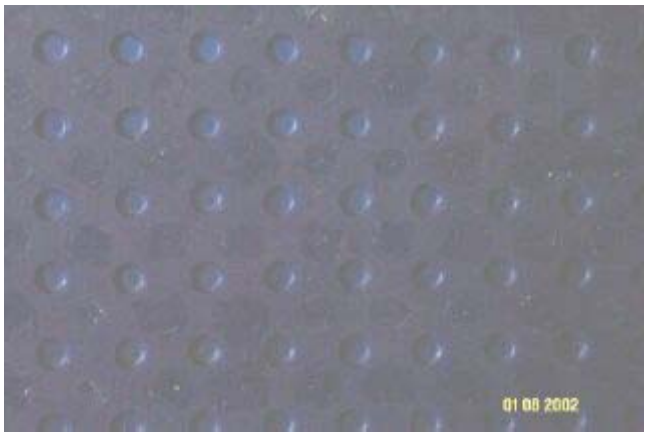
ADA Truncated Dome Detectable Warning Technical Data Sheets



Description of System

Detectable warnings are an Americans with Disabilities Act (ADA) requirement in the current Americans with Disabilities Act Accessibility Guidelines (ADAAG) for the use of detecting the boundary between the sidewalk and the street. Truncated domes are the only detectable warnings allowed by ADAAG. Grooves, exposed aggregate, and other designs intended for use as detectable warning are too similar to pavement textures, cracks and joints and are not considered equivalent facilitation. The detectable warning is a unique and standardized surface intended to function much like a stop sign to alert pedestrians who are blind or visually impaired to the presence of hazards in the line of travel. Truncated domes are a unique design and have proven to be the most detectable surface.

Specification Information

**** Although the following information is based on the memorandum dated May 6th, 2002 from the Federal Highway Administration and much of which is being enforced by the U.S. Department of Transportation, there may be additional state and local regulations that need to be researched prior to application.**

A. Size
Detectable warnings shall be 24 inches [610 mm] in the direction of travel and extend the full width of the curb ramp or flush surface.

B. Location
The detectable warning shall be located so that the edge nearest the curb line or other potential hazard is 6 to 8 inches [150 to 205 mm] from the curb line or other potential hazard or as specified.
Placement of the detectable warnings a maximum of 6 to 8 inches back from the curb line gives some latitude in placement of the detectable warning. Where curbing is embedded at the sidewalk/street junction, this will not need to be replaced. In addition, allowing 6 to 8 inches of ramp (or curb) surface beyond the detectable warning will give pedestrians who are blind an additional stopping distance before they step into the street. It will also enable some persons having mobility impairments to make a smoother transition between the street and the curb ramp.

Important Statistics

- Base Diameter of Dome: .9 of an inch (23-mm)
- Top Diameter of Dome: .45 of an inch (10-mm)
- Height of Dome: .2 of an inch (5-mm)
- Center to Center spacing of 2.35 inches (60-mm)
- Size of Stamps: 24”X24”, 24”X36”, 24”X48”, 24”X24” Flexible

Application

The application of this process can be extremely tedious in comparison to that of general stamped concrete. By following the suggested forms of application, you can eliminate many potential problems. Prior to going to job site, it is recommended that you take a drill and 3/16” drill bit and drill the holes in the stamps again in order to make sure they are properly perforated. The purpose of the holes is to assure a way for air to escape in order to achieve a proper design.

Application of Concrete: It is suggested that you pour and finish the area to be stamped as part of a continuous pour from the regular curb ramp. Once you have poured the selected area, you will need to spend a little more time using a trowel in this section to really bring up the cream to the surface area. As required by the U.S. Access Board, the detectable warning surfaces at platform boarding edges should be 24 inches (610mm) wide and shall extend the full length of the platform. Because of this, all our stamping tools are 24” in width to make the application easier for the installer. Once you have worked the surface good, you will then need to make a bridge over the sidewalk using a couple of blocks and a 2”X10” board or other format if applicable. This is very important, as it will allow you to tamp the tool directly over the stamp itself instead of at an angle. Next you will need to apply a generous coat of your liquid release agent over the entire surface as well as stamping tools to prevent the two from sticking to eachother.

Place stamping tools on surface and *gently vibrate or tamp stamp over entire surface of stamp from the bridge*. Once again, it is very important to **tamp every area of the tool directly above the stamp itself to get a uniform appearance**, as well as straight domes that are not crooked from hitting it at an angle. As you will notice, while tamping the pattern into the concrete, you will see the cream from the concrete start to come through the holes in the stamp. This will assure you that the pattern is receiving full detail throughout. As mentioned earlier, each stamp can take an estimate of 5-7 minutes to properly vibrate the patterns throughout the stamp. Gently lift the stamp up from concrete and wash off any excess material from stamping tools immediately. You will also need to make sure the holes drilled in the stamp are clear of any material as well prior to using it again. Then place stamp in next section to be complete and repeat listed steps.

Washing and Sealing of Surface: Come back to the job site where the truncated domes were stamped the day before and use a scraper to knock the tips of the domes off the surface, caused by the drilled holes in the stamps. A floor scraper tends to work the best and is also the fastest. After knocking the tips off, use a degreaser (i.e. Simple Green) and clean any debris, loose concrete and in particular, the residue from the release agent from the surface. When surface is completely dry, tape off the area you do not want colored to protect, and apply two coats of Stampcrete Colour-Seal pigmented sealer. Once again, the U.S. Access Board is requiring a contrast of light on dark or dark on light for the area you have stamped from the adjacent sidewalk. We suggest using two coats of either the Stampcrete Brick Red, Dark Brown or Charcoal Colour-Seal to achieve this contrast, as well as protect the surface from harmful elements.

Suggested Colors for use with Colour-Seal System:

- Dark Brown - Brick Red - Charcoal

Limitations:

- DO NOT apply when air temperature is above 90F or below 40F
- DO NOT rewet surface when finishing colored concrete
- DO NOT use Calcium Chloride accelerators with colored concrete
- DO NOT over strike stamps or on an angle, as the domes will come out crooked.
- DO NOT use large aggregate in mix design. Suggested for best outcome being ½".

Contact:
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Illustration and Steps of Process

1) Spray both your stamps and surface with Liquid Release after finishing concrete and you are ready to stamp.

2) Use plank to bridge surface to be imprinted and place stamps on surface from directly over top. Do not drag or pick up the stamps after placing them on concrete.

3) Tamp the stamping tool and make sure to cover every row of the domes in order to achieve the proper design and appropriate number of domes. Then lift stamps straight up, being careful not to drag and wash off any concrete that may have stuck to the stamps.

4) Day two – If desired, take a scrapper and knock off any tips from the domes that are extreme. Then wash residue left from Liquid Release off surface using a mild detergent and water.

5) Apply 2 Coats of ADA Colour-Seal to desired surface when dry to give the light on dark contrast and you have your completed project.

Tools and Product to have at job site