

Chapter 4. Environmental Evaluation

The following Chapter 4 Environmental Evaluation enumerates and analyzes environmental impacts associated with the Project refinements listed in Chapter 3 Project Description. Each section is structured similarly, focusing the discussion on existing conditions, environmental impacts, mitigation measures, and impact result with mitigation for each Project refinement. However, some sections demand more in-depth and/or supplemental analysis, leading to expanded sections or a different approach than the aforementioned.

4.1 Aesthetics

This section discusses the existing aesthetic conditions and analyzes potential impacts from implementation of the Project refinements listed in Chapter 3 Project Description. The section assesses the existing conditions, environmental impacts, mitigation measures, and impact results with mitigation.

4.1.1 Methodology and Definitions

4.1.1.1 Visual Assessment Methods

Guidelines in the Federal Highway Administration's (FHWA) Visual Impact Assessment for Highway Projects (March 1981) were referenced to organize this section. The manual provides a methodology to characterize the visual quality of existing resources, analyze the proposed Project effect on these resources, and predict the degradation of this visual quality and the viewer's response.

Generally, the visual impact assessment followed these steps:

- Review of the 2007 Final EIR, which serves as the baseline for the SEIR analysis
- Define the existing visual character of the Project study area for each Project refinement
- Identify the existing visual quality of the Project study area for each Project refinement
- Identify the Project viewing audience and their views that are likely to be affected by the proposed Project refinements
- Identify community goals for visual quality
- Identify visual landmarks or vistas of regional importance seen within or from the Project study area for each Project refinement
- Identify the visual quality of the visual character



- Analyze if the proposed Project refinements would degrade the visual resources by introducing new elements that are incompatible with the visual character of the area viewed by viewer groups. Review design drawings of the Project refinements to help predict the Project's effect, if any
- Propose strategies that may be considered to mitigate any adverse effect

Visual character can be identified by the distinctive arrangement, condition, pattern, and other visual qualities of the man-made and natural surface elements seen by local viewers.

Visual quality is evaluated by analyzing the vividness, intactness, and unity present in the visual character of each Project refinement area. These three evaluation characteristics can be defined as follows:

- Vividness is the visual power or memorability of landscape components as they combine in distinctive visual patterns.
- Intactness is the visual integrity of the natural and man-built landscape and its freedom from encroaching elements. It can be present in well-kept urban and rural landscapes, as well as in natural settings.
- Unity is the visual coherence and compositional harmony of the landscape considered as a whole. It frequently attests to the careful design of individual manmade components in the landscape.

FHWA states that this method should correlate with public judgments of visual quality well enough to predict those judgments. This approach to evaluating visual quality can also help identify specific methods for mitigating each adverse impact that may occur as a result of a project refinement.

4.1.1.2 Viewing Audience

The proposed improvements would have a varied effect on the different types of viewers of the Project refinements. The viewing audience includes four groups that are categorized by what they can see as they occupy the Project study area. The first group includes motorized travelers that would view the improvements from a LRT corridor, highway or nearby local streets. Since many of the refinements are close to freeways, transit corridors or local streets, travelers' exposure to the visual resources would be high. Traveler sensitivity to visual change would be low because of their focus on their commute as opposed to their surroundings. The second group includes pedestrians that pass through the area on foot or by bicycle to their homes, work places, or other origins outside of the Project study areas. Pedestrian activity in the study areas was observed to be low; therefore pedestrian exposure would also be low. Pedestrian sensitivity to visual quality would be high because of their slow rate of travel and the longer time period pedestrians have to experience the views. The third group includes residents that live in the Project study areas. Residential viewers would have a high level of sensitivity because of their desire to maintain or improve their visual surroundings, but would have low exposure because there are few homes within each Project study area. The fourth group includes employees or owners of commercial, industrial, or other non-residential properties. Occupants of these business and properties would have a low-to medium level of sensitivity, since the occupants are focused on work activities as opposed to views of their



surrounding environment. Since many of the Project study areas are primarily within commercial or industrial land uses, this groups' exposure to Project visual resources would be high.

In summary, viewer response was predicted in consideration of anticipated responses from these viewer groups, listed below in corresponding order to each group's level of exposure and sensitivity to visual resource change: (1) residents; (2) business or commercial occupants; (3) pedestrians; and (4) motorized travelers.

Field Surveys and Data Collection Project study areas were viewed by car and by foot during daylight hours to observe the Project setting, identify visual character and scenic landmarks, and document typical viewer groups. Photographs were taken at the proposed sites to document the existing visual character. Additionally, a tree study was conducted during June and July 2010 to determine potential short term impacts associated with the loss of trees during construction.

Local city and county land use plans were reviewed for community goals or policies concerning visual resources for each Project refinement study area. The following area plans and Project study area reports were reviewed:

- 2007 Final EIR (M&O Facility in Monrovia, Monrovia LRT Station Parking Structure, Irwindale LRT Station Parking Lot/Structure, San Gabriel River Bridge Replacement)
- City of Arcadia General Plan (North Colorado Boulevard Bridge Replacement)
- City of Arcadia Architectural Design Guidelines, Commercial and Industrial (North Colorado Boulevard Bridge Replacement)
- City of Monrovia General Plan and Update (M&O Facility in Monrovia, Monrovia LRT Station Parking Structure, Mountain Avenue Realignment)
- City of Duarte General Plan and Update(s) (Mountain Avenue Realignment)
- City of Irwindale General Plan Update (Irwindale LRT Station Parking Lot/Structure and the San Gabriel River Bridge Replacement)
- Area PD-12 Station Square Transit Village (M&O Facility in Monrovia and Monrovia LRT Station Parking Structure)
- City of Monrovia General Plan Amendment (Monrovia LRT Station Parking Structure)

Conceptual design drawings of the proposed Project refinements were evaluated and analyzed through the defined viewshed units to determine if the proposed Project refinements would degrade the visual resources by introducing new elements that are incompatible with the character of the area viewed by viewer groups.

The 2007 Final EIR was used as the basis for analysis in the Visual Impact Analysis. This visual impact study agrees with and will use the character analysis and assessment of existing views and vistas to and from the previously analyzed sites. However, the 2007 Final EIR did not evaluate the Mountain Avenue Realignment and the Colorado Boulevard Bridge replacement for visual impacts.



4.1.2 Regulatory Framework

In the 2007 Final EIR, no stand alone regulatory framework was discussed regarding aesthetics. The regulatory framework was embedded within the existing conditions discussion. Refer to the 2007 Final EIR for regulatory framework in addition to the following.

Viewer response to proposed Project refinements was predicted based on goals and policies set by the local municipalities. Since general plans are prepared and adopted by city governments, the general plan policies and goals for visual and aesthetic resources can be used to predict viewer response. A summary of the municipal goals for visual resources is provided below:

Intent of the City of Arcadia Draft General Plan regarding Visual Resources. The 2010 draft Plan contains objectives to minimize the alteration of existing landforms and maintain the natural topographic characteristics of hillside areas. To preserve the specific attributes which comprise Arcadia's identity as a "Community of Homes" and which contribute to the high quality of life of its residents.

Intent of City of Monrovia General Plan Land Use Planning regarding Visual Resources. The 2008 Plan contains a commitment to preserve the hillside and historic neighborhoods of the City of Monrovia. Policies are in place that require new development to consider existing uses in terms of neighborhood disruption, buffering, architectural styles, building materials, development patterns, and scale of buildings. An objective of the City of Monrovia is to ensure development in Monrovia is sensitive to the City's existing architectural and natural/open space resources.

Intent of the City of Duarte General Plan regarding Visual Resources. The 2007 Plan contains the City's commitment to preserve Duarte's natural hillsides which provide significant wildlife habitat, open space, aesthetic, and a visual backdrop to the community.

Intent of the City of Irwindale General Plan regarding Visual Resources. The 2008 Plan contains the City's commitment to promote quality urban design as a means to make Irwindale a more desirable place to live, work, and invest. The City of Irwindale promotes quality design in the review and approval of commercial and industrial development through the application of the commercial and industrial guidelines. The commercial and industrial guidelines provide recommendations for architectural style, landscaping and screening.

4.1.3 Existing Conditions

4.1.3.1 Project Settings and Existing Visual Resources, Scenic Routes, Visual Landmarks, and Important Views

All of the Project study area is adjacent to the existing Burlington Northern Santa Fe (BNSF) railroad corridor and in close proximity to the I-210 freeway and/or a local network of roadways. The proposed Project refinements would take place in the cities of Arcadia, Monrovia, Duarte, and Irwindale. Historically the study area land uses and streets have been influenced by adjacency to the rail corridor.



In close proximity to the study areas, views are primarily of industrial, commercial and vacant land uses. In the distance, views of the San Gabriel Mountains are visible to the north. Although, the San Gabriel Mountains are visible at certain vantage points, there are no significant vistas or views of the mountains from the proposed Project refinement sites. In addition there are limited regional landmarks and distinctive features identified within the Project study area.

4.1.3.2 Visual Character

There are six Project refinement study areas. The visual character of each Project refinement study area is defined by its location, natural topographic features, and the land use building types and arrangement.

M&O Facility in Monrovia

The M&O Facility in Monrovia includes two layout options (Options A and B). The existing land uses at the proposed site consist of commercial and industrial land uses (Figures 4.1-1, 4.1-2). Adjacent properties include a Home Depot and other commercial facilities to the east; industrial, commercial and residential uses to the west, the I-210 freeway to the north; and commercial, industrial and residential uses to the south, and a few residences across California Avenue at the north-west corner of the site.

The visual characteristics for the M&O Facility are distinguished by large, one or two story commercial and industrial buildings surrounded by parking lots. Building forms and their site orientations were designed for operations and not focused on external views. There are limited street trees and street lights associated with Shamrock Avenue, South California Avenue, East Duarte Road, and East Evergreen Avenue. There are overhead utilities on Duarte Road and South California Avenue. There is an established hedgerow on Duarte Road that screens the railroad tracks and a hedgerow on a berm and a retaining wall on Evergreen Avenue that screens the I-210 freeway.

The Live Oak Cemetery is located southwest of the proposed M&O Facility site and is a community landmark. The views to and from the cemetery are limited by a six foot wall on the cemetery property. Therefore, the M&O Facility would not affect the visual quality of the cemetery.

There are no identified significant view/vistas, or light sensitive resources and limited visual resources at the M&O Facility. This site would primarily be viewed by the adjacent commercial businesses and by motorists on I-210 freeway. The visual quality of the proposed M&O Facility in Monrovia site is described below:

- **Vividness:** Views to and from the M&O Facility unit are of commercial, industrial and residential land uses. There is no distinguishing building style and minimal landscaping. There is limited sight of regional landmarks such as the San Gabriel Mountains, nor distinctive features to make the views memorable. The vividness rating is low.



- Intactness: The site has a high intactness rating. The visual character is consistent throughout the study area and reads as industrial. The building forms and functional elements support the visual integrity of this man-built viewshed.
- Unity: The buildings and landscape have been placed for function and not aesthetic value. There is no careful design of individual manmade components. Therefore the site has a low unity rating (Figure 4.1-1 and 4.1-2).

Figure 4.1-1: M&O Facility in Monrovia Site - View 1 ¹



Figure 4.1-2: M&O Facility in Monrovia Site - View 2 ²



Mountain Avenue Realignment

The Mountain Avenue Realignment site is proposed for the intersection of Mountain Avenue and Duarte Road. Adjacent properties include commercial, residential, and industrial land uses (Figure 4.1-3). The visual characteristic for this landscape unit is distinguished by a combination of large, one or two story commercial buildings surrounded by parking lots and single-family residential homes. Mountain Avenue has overhead utilities, street trees and street lights associated with the streetscape. Duarte Road has street trees and formal landscaping. There is an established hedgerow located on the northwest corner of the intersection. The San Gabriel Mountains are slightly visible in the distant background with no sight of other regional landmarks or distinctive local features. This site would be viewed by both the adjacent commercial and residential land uses and the motorists on Mountain Avenue and Duarte Road. The visual quality of the existing site at the intersection of Mountain Avenue and Duarte Road is described below:

- Vividness: Views to and from the Mountain Avenue Realignment study area are of an intersection and the surrounding residential, commercial and industrial land uses. There is a consistent pattern of sidewalks and landscape treatments adjacent to the

¹ View is looking south from southwest corner of Shamrock Avenue and Evergreen Avenue.

² View is looking east from northeast corner of Duarte Avenue and California Avenue.

intersection. The planted medians, hedges and landscaping provide a uniform green boundary to the streets. The vividness rating is moderate.

- Intactness: The site is an existing intersection surrounded by a variety of land uses. The combination of land uses and streetscape provide some visual integrity. The intactness rating is moderate.
- Unity: Screening elements such as fences and hedges are used around the intersection. The screening, consistent landscaping and signage unifies the visual quality of the site. The site has a moderate unity rating.

Figure 4.1-3: Mountain Avenue Realignment Site ³



Monrovia LRT Station Parking Structure

The Monrovia LRT Station Parking Structure site has recently been demolished and is now vacant (Figure 4.1-4). Adjacent properties include commercial and industrial facilities to the east; industrial and residential uses to west, industrial, commercial and residential uses to the north, the BNSF, and industrial uses (i.e., Monrovia Recycling Center) to the south. There are overhead utilities to the northwest. A Spanish Colonial Revival style AT&T Railroad Depot (1925) is located at Myrtle Avenue. The depot is eligible for the National Register as noted in the 2007 Final EIR. The railroad depot is proposed to adjoin the proposed Monrovia LRT Station and parking structure, and because of its architectural style is a significant visual resource located adjacent to the parking structure site.

The visual characteristic for this landscape unit is distinguished by large, one or two story buildings surrounded by parking lots. There is limited landscaping with a few large trees associated with the streetscape. Due to the industrial and commercial development surrounding the site, there are limited views to and from the site. There are no identified significant views/vistas, and no light sensitive resources at the Monrovia LRT Station Parking Structure site. This site would primarily be

³ View is looking north from Mountain Avenue across Duarte Road.

viewed by LRT passengers, motorists and the adjacent industrial and commercial businesses. There are multi-family homes to the west of the site but views from these homes are limited by commercial buildings located between the Project site the homes. The visual quality of the existing site of the proposed Monrovia LRT Station parking structure is described below:

- **Vividness:** Views to and from the Monrovia LRT Station Parking Structure site are of the cleared landscape and surrounding industrial and commercial land uses. The variety of architectural styles and landscape treatments applied to adjacent one to two story buildings provide no common theme to the area. The historic railroad depot located east of the Monrovia LRT Station Parking Structure site is an important local landmark. The depot's unique character is currently difficult to see and not enhanced by adjacent buildings, therefore the vividness rating for this site is low.
- **Intactness:** The recently demolished site is surrounded by industrial and residential land uses. The combination of industrial and residential buildings and vacant land provide little visual integrity. The site has a low intactness rating.
- **Unity:** The landscape as a whole has no careful design of individual manmade components. The site has a low unity rating.

Figure 4.1-4: Monrovia LRT Station Parking Structure Site ⁴



Irwindale LRT Station Parking Lot/Structure

There are two options for a parking facility at the Irwindale LRT Station Parking site. Both would be located at the southwest corner of Irwindale Avenue and Avenida Padilla, adjacent to the Irwindale LRT station (Figures 4.1-5 and 4.1-6). This parking lot /structure would be located below and immediately west of Irwindale Avenue. This site is located approximately a quarter mile southeast of the I-210 freeway and a quarter mile east of North Irwindale Avenue on property currently owned by the Miller-Coors Brewing Company.

⁴ View is looking south from southwest corner of Pomona Avenue and Primrose Avenue.

There is a large drop in elevation from Irwindale Blvd to the proposed site and then another drop in elevation from the proposed site to the railroad tracks to the west. Adjacent properties include the Miller-Coors Brewing Company (west), I-210 freeway (north), commercial/industrial (east), and commercial/industrial/open space (south). There are overhead utilities that run through the site. The visual characteristic for this landscape unit is distinguished by a vegetated landscape and the Miller-Coors Brewing Company. Due to the vertical grade changes and vegetation, there are limited views from the site. This site would primarily be viewed by motorists on I-210 freeway and Irwindale Avenue. The visual quality of the existing site of the proposed Irwindale LRT Station Parking Lot/Structure site is described below:

- **Vividness:** Views to and from the Irwindale LRT Station Parking Lot/Structure site are of a landscaped embankment with a road bisecting it and surrounding industrial and commercial land uses. Views are limited due to the large vertical grade change. There are no significant views/vistas with any sight of regional landmarks or distinctive features. This site is not memorable due to the high travel speeds from which this site is viewed. The vividness rating is low.
- **Intactness:** The site is landscaped with a road cutting through it. Due to the intruding factor of the road, the intactness rating for this site is moderate.
- **Unity:** The site's dense vegetation does provide a consistent view of green within the site boundaries. However, this dense vegetation does not relate to the surroundings land uses. This inconsistency results in a low unity rating.

Figure 4.1-5: Irwindale LRT Station Parking - View 1⁵



Figure 4.1-6: Irwindale LRT Station Parking - View 2⁶



⁵ View is looking south along the east edge of the proposed site.

⁶ View is looking south along the west edge of the proposed site.

North Colorado Boulevard Bridge Replacement

The existing grade-separated (formerly used by ATSF) railroad crossing of North Colorado Boulevard (Figures 4.1-7 and 4.1-8) includes Art Deco era detailing. The bridge is a visually important resource because the bridge aesthetics represent an architectural style typical to public works projects built in the region during the 1930s. Adjacent land uses include residential, commercial, and recreational uses. The visual characteristics for this viewshed are distinguished by one or two story residential homes and moderate sized commercial buildings. Residential and commercial properties have manicured landscapes with overhead utilities. The depressed roadway limits views to and from the Project site. This site would primarily be viewed by motorists traveling on North Colorado Boulevard and by some adjacent residents. The visual quality of the existing site of the proposed North Colorado Bridge Replacement is described below:

- **Vividness:** The Art Deco detailing of bridge abutment towers and walls make views of this site memorable. The vividness rating is high.
- **Intactness:** Views of this bridge framed by its concrete abutments, walls and slope pavement, strengthen the visual integrity of this place. The intactness rating is moderate.
- **Unity:** Views of this bridge framed by its concrete abutments, walls and slope pavement, strengthen the visual integrity of this place. The unity rating is moderate.

Figure 4.1-7: N. Colorado Boulevard Bridge Replacement View 1⁷



Figure 4.1-8: N. Colorado Boulevard Bridge Replacement View 2⁸

⁷ View is looking east towards the North Colorado Boulevard Bridge

⁸ View is looking at a portion of the bridge and the Art Deco detailing

San Gabriel River Bridge Replacement

The existing San Gabriel River rail bridge is a 700 foot long single track bridge spanning over the San Gabriel River and its flood plain. The bridge is adjacent to and parallel with the south side of I-210 freeway. Steel plate girders are attached to the side of the tracks and supporting span. These girders are visually prominent and have been tagged repeatedly with graffiti along its length. Although the bridge was originally built in 1903, it has been modified and no longer has historic integrity. The previous 2007 Final EIR concluded the San Gabriel River Bridge did not appear to be eligible for listing in national, state or local historic registers.

Eastbound I-210 freeway motorists can plainly see the railroad bridge to the right of the freeway while traveling at freeway speeds but views of the natural riverbed in the middle ground and the mountains in the background are more visually interesting than the rail bridge. The rail bridge is also visible from unpaved roads in the river flood plain but the number of viewers that use these roads is far less than the number of I-210 freeway travelers. A photo taken from the base of the rail bridge is shown in Figure 4.1-9. The visual quality of the existing site of the proposed San Gabriel River Bridge Replacement is described below:

- Vividness: Since the bridge has a low profile and the bridge architecture is unremarkable, the visual power of the existing rail bridge is low.
- Intactness: The rail bridge, power lines and dirt roads detract from the natural setting of the river flood plain. The intactness rating for this site is low.
- Unity: The design of the rail bridge, utility poles and roads do not respect the natural setting of this view. Their locations and materials degrade views of the native vegetation and mountains in the background. The unity of this view is low.

Figure 4.1-9: San Gabriel River Bridge Replacement Site View ⁹



⁹ View is looking west from south side of the bridge.

4.1.4 Environmental Impacts

4.1.4.1 Impact Criteria

Each Project refinement was analyzed for potential changes in the visual character and visual quality of each site, in consideration of the viewer groups' sensitivity and exposure to the Project. An adverse impact was identified if the Project refinements would degrade visual resources by introducing new elements that are incompatible with the visual character of each site as seen by key viewer groups.

In addition to this assessment methodology, criteria set forth in the 2007 Final EIR was also considered during the evaluation of visual impacts. The 2007 Final EIR also identified an adverse visual impact if the Project damaged significant visual resources (such as historic buildings or scenic views); introduces substantial glare that would affect sensitive users, or create substantial artificial light that would adversely affect nighttime views in the area.

4.1.4.2 Project Impacts

Overall, the Project refinements would meet and adhere to the visual goals of each of the local municipalities. None of the refinements associated with the Project would impact the hills or historic neighborhoods that are to be preserved. The improvements would meet local zoning requirements and design guidelines, if applicable.

Construction of the various Project refinements would have a temporary effect to the surrounding businesses and residences. Construction activities could add cranes, barricade materials, stock-piled building materials, dozers, graders, scrapers, and trucks, as well as safety and directional signage to the Project area. These changes may be visible from the surrounding streets, businesses, and residences but are considered to be less than significant because the equipment will go away once the Project construction is complete and no significant views or visual resources would be affected by these temporary activities. Construction activities are anticipated to occur primarily during daylight hours, but if work is required at night, construction lighting, and glare would temporarily affect visibility.

Excavation and construction of the Project refinements would impact trees, shrubs, and ground cover. At least 109 trees may be removed as a result of the proposed Project refinements. The Authority's tree removal policy will require two new trees to be planted for every tree removed assuming the replacement trees do not interfere with the construction access points and staging, or the safe operation of the Project refinements. The Authority's tree removal policy can be found in Volume 2.F of the SEIR.

M&O Facility in Monrovia

The M&O Facility in Monrovia is proposed to contain 1 to 3 story buildings with a fence surrounding the perimeter. Options A (27 acre site) and B (24 acre site) vary in size and orientation, but overall would have the same visual impacts. The proposed improvements would consolidate numerous access points to the site to one primary access point and a secondary emergency access. This provides an opportunity for more streetscape and a consistent street presence. The biggest change to the visual quality of the site would be the introduction of the tracks, catenary lines, loading



docks, and the storage of up to 84 LRT cars. The tracks and storage are proposed on the northern portion of the site making them visible to motorists on the I-210 freeway. A fence is proposed to surround the outside perimeter of the M&O Facility, which will reduce the visual impact of the proposed elements to the surrounding residents and motorists.

The M&O Facility is proposed to be illuminated 24 hours a day, with a minimum illumination of one foot candle at ground level. The proposed yard lighting is required to minimize shadows, however, since these light sources can be shielded so that nighttime lighting is focused on the M&O Facility property, there would be no light overspill or significant impacts on nearby properties and streets.

Views of the adjacent commercial businesses and the motorists on the I-210 freeway, to and from the site, would remain intact with the proposed M&O Facility. The proposed improvements are consistent with the surrounding environment. The new features introduced by the proposed M&O Facility would not substantially limit or alter existing views.

The visual quality of the proposed M&O Facility in Monrovia is described below:

- **Vividness:** Introduction of tracks, LRT vehicles, and the M&O Facility to an already industrial area would not have an adverse effect to the memorability of the site. The site would remain a low vividness rating.
- **Intactness:** Views to and from the surrounding industrial community are held intact by the Project's similar building form. The intactness rating would remain as high.
- **Unity:** The proposed aesthetics associated with the M&O Facility would improve the visual quality of the site. The proposed fencing, screening, and perimeter landscaping would change the unity rating from low to moderate.

The M&O Facility would result in significant impacts to the visual quality of the surrounding area.

These impacts would be temporary and during the construction period. Furthermore, these impacts would be reduced to a less than significant level with implementation of Mitigation Measure V-1 from the 2007 Final EIR and V-3 from this SEIR.

Mountain Avenue Realignment

The Mountain Avenue Realignment would require the relocation of two existing residences on the southeastern side of Mountain Avenue. Landscaping associated with the residences would be removed. In addition, a portion of the established hedgerow would be removed on the northwest corner. A new right turn lane would increase the amount of surface pavement. This site would primarily be viewed by motorists on Mountain Avenue and Duarte Road and adjacent properties. The views of the adjacent commercial businesses and local motorists to and from the site would remain intact with the proposed Mountain Avenue Realignment. The proposed Project refinements are consistent with the surrounding environment. The visual quality of the proposed Project refinement at Mountain Avenue is described below:



- **Vividness:** Relocation of residences and the increase of surface pavement would have a minimal influence to the memorability of the site. The proposed Project refinements for the Mountain Avenue Realignment would remain a moderate vividness rating.
- **Intactness:** The relocation of residences and the increase of surface pavement would not change the visual integrity of the site. The intactness rating would remain moderate.
- **Unity:** Realignment of an existing intersection would maintain the visual coherence of the Mountain Avenue site. The level of landscaping and streetscape design would remain consistent with what is there today. The unity rating would remain as moderate.

Since there would be no change to the visual quality of this Project site, the Mountain Avenue Realignment refinement would not result in any significant impact to visual resources.

Monrovia LRT Station Parking Structure

The proposed two-story parking structure would be constructed on a site that has been cleared. The parking structure would not obstruct significant views or landmarks and would not diminish the visual identity of the site. The historic ATSF railroad depot located at Myrtle Avenue would not be adversely affected by the proposed parking structure.

The City of Monrovia has created a zone called Area PD-12 Station Square Transit Village that sets goals, objectives and guidelines that directs transit oriented development (TOD) around the station. The future Monrovia Station and TOD have the potential to improve the site aesthetics with the construction of an attractive building with architectural details integrated with the station platform design. Monrovia's vision for this site is to "provide adequate parking in attractive structures that complement the architecture and landscaping of accompanying (new) development."

The proposed Project refinement would primarily be viewed by the adjacent industrial and commercial businesses. The structure would be illuminated but the light sources would be shielded so that nighttime lighting is focused on the transit property, there would be no significant impacts. The proposed Project refinements would not substantially limit or alter the existing views by the surrounding businesses but would instead elevate the visual quality of the site.

- **Vividness:** The introduction of the proposed parking structure and the Area PD-12 Station Square Transit Village would provide opportunities to dramatically improve the memorability of the site. The vividness of the site would change from low to a moderate rating with the Project refinements.
- **Intactness:** The visual integrity of the site would moderately improve with the addition of the two story parking structure. The recently cleared land would be replaced with a parking structure that is more visually cohesive with surrounding land uses. The intactness rating would change from low to moderate.
- **Unity:** The proposed aesthetics associated with the parking structure would improve the visual quality of the site. Proposed architectural elements associated with the



parking structure and new landscaping would be required to be consistent with the design guidelines outlined in the Land Use Element for the Transit Village Planning Area. Providing this level of improvement would change the unity rating from low to moderate.

Overall the visual quality of this Project site would improve with the implementation of the Monrovia LRT Station Parking Structure.

Irwindale LRT Station Parking Lot/Structure

This site would primarily be viewed by motorists on I-210 freeway and Irwindale Avenue. Since the site would be viewed at a high speed, the addition of a parking structure or surface parking lot would not have a significant impact on the motorist's views. The following discussion analyzes both the structure and lot options.

The multi-story parking structure and retaining wall option would not obstruct significant views or landmarks but would require the removal of existing vegetation which would change the visual quality of the Irwindale LRT Station Parking Structure site.

The parking structure would be illuminated. Since light sources can be shielded so that nighttime lighting is focused on the transit property, there should be no significant impacts under CEQA.

- **Vividness:** The proposed improvements at the Irwindale LRT Station Parking Structure would change the visual character of the site. Motorists currently see a flash of green when driving by the site. With the proposed Project refinements, the green would be replaced by a two story parking structure. Since this site is primarily viewed at a high speed the memorability of the site would not change. The vividness of the site would remain a low rating.
- **Intactness:** The visual integrity of the site would change from undeveloped and vegetated landscape to an urban landscape filled with buildings. The intactness rating would change from moderate to low.
- **Unity:** The visual coherence of the site would change from an undeveloped landscape to an urban landscape. The proposed architectural elements and landscaping associated with the parking structure would soften the visual impacts of the structure to the site. The proposed Irwindale LRT Station Parking Structure would remain a moderate unity rating.

The surface parking lot option was analyzed in the 2007 Final EIR, which stated that there would be no adverse effect/significant impact to visual resources as a result of the proposed improvements. The visual quality assessment below supports this finding:

- **Vividness:** The proposed improvements at the Irwindale LRT Station Surface Parking Lot would change the visual character of the site. Motorist currently see a flash of brown and green when driving by the site, with the proposed improvements the green would be replaced by surface parking, but since this site is primarily viewed at a high

speed, the memorability of the site would not change. The vividness of the site would remain a low rating.

- **Intactness:** The visual integrity of the site would change from a roadway landscape to an urban landscape. The introduction of a surface parking lot would maintain low intactness rating.
- **Unity:** The visual coherence of the site would change from a roadway landscape to an urban landscape. The proposed architectural elements and landscaping associated with the surface parking would soften the visual impacts of the structure to the site. The proposed Irwindale LRT Station Parking Structure would maintain a low unity rating.

The Irwindale LRT Station Parking Lot/Structure refinement would not result in any significant impact to visual resources.

North Colorado Boulevard Bridge Replacement

The North Colorado Boulevard Bridge refinement would replace an existing bridge with one dual track bridge. The existing bridge is a 1930s era Art Deco style railroad bridge that has been determined to be a visually significant resource. The new bridge would be approximately 34 feet wide and 75 feet long and 15 to 20 feet above the exiting road. The footprint of the reconstructed bridge would be larger than the existing bridge. The LRT catenary system is not of sufficient mass to create shade and or shadow impacts. This site would primarily be viewed by motorists on Colorado Boulevard, with some views from the adjacent residents and businesses. As a result of removing the existing bridge the visual quality of the site would be diminished, resulting in a significant impact.

- **Vividness:** The replacement of the existing bridge with one dual track bridge would change the memorability of the site. The removal of the bridge would result in losing the character and concrete detailing. The proposed improvements for the North Colorado Boulevard replacement would change from high to a low vividness rating.
- **Intactness:** The replacement of the existing bridge with a dual track bridge of undefined design would impact the visual integrity of the site because of the potential that the new bridge abutments and walls may be replaced with a design that contrasts with the existing slope pavement. The intactness rating for the site would change from moderate to low.
- **Unity:** The replacement of the existing single tract bridge with one dual track bridge of an undefined design and material would disrupt the visual coherence of the site. The unity rating would change from moderate to low.

The removal of the North Colorado Boulevard Bridge would result in a significant impact to the quality of the visual resource at that site. With implementation of Mitigation Measure V-4, CR-4, and CR-5 (Section 4.5.5), this impact would be reduced to a less than significant level.



San Gabriel River Bridge Replacement

The existing San Gabriel River Bridge will be removed and replaced with a rail bridge designed for LRT use. Although the bridge design will be determined later, the Authority has stated in its 2010 request for design-build proposals that ‘Project refinements will explore opportunities to enhance and complement the surrounding environment.’ Since the existing visual quality of the rail bridge is low and the Authority has shown a preference for the new bridge to complement its surrounding, the San Gabriel Bridge Replacement Project refinement will not cause a significant impact to existing visual quality of the site.

4.1.5 Mitigation Measures

The following provides recommended mitigation measures for the M&O Facility in Monrovia and the North Colorado Boulevard refinements analyzed under potential aesthetic impacts. The subsequent mitigation measures continue from the 2007 Final EIR (Executive Summary) Visual Impact Mitigation Measures (V-1 through V-2), of which V-1 is still applicable.

Beyond Mitigation Measure V-1, Mitigation Measure V-3 provides a recommended mitigation measure for the M&O Facility refinement analyzed under potential aesthetic impacts.

V-3: As stated in the 2007 Final EIR, the proposed mitigation for the removal of the hedgerow in the Authority’s right-of-way along Duarte would be to provide landscaping in a manner consistent with the landscape treatments used in Phase I of the Project. These treatments could consist of hardscape and or landscape treatments that could be physically accommodated within the available right of way, plant materials that are indigenous or adaptable to the Southern California environment, and plant materials that could survive with limited maintenance and without introducing safety concerns. Metro Environmental Policy & Water Use and Conservation Policy provisions would be considered in selecting and maintaining plant materials. All hardscape and landscape treatments must avoid current or future encroachment into the safety envelope required for operation of an LRT system.

Mitigation Measures V-4 provides a recommended mitigation measure for the North Colorado Boulevard refinement analyzed under potential aesthetic impacts.

V-4: The proposed dual track bridge, which will replace the existing single-track bridge at the North Colorado Boulevard overcrossing, shall conform to all applicable Metro design criteria and include aesthetic treatment to be determined by the Authority in coordination with the City of Arcadia and a qualified bridge architect and/or architectural historian during final design. ~~The proposed dual track bridge, which will replace the existing single track bridge at the North Colorado Boulevard overcrossing, shall include aesthetic treatments to be determined by the Authority in coordination with a qualified landscape architect or other design professional during final design.~~ The aesthetic treatments may include replication of the existing bridge’s art deco detailing on the new bridge and retaining walls.

The Authority would implement cultural resource mitigation measures CR-4 and CR-5 in addition to Mitigation Measure V-4 for the North Colorado Boulevard refinement, as described:



- CR-4 A comprehensive documentation program shall be completed on the existing bridge prior to the commencement of the proposed project. Due to the local nature and limited level of the bridge's significance, procedures comparable to the Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER), which are often applied in similar documentation of historical buildings and structures, do not appear to be an appropriate approach in this case. Instead, the recommended scope of work consists of detailed architectural description, photographic recordation, scaled mapping, and compilation of historical background. The results of the documentation program should be curated at the appropriate local cultural resources information repositories for easy public access, such as the City of Arcadia and the South Central Costal Information Center of the California Historical Resources Information System. CR-4 has been carried out in conjunction with the cultural resources study for the SEIR (Volume 2.D of the SEIR).
- CR-5 The replacement bridge to be constructed at the site during this project shall incorporate, as appropriate, the Art Deco-style motifs on the existing bridge, such as the concrete towers at the edges of the abutments and the decorative relieves near the top of the concrete sidewalls, while clearly distinguishing itself from similar bridges of historic origin to avoid any future confusion. The work shall be coordinated with the Authority and the City of Arcadia, as well as with a qualified bridge architect or architectural historian.

4.1.6 Impact Results with Mitigation

With implementation of mitigation measures V-1, V-3, V-4, CR-4 and CR-5, aesthetics impacts would be reduced to less than significant levels.



4.2 Land Use

This section discusses the existing land use and planning conditions and analyzes potential impacts from implementation of the Project refinements listed in Chapter 3 Project Description. The section will assess existing conditions, environmental impacts, mitigation measures and impact results with mitigation

4.2.1 Methodology and Definitions

Potential land use and planning impacts were evaluated by examining existing land uses at each of the proposed refinement sites, adjacent land uses, and the adopted plans and policies of the jurisdictions in which each refinement is located. Land use impacts would be considered significant if implementation of the proposed Project refinements would create incompatible land uses or result in conflicts with applicable land use plans, policies, or regulations.

Existing land uses were observed in an August 2010 field visit and during review of aerial maps of the vicinity of each refinement.¹⁰

4.2.2 Regulatory Framework

In the 2007 Final EIR, no stand alone regulatory framework was discussed regarding land use. The regulatory framework was embedded within the existing conditions discussion. Refer to the 2007 Final EIR for regulatory framework in addition to the following.

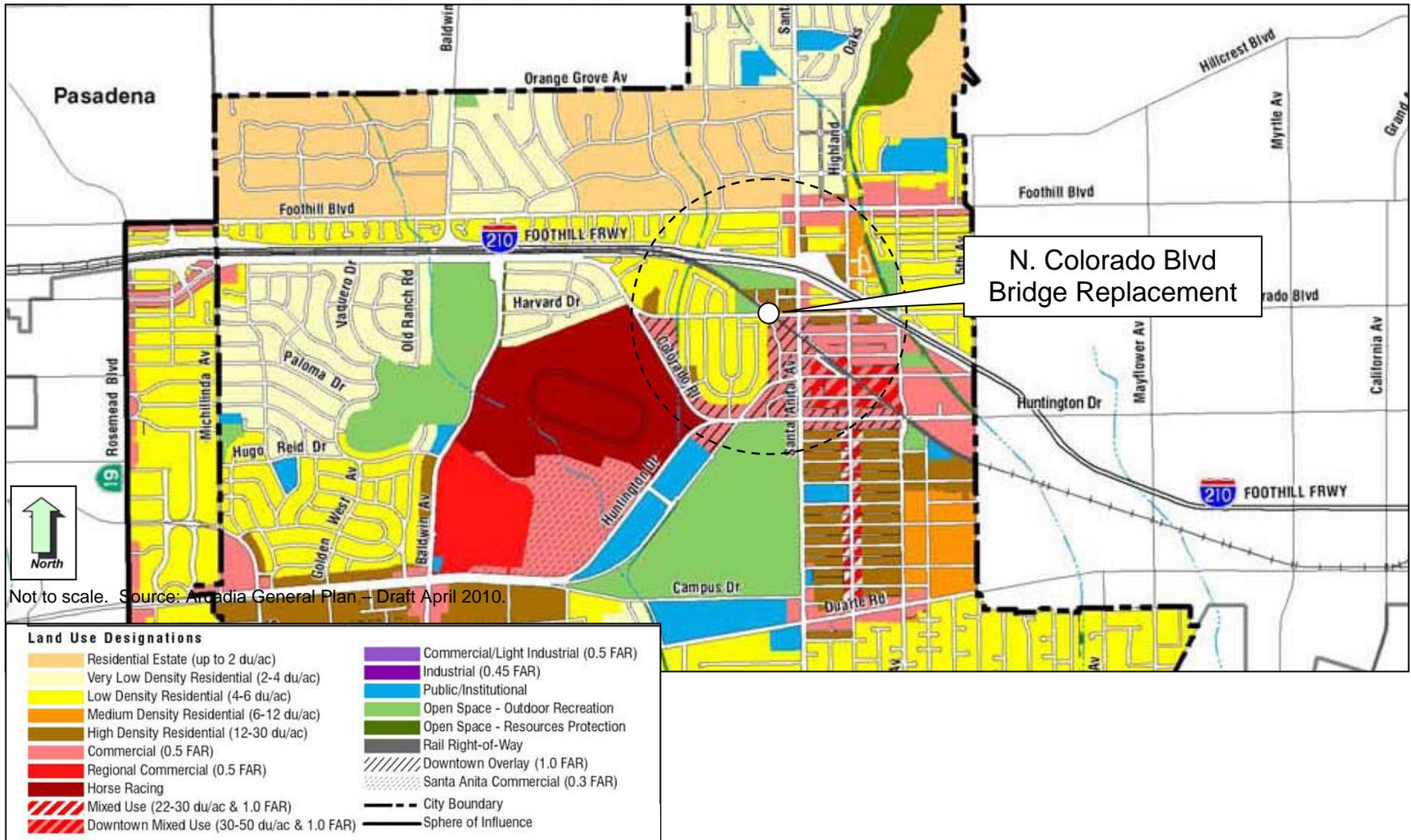
4.2.2.1 City of Arcadia

The Land Use section of the 2007 Final EIR described the City of Arcadia's general plan land use policies from their general plan, which was last updated in 1996. Since certification of the 2007 Final EIR, the City of Arcadia updated its general plan. As such, this SEIR providing updated land use information from the April 2010 Arcadia Draft General Plan Land Use element (Figure 4.2-1) as relevant to the North Colorado Boulevard Bridge refinement.

¹⁰ Google Earth November 15, 2009



Figure 4.2-1: Arcadia Draft General Plan Land Use Map (2010)



Page 2-8 of the 2010 Arcadia General Plan designates the North Colorado Bridge area with the following land uses categories: the land immediately north of the bridge and LRT tracks are designated for high density residential land uses; the southwest corner of the bridge area is designated for low density residential land use; and the southeast corner is designated as downtown mixed use land uses.¹¹

The Low Density Residential (LDR) designation accommodates low density single-family residential neighborhoods. Development is typified by detached single-family residences on lots 7,200 to 10,000 square feet in size. Permitted uses are limited to single family residences on a single lot. The High Density Residential (HDR) designation accommodates higher density attached housing types for both renter and owner households within a neighborhood context. Such housing types are generally located near transit stops, along arterials and transit corridors, and within easy walking distance of shops and services. The Downtown Mixed Use (DMU) designation provides opportunities for complementary service and retail commercial businesses, professional offices, and residential uses to locate within the City's downtown. DMU requires the inclusion of a ground-floor, street-frontage commercial component for all projects. Mixed commercial/office and residential tenancies and standalone commercial or office uses are allowed. However, exclusively residential buildings are not allowed. Development approaches encourage shared use of parking areas and public open spaces, pedestrian travel ways, and interaction of uses within the district. Particular features that will define Downtown include public open space as an integral component of the Gold Line station, as well as any larger mixed-use or commercial developments.

The following identifies land use and circulation policies related to the proposed North Colorado Boulevard Bridge refinement:

- Land Use Policy LU-10.2 instructs the City of Arcadia to promote the Gold Line Extension Project and establish a transit station in Downtown Arcadia, taking full advantage of the opportunities the Gold Line station will bring to the Downtown and the City as a whole (page 2-53 of the 2010 Arcadia General Plan).
- Additionally, the North Colorado Bridge is located at the northwest corner of the City of Arcadia's "Downtown Arcadia Land Use Focus Area" (page 2-39 of the 2010 Arcadia General Plan) and the General Plan states that, "The most important and anticipated development in Downtown is the Metro Gold Line extension and Arcadia station" (page 2-40 of the 2010 Arcadia General Plan). The City envisions the Downtown Arcadia station as a destination for visitors and a catalyst for transit-oriented development in the surrounding district. The proposed bridge replacement supports the development of the Gold Line and thus furthers the City of Arcadia's land use goals and policies. City of Arcadia Planning Department staff stated that this bridge area is not zoned.¹²

¹¹ City of Arcadia April 2010

¹² Flores July 20, 2010



4.2.2.2 City of Monrovia

The Land Use section of the 2007 Final EIR described the City of Monrovia's general plan land use policies from its general plan that was last updated in 1993. Since certification of the 2007 Final EIR, the City of Monrovia has updated its general plan. As such, this SEIR will provide updated land use information from the 2008 City of Monrovia General Plan Amendment Land Use Element (2008 Monrovia General Plan) (Figure 4.2-2) as is relevant to the M&O Facility in Monrovia, the Monrovia LRT Station Parking Structure, and the Mountain Avenue Realignment at the intersection with Duarte Road.

The proposed project would include construction of the M&O Facility and a parking lot structure in the city of Monrovia. The general plan land use map and zoning designation map are the same for the City of Monrovia.¹³ The proposed M&O Facility and parking structure are designated and zoned as Planned Development Area 12 (PD-12). The 2008 Monrovia General Plan established the Planned Development Area (PD-12) Station Square Transit Village to provide flexibility in land use types, location, and intensities that will allow development to respond to changes in the marketplace over time. This planning area is intended to connect the Transit Village with the proposed development of Old Town Monrovia and the commercial and office parks of Huntington Drive.

Several land use policies within the 2008 General Plan support the development of light rail transit service in Monrovia and the reuse of the Santa Fe Depot as a light rail station. The proposed project components are located in the City's "Station Square Transit Village" planning area, which is described in the 2008 Monrovia General Plan. The 2008 Monrovia General Plan identifies this planning area as a mixed-use district that will surround the planned Gold Line Foothill Extension Project LRT station. The City of Monrovia updated its Land Use and Circulation general plan elements in this same 2008 document. The following identifies land use and circulation policies related to the proposed Project:

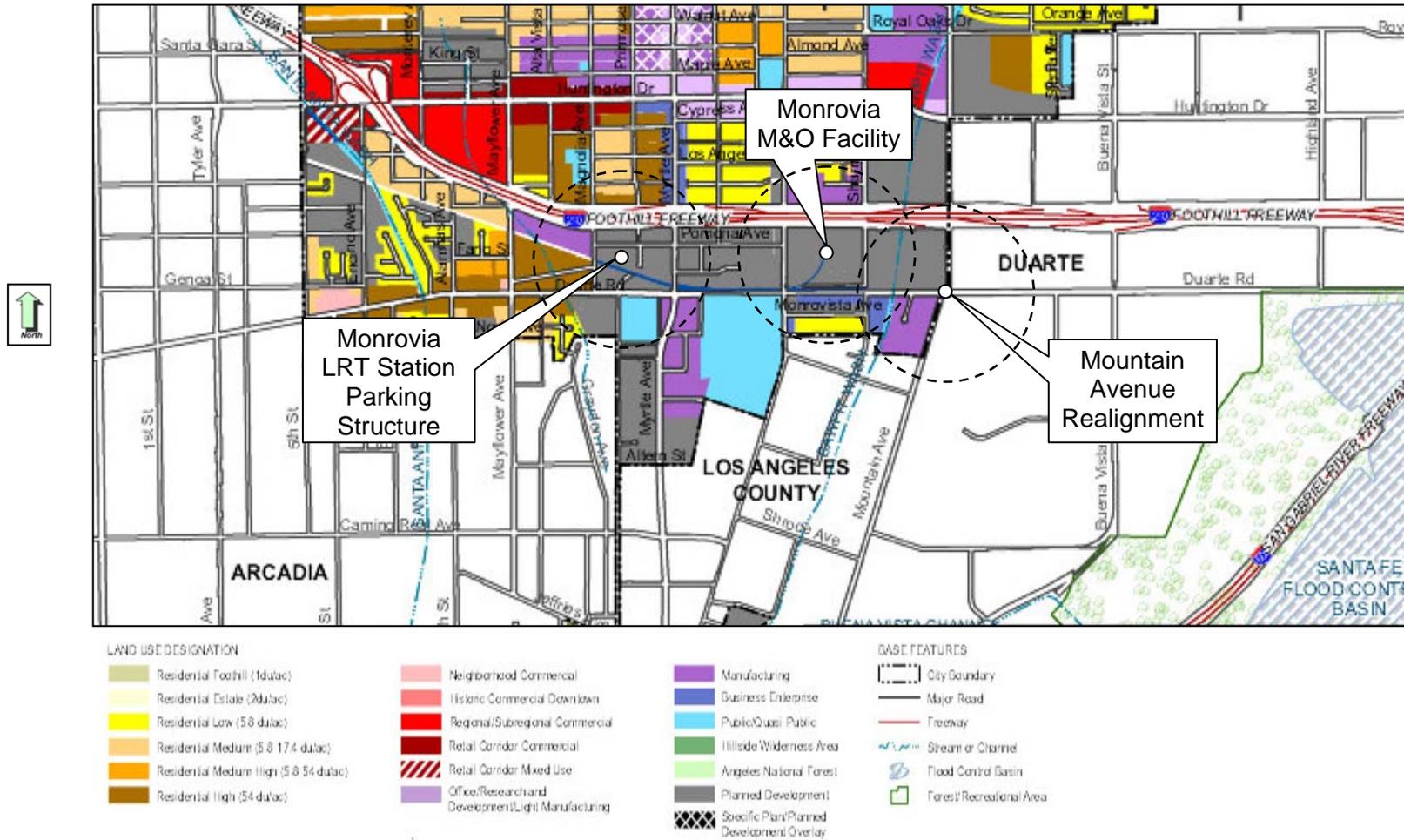
- Land Use Policy 1.5 allows for the development of mixed use projects consisting of residential, retail, and office uses along existing and future transit corridors such as Myrtle Avenue and the Station Square Planning Area.
- Land Use Policy 3.3 blends new Medium and High Density development with existing neighborhoods by encouraging Planned Unit Developments (PUD).
- Land Use Policy 7.4 considers appropriate future uses in the vicinity of the Santa Fe Depot, including uses in the Railroad and Pomona Avenue areas that will take maximum advantage of access to light rail. Such uses may include high density residential, office, retail commercial, and research and development uses.
- Circulation Policy 4:10 coordinates the location of future transit routes with high-demand areas. Encourage development of mixed-use Planned Development projects (e.g., joint parking structures) surrounding the light rail transit station.

Additionally, the proposed Project would include realigning the intersection of Mountain Avenue and Duarte Road. The proposed realignment of Mountain Avenue is located at the easternmost border of the City of Monrovia and the westernmost border of the City of Duarte.

¹³ Romine, B. pers comm., 2010



Figure 4.2-2: City of Monrovia General Plan Land Use Map (2008)



Not to scale. Source: City of Monrovia General Plan Amendment – January 2008; City of Duarte 2007 General Plan.



The city of Duarte General Plan Circulation Element describes the portion of Mountain Avenue between Duarte and I-210 as an unacceptable operating condition¹⁴. This portion of Mountain Avenue operates only slightly above the capacity levels, and it would not be necessary to widen the roadways to a six-lane cross section. However, as stated in the circulation element, it is recommended that measures be taken to increase the capacity and enhance traffic flow along these two roadways. Such measures that could potentially be considered include peak period parking restrictions to provide an additional travel lane, intersection improvements to provide double left-turn lanes and exclusive right-turn lanes at major intersections, and traffic signal coordination. The City of Monrovia's general plan map designates this intersection as a Planned Development area. The 2008 Monrovia General Plan created the Planned Development land use designation for areas that are suitable for more than one type of land use. As such, no specific land use classification is applied to this intersection. However, Circulation Policy 4:10 (as noted above) coordinates the location of future transit routes with high-demand areas, which includes the Mountain Avenue/Duarte Road intersection. It also encourages development of mixed-use planned development projects (e.g., joint parking structures) surrounding the light rail transit station. Proposed development will be subject to City review and approval, in order to preserve the orderly development of the area and promote needed area improvements.

4.2.2.3 City of Duarte

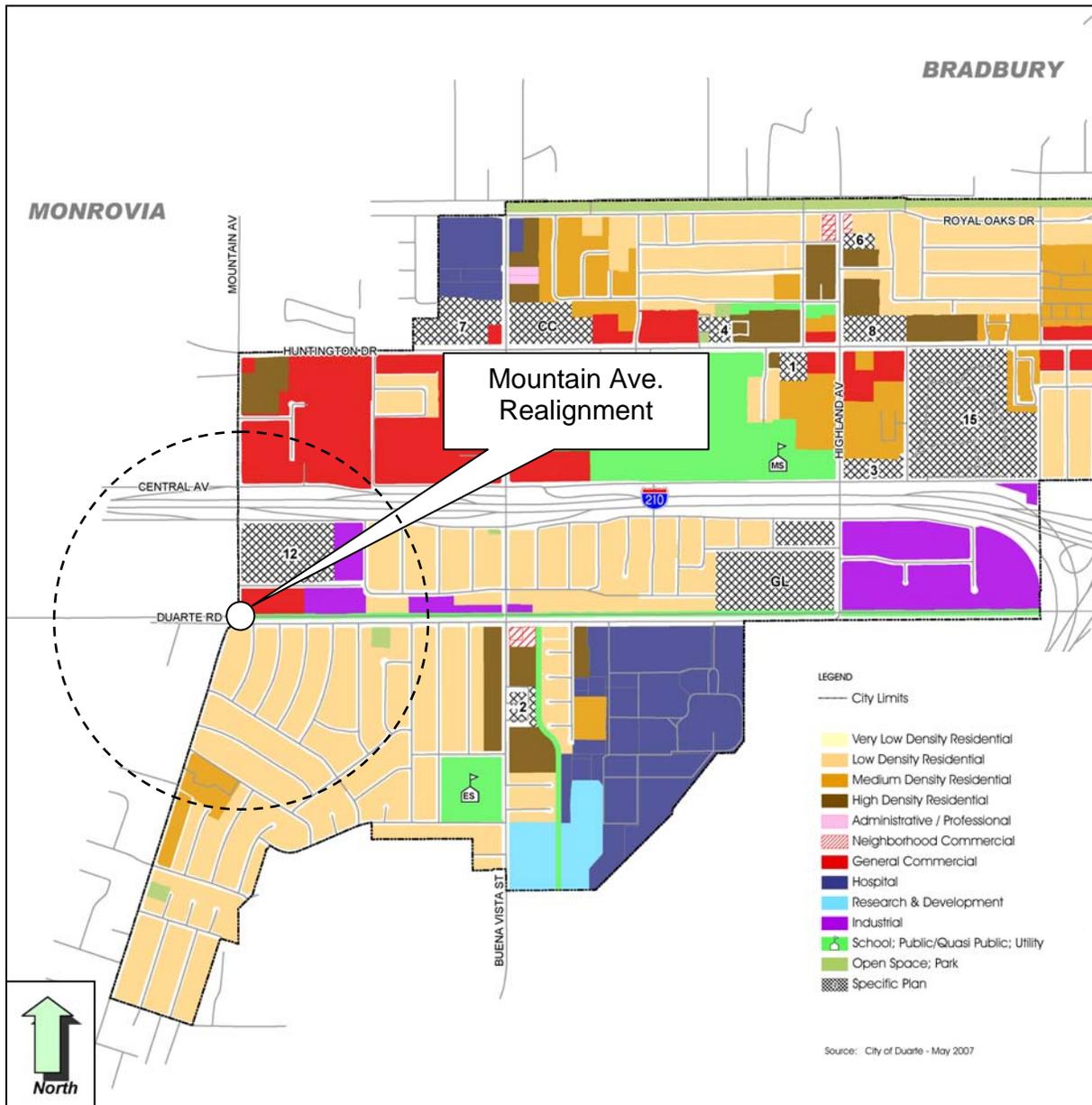
The Land Use section of the 2007 Final EIR described the City of Duarte's general plan land use policies from its general plan that was last updated in 1989. Since certification of the 2007 Final EIR, the City of Duarte has updated its general plan. As such, this supplemental EIR will provide updated land use information from the 2007 City of Duarte General Plan 2005-2020 Land Use element (Figure 4.2-3), as related to the Mountain Avenue Realignment at its intersection with Duarte Road.

As stated above in the City of Monrovia land use regulatory section, the proposed Mountain Avenue realignment is located along the border of the City of Monrovia and the City of Duarte. The City of Duarte General Plan Land Use map designates the north side of Duarte Road at Mountain Avenue as General Commercial, which allows general retail, service, and office uses. The C-2 zoning district corresponds with this land use designation. Permitted uses include those in the CP and C-1 zones, with expanded retail and service uses. Specific permitted uses in the C-2 zone include: auto sales and service; building supplies; department stores; furniture stores, sporting goods, printing and restaurants. The south side of Duarte Road along Mountain Avenue is designated as Very Low Density Residential, which allow detached homes on large lots. Zoning Districts that correspond with this land use designation are: R-1F (80,000 sq. ft. lots), R -1D (20,000 sq. ft. lots) and R-1B (10,000 sq. ft. lots).

¹⁴ City of Duarte 2007



Figure 4.2-3: City of Duarte General Plan Land Use Map (2007)



Not to scale. Source: City of Duarte General Plan – 2005-2020.

4.2.2.4 City of Irwindale

The Land Use section of the 2007 Final EIR described the City of Irwindale’s general plan land use policies from its general plan that was last updated in 1975. Since certification of the Final EIR, the City of Irwindale has updated its general plan. As such, this supplemental EIR will provide updated land use information from the 2008 City of Irwindale 2020 General Plan Community Development Element (Figure 4.2-4), as relevant to the relocated parking for the Irwindale LRT Station Parking

Lot/Structure and the San Gabriel River Bridge Replacement refinements. The Community Development Element designates the general distribution and intensity of land use and development contemplated within the land area governed by the general plan.

The proposed Irwindale LRT Parking Lot/Structure and the existing San Gabriel River Bridge are all located in the City of Irwindale's Northeastern Planning Area (Exhibit 1-3 of the 2008 Irwindale General Plan). The proposed LRT parking lot/structure is designated as Industrial/Business Park, which corresponds to the CM (Commercial Manufacturing), M-1 (Light Manufacturing), and the M-2 (Heavy Manufacturing) zones. The proposed San Gabriel River Bridge Replacement is located in Open/Space Easement land use designation, which applies exclusively to all open space areas used for flood control. Land uses within this designation may include other uses, subject to approval of a conditional use permit. The proposed refinement at the San Gabriel River Bridge is not subject to the local permitting requirements. However, the Authority will work with the City of Irwindale to address land use concerns and work with the USACE.

The City of Irwindale General Plan Resource Management Element was reviewed and no relevant policies related to the San Gabriel River Bridge Replacement Refinement were identified. The following identifies policies related to the proposed Project refinements:

- **Community Development Policies.** The City of Irwindale will promote and support the future extension of the Gold Line Foothill Extension along the I-210 Freeway corridor.
- **Infrastructure Element Policies.** The City of Irwindale will continue to support the development and expansion of the region's public and mass transit system.
- **Resource Management Element Policies.** The City of Irwindale will monitor traffic and congestion to determine when and where the City needs new transportation facilities to achieve increased mobility efficiency.

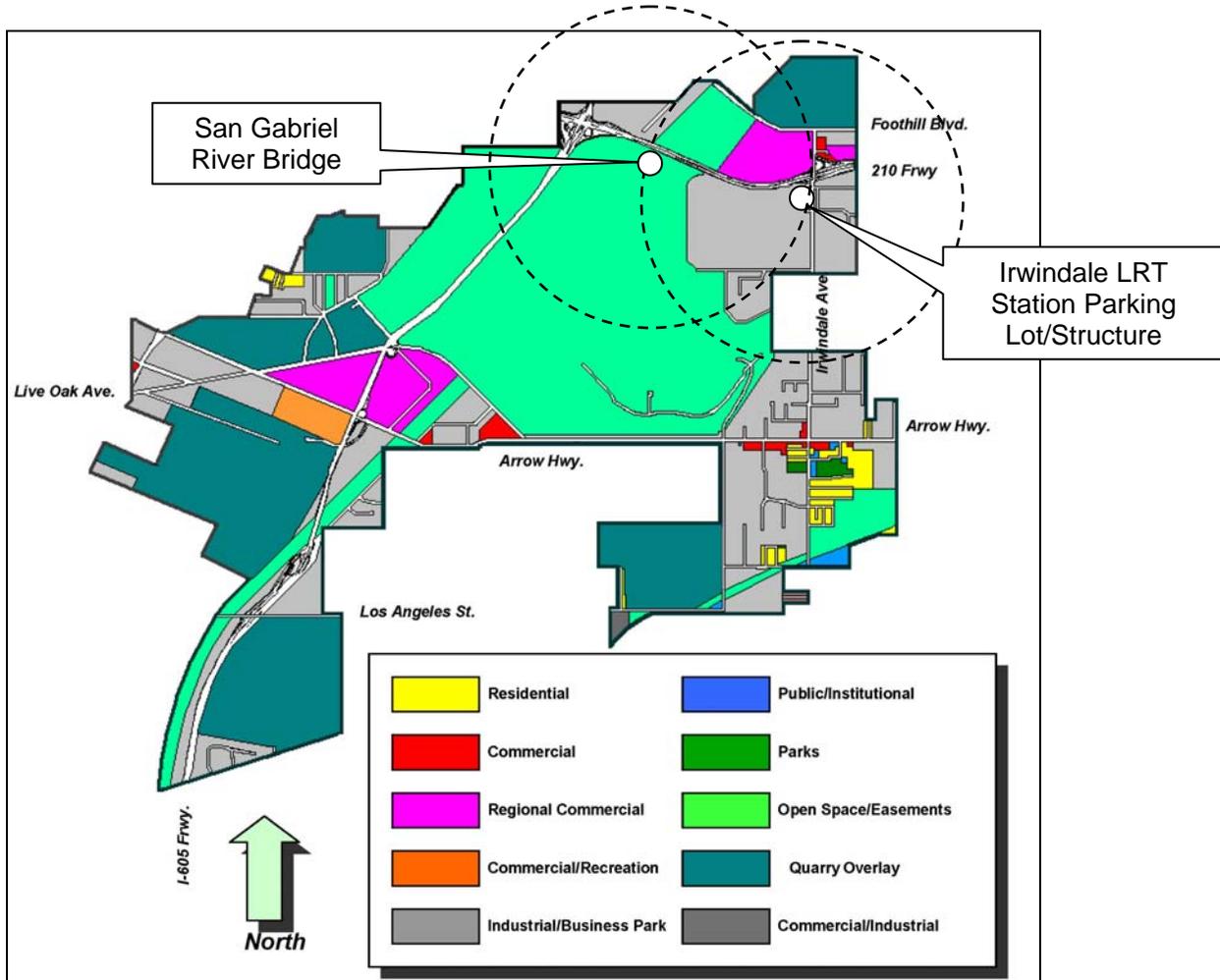
4.2.2.5 Regional Land Use Plans

SCAG Regional Comprehensive Plan and Guide

SCAG functions as the Metropolitan Planning Organization for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The region encompasses a population exceeding 15 million in an area of more than 38,000 square miles. As the designated Metropolitan Planning Organization, SCAG is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the state level. As an example, SCAG is required by state law to allocate the existing and projected housing needs for each city and county in its region.



Figure 4.2-4: City of Irwindale General Plan Land Use Map (2008)



Not to scale. Source: City of Irwindale General Plan Update – June 2008.

The following identifies policies related to the proposed project refinements in Irwindale:

- Land Use and Housing Goals. Focus growth in existing and emerging centers and along major transportation corridors. Targeting growth in housing, employment and commercial development within walking distance of existing and planned transit stations.
- Reduce vehicle miles traveled (VMT). Reduce total regional VMT to 1990 levels by 2020 (the Land Use and Housing Action Plan can be expected to result in a 10 percent reduction in VMT in 2035 when compared to current trends. VMT serves as a proxy for jobs/housing balance, urban design, transit accessibility, and other urban

form issues. VMT per household will decrease with Compass Blueprint implementation.).

- Transportation Goals. A more efficient transportation system that reduces and better manages vehicle activity.

SCAG Regional Transportation Plan

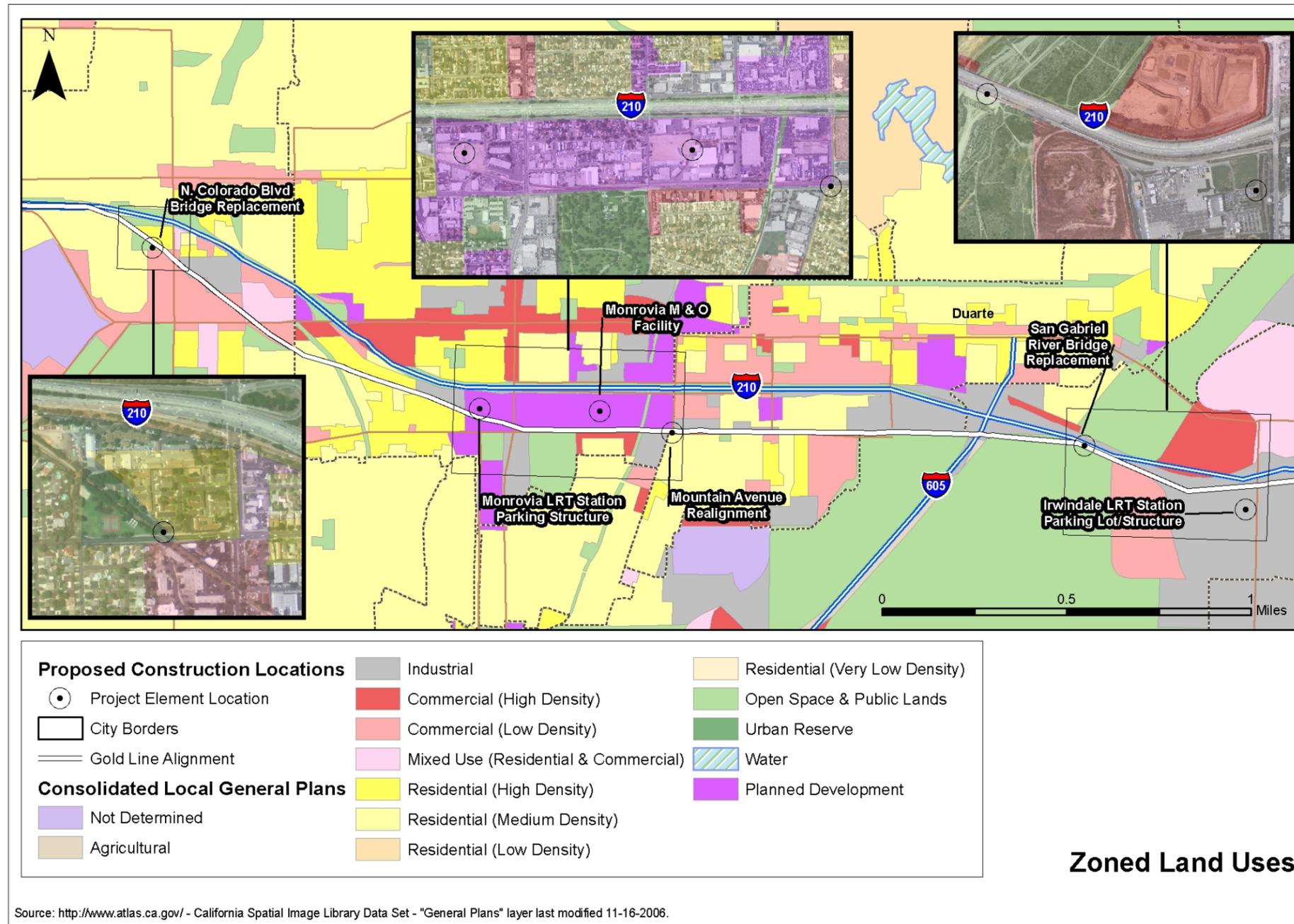
On May 8, 2008, the Regional Council of SCAG adopted the 2008 Regional Transportation Plan (RTP): Making the Connections (2008 RTP). The 2008 RTP is a \$531.5 billion plan, which strives to provide a regional investment framework to address the region’s transportation issues. It also identifies strategies that preserve and enhance the existing transportation system and integrates land use into transportation planning (Figure 4.2-5).

SCAG adopted a set of advisory land use policies and strategies for future regional planning efforts and for localities to consider as they accommodate future growth. The 2008 RTP identified the following goals:

- Identify regional strategic areas for infill and investment
- Structure the plan on a three-tiered system of centers development
- Develop “complete communities”
- Develop nodes on a corridor
- Plan for additional housing and jobs near transit
- Plan for a changing demand in types of housing
- Continue to protect stable existing single-family areas
- Ensure adequate access to open space and preservation of habitat
- Incorporate local input and feedback on future growth



Figure 4.2-5: SCAG Regional Transportation Plan Land Use (2008)



In addition to the above policies, the 2008 RTP recommends closing critical gaps in the transit system to improve service and to extend routes to serve a greater number of passengers. In addition, the coordination of development in and around transit stations and corridors, improved service reliability and performance, and a highly focused transit capital investment program appear to yield the best results within the budget limitations that the region faces.

4.2.3 Existing Conditions

The existing land use conditions for this SEIR will describe the jurisdictions for which the proposed Project refinements are located. The proposed Project refinements are located primarily in the cities of Monrovia and Irwindale. This includes the M&O Facility, the Monrovia LRT Station Parking Structure and Irwindale LRT Station Parking Lot/Structure. However, the Mountain Avenue Realignment is located on the border of the cities of Monrovia and Duarte, and the North Colorado Boulevard Bridge Replacement is located in the City of Arcadia. Each city has an adopted general plan, which outlines the overall context for planning decisions, and may also describe planning areas that identify additional parameters for development in sub-areas of the cities. Each city also has a zoning code, which is the set of legal regulations used to implement the policies and land use map designations outlined in general plans. The following discussion describes existing and planned land uses, as well as the local land use plans, policies, and zoning regulations for each of the project refinements. In addition to land use, transportation, circulation, and open space policies were reviewed and considered.

Land use in the project study area covers the range of land use types that are typically found in mature suburban communities. Several of the adjacent and surrounding land uses are industrial, retail, or commercial.

M&O Facility - City of Monrovia

As noted in Chapter 3 Project Description, the proposed M&O Facility would be located in the City of Monrovia on either 27 acres (Option A) or 24 acres (Option B) of the same city block. The study area for the proposed M&O facility is bounded by South California Avenue to the west, East Evergreen Avenue to the north, South Shamrock Avenue to the east, and East Duarte Road to the south. Adjacent properties include a Home Depot and other commercial facilities to the east; industrial, commercial, and residential uses to the west, the I-210 freeway to the north; commercial, industrial, and residential uses to the south, and residences across California Avenue at the north-west corner of the site.

Mountain Avenue Realignment

The proposed realignment of the Mountain Avenue is located along the border between the cities of Monrovia and Duarte. The northeast corner of the Mountain Avenue/ Duarte Road intersection has adjacent retail land uses, such as Panda Express and IHOP restaurants. The southeast corner is built



out with residential land uses.¹⁵ The northwest and southwest corners, both located in the city of Monrovia, have parking lots, commercial, and retail land uses.¹⁶

Monrovia LRT Station Parking Structure

The proposed two story parking structure would provide ~~338~~³⁵⁰ parking spaces on a site adjacent to South Primrose Avenue, West Pomona Avenue, and across from Peck Avenue. This site is currently a vacant dirt lot, located adjacent to the future Monrovia LRT station. The area surrounding this site is generally characterized as retail and commercial land uses. The Calvary Chapel of Monrovia and Knights of Columbus bar and restaurant are located northeast of the site. Santa Fe Middle School is located south of the site along Duarte Road.¹⁷

Irwindale LRT Station Parking Lot/Structure

The proposed Irwindale parking lot/structure would be located at the northwest corner of Irwindale Avenue and Avenida Padilla, adjacent to the Irwindale LRT station. This parking lot/structure would be located adjacent to the Miller-Coors Brewing Facility on land that is owned by the Miller-Coors Brewing Company. The parking lot would be located beneath the existing Irwindale Avenue elevated ramp. This proposed parking lot/structure site is located immediately adjacent to North Irwindale Avenue. Existing land uses located west of this site include open space, parking lots, and large water/propane storage tanks. Land uses located to the east and south of the site appear to be commercial and light industrial. The I-210 freeway is located north of the site.

North Colorado Boulevard Bridge Replacement

The North Colorado Boulevard Bridge Replacement is located near the eastern boundary of the City of Arcadia, where it crosses above North Colorado Boulevard. The existing bridge, which supports an inactive segment of the BNSF railroad, is located in the center of the Construction Authority's 50 foot wide right-of-way and does not provide any public motor vehicle access. The existing structure would be removed and replaced with a 34 feet wide and 140 feet long bridge. It will be 15 to 20 feet above North Colorado Boulevard.

San Gabriel River Bridge Replacement

The San Gabriel River Bridge is located directly parallel to the I-210 freeway, slightly southeast of the I-210 freeway and I-605 freeway interchange. The proposed bridge replacement would not substantially relocate the bridge but would accommodate a fixed LRT dual track and other enhancements and would necessitate the removal and replacement of the bridge's support structures. The bridge and surrounding land uses are located in an undeveloped riverbed.

¹⁵ Google Earth November 15, 2009

¹⁶ City of Duarte 2007

¹⁷ Google Earth November 15, 2009



4.2.4 Environmental Impacts

4.2.4.1 Impact Criteria

The following section identifies the CEQA impact criteria for land use. For the purposes of the analyses, the proposed Project refinements would have an adverse environmental impact under CEQA if they met or exceeded the following criteria:

- A proposed Project refinement physically divides an established community;
- A proposed Project refinement conflicts with jurisdictional land use plans, policies, or regulations that have been adopted for the purpose of avoiding or mitigating environmental effects; or
- A proposed Project refinement conflicts with applicable habitat or natural community conservation plans.

4.2.4.2 Project Impacts

The proposed Project refinements would not conflict with habitat or natural community conservation plans, as there are currently no conservation plans in the Project vicinity. Additionally, the proposed Project would not divide established communities, since the Project corridor is an existing railroad and transportation route on which the corridor communities have historically developed and to the extent that division of communities exists, it is not caused by the proposed refinements. Significance of land use impact is related to the consistency of the proposed Project with applicable land use and circulation plans, policies, and regulations. If the proposed Project refinements are consistent with both the local general plan and zoning code, it can be determined to have a less than significant impact on the land use of the area, so long as its design is compatible with the surrounding community. If the project requires a zone change and/or general plan amendment, potential impacts to surrounding land uses may occur. Significance would be a function of the surrounding land uses, buildings, general or specific plan designations, zoning, and parcel sizes.

Beyond this, two other impact periods are considered: Construction and Long-term Period Impacts.

Construction Period Impacts

Because construction activities would be temporary and access to surrounding uses would be maintained, construction period land use impacts are not expected for any of the proposed project refinements. Construction activities would not likely generate activities that would affect the planning or zoning designations of adjoining or nearby properties. All six Project refinements have been found to be consistent with the applicable existing planning, zoning, and circulation elements of the cities of Arcadia, Monrovia, Duarte, and Irwindale. Construction impacts from each refinement would be short term and temporary in nature. The M&O Facility in Monrovia, the Mountain Avenue Realignment, and the Monrovia LRT Station Parking Facility are all located in and consistent with the City of Monrovia PD-12. The Mountain Avenue Realignment is not specifically listed in the City of Duarte Circulation Element, but is consistent with the intersection being improved via additional turn lanes and improved circulation. The City of Irwindale has embraced



and is in full support of the Irwindale LRT Station location and parking facilities. The Authority will prepare a construction management plan for each of the refinements.

Long-Term Period Impacts

The proposed project alternatives would generate long-term land use impacts if the actions proposed were inconsistent with applicable land use plans, policies, or regulations. Additionally, long-term land use impacts would result if the proposed project physically divides an established community. The Project refinements would be consistent with adopted land use plans and zoning.

As described above in Section 4.2.2, several regional land use plans and policies are applicable to the study area and the Project refinements. The Project refinements would be consistent with these plans and policies. As such, no significant impacts would result.

4.2.5 Mitigation Measures

All land use and planning impacts would be less than significant. Therefore, no mitigation measures would be required.

4.2.6 Impact Results with Mitigation

All land use and planning impacts would be less than significant. Therefore, no mitigation measures would be required.



4.3 Population and Housing

This section discusses the existing population and housing conditions and analyzes potential impacts from implementation of the Project refinements listed in Chapter 3 Project Description. The section will assess existing conditions, environmental impacts, mitigation measures, and impact results with mitigation.

4.3.1 Methodology and Definitions

The study area for discussion of population and housing includes the cities adjacent to proposed project components. Noted throughout and moving west to east, the cities are: Arcadia, Monrovia, Duarte, Irwindale, and Azusa.

4.3.2 Regulatory Framework

The 2007 Final EIR identified this section under the title “Socioeconomics” (Section 3-14 of the 2007 Final EIR). In the 2007 Final EIR, no stand alone regulatory framework was discussed regarding population and housing. The regulatory framework was embedded within the existing conditions discussion. Refer to the 2007 Final EIR for regulatory framework in addition to the following.

4.3.3 Existing Conditions

Table 4.3-1 shows population change in the Project study area from 2000 to 2035. Population calculations for 2000 and 2008 are based on U.S. Census data. Population forecasts are based on the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan Update.

Table 4.3-1: Local and Regional Population Change

City	2000 Population	2008 Population	Percent Change 2000 to 2008	Forecasted Population 2035	Percent Change 2008 to 2035
Arcadia	53,054	56,358	6.2%	64,846	15.1%
Azusa	44,712	48,704	8.9%	56,652	16.3%
Duarte	21,486	22,958	6.9%	25,163	9.6%
Irwindale	1,446	1,721	19.0%	2,845	65.3%
Monrovia	36,929	39,317	6.5%	42,276	7.5%
Study Area	157,627	169,058	7.3%	191,782	13.4%
LA County	9,519,338	10,347,644	8.7%	11,889,867	14.9%

Sources: Populations: U.S. Bureau of the Census, 2008. Forecasts: 2008 SCAG RTP Update

Table 4.3-2 provides information on employment in the study area for the period from 2000 to 2025. Employment calculations are based on U.S. Census data. Employment forecasts are from the 2008 RTP.



Table 4.3-2: Change in Employment

City	2005 Employment	2010 Forecasted	2015 Forecasted Employment	2020 Forecasted Employment	2025 Forecasted Employment	Percent Change 2005 to 2025
Arcadia	26,102	27,128	27,943	28,464	29,076	11.39%
Azusa	18,047	18,478	18,820	19,039	19,296	6.92%
Duarte	6,667	6,873	7,037	7,142	7,265	8.97%
Irwindale	13,444	13,622	13,764	13,855	13,961	3.85%
Monrovia	17,563	18,075	18,481	18,741	19,046	8.44%
Study Area	111,077	119,493	124,646	128,961	132,624	19.40%
LA County	4,397,025	4,552,398	4,675,875	4,754,731	4,847,436	10.24%

Source: Employment: 2008 SCAG RTP Update

More than 111,000 jobs were provided in the study area in 2005. The employment forecasts from SCAG indicate that by 2025 an additional 21,547 jobs will be created within the area, a 19% increase from 2005. The largest employment centers are in Monrovia and Arcadia. The city of Arcadia is forecasted to have employment growth greater than that of Los Angeles County. Between 2005 and 2025, approximately one job is forecasted to be created for every 3.5 new Los Angeles County residents. However, in the Project study area, approximately one job is forecasted to be created for every 1.15 Project study area residents. This employment data reflects that the proposed Project area is currently an important regional employment center, and the forecasts indicate that the corridor’s importance as a regional employment center will continue. An important feature of these employment numbers is that they reflect the presence of stable employment centers, such as colleges and hospitals.

Table 4.3-3: Local and Regional Housing Occupancy, Tenure, and Size

City	Total	Vacant	%	Occupied	%	Owner Occupied	%	Renter Occupied	%	Average Household
Arcadia	20,370	815	4%	19,533	96%	12,629	62%	7,741	38%	3.13
Azusa	13,711	548	4%	13,163	96%	6,856	50%	6,856	50%	3.57
Duarte	6,995	140	2%	6,855	98%	4,966	71%	2,029	29%	3.32
Irwindale	428	13	3%	415	97%	295	69%	133	31%	4.16
Monrovia	14,445	433	3%	14,012	97%	6,934	48%	7,511	52%	2.84
Study Area	55,949	2238	4%	53,711	96%	31,891	57%	24,058	43%	3.40
LA County	3,431,588	137,264	4%	3,294,324	96%	1,647,162	48%	1,784,426	52%	3.12

Source: California Department of Finance, 2010

Like the rest of Los Angeles County, housing vacancies in the Project study area were low (4% or less). As shown in Table 4.3-3, vacancies were 2% in the city of Duarte. Homeownership in the Project study area was higher than it was in Los Angeles County as a whole. The average household size in the Project study area (3.4 persons per household) was similar to Los Angeles County (3.12 persons per household).



4.3.4 Environmental Impacts

4.3.4.1 Impact Criteria

Impact criteria were established through consideration of the CEQA guidelines and standard professional practice. For the purposes of the analyses, the proposed Project refinements would have an adverse environmental impact under CEQA if they met or exceeded the following criteria:

- The proposed Project refinement induces substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
- The proposed Project refinement displaces substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- The proposed Project refinement displaces substantial numbers of people, necessitating the construction of replacement housing elsewhere.

4.3.4.2 Project Impacts

Direct population and housing impacts from the proposed Project refinements would largely be associated with property impacts, including acquisitions and relocations of existing residences and business. Impacts from implementation of the M&O Facility in Monrovia could include the potential acquisition and relocation of as many as 18 properties, including approximately 13 commercial structures under Option A and 12 commercial structures under Option B. The Mountain Avenue Realignment would potentially require two partial property acquisitions and two full residential relocations. The Monrovia LRT Parking Structure would potentially require the acquisition of three undeveloped properties. The Irwindale LRT Station Parking Lot/Structure would impact two properties that are currently occupied by the Miller-Coors Brewing Company property and the City of Irwindale. The North Colorado Boulevard Bridge and San Gabriel River Bridge replacements would not require any additional acquisitions.

Implementation of the proposed Project refinements would occur under the auspices of the California Relocation Assistance Act, requiring public entities to provide procedural protections and benefits when they displace businesses, homeowners, and tenants in the process of implementing public projects for public benefit. The state law is patterned after the federal Uniform Relocation Assistance and Real Property Acquisition Act. Both laws mandate that acquisitions be made at fair market value.

The Project refinements would result in two residential relocations that could be accommodated within the existing housing stock. The refinements would also relocate approximately 13 commercial structures in order to construct the M&O Facility in Monrovia (Option A) (approximately 12 under Option B), with the most substantial change in employment occurring as a result of the M&O Facility. The loss of existing employment at the site would be offset by the provision of new jobs associated with the M&O Facility. Population and housing changes resulting from the proposed Project refinements would not be of sufficient magnitude to change the overall socioeconomic makeup of cities in the Project study area. The change in land use would not be of sufficient



magnitude to induce significant changes in housing, employment, or the location and economic viability of commercial activities. Although existing housing displacements would occur as well as indirect increases of population growth due to expansion of infrastructure (i.e., light rail), these impacts would be considered less than significant.

The 2007 Final EIR determined that the LRT facilities could influence socioeconomic conditions on a localized basis. The locations of transit facilities and stations could result in some shifting of the specific locations of housing or commercial activities. However, it is not likely to be of significant magnitude to induce major changes in socioeconomic characteristics of the cities. Substantive changes in socioeconomic characteristics are driven by overall market conditions in the cities and the region, and large-scale land use changes, such as conversion of agricultural lands to residential or commercial uses. The proposed Project refinements would not change the impacts identified in the 2007 Final EIR, and population and housing impacts would be less than significant.

The proposed Project refinements would result in the displacement of two residential units. However, as shown in Table 4.3-3, housing is available within the Project study area. Therefore, population and housing impacts would be less than significant, and no mitigation is required.

4.3.5 Mitigation Measures

All population and housing impacts would be less than significant. Therefore, no mitigation measures would be required.

4.3.6 Impact Results with Mitigation

All population and housing impacts would be less than significant. Therefore, no mitigation measures would be required.



4.4 Transportation and Traffic

This section discusses the existing transportation and traffic environment and analyzes potential traffic impacts from implementation of the Project refinements listed in Chapter 3 Project Description. The section will assess existing conditions, environmental impacts, mitigation measures, and impact results with mitigation.

4.4.1 Methodology and Definition

4.4.1.1 Level of Service Methodology

Comparisons were made of proposed Project refinements to assumptions made for the 2007 Final EIR and the related Transportation Technical Report of July 2005. Analysis methodologies for roadway capacity assumptions, level of service analysis, and significant impact calculations, were all defined consistent with the 2007 Final EIR. The level of service analysis focused on weekday traffic operations. This is consistent with the scoping document reviewed by the City of Monrovia for the M&O Facility analysis and also consistent with the methodology of the 2007 Final EIR.

The M&O Facility in Monrovia was not analyzed within the 2007 Final EIR. Therefore, a detailed traffic analysis was conducted for that refinement. The other refinements relate to Project aspects that were included in the 2007 Final EIR but modified under current project plans.

Level of service (LOS) values for the M&O Facility in Monrovia study area were calculated through the use of the Intersection Capacity Utilization (ICU) method. This approach is consistent with City of Monrovia traffic study guidelines and policies. The traffic study for the 2007 Final EIR used the Circular 212 (Critical Movement Analysis) method, and this method was used in a supplemental analysis to analyze intersections on the border with the City of Duarte. This method was also used to analyze the Mountain Avenue Realignment, which was also not analyzed within the 2007 Final EIR. Both methodologies are consistent with the Congestion Management Program for Los Angeles County (CMP).¹⁸

Study roadway segment volume-to-capacity (v/c) ratios were determined for the peak-hour by using a per-lane capacity of 1,600 vehicles for arterials and a per-lane capacity of 1,200 vehicles for collector and smaller roadways. Daily v/c ratios were determined by applying daily lane capacities of 10,000 vehicles for arterials and lane capacities of 7,500 vehicles for collector and smaller roadways. These capacity values are based on general capacity concepts of the Intersection Capacity Utilization and Circular 212 Planning methodologies, and capacity values defined with the County of Los Angeles Congestion Management Program.

During the fieldwork effort conducted for the existing conditions analysis of the M&O Facility in Monrovia, it was noted that due to a current I-210 freeway improvement project, the northbound and southbound approaches of the California Avenue/Evergreen Avenue intersection were restricted to one thru lane. California Avenue is a four-lane roadway and under normal conditions this intersection would have two thru lanes at each of these approaches. Conditions were analyzed under constricted conditions, in order to provide a conservative analysis of existing conditions. The

¹⁸ Los Angeles County Metropolitan Transportation Authority 2004



Project is planned to continue through the year 2102, per project status summaries maintained by Caltrans. These constricted conditions were included in the analysis, as the analysis year for construction of the M&O Facility is also the year 2012.

4.4.1.2 Definition of Future No-Project Conditions

Future No-Project conditions were defined for the M&O Facility in Monrovia in the peak project construction year of 2012. For the analysis of the Mountain Avenue Realignment, Future No-Project conditions were defined for the project opening year of 2014 and a buildout year of 2025. These years match the timeframes defined within the 2007 Final EIR.

For near-term traffic growth between the existing count totals and the project year, an annual growth rate of one percent was used. This rate is conservative compared with annual growth rates defined by the CMP, and was defined within the scoping document for the Monrovia study area.

Buildout-year conditions were defined using an average of roadway corridor growth rates for the M&O Facility study area and the analysis of the Mountain Avenue Realignment based on the regional traffic model maintained by the Southern California Association of Governments (SCAG). Annual rates defined by a review of output from this model were used to increase project-year volumes to year-2025 buildout volumes.

For both the future and buildout period analysis timeframes, trips generated by specific identified development projects in the general vicinity of the M&O Facility study area, an approximate 1.5 mile radius from the M&O Facility site, were included in the study intersection and study roadway segment volumes. This analysis of specific development projects relates only to the analysis for the Monrovia M&O facility, as that analysis included a detailed set of scenarios for both near-term and buildout timeframes. Trips generated by these projects, calculated by development intensities and related rates defined by Trip Generation (8th edition), published by the Institute of Transportation Engineers (ITE) in 2008, are defined within Table 4.4-1.



Table 4.4-1: Planned Area Projects

Map #	Project Name	Project Location	Land Use	Intensity	Unit	Daily Total	AM Peak Hour			PM Peak Hour		
							Total	In	Out	Total	In	Out
1	The Rose Garden at Santa Teresita *	SW Corner of Buena Vista St. / Royal Oak Dr.	Nursing Home	191	Bed	453	27	17	9	42	14	28
2	Retail Building at Best Buy Shopping Center	Mountain Ave. / Central Ave.	Specialty Retail Center	11.0	Ksf	488	15	9	6	30	13	17
3	City of Hope Research and Development Building	SE of Buena Vista St. / Duarte Rd.	Research and Development Center	40.0	ksf	324	49	41	8	43	6	36

* No AM peak hour nursing home trip generation rates available from ITE, rates for assisted living were used.

4.4.1.3 Definition of M&O Facility in Monrovia Trip Generation

The proposed M&O Facility would generate measurable vehicle trips that could create significant impacts on area roadways during the project construction period and during the with-project/operations period. Project trips were calculated for both periods and are discussed below.

Project Construction Trips

Based on facility construction information defined by [the Los Angeles County Metropolitan Transportation Authority](#)~~the County of Los Angeles Metropolitan Construction Authority~~ (Metro), based on experience with M&O facilities on other Metro Rail lines, construction trip generation for trucks and employee vehicles was defined. Truck volumes were multiplied by a passenger car equivalency (PCE) factor of 2.5. Table 4.4-2 provides a summary of the construction trip generation for the Project refinements.

Table 4.4-2: Project Trip Generation

Generator	Daily	Weekday AM Total	Weekday AM IN	Weekday AM OUT	Weekday PM Total	Weekday PM IN	Weekday PM OUT
Employees [a]	50	25	25	0	25	0	25
Trucks [b]	240	30	15	15	30	15	15
TOTAL	290	55	40	15	55	15	40

[a] Employee trips = 1.2 vehicle/employee

[b] Vehicle trips = 2.5 PCE x truck trips



The data totals within Table 4.4-2 indicate that construction-period trips for the M&O Facility in Monrovia would total 290 on a weekday daily basis, including 55 trips (40 inbound and 15 outbound) during the a.m. peak hour and 55 trips (15 inbound and 40 outbound) during the p.m. peak hour. Potential traffic impacts caused by construction trips are evaluated later within this report section.

Project Operations Period Trips

The potential for significant traffic impacts from the M&O Facility in Monrovia or operational period was also evaluated. Using operations and maintenance shift information defined by Metro, an evaluation of typical weekday daily operations was conducted.

The M&O Facility would have 191 employees, with 106 personnel in maintenance functions and 85 personnel in operations.

Operations would have two peak periods: from 6:00 a.m. to 9:00 a.m. and from 3:00 p.m. to 7:00 p.m. Operations employees would generally arrive one hour before their start time. Service frequencies on the LRT line would be highest during these times, and more trains would be running on the line during these time periods. At the end of these time periods, trains would pull back into the M&O Facility, and frequency would be reduced for off-peak operations.

Maintenance would occur on a 24 hour, 7 day a week basis in three shifts. A swing shift time period, from 2:00 p.m. to 10:00 p.m., would be the highest period of activity for maintenance operations.

The p.m. operations peak, and its overlap with the maintenance swing shift, would represent the highest period of activity (and total number of employees on-site) for the M&O Facility. The primary periods of inbound and outbound trips generated by the M&O Facility would be during the following periods:

- 3:00 a.m. to 6:00 a.m.: inbound
- 9:00 a.m. to 11:00 a.m.: outbound
- 2:00 p.m. to 4:00 p.m.: inbound
- 7:00 p.m. to 1:00 a.m.: outbound

The Authority estimates that, based on operations at other existing Metro M&O facilities, up to 25 percent of employees would carpool or take transit to the M&O Facility. Metro Bus Line 264 provides service on Duarte Road, and area circulator shuttle operated by Duarte Transit provides service on Mountain Avenue.

The information defined by Metro for the M&O Facility operations was analyzed to determine the number of trips that would be taken to and from the site on a daily basis and on a peak-hour basis. This analysis indicated that the site would have negligible peak-hour trips, due to the nature of operations of the light rail line and the facility maintenance patterns. A summary of this analysis is provided in Volume 2.G of the SEIR.



4.4.1.4 Definition of Significant Impacts

The impact methodology used to determine significant impacts at the study intersections is based on changes in volume-to-capacity ratios due to the proposed project for analyzed locations. The City of Monrovia has specific significant impact thresholds that are applicable to any range of facility operations (all level of service values). The impact thresholds defined by the City are provided in Table 4.4-3 below.

Table 4.4-3: City of Monrovia Traffic Impact Standards

Level of Service under Existing Conditions	Corresponding Volume-to-Capacity (v/c) Ratio	Project-Related Increase in v/c Ratio
A	0.00 to 0.599	0.060
B	0.600 to 0.699	0.050
C	0.700 to 0.799	0.040
D	0.800 to 0.899	0.030
E	0.900 to 0.999	0.020
F	1.000 and above	0.010

The City of Monrovia policies for traffic impact studies also include definitions for level of service analysis. The City policies define the Intersection Capacity Utilization (ICU) method as the preferred level of service calculation basis. Unsignalized intersections are analyzed as two-phase signals using the ICU method, with LOS values determined using the Highway Capacity Manual (HCM) method. This application to unsignalized intersections avoids the sensitivity to small volume increases that is common under the HCM method.

As the remainder of the study area includes multiple jurisdictions, a significant impact criterion that is uniform and generally acceptable across local jurisdictions was selected for use within the 2007 Final EIR. The criteria utilized were based on the Traffic Impact Analysis (TIA) guidelines defined by the 2004 CMP.

Based on the CMP, a signalized intersection is considered to be adversely or significantly impacted if the resulting LOS is F and the defined v/c threshold is exceeded. Consistent with the 2007 EIR, thresholds at both LOS E and F were applied. Many local jurisdictions use this broader overall standard, which is based on former versions of the CMP.

The CMP impact criterion, as defined within Section B.9.1 of the 2004 version of the document, is as follows:

For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$), causing LOS F ($V/C > 1.00$). If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$).

4.4.2 Regulatory Framework

In the 2007 Final EIR, no stand alone regulatory framework was discussed regarding traffic and transportation. The regulatory framework was embedded within the existing conditions discussion.



Refer to the 2007 Final EIR for regulatory framework in addition to what is discussed above in Section 4.4.1 Methodology and Definitions.

4.4.3 Existing Condition

The two design options for the M&O Facility in Monrovia (Options A and B) were determined to not have quantifiable differences in traffic impacts because the operational characteristics would be similar. Access to and egress from the site is generally the same for both options. Therefore, the M&O Facility was analyzed with one assumption for construction-period truck and employee vehicle trips, and one assumption for the with-project/operations period vehicle trips. Further, the San Gabriel River Bridge Replacement was not analyzed under this section as construction would take place on a site that is physically removed from the public roadway network. At the time of construction of the new bridge no use of the rail will be required. The analysis of traffic impacts that could be caused by these Project refinements is summarized below. The existing conditions scenario, the basis for all subsequent analysis, is defined first.

M&O Facility – City of Monrovia

The M&O Facility in Monrovia (Option A and Option B) encompasses a city block defined by the roadways of Evergreen Avenue on the north, Duarte Road and the existing railroad tracks on the south, Shamrock Avenue on the east, and California Avenue on the west.

The following study area intersections and roadway segments were defined by a study scoping document provided to City of Monrovia engineering staff on July 8, 2010:

- California Avenue/Central Avenue
- Shamrock Avenue/Central Avenue
- Mountain Avenue/Central Avenue
- California Avenue/Evergreen Avenue
- Shamrock Avenue/Evergreen Avenue
- Mountain Avenue/Evergreen Avenue
- California Avenue/Duarte Road
- Mountain Avenue/Duarte Road

Study Roadway Segments

- Central Avenue, west of Mountain Avenue
- Evergreen Avenue, west of Mountain Avenue
- California Avenue, south of Evergreen Avenue
- Duarte Road, east of California Avenue



This study area is located entirely within the City of Monrovia. The Mountain Avenue study intersections are located on the boundary of Monrovia with the City of Duarte. Based on the City of Monrovia comments received in a letter of July 13, 2010, study intersections were added at the locations of Shamrock Avenue/Central Avenue and Mountain Avenue/Duarte Road.

The scoping document to the City Monrovia and their response letter are provided in Volume 2.G of the SEIR.

Existing traffic volumes were primarily defined by new traffic counts conducted in April 2010 and June 2010. The latter counts, conducted in the first half of the month before schools entered summer sessions, were commenced after receiving comments from the City of Monrovia on the original scoping document. All counts were conducted before local schools entered summer sessions, in order to capture normal peak-hour and daily traffic conditions. Some supplemental counts were conducted based on City of Monrovia comments on the scoping document. These counts were conducted in July 2010 but factored upward based on comparison counts from the June data collection effort. June data was used to normalize the July counts to school-period (normal peak conditions) traffic volumes.

Mountain Avenue Realignment

The analysis of the proposed Mountain Avenue Realignment was conducted earlier than the analysis of the M&O Facility, in order to provide specific input into design plans for that intersection. Counts for this intersection were conducted in April 2010 and are also included in the M&O Facility analysis.

4.4.4 Environmental Impacts

4.4.4.1 Impact Criteria

Impact criteria were established in Section 4.4.1 Methodology and Definitions. The proposed Project refinements were then evaluated using the impact criteria to determine what level of impact on transportation and traffic, if any, would result.

4.4.4.2 Project Impacts

M&O Facility in Monrovia (Peak Construction Year (2012) Analysis)

With the application of an annual ambient traffic growth rate to the existing traffic counts, and the addition of trips from other planned projects in the vicinity of the M&O Facility in Monrovia, initial total traffic volumes for the Future No-Project analysis scenario were defined. Also added to these volumes was a shift in traffic on Shamrock Avenue due to the project-related closure of the Duarte Road frontage road at the south side of the M&O site. Shamrock Avenue would remain open, to its current southern terminus at the frontage road.

With the addition of construction-period trips and the closure of the Duarte Road frontage road, total volumes for the Future with-Project analysis scenario were defined.



These volumes were included in the traffic analysis and analyzed using both the ICU and HCM level of service methodologies, per the City of Monrovia traffic study review policies and signalization of study intersections.

Table 4.4-4 provides a summary of this analysis, and calculation of significant impacts. Shaded data cells represent either LOS E or F conditions, or significant impacts.

Table 4.4-4: Year 2012 Conditions with Project LOS Summary

Study Intersections		Future 2012 No Project				Future 2012 With Project				Change in V/C		Signif. Impact ?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak	PM Peak	
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS			
1	California Ave and Central Ave	0.392	A	0.447	A	0.404	A	0.467	A	0.012	0.020	NO
2	Shamrock Ave and Central Ave *	0.288	A	0.308	A	0.313	A	0.343	A	0.025	0.035	NO
3	Mountain Ave and Central Ave	0.711	C	0.710	C	0.714	C	0.710	C	0.003	0.000	NO
4	California Ave and Evergreen Ave	0.458	A	0.561	A	0.522	A	0.618	B	0.064	0.057	YES
5	Shamrock Ave and Evergreen Ave *	0.228	A	0.400	B	0.273	B	0.446	C	0.045	0.046	YES
6	Mountain Ave and Evergreen Ave	0.675	B	0.825	D	0.675	B	0.831	D	0.000	0.006	NO
7	California Ave and Duarte Rd	0.648	B	0.818	D	0.657	B	0.819	D	0.009	0.001	NO
8	Mountain Ave and Duarte Rd	0.680	B	0.683	B	0.680	B	0.690	B	0.000	0.007	NO

* For unsignalized Intersections, impact analysis was based on LOS value from the HCM unsignalized methodology and the impact increment was based on the ICU/signalized methodology.

The data within the right-most column of Table 4.4-4 indicates that during the peak Project construction year of 2012, construction truck and construction employee vehicle activity would create significant impacts at the following intersections:

- California Avenue/Evergreen Avenue: during the a.m. peak and p.m. peak hours
- Shamrock Avenue/Evergreen Avenue: during the p.m. peak hours

Figure 4.4-1 to Figure 4.4-7 provide the existing intersection approach lane/control configurations and the analyzed volumes for this analysis.



Figure 4.4-1: Study Intersection Approach Lane and Control Configurations

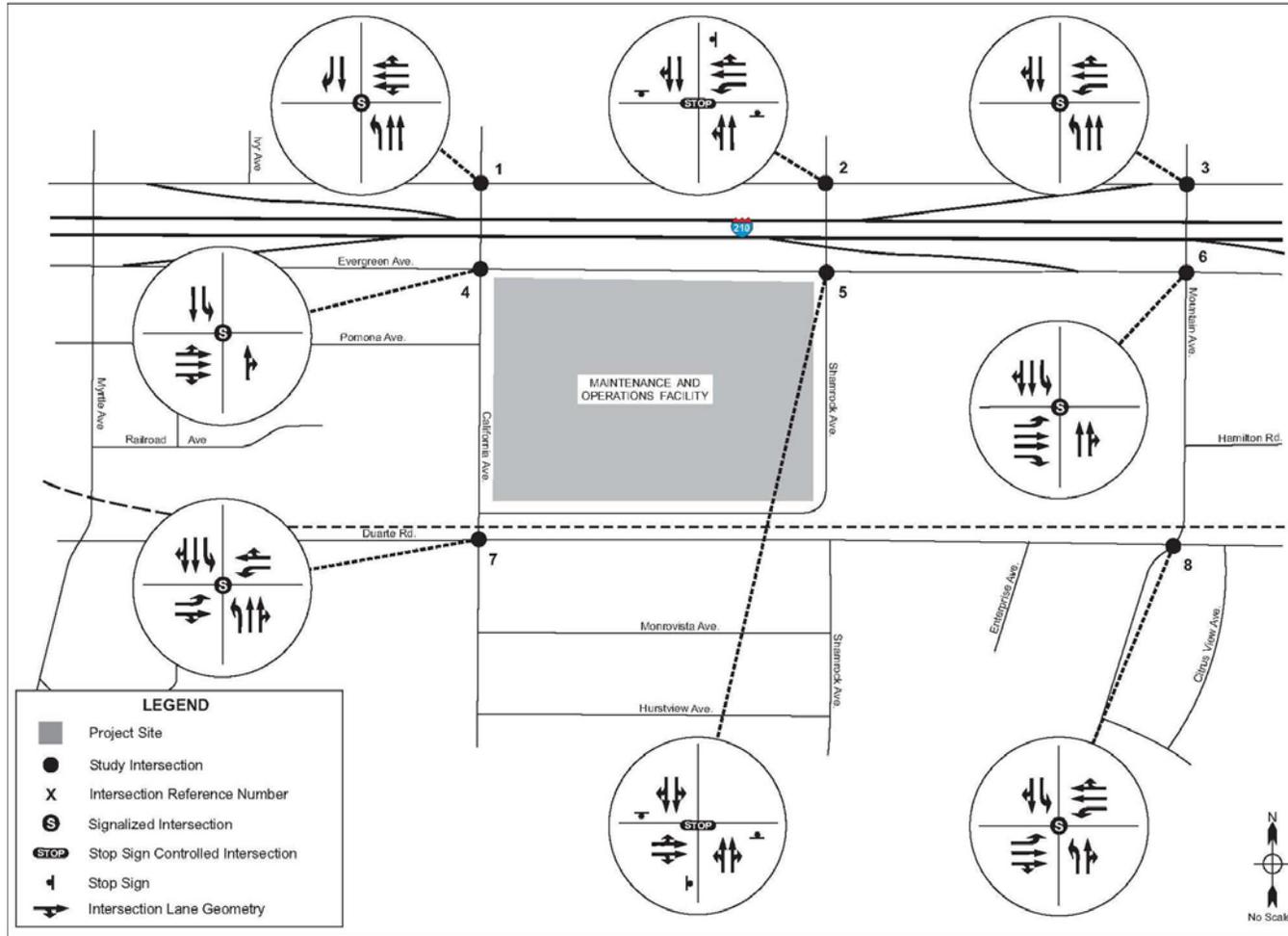


Figure 4.4-2: Future (2012) No-Project AM Peak-Hour Turn Volumes

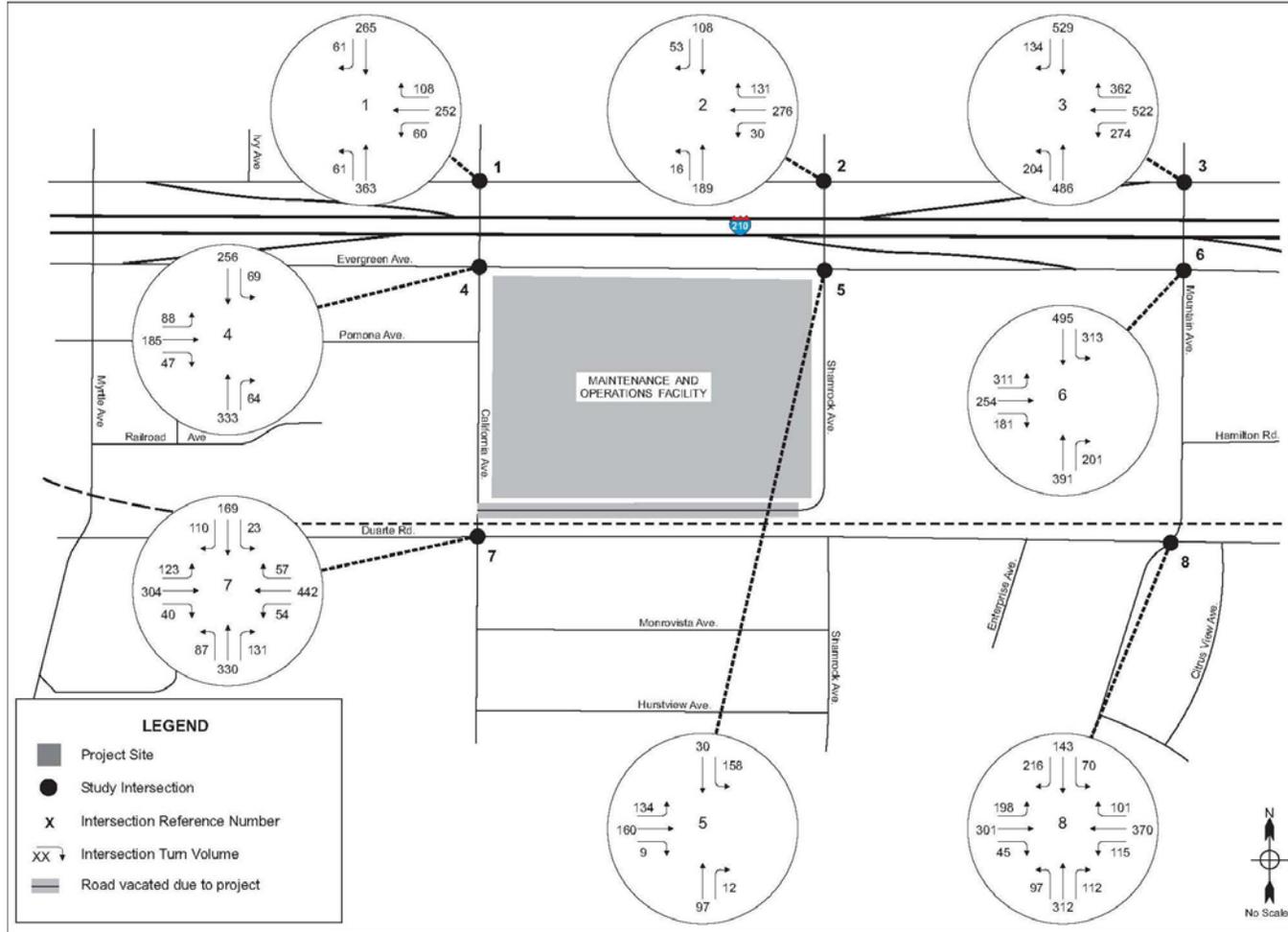


Figure 4.4-3: Future (2012) No-Project PM Peak-Hour Turn Volumes

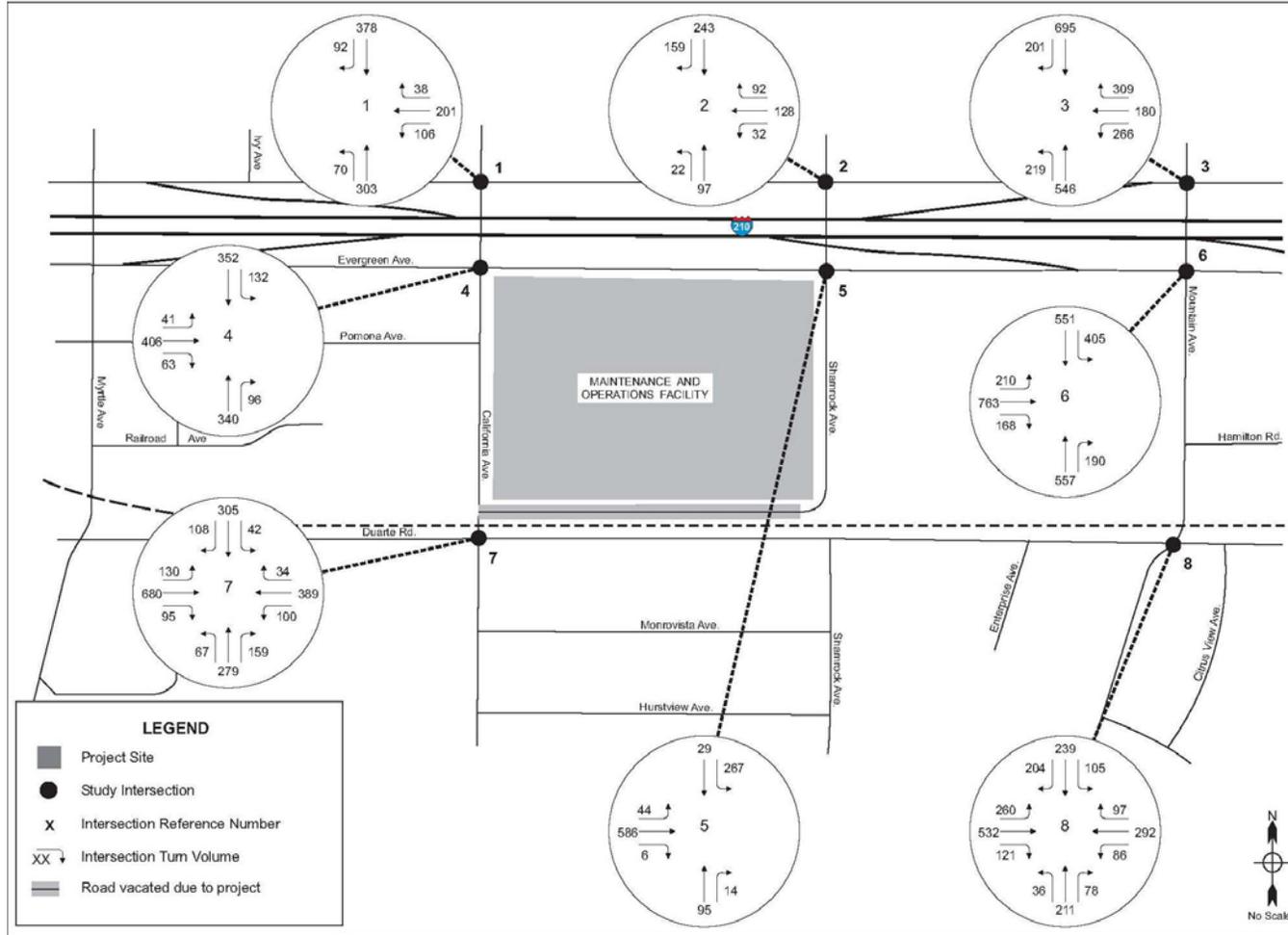


Figure 4.4-4: Future (2012) ~~No~~-Project Average Daily Traffic Volumes

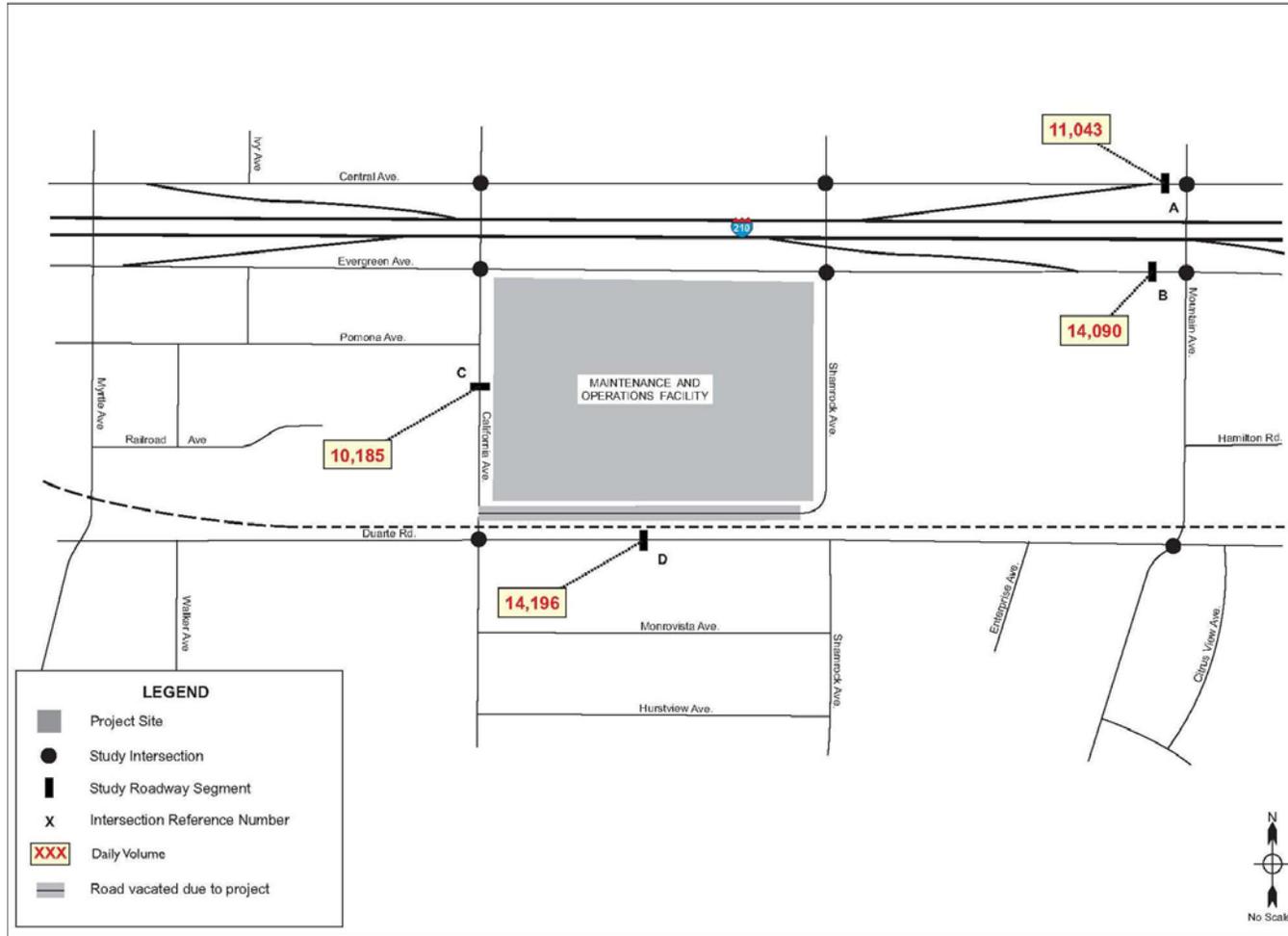


Figure 4.4-5: Future (2012) with-Project AM Peak-Hour Turn Volumes

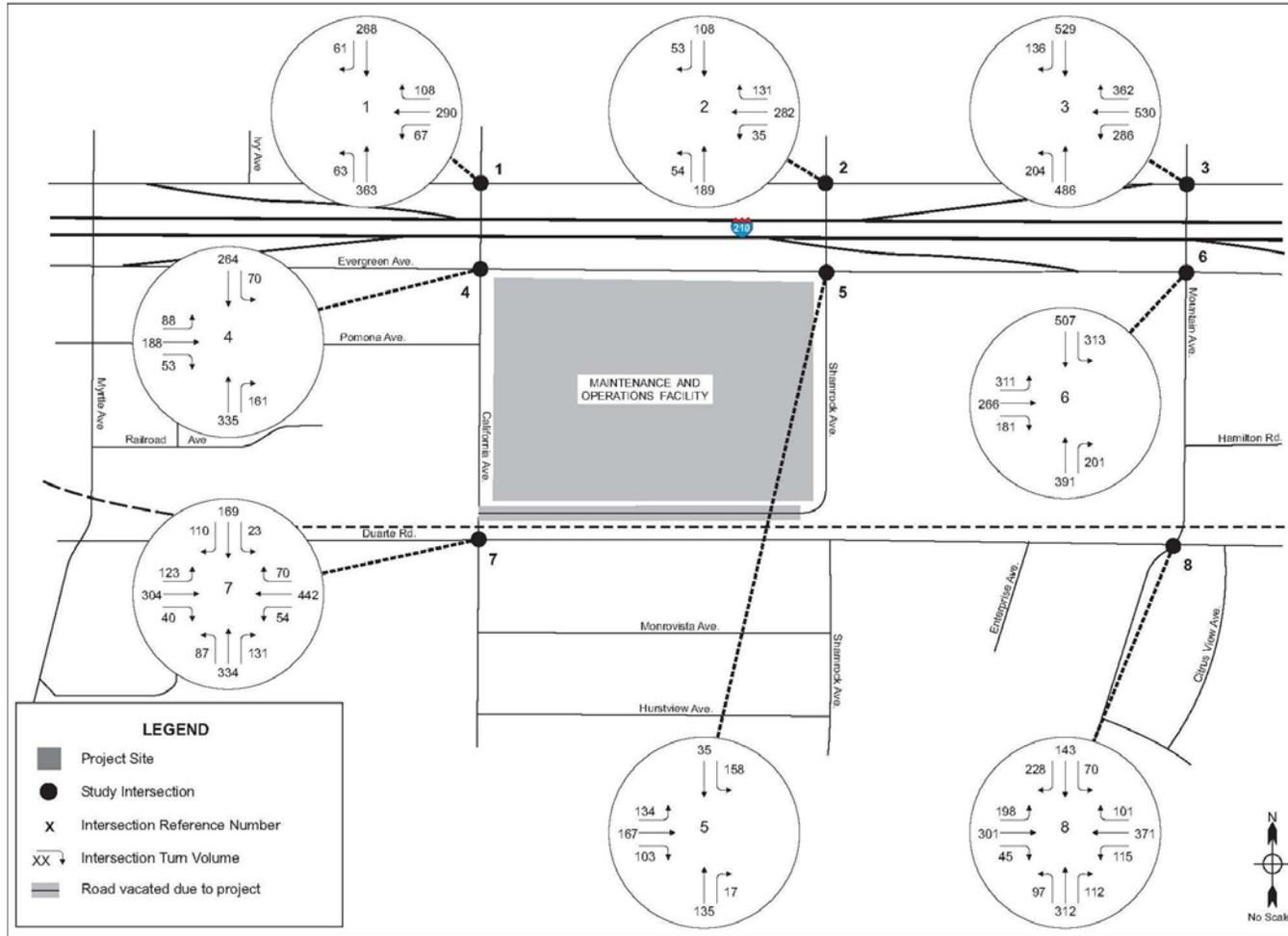


Figure 4.4-6: Future (2012) with-Project PM Peak-Hour Turn Volumes

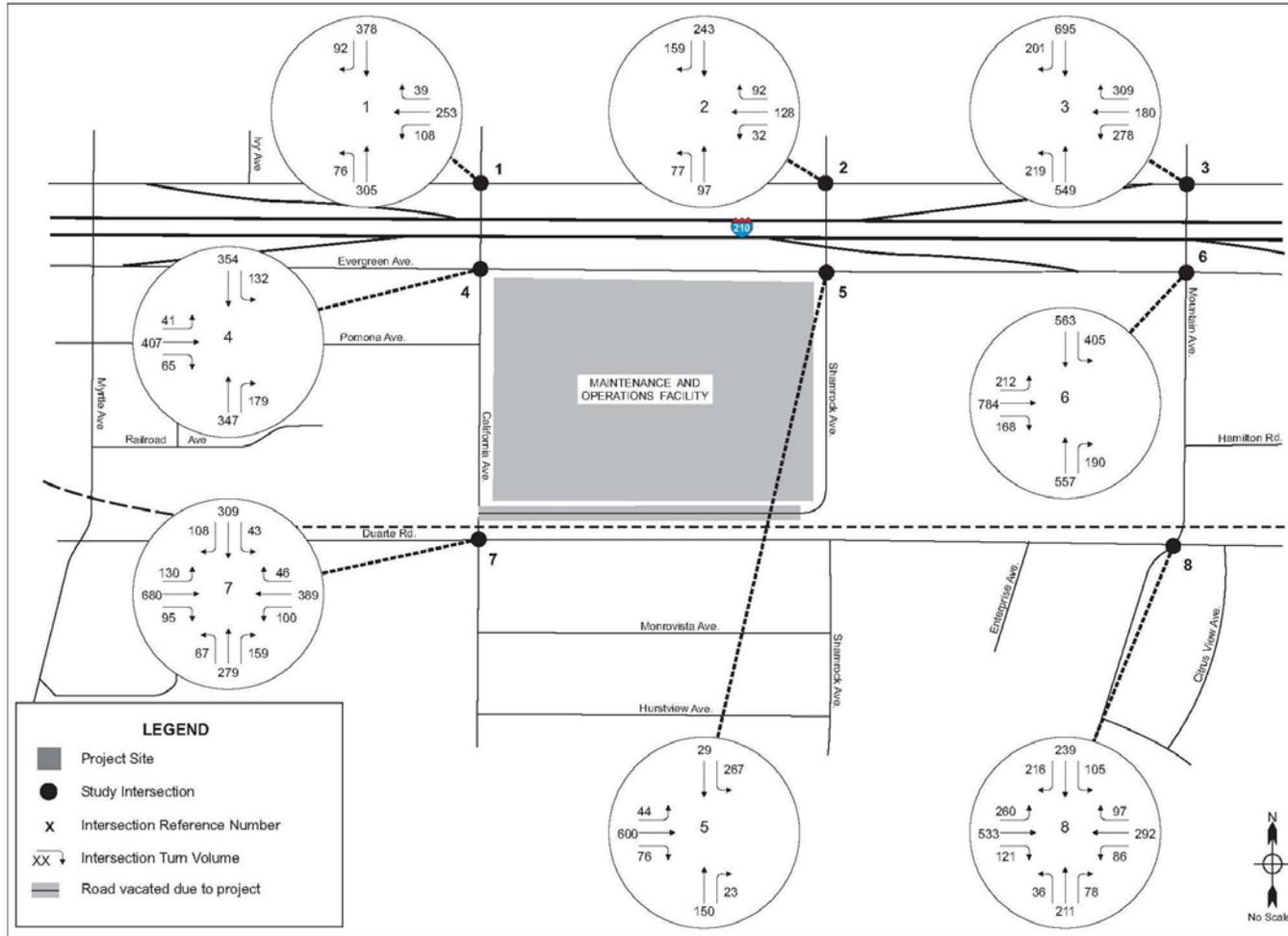
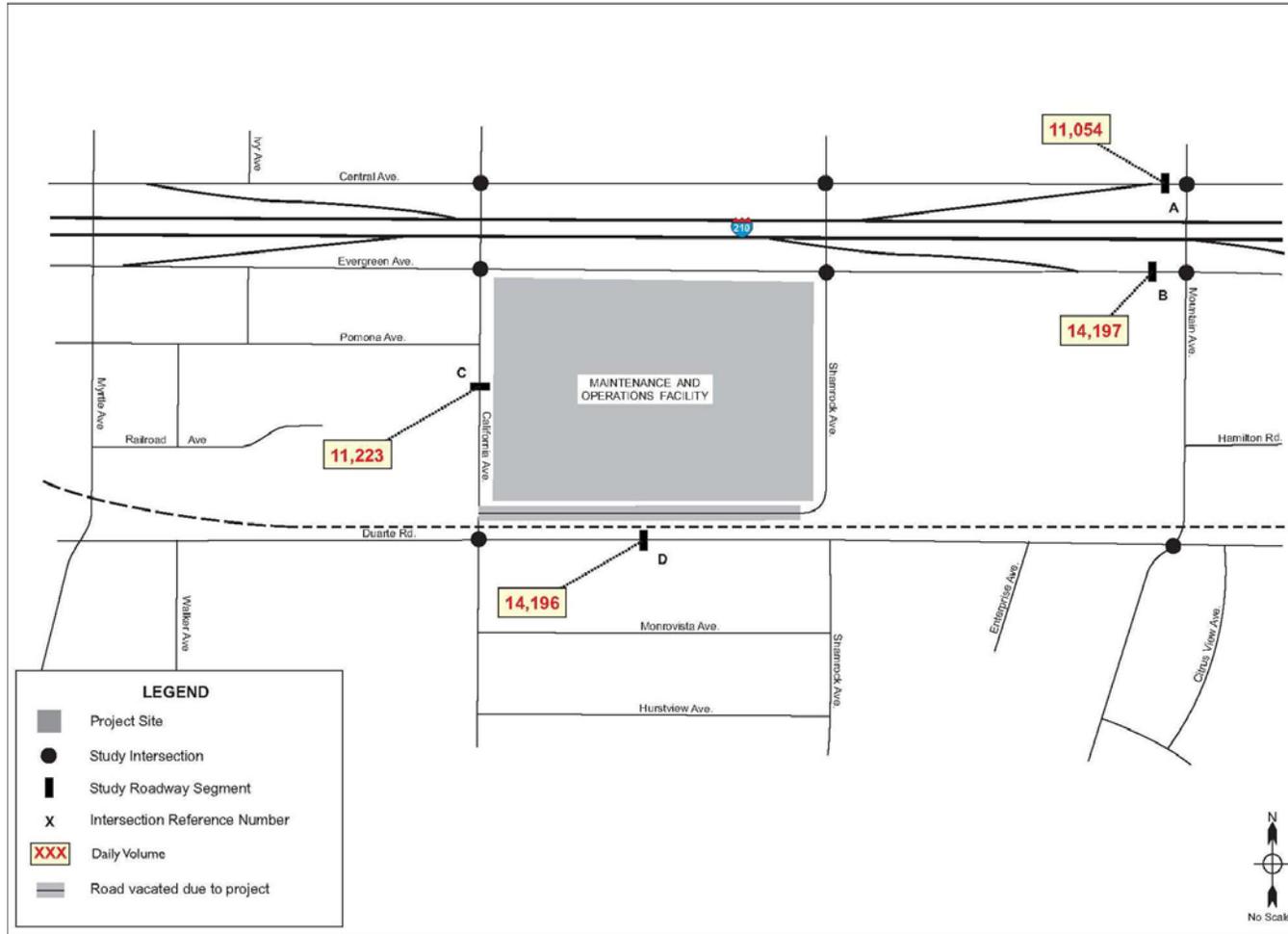


Figure 4.4-7: Future (2012) with-Project Average Daily Traffic Volumes



The study intersections on Mountain Avenue Realignment site are located on the border between the City of Monrovia (to the west) and the City of Duarte (to the east). A supplemental level of service analysis was conducted for these intersections, using the Critical Movement Analysis or Circular 212 methodology, acceptable under the County CMP.

Table 4.4-5 provides a summary of this supplemental analysis for the three Mountain Avenue study intersections.

Table 4.4-5: Year 2012 Conditions with Project LOS Summary using Circular 212 Method for Intersections on City of Duarte Border

Study Intersections		Future 2012 No Project				Future 2012 With Project				Change in V/C		Signif. Impact ?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak	PM Peak	
		V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
3	Mountain Ave and Central Ave	0.686	B	0.685	B	0.690	B	0.685	B	0.004	0.000	NO
6	Mountain Ave and Evergreen Ave	0.646	B	0.814	D	0.646	B	0.821	D	0.000	0.007	NO
8	Mountain Ave and Duarte Rd	0.651	B	0.654	B	0.652	B	0.663	B	0.001	0.009	NO

The determinations within the right-most column of Table 4.4-5 indicate that construction-period impacts would not occur at the Mountain Avenue Realignment study intersections, based on this supplemental Circular 212 analysis.

Table 4.4-6 provides a summary of the conditions at the California Avenue/ Evergreen Avenue intersection, with northbound and southbound approach lane capacity restored (when the freeway improvement project is complete). Once this capacity is restored in 2012, construction of the M&O Facility in Monrovia would not create a significant impact. The overlap of both construction projects has been considered here, however, in order to provide a conservative analysis.

Table 4.4-6: Year 2012 Conditions with Project LOS Summary at Intersection #4 with Completion of Freeway Construction

Study Intersections		Future 2012 No Project				Future 2012 With Project				Change in V/C		Signif. Impact ?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak	PM Peak	
		ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS			
4	California Ave and Evergreen Ave	0.334	A	0.425	A	0.367	A	0.453	A	0.033	0.028	NO

An analysis of study roadway segment impacts for the M&O Facility in Monrovia is provided in Table 4.4-7 (daily impacts), Table 4.4-8 (a.m. peak hour impacts), and Table 4.4-9 (p.m. peak hour impacts). Project-added volumes included project construction volumes and shifts in traffic from the closed Duarte Road frontage road segment.



Table 4.4-7: Year 2012 Conditions with Project LOS Summary for Study Roadway Segments: Average Daily Volumes

#	Roadway Segment	Lane	Existing ADT	Roadway Capacity	Pre Proj ADT	Future 2012 w/o Construction		Proj Trips	Vol Shift	Post Proj ADT	Future 2012 w/ Construction	
						V/C	LOS				V/C	LOS
1	Central Ave, west of Mountain Ave	3	10,826	18,000	11,043	0.613	B	11	0	11,054	0.614	B
2	Evergreen Ave, west of Mountain Ave	3	13,814	18,000	14,090	0.783	C	107	0	14,197	0.789	C
3	California Ave, between Pomona Ave & Duarte Rd	4	9,985	24,000	10,185	0.424	A	152	869	11,223	0.468	A
4	Duarte Rd, between California Ave & Shamrock Ave	2	13,918	20,000	14,196	0.710	C	0	0	14,196	0.710	C

Table 4.4-8: Year 2012 Conditions with Project LOS Summary for Study Roadway Segments: AM Peak Hour Volumes

#	Roadway Segment	Lane	Existing AM Peak	Roadway Capacity	Pre Proj Vol	Future 2012 w/o Construction		Proj Trips	Vol Shift	Post Proj Vol	Future 2012 w/ Construction	
						V/C	LOS				V/C	LOS
1	Central Ave, west of Mountain Ave	3	829	3,600	846	0.235	A	11	0	857	0.238	A
2	Evergreen Ave, west of Mountain Ave	3	735	3,600	750	0.206	A	12	0	762	0.212	A
3	California Ave, between Pomona Ave & Duarte Rd	4	768	4,800	783	0.163	A	29	83	897	0.187	A
4	Duarte Rd, between California Ave & Shamrock Ave	2	992	3,200	1,012	0.316	A	0	0	1,012	0.316	A

Table 4.4-9: Year 2012 Conditions with Project LOS Summary for Study Roadway Segments: PM Peak Hour Volumes

#	Roadway Segment	Lane	Existing PM Peak	Roadway Capacity	Pre Proj Vol	Future 2012 w/o Construction		Proj Trips	Vol Shift	Post Proj Vol	Future 2012 w/ Construction	
						V/C	LOS				V/C	LOS
1	Central Ave, west of Mountain Ave	3	546	3,600	559	0.155	A	0	0	559	0.155	A
2	Evergreen Ave, west of Mountain Ave	3	1,118	3,600	1,140	0.317	A	23	0	1,163	0.323	A
3	California Ave, between Pomona Ave & Duarte Rd	4	828	4,800	845	0.176	A	29	64	939	0.196	A
4	Duarte Rd, between California Ave & Shamrock Ave	2	1,328	3,200	1,410	0.441	A	0	0	1,410	0.441	A

The three tables above indicate that operations of the study roadway segments would remain at good levels of service during construction of the proposed Project refinements.

M&O Facility in Monrovia (Buildout Year (2025) Analysis)

As the M&O Facility in Monrovia construction would be completed before the study area buildout analysis year of 2025, and as no significant levels of trip generation were identified during peak periods of M&O Facility operations, a buildout-year impact analysis was not conducted.



Mountain Avenue Realignment

The proposed Project refinements include a reconfigured grade crossing at the north leg (southbound approach) of the Mountain Avenue Realignment at the intersection with Duarte Road. The existing configuration of the grade crossing and adjacent intersection has a non-linear transition from north to south, as vehicles travel on Mountain Avenue. The grade crossing also adds a pronounced vertical profile to the roadway.

For these reasons, the alignment of Mountain Avenue across the grade crossing would be improved by realigning the intersection approaches. A separate conceptual design exercise has been completed, which evaluated three potential improvement options for the analyzed intersection. This crossing is currently a single-track freight crossing. The establishment of the LRT crossing would necessitate coordination of the traffic signal phasing with the grade crossing and related pre-emption settings. This type of signal timing was incorporated into the operations assumptions for the analysis.

Based on typical grade crossings for light rail systems, total loss time for pre-empted traffic signals is approximately 45 seconds. This loss time includes the transition of the active phase to yellow and red, clearing of the approach where the grade crossing is located, and the grade crossing gate down time.

Table 4.4-10 summarizes the operations factor calculations used to incorporate the anticipated effects of the LRT operations into the intersection operations analysis.

Table 4.4-10: Mountain Avenue Realignment Loss Time

Variable	Applied Value
Loss Time (sec.) due to train crossing	45
Train Frequency	Every 10 minutes
Number of trains crossing the intersection every hour (both directions)	$60 / 10 * 2 = 12$
Total loss time every hour	$45 * 12 = 540 \text{ sec}$
Loss Time/Cycle	$540 / 3600 = 0.15$

The expected train frequency of 10 minutes was doubled, as trains running in both directions would affect signal operations. The 12 possible occurrences per hour were multiplied by the 45-second pre-emption and gate down time. This translates into a 15 percent capacity reduction, which was added to the volume-to-capacity ratios.

Table 4.4-11 provides a summary of the intersection operations analysis, for three analyzed design scenarios, based on the methodology described above, within the year-2014 with-Project period. Table 4.4-12 provides a similar summary for the year-2025 buildout period. Various improvements at the northbound and southbound approaches to the intersection were investigated, including approach lane and related control improvements.

Table 4.4-11: Mountain Avenue Realignment Level of Service Analysis Summary: Year 2014 Conditions

Scenario	Future Northbound/Southbound Approach Lane Configurations	AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
	Without Improvements – Left and thru-right lanes	0.803	D	0.806	D
1	Left, thru, right lanes	0.688	B	0.661	B
2	Left, thru, thru-right lanes	0.643	B	0.622	B
3	Split north/south signal phasing	0.817	D	0.778	C

Table 4.4-12: Mountain Avenue/Duarte Road Intersection Level of Service Analysis Summary: Year 2025 Conditions

Scenario	Future Northbound/Southbound Approach Lane Configurations	AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
	Without Improvements – Left and thru-right lanes	0.855	D	0.858	D
1	Left, thru, right lanes	0.731	C	0.702	C
2	Left, thru, thru-right lanes	0.683	B	0.660	B
3	Split north/south signal phasing	0.871	D	0.828	D

Scenario 1 has been chosen for implementation, as operations would still fall within the LOS C range (good operations) and would not have the geometric difficulties of the Scenario 2 improvements (as discussed below).

The best operational improvement, as shown by the volume-to-capacity (v/c) numbers within both of the tables, would be Scenario 2. This scenario would provide for left, thru, and shared thru/right approach lanes. This improvement, however, would be difficult to implement at both the northbound and southbound approaches due to the lack of two receiving lanes at the south leg of the intersection and the horizontal curvature and the pronounced vertical profile of the roadway related to the railroad grade crossing. For these reasons, Scenario 2 has not been chosen for implementation.

Scenario 3 would not be a desired improvement, as the split phasing (separate dedicated phases for northbound and southbound approach vehicles) would worsen the overall operations.

Peak-hour turn movement volumes used for the analysis are provided on Figure 4.4-8 (year-2014 a.m. peak hour), Figure 4.4-9 (year-2014 p.m. peak hour), Figure 4.4-10 (year-2025 a.m. peak hour), and Figure 4.4-11 (year-2025 p.m. peak hour). The intersection approach configuration and control assumptions are illustrated on Figure 4.4-12.

LOS worksheets for the analyzed scenarios at the Mountain Avenue/Duarte Road intersection are provided in Volume 2.G of the SEIR.

The proposed realignment of the Mountain Avenue/Duarte Road intersection would improve operations over no-project conditions. The calculated level of service values would improve in both the weekday a.m. peak and p.m. peak hours. Therefore, no mitigation measures would be required at this intersection.



Figure 4.4-8: Future (2014) Mountain Avenue & Duarte Road AM Peak-Hour Turn Volumes

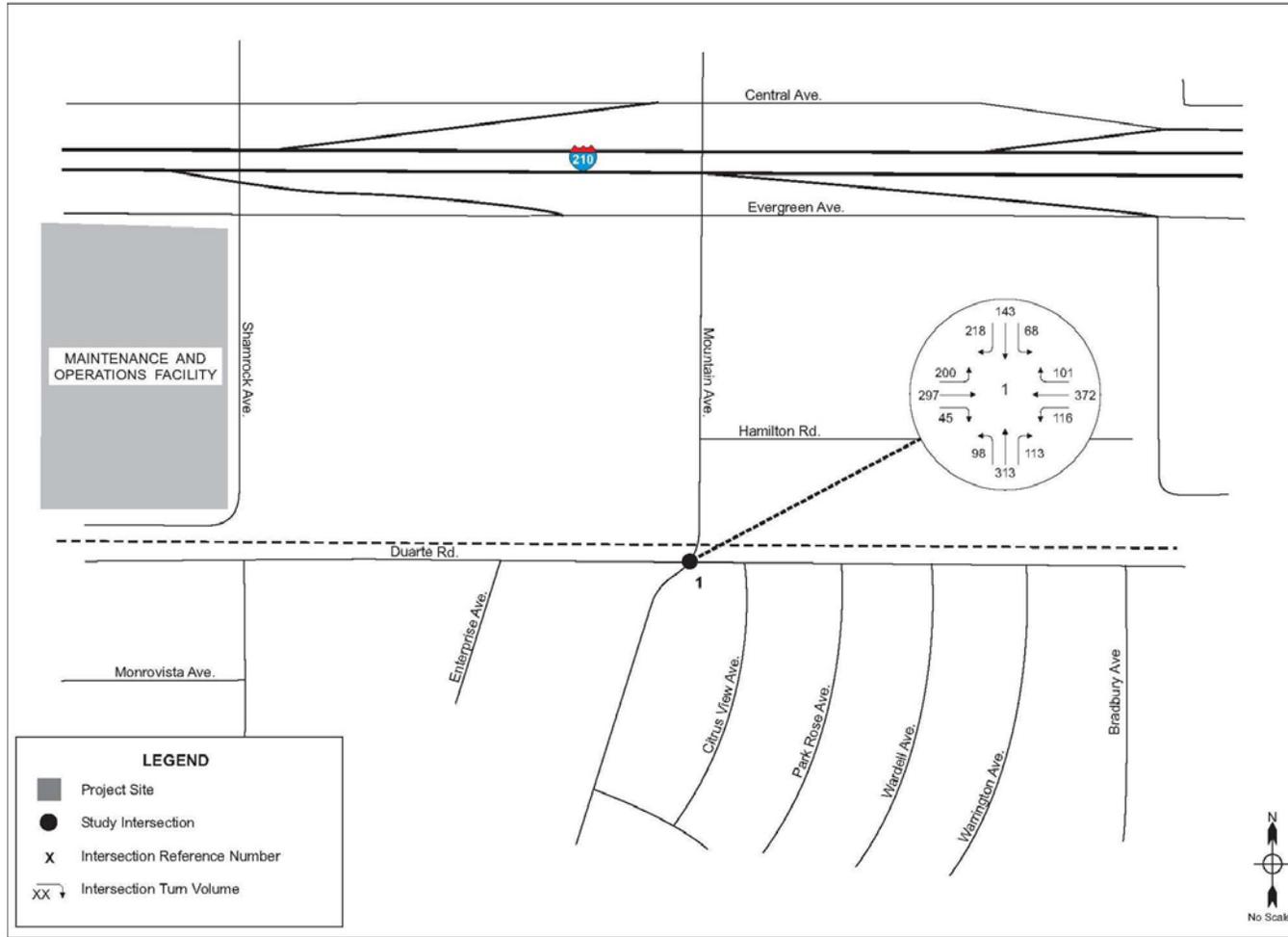


Figure 4.4-9: Future (2014) Mountain Avenue & Duarte Road PM Peak-Hour Turn Volumes

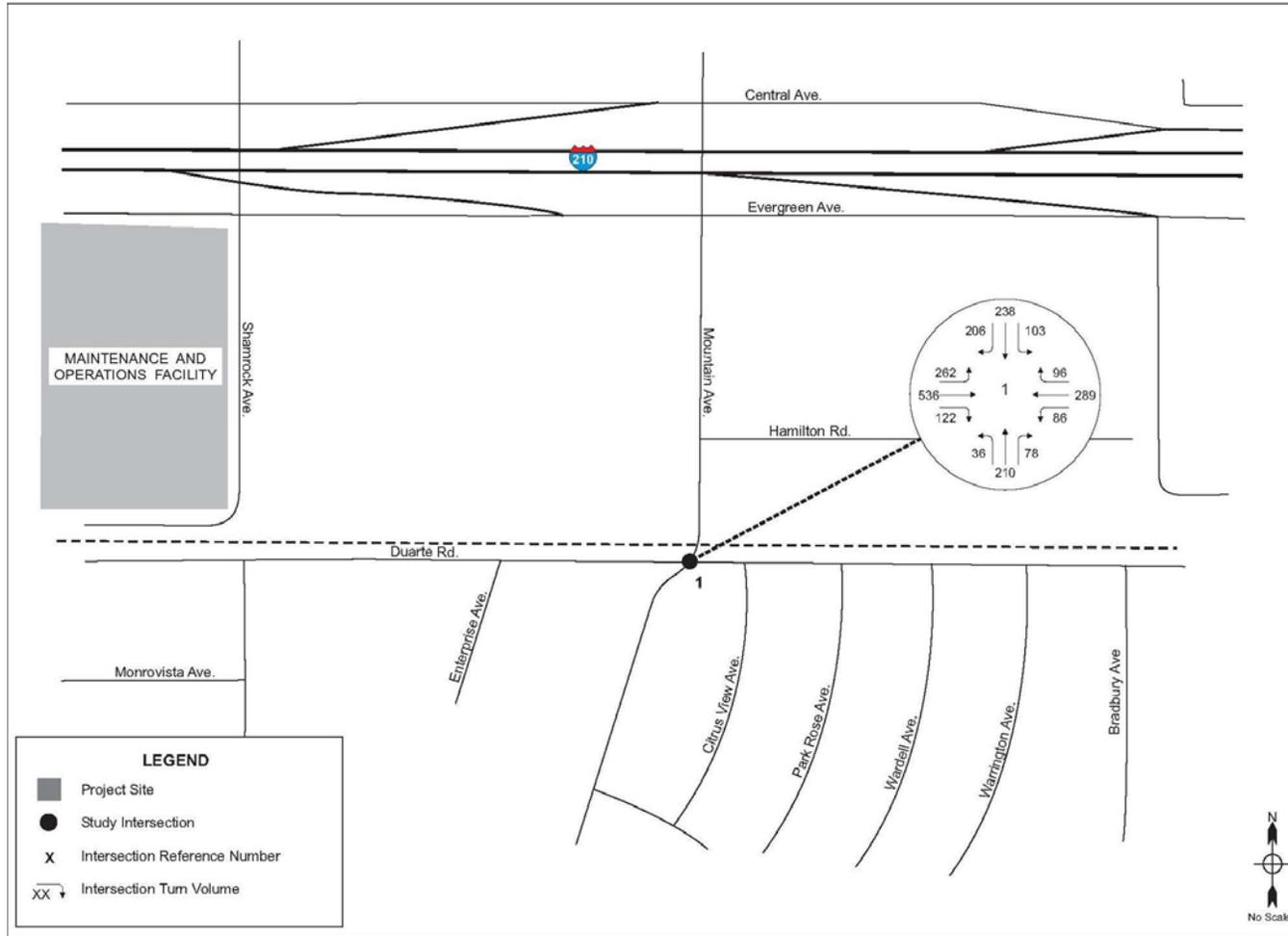


Figure 4.4-10: Future (2025) Mountain Avenue & Duarte Road AM Peak-Hour Turn Volumes

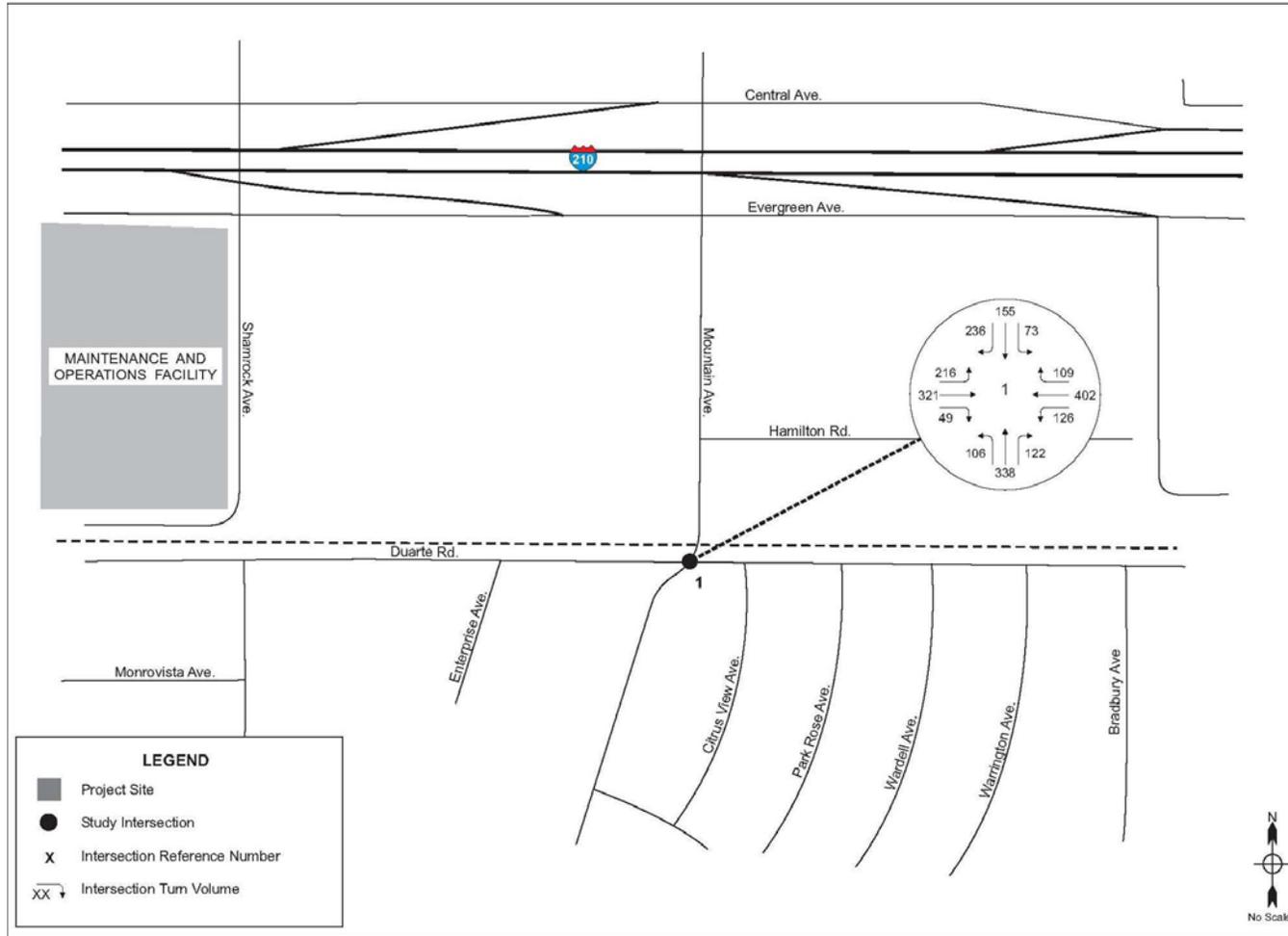


Figure 4.4-11: Future (2025) Mountain Avenue & Duarte Road PM Peak-Hour Turn Volumes

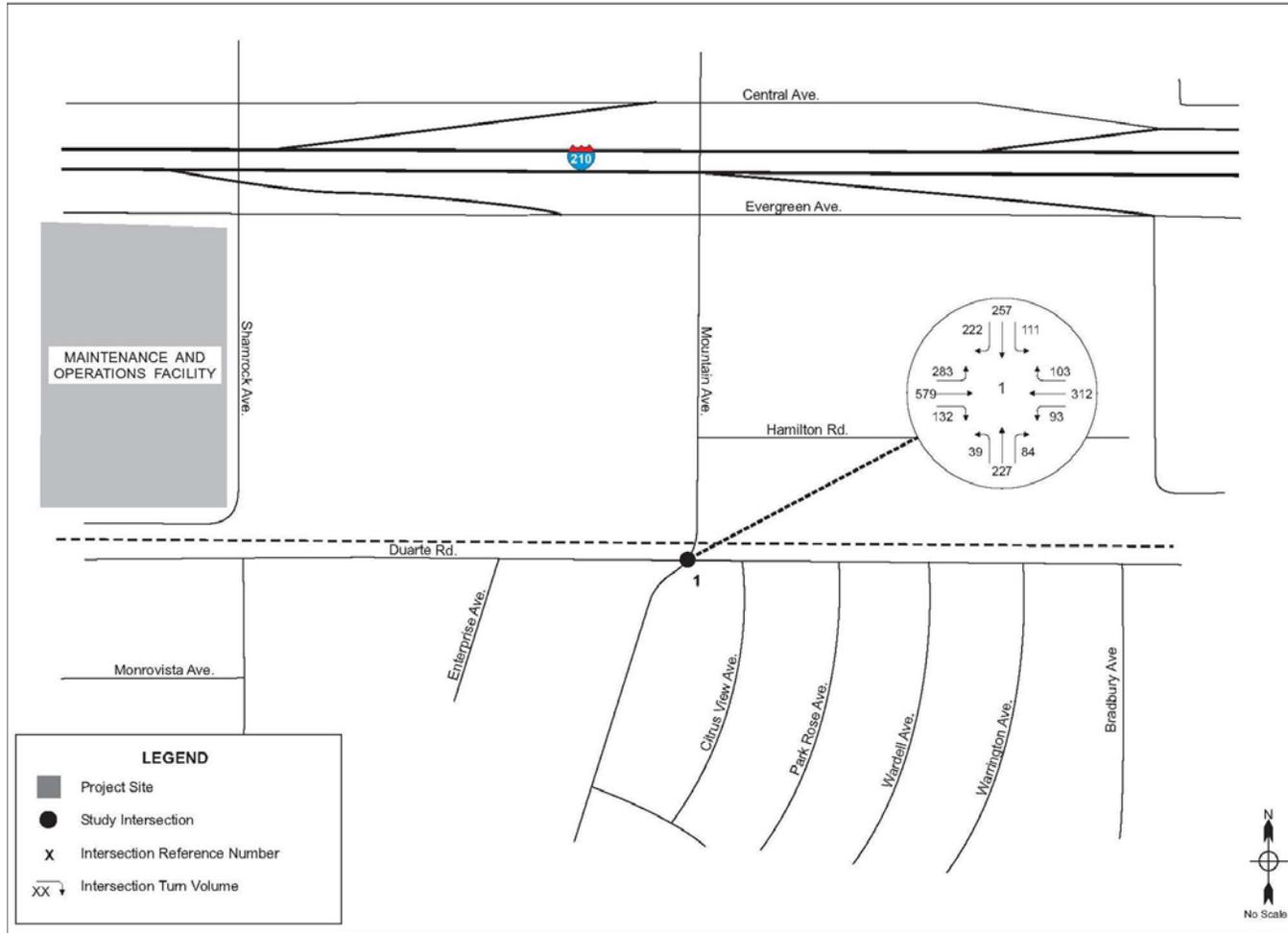
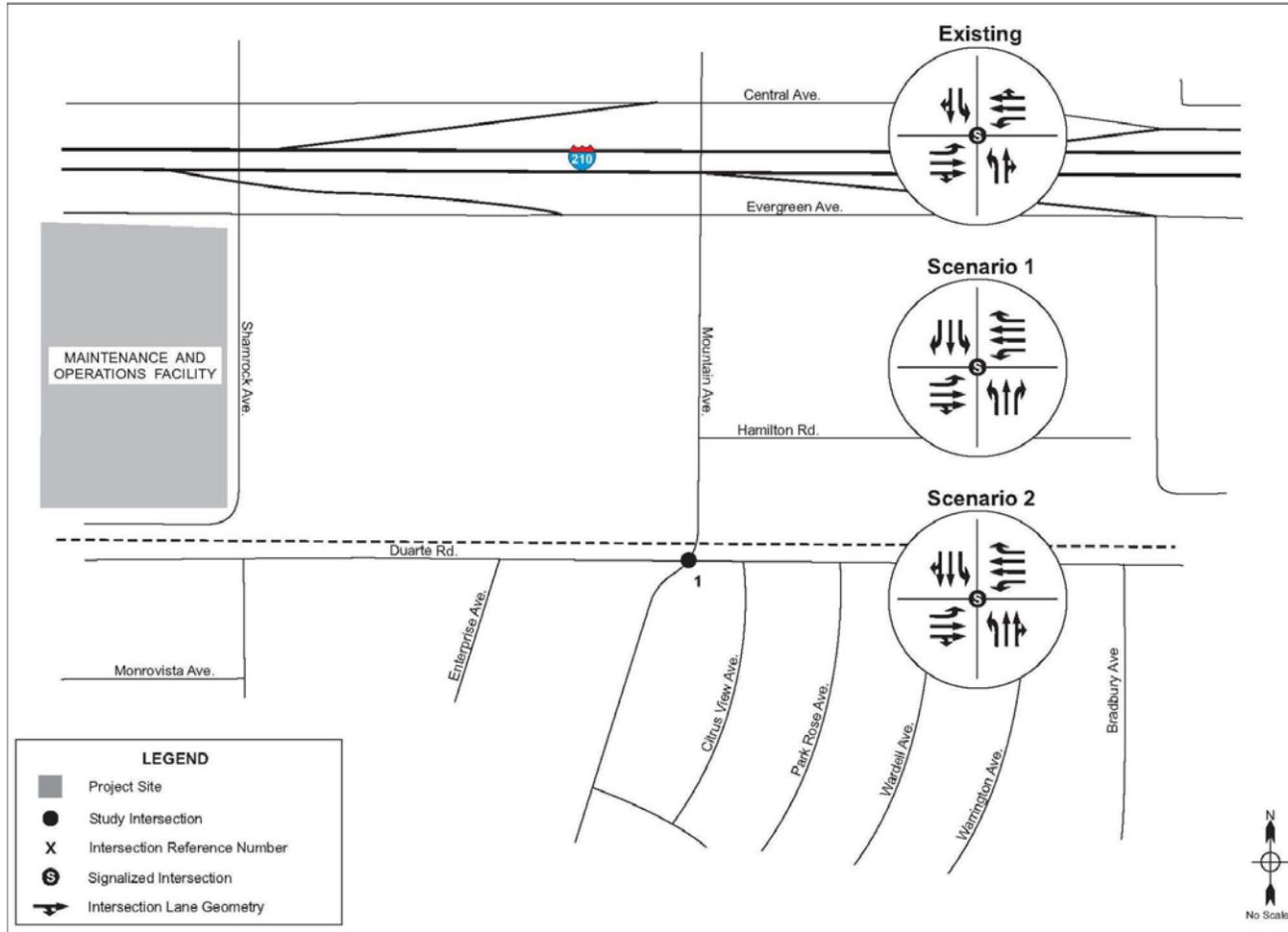


Figure 4.4-12: Mountain Avenue & Duarte Geometry



Monrovia LRT Station Parking Structure

A change in the planned parking supply at the Monrovia station (to the west of Myrtle Avenue and to the north of Duarte Road) was analyzed, in order to compare the current planned station parking to that analyzed in the 2007 Final EIR. The change is described below, and analyzed based on data within the 2007 Final EIR.

The 2007 Final EIR identified a 300-space surface parking lot, being completed at this time by the City of Monrovia, at the southwest corner of the Pomona Avenue/Myrtle Avenue intersection (now completed). Future transit-oriented development (TOD) at the same site was identified to include parking for 600 transit patrons.

The updated parking supply description for the Monrovia station includes a new parking structure to provide ~~338~~³⁵⁰ vehicle spaces. This structure would be located on the north side of the station, southwest of the southern Primrose Avenue cul-de-sac.

Overall parking supply has grown by 60 spaces. However, instead of all spaces being located at the Pomona/Myrtle lot, slightly more than half of the spaces would be accessed from Primrose Avenue, but would continue to access Myrtle Avenue at the intersection with Pomona Avenue.

In the 2007 Final EIR, study intersections near the Monrovia LRT Station Parking Structure included the following:

- Myrtle Avenue/Central Avenue: analyzed as LOS F in no-build scenario
- Myrtle Avenue/Evergreen Avenue: analyzed as LOS F in no-build scenario
- Myrtle Avenue/Duarte Road: analyzed as LOS D in no-build scenario

Capacity improvements were recommended as traffic mitigation measures at the nearby intersections of Myrtle Avenue/Evergreen Avenue (new exclusive southbound left turn lane) and Myrtle Avenue/Duarte Road (new exclusive southbound right turn lane). In addition, signalization of the Myrtle Avenue/Pomona Avenue intersection was recommended.

Signalization of the Myrtle Avenue/Pomona Avenue intersection would provide for improved traffic flow between the new proposed parking area and the Myrtle Avenue corridor.

In summary, potential new traffic impacts were not identified by the analysis within this report section. Signalization of the Myrtle Avenue/Pomona Avenue intersection, as recommended in the 2007 Final EIR (T-5 through T-6), would provide for improved traffic flow between the new proposed parking area and the Myrtle Avenue corridor. Additional mitigation measures would not be required at this intersection.

Irwindale LRT Station Parking Lot/Structure

The parking supply provision for the project Irwindale station has been modified from the supply analyzed within the 2007 Final EIR. The change is described below, and analyzed based on data within the 2007 Final EIR.



The 2007 Final EIR and the traffic study of July 2005 identified a surface parking lot of 700 spaces that would be constructed east of Irwindale Ave and north of the Montoya Street frontage road (Avenida Padilla). The modified parking provision for this station includes two options, which would both be built to the west of Irwindale Avenue with the same ultimate parking capacity, south of the station platform:

- Option A: Surface Lot with 350 Spaces, increasing to 700 by the buildout year
- Option B: Parking Structure with 373 Spaces, increasing to 700 by the buildout year

The revised parking supply for the site has been reduced for the near-term planned supply, but would continue to support the expected demand for the station. By the area buildout year of 2025 defined by the 2007 Final EIR, the station would provide 700 parking spaces under either option.

Improvements identified within the 2007 Final EIR would continue to support good traffic circulation into and out of the station site with the revised parking location. The 2007 Final EIR identified a non-mitigation improvement at the Irwindale Avenue and Adelante Street-Irwindale Avenue frontage road intersection. This improvement would provide for signalization and reconfiguration of this intersection into a full-access intersection. The intersection is currently limited by right-in/right-out access to and from the Irwindale Avenue frontage roads. The improvement would provide direct access to and from the frontage roads to the primary roadway.

The 2007 Final EIR proposed a mitigation measure at the Irwindale Avenue frontage road and Montoya Street intersection. Signalization of this intersection was proposed, which would provide for improved traffic flow between the current proposed parking area and the eastern Irwindale Avenue frontage road.

Another mitigation measure at the Irwindale Avenue/I-210 freeway interchange would improve traffic flow at this location. At the Irwindale Avenue/I-210 freeway Eastbound Ramps intersection, a new exclusive left turn lane would be added to the southbound approach.

The parking supply change for the Irwindale station would not create any new significant impacts, based on the proposed parking configuration and the local roadway improvements proposed within the 2007 Final EIR.

Potential new traffic impacts were not identified. Furthermore, proposed Project refinements would continue to support traffic flow in and out of the station site. Therefore, no mitigation measures would be required at this intersection.

North Colorado Boulevard Bridge Replacement

Construction traffic control plans necessary for construction of the bridge structure should be coordinated with the City of Arcadia, in order to set up proper roadway lane closures. Implementation of an approved roadway closure plan will mitigate any potential significant impacts of this project refinement. This impact would be reduced to a less than significant level with implementation of Mitigation Measure T-3 from the 2007 Final EIR.

Construction-Period Trip Generation

Construction-period trip generation and potential traffic impacts were analyzed in detail for the M&O Facility in Monrovia, as it is proposed to be a large single-site facility and could potentially cause significant local impacts. Other project refinements, however, have specific construction-period trip generation totals that were not identified within the 2007 Final EIR. These totals are as follows:

- Mountain Avenue Realignment: 15 construction employees per day and 20 haul/delivery trucks per day
- Monrovia LRT Station Parking Structure: 25 construction employees per day and 20 haul/delivery trucks per day
- Irwindale LRT Station Parking Lot/Structure: 30 construction employees per day and 25 haul/delivery trucks per day
- North Colorado Boulevard Bridge Replacement: 15 construction employees per day and 10 haul/delivery trucks per day

Each of these construction-period trip totals would not exceed typical local impact standards of 50 trips per hour or 500 trips per day. Therefore, specific impact analyses for the construction period of each Project refinement were not pursued.

4.4.5 Mitigation Measures

The subsequent mitigation measures continue from the 2007 Final EIR (Executive Summary) Traffic Operations Mitigation Measures (T-1 through T-6), which are all still applicable to the Project refinements.

The following provides recommended mitigation measures for the M&O Facility refinement analyzed under potential new traffic impacts.

T-7 Significant traffic impacts, per City of Monrovia guidelines, were identified at the study intersections of California Avenue/Evergreen Avenue and Shamrock Avenue/Evergreen Avenue. The impact at the intersection of California Avenue/Evergreen Avenue would be removed, once additional capacity is restored at completion of current I-210 freeway construction.

In order to mitigate the construction-period impact at the intersection of Shamrock Avenue/Evergreen Avenue, truck routes that use this intersection be restricted to off-peak periods only (outside of the 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. periods on weekdays).

4.4.6 Impact Results with Mitigation

With implementation of mitigation measures T-1 through T-7, transportation and traffic impacts would be reduced to less than significant levels.



4.5 Cultural Resources

This section discusses existing cultural resources and analyzes potential impacts from implementation of the Project refinements listed in Chapter 3 Project Description. This section will assess existing conditions, environmental impacts, mitigation measures, and impacts results with mitigation.

4.5.1 Methodology and Definitions

A cultural resources study was conducted by a team of qualified archaeologists, historians, and architectural historians between June and August 2010 along a segment of the former Atchison, Topeka, and Santa Fe (ATSF) Railway in Los Angeles County, California. The project area includes six non-contiguous Project refinements located in the cities of Arcadia, Monrovia, Duarte, and Irwindale. A cultural resources technical report was prepared and the full report is found in Volume 2.C of the SEIR.

The subject of one component of the Project, the Colorado Boulevard overpass in the City of Arcadia, was previously addressed in the existing FEIR, whereby it was determined to be eligible for local historical designation and thus to qualify as a "historical resource" under CEQA.¹⁹ In order to mitigate project effect on this historic structure, it was recommended to the MGLFECA that a comprehensive recordation program be completed on the existing bridge prior to the project and that its Art Deco-style design elements be incorporated into the proposed new bridge.²⁰ The comprehensive recordation program was implemented in July-August 2010, as documented under separate cover (Volume 2.D of the SEIR).

As a part of the cultural resources study, a record check was conducted at the South Central Coastal Information Center (SCCIC), California State University, Fullerton to determine the locations of previously recorded resources and previous surveys conducted in the area. Research performed included checking the SCCIC files and maps for previously identified historical or archaeological resources in or near the project area. More detailed information regarding the record check and research is provided below.

A field survey was also conducted of the six refinement areas. A total of ten historic resources were identified during the course of the field effort. No archaeological sites were identified that would be affected by the project. The results of the field survey and detailed information about the historic sites are provided below.

4.5.1.1 Record Check and Literature Review

A record check was conducted at the SCCIC to identify previously recorded resources and previous surveys conducted in the area. Historical and archaeological resources include properties designated as California Historical Landmarks (CHL) and California Points of Historical Interest (CPHI) as well as those listed in the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), and the California Historical Resources Inventory (CHRI).

¹⁹ Myra L. Frank/Jones & Stokes and Applied Earthworks 2005:8, MGLFECA 2007:3-5-30

²⁰ Volume 2.D of the SEIR



Historical research performed included preliminary background research on published and unpublished literature in local and regional history. It also involved review of historic maps of the San Gabriel Valley region. U.S. Geological Survey topographic maps from the early and mid-20th century showed cultural features in and around the project area in detail. More specific research on the history of the properties was also conducted. Sources consulted during this phase included primarily the archival records of the County of Los Angeles and the Cities of Monrovia and Duarte, in particular building permit records.

According to SCCIC records, a small portion of the Project area along the San Gabriel River was included in at least two previous cultural resource surveys. Outside the project boundaries but within a one-mile radius, SCCIC records indicate some 40 other previous studies covering various tracts of land and linear features. As a result of these studies, ten historical/archaeological sites, all dating to the historic period, were recorded within the scope of the records search area and submitted to the California Historical Resources Inventory. In addition, the railroad bridge over the San Gabriel River, slated for replacement as a proposed Project refinement, was also recorded during a 2004-2005 survey. However, site record forms generated from that study have yet to be submitted to, or processed by, the SCCIC.²¹

Seven of the recorded sites represented buildings of a wide variety of vintages and functions. Two were railroad bridges on the ATSF line, and the other two sites were described as structural remains and a refuse deposit. The two bridges are discussed in more detail below. None of the other previously recorded sites were located in the immediate vicinity of the project area. Thus, none of them requires further consideration as they will not be affected by the project. Table 4.5-1 provides further information about previously recorded resources in the Project area vicinity. Table 4.5-2 identifies their relative locations to the Project area.

Table 4.5-1: Previously Recorded Sites within the Scope of the Records Search

Site No.	Recorded by	Description and Date
19-001368	Strudwick (1988)	Historic-period refuse deposit, ca. 1910-1960
19-002207	Toren and Larson (1994)	Concrete structural footings
19-179357	Page (1977)	The ATSF Monrovia depot, ca. 1925
19-179358	Page and Sitton (1977)	United Methodist Church of Monrovia, ca. 1911
19-179369	Page (1977)	Victorian-style residence (Anderson House), ca. 1887
19-187710	Erickson (2003)	Industrial building, ca. 1944-1946
19-187711	Erickson (2003)	Single story concrete and brick building, ca. 1953
19-187712	Erickson (2003)	Single story concrete block/wood-frame bldg., ca. 1922
19-187944	Feldman (2005); Tang (2006)	ATSF bridge over Colorado Boulevard, ca. 1933
19-188268	Supernowicz (2008)	Two-story, masonry commercial building, ca. 1940
N/A	Feldman (2005)	ATSF bridge over the San Gabriel River, ca. 1903

²¹ Feldman 2005



Table 4.5-2: Relative Locations of Previously Recorded Sites to the Project Area

Site No.	Location
19-001368	Half-mile northeast of Maintenance and Operations Facility Alternative C
19-002207	Quarter-mile south of Maintenance and Operations Facility Alternative C
19-179357	Approximately 330 feet southeast of Monrovia LRT Station Parking Structure
19-179358	One mile northeast of Monrovia LRT Station Parking Structure
19-179369	One mile northeast of Monrovia LRT Station Parking Structure
19-187710	Half-mile northwest of Maintenance and Operations Facility Alternative A/B
19-187711	Half-mile northwest of Maintenance and Operations Facility Alternative A/B
19-187712	Half-mile northwest of Maintenance and Operations Facility Alternative A/B
19-187944	Within the Project area (Colorado Boulevard Overpass Replacement)
19-188268	One mile northeast of Monrovia LRT Station Parking Structure
N/A (SG River bridge)	Within the Project area (San Gabriel River Bridge Replacement)

4.5.2 Regulatory Framework

In the 2007 Final EIR, no stand alone regulatory framework was discussed regarding cultural resources. The regulatory framework was embedded within the existing conditions discussion. Refer to the 2007 Final EIR for regulatory framework.

4.5.3 Existing Conditions

As the result of the research and field survey, a total of eleven potential historical resources were identified within the refinement study area. Besides the San Gabriel River Bridge, the North Colorado Boulevard Bridge, two single-family residences, and seven groups of commercial/industrial buildings that date to the historic period, which had not been previously recorded, were encountered and recorded in the California Historical Resources Inventory. The seven groups of commercial/industrial buildings are located in the proposed M&O Facility in Monrovia site. The two residences are located within the Mountain Avenue Realignment site.

4.5.3.1 M&O Facility in Monrovia

The seven industrial/commercial properties recorded at this location contain one to four buildings per lot that share many similar characteristics, such as plain, utilitarian appearance with the basic traits of the mid-century Modernist architecture. All of the buildings date to the 1946-1960 era, and as is typical with industrial/commercial buildings of similar vintages, all of them have been altered to various degrees.

APN 8513-012-033 to -035 (520-622 E. Evergreen Avenue)

Building Description. This property consists of four single-story, modern-style commercial buildings arranged in an east-west row, all facing a driveway and parking lot to the north, and all presently occupied by construction and home improvement material wholesale and retail businesses. The largest among them, on the eastern end of the row and adjacent to Shamrock Avenue, is a stucco building of uncertain construction material, while the other three are constructed of concrete bricks. All four are set on concrete slab foundations. The three buildings on the east, containing retail and office spaces, are surmounted by vaulted roofs of low to medium pitches, which are covered with gray composition sheets and surrounded partially by low parapets. The smallest among



the four, located on the western end of the row and used for storage, is flat-roofed. Some of the parapets bear the signs for the businesses within, and none of the roofs has a notable eave overhang.

Construction History. According to archival records, these buildings were constructed between 1950 and 1960, and all have been altered over the years.²² An 8,000-square-foot concrete warehouse built at 600 E. Evergreen Avenue in 1960, likely the easternmost building in the group, was apparently the last building to be completed on the property.²³

APN 8513-012-037 (1601 S. Shamrock Avenue)

Building Description. The generally rectangular mass of this modern-style, brick-masonry industrial building rests on a concrete slab foundation that is partially elevated, and has a flat roof with low parapets. The building stands one-story tall, although the southern portion is significantly taller than the smaller northern wing containing office spaces. A large tower clad with corrugated metal panels rises several stories high in the northwestern corner.

Construction History. Archival records indicate that in 1952 new construction permits for two industrial buildings measuring 150 x 150 feet and 40 x 506 feet, respectively, were issued to property owner A.W. Brokate of Arcadia, who also owned other nearby properties at the time, such as the adjacent parcels at 520-622 E. Evergreen Avenue.²⁴

APN 8513-012-040 (525 E. Duarte Road)

Building Description. This flat-roofed, one-story, modern-style industrial building essentially consists of a large concrete-brick “box,” which contains warehouse space, and a smaller, slightly lower “box” of the same material attached to the front, which contains office space.

Construction History. This 56 x 156-foot warehouse building was also constructed by A.W. Brokate around 1952.²⁵ It was designed by the architectural firm of Corse and Carpenter of Los Angeles and was known then as the “Jewel Tea Building” (*ibid.*). The building was occupied by Radiophone in 1960.

APN 8513-012-043 (1630 S. California Avenue)

Building Description. This west-facing, one-story industrial building is an elongated but generally rectangular brick structure resting on a concrete slab foundation. It is surmounted by a low-pitched vaulted roof, which is covered with gray composition shingles and fronted by a brick parapet.

Construction History. A new construction permit for an 18,000-square-foot “office and factory” of reinforced bricks was issued to the Dunbar Bedding Company of Pasadena in 1948.²⁶ The

²² County of Los Angeles n.d., City of Monrovia 1955-1974

²³ City of Monrovia 1960

²⁴ City of Monrovia 1952

²⁵ County of Los Angeles n.d., City of Monrovia 1955-1974

²⁶ City of Monrovia 1948

building was designed by the architectural firm of John M. Cooper of Los Angeles and built by the Western United Contractors of Ontario (*ibid.*).

APN 8513-012-054 and -055 (1532 S. California Avenue)

Building Description. This flat-roofed, one-story commercial building is designed in the modern-style and is currently in use as a large-scale retail store known as The Outlet. The L-shaped mass rests on an elevated concrete slab foundation and is surmounted by a flat roof with a gutter system attached along the roofline. A rectangular tower sheathed in corrugated metal panels rises from the midsection of the roof. The building is constructed of poured concrete.

Construction History. Archival records indicate that this concrete building was originally 16,724 square feet in size, as designed by architect George E. Russell for factory owner A.T. Case and built by contractor E.A. Raulston in 1945.²⁷

APN 8513-012-908 (1714 S. California Avenue)

Building Description. This one-story industrial building has an L-shaped ground plan and faces west. The front portion of the building, housing office spaces, is flat-roofed, and the rear portion is surmounted by a low-pitched vaulted roof, which is surrounded by low parapets and dotted with protruding skylights. The exterior walls are constructed of concrete block in the front and poured concrete in the rear portion.

Construction History. This building apparently began as a 75 x 150-foot concrete structure in 1946 but was extended in the front portion by an additional 7,500 square feet in 1952-1953, when a loading dock was also covered at the same time.²⁸

APN 8513-012-910 (475 E. Duarte Road)

Building Description. This south-facing, modern-style industrial building is constructed on an irregular ground plan and an elevated concrete slab foundation. The southeastern portion of the building is flat-roofed, while the western and southern portions are surmounted by low-pitched vaulted roofs covered with gray composition materials. The exterior walls are constructed of bricks at the southeastern corner, where the office spaces are located, and apparently of poured concrete elsewhere.

Construction History. Originally around 20,000 square feet in size when first built in 1948-1949, this buildings was expanded by 160 square feet for offices in 1950, by 11,000 square feet in 1955, and again by 21,000-2,4000 square feet in 1960, the last two additions including bays and loading docks.²⁹

²⁷ City of Monrovia 1945

²⁸ City of Monrovia 1946-1953

²⁹ City of Monrovia 1948-1960

4.5.3.2 Mountain Avenue Realignment Site

Both of the residences recorded at this location date to the 1948-1952 era, and both are situated on the edge of a residential neighborhood near an industrial complex.

APN 8531-017-021 (1812 S. Mountain Avenue)

Building Description. This Modern-style single-family residence is L-shaped in plan, with a front porch filling the angle. It is a wood-framed, one-story building surmounted by a flat roof ending in wide, open eaves trimmed with fascia boards. The symmetrical, west-facing primary façade features a main entrance that opens to the south, into the porch, which is sheltered by a low-pitched shed roof supported by two wood posts.

Construction History. The house at 1812 S. Mountain Avenue was likely built around 1948, but was known to be in place at least by 1952, when a 220-square-foot detached garage was built on the property by the Findley Construction Company of Bellflower.³⁰

APN 8531-017-022 (1806 S. Mountain Avenue)

Building Description. This one-story, Modern-style single-family residence is situated on the east side of Mountain Avenue, facing the driveway on the south. It is L-shaped in plan and is surmounted by a flat roof ending in wide, open eaves with exposed rafters and fascia boards. The exterior walls are constructed of concrete blocks. The asymmetrical primary façade features a glazed wooden entry door near the southeast corner of the house, which opens to a concrete walkway. A secondary entrance is located on the north side of the building.

Construction History. Archival records indicate this modest home was originally 642 square feet in size when first constructed in 1948 for property owner H.R. Wilson of Pasadena.³¹ It was designed by architect J.A. Shjarback and built by contractor C.L. Blikowsky, also of Pasadena.

4.5.3.3 Monrovia and Irwindale LRT Parking Structures

The parking structure sites are vacant, and thus no historic resources were identified at either the Monrovia LRT Station Parking Structure or Irwindale LRT Station Parking Lot/Structure sites.

4.5.3.4 North Colorado Boulevard Bridge

The LACMTA bridge over Colorado Boulevard, formerly a part of the Atchison, Topeka, and Santa Fe Railway (ATSF), is a single-span steel plate girder bridge of the half-through type, constructed of two riveted I-beams supported on each end by a concrete abutment. It measures approximate 140 feet in total length and 20 feet in width. The two massive I-beams serving as the main girders each measure 8 feet 4 inches tall and are topped with 1 foot 8 inch-wide flange plates, while the floor beams measure approximately 1 foot wide. The main girders are reinforced on the interior by triangular stiffener plates at the interval of 3 feet 6 inches or 7 feet. The bottom of the span has a clearance of 14 feet 8 inches over the street below.

³⁰ County of Los Angeles n.d, City of Duarte 1952

³¹ City of Duarte 1948