STANDARD NUMBERS	DESCRIPTION	Dates	
		MDSHA	FHWA
	CATEGORY "5" PAVING		
MD 550.01	*SQUARE FOOT AREAS OF PAVEMENT MARKING LETTERS, SYMBOLS, ARROWS, AND NUMBERS*	*05/21/14*	*05/20/14*
MD 557.01	*RECESSED SNOWPLOWABLE RAISED PAVEMENT MARKER WITH PLASTIC HOLDER AND LENS*	*01/30/25*	*01/24/25*
MD 557.01-.01	*RECESSED SRPM WITH PLASTIC HOLDER AND LENS – RESTRICTIVE SITE CONDITIONS*	*01/30/25*	*01/24/25*
MD 557.02	*RECESSED DIRECT SNOWPLOWABLE RAISED PAVEMENT MARKER WITHOUT HOLDER AND LENS*	*01/30/25*	*01/24/25*
MD 572.21	*REINFORCED CONCRETE PAVEMENT REQUIREMENT FOR LOAD TRANSFER DEVICES*	*02/25/16*	*02/23/16*
MD 572.23	*STANDARD DOWEL BAR ASSEMBLY CONTRACTION JOINTS*	*12/13/18*	*11/29/18*
MD 572.61	*CONCRETE PAVEMENT LONGITUDINAL TIE DEVICES*	*02/25/16*	*02/23/16*
MD 572.61-01	*CONCRETE PAVEMENT LONGITUDINAL TIE DEVICES*	*02/25/16*	*02/23/16*
MD 572.91	*CONCRETE PAVEMENT LOCATION OF JOINTS*	*02/25/16*	*02/23/16*
MD 572.92	*CONCRETE PAVEMENT TYPES OF JOINTS*	*02/25/16*	*02/23/16*
MD 573.01	*TERMINAL JOINT FOR CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT*	*02/25/16*	*02/23/16*
MD 577.01	*CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT REPAIRS SAW CUTS FOR LIFT OUT METHOD*	*02/25/16*	*02/23/16*
MD 577.02	*METHOD 'A' PLAIN PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 REPAIRS*	*02/25/16*	*02/23/16*
MD 577.03	*YMETHOD 'B' PLAIN OR CONVENTIONALL REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND TYPE 2 REPAIRS*	*02/25/16*	*02/23/16*
MD 577.04	*METHOD 'C' PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND TYPE 2 REPAIRS*	*02/25/16*	*02/23/16*
MD 577.05	*METHOD 'D' PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND TYPE 2 REPAIRS*	*02/25/16*	*02/23/16*

STANDARD NUMBERS	DESCRIPTION	Dates	
		MDSHA	FHWA
	CATEGORY "5" PAVING		
MD 577.06	*METHOD 'E' PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND TYPE 2 REPAIRS*	*02/25/16*	*02/23/16*
MD 577.07	*JOINTS FOR PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENTS*	*02/25/16*	*02/23/16*
MD 577.08	*DOWEL AND TIE BAR ANCHORAGE FOR TYPE 1 AND TYPE 2 PAVEMENT REPAIRS*	*02/25/16*	*02/23/16*
MD 577.10	*CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT REPAIRS USING CONTINUOUSLY REINFORCED CONCRETE PAVEMENT*	*02/25/16*	*02/23/16*
MD 577.10-01	*CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE REPAIRS USING PLAIN CONCRETE PAVEMENT*	*02/25/16*	*02/23/16*
MD 578.01	*REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES*	*10/27/22*	*08/26/22*
MD 578.03	*PERMANENT PATCHING FOR FLEXIBLE PAVEMENT USING ASPHALT MIX*	*02/25/16*	*02/23/16*
MD 578.03-01	*PERMANENT PATCHING FOR COMPOSITE PAVEMENT*	*02/25/16*	*02/23/16*
MD 580.01	*CONCRETE PAVEMENT DOWEL BAR RETROFIT*	*02/25/16*	*02/23/16*
MD 580.02	*NEW OR REPLACEMENT CONCRETE BUS PADS*	*10/27/22*	*08/26/22*
MD 580.03	*NEW COMBINATION CURB AND GUTTER PLACEMENT ALONG EXISTING PAVEMENT*	*10/27/22*	*08/26/22*
MD580.04	*CONCRETE PAVEMENT SPALL REPAIR*	*02/25/16*	*02/23/16*
MD 580.05	*ROUNDABOUT PAVEMENT SECTION*	*02/25/16*	*02/23/16*
MD 580.06	*PARK AND RIDE PAVEMENT SECTIONS FLEXIBLE PAVEMENT*	*02/25/16*	*02/23/16*
MD 580.07	*PARK AND RIDE SECTIONS RIGID PAVEMENT*	*02/25/16*	*02/23/16*
MD 580.08	*DRIVEWAYS AND BIKE PAVEMENT SECTIONS*	*02/25/16*	*02/23/16*

STANDARD NUMBERS	DESCRIPTION	Approval Dates	
		MDSHA	FHWA
	CATEGORY "5" PAVING		
MD 580.09	*BRIDGE APPROACH PAVEMENT SECTION*	*10/27/22*	*08/26/22*
MD 580.10	*PERMEABLE PAVEMENT SECTIONS*	*10/27/22*	*08/26/22*

SQUARE FOOT AREAS OF SYMBOLS AND ARROWS

SYMBOL	DESCRIPTION	AREA (SQ. FT.)
	THROUGH LANE-USE	12.5
	TURN LANE-USE (LEFT OR RIGHT)	15.5
	TURN AND THROUGH LANE-USE (LEFT OR RIGHT)	25.5
	LEFT AND RIGHT TURN LANE-USE	27.0
	ALL DIRECTIONS LANE-USE	38.5
	LANE-REDUCTION (LEFT OR RIGHT)	42.0
	FREEWAY, EXPRESSWAY AND RAMP ARROW	24.4
	WRONG WAY ARROW	23.8
	HOV LANE	13.5
	ACCESSIBILITY SYMBOL (BLUE BACKGROUND)	
	40"X40" (STANDARD)	11.5
	48"X48" (SPECIAL)	16.0
	RAILROAD-CROSSING	64.7 (TOTAL)
	"R" (6' HIGH)	3.6 (EACH)
	"X" (20' HIGH)	57.5
	YIELD AHEAD TRIANGLE	
	POSTED SPEED LIMIT 45 MPH OR GREATER	43.0
	POSTED SPEED LIMIT LESS THAN 45 MPH	34.0
	SHARKS TEETH	
	12"X18" POSTED SPEED LIMIT LESS THAN 45 MPH	0.75
	24"X36" POSTED SPEED LIMIT 45 MPH OR GREATER	3.0
	BIKE LANE DETECTOR 12"X43"	1.0
	SHARED LANE (SHARROW) 40"X112"	9.0
	BIKE LANE ARROW 24"X72"	5.0
	BIKE LANE (STANDARD) 40"X72"	5.0
	BIKE LANE (ALTERNATE NOT FOR USE ON STATE ROADWAYS) 40"X72"	6.0

SQUARE FOOT AREAS OF LEGENDS

LEGEND	SIZE/DESCRIPTION	AREA (SQ. FT.)
AHEAD	8' HIGH	29.0
LANE	8' HIGH (STANDARD)	22.3
LEFT	8' HIGH	18.2
ONLY	8' HIGH	20.8
PED	8' HIGH	17.3
RIGHT	8' HIGH	24.5
SCHOOL	8' HIGH (STANDARD)	32.3
	10' HIGH (ACROSS TWO LANES)	94.0
SLOW	8' HIGH	22.8
STOP	8' HIGH	20.8
TURN	8' HIGH	22.8
XING	8' HIGH	20.3
YIELD	8' HIGH	22.3

SQUARE FOOT AREAS OF NUMBERS

SIZE \ NUMBER	1	2	3	4	5	6	7	8	9	0
SMALL (6 FT.)	1.5	3.3	3.3	2.9	3.5	3.5	2.2	3.8	3.5	3.4
LARGE (8 FT.)	2.6	5.8	5.8	5.1	6.1	6.2	3.8	6.7	6.2	6.0

SQUARE FOOT AREAS OF LETTERS

SIZE \ LETTER	A	B	C	D	E	F	G	H	I	J	K
SMALL (6 FT.)	3.1	4.0	2.7	3.4	3.3	2.6	3.3	3.4	1.5	2.1	3.1
LARGE (8 FT.)	5.5	7.1	4.8	6.1	5.9	4.7	5.8	6.0	2.6	3.7	5.7

L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2.2	4.2	4.0	3.4	3.0	3.6	3.6	3.2	2.2	3.2	2.7	4.2	2.7	2.2	2.9
3.8	7.4	7.1	6.0	5.3	6.3	6.3	5.7	3.8	5.6	4.8	7.3	4.8	3.9	5.1

NOTE: REFER TO THE MOST RECENT VERSION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE FHWA STANDARD HIGHWAY SIGNS MANUAL FOR DIMENSIONS OF ALL PAVEMENT MARKING LETTERS, SYMBOLS, ARROWS, AND NUMBERS.

SPECIFICATION	CATEGORY CODE ITEMS

APPROVED _____
DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 5-21-14	APPROVAL 5-20-14
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

SHA State Highway Administration

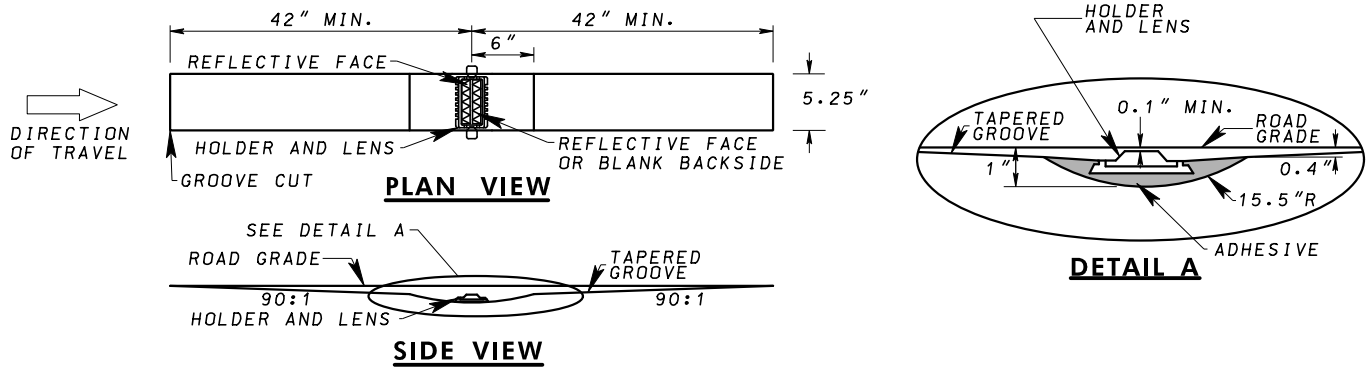
Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

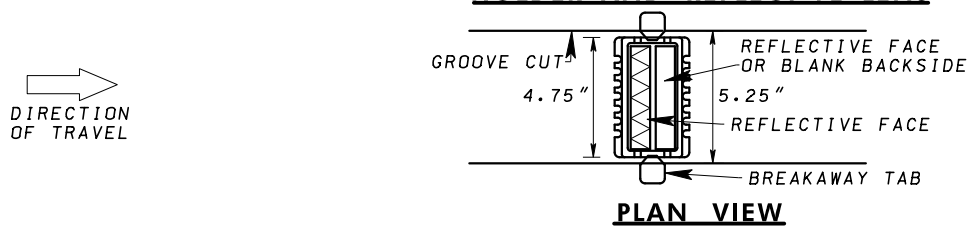
SQUARE FOOT AREAS OF PAVEMENT MARKING LETTERS, SYMBOLS, ARROWS AND NUMBERS

STANDARD NO. MD 550.01

RECESSED SRPM – SINGLE HOLDER & LENS – ONE WAY/TWO WAY

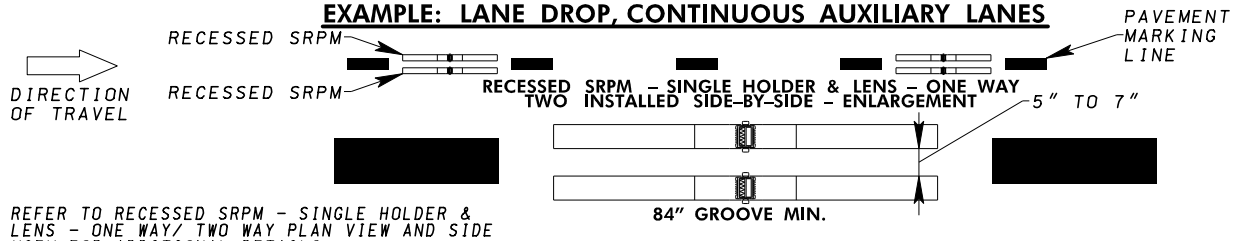


HOLDER AND REFLECTIVE LENS



10 IN. LANE LINE (3 FT. LINE WITH 9 FT. GAP) WHERE SUPPLEMENTED WITH RPM PER MDMUTCD

EXAMPLE: LANE DROP, CONTINUOUS AUXILIARY LANES



REFER TO RECESSED SRPM – SINGLE HOLDER & LENS – ONE WAY/ TWO WAY PLAN VIEW AND SIDE VIEW FOR ADDITIONAL DETAILS

NOTES

1. THE GROOVE SHALL BE CUT AS SHOWN.
2. THE CUT PATTERN SHALL BE CLEANED, AND DRIED BY COMPRESSED AIR BEFORE PLACING THE ADHESIVE. THE ADHESIVE SHALL BE PLACED PER THE MANUFACTURERS RECOMMENDATIONS.
3. EPOXY ADHESIVE SHALL BE INSTALLED DURING WEATHER CONDITIONS CONSISTENT WITH MANUFACTURERS RECOMMENDATIONS.
4. REFLECTIVE MARKER SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
5. THE MARKER SHALL BE PROTECTED FROM TRAFFIC UNTIL THE ADHESIVE HAS PROPERLY HARDENED.
6. REFLECTIVE FACE COLORS SHALL BE DETERMINED BASED ON THE APPLICATION.
7. RECESSED SRPM WHICH SUPPLEMENT 10 IN. WIDE BROKEN OR DOTTED LINES WILL BE SINGLE HOLDER AND LENS, INSTALLED SIDE-BY-SIDE WITH 5 IN. TO 7 IN. SEPARATION BETWEEN GROOVES.
8. THE RECESSED SRPM WITH 48 IN. GROOVE FOR RESTRICTIVE SITE CONDITIONS SHALL ONLY BE USED IN LOCATIONS WHERE THE FULL 84 IN. GROOVE CANNOT BE INSTALLED OR AS APPROVED BY THE ENGINEER.
9. THE RECESSED SRPM WITH 54 IN. GROOVE FOR CENTERLINE CURVED ALIGNMENTS SHALL ONLY BE USED IN LOCATIONS WHERE THE FULL 84 IN. GROOVE CANNOT BE INSTALLED OR AS APPROVED BY THE ENGINEER.
10. SRPM INSTALLATION ON CONCRETE BRIDGE DECKS REQUIRES NOTIFICATION OF MDOT SHA OFFICE OF STRUCTURES.
11. RECESSED SRPM GROOVE AND LENS INSTALLED TO SUPPLEMENT 10 IN. WIDE LINES AT EXIT RAMP GORES SHALL BE PERPENDICULAR TO MAINLINE TRAFFIC. THE GROOVE LENGTH SHALL BE SELECTED TO MINIMIZE IMPACT TO PAVEMENT MARKINGS AND TRAVEL LANE WIDTH.
12. RECESSED SRPM GROOVE AND LENS INSTALLED TO SUPPLEMENT 10 IN. WIDE LINES AT ENTRANCE RAMP GORES SHALL BE PERPENDICULAR TO RAMP TRAFFIC. THE GROOVE LENGTH SHALL BE SELECTED TO MINIMIZE IMPACT TO PAVEMENT MARKINGS AND TRAVEL LANE WIDTH.
13. RECESSED SRPM PLACEMENT SHALL AVOID LOOP DETECTORS AND LOOP DETECTOR LEAD-INS.
14. NEW ASPHALT PAVEMENT SHALL BE ALLOWED TO PROPERLY SETUP, CURE AND COOL BEFORE INSTALLATION OF GROOVES TO AVOID DAMAGE TO THE PAVEMENT SURFACE.

SPECIFICATION	CATEGORY CODE ITEMS
557	

APPROVED Cedric Ward
DIRECTOR - OFFICE OF TRAFFIC AND SAFETY

APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	1-30-25	APPROVAL	1-24-25
REVISED		REVISED	
REVISED		REVISED	
REVISED		REVISED	

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

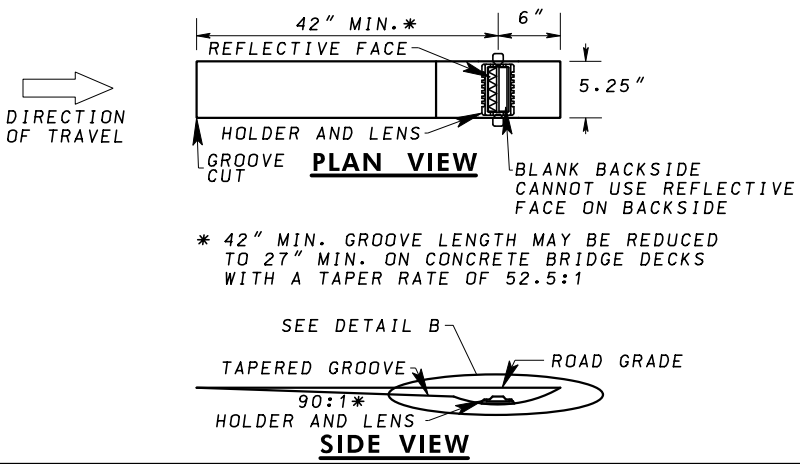
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

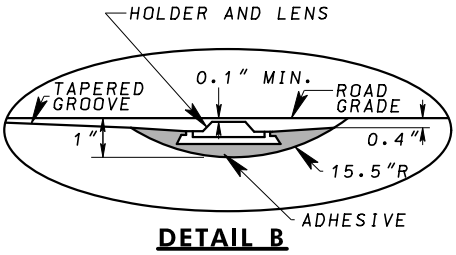
RECESSED SNOWPLOWABLE RAISED PAVEMENT MARKER WITH PLASTIC HOLDER AND LENS

STANDARD NO. MD 557.01

RECESSED SRPM FOR RESTRICTIVE SITE CONDITIONS

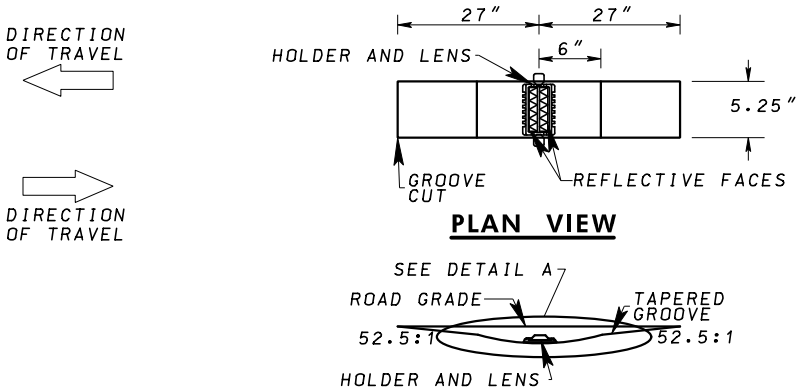
RECESSED SRPM – SINGLE HOLDER & LENS – ONE WAY WITH BLANK BACKSIDE RESTRICTIVE SITE CONDITIONS

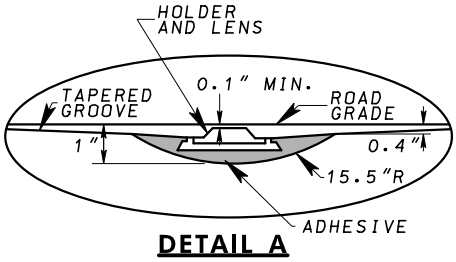




DETAIL B

RECESSED SRPM – SINGLE HOLDER & LENS – TWO WAY – CENTERLINE RESTRICTIVE SITE CONDITIONS – SHORT GROOVE FOR CURVED ALIGNMENT





DETAIL A

NOTES

1. THE GROOVE SHALL BE CUT AS SHOWN.
2. THE CUT PATTERN SHALL BE CLEANED, AND DRIED BY COMPRESSED AIR BEFORE PLACING THE ADHESIVE. THE ADHESIVE SHALL BE PLACED PER THE MANUFACTURERS RECOMMENDATIONS.
3. EPOXY ADHESIVE SHALL BE INSTALLED DURING WEATHER CONDITIONS CONSISTENT WITH MANUFACTURERS RECOMMENDATIONS.
4. REFLECTIVE MARKER SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS.
5. THE MARKER SHALL BE PROTECTED FROM TRAFFIC UNTIL THE ADHESIVE HAS PROPERLY HARDENED.
6. REFLECTIVE FACE COLORS SHALL BE DETERMINED BASED ON THE APPLICATION.
7. RECESSED SRPM WHICH SUPPLEMENT 10 IN. WIDE BROKEN OR DOTTED LINES WILL BE SINGLE HOLDER AND LENS, INSTALLED SIDE-BY-SIDE WITH 5 IN. TO 7 IN. SEPARATION BETWEEN GROOVES.
8. THE RECESSED SRPM WITH 48 IN. GROOVE FOR RESTRICTIVE SITE CONDITIONS SHALL ONLY BE USED IN LOCATIONS WHERE THE FULL 84 IN. GROOVE CANNOT BE INSTALLED OR AS APPROVED BY THE ENGINEER.
9. THE RECESSED SRPM WITH 54 IN. GROOVE FOR CENTERLINE CURVED ALIGNMENTS SHALL ONLY BE USED IN LOCATIONS WHERE THE FULL 84 IN. GROOVE CANNOT BE INSTALLED OR AS APPROVED BY THE ENGINEER.
10. SRPM INSTALLATION ON CONCRETE BRIDGE DECKS REQUIRES NOTIFICATION OF MDOT SHA OFFICE OF STRUCTURES.
11. RECESSED SRPM GROOVE AND LENS INSTALLED TO SUPPLEMENT 10 IN. WIDE LINES AT EXIT RAMP GORES SHALL BE PERPENDICULAR TO MAINLINE TRAFFIC. THE GROOVE LENGTH SHALL BE SELECTED TO MINIMIZE IMPACT TO PAVEMENT MARKINGS AND TRAVEL LANE WIDTH.
12. RECESSED SRPM GROOVE AND LENS INSTALLED TO SUPPLEMENT 10 IN. WIDE LINES AT ENTRANCE RAMP GORES SHALL BE PERPENDICULAR TO RAMP TRAFFIC. THE GROOVE LENGTH SHALL BE SELECTED TO MINIMIZE IMPACT TO PAVEMENT MARKINGS AND TRAVEL LANE WIDTH.
13. RECESSED SRPM PLACEMENT SHALL AVOID LOOP DETECTORS AND LOOP DETECTOR LEAD-INS.
14. NEW ASPHALT PAVEMENT SHALL BE ALLOWED TO PROPERLY SETUP, CURE AND COOL BEFORE INSTALLATION OF GROOVES TO AVOID DAMAGE TO THE PAVEMENT SURFACE.

SPECIFICATION	CATEGORY CODE ITEMS
557	

APPROVED Cedric Ward
DIRECTOR - OFFICE OF TRAFFIC AND SAFETY

APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	1-30-25	APPROVAL	1-24-25
REVISED		REVISED	
REVISED		REVISED	
REVISED		REVISED	

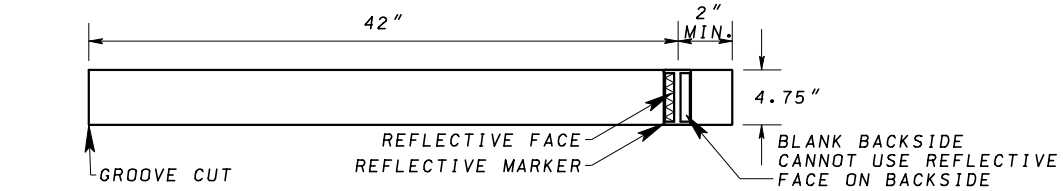
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

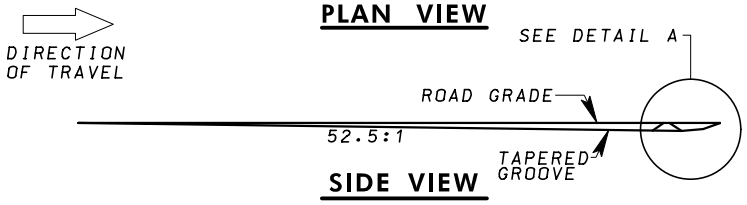
RECESSED SRPM WITH PLASTIC HOLDER AND LENS – RESTRICTIVE SITE CONDITIONS

STANDARD NO. MD 557.01-01

RECESSED DIRECT SRPM & LENS – WITHOUT HOLDER – ONE WAY

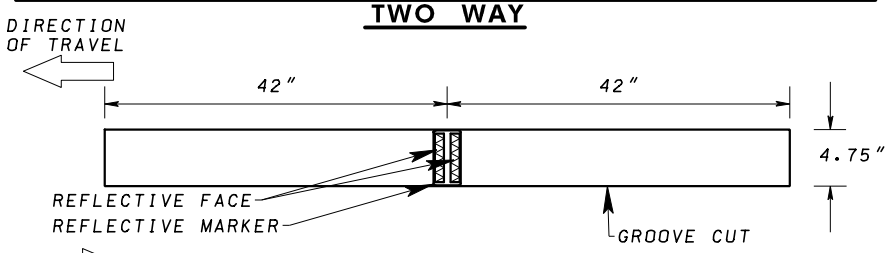


PLAN VIEW

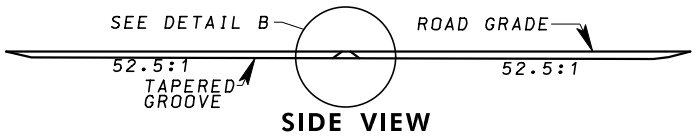


SIDE VIEW

RECESSED DIRECT SRPM & LENS – WITHOUT HOLDER – TWO WAY



PLAN VIEW

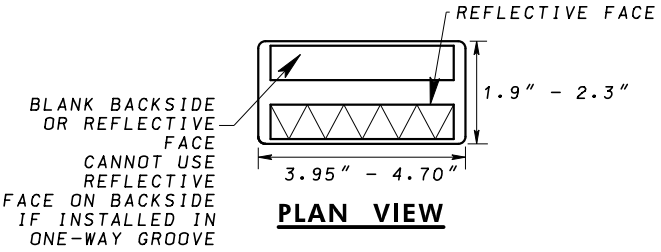


SIDE VIEW

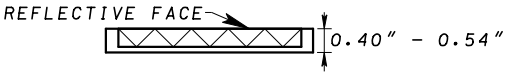
NOTES:

1. THE GROOVE SHALL BE CUT AS SHOWN.
2. THE CUT PATTERN SHALL BE CLEANED, AND DRIED BY COMPRESSED AIR BEFORE PLACING THE ADHESIVE. THE ADHESIVE SHALL BE PLACED PER THE MANUFACTURERS RECOMMENDATIONS.
3. EPOXY ADHESIVE SHALL BE INSTALLED DURING WEATHER CONDITIONS CONSISTENT WITH MANUFACTURERS RECOMMENDATIONS.
4. REFLECTIVE MARKER SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SHALL BE SELECTED FROM THE QUALIFIED PRODUCTS LIST (QPL).
5. THE MARKER SHALL BE PROTECTED FROM TRAFFIC UNTIL THE ADHESIVE HAS PROPERLY HARDENED.
6. REFLECTIVE FACE COLORS SHALL BE DETERMINED BASED ON THE APPLICATION.
7. RECESSED DIRECT SRPM SHALL NOT BE USED ON CONCRETE BRIDGE DECKS.
8. RECESSED DIRECT SRPM PLACEMENT SHALL AVOID LOOP DETECTORS AND LOOP DETECTOR LEAD-INS.
9. NEW ASPHALT PAVEMENT SHALL BE ALLOWED TO PROPERLY SETUP, CURE AND COOL BEFORE INSTALLATION OF GROOVES TO AVOID DAMAGE TO THE PAVEMENT SURFACE.

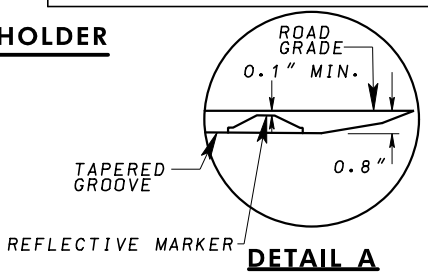
RECESSED DIRECT SRPM REFLECTIVE MARKER WITHOUT HOLDER



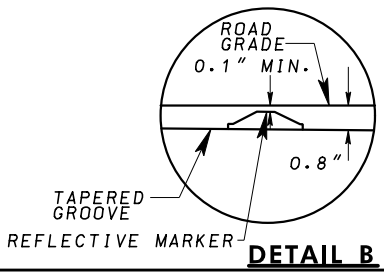
PLAN VIEW



SIDE VIEW



DETAIL A



DETAIL B

SPECIFICATION	CATEGORY CODE ITEMS
557	

APPROVED Cedric Ward
DIRECTOR - OFFICE OF TRAFFIC AND SAFETY

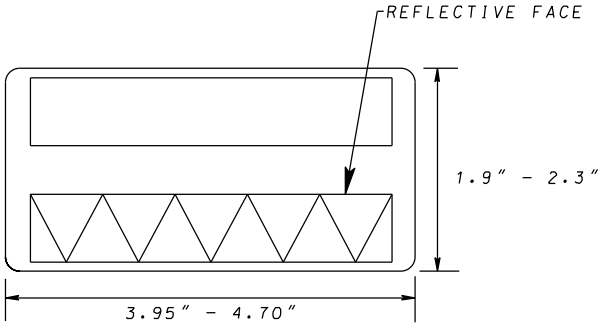
APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	1-30-25	APPROVAL	1-24-25
REVISED		REVISED	
REVISED		REVISED	
REVISED		REVISED	

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

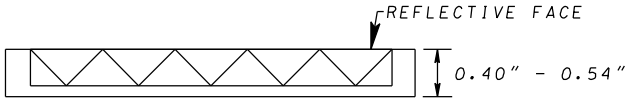
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

RECESSED DIRECT SNOWPLOWABLE RAISED PAVEMENT MARKER WITHOUT HOLDER AND LENS

STANDARD NO. MD 557.02



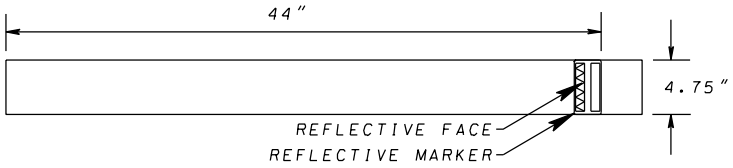
REFLECTIVE MARKER – PLAN VIEW



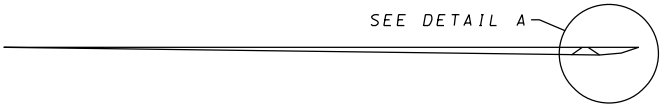
REFLECTIVE MARKER – FRONT VIEW

INSTALLATION

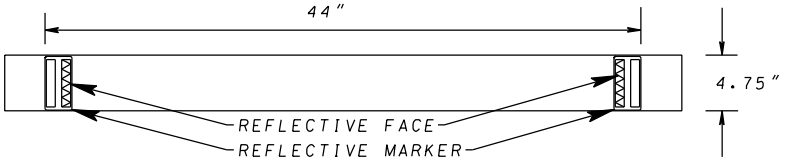
1. THE GROOVE SHALL BE CUT AS SHOWN.
2. THE CUT PATTERN SHALL BE CLEANED, AND DRIED BY COMPRESSED AIR BEFORE PLACING THE ADHESIVE. THE ADHESIVE SHALL BE PLACED PER THE MANUFACTURERS RECOMMENDATIONS.
3. EPOXY ADHESIVE SHALL BE INSTALLED DURING WEATHER CONDITIONS CONSISTENT WITH MANUFACTURERS RECOMMENDATIONS.
4. REFLECTIVE MARKER SHALL BE INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND SHALL BE SELECTED FROM THE QUALIFIED PRODUCTS LIST (QPL).
5. THE MARKER SHALL BE PROTECTED FROM TRAFFIC UNTIL THE ADHESIVE HAS PROPERLY HARDENED.



ONE WAY PAVEMENT GROOVE – PLAN VIEW

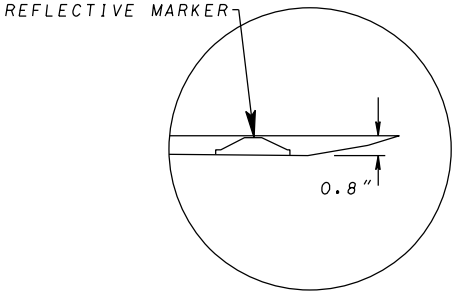


ONE WAY PAVEMENT GROOVE – SIDE VIEW



TWO WAY PAVEMENT GROOVE – PLAN VIEW

TWO WAY PAVEMENT GROOVE – SIDE VIEW



DETAIL A

SPECIFICATION 558	CATEGORY CODE ITEMS

APPROVED _____ DIRECTOR – OFFICE OF TRAFFIC AND SAFETY

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 02-05-14	APPROVAL 01-14-14
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

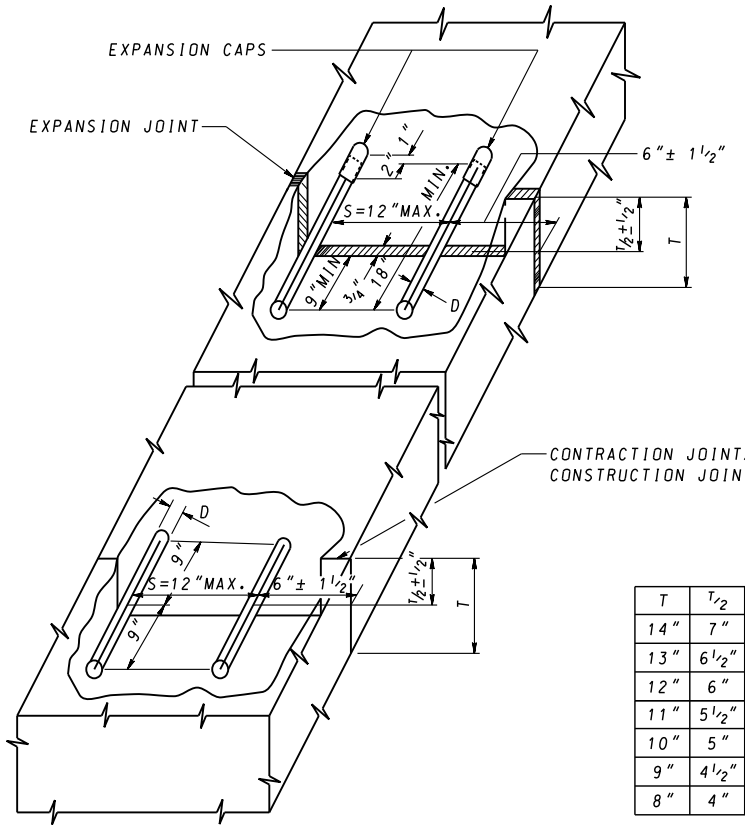
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

RECESSED PAVEMENT MARKERS

STANDARD NO. MD 558.01

NOTES

1. DOWELS SHALL BE ASSEMBLED IN A RIGID FRAMEWORK OF A LENGTH EQUAL TO A LANE WIDTH. THE EXPANSION JOINT FRAMEWORK SHALL PROVIDE ADEQUATE SUPPORT TO MAINTAIN THE PREMOLDED JOINT FILLER IN THE PROPER HORIZONTAL AND VERTICAL ALIGNMENT.
2. APPROVED FASTENERS SHALL BE USED TO SECURE THE FRAMEWORK AGAINST ANY MOVEMENT ALONG THE SUBGRADE.
3. THE DOWELS AND SUPPORTING FRAMEWORK SHALL BE STABLE AGAINST OVERTURNING, INDEPENDENT OF ANY APPROVED FASTENERS.
4. THE FREE MOVING OR UNANCHORED END OF ALL DOWEL BARS IN BOTH CONTRACTION AND EXPANSION JOINTS SHALL BE COATED WITH APPROVED LUBRICANT APPLIED WITH A GLOVED HAND. THIS SAME END OF ALL EXPANSION JOINT DOWEL BARS SHALL BE CAPPED WITH A SNUG FITTING CLOSED END METAL EXPANSION SLEEVE TEMPORARILY SECURED TO THE BAR SO AS TO PROVIDE A 1" LONG OPEN SOCKET BEYOND THE BAR END AND TO LAP BACK 2" ON THE BAR AT THE TIME OF INSTALLATION.
5. THE DOWEL (D) SIZES SHOWN BELOW WILL BE USED FOR THE PAVEMENT THICKNESS INDICATED UNLESS OTHERWISE STATED IN THE SPECIAL PROVISIONS.
6. SEE 908.02 FOR DOWEL BAR MATERIAL SPECIFICATIONS.
7. DOWEL BAR TO BE 18". BAR SHALL BE CENTERED.



T = PAVEMENT THICKNESS

T	T/2	D
14"	7"	1 1/2" ϕ
13"	6 1/2"	1 1/2" ϕ
12"	6"	1 1/2" ϕ
11"	5 1/2"	1 1/2" ϕ
10"	5"	1 1/4" ϕ
9"	4 1/2"	1 1/4" ϕ
8"	4"	1 1/4" ϕ

NEW CONCRETE OR PATCHING EXISTING CONCRETE

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	1-11-61	APPROVAL	1-10-62
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

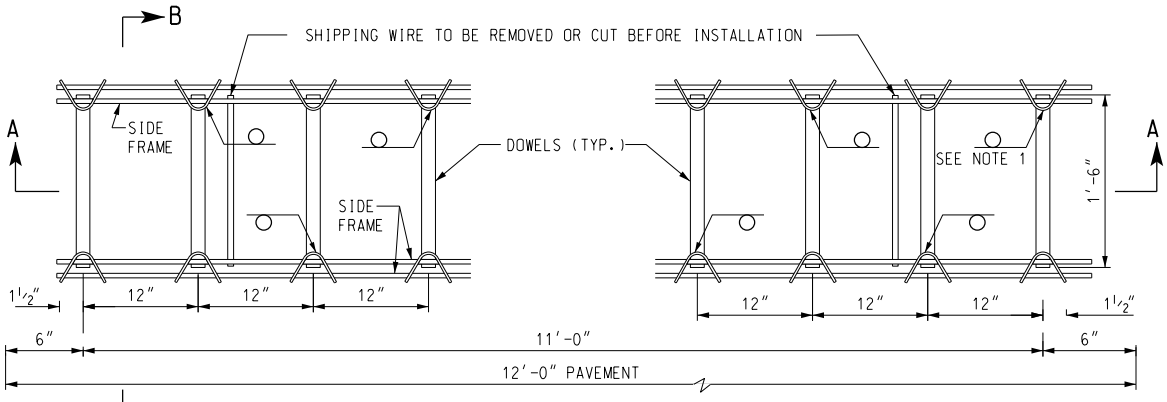
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

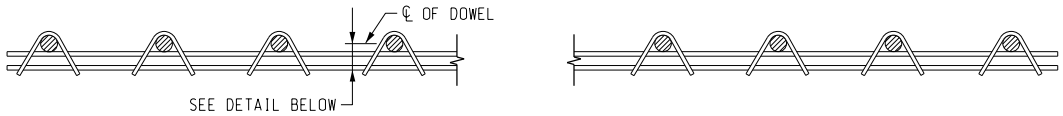
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

JOINTED CONCRETE PAVEMENT REQUIREMENT FOR LOAD TRANSFER DEVICES

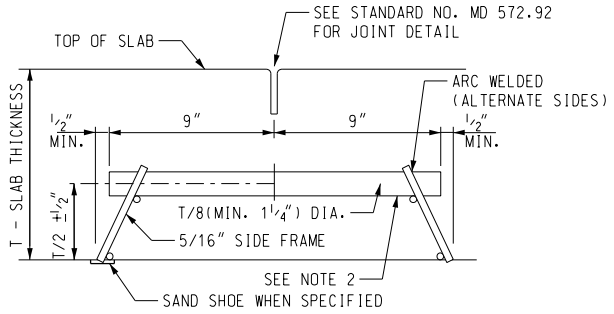
STANDARD NO. MD 572.21



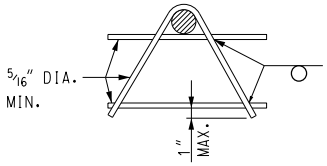
PLAN OF DOWEL UNIT FOR CONTRACTION JOINT



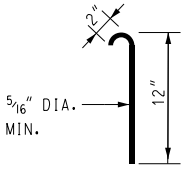
SIDE ELEVATION A - A CONTRACTION JOINT



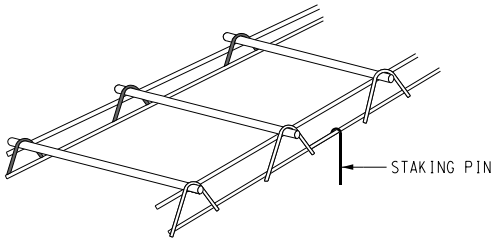
SECTION B - B
THRU CONTRACTION JOINT



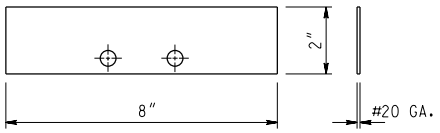
SIDE FRAME DETAIL



STAKING PIN



PERSPECTIVE VIEW



SAND SHOE

NOTES:

1. WELD ALTERNATE BARS AT OPPOSITE ENDS.
2. ENTIRE BAR TO BE LUBRICATED.
3. STAKING PINS, A MINIMUM SIX PER ASSEMBLY, THREE TO EACH SIDE.
4. THE DEVICE FOR SUPPORTING DOWELS SHALL BE SO CONSTRUCTED THAT IT WILL HOLD THE DOWELS FIRMLY IN POSITION, PARALLEL TO THE SURFACE AND CENTERLINE OF THE SLAB.
5. NO MEMBERS SHALL BE PLACED SO THAT THEY WILL INTERFERE WITH THE FREE FLOW OF CONCRETE BETWEEN THE DOWELS.
6. ASSEMBLY AND WELDING OF ALL MEMBERS SHALL BE SUCH AS TO ENSURE A GOOD WORKMANLIKE JOB, WITH ALL JOINTS TRUE AND SQUARE.
7. ASSEMBLIES WHICH HAVE BECOME WARPED OR DAMAGED IN TRANSIT OR STORAGE SO THEY WILL NOT CONFORM TO THE SUBGRADE SHALL NOT BE USED.
8. A SAMPLE OF THE SUPPORTING DEVICE SHALL BE SUBMITTED FOR APPROVAL PRIOR TO THE FILLING OF JOB ORDERS.
9. THE DIAMETER (D) OF ALL BARS SHALL BE AS SHOWN ON STD. MD 572.21. SAND SHOES ADDED WHEN SPECIFIED ARE TO BE USED UNDER THE FRAME TO HOLD DOWEL UNITS IN TRUE ALIGNMENT. SAND SHOES ADDED IN THE FIELD. THE UNITS ARE TO BE STAKED IN PLACE BY DRIVING #0 GA. PINS IN NUMBERS AND TO A DEPTH AS SUBGRADE CONDITIONS MAKE NECESSARY ALONG BOTH SIDES OF THE FRAME. A MINIMUM OF SIX (6) STAKES SHALL BE USED FOR EACH ASSEMBLY. THE UNITS ARE TO BE SHOP FABRICATED AS TO FRAME, ETC. ALTERNATIVE LOAD TRANSFER ASSEMBLIES MAY BE SUBMITTED TO OMT'S PAVEMENT & GEOTECHNICAL DIVISION FOR CONSIDERATION OF APPROVAL.

SPECIFICATION	CATEGORY CODE ITEMS

APPROVED *Cruzmaciabla*
DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT

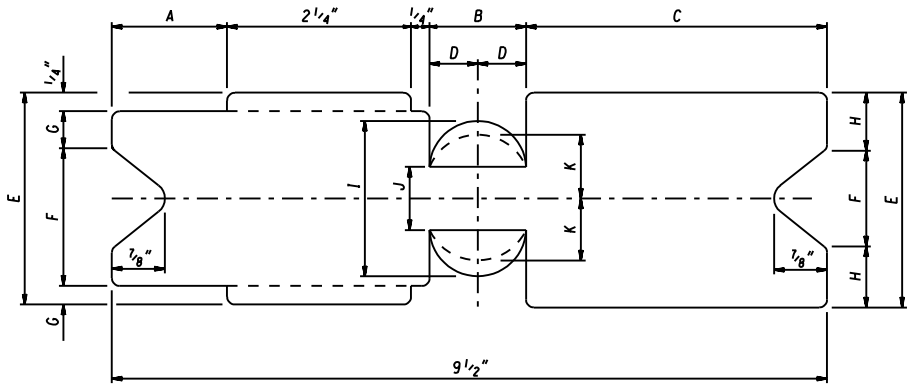
APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	7-14-61	APPROVAL	7-7-67
REVISED	10-1-01	REVISED	7-2-85
REVISED	3-25-10	REVISED	
REVISED	12-13-18	REVISED	11-29-18

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

STANDARD DOWEL BAR ASSEMBLY CONTRACTION JOINTS

STANDARD NO. MD 572.23



BLANK FOR DOWEL TUBE

MATERIAL: 23 GA. (.025 THICK) STEEL

ϕ	A	B	C	D	E	F	G	H	I	J	K
1 1/4"	1 19/32"	1 5/16"	4 3/32"	21/32"	2 1/2"	7/8"	9/16"	13/16"	1 3/4"	7/8"	21/32"
1"	1 11/16"	1 1/8"	4 3/16"	9/16"	2 3/16"	3/4"	15/32"	23/32"	1 9/16"	5/8"	9/16"

TUBE FOLDED FOR USE

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	Kirk G. McClellan DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

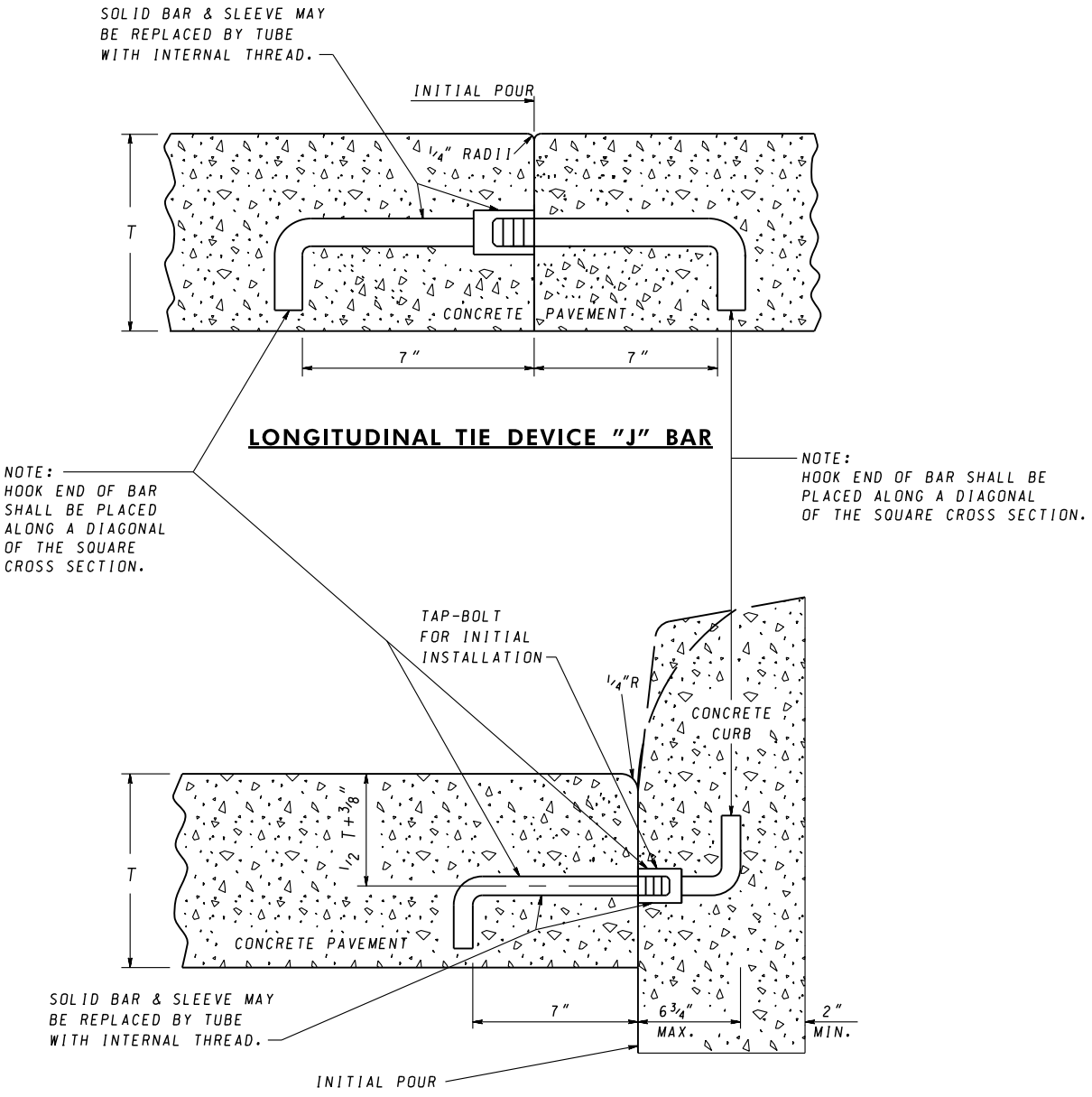
APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	4-1-61	APPROVAL	1-29-62
REVISED	10-1-01	REVISED	7-2-85
REVISED		REVISED	
REVISED		REVISED	

SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

REINFORCED CONCRETE PAVEMENT DOWEL TUBE EXPANSION JOINT ASSEMBLY

STANDARD NO. MD 572.43



LONGITUDINAL TIE DEVICE "J" BAR

LONGITUDINAL TIE DEVICE – "J" BAR MODIFIED

T = PAVEMENT THICKNESS

FOR APPLICABLE NOTES REFER TO STANDARD 572.61-01

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 6-15-64	APPROVAL 7-21-65
REVISED 2-25-16	REVISED 2-23-16
REVISED	REVISED
REVISED	REVISED

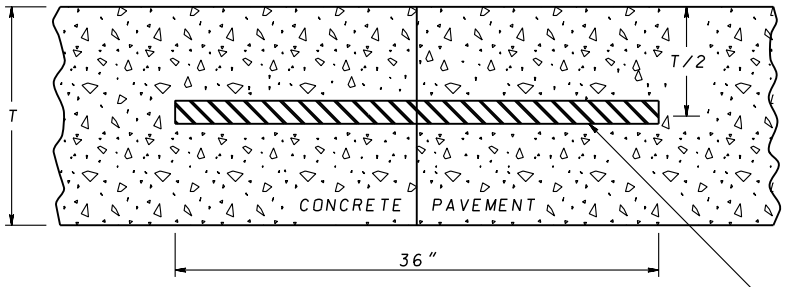
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

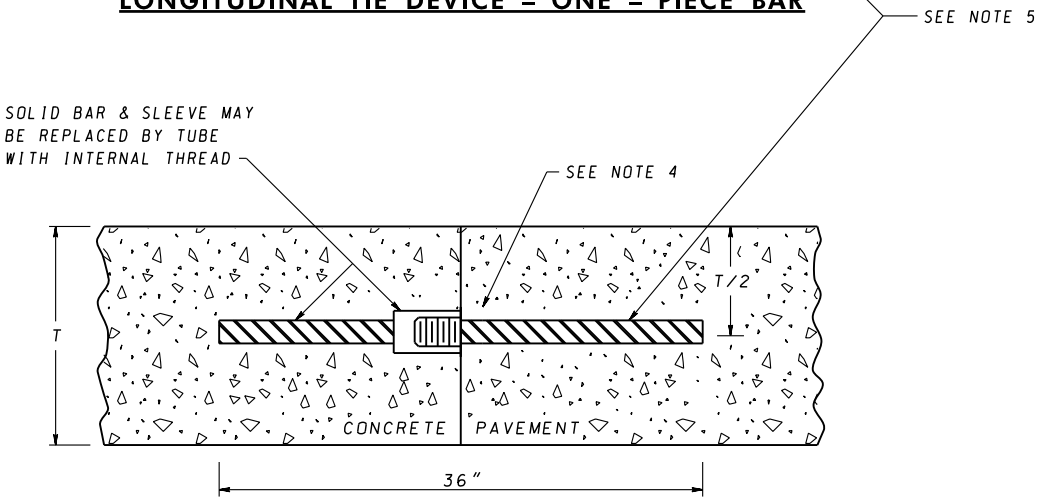
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

CONCRETE PAVEMENT
LONGITUDINAL TIE DEVICES

STANDARD NO. MD 572.61



LONGITUDINAL TIE DEVICE – ONE – PIECE BAR



LONGITUDINAL TIE DEVICE – TWO – COMPONENT BAR

T = PAVEMENT THICKNESS

NOTES

1. *SEE 908.09 FOR TIE-BAR MATERIAL SPECIFICATIONS.*
2. *ANY SIMILAR DEVICE MAY BE SUBMITTED FOR CONSIDERATION BY THE ENGINEER AND OMT'S PAVEMENT & GEOTECHNICAL DIVISION. IF THE GENERAL TYPE OF A SUBSTITUTION IS APPROVED, THE DEVICE MUST STILL MEET THE STRENGTH REQUIREMENTS APPEARING IN THE SPECIFICATIONS OR SPECIAL PROVISIONS.*
3. *THE PORTION OF THE DEVICE INITIALLY INSTALLED MUST BE HELD FIRMLY IN PLACE BY TAP - BOLTS INSERTED THROUGH DRILLED HOLES. IF HOLES IN THE FORMS HAVE BEEN FORMED BY ANY OTHER METHOD THAN DRILLING THEN STEEL WASHERS MUST BE USED IN ADDITION TO THE TAP - BOLTS AS DIRECTED BY THE ENGINEER.*
4. *TAP- BOLTS REQUIRED FOR INITIAL INSTALLATION IF FORMS ARE USED FOR PLACEMENT OF CONCRETE. OTHERWISE THE FEMALE END OF A TWO- COMPONENT TIE-BAR SHALL BE PLACED ON CHAIRS OR PLACED INTO CONCRETE WHEN SUFFICIENT STRENGTH HAS BEEN REACHED TO SUPPORT THE BAR IN THE SPECIFIED POSITION IN THE SLAB. ANOTHER METHOD IS TO DRILL HOLES INTO THE LONGITUDINAL JOINT FACE AND INSERT THE TIE-BAR INTO THE HOLE AND SECURE WITH BONDING MATERIAL SPECIFIED IN 902.11.*
5. *#4 EPOXY COATED DEFORMED, GRADE 40 TIE-BAR PLACE 3'-0" C/C, SEE NOTES 6 AND 7.*
6. *ONE-PIECE TIE-BARS SHALL BE STRAIGHT OR NINETY-DEGREE BENT TIE-BARS. BENT TIE-BARS ARE INSERTED INTO LONGITUDINAL JOINT FACE DURING PAVING AND STRAIGHTENED BY COLD BENDING PRIOR TO PLACING ADJACENT SLAB. ONE-PIECE TIE-BAR PLACEMENT IN LONGITUDINAL JOINT IS THE SAME AS THE FEMALE END PLACEMENT OF THE TWO-COMPONENT BAR (SEE NOTE 4).*
7. *THE FIRST LONGITUDINAL TIE-BAR SHOULD BE OFFSET BY A MINIMUM OF 18" FROM THE NEAREST TRANSVERSE JOINT.*
8. *REPAIR DAMAGED EPOXY AREAS AS SPECIFIED IN 465.03.*

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	6-15-64	APPROVAL	7-21-65
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

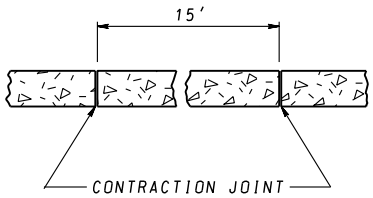
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

CONCRETE PAVEMENT
LONGITUDINAL TIE DEVICES

STANDARD NO. MD 572.61-01



TRANSVERSE JOINT SPACING FOR UNREINFORCED CONCRETE PAVEMENT

NOTES

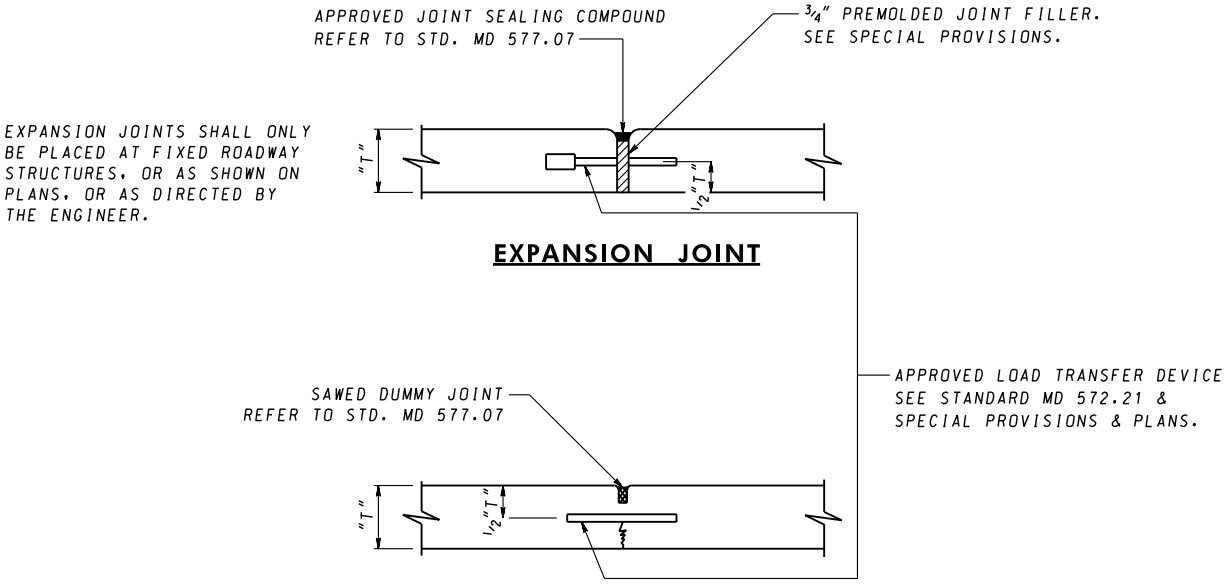
1. NEW JOINT SPACING SHALL MATCH ANY EXISTING JOINT SPACING REMAINING IN PLACE, NOT TO EXCEED A 15' MAXIMUM SPACING.
2. TIE-BARS SHALL BE OMITTED WITHIN 36" OF EITHER SIDE OF THE NEW JOINT WHEN TYING INTO EXISTING CONCRETE.

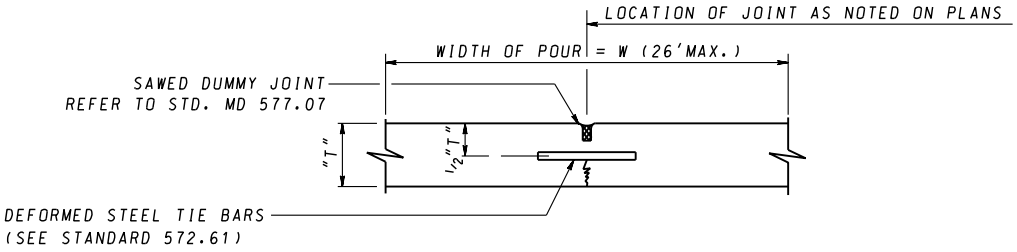
SPECIFICATION	CATEGORY CODE ITEMS		
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT		
SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
	APPROVAL 3-17-69	APPROVAL 3-19-69	
	REVISED 2-25-16	REVISED 2-23-16	
	REVISED	REVISED	
	REVISED	REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

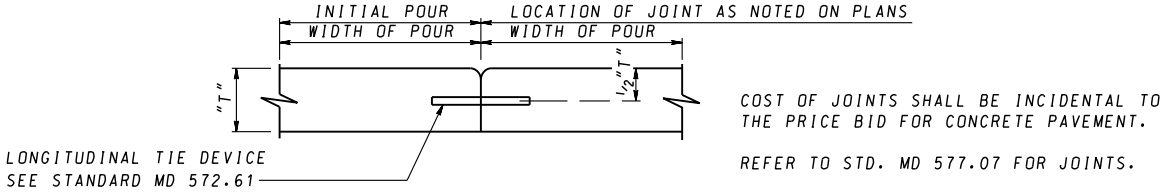
CONCRETE PAVEMENT LOCATION OF JOINTS

STANDARD NO. MD 572.91





SAWED LONGITUDINAL DUMMY CONSTRUCTION JOINT



LONGITUDINAL CONSTRUCTION JOINT

SPECIFICATION 523	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

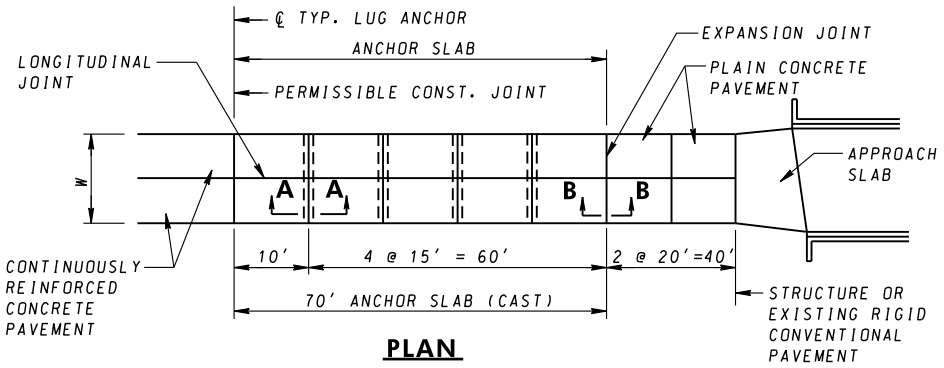
APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-17-69	APPROVAL	3-19-69
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

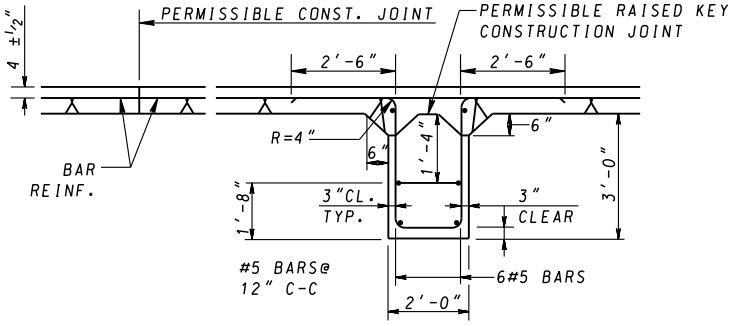
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

CONCRETE PAVEMENT TYPES OF JOINTS

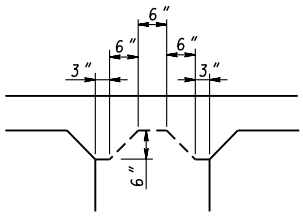
STANDARD NO. MD 572.92



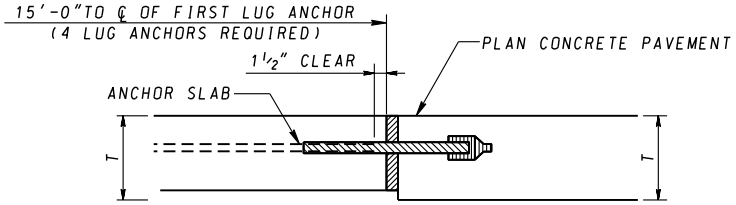
PLAN



SECTION A–A



DETAIL–RAISED KEY CONSTRUCTION JOINT



NOTE: FOR DOWEL & JOINT DETAILS REFER TO 572.21 AND 572.92

SECTION B–B
ANCHOR SLAB TERMINAL JOINT

(FOR USE ADJACENT TO PLAIN CONCRETE PAVEMENT)

NOTES

1. CONCRETE FOR LUG ANCHORS SHALL BE POURED AGAINST COMPACTED SUBGRADE. CONCRETE FOR LUGS AND ANCHOR SLAB MAY BE POURED MONOLITHICALLY OR POURED USING RAISED KEY CONSTRUCTION JOINT METHOD.
2. ADEQUATE CONSOLIDATION OF CONCRETE IN LUGS SHALL BE OBTAINED WITHOUT DISPLACING LONGITUDINAL CONTINUOUS STEEL, BY THE USE OF INTERNAL VIBRATION.
3. WHEN LESS THAN FULL WIDTH LUG AND PAVEMENT SLAB IS PLACED, THE #5 TRANSVERSE STEEL IN THE LUGS SHALL BE EXTENDED, LAPPED AND SPLICED AT LEAST 25 DIAMETERS.
4. WHEN THE SHOULDERS ARE JOINTED CONVENTIONAL OR CONTINUOUSLY REINFORCED CONCRETE PAVEMENT THE TERMINAL JOINT AND THE SLEEPER SLAB SHALL EXTEND THROUGH THE SHOULDER WIDTH.

SPECIFICATION 521	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-23-95	APPROVAL	11-16-92
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

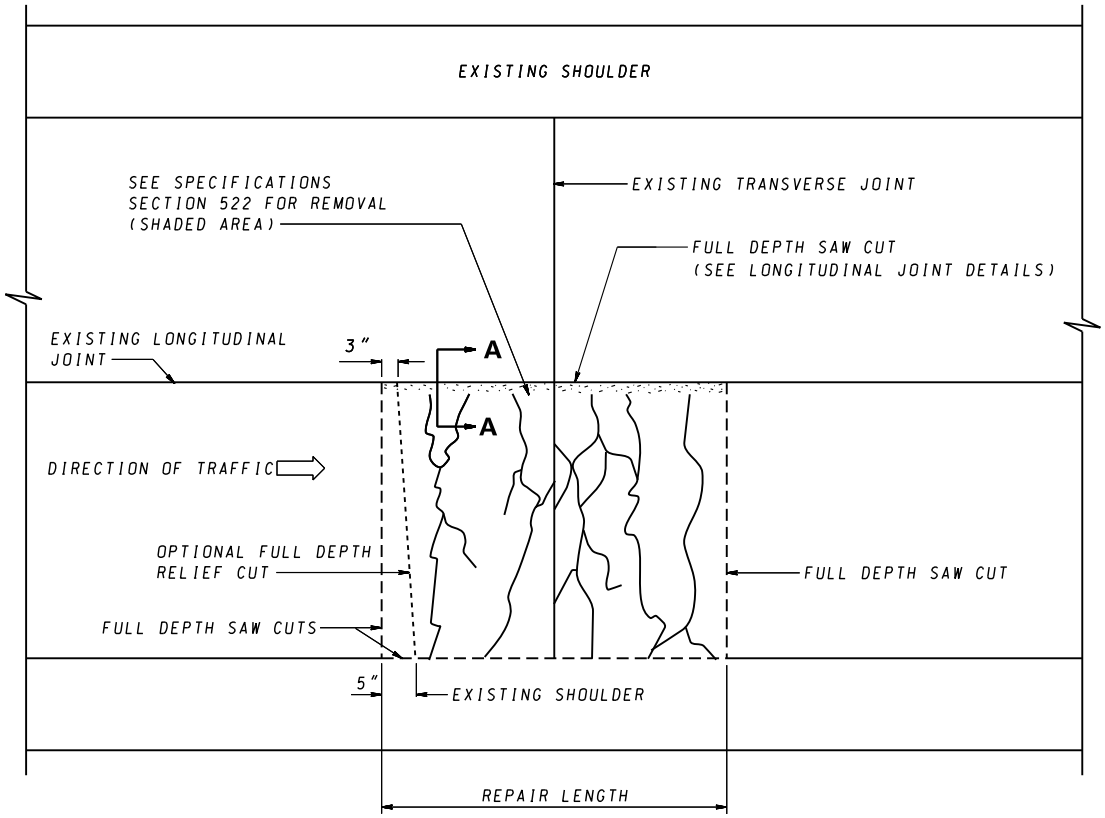
State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

TERMINAL JOINT FOR CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

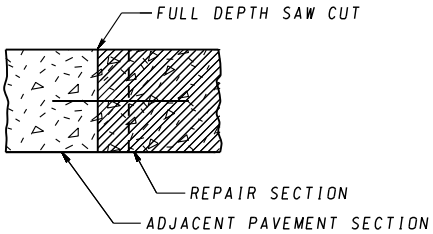
STANDARD NO. MD 573.01



PLAN

NOTES

1. SHOULDER JOINT CUTS MAY BE CUT DIRECTLY ON THE EXISTING JOINT.
2. REFER TO STANDARD MD 572.61-01 FOR TIE DEVICES.
3. SAW CUTS MAY BE MADE INTO THE SHOULDER.
4. DASHED LINES INDICATE CUTS TO BE MADE.
5. SEE STANDARDS MD 577.02. MD 577.03.MD 577.04 MD 577.05 AND MD 577.06 FOR DETAILS OF TYPE 1 AND TYPE 2 REPAIR METHODS.
6. ALL SAW CUTS ARE INCIDENTAL TO THE SPECIFIC CONCRETE PAVEMENT REPAIRS ITEM IN THE INVITATION FOR BIDS.



SECTION A-A

LONGITUDINAL JOINT DETAILS

SPECIFICATION	CATEGORY CODE ITEMS
522	

APPROVED _____
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

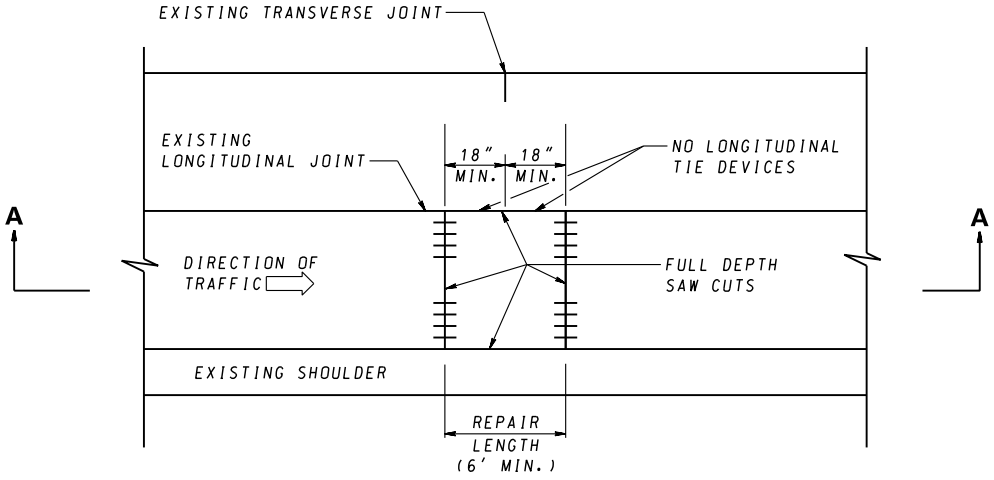
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

JOINTED PORTLAND CEMENT CONCRETE PAVEMENT REPAIRS SAW CUTS FOR LIFT OUT METHOD

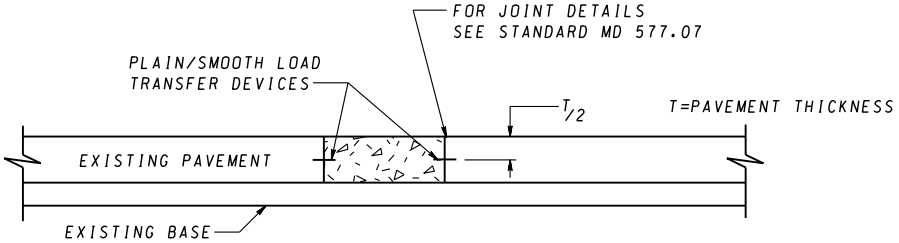
STANDARD NO. MD 577.01

METHOD 'A'

REPAIRS PERFORMED AT AN EXISTING TRANSVERSE JOINT EVEN THOUGH ONLY ONE SIDE NEEDS REPAIR.



PLAN



SECTION A–A

REPAIR GUIDELINES

1. TYPE 1 REPAIRS ARE 6 FT TO LESS THAN 15 FT IN LENGTH AND REQUIRE NO REINFORCEMENT.
2. REPAIR SLABS AND REMAINS OF EXISTING SLABS SHALL NOT BE LESS THAN 6 FT IN LENGTH.
3. EXISTING DOWELS AND ASSEMBLIES SHALL BE COMPLETELY REMOVED WHEN A REPAIR IS PERFORMED AT A TRANSVERSE JOINT.

NOTES

1. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS.
2. REPAIRS SHALL BE MADE USING CONCRETE MEETING THE REQUIREMENTS OF 522.02 OF THE SPECIFICATIONS.
3. WHEN THE SUBBASE MATERIAL IS DETERMINED TO THE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND REFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4 INCHES IN DEPTH, AS DIRECTED BY THE ENGINEER.
4. HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.
5. JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07.
6. ALL LOAD TRANSFER DOWELS SHALL BE EPOXY COATED.
7. SEE STANDARD MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
8. LOAD TRANSFER DEVICES: PLAIN DOWELS 18" LONG AND 12" C/C LOCATED IN EACH WHEEL PATH. WHEEL PATH IS DEFINED AS A DISTANCE OF 16" TO 56" (WIDTH OF 40") FROM THE LEFT OR RIGHT OF THE CENTERLINE OF THE ROADWAY TRAVEL LANE. REFER TO STANDARD MD 572.21.

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

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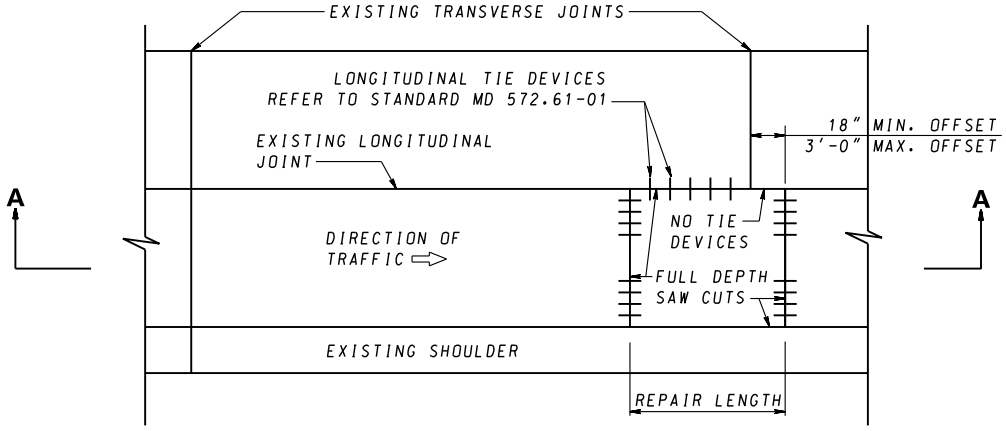
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

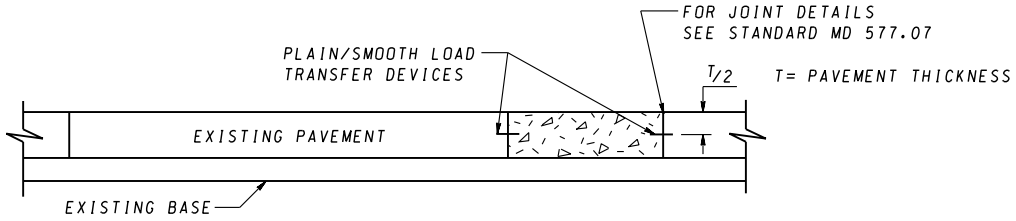
METHOD 'A' JOINTED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 REPAIRS

STANDARD NO. MD 577.02

METHOD 'B' REPAIRS PERFORMED AT AN EXISTING TRANSVERSE JOINT WHEN THE REPAIR EXCEEDS 3 FT. ON ONLY ONE SIDE OF THE JOINT. (NOTE THAT THE 3 FT. OFFSET IS TO ALLOW FOR THE REMOVAL AND REPLACEMENT OF DOWELS.)



PLAN



SECTION A-A

REPAIR GUIDELINES

1. TYPE 1 REPAIRS ARE 6 FT TO LESS THAN 15 FT IN LENGTH AND DO NOT REQUIRE REINFORCEMENT. TYPE 2 REPAIRS ARE 15 FT. AND GREATER IN LENGTH AND DO NOT REQUIRE REINFORCEMENT. MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15 FEET AND THERE SHALL BE NO MID-SLAB REINFORCEMENT.
2. REPAIR SLABS AND REMAINS OF EXISTING SLABS SHALL NOT BE LESS THAN 6 FT. IN LENGTH.
3. EXISTING DOWELS AND ASSEMBLIES SHALL BE COMPLETELY REMOVED WHEN A REPAIR IS PERFORMED AT A TRANSVERSE JOINT.

NOTES

1. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS.
2. REPAIRS SHALL BE MADE USING CONCRETE MEETING THE REQUIREMENTS OF 522.02 OF THE SPECIFICATIONS.
3. WHEN THE SUBBASE MATERIAL IS DETERMINED TO THE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND REFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4 INCHES IN DEPTH, AS DIRECTED BY THE ENGINEER.
4. HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.
5. JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07.
6. ALL LOAD TRANSFER DOWELS SHALL BE EPOXY COATED.
7. SEE STANDARD MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
8. LOAD TRANSFER DEVICES: PLAIN DOWELS 18" LONG AND 12" C/C LOCATED IN EACH WHEEL PATH. WHEEL PATH IS DEFINED AS A DISTANCE OF 16" TO 56" (WIDTH OF 40") FROM THE LEFT OR RIGHT OF THE CENTERLINE OF THE ROADWAY TRAVEL LANE. REFER TO STANDARD MD 572.21.

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 3-6-86	APPROVAL 3-18-86
REVISED 2-25-16	REVISED 2-23-16
REVISED	REVISED
REVISED	REVISED

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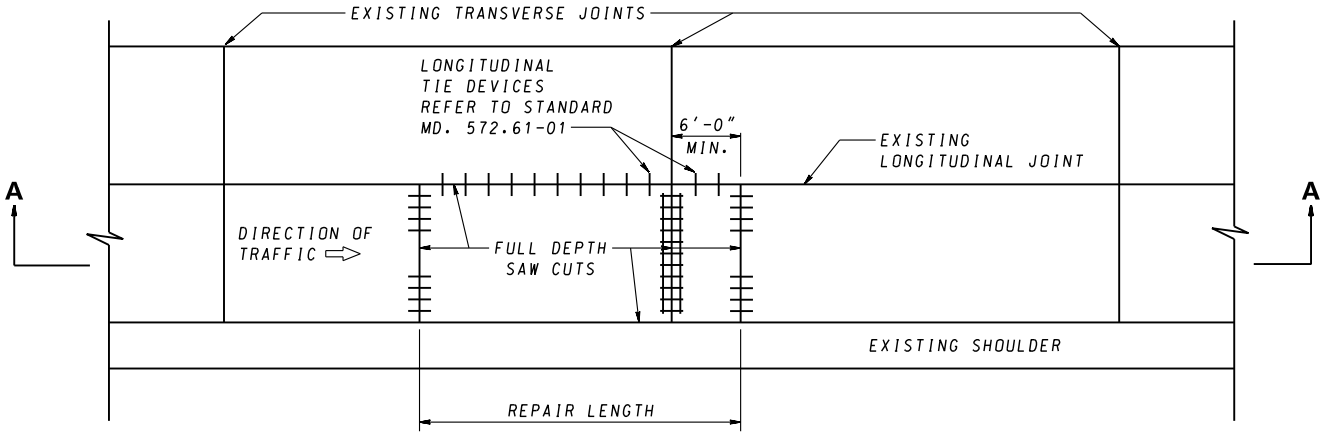
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

METHOD 'B' JOINTED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND TYPE 2 REPAIRS

STANDARD NO. MD 577.03

METHOD 'C' REPAIRS EXCEEDING 3 FT. ON BOTH SIDES OF AN EXISTING TRANSVERSE JOINT.



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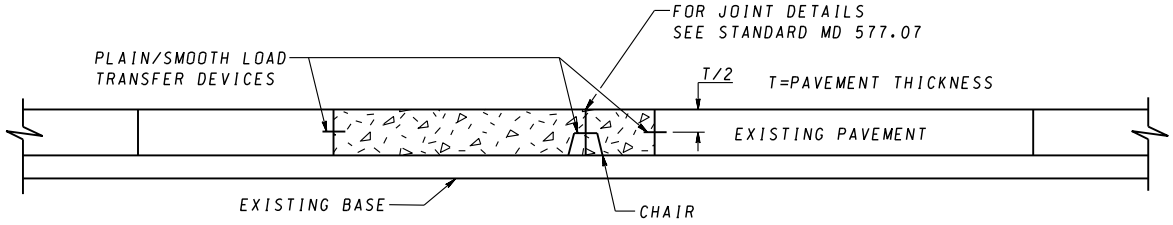

SECTION A–A

REPAIR GUIDELINES

1. TYPE 1 REPAIRS ARE 6 FT. TO LESS THAN 15 FT. IN LENGTH AND REQUIRE NO REINFORCEMENT. TYPE 2 REPAIRS ARE 15 FT. AND GREATER IN LENGTH AND REQUIRE NO REINFORCEMENT. MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15 FT. AND THERE SHALL BE NO MID-SLAB REINFORCEMENT.
2. REPAIR SLABS AND REMAINS OF EXISTING SLABS SHALL NOT BE LESS THAN 6 FT. IN LENGTH.
3. ALL REPAIRS OFFSET MORE THAN 3 FT. ON EITHER SIDE OF AN EXISTING TRANSVERSE JOINT SHALL BE EXTENDED TO A MINIMUM OF 6 FT. AND DOWEL ASSEMBLIES SHALL BE PLACED ADJACENT TO THE EXISTING TRANSVERSE JOINT.
4. EXISTING DOWELS AND ASSEMBLIES SHALL BE COMPLETELY REMOVED WHEN A REPAIR IS PERFORMED AT A TRANSVERSE JOINT.

NOTES

1. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS.
2. REPAIRS SHALL BE MADE USING CONCRETE MEETING THE REQUIREMENTS OF 522.02 OF THE SPECIFICATIONS.
3. WHEN THE SUBBASE MATERIAL IS DETERMINED TO THE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND REFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4 INCHES IN DEPTH, AS DIRECTED BY THE ENGINEER.
4. HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.
5. JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07.
6. ALL LOAD TRANSFER DOWELS SHALL BE EPOXY COATED.
7. SEE STANDARD MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
8. LOAD TRANSFER DEVICES: PLAIN DOWELS 18" LONG AND 12" C/C LOCATED IN EACH WHEEL PATH. WHEEL PATH IS DEFINED AS A DISTANCE OF 16" TO 56" (WIDTH OF 40") FROM THE LEFT OR RIGHT OF THE CENTERLINE OF THE ROADWAY TRAVEL LANE. REFER TO STANDARD MD 572.21.

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

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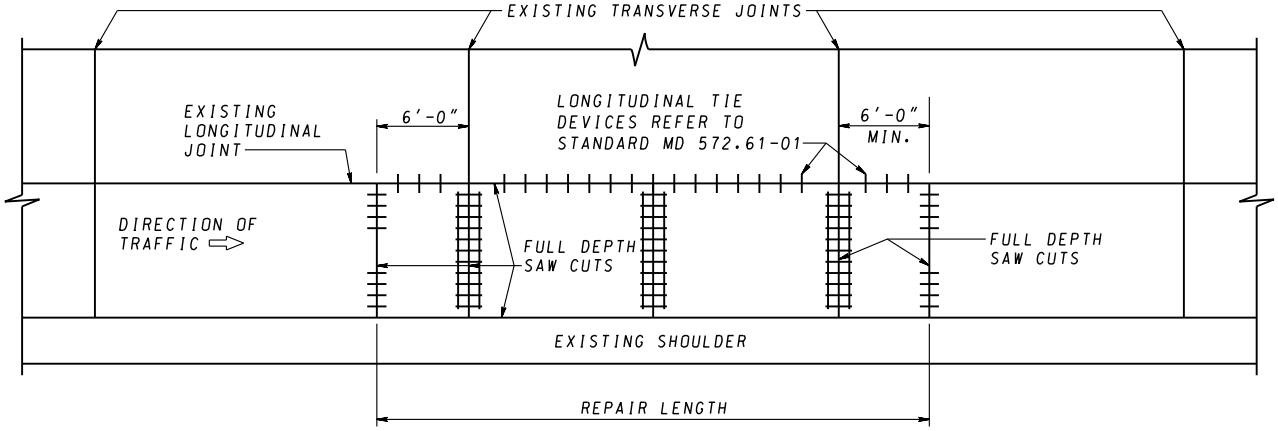
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

METHOD 'C' PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND 2 REPAIRS

STANDARD NO. MD 577.04

METHOD 'D' REPAIRS PERFORMED TO COMPLETELY REPLACE SLABS BETWEEN TWO TRANSVERSE JOINTS.



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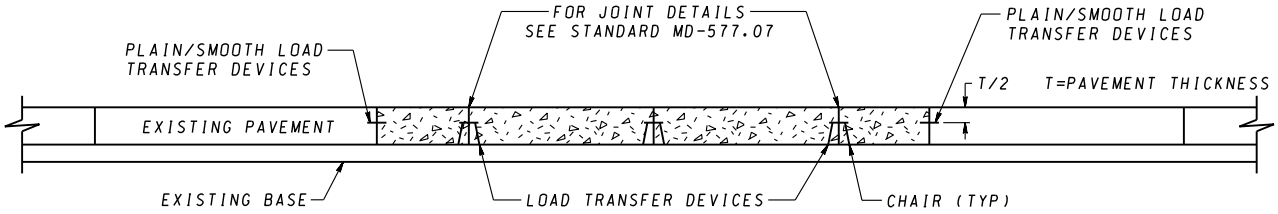

SECTION A-A

REPAIR GUIDELINES

1. TYPE 1 REPAIRS ARE 6 FT. TO LESS THAN 15 FT. IN LENGTH AND REQUIRE NO REINFORCEMENT. TYPE 2 REPAIRS ARE 15 FT. AND GREATER IN LENGTH AND REQUIRE NO REINFORCEMENT. MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15 FT. AND THERE SHALL BE NO MID-SLAB REINFORCEMENT.
2. REPAIR SLABS AND REMAINS OF EXISTING SLABS SHALL NOT BE LESS THAN 6 FT. IN LENGTH.
3. EXISTING DOWELS AND ASSEMBLIES SHALL BE COMPLETELY REMOVED WHEN A REPAIR IS PERFORMED AT A TRANSVERSE JOINT.
4. ALL REPAIRS OFFSET MORE THAN 3 FT. ON EITHER SIDE OF AN EXISTING TRANSVERSE JOINT SHALL BE EXTENDED TO A MINIMUM OF 6 FT AND DOWEL ASSEMBLIES SHALL BE PLACED ADJACENT TO THE EXISTING TRANSVERSE JOINTS AS SHOWN IN REPAIR METHOD "C" ON STANDARD MD 577.04.

NOTES

1. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS.
2. REPAIRS SHALL BE MADE USING CONCRETE MEETING THE REQUIREMENTS OF 522.02 OF THE SPECIFICATIONS.
3. WHEN THE SUBBASE MATERIAL IS DETERMINED TO THE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND REFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4 INCHES IN DEPTH, AS DIRECTED BY THE ENGINEER.
4. HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.
5. JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07.
6. ALL LOAD TRANSFER DOWELS SHALL BE EPOXY COATED.
7. SEE STANDARD MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
8. LOAD TRANSFER DEVICES: PLAIN DOWELS 18" LONG AND 12" C/C LOCATED IN EACH WHEEL PATH. WHEEL PATH IS DEFINED AS A DISTANCE OF 16" TO 56" (WIDTH OF 40") FROM THE LEFT OR RIGHT OF THE CENTERLINE OF THE ROADWAY TRAVEL LANE. REFER TO STANDARD MD 572.21.

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

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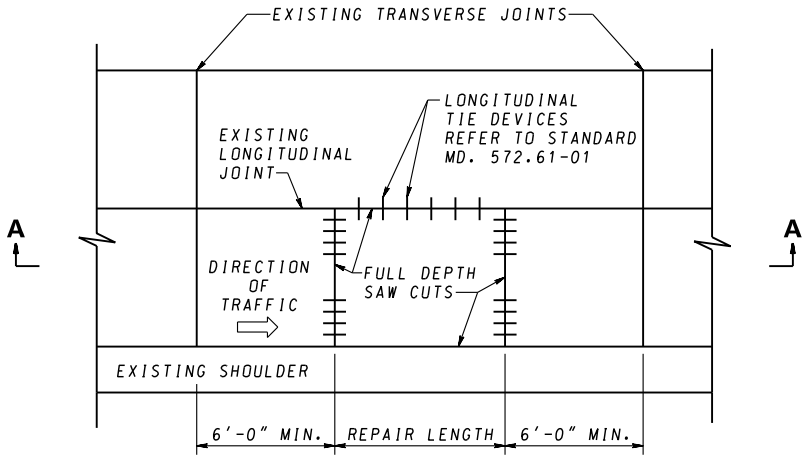
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

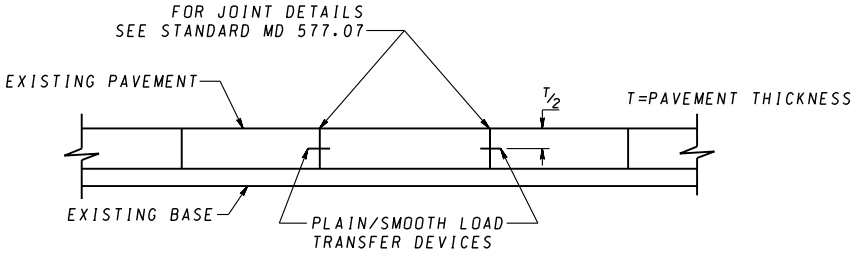
METHOD 'D' PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND TYPE 2 REPAIRS

STANDARD NO. MD 577.05

METHOD 'E' *REPAIRS PERFORMED AT MID SLAB OR A MINIMUM OF 6 FT. FROM AN EXISTING TRANSVERSE JOINT.*



PLAN



SECTION A-A

REPAIR GUIDELINES

1. *TYPE 1 REPAIRS ARE 6 FT. TO LESS THAN 15 FT. IN LENGTH AND REQUIRE NO REINFORCEMENT. TYPE 2 REPAIRS ARE 15 FT. AND GREATER IN LENGTH AND REQUIRE NO REINFORCEMENT. MAXIMUM TRANSVERSE JOINT SPACING SHALL BE 15 FT. AND THERE SHALL BE NO MID-SLAB REINFORCEMENT.*
2. *REPAIR SLABS AND REMAINS OF EXISTING SLABS SHALL NOT BE LESS THAN 6 FT. IN LENGTH.*
3. *EXISTING DOWELS AND ASSEMBLIES SHALL BE COMPLETELY REMOVED WHEN A REPAIR IS PERFORMED AT A TRANSVERSE JOINT.*

NOTES

1. *REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS.*
2. *REPAIRS SHALL BE MADE USING CONCRETE MEETING THE REQUIREMENTS OF 522.02 OF THE SPECIFICATIONS.*
3. *WHEN THE SUBBASE MATERIAL IS DETERMINED TO THE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND REFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4 INCHES IN DEPTH, AS DIRECTED BY THE ENGINEER.*
4. *HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.*
5. *JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07.*
6. *ALL LOAD TRANSFER DOWELS SHALL BE EPOXY COATED.*
7. *SEE STANDARD MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.*
8. *LOAD TRANSFER DEVICES: PLAIN DOWELS 18" LONG AND 12" C/C LOCATED IN EACH WHEEL PATH. WHEEL PATH IS DEFINED AS A DISTANCE OF 16" TO 56" (WIDTH OF 40") FROM THE LEFT OR RIGHT OF THE CENTERLINE OF THE ROADWAY TRAVEL LANE. REFER TO STANDARD MD 572.21.*

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

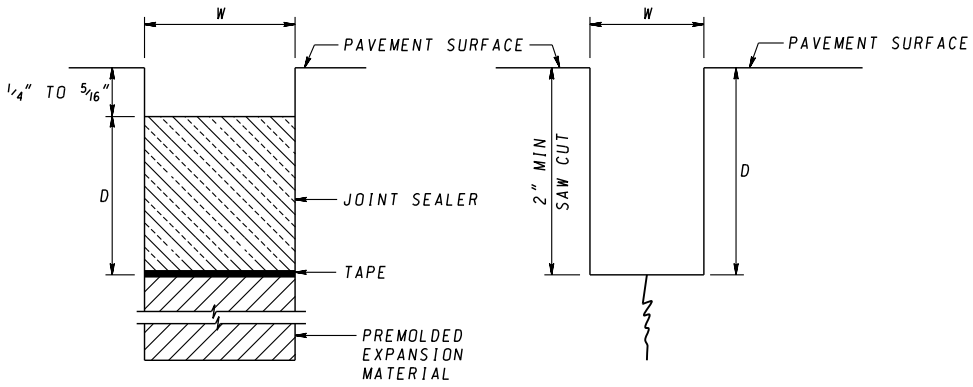
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

METHOD 'E' PLAIN OR CONVENTIONALLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT TYPE 1 AND 2 REPAIRS

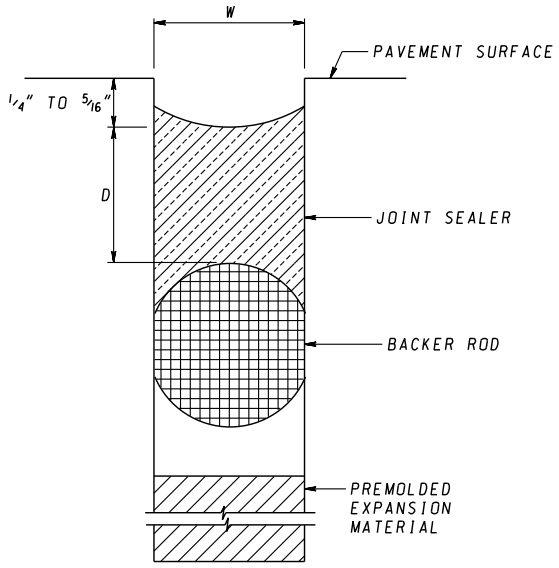
STANDARD NO. MD 577.06



EXPANSION JOINT
WITH TAPE – HOT POUR

CONTRACTION JOINT
SAW CUT

JOINTS



EXPANSION JOINT
WITH BACKER ROD – COLD POUR

SLAB THICKNESS = "T"
BACKER ROD DIA.= 1.25W

NOTES

1. W= NOMINAL 3/4" FOR TRANSVERSE EXPANSION JOINTS UNLESS FIELD CONDITIONS REQUIRE A LARGER OPENING.
   D= W FOR TRANSVERSE EXPANSION JOINTS. UNLESS SILICONE JOINT SEALANT IS USED, THEN D= 1/2 W.
   W= NOMINAL 1/8" FOR TRANSVERSE CONTRACTION JOINTS & LONGITUDINAL JOINTS.
   D= T/3 FOR TRANSVERSE CONTRACTION JOINTS & LONGITUDINAL JOINTS. SEE NOTE 4.
2. THE CONTRACTOR MAY ELECT TO USE TAPE OR BACKER ROD TO MAINTAIN THE SPECIFIED SHAPE FACTORS FOR THE JOINT SEALANT. THE ENGINEER MAY REQUIRE THE USE OF THE BACKER ROD IF THE TAPE METHOD DOES NOT PROHIBIT BOND OF THE JOINT SEALANT TO THE BOTTOM OF THE RESERVOIR OR IF THE BOTTOM OF THE RESERVOIR IS TOO LOW TO MAINTAIN THE SHAPE FACTOR AND THE 1/4" TO 5/16" CLEARANCE BETWEEN THE TOP SURFACE OF THE JOINT SEALANT AND THE ROADWAY SURFACE.
3. SEE SECTION 520 OF THE SPECIFICATIONS.
4. SAWCUT DEPTH SHALL BE T/3 UNLESS EARLY ENTRY SAWING USED, FOR WHICH T/4 IS PERMITTED. IF ADEQUATE CRACK CONTROL CAN BE DEMONSTRATED WITH EARLY ENTRY SAWING, A SHALLOWER DEPTH IS ACCEPTABLE.
5. COST OF JOINTS SHALL BE INCIDENTAL TO THE PRICE BID FOR CONCRETE PAVEMENT REPAIRS OR CONCRETE PAVEMENTS.

SPECIFICATION	CATEGORY CODE ITEMS
520	

APPROVED _____
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
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REVISED		REVISED	
REVISED		REVISED	

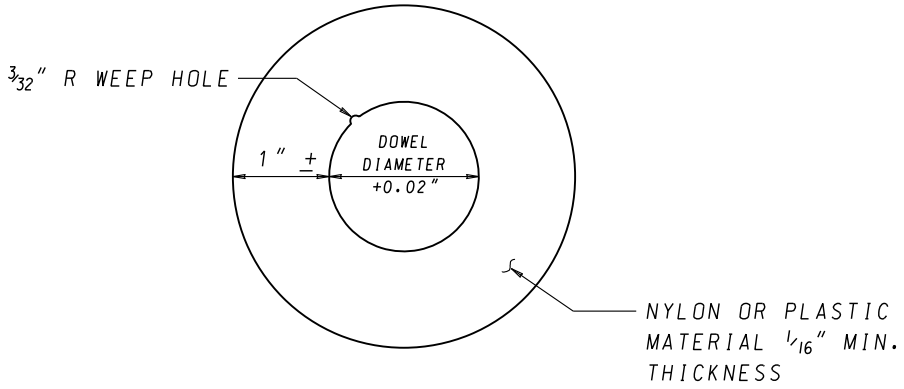
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

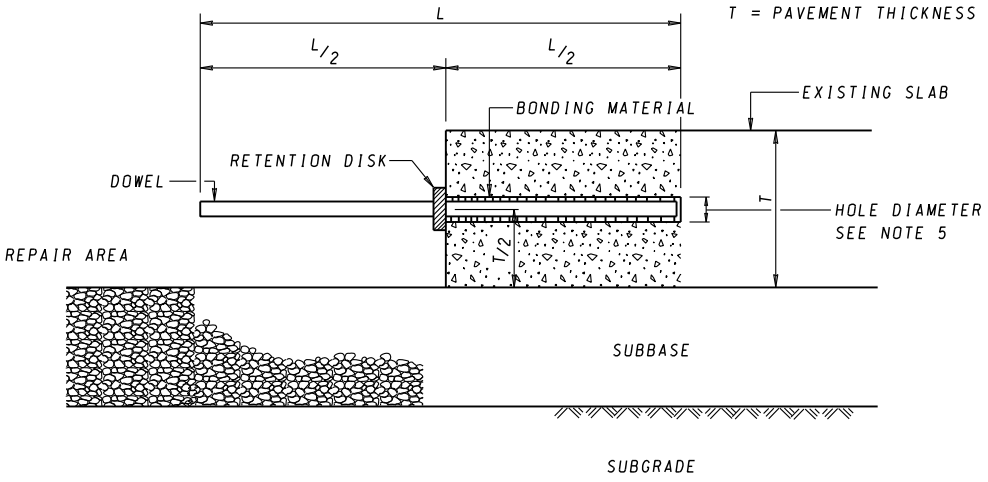
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

JOINTS FOR PLAIN PORTLAND CEMENT CONCRETE PAVEMENTS

STANDARD NO. MD 577.07



RETENTION DISK



TYPICAL ELEVATION VIEW

NOTES

1. COST OF THE DOWEL, DRILLED HOLES, RETENTION DISK, BONDING MATERIAL, ALL EQUIPMENT, TOOLS, AND LABOR SHALL BE INCIDENTAL TO THE RESPECTIVE TYPE 1 OR 2 REPAIR PAY ITEM IN THE INVITATION FOR BIDS.
2. BONDING MATERIAL PER 902.11. SEE NOTE 5.
3. SEE STANDARD MD 572.21 FOR LENGTH.
4. ALL DOWELS AND CHAIRS SHALL BE EPOXY COATED.
5. IF NONSHRINK GROUT WILL BE USED, DIAMETER SHALL BE 0.2" TO 0.25" LARGER THAN LOAD TRANSFER DEVICES. IF A DIFFERENT MATERIAL WILL BE USED, DIAMETER SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER.

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	4-18-90	APPROVAL	6-8-90
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REVISED		REVISED	
REVISED		REVISED	

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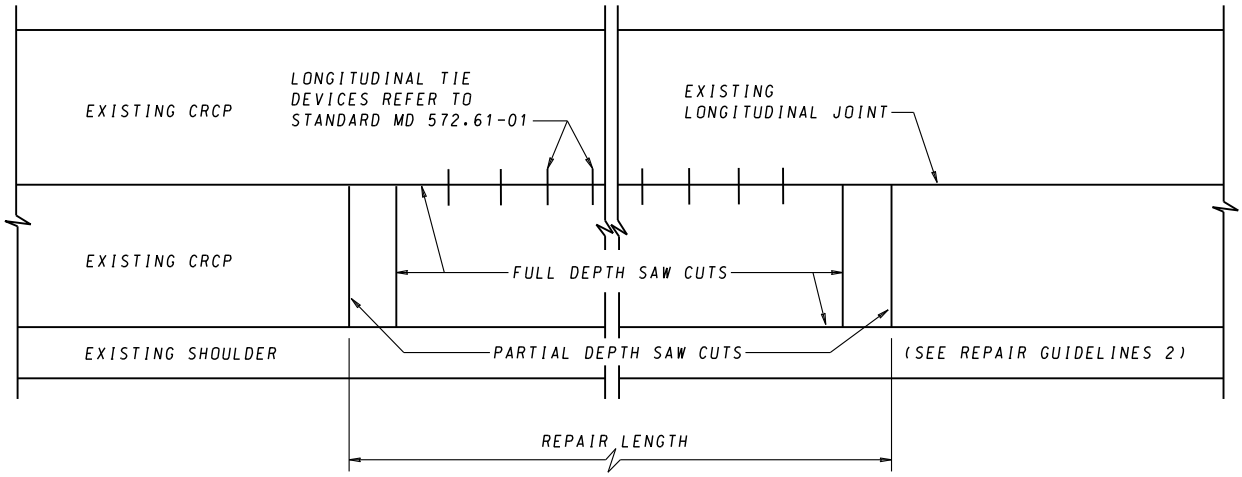
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DOWEL ANCHORAGE FOR TYPE 1 AND TYPE 2 PAVEMENT REPAIRS

STANDARD NO. MD 577.08



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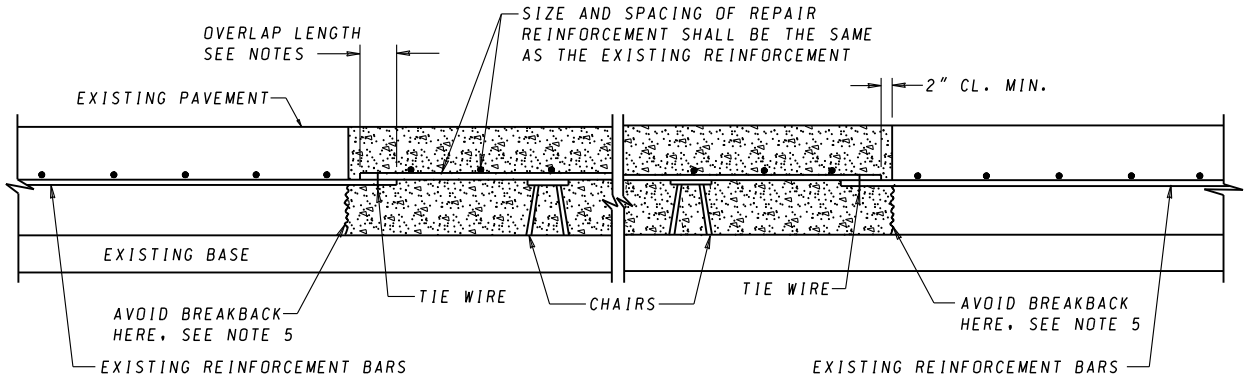


ELEVATION

REPAIR GUIDELINES

1. SAW CUT THE AREA TO BE PATCHED. IF THE EXISTING TRANSVERSE CRACKS ARE WITHIN 1 FT. OF THE PATCH AREA ON EITHER SIDE, THE PATCH LENGTH SHOULD BE EXTENDED TO COVER THE TRANSVERSE CRACKS ON EITHER SIDE OF THE PATCH. INSTALL REINFORCEMENT BARS AND PLACE THE PCC PATCH MIXTURE AT THE SAME GRADE AS THE EXISTING CONCRETE PAVEMENT. OPEN THE LANE TO TRAFFIC AFTER PCC HAS CURED TO ACHIEVE OPENING STRENGTH OR AS APPROVED BY THE ENGINEER.
2. EXISTING PAVEMENT SHALL BE REMOVED BY SAWING THE EXTERIOR TRANSVERSE PATCHING LIMITS TO A DEPTH OF 2" TO 3". CARE SHALL BE TAKEN TO AVOID SAW CUTTING THE EXISTING STEEL REINFORCEMENT. LONGITUDINAL LIMITS SHALL BE FULL-DEPTH SAW CUT.

NOTES

1. REPAIR SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS AND APPLICABLE MD STANDARDS.
2. WHEN THE SUBBASE MATERIAL IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND BACKFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4" DEPTH, AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCEMENT BARS SHALL BE EPOXY COATED.
4. SEE STANDARD NO. MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
5. THE CONCRETE IN THE END SECTIONS SHALL BE REMOVED FULL-DEPTH BY METHODS THAT WILL NOT BEND NOR GOUGE THE REINFORCING STEEL NOR DAMAGE THE ADJACENT CONCRETE THAT IS TO REMAIN IN PLACE AS APPROVED BY THE ENGINEER.
6. REINFORCEMENT STEEL OVERLAP SHALL BE 18" MINIMUM FOR NO.5 STEEL BARS AND 22" MINIMUM FOR NO. 6 STEEL BARS.

SPECIFICATION	CATEGORY CODE ITEMS
522	

APPROVED _____
DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS		APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	1-10-90	APPROVAL	6-8-90
REVISED	2-25-16	REVISED	2-23-16
REVISED		REVISED	
REVISED		REVISED	

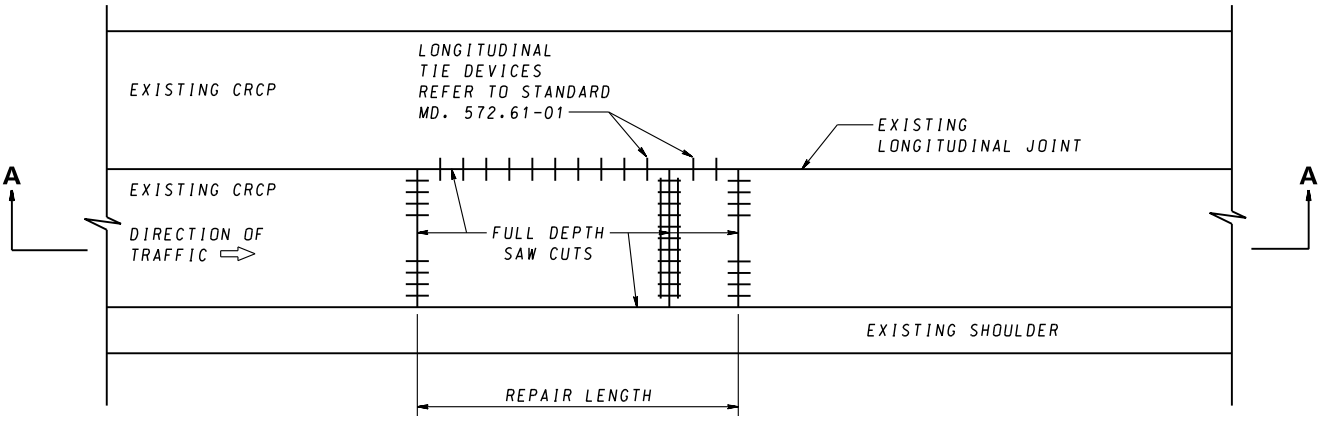
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

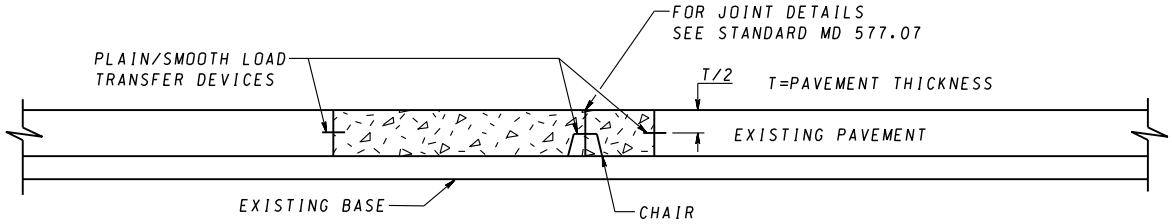
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT REPAIRS USING CONTINUOUSLY REINFORCED CONCRETE PAVEMENT

STANDARD NO. MD 577.10



PLAN



SECTION A-A

REPAIR GUIDELINES

1. SAW CUT THE AREA TO BE PATCHED. IF THE EXISTING TRANSVERSE CRACKS ARE WITHIN 1 FT. OF THE PATCH AREA ON EITHER SIDE, THE PATCH LENGTH SHOULD BE EXTENDED TO COVER THE TRANSVERSE CRACKS ON EITHER SIDE OF THE PATCH. SQUARE-OFF FOUR SIDES OF THE PATCH WITH VERTICAL FACES. INSTALL LOAD TRANSFER BARS AND PLACE THE PCC PATCH MIXTURE AT THE SAME GRADE AS THE EXISTING CONCRETE PAVEMENT. OPEN THE LANE TO TRAFFIC AFTER PCC HAS CURED TO ACHIEVE OPENING STRENGTH OR AS APPROVED BY THE ENGINEER.
2. WHILE DRILLING DOWEL HOLES, IF TRANSVERSE STEEL IS ENCOUNTERED WITHIN 7", THE PATCH LENGTH SHOULD BE EXTENDED PAST THE TRANSVERSE STEEL WITH A NEW SAWCUT.

NOTES

1. REPAIR SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS AND APPLICABLE MD STANDARDS.
2. WHEN THE SUBBASE MATERIAL IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER, COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND BACKFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4" DEPTH, AS DIRECTED BY THE ENGINEER.
3. FOR LOAD TRANSFER DEVICES, REFER TO MD STANDARDS 572.21, 572.61 AND 572.61-01. ALL LOAD TRANSFER DEVICES SHALL BE EPOXY COATED.
4. SEE STANDARD NO. MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
5. HOLES FOR THE LOAD TRANSFER DEVICES SHALL BE DRILLED TO THE REQUIRED DEPTH USING FRAME-MOUNTED GANG DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINAL PARALLEL POSITION.
6. JOINT SPACING SHALL BE 15 FT. MAXIMUM. MINIMUM SPACING BETWEEN PATCHES SHALL BE 8 FT. MINIMUM PATCH LENGTH SHALL BE 6 FT. JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07.
7. LOAD TRANSFER DEVICES: PLAIN DOWELS 18" LONG AND 12" C/C LOCATED IN EACH WHEEL PATH. WHEEL PATH IS DEFINED AS A DISTANCE OF 16" TO 56" (WIDTH OF 40") FROM THE LEFT OR RIGHT OF THE CENTERLINE OF THE ROADWAY TRAVEL LANE. REFER TO STANDARD MD 572.21.

SPECIFICATION 522	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

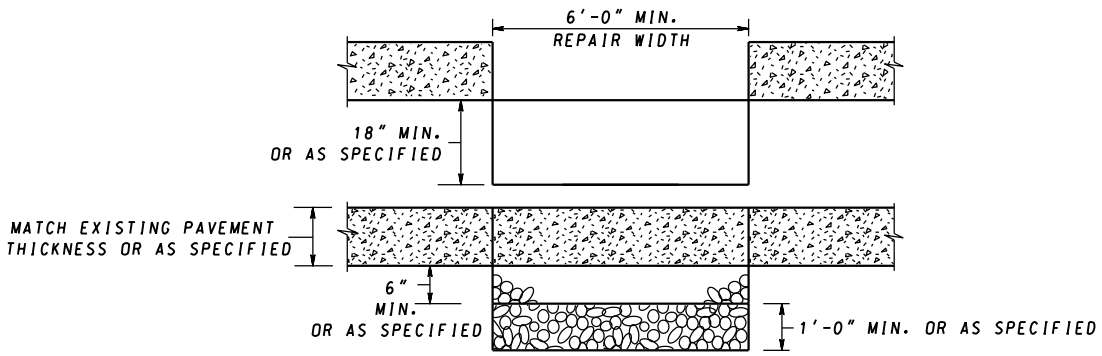
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

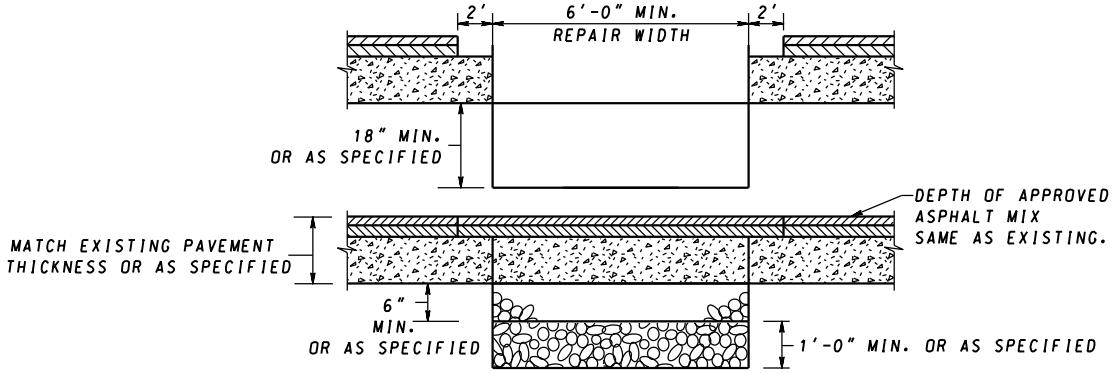
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT REPAIRS USING PLAIN CONCRETE PAVEMENT

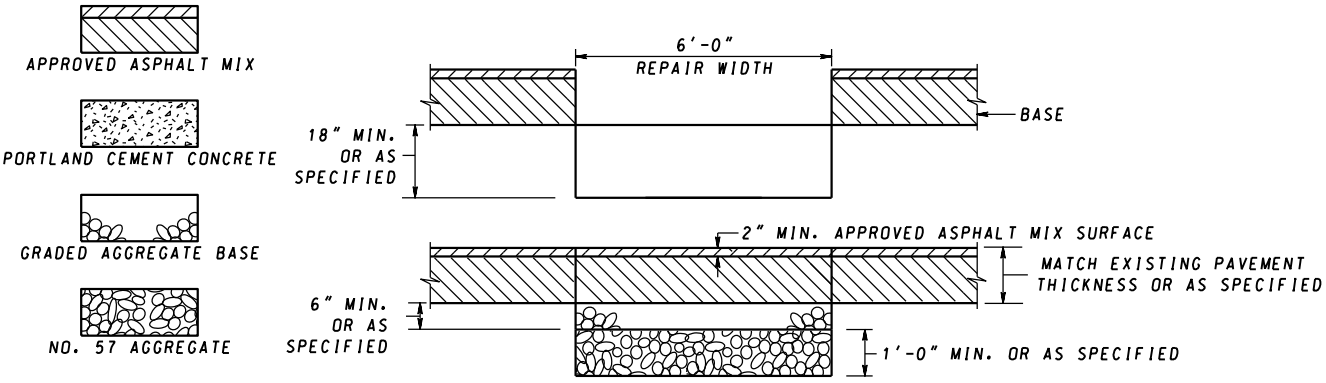
STANDARD NO. MD 577.10-01



RIGID PAVEMENT



APPROVED ASPHALT MIX PAVEMENT WITH PORTLAND CEMENT CONCRETE BASE



FLEXIBLE PAVEMENT

NOTES

1. THIS STANDARD IS TO BE USED IN ACCORDANCE WITH SECTIONS 505 AND 522. THE ROADWAY SHALL BE PATCHED WITH THE SAME TYPE MATERIAL REMOVED UNLESS NOTED IN THE SPECIFICATIONS. PORTLAND CEMENT CONCRETE PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH STANDARDS 577.02, 577.03, 577.04, 577.05, 577.06, OR 577.10.
2. THE TOP 1 FT. OF THE TRENCH SHALL BE FILLED WITH NO. 57 AGGREGATE. TRENCH TO BE EXTENDED TO DITCH LINE.
3. WHEREVER A TRENCH CROSSES A CONCRETE ROADWAY THAT HAS JOINT INSTALLATIONS THE ENTIRE SLAB BETWEEN THE EDGE OF THE TRENCH AND NEAREST JOINT SHALL BE REMOVED IF THE DISTANCE IS LESS THAN 6 FT.
4. CLEAN AND WET EDGES OF CUT AND SUBBASE BEFORE PLACING CONCRETE. MATERIAL CONFORMING TO SECTION 303, CR-6, NO. 57 AGGREGATE WRAPPED IN SE GEOTEXTILE, CLSM OR GAB.
5. ALL WORK SUCH AS TRENCH BACKFILL, CURING OF CONCRETE, MATERIALS USED, ETC. SHALL BE IN ACCORDANCE WITH SECTIONS 201, 505 AND 522 OF THE SPECIFICATIONS OR AS SPECIFIED IN THE PERMIT.
6. ALL COSTS FOR SAWCUTS, TRENCH EXCAVATION, BACKFILL, APPROVED ASPHALT MIX, CONCRETE, MATERIAL CONFORMING TO SECTION 303, CR-6, NO. 57 AGGREGATE WRAPPED IN SE GEOTEXTILE, CLSM OR GAB, MATERIALS, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE OF THE UTILITY ITEMS.
7. CLSM - CONTROLLED LOW STRENGTH MATERIAL.
8. NO. 57 AGGREGATE SHALL BE COMPLETELY WRAPPED IN SE GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SPECIFICATION	CATEGORY CODE ITEMS

APPROVED _____

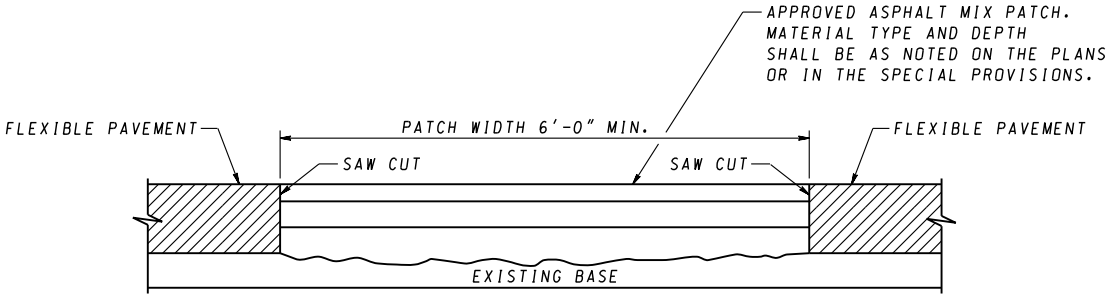
APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	3-6-86	APPROVAL	3-18-86
REVISED	2-25-16	REVISED	2-23-16
REVISED	10-27-22	REVISED	8-26-22
REVISED		REVISED	

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

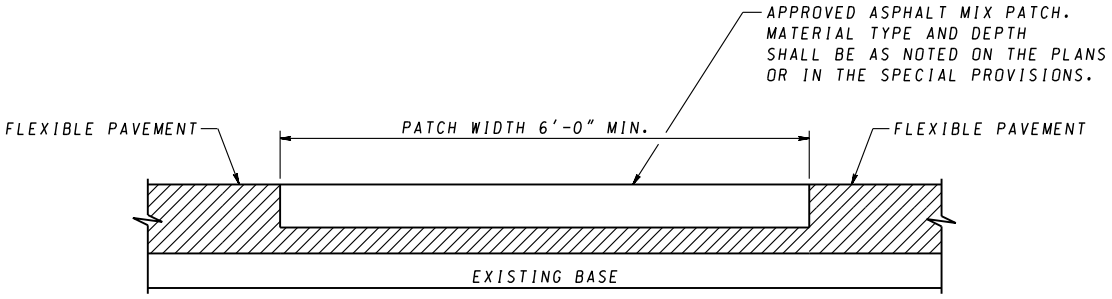
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES

STANDARD NO. MD 578.01



FLEXIBLE PAVEMENT – FULL DEPTH PATCH



FLEXIBLE PAVEMENT – PARTIAL DEPTH PATCH

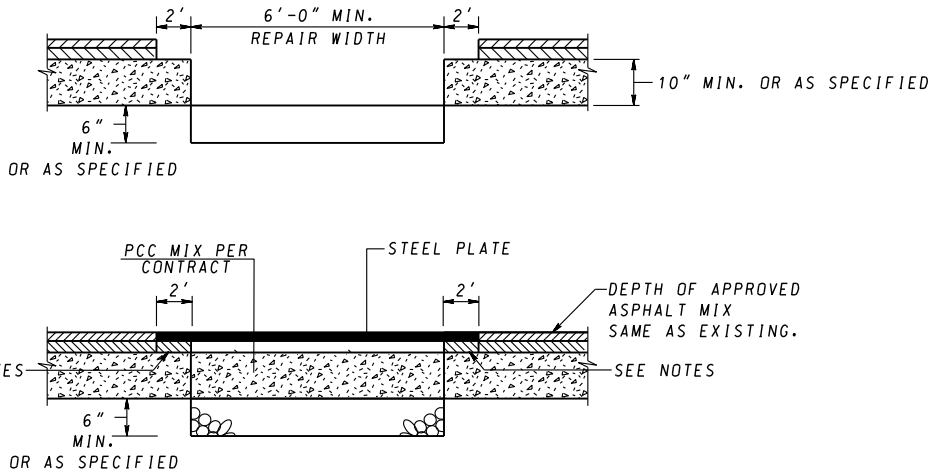
NOTES

1. TACK COAT TO BE APPLIED TO THE HORIZONTAL AND VERTICAL FACES OF THE PATCH. APPLY EVENLY WITH PRESSURIZED SPRAY WAND.

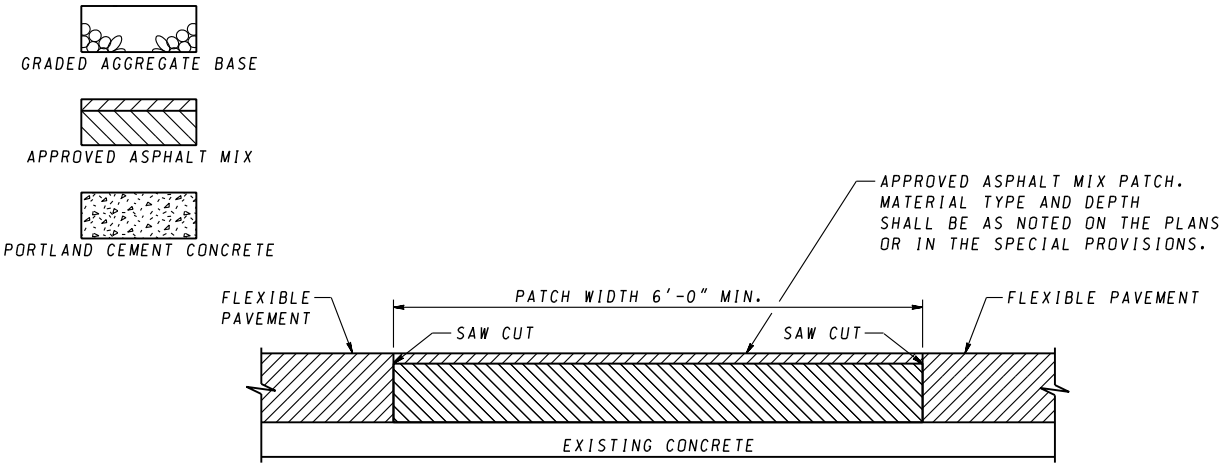
SPECIFICATION 505	CATEGORY CODE ITEMS	
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT	
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 3-6-86	APPROVAL 3-18-86
	REVISED 2-25-16	REVISED 2-23-16
	REVISED	REVISED
	REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
PERMANENT PATCHING FOR FLEXIBLE PAVEMENT USING APPROVED ASPHALT MIX

STANDARD NO. MD 578.03



COMPOSITE PAVEMENT – FULL DEPTH PATCH



COMPOSITE PAVEMENT – PARTIAL DEPTH PATCH

REPAIR GUIDELINES

1. FULL-DEPTH COMPOSITE PATCHING MAY BE COMPLETED IN THE FOLLOWING ORDER:
   STEP I - SAW CUT THE AREAS TO BE PATCHED. IN ADDITION, A TWO-FOOT WIDTH OF EXISTING ASPHALT MIX ON EACH SIDE WILL NEED TO BE REMOVED TO ACCOMMODATE THE STEEL PLATE.
   STEP II - REMOVE THE EXISTING ASPHALT MIX AND PCC PAVEMENT, INSTALL TIE BARS AND DOWEL BARS AND PLACE PCC PATCH MIXTURE TO MATCH THE EXISTING PCC ELEVATION AFTER WHICH A STEEL PLATE MAY BE PLACED.
   STEP III - AFTER PCC HAS CURED TO OPENING STRENGTH, REMOVE STEEL PLATE. REMOVE THE ASPHALT USED TO SUPPORT THE STEEL PLATE AND PATCH WITH APPROVED ASPHALT MIX TO THE ELEVATION OF THE EXISTING ROADWAY, AS PER THE PARTIAL-DEPTH PATCH DETAIL.

NOTES

1. THIS STANDARD IS TO BE USED IN ACCORDANCE WITH SECTIONS 505 AND 522. THE ROADWAY SHALL BE PATCHED WITH THE SAME TYPE MATERIAL REMOVED UNLESS NOTED IN THE SPECIFICATIONS. PORTLAND CEMENT CONCRETE PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH STANDARDS 577.02, 577.03, 577.04, 577.05, 577.06, OR 577.10.
2. SQUARE-OFF FOUR SIDES OF THE PATCH WITH VERTICAL FACE.
3. EXISTING ASPHALT MIX OR OTHER SUPPORT MAY BE LEFT IN PLACE TO KEEP STEEL PLATE FLUSH WITH THE EXISTING ASPHALT MIX SURFACE.

SPECIFICATION 505	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

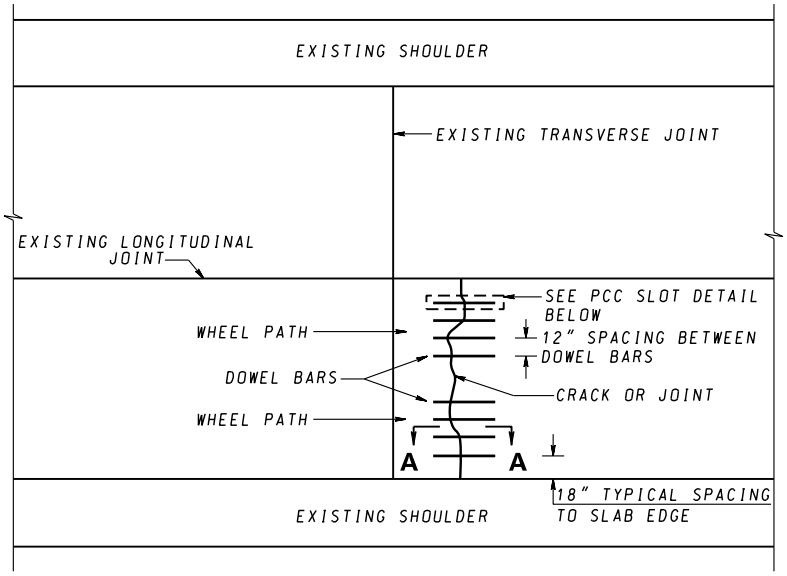
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
	APPROVAL 2-25-16	APPROVAL 2-23-16
	REVISED	REVISED
	REVISED	REVISED
	REVISED	REVISED

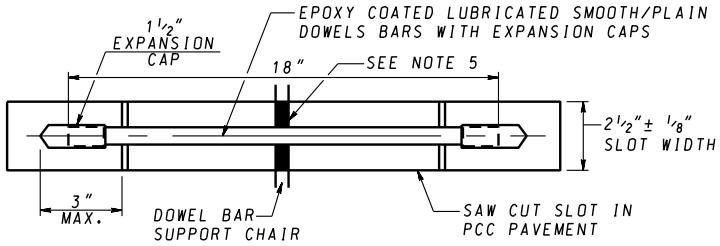
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PERMANENT PATCHING FOR COMPOSITE PAVEMENT

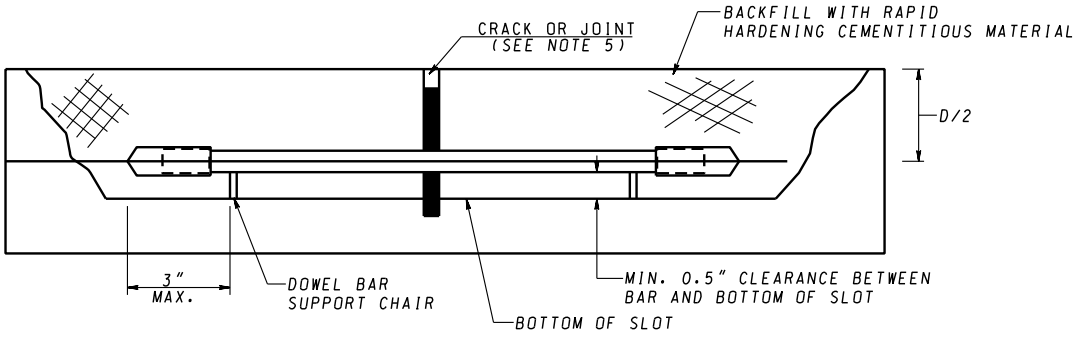
STANDARD NO. MD 578.03-01





PCC SLOT DETAIL

PLAN



SECTION A–A

NOTES

1. D - SLAB THICKNESS.
2. PCC SLOT TO BE FILLED WITH RAPID HARDENING CEMENTITIOUS MATERIAL.
3. REFER TO STANDARD MD 572.21 FOR DOWEL BAR SIZES.
4. DASHED LINES INDICATE CUTS TO BE MADE.
5. SEAL THE EXISTING TRANSVERSE CONTRACTION JOINT AND/OR ALL CRACKS AT THE BOTTOM AND THE SIDES OF THE DOWEL BAR SLOT WITH AN APPROVED CAULKING FILLER TO PREVENT ANY OF THE BACKFILL MATERIAL FROM ENTERING THESE AREAS. PRIOR TO SEALING, ENSURE THAT SURFACES RECEIVING THE CAULKING FILLER ARE CLEAN AND FREE OF MOISTURE. DO NOT EXTEND THE CAULKING FILLER BEYOND 3/8 IN OF EACH SIDE OF THE EXISTING JOINT OR CRACK. WIDEN THE TRANSVERSE JOINTS OR CRACKS BY DIAMOND SAW CUTTING AFTER COMPLETION OF THE RETROFIT DOWEL INSTALLATION IF DIAMOND GRINDING IS NOT EMPLOYED, OR AFTER THE GRINDING HAS BEEN COMPLETED. SEAL JOINTS AND CRACKS WITH AN APPROPRIATE SEALANT AS SPECIFIED IN THE STANDARD SPECIFICATIONS.

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

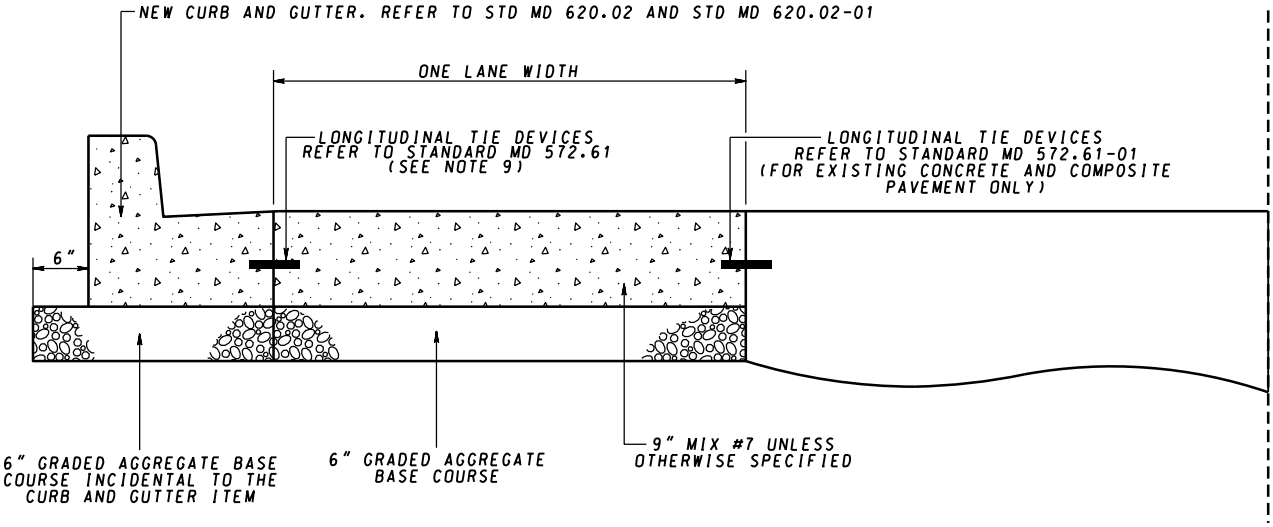
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

CONCRETE PAVEMENT DOWEL BAR RETROFIT

STANDARD NO. MD 580.01



NOTES

1. REPAIRS SHALL BE MADE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS.
2. WHEN THE SUBBASE MATERIAL IS DETERMINED TO BE UNSUITABLE BY THE ENGINEER. COMPACT THE MATERIAL WITH A VIBRATORY COMPACTOR OR REMOVE THE UNSUITABLE MATERIAL AND REFILL WITH COMPACTED GRADED AGGREGATE BASE IN LIFTS NO GREATER THAN 4 INCHES IN DEPTH. AS DIRECTED BY THE ENGINEER.
3. FOR EXISTING CONCRETE AND COMPOSITE PAVEMENTS ONLY. HOLES FOR THE DOWELS AND LOAD TRANSFER TIE DEVICES SHALL BE DRILLED SIMULTANEOUSLY TO THE REQUIRED DEPTH USING FRAME MOUNTED DRILLS WHICH WILL MAINTAIN THE DRILLS IN A LONGITUDINALLY PARALLEL POSITION.
4. JOINTS SHALL BE MADE IN ACCORDANCE WITH SECTION 520 OF THE SPECIFICATIONS AND STANDARD MD 577.07. TRANSVERSE JOINTS SHALL BE CONTRACTION JOINTS.
5. ALL LOAD TRANSFER DOWELS SHALL BE EPOXY COATED.
6. SEE STANDARD MD 577.01 FOR PAVEMENT REPAIR SAW CUTS FOR LIFT OUT METHOD.
7. LOAD TRANSFER DEVICES: SMOOTH PLAIN DOWELS 18" LONG AND 12" C/C ACROSS THE ENTIRE JOINT. REFER TO STANDARD NO. MD 572.21.
8. TRANSVERSE JOINT SPACING SHALL BE BETWEEN 10 AND 15 FEET AND THERE SHALL BE NO MID SLAB REINFORCEMENT.
9. LONGITUDINAL TIE DEVICES TYING INTO EXISTING CURB SHALL BE 18" LONG, WITH AT LEAST 6" INSERTED INTO THE EXISTING CURB, PER STANDARD NO. MD 572.61-01.

SPECIFICATION	CATEGORY CODE ITEMS

APPROVED _____

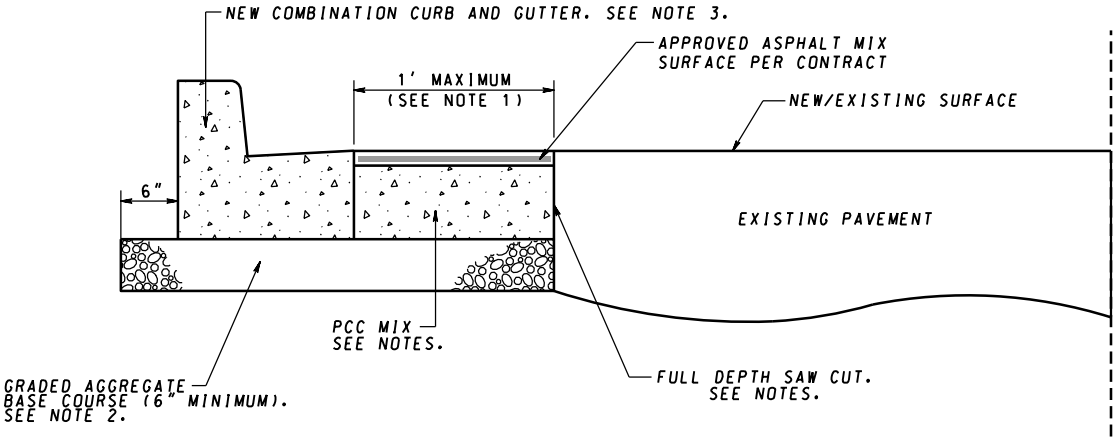
APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-25-16	APPROVAL	2-23-16
REVISED	10-27-22	REVISED	8-26-22
REVISED		REVISED	
REVISED		REVISED	

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

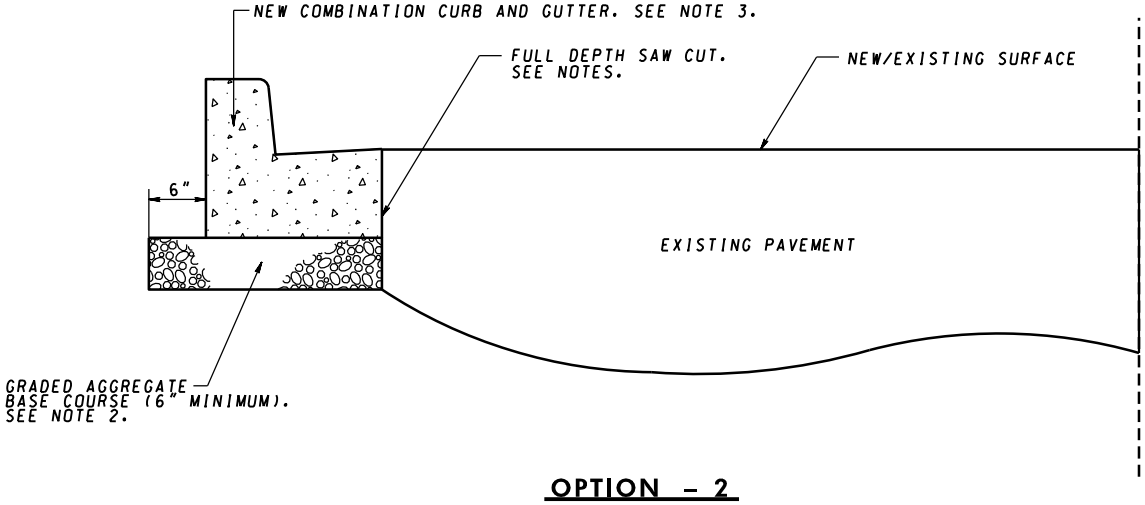
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

NEW OR REPLACEMENT CONCRETE BUS PADS

STANDARD NO. MD 580.02



OPTION - 1
SEE NOTE 1



OPTION - 2

NOTES

1. THIS WORK IS TO BE DONE AT THE CONTRACTOR'S OPTION. THIS 1' WIDTH (MAXIMUM) EXCAVATION MAY BE USED FOR CURB AND GUTTER FORM PLACEMENT. THE ADDITIONAL EXCAVATION WIDTH IS TO BE FILLED WITH PCC MIX NO. 3 OR MIX 9 CONCRETE TO THE BOTTOM OF THE FINAL ASPHALT MIX COURSE. PAYMENT SHALL BE INCIDENTAL TO THE LINEAR FOOT ITEM FOR CURB AND GUTTER. JOINTS SHALL MATCH THOSE OF THE CURB AND GUTTER. NO DOWEL BARS ARE NEEDED.
2. ALL COSTS FOR ITEMS, MATERIALS, TOOLS, AND LABOR FOR EXCAVATION, PCC MIX, GAB, AND FULL DEPTH SAW CUT EXCEPT FOR ASPHALT MIX SURFACE SHALL BE INCIDENTAL AND INCLUDED IN THE PRICE OF THE LINEAR FOOT ITEM FOR CURB AND GUTTER.
3. REFER TO STANDARD NOS. MD 620.02 AND 620.02-01 FOR COMBINATION CURB AND GUTTER DIMENSIONS.

SPECIFICATION	CATEGORY CODE ITEMS

APPROVED _____

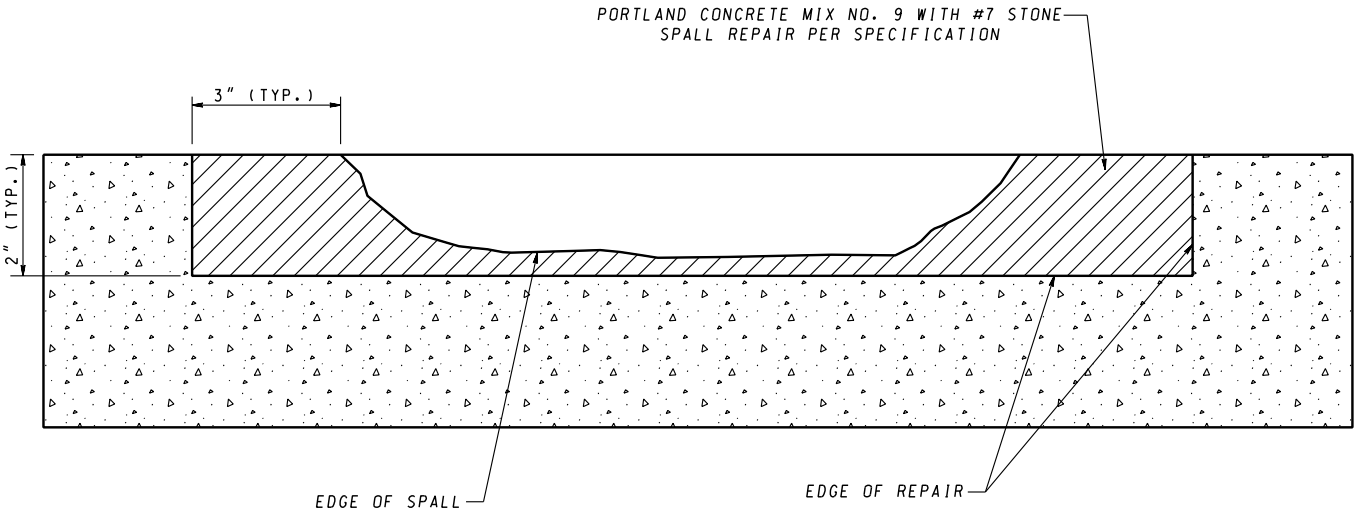
APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-25-16	APPROVAL	2-23-16
REVISED	10-27-22	REVISED	8-26-22
REVISED		REVISED	
REVISED		REVISED	

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

NEW COMBINATION CURB AND GUTTER PLACEMENT ALONG EXISTING PAVEMENT

STANDARD NO. MD 580.03



NOTE

IF A SPALL OCCURS AT A JOINT OR CRACK, RE-ESTABLISH THE JOINT OR CRACK.

SPECIFICATION	CATEGORY CODE ITEMS
522	

APPROVED

DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

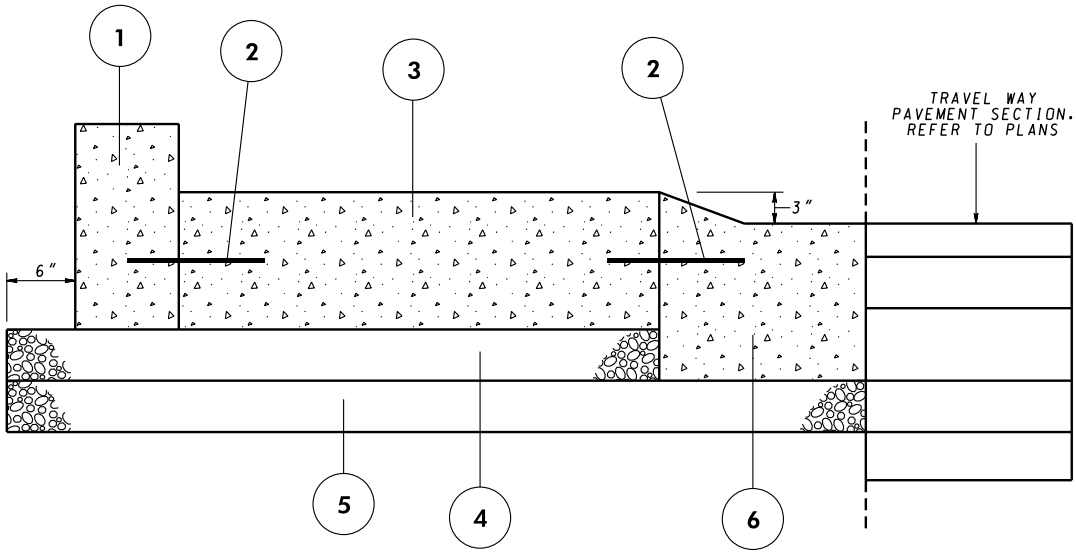
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

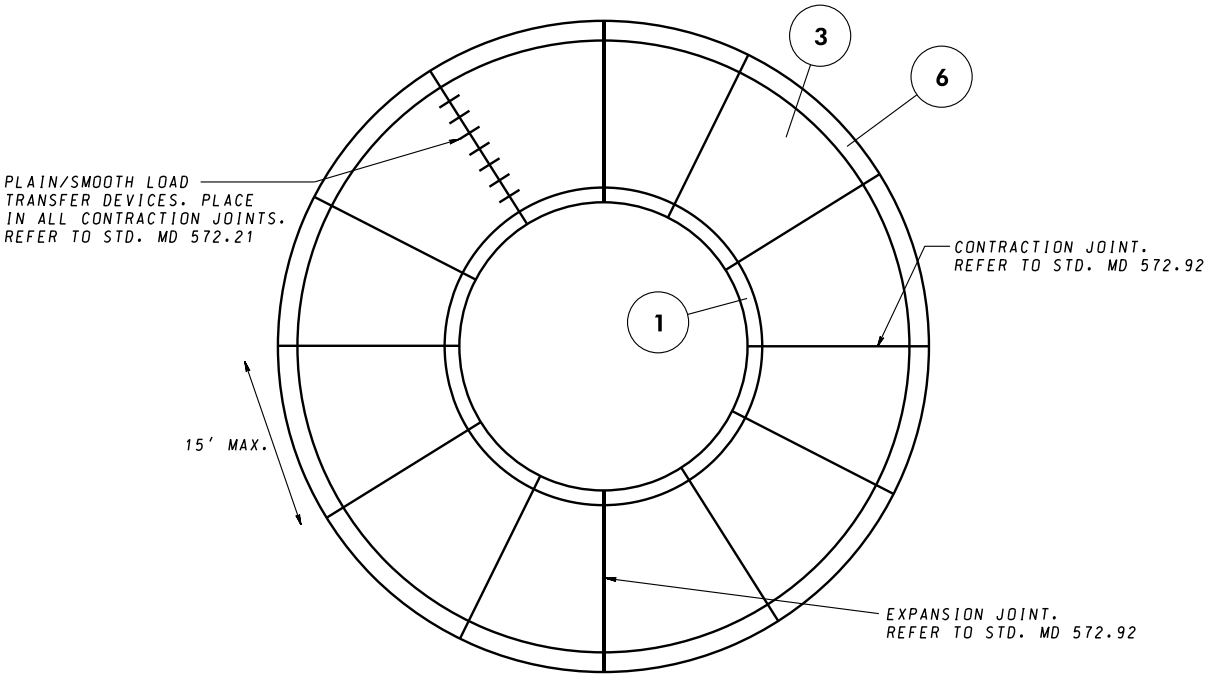
CONCRETE PAVEMENT
SPALL REPAIR

STANDARD NO. MD 580.04



① CONCRETE CURB TYPE A: REFER TO STD. MD 620.02
② LONGITUDINAL TIE DEVICES: REFER TO STD. MD 572.61
③ 9" MINIMUM JOINTED PLAIN CONCRETE PAVEMENT - MIX #7
④ VARIABLE DEPTH GRADED AGGREGATE BASE
⑤ 4" MINIMUM GRADED AGGREGATE BASE
⑥ TYPE "C" COMBINATION CURB AND GUTTER: REFER TO STD. MD 602.02-01

ROUNDABOUT PAVEMENT DETAIL



ROUNDABOUT PLAN VIEW

NOTE:

EVERY ATTEMPT SHALL BE MADE TO HAVE EQUAL AND CONSISTENT JOINT SPACING AROUND THE TRUCK APRON.

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

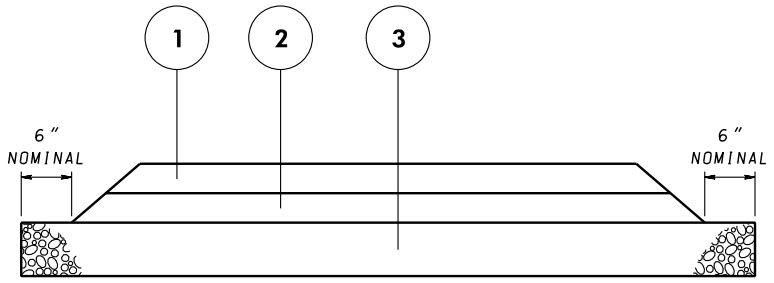
SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

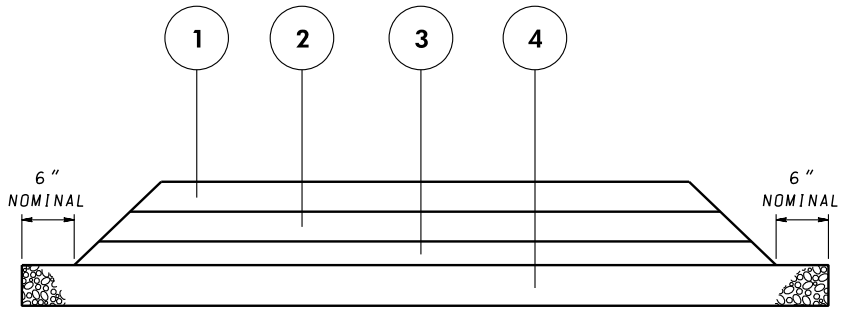
ROUNDABOUT PAVEMENT SECTION

STANDARD NO. MD 580.05



① 2″ SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG64S-22, LEVEL 2
② 3″ SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG64S-22, LEVEL 2
③ 6″ GRADED AGGREGATE BASE

PARK & RIDE – FLEXIBLE PAVEMENT SECTION – PASSENGER VEHICLES



① 2″ SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG64S-22, LEVEL 2
② 3″ SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG64S-22, LEVEL 2
③ 2″ SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG64S-22, LEVEL 2
④ 4″ GRADED AGGREGATE BASE

PARK & RIDE – FLEXIBLE PAVEMENT SECTION – BUS LANE

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

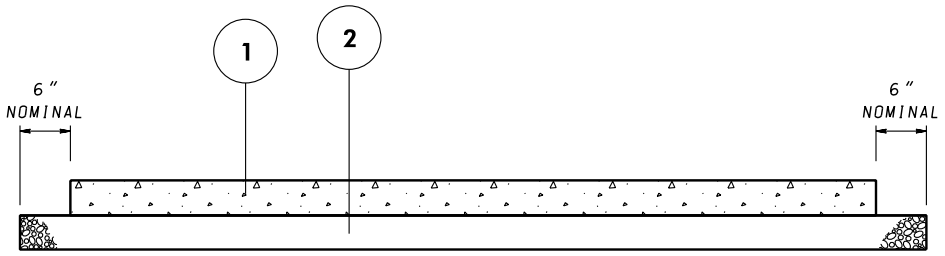
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

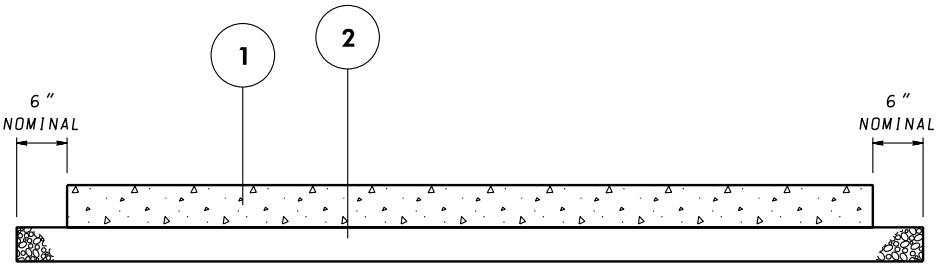
PARK & RIDE PAVEMENT SECTIONS
FLEXIBLE PAVEMENT

STANDARD NO. MD 580.06



① 5″ JOINTED PLAIN CONCRETE - MIX #7. MAXIMUM JOINT SPACING SHALL BE 6′. NO LOAD TRANSFER DEVICES ARE NEEDED. REFER TO STD. NO. MD 577.07.
② 6″ GRADED AGGREGATE BASE

PARK & RIDE – RIGID PAVEMENT SECTION – PASSENGER VEHICLES



① 9″ JOINTED PLAIN CONCRETE - MIX #7. REFER TO STD. NOS. MD 572.21, MD 572.61 AND MD 572.91
② 6″ GRADED AGGREGATE BASE

PARK & RIDE – RIGID PAVEMENT SECTION – BUS LANE AND BUS STOP PAD

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

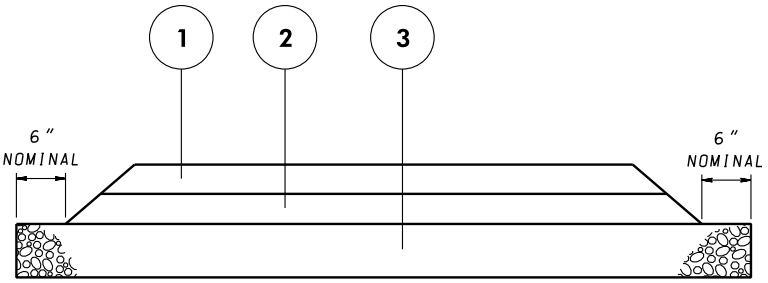
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

SHA State Highway Administration

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

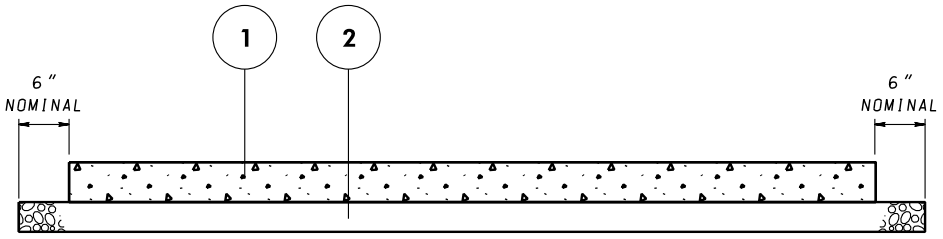
PARK & RIDE PAVEMENT SECTIONS
RIGID PAVEMENT

STANDARD NO. MD 580.07



① 1.5″ SUPERPAVE ASPHALT MIX 9.5mm FOR SURFACE, PG64S-22, LEVEL 2
② 2.5″ SUPERPAVE ASPHALT MIX 19.0mm FOR BASE, PG64S-22, LEVEL 2
③ 4″ GRADED AGGREGATE BASE

DRIVEWAYS & BIKE PATHS – FLEXIBLE PAVEMENT SECTION



① 5″ JOINTED PLAIN CONCRETE - MIX #7
② 3″ GRADED AGGREGATE BASE

BIKE PATHS – RIGID PAVEMENT SECTION

NOTES

1. THE JOINT SPACING SHALL BE 5 FEET. THERE ARE NO LOAD TRANSFER REQUIREMENTS FOR BIKE PATHS.
2. FOR RIGID DRIVEWAYS, REFER TO STANDARDS MD 630.01 THROUGH MD 630.03.

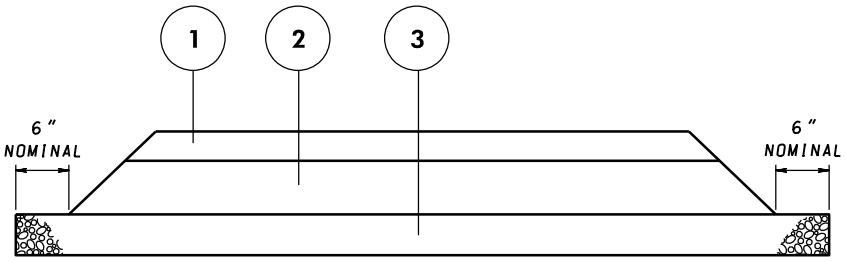
SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT

APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-25-16	APPROVAL 2-23-16
REVISED	REVISED
REVISED	REVISED
REVISED	REVISED

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

DRIVEWAYS AND BIKE PATHS PAVEMENT SECTIONS

STANDARD NO. MD 580.08



① 2" SUPERPAVE ASPHALT MIX 9.5mm OR 12.5mm FOR SURFACE, PG64S-22, LEVEL 2
② SUPERPAVE ASPHALT MIX 19.0mm OR 25.0mm FOR BASE, PG64S-22, LEVEL 2 (SEE NOTES 1 THROUGH 4)
③ 24" GRADED AGGREGATE BASE (FOUR LIFTS) FOR 30' CLOSEST TO BRIDGE OR 12" GRADED AGGREGATE BASE BEYOND 30' (TWO LIFTS).

BRIDGE APPROACHES

NOTES

1. LIGHT TRAFFIC ~ ADT < 10,000 VEHICLES/DAY. ASPHALT BASE LAYER SHALL BE 8" THICK.
2. MEDIUM TRAFFIC ~ ADT > 10,000 TO LESS THAN < 30,000 VEHICLES/DAY. ASPHALT BASE LAYER SHALL BE 10" THICK.
3. HEAVY TRAFFIC ~ ADT > 30,000 VEHICLE/DAY. ASPHALT BASE LAYER SHALL BE 12" THICK.
4. REFER TO SPECIFICATION 505.03.10 FOR MINIMUM AND MAXIMUM LIFT THICKNESSES.

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	

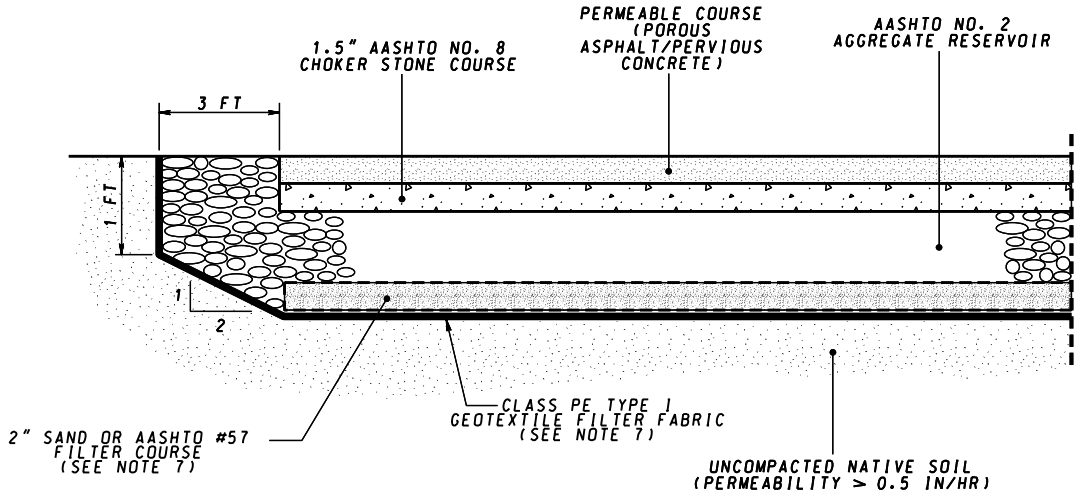
APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-25-16	APPROVAL	2-23-16
REVISED	10-27-22	REVISED	8-26-22
REVISED		REVISED	
REVISED		REVISED	

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

BRIDGE APPROACH PAVEMENT SECTIONS

STANDARD NO. MD 580.09



PERMEABLE PAVEMENT SECTION

TYPE OF TRAFFIC	POROUS ASPHALT COMPACTED THICKNESS	PERVIOUS CONCRETE THICKNESS	MINIMUM RESERVOIR LAYER THICKNESS
SIDEWALK, HIKER-BIKER TRAIL	3"	5"	8"
PASSENGER VEHICLES ONLY	4"	6"	8"
PASSENGER AND LIGHT TRUCKS	5"	6"	8"
TRUCKS (ADTT < 10)	NOT APPROPRIATE	8"	12"

NOTES

1. REFER TO SPECIAL PROVISION 904 OPEN GRADED FRICTION COURSE FOR POROUS ASPHALT.
2. REFER TO SPECIAL PROVISION 902 PERVIOUS CONCRETE.
3. RESERVOIR LAYER THICKNESS SHALL BE DESIGNED TO MEET HYDRAULIC EVENT REQUIREMENTS.
4. USE FILTER COURSE AS DIRECTED ELSEWHERE IN THE CONTRACT.
5. USE FILTER FABRIC AS DIRECTED ELSEWHERE IN THE CONTRACT.
6. USE LONGITUDINAL UNDERDRAIN AS DIRECTED ELSEWHERE IN THE CONTRACT. REFER TO STANDARD NOS. MD 387.11, 387.11-01, 387.12, 387.21, AND 387.21-01.
7. OR AS DIRECTED ON THE PLAN OR BY THE ENGINEER.

SPECIFICATION	CATEGORY CODE ITEMS
APPROVED	Brian Marable

APPROVAL SHA REVISIONS		APPROVAL FEDERAL HIGHWAY ADMINISTRATION	
APPROVAL	2-25-16	APPROVAL	2-23-16
REVISED	10-27-22	REVISED	8-26-22
REVISED		REVISED	
REVISED		REVISED	

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

PERMEABLE PAVEMENT SECTIONS

STANDARD NO. MD 580.10