Pedestrian Safety Work Group
(A subcommittee of the RTC’s Elderly & Disabled Transportation Advisory Committee)

Santa Cruz Regional Transportation Commission
1523 Pacific Avenue, Santa Cruz, CA

Agenda – Tuesday, March 12, 2019 @ 10:00 am to 12:00 pm

1. Introductions
2. Additions or Deletions to the agenda
3. Review December 11, 2018 Meeting Notes
4. Pedestrian Hazard Reports
5. Cruz511 Outreach
6. Construction Guidelines- Status
7. Pedestrian Safety Workgroup Designation & Purpose
8. Next Meeting Date & Topics
Attendees: Veronica Elsea (Chair), Grace Blakeslee, Debbie Benham, John Daugherty, Joanna Edmonds, Theresia Rogerson (CTSC Staff)

The meeting was called to order at 2:06 pm.

1. Introductions

2. Additions or deletions to the agenda
   None

3. Received Notes from 8/30/18 meeting

4. Cruz511 Outreach and Messaging
   RTC staff shared examples of social media posts and newsletter stories that include Elderly and Disabled Pedestrian Safety Messaging in outreach efforts and workgroup members provided feedback.

5. Construction Guidelines
   Workgroup members and Theresia Rogerson, Community Traffic Safety Coalition (CTSC) staff, discussed content of guidelines, ways to reach the construction community, and how to reformat guidelines to improve readability.

6. Pedestrian Hazard Reporting System
   RTC staff reported results of meetings with local jurisdictions to discuss the hazard reporting system and to get input about possible improvements to the system.

7. Next Meeting Dates & Topics
   - Next Meeting - January 25, 2018 1:30 pm – 3:30 pm
   - Pedestrian Hazard Reporting System
   - Construction Guidelines
   - Elderly and Disabled Pedestrian Safety Messaging

Meeting adjourned at approximately 3:28 pm
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<td>01/15/19</td>
<td>307 Church St.</td>
<td>Center St.</td>
<td>Santa Cruz</td>
<td>Ped: Other</td>
<td>There are no handrails on the steps at the civic downtown.</td>
<td>Jim Burr</td>
<td>01/15/19</td>
<td>1/15/19 Jim Burr: I will forward this to the Parks Dept. No further reply from PW. Thanks 1/15/19 Noah Downing, City of SC Parks and Rec: Thank you for passing along the information. The Parks and Recreation Department will review and correspond directly with the reporting party.</td>
<td><img src="https://sccrtc.org/index.php?gf-download=2018%2F12%2F15_307ChurchSt.jpg" alt="Images" /></td>
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<td>12/26/18</td>
<td>532 Mission St</td>
<td>Locust St</td>
<td>Santa Cruz</td>
<td>Ped: Plant overgrowth or interference</td>
<td>526 Mission Street, Santa Cruz Folage is blocking sidewalk. This is especially dangerous on this busy street since the pedestrian must get extremely close to fast moving traffic to walk around.</td>
<td>Nancy Cross, Caltrans</td>
<td>12/26/18</td>
<td>12/26/18 Steve Jesberg: Message has been sent to our maintenance crew to clean up the glass. -Steve 12/26/18 Eddie Ray Garcia: The glass has been cleaned up. Happy Holidays.</td>
<td><img src="https://sccrtc.org/index.php?gf-download=2018%2F12%2F26_532MissionSt.jpg" alt="Images" /></td>
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<td>12/21/18</td>
<td>7th Capitola Ave</td>
<td>Plum St</td>
<td>Capitola</td>
<td>Ped: Debris on sidewalk, Lack of wheelchair access</td>
<td>Curb out at Plum St and Capitola Ave, Capitola Sidewalk in front of 7th Capitola Avenue (Palm Gardens Center). Broken glass (green) in the yellow curb outsidewalk way. Could puncture wheelchair tires and/or cause injury.</td>
<td>Steve Jesberg, Kalash Morcumder</td>
<td>12/26/18</td>
<td>12/26/18 12/17/18 Nathan Nguyen: Please forward hazard to Caltrans, this is in their jurisdiction. Thanks, Nathan See entry dated 12/26/18 above</td>
<td><img src="https://sccrtc.org/index.php?gf-download=2018%2F12%2F21_7thCapitolaAve.jpg" alt="Images" /></td>
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<td>Santa Cruz</td>
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<td>Jim Burr</td>
<td>12/17/18</td>
<td>12/17/18 Jim on vacation until 1/2/19</td>
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<td>12/12/18</td>
<td>1411 Seabright Ave</td>
<td>Hanover</td>
<td>Santa Cruz</td>
<td>Ped: Damaged sidewalk</td>
<td>Large pieces of sidewalk missing or cracked</td>
<td>Jim Burr</td>
<td>12/13/18</td>
<td>Jim on vacation until 1/2/19</td>
<td><img src="https://sccrtc.org/index.php?gf-download=2018%2F12%2F12_1411SeabrightAve.jpg" alt="Images" /></td>
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<td>12/12/18</td>
<td>Laurel St.</td>
<td>Pacific Ave</td>
<td>Santa Cruz</td>
<td>Ped: Traffic signal problem</td>
<td>Intersection: Laurel and Pacific Ave (Saturn Cafe to Taco Bell side). The pedestrian buttons do not work on either side of the street (Saturn Cafe corner and Taco Bell corner). The traffic signal stays on the ‘do not walk’ sign. This started happening about a month ago.</td>
<td>Jim Burr</td>
<td>12/12/18</td>
<td>Jim on vacation until 1/2/19</td>
<td><img src="https://sccrtc.org/index.php?gf-download=2018%2F12%2F12_LaurelSt.jpg" alt="Images" /></td>
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<td>12/11/18</td>
<td>113 30th Ave (APN:032-192-39)</td>
<td>East Cliff Dr</td>
<td>Santa Cruz</td>
<td>Ped: Debris on sidewalk, sidewalk too narrow, plant overgrowth or interference, construction hazard</td>
<td>The following report was sent by mail (dated 12/6/18) and received on 12/11/18. I walk up and down 30th Ave all the time and it’s getting harder with the plants and broken cement - see pictures attached. There’s no sidewalk on the other side of 30th Ave so I have to watch out for the plants growing over the sidewalk and for the broken cement from when he dug up his “garage” (really is living quarters)</td>
<td>DPW</td>
<td>12/12/18</td>
<td>12/12/18 Marilyn Raffaelli: I am in receipt of your email regarding sidewalk encroachment at 113 30th Avenue. Sidewalk maintenance is land owner responsibility and as such is not within the jurisdiction of the County of Santa Cruz Public Works department. Thank you for taking the time to contact us. 12/21/18 Kristine Conley: This is an ongoing complaint about a tree in the planting strip that the RP wants cut down. There are no hazards or obstructions to the sidewalk or roadway at this location. I went by today to verify that the property is still within compliance. Public Works will not send letter or require someone to remove a tree that is not affecting the public use of the right of way.</td>
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<td>12/04/18</td>
<td>1303 Laurel Cleveland</td>
<td>Santa Cruz</td>
<td>Ped: Plant overgrowth or interference</td>
<td>1303 Laurel, corner of Cleveland. Hazard on Cleveland. Prickly pear cactus overgrowth.</td>
<td>Jim Burr</td>
<td>12/04/18</td>
<td>12/04/18 Jim Burr: This report came in through the City CRSP system as well and a staff has been assigned to investigate. Please do not double report as this wastes valuable staff time. Thanks</td>
<td><img src="https://sccrtc.org/index.php?gf-download=2018%2F12%2F04_1303Laurel.jpg" alt="Images" /></td>
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<td>11/29/18</td>
<td>Empire Grade</td>
<td>Heller Dr</td>
<td>Santa Cruz</td>
<td>Ped: Traffic signal problem</td>
<td>Cave Gulch Trailhead, Empire Grade, Santa Cruz, CA 95060 Empire Grade @ Heller Drive Signal has no power.</td>
<td>DPW</td>
<td>11/29/18</td>
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<td>11/09/18</td>
<td>Coral St</td>
<td>River St</td>
<td>Santa Cruz</td>
<td>Ped: Debris on shoulder or bikeway, Vehicles or objects blocking sidewalk, Debris on sidewalk, Lack of wheelchair access</td>
<td>Across from the Homeless Services Center on Coral st. Can't miss it! The entire block is a hazard of people, their belongings &amp; trash etc. occupying the sidewalk along with tarps strung from my fence across the sidewalk used for concealing themselves &amp; using drugs. This atmosphere of filth &amp; stench is unhealthy to all exposed. By getting the sidewalk cleaned &amp; cleared is needed for normal use and a better work environment for those who work for a living. Please call with any additional information needed. I am greatly waiting for a response. Thank You, Greg Wolever</td>
<td>Jim Burr</td>
<td>11/09/18</td>
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<tr>
<td>10/04/18</td>
<td>Center St</td>
<td>Mission St</td>
<td>Santa Cruz</td>
<td>Ped: Vehicles or objects blocking sidewalk, Luck of sidewalk</td>
<td>Crossing Center Street at Mission Street heading east/west. Cars on Center Street waiting to turn left onto Mission Street will often pull up so much that they are fully blocking the crosswalk and there is no room to cross in front of the car with out entering the lane of traffic on Mission Street. Is there additional signage or striping that could have the cars wait a few feet back and still activate the traffic signal? I know the wall at this light can seem very long to traffic in all directions. I hate having to tell drivers they are in the crosswalk on a daily basis.</td>
<td>Jim Burr</td>
<td>11/05/18</td>
<td>10/10/18 Jim Burr: All signs and markings per the MUTCD are in place. This is an enforcement issue and will be forwarded to the SCPD. 10/10/18 Scott Garner SCPD: I will forward this to our enforcement officers. Thank you for bringing this to our attention.</td>
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<td>10/04/18</td>
<td>North Pacific Ave</td>
<td>River St</td>
<td>Santa Cruz</td>
<td>Ped: Traffic Signal problem, Other</td>
<td>North Pacific, heading north, crossing River Street, in conflict with drivers turning left onto River Street. I cross River Street on foot on a daily basis. Trying to get across River Street, even at that light is a stressful, unsafe experience in which I feel as though drivers trying to make it through the light are speeding past me the second they can. I know traffic light timing is very complicated, but it would be great to either have all the lights red in a traffic scramble or at least have some lead time with the north bound light red in order to get into the crosswalk before the cars accelerate. Thank you for looking into this.</td>
<td>Jim Burr</td>
<td>10/05/18</td>
<td>10/10/18 Jim Burr: No response required</td>
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<td>10/04/18</td>
<td>Soquel Dr</td>
<td>State Park</td>
<td>Aptos</td>
<td>Ped: Other</td>
<td>Soquel Drive stores across from plaza with UPS - cars are using the parking areas as a passing lane on Soquel Drive. Coming up from Aptos Village towards State Park Drive there are stores along the right side facing the street with spaces in front for parking - cars are using this to pass when the lots are somewhat empty, starting at Open Door Locksmith and cutting back at Sushi On The Go.</td>
<td>DPW</td>
<td>10/05/18</td>
<td>10/05/18 Misty Dawn Scott: Good morning Denise, I am in receipt of traffic violations on Soquel Drive however this would be an enforcement issue for the California Highway Patrol. The County of Santa Cruz Public Works does not have the authority for traffic violations ticketing enforcement. Thank you for taking the time to report these issues.</td>
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<td>10/04/18</td>
<td>Soquel Dr</td>
<td>Aptos</td>
<td>Ped: Other</td>
<td>There is very dangerous speeding occurring on Soquel Drive between State Park Drive and Park Avenue exits, particularly in front of the Apts: Shopping Center strip mall (with Pacific Coffee Roasting &amp; Frank's Pharmacy) and Mar Vista Elementary School. I live behind Aegis, work at Cabrillo, and my son attends Santa Cruz Montessori. I drive and walk that area a lot. Walking along Soquel has gotten very scary... cars zoom by right at the crosswalk and 25 mph sign. And, while driving I am pretty much run off the road when maintaining the speed limit (usually a little fast at 28-30 mph). It's bad in front of my son's school, too - Santa Cruz Montessori. I anticipate a fender-bender any day now - hopefully not worse. CHP had increased monitoring on this road in the past - it needs to happen again before someone is horribly injured.</td>
<td>DPW</td>
<td>10/05/18</td>
<td>10/05/18 Misty Dawn Scott: Good morning Denise. I am in receipt of traffic violations on Soquel Drive however this would be an enforcement issue for the California Highway Patrol. The County of Santa Cruz Public Works does not have the authority for traffic violations ticketing enforcement. Thank you for taking the time to report these issues.</td>
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<td>09/20/18</td>
<td>Mission</td>
<td>Santa Cruz</td>
<td>Ped: Audible crossing signal needs repair</td>
<td>On the corner with the Herb room, for crossing Mission towards Emily's, the housing containing the walk light button is extremely loose on the pole. Second, on the corner which used to have the pharmacy and now has an unoccupied building, for crossing Mission towards the second-hand store, the chirper in the audible pedestrian signal does not make a sound. As this is my home area crossing, it's extremely dangerous for me on a regular basis.</td>
<td>Caltrans, Jessica Bld, Julie Gonzalez, Carol Salas</td>
<td>09/20/18</td>
<td>9/21/18 Nancy Cross: She's received an email with her ticket number and the information below. We'll keep this open until the issue has been resolved. 10/2/18 Nancy Cross: This is to confirm the request below has been addressed by our Electrical crews, and an email was sent to the citizen. Note; initially sent to Jim Burr, City of Santa Cruz in July, should have been sent to Caltrans - see entry dated 7/27/18.</td>
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<td>09/12/18</td>
<td>6500 Soquel Dr</td>
<td>Aptos</td>
<td>Ped: Rough pavement or potholes</td>
<td>Sidewalk, mountain side of Soquel Drive, in front of the Cabrillo bus stop. Where the concrete meets asphalt, there is a raised ridge that I tripped over and skinned my knees.</td>
<td>DPW, then Metro</td>
<td>9/13/2018</td>
<td>9/17/18 Misty Dawn Scott: Good morning George, I am in receipt of your issue of raised sidewalk on Soquel Avenue. I will be forwarding your report to our Encroachment /Permits division of Public Works for their review. 10/11/18 Misty Dawn Scott: Good afternoon George. Our Encroachment / Road Operations Division of Public Works went out on your request and found that this is an issue with the Santa Cruz Metro bus stop and not a County of Santa Cruz Public Works issue. I hope this helps.</td>
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<td>09/05/18</td>
<td>724 Rio Del Mar Blvd</td>
<td>Aptos</td>
<td>Ped: Crossing Hazard</td>
<td>The pedestrian path across from the Deluxe shopping center on Rio Del Mar. what does it take to enhance it with flashing lights like by Whole Foods in Capitola? My life is in danger each time I cross and I cannot believe that CHP is never there to catch speeding cars!</td>
<td>DPW</td>
<td>09/06/2018</td>
<td>9/7/18 Misty Dawn Scott: Good afternoon Nick, I am in receipt of your traffic issue on Rio Del Mar Blvd. I will be forwarding your report to our Traffic division of Public Works for their review and reply. Thank you for taking the time to report this issue.</td>
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Looks like there will be perfect bike riding weather this weekend! If you go out on a ride, remember to keep crosswalks free and clear for pedestrians when you are stopped. For more Bicycle Safety tips see https://bit.ly/2T3IwWV
Taking a walk is a great way to get outside and get some exercise! During these shorter winter days, visibility can be reduced so make sure to wear reflective and visible clothing. For more Pedestrian Safety tips see https://bit.ly/2T3IwWV
Recommended Guidelines to Protect the Safety of Bicyclists and Pedestrians, Including Those with Disabilities During Road Construction, Maintenance or Encroachment

As stated in the California MUTCD 2012 Edition, “The needs and control of all road users (motorists, bicyclists, and pedestrians within the highway, or on private roads open to public travel, including persons with disabilities in accordance with the Americans with Disabilities Act of 1990 (ADA)) through a temporary traffic control (TTC) zone shall be an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents.”

THE PROBLEMS
There are three general situations which impact bicyclists, pedestrians, and disabled travelers:
1. Work in the bikeway or walkway that forces bicyclists or pedestrians to compete with motor vehicles in a narrow car lane.
2. Work which is not in the bikeway or walkway but which puts equipment, debris, or warning signs in the bikeway or walkway.
3. Work that blocks the direction of travel without a clear, safe, and convenient detour for cyclists, pedestrians, or wheelchair travelers.

In addition, please be aware of these specific hazards for bicyclists, pedestrians, and disabled travelers:

Hazards to Bicyclists
- Signs, equipment, or debris in the bikeway.
- Bikeway blocked without advance warning.
- Rough pavement or gravel without advance warning.
- Poor pavement transitions, especially when parallel to the line of travel (e.g. metal plate edges or pavement removal/resurface areas which are not tapered).
- Inadequate time to pass through a signalized traffic control.

Hazards to All Pedestrians (including those who are visually impaired or use mobility equipment)
- Blocked/hazardous walkway that is not marked in a way that is visible in advance, especially at night.
- Alternate route or detour that is not negotiable by pedestrians using wheelchairs, strollers, carts, etc.
- Blocked/hazardous walkway without a barrier that is solid enough to be discernible by guide dog or cane.
- Signs, equipment, or debris partially blocking the walkway or encroaching on minimum clearance envelope of 4 feet wide by 7 feet tall.
- Sidewalk blocked with no curb cut or ramp to exit or advance warning to exit at a prior curb cut.
- Rough pavement, grooves, or gravel without advance warning. Rocks of 3 inch diameter or greater are especially hazardous as they may cause a wheelchair to stop abruptly and eject the occupant.

* For the purposes of these guidelines, “bikeway” will be used to refer to the space usually used by bicyclists for travel within a given right-of-way, including painted bike lanes, paved shoulders, the right side of a wide travel lane, or the center of a narrow travel lane if there is no bike lane or shoulder. “Walkway” will be used to refer to sidewalks, shoulders, and paths where pedestrians, including people using wheelchairs, usually travel.
THE SOLUTIONS

The CA MUTCD follows these “fundamental principles” for bicyclists and pedestrians in TTC zones:

1. Bicycle and pedestrian “movement should be disrupted as little as practicable”
2. “Bicyclists and pedestrians, including those with disabilities, should be provided with access and reasonably safe passage through the TTC zone.”
3. “Motorists, bicyclists, and pedestrians should be guided in a clear and positive manner while approaching and traversing TTC zones and incident sites.”

In addition, please consider the following specific safety and access measures:

Detours
- When construction blocks the bikeway, accommodations should be made for bicyclists if they are made for motorists, including safe and well-marked detours when needed. When motorists are detoured, try finding a safe corridor that may be left open for bicyclists. If not possible, post “End Bike Lane” and “Bikes May Use Full Lane” (BMUFL) signs to encourage cyclists to merge into the travel lane. Rather than directing bicyclists to walk their bikes, try to provide a rideable alternative.
- If construction or signs must block the walkway, establish safe, well-signed detours for pedestrians that are accessible for pedestrians using wheelchairs, strollers, carts, etc.
- When traffic control is conducted using temporary traffic signals, timing should accommodate bicyclists, who will be slower than motor vehicles, especially in the uphill direction. Consider push button signals or special bicycle loop detectors for bicyclists, if practical.
- Barriers should have a portion low enough and solid enough to be easily discernible by a cane, guide dog, or child. If necessary, use flaggers to guide pedestrians in a clear, calm manner.
- For long-term duration projects, the chevron-style “shared roadway bicycle marking” (sharrow) may be used along detours with on-street parking and inadequate lane width.

Signs
- Whenever possible, construction warning signs should be placed out of the bikeway and walkway, so that the sign itself is not a barrier for bicyclists, pedestrians, or wheelchair travelers. Remove construction signs promptly when construction pauses or ends.
- Any construction or sign that blocks the bikeway should have sufficient sight distance, including nighttime visibility, to allow cyclists time to merge safely into the travel lane. Use “End Bike Lane” and “BMUFL” signs appropriately.
- Any construction or sign which blocks the walkway should have prior warning to allow pedestrians and wheelchair travelers time to exit the walkway at a prior curb cut.
- For all construction where the bikeway or walkway is blocked or narrows, post appropriate caution signs to warn motorists to slow down and watch for bicyclists and pedestrians.

Pavement Surface
- Temporary pavement or metal plates installed during TTC zones should have cold mix asphalt tapered at the edges for bicyclist, pedestrian and wheelchair traveler safety. Avoid placing metal plate edges in the middle of the bikeway. Debris in the bikeway or walkway should be cleared at the end of each workday.
- If no smooth surface is available for bicyclists, pedestrians, or wheelchair travelers, post signs warning “Rough Surface” or “Uneven Pavement” at the beginning of the work area. Keep signs posted at the end of the workday. Use reflective signage on barricades with flashers for night safety.
- Prior to “sign off” on projects, verify that the pavement in the bikeway and walkway is even. Overlay should be smoothed at drainage grates, manholes, and gutter pan, and after narrow trenching in the bikeway.
This handbook provides information for workers in the field for accommodating pedestrians with disabilities through and around work zones.

June 2014
Introduction
Caltrans maintains safe and convenient access for users of its roads, highways, and facilities. The needs and control of road users are an essential part of highway construction, utility work, maintenance operations, and management of traffic incidents through use of temporary traffic control zones. Caltrans developed this handbook to help field staff accommodate pedestrians, including persons with disabilities, through and around work zones.

Related Caltrans Standards
- Section 7-1.02A, “General,” of the 2010 Standard Specifications requires the contractor to comply with current laws, regulations, orders, and decrees.
- Section 7-1.04, “Public Safety,” requires that the contractor provide for the safety of the public during construction.
- Section 12, “Temporary Traffic Control,” directs the contractor’s attention to the California Manual on Uniform Traffic Control Devices (California MUTCD).
- Section 12-7, “Temporary Pedestrian Walkways,” requires the contractor to construct temporary pedestrian facilities in compliance with the California MUTCD, Part 6, Chapter 6D, “Pedestrian and Worker Safety.”

General Requirements
Ensure the contractor follows these guidelines:

- If the contractor’s activity requires closing a pedestrian pathway, another pathway must be made available nearby, off the traveled way. This pathway must replicate, to the maximum extent possible, the characteristics of the existing pathway. Special care should be given to areas in schools and senior citizen center locations.
• Advanced signing notification of sidewalk closures must be provided.

• Pedestrian facilities must be maintained in good condition and kept clear of obstruction.

• Traffic control devices, equipment, and other construction materials and features must not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility.

• Signs and other devices mounted lower than 7 feet above the temporary pedestrian pathway should not project more than 4 inches into accessible pedestrian facilities.

• Where pedestrian openings through falsework are required, a temporary pedestrian facility with protective overhead covering must be provided during all bridge construction activities.

• Hand railings on each side of temporary pedestrian facilities must be provided as necessary to protect pedestrian traffic from hazards due to work activities or adjacent vehicular traffic.

• Protective overhead covering must be provided as necessary to ensure protection from falling objects and dripping from overhead structures.

• When affected by an activity, a continuous unobstructed pathway connecting all existing accessible elements (parking lots, bus stops) through the project must be maintained.

The resident engineer may require a pedestrian traffic-handling plan if the affected facility is not identified in the contract plans. The contractor is responsible for accommodating pedestrians through temporary traffic control (TTC) whenever the work disrupts pedestrian facilities.
California MUTCD Requirements

The following three items should be considered when planning for pedestrians in TTC zones:

1. Pedestrians should not be led into conflicts with work site vehicles, equipment, and operations.
2. Pedestrians should not be led into conflicts with vehicles moving through or around the work site.
3. Pedestrians should be provided with a reasonably safe, convenient, and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalk or footpath.

General Considerations

The contractor should consider the following items when planning the temporary facility:

- A pedestrian route must not be severed or moved for non-construction activities such as parking for vehicles and equipment.
- A barrier, detectable by a person with a visual disability traveling with the aid of a long cane, must be placed across the full width of the closed sidewalk they would normally use.
- A reasonably safe route that does not involve crossing the roadway must be provided. If this is not possible, advance signing should direct pedestrians to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, place these signs at intersections.
- Midblock work sites should not induce pedestrians to attempt skirting the work site or make a midblock crossing. (See Figures 1 and 2.)
Figure 1. Sidewalk Detour or Diversion
Figure 2. Crosswalk Closures and Pedestrian Detours
Temporary Pedestrian Facilities Handbook

• Pedestrian movements should be separated from both work site activity and vehicular traffic. When pedestrians are routed adjacent to live traffic, barrier protection must be provided to prevent vehicles from entering the pedestrian facility.

• Tape, rope, or plastic chain strung between devices as controls for pedestrian movements must not be used. They are not readily detectable by persons with a visual disability.

• Where barricades channel pedestrians, continuous detectable bottom and top rails must be used, with no gaps between individual barricades for users of long canes. The bottom of the bottom rail must be no higher than 2 inches above the ground surface. The top of the top rail must be at least 32 inches above the ground. Refer to Part 6, Sections 6F.63 and 6F.68 of the California MUTCD.
Permanent Facilities

Construct permanent new facilities and alterations to existing facilities according to the contract plans and specifications.

Additional resources for consideration:

- Caltrans Design Information Bulletin 82, “Pedestrian Accessibility Guidelines for Highway Projects,” which addresses requirements for new construction and alterations of existing facilities.


- Contact the district design unit to develop plans for any permanent facility to be added by contract change order.

During the inspection process, check that all contractor-installed finished elements comply with dimensions and installation requirements. Check all slopes using a 2-foot-long smart level on elements with a dimension of 4 feet or less, and a smart level at least 4 feet long on elements with a dimension greater than 4 feet.

_Do not exceed any of the maximums shown in the requirements. They are absolute._
ADA Checklist

Temporary pedestrian facilities must be verified against this checklist for compliance with the *Americans with Disabilities Act Accessibility Guidelines* (ADAAG). Document the reasons why any item does not conform to this checklist.

Accessible Route Basics

- The path must be stable, firm, and slip resistant. Pedestrian facilities must be surfaced with asphalt concrete, portland cement concrete, or timber. Dirt is not an acceptable surface.

- The surface should be smooth and continuously hard throughout the entire length of the temporary pedestrian facility. No abrupt changes should exist in grade or terrain that could cause tripping or be a barrier to wheelchair use.

- Surface discontinuities must not exceed ½ inch maximum. Vertical discontinuities between ¼ inch and ½ inch should be beveled at a maximum of 2:1 or flatter, and bevels should be constant across the entire level change. New surfaces must not have vertical surface discontinuities. Curb ramps, landings, and gutter areas must not have surface discontinuities. (See Figure 3.)

![Figure 3. Surface Discontinuities](image-url)
On pedestrian access route joints and gratings, surface openings must not permit passage of a sphere larger than 1/2 inch. Place horizontal surface openings so that the long dimension is perpendicular to the dominant direction of travel. (See Figure 4.)

The cross slope must be no greater than 1:50 (2 percent).

The running slope must be no greater than 1:20 (5 percent). Otherwise, meet the ramp requirements discussed below. For street facilities, the running slope may follow the adjoining street.

When feasible, a width of 60 inches should be maintained throughout the pedestrian pathway. (See Figure 5.)

When it is not possible to maintain a width of 60 inches, a 60 x 60-inch passing space must be provided at least every 200 feet to allow individuals in wheelchairs to pass. (See Figure 6.)

The path must have a clear width of no less than 48 inches. Verify that no fixed objects (cabinets, poles, and so forth) will reduce the path width at any point. (See Figure 7.)
Figure 5. Preferred Pedestrian Path Width

Figure 6. Passing Space
Figure 7. Minimum Path Width
Signs and other devices mounted lower than 7 feet above the temporary pedestrian pathway should not project more than 4 inches into accessible pedestrian facilities. Refer to Part 6, Section 6D.02 of the California MUTCD. (See Figure 8.)

Object must not protrude into the path. Check with the project engineer for exceptions.

Vertical clearance must be 80 inches minimum.

If the path requires a 180-degree turn, the turning pad must be at least 60 inches deep. (See Figure 9.)

Access to nearby temporary transit stops must be provided.
Pedestrians may need temporary nighttime lighting. Refer to contract plans and specifications for requirements.

**Ramps**

- The cross slope must be no greater than 1:50 (2 percent).
- The running slope must be no greater than 1:12 (8.33 percent).
- Each ramp must have level landings at the bottom and top. A landing must be as wide as the run leading to it and have a minimum length of 60 inches. (See Figure 10.)
- Ramps must have hand railings and edge protection.

**Figure 9. Wheelchair Turning Space (ADAAG)**

**Figure 10. Components of a Single Ramp and Sample Ramp Dimensions (ADAAG)**
Curb ramps to be constructed on sites or facilities where space limitations prohibit the use of a 1:12 slope or less may have slopes and rises as follows:

- A slope between 1:10 and 1:12 is allowed for a maximum rise of 6 inches.
- A slope between 1:8 and 1:10 is allowed for a maximum rise of 3 inches.
- A slope steeper than 1:8 is not allowed.

**Scaffolding**

- Pedestrian facilities must be maintained in good condition and kept clear of obstructions.
- Traffic control devices, equipment, and other construction materials and features must not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility. Signs and other devices mounted lower than 7 feet above the temporary pedestrian pathway should not project more than 4 inches into accessible pedestrian facilities.
- Where pedestrian openings through falsework are required, a temporary pedestrian facility with protective overhead covering must be provided during all bridge construction activities.
- Hand railings on each side of temporary pedestrian facilities must be provided as necessary to protect pedestrian traffic from hazards due to work activities or adjacent vehicular traffic.
- Protective overhead covering must be provided as necessary for protection from falling objects and dripping from overhead structures.
Pedestrian Push Buttons

☐ The pedestrian push button must have an unobstructed forward reach. For the exact height of the button, refer to the Standard Plans. (See Figure 11.)

![Figure 11. High Forward Reach (ADAAG)](image)

Objects that require a forward reach must be placed no lower than 15 inches and no higher than 48 inches.

☐ If the pedestrian push button requires a side reach, obstructions at the bottom cannot extend more than 24 inches from base. For the exact height of the button, refer to the Standard Plans. (See Figure 12.)

☐ A pedestrian push button used to provide equivalent TTC information to pedestrians with visual disabilities should be equipped with a locator tone to notify them that a special accommodation is available and help them locate the button.
Audible Information Devices

A wide range of pedestrians might be affected by TTC zones, including the young, elderly, and people with disabilities such as hearing, visual, or mobility. These pedestrians need a clearly delineated and usable travel path.

A speech message by an audible information device is the preferred way of providing information equivalent to visual signage to notify pedestrians with visual disabilities of sidewalk closures.
Devices that provide speech messages in response to passive pedestrian actuation (motion sensor) are preferred.

Other devices that continuously emit a message or a message in response to use of a pedestrian push button are also acceptable.

Signage information can also be transmitted to personal receivers, but currently pedestrians with visual disabilities are not likely to carry or use such receivers in TTC zones.

Audible information devices may not be needed if detectable channelizing devices make an alternate route of travel evident to pedestrians with visual disabilities.