INTRODUCTION
Presented in this third Chapter are references for the criteria that were used to locate and design bus stops, prototypical bus stop designs that were used in laying out the proposed bus stops, examples of bus shelters from other locations, and specific bus/rail interface improvement plans for each of the six Pasadena to Azusa stations.

BUS STOP LOCATION AND DESIGN CRITERIA AND PROTOTYPES

Bus Stop Location and Design Criteria
As part of the Bus Interface Project a technical memorandum was prepared that compiled criteria for locating bus stops and preparing concept designs for the safe and convenient interface between these bus stops and the Pasadena to Azusa Metro Gold Line Foothill Extension stations (Task 4.1 Design Criteria and Prototypical Bus Stop Treatments Technical Memorandum, prepared June 8, 2010). Since the Metro Gold Line Foothill Extension Construction Authority will not be the implementing agency for the bus stop improvements, the criteria, guidelines and prototypes contained in the technical memorandum are intended to be sufficiently generic so that they can be further refined by each city and/or bus operator for detailed design under their supervision.

Contained in the Design Criteria Technical Memorandum are excerpts from the following documents:
- TCRP Report 19 Guidelines for the Location and Design of Bus Stops, 1996
- LACMTA Transit Service Policy Guidelines, November 2007
- LACMTA Rail Design Criteria, January 2010
- Omnitrans Bus Stop Design Guidelines, October 2006

Bus Stop Location Criteria
Recommendations regarding bus stop locations and the capacity of each bus stop are based on bus stop and layover space requirements identified above. Positioning and sizing of bus stops is based on specific criteria developed and/or adopted by the appropriate public agencies and transit operators that will be servicing the bus stops. For the purposes of this project, bus stop location and design criteria are consistent with those adopted by Los Angeles County Metropolitan Transportation Authority (Metro). These guidelines also incorporate a report published by Transportation Cooperative Research Program (TCRP) that includes specific details and recommendations regarding bus stop locations, spacing, and design guidelines1. Standards and guidelines presented in these two documents are used as the basis for recommendations presented herein.

Three primary criteria were used in the process of determining bus stop locations. These criteria are:
- Convenience and Safety – Route of Access between bus stop and light rail station platform access points
- Spacing – Distance between bus stops
- Capacity – Number of buses that should be accommodated at stops located adjacent to the light rail stations

Parameters and guidelines used for each criterion are summarized below.

Convenience and Safety
Identifying specific locations for bus stops adjacent to the six Pasadena to Azusa light rail stations involved coordination with staff from Metro and Foothill Transit, as well as with staff from each of the five cities located along the Pasadena to Azusa alignment. Discussions with these transit agencies and local jurisdictions focused on making potential transfer between bus and rail services (as well as the reverse) as simple and safe as possible within each station area. Specific considerations included the following:
- Minimize street crossings – When possible bus stops have been located on the same side of the street as the light rail station to minimize the need for riders to cross streets when traveling between bus stops and light rail station platforms.
- Safety – The path traveled by riders between the bus stop and the light rail station platform were selected to provide a safe path of travel, avoiding as much as possible conflicts with automobile, bus, and light rail and other train traffic.
- Minimize distance traveled – Bus stops have been located as close as possible to the pedestrian access points for light rail station platforms in order to minimize the amount of time and distance involved for riders to make the transfer between modes.
- Minimize impacts to traffic – Bus stops have been probably located to minimize potential impacts to automobile traffic traveling in the vicinity of light rail stations. Bus stops are located off-street or within bus turnouts where feasible. On-street bus stops have been located to minimize impacts to parallel automobile traffic.
- Minimize impacts to bus travel times – Bus stops have been located to minimize adding to on-board passenger bus travel times. As much as possible bus locations seek to minimize circuitous travel routes, unsignalized turning movements, and diversions from the main bus routing.

Bus Stop Spacing
Determining spacing between individual bus stops is important for several reasons and typically involves a balancing act between providing convenient walking access to bus lines by individual passengers while minimizing impacts to bus travel times and speeds that may result from a high frequency of stops. Too many stops can increase travel times and discourage ridership; as well as on attracting riders, providing the right number of stops increases the accessibility of the transit service and minimizes the distance that potential riders must walk to access a bus stop.

To address these competing objectives and to ensure that various types of bus services operate as efficiently as possible, Metro and other bus operators have guidelines related to bus stop spacing for specific types of bus services. Table 3-1 summarizes the guidelines for bus stop spacing as adopted by L.A. County Metro.

### TABLE 3-1 - BUS STOP SPACING GUIDELINES

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Population Density (Persons per Square Mile)</th>
<th>Route Average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Over 20,000</td>
<td>10,000 to 20,000</td>
</tr>
<tr>
<td>Metro Liner</td>
<td>1,500 to 4,000 ft</td>
<td>1,500 to 4,000 ft</td>
</tr>
<tr>
<td>Express</td>
<td>500 to 2,600 ft</td>
<td>1,500 to 4,000 ft</td>
</tr>
<tr>
<td>Rapid Express</td>
<td>800 to 1,500 ft</td>
<td>1,000 to 4,000 ft</td>
</tr>
<tr>
<td>Rapid</td>
<td>800 to 1,500 ft</td>
<td>1,000 to 4,000 ft</td>
</tr>
<tr>
<td>Limited</td>
<td>750 to 1,500 ft</td>
<td>750 to 1,500 ft</td>
</tr>
<tr>
<td>Local</td>
<td>500 to 800 ft</td>
<td>500 to 1,000 ft</td>
</tr>
<tr>
<td>Shuttle</td>
<td>TBD</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Source: Los Angeles County Metropolitan Transportation Authority, Transit Service Policy, November 2007
The six Pasadena to Azusa light rail stations will primarily be served by local bus and shuttle services. However, stop spacing recommendations presented below would not preclude operation of other bus service types identified in Table 3-1.

Bus Stop Bay Capacity

The third criterion in determining bus stop locations and size addresses the appropriate capacity of bus stops to accommodate the anticipated number of buses that would be using the stop during peak service time periods. Table 3-1 gave the total number of buses anticipated to service the stops located closest to the Pasadena to Azusa stations. There are two main categories that these buses can be placed into. The first category includes buses that are only stopping adjacent to a light rail station to board and disembark passengers. These buses would be stopping for short periods of time, typically only as long as it takes to board and disembark passengers) before continuing their route. In these cases, several bus routes can typically share the same space within a single bus stop. Table 3-2 presents guidelines for the bus bay size requirements for an individual stop based on the frequency of service.

### TABLE 3-2 - BUS STOP BAY SIZE RECOMMENDATIONS

<table>
<thead>
<tr>
<th>No. of Buses Per Peak Hours</th>
<th>Capacity Required (Bays) When Service Time at Stop is</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10 Seconds</td>
</tr>
<tr>
<td>15</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>45</td>
<td>1</td>
</tr>
<tr>
<td>60</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Transportation Cooperative Research Program (TCRP), TCRP Report 19 – Guidelines for the Location and Design of Bus Stops, 1996

Initial Bus Stop Needs

The second category involves buses that will layover adjacent to a particular light rail station. Buses stopping to layover typically stop for durations of 10 to 15 minutes, allowing for short breaks for bus operators or shift changes between operators. Layovers typically occur at the terminus of an individual bus route. In these cases, a dedicated bus stop space or bay is usually required for each bus line, depending on the frequency of service for that individual bus line. Layover spaces are typically located completely outside of traffic lanes, either off-street in a bus bay or parallel to existing traffic lanes in a bus turnout or wide curb lane.

Using the recommendations presented in Table 3-2, bus stop capacity needs have been estimated for each of the Pasadena to Azusa stations by analyzing the bus frequency information presented in Chapter 2 Table 2-1. Table 3-3 summarizes the bus bay needs by station for the Gold Line opening year, based on existing bus service levels. The table identifies bus frequency at each bus stop at each Gold Line station, along with the corresponding bus stop capacity needs and layover space needs. The combined total of bus stops and layover positions is the need for each particular bus stop.

Future Bus Stop Needs

Estimating future bus stop capacity needs can be difficult as most transit agencies develop detailed service plans and route development proposals only for short-term time periods (1-5 years). This short-term planning horizon allows agencies sufficient time for the acquisition of additional buses, if needed, and also allows for flexibility to adjust service schedules to changing travel demand patterns. Even with these constraints, it is possible to make a conservative assumption regarding future bus service increases. Metro’s 2009 Long Range Transportation Plan (LRTP) calls for substantial investments in expanding local bus services, both by Metro and by municipal operators, as well as Foothill Transit.

For the Year 2035 buildout condition, the following bus service improvements are assumed for the bus routes serving the Pasadena to Azusa stations. Again, these are conservative assumptions for service increases.

- Bus routes operating at 15 minute headways or less would maintain those service frequencies.
- Bus routes operating at 20 to 30 minute headways would change to operate at 15 minute headways.
- Bus routes operating at 35 to 60 minute headways would change to operate at 30 minute headways.

Table 3-4 identifies bus stop and layover needs assuming the future growth in transit service frequencies identified above for the buildout condition (year 2035).

The table below shows the bus stop bay needs by station for the Gold Line opening year.

### TABLE 3-3 - BUS STOP BAY NEEDS BY STATION (GOLD LINE OPENING YEAR)

<table>
<thead>
<tr>
<th>Station</th>
<th>Bus Stop Location</th>
<th>Stop Designation</th>
<th>Peak Hour Bus Flow AM</th>
<th>Stops Needed</th>
<th>Layover Spaces Needed</th>
<th>Peak Hour Bus Flow PM</th>
<th>Stops Needed</th>
<th>Layover Spaces Needed</th>
<th>Total Bus Bay Capacity Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>NB Santa Clara</td>
<td>A</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>3</td>
<td>3 layover</td>
<td></td>
</tr>
<tr>
<td>NB 1st</td>
<td>B</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB 1st</td>
<td>C</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB 1st</td>
<td>D</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>1</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB 1st</td>
<td>E</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB Santa Anita</td>
<td>F</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>Primrose Ave</td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1 layover</td>
<td></td>
</tr>
<tr>
<td>SB Myrtle Ave</td>
<td>B</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>EB Duarte Rd</td>
<td>C</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB Myrtle Ave</td>
<td>E</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB Highland</td>
<td>A</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>EB Duarte Rd</td>
<td>D</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>EB Duarte Rd</td>
<td>E</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>2 layover</td>
<td></td>
</tr>
<tr>
<td>EB Duarte Rd</td>
<td>F</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB Avenida Puda</td>
<td>A</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td>2 layovers</td>
<td></td>
</tr>
<tr>
<td>EB Santa Fe Ave</td>
<td>B</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB Azusa Ave</td>
<td>C</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>11</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>SB Citrus Ave</td>
<td>A</td>
<td>6-7</td>
<td>1</td>
<td>1</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1 stop</td>
<td></td>
</tr>
<tr>
<td>NB Citrus</td>
<td>B</td>
<td>8</td>
<td>0</td>
<td>5</td>
<td>8</td>
<td>0</td>
<td>5</td>
<td>3 layovers</td>
<td></td>
</tr>
</tbody>
</table>

Note: Stops identified as zero are locations where all buses utilizing this stop will be layovers.

For the Year 2035 buildout condition, the following bus service improvements are assumed for the bus routes serving the Pasadena to Azusa stations. Again, these are conservative assumptions for service increases.

- Bus routes operating at 15 minute headways or less would maintain those service frequencies.
- Bus routes operating at 20 to 30 minute headways would change to operate at 15 minute headways.
- Bus routes operating at 35 to 60 minute headways would change to operate at 30 minute headways.

Table 3-4 identifies bus stop and layover needs assuming the future growth in transit service frequencies identified above for the buildout condition (year 2035).
using the criteria identified above, recommended bus stop locations for each Pasadena to Azusa station are identified below.

**Table 3-4 - Bus Stop Bay Needs by Station (Buildout Year)**

<table>
<thead>
<tr>
<th>Station</th>
<th>Bus Stop Location</th>
<th>Stop Designation</th>
<th>Peak Hour Bus Flow AM</th>
<th>Stops Needed</th>
<th>Layover Spaces Needed</th>
<th>Peak Hour Bus Flow PM</th>
<th>Stops Needed</th>
<th>Layover Spaces Needed</th>
<th>Total Bus Bay Capacity Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arcadia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WB Santa Clara</td>
<td>A</td>
<td>11</td>
<td>0</td>
<td>3</td>
<td>11</td>
<td>0</td>
<td>3</td>
<td>3 layover</td>
</tr>
<tr>
<td></td>
<td>SB 1st (n/o Santa Clara)</td>
<td>B</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>NB 1st (n/o Santa Clara)</td>
<td>C</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>NB 1st (n/o Huntington)</td>
<td>D</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>SB 1st (n/o Huntington)</td>
<td>E</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>SB Santa Anita</td>
<td>F</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td>Monrovia</td>
<td>Primrose Avenue</td>
<td>A</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>12</td>
<td>2</td>
<td>1</td>
<td>2 stops/1 layover</td>
</tr>
<tr>
<td></td>
<td>SB Myrtle Ave</td>
<td>B</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>WB Duarte Road</td>
<td>C</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>EB Duarte Road</td>
<td>D</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>NB Myrtle Ave</td>
<td>E</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td>Duarte</td>
<td>SB Highland (n/o Duarte Road)</td>
<td>A</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>NB Highland</td>
<td>B</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>SB Highland (n/o Business Ctr Drive)</td>
<td>C</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>WB Duarte Road</td>
<td>D</td>
<td>10</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>EB Duarte Road</td>
<td>E</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>2 layover</td>
</tr>
<tr>
<td></td>
<td>EB Duarte Road</td>
<td>F</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td>Irwindale</td>
<td>WB Avenida Padilla</td>
<td>A</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>2 stop</td>
</tr>
<tr>
<td>Azusa Alameda</td>
<td>EB Santa Fe Avenue</td>
<td>B</td>
<td>14</td>
<td>1</td>
<td>2</td>
<td>14</td>
<td>1</td>
<td>2</td>
<td>1 stop/2 layover</td>
</tr>
<tr>
<td></td>
<td>NB Azusa Avenue</td>
<td>C</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>14</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
<tr>
<td>Azusa Citrus</td>
<td>SB Citrus Avenue</td>
<td>A</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>1 stop</td>
</tr>
<tr>
<td></td>
<td>NB Citrus</td>
<td>B</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>12</td>
<td>1</td>
<td>0</td>
<td>1 stop</td>
</tr>
</tbody>
</table>

Using the criteria identified above, recommended bus stop locations for each Pasadena to Azusa station are identified below.

**Bus Stop Design**

The graphic depiction of a typical bus stop shown in Figure 3-1 is a compilation of elements and requirements that are either necessary or desirable features to include in the design of a bus stop. Clearances at the bus shelter and sidewalk are based on requirements in the California Building Code. Inclusion of the bus pad in the street is derived from Metro Design Criteria Civil Section 3.7.5 for bus stops adjacent to transit stations. The width is derived from the bus stop guidelines in the Transit Cooperative Research Program (TCRP) Report 19 “Guidelines for the Location and Design of Bus Stops”. These standards are used by both Foothill Transit Authority and Metro for their bus stop standards. The bus shelter features listed consist of items common in bus shelter and other features that could be included for sustainable design or advanced technology.

**Prototypical Bus Stop Configurations**

Various bus stop configurations were developed as prototypes or templates for applying to the potential bus stop locations at each station site to make sure that the design criteria contained in the TCRP report would be met. There are four conditions that apply: a bus stop on the near side of an intersection (before crossing it) (see Figure 3-2), the far side (after crossing it) (see Figure 3-3), mid block (Figure 3-4) and mid block in a turnout to be out of the traffic lanes (Figure 3-5). The location of the bus stop relative to the corner for the “far side” case when the bus has made a left or right turn needs to be further away from the intersection than if the bus is traveling in a straight path.

A sawtooth arrangement is not shown since there are none proposed for the bus stops at the Pasadena to Azusa Gold Line stations. There are standards for these by Metro and others that would be applicable if a sawtooth arrangement was found to be desirable for any of the proposed stations. The advantage of a sawtooth arrangement is in minimizing the curb length requirements for bus maneuvering. This however requires additional street or bus traffic lane widths.

The three dimensional illustrations in Figures 3-2 to 3-5 are to enhance the visualization of their impact on the streets where they occur. Each of them show the length along the curb required for the bus stop and what is required in approaching and leaving them. The curbs and crosswalks at intersections are shown with the clearances required from them. The mid-block turnout requirements shown do not include long acceleration and deceleration distances called for in the TCRP report, since these are applicable to bus turnouts on high speed highways. Additionally, the long deceleration and acceleration distances required on highways are not typically available at the Gold Line station locations. Street traffic, the need for on-street parking and access to adjacent property would make their inclusion impractical and not always necessary due to the relatively slow traffic speeds.

Examples of some existing bus shelters in the corridor cities are shown in Figure 3-6. Examples of some innovative bus shelter prototypes that contain sustainable features such as solar power, recycled materials, and touch screen displays are shown in Figure 3-7. Additional sustainable features that could be incorporated into the design of the bus stops and walkways connecting the stops to the LRT stations are shown in Figure 3-8. These include sustainable approaches to lighting, benches and other street furniture typically found at bus stops, as well as landscaping and drainage.

As depicted in the Figure 3-6 artist’s rendering, another approach to bus shelter design is to mimic the Gold Line station canopies. A bus shelter design that mimics the Gold Line station canopies is one way to extend the station “branding.” Bus stop continuity with the stations could also be achieved by extending pavement materials, colors, detailing of fixtures such as railings or trash receptacles and lighting, etc. Extending the station materials and/or detailing would provide for visual association and recognition of the bus stop as the one where you transfer to the LRT.
**Figure 3-1: Typical Bus Stop Design**

**Features and Components**

**Standard Components**
- Roof
- Seating
- Lean bars/railings
- Lighting
- Sustainable materials
- Pavement striping
- Route map at shelter or bus sign pole
- Directional signage for LRT station

**Bus Stop Design**

- Provide additional width at offstreet facilities to provide 20’ total for buses to pass
- Concrete bus pad according to City and bus operator standards
- Sidewalk finish at stop Possible upgrade for compatibility with station paving
- Bus sign located per City and bus operation requirements
- Minimum overhead clearance
- 4’ minimum at shelter structure
- 8’ clear sidewalk where bus stops to provide 8’ x 5’ pad at bus doors
- Note: Dimensions shown are desired, but may need to be modified to fit actual conditions at each bus stop location.

**Bus Shelter Design**

**Standard Components**
- Roof
- Seating
- Lean bars/railings
- Lighting
- Sustainable materials
- Pavement striping
- Route map at shelter or bus sign pole
- Directional signage for LRT station

**Other Possible Components**
- Landscaping
- Trash receptacles
- Newspaper racks
- Audio/Video messaging
- Photovoltaic power
- Wind panels
- Advertising panels
- Possible canopy design to match LRT station
- Wifi

Note: Dimensions shown are desired, but may need to be modified to fit actual conditions at each bus stop location.
Figure 3-2: Typical Near-Side Bus Stop

Note:
Dimensions shown are desired, but may need to be modified to fit actual conditions at each bus stop location.
**Figure 3-3: Typical Far-Side Bus Stop**

*Note: Dimensions shown are desired, but may need to be modified to fit actual conditions at each bus stop location.*
Figure 3-4: Typical Mid-Block Bus Stop

**Note:**
Dimensions shown are desired, but may need to be modified to fit actual conditions at each bus stop location.
Figure 3-5: Typical MidBlock Turnout Bus Stop

- **Exit Taper**: 3:1 Minimum
- **50’ No Parking Zone**: (Bus Approach to Traffic)
- **100’**: (Bus Stop and Bus Approach to Stop)
- **Entrance Taper**: 5:1 Minimum
- **Increase Bus Stop Zone**: 50' for each additional standard 40-foot bus, 70' for each additional 60-foot bus, or 30' for ADA Van

**Notes:**
- TCRP Report 19 acceleration and deceleration lanes per traffic through speed not provided.
- Dimensions shown are desired, but may need to be modified to fit actual conditions at each bus stop location.
Examples at the left are samples of bus shelters found in the cities served. Passenger volumes may be larger due to train capacity than for a typical bus stop and a more substantial shelter may be appropriate. In addition, the stop may give a first impression of the community to transit riders.

Figure 3-6: Bus Shelter Design Examples
Figure 3-7: Examples of Innovative Prototypes

Through public and academic design competitions and agency and municipality design contracts, innovative and unusual approaches to bus stop design have been developed worldwide. Many reflect thinking about how to incorporate sustainable design, alternative energy and the newest communication and lighting technologies into the stops and shelters. Others address passenger comfort and providing relevant information.
SUSTAINABILITY
Weaving sustainable design components into the public realm when planning Gold Line Foothill Extension station areas will ensure not only resource conservation, but also provide another set of place-making opportunities. Opportunities exist within station areas to employ bioswales, biofiltration planters and permeable paving to infiltrate or cleanse storm water in the public realm before it reaches storm drains. Planting concepts can incorporate drought-tolerant and native plant species to minimize water use and maintenance. Energy savings can be achieved through the use of solar-powered and high efficiency lighting and furnishings. Impacts of furnishings manufacturing and transportation can be mitigated by choosing locally made furnishings and materials with locally sourced, recycled or sustainable harvested content. Further, incorporating street trees and paving materials with high reflectivity can create shade and reduce the heat island effect of paved areas.

CLEANSE/INFILTRATE STORM WATER

- **Bioswale**
  - Capture, cleanse and infiltrate storm water runoff from street and/or building downsprouts
  - Water percolates into soil below

- **Biofiltration Planter**
  - Capture and cleanse storm water runoff as it flows through planter.
  - Cleansed water returns to storm drain.

- **Permeable Paving**
  - Allows storm water to filter into the ground instead of carrying pollutants to the storm drain.

INTEGRATE DROUGHT-TOLERANT AND NATIVE PLANTING

- To conserve water, provide urban habitat for local wildlife, visual appeal and shade, incorporate drought-tolerant and native planting.

USE SOLAR-POWERED AND HIGH-EFFICIENCY LIGHTING AND FURNISHINGS

- **Solar Powered Recycling and Trash Receptacles**
  - Harness sun’s energy to compact items, reducing trips needed to empty bins.

- **Solar Powered Lighting**
  - Off-the-grid; reduce reliance on energy; cost savings

- **LED High Efficiency Lighting**
  - Reduced energy needs and cost savings

CHOOSE LOCALLY MADE FURNISHINGS & MATERIALS WITH LOCALLY SOURCED, RECYCLED AND SUSTAINABLY HARVESTED CONTENT

Products that incorporate recycled materials, such as this bench made from recycled plastics, reduce impacts resulting from extraction and processing of virgin resources.

- Locally manufactured furnishings reduce the distance items must be shipped and contribute to the local economy.
- Locally sourced, recycled and sustainably harvested content reduce impacts on the environment

REDUCE HEAT ISLAND EFFECT

- Sufficient tree canopy provides shade that also contributes to reducing the heat island effect.
- Lighter-colored paving materials reflect the sun’s rays more than darker materials, reducing the heat island effect.

Figure 3-8: Sustainability Considerations
PROPOSED BUS/RAIL INTERFACE FACILITY IMPROVEMENTS

At each of the Pasadena to Azusa LRT Stations, bus stops are proposed to be as close as reasonable to the station. In locating the proposed bus stops consideration was also given to future development plans in the areas surrounding the stations. Where new construction will be involved and the bus stop will be adjacent to the proposed station, the proposed bus stop improvements should include a concrete bus pad in the street per Metro Design Criteria. All proposed bus stops adjacent to the stations are recommended to have a shelter or canopy for weather protection. The other nearby bus stops at a minimum should have bus route and wayfinding signage and seating.

Arcadia Station Bus Improvement Plan

As indicated in Figure 3-9, the eastern portion of the block to the south of the LRT Station is designated for LRT Transit Station related uses. The triangular corner piece is to be a future Transit Plaza. Next to it will be a large park-and-ride garage for Gold Line users. Three of the four bus lines that serve the Arcadia business district near the station are proposed to be re-routed to provide a stop convenient to LRT passengers westbound on Santa Clara Street next to these parcels. Metro Route 79, and Foothill Transit Routes 186 and 187 are proposed to be rerouted to circulate counter-clockwise around Santa Anita Avenue, Huntington Drive, 1st Avenue and Santa Clara Street where the LRT Station stop will be. Metro Route 487 would remain on 1st Avenue with northbound and southbound stops just north of the tracks.

Bus layover space for buses terminating/originating at Arcadia Station are recommended to be located at these stops. Additionally, a designated ADA Van Stop is recommended to be located on 1st Avenue. To meet the forecasted needs a total of three bus stop/layover positions are shown on Santa Clara Street. Two bus stops and one ADA Van stop are shown on 1st Avenue (in Figure 3-10).

Due to re-routing of bus routes, two additional new bus stops are proposed to be located along nearby blocks and several others abandoned to continue service to the surrounding area from these bus lines. The new stops would occur southbound on Santa Anita Avenue and northbound on 1st Avenue, both just north of Huntington Drive.

The bus stops adjacent to the station on Santa Clara Street can include a concrete bus pad as recommended by Metro for bus stops adjacent to transit stations. The sidewalk and the parking garage are recommended to be recessed slightly from the existing property line to allow space for passenger waiting. A bus pad is also proposed for the new stop shown on 1st Avenue just north of the tracks. The other new proposed stops on Santa Anita Avenue and on 1st Avenue just above Huntington Drive could be provided with just the necessary signage and some seating. To accommodate the northbound stop on 1st Avenue a portion of the existing planting islands would need to be removed.

Figure 3-11 is an artist’s rendering of the proposed Gold Line Arcadia Station as viewed from the southwest corner of 1st Avenue and Santa Clara Street. It shows a portion of the bus transfer area on Santa Clara Street adjacent to the proposed transit plaza.

### TABLE 3-5 RECOMMENDED ARCADIA STATION BUS STOP IMPROVEMENTS

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create area for bus loading and layover</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designate 30’ curb location for ADA vans</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setback parking structure to provide an 8’ sidewalk</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk width at bus stop to be minimum 8’</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Locate bus sign per City and bus operator requirements</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Install bus shelter</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install seating/bench</td>
<td></td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Install concrete bus pad</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove curb side planter</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove curb side parking</td>
<td></td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
</tr>
</tbody>
</table>

Table Note:
Where possible, utilities such as fire hydrants, electrical cabinets etc. and storm drain inlets at the new bus stops/turnouts shall be avoided.
Figure 3-9: Arcadia Station
Existing and Proposed Bus Interface

Potential Bus Interface Improvements correspond to Bus Stop Improvements Matrix. (Table 3-5)
Figure 3-10: Arcadia Station
Bus Improvement Plan
Figure 3-11: Arcadia Station
Artist Rendering
Monrovia Station Bus Improvement Plan

As shown in Figure 3-12, all of the adjacent land surrounding the Monrovia Station is designated for redevelopment according to a currently in progress Specific Plan. Transit related uses are planned closest to the station. Proposed on the north side, is a park-and-ride garage and a vehicular pick-up and drop-off area for LRT passengers that would also serve as a bus stop/layover for Metro Route 270. The remaining land is to be developed for commercial and residential uses. The existing depot building will remain and be converted to a use compatible with the surrounding activities.

It is recommended that Metro Route 264 will retain its current routing but that the westbound bus stop location be moved for traffic safety reasons and to be more convenient for LRT passengers. A designated ADA van stop is recommended on the north side of the station at the bus loop/vehicular drop off zone. This bus loop could also serve as the bus stop for Monrovia Transit (dial-a-ride service) and for the Old Town Trolley if it is extended to connect Old Town Monrovia with the Gold Line station.

It is recommended that Metro Route 270 which runs north and south on Myrtle Avenue terminate/originate at the Monrovia Station. Besides the off-street bus stop at the station, it is recommended that the existing southbound stop on Myrtle Avenue be relocated to just north of the tracks. It is proposed that the stops for route 264 be on Duarte Road west of Myrtle Avenue – eastbound the existing stop near the corner and westbound accessible from the platform from walks along the alignment and south from the south end of the platform directly to Duarte Road.

The new southbound stop just north of the LRT alignment on Myrtle Avenue should include a new concrete bus pad, a widened sidewalk and a new shelter. The stops on Duarte Road can utilize the existing street surfaces and sidewalks with the addition of signage and a bus shelter. The existing sidewalk at the eastbound stop on Duarte Road just west of Myrtle Avenue does not meet the desired 8’ in width. Figure 3-13 shows the proposed bus stop configuration at Monrovia Station.

An artist’s rendering of Monrovia Station approaching it from the bus stops at Duarte Road and Myrtle Avenue is shown in Figure 3-14.

### Table 3-6 Recommended Monrovia Station Bus Stop Improvements

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create bus stop for required number of buses</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designate 30’ curb location for ADA vans</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk width at bus stop to be minimum 8 feet</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Locate bus sign per City and bus operators requirements</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Install bus shelter</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Install concrete bus pad</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 3-12: Monrovia Station
Existing and Proposed Bus Interface

- Future Redevelopment—Station Square Transit Village
- Proposed parking garage
- New drive to garage entrance, bus loop and drop off area
- LRT Parking
- LRT Platform
- Rail Tracks
- Existing Bus Route
- Proposed Bus Route
- Proposed Discontinued Bus Route
- Parking Requirement at Opening—350 Spaces
- Parking Requirement in 2025—600 Spaces

Potential Bus Interface Improvements correspond to Bus Stop Improvements Matrix. (Table 3-6)

- Existing city parking lot
- City master plan to widen street and add bus lane/bus stop near station
- LRT tracks
- WB bus stop to be relocated west, away from intersection

Consider pedestrian easement to Duarte Rd and bus stop

LEGEND
- Existing Bus Stop Location
- Proposed Bus Stop Location
- Relocation of Existing Bus Stops
- Proposed ADA Bus Stop Location
- Pedestrian Circulation
- Historic depot
- Proposed parking garage
- New drive to garage entrance, bus loop and drop off area
- LRT Platform
- LRT Platform
- LRT Platform
- Metro Rte 264
- Metro Rte 270
- Pomona Ave
- Myrtle Ave
- Magnolia Ave
- Genoa St
- Duarte Rd
- Pomona Ave
- Metro Rte 270
- Future Redevelopment—Station Square Transit Village
- Proposed parking garage
- New drive to garage entrance, bus loop and drop off area

Aerial courtesy of the U.S. Geological Survey
Figure 3-13: Monrovia Station
Initial Bus Improvement Plan
Figure 3-14: Monrovia Station
Artist Rendering
Duarte Station Bus Improvement Plan

Metro Route 264 and Foothill Route 272 currently operate on Duarte Road adjacent to the proposed Duarte Gold Line station. Additionally Duarte Transit has three routes that operate near the proposed station that are proposed to be rerouted to directly serve the station. Figure 3-15 shows the proposed changes to the Duarte Transit routings of their Blue Line and Commuter Line to provide a more convenient interface with the Gold Line station. The Duarte Transit Green Line already uses Duarte Road and Highland Avenue.

It is proposed that the existing eastbound stops on Duarte Road be retained, and a new southbound/westbound stop added next to the east station entrance southbound on Highland Avenue. It is recommended that this stop include provisions for an ADA Van. Additionally there are some revisions proposed to the bus routings north of Business Center Drive to enable stops that are closer to the east station entrance. A new westbound stop is also shown on Duarte Road across from the main access road to the City of Hope complex, primarily for the convenience of City of Hope bus riders.

Bus access to the Gold Line station will also be provided at the existing stops near the entrance to the City of Hope Medical Center on the south side of Duarte Road. A station entrance at the west end of the platforms would connect to a new sidewalk along the north side of Duarte Road to provide a pedestrian route to these bus stops and for Gold Line passengers going to the City of Hope. The eastbound stops will remain as they are. A new westbound stop on the north side of Duarte Road across from the City of Hope entrance is proposed. It should have a new shelter and waiting area.

It is recommended that the new stop at the east station entrance include a concrete pad for the buses. The stop should also have a shelter.

Figure 3-16 shows the configuration of the bus interface facilities proposed for the Duarte Station. Figure 3-17 is an artist’s rendering of the station and bus stops as seen from the eastbound bus turnout on Duarte Road.

### TABLE 3-7 RECOMMENDED DUARTE STATION BUS STOP IMPROVEMENTS

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designate 30’ curb location for ADA vans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk width at bus stop to be minimum 8 feet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locate bus sign per City and bus operator requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install bus shelter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install concrete bus pad</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install seating</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No improvements required</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 3 | PROPOSED BUS/RAIL INTERFACE FACILITY IMPROVEMENTS

Figure 3-16: Duarte Station
Bus Improvement Plan

Foothill Extension Bus Interface Plan
DRAFT 6/22/2011
Figure 3-17: Duarte Station
Artist Rendering
Irwindale Station Bus Improvement Plan

Irwindale station is located next to existing industrial development. As depicted in Figure 3-18, it is recommended that there be a bus stop that accommodates two buses as well as an ADA van stop. The bus stop would be accessible from the west end of the LRT platform and located on Avenida Padilla partially under the Irwindale Avenue overpass that crosses above the existing railroad (future LRT) tracks. Foothill Transit Route 185 is proposed to be rerouted from its current route on Irwindale Avenue to loop under the overpass from the intersection at Adelante Street.

The new stop, shown in Figure 3-19 would have two bus positions, and should include a new concrete bus pad as part of the construction of the new sidewalk for the station which will be several feet wider than the existing space between the street and the overpass columns. There is no sidewalk there currently. There are no bus layovers planned at this station unless Route 185 is shortened to terminate here.

An artist’s rendering of the station and bus stop area is shown in Figure 3-20.

Irwindale Station Bus Improvement Recommendations

<table>
<thead>
<tr>
<th>TABLE 3-8 IRWINDEALE STATION BUS STOP IMPROVEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalk width at bus stop to be minimum 8 feet</td>
</tr>
<tr>
<td>Locate bus sign per City and bus operator requirements</td>
</tr>
<tr>
<td>Install concrete bus pad</td>
</tr>
<tr>
<td>Install shelter</td>
</tr>
<tr>
<td>Designate 30 foot curb location for ADA Vans</td>
</tr>
</tbody>
</table>
Figure 3-18: Irwindale Station
Existing and Proposed Bus Interface

Potential Bus Interface Improvements correspond to Bus Stop Improvements Matrix. (Table 3-8)
Figure 3-19: Irwindale Station
Bus Improvement Plan

Foothill Extension Bus Interface Plan
DRAFT 6/22/2011
Figure 3-20: Irwindale Station
Artist Rendering
Azusa-Alameda Station Bus Improvement Plan

As indicated in Figure 3-21, all three bus routes serving this station - Foothill Routes 185, 187 and 280 - are proposed to be re-routed to Santa Fe Avenue in a clockwise loop from Foothill Boulevard on Azusa Avenue and returning to Foothill Boulevard on Alameda Avenue. Because Azusa Avenue is a one-way street northbound, the proposed bus stop location is in the eastbound direction on the south side of Santa Fe Avenue. It is recommended that the sidewalk along the south side of the street be widened to provide the required 8’ accessibility requirement at a bus stop. It is also recommended that an ADA van stop be provided at the west end of the north side of the street.

The existing sidewalk on the south side of Santa Fe Avenue is about 7’ wide. Widening it to 8’ would enable the stop to meet the dimensions required for accessibility. A concrete bus pad as recommended by Metro for bus stops adjacent to transit stations can be provided in conjunction with the widened sidewalk. A total of one bus stop and two layover positions are recommended. For the ADA van stop on the north side of Santa Fe, a few angled parking spaces would have to be removed to provide the space along the existing curb. Figure 3-22 shows the proposed bus interface plan at Azusa-Alameda Station.

An artist’s rendering of Azusa-Alameda Station as viewed from the bus transfer facility on Santa Fe Avenue is shown in Figure 3-23.

### TABLE 3-9 RECOMMENDED AZUSA-ALAMEDA STATION BUS STOP IMPROVEMENTS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designate 30’ curb location for ADA vans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sidewalk width at bus stop to be minimum 8 feet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locate bus sign per City and bus operator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install bus shelter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Install concrete bus pad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove curb side parking</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table Note:**

1. Bus stop B existing sidewalk at 7 feet
Figure 3-21: Azusa-Alameda Station
Existing and Proposed Bus Interface

LEGEND
- Existing Bus Stop Location
- Proposed Bus Stop Location
- Relocation of Existing Bus Stops
- Proposed ADA Bus Stop Location
- Pedestrian Circulation
- LRT Parking
- LRT Platform
- Rail Tracks
- Existing Bus Route
- Proposed Bus Route
- Proposed Discontinued Bus Route
- Parking Requirement at Opening—200 Spaces
- Parking Requirement in 2025—400 Spaces

Potential Bus Interface Improvements correspond to Bus Stop Improvements Matrix. (Table 3-9)
Figure 3-23: Azusa-Alameda Station
Artist Rendering
Azusa-Citrus Station Bus Improvement Plan

Bus access to the station will be from south of the station at the Foothill Boulevard/Citrus Avenue intersection.

Foothill Transit Routes 187, 188, 281, 488, 494 and 498 run in both directions on Foothill Boulevard and Citrus Avenue. Shuttle service between the Azusa Pacific University campuses could also serve the station at the new bus stops. These lines could all be routed to and from the new stop when it is constructed. Figure 3-24 shows the bus routes and proposed bus stops in the station environs.

As shown in Figure 3-25, it is recommended that buses in both directions stop along Citrus Avenue south of Foothill Boulevard. Crosswalks, sidewalks along the west side of Citrus Avenue and a sloped walk along the north side of the tracks would provide a safe albeit not that convenient pedestrian route to the station platform. Serving ADA Van passengers will be a challenge until the Transit Oriented Development adjacent to the site is built. Once this occurs, ADA Vans will be able to use The Promenade, a new street north of the station, to provide a convenient transfer to the Gold Line. Until this occurs, one option is to designate an area in the proposed parking structure for ADA Van loading. This would restrict the size of vans that can serve the site to those with sufficient headroom clearance. Also, the sidewalks along the west side of Citrus Avenue are not as wide as what is required for accessibility (8 feet). To provide the required width, either the road would have to be narrowed or a portion of the existing wall at the back of the sidewalk would need to be removed and possibly replaced. It is not known whether or not any land acquisition would be required.

The bus stops along Citrus Avenue could be constructed using the existing road surfaces with bus pads added at the stops. It is recommended that new signs and shelters be constructed.

Figure 3-26 is an artist’s rendering of a view of the Azusa-Citrus Station from the walkway that will link the future bus area to the station.

<table>
<thead>
<tr>
<th>TABLE 3-10 RECOMMENDED AZUSA-CITRUS STATION BUS STOP IMPROVEMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designate 30 foot curb location for ADA vans</td>
</tr>
<tr>
<td>Sidewalk width at bus stop to be minimum 8 feet</td>
</tr>
<tr>
<td>Locate bus sign per City and bus operator requirements</td>
</tr>
<tr>
<td>Install bus shelter</td>
</tr>
<tr>
<td>Install concrete bus pad</td>
</tr>
<tr>
<td>Existing sidewalk width less than 8 feet</td>
</tr>
</tbody>
</table>
Figure 3-24: Azusa-Citrus Station
Existing and Proposed Bus Interface

Note:
Terminal Station for Gold Line Extension Phase 1

LEGEND
- Existing Bus Stop Location
- Proposed Bus Stop Location
- Relocation of Existing Bus Stops
- Proposed ADA Bus Stop Location
- Pedestrian Circulation
- LRT Parking
- LRT Platform
- Rail Tracks
- Existing Bus Route
- Proposed Bus Route
- Proposed Discontinued Bus Route
- Parking Requirement at Opening — 200 Spaces
- Parking Requirement in 2025 — 350 Spaces

Potential Bus Interface Improvements correspond to Bus Stop Improvements Matrix. (Table 3-10)
Figure 3-25: Azusa-Citrus Station
Bus Improvement Plan

Foothill Extension Bus Interface Plan
DRAFT 6/22/2011
Figure 3-26: Azusa-Citrus Station
Artist Rendering