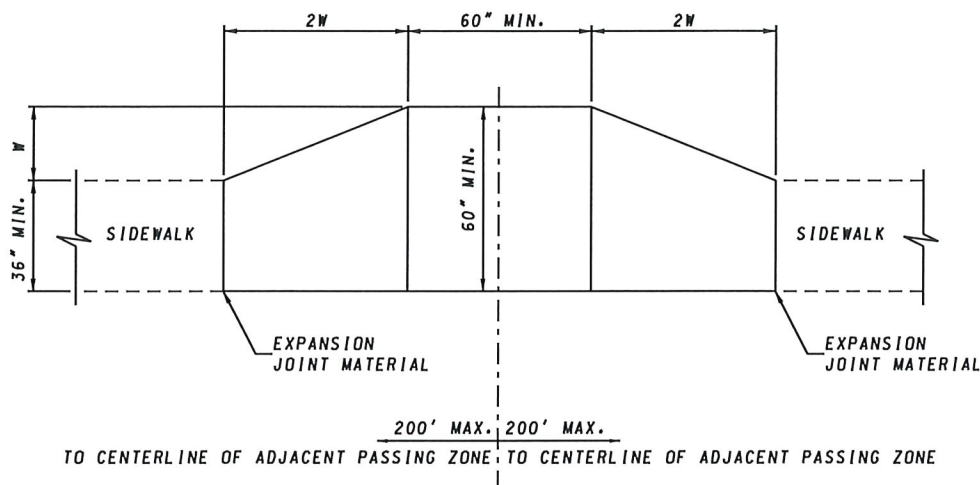



SPECIFICATION	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
APPROVED	<i>Kirk G. McCallum</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
SHA State Highway Administration	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	SIDEWALK EXPANSION JOINTS STANDARD NO. MD 655.01
	APPROVAL 3-11-64	APPROVAL 6-9-64	
	REVISED 10-1-01	REVISED	
	REVISED	REVISED	
	REVISED	REVISED	

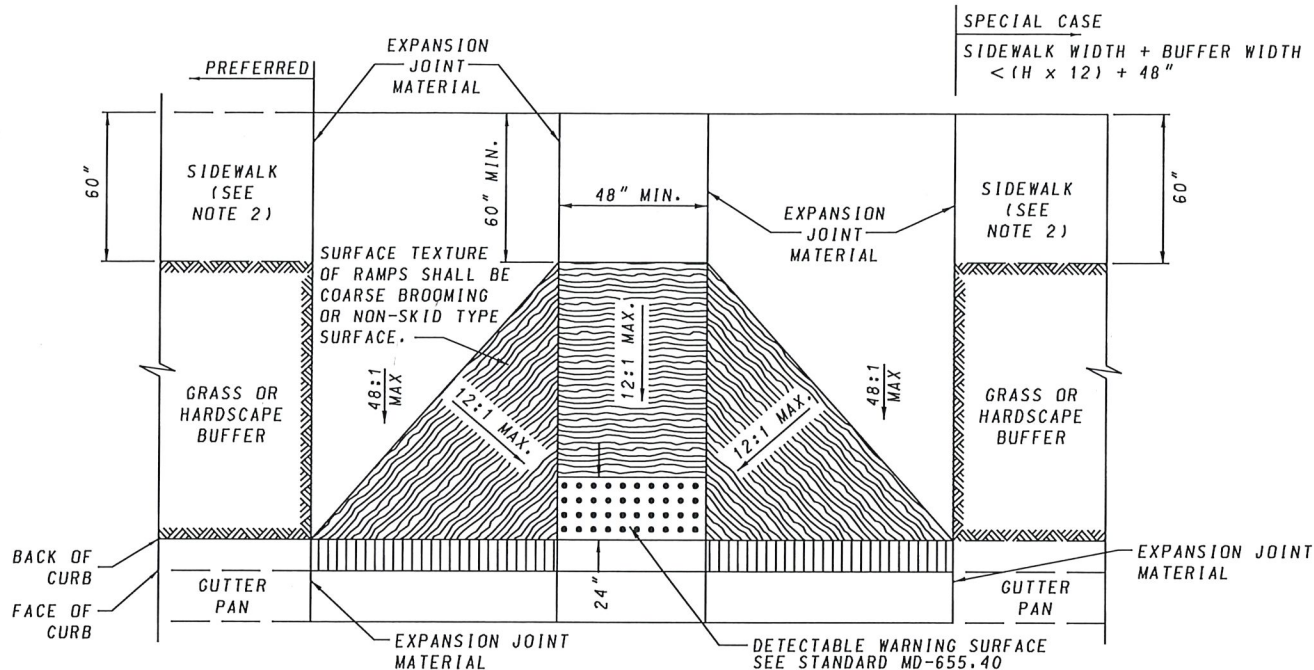


PLAN

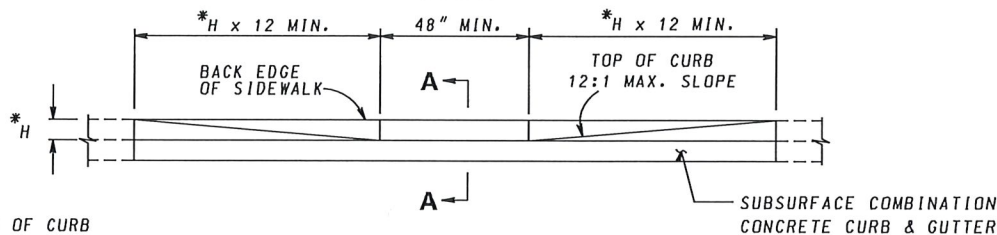
NOTES

1. WHERE THE CONTINUOUS WIDTH FOR TRAVEL IS LESS THAN 60", SIDEWALK PASSING ZONES SHALL BE PROVIDED AT AN INTERVAL NOT TO EXCEED 200'. USE OF ENTRANCES AND LEADER WALKS AS PASSING ZONES IS ACCEPTABLE PROVIDED THAT THE GEOMETRY MEETS THE REQUIREMENTS OF THIS STANDARD.
2. SIDEWALK PASSING ZONES SHALL BE LOCATED AS INDICATED ON DRAWINGS, HOWEVER EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. MAY AFFECT PLACEMENT.
3. SIDEWALK TRANSVERSE SLOPE SHALL BE MAINTAINED ACROSS THE ENTIRE WIDTH OF THE PASSING ZONE (48:1 MAX.).

SPECIFICATION 603	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<i>Kirk G. McCall</i> DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT	
	APPROVAL • SHA REVISIONS	
	APPROVAL 2-10-04	APPROVAL 3-31-04
	REVISED	REVISED
	REVISED	REVISED
	REVISED	REVISED
		STANDARD NO. MD 655.02

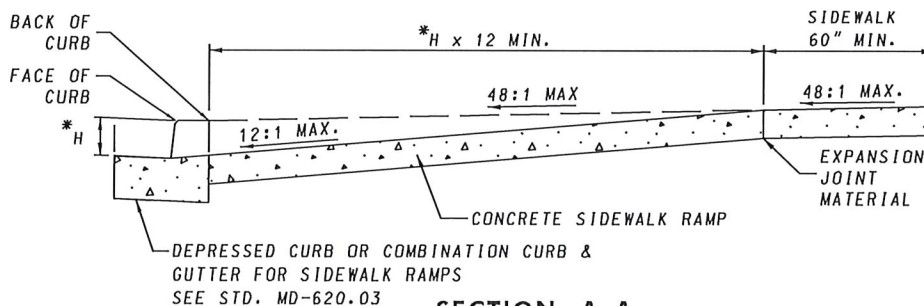


PLAN



ELEVATION

* - H = HEIGHT OF CURB
ALL MEASUREMENTS IN INCHES



SECTION A-A

NOTES

1. TO BE USED ON WIDE SIDEWALKS OR SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRY SPECIFIED IN THE DETAILS ABOVE CAN BE SATISFIED. MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.

SPECIFICATION
603 & 611

CATEGORY CODE ITEMS

APPROVED

DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT



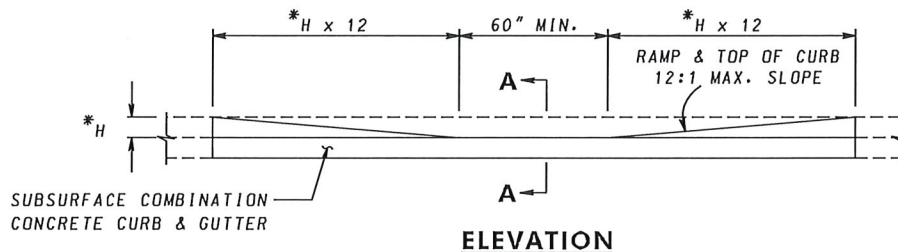
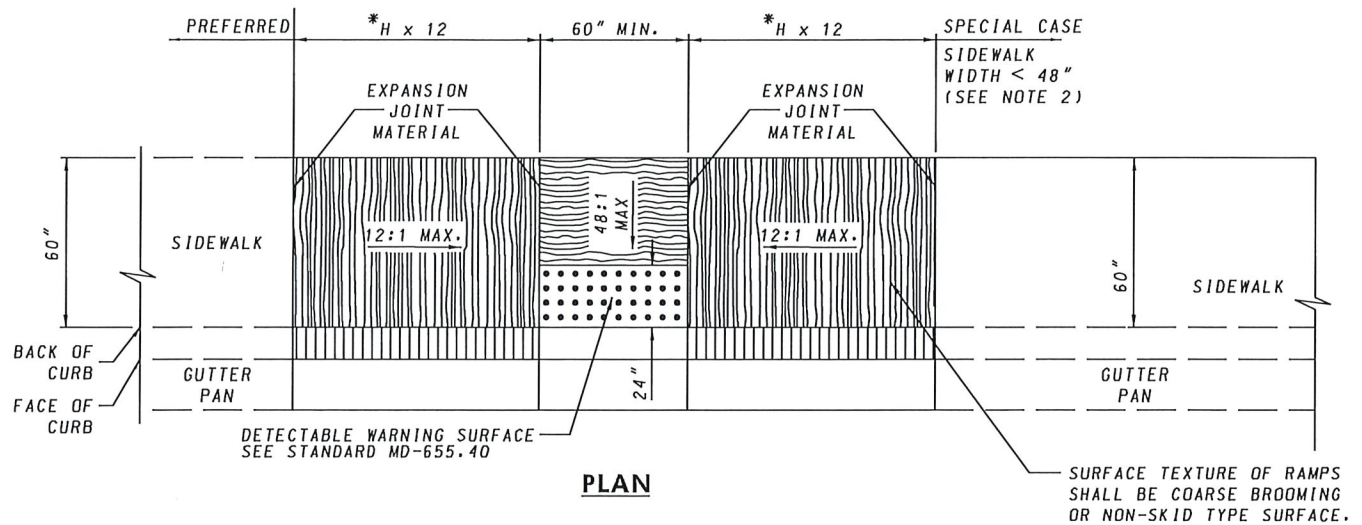
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-10-04	APPROVAL 3-31-04
REVISED 3-25-08	REVISED 4-5-06
REVISED 6-2-14	REVISED 5-20-14
REVISED	REVISED

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

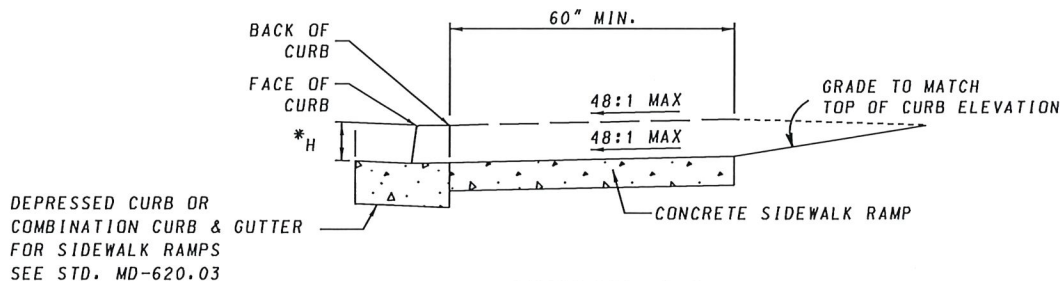
**SIDEWALK RAMPS
PERPENDICULAR**

STANDARD NO.

MD 655.11



* - H = HEIGHT OF CURB
ALL MEASUREMENTS IN INCHES



NOTES

1. TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF THE LANDING AREA CANNOT EXCEED GRADE OF ROADWAY
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH

SPECIFICATION
603 & 611

CATEGORY CODE ITEMS

APPROVED

DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT



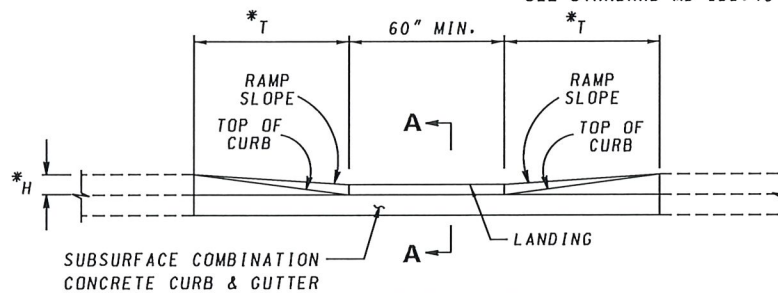
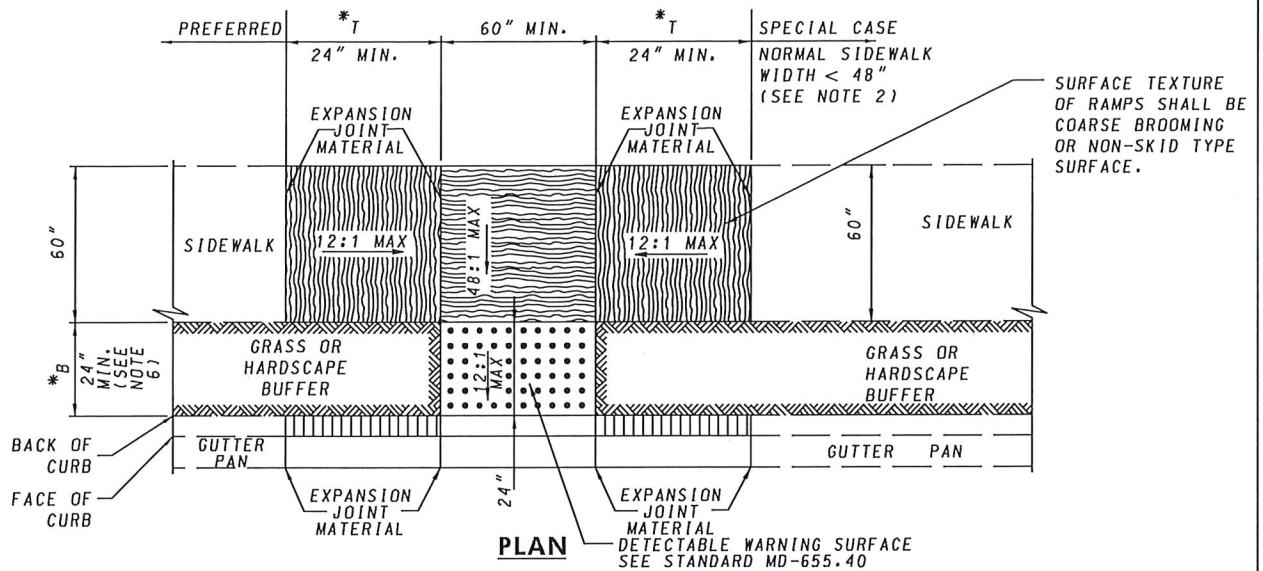
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION
APPROVAL 2-10-04	APPROVAL 3-31-04
REVISED 3-25-08	REVISED 4-5-06
REVISED 6-2-14	REVISED 5-20-14
REVISED	REVISED

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

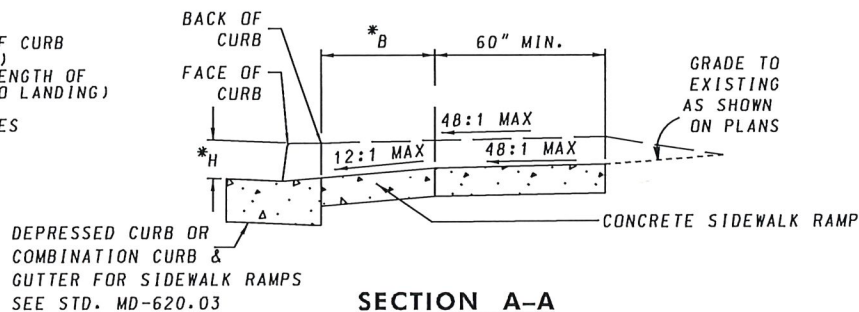
SIDEWALK RAMPS PARALLEL

STANDARD NO.

MD 655.12



- * - H = HEIGHT OF CURB
 B = BUFFER WIDTH (BACK OF CURB TO FRONT OF SIDEWALK)
 T = TRANSITION LENGTH (LENGTH OF RAMP FROM SIDEWALK TO LANDING)
 $T = (12 \times H) - B$
 ALL MEASUREMENTS IN INCHES



NOTES

1. TO BE USED WHERE AT LEAST 7'-0" EXISTS BETWEEN THE BACK OF CURB AND THE BACK OF SIDEWALK. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
2. WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
3. NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
4. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
5. SIDEWALK RAMPS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
6. FOR BUFFER WIDTHS LESS THAN 24", WIDEN SIDEWALK TO BACK OF CURB AS SHOWN FOR THE SPECIAL CASE, THEN BUILD PARALLEL RAMP USING STANDARD MD-655.12.
7. TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH
8. IF THE BUFFER AREA IS GREATER THAN OR EQUAL TO 4' THE LANDING AREA MUST BE 2% X 2%. IF THE BUFFER AREA IS LESS THAN 4' THE LANDING AREA CROSS-SLOPE CANNOT EXCEED THE GRADE OF THE ROAD.

SPECIFICATION
603 & 611

CATEGORY CODE ITEMS

APPROVED

DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT



APPROVAL • SHA
REVISIONS

APPROVAL 2-10-04

REVISED 8-25-08

REVISED 6-2-14

REVISED

APPROVAL • FEDERAL
HIGHWAY ADMINISTRATION

APPROVAL 3-31-04

REVISED 4-5-06

REVISED 5-20-14

REVISED

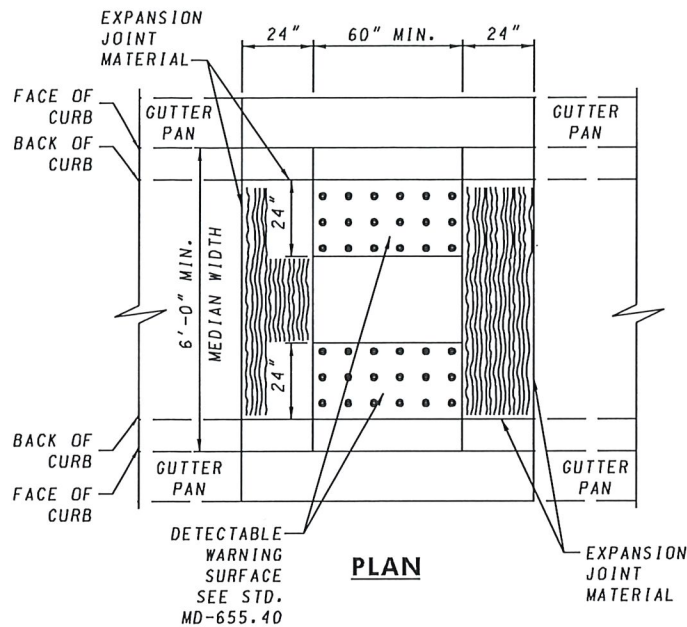
Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

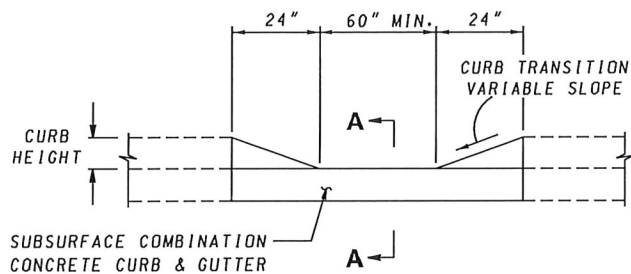
SIDEWALK RAMPS COMBINATION

STANDARD NO.

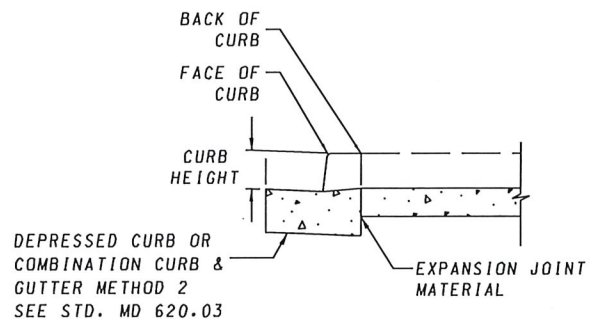
MD 655.13



PLAN



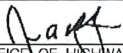

ELEVATION

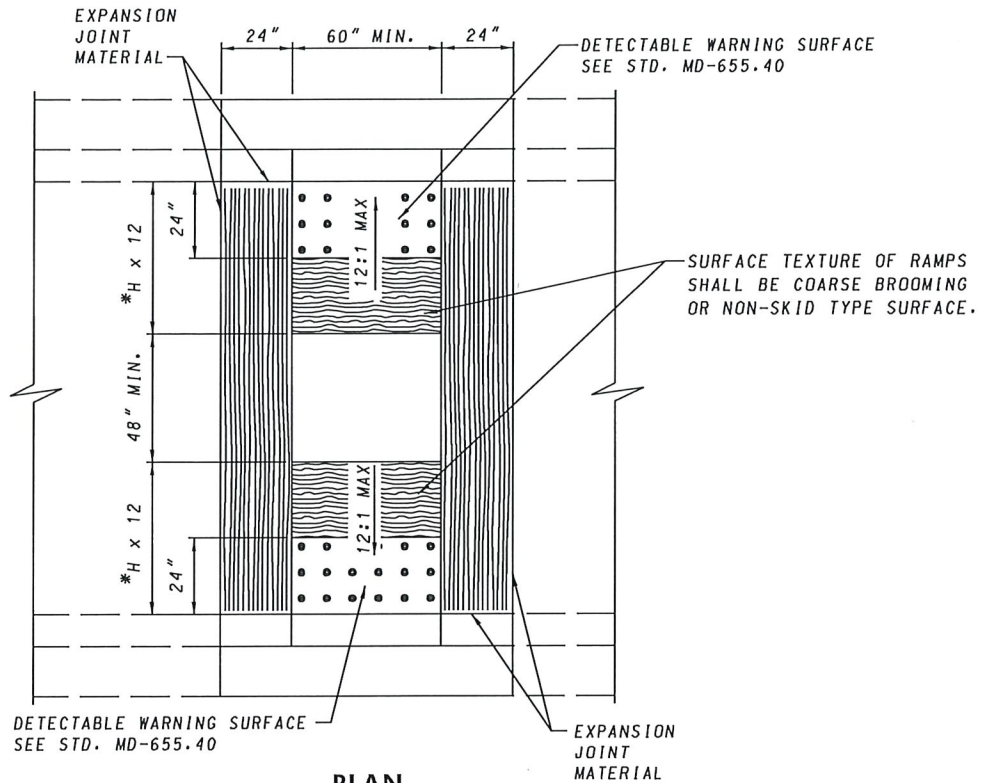


SECTION A-A

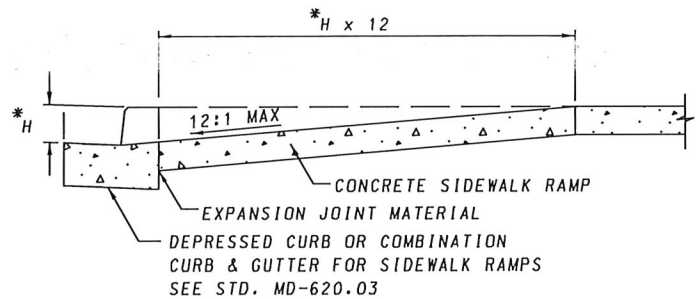
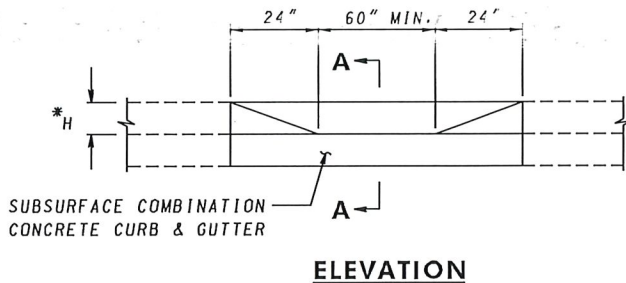
NOTES

1. TO BE USED WHERE A STREET-LEVEL PEDESTRIAN CROSSING IS REQUIRED THROUGH RAISED MEDIANS OR RAISED ISLANDS AND THERE IS INSUFFICIENT WIDTH TO PROVIDE A RAMPED MEDIAN OR ISLAND OPENING (STD. MD-655.22).
2. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD MD-655.01.
3. CUT-THROUGH MEDIAN AND ISLAND OPENINGS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE OPENING ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED OPENING VARIES FROM STANDARD METHODS.
4. WHERE 60" CUT THROUGHS CAN NOT BE PROVIDED A DESIGN WAIVER MUST BE REQUESTED.

SPECIFICATION 603 & 611	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES CUT-THROUGH MEDIAN AND ISLAND OPENINGS	
APPROVED	 DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	STANDARD NO. MD 655.21
	APPROVAL 2-10-04	APPROVAL 3-31-04	
	REVISED 6-2-14	REVISED 5-20-14	
	REVISED	REVISED	



* - H = HEIGHT OF CURB
ALL MEASUREMENTS IN INCHES



NOTES

1. TO BE USED WHERE A PEDESTRIAN ACCESS ROUTE CROSSES RAISED MEDIANS OR RAISED ISLANDS AND THERE IS SUFFICIENT WIDTH TO SATISFY THE GEOMETRY OUTLINED IN THIS STANDARD.
2. EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD MD-655.01.
3. RAMPED MEDIAN AND ISLAND OPENINGS TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE OPENING ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED OPENING VARIES FROM STANDARD METHODS.
4. WHERE 60" OPENINGS CAN NOT BE USED A DESIGN WAIVER MUST BE REQUESTED.

SPECIFICATION 603 & 611	CATEGORY CODE ITEMS										
APPROVED	DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT										
SHA State Highway Administration	<table> <tr> <td>APPROVAL • SHA REVISIONS</td><td>APPROVAL • FEDERAL HIGHWAY ADMINISTRATION</td></tr> <tr> <td>APPROVAL 2-10-04</td><td>APPROVAL 3-31-04</td></tr> <tr> <td>REVISED 6-2-14</td><td>REVISED 5-20-14</td></tr> <tr> <td>REVISED</td><td>REVISED</td></tr> <tr> <td>REVISED</td><td>REVISED</td></tr> </table>	APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION	APPROVAL 2-10-04	APPROVAL 3-31-04	REVISED 6-2-14	REVISED 5-20-14	REVISED	REVISED	REVISED	REVISED
APPROVAL • SHA REVISIONS	APPROVAL • FEDERAL HIGHWAY ADMINISTRATION										
APPROVAL 2-10-04	APPROVAL 3-31-04										
REVISED 6-2-14	REVISED 5-20-14										
REVISED	REVISED										
REVISED	REVISED										

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

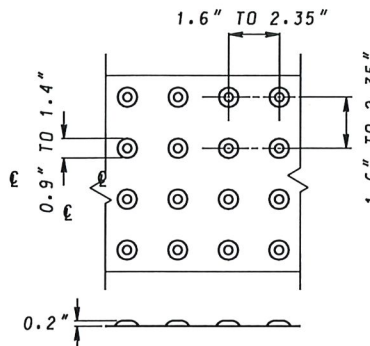
RAMPED
MEDIAN AND ISLAND OPENINGS

STANDARD NO.

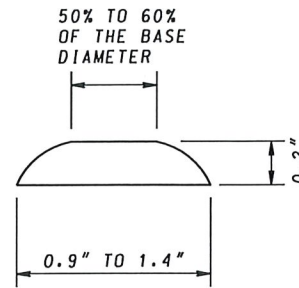
MD 655.22

MAT DETAILS

SEE PLACEMENT GUIDELINES BELOW

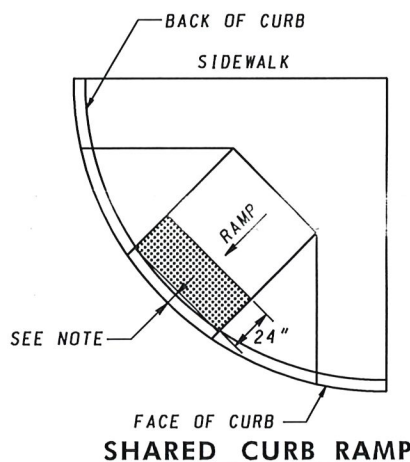


DOME SPACING

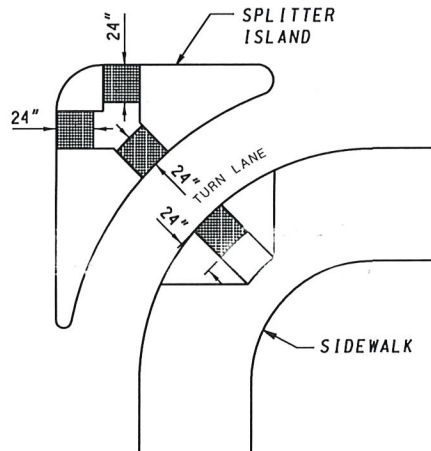


DOME SECTION

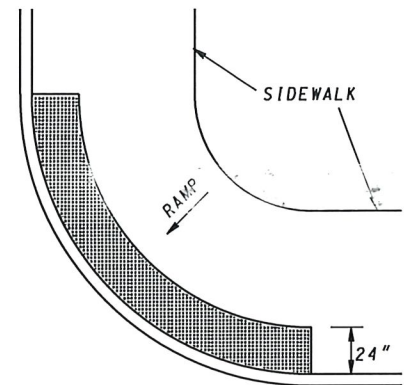
PLACEMENT GUIDELINES



SHARED CURB RAMP



REFUGE ISLAND



BLENDED CURB

WHERE ISLANDS OR MEDIANS ARE LESS THAN 6 FEET WIDE, THE DETECTABLE WARNING SHOULD EXTEND ACROSS THE FULL LENGTH OF THE CUT THROUGH THE ISLAND OR MEDIAN

NOTES

1. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
2. FOR SKEWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5" AND NO MORE THAN 3.0" FROM THE BACK OF CURB. TRUNCATED DOME SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
3. DETECTABLE WARNING SURFACE SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
4. DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING & SIGNALIZED INTERSECTIONS.

SPECIFICATION 611	CATEGORY CODE ITEMS	Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
APPROVED	<div><div></div><div>DIRECTOR – OFFICE OF HIGHWAY DEVELOPMENT</div></div>	
<div><div>SHA</div><div>State Highway Administration</div></div>	APPROVAL • SHA REVISIONS	
	APPROVAL 2-10-04	APPROVAL 3-31-04
	REVISED 4-17-06	REVISED 4-5-06
	REVISED	REVISED
	REVISED	REVISED
STANDARD NO.		MD 655.40