Pedestrian Crossings

As the leader in the railroad grade crossing industry, Century Group Inc. has become the supplier of choice when it comes to pedestrian grade crossings for commuter, transit, intercity and rapid rail systems. Safety is the number one priority when it comes to pedestrian crossings and Century can meet that challenge. Century Group manufactures pedestrian grade crossings with an anti-skid surface and furnishes a flangeway system which meet ADA requirements.

Pedestrian Crossing at Commuter Rail Passenger Station

For over three decades Century Group Inc.’s experienced staff has worked with architects, planners and engineers across North America assisting in the design and manufacture of safe, economical and attractive pedestrian crossings for light rail transit and commuter railroads. Century Group is the name that stands for experience, innovation, performance and the test of time.

Pedestrian Crossing with Brick Texture for Light Rail Transit

As a supplier, Century Group Inc. is proactive in the railroad industry by ensuring that all sales and technical field representatives have been through the Class I Railroad’s e-rail safe program, the Roadway Worker On-Track Safety program overseen by the Federal Railroad Administration (FRA) and the Transportation Worker Identification Credential Program (TWIC) implemented by Transportation Security Agency (TSA) and the U.S. Coast Guard. Safety and security at jobsites is the highest priority at Century Group Inc.

Light Rail Transit Authority 9’ Pedestrian Crossing

Applications & Uses:

- Textured surfaces to match adjacent pavements and structures at commuter railroad, light rail transit stations and historical areas
- Custom colors
- ADA compliant flangeway filler
- Anti-skid surface for added safety
- Built-in tapered ends available
- Custom sizes and shapes

VERSATILITY

For decades, Century Group Inc.’s goal has been to provide innovative ideas to meet the challenges of pedestrian grade crossings at suburban loading platforms, commuter rail stations, emergency access crossings in tunnels, jogging/bicycle paths, etc... Working hand in hand with our clients, Century Group not only provides the safest pedestrian crossings but also manufactures precast concrete pedestrian crossing panels in different colors and textured surfaces, such as brick or paver patterns to complement the architectural themes of loading stations and passenger station platforms.

Pedestrian Crossing at Light Rail Passenger Station

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Contact the Century Group Inc. Railroad Products Division 1-800-527-5232, Ext. 118
Century Group has the ability to manufacture pedestrian crossing panels to fit on standard wood or concrete crossties, mono-block ties and direct fixation track. Century Group remains the largest manufacturer of precast concrete pedestrian crossing panels for the light rail transit and commuter rail industry across the U.S. and sets the standard for safety, durability, and service.

**Pedestrian Crossings With Devil Strip Panels At Commuter Rail Station**

Should a pedestrian crossing encroach the limits of a turnout, custom panels can be manufactured to fit around frogs, switch points, etc…

Century Group’s decades of experience in railroad construction and precast concrete manufacturing allows us to understand our client’s needs and be able to design the best pedestrian crossing system for your project. Our vast experience, diversity and flexibility allows us to manufacture and deliver the exact pedestrian crossing system to ensure that it is a perfect fit with your project.

**SERVICE**

Century Group Inc. is the only company with the resources and commitment to handle your most complicated pedestrian grade crossing projects. With over four decades of railroad construction experience, Century Group offers a network of sales and technical staff to assist our clients with onsite layout, as-built field measurements and assistance with actual pedestrian crossing installations.

**ADA COMPLIANT PEDESTRIAN CROSSINGS**

As light rail transportation becomes a more popular mode of transportation, so does the concern for safety issues regarding people with disabilities at pedestrian rail crossings, transit stations, sidewalks and emergency exits in railway tunnels. Over the last three decades, Century Group Inc. has manufactured pedestrian grade crossing systems for railroads, light rail transits, municipalities and industry across North America.

**ADA Wheelchair Friendly Pedestrian Grade Crossing**

Having been involved in precast concrete manufacturing and railroad construction for over six decades, Century Group Inc. has utilized its immense experience and resources to identify and develop a pedestrian grade crossing system that addresses safety issues and meets current ADA (American with Disabilities Act) regulations. While there are always safety issues when pedestrians encroach the right-of-way of railroads and light rail transit lines, Century Group Inc. is focused and committed to providing the safest and most innovative pedestrian grade crossing for the general public with special attention given to those persons that are handicapped or disabled.

**ADA Pedestrian Friendly Flangeway Filler**

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FLANGEWAYS
The most debated subject regarding pedestrian grade crossings is the minimization of the flangeway area between the inside ball of rail to the grade crossing surface. The ADA (Americans with Disability Act) requires that the flangeway widths be a maximum of 2 ½” wide from inside ball of rail to the grade crossing surface and depth of the flangeway area should be approximately 1 ½” deep from top of rail to bottom of flangeway. Potentially, the flangeway is an area for wheelchair or scooter entrapment, tripping, the lodging of a shoe, walking cane, walker or bicycle tire when being traversed by the general public.

Century Group Inc. has developed an ADA compliant elastomeric flangeway filler system that is integral to its precast concrete pedestrian grade crossing panel system for installation at newly constructed light, rapid, commuter rail station platforms. The Century ADA filler minimizes the flangeway area to meet the ADA requirements that flangeways be a maximum of 2 ½” wide at passenger loading platforms and stations. The Century ADA flangeway filler is manufactured out of a high-strength elastomeric rubber that has a high electrical resistivity. The Century ADA flangeway filler is attached to the concrete crossing panels with high tensile threaded steel studs welded to the angle surround of the Century concrete crossing panels. An additional steel member runs longitudinally under the filler to provide additional support to prevent collapsing of the flangeway filler in the event that it is encroached by a wheelchair, scooter, walking cane, shoe heel, etc... The Century ADA compliant flangeway filler is also compatible with most elastomeric rail boots that are common on electrified light and commuter rail lines. One should consult with a Century Group technical representative for rail boot compatibility at 1-800-527-5232, Ext. 118.

LEVEL / UNIFORM SURFACE
The Century pedestrian crossing panels are manufactured to insure that the walking surface is level and there are no surface deflections caused by lag screw holes and/or lifting units. All Century pedestrian crossing panels are manufactured with threaded lifting inserts that terminate below the walking surface and are capped with a plastic setting plug that fits flush with the walking surface. This eliminates any surface deflections or trip hazards and provides long term protection to the lifting units. The Century pedestrian crossings are of a lagless design which eliminates the need for lag screws and the challenge of having to install plugs or patches to cover screw holes or raised screw heads that could cause a trip hazard or obstruction to wheelchairs and/or walkers.

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ADA COMPLIANT NON-SKID SURFACE
Our skilled and highly experienced workforce applies a uniformed broomed non-skid finish (parallel to the running rails) that has a static coefficient of friction (ASTM) that meets or exceeds ADA and International Building Code specifications for stairs and steps. This non-slip surface helps provide a safe walking surface available even in the most challenging situations where snow, icing or wet conditions are prevalent.

SAFE WHEELCHAIR / SCOOTER MANEUVERING AREA
Century Group Inc. has designed its pedestrian crossings with safety as its number one priority. One of the concerns over the years has been maneuverability and adequate room for passing pedestrian traffic. Although there are no specific ADA or building code regulations regarding width of a railroad pedestrian crossing, Century Group Inc. feels that it is prudent to manufacture pedestrian crossings that allows for safe maneuvering and navigation of wheelchairs and/or scooters across the crossings. Century’s pedestrian crossings are designed to meet or exceed ADA space allowances for wheelchair passage and passing on “clear floor and ground space for wheelchairs” as described in ADA regulations Accessibility Guidelines 4.2.1. With this safety aspect in mind, it is Century Group’s recommendation that the minimum width of a pedestrian crossing be no less than 9 foot. The Century Group design allows for the safe navigation of a wheelchair, scooter or handicap walker across a pedestrian crossing in one direction while allowing oncoming pedestrian or wheelchair / scooter / walker traffic to pass safely with ample room. Click on the drawing at the right to view section drawing.

ADA Scooter Chair Friendly Pedestrian Grade Crossing

Note the above drawing is only to convey that the Century pedestrian crossing widths meet or exceed the ADA accessibility guidelines.

The Century pedestrian crossing width of 9 foot also allows a wheelchair bound person ample room to safely stop, pivot and change directions while allowing for safe passage by approaching pedestrian traffic. Click on the drawing at the right to view diagram.

SAFE/STRUCTURALLY SOUND END DEFLECTION
The standard Century concrete pedestrian crossings are manufactured with built-in tapered ends that offer the safest and most structurally sound end deflection design available. Tapered ends cast as part of the crossing panels offer many distinct advantages over add-on metal deflector plates:

Shortline railroad concrete pedestrian crossing at community park entrance

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With built-in tapered ends, the end deflection is part of the 5,000 p.s.i. steel reinforced panel which can withstand far greater impacts from dragging equipment.

**Pedestrian Crossing for Commuter Rail**

The built-in tapered panels would have a far better chance to avoid the hanging up of a vehicle on the crossing in the event of an auto/train collision.

- The Century built-in tapered panels eliminate the need for additional welding of metal deflector plates to the crossing panels.
- The Century built-in end tapered end design has a smooth uniform surface, especially if a shunt resistant design is required. With metal end deflector plates, a gap is required between the two pieces on the gauge panels which actually creates a catch hazard for dragging equipment.

**NOTE:** It is recommended by Century Group Inc. that flattop ties be used within the limits of pedestrian crossings to facilitate the use of built-in-tapered end panels. In some cases the use of concrete crossties whose top surfaces are uneven may eliminate the use of a built-in tapered panel. One should consult with a Century Group technical representative to evaluate which type and models of crossties are conducive to the built-in tapered end design.

**DEVIL STRIP PANELS**

Century Group Inc. specializes in manufacturing custom devil strip panels for pedestrian grade crossings at light and commuter rail passenger stations where multiple tracks exist. The special devil strip panels are installed between parallel tracks to provide a safe, continuous ADA compliant grade crossing surface across multiple tracks eliminating the challenge of transitioning two grade crossing field panels with a poured-in-place transitional surface. In most instances the panels must fit between two different tracks, the manufactured width of the panels must be exact to ensure a snug fit on the outside ball of the rail at the correct height providing a smooth, safe ADA compliant grade crossing surface.

**Light Rail Pedestrian Crossings With Devil Strips**

Because the final as-built dimensions of the multiple tracks are critical for insuring properly manufactured widths of the devil strip panels, Century Group’s experienced technical staff mobilizes onsite to provide our manufacturing personnel with the proper field measurements.

**STRUCTURAL STRENGTH**

Century pedestrian crossings are manufactured of high-strength 5,000 p.s.i. concrete with state-of-the-art admixtures to ensure a dense impervious concrete surface resistant to damage from salt and deicers, freeze thaw cycles and other contaminants.

**Pedestrian Crossing at Rapid Rail Transit Station**
All Century pedestrian crossings are manufactured to meet HS20-44 loading standards plus a 30 percent impact increment. Century Group Inc. feels that this load carrying capacity is critical because experience has proven that pedestrian crossings could be used for hi-rail access in the case of emergencies or access for other types of equipment such as man lifts, truck cranes, etc… for routine maintenance to tracks overhead catenary passenger stations, canopies, etc…

Concrete Pedestrian Crossing at Light Rail Passenger Station

Other areas of a pedestrian crossing that should be evaluated during design and is especially important to those who are disabled are:

- Make sure that there is adequate warning of trains approaching.
- Make sure that approaches to the pedestrian crossings are suitable for use by those in wheelchairs, scooters or who have walking impairments. Approaches should have smooth walking surfaces and gradients should be as minimal as possible meeting ADA accessibility guidelines.
- Crossing panels should be installed at right angles to the track with all edges even. It is important that where multiple tracks are involved that the crossing panels are installed parallel to each other with the ends aligned with each other. Skewed panels create the potential hazard of pedestrians walking or wheelchairs / scooters rolling off the crossing.
- All pedestrian crossings should have a detectable warning strip that meets ADA standards.

At Century Group; safety is our number one priority for the users of our concrete pedestrian crossings. Our commitment is to continue to research new ideas to develop a pedestrian crossing that is safe for all user groups especially those who are disabled or physically challenged. We look forward to working with you in designing your next project and supplying the safest, most durable and innovative ADA compliant pedestrian crossing available. All of our crossing systems are available in CAD or pdf formats. For drawings and written specifications please give us a call at 1-800-527-5232, Ext. 118 or click on the link to email the Century Group Railroad Products Division.

Just a few of our clients include:

- Metropolitan Atlanta Rapid Transit Authority
- Miami Metro Dade
- Metrolink – St. Louis
- Bay Area Regional Transit
- Denver Regional Transit District  Dallas Area Rapid Transit
- New Orleans Regional Transit Agency
- MTA - Baltimore
- Southern California Regional Rail Authority
- CATS – Charlotte Area Transit System

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