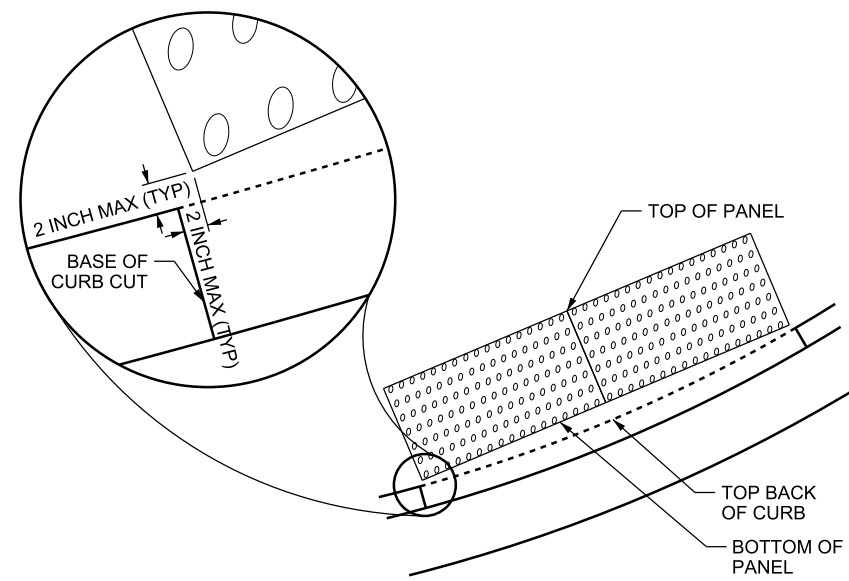
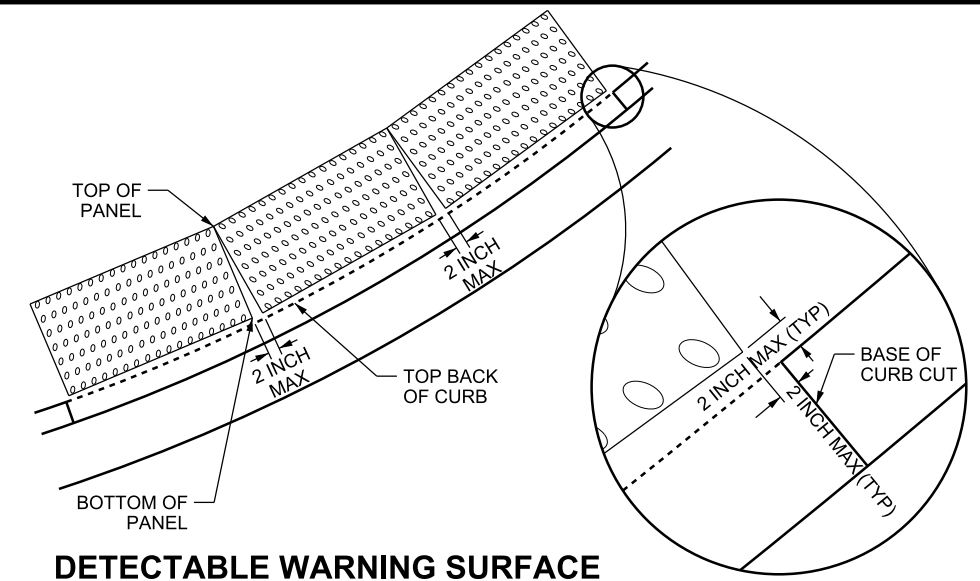


**DETECTABLE WARNING SURFACE
DETAIL A**
(PROWAG R305)



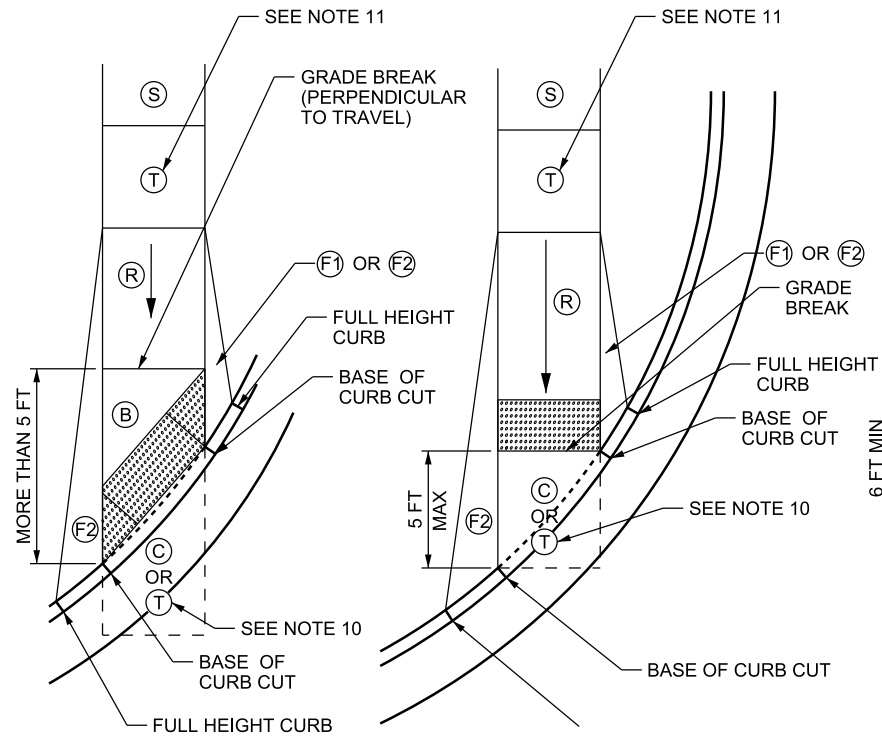
**DETECTABLE WARNING SURFACE
PANEL WITHOUT GAP (PREFERRED)
DETAIL B**
SEE NOTES 4 AND 5



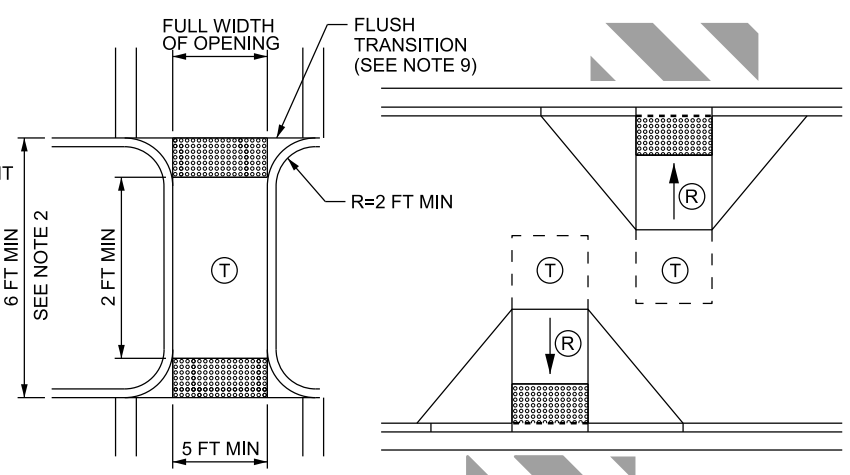
**DETECTABLE WARNING SURFACE
PANEL WITH GAP - DETAIL C**
SEE NOTES 4 AND 5

NOTES:

- REFER TO STD DWG PA 1 FOR DIMENSION TABLE AND GENERAL NOTES.
- DETECTABLE WARNING SURFACES ARE NOT REQUIRED AT PEDESTRIAN REFUGE ISLANDS THAT ARE CUT-THROUGH AT STREET LEVEL AND ARE LESS THAN 6.0 FT IN LENGTH. THE SIGNAL SHOULD BE TIMED FOR A COMPLETE CROSSING OF THE STREET WHERE SIGNALIZED AND THE CUT-THROUGH ISLAND DOES NOT HAVE DETECTABLE WARNING SURFACES. (PROWAG R208.2)
- PROVIDE DETECTABLE WARNING SURFACE THAT CONTRASTS WITH ADJACENT ACCESS ROUTE, GUTTER, STREET, AND FLARES, EITHER DARK-ON-LIGHT OR LIGHT-ON-DARK. (PROWAG R305.1.3)
- PLACE DETECTABLE WARNING SURFACE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS 2 FT MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL FOR THE FULL WIDTH OF THE RAMP (EXCLUDING FLARES), BLENDED TRANSITION, OR TURNING SPACE (PROWAG R305.1.4). USE OF PRODUCTS DESIGNED TO MATCH THE EXACT CURB RADII ARE ACCEPTABLE. USE A 4 FT MINIMUM CURB CUT WIDTH FOR SINGLE-DIRECTION CROSSWALKS AND AN 8 FT MINIMUM FOR BI-DIRECTIONAL CURB CUT WIDTHS LESS THAN 8 FT (4 FT MIN) MAY BE USED FOR BI-DIRECTIONAL CROSSWALKS UPON APPROVAL OF THE REGION TRAFFIC ENGINEER. DETECTABLE WARNING SURFACE WIDTHS IN 4 FT INCREMENTS ARE PREFERRED.
- PLACE DETECTABLE WARNING SURFACE ON PERPENDICULAR CURB RAMPS AS FOLLOWS (PROWAG R 305.2.1):
 - PLACE DETECTABLE WARNING SURFACES AT THE BACK OF CURB WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE IN FRONT OF THE BACK OF CURB.
 - PLACE DETECTABLE WARNING SURFACES ON THE RAMP RUN WITHIN 2 INCHES OF THE BOTTOM GRADE BREAK WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5.0 FT OR LESS. (SEE DETAIL D2)
 - PLACE DETECTABLE WARNING SURFACES ON THE LOWER LANDING AT THE BACK OF CURB WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BRAKE TO THE BACK OF CURB IS MORE THAN 5.0 FT. (DETAIL D1)
- PLACE DETECTABLE WARNING SURFACES ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALK (AT THE BACK OF CURB) ON PARALLEL CURB RAMPS. (PROWAG R305.2.2)
- PLACE DETECTABLE WARNING SURFACES AT THE BACK OF CURB ON BLENDED TRANSITIONS. (PROWAG R305.2.3)
- PLACE DETECTABLE WARNING SURFACES ON EACH SIDE OF THE RAIL CROSSING AT PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY. PLACE THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE RAIL CROSSING BETWEEN 6.0 FT MINIMUM AND 15.0 FT MAXIMUM FROM THE CENTERLINE OF THE NEAREST RAIL. PLACE DETECTABLE WARNING SURFACES ON THE SIDE OF THE GATES OPPOSITE THE RAIL WHERE PEDESTRIAN GATES ARE PROVIDED. (PROWAG R305.2.5)
- PLACE DETECTABLE WARNING SURFACES AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALK WHEN THERE IS A RAISED STREET CROSSING, DEPRESSED CORNERS, OR THERE IS NO GRADE CHANGE BETWEEN THE SIDEWALK AND THE STREET (SEE DETAIL E1). (PROWAG R305.2.3)
- THE TURNING SPACE IS PERMITTED TO OVERLAP OTHER TURNING SPACES AND CLEAR SPACES. (PROWAG R304.2.1, R304.3.1) THE TURNING SPACE MAY BE PLACED AT THE BOTTOM OF THE RAMP OR IN THE CLEAR SPACE IF THE COMBINED SPACE SLOPE MEETS ALL THE REQUIREMENTS OF THE TURNING SPACE.
- THE TURNING SPACE AT THE TOP OF THE RAMP MAY BE OMITTED IN DIRECTIONAL RAMP APPLICATIONS WITH ONLY ONE SIDEWALK APPROACH THAT DOES NOT REQUIRE A CHANGE IN DIRECTION. PROVIDE A BLENDED TRANSITION WITH A 2% MAX RUNNING SLOPE WHERE THE TURNING SPACE IS OMITTED.
- GRIND OFF REMAINING PORTION OF ANY CUT DOMES WHEN DETECTABLE WARNING SURFACE IS CUT. SEAL ALL CUT PANEL EDGES TO PREVENT WATER DAMAGE.



**DETECTABLE WARNING SURFACE PLACEMENT
FOR DIRECTIONAL CURB RAMPS
DETAIL D**
SEE NOTE 5



**CUT THRU
DETAIL E1**
**OFFSET PERPENDICULAR
RAMP - DETAIL E2**
PEDESTRIAN REFUGE ISLAND

NO.	DATE	APPR.	REMARKS
1	2/22/18	CGW	NEW DRAWING

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL
Randy J. Ford
CHAIRMAN STANDARDS COMMITTEE

APPROVED
[Signature]
DEPUTY DIRECTOR

DATE: FEB. 22, 2018
DATE: FEB. 22, 2018

**DETECTABLE WARNING SURFACE
PEDESTRIAN ACCESS**

STANDARD DRAWING TITLE

DGN File: D:\StandardSpec\Section\2017\Section\All Supp Issues\Issue 4 02-22-2018\Drawings\PA 02.dgn 07-MAR-2018