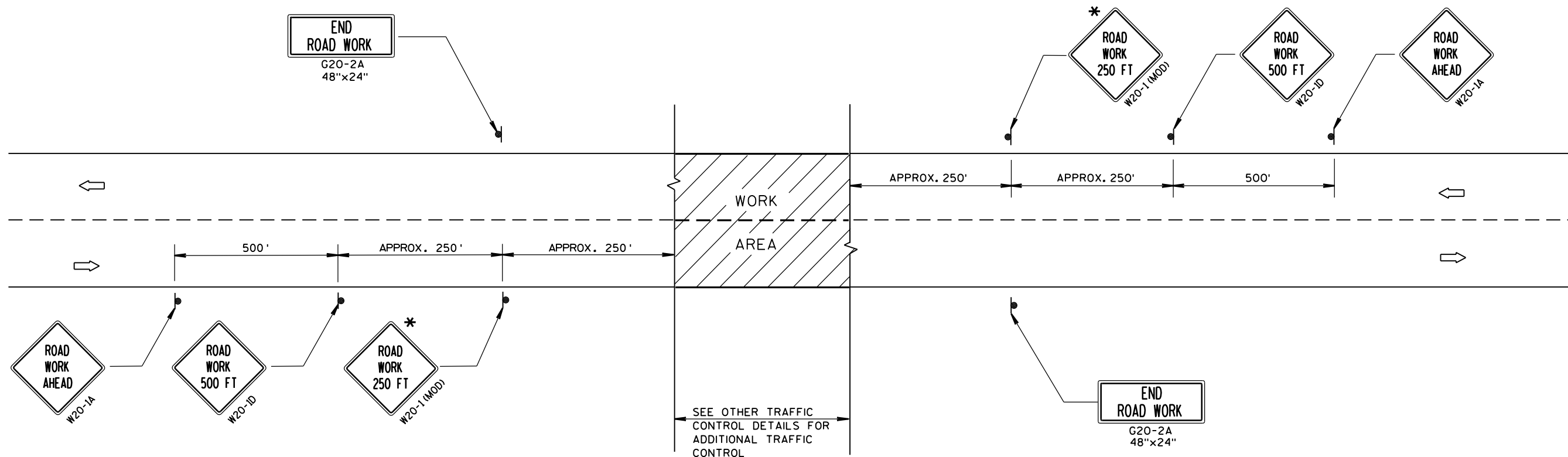
LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

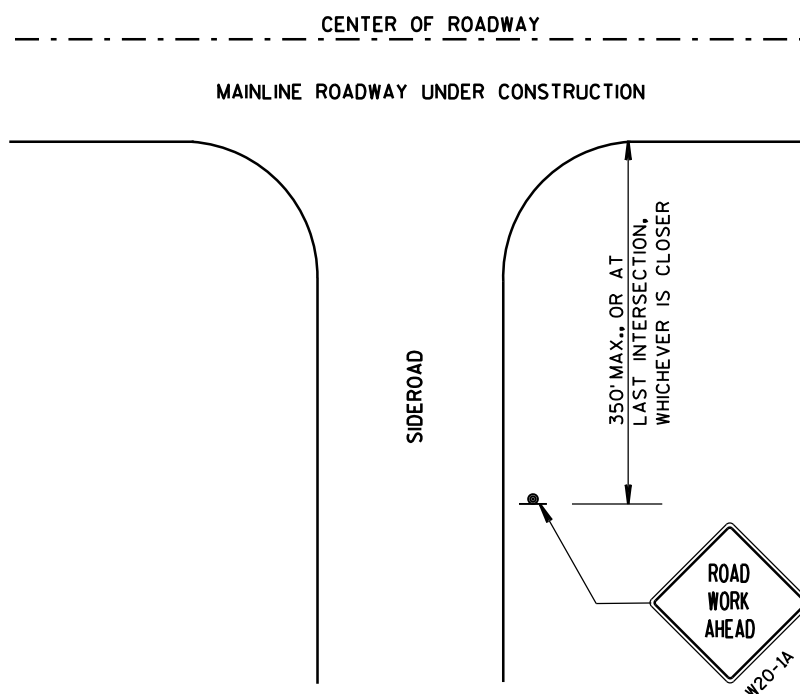
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



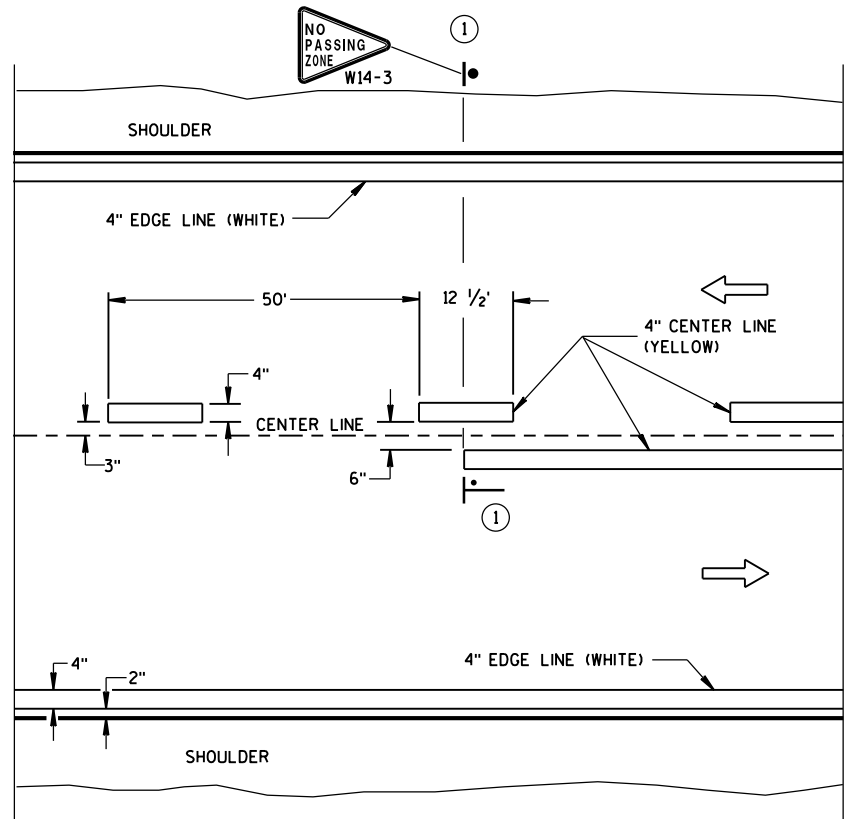
LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

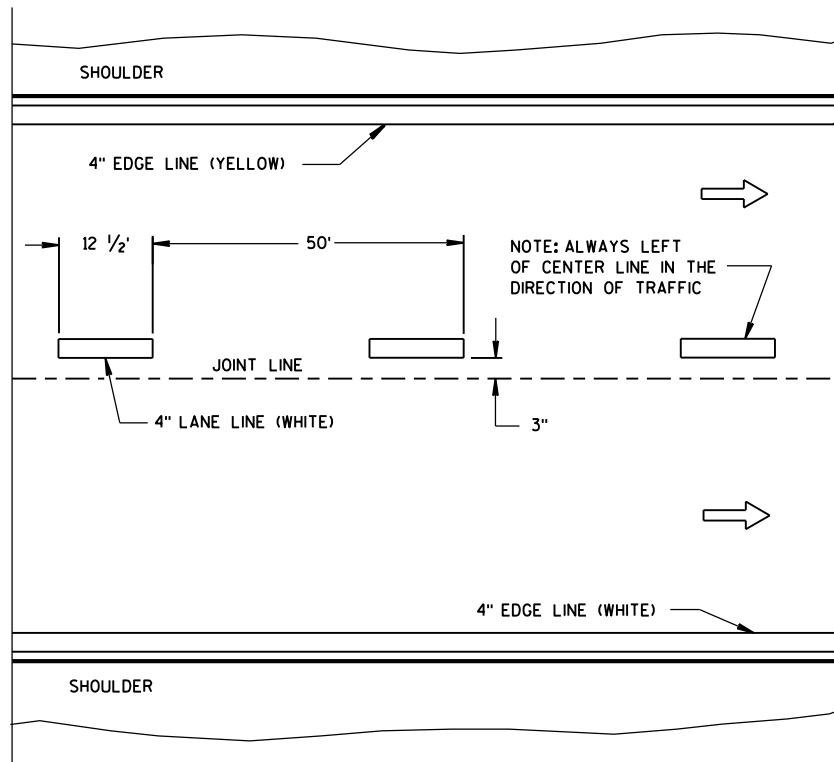
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

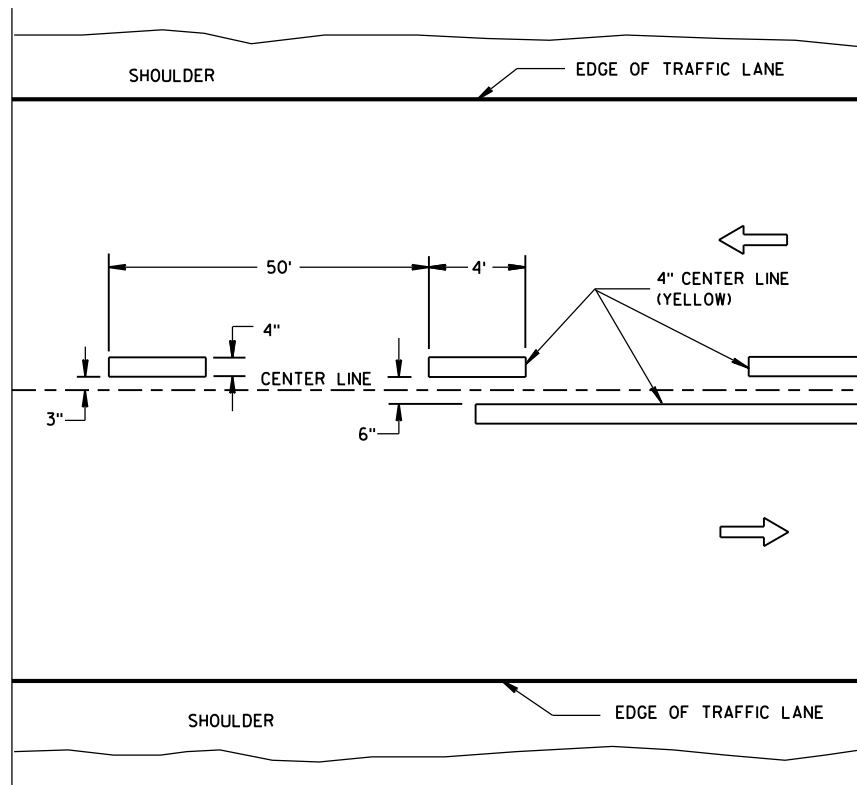


TWO WAY TRAFFIC

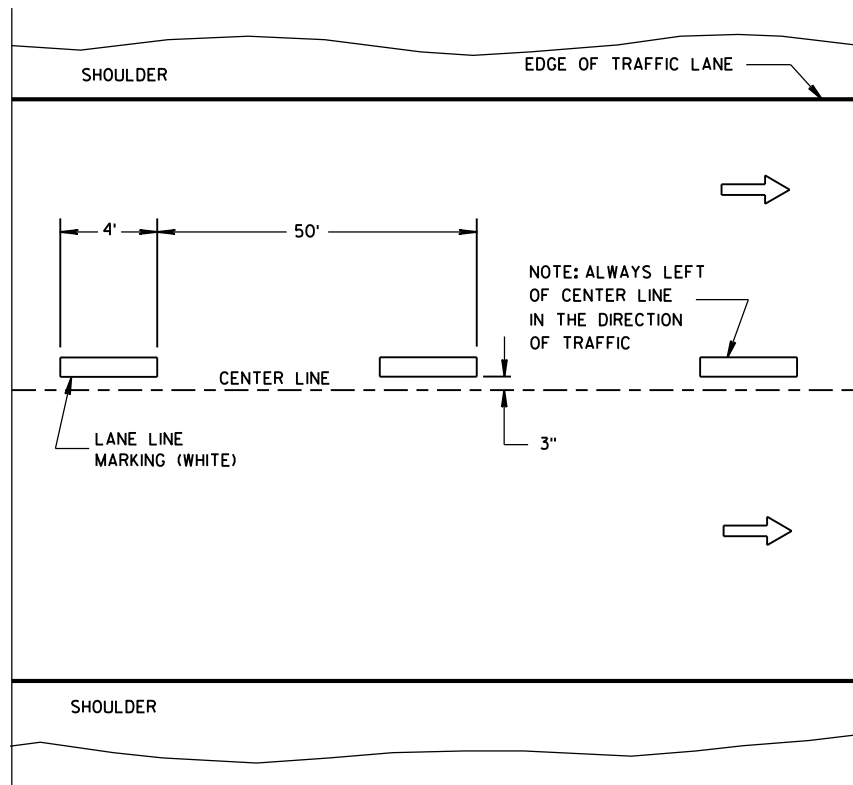


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

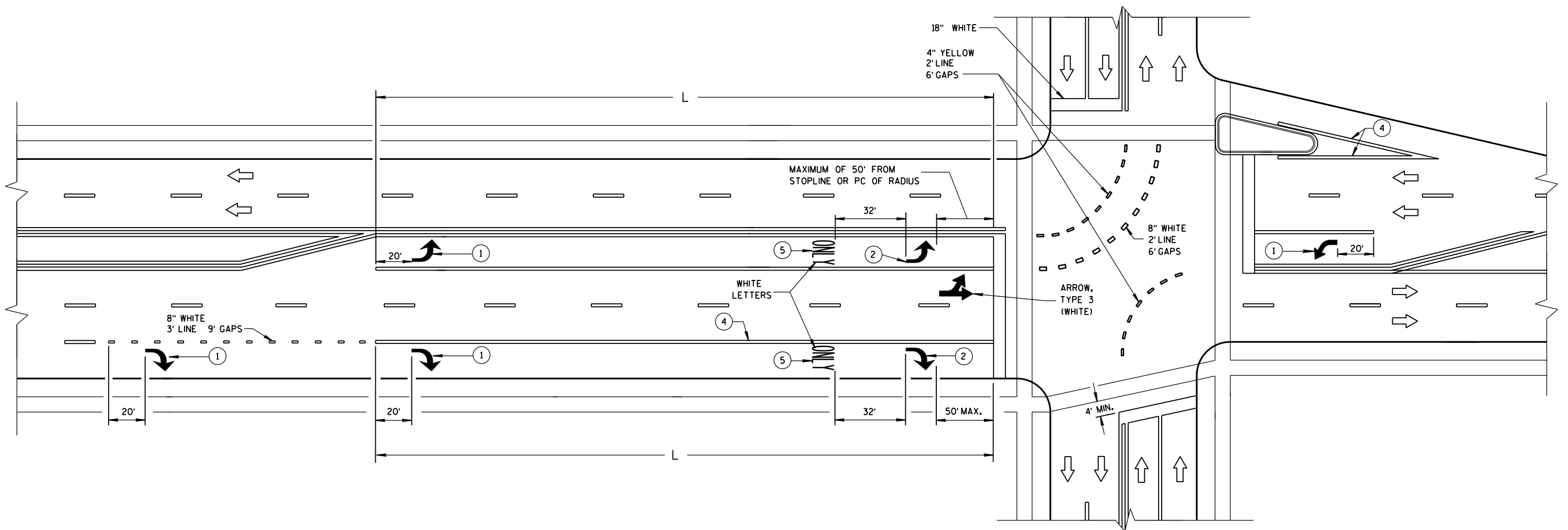
├── "T" MARKING

● POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION


APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



GENERAL NOTES

- ① REQUIRED ARROW, TYPE 2 (WHITE).
- ② REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ 8" WHITE
- ⑤ REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

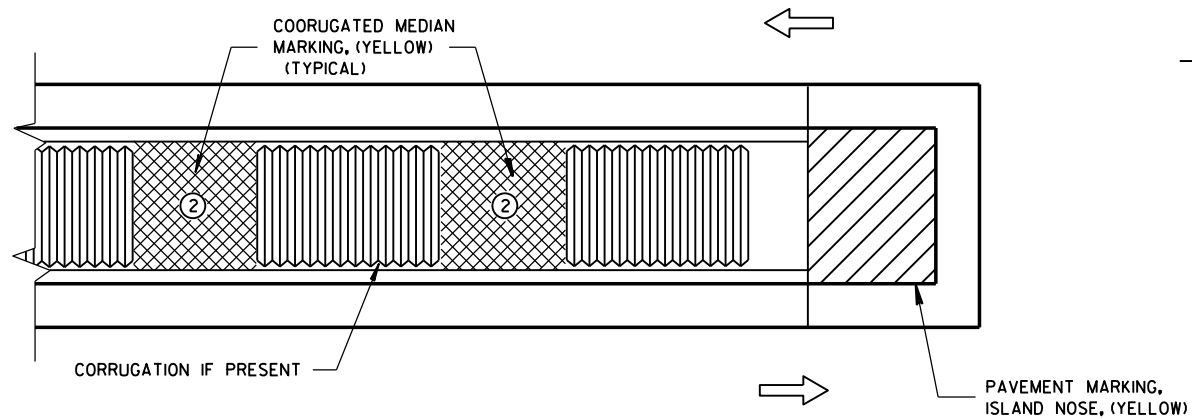
TWO WAY LEFT TURN LANE

NOTE:
ARROW SYMBOL ()
SHOWS DIRECTION OF TRAVEL

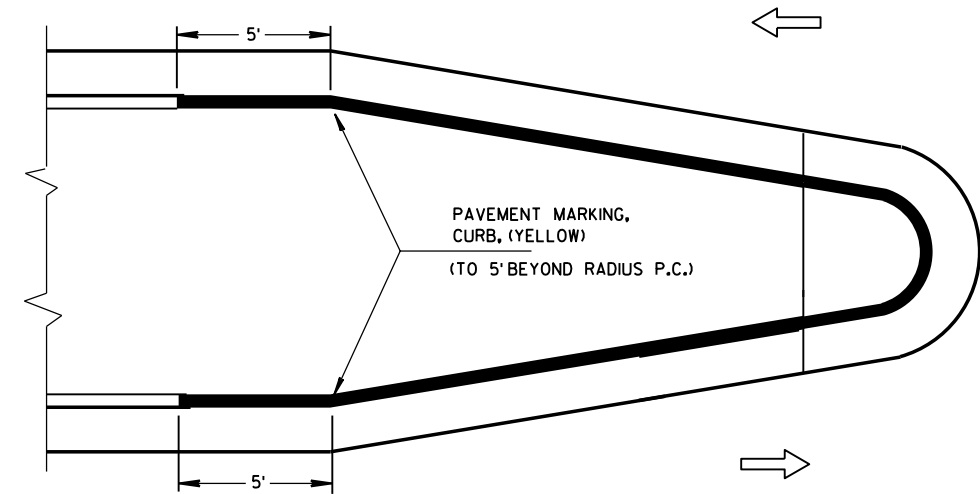
L = LENGTH OF TURN BAY

PAVEMENT MARKING
(TURN LANES)

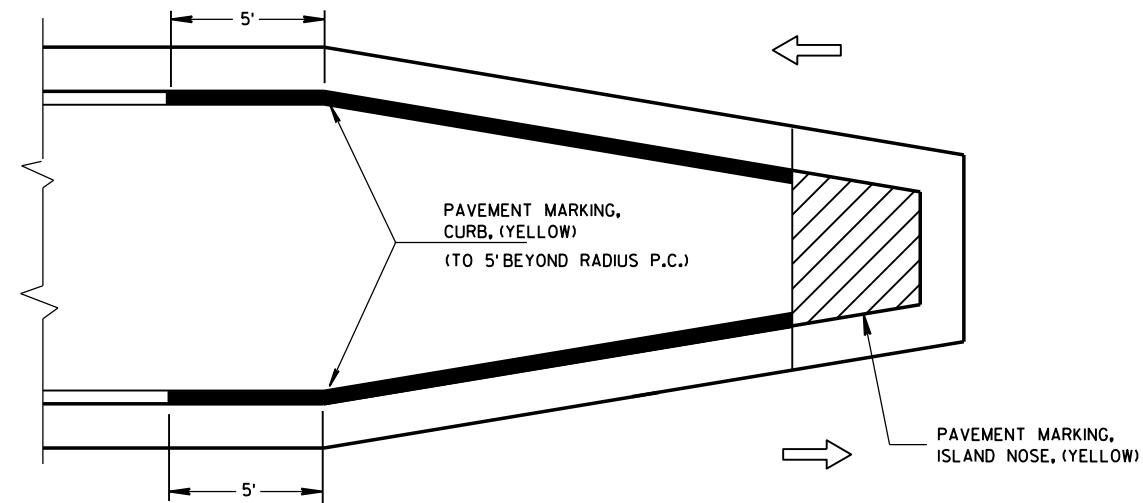
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

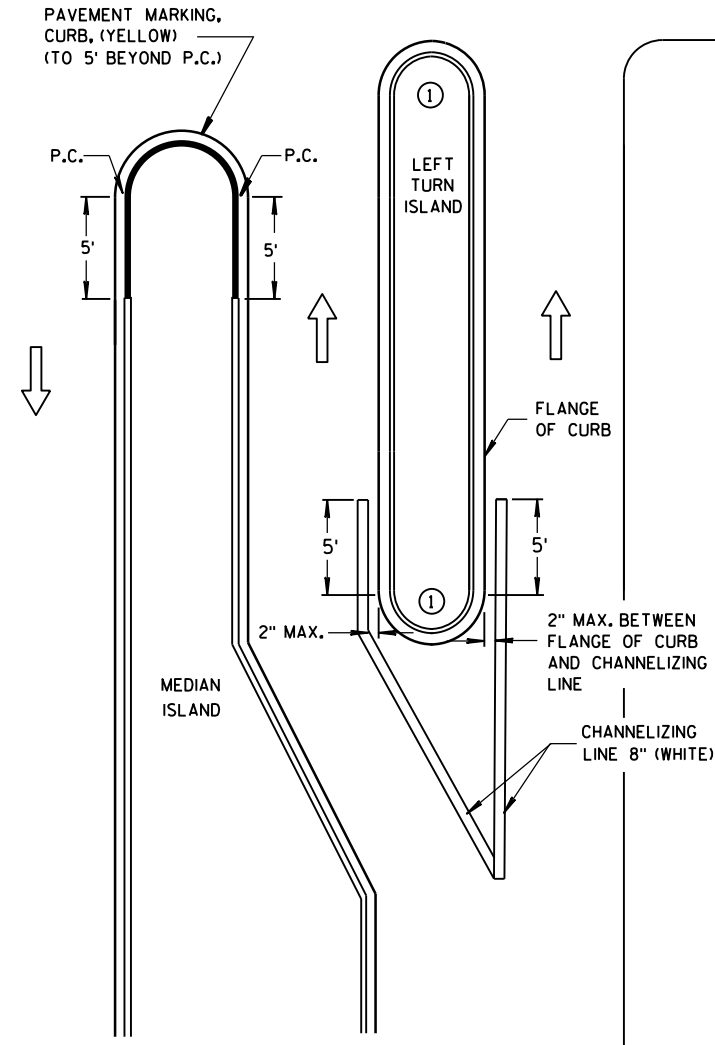


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

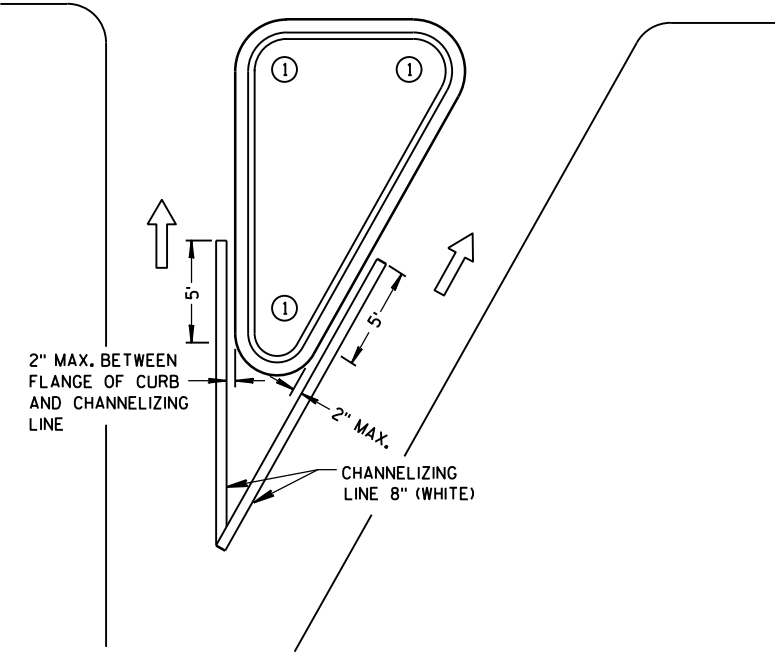
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

- 1 DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- 2 WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN, THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

	SIGN ON PORTABLE OR PERMANENT SUPPORT
	DIRECTION OF TRAFFIC
	WORK AREA
	FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

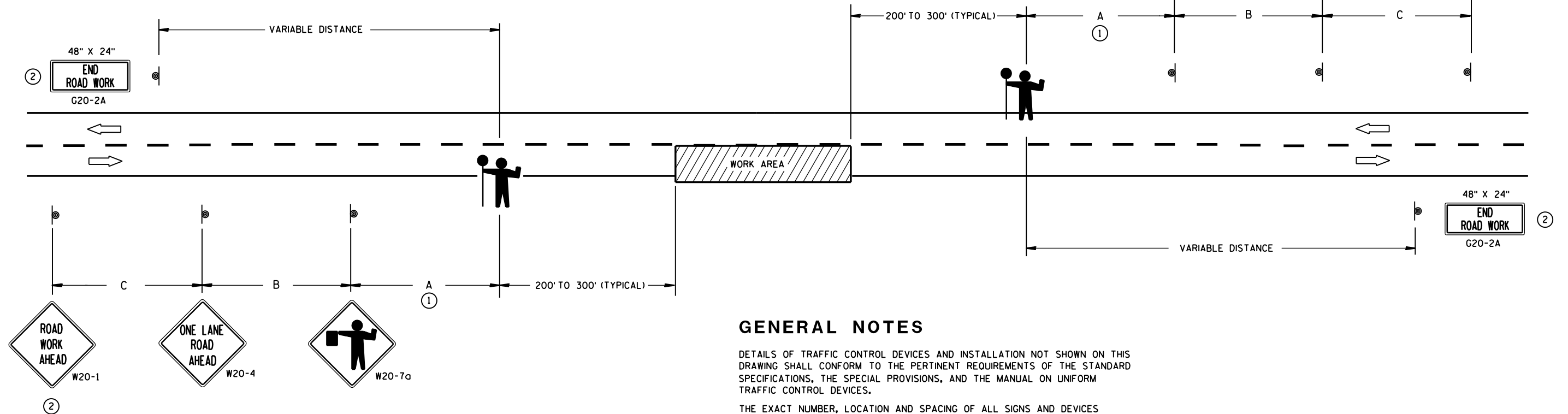
SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



W20-7a

W20-4

W20-1



DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS
DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD
SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM
TRAFFIC CONTROL DEVICES.

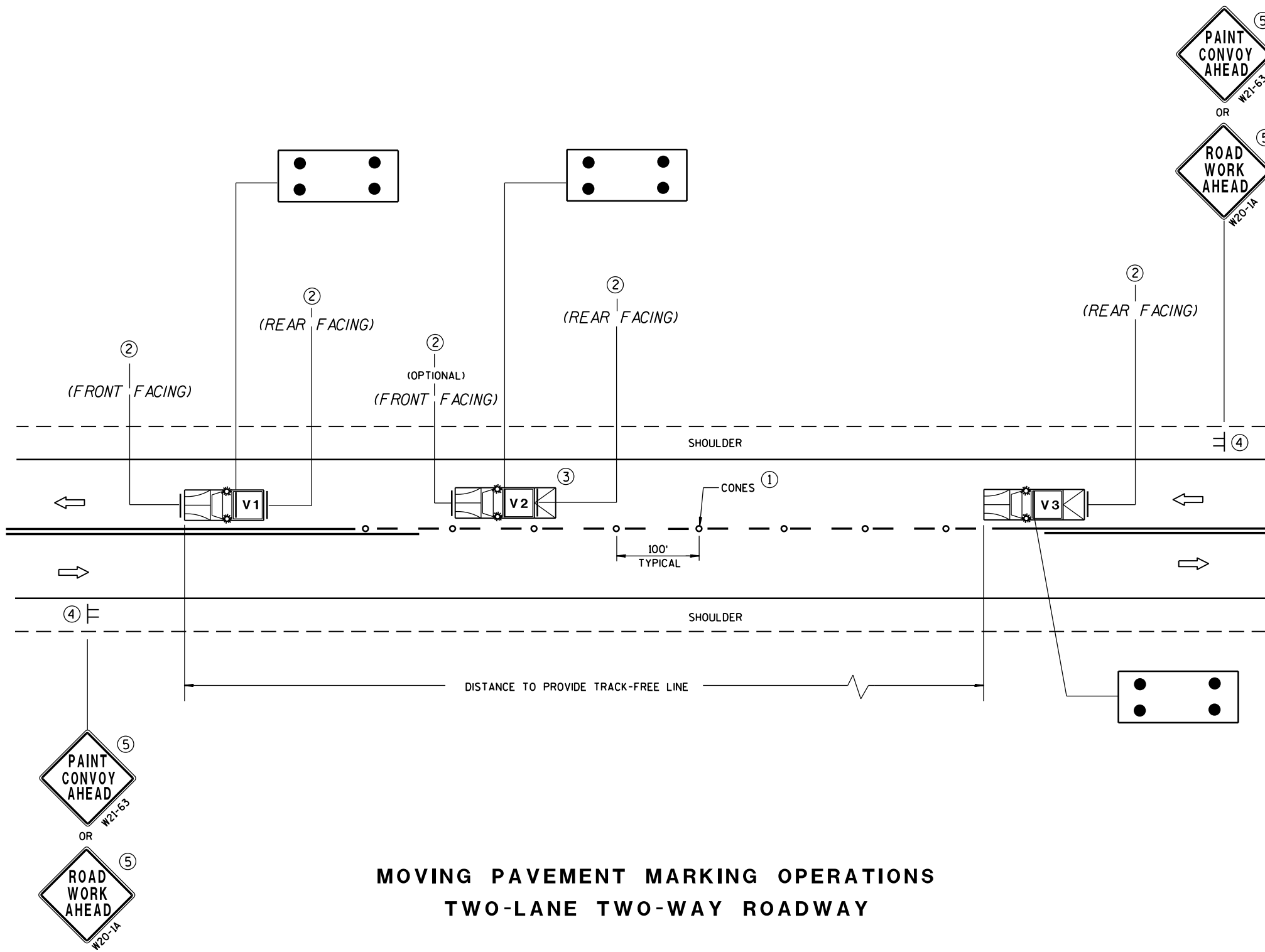
THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.



ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.






THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.
 OR 
W21-64 W21-64
- ③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.
- ④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

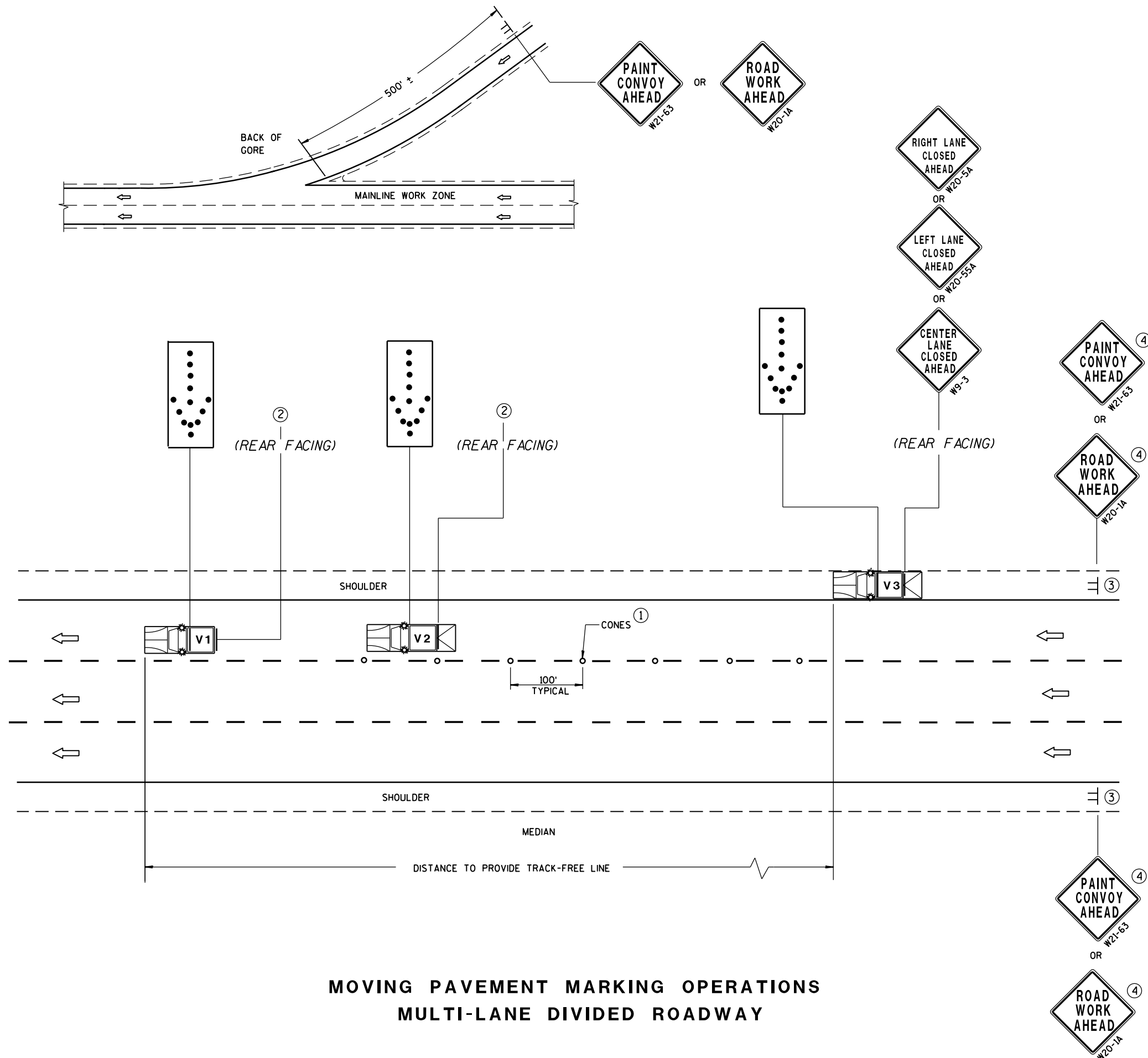
LEGEND

- V1** LEAD VEHICLE
- V2** SHADOW VEHICLE
- V3** TRAIL VEHICLE WITH TMA
-  **TMA** TRUCK-MOUNTED ATTENUATOR
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  CONES
-  FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.


USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.


WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

- ① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- ② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

 WET PAINT

OR

WET PAINT 


W21-64W21-64
- ③ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.
- ④ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

 **TMA** TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

O CONES

 FLASHING
ARROW
PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	
June 2016	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE TRAFFIC
	SAFETY ENGINEER
FHWA	

GENERAL NOTES

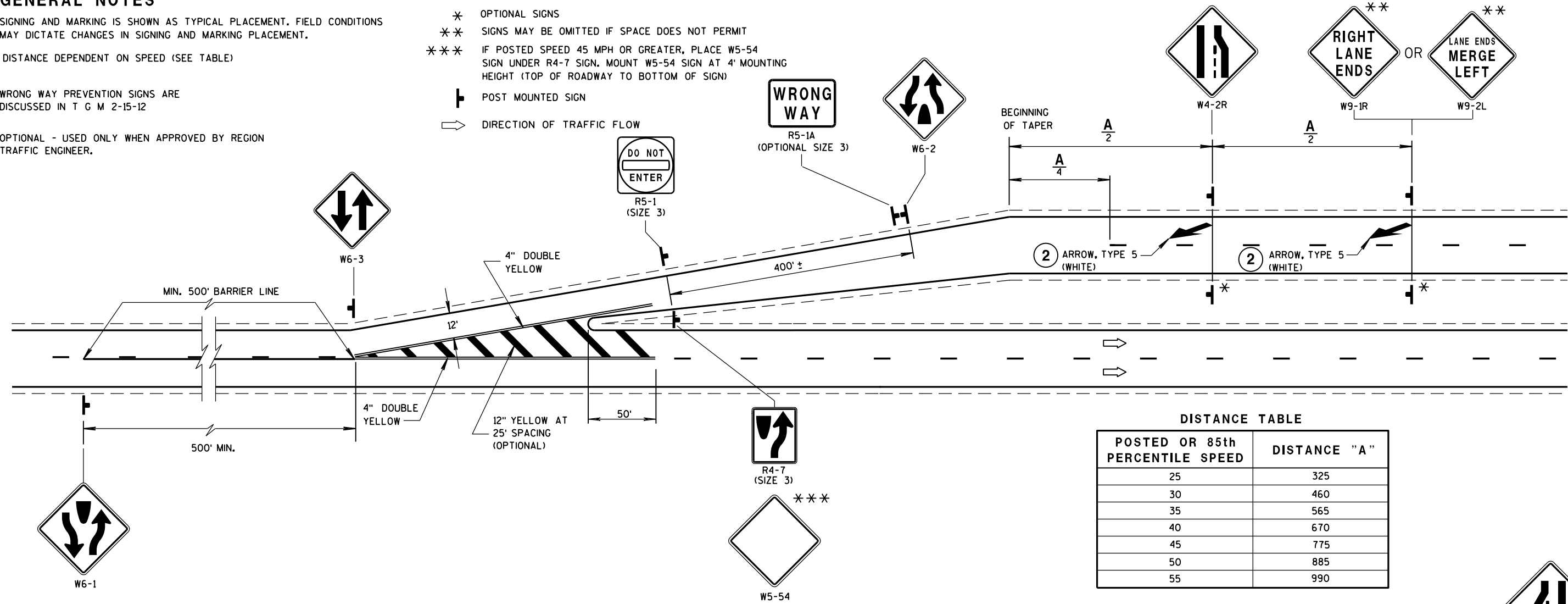
SIGNING AND MARKING IS SHOWN AS TYPICAL PLACEMENT. FIELD CONDITIONS MAY DICTATE CHANGES IN SIGNING AND MARKING PLACEMENT.

A DISTANCE DEPENDENT ON SPEED (SEE TABLE)

- 1 WRONG WAY PREVENTION SIGNS ARE DISCUSSED IN T G M 2-15-12
- 2 OPTIONAL - USED ONLY WHEN APPROVED BY REGION TRAFFIC ENGINEER.

SYMBOLS

- * OPTIONAL SIGNS
- ** SIGNS MAY BE OMITTED IF SPACE DOES NOT PERMIT
- *** IF POSTED SPEED 45 MPH OR GREATER, PLACE W5-54 SIGN UNDER R4-7 SIGN. MOUNT W5-54 SIGN AT 4' MOUNTING HEIGHT (TOP OF ROADWAY TO BOTTOM OF SIGN)
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

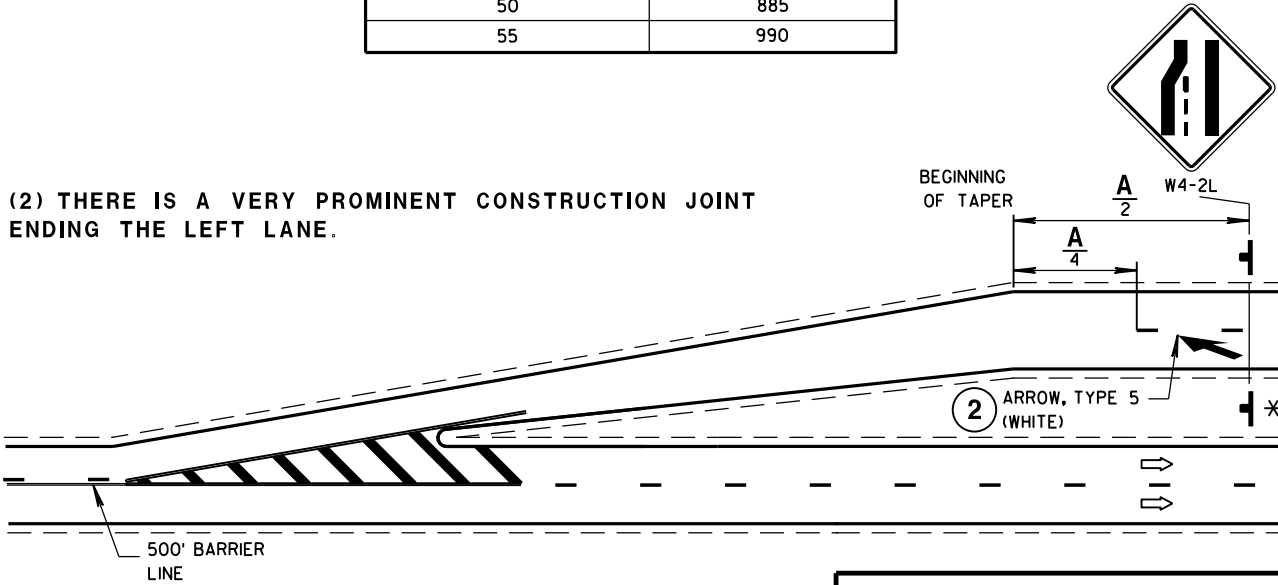
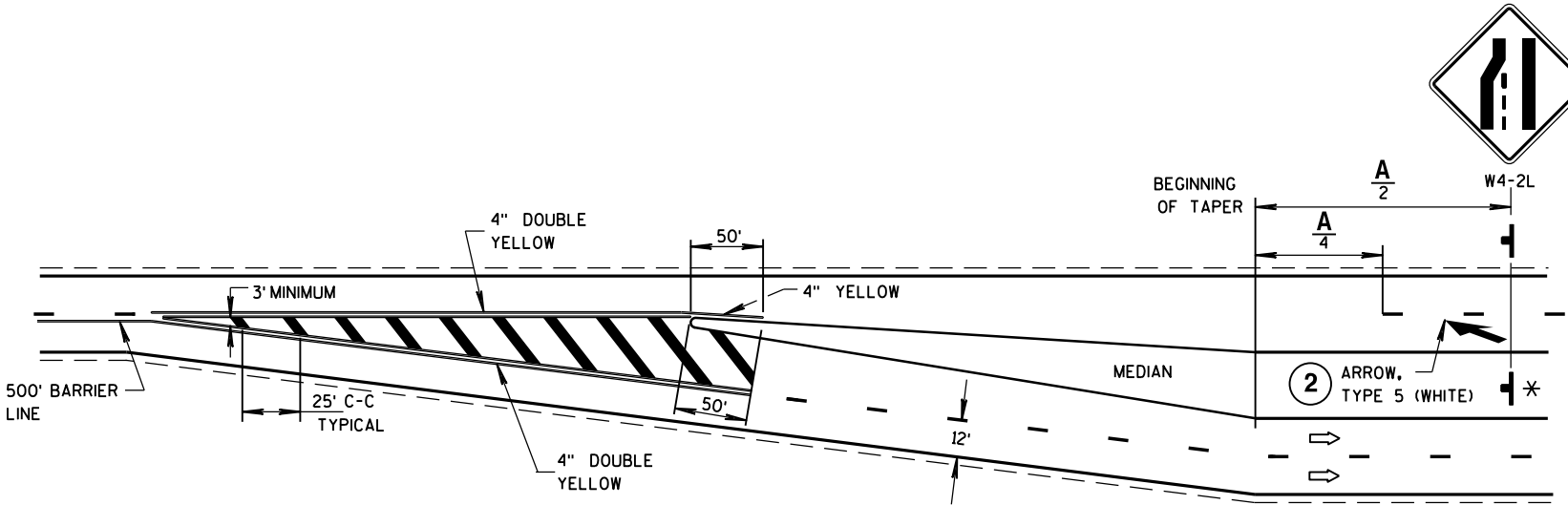


POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	325
30	460
35	565
40	670
45	775
50	885
55	990

(1) THE LEFT LANE IS PUSHED TO THE RIGHT:

USE W4-2L IF :
OR

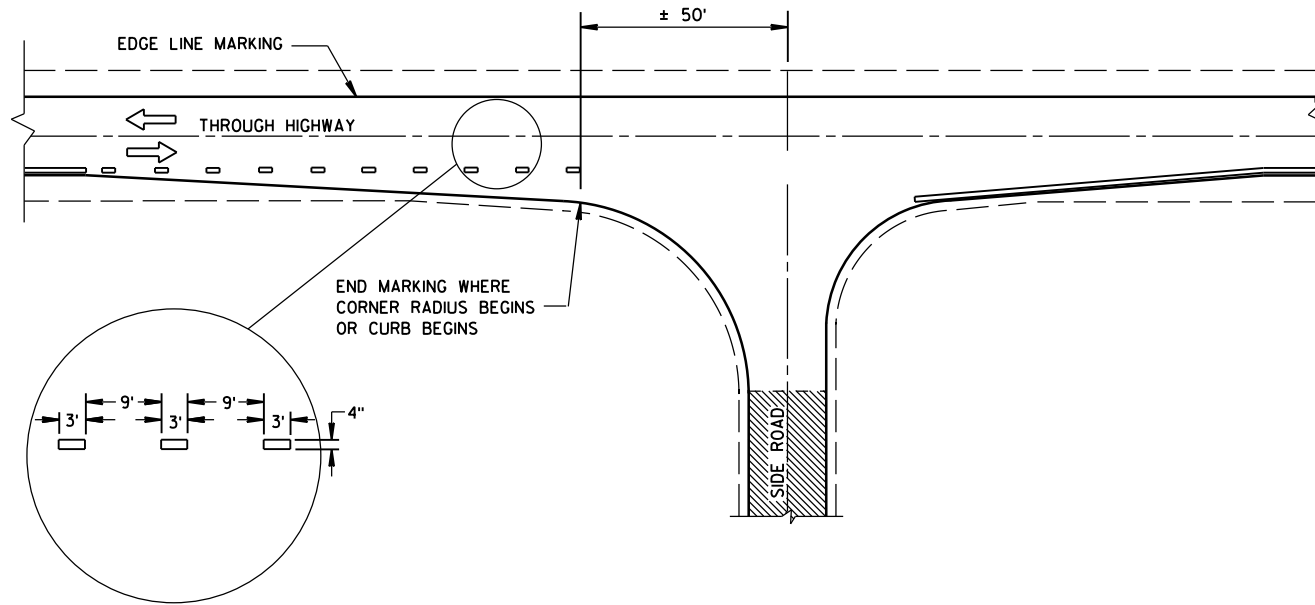
(2) THERE IS A VERY PROMINENT CONSTRUCTION JOINT ENDING THE LEFT LANE.



SIGNING AND MARKING
TWO LANE TO FOUR LANE
DIVIDED TRANSITIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA




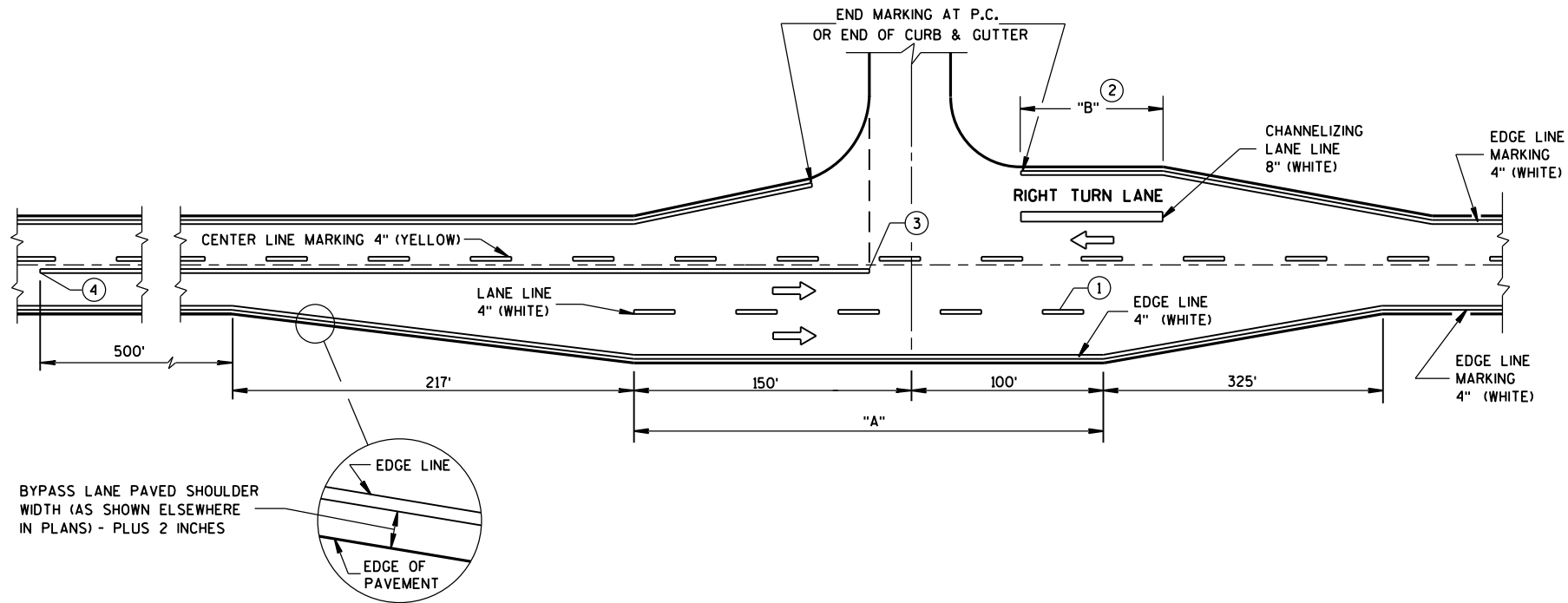
MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

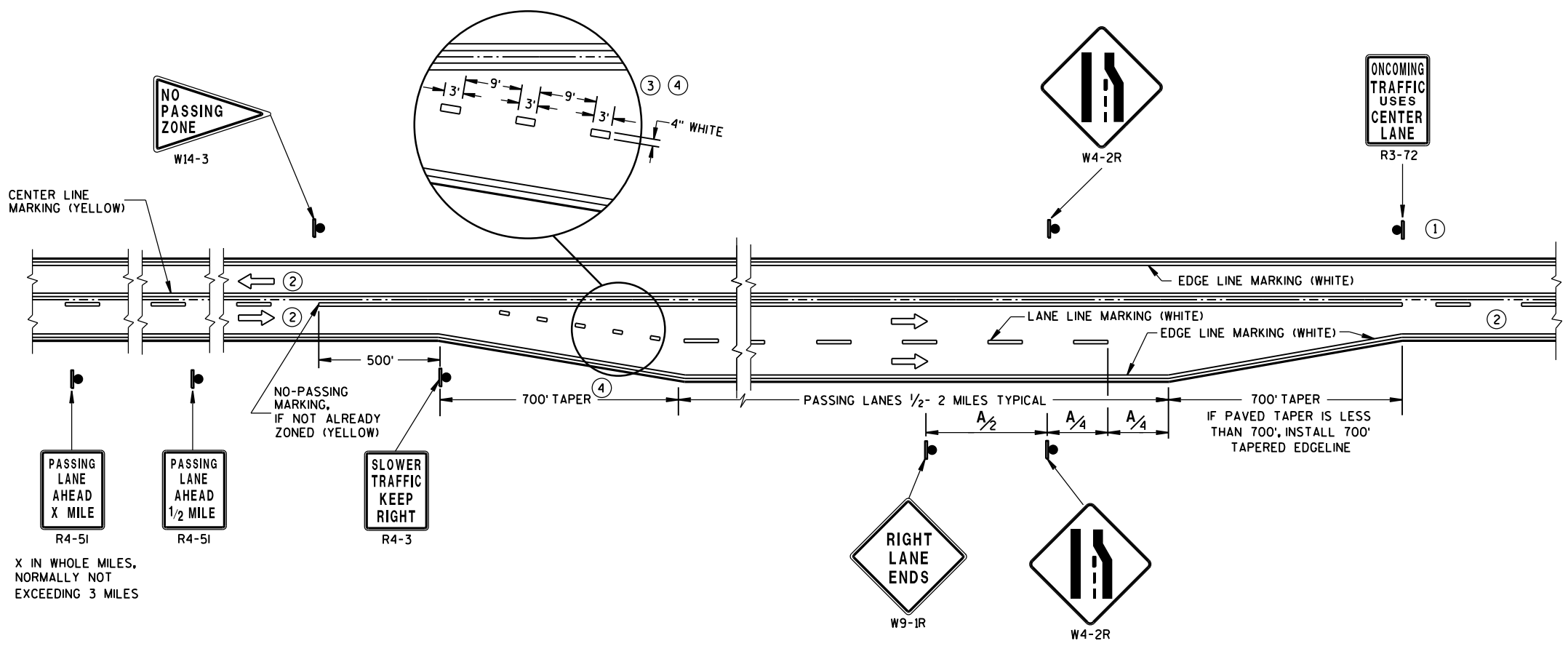
ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



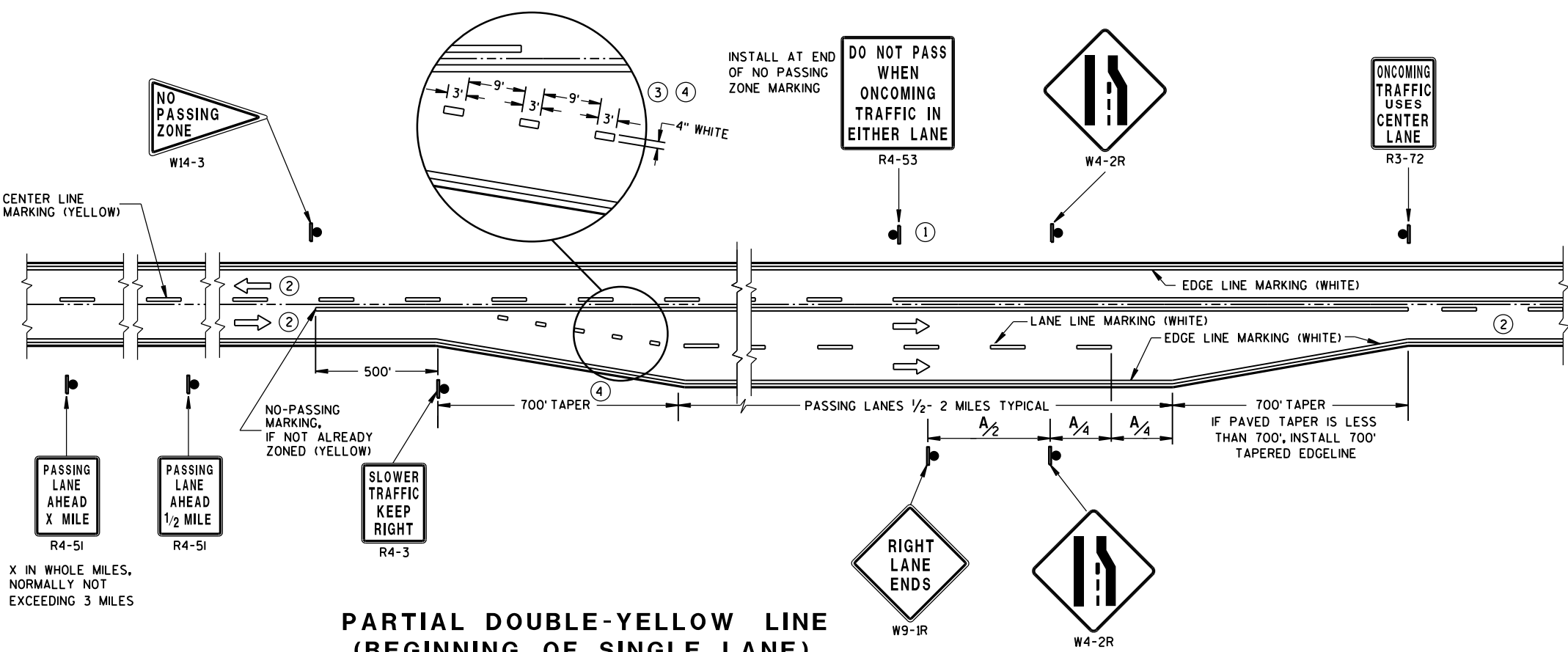
**SOLID DOUBLE-YELLOW LINE
(THROUGHOUT ENTIRE PASSING/CLIMBING LANE)**

GENERAL NOTES

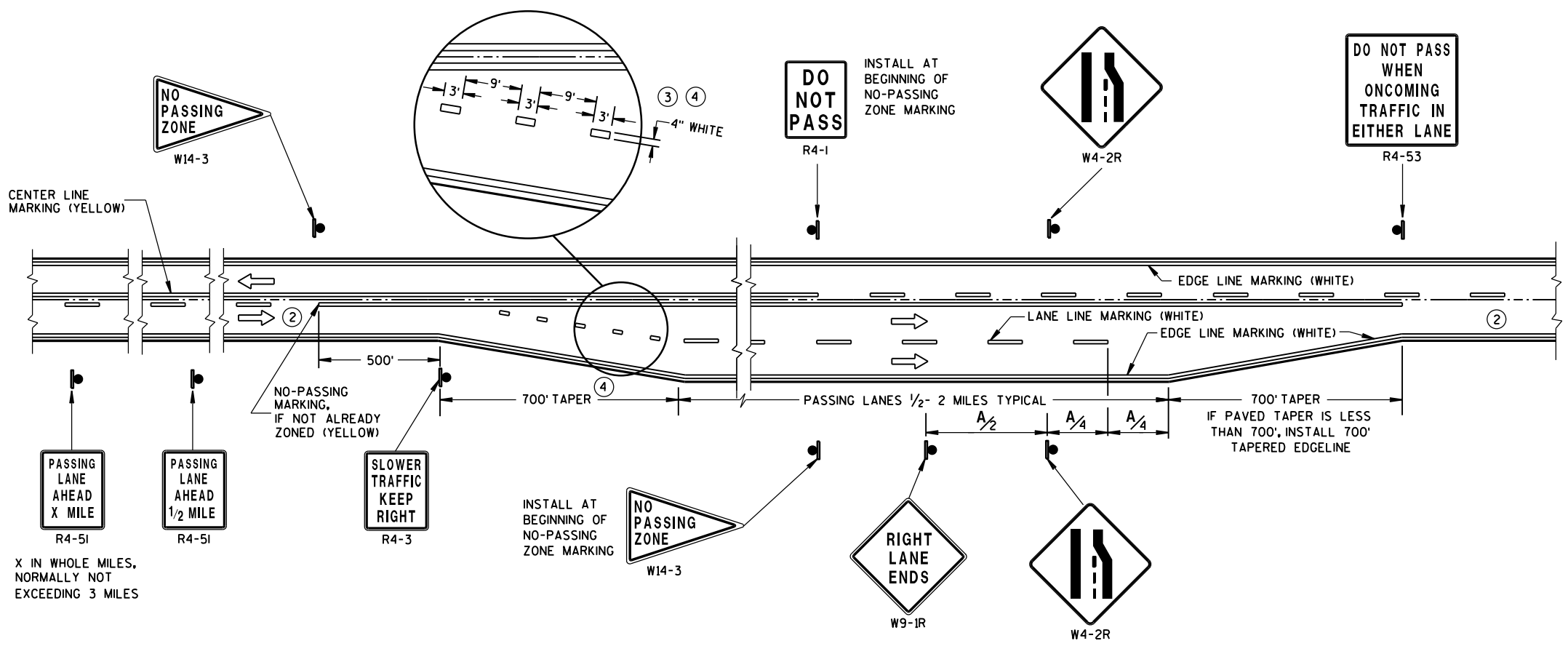
- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE	
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



**PARTIAL DOUBLE-YELLOW LINE
(BEGINNING OF SINGLE LANE)**



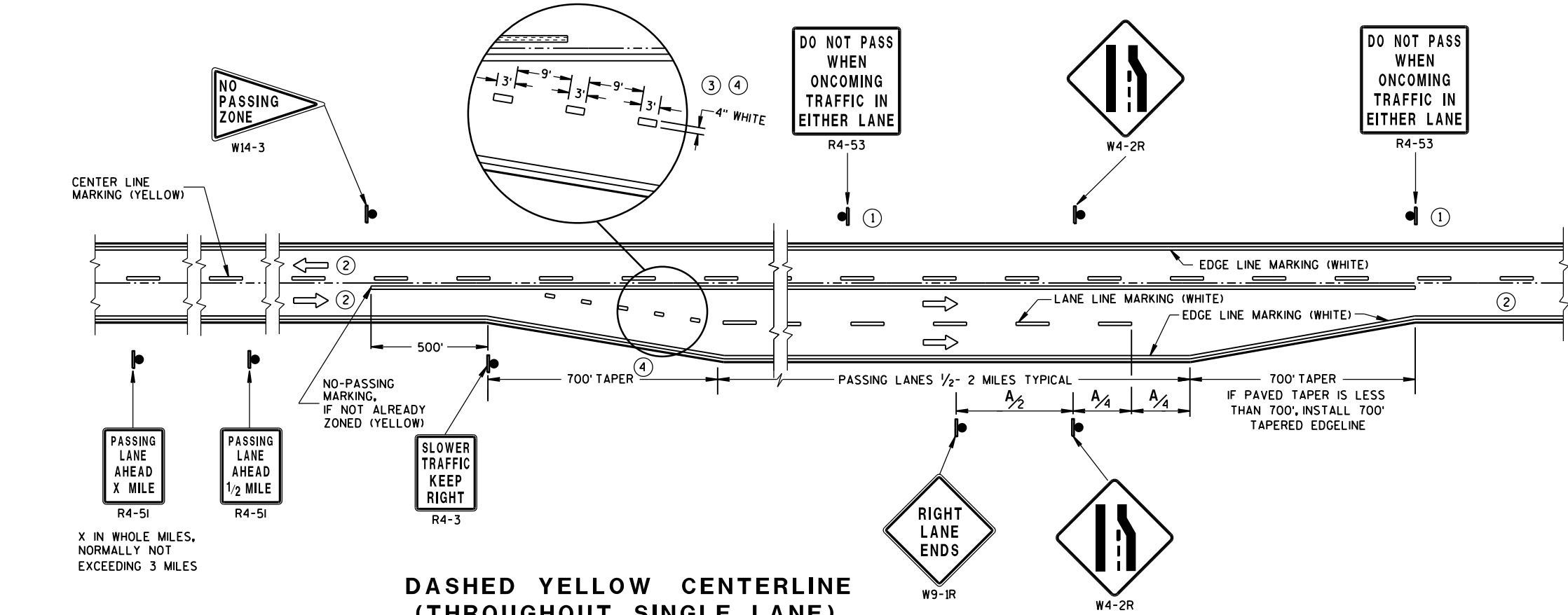
**SOLID DOUBLE-YELLOW LINE
(END OF SINGLE LANE)**

GENERAL NOTES

- ① SIGN SHALL BE REPEATED AT ONE MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING/CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

DISTANCE TABLE	
POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
45	750
50	850
55	950



**DASHED YELLOW CENTERLINE
(THROUGHOUT SINGLE LANE)**

**PAVEMENT MARKING & SIGNING
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

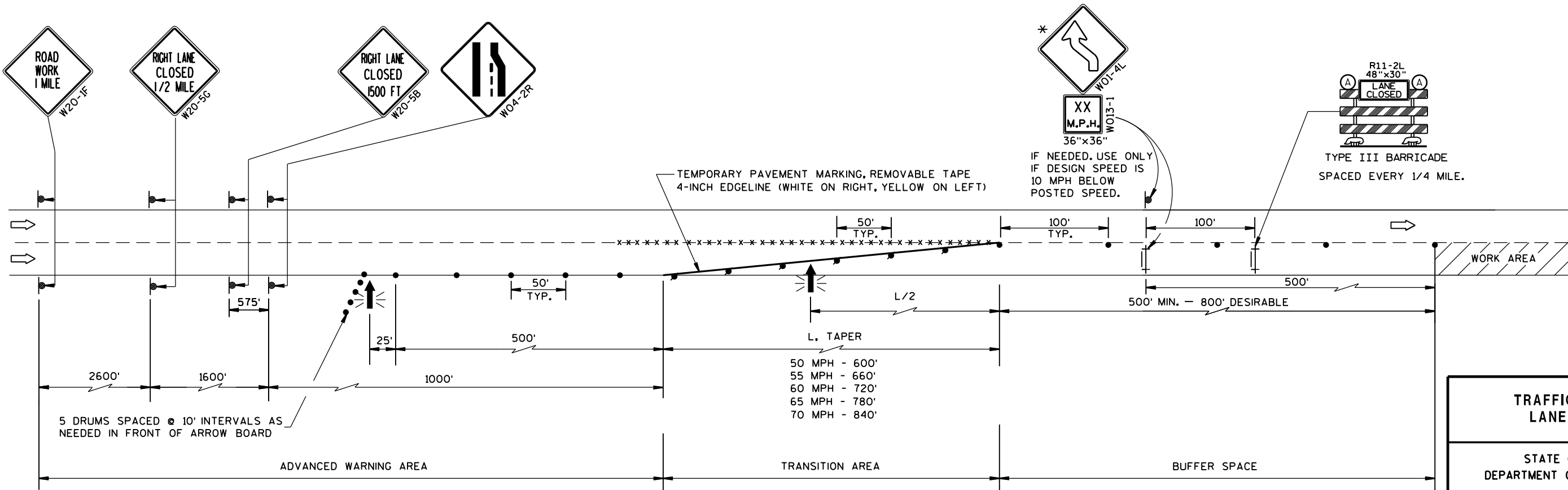
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

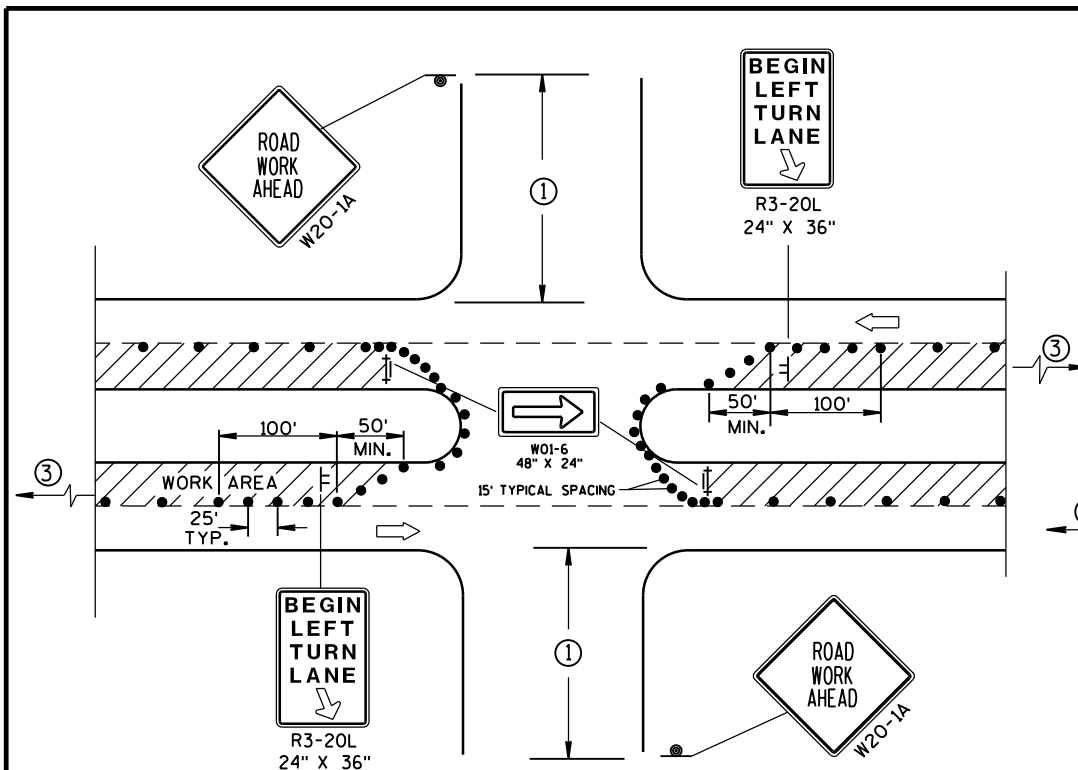
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

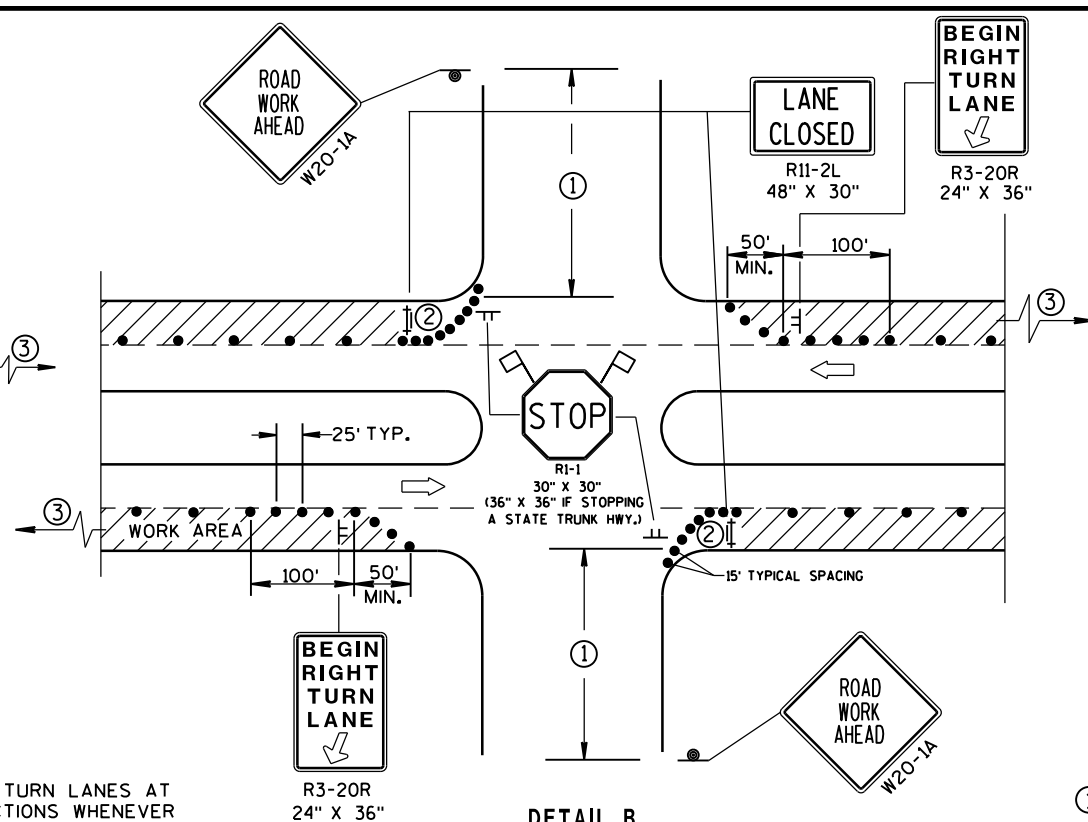


TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

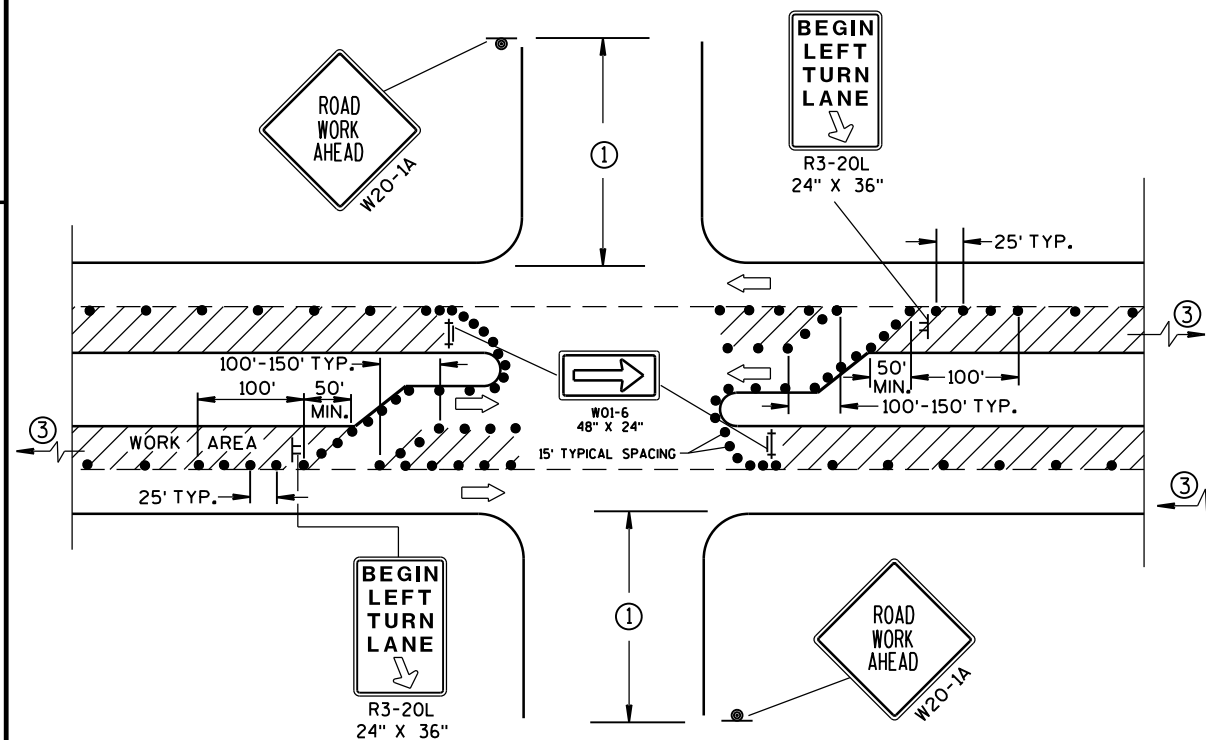
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

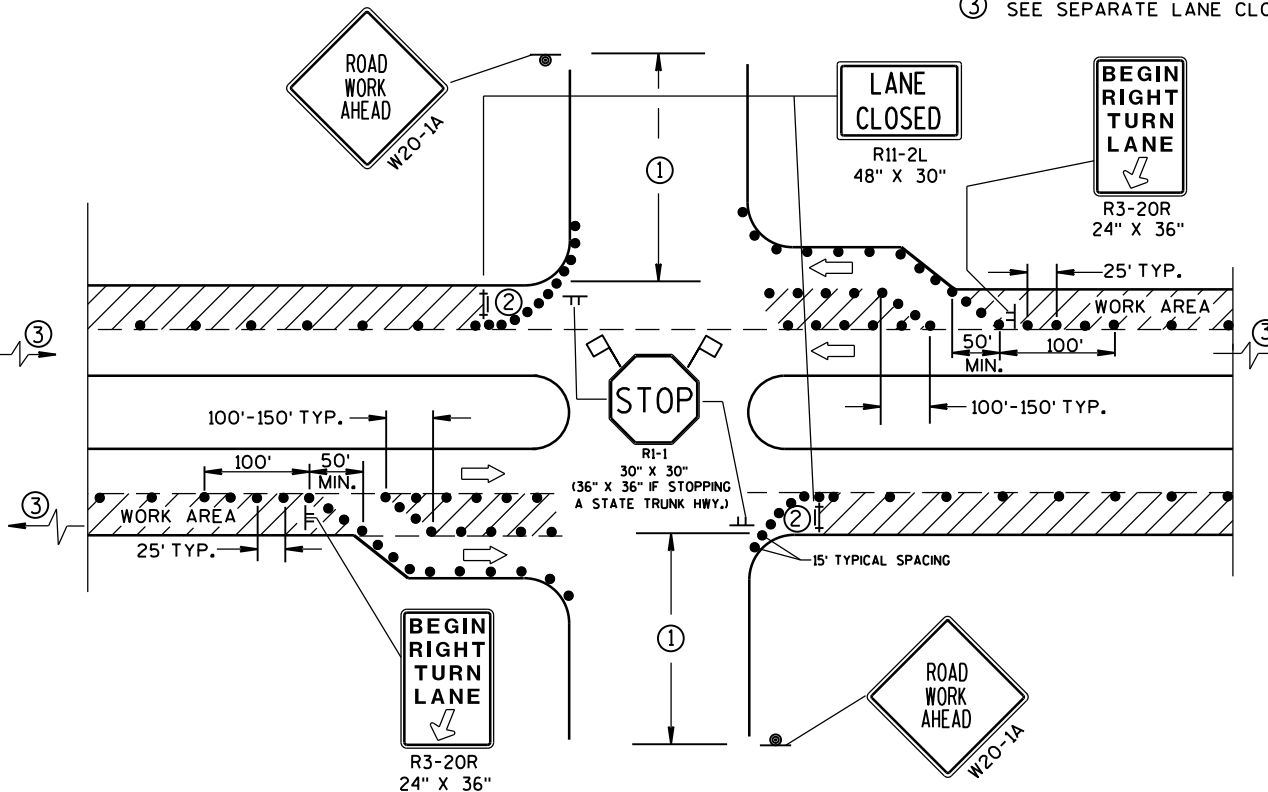
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.
- ② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
- ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊙ SIGN ON PERMANENT SUPPORT
- ⊢ SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- ⊢ TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- ➡ DIRECTION OF TRAFFIC
- ⚑ FLAGS, 16" X 16" MIN., (ORANGE)
- ▨ WORK AREA



DETAIL C
FOR LEFT LANE CLOSURE AT INTERSECTION OR
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

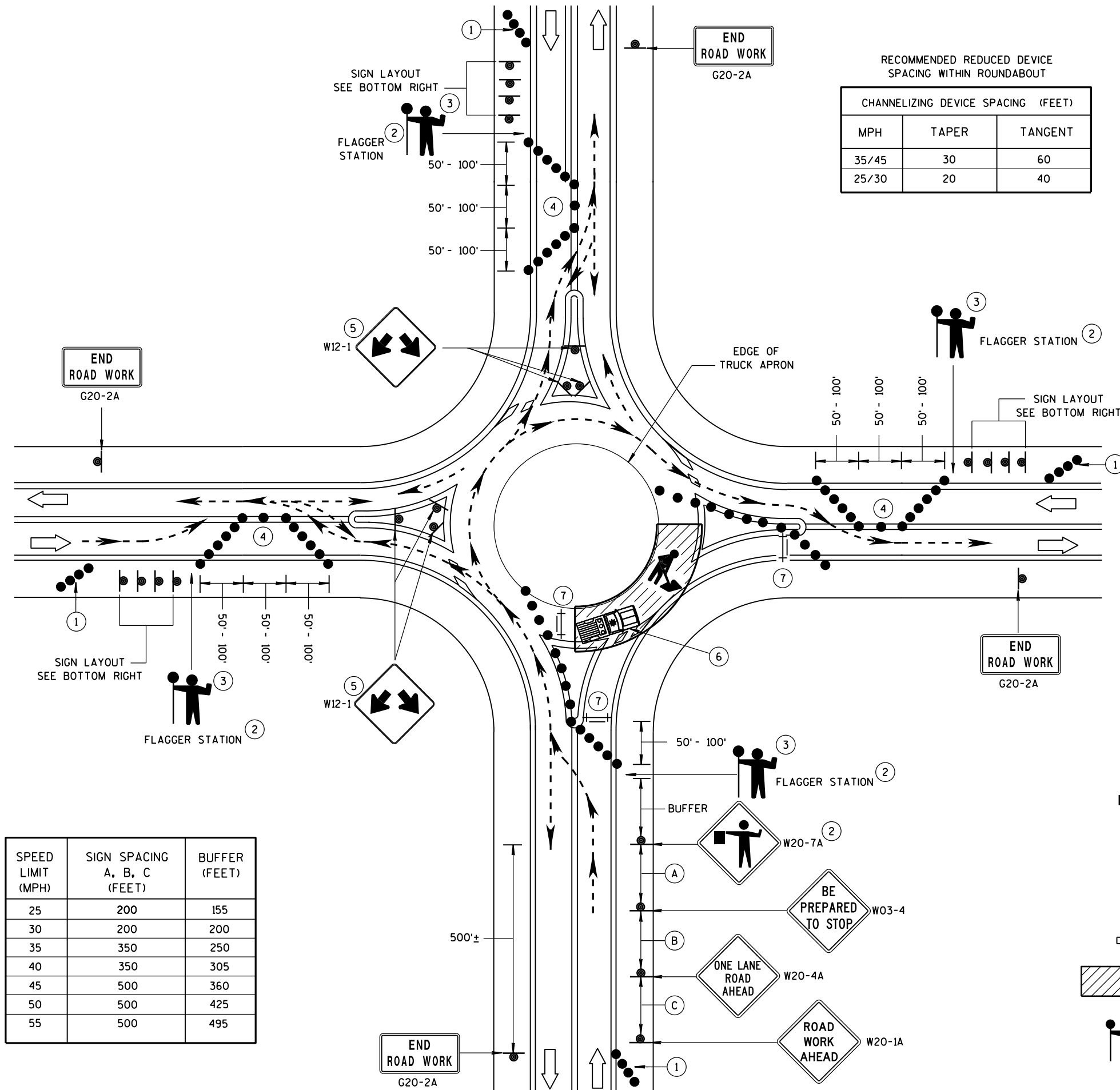


DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Anakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



SPEED LIMIT (MPH)	SIGN SPACING A, B, C (FEET)	BUFFER (FEET)
25	200	155
30	200	200
35	350	250
40	350	305
45	500	360
50	500	425
55	500	495

END
ROAD WORK
G20-2A

RECOMMENDED REDUCED DEVICE
SPACING WITHIN ROUNDABOUT

CHANNELIZING DEVICE SPACING (FEET)		
MPH	TAPER	TANGENT
35/45	30	60
25/30	20	40

GENERAL NOTES

ALL SIGNS ARE 48"x48" BLACK ON ORANGE UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS IF APPROVED BY THE ENGINEER.

REMOVE OR COVER CONFLICTING SIGNS.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

ONLY ONE QUADRANT OF TRAFFIC SHALL BE RELEASED AT A TIME.

FLAGGERS SHALL CONTROL TRAFFIC ON ALL APPROACHES OF THE ONE-LANE ROUNDABOUT. ONE FLAGGER SHALL BE DESIGNATED LEAD FLAGGER.

RADIO COMMUNICATION SHALL BE USED BY ALL FLAGGERS.

NIGHT TIME WORK REQUIRES ADDITIONAL LIGHTING AT FLAGGER STATION(S).

- 1 PLACE A MINIMUM OF 4 DRUMS ON THE SHOULDER IN ADVANCE OF THE PCMS IN A TAPER FOR DELINEATION ON ALL APPROACHES TO THE ROUNDABOUT.
- 2 ESTABLISH THE LIMITS OF THE WORK ZONE TO ENSURE THE MAXIMUM POSSIBLE SIGHT DISTANCE TO THE FLAGGER STATION.
- 3 FLAGGERS SHALL BE IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.
- 4 ADJUST CHANNELIZING DEVICES TO ACCOMMODATE FOR TURNING RADIUS OF LARGE VEHICLES AS DIRECTED BY THE ENGINEER.
- 5 GUIDE SIGN WITH ROAD NAMES MAY BE USED IN LIEU OF THE DOUBLE ARROW (W12-1) SIGN.
- 6 BUFFER VEHICLE RECOMMENDED TO SHIELD WORK AREA.
- 7 TYPE III BARRICADES WITH ROAD CLOSED SIGN.

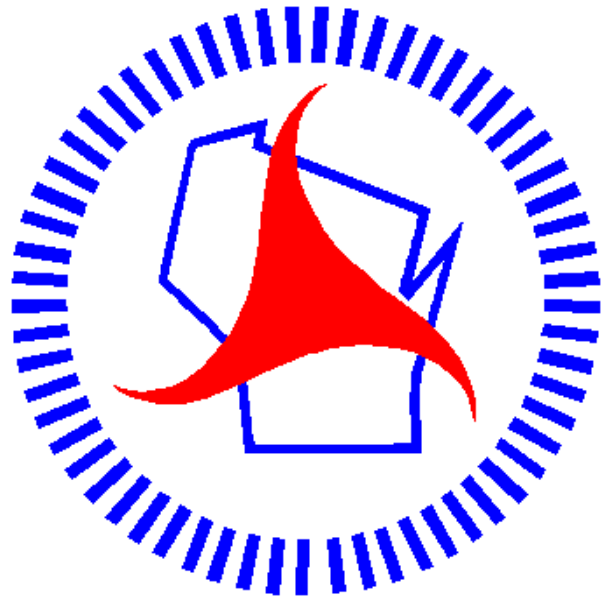
LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- || TYPE III BARRICADE WITH ATTACHED SIGN
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA
- 🚧 FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

TRAFFIC CONTROL,
2-LANE ROUNDABOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>