

Accessible Route Rumble Strips

Play and Recreation areas can prove to be a design challenge, particularly when spectacular and accommodating play value is needed for persons with disabilities. Generally design options include the structures and objects that fill the vertical space, often placing play out of reach of the participant. This tends to ignore the play potential in the surfacing, which most designers see as something to traverse rather than something to interact with. Working with the texture, slope and softness of the surfacing adds a dimension of play that cannot otherwise be achieved through structure alone.

Working with the surface as a functional part of the environment to provide play value is both an art and science. As in everything there is a mechanical component that can be replicated by experience and learned technique, while the combining of surface aspects and continuing to meet the requirements of the ADA, CSA B615 or CSA Z614-14, Annex H, is the art. Transitions must provide a graduated challenge to the user before the child commits to the challenge of the play element presented in the surface.

One element of play value for the surfacing and the provision of the graduated challenge is the Rumble Strip. This is typically placed into rubber surfaces that are installed “in situ” in multiple layers to ensure that a basic “softness” is achieved and the play component has structure. To facilitate the use of mobility devices, the surface must be firm and stable and not have detrimental effects for the user.

The Rumble Strip is a series of evenly spaced indentations running at 90° to the route of travel and not forming a barrier to travel. The indentions are graduated to provide an increasing challenge achieved through the judicious placement of specially designed jigs. The size of the Rumble strip area is 1.5 times the size of a standard wheelchair to allow for the entire chair to be within the Rumble Strip area. The additional width recognizes that straight-line steering might be part of the challenge, while not being excessively wide allows for the graduated challenge to allow of one main wheel and caster to be on a smooth, firm and stable surface and allow the user to move to the challenge they are comfortable with today.

The technical aspect of the Rumble Strip is provided through the use of a jig that creates the indentation. The depth of the indentation is determined through experience and technical ability at the time of installation.