





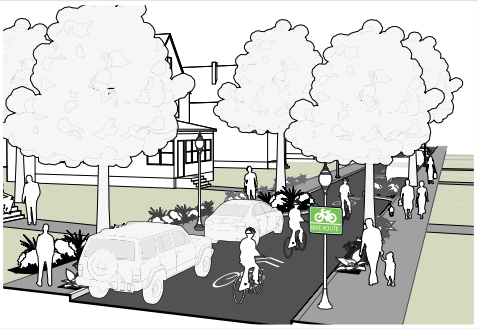



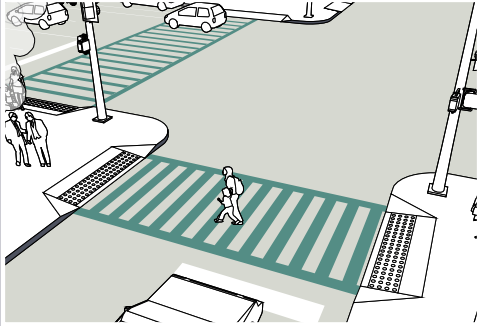

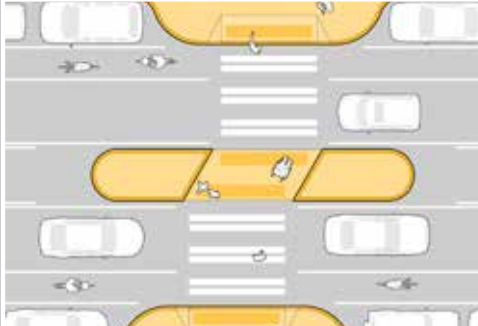
Walkway & Bikeway Toolkit


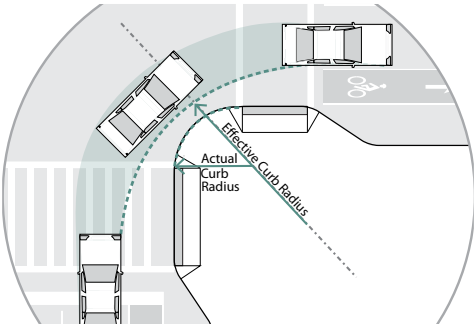

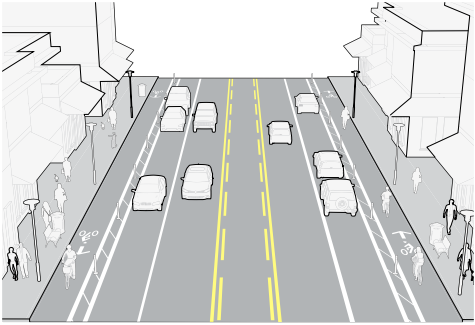
Table 4 represents high-level guidance for the planning, design, and construction of Las Cruces’ active transportation network. Design considerations unique to each treatment and appropriate street types are also included. As with all facilities, walkways and bikeways should be designed consistent with local, state, and federal standards. However, variances should be considered if needed to provide a higher-quality facility consistent with the National Association of City Transportation Officials (NACTO) *Urban Bikeway Guide* and *Urban Street Design Guide* and with FHWA’s 2016 *Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts* guidebook.

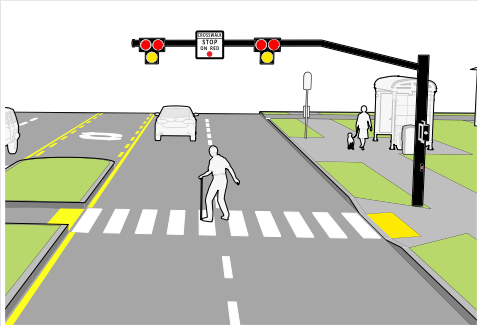
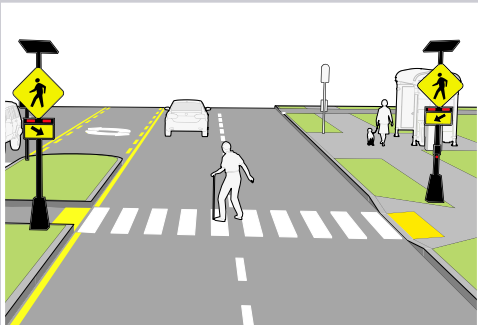

Table 4. Walkway & Bikeway Toolkit

Treatment Type	Description	Design Considerations	Street Type
Linear Facilities			
<p>Sidewalks</p> 	<p>Sidewalks provide dedicated space for pedestrians. Sidewalks are separated from travel lanes with curbs or buffer areas.</p>	<p>Sidewalks should be at least five feet wide to provide space for side-by-side walking and wheelchair use. They should be separated from travel lanes with a buffer that could accommodate street trees, landscaping, or street furniture. In most cases, sidewalks should be constructed on both sides of the street.</p>	<p>Any non-freeway street</p>
<p>Trails</p> 	<p>Shared use paths, also known as trails, include paved and unpaved paths that can be used by both pedestrians and bicyclists. Shared use paths can follow streets for short distances but are typically located away from streets.</p>	<p>Trail intersections should provide wayfinding to direct trail users. Where heavily utilized or around curves, a centerline can encourage users to stay to the right. Crossings at major streets should draw motorists’ attention and encourage yielding.</p>	<p>In parks, utility corridors, abandoned railroad corridors, and along arroyos and canals</p>
<p>Sidepaths</p> 	<p>Sidepaths are paved paths that can be used by both pedestrians and bicyclists. Sidepaths are located adjacent to streets and can connect to off-street trails.</p>	<p>Crossings at intersections and driveways should draw motorists’ attention and encourage yielding. Recessed crossings at driveways can improve interactions between bicyclists and motorists.</p>	<p>Arterials and collector streets with good visibility and few intersections or driveways</p>

Treatment Type	Description	Design Considerations	Street Type
<p>Separated Bike Lanes</p> 	<p>Separated bike lanes dedicate space to bicyclists that is physically separated from both motorists and pedestrians. Common vertical separators include planters, curbs, plastic delineators, and on-street parking. Separated bike lanes can be designed to accommodate one-way or two-way travel.</p>	<p>Bicycle signals, lateral offsets, signs, and markings can improve safety at intersections and driveways. Transitions to trails and other bicycle facilities should be clear and intuitive.</p>	<p>Arterials and collector streets</p>
<p>Buffered Bike Lanes</p> 	<p>Buffered bike lanes include a striped buffer area in addition to the bike lane, typically positioned between the bike lane and adjacent travel lane. In some cases, the buffer may be placed next to on-street parking to mitigate collisions with opening doors.</p>	<p>Cross-hatched buffers, clearly communicate the buffer's function. Where pavement width allows and on-street parking exists, buffers can be provided on both sides of the bike lane.</p>	<p>Collector streets and major local streets</p>
<p>Bike Lanes</p> 	<p>Conventional bike lanes provide space within the street for exclusive bicycle travel. Signs and markings remind motorists that the bike lane is intended solely for bicyclist travel.</p>	<p>Bike lanes should be striped at intersection approaches and through intersections if the need for clarity exists. Bike lanes should meet minimum width requirements exclusive of the gutter pan.</p>	<p>Collector streets and major local streets</p>
<p>Bike Boulevards</p> 	<p>Bike boulevards optimize local streets for bicycle travel by reducing traffic volumes and speeds. Bike boulevards include wayfinding signs and shared lane markings at a minimum.</p>	<p>Beyond signs and markings, bike boulevards generally include traffic calming features – such as speed humps, curb extensions, traffic circles, and traffic diversion treatments. In Las Cruces, select bike boulevards could be implemented as Cool Corridors (see page 29) to offer a truly comfortable bicycling experience.</p>	<p>Local streets</p>

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<p>Paved Shoulders</p> 	<p>Paved shoulders are primarily constructed to accommodate emergency stops, provide space for emergency vehicles, and extend pavement life. However, they can also be used by bicyclists.</p>	<p>Paved shoulders can collect debris and should be swept to facilitate bicycle travel. Gaps should be provided in shoulder rumble strips to accommodate turning or merging bicyclists. Signage can remind motorists to expect bicyclists in paved shoulders.</p>	<p>Any street without curbing, rural streets</p>
Pedestrian or Complete Streets Treatments			
<p>Crosswalks</p> 	<p>Crosswalks facilitate pedestrian crossings at intersections and mid-block locations. In New Mexico, motorists are legally required to yield to pedestrians in any unsignalized crosswalk.</p>	<p>On higher-volume, higher-speed, multilane streets, marked crosswalks should be accompanied by treatments to encourage motorist yielding and improve pedestrian safety, such as parking restrictions, nighttime lighting, yield signs and markings, median refuge islands, and pedestrian hybrid beacons.</p>	<p>Any non-freeway street</p>
<p>Curb Ramps</p> 	<p>Curb ramps provide smooth transitions from sidewalks to streets at intersections and crossings which serve pedestrians with mobility devices. Curb ramps can also serve people with strollers or people on bicycles.</p>	<p>Curb ramp design and construction must comply with ADA requirements to ensure that they can be used by people with disabilities. ADA-compliant curb ramps typically include detectable surfaces to warn visually-impaired people of the bottom of the ramp.</p>	<p>Any street</p>
<p>Median Refuge Islands</p> 	<p>Median refuge islands allow pedestrians and bicyclists to cross one direction of traffic at a time. They shorten crossing distances, enhance visibility, and provide spaces for pedestrians waiting for traffic to pass.</p>	<p>Median refuge islands should be accompanied by crosswalk markings, signs, lights, and signals. At mid-block locations, median refuge islands can also encourage pedestrians to look for traffic by using an angle or zig-zag design and offsetting the crosswalks on either side.</p>	<p>Any street</p>

Treatment Type	Description	Design Considerations	Street Type
<p>Gateway Treatment</p> 	<p>The gateway treatment includes signs between travel lanes and on the edge of the road reminding motorists to yield to pedestrians at crosswalks.</p>	<p>In-street sign placards should be placed at mid-block crosswalks. Yield markings can help to draw attention to the presence of crosswalks.</p>	<p>Collector streets and local streets</p>
<p>Curb Radius Reductions</p> 	<p>Small curb radii encourage reduced turning speeds, shorten crossing distances, and improve intersection visibility.</p>	<p>A high frequency of right turns by large vehicles may preclude curb radius reductions. Occasional right turning movements by large vehicles can be accommodated through stop bar setbacks and curb aprons.</p>	<p>Any street</p>
<p>Access Management</p> 	<p>Access management seeks to reduce potential conflicts and improve predictability through turn restrictions, driveway consolidation, and driveway narrowing.</p>	<p>Driveway consolidation may increase the frequency of turns into and out of each driveway, which could necessitate pavement markings and signs to remind motorists, bicyclists, and pedestrians to watch out for one another.</p>	<p>Arterial streets and collector streets</p>
<p>Street Reconfigurations</p> 	<p>Also known as road diets, street reconfigurations reduce the number of vehicular travel lanes on multi-lane roadways, often allocating space instead to bike lanes, center left-turn lanes, or on-street parking. According to FHWA, road diets of four-lane undivided streets are associated with a 19 to 47 percent reduction in overall crashes.</p>	<p>In some cases, road diets can add bike lanes simply by narrowing existing travel lanes without impacting motor vehicle flow. Road diets on streets with on-street parking may position the parking lane to provide parking-protected bike lanes. To understand potential impacts, analysis should be performed before completing a road diet.</p>	<p>Multilane arterial streets and collector streets</p>

Treatment Type	Description	Design Considerations	Street Type
<p>Pedestrian Hybrid Beacons</p> 	<p>Also known as HAWK beacons (High-Intensity Activated Crosswalk beacons), pedestrian hybrid beacons are signals that stop vehicles with a red indication and allow pedestrians to cross with a walk signal.</p>	<p>Coordination with nearby traffic signals should be considered if pedestrian hybrid beacon activations could create motor vehicle queuing issues. Pedestrian hybrid beacons can provide crossing times that are long enough to accommodate slower pedestrians such as children and people with mobility disabilities.</p>	<p>Any street</p>
<p>Rectangular Rapid Flashing Beacons</p> 	<p>Rectangular rapid flashing beacons are signs with yellow flashing lights that draw motorists' attention to pedestrians in the crosswalk.</p>	<p>When used, median refuge islands should include activation buttons in the median to accommodate two-stage crossings.</p>	<p>Collector streets and local streets</p>
<p>Traffic Signals</p> 	<p>Traffic signals help separate conflicts between people driving, bicycling, and walking at intersections through red, yellow, and green circles and arrows; pedestrian signals; and bicycle signal heads.</p>	<p>Traffic signals without pedestrian push buttons should call the pedestrian signal every cycle. Crosswalk markings and bike lane extension markings can further improve awareness of pedestrians and bicyclists.</p>	<p>Any street</p>