

3.7 Public Transit

3.7.1 General Provisions

- 3.7.1.1 The provisions of this section describe appropriate transit stop facilities by location and the layout of stop area features. Other considerations in this section include roadway design issues that should be addressed during reconstruction projects, as well as guidance for dedicated transit infrastructure.
- 3.7.1.2 Site development applications and City roadway projects may be reviewed by ABQ RIDE and Rio Metro Regional Transit District (RTD) for the provision of transit facilities, where applicable. Contributions to transit stop amenities may be asked of a site developer as a mitigation measure in lieu of a roadway improvement. See the TIS section on mitigation measures for additional guidance.
- 3.7.1.3 Guidance for this section is derived from the sources listed below. Updated versions of these documents or equivalent sources may be utilized with the approval of the City Engineer and the affected transit provider.
- U.S. Access Board's draft *Public Rights of Way Accessibility Guide* (PROWAG, 2013 version).
 - NACTO *Transit Street Design Guide* (2016 version)
 - AASHTO *Guide for the Geometric Design of Transit Facilities on Highways and Streets* (2014 version)
 - American Public Transportation Association *Designing Bus Rapid Transit Running Ways*, 2010
 - TCRP Report 90 *Bus Rapid Transit Volume 2: Implementation Guidelines*, 2003

3.7.2 Pedestrian Connections to Transit Stops

1. Per section 14-6-4 C of the IDO, all non-residential, mixed use, and multifamily developments adjacent to transit stops, stations, and park and ride facilities must provide pedestrian connections.
2. See the Network Connectivity section for additional guidance on pedestrian crossings.
3. Sidewalks wider than the minimum standards are a high priority along Premium Transit and Major Transit corridors.

3.7.3 Boarding and Alighting Areas

- 3.7.3.1 At least one boarding area shall be provided at each stop or station for use of the front door of the bus. At high-volume stops a similar area should be provided for the rear door(s) as well.
- 3.7.3.2 The boarding and alighting area shall be a clear space that is at least 5 feet wide in the direction parallel to the roadway and 8 feet wide in the direction perpendicular to the roadway.

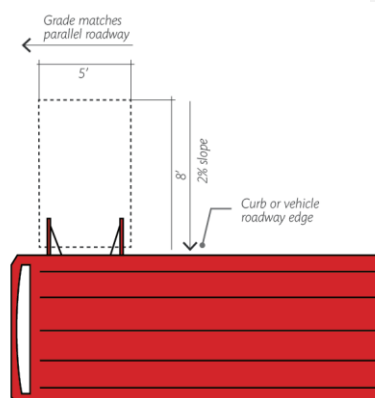


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- 3.7.3.3 The slope of the boarding and alighting area shall match the roadway grade in the direction parallel to the roadway. The grade perpendicular to the roadway shall be no more than 2%.
- 3.7.3.4 The boarding and alighting area must be firm, stable, and slip-resistant.
- 3.7.3.5 The boarding and alighting area shall be connected to sidewalks, private pedestrian walkways, existing bus shelters, and roads by an ADA-compliant pedestrian access route.
- 3.7.3.6 All curbside bus stops shall be designed to accommodate at least one bus serving the boarding and alighting area. The length of the bus queueing space depends on the type of vehicle(s) expected to serve the route. If there are multiple routes and thus multiple buses serving the stop the queueing space should be extended accordingly. Potential transit service expansion and future routes should also be considered.

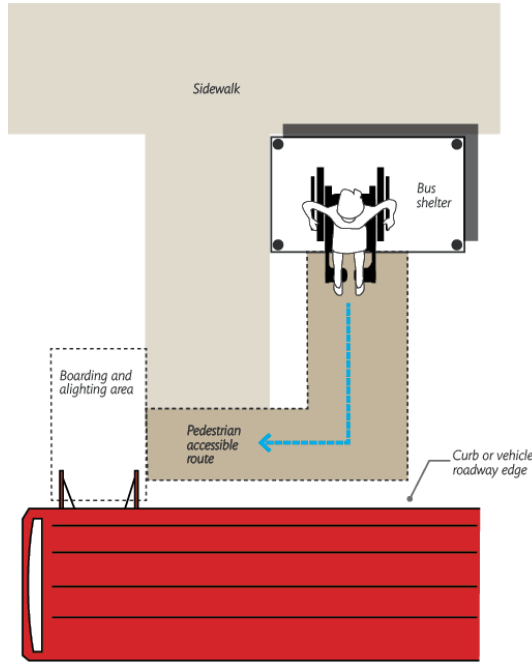


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3.7.4 Transit Stop Types

The following contains guidance on transit stop types and desired amenities by location. It is expected that transit stops be integrated into the pedestrian realm. Additional right-of-way or easements may be required to implement desired amenities along existing roadways. See the Sidewalks section for additional guidance. Per the Access and Connectivity chapter of the IDO (section 14-6-4-3.4), there must also be pedestrian connections from adjacent developments to transit stops and stations.

3.7.4.1 Basic Transit Stop

1. A basic transit stop consists of an ADA-accessible boarding and alighting area with easily identifiable signage indicating the location of the stop. Basic transit stops are most commonly associated with bus transit.
2. Basic stops are the minimum required transit stop infrastructure and are generally acceptable at locations where there are no more than two buses per weekday peak hour arriving at the stop. Basic transit stops do not feature benches or shelters.
3. Transit stops should be located near marked or protected pedestrian crossings, where possible.
 - a. A minimum of 10 feet of distance should be provided ahead of the transit vehicle at near-side stops.
 - b. At least 10 feet of distance should be provided behind the vehicle to the crosswalk at far-side stops, with a distance of 35 to 50 feet preferable.

3.7.4.2 Transit Stop with Bench

1. A bench should be provided at transit stops on Major Transit corridors, locations where there are at least two buses per hour in the peak period arriving at the stop, or where considered appropriate by ABQ RIDE or the Rio Metro RTD.
2. The bench must be located so that it does not block the clear sidewalk width, preferably with the sidewalk routed between the bench and the curb.
3. The front of the bench should not be placed closer than 4 feet from the back of the curb, or 6 feet from the back of the curb when a travel lane exists immediately adjacent to the curb.
4. Benches should be oriented toward the street or the direction of the approaching transit vehicle.
5. The bench site area should include ADA-compliant pedestrian access route connections (minimum 4 feet wide) to the sidewalk and the boarding and alighting area.
6. The bench site should include a level 30" by 48" maneuvering space adjacent to the bench that is firm, stable, and slip-resistant.
7. ADA-compliant bench design requirements are:
 - a. Seat length: 42 inches minimum
 - b. Seat height: 17-19 inches
 - c. Seat depth: 20 inches minimum, 24 inches maximum
 - d. Seat back, top: 18 inches minimum above the seat
 - e. Seat back bottom: 2.0 inches maximum above the seat

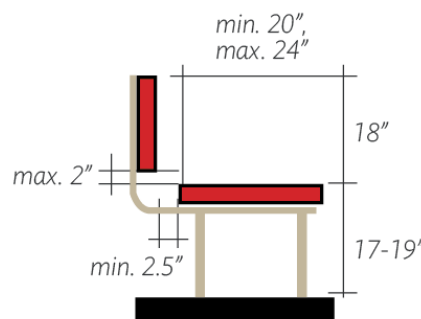


Figure Error! No text of specified style in document.-3 Error! No text of specified style in document.-4 - ADA Compliant bench design requirements

- f. Separation between the seating surface and the seat back should be a minimum of 2.5 inches.
- g. The wall of a shelter may serve as the seat back.

3.7.4.3 Transit Stop with Shelter

1. A shelter should be provided, where feasible, at the following transit stop locations:
 - a. Along Major Transit corridors
 - b. Locations where there are at least three total buses per hour in the peak hour
 - c. Within Comp Plan-designated Centers
 - d. Where considered appropriate by ABQ RIDE and/or the Rio Metro RTD
2. The shelter must be located so that it does not block the clear sidewalk width.
3. Shelters should not be placed closer than 4 feet from the leading edge of the roof of the shelter to the face of the curb. Where feasible 6 feet is desired.
4. Shelters shall be oriented toward the street or the direction of the approaching transit vehicle.
5. The shelter site area shall include ADA-compliant pedestrian access route connections (minimum 4 feet wide) to the sidewalk and to the boarding and alighting area.
6. Shelters should include space to rest, such as a bench or leaning rail.
7. Shelters shall have a minimum clear floor space of 4 feet by 4 feet for wheelchair users. The clear space shall be located under the shelter roof adjacent to any seating areas and not in front of or behind the seating area.
8. Any protruding objects in the shelter shall comply with ADA requirements.

3.7.4.4 Transit Station

1. Usually associated with a premium service such as Bus Rapid Transit, transit stations are distinguished from transit stops by having level-boarding platforms and passenger amenities such as ticket vending machines and real-time transit information, as well as common transit stop amenities such as seating, shelters, and/or leaning rails.
2. Transit stations are most appropriate along Premium Transit corridors.
3. Transit stations may be located curbside or in the median. If a station is located in the median, marked or protected pedestrian crossings must be provided to the sidewalks on either side of the street.
4. Pedestrian crossings shall be provided directly to or within 100' of the transit station. See the Network Connectivity section for additional guidance on pedestrian crossings.
5. See National Association of City Transportation Officials (NACTO) Transit Design Guide or other documents considered appropriate by ABQ RIDE and Rio Metro RTD for guidance on transit station design.

3.7.4.5 Park and Ride Facilities

1. Parking lots or formal station facilities that allow commuters and other transit users to leave their vehicles and transfer to public transit vehicles. Park and ride facilities generally serve as transfer facilities for multiple routes. Park and rides should include space for picking up and dropping off passengers, bicycle racks, traveler information, shelters, and other station amenities.
2. Design for park and ride facilities is based on the available parcel or lot size and should follow general site development standards outlined in the DPM, including on-site circulation requirements and guidelines for pedestrian access from surrounding roads to boarding and alighting areas.

3. See sections on Driveway Access and Curb Cuts for guidance on vehicle access to park and ride facilities.
4. Pedestrian access should be provided from developments at sites adjacent to park and ride facilities.

3.7.5 Roadway Design Considerations for Transit

3.7.5.1 Travel Lanes

1. Where transit operates in mixed flow traffic – generally the outside lane – widths at the higher end of the ranges provided in Table 1 in the Street Elements section may be appropriate. Narrow lanes (i.e. at the low end of the range provided in Table 1 in the Street Elements section) may be provided for other lanes along the same corridor where transit does not operate)
2. Where transit operates adjacent to on-street parking, 12' travel lanes and 8' wide on-street parking spaces are preferred, though narrower widths may be considered under constrained circumstances.

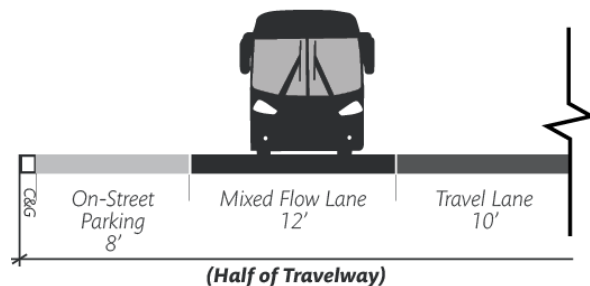


Figure Error! No text of specified style in document.-5 Travel Lane

3.7.5.2 Dedicated Transit Infrastructure

1. Dedicated transit infrastructure refers to the portion of the road or right-of-way allocated exclusively for transit vehicles and associated improvements. This design approach reduces traffic delays and conflicts and improves transit travel time reliability.
2. Dedicated transit infrastructure may take the form of a separate lane or transit guideway and may be located curbside or in the median.
3. Dedicated transit lanes may be shared use under limited contexts, such as for emergency response, providing business access along a curbside lane, or through time-of-day restrictions.
4. Signage and pavement markings are necessary where physical separations between dedicated transit infrastructure and general purpose travel lanes do not exist.
5. Dedicated transit infrastructure is most appropriate along Premium Transit and Major Transit corridors.
6. See the NACTO *Transit Design Guide* or other documents considered appropriate by ABQ RIDE and Rio Metro RTD for additional guidance on dedicated transit infrastructure.
7. See the MUTCD for guidance on lane striping and pavement markings required for dedicated transit infrastructure.

3.7.5.3 Curbside Transit Lanes

1. Dedicated curbside bus transit lanes should be 10-12' in width not including the gutter, with 11' width preferred. Narrower lanes are most appropriate when operating speeds are 25 MPH or below, or where right-of-way is severely constricted.
2. Lane widths at stop locations may be reduced to 10'.
3. Curbside lanes may be separated by concrete barrier or rumble strip depending on the roadway design speed and available right-of-way.
4. If right-of-way is constrained and no landscape buffer currently exists, a minimum 2-4' separation, including the gutter, should be provided between the sidewalk and the curbside transit lane.
5. Curbside transit lanes may be used for business access or right turns. Alternatively, right turns may be restricted to signalized turning movements.

Comment [RMM1]: Generally taken from APTA, including shoulder recommendations

3.7.5.4 Median Transit Lanes

1. Median transit lanes should be 11-13', with a recommended width of 12'. The lane width may be reduced if there are guideways or tracks to steer transit travel.
2. Median transit lanes and center platform stations require a minimum of 28' for the boarding and alighting area and dedicated lanes on both sides.
3. Some form of separation, such as a raised curb or rumble strips, is desirable between the transit lane and adjacent general purpose lanes.
4. Roadway designs must accommodate left turns at regular intervals through dedicated turn lanes and protected signals.

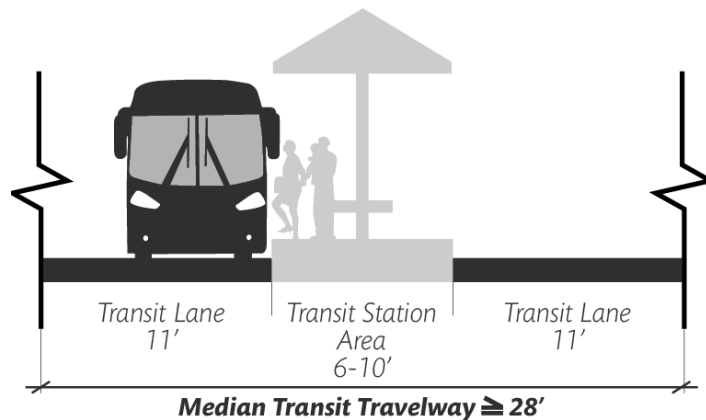


Figure Error! No text of specified style in document.-6B. Median transit lanes and center platform station

3.7.5.5 Queue Jump Facilities

1. Queue-jumps are short transit-only facilities at intersections that are combined with signal prioritization to allow for buses to enter traffic flow ahead of general purpose travel lanes. Queue jump facilities can be applied in the curbside travel lane where stops are located adjacent to signalized intersections or in a short-length special bus-only travel lane.

2. Queue jump facilities may require additional right-of-way at intersections or the reallocation of a dedicated right-turn lane. Curbside queue jump facilities require right turns to be made from the nearest inside travel lane.
3. Queue jump facilities are most appropriate along Major Transit and Premium Transit corridors.
4. See the NACTO Transit Design Guide or other documents considered appropriate by ABQ RIDE and Rio Metro RTD for guidance on the design of queue jump facilities.

3.7.5.6 Bus Turnouts and Bus Bays

1. Additional right-of-way may be required for bus turnouts and bus bays on arterial and collector streets at locations determined by the City Engineer. The width of the additional right-of-way will be whatever is necessary to provide 10' from face of the curb along the bus bay, plus the additional area for a shelter. The length of the bus bay depends on the length of the vehicle(s) serving the route.
2. Dedication of right-of-way for transit amenities (e.g. bus bay, shelter, and sidewalk) may be required as a condition of approval for site plans. An easement for these purposes is satisfactory provided platting is not otherwise occurring on the property. Bus bay design must provide for conveyance of nuisance drainage flow by valley gutter or other approved means.
3. Bus turnouts consist of a dedicated zone on the side of a roadway for passenger boarding and alighting that prevents travel lanes from being blocked when buses stop to pick up and drop off passengers.
4. Bus turnouts may be utilized where sufficient space exists on the side of the road to allow a transit vehicle to fully exit the travel lane. Bus turnouts require zones for deceleration, stopping, and accelerating to ensure transit vehicles can safely enter and exit the turnout, and may require the restriction of on-street parking to provide acceleration and deceleration zones.

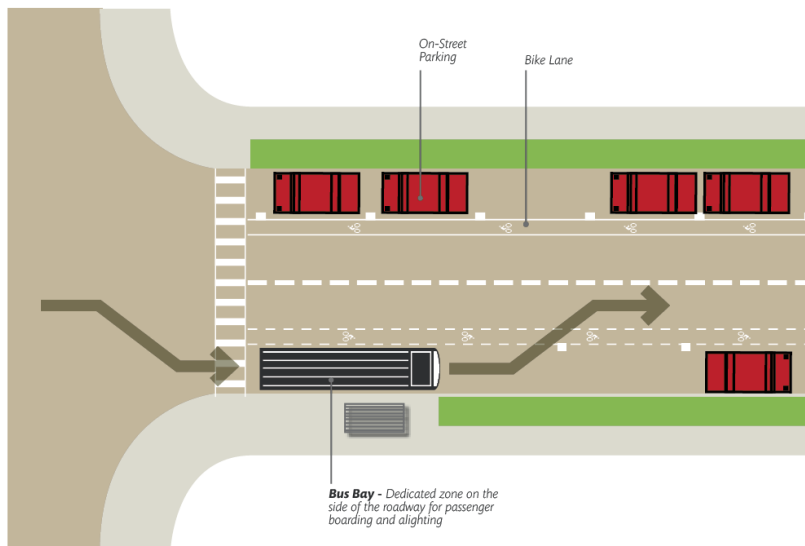


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5. Bus bays are similar to bus turnouts in that they provide a dedicated space for passenger boarding and alighting at the side of a road. In contrast to turnouts, bus bays have a protected zone with entrance and exit tapers. Bus bays require setbacks to enable the transit vehicle to completely exit the travel lane.
6. Bus bays are most appropriate along corridors where the speed limit is 40 MPH or greater, or locations where maintaining efficient vehicle throughput is a high priority. Bus bays may be suitable in other situations as determined by ABQ RIDE or the Rio Metro RTD and the City Engineer.

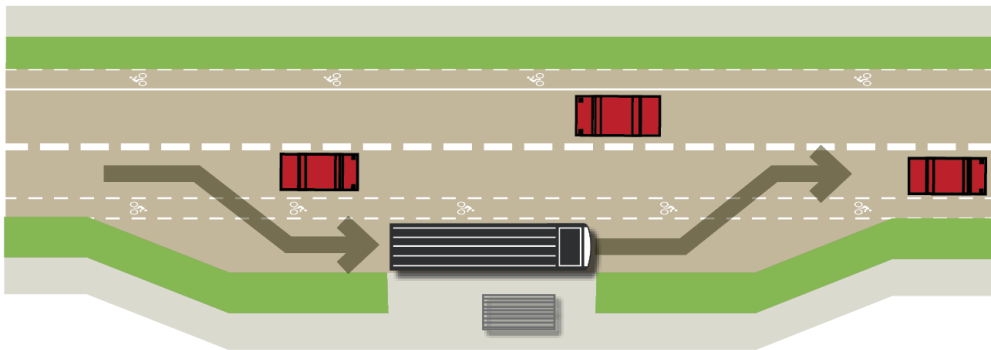


Figure *Error! No text of specified style in document.*-8 Bus Bay

3.7.5.7 Pavement Design

1. A more durable pavement design (e.g. concrete) may be desirable for dedicated transit lanes, loading areas, station areas, and stops along Premium Transit and Major Transit corridors with high frequency of bus service.
2. Specific pavement design and thickness should be considered based on factors such as expected vehicle traffic and subgrade conditions.
3. Typical gross bus weights including vehicle and passengers are 40,000 for standard buses and 60,000 for articulated buses.

3.7.5.8 Transit Conflicts with Bicycles

1. Parallel networks in which bicycle facilities are provided on a nearby street are an appropriate means of minimizing conflicts.
2. Where transit service operates in mixed-flow traffic and coincides with on-street bicycle lanes, signage and pavement markings should be provided to improve awareness for cyclists and bus drivers. Preferred treatments include dashed lines along bicycle lanes at the entrance to the bus stop area.
3. Rerouting of bicycle lanes and boarding islands that direct bicyclists behind a transit stop may be employed in areas with sufficient right-of-way and high levels of conflict. See NACTO's Transit Street Design Guide for information on boarding islands and other treatments to alleviate conflicts between bicyclists and transit vehicles.