



Governments
SANBAG
Working Together

Upland Metrolink Land Use and Constraints Analysis

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Executive Summary

Transit Oriented Development, or TOD as they are commonly referred, is a fast growing trend in linking land use with transportation. It is a creation of compact mixed use land use (a combination of office, retail and housing) and walkable communities around successful transit corridors, particularly rail corridors. Starting as a “concept” in the 1980s to limit urban sprawl and revitalize decaying downtown, TODs have moved from the academic realm to implementation around the country, as law and policy makers, developers and planners have become enthusiastic and champions of building high density development around stations.

This study, in collaboration with San Bernardino Associated Governments (SANBAG) and the City of Upland, examines the development potential of two parcels located immediately south of the Metrolink Station in Upland. The two parcels located east and west of 2nd Avenue, are bounded by the San Bernardino Line (SB Line) on the north and Stowell Street to the south; Euclid Avenue to the west and Sultana Avenue to the east. The west parcel, which is currently vacant, was the home of Hoyt Lumber for 16 years, before it closed in 2012. The east parcel, historically used for industrial purposes is currently not vacant and is occupied by Scheu Manufacturing Company.

ES.1. Study Area

On the south side of the Upland Metrolink Station, and north of Stowell Street between Euclid and Sultana Avenues, SANBAG owns two properties. These have immense development potential based on their adjacency to the Metrolink Station and being located within the downtown area of the City. The City of Upland along with SANBAG wanted to develop these two properties, one of which (west parcel) is currently vacant. In light of this, the “Project” involved conducting a land use and constraints analysis to create a conceptually entitled land use and circulation plan in support of the preparation of a Request for Proposals (RFP) for development of SANBAG properties #1 and #2 (**Figure ES.1** and **Figure ES.2**), as well as potential partnering with City of Upland for the current Metrolink parking located in the vicinity of the SANBAG parcels, including the upgrade of the Upland Metrolink Station to support expansion of the SB Line.

Developer Interest

At the onset of this analysis, the Project Development Team (PDT) arranged a meeting with surrounding developers and property owners. The purpose of this meeting and ensuing communications was to define private sector development interests and private sector opportunities for coordination and collaboration on, or with, the Project. Based on the Project overview provided at the meeting, the following is a summary of the major initial issues identified by the surrounding property owners and developers:

- A desire for walkable mixed-use development at pedestrian densities
- Residential density of 35 dwellings per acre or more
- Youth and young professionals residential markets
- Retirement residential demand
- Site consolidation important
- Parking costs
- Local and National developers interested in Los Angeles Metro area TOD
- Historic Downtown Upland Specific Plan (HDUSP) was updated in 2011
- Need to increase bus access and connectivity to the Metrolink Station

Figure ES.1: Location of SANBAG Property #1



Source: HDR

Figure ES.2: Location of SANBAG Property #2



ES.2. Project Objectives and Principles

Based on the feedback from the PDT, surrounding property owners, and developers, at the onset of the Project, planning assumptions, responsibilities of partnering agencies and entities (SANBAG, City of Upland and Consultants), Project objectives and principles were delineated to help complete this study.

Project Objectives

- Summarizes the key assumptions of the planning options that optimize development feasibility and land use planning consistent with the project principles;
- Proposes strategies for how SANBAG and the City of Upland define responsibilities to collaborate on the implementation of the development; and
- Outlines key principles that should be included in a potential Request for Proposals (RFP) to implement the development.

Project Principles

- The site's proposed land use and development pattern/intensity was consistent with adopted plans and zoning, or the City of Upland should be able to update the adopted plans and zoning to incorporate the selected Project site plan.
- The site's proposed site plan was compatible with planned improvements to the rail corridor and station.
- The site's proposed land use supported the Vision of the Historic Downtown Upland Specific Plan (HDUSP) and development of a walkable and transit-oriented downtown around the Upland Metrolink Station.
- The City of Upland and SANBAG would need to collaborate in order to minimize public costs while achieving the goal of privately-developed transit-oriented development for the sites.
- The City of Upland should be able to update adopted plans and zoning to incorporate this study's land use and circulation plan recommendations. The City also would provide as much conceptual entitlement approval as practical within the bounds of the Project scope to promote SANBAG's implementation of an RFP for development of the sites.
- SANBAG would assist the City in pursuing implementation of a Quiet Zone (QZ) through the area if possible.

ES.3. Land Use Analysis

The land use analysis incorporated the review of key planning documents – The City of Upland's adopted General Plan of 1982 and the HDUSP, adopted in 2011. Subsequent to the completion of findings and recommendation of this Study, the City adopted a General Plan Update in September 2015. This update has incorporated current data and Federal, State and Regional policy relative to local land use and planning; and provides a comprehensive and integrated direction for growth and preservation within the City, and will be the guiding document for all other City plans, programs, ordinances and operations.

Review of Planning Documents

The City's General Plan provides the policy foundation for implementing City planning standards and public works, such as are documented in the HDUSP that covers the Project area. The current General Plan, due to its date of adoption, does not provide significant comprehensive and specific policy direction for encouraging TOD that would be relevant and supportive of the Project. The comprehensive General Plan update currently underway is expected to provide an excellent opportunity for the City to systematically incorporate TOD policy and planning direction that would support the Project.

The HDUSP provides policy, regulations, and public works plans to implement the General Plan and guide individual development and community proposals in the Project area, and will be the focus of the assessment in

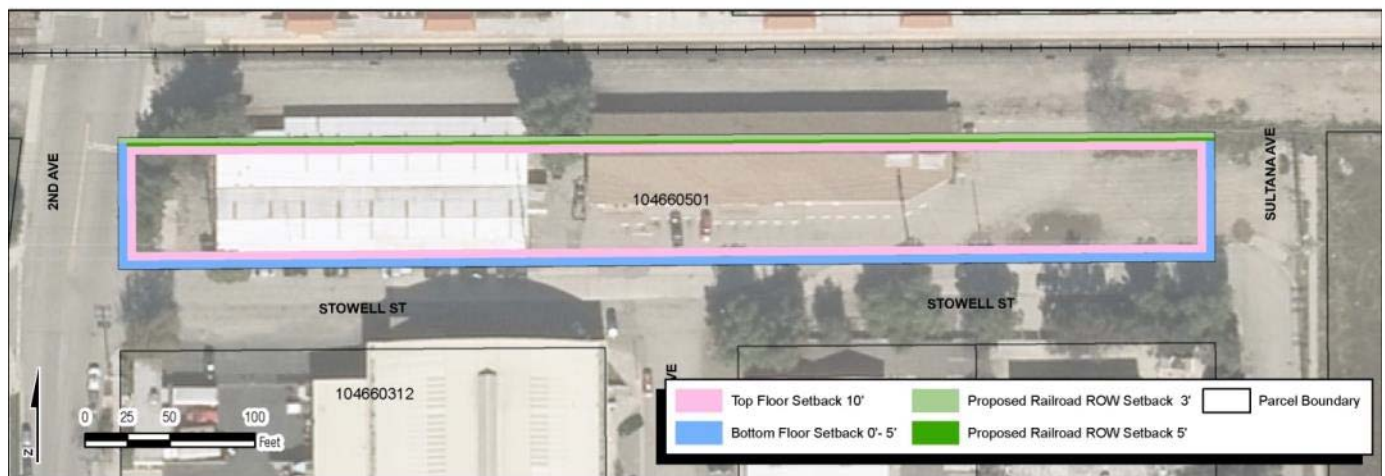
this memo. Importantly, the HDUSP recognizes the importance of significant housing and population density that is both transit and pedestrian/bike oriented as a means to revitalize Downtown Upland and meet other City goals as well as to promote land use and transit goals supported by State and regional planning.

Historic District Upland Specific Plan - Citrus Transportation and Euclid Districts

The stated purpose of a Development Code is to provide “precise specifications” for uses, building heights, setbacks, and parking.

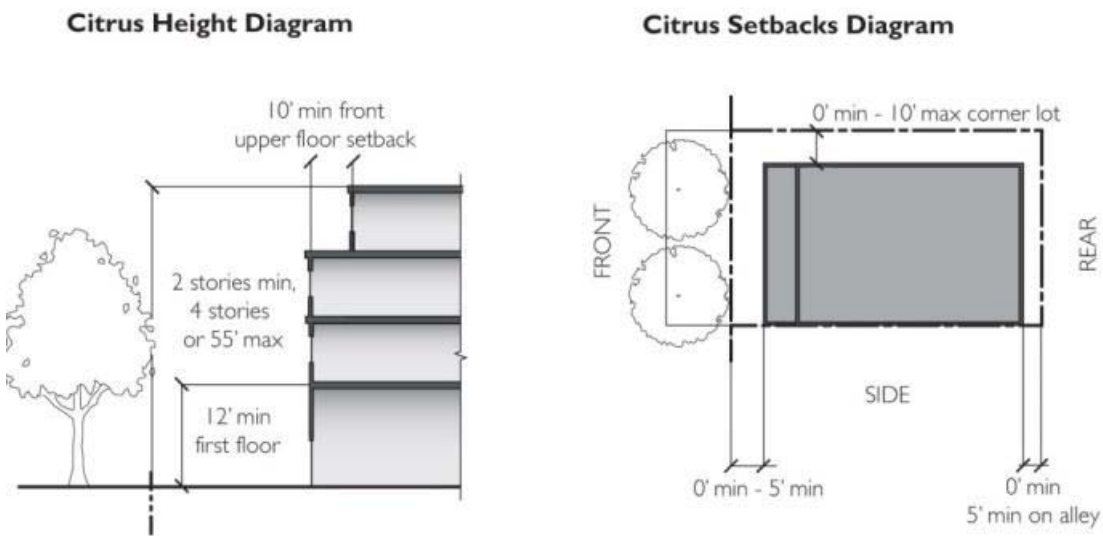
The HDUSP divides the specific plan area into several districts that have similar, but separate development code standards. SANBAG properties #1 and #2 are contained within the HDUSP’s Citrus Transportation and Euclid Transportation Districts. Approximately 60% of the eastern part of property #2 and the entirety of property #1 are contained in the Citrus Transportation District. The remaining 40% western part of property #2 lies within the Euclid District. **Figure ES.3** identifies the primary setbacks for property #1 as identified in the HDUSP, and **Figure ES.5** identifies the primary setbacks for property #2. The Citrus Transportation District setback and height limits are illustrated in **Figure ES.4**, and **Figure ES.6** illustrates the Euclid District setback and height limits.

Figure ES.3: Setback for SANBAG property #1 – APN:1046-605-01



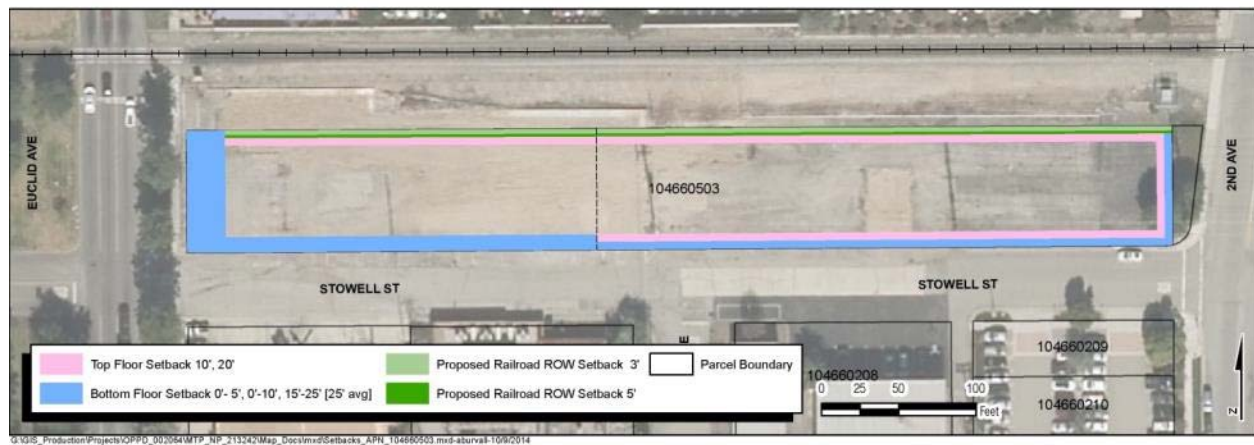
Source: HDR, 2014

Figure ES.4: HDUSP Citrus Transportation District Setback and Height Limits



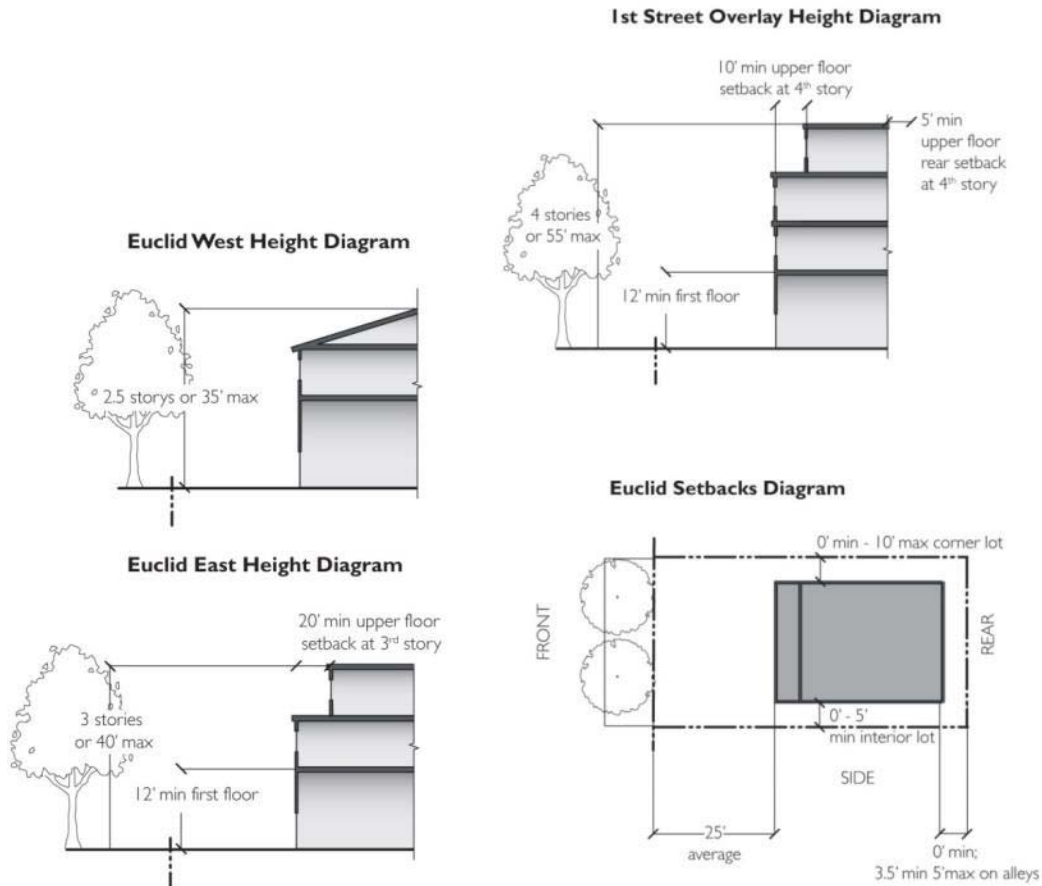
Source: HDUSP, Page 5-33, 2011

Figure ES.5: Setback for SANBAG property #2 – APN:1046-605-03



Source: HDR, 2014

Figure ES.6: HDUSP Euclid District Setback and Height Limits



Source: HDUSP, Page 5-13, 2011

Potential Planning and Policy Issues

Some of the larger possible planning and policy issues requiring Project discussion and possible inclusion into the General Plan or HDUSPS updates include:

- Future rail corridor ROW and configuration needs
- Rail corridor noise planning and funding
- Potential future rail transit services
- Potential future bus and rail transit interconnection routes, services, and facilities
- The City's loss of Redevelopment Project authority and funding
- City pedestrian and bike infrastructure funding
- Mutual cost savings and increased benefits by City and SANBAG coordination of effort
- Entitled concept land use approvals for both SANBAG properties and quiet zone infrastructure

ES.4. Conceptual Alternatives

Conceptual land use and circulation alternatives were developed to account for future growth at the Upland Metrolink Station due to future expansion of the SB Line.

Assumptions

A feasibility analysis of adding two Metrolink tracks and continuing the future Gold Line alignment was conducted. The two additional Metrolink tracks would provide for separate tracks to carry the eastbound Metrolink trains and a pass through track for express and freight trains. The existing track would carry the westbound trains. During the course of the study however, it was determined that one additional rail track through the Upland Station area would be adequate to accommodate Metrolink service expansion planned through this station. Current Gold Line plans extend the light rail system from its existing terminus at Sierra Madre Villa to Montclair.

The analysis examined the impacts of carrying the Gold Line through the Upland Station to serve Ontario International Airport. For the light rail to serve the airport from its planned terminus at Montclair, it is necessary for the Gold Line tracks to cross over the Metrolink tracks to continue southward towards the airport, possibly along the Cucamonga Channel. The Gold Line tracks could either cross the Metrolink tracks west of or east of the Upland Station, thereby, keeping the Gold Line tracks south of, or north of the Metrolink tracks, respectively at the Upland Station.

The analysis determined that there will be significant ROW impacts either in the downtown area if the Gold Line tracks are on the north side of the Metrolink tracks. If the Gold Line tracks are on the south side of the Metrolink tracks, both SANBAG properties would be impacted, leaving them undevelopable. Even with two Metrolink tracks, instead of three, Gold Line double tracks will have significant ROW impacts regardless of whether they are planned along the north or south side of the Metrolink tracks. With that in mind, land use alternatives only considered double tracking of Metrolink tracks and no Gold Line tracks through the Upland Station area.

Descriptions of Alternatives

Three land use alternatives were developed by the study team in consultation with the PDT, and are presented in Figures **ES.7** through **ES.12**.

Alternative 1 proposes a mixed land use development on the west SANBAG parcel (property #2) and possibly on the existing Metrolink parking lot that is located on the southwest corner of 2nd Avenue and Stowell Street and owned by the City of Upland. The development calls for a total of 77,860 square feet of developable land. A surface parking lot and 3,110 square foot pedestrian plaza is proposed on the east SANBAG parcel (property #1).

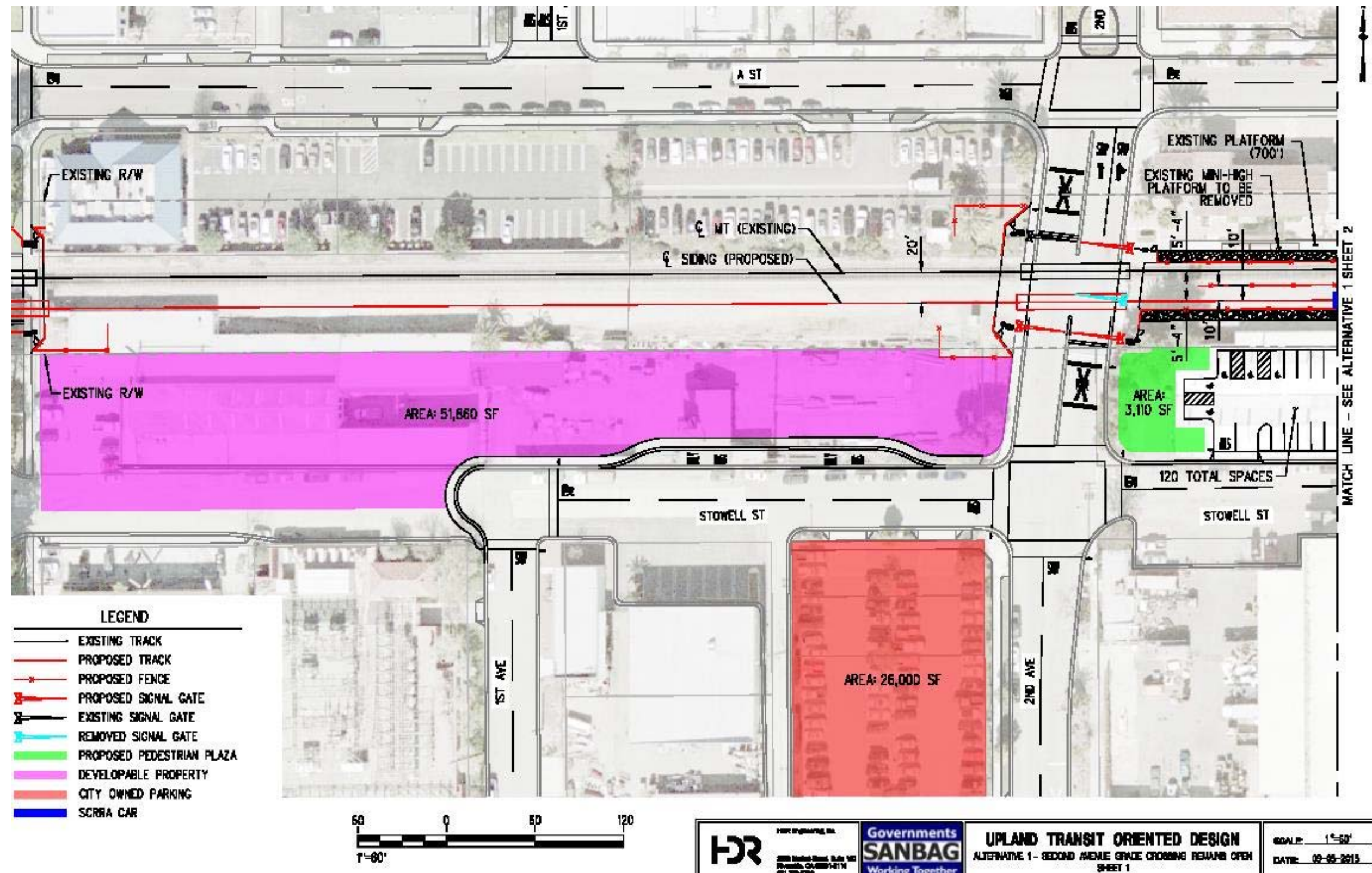
In Alternative 2, property #2 is partially developed into a mixed land use, while the remainder of the parcel and entirety of property #1 is a proposed parking lot with more parking spaces than Alternative 1. This alternative proposes a total of 56,210 square feet of developable land. A surface parking lot and 3,110 square foot pedestrian plaza, similar to Alternative 1, is proposed on the east SANBAG parcel (property #1).

Alternative 3 consists of developing both parcels #1 and #2, along with the existing city owned Metrolink parking lot. This alternative provides a total of 124,430 square feet of developable land, but eliminates the existing 67 parking spaces dedicated to the Metrolink Station. No pedestrian plaza is proposed.

Proposed Project features common to all three alternatives include the following:

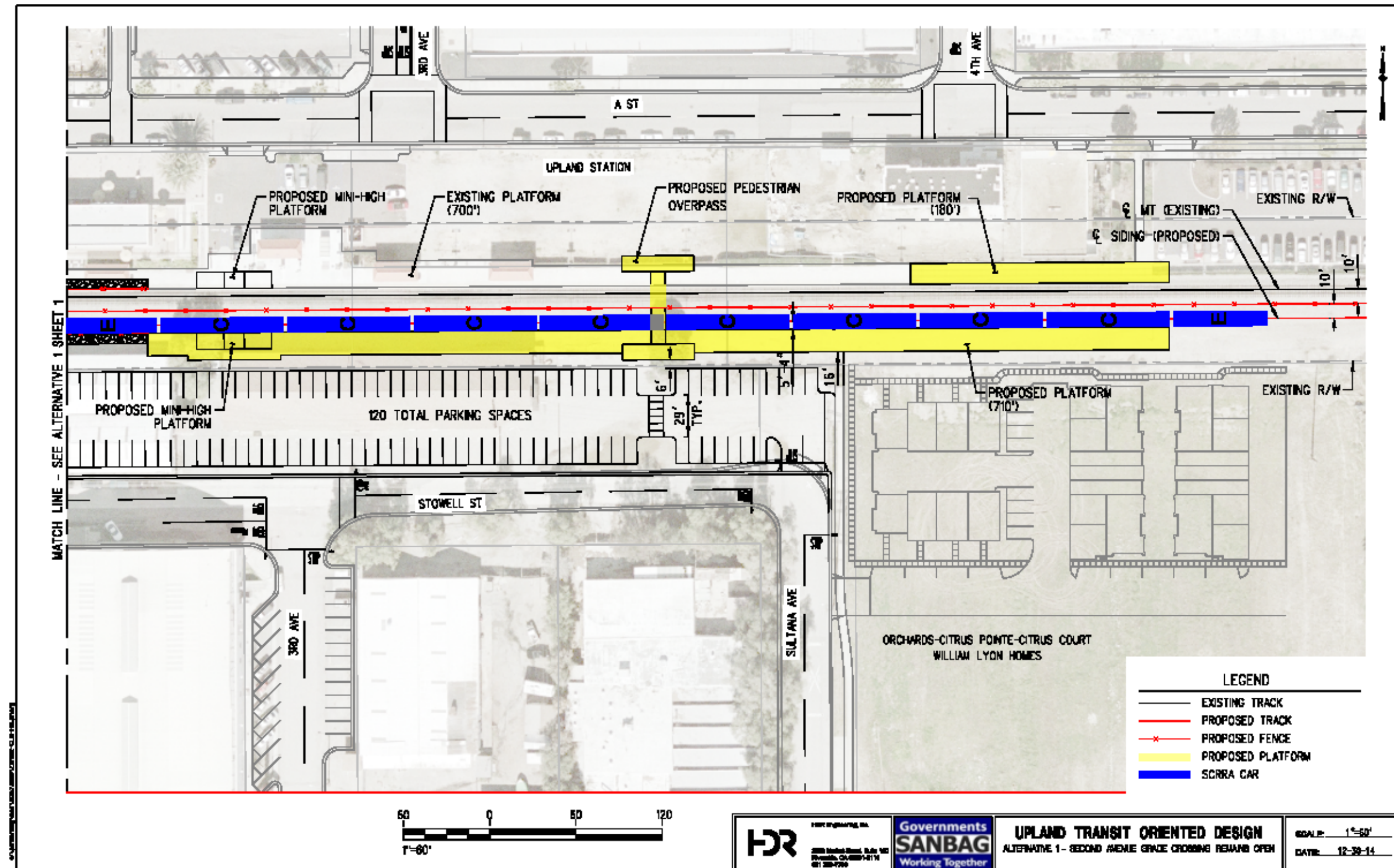
- Two bus bays for OmniTrans future direct service to the Upland Station. For Alternatives 1 and 3, these bays are proposed along Stowell Street, between 1st Avenue and 2nd Avenue, while for Alternative 2, these bus bays are proposed along 2nd Avenue, south of Stowell Street.
- Half of Stowell Street right-of-way (ROW), west of 1st Avenue is to be included within SANBAG parcel #2 for development.
- Station improvements of a new south platform and an extension of the existing north platform to accommodate Metrolink trains with eight cars and two locomotives (this could be a stand alone project or can be included as part of the development of the SANBAG parcels).
- A pedestrian overpass bridge to facilitate safe crossing of railroad tracks (this could be a stand alone project or can be included as part of the development of the SANBAG parcels).

Figure ES.7: Alternative 1 Layout (1 of 2)



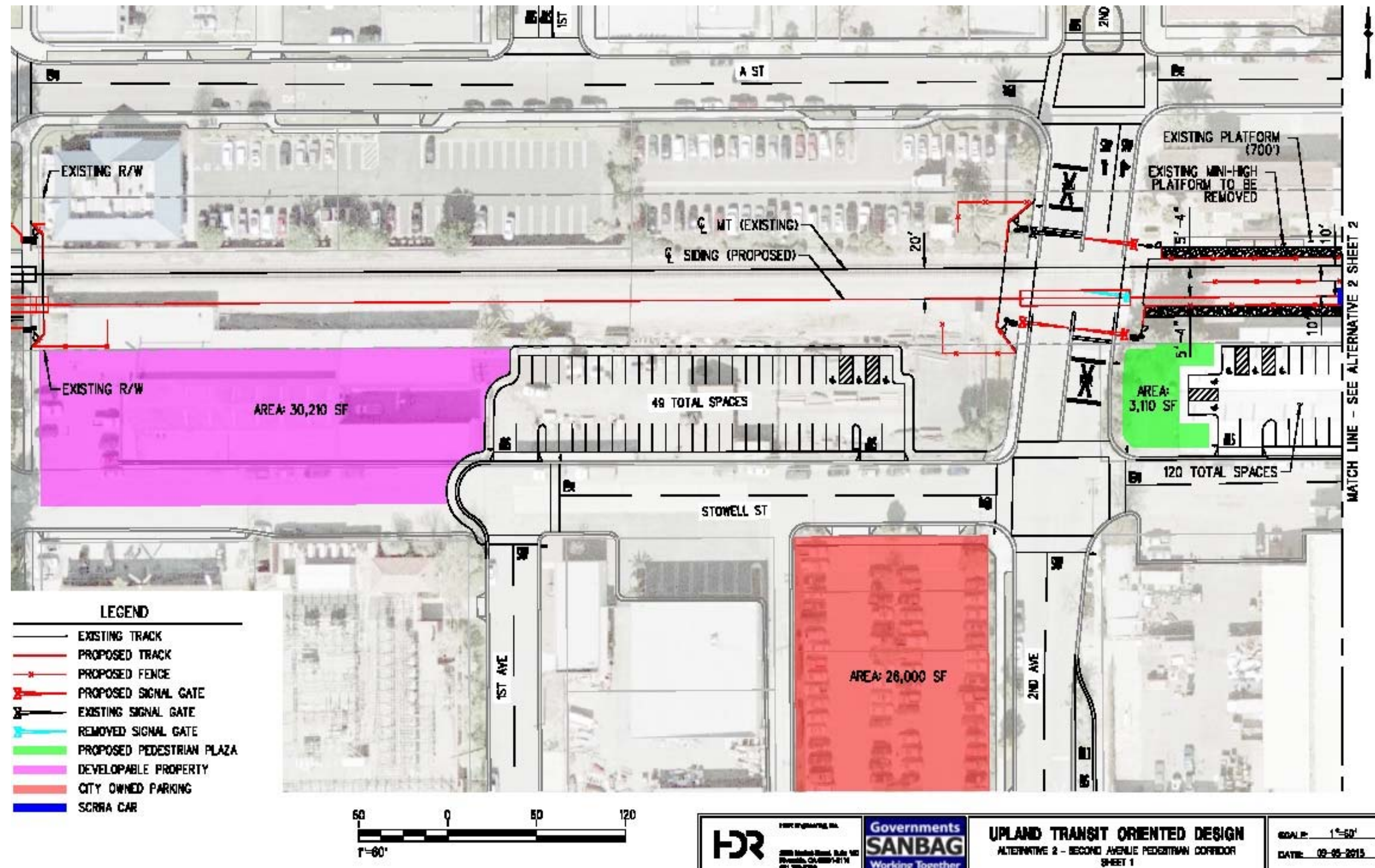
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Figure ES.8: Alternative 1 Layout (2 of 2)



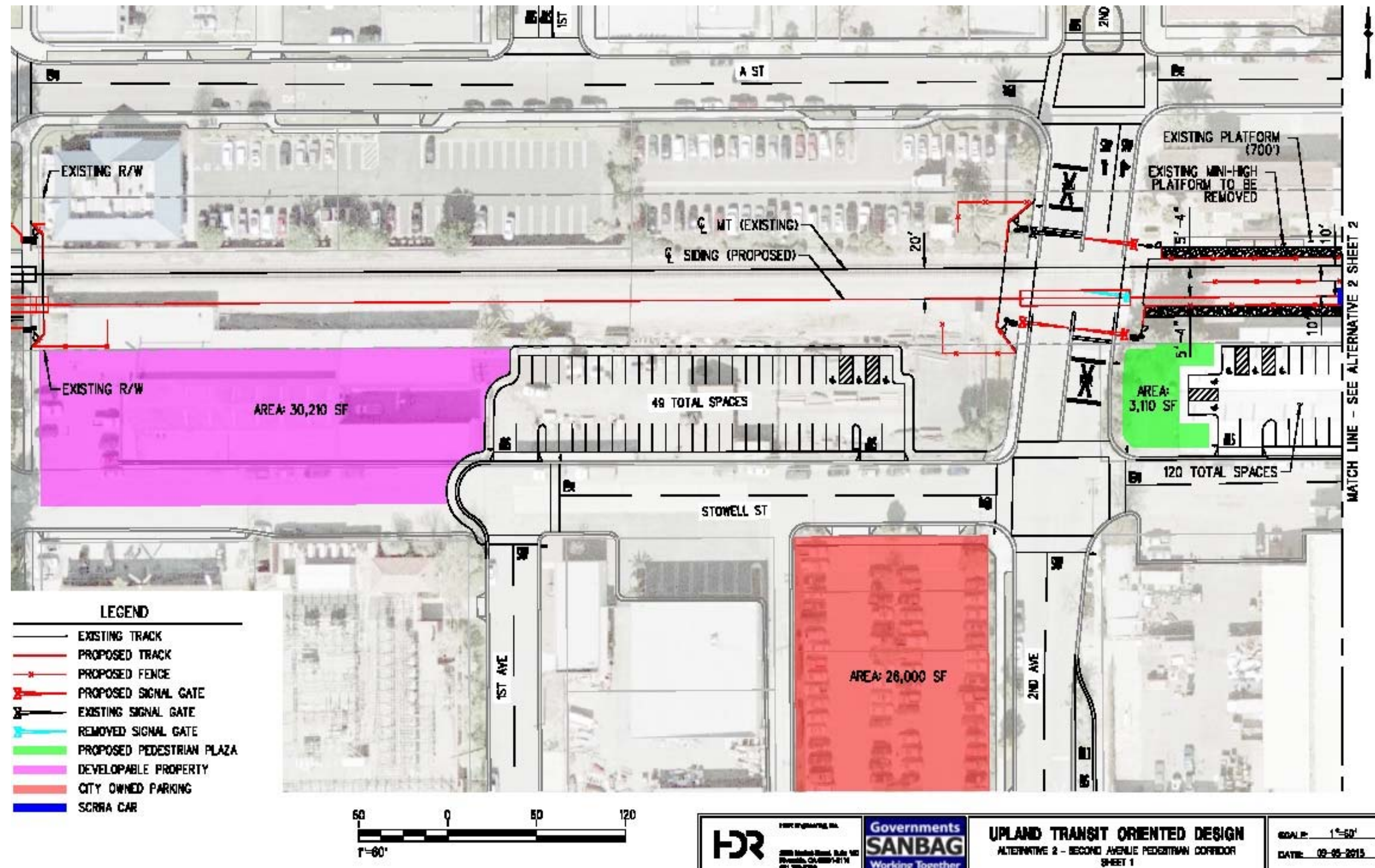
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Figure ES.9: Alternative 2 Layout (1 of 2)



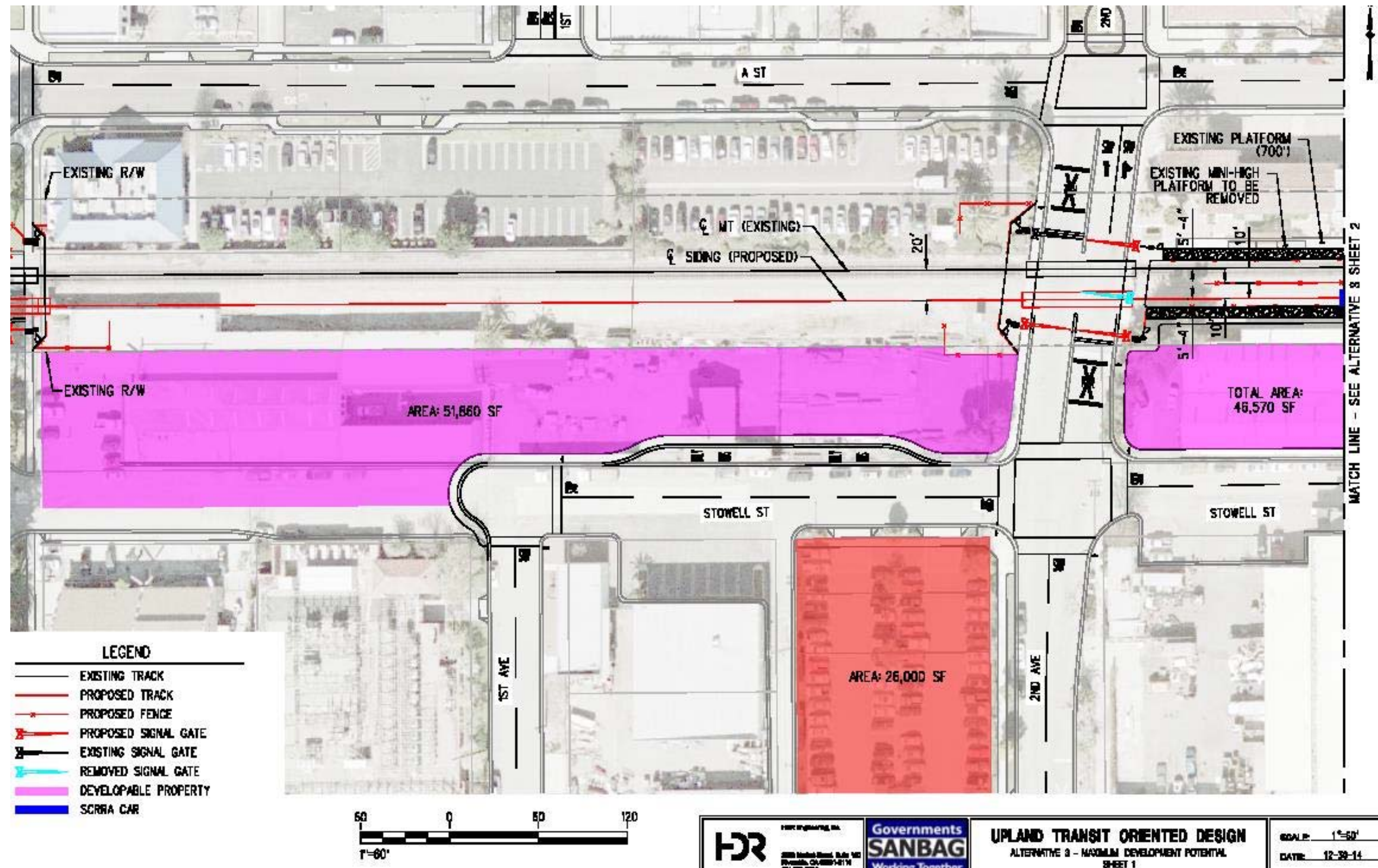
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Figure ES.10: Alternative 2 Layout (2 of 2)



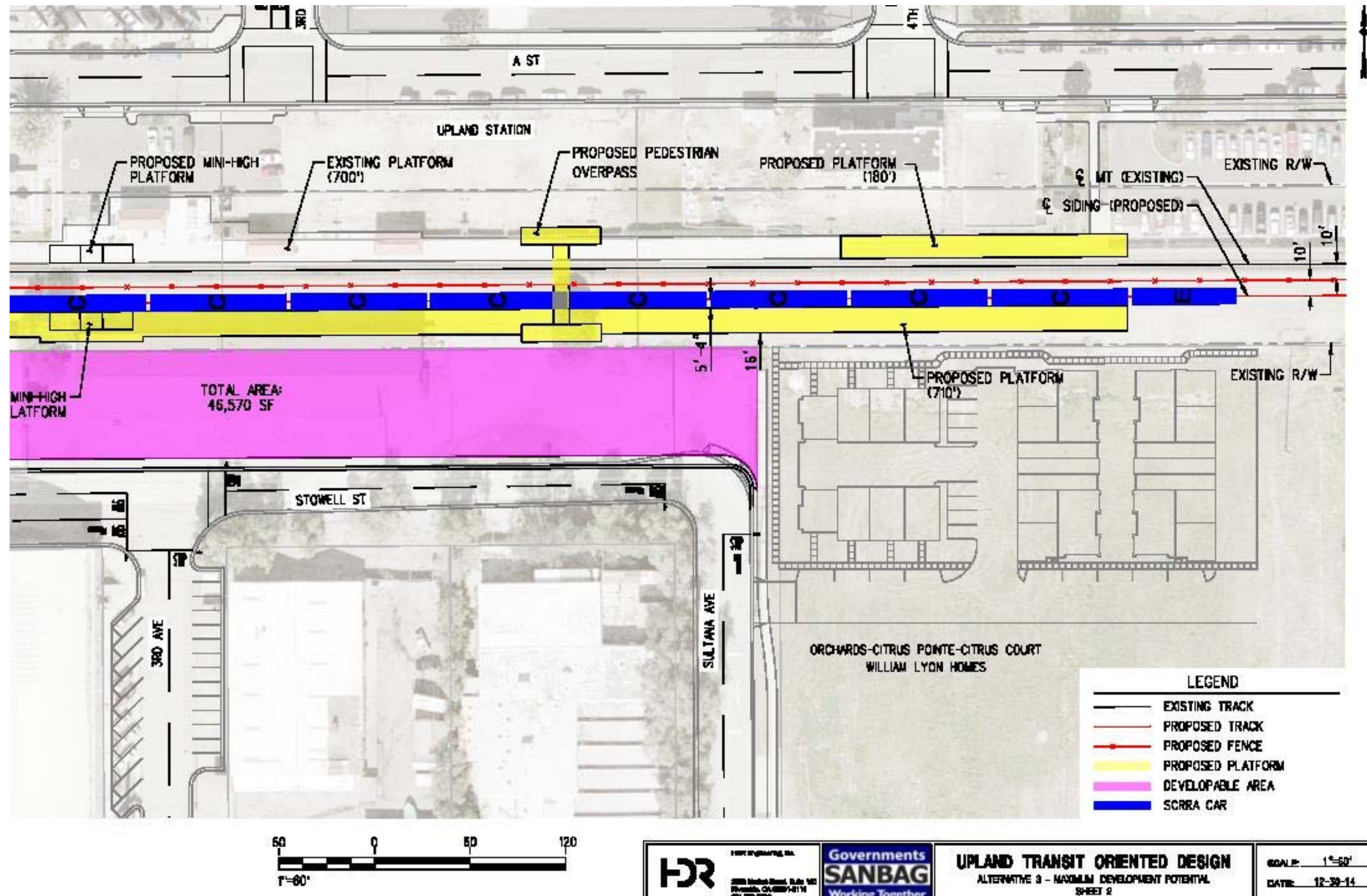
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Figure ES.11: Alternative 3 Layout (1 of 2)



Source: HDR

Figure ES.12: Alternative 3 Layout (2 of 2)



Source: HD

ES.5.Circulation Patterns

A robust multimodal transportation network includes transit and auto connectivity, parking, bike and pedestrian connections and is an essential consideration as development grows.

Review of Transportation Plans

This study drew upon previous planning work conducted in the study area to combine planned and proposed improvements, present possible transportation network scenarios adjacent to the Upland Metrolink Station, and identify strategies to be responsive to the changes in land use. Recommendations and strategies taken from these plans were analyzed within two time periods: Existing (2014-2015) and Short Term (2020). The following is a listing of the previous plans that are referenced in this analysis.

- SANBAG The Advanced Regional Rail Integrated Vision – East (ARRIVE) Corridor, Existing Conditions Report, August 2014
- San Bernardino County Long Range Transit plan Interim Draft Report (LRTP), October 2009
- SANBAG Access to Transit (ATT), November 2012
- San Bernardino County Non-Motorized Transportation Plan (NMTP), May 2014
- Omnitrans System-wide Transit Corridor Plan for the San Bernardino Valley (TCP), October 2010
- OmniCONNECTS – Omnitrans FY2015 – 2020 Short-Range Transit Plan (SRTP), 2014

Existing Conditions Analysis

Existing year conditions includes the current land use and transportation network near the Upland Metrolink Station, as well as planned solutions that are underway or will occur within the 2015-2016 time frame.

The analysis assumes all planned development is in place. This development will affect the transportation network by adding more auto trips in the study area. Based on the existing levels of service on roads near the Upland Metrolink Station, there is significant capacity available before the roadways would be considered congested. Even with the additional development approved, the existing roadway capacity is sufficient to handle the trips.

The transit services in the study area include Metrolink and Omnitrans Routes 63, 68, and 83. Due to the modest levels of planned development, and a decrease in Metrolink service that took effect in October, 2014, under the Existing condition, only minor changes to the transit network are proposed. Current ridership on the three Omnitrans lines does not make it operationally feasible for Omnitrans to serve the Upland Metrolink Station directly.

It is assumed that development and increased Metrolink ridership, the major contributors towards increases in parking demand, will not occur under the Existing condition.

Near Term Analysis

A description of near term conditions roughly covers the period of time 2015-2020.

At a coordination meeting with Omnitrans staff, it was determined that Omnitrans could possibly reroute Route 83 to serve the Metrolink Station in the future, if ridership levels warrants the service. Key factors in establishing sufficient ridership are developing a significant density of transit oriented land uses within a short walking distance; particularly land uses that Omnitrans thinks would use the bus network for access.

For this study, 2nd Avenue remains as a through street, serving as a direct access from I-10 to the SANBAG properties as well as the downtown. Since safety is of paramount importance when considering changes to the roadway network in and around railroad tracks, in the future if railroad activities and ridership at the Upland

Station significantly increases, 2nd Avenue may be recommended for closure to augment safety measures at this crossing.

A significant amount of analysis was conducted to both establish existing parking supply and estimate future parking needs based on future land development patterns. While the existing parking supply adequately serves the Downtown community, future development and increased Metrolink ridership may cause a shortage of parking. In the event that neither increased on-street nor shared parking arrangements provide sufficient parking capacity for the future levels of demand, the final option is to construct a new parking structure. This option is considered a last resort because it is preferable that available land be allocated to development.

ES.6. Environmental Analysis

The environmental constraints analysis provided a high level, desktop constrained evaluation of the three alternative scenarios currently under consideration by SANBAG and the City of Upland. This evaluation provides a conceptual and land use constraints analysis for future TOD along the Upland Metrolink Station. The main objective of this evaluation was to identify environmental “fatal flaws” for each alternative scenario with particular focus on biological and cultural resources.

Based on the findings of this analysis, no environmental fatal flaws were identified for any of the alternative scenarios that would otherwise preclude them from further consideration; however, each alternative possesses unique challenges. This evaluation will be need to supplemented at a later date once preliminary engineering becomes available in order to develop a project footprint (or area of potential effect) to allow for the completion of a more detailed environmental analysis of the alternative scenario selected for further consideration.

It is anticipated that improvements associated with the Metrolink Upland Station (e.g. platform extensions, station modernization) could be cleared under a Statutory Exemption per California Environmental Quality Act (CEQA) Guidelines Section 15275 Specific Mass Transit Projects, which states:

CEQA does not apply to the following mass transit projects:

- The institution or increase of passenger or commuter service on rail lines or high-occupancy vehicle lanes already in use, including the modernization of existing stations and parking facilities;
- Facility extensions not to exceed four miles in length which are required for transfer of passengers from or to exclusive public mass transit guideway or busway public transit services.

While the station improvements currently contemplated may be cleared with a Statutory Exemption, the development of either or both of the SANBAG properties would require further assessment under CEQA. The level of CEQA document (e.g. Initial Study versus Environmental Impact Report) needed for the development of the properties would be determined once a more defined project footprint and development scenario is identified.

ES.7. Funding and Financial Analysis

There are two recently-enacted funding programs in California that could be used to implement the land use concepts described in the HDUSP and those developed in this study for the Upland Metrolink Station area:

- SB 628 Enhanced Infrastructure Financing Districts (EIFD)
- SB 862 Affordable Housing and Sustainable Communities (AHSC) Program.

The financial analysis was focused on EIFDs and the AHSC program because both are new opportunities to fund TOD-related infrastructure improvements.

Funding Programs

To implement the land use concepts around Upland Metrolink Station elaborated in this study, the City of Upland could focus on two recently-enacted, complimentary funding programs: 1) SB 628 EIFD, which allows cities limited use of tax increment financing (TIF) for local infrastructure projects and facilities; and 2) SB 862 AHSC Program, which provides grants for integrated affordable housing and transportation infrastructure projects that reduce greenhouse gas (GHG) emissions. While only cities or counties may be sponsors of EIFDs, the AHSC allows a broad range of (co)-applicants, including special districts and joint powers authorities.

This analysis provides an overview of each of these two programs as well as the revenue potential of a TIF-based EIFD, assuming that EIFD boundaries cover a one-half mile radius around the Upland Metrolink Station.

- A TIF-based EIFD would generate a cumulative cash flow of \$19.2 million to \$45.2 million (Year of Expenditure (YOE) dollars) over the first 20 years, with the range attributable to the level of new development and the participation of taxing entities in the EIFD.
- The estimated bonding capacity of a TIF-based EIFD over the maximum 45-year maturity period allowable under SB 628 ranges from \$11.8 million to \$27.1 million. The issuance of EIFD-backed debt would require approval of 55 percent of the voters located in the district.
- The upfront proceeds from a bond issuance could be leveraged with a grant from the AHSC program to accelerate implementation of a number of the high-priority infrastructure improvements identified in this study and the HDUSP, including the construction of a public parking garage for Metrolink commuters.
- There are two project prototypes eligible to be funded under the AHSC program; however, the Metrolink Upland Station area would only be eligible for one of these, the Integrated Connectivity Project (ICP) category, with a maximum grant award of \$8 million.
- If the City were to partner with a private developer for an AHSC program grant, it could leverage a number of publicly-owned parcels in the vicinity of the Upland Metrolink Station area to subsidize construction of new housing units or adaptively reuse existing non-residential structures, such as the historic packing houses located along A Street.
- Upland's historic downtown ranks in the top 10 percent of Census tracts identified by the California Environmental Protection Agency (CalEPA) as "disadvantaged," meaning that any ICP Project proposed around the Upland Metrolink Station would qualify for the 50 percent program set-aside for disadvantaged communities under the AHSC program.
- Starting in Fiscal Year (FY) 15/16, the AHSC program will be funded on an ongoing basis with 20 percent of cap-and-trade auction revenue proceeds. As such, it will generate anywhere from \$250 million to \$1 billion annually through FY 2020, according to the California Legislative Analyst's Office (LAO) and independent estimates.
- The AHSC program can be expected to fund at least 30 projects statewide per year assuming the low estimate for future cap-and-trade auction revenue, and possibly over 100 projects per year assuming the high revenue estimate.

Financial Analysis for TOD

Three alternatives for use of the SANBAG-owned sites set aside different portions of the parcel for private development and station-related uses. For each of the alternatives, using prevailing construction costs and market values for residential properties in the City of Upland, the analysis assessed the financial feasibility of three different residential building typologies, each of which is capable of accommodating increasing levels of residential density:

- single-family attached townhomes at 20 dwelling units (DU) per acre (AC);
- podium construction at 35 DU per acre; and

- wrap apartments at 46 DU per acre.

The residual land value for the three alternatives was calculated at the above range of development densities, as summarized below in **Table ES.1**.

For the podium construction and wrap apartment building typologies, per-square foot development costs exceed the per-square foot capitalized market value, resulting in a negative residual land value and indicating that these development intensities are not yet feasible in the Upland market. Current rent levels/sale prices per square foot in Upland do appear to support the development of single-family attached townhomes, at a density of 20 units per acre. The analysis estimates that the residual land value of the SANBAG-owned sites under a townhome configuration ranges from \$2.3 million to \$7.1 million, depending on the site alternative. This range represents the maximum amount that a developer could afford to pay for the land at the specified density level. Conversely, a negative value indicates the subsidy that would be required to underwrite development.

Table ES.1: Residual Land Values, by Alternative

		Alternative 1	Alternative 2	Alternative 3
Parcel Area (SF)		51,140	32,305	99,370
Building Typology	Typical DU/AC	Residual Land Value		
Townhomes	20	\$3,696,000	\$2,310,000	\$7,084,000
Podium	35	(\$968,000)	(\$541,000)	(\$1,802,000)
Wrap Apartments	46	(\$4,130,000)	(\$2,249,000)	(\$8,186,000)

Source: HDR

ES.8. Grade Crossings and Quiet Zones

The term “Quiet Zone” (QZ) refers to a segment of a railroad line that has one or more consecutive public highway-rail crossings at which locomotive horns are not routinely sounded. However, when a locomotive engineer perceives a dangerous condition, such as trespassers on the railroad or a car stopped on the tracks, he or she can use the locomotive horn at their discretion. Railroad construction activities within a QZ require the locomotive engineer to sound the train horn as an added safety measure. Under normal conditions within the QZ, train horns will not be used. Trains entering a station are required to sound a bell as the train moves adjacent to the platform. The requirement for trains to use their bell within the station area remains once a QZ is established.

QZ Approval Process

Establishment of a QZ is a City-initiated process. The City would need to obtain approval from the Southern California Regional Rail Authority (SCRRA), the California Public Utilities Commission (CPUC), and the Federal Railroad Administration (FRA). An existing conditions analysis was performed at the City’s five grade crossings to determine the feasibility of a QZ. Determination of the feasibility of a proposed QZ relies on two basic parameters: Risk Index and Safety Measures. The term “risk index” refers to the predicted cost to society of casualties that are expected to result from collisions at an individual crossing.

There are two categories of safety measures that can be implemented to establish a quiet zone:

- Supplemental Safety Measures (SSM)
 - SSMs are engineering improvements which, when installed at highway-rail grade crossings within a quiet zone, would reduce the risk of a collision at the crossing.
- Alternative Safety Measures (ASM)
 - ASMs are a safety system or procedure provided by the appropriate traffic control authority which, after individual review and analysis, is determined by the FRA to be an effective substitute for the locomotive horn at specific highway-rail grade crossings.

QZ Implementation Scenarios

Although this study assumes that 2nd Avenue will remain open, the SSM alternatives included scenarios where 2nd Avenue is permanently closed, in case in the future FRA mandates closure of this grade crossing based on safety issues and vehicular volumes.

Key considerations in identifying the QZ implementation scenarios were:

- How many crossings to include?
- What SSMs are most appropriate or feasible at each crossing?

Table **ES.2** presents the summary of findings for SSM implementation scenarios.

Table ES.2: Summary of SSM Implementation Scenarios

Scenario	Description	Campus Avenue	2nd Avenue	Euclid Avenue (SR 83)	San Antonio Avenue	Mountain Avenue
1	HDUSPA Crossings, 2nd Avenue. Closed	✓	✓	✓	○	○
2	HDUSPA Crossings, 2nd Avenue. Open	✓	✓	✓	○	○
3	Citywide Quiet Zone, 2nd Avenue. Closed	✓	✓	✓	✓	✓
4	Citywide Quiet Zone, 2nd Avenue. Open	✓	✓	✓	✓	✓

Legend

- ✓ Crossing included in Quiet Zone
○ Crossing not included in Quiet Zone

Source: HDR

QZ Conceptual Cost Estimate

Table **ES.3** presents estimated costs for each SSM implementation scenario. Based on existing site characteristics, SSMs were selected for each crossing. The SSM number (No.) represents proposed SSM installations at specific crossings within each quiet zone scenario: SSM No. 1 indicates permanent closure; SSM No. 6 is a four-quadrant gate installation and SSM No. 13 raised medians extending a minimum of 100 ft. from the crossing gate arms.

Table ES.3: Estimated Costs for Each SSM Implementation Scenario

	SSM Scenario 1- Historic District Crossings Only, 2 nd Avenue Remains Open		SSM Scenario 2- Historic District Crossings Only, Permanently Close 2 nd Avenue		SSM Scenario 3- Citywide Quiet Zone, 2 nd Avenue Remains open		SSM Scenario 4- Citywide Quiet Zone, Permanently Close 2 nd Avenue	
Street	SSM No.	Estimated Cost	SSM No.	Estimated Cost	SSM No.	Estimated Cost	SSM No.	Estimated Cost
Campus Avenue	6	\$1,440,000	6	\$1,440,000	6	\$1,440,000	6	\$1,440,000

2 nd Avenue	6	\$1,440,000	1	\$100,000	6	\$1,440,000	1	\$100,000
Euclid Avenue (SR 83)	13	\$480,000	13	\$480,000	13	\$480,000	13	\$480,000
San Antonio Avenue					6	\$1,440,000	6	\$1,440,000
Mountain Avenue					13	\$480,000	13	\$480,000
Total		\$3,360,000		\$2,020,000		\$5,280,000		\$3,940,000

Source: HDR

QZ Implementation

The FRA and SCRRRA each have guidelines and procedures for implementation of a QZ. In summary, the next steps of the QZ implementation process contain the following items:

- Fund the project
- Engineering design
- Obtain CPUC approval
- Submit a Notice of Intent to Create a Quiet Zone
- Construct crossing improvements
- Provide Notice of Quiet Zone Establishment

ES.9. Project Option and Implementation

The PDT established project principles in order to evaluate planning issues and the circulation, environmental, funding, and rail corridor crossing issues. The outcomes of these evaluations led to the development of the Project design alternatives and identification of several major planning preferences. The PDT's major planning preferences regarding the Project's regional rail corridor components, along with current and potential financial feasibilities of the Project's TOD component, greatly influence planning options. Planning options that coordinate optimal implementation of the rail transit and rail corridor facilities as well as the development feasibility of the TOD sites are best expressed in a basic order that recognizes project principles, a logical sequence, likely timing, and optimal implementation of possible actions to further each part of the Project. This basic order is presented in the **Table ES.4**.

Based on the financial analysis, Alternatives 1 and 3 were recommended to be moved forward.

SANBAG – Upland Strategies

The City and SANBAG can together collaborate in a variety of ways to most effectively implement the project. Key basic areas of collaboration include:

- Incorporating agreements, procedures and coordinated timing to minimize both City and SANBAG project costs while maintaining project performance and quality goals
- Updating adopted plans, regulations and capital projects to incorporate the project and coordinate actions
- Providing as much conceptual entitlement approval as practical
- SANBAG assisting the City in pursuing implementation of a QZ if possible

Table ES.4: Planning Options Summary

Project Principles for Development	Rail Corridor Facilities & Bus service Planning Options	TOD Sites Development Planning Options	Likely Timing	Logical Sequence	Optimal Implementation	Lead Agency or Agencies
The site's proposed site plan is compatible with planned improvements to the rail corridor and station.	Additional track		When track capacity is reached and the project is funded	Same as Likely Timing	Just prior to capacity need and with external funding Before TOD development on SANBAG sites due to construction staging and land use compatibility	SANBAG, Metrolink, SCAG, FTA
The site's proposed site plan is compatible with planned improvements to the rail corridor and station.	Additional station platform and passenger connection		When Metrolink passenger capacity dictates and the project is funded	Same as Likely Timing	Just prior to capacity need and with external funding Before TOD development on SANBAG sites due to construction staging and land use compatibility	SANBAG, Metrolink, SCAG, FTA
<div><div>1. The site's proposed land use will support the Vision of the Historic Downtown Upland Specific Plan and development of a walkable and transit-oriented downtown around the Upland Metrolink Station.</div><div>2. The City of Upland will update adopted plans and zoning to incorporate this study's land use and circulation plan recommendations.</div></div>	Bus Route 83 re-routing and bus stop		When Omnitrans determines sufficient bus ridership warrants	Most likely in next 10-20 years with HDUSP implemented and sufficient TOD land use surrounding the Metrolink	As soon as justified by bus ridership demand	City leads developing sufficient TOD to create bus ridership demand. Omnitrans to implement re-routing and bus stop.
<div><div>1. SANBAG will assist the City in pursuing implementation of a Quiet Zone through the area if possible.</div><div>2. The City of Upland will update adopted plans and zoning to incorporate this study's land use and circulation plan recommendations.</div></div>	Quiet Zone improvements		Several years	When City has funded design and construction	City funding program established as soon as possible to allow existing/future surrounding land use to contribute Construction coordinated with and concurrent or after rail corridor double tracking and double platform construction	City leads in applying for Quiet Zone improvements. CPUC, FRA, SANBAG, Metrolink will be involved.
Not applicable, as this would be a transportation safety issue	Maintaining safety of City 2 nd Avenue Crossing of the Rail Corridor		When required by rail safety requirements	Crossing accidents or changes in the rail corridor may trigger safety improvements		City and SANBAG, CPUC, FRA
The City of Upland and SANBAG will collaborate in order to minimize public costs while achieving the goal of privately-developed transit-oriented development for the sites.		Interim uses on SANBAG TOD sites to help fund TOD feasibility	When request for interim use is received by SANBAG	After SANBAG has defined any rail corridor uses for the sites	After the Project analysis is accepted by SANBAG, and SANBAG has defined any rail corridor uses for the sites	SANBAG
Not applicable, as this would be a SANBAG policy		Define SANBAG land use policy	When SANBAG receives sufficient requests for lease/sale of their land resource	Needed prior to definition of minimum required Return on Investment (ROI)	As soon as possible. A land use policy will define how SANBAG land is planned, managed and under what situations is available for private use	SANBAG
Not applicable, as this would be a SANBAG policy		Define the minimum desired ROI based on surrounding market values for lease/sale of SANBAG land	When SANBAG receives sufficient requests for lease/sale of their land resources	Needed prior to RFP preparation to inform proposers of the minimum required ROI	As soon as possible. An ROI Threshold policy for SANBAG land leases or sales will allow SANBAG to quickly respond to developer inquiries and determine when an RFP will likely be prepared	SANBAG
<div><div>1. The site's proposed land use and development pattern/intensity is consistent with adopted plans and zoning, or the City of Upland will be able to update the adopted plans and zoning to incorporate the selected Project site plan.</div><div>2. The City will provide as much conceptual entitlement approval as practical within the bounds of the Project scope to promote SANBAG's implementation of an RFP for development of the sites.</div></div>		Prepare RFP for TOD development	Possibly in next 10-15 years when TOD demand and land values increase	Pre-RFP coordination to define or pre-approve allowed development to advance City goals and reduce developer entitlement risk	The Logical Sequence, and when land values are higher and allow TOD development more consistent with the City HDUSP	SANBAG

Implementation

The key and most fundamental land use implementation feature is the clear recognition, planning and regulatory support for transit and TOD. The Project is at the heart of the regional Metrolink transit system in Upland. The City of Upland's transit connectivity to the region and the region's transit connection to Upland are centered at around the Project, and enhancing the feasibility of both transit and the Project helps the City of Upland best benefit from this situation.

SANBAG Board Direction

Subsequent to the completion of the technical study for this report, the SANBAG Board on April 6, 2016, recommended and approved that the two properties be surplused, and the revenue generated from the sale be used to fund additional parking at the Upland Metrolink Station. Selling the properties reduces the risk associated with owning the property, ongoing maintenance needs, and generates revenue for other projects. In this case, the revenue generated from the sale could be used to fund additional parking at the Upland Metrolink Station pending approval of an agreement with the City for it to be on City-owned property.

It is important to note, that the sale of the properties will not impact the Gold Line extension to Montclair Transit Center, a project included in Measure I 2010-2040 Ordinance. However, if Gold Line is to be extended easterly from the Montclair Transit Center, and aligned south of the existing Metrolink tracks, majority portion of these parcels would have to be acquired for Gold Line right-of-way, including the William Lyon Homes development, currently under construction, located east of the Upland Station and south of the tracks. Different property takes would occur if in the future Gold Line extends easterly from Montclair and is aligned north of the existing Metrolink tracks.

Chapter 1 - Introduction

Transit Oriented Development or TOD as commonly termed, has been a fast growing trend in linking land use with transportation. It is a creation of compact mixed use land use (a combination of office, retail and housing) and walkable communities around successful transit corridors, particularly rail corridors. Starting as a “concept” in the 1980s to limit urban sprawl and revitalize decaying downtown, TODs have moved from the academic realm to implementation around the country, as law and policy makers, developers and planners have become enthusiastic and champions of building high density development around stations.

In recent years, the Southern California Association of Governments (SCAG) has initiated the Compass Blueprint strategy to provide mobility for all residents and sustainability for future generation. This strategy promotes smart growth and directs most future development towards existing and emerging centers, near transit hubs, and along major transportation corridors. In addition, SCAG’s 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals, by improving efficiency of the region’s transportation network, to enhance mobility choices for all.

At the local level, in 2014, the San Bernardino Associated Governments (SANBAG) received a Caltrans Transportation Planning Grant to create a regional vision for development around stations along the San Bernardino Line (SB Line). The SB Line is an east-west commuter rail corridor connecting the Metrolink San Bernardino communities with downtown Los Angeles. The SB Line serves six stations in the San Bernardino County, at Montclair, Upland, Rancho Cucamonga, Fontana, Rialto and San Bernardino. According to SANBAG *“The Advanced Regional Rail Integrated Vision – East (ARRIVE) Corridor Study aims to develop practical strategies for transitioning the SB line, over time, from a traditional commuter rail corridor to a more integrated transit oriented development (TOD)/regional rail corridor.”*¹

As an extension to the ARRIVE study and in an effort to develop vacant lands around train stations, this study, in collaboration with SANBAG and the City of Upland, examines the development potential of two parcels located immediately south of the Metrolink Station in Upland. The two parcels located east and west of 2nd Avenue, are bounded by the SB Line on the north and Stowell Street to the south, Euclid Avenue to the west and Sultana Avenue to the east. The west parcel, which is currently vacant, was the home of Hoyt Lumber for 16 years, before it closed its shop in 2012. The east parcel was historically used for industrial purposes and is currently not vacant and is occupied by Scheu Manufacturing Company.

The report identifies project objectives and principles; documents analyses of existing and future land use and circulation plans in the immediate vicinity of the parcels; identifies development alternatives for the two parcels; provides an environmental and financial analysis; and outlines an implementation strategy moving forward.

¹ http://www.sanbag.ca.gov/planning2/study_arrive.html

Chapter 2 - Study Area

2.1 Project Description

On the south side of the Upland Metrolink Station, and north of Stowell Street between Euclid and Sultana Avenues, SANBAG owns two properties. These have immense development potential based on their adjacency to the Metrolink Station and being located within the downtown area of the City. The City of Upland wants to develop these two properties, one of which is currently vacant. In light of this, the “Project” involves conducting a land use and constraints analysis to create a conceptually entitled land use and circulation plan in support of the preparation of a Request for Proposals (RFP) for development of the SANBAG properties #1 and #2 (**Figure 2.1** and **Figure 2.2**), as well as potential partnering with the City of Upland on a city-owned site near the SANBAG sites, that is currently being used as Metrolink parking, as shown in **Figure 2.3**, including the upgrade of Upland Metrolink Station to support expansion of the SB Line.

2.2 Upland Project Development Team

This analysis was completed with supervision and coordination from the Upland Project Development Team (PDT), which met on a monthly basis during the development phases of the project. Their invaluable input helped shape the Project. The PDT included representatives from the City of Upland, SANBAG and the consultants, Hatch Mott MacDonald, HDR and Lance Schulte. City of Upland was represented in most meetings by the following:

- Ray Musser, Mayor
- Rod Butler, City Manager
- Jeff Zwack, Development Services Director
- Rosemary Hoerning, Public Works Director
- Melecio Picazo, Development Services Specialist

SANBAG was represented by their Director of Transit and Rail Programs, and Project Manager Nessa Williams.

2.3 Meeting with Developers

At the onset of this analysis, the PDT arranged a meeting with the following developers and surrounding property owners during the October 29, 2014 PDT meeting:

- Bryan Bergeron of William Lyon Homes, Inc.
- Bobby Bedi of WB Properties, Inc.
- Mike Mendez of The Hanover Group
- Raul Amescua of The Hanover Group

The purpose of this meeting and ensuing communications was to define private sector development interests and private sector opportunities for coordination and collaboration on, or with, the Project. The meeting occurred early in the Project process to both inform surrounding property owners and developers about the Project and to identify initial private sector issues that could be used by the PDT during the analyses.

Communication between the PDT, surrounding property owners and developers during the Project process provided opportunities to confirm Project assumptions relative to private sector perspectives and enhance the Project, and its ultimate implementation, through private sector coordination and engagement. The PDT consensus was to maintain ongoing communication and encourage surrounding property owners and developers to provide unsolicited information and insights about redevelopment around the Project.

Figure 2.1: Location of SANBAG Property #1



Source: HDR

Figure 2.2: Location of SANBAG Property #2



Source: HDR

Figure 2.3: Upland Metrolink Station and Vicinity



Based on the Project overview provided at the meeting, which included the planned rail corridor track and platform improvements, Federal rules and procedures regarding rail safety and quiet zones (QZ), and the SANBAG process on obtaining permission to access the rail corridor if needed by adjacent development, the following is a summary of the major initial issues identified by the surrounding property owners and developers.

- A desire for walkable mixed-use development at pedestrian densities
 - There was a desire, and market, for mixed-use (residential and commercial) projects at sufficiently high enough residential density to encourage and create a vibrant and walkable downtown.
 - It was identified that the area needs many more residents (increased residential density) to make retail viable and develop a customer base for ground floor commercial development in mixed-use projects.
 - A strategy for transitional residential use of ground floor space in mixed-use developments was discussed as a means to help improve mixed-use project feasibility.
- Residential density of 35 dwellings per acre or more
 - Property owners and developers identified a minimum desired residential density of about 35 dwellings per acre for development feasibility. The Historic Downtown Upland Specific Plan (HDUSP) and Housing Element note higher allowable and estimated densities. Sufficient density of a resident population is needed for downtown commercial viability.
- Youth and young professionals residential markets
 - Per the developers, providing housing for young and young professionals was seen as a particularly key area of opportunity and demand due to access to rail transit and desire for a walkable downtown.
 - Residential unit sizes more likely 500-750 square feet in size due to this market desire, affordability, and walkable downtown commercial space substituting for some of the dwelling unit's 'living/family room' and entertaining space.
- Retirement residential demand
 - The Mayor commented that there is demand for retirement housing in the area.
 - There is a need for good pedestrian and bike facilities, as well as transit, so retired persons can walk to and within the Downtown area.
- Site consolidation important
 - There are few optimally sized sites for cost effective redevelopment.
 - Opportunities to consolidate lots of sufficient size and dimensions should be encouraged.
 - Parking facility and fire truck access requirements require certain minimal site dimensions to promote redevelopment feasibility.
- Parking costs
 - Parking costs are critical for redevelopment feasibility.
 - Underground parking is cost prohibitive in the current and foreseeable market in downtown Upland.
 - Providing a 'wrapped' parking structure requires significantly wide and long sites to provide an efficient parking structure and space to wrap the structure with residential or non-residential land use. There are limited areas in downtown Upland that could accommodate a cost efficient wrapped parking structure.
 - The ability for developers to buy the parking spaces their project needs in a common lot or structures is ideal, as this makes site planning and lot consolidation easier.

- Local and National developers interested in Los Angeles Metro area TOD
 - Success in areas like Pasadena and other dense and walkable downtowns served by rail transit can be achieved in Upland as demand extends out from LA at appropriate downtowns around transit stations.
 - Residential density is needed for a walkable commercial downtown; a walkable commercial downtown with residential amenities will attract more national development interest.
- HDUSP was updated in 2011.
 - The City is looking at future refinements and adjustments to the HDUSP. The City is getting feedback and 'reality checks' from the development community to make refinements that promote the overall vision of the HDUSP and support development feasibility.
 - Currently, the City's Zoning Code is in the process of being updated and will likely be adopted by end of 2015
- Need to increase bus access and connectivity to the Metrolink Station

Chapter 3 - Project Objectives and Principles

Based on the feedback from the PDT, surrounding property owners, and developers, at the onset of the Project, planning assumptions, responsibilities of partnering agencies and entities, Project objectives and principles were delineated to help complete this study.

3.1 Key Planning Assumptions

- The development sites to be planned are the two SANBAG properties south of the regional rail corridor and right-of-way (ROW) and north of Stowell Street between Euclid and Sultana Avenues.
- Three alternative land use plans will be developed and evaluated at a concept level using the following issues and constraints:
 - surrounding land uses,
 - potential for street closures,
 - integration of transit service,
 - parking demand and opportunities for parking supply,
 - future rail corridor and station elements,
 - potential Quiet Zone (QZ),
 - funding/finance opportunities and governance, and
 - environmental factors.
- Conduct a QZ analysis for implementation

3.2 Responsibilities

Responsibilities of each entity are listed below:

- SANBAG provided:
 - Direction on the future rail corridor and station elements to be addressed.
- The City of Upland provided:
 - Land use planning parameters for the site.
 - Direction on future land use assumptions and coordination for surrounding properties.
- SANBAG and the City of Upland collaborated to:
 - Review and comment on the consultant responsibilities.
 - Modify consultant recommendations based on agency consensus.
 - Collaborate to implement the project recommendations at the conclusion of the study.
- The consultants responsibilities included:
 - Completion of the Project scope of work on time and budget.
 - Identification and development of the land use alternatives to achieve the project principles within the context of the planning parameters provided by SANBAG and the City of Upland.
 - Evaluation of the issues and constraints in the context of achieving the development principles.
 - Making recommendations in relation to the three outcomes to be defined in the Project.
 - Report (planning options, collaboration strategies, and key features).

3.3 Project Objectives

Conceptual alternative land use plans for potential development of the SANBAG-owned sites located to the southwest of the Upland Metrolink Station was developed and an analysis of constraints associated with the alternative land use plans was conducted. The project culminated with this Final Report that included analyses and included the following in **Chapter 10**:

- Summarizes the key assumptions of the planning options that optimize development feasibility and land use planning consistent with the project principles;
- Proposes strategies for how SANBAG and the City of Upland define responsibilities to collaborate on the implementation of the development; and

- Outlines key principles that should be included in a potential RFP to implement the development.

The results of this analysis will be used to support the three outcomes intended for this study to be incorporated into the Project Report (planning options, collaboration strategies, and key features).

3.4 Principles for Development

- The site's proposed land use and development pattern/intensity was consistent with adopted plans and zoning, or the City of Upland should be able to update the adopted plans and zoning to incorporate the selected Project site plan.
- The site's proposed site plan was compatible with planned improvements to the rail corridor and station.
- The site's proposed land use supported the vision of the HDUSP and development of a walkable and transit-oriented downtown around the Upland Metrolink Station.
- The City of Upland and SANBAG would need to collaborate in order to minimize public costs while achieving the goal of privately-developed transit-oriented development for the sites.
- The City of Upland should be able to update adopted plans and zoning to incorporate this study's land use and circulation plan recommendations. The City also would provide as much conceptual entitlement approval as practical within the bounds of the Project scope to promote SANBAG's implementation of an RFP for development of the sites.
- SANBAG will assist the City in pursuing implementation of a QZ through the area if possible.

Chapter 4 - Land Use Analysis

This chapter provides a basic summary assessment of current City of Upland land use planning relative to the Project.

The legal foundation for local City planning is the United States Constitution, applicable Federal laws, and subsequent State of California Planning, Zoning and Development laws; and related laws such as the California Environmental Quality Act (CEQA). At the City level, the City's General Plan provides the basis for implementation of Federal and State law in City land use and community planning. The City's General Plan provides the policy foundation for implementing City planning standards and public works, such as are documented in the HDUSP that covers the Project area. The HDUSP provides policy, regulations, and public works plans to implement the General Plan and guide individual development and community proposals in the Project area, and the two documents are the focus of the assessment in this memo.

4.1 Review of Upland General Plan

The study relies on the guidance of the City's 1982 General Plan, which at the time of this study was undergoing an update. Subsequent to the completion of the findings and recommendations of this study, the Upland General Plan Update was adopted in September 2015. This 2015 update has incorporated current data and Federal, State and regional policy relative to local land use and planning; and provides integrated direction for growth and preservation within the City, and will be the guiding document for all other City plans, programs, ordinances and operations.

4.1.1 General Plan - Housing Element

At the time of this study, the City had updated certain elements of the General Plan such as the Housing Element (adopted in 2014) that mapped properties with the opportunity to meet the Regional Housing Needs Assessment (RHNA). In this update, the City recognized the value and benefit of TODs and incorporated several properties identified in the HDUSP, as shown in the City's Housing Element RHNA property inventory (**Figure 4.1**) and on SANBAG's recently completed ARRIVE study (**Figure 4.2**). It is to be noted that the RHNA property inventory illustrates property that "likely may" be developed at densities that are affordable as per State Housing Law.

Properties were identified that take advantage of and link with a transit and pedestrian transportation orientation, thus minimizing traffic impacts and supporting Downtown Upland revitalization. Properties include City or SANBAG owned vacant or parking lots, contiguous parcels under common ownership, and/or those that present the best potential for lot consolidation and future development. SANBAG's properties are included in the HDUSP and RHNA inventory, and page 65 of the City's Housing Element states *"The specific plan contains maximum densities of 15 to 55 units per acre. Because the explicit intent of the specific plan is to promote higher density development, the buildout was determined based on a site design analysis that determined realistic densities achievable based on required development standards and a series of realistic assumptions for each site."*

The two SANBAG sites are identified as Housing Opportunity Sites (#23 & #24), with each site having a potential residential density of 55 units per acre, and ground floor commercial uses. Following is a summary of the City estimated "realistic capacity" of residential development potential (Housing Element Table C-1) for the SANBAG sites:

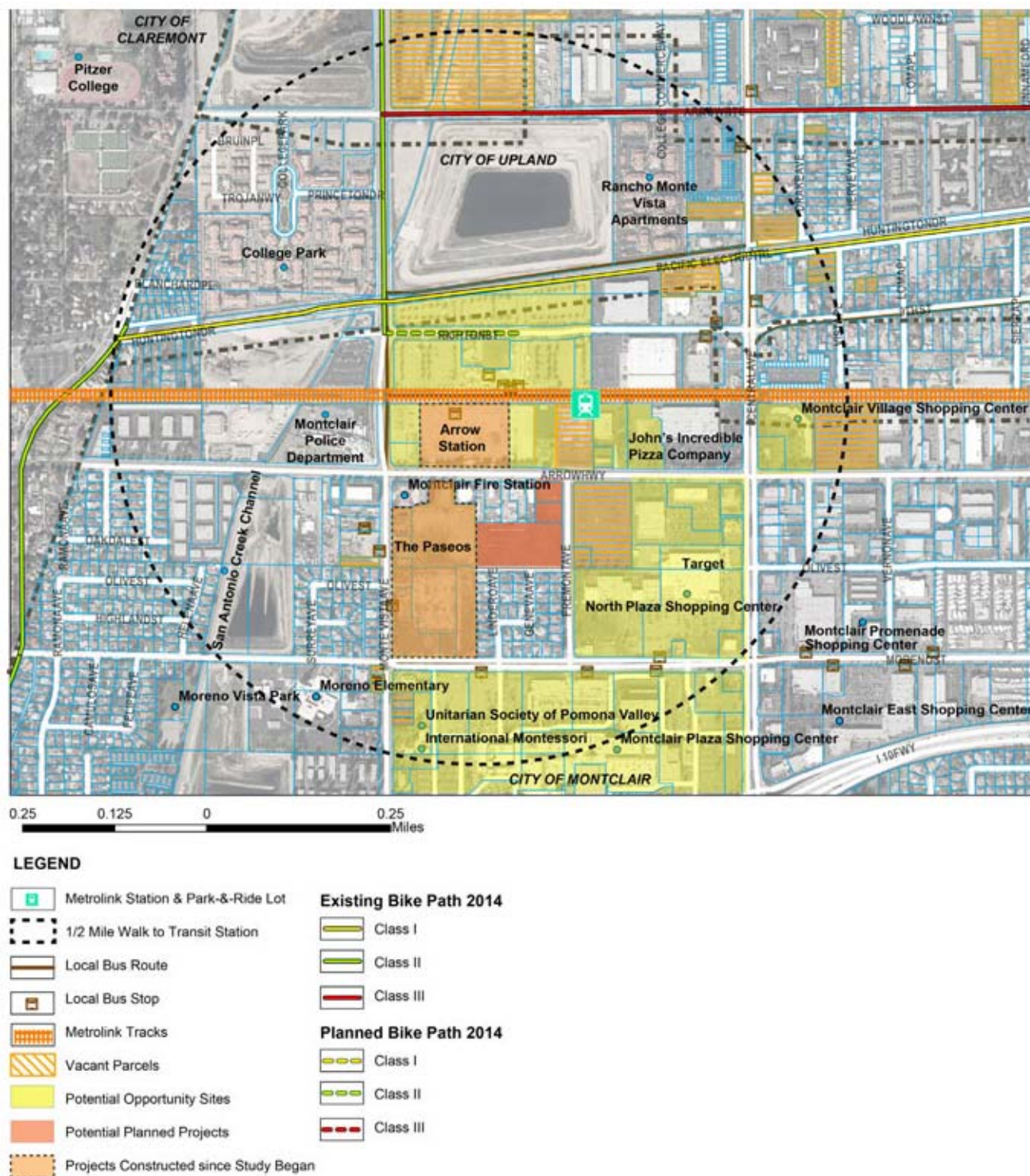
- Site 23 [SANBAG property #1]: 46 dwellings on 1.13 acres or 41 dwelling units (DU) /acre (fractions rounded up).
- Site 24 [SANBAG property #2]: 46 dwellings on 1.13 acres or 41 dwelling units (DU)/acre (fractions rounded up).

Figure 4.1: City of Upland Housing Element RHNA Property Inventory



Source: City of Upland Housing Element, RHNA property inventory, page 66, 2013

Figure 4.2: Potential Opportunity Sites around Upland Metrolink Station



Source: Figure 4.5, The ARRIVE Corridor Final Report, Gruen, 2015

Specific objectives in the Housing Element on page 90 relative to the Project include:

- *“Continue to implement the Historic Downtown Specific Plan to facilitate high quality infill residential development in Upland.*
- *Annually review Specific Plan progress and priority implementation programs and make revisions as needed to facilitate new development.”*

The Project could help facilitate the implementation of the City’s Housing Element by providing a concept level plan entitlement to the Project areas.

4.1.2 General Plan - Circulation Element

The study relied on the adopted 1996 Circulation Element, which was somewhat dated but acknowledged the (then) recent start of Metrolink service in 1992. This study recommends updates to reflect current information about existing and planned regional transit services and rail corridor management. In addition, there are recent provisions of CEQA, such as SB 743, that uses vehicle-miles-traveled (VMT) vs. level-of-service (LOS) as the transportation metric for CEQA analysis, which will support TOD, transit, pedestrian, and bike travel and orientation for the Project and area surrounding the Metrolink Station. The City can utilize the Circulation Element update to incorporate and define circulation policies and plans that are more current and consistent with State laws, regional transit plans, and anticipated funding. It is to be noted that since the completion of the findings of this study, on September 2015, the City adopted a General Plan update, which also included a Circulation Element Update.

4.1.3 General Plan - Land Use Element

Updates to the Land Use Element (2011) included mapping and references to the HDUSP. The City has the opportunity to broaden the TOD policy and planning direction in the Land Use Element, including broadened interrelationships of the entire General Plan, which could be supportive of the Project. One such consideration could be adoption of a Transit Village Plan under State law, CA Government Code Section 65460-65460.11 (see **Appendix A**). The Project and area around the Metrolink Station is identified as a High Quality Transit Area (HQTA) in the SCAG 2012–2035 RTP/SCS.

4.1.4 General Plan - Noise Element

The study relied on the 1982 adopted Noise Element. Subsequent to the completion of findings and recommendation of this study, the City of Upland adopted a General Plan Update in September 2015. The Safety Element of this update sets policy guidelines for noise mitigation. Although QZ are not specifically mentioned, Policy SAF-1.9 (Alternative to Sound Walls) encourages “the use of design strategies and other noise reduction methods along transportation corridors in lieu of sound walls to mitigate noise impacts and enhance aesthetics”.

4.1.5 General Plan - Summary

In summary, the recently updated and approved General Plan has incorporated TOD policy and planning direction that would support the Project. As part of the PDT the City was provided the Federal Transit Administration (FTA) Guidance on Joint Development (see **Appendix B**) along with State and Regional TOD planning and funding programs to inform them of potential external government funding and support opportunities. State and regional land use policies and laws referenced include:

- California Transit Village Plan (CA Government Code Section 65460-65460.11)
- California Bicycle Transportation Plan
- 2012-2035 SCAG Regional Transportation Plan/Sustainable Communities Strategy
- SCAG/SANBAG Transit Access for Cyclists and Pedestrians Project

- SANBAG Strategic Plan/Measure I
- SANBAG Long Range Transit Plan
- SANBAG San Bernardino County Non-Motorized Transportation Plan
- SANBAG ARRIVE Corridor Study Project (completed in September 2015)
- FTA Joint Development Guidelines
- Omnitrans System-Wide Transit Corridor Plan
- Omnitrans Short Range Transit Plan

As part of the PDT, the City reviewed these suggestions and indicated the General Plan Update emphasized TOD/smart growth throughout the document and in the land use plan. The City also indicated a proposed General Plan action item in the General Plan Update is to draw from current funding sources to facilitate TOD, so it can incorporate new funding sources or information whenever it becomes available.

For the Project and surrounding area, the HDUSP provides the most comprehensive and recent City policy and regulatory document to serve as a foundation for including coordinated TOD policy and planning in the General Plan, and also can serve as a model for incorporating overall General Plan TOD policy and planning.

4.2 Review of Upland Historic Downtown Vision and Specific Plan

The HDUSP, adopted in 2011, provides a recent and fairly comprehensive plan for TOD and community enhancement in Downtown Upland and around the Metrolink Station. Importantly, the HDUSP recognizes the importance of significant housing and population density that is both transit and pedestrian/bike oriented as a means to revitalize Downtown Upland and meet other City goals as well as to promote land use and transit goals supported by State and regional planning. The HDUSP is well crafted and generally incorporates sound planning principles, designs and approaches. Given the general nature of specific plan regulations and the uniqueness and planning schedule of SANBAG properties in the HDUSP area, certain specific plan provisions, when universally applied to SANBAG properties, may not fully achieve or advance the Vision and intent for Downtown Upland. The HDUSP recognizes, like all specific plans, that all planning and regulatory details are not completely covered. The Project reflects this fact and emphasizes the benefit for both the City and SANBAG to coordinate on a focused and entitled plan within the HDUSP for SANBAG properties and potential partner properties. During the development of this project, City of Upland staff concurred that the City will work with SANBAG to design a project that meets the intent of the updated General Plan.

As part of an initial scan, some of the larger possible Project issues not clearly addressed in the HDUSP that could become areas of Project discussion and possible inclusion, include:

- Future rail corridor ROW and configuration needs;
- Rail corridor noise planning and funding;
- Future rail transit services;
- Future bus and rail transit interconnection routes, services, and facilities;
- The City's loss of Redevelopment Project authority and funding;
- City pedestrian and bike infrastructure funding;
- Mutual cost savings and increased benefits by City and SANBAG coordination; and
- Entitled concept land use approvals for both SANBAG properties and QZ infrastructure.

These are discussed in more detail in **Section 4.2.2** (Chapter 2 Existing Conditions) and **Section 4.2.6** (Chapter 6 Design Standards and Guidelines).

Following is a summary and analysis by chapter of HDUSP issues relative to the Project for discussion.

4.2.1 HDUSP Chapter 1 - Introduction

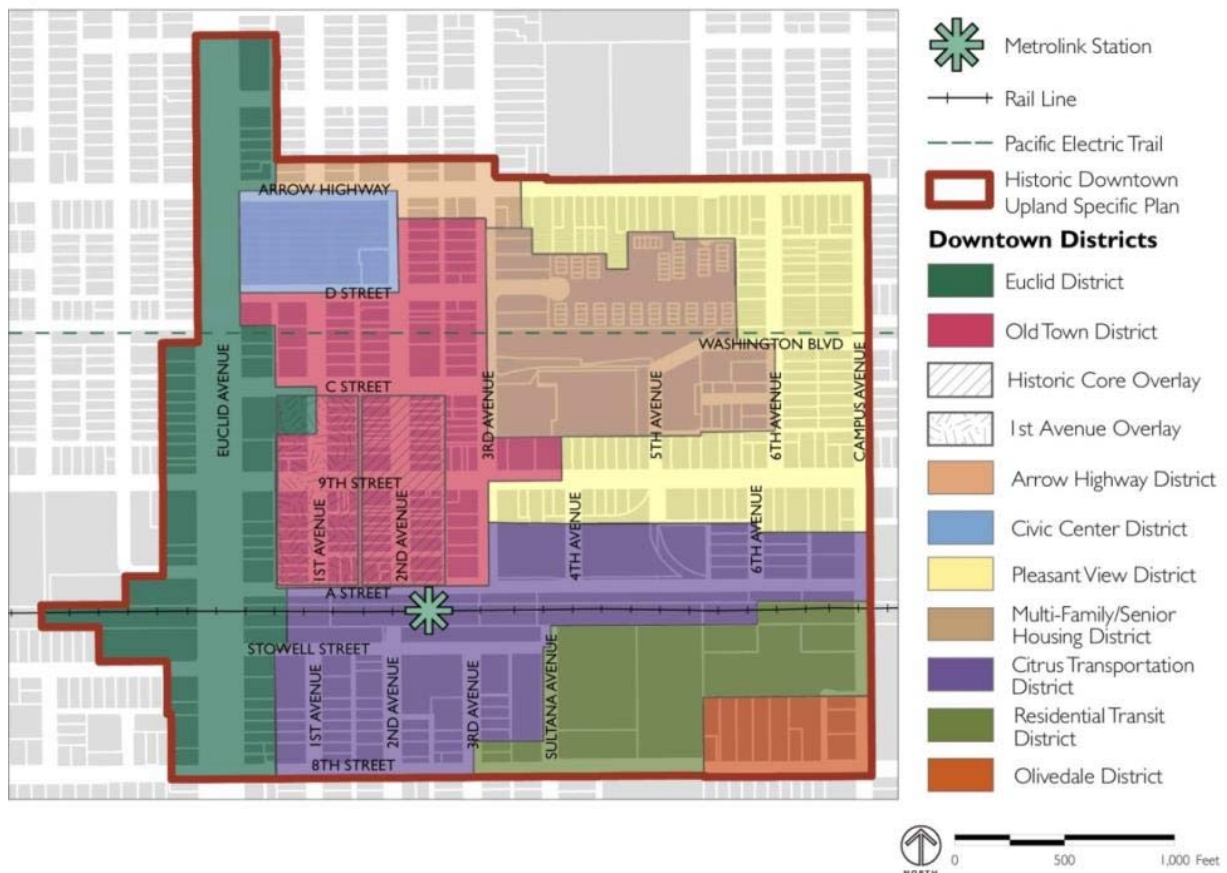
If utilizing and maximizing the benefits of transit access and mobility is desired, then referencing and coordinating to a greater extent with the regional transit plans and the State provisions for Transit Villages could be helpful. This would help guide HDUSP area investors to see the larger picture and better coordinate with State standards to create a more walkable and vibrant center. Section E would be logical to make these references, interrelationships, and regional investments in HDUSP.

4.2.2 HDUSP Chapter 2 - Existing Conditions

On page 2-7 of the HDUSP, the Project may provide the opportunity to add text to HDUSP Chapter 7 (summary discussion presented in **Section 4.2.7**) that reflects the enhanced coordination with Metrolink services/facilities in the Citrus Transportation District. For instance, an overlay district that incorporates the Project area and SANBAG transit related features may be a means to incorporate and conceptually entitle the outcomes of the Project.

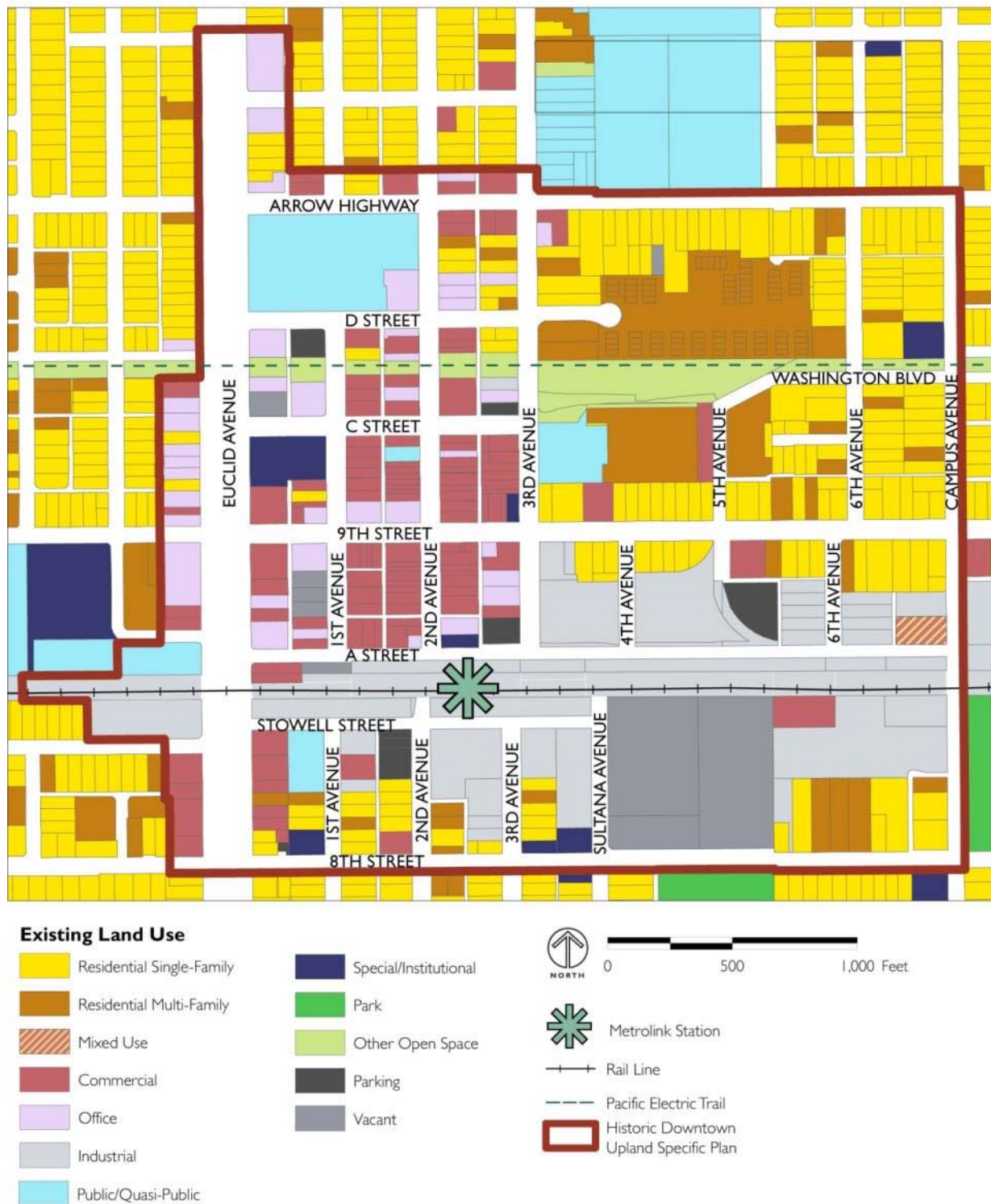
Figure 4.3 (HDUSP Figure 2-1), **Figure 4.4** (HDUSP Figure 2-2) and **Figure 4.5** (HDUSP Figure 2-5), could be updated to reflect the Project, along with additional language in the document applicable to the overlay area that would provide development standards. **Figure 4.4** does not show 2nd Avenue (a Local Street) as a through street across the rail ROW. This needs to be updated in light of the City's direction of keeping 2nd Avenue open as a direct link from I-10 to the downtown.

Figure 4.3: HDUSP Downtown Districts Map



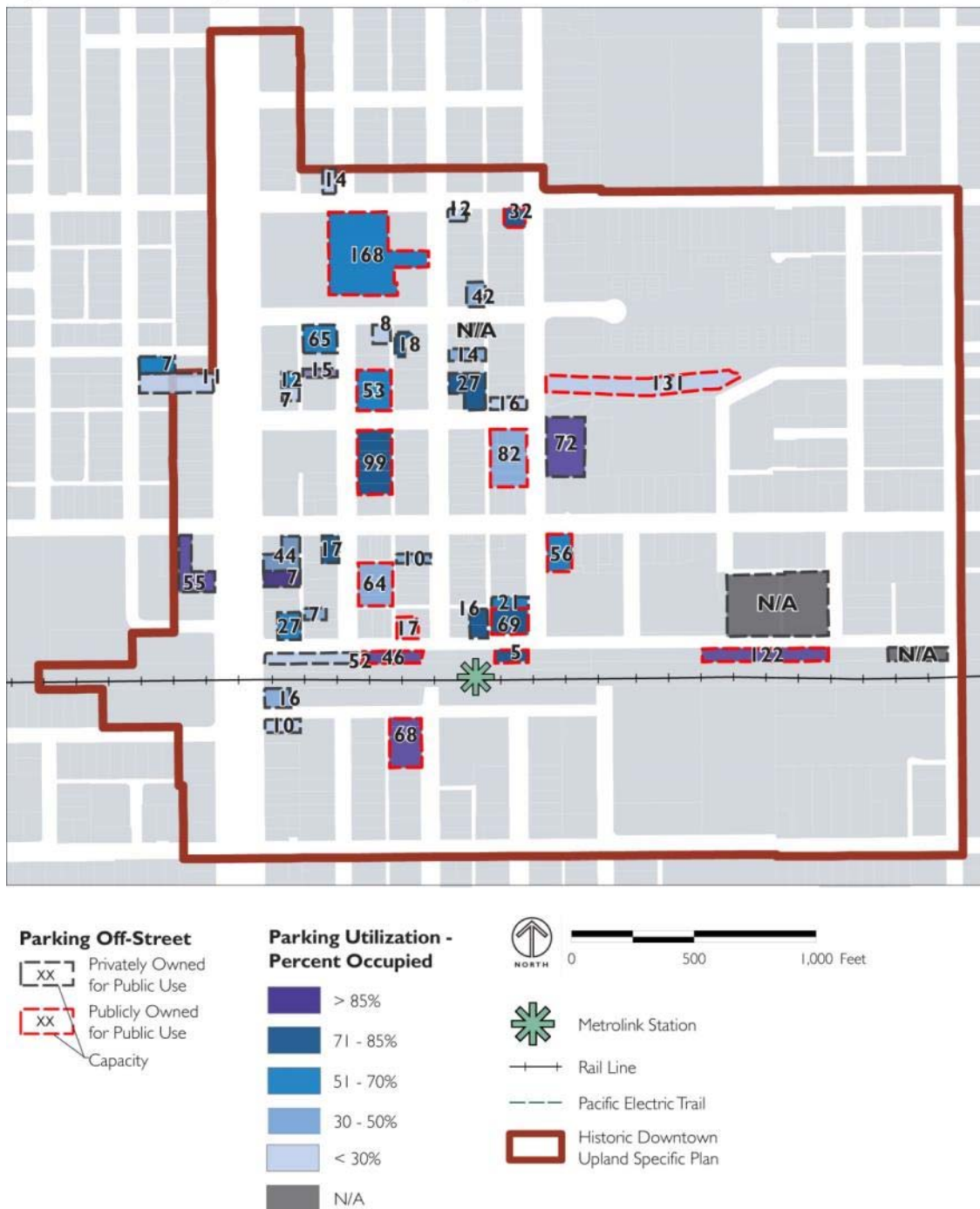
Source: HDUSP Figure 2-1, Page 2-2, 2011

Figure 4.4: HDUSP Existing Land Use Map



Source: HDUSP Figure 2-2, Page 2-3, 2011

Figure 4.5: HDUSP Parking Map



Source: HDUSP Figure 2-5, Page 2-15, 2011

On page 2-12 through 2-13 of the HDUSP it may be beneficial to note that transit facilities and services provide pedestrian delivery systems. Given the pedestrian oriented objectives of the HDUSP, this discussion could be expanded/updated to include the SANBAG ARRIVE Corridor to promote Downtown Upland as a transit destination, the SCAG/SANBAG Transit Access for Cyclists and Pedestrians Project, the SANBAG/San Bernardino County Non-Motorized Transportation Plan to enhance pedestrian/bike mobility around the Metrolink Station, and Omnitrans' plans to provide better transit services to the Metrolink station. On **Figure 4.5** it is not clear if the parking adjacent to the Metrolink platforms was included in HDUSP.

4.2.3 HDUSP Chapter 3 - Downtown Vision

The downtown vision is sound and recognizes the critical importance of residential (customer and commuter) density in the downtown and next to transit. Residential density is the foundation to facilitate a pedestrian environment and a vibrant downtown. Chapter 3 mentions that projects in the HDUSP should review the intent of the Specific Plan. However, it would be beneficial if the findings for project approvals in the HDUSP, as required in Chapter 9, include promotion or advancement of the Downtown Vision.

As mentioned earlier in reference to page 2-7 of the HDUSP, it may be helpful to reference and incorporate the outcomes of the Project in an update to HDUSP Figures 3-1, 3-2, and 3-12, to show progress in implementing the HDUSP and provide additional direction (**Figure 4.6**, **Figure 4.7** and **Figure 4.8**). One of the cost-effective methods of communication could be to advertise progress on the City's website about how the Specific Plan is being implemented, similar to what the City will have for the General Plan. Basically, this would entail showcasing a project underway that is working to accomplish the Specific Plan vision and can be an effective case study for collaborative joint venture projects, moving forward.

Figure 4.6: HDUSP Downtown Vision Concept Plan



Source: HDUSP Figure 3-1, Page 3-3, 2011

4.2.4 HDUSP Chapter 4 - Goals, Objectives, Policies and Actions

The Goals, Objectives, Policies and Actions appear well constructed and consistent with sound planning practice. However it may be beneficial to include an additional Goals, Objectives, Policies and Actions section for the outcomes related to the Project. This additional Goal to Actions could help advance the Project and entitle its implementation. It also may potentially provide the City with an example for key collaborative efforts to implement the HDUSP with other prime property and facility owners.

Figure 4.7: HDUSP Euclid District



Source: HDUSP Figure 3-1, Page 3-3, 2011

Figure 4.8: HDUSP Citrus Transportation District



Source: HDUSP Figure 3-1, Page 3-3, 2011

The HDUSP notes that project applicants should review Chapter 4 to ensure that the proposed project is consistent with the overall goals, objectives and policies for the Specific Plan Area. As noted in **Section 4.2.3**, it would appear beneficial to include in the findings for project approvals in the HDUSP as required in Chapter 9 to include consistency with the Goals, Objectives, Policies and Actions of Chapter 4.

Overall Actions could be updated to reflect the recent and current regional plans and projects that relate to various Goals, Objectives and Policies. For instance, Actions for Goal 6 could include implementing actions the City can make consistent with the regional pedestrian, bike and transit mobility plans recently completed (or in the process of completion).

For example,

- Policy 3.2.3: Policy interpretation appears flexible. However, although ground floor commercial uses for parking facilities are excellent ideas, for some narrow lots or areas that may not fully support a narrow and expensive storefront, this could be a significant barrier that may deter desired projects. This may be an issue for the SANBAG sites south of the rail ROW as suggested in **Figure 4.6** to **Figure 4.8**.
- Action 6.1: It appears this Action likely requires design and planning on private and public land on each side of the rail ROW, along with private sector funding participation. For example, SANBAG has creatively worked with the City of Redlands to coordinate planning of their downtown rail transit station and city parking structure. This included preplanning for a possible pedestrian bridge over the rail corridor. This preplanning will help reduce costs for a potential public pedestrian bridge over the rail ROW and between a planned City parking structure and potential future private land use development. A more inclusive Action could tap into this type of opportunity.
- Action 6.3.2: This Action appears to specifically address some of the issues that are subject to the Project. The Project may define more beneficial alternatives to the detailed approach outlined in the current Action 6.3.2, and may prompt an edit to this Action.

4.2.5 HDUSP Chapter 5 - Development Code

The stated purpose of the Development Code is to provide “precise specifications” for uses, building heights, setbacks, and parking. The Project will provide a conceptual identification of the planned/possible rail ROW and remaining SANBAG property available for TOD. ROW analysis and pre-conceptual engineering is needed and is presented in **Chapter 5**. A preliminary base case analysis using existing conceptual level ROW and SANBAG property dimension, defined conceptual maximum building configurations to help guide the Project in creating conceptual alternatives and a Proposed Project Implementation Plan. As noted above in **Section 4.1.1**, the City provided an estimated “realistic capacity” of 41 dwellings per acre plus ground floor commercial development for the two SANBAG properties. The City’s estimated capacity is about 75% of the planning maximum density of 55 dwelling units per acre allowed in the HDUSP.

The HDUSP divides the specific plan area into several districts that have similar, but separate development code standards. The SANBAG Project sites are contained within the Euclid District and Citrus Transportation District. Some portions of the SANBAG rail ROW on the eastern edge of the specific plan are also within the Residential Transit District (shown in **Figure 4.3**). One SANBAG site north of Stowell and east of 2nd Avenue (**Figure 4.9**) is wholly within the Citrus Transportation District. The other SANBAG site north of Stowell Street and between Euclid and 2nd Avenues (**Figure 4.10**), is within both the Euclid District and Citrus Transportation District boundaries. The development code standards applicable to the two SANBAG Project sites are similar. However to provide a base framework for discussion, and for conceptual entitlement approval and possible SANBAG RFP to develop a site, or sites, a summary of sufficient HDUSP development standards and a base case development block massing diagram for each site is provided.

The summary review of the HDUSP Chapter 5 Development Code on the Project’s two SANBAG properties is summarized below. As development planning and design can be complicated, and various design and project directions and details can bring up other City regulatory issues, the following summary is intended to provide an initial indication of Development Code issues to discuss and address in the Project.

SANBAG Property #1 – Development Code

The SANBAG property #1 is within the HDUSP’s Citrus Transportation District (**Figure 4.9**). **Figure 4.10** graphically identifies the primary setbacks for the property as identified in the HDUSP and described in more detail below. **Figure 4.10** also graphically shows a potential setback from the regional rail corridor ROW that is an overall Citywide issue and discussed in **Section 4.2.6**. The Citrus Transportation District setback and height limits are illustrated in **Figure 4.11**.

The setback standards for the Project property’s rear setback do not take into consideration the special situation of being adjacent to a regional transportation and rail transit corridor and ROW. This ROW has very limited and specialized access requirements and a minimum of 3 to 5 feet setback from the rail transportation corridor. Similar to the front yard setbacks, setback standards adjacent to City roadways is suggested not only for this District and the HDUSP, but for all properties in the City adjacent to the regional rail corridor and ROW. This setback would allow properties unrestricted access from their property to maintain their property adjacent to rail ROW, and if landscaped, provides the City of Upland with an attractive rail corridor and rail ‘front door’ to the City.

Following is an initial summary of the Development Code District standards for SANBAG property #1. Review comments are noted in sub-bullets.

- Location: NE 2nd/Stowell – APN:1046-605-01
- Located in the Citrus Transportation District
- Permitted Uses: See HDUSP Table 5-1.
 - The permitted uses in the HDUSP Table 5-1 appear appropriate. Desired Primary Uses are Mixed-Use Residential, Retail, Restaurants, and Entertainment

Figure 4.9: HDUSP Citrus Transportation District: Visual Simulation

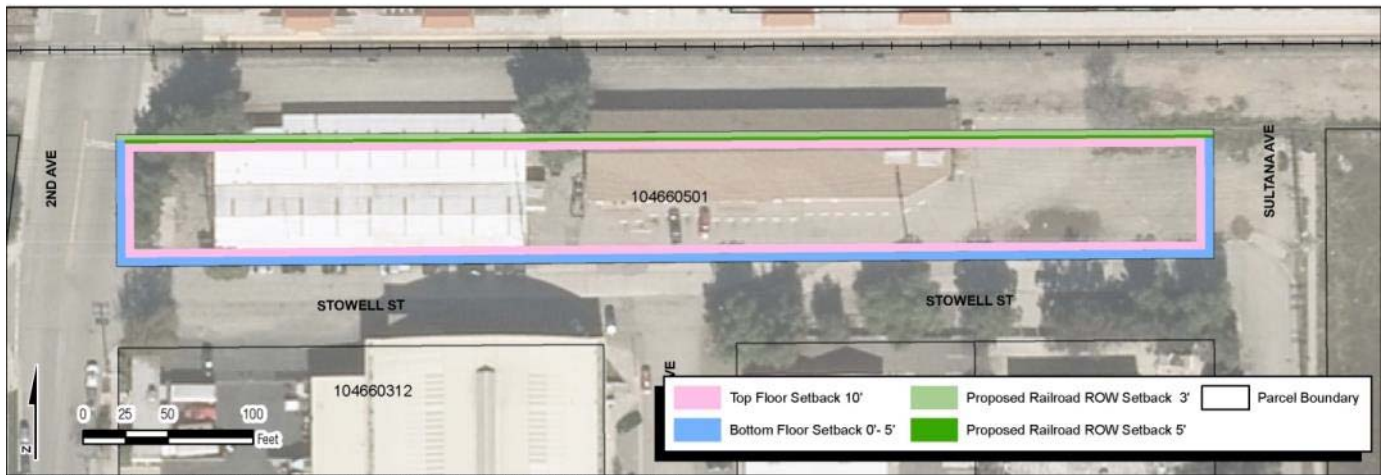


Source: HDUSP, Page 5-32, 2011

- Allowed Frontage Types: Forecourt/Patio, Arcade, Gallery (See Section F.1 for general standards).
 - These appear reasonable, but a more industrial frontage consistent with the history of the area may be appropriate to consider.
- Minimum lot: width = 50 feet, and depth = 130 feet.
- The current existing lot depth is 77 feet and an existing non-conformity. Subdivision of this property may be needed or desirable for redevelopment. A cost efficient solution to this regulatory non-conformity would be desirable. Residential Density: 55 DU/acre maximum.
 - City Housing Element estimated “realistic capacity” density is 46 DU/acre. The diagrams and calculations used to determine ‘realistic capacity’ could be helpful.
- Height: 2 stories minimum, 4 stories or 55 feet maximum, with ground floor height (retail, commercial or public uses) 12 feet minimum clear floor to ceiling height. An architectural feature may exceed the height limit by 10 feet if the feature is appropriate to the architectural style of the building.
 - Heights seem reasonable, but could undesirably limit any proposed parking structure.

- Building Setback Front [facing Stowell – to be confirmed with the City]: 0 feet minimum and 5 feet maximum. The Upper Floor Setback is 10 feet minimum at the fourth story.
 - Seems reasonable.
- Building Setback Side - Corner lot: 0 feet minimum, 10 feet maximum; except 5 feet minimum at fourth story on the street side setback
 - Seems reasonable.

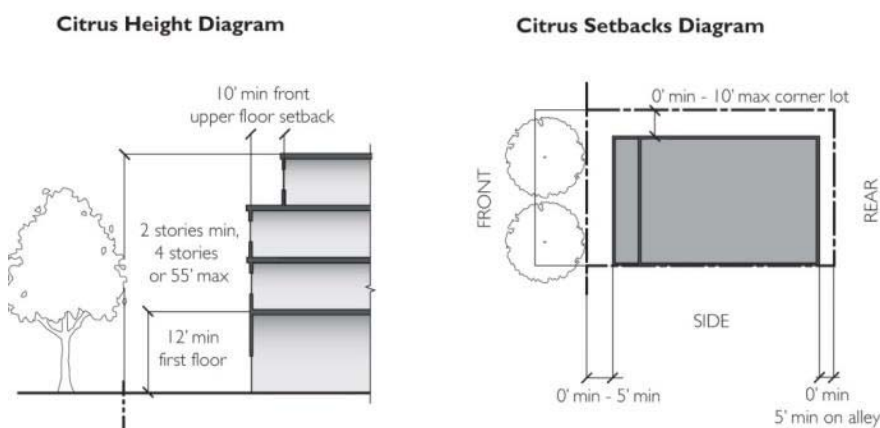
Figure 4.10: Setback for SANBAG property #1 – APN:1046-605-01



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Source: HDR, 2014

Figure 4.11: HDUSP Citrus Transportation District Setback and Height Limits



Source: HDUSP, Page 5-33, 2011

- Building Setback Side - Interior lot: 0 feet minimum, subject to the requirements of UMC Chapter 15, Buildings and Construction; No maximum
 - Seems reasonable.

- Building Setback Side - Side alley: 3.5 feet minimum and 5 feet maximum. When properly designed to accommodate it, such yard may be set back further to allow for semi-public spaces, vehicle parking and/or loading purposes.
 - Seems reasonable.
- Building Setback Rear: 0 feet minimum and no maximum. Fronting alley: 5 feet minimum and no maximum.
 - For properties with rear setbacks facing the regional rail corridor ROW, this is not desirable, because it does not facilitate building maintenance (and graffiti removal) without rail corridor owner permission. Given regional and interstate rail activities, permission may not be conveniently available. Also, a 0 feet setback does not allow any landscaping and presentation of an attractive 'front door' to the City of Upland. A 3-5 feet setback, perhaps landscaped, is suggested for all properties in the City of Upland fronting on the regional rail corridor. An example of such an approach is noted in Section 2.2.6 of this memo.
- Building Setback facing 2nd Avenue: 0 feet minimum and 5 feet maximum on the side of the building facing 2nd Avenue.
 - Seems reasonable. City confirmation that this supersedes the Corner lot setback is needed.
- Building Transparency: Minimum 70 percent transparency where ground floor use is non-residential, commercial or office.
 - These appear reasonable, but as mentioned above, a more industrial frontage consistent with the history of the area may be appropriate to consider. If allowed, a reduction in transparency would likely be appropriate.
- No direct vehicular access onto 2nd Avenue
 - Seems reasonable.

SANBAG Property #2 – Development Code

The SANBAG property #2 is within both the HDUSP's Euclid and Citrus Transportation Districts (**Figure 4.9, Figure 4.10, Figure 4.11, Figure 4.12** and **Figure 4.13**). The westerly approximately 265' (as initially estimated by basic visual inspection) is located in the Euclid District. The boundary between the two Districts should be resolved by the implementing entities during Project development. **Figure 4.12** graphically identifies the primary setbacks for the property as identified in the HDUSP and is described in more detail below. **Figure 4.12** also graphically shows a potential setback from the regional rail corridor ROW that is an overall Citywide issue and discussed **Section 4.2.6** of this memo.

The Euclid District setback and height limits are illustrated in **Figure 4.14**, and the Citrus Transportation District setback and height limits are shown earlier in **Figure 4.11**. There may be questions about how to transition the Development Code standards at the boundary of the Districts, but these can be addressed by the implementing entities during Project creation. **Figure 4.15** illustrates the type of development the HDUSP guides for fronting on Euclid Avenue.

Following is an initial summary of the Development Code District standards for SANBAG property #2, located north of Stowell Street between Euclid/2nd – APN:1046-605-03

District: The western approximately 265' is located in the Euclid District

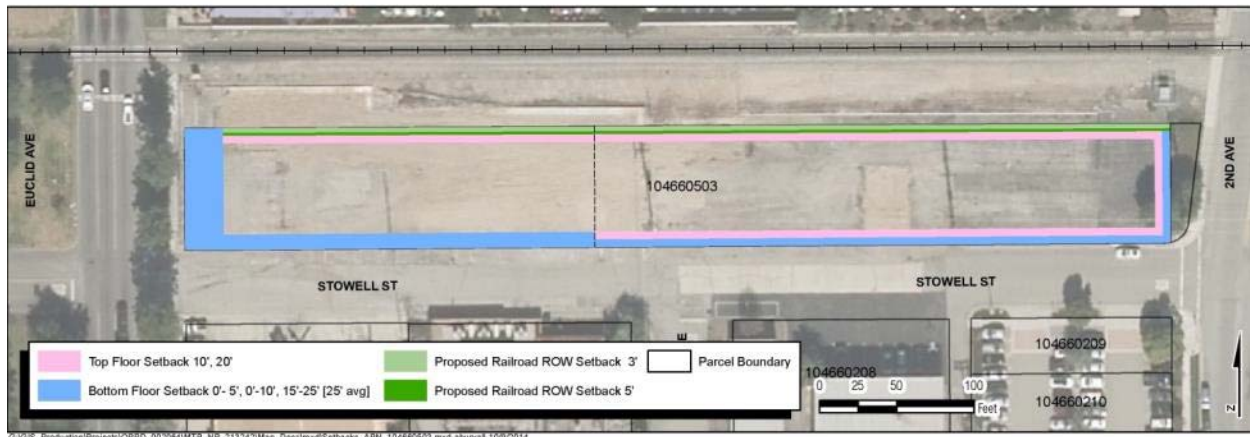
- Permitted Uses: See HDUSP Table 5-1.
 - The permitted uses in the HDUSP Table 5-1 appear appropriate. The Desired Primary Uses are Office, Retail, Single-Family Residential, Multi-Family Residential, Mixed-Use, and Institutional.

Figure 4.12: HDUSP Euclid District



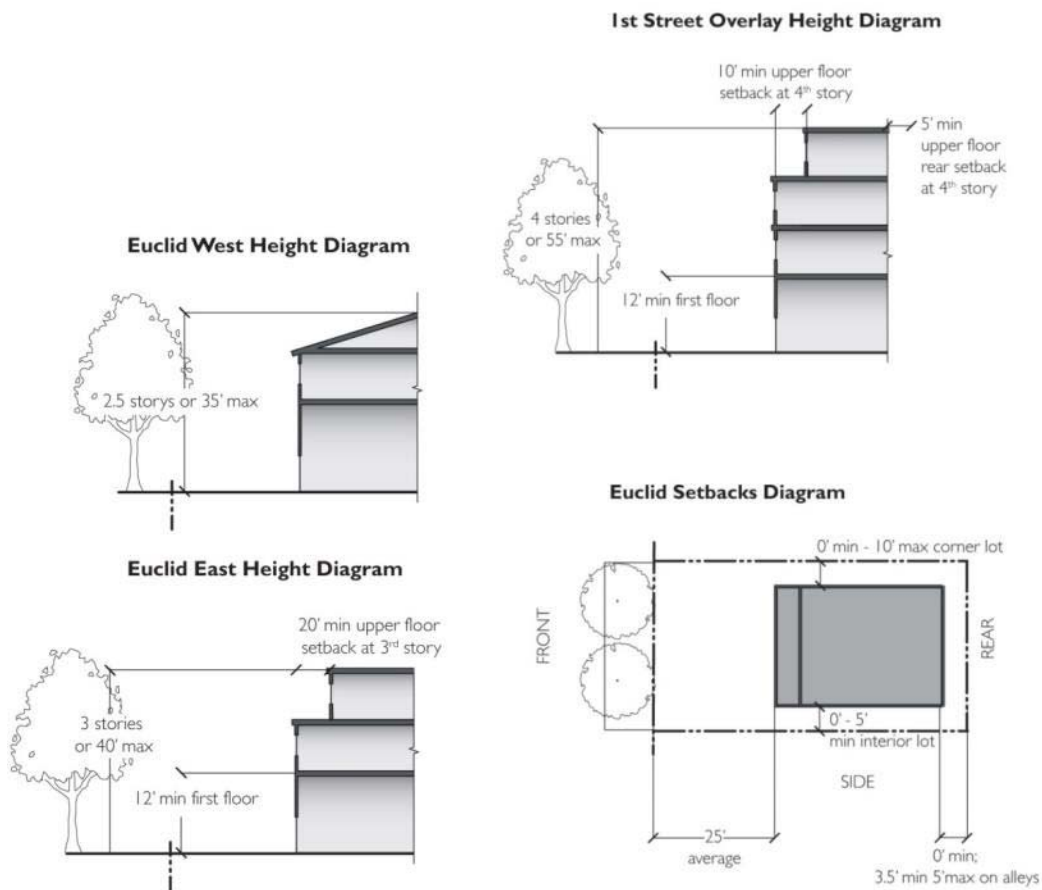
Source: HDUSP, Page 5-11, 2011

Figure 4.13: Setback for SANBAG property #2 – APN:1046-605-03



Source: HDR, 2014

Figure 4.14: HDUSP Euclid District Setback and Height Limits



Source: HDUSP, Page 5-13, 2011

Figure 4.15: HDUSP Development Illustration for Euclid Avenue Frontage



Source: HDUSP, Page 5-11, 2011

- Expansion of Commercial or Industrial Uses: The use, modification and/or conversion of any existing commercial or industrial building or structure for a more intensive purpose shall not be permitted except as may otherwise be authorized as a conditional use, in accordance a Major Use Permit described in Chapter 9.
 - Seems reasonable given Euclid's role as one of the City's (attractive) vehicular 'front doors'
- Allowed Frontage Types: Porch, Stoop, Forecourt, Arcade, Gallery (See Section F.1 for general standards)
 - Seems reasonable. A transition to the Citrus Transportation District standards on the same lot that do not allow stoops maybe a consideration.
- Minimum lot width: 90 feet
 - The current existing lot depth is 80 feet (from Stowell Street) and may be an existing non-conformity. Subdivision of this property may be needed or desirable for redevelopment. A cost efficient solution to this potential regulatory non-conformity would be desirable.
- Residential Density: 40 du/acre maximum
 - City Housing Element estimated "realistic capacity" density is 46 DU/acre for the entire site, and included the eastern portion of the site governed by the Citrus Transportation District standards. The diagrams and calculations used to determine 'realistic capacity' could be helpful. How maximum residential density is calculated for a site with multiple standards should be resolved during Project development phase
- Height: 3 stories or 40 feet maximum, with ground floor height (retail, commercial or public uses) 12 feet minimum clear floor to ceiling height. An architectural feature may exceed the height limit by 10 feet if the feature is appropriate to the architectural style of the building.
 - Heights seem reasonable, but will undesirably limit any proposed parking structure.

- Building Setback along Euclid: An average of 25 feet, with no building or structure closer than 15 feet from the front property line. The Upper Floor Setback is 20 feet minimum at the third story.
 - Seems reasonable given the uniform landscaped design of Euclid Avenue.
- Building Setback at Side - Corner lot: 0 feet minimum, 10 feet maximum.
 - Seems reasonable. It is assumed this is adjacent to Stowell Street, and should be confirmed with the City of Upland.
- Building Setback at Side - Interior lot: 0 feet minimum for adjacent zero-lot line products (town- home, row-house or similar which share a party wall), subject to the requirements of UMC Chapter 15, Buildings and Construction.
 - It is assumed this is adjacent to the regional rail corridor ROW, and should be confirmed with the City of Upland. As noted above for properties with rear setbacks facing the regional rail corridor ROW, this is not desirable, because it does not facilitate building maintenance (and graffiti removal) without rail corridor owner permission. Given regional and interstate rail activities convenient permission may not be available. Also, a 0 feet setback does not allow any landscaping and presentation of an attractive 'front door' to the City of Upland. A 3-5 feet setback, perhaps landscaped, is suggested for all properties in the City of Upland fronting on the regional rail corridor. An example of such an approach is noted in Section 2.2.6 of this memo.
- Building setback at Rear: 0 feet minimum, no maximum. Structure fronting alley = 3.5 feet minimum and 5 feet maximum. When properly designed to accommodate it, such yard may be set back further to allow for semi-public spaces, vehicle parking and/or loading purposes.
 - It is assumed this standard applies at the end of the estimation, and to be confirmed, 265' from Euclid or not applicable if no site rear lot line within the Euclid District. This should be confirmed with the City.
- Building Transparency: Minimum 70 percent transparency where ground floor use is non-residential, commercial or office.
 - These appear reasonable, but as mentioned in the discussion of the Citrus Transportation District standards that co-exist on the same lot as one moves east from Euclid Avenue, a more industrial frontage consistent with the history of the area may be appropriate to consider. If allowed, a transitional reduction in transparency would likely be appropriate.
- No direct vehicular access for any commercial, commercial/ professional, industrial or multi-family developments onto Euclid Avenue.
 - Seems reasonable.

District: Eastern remainder of the property is located in the Citrus Transportation District.

- Permitted Uses: See HDUSP Table 5-1.
 - The permitted uses in the HDUSP Table 5-1 appear appropriate. Desired Primary Uses are Mixed-Use Residential, Retail, Restaurants, and Entertainment.
- Allowed Frontage Types: Forecourt/Patio, Arcade, Gallery (See Section F.1 for general standards)
 - These appear reasonable, but a more industrial frontage consistent with the history of the area may be appropriate to consider. Also a transition to the Euclid District standards on the same lot that allow stoops may be a consideration.
- Minimum lot: width = 50 feet, and depth = 130 feet
 - The current existing lot depth is 80 feet (from Stowell Street) and may be an existing non-conformity. Subdivision of this property may be needed or desirable for redevelopment. A cost efficient solution to this potential regulatory non-conformity would be desirable.
- Residential Density: 55 du/acre maximum

- City Housing Element estimated “realistic capacity” density is 46 du/acre for the entire site, and included the western portion of the site governed by the lower 40 du/acre Euclid District standards. The diagrams and calculations used to determine ‘realistic capacity’ could be helpful. How maximum residential density is calculated for a site with multiple standards should be resolved by the implementing entities.
- Height: 2 stories minimum, 4 stories or 55 feet maximum, with ground floor height (retail, commercial or public uses) 12 feet minimum clear floor to ceiling height. An architectural feature may exceed the height limit by 10 feet if the feature is appropriate to the architectural style of the building.
 - Heights seem reasonable, but will require transition to the lower Euclid District standard height. The height limit may undesirably limit any proposed parking structure.
- Building Setback Front: 0 feet minimum and 5 feet maximum. The Upper Floor Setback is 10 feet minimum at the fourth story.
 - Assume this setback applies to the site facing Stowell Street, which needs to be confirmed with the City. The setback will blend and transition with the Euclid District standards. The setback seems reasonable, but may be subject to suggested adjustment during the Project development stage.
- Building Setback Side - Corner lot: 0 feet minimum, 10 feet maximum; except 5 feet minimum at fourth story on the street side setback
 - Seems reasonable.
- Building Setback Side - Interior lot: 0 feet minimum, subject to the requirements of UMC Chapter 15, Buildings and Construction; No maximum
 - Seems reasonable.
- Building Setback Side - Side alley: 3.5 feet minimum and 5 feet maximum. When properly designed to accommodate it, such yard may be set back further to allow for semi-public spaces, vehicle parking and/or loading purposes.
 - Seems reasonable.
- Building Setback facing 2nd Avenue: 0 feet minimum and 5 feet maximum on the side of the building facing 2nd Avenue.
 - Seems reasonable.
- Building Setback Rear: 0 feet minimum and no maximum. Fronting alley: 5 feet minimum and no maximum.
 - For properties with rear setbacks facing the regional rail corridor ROW, this is not desirable, because it does not facilitate building maintenance (and graffiti removal) without rail corridor owner permission. Given regional and interstate rail activities convenient permission may not be available. Also, a 0 feet setback does not allow any landscaping and presentation of an attractive ‘front door’ to the City of Upland. A 3-5 feet setback, perhaps landscaped, is suggested for all properties in the City of Upland fronting on the regional rail corridor. An example of such an approach is noted in Section 2.2.6 of this memo.
- Building Transparency: Minimum 70 percent transparency where ground floor use is non-residential, commercial or office.
 - These appear reasonable, but as mentioned above, a more industrial frontage consistent with the history of the area may be appropriate to consider. If allowed a reduction in transparency would likely be appropriate.
- No direct vehicular access onto 2nd Avenue
 - Seems reasonable.

Additional Multi-family Standards

HDUSP page 5-44 states “All multi-family residential projects shall be constructed to accommodate and/or facilitate conversion to condominium ownership.” This was intended to ensure that for-rent or for-sale units would be built to the same condominium standards, so that for-rent could easily transition to condominiums in the future, if need be. This would be addressed on the Parcel or Tract Map. The multi-family standard for a minimum unit size of 750 square feet for a 1 bedroom, and 200 sq. ft. for each additional bedroom is consistent with the City’s goals for the downtown. City of Upland staff believes that this will provide for a high-quality product, consistent with the HDUSP. However, staff concurs that they would need to peruse the multi-family residential standards to identify which standards need clarification.

Additional Condominium Standards

HDUSP on page 5-44 also states “2.c. Height and Setbacks, the height and setback standards of each district shall apply for the development of multi-family housing, except as specified below for condominium projects”. The additional Height and Setback standards in section 2.c. on pages 5-44 to 5-48 are extremely detailed and difficult to diagram for base case analysis at this time and require confirmation from the City of Upland as to the relevance and applicability to multi-family residential projects.

Additional Mixed-use Standards

HDUSP on page 5-49 indicates “...The following standards shall apply to all mixed-use projects in Downtown in addition to the standards for the district in which a project is located.

- a. *Use Limitations* - The non-residential area of a mixed-use project shall be a use allowed within the project’s district, as shown in Table 5-1. The non-residential area must meet the requirements of the Uniform Building Code, as adopted by the City, for the type of activity/ use being undertaken.
- b. *Development Intensity* - i. *Minimum Lot Area and Dimension*. Mixed-use developments are not subject to minimum lot area or dimension standards. ii. *Density*. Mixed-use developments shall be permitted to exceed the maximum residential density permitted in each district by up to 25 percent (for a maximum of 55 units per acre).
- c. *Location of Uses* - The ground floor portion of a mixed-use development facing a street or alley shall be a non-residential use, which activates the district in which it is located.
- d. *Height and Setbacks* - The height and setback standards for each district shall apply for mixed-use developments.
- e. *Allowed Projections and Encroachments* - Architectural features, porches, stoops, balconies, awnings and canopies may encroach into required setbacks and rights-of-way as identified in the standards for each district.
- f. *Open Space* - Mixed-use developments containing residential units shall provide a minimum of 100 square feet per residential unit of usable open space, consisting of a combination of private residential open space and usable common areas. A minimum of 60 square feet shall be located within the private residential unit.
- g. *Transparency* - The transparency standards for each district shall apply for all mixed-use projects.”

Chapter 5 of the HDUSP also has additional standards for ‘Live-work’ and ‘Senior Housing’ developments that are somewhat ancillary and specialized. The balance of Chapter 5 provides standards for frontage types, walls and fences, parking, open space, landscaping, lighting, non-conforming uses, and signs; and are relatively typical except for the special Upland Parking and Business Improvement District features and standards. The Upland Parking and Business Improvement District features and standards help to facilitate reduced parking costs for development, and the District could potentially be updated to better incorporate and share parking with the City’s

transit parking resources to mutually reduce overall parking costs. For instance, peak parking demand by time of day (**Table 4.1**) could be updated to encourage more shared parking with transit users.

Table 4.1: HDUSP Peak Parking Demand by Time of Day

Land Use	Weekday Daytime (8:00 am to 5:00 pm)	Weekday Evening (6:00 pm to 12:00 am)	Weekday Night (12:00 am to 6:00 am)	Weekend Daytime (8:00 am to 5:00 pm)	Weekend Evening (6:00 pm to 12:00 am)	Weekend Night (12:00 am to 6:00 am)
Cultural Use	60%	90%	5%	100%	90%	5%
General Retail	90%	80%	5%	100%	70%	5%
Restaurant	70%	100%	10%	70%	100%	20%
General Office	100%	20%	5%	5%	5%	5%
Hotel/Motel	70%	100%	100%	70%	100%	100%
Entertainment	40%	100%	10%	80%	100%	50%

Source: HDUSP Table 5-3, Page 5-59, 2011

4.2.6 HDUSP Chapter 6 - Design Standards & Guidelines

Design standards and guidelines include “shall” (required) and “should” (desirable) design direction for both private and public spaces and properties in the HDUSP. Most of this direction is qualitative in nature and subject to design, aesthetic, and sometimes political evaluation. These qualitative standards provide real costs to development (design, materials, processing time and project risk), but are hard to define in a schematic and conceptual Project. Successful implementation of Design Standards and Guidelines is more an art-form and requires openness, consideration, creativeness and collaboration to advance quality community design. It is suggested that the implementing entities work to define ways to reduce these potential costs in a mutually beneficial way, to help reduce development investment barriers for the Project.

The Design Standards and Guidelines appear well crafted and consistent with quality design principles and the context of Upland; but as qualitative standards, poor interruption or evaluation could limit quality design and decrease a project’s feasibility.

Critically, the Design Standards and Guidelines fail to address a major design feature in the HDUSP; properties adjacent to the regional rail transportation and transit corridor. The Design Standards and Guidelines do “...ensure that buildings located along the Pacific Electric Trail enhance the trail through integrated open space, landscaping and architectural design.” and provide the following direction:

“C.3.1.1 Sites abutting the Pacific Electric Trail should design the site and buildings to allow visibility and open access to the trail.

C.3.1.2 Sufficient setbacks and landscape buffers should be provided between the trail and adjacent land uses.

C.3.1.3 On-site landscaping should be coordinated and transition to the landscaping along the trail. California-friendly plant species should be planted adjacent to the trail wherever possible.

C.3.1.4 Building facades facing the trail should include articulation, architectural detailing and amenities that address the trail as a pedestrian corridor. Such elements may include the use of natural building materials, decorative windows, canopies, shaded seating areas and public artwork, so long as they don’t project into the trail ROW.”

The direction provided for sites adjacent the Pacific Electric Trail is similarly applicable for sites adjacent to the regional rail and transit corridor; particularly given substantially more people are likely to traverse the regional rail and transit corridor. The regional rail and transit corridor is an important ‘front door’ to the City. Design Standards

for properties adjacent to the corridor could be similar to those provided for the Pacific Electric Trail. Incorporating the unique conditions of the rail corridor seems beneficial and warranting consideration.

Chapter 6 includes Commercial Core – Proposed Minimum Functional Zone Widths standards (**Table 4.2**) that may require street dedication and loss of development potential on the SANBAG properties. This should be factored into the constraints and alternative land use concepts tasks to be conducted later in this Project.

Table 4.2: HDUSP Commercial Core Proposed Minimum Functional Zone Widths Standards

Street	Segment	Existing Right-of-Way Width	Existing Sidewalk / Parkway Width (each side)	Functional Zone Width		
				Pedestrian Zone	Public Amenity Zone	Frontage Zone
1st Avenue	Between D Street and A Street	80'	16'	8'	4'	4'
1st Avenue	Between Stowell Street. and 8 th Street.	68'	15'	8'	4'	3'
2nd Avenue	Between Arrow Highway. and C Street.	80'	16'	8'	4'	4'
2nd Avenue	Between C Street and A Street	80'	14.5'	8'	4'	2.5'
2nd Avenue	Between A Street and 8 th Street	77'	18.5'	8'	6'	4.5'
3rd Avenue	Between Arrow Highway and A Street	80'	15'	8'	4'	3'
3rd Avenue	Between Stowell Street. and 8 th Street.	78'	24'	12'	8'	4'
9th Street	Between Euclid Avenue and 1st Avenue	80'	11.5'	6'	4'	1.5'
9th Street	Between 1st Avenue and 3 rd Avenue.	80'	14'	8'	4'	2'
C Street	Between Euclid Avenue. and 3 rd Avenue	80'	16'	8'	4'	4'
Stowell Street	Between Euclid Avenue and Sultana Avenue	45'	9'	5'	4'	0'
Sultana Avenue	Between Stowell Street and 8 th Street	66'	15'	8'	4'	3'

Source: HDUSP Table 6-1, Page 6-58, 2011

4.2.7 HDUSP Chapter 7 – Circulation and Parking

A key circulation issue around transit stations is the quality and density of bike and pedestrian access between surrounding land uses and the station. A high density and quality of bike and pedestrian pathways and routes will maximize the potential for surrounding TOD investment while reducing traffic and parking impacts and costs. The Chapter could be updated to incorporate relevant projects recently conducted and/or currently in the progress:

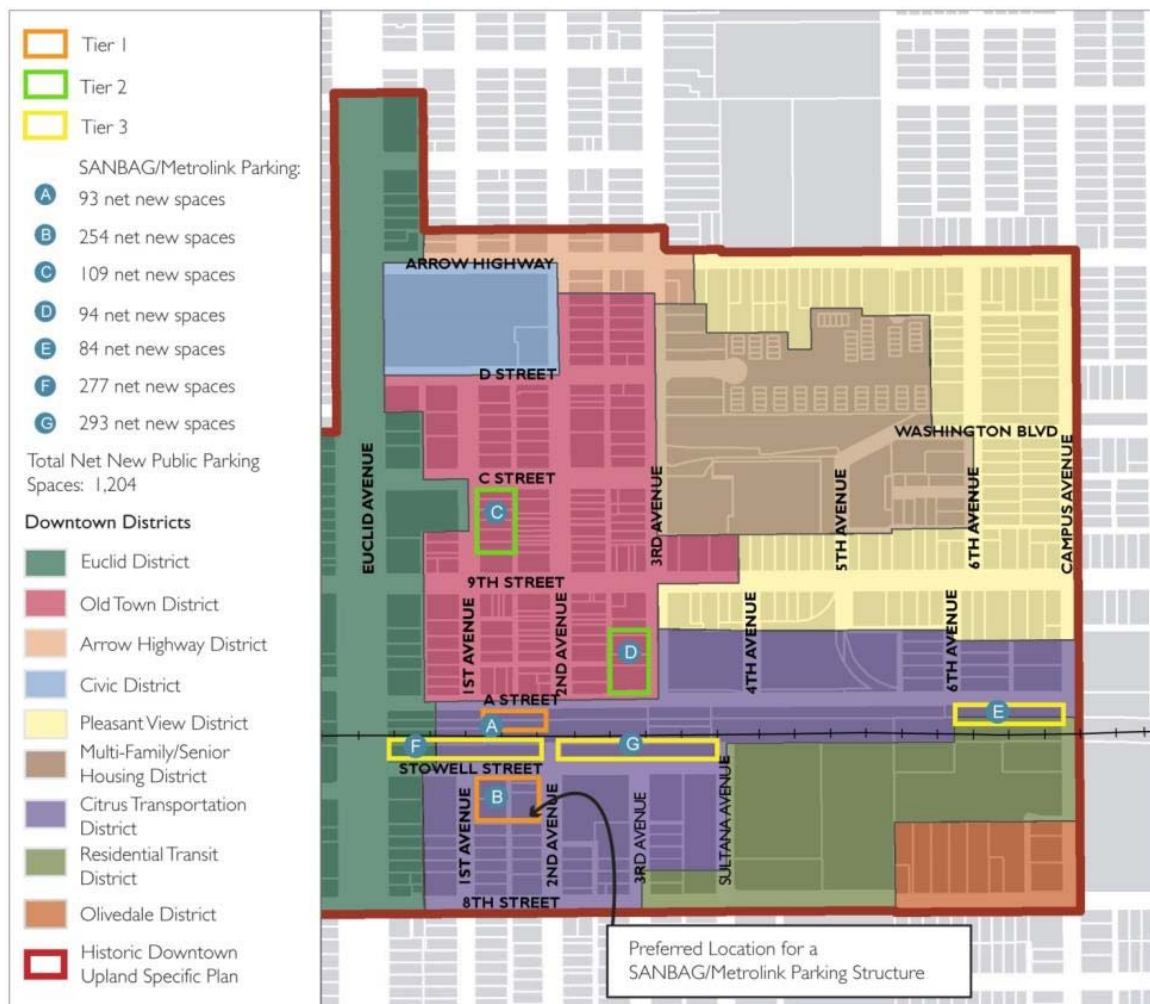
- 2012-2035 SCAG Regional Transportation Plan/Sustainable Community Strategy,
- SCAG/SANBAG Transit Access for Cyclists and Pedestrians Project,
- SANBAG / San Bernardino County Non-Motorized Transportation Plan,
- SANBAG Arrive Corridor Study Project (completed in September 2015),
- Omnitrans System-Wide Transit Corridor Plan, and

- Omnitrans Short Range Transit Plan.

Discussing parking in the context of a transit oriented and walkable downtown can be challenging, because it requires a transition from suburban auto dependent and oriented land use planning to more dense and economically vibrant pedestrian, bike and transit orientation. Chapter 7 provides a good plan for this transition; however, it does not fully factor in the ability of improved bike and pedestrian access in the area to lessen the future projection of transit rider parking. Additionally, improved Omnitrans bus service to the transit station can help reduce the need for parking. The outcomes of the SANBAG ARRIVE Corridor Study Project (completed in September 2015), closely coordinated with a dense and quality pedestrian and bike network, may provide the opportunity to reduce parking demand by promoting transit destinations in downtown Upland.

Chapter 7 identifies SANBAG properties #1 and #2 as potential Tier 3 parking areas (**Figure 4.16**). Access to the diagrams and calculations used by the HDUSP to define this potential would be helpful during the Project development phase. Due to the narrow width of these properties, they can work reasonably well for surface parking, but appear limited and inefficient for multilevel structured parking due to needed ramping, turn movements and exits, and HDUSP frontage development standards. With the HDUSP data, the implementing entities can analyze and clarify the parking potential and efficiency of the sites.

Figure 4.16: HDUSP Tier Parking Areas



Source: HDUSP Figure 7-9, Page 7-20, 2011

Chapter 7 in HDUSP notes without citation that:

“The Metrolink Station in Downtown Upland will generate additional parking demand. Currently, the station does not provide enough parking to meet the demand of Metrolink users and some residents choose to board the train at the nearby Montclair Metrolink Station. If sufficient parking is provided at the Upland Station, some riders who board in Montclair might choose to board in Upland. Additionally, Metrolink ridership is projected to increase by up to 40 percent by 2030. Based on these projections, an additional 363 spaces should be provided near the Upland Metrolink Station to satisfy the Metrolink user base in Upland.

The San Bernardino Associated Governments (SANBAG) will help fund a parking structure in Downtown that will serve both patrons of Downtown and the Metrolink. It is necessary to locate the Metrolink parking facilities adjacent to the station to ensure convenient access for Metrolink riders.” At the time of the HDUSP approval (2011), the SANBAG Board had made no commitment to funding a Downtown parking structure. It would be helpful if the developers reviewed the data sources for these statements and the conceptual feasibility of proposed parking structures on SANBAG properties #1 and 2 and the City's Site “B” in **Figure 4.16** as part of the constraints and background information used in Project alternative development. Also, as land uses at sufficient densities to create a pedestrian and transit oriented downtown is redeveloped around the transit station, the need and desirability of transit related parking will diminish.

4.2.8 HDUSP Chapter 8 - Public Utilities and Infrastructure

Chapter 8 summarizes studies prepared by the City's Public Works Department to assess water, sewer and storm drainage infrastructure necessary to provide an adequate level of service for long-term implementation of the Specific Plan. Chapter 9 in part takes the information from Chapter 8 and identifies how planned public utilities and infrastructure needs from planned redevelopments are implemented. In an initial scan, there are modest public utility and infrastructure needs identified for the area surrounding the Project properties.

4.2.9 HDUSP Chapter 9 - Implementation

General Implementation Provisions

Under Section A.1: Authority and Scope, as mentioned previously in this memo, HDUSP references to and adoption consistent with various Federal, State and Regional laws, programs and plans that support TOD and potential external funding or collaboration opportunities for the HDUSP could be helpful. HDUSP Chapter Tables 9-1 and 9-2 could be amended to summarize the outcomes of any of these references and adoptions.

Administration

The Project, to be fully approved, would likely require approval of:

- Change in Use Application,
- Major Alteration – Site Plan Application,
- Conditional Use Permit (may or may not be needed),
- Shared Parking Application,
- Encroachment Permit, and
- CEQA documentation approval.

These are a bundle of entitlements. The Project is intended as a joint effort between the City and SANBAG to review and define a potential conceptual development for the Project area that incorporates planned rail ROW corridor improvements. This review and definition process is similar, if not equivalent, to a conceptual development approval process. It is hoped the joint and collaborative effort will serve to mutually reduce City and SANBAG costs and advance mutual goals relative to the Project and its role in furthering the HDUSP. One such method would be utilizing the Project's concept design process with the City as an equivalent to several of the

City's development entitlement processes; and at conclusion to the Project, have the City substantially entitle the Project. The HDUSP's implementation priorities are listed in **Table 4.3**.

Project opportunities appear consistent with the following City stated overall high-priority implementation items on page 9-11 of the HDUSP:

- "1. Incentivizing housing in particular but other new development as well, including higher density housing within mixed use or live/work developments. ... The development of an initial increment of new housing in Downtown Upland is the most important implementation action. At least 200 new residential units are needed to attract high-quality retailers to the Downtown. ...*
- 3. Improving business retention and attraction, and economic development efforts.*
- 4. Focusing on expanding support for rehabilitation, remodeling, and seismic retrofitting of Downtown structures to accommodate contemporary retail formats.*
- 5. Implementing streetscape improvements, including pedestrian and bicycle improvements and "greening" of alleys in the Downtown. ..."*

The collaborating implementing entities (SANBAG, Developers etc.) should review and utilize these and other City high-priority items identified in **Table 4.3** as a guide to collaboration on Project development. These projects could also be evaluated for updating as they reference Tax Increment Financing (TIF) as a financial resource to implement the HDUSP. After the City adopted the HDUSP, State Law removed Redevelopment and TIF ability as part of local government redevelopment efforts. There has been discussion in the State Legislature to reinstate some form of Redevelopment and/or TIF for infill downtown and planned transit oriented areas like Downtown Upland, but they have not yet been signed into State law.

The HDUSP could be well positioned to secure external public or private funding for TOD based on recent market trends and a general State planning direction to encourage this type of development. The implementing entities should work collaboratively to reduce Project costs and improve Project feasibility to attract both public and/or private funding. The HDUSP states SANBAG is a funding source for a 2nd priority and mid to long-term parking structure development across Stowell Street from SANBAG property #2. The statement basis and funding potential should be clarified by the implementing entities, and the table updated as needed.

Development and Redevelopment Strategies

A prime strategy in the HDUSP is to *"use City-owned properties to stimulate private development, especially housing."* The opportunity for the implementing entities to coordinate land resources to improve potential development feasibility should be explored and appears consistent with City strategy. The City identifies City and other publicly owned properties as potential catalyst sites to implement this strategy (**Figure 4.17**).

Economic Development Strategies

One of the Economic Development Strategies is to *"Coordinate existing business and property owner assistance efforts with the Downtown Specific Plan implementation effort, especially to attract retail tenants identified in the tenancing program."* The Project could be a site to create development to house and attract desired retail tenants. Implementing entities' collaboration on this strategy with City property owner assistance could help advance this strategy.

Table 4.3: HDUSP High Priority Projects

	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Regulatory Actions							
Adopt the Specific Plan and EIR.	1	Short-term	CD			N/A	
Amend the Zoning Code and General Plan to reflect adoption of the Specific Plan.	1	Short-term	CD			N/A	
Development and Redevelopment							
Use City-owned properties to stimulate private development, especially housing, and continue to acquire property in Downtown for land assembly as a way to incentivize development.	1	On-going	RD, PD		High	TOD Housing Program, New Markets Tax Credits, TI, PI	
Bring new attached housing projects to Downtown to expand the residential base and support commercial activity.	1	On-going	PD, RD		High	TOD Housing Program, TI, PI	
Attract additional anchor retailers to Downtown to attract new customers and drive traffic to existing and new smaller businesses; in particular, target an anchor specialty grocery store/deli to Downtown that will serve residents and visitors.	1	Mid-Term	RD	CD	High	TI, PI, Community Development Block Grant Special Economic Development Provision	Need 200-400 new residential units to support specialty grocery store; Retail Tenancing Strategy
Strengthen and expand entertainment and cultural offerings in Downtown, either through expansion of the Grove Theatre's capacity or by developing an additional venue.	2	Mid to Long-term	RD	CD	Medium to High	TI, Capital Fundraising Campaign, Community Development Block Grant Special Economic Development Provision	
Develop and foster a public art program and walking tours to preserve and communicate the historical significance of Downtown Upland.	2	Short to Mid-term	RD	Main Street	Low	TI, BID	
Provide support for the rehabilitation and adaptive reuse of the historic packing houses located in the Citrus Transportation District.	2	Mid-term	RD	CD	High	TI, PI	Depends on degree of TI – façade improvement program or full rehabilitation
Provide financial assistance to improve the appearance of storefronts and rear entrances of Downtown businesses.	2	On-going	RD	CD	Low to High, depending on number of improvements	Restaurant/Commercial Rehab/Façade Improvement Loan Program, Upland Town Center Community Rehab Program and Upland Town Center Construction Loan, Community Development Block Grant (CDBG) funds, New Markets Tax Credits, Rehabilitation Credit, Seismic Retrofit Property Tax Exclusion, TI	

Table 4.3: HDUSP High Priority Projects (continued)

	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Economic Development							
Develop & implement a comprehensive marketing strategy for Downtown that is strategic, multi-pronged and makes the most of existing resources.	2	Short-term	RD	CD, Main Street	Low	Caltrans Community-Based Transportation Planning Grant, SCAG Compass Blueprint Demonstration Project, BID	Part of tenancing strategy for new development
Develop and implement a retail tenancing program to identify and attract desirable retail tenants to the Downtown.	2	Mid-term	RD	Main Street	Low	Caltrans Community-Based Transportation Planning Grant, SCAG Compass Blueprint Demonstration Project, BID	
Expand support of rehabilitation, remodeling, and seismic retrofitting of Downtown structures that cannot accommodate contemporary retail formats and do not satisfy modern earthquake standards for construction.	1	On-going	RD	CD	Low to High, depending on number of rehabilitations	Restaurant/Commercial Rehab/Façade Improvement Loan Program, Upland Town Center Community Rehab Program and Upland Town Center Construction Loan, Community Development Block Grant (CDBG) funds, New Markets Tax Credits, Rehabilitation Credit, Seismic Retrofit Property Tax Exclusion, TI	
Support existing and new Downtown businesses through the Small Business Development Center and other business support services, such as a fast track land entitlement process, permitting and fee program.	1	On-going	SBDC	RD	Low	TI, BID	
Revitalize the Farmer's Market and strengthen the relationship between the Farmer's Market and Downtown businesses.	2	Short to Mid-term	RD	Main Street	Low	TI, BID	
Parking							
Create a parking monitoring system and perform regular monitoring of parking utilization to ensure that parking measures are implemented at the appropriate times and places in Downtown.	1	On-going	PW	RD	Medium to High	SCAG	Enforce existing time restrictions
Convert on-street parking to angled parking where right-of-way width permits and as parking is needed in Downtown.	1	On-going	PW		Medium	TI	
Provide parking through shared private and public parking opportunities, and lease privately-owned off-street parking spaces for public use when additional public parking is needed and private lots are underutilized.	2	On-going	CD	PW	Low	TI	e.g., if there is an evening demand for parking, City could lease private lot for public use

Table 4.3: HDUSP High Priority Projects (continued)

	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Parking (Continued)							
Construct new public parking structures in the following locations:							
Tier 1: South of Stowell Street between 1 st Avenue and 2 nd Avenue (3-story minimum parking garage: 254 additional parking spaces); South of A Street between Euclid Avenue and 1 st Avenue (3-story minimum parking garage: 94 additional parking spaces)	2	Mid to Long-term	PW	RD	High	SANBAG, TI, PI	
Tier 2: Southeast corner of 1 st Avenue and C Street (3-story parking garage: 109 additional parking spaces); Northwest corner of 3 rd Avenue and A Street (3-story parking garage: 94 additional parking spaces); Southeast corner of A Street and 6 th Avenue (surface lot: 84 additional parking spaces)	3	Long-term	PW	RD	High	TI, PI	
Tier 3: North of Stowell Street between 2 nd Avenue and Sultana Avenue (3-story minimum parking garage: 293 additional parking spaces); North of Stowell Street between Euclid Avenue and 2 nd Avenue (3-story minimum parking garage: 277 additional parking spaces)	3	Long-term	PW	RD	High	TI, PI	
Develop and implement a parking in-lieu fee program to allow the payments of a fee to the City in-lieu of providing required parking spaces.	1	On-going	CD		Low		
Restructure the Parking and Business Improvement District to meet long-term parking needs.	1	Short-term	PW	RD, CD	Low	TI, PI	
Public Realm							
Develop detailed plans for and complete a set of consistent public streetscape improvements for the following streets:							City Streetscape Plan
A Street, C Street, 1 st Avenue, 2 nd Avenue	1	Short-term	PW	RD	Medium	Transportation Enhancement Program	
Stowell Street, Sultana Avenue, 3 rd Avenue	1	Short to mid-term	PW	RD	Medium	Transportation Enhancement Program	
4 th Avenue, 5 th Avenue, 6 th Avenue, Campus Avenue, Arrow Highway	2	Mid-term	PW	RD	Medium	Transportation Enhancement Program	
Replace or resurface existing brick planters in street medians within the Old Town District to complement streetscape improvements.	2	Mid-term	PW	RD	Low	N/A	
Work with Omnitrans to provide direct bus or shuttle service to the Upland Metrolink Station.	2	Mid-term	PW	CD	Low		
Develop a signage and public art program to mark significant landmarks, highlight important gateways into Downtown and direct visitors throughout the various Downtown Districts.	2	On-going	CD	RD	Low	TI, PI	Coordinate with public parking sign program; re-assess wayfinding signage.
Establish a maintenance program for sidewalks and monitor sidewalk paving.	2	On-going	PW	RD	Low	N/A	

Table 4.3: HDUSP High Priority Projects (continued)

	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Public Realm (continued)							
Install signage at the locations identified in the signage program that is consistent with the standards and guidelines set forth in Chapter 5, the Development Code.	2	Mid to Long-term	CD	PW,RD	Low		
Improve sidewalks in the following areas where paving is uneven, damaged, or inaccessible for all users:							
Arrow Highway from Euclid Avenue to Campus Avenue, 3 rd Avenue from Arrow Highway to 9 th Street, 6 th Avenue from Arrow Highway to 9 th Street, Campus Avenue from Arrow Highway to 9 th Street	1	Short to Mid-term	PW	RD	Medium	Highway Safety Improvement Program, Transportation Enhancement Program	
Construct new sidewalks in the following areas where sidewalks are currently missing on one or two sides of the street:							
Stowell Street from Euclid Avenue to Sultana Avenue, A Street from 3 rd Avenue to 4 th Avenue, A Street from 6 th Avenue to Campus Avenue, 1 st Avenue from 8 th Street to Stowell Street, 2 nd Avenue from Stowell Street to the Metrolink tracks, 3 rd Avenue from 8 th Street to Stowell Street, Sultana Avenue north of Stowell Street, 4 th Avenue from A Street to 9 th Street, 5 th Avenue south of 9 th Street, 6 th Avenue north of A Street	2	Mid-term	PW	RD	Medium	Highway Safety Improvement Program, Transportation Enhancement Program	
Install mid-block crossing treatments for the crossing of the Pacific Electric Trail at Euclid Avenue.	2	Mid-term	PW	RD	Low	Bicycle Transportation Account, Highway Safety Improvement Program, Transportation Enhancement Program	Bike and Pedestrian Master Plan
Construct a pedestrian and bicycle overpass, between the Residential Transit District south of the railroad tracks and the Citrus Transportation District north of the tracks, at 4 th Avenue.	3	Long-term	PW	RD	High	Bicycle Transportation Account, Highway Safety Improvement Program, Transportation Enhancement Program	
Make improvements to the Pacific Electric Trail, including planting shade trees and native landscaping, installing benches and drinking fountains, and making safe connections to adjacent neighborhoods.	1	Short-term	RCS	PW,RD	Low	Housing Related Parks Program, Land and Water Conservation Fund, Bicycle Transportation Account, Highway Safety Improvement Program, Transportation Enhancement Program	Bike and Pedestrian Master Plan

Table 4.3: HDUSP High Priority Projects (continued)

	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Public Realm (continued)							
Construct the following additional bicycle facilities consistent with the Pedestrian and Bicycle Facilities Master Plan:							
Extend Class II/III Euclid Bicycle Route south to city limits and connect northern and southern portions of route between Arrow Highway and Foothill Boulevard	2	Mid-term	PW		Medium	Bicycle Transportation Account, Highway Safety Improvement Program, Transportation Enhancement Program	
Extend Class II/III Campus Avenue bicycle route south to City limit and north through City	2	Mid-term	PW		Medium	Bicycle Transportation Account, Highway Safety Improvement Program, Transportation Enhancement Program	
Add Class II/III bicycle route along Arrow Highway through City	2	Mid-term	PW		Low	Bicycle Transportation Account, Highway Safety Improvement Program, Transportation Enhancement Program	
Develop a "Green Alleys" Program and retrofit public alleys throughout Downtown using such elements as pervious paving materials, potted plants and trees, park benches, lighting, allowances for outdoor café seating, and other amenities. Prioritize the following public alleys:						Transportation Enhancement Program	Consider pilot project to retrofit one alley and see how successful it is; Issue of theft and taking pedestrians off of primary streets
Alley between 1 st Avenue and 2 nd Avenue	2	Mid-term	PW	RD	Medium		
Alley between 2 nd Avenue and 3 rd Avenue	2	Mid-term	PW	RD	Medium		
Build a public park on the southeast corner of 3 rd Avenue and 9 th Street	2	Mid-term	RCS	PW, RD	High	Housing Related Parks Program, TI, PI	City-owned lot
Build a public plaza on the corner of 2 nd Avenue and Stowell Street that celebrates the citrus heritage of Upland.	3	Long-term	PW	CD, RD	High	TI, PI	Privately owned public space
Develop and implement an open space in-lieu fee program to allow the payments of a fee to the City in-lieu of providing required open space.	2	Short-term	CD		Low		
Public Facilities and Infrastructure							
Water							
Install an 8-inch water line connecting existing water lines on both sides of Euclid Avenue and F Street.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	

Table 4.3: HDUSP High Priority Projects (continued)

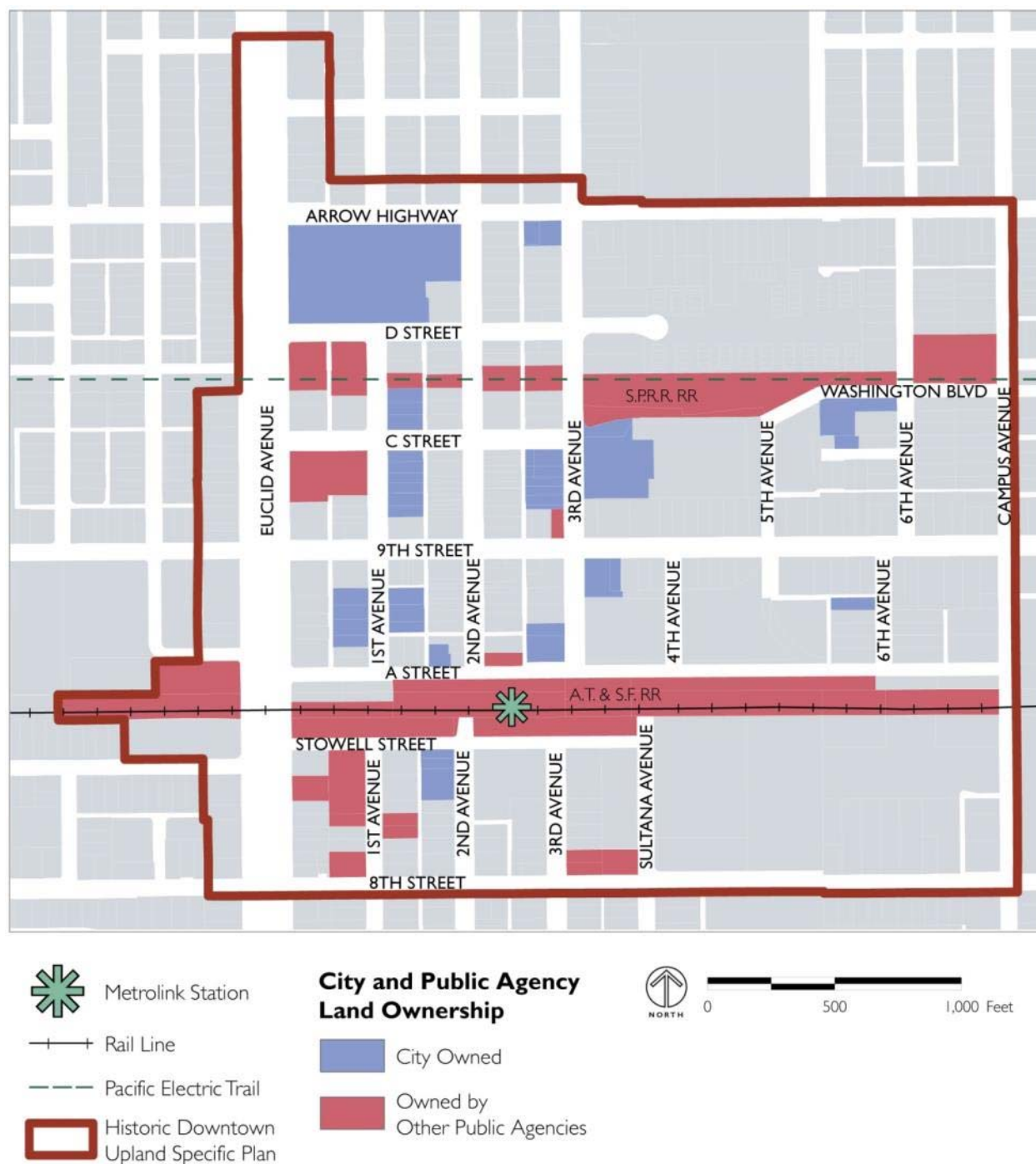
	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Public Facilities and Infrastructure (continued)							
Water (continued)							
Upgrade the existing 3-inch water line to a 6-inch water line at Euclid Avenue and G Street.	1	Short to Mid-term	PW		Medium	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Install an 8-inch water line to eliminate the dead end at Campus Avenue and 8 th Street.	1	Short to Mid-term	PW		Medium	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Upgrade the 6-inch water line to an 8-inch water line at Euclid Avenue and Euclid Place.	2	Long-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Install a new 14-inch water line on 9 th Street parallel to the existing 6-inch line, from Campus Avenue to 10 th Avenue.	2	Long-term	PW		Medium	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Connect the new 14-inch water line with the existing 6-inch water line at 9 th Avenue and 9 th Street.	2	Long-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Sewer							
Construct a 12-inch parallel sewer line along the alley west of Campus Avenue between Highland and 7 th Streets.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 12-inch parallel sewer line along 7 th Street between the alley west of Campus Avenue and Campus Avenue.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 10-inch parallel sewer line along 7 th Street between the alley west of Sultana Avenue and Sultana Avenue.	1	Short to Mid-term	PW		Medium	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 10-inch parallel sewer line along 9 th Street between 6 th and Campus Avenues.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	

Table 4.3: HDUSP High Priority Projects (continued)

	Priority	Timeframe	Lead Entity	Support	Magnitude of Cost	Financial Resources	Comments
Sewer (continued)							
Construct a 10-inch parallel sewer line along Campus Avenue between 9 th Street and the first manhole south of 9 th Street.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 10-inch parallel sewer line along the alley west of Euclid Avenue between the manhole north of 9 th Street to A Street.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 10-inch parallel sewer line along Arrow Highway between 5 th and 6 th Avenues.	1	Short to Mid-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 10-inch parallel sewer line along 6 th Avenue between Arrow Highway and 9 th Street.	1	Short to Mid-term	PW		Medium	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	
Construct a 10-inch parallel sewer line along the alley west of Euclid Avenue between Arrow Highway and 9 th Street.	2	Mid to Long-term	PW		Low	TOD Housing Program, Infill Infrastructure Grant Program, Infrastructure State Revolving Fund Program	

Source: HDUSP Table 9-1, page 9-13, 2011

Figure 4.17: HDUSP City and Public Agency Land Ownership



Source: HDUSP Figure 9-1, Page 9-18, 2011

Parking Monitoring and Strategies

The City's parking strategies states "Developers considering new projects, whether residential or non-residential, must be given the right incentives to assist in better parking management. Currently, parking requirements for

business owners in the Historic Core are waived if they pay a fee. Given the need to stimulate businesses there, and the amount of parking currently available, this waiver should continue.

Developers creating new built space, however, should be given different incentives – incentives designed to minimize the amount of onsite parking required, lower development costs, and raise funds for the parking garages.” and “Nonresidential developers should be given more powerful incentives to participate in pooled parking rather than provide parking onsite.” The implementing entities can work together to define incentives that mutually support this strategy. Creative opportunities to incorporate transit facilities and services as replacements for vehicle access and parking demands could be explored by the implementing entities to fulfil this strategy.

Public Realm Improvement Strategies

One strategy is to *“Implement consistent public streetscape improvements throughout Downtown.”* However, visual quality of properties facing the rail corridor is not addressed. During Project development phase, the implementing entities can explore solutions for the Project, but a more comprehensive Citywide approach to creating an attractive ‘front door’ to the City of Upland by standards like the aforementioned Pacific Electric Trail standards in the HDUSP could be beneficial to the City.

Another strategy is to *“Work with Omnitrans to provide direct bus and shuttle service to the Upland Metrolink Station.”* The implementing entities will consult with Omnitrans as part of the Project scope to address this strategy.

The strategy to *“Improve pedestrian and bicycle facilities to ensure safer travel throughout Downtown”* can greatly help reduce transit and development parking demand and vehicular traffic. Although not specifically associated with the Project, City expansion of the density and quality of pedestrian and bike facilities to fully radiate in all directions from the transit station would have a positive impact for the TOD area and further implementation of this strategy.

Public Facilities and Infrastructure

The strategy states that *“Individual developments will be responsible for mitigating their impacts on public facilities, including making fair-share contributions to mitigating system impacts, where applicable”* But does not indicate how this is implemented. The City should define what public facilities impacts and mitigation strategies would be applicable to the Project. The implementing entities should work together to responsibly address, but minimize the costs of mitigation so as to promote Project feasibility and the potential for implementation.

Financing Strategies

The strategy notes that *“The City is fortunate to have considerable RDA tax-increment funds, but these funds are unpredictable both because of the market and ever-changing State financing formulas. Thus, implementation of the Downtown Specific Plan will require not only traditional RDA funding, but a variety of additional external funding sources and possibly some local funding sources as well.”* With the elimination of RDA tax-increment funds, alternative City funds and City partnerships with external funding sources and property owners becomes more critical. The Project provides an opportunity to develop a partnership between the City and SANBAG to create feasibility and funding for the Project. This is reflective of the City's tactic to *“Develop an opportunistic strategy to finance projects and programs that take advantage of new funding sources as they become available in order to accomplish the priorities identified in the Implementation Matrix.” (Table 4.4).*

Table 4.4: HDUSP Recommended Implementation and Funding Matrix

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
New Housing					
TOD Housing Program	CA Department Housing and Community Development	Under the TOD Housing Program, low-interest loans are available as gap financing for rental housing developments that include affordable units, and as mortgage assistance for homeownership developments. In addition, grants are available to cities, counties and transit agencies for infrastructure improvements necessary for the development of specified housing developments, or to facilitate connections between these developments and the transit station.	\$300 million	Maximum Program loan or grant, or combination of the two, for a single Housing Development or for a single housing developer applicant, including any affiliates of such applicant, shall be limited to \$17 million per funding round. The total maximum amount of Program assistance for applications based on a single Qualifying Transit Station and all awards of Program funds over the life of the Program shall be \$50 million.	Cities, counties, transit agencies, developers and redevelopment agencies.
Public Realm					
Housing Related Parks Program	CA Department of Housing and Community Development	The Housing Related Parks Program is intended to increase the overall supply of housing affordable to lower income households by providing financial incentives to cities and counties with documented housing starts for newly constructed units affordable to very low or low-income households. The incentives can be used for the creation of new park and recreation facilities or improvement of existing park and recreation facilities.		Grant amounts are based on the numbers of bedrooms in newly constructed rental and ownership units restricted for very low and low-income households for which there is documentation of a completed foundation inspection during the designated 12- month period covered by the Notice of Funding Availability. Qualifying rental units must be rent-restricted for at least 55 years. Ownership units must be initially sold to qualifying households at affordable cost. Any public funds used to achieve affordability in ownership units must be recovered on resale and reused for affordable housing for at least 20 years. Grants for very low income units will be greater than grants for low-income units. Bonus grant funds will be awarded for projects with specific characteristics, such as infill projects and those serving disadvantaged communities, among others.	Cities and counties that, by the end of the 12- month period for which application is made, have adopted housing elements that HCD has found to be in substantial compliance with housing element law, and have submitted to HCD the annual progress report required by Section 65400 of the Government Code within the preceding 12 months. A city, county, or city and county that receive funds may subcontract through a recreation and park district or nonprofit organization that has among its purposes the conservation of natural or cultural resources.

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Public Realm (continued)					
Infill Infrastructure Grant Program	CA Department of Housing and Community Development	The Infill Infrastructure Grant Program assists in the new construction and rehabilitation of infrastructure that supports higher-density affordable and mixed-income housing in locations designated as infill. New construction, rehabilitation, and acquisition of infrastructure required as a condition of or approved in connection with approval of Qualifying Infill Projects or Qualifying Infill Areas.	\$197 million; funded by the CA HUD from Proposition 1C	Minimum/Maximum grant amounts for Qualifying Infill Projects: \$500,000/\$20 million (\$250,000 minimum for Rural Areas). Grant calculation based on number of units, bedroom size, affordability, and density. Minimum/Maximum grant amounts for Qualifying Infill Areas (and Large Multi-phased Qualifying Infill Projects scored as Areas): \$2 million/\$30 million (\$1 million minimum for Rural Areas). See: www.hcd.ca.gov/fa/iig/NOFA_Application_Presentation.ppt	For Qualifying Infill Projects and Large Multi-phased Qualifying Infill Projects. Eligible applicants include non-profit and for profit developers and as a joint applicant with the developer, a locality, public housing authority, or a redevelopment agency. For Qualifying Infill Areas, eligible applicants include localities, public housing authorities, redevelopment agencies, and BIDs as joint applicants with any of the other allowed Area applicants.
Land and Water Conservation Fund	CA Department of Parks and Recreation	The Land and Water Conservation Fund program provides funds to federal agencies and states. The money allocated to the states may be used for statewide planning, and for acquiring and developing outdoor recreation areas and facilities. The program, which is administered nationally by the National Park Service was established in September 1964, initially authorized for a 25-year period, and has been extended for another 25 years, to January 2015.	\$184 million for the first competitive round; 60% for southern California and 40% for northern California.	The Match is, at a minimum, one Applicant dollar to one federal dollar for all LWCF grants. However, any additional funds used to complete the project are also considered Match. This is a reimbursement program. The Grantee is expected to finance the entire Project. Up to 50 percent of the actual project expenditures, not to exceed the Grant amount, will be refunded when the Project has been completed. For local agencies, funds are provided through a competitive selection process. Grants for local agencies are divided: 60 percent for southern California and 40 percent for northern California. State agency allocations are distributed under the established program formula.	Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation areas. State agencies as defined under the program.

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Public Realm (continued)					
Bicycle Transportation Account (BTA)	Caltrans	BTA provides State funds for city and county projects that improve safety and convenience for bicycle commuters.		To be eligible for BTA funds, a city or county must prepare and adopt a Bicycle Transportation Plan (BTP) that complies with Streets and Highways Code Section 891.2 and is approved by the appropriate Metropolitan Planning Organization (MPO) or Regional Transportation Planning Agency (RTPA) and the Caltrans Bicycle Facilities Unit.	Cities, counties
Highway Safety Improvement Program (HSIP)	Caltrans	HSIP funds are eligible for work on any publicly-owned roadway or bicycle/pedestrian pathway or trail that corrects or improves the safety for its users.	The amount of federal safety funds available in the 2009/10 FFY is expected to be approximately \$50 million.	The maximum federal reimbursement ratio for all HSIP projects is 90 percent. The maximum federal reimbursement amount for any single HSIP project is \$900,000. All project expenses that exceed the \$900,000 maximum federal reimbursement amount will be the responsibility of the project sponsor and will not be eligible for reimbursement. Projects should not require the acquisition of significant rights of way (not more than 10 percent of the construction cost), nor should they require extensive environmental review and mitigation.	The applicant must be a city or a county within the State of California. Exceptions to this requirement will be reviewed by the Department of Transportation (Caltrans), Headquarters - Division of Local Assistance (HQ-DLA) on a case-by-case basis.
Transportation Enhancement Program	Caltrans	The Transportation Enhancement Program helps expand transportation choices and enhance transportation through twelve eligible transportation enhancement surface transportation activities, including pedestrian and bicycle infrastructure and safety programs, landscaping beautification, historic preservation, and environmental mitigation. Transportation enhancement activities are a means of more creatively and sensitively integrating surface transportation facilities into their surrounding communities. What distinguishes transportation enhancement activities from other worthwhile "quality-of-life" and environmental activities are their potential to create a transportation experience that is more than merely adequate. At the same time they may protect the environment and provide a more aesthetic, pleasant and improved interface between the transportation system for the communities and people adjacent to transportation facilities.	California receives about \$75 million per year. A local or State funding share is required in each reimbursed phase of work.	This list is exclusive. Only these activities are eligible to be accounted for as Transportation Enhancement activities. They are: 1. Provision of facilities for pedestrians and bicycles; 2. Provision of safety and educational activities for pedestrians and bicyclists; 3. Acquisition of scenic easements and scenic or historic sites; 4. Scenic or historic highway programs (including the provision of tourist and welcome center facilities); 5. Landscaping and other scenic beautification; 6. Historic preservation; 7. Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals); 8. Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails); 9. Control and removal of outdoor advertising; 10. Archaeological planning and research; 11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat	Regional Transportation Planning Agencies and Caltrans Department districts. These are programmed into the Interregional Transportation Improvement Program (ITIP) and also become part of the STIP. Projects must meet the criteria for statewide significance to be considered for the ITIP.

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Public Realm (continued)					
Measure I	San Bernardino County	Measure I is the half-cent sales tax collected throughout San Bernardino County for transportation improvements. San Bernardino County voters first approved the measure in November 1989 to ensure that needed transportation projects were implemented countywide through 2010. In 2004, San Bernardino County voters overwhelmingly approved the extension of the Measure I sales tax through 2040.	Anticipate \$6,178 million of tax revenue and state/federal funds, with \$4,520 million from tax revenue For the San Bernardino Valley SUBAREA	Funds are distributed as follows: 29% Freeway Projects; 11% Freeway Interchange Projects; 20% Major Street Projects; 20% Local Street Projects; 8% Metrolink/ Rail Service; 2% Express Bus; 8% Senior and Disabled Transit Service; 2% Traffic Management.	San Bernardino County Jurisdictions
Rehabilitation and Redevelopment					
New Markets Tax Credits (NMTC)	HUD	The NMTC Program permits taxpayers to receive a credit against Federal income taxes for making qualified equity investments in designated Community Development Entities (CDEs). The federal subsidy goes to qualifying projects in the form of below-market interest rates and more flexible loan terms like longer amortizations and higher loan-to-value ratios.		Substantially all of the qualified equity investment must in turn be used by the CDE to provide investments in low-income communities. Throughout the life of the NMTC Program, the Fund is authorized to allocate to CDEs the authority to issue to their investors up to the aggregate amount of \$23 billion in equity as to which NMTCs can be claimed.	An organization wishing to receive awards under the NMTC Program must be certified as a CDE by the Fund. To qualify as a CDE, an organization must: be a domestic corporation or partnership at the time of the certification application; demonstrate a primary a mission of serving, or providing investment capital for, low-income communities or low-income persons; and maintain accountability to residents of low-income communities through representation on a governing board of or advisory board to the entity.

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Rehabilitation and Redevelopment (continued)					
Rehabilitation Credit	HUD	The Rehabilitation Credit applies to costs incurred for rehabilitation and reconstruction of residential buildings. Rehabilitation includes renovation, restoration and reconstruction. It does not include enlargement or new construction. Generally, the percentage of costs you can take as a credit is: 10% for buildings placed in service before 1936 and 20% for certified historic structures.		The rehabilitation tax credit is not allowed for expenditures with respect to property that is considered to be tax exempt use property. Business tax credits generally may not exceed the excess of the taxpayer's income tax liability over the tentative minimum tax (or, if greater, 25 percent of the regular tax liability in excess of \$25,000). Thus, business tax credits cannot offset the alternative minimum tax liability. For qualified rehabilitation credits determined under Internal Revenue Code Section 47 attributable to qualified rehabilitation expenses properly taken into account for periods after December 31, 2007, the tentative minimum tax is treated as being zero with respect to the rehabilitation tax credit. Thus, a taxpayer may use the rehabilitation tax credit to offset his regular tax liability.	The rehabilitation tax credit is available to the person(s) and/or the entity who holds title to the property being rehabilitated.
Seismic Retrofit Property Tax Exclusion	State of California, County of San Bernardino	The Seismic Retrofit Property Tax Exclusion allows for a 15-year exclusion of costs of seismic retrofit in property tax reassessments. This must be coordinated with the local building department to determine the seismic retrofit work involved in the project and the value of that work. The County Tax Assessor must be notified within 30 days of completion of the project.		California Proposition 13, the Seismic Retrofitting Amendment, is on the June 8, 2010 ballot in California. If approved, it will prohibit tax assessors from re-evaluating new construction for property tax purposes when the point of the new construction is to seismically retrofit an existing building.	The tax exclusion is available to the person(s) and/or the entity who holds title to the property being retrofitted.
Economic Development					
Economic Development Initiative (EDI) Grant	HUD	EDI provides grants to local governments to enhance both the security of loans guaranteed through the Section 108 Loan Program and the feasibility of the economic development and revitalization projects they finance. The grants make projects more feasible by paying some of the project costs with grant funds or by reducing the interest rate to be paid from a revolving loan fund.		Competitive EDI grant funds can only be used in projects also assisted by the Section 108 Loan Program. Such projects may involve activities such as property acquisition, rehabilitation of publicly owned property, housing rehabilitation, economic development activities, acquisition, construction, reconstruction or installation of public facilities, and for colonias, public works and other site improvements.	Public entities

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Economic Development (continued)					
Community Development Block Grant (CDBG) Special Economic Development Provision	HUD	CDBG funds may be used to provide affordable housing, services and jobs for the most vulnerable in our communities. The 24 C.F.R. 570.203 statute establishes the Special Economic Development Initiative and allows for CDBG funding to apply to economic development projects. The cities of Covina, Alameda and Claremont have begun giving businesses economic incentives by providing no interest or forgivable loans. Nationally, funding for the CDBG program reaches \$1 billion.	\$1 billion	Not less than 70 percent of CDBG funds must be used for activities that benefit low- and moderate-income persons. In addition, each activity must meet one of the following objectives: benefit low- and moderate-income persons, prevention or elimination of slums or blight, or address community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community for which other funding is not available.	States and local jurisdictions
Entertainment/Cultural Arts Venue					
501(c)(3) Revenue Bond Program	CA Infrastructure and Economic Development Bank	501(c)(3) revenue bonds are a low-cost, tax-exempt financing resource for capital improvement projects of qualified nonprofit corporations. In order for a nonprofit corporation to access tax- exempt financing, it must have received a determination letter from the Internal Revenue Service stating that it qualifies as an organization as defined under Section 501(c)(3) of the Internal Revenue Code.	No limit	501(c)(3) revenue bond proceeds may be used for the following purposes: capital expenditures, refinancing prior debt (under certain circumstances), reimbursing prior expenditures (under certain conditions), (limited) working capital, costs of issuance, capitalized interest and debt service reserve funds. The proceeds of 501(c)(3) revenue bonds must create public benefits in the community where the project is located by enhancing the economic, social, or cultural quality of life for local residents. The project must be located in California and be consistent with any existing local or regional comprehensive plan.	501(c)(3) nonprofit corporations that have a recreational, research, community, educational, cultural or social welfare purpose
Planning and Technical Assistance					
Caltrans Community-Based Transportation Planning (CBTP) Grant	Caltrans State Highway Account	The Community-Based Transportation Planning (CBTP) grant program funds coordinated transportation and land use planning projects that encourage community involvement and partnership. Projects must support livable/sustainable community concepts with a transportation or mobility objective, and promote community identity and quality of life.	\$3 Million budget, \$300,000 grant cap	Funding for each project requires a minimum ten percent local match. One-quarter of the local match may include in-kind services. Local match funds cannot be state or federal, or money that has already been earmarked for other programs or projects. Upland could apply for a grant to fund an economic development study or plan for Downtown businesses, so long as the Metrolink (and potential Gold Line Extension Station) are incorporated into the study.	Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Agencies (RTPAs), cities, counties, transit agencies, and federally recognized Native American Tribal Governments may apply for this grant program directly as an applicant or as a sub-recipient to a lead applicant.

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Planning and Technical Assistance (continued)					
SCAG Compass Blueprint Demonstration Project	SCAG	SCAG Demonstration project recipients receive a combination of technical assistance, financial assistance, outside consulting services and SCAG staff time. Demonstration Projects include a wide range of planning efforts, including land use planning and design, market feasibility analysis, transportation and parking, sustainability services, visualization and outreach and community engagement. In the case of Upland, the Compass Blueprint consulting services might be used for a detailed market and feasibility analysis of the catalytic projects proposed for the Downtown, a more detailed set of economic development strategies for the Downtown, or a study to determine the optimal location/design of a new shared parking structure for Downtown.		Selection and assistance is based on several evaluation criteria, including: The project's integration of land use and transportation planning and efficiency of infrastructure use; mix of housing densities and types, including affordable housing; the project's inclusion of emerging fields of sustainability such as carbon footprint modeling, climate change mitigation, storm water management, green building, etc.; cooperation with other local governments and transportation commissions; coordination with project stakeholders through an existing or planned advisory group; development planned within or adjacent to existing developed or underutilized areas, with conservation of open space and agricultural lands; location within a 2% Strategy Growth Opportunity Area.	Cities, counties, subregions and Councils of Governments (COGs) and County Transportation Commissions (CTCs) are eligible to apply. Non-governmental organizations may apply in partnership with a local jurisdiction or public agency.
Financing					
Section 108 Loan Guarantee	HUD	The Section 108 Loan Guarantee program provides loans to local governments to finance economic development, housing rehabilitation, public facilities and large-scale physical development projects, with CDBG monies as the source of repayment. Cities can leverage some of their annual CDBG allocation into a larger loan that can finance the proposed infrastructure improvements.		If loan guarantee commitments have been issued in any fiscal year in an aggregate amount equal to 50 percent of the amount approved in an appropriation act for that fiscal year, HUD may limit the amount of commitments any one public entity may receive during such fiscal year.	Public entities

Table 4.4: HDUSP Recommended Implementation and Funding Matrix (continued)

Name	Funding Agency	Description / Objective	Funding Available	Funding Terms	Who Qualifies
Financing (continued)					
Infrastructure State Revolving Fund (ISRF) Program	CA Infrastructure and Economic Development Bank	The ISRF Program provides low-cost financing to public agencies for a wide variety of infrastructure projects. Preliminary applications are continuously accepted. Eligible project categories include city streets, county highways, state highways, drainage, water supply and flood control, educational facilities, environmental mitigation measures, parks and recreational facilities, port facilities, public transit, sewage collection and treatment, solid waste collection and disposal, water treatment and distribution, defense conversion, public safety facilities, and power and communications facilities.	Loans range from \$250,000 to \$10 million; \$20 million per jurisdiction per fiscal year	Subsidized interest rate with up to 30 year financing.	Cities, counties, redevelopment agencies, special districts, assessment districts, joint powers authorities and non-profit corporations formed on behalf of a local government.
Public Agency Revenue Bond Program	CA Infrastructure and Economic Development Bank	The Public Agency Revenue Bond Program is a conduit tax-exempt and taxable bond financing to expand unique programs of specific state and local governmental agencies	No limit	Variable rate demand bonds or fixed rate bonds with terms set by bond borrower and market.	State departments and divisions, and local jurisdictions

Source: HDUSP Table 9-2, Page 9-33, 2011

The strategy indicates “*The Implementation Matrix provides a general magnitude of cost and possible funding/financing source for each action item.*” And states that “*In this era of diminished local government revenue, one thing is clear: planning and plan implementation at the local level will rely more than ever on regional, State, and federal revenue sources.*” However the same factors that are diminishing local government revenue are also affecting State and federal revenue sources. Federal, State and regional funding is becoming increasingly competitive and typically successfully funded projects are only the most feasible ‘risk-free’ projects that provide significant public benefits and that have already secured some other funding resources. It is therefore important for the implementing entities to work together and try to reduce Project costs to improve feasibility, attract private sector investment, and to coordinate and leverage collaborative funding resources and public benefits. The City may want to update the Implementation Matrix (see **Table 4.4**) to include additional TOD funding and cost saving tools mentioned in the various federal, state and regional along with those presented in **Chapter 8**.

4.3 Review of Upland Zoning Code

The HDUSP is basically the zoning code for Project properties. During Project development phase, the implementing entities should confirm with the City of Upland staff that this is the case and identify, document, and work through any relevant City zoning code requirements applicable to the Project.

4.4 Document Current Land Use Plans

Section 4.1 documented some current land use plans and studies that could be factored during the Project development phase as appropriate. Other plans, particularly from the private sector and surrounding properties may be identified during Project development.

4.5 Areas of Project Related Refinement

Project refinements will factor into the information the implementing entities gain during Project development. Key factors will include conceptual future rail corridor requirements based on planned future rail services and traffic and potential bus service interconnection facilities with rail service. The three conceptual land use alternatives presented in **Chapter 5** can have significant impacts on lot, access and building configurations, and the various city development standards that can discreetly apply to different conceptual configurations.

4.6 Potential Planning and Policy Issues Relative to the Project

As mentioned in **Section 4.2**, some of the larger possible planning and policy issues requiring Project discussion and possible inclusion into the General Plan or HDUSP include:

- Future rail corridor ROW and configuration needs: The General Plan and HDUSP updates could incorporate the Project’s rail corridor ROW and configuration concepts and background information on Federal and regional rail corridor policy and standards. This would better inform Citizens and Developers about the rail corridor and promote integration and coordination with the City of Upland planning documents.
- Rail corridor noise planning and funding: As mentioned above, the Federal laws relative to rail noise planning and funding would help inform an overall City planning approach to rail corridor noise issues.
- Potential future rail transit services: Incorporation of SCAG, and SANBAG projections, plans and policies relative to future regional rail transit service and infrastructure investments would be helpful in informing the City’s General Plan and as appropriate the HDUSP on opportunities for the City to maximize the benefits of the Metrolink and other potential rail transit services for Upland residents and businesses.
- Potential future bus and rail transit interconnection routes, services, and facilities: Part of the Project scope is dialog with Omnitrans regarding improved bus service and ridership feeding to/from the Metrolink Station. The results of the dialog could be incorporated into City circulation and land use planning. Well-conceived and interconnected rail/bus transit can enhance ridership convenience and

expand use of the overall transit network. Expanded transit use can help reduce roadway congestion and promote clustering of land uses around transit stations.

- The City's loss of Redevelopment Project authority and funding: The current situation at the State level regarding Redevelopment and TIF could help define alternative funding approaches for HDUSP implementation. Some discussions at the State legislative level have looked at using TIF for transit served infill development districts due to the environmental, social and infrastructure cost savings of infill development investing in these areas. City incorporation of these possible State policy discussions/directions could be helpful in setting the stage for possible future State TIF or other redevelopment supportive alternatives. As mentioned, adopting the HDUSP as a Transit Village under State planning law may be helpful in positioning the HDUSP for these possible future opportunities.
- City pedestrian and bike infrastructure funding: Critical for the City to maximize the benefit of transit service is to have a safe, attractive, and well identified bike and pedestrian network to promote as much walking and biking to/from the transit station as possible. A well-funded plan to achieve such a network can support surrounding residents and businesses and help promote transit as well as non-motorized uses.
- Mutual cost savings and increased benefits by City and SANBAG coordination of effort: An ancillary benefit of the Project is the opportunity for the implementing entities to identify and coordinate actions that could provide mutually beneficial costs savings to help with Project feasibility and advance the City's vision for Historic Downtown Upland.
- Entitled concept land use approvals for both SANBAG properties and QZ infrastructure: Risk and unknowns add to project costs and sometimes have the effect of not pursuing a project. Opportunities to take the outcomes of the Project and provide entitlement or conceptual design approval could be helpful in reducing developer and implementation risk.

Along with aforementioned issues embodied throughout this memorandum, some potential additional issues may include:

- Land swaps between City and SANBAG with base entitlements,
- Threshold ROI for SANBAG to proceed to RFP on the Project,
- Opportunities for SANBAG and/or the City to partner with surrounding property owners on the Project or other coordinated project(s),
- Other potential City and SANBAG incentives,
- Unforeseen changes to the regional rail corridor, and
- And other unforeseen issues at this time.

Chapter 5 - Project Alternatives

Based on the understanding of the City's planning documents, three land use alternatives were developed by the study team in consultation with the PDT. The land use alternatives accounted for future growth at the Upland station due to future expansion of the SB Line, on which the Upland Metrolink Station is located.

5.1 Impacts of Gold Line Extension

At the onset of determining the land use alternatives, a feasibility analysis of adding two Metrolink tracks and continuing the future Gold Line alignment was conducted. The two additional Metrolink tracks would provide for separate tracks to carry the eastbound Metrolink trains and a pass through track for express and freight trains. The existing track would carry the westbound trains. During the course of the study however, it was determined that one additional rail track through the Upland Station would be adequate to accommodate Metrolink service expansion planned through this station.

Current Gold Line plans extend the light rail system from its existing terminus at Azusa to Montclair. Passenger service on the segment between Pasadena and Azusa began in March 2016. The section of Azusa and Montclair is in the advanced conceptual engineering phase and is anticipated to be constructed when funds for this segment are secured. In the future, there may be plans of extending the system to serve the Ontario International Airport. In 2014, SANBAG completed the Ontario Airport Rail Access Study (OARAS), which developed and analyzed alternatives for rail transit services, similar to Metrolink and the Metro Gold Line, to connect Ontario Airport terminals with the regional rail system. According to the OARAS, if Gold Line is to be extended, the ridership share would roughly be 5% from San Bernardino County and remaining 95% from Los Angeles County. On the other hand, if a connection similar to Metrolink is selected, the ridership split between San Bernardino County and Los Angeles County would be 80% and 20%, respectively.

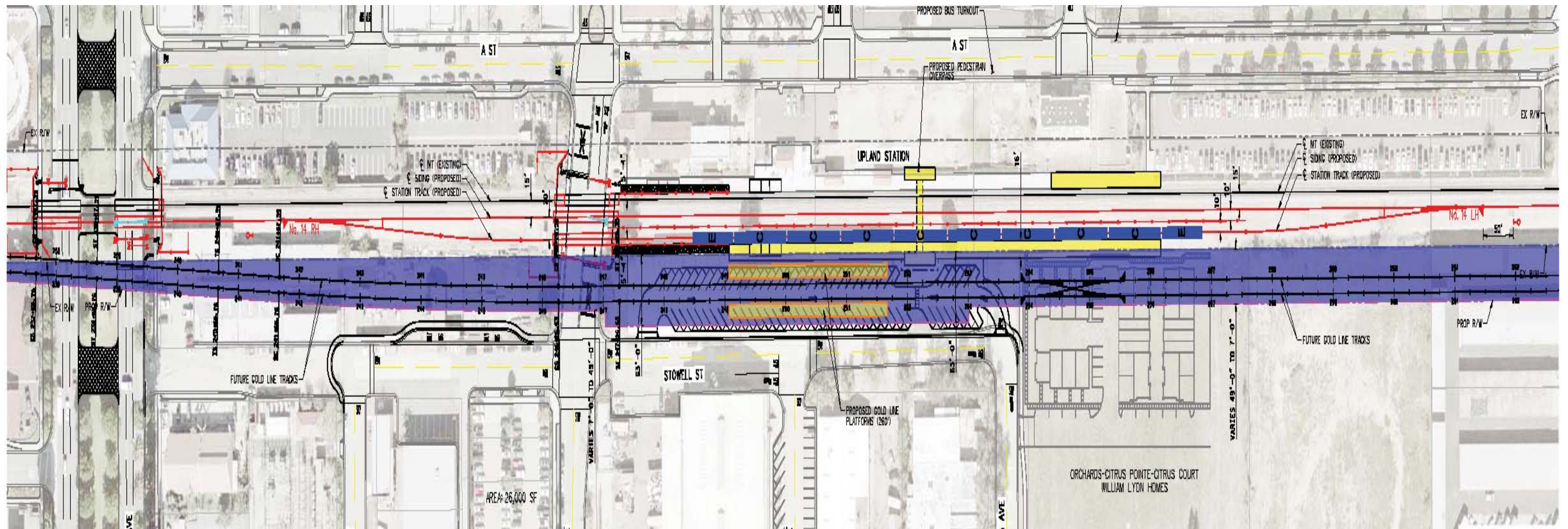
This study examined the impacts of carrying the Gold Line through the Upland Station. For the light rail to serve the airport from its planned terminus at Montclair, it is necessary for the Gold Line tracks to cross over the Metrolink tracks to continue southward towards the airport, possibly along the Cucamonga Channel. The Gold Line tracks could either cross the Metrolink tracks west of, or east of the Upland Station, thereby, keeping the Gold Line tracks south of, or north of the Metrolink tracks, respectively, at the Upland Station. The following **Figures 5.1** and **5.2** show the impact of Gold Line extension through the Upland Station.

The figures present the most conservative approach of accounting for three Metrolink tracks through the station as well, even though for the land use alternatives, only two Metrolink tracks were considered. The exhibits show that there is a significant ROW impact either in the downtown area if the Gold Line tracks are on the north side of the Metrolink tracks, or should the Gold Line tracks be on the south side of the Metrolink tracks, both SANBAG properties have to be taken.

At the request of SANBAG Commuter Rail and Transit Committee, the consultant team conducted several sensitivity analyses to evaluate the impacts of double tracking Metrolink and Gold Line passing through the Upland Station and connecting to the Ontario Airport. The analyses studied in particular the following:

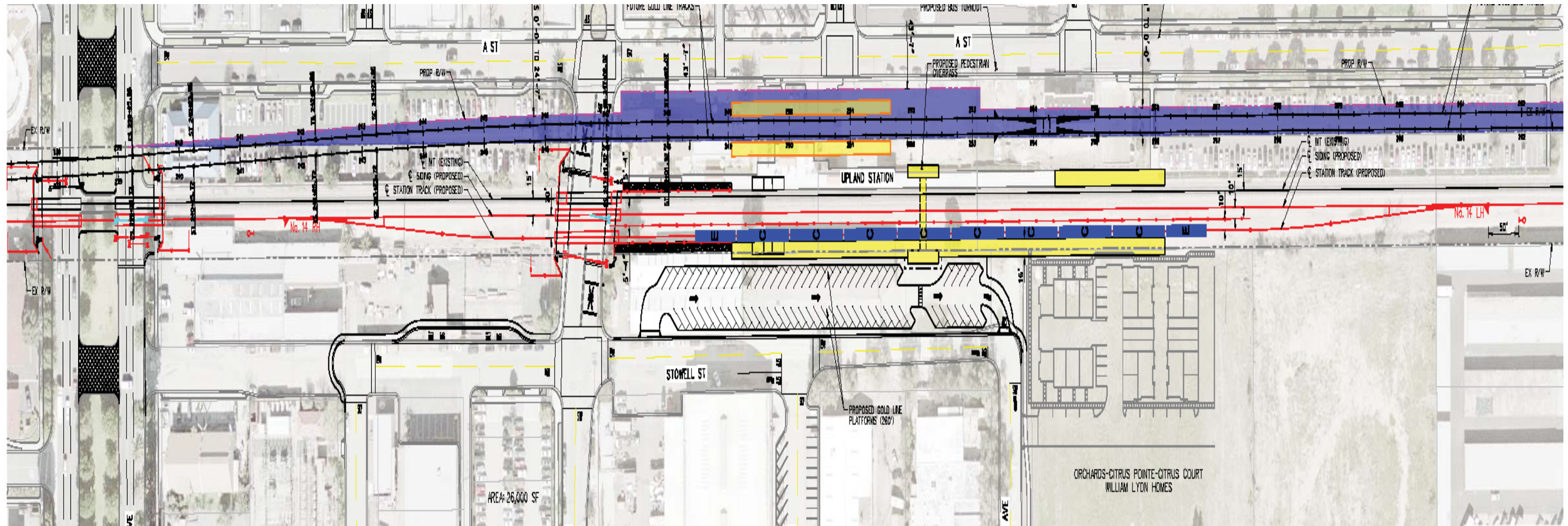
- ROW impacts of Gold Line aligned either on the north or the south side of the Metrolink tracks (see **Appendix C**)
- Identification of all historic properties that are likely to be impacted by the extension of Gold Line east of Montclair Transit Center (see **Appendix D**)
- Possible relocation of historic building (Eden Garden Fusion Grill) located at 392 E A St, Upland, CA 91786 (see **Appendix E**)
- Impacts of Metrolink double tracking on historic building (Eden Garden Fusion Grill) located at 392 E A St, Upland, CA 91786 (see **Appendix F**)

Figure 5.1: Possible Gold Line Track Alignment – South of Metrolink Tracks



Source: HDR

Figure 5.2: Possible Gold Line Track Alignment – North of Metrolink Tracks



Source: HDR

In summary, the sensitivity analyses concluded that even with double tracking of Metrolink tracks instead of triple, Gold Line double tracks will have significant ROW impacts regardless of whether they are planned on the north or south side of the Metrolink tracks. With that in mind, land use alternatives only considered double tracking of Metrolink tracks and no Gold Line. The following sections describe in details each of the three land use alternatives along with key features for each of them.

5.2 Alternative 1

Alternative 1, shown in **Figures 5.3** and **5.4**, proposes a mixed land use development on the west SANBAG parcel (SANBAG parcel #2) and possibly on the existing Metrolink parking lot located on the southwest corner of 2nd Avenue and Stowell Street and owned by the City of Upland. The development calls for a total of 77,860 square feet (51,860 SF on the SANBAG parcel and 26,000 SF on the Metrolink parking lot) of developable land. A surface parking lot and 3,110 square feet pedestrian plaza is proposed on the east SANBAG parcel (SANBAG parcel #1). This proposed parking lot will replace the existing lot at the corner of 2nd Avenue and Stowell Street and provide 53 additional spaces, totaling to 120 parking spaces, including five handicapped stalls.

A bus bay adequate for two buses is proposed along Stowell Street to accommodate future OmniTrans service to the station. As an alternative, OmniTrans bus bays can also be located along 2nd Avenue south of Stowell Street as described in Alternative 2.

At the station, a new platform with a mini-high platform is proposed on the south side of the existing platform to provide service to the second Metrolink track. The 710-foot platform is proposed to accommodate eight cars and two locomotives, keeping in mind future Metrolink service expansion of the SB Line. The existing north platform is extended 180 feet eastward to accommodate future longer train lengths. A pedestrian overpass bridge is also proposed to facilitate safe crossing of railroad tracks. A conceptual design of the pedestrian overpass is presented in **Appendix G**. Although the conceptual design considers three tracks, it can be easily modified to accommodate two tracks.

In addition, half ROW along Stowell Street west of 1st Avenue is proposed to be included within SANBAG parcel #2 for development. This segment of Stowell Street is proposed to become a right-in and right-out thoroughfare from Euclid Avenue, to accommodate access to the liquor store at the corner of Euclid Avenue and Stowell Street and a fire safety access to the power substation, located at the southwest quadrant of 1st Avenue and Stowell Street.

There is no change proposed at the existing 2nd Avenue grade crossing.

5.3 Alternative 2

In Alternative 2 shown in **Figures 5.5** and **5.6**, SANBAG parcel #2 is partially developed into a mixed land use, while the remainder of the parcel and entirety of SANBAG parcel #1 is a proposed parking lot with 49 more spaces than Alternative 1, totaling to 169 parking spaces. Similarly to Alternative 1, the existing Metrolink parking lot will be converted to a mixed land use, providing a total of 56,210 square feet (30,210 SF on the SANBAG parcel and 26,000 SF on the Metrolink parking lot) of developable land. A 3,110 SF pedestrian plaza, similar to Alternative 1 is also proposed at the northeast corner of 2nd Avenue and Stowell Street.

A bus bay adequate for two buses is proposed along 2nd Avenue, just south of Stowell Street to accommodate future OmniTrans service to the station.

Station improvements remain the same as Alternative 1 as does the proposed modification of Stowell Street west of 1st Avenue. There is no change proposed at the existing 2nd Avenue grade crossing.

5.4 Alternative 3

Alternative 3 shown in **Figures 5.7** and **5.8** consists of developing both SANBAG parcels #1 and #2, along with the existing city-owned Metrolink parking lot. This alternative provides a total of 124,430 square feet (51,860 SF on the SANBAG parcel #2, 46,570 SF on SANBAG parcel #1 and 26,000 SF on the Metrolink parking lot) of developable land, but eliminates the existing 67 parking spaces dedicated to the Metrolink Station. No pedestrian plaza is proposed.

Similar to Alternative 1, a bus bay adequate for two buses is proposed along Stowell Street to accommodate future OmniTrans service to the station. As an alternative, OmniTrans bus bays can also be located along 2nd Avenue south of Stowell Street as described in Alternative 2.

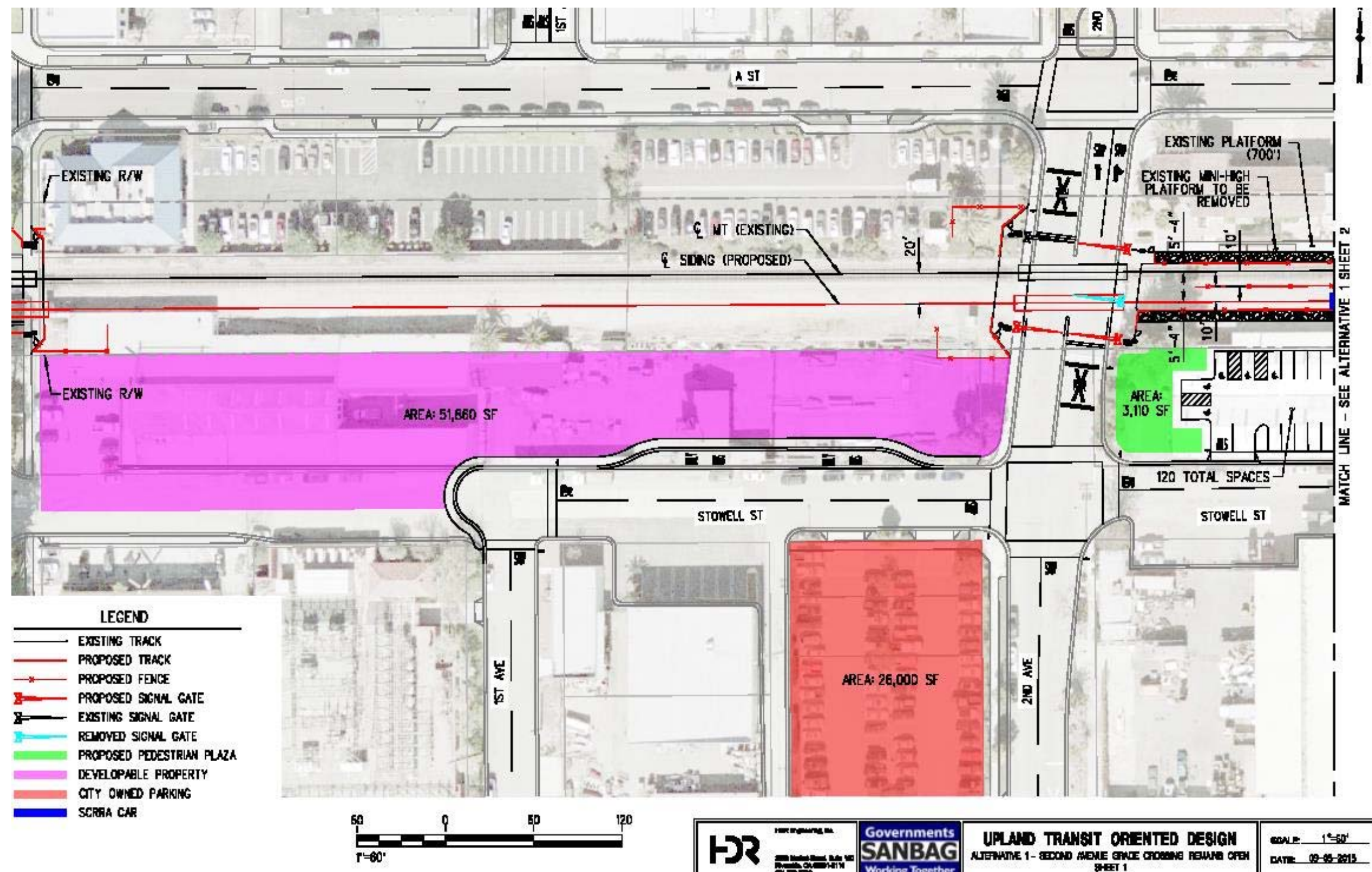
Station improvements remain the same as Alternatives 1 and 2 as does the proposed modification of Stowell Street west of 1st Avenue. There is no change proposed at the existing 2nd Avenue grade crossing.

Table 5.1 summarizes the key features for each of the alternatives

Table 5.1: Land Use Alternatives Comparison

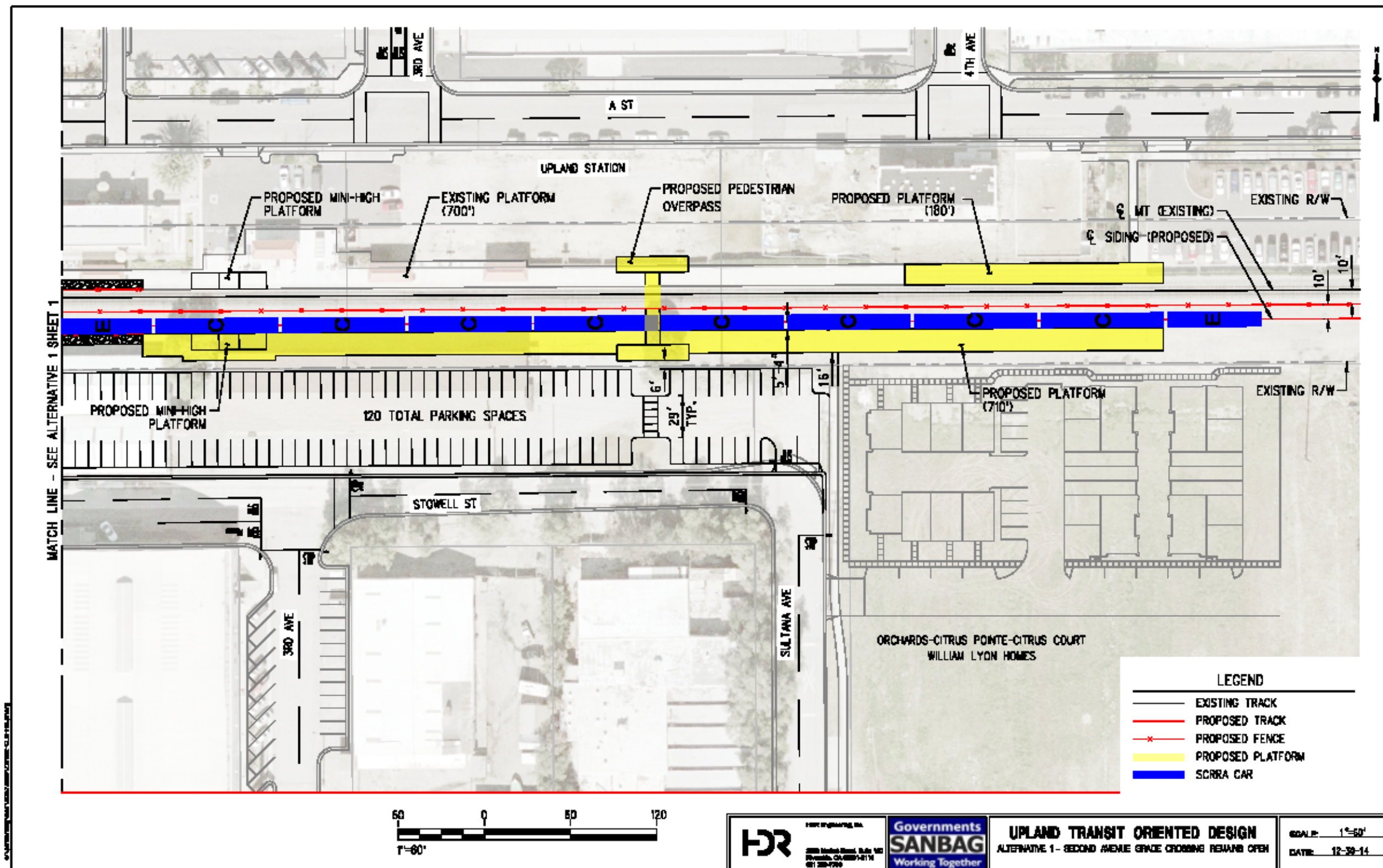
	Alternative 1	Alternative 2	Alternative 3
Railroad and Station Features			
One new track	■	■	■
New station platform	■	■	■
Existing Platform Shifted East	■	■	■
Pedestrian Overpass	■	■	■
Parking and Transit Circulation Features			
New Station Parking Spaces (Total)	120	169	0
Existing Parking Lot on 2 nd Avenue recommended for Development, Loss of 67 Parking Spaces	■	■	■
Additional Station Surface Parking	53	102	
Bus Bays along Stowell Street	■		■
Bus Bays along 2 nd Avenue		■	
Land Use Features			
Pedestrian Plaza Area, at 2 nd Avenue / Stowell Street (SF)	3,110	3,110	
Stowell Street Partial Closure at 1 st Street	■	■	■
Development Potential			
SANBAG Parcel #1 (SF)	51,860	30,210	51,860
SANBAG Parcel #2 (SF)	0	0	46,570
City-owned Metrolink Parking Lot (SF)	26,000	26,000	26,000
TOTAL	77,860	56,210	124,430

Figure 5.3: Alternative 1 Layout (1 of 2)



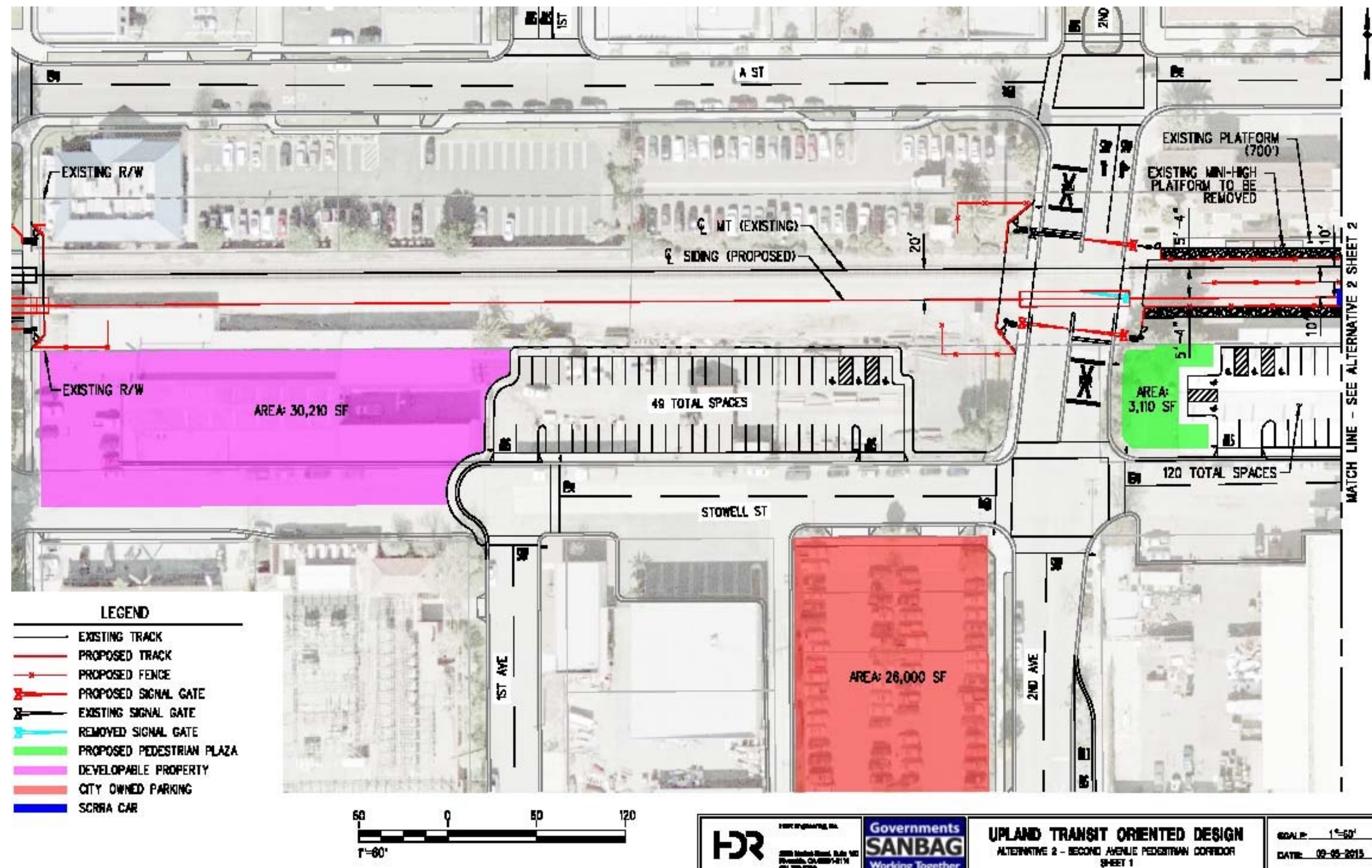
Source: HDR

Figure 5.4: Alternative 1 Layout (2 of 2)



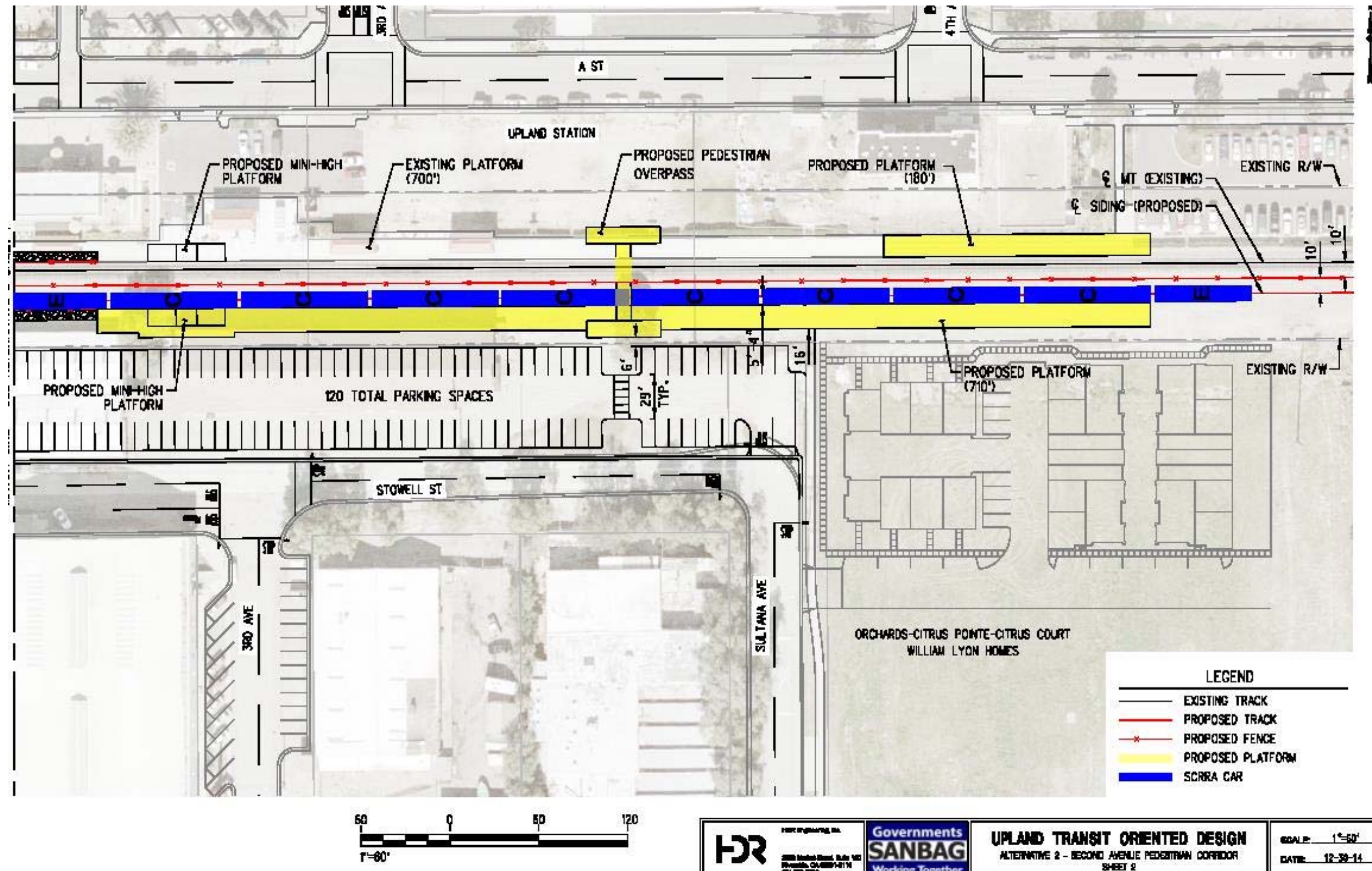
Source: HDR

Figure 5.5: Alternative 2 Layout (1 of 2)



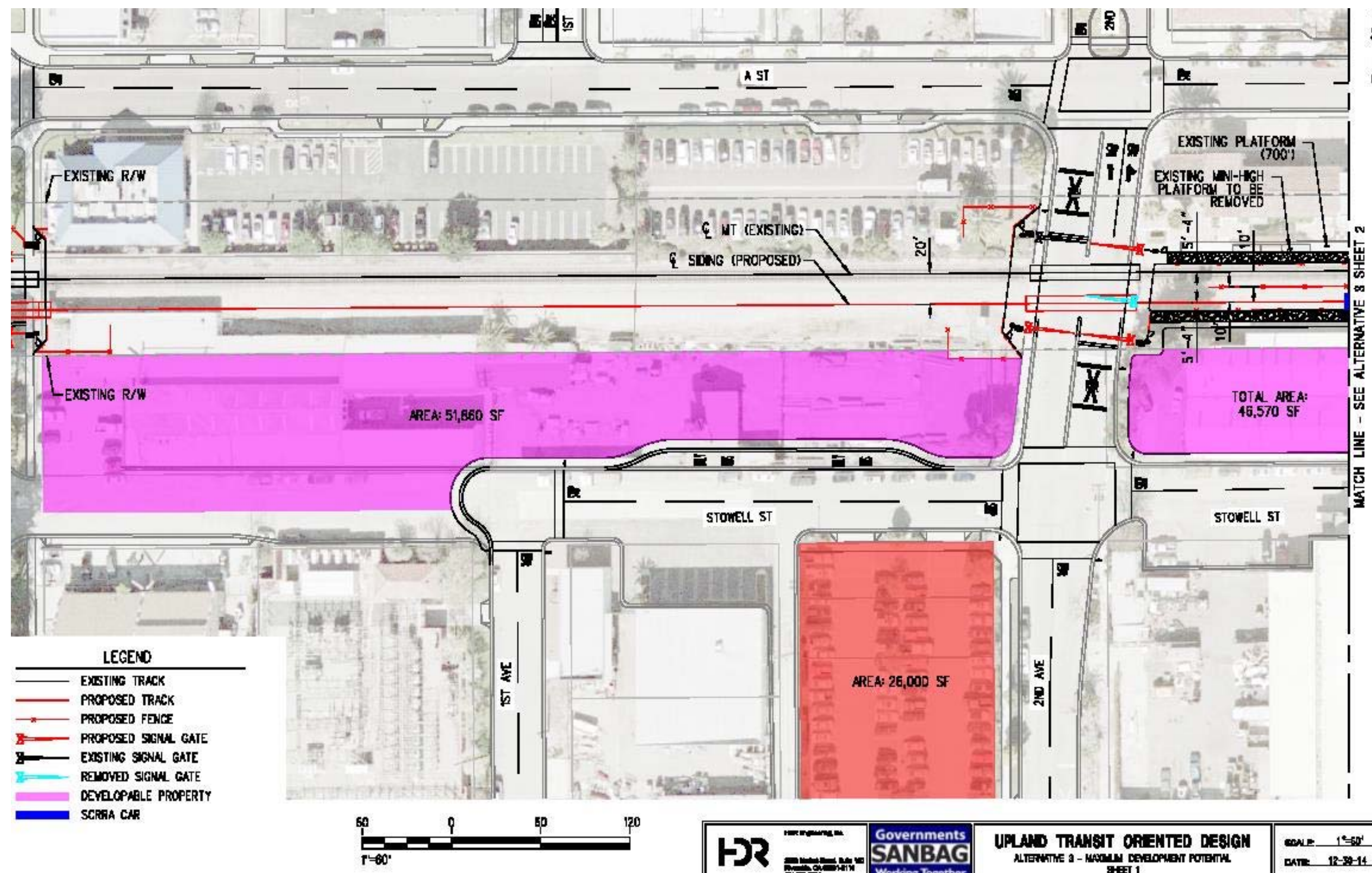
Source: HDR

Figure 5.6: Alternative 2 Layout (2 of 2)



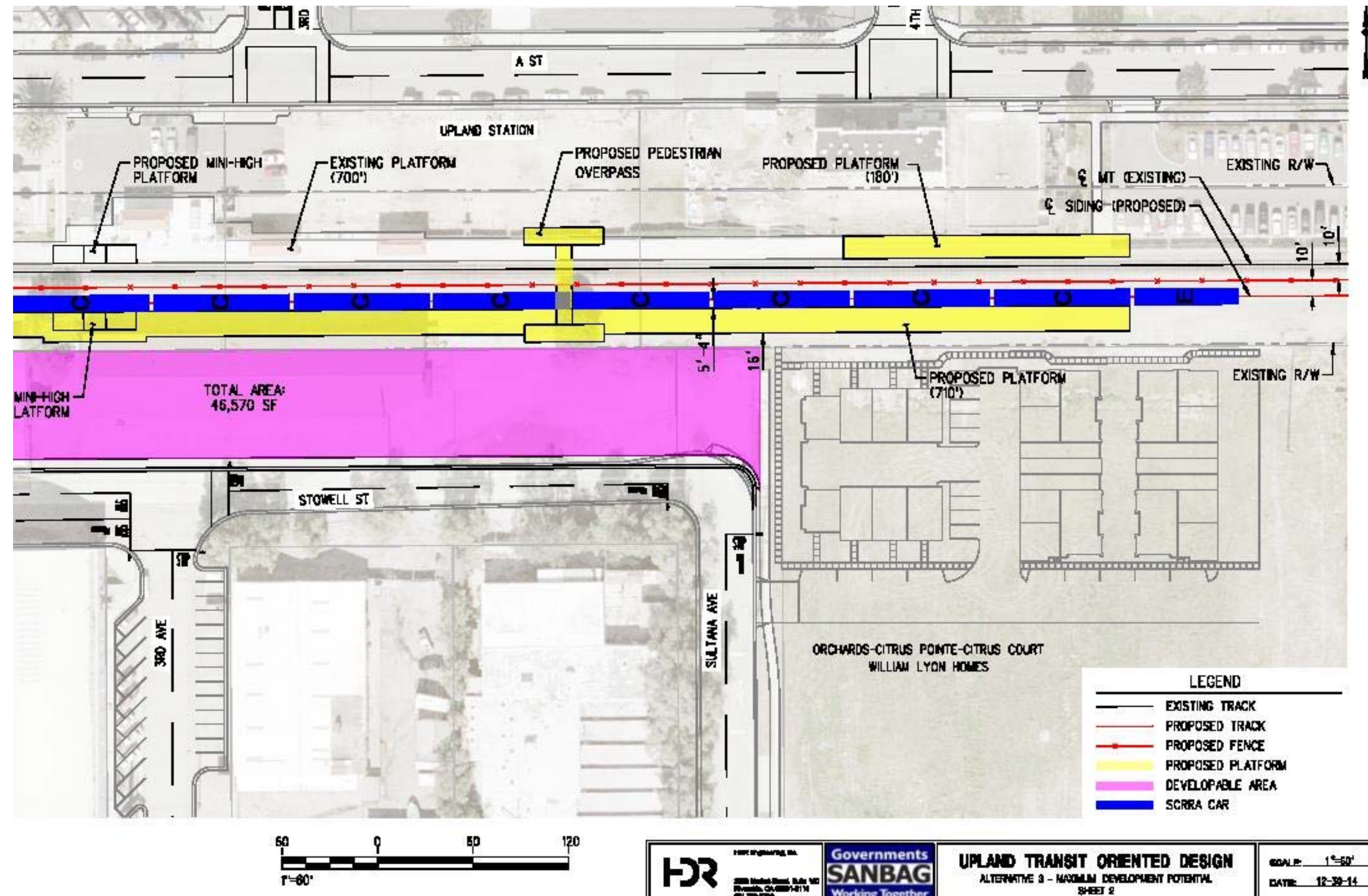
Source: HDR

Figure 5.7: Alternative 3 Layout (1 of 2)



Source: HDR

Figure 5.8: Alternative 3 Layout (2 of 2)



Source: HDR

Chapter 6 - Circulation Patterns

A robust multimodal transportation network includes transit and auto connectivity, parking, and bike and pedestrian connections and is an essential consideration as development grows. The following memo draws upon previous planning work conducted in the study area to combine planned and proposed improvements, present possible transportation network scenarios adjacent to the Upland Metrolink Station, and identify strategies to be responsive to the changes in land use. The analysis describes changes in both an existing (2014) and short-range future scenario (2020) and considers the area within ½ mile radius of the Upland Metrolink Station, unless otherwise noted.

These analyses are summarized below.

- Existing Conditions Analysis – this section presents those improvements and changes to land use that are planned or highly likely to occur over the course of the next year (2015). A description of these changes is presented in the following section of the tech memo and forms the base network onto which proposed changes will then be added. The proposed changes will describe improvements to the transportation network that will create better connectivity to the Upland Metrolink Station.
- Near Term Conditions Analysis - this section presents those improvements and changes to land use that are planned or highly likely to occur by 2020. To be conservative, some changes to land use that are planned for implementation by 2030 are moved forward in order to understand their effects on the transportation network. These changes are noted in the text below. A description of changes presented will form the base network onto which proposed changes will be added. As with the Existing Conditions Analysis, the proposed changes will describe improvements to the transportation network that will create better connectivity to the Upland Metrolink Station.

6.1 Summary of Previous Planning Work

The following is a listing, description, and time period of the previous plans that are referenced in this analysis.

6.1.1 HDUSP, September 2011

- Presented previously in **Section 4.2**

6.1.2 SANBAG - The ARRIVE² Corridor Final Report, September 2015

- *Planned implementation: 2015*
- *Plan Description³:* The report examines the feasibility of transitioning the San Bernardino Metrolink Line, a traditional commuter rail corridor, over time, to a corridor that fully integrates TOD and regional rail. The report explores how to build on that success by evaluating opportunities for TOD across all stations on the San Bernardino Metrolink Line within the county. It is the goal of this study that ultimately this rail service will not merely send more commuters westward to Los Angeles, but will support a series of in-county destinations in their own right. The goal is to convert these station-area nodes into more significant mixed-use, walkable activity centers, contributing to the livability and economy of the San Bernardino Valley.

² ARRIVE: Advanced Regional Rail Integrated Vision - East

³ The ARRIVE Final Report, Gruen 2015

6.1.3 San Bernardino County Long Range Transit Plan Interim Draft Report (LRTP), October 2009

- *Planned implementation: 2010 – 2035*
- *Plan Description⁴:* The LRTP aims to provide the best possible future transit network for San Bernardino County. Acknowledging the challenges and opportunities that are inherent in planning for the future, four alternatives were developed for the San Bernardino Valley to provide a range of options for the LRTP. The four alternatives: 1) Baseline 2) Plan 3) Vision and 4) Sustainable, are compared on the basis of annual boardings and passenger miles as well as capital and operating cost. Relevant to the Upland Metrolink Station area – a planned bus rapid transit (BRT) would provide increased service frequencies with fewer stops on Euclid Avenue; a north-south corridor west of the station area.

6.1.4 SANBAG - Access to Transit (ATT), November 2012

- *Planned implementation: 2015 – 2035 (estimated)*
- *Plan Description (Source: ATT, Executive Summary and Chapter 4.2):* SANBAG undertook this effort to examine the ability of non-motorized users to access its regional transit network. This project sought to identify existing barriers to access, inform stakeholders of industry best practices relating to improving non-motorized circulation, and propose planning-level improvements in and around the selected stations. The project is designed to serve as a guiding document for transit station area improvements, to implement the goals of the SANBAG Non-Motorized Transportation Plan (NMTP), and to improve access to and from these stations for local residents and commuters, thereby reducing parking demand and increasing transit ridership. Existing bicycle and pedestrian facilities in Downtown Upland are ample and adequate. Project improvements focus on improving existing Class II and III bicycle facilities in the study area, and creating a connection to the planned TOD immediately southeast of the station.

6.1.5 San Bernardino County Non-Motorized Transportation Plan (NMTP), May 2014

- *Planned implementation: 2015 – 2035 (estimated)*
- *Plan Description⁵:* A safe, interconnected cycling and walking system can be a major asset to both individual communities and an urban area. Even though San Bernardino County is known for its recreational opportunities, such a system is not well developed in many areas of the County. Through the development of this Plan, the County hopes to take the development of such systems to another level. It identifies a comprehensive network, with a focus on the bicycle system. It is also a response, in part, to the initiatives to reduce vehicle travel and greenhouse gas emissions embedded in California Senate Bill 375 (SB 375). The growth in the City of Upland's non-motorized system has spread across Class I, II and III facilities. The City now includes 6.33 miles of Class I, 21.43 miles of Class II and 12.19 miles of Class III facilities for a total of 39.41 miles. Since the last update to the NMTP (2014) the City has averaged 4 miles of new infrastructure per year.

6.1.6 Omnitrans System-wide Transit Corridor Plan for the San Bernardino Valley (TCP), October 2010

- *Planned implementation: 2010 – 2035*

⁴ San Bernardino County LRTP, Chapter 11

⁵ San Bernardino County NMTP, Executive Summary

- *Plan Description*⁶: The System-Wide Plan supports Omnitrans' ongoing efforts to develop the San Bernardino Express (sbX) network, a series of premium transit corridors, currently planned as BRT corridors. The System-Wide Plan presents an introduction of the considerations, including the development of the sbX E Street BRT Corridor and the passage of SB 375 in November of 2008. Potential corridors are identified and then analyzed based on existing conditions (land use patterns, ridership patterns, demographic patterns) and future conditions. The future conditions are based on the San Bernardino Valley Focused Travel Demand Model, which generates transit ridership forecasts. Euclid Avenue is identified as the fourth strongest corridor, but this ranking relies upon development in the Agricultural Preserve that has not yet occurred. This corridor could be moved up the priority list if development of the Agricultural Preserve accelerates and developers give high priority to reserving transportation ROW for future mass transit investments.

6.1.7 OmniCONNECTS – Omnitrans FY2015 – 2020 Short-Range Transit Plan (SRTP), 2014

- *Planned implementation: 2014 – 2020*
- *Plan Description*⁷: The SRTP sets the FY2015-2020 objectives in a six year capital and operating plan, which is submitted to the Omnitrans Board of Directors and SANBAG for approval. The SRTP is typically updated every three years. The FY2015-2020 update of the SRTP is called OmniCONNECTS. The SRTP is developed within the context of the Regional Transportation Improvement Plan (RTIP) overseen by the Southern California Association of Governments (SCAG). The SRTP consists of information on Omnitrans' services and operating characteristics, which are integrated into the RTIP, State Transportation Improvement Plan (STIP), and Federal Transportation Improvement Plan (FTIP).

As noted above, recommendations and strategies taken from these plans were analyzed within two time periods: Existing (2014-2015) and Short Term (2020). When one or both of these time periods are analyzed in the above plans, a reasonable effort was made to translate planning periods. In these instances, assumptions used in translation were explicitly defined. **Table 6.1** below indicates the time period(s) within which each study was analyzed.

Table 6.1: Time Periods of Analysis

Study / Planning Document	Existing (2014-15)	Near Term (2020)
Historic Downtown Upland Specific Plan	■	■
The ARRIVE Corridor Existing Conditions Report	■	
San Bernardino County LRTP		■
SANBAG ATT	■	■
San Bernardino County NMTP	■	■
Omnitrans System-Wide TCP	■	■
OmniCONNECTS SRTP		■

Source: HDR

6.2 Existing Conditions Analysis

This section presents a summary of existing conditions (2014-2105), including an analysis of street closures, the integration of Omnitrans services, and an analysis of parking demand and impacts based on existing or planned

⁶ Transit Corridor Plan, Executive Summary

⁷ OmniCONNECTS, Chapter 1

land use near the Upland Metrolink Station. Initially, a discussion of assumptions is presented which also includes an assessment of land use and development, followed by a description of proposed transportation solutions.

6.2.1 Assumptions/Principles Used in Existing Conditions Analysis

Existing year conditions includes the current land use and transportation network near the Upland Metrolink Station, as well as planned solutions that are underway or will occur in 2015. Following is a discussion of these assumptions.

Land Use

The following describes the existing land use, near-term planned development assumptions and the policy framework within which development occurs. Additionally, an estimate is provided of the number of additional auto trips generated by the proposed development.

- Existing land use: The analysis assumes existing land use as presented in **Figure 4.4**
- Planned development: The analysis assumes all planned development as presented in **Appendix H⁸**, is in place. This development will affect the transportation network by adding more auto trips in the study area. Based on the existing levels of service⁹ on roads near the Upland Metrolink Station, there is significant capacity available before the roadways would be considered congested. According to Table 2-1 in HDUSP, the closest any roadway segment in the study area comes to reaching daily capacity is approximately 6,000 vehicles per day: 8th Street between Euclid and Campus Avenue is currently carrying approximately 7,000 vehicles per day whereas the roadway is considered congested when vehicle volumes reach 13,000 per day. Planned development includes three residential developments. An estimation of the number of daily trips added by each development is presented in **Table 6.2**. Even with the additional development approved, the existing roadway capacity is sufficient to handle the trips.

Table 6.2: Daily Trips Added to Study Area by Planned Development

Development	Land Use	Density	Number of Units	Trip Generation Rate ¹	Estimated Daily Trips
Northeast corner of 8 th Street and Sultana	MF Residential (Apartments)	22.5 du/ac	209	6.60	1,380
Expansion of existing senior housing	MF Residential (Apartments)	31.2 du/ac (land: 1.0 Acre)	72	6.60	475
Southwest corner of 3 rd and C Street	Mixed Use	35 du/acre (land: 0.8 Acre)	28 ²	6.60	185
Total Trips					2,040

Source: HDR, The ARRIVE Existing Conditions Report, Gruen 2014

Notes: 1 Institute of Transportation Engineers, Trip Generation Manual

2 number of units was estimated based on land area and density

- Guiding principles for development: The following are relevant principles¹⁰ that are assumed to be in place and used to guide development decisions:
 - Use City-owned properties to stimulate private development, especially residential
 - Focus on key catalytic projects to spur physical and economic development in Downtown.

⁸ The ARRIVE Corridor Existing Conditions Report, Chapter 3, Figure 3.29

⁹ HDUSP, Table 2-1

¹⁰ HDUSP, Chapter 9, Section D

- Continue to provide support for rehabilitation and adaptive reuse of the historic packing houses located in the Citrus Transportation District where appropriate commercial uses can be identified.

Transit

This section presents a discussion of the planning assumptions that will be applied to transit services in the study area. The discussion includes Metrolink and Omnitrans services.

- Upland Metrolink Station¹¹:
 - Boardings: The most current published boardings estimate at the Upland Metrolink Station is 486 (presented in **Appendix I**).
 - Level of service: Served by 38 trains each weekday, 20 on Saturday, and 14 on Sunday
 - Mode of access: It is estimated that nearly 2/3 of weekday passengers arrive at the station via private auto, with the remaining 1/3 accessing the station by walking or biking. There is no direct transit access and it is estimated that no passengers use nearby transit routes and walk to the station.
 - Parking: 294 spaces adjacent to station; over 96% utilization on weekdays
 - Track: no changes to Metrolink track assumed
- Omnitrans: the following outlines service characteristics of those routes that lie within ½ mile radius (generally considered reasonable walking distance from/to transit service) of the Upland Metrolink Station. A discussion of potential bus stop locations and bus bay needs follows routing discussion:
 - Route 63: Chino – Ontario – Upland
 - Current routing: presented in **Appendix J**
 - Closest stop: Campus Avenue/A Street; north-south service along Campus Avenue
 - Level of service: This route operates with 60 minute frequency both during the week and on the weekend
 - Parking: there are no formal park-and-ride lots adjacent to this route.
 - Proposed solution: re-route to directly serve Upland Metrolink Station
 - Route 68: Chino – Montclair – Chaffey
 - Current routing: presented in **Appendix J**
 - Closest stop: 2nd Avenue/Arrow Street; east-west service along Arrow Street
 - Level of service: Weekdays – 20-40 minutes throughout the day, 60 minutes on Saturday, no Sunday service
 - Parking: Montclair Metrolink Station park-and-ride lot, 1,600 spaces
 - Route 83: Upland – Euclid – Chino
 - Current routing: presented in **Appendix J**
 - Closest stop: Euclid Avenue/8th Street and Euclid Avenue/9th Street; north-south service along Euclid Avenue
 - Level of service: This route operates with 60 minute frequency both during the week and on the weekend
 - Parking: there are no formal park-and-ride lots adjacent to this route.

Due to the modest levels of planned development, and a decrease in Metrolink service that took effect in October, 2014, under the existing condition, only minor changes to the transit network are proposed. Although it would be ideal to have all the three Omnitrans Routes (63, 68, 83) that serve with the ½ mile radius of the Upland Metrolink Station, current ridership on these line do not make it operationally feasible for Omnitrans to serve the station

¹¹ SANBAG LRTP, 2009

directly. At a coordination meeting with Omnitrans staff¹², it was determined that Omnitrans could possibly reroute Route 83 to serve the Metrolink Station in the future, if ridership levels warrants the service. Detail discussion on the reroute of Route 83 is presented in **Section 6.3.2**.

Parking

It is assumed that development and increased Metrolink ridership, the major contributors towards increases in parking demand, will not occur under the Existing condition. The parking need that these new uses will bring to the study area is analyzed under the Near Term (2020) scenario. This section provides an overview of the existing parking supply and a discussion of parking policy.

- Existing parking supply consists of the following¹³:
 - On-street parking spaces = 808
 - Off-street parking spaces, publically owned = 1,012
 - Off-street parking spaces, privately owned = 622
- Existing parking policies and assessments
 - Parking and Business Improvement District – this district includes two separate geographic areas¹⁴. The intent of this district is to assess those businesses that place a higher burden on parking supply than others ensuring that future development and changes in land use provide sufficient parking on site or via shared spaces.
 - Zone A includes the historic Downtown core. Businesses in this zone are not assessed for parking.
 - Zone B includes areas adjacent to Zone A and extends south of the Metrolink Station where a number of potential development sites lie. Businesses in this zone are assessed for parking. In return, they receive a 10% discount on the required number of parking spaces required to be provided.
 - Parking requirements within ¼ mile of Metrolink Station: developments that fall within this area receive a 20% reduction in the number of parking spaces required to be provided
 - Parking Assessment – this assessment is conducted through two stages: 1) Parking Monitoring – this step will monitor the utilization of existing public and private parking lots and 2) Parking Measures – this tiered system examines the level of demand for parking and provides supply in response.

Circulation Modifications

There are no street closures or “green alley” networks assumed for the existing conditions analysis. These concepts will be included in the future year analysis scenarios.

6.3 Near Term Conditions Analysis

This section presents a summary of proposed changes to the street network, Omnitrans services, and an analysis of parking demand and supply based on existing and planned land use near the Upland Metrolink Station. Two proposed transportation networks are presented as a result of future plans.

6.3.1 Assumptions/Principles Used in Near Term Conditions Analysis

A description of near term conditions roughly covers the period of time 2015-2020. In a few cases, improvements may not exactly fall into this period but are included in the assumptions in order to provide the most conservative estimate of changes to the transportation network. Similar to the discussion of existing conditions in the previous

¹² Meeting held with SANBAG, HMM and HDR on Jan 09, 2015

¹³ HDUSP, Chapter 7

¹⁴ HDUSP, Figure 2-6

section, assumptions for land use, transportation network near the Upland Metrolink Station, and planned development are described.

Land Use

The following describes the near-term planned development assumptions in the study area as well as the policy framework within which development is expected to occur. Additionally, an estimate of additional auto trips generated by the proposed development is provided.

- Land use: Land use is assumed to include all planned development discussed under Existing Conditions. Additionally, two development scenarios were analyzed that specifically consider the SANBAG owned properties just south of the Metrolink tracks on either side of 2nd Avenue (see **Figures 2.1** and **2.2** for location of these parcels) and **Table 6.3** presents an estimate of the number of daily trips added to the street network, due to development on these parcels.

The scenarios include:

- Scenario 1 - Development of one SANBAG parcel to include both parking and residential use. It is assumed that the residential development includes 46 units in a multi-family building with parking on the lower levels. The second parcel is assumed to be solely used for surface parking
- Scenario 2 - Development of both SANBAG parcels to include both parking and residential use. It is assumed that the residential developments includes 46 units in a multi-family building with parking on the lower levels

Table 6.3: Daily Trips Added to Study Area by Proposed Development

Development	Land Use	Units of Analysis	Number of Units	Trip Generation Rate	Estimated Daily Trips
Scenario 1 – Development of one site	MF Residential	Apartment	46	6.60	304
Scenario 2 – Development of both SANBAG sites	MF Residential	Apartment	92	6.60	608

Source: HDR

Transit

This section presents a discussion of the planning assumptions that were applied to transit services in the study area. The discussion includes Metrolink and Omnitrans services.

- Upland Metrolink Station¹⁵:
 - Boardings: To be conservative, it is assumed that 2030 growth assumptions for boardings at the Upland Metrolink Station occur in this time period. A growth rate of 40% is thus assumed which results in an estimated increase of nearly 200 boardings a day for a total of 680 total boardings per day.
 - Level of service: During this time, Metrolink projects that 48 trains will operate on the SB Line each weekday. This is an increase of 10 trains per day from existing conditions. Six of these trains are intended to serve only the Express service, which does not stop in the Upland Metrolink Station. The net effect is a 10% increase in weekday service levels.
 - Mode of access: The assumption stated in the existing conditions was carried forward. Thus, it is estimated that nearly 2/3 of weekday passengers arrive at the station via private auto, with the

¹⁵ SANBAG LRTP, 2009

- remaining 1/3 accessing the station by walking or biking. There may be some fluctuation in this percentage as transit service to the station increases. However, to be conservative, this means that 455 vehicles require parking or drop off facilities – an increase of about 160 spaces.
- Parking: The additional parking required to meet forecasted demand and high utilization is assumed to be met by solutions listed below.
 - Track: During much of the study process, a third express track was assumed. However, as the study came to a close, this assumption was revised to a double track at the Upland Metrolink Station.
 - Omnitrans: the following outlines service characteristics of those routes that lie within ½ mile radius (generally considered reasonable walking distance from/to transit service) of the Upland Metrolink Station. These routes are a reflection of the proposed routes in OmniCONNECTS Short Range Transit Plan. A discussion of potential bus stop locations and bus bay needs follows routing discussion:
 - Route 83: Upland – Euclid – Chino – this is assumed to be a local bus route with the same routing in the study area. The proposed bus rapid transit service is not assumed to be implemented at this time.
 - Level of service: This route operates with 60 minute frequency both during the week and on the weekend
 - Parking: there are no formal park-and-ride lots adjacent to this route.
 - Proposed solution: re-route to directly serve Upland Metrolink Station
 - Route 65: Chino – Montclair – Chaffey (this route assumes the portion of the previous Route 68 that lie in the study area).
 - Level of service: Assumed to be same as former Route 68: Weekdays – 20-40 minutes throughout the day, 60 minutes on Saturday, no Sunday service
 - Parking: Montclair Metrolink Station park-and-ride lot, 1,600 spaces
 - Route 63: no longer operating within the ½ mile walk distance
 - Route 84: Chino – Ontario – Upland (will serve the existing Route 63 service areas)
 - Level of service: This route operates with 60 minute frequency both during the week and on the weekend
 - Parking: there are no formal park-and-ride lots adjacent to this route.

Based on a coordination meeting with Omnitrans, Route 83 could directly serve the Metrolink Station only if ridership warranted the detour. Key factors in establishing sufficient ridership are developing a significant density of transit oriented land uses within a short walking distance; particularly uses that Omnitrans thinks would use the bus network for access. **Figure 6.1** presents the proposed reroute of Route 83. Both southbound and northbound buses can be rerouted from its current path on Euclid Avenue to eastbound on 8th Street, to continue northbound on 2nd Avenue, westbound on Stowell Street, southbound on 1st Street before merging back on Euclid Avenue, either southbound or northbound, respectively. Two bus bays to accommodate the reroute are proposed to be located on Stowell Street between 2nd avenue and 1st Avenue and are presented in the land use alternatives exhibits in **Chapter 5**. Each proposed bus bay is intended to accommodate a 40-foot bus.

Circulation Modification¹⁶

As has been noted in **Chapter 5**, for this study, 2nd Avenue remains as a through street, serving as a direct access from I-10 to the SANBAG properties as well as the downtown. However, in the future if railroad activities and ridership at the Upland Station increase significantly, 2nd Avenue may be recommended for closure by the California Public Utility Commission (CPUC), keeping safety in consideration.

¹⁶ HDUSP, Figures 7-1, 7-2

Safety is of paramount importance when considering changes to the roadway network in and around railroad tracks. Following are the key issues that the City of Upland may consider in the future to support the closure of 2nd Avenue between Stowell Street and A Street. Specific crossing treatments and measures are found in the Federal Railroad Administration's 2008 report "*A Compilation of Pedestrian Safety Devices in Use at Grade Crossings (2008)*."¹⁷

- Safety concerns for persons with disabilities – visually impaired or deaf persons require that additional safety measures be taken at grade pedestrian crossings of railroads.
- Sight lines – it is important that pedestrians/bicyclist standing at a railroad crossing be able to see oncoming trains well in advance of their arrival at the station. Thus, buildings and other objects adjacent to the track must be set back from the track a sufficient distance so as not to impair the line of sight as shown in a "sight triangle" presented in **Appendix K**.
- Train speed through stations – with the addition of three possible tracks at the Upland Metrolink Station, it would enable express trains to pass trains stopped at the station. The appropriate speed of these trains should be analyzed and proper crossing mechanisms and warning devices should be in place to ensure pedestrian and bicyclist safety.

Half of the street ROW along Stowell Street west of 1st Avenue is proposed to be included within SANBAG parcel #2 for development. This segment of Stowell Street is proposed to become a right-in and right-out thoroughfare from Euclid Avenue, to accommodate access to the liquor store at the corner of Euclid Avenue and Stowell Street and a fire safety access to the power substation, located at the southwest quadrant of 1st Avenue and Stowell Street.

In addition, as development occurs south of the Metrolink tracks, there will be a greater need for additional street infrastructure. This analysis assumed that the proposed streets in the HDUSP¹⁸ are in place. These streets are located east of Sultana Avenue between Stowell Street and 8th Street. Green Alleys, providing additional support to the future pedestrian network, as well as activating currently unused or underutilized alleys, are also proposed. Green alleys provide additional opportunities for businesses to utilize the front and back of their stores and create new pedestrian corridors. It is assumed that all green alleys proposed in the HDUSP are in place for the purposes of this analysis. The City of Upland is committed to working with developers to meet the need for additional street infrastructure as development occurs south of the Metrolink tracks.

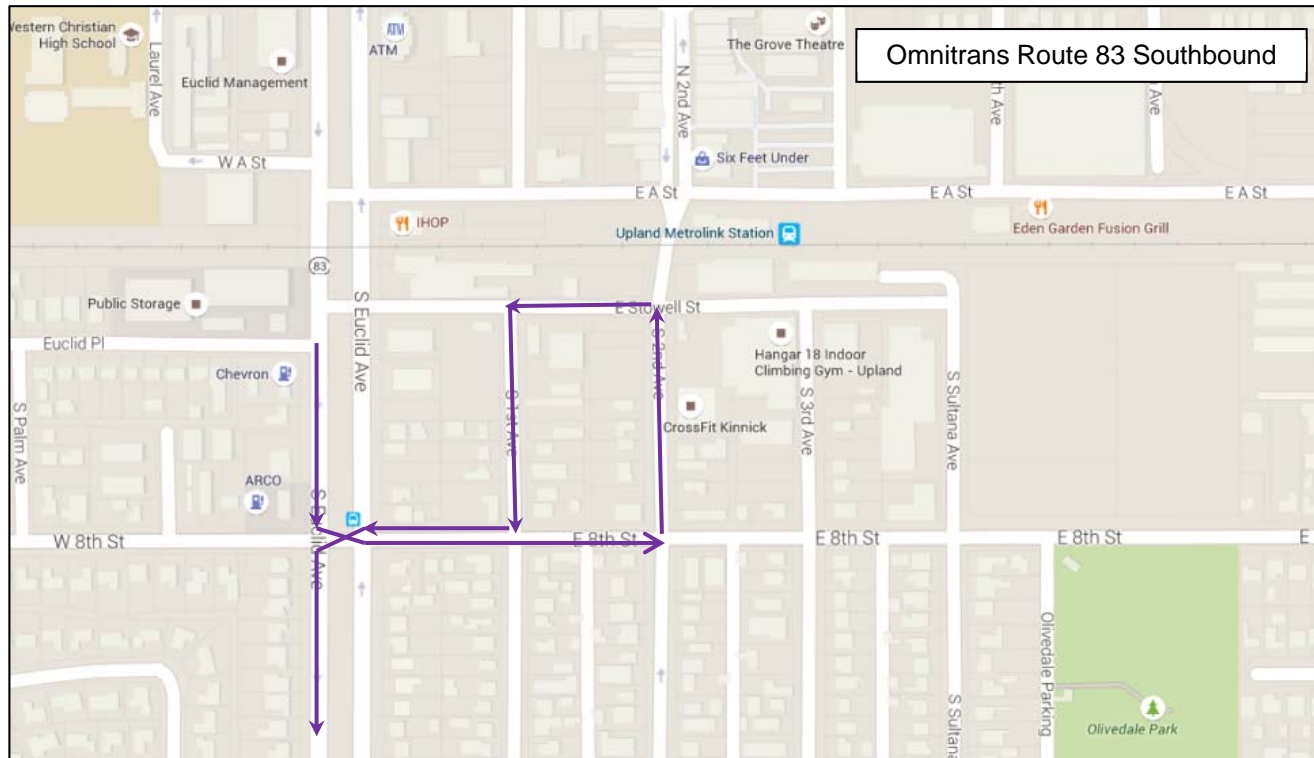
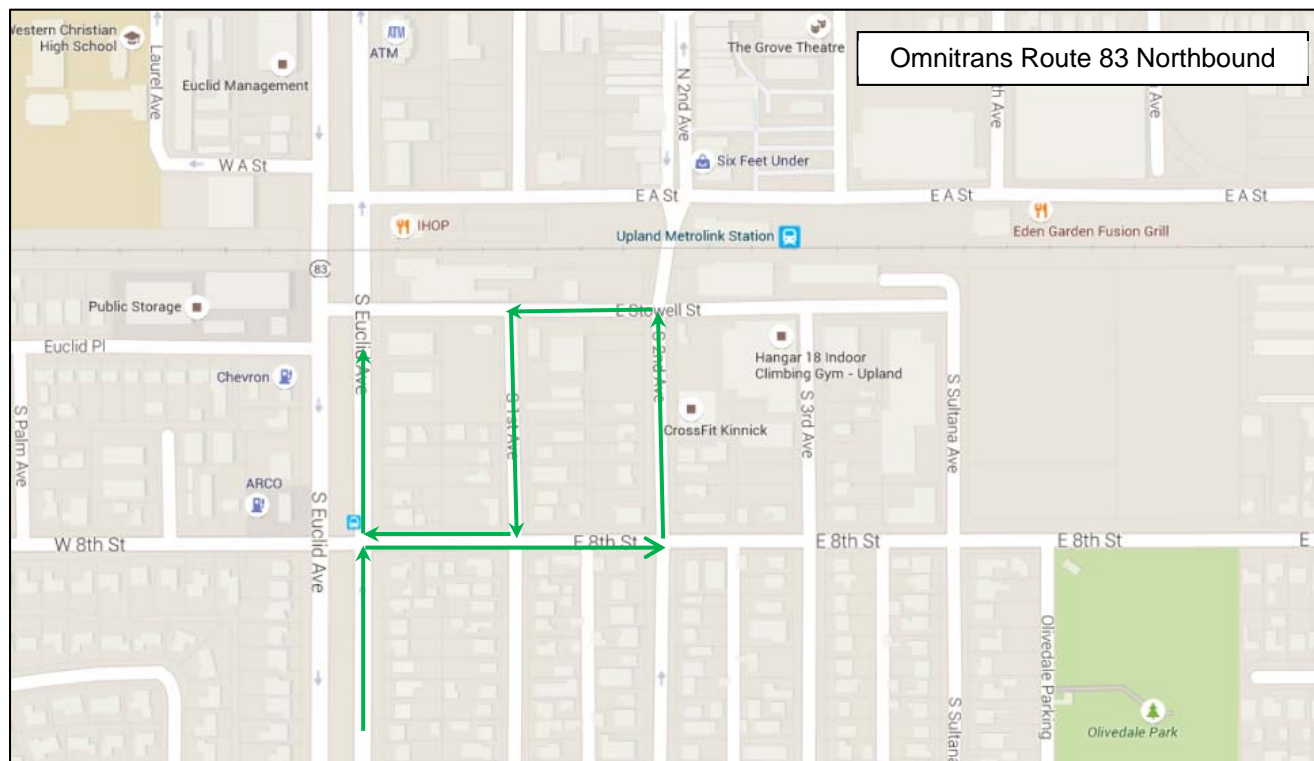
6.3.2 Parking

A significant amount of analysis was conducted to both establish existing parking supply and estimate future parking needs based on future land development patterns. **Table 6.4** describes the existing and future supply of parking in Downtown Upland. It is estimated that a net decrease in parking supply of about 15% occurs as development is added. This is likely due to the provisions of the Parking and Business Improvement District that allows non-residential development to reduce the required number of parking spaces by 10-20% based on a business' location in the Downtown area.

¹⁷ U.S. Department of Transportation, Federal Railroad Administration, January 2008.

¹⁸ HDUSP, Figure 7-1

Omnitrans Route 83 Northbound



Source: HDR

Table 6.4: Estimated Parking Supply, Downtown Upland – Existing and Near Term Conditions

	On-Street	Off-Street Public	Off-Street Private	Total
Existing	808	1,012	622	2,442
Future	733	683	734	2,150
<i>Decrease due to development</i>	0	(321)	(112)	(433)
<i>Conversion to angled parking</i>	75	--	--	75
<i>Developer provided parking</i>	--	650	--	650

Source: HDR

Table 6.5 presents an estimate of parking demand for both existing and future scenarios. These estimates also reflect figures for the Downtown area as a whole and assume density levels outlined in the HDUSP.

Table 6.5: Estimated Parking Demand, Downtown Upland – Existing and Near Term Conditions

	Parking Demand
Existing	1,300
Future	2,292
<i>Increase due to Metrolink</i>	160
<i>Development demand</i>	832

Source: HDR

While the existing parking supply adequately serves the Downtown community, future development and increased Metrolink ridership may cause a shortage of parking. The timing and nature of development as well as the physical characteristics of a site may affect the demand for parking in Downtown Upland. Thus, the following section presents an assessment of parking demand and supply adjacent to the Upland Metrolink Station. Using the existing demand figures, parking opportunities was assessed for the two SANBAG owned properties noted in **Figure 2.1** and **2.2**.

Accommodating Parking Demand with Shared Use Agreements

Weekday afternoons represent the period of time when parking demand and utilization is at its peak. This is true both generally in Downtown and particularly near the Metrolink Station. Thus, to understand the opportunities to establish shared parking arrangements, weekday daytime parking demand percentages by land use from Table 5-3 in the HDUSP were used. The percentages are as follows:

- Cultural Use: 60%
- General Retail: 90%
- Restaurant: 70%
- General Office: 100%
- Hotel/Motel: 70%
- Entertainment: 40%

Given that the non-residential land use south of the Metrolink tracks is predominantly multi-use, and lacking specific development densities, it is difficult to determine precisely how much parking demand these land uses could generate. However, it is useful to understand those land uses that may contribute to future shared use parking. Lower percentage utilization occurs with cultural, entertainment, and restaurant uses. While restaurants and potentially cultural uses will not include significant parking capacity, entertainment centers such as theaters or concert venues may present a good option for shared use parking agreements.

Accommodating Parking Demand with New Parking Supply

In the event that neither increased on-street nor shared parking arrangements provide sufficient parking capacity for the future levels of demand, the final option is to construct a new parking structure. This option is considered a last resort because it is preferable that available land be allocated to development. However, in Chapter 7 of the HUDSP generally, and Figure 7-9 specifically, the location and sizing of parking structures is presented in a tiered format. Tiers of potential parking structures are organized by preference of the order in which these sites are developed. The following describes the location and the estimated parking spaces constructed by tier¹⁹:

- Tier 1 – total parking spaces: 348
 - South of A Street between 1st Avenue and 2nd Avenue (3-story parking garage: 94 additional parking spaces).
 - South of Stowell Street between 1st Avenue and 2nd Avenue (3-story parking garage: 254 additional parking spaces).
- Tier 2 – total parking spaces: 203
 - Southeast corner of 1st Avenue and C Street (3-story parking garage: 109 additional parking spaces)
 - Northwest corner of 3rd Avenue and A Street (3-story parking garage: 94 additional parking spaces).
- Tier 3 – total parking spaces: 654
 - Southeast corner of A Street and 6th Avenue (surface lot: 84 additional parking spaces).
 - North of Stowell Street between Euclid Avenue and 2nd Avenue (3-story parking garage: 277 additional parking spaces).
 - North of Stowell Street between 2nd Avenue and Sultana Avenue (3-story parking garage: 293 additional parking spaces).
- Total estimated parking spaces in parking structures: 1,205

The estimated unmet future parking demand is approximately 140 spaces in the peak period. This demand is easily accommodated with the construction of the 254 space parking structure indicated in the Tier 1 list above. This figure assumes a 100% utilization of parking capacity. However, the City of Upland has a threshold of 75%. Thus, as parking utilization in the parking sub-areas reaches 75% of available capacity, additional parking supply is necessary. Taking this threshold into account, unmet future parking demand is actually 680 parking spaces. To meet this level of parking supply, all proposed structures in Tier 1 and 2 lists as well as any two structures listed in Tier 3 must be built.

¹⁹ HDUSP, Chapter 7

Chapter 7 - Environmental Constraints Analysis

7.1 Environmental Analysis Assumptions

This chapter provides a summary of environmental constraints associated with the proposed TOD site/study area. This analysis of existing conditions and environmental constraints focuses on the following land use-based issues that would require analysis under the California Environmental Quality Act (CEQA):

- Biological resources
- Cultural and historic resources
- Noise and vibration
- Hazards and hazardous materials
- Air quality
- Recreational resources
- Hydrology/water quality
- Visual/aesthetics

Overall, no fatal flaws were identified that would prohibit the TOD at the SANBAG sites. However, there are several areas of concern or environmental constraints that will require additional evaluation, agency coordination, and possible mitigation should development occur within those areas. These constraints would not preclude development. Each resource would need to be evaluated in light of the development funding source (private, local, state or federal) and in light of the laws and regulations protecting the resource in question. A summary of each of these constraints is provided in the following existing conditions analysis.

For the purposes of the environmental constraints analysis, the study area was confined to the SANBAG parcel boundaries (refer **Figures 2.1, 2.2** and **7.1**). Additional proposed project design features such as pedestrian crossings were also taken into consideration as part of this analysis. It is anticipated that the pedestrian crossings would be part of a separate project associated with improvements to the Metrolink Upland Station. As currently proposed, these improvements would be within the existing rail ROW. Where appropriate, resources located outside of the project sites were identified for each of the resource topics. The following sections provide an evaluation of potential environmental constraints and/or impacts of the identified alternative scenarios.

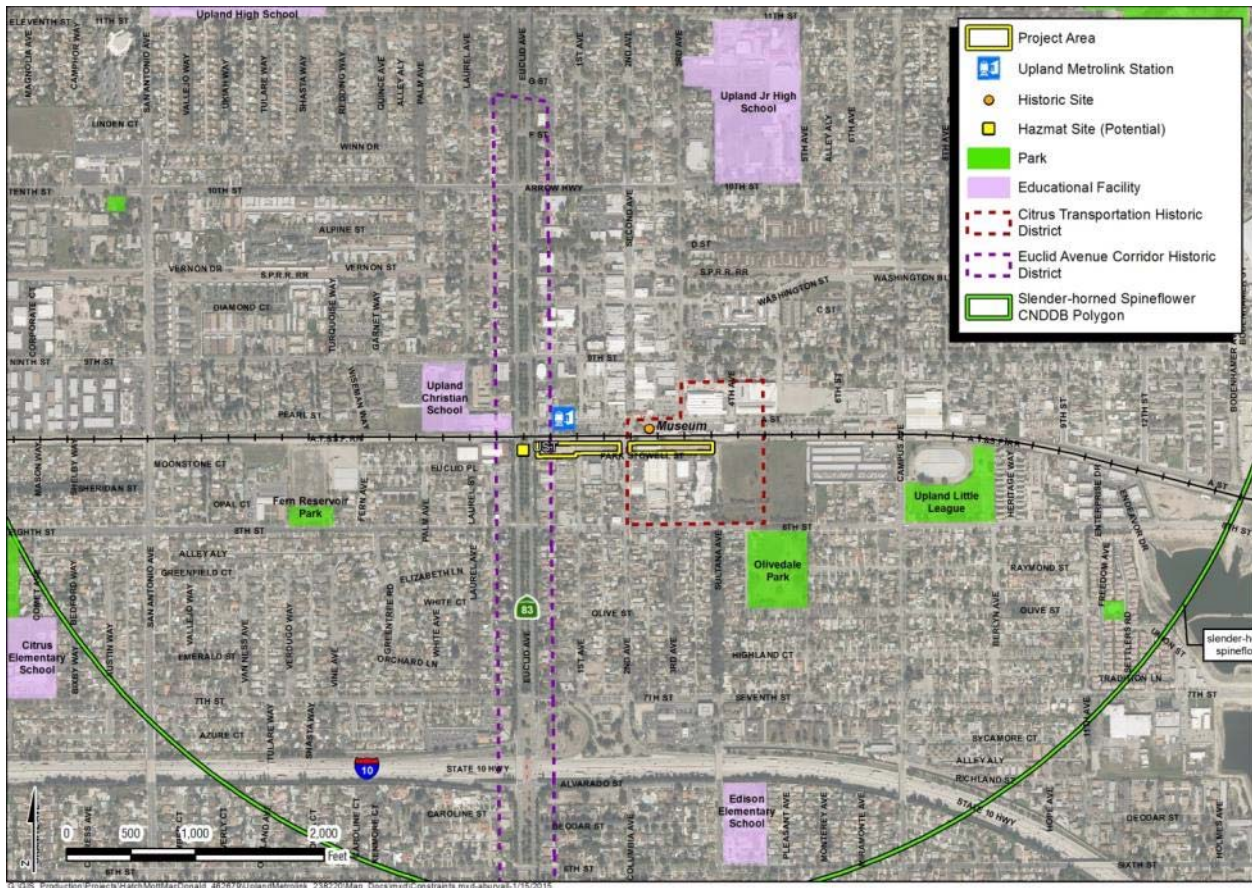
7.2 Existing Conditions Analysis

7.2.1 Biological Resources

Data Sources/Methods

The project sites were evaluated for the potential to support special-status species based upon publicly available data including a search of the California Natural Diversity Database (CNDDB) and California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants for records occurring in the quadrangle including and surrounding the project sites, U.S. Fish and Wildlife Service (USFWS) critical habitat mapper and National Wetland Inventory mapping, aerial photography, Natural Resource Conservation Service (NRCS) soil mapping, and U.S. Geological Survey (USGS) topographic maps. This information was then used to identify potential future survey activities and regulatory approvals that may be required for development of an alternative scenario under consideration.

Figure 7.1: Project Study Area



Source: HDR

Alternative Scenario Evaluation

The project sites are located in an urban center that is largely developed. Undeveloped areas within the area are generally limited to parks or are vacant lots that have been subjected to previous grading or development activities. SANBAG Property #1 is currently developed with two buildings and associated paving and parking areas covering the parcel. There are few ornamental trees and landscape sparsely located throughout the property. SANBAG Property #2 is currently vacant with remnants of building pads, pavement, and parking area. There were no visible drainage features traversing the project sites. A potential species list was generated for the area, and based on the habitats visible in aerial photographs, a general habitat suitability evaluation was completed.

The Project ultimately proposes development and redevelopment of vacant and underutilized sites. SANBAG Property #2 is bounded by Euclid Avenue to the west, 2nd Avenue to the east, existing Metrolink tracks and infrastructure to the north, and Stowell Avenue to the south. Beyond these adjacent uses, there is existing urban development consisting of buildings, pavement, and ornamental landscaping. SANBAG Property #1 is bounded by 2nd Avenue to the west, and existing Metrolink tracks and infrastructure to the north. Adjacent land east of SANBAG Property #1 is currently a vacant lot. This vacant lot is currently in the development phase for future residential uses. However, due to the proximity of the vacant lot to SANBAG Property #1, there is a potential for sensitive bird species (such as the burrowing owl) to occur close to the project site.

Although the project sites do not fall within federally-designated critical habitat, the project sites are located in an area where suitable habitat for the endangered slender-horned spineflower (*Dodecahena leptoceras*) may occur. Slender-horned spineflower is associated with intermediate to late successional stages in alluvial scrub habitats. It typically occurs in washes, on flat benches and terraces away from active stream channels, and in uplands or dry drainage channels not associated with developed floodplains. Textures on soils supporting slender-horned spineflower include silt, loamy sand, and sand. These soils may contain gravel or cobble.

Findings and Recommendations

Based on the existing conditions on site (e.g. fully developed and urban lots), it is anticipated that no special status plant or animals species exist in the local vicinity due to the level of past disturbance and non-native plant species in the area. Although no biological resources are anticipated under implementation of any of the alternative scenarios, it is recommended to conduct a general biological survey to confirm existing site conditions to identify, if needed, additional species- or resource-specific mitigation measures. The results of the general biological survey would confirm if a pre-construction survey or focused surveys would be needed for sensitive species if there is potential for occurrence on the project sites.

7.2.2 Cultural and Historic Resources

Data Sources/Methods

Historic and cultural (or archaeological) resources are known to occur within the study area. To determine if one or more of these resources occur with the study area for each of the alternative scenarios, a review of the City of Upland General Plan, HDUSP, and supporting HDUSP Initial Study (IS) and Environmental Impact Report (EIR) were conducted. In addition, the National Park Service's National Register of Historic Places (NRHP) Program Spatial Data was reviewed to determine if any NRHP-listed sites occurred within or in close proximity of the study area for each alternative scenario.

Alternative Scenario Evaluation

Historical Resources

Based on the data sources reviewed, one historical resource listed on the NRHP is located adjacent to the alternative scenarios under consideration. A historical resource is identified as Euclid Avenue (from 24th Street in Upland to Philadelphia Street in Ontario) and was listed on the NRHP in 2005. Euclid Avenue is also listed on State List of Historic Sites. This finding may potentially impact SANBAG Parcel #2 which abuts Euclid Avenue. Historic functions of this resource are identified as landscape/plaza use, transportation/road related use, and transportation/rail related use. While it is anticipated that no direct changes would be made to Euclid Avenue as a result of the development of any of the alternative scenarios, an analysis of potential impacts to this historical resource would need to be covered under the CEQA document prepared for the Project. While this analysis assumes no Federal funding, if Federal funding or approvals are involved, the development of the sites may require consultation with and approval from the California State Historic Preservation Officer (SHPO).

The City of Upland's General Plan is currently being updated and the City adopted the HDUSP in 2011. There are two designated historic districts in the vicinity of the Metrolink Upland Station (see **Figure 4.3**), which are contained a larger Historic Preservation Overlay Zone. These historic districts include the Euclid District and the Citrus Transportation Historic District. According to the Specific Plan, the City's Local Register identifies 154 structures with potential national, state, or local historic significance that are located within the Historic Preservation Overlay Zone.

SANBAG Parcel #1 is located entirely within the Citrus Transportation Historic District. SANBAG Parcel #2 is within both the HDUSP's Euclid District and Citrus Transportation Districts (Figure 3). Although both parcels are located within historic districts, they may not be historical sites. The westerly approximately 265' (as initially estimated by basic visual inspection) of parcel #2 is located in the Euclid District. SANBAG Parcel #2 is currently a vacant lot with remnants of building slabs and parking lots scattered throughout the site. SANBAG Parcel #1 currently has two structures on the site. One structure (located at 255 E. Stowell Street) appears to be a

prefabricated corrugated steel warehouse building currently occupied by a portable heating company. The other structure appears to be an office building. Based on a review of historical aerials of the area, these structures appear on photo aerials dating back to 1938. Under all alternative scenarios, these buildings on SANBAG Parcel #1 would be demolished. While it is anticipated that some modifications to the structures have been made over the years, both structures would need to be assessed in a cultural resources report to determine structure age and if there is a need for further historical documentation.

Archaeological Resources

As identified in the IS prepared for the HDUSP, the area in which the two sites are located are predominately urbanized with land area having been previously disturbed. No archaeological resources are known to occur within the area and the likelihood of archaeological resources existing on-site is minimized by the land area having been previously disturbed. However, it is not known at this time the depth or age of the artificial fill at the two project sites. Depending on the conditions of the underlying fill or soil, there could be a high potential for discovery of historical archaeology resources.

Paleontological Resources

Under CEQA Guidelines, potential impacts to paleontological resources resulting from project implementation must be evaluated and, if found to be significant, mitigated to below a level of significance. Paleontological resources include fossils (i.e. the remains and/or traces of prehistoric plant and animal life), as well as the collecting localities and the geologic formations containing those localities. Estimates of the likelihood of the presence of paleontological resources at a given site are based on the identification of underlying geologic formations and the paleontological sensitivity of these formations.

The City of Upland lies upon a thin blanket of alluvial sediments derived from south-bound erosion of the San Bernardino Mountains. Most of these sediments were deposited during the Holocene era (to 10,000 years before the present), and most paleontologists consider Holocene alluvial sediments too young to contain fossils. Deep excavations, such as those exposed during construction of parking garages, may expose strata associated with late Pleistocene (10,000 to 120,000 years ago) alluvial deposition.

Based on the IS prepared for the HDUSP, no paleontological resources are known to occur within the HDUSP area and the likelihood of paleontological resources existing on-site is minimized by the land area having been previously disturbed. According to U.S. Geological Survey maps, the project sites are underlain by artificial fill. This is not a naturally occurring formation, but is young geologic material used in the construction building facilities. Artificial fill is considered to have zero paleontological resource potential. Thus, any construction activities involving grading or excavation of the artificial fills would have no potential to expose fossil-bearing geologic formations or adversely impact paleontological resources. However, no information is available on the depth of the artificial fill at the two sites at this time.

Findings and Recommendations

Historical/Archaeological Resources

Publicly available data on identified cultural resources is generally limited due to the sensitivity of the location and condition of the resource. This constraints analysis relies on publicly available data and is not based on a formal records search. A formal records search request will require the development of an area of potential effect (APE) that captures both the direct and indirect affect area for the alternative scenarios selected for further evaluation. Once an APE is defined, it is recommended to conduct a formal records search request through the California Information Center.

If federal funding or approvals are involved, the development of the APE would require consultation with and approval from the SHPO. Additionally, coordination with local tribes would also be necessary. After an APE is established for the selected alternative scenario, a detailed field archaeological and architectural survey would be required to determine if any undocumented resources exist on the project sites. Based on the results of this evaluation, each of the alternative scenarios carries a potential to directly or indirectly affect both documented

historical resources along with other undocumented historical and archaeological resources. For this reason, the following recommendations are proposed for each of the alternative scenarios selected for further consideration:

- Establish an APE for each of the selected alternative scenarios.
- If federal agency approvals or funding are contemplated, seek concurrence from SHPO.
- Determine if any TOD planning would require amendments to existing general plan land use designations, which could trigger consultation requirements under Senate Bill (SB) 18.
- Complete an archival records search to include the cultural resource databases housed with the South Central Coastal Information Center (SCCIC), the Sacred Lands File (SLF) kept with the Native American Heritage Commission, the BLM's General Land Office (GLO) records, and any available historic aerial imagery and documents
- Complete a Phase 1 archaeological survey for the APE following the Secretary of the Interior's (SOI) Standards and Guidelines for Archaeology and Historic Preservation (48FR 44716, September 29, 1983).
- If warranted based on the findings of the Phase 1 survey, complete archaeological testing including an extended Phase I and Phase II significance evaluation.
- Comply with local regulations when completing any required resource evaluations.
- Based on the findings of the cultural resources records search and field survey, additional avoidance, minimization, or mitigation measures would be identified.

Paleontological Resources.

As noted above, no information is currently available on the depth of artificial fill present at the two sites. Therefore, it is not known at this time whether there is the potential to expose fossil-bearing geologic formations with the development of any of the alternative scenarios. A geotechnical study would be necessary to evaluate this possibility. In the case of potential paleontological impacts associated with development at either or both project sites, mitigation could require preparation and implementation of a paleontological monitoring program. Such mitigation would reduce potential paleontological impacts to below a level of significance.

7.2.3 Noise and Vibration

Data Sources/Methods

Data used to prepare this analysis were obtained from the City of Upland General Plan, the City of Upland Municipal Code, the Upland Downtown Specific Plan Draft Traffic Study and the Historic Downtown Upland Specific Plan. The section utilizes existing noise measurements taken in the project area and relies on the State and City noise guidelines for commercial and residential development.

Alternative Scenario Evaluation

The primary noise sources in the vicinity of the project sites include industrial uses, car and truck traffic, noise from major arterial roadways such as Euclid Avenue and Arrow Highway, and train noise associated with the Upland Metrolink Station. Traffic along these arterial roadways generates substantial noise levels at roadside receptors. Both mobile and stationary noise sources contribute to the existing noise levels within the project area.

The Upland Metrolink Station is located within the Citrus Transportation District, south of A Street and adjacent to the Project sites. The rail ROW traverses an east-west direction, parallel to A Street. Passenger rail service operates from approximately 4:30 am to 10:00 pm Monday through Friday, from 7:30 am to 12:30 am on Saturday, and from 7:30 am to 8:45 pm on Sundays. In addition to serving as a regional passenger rail corridor, the rail ROW is utilized by Amtrak for nationwide passenger service, and by the BNSF Railway Company for cargo shipping. The existing uses along the rail ROW include a transitional mix of industrial and commercial uses, with residential uses located further away.

Land uses that are considered sensitive receptors to noise include residential areas, schools, hospitals, churches, recreational areas, office buildings, and transient lodging. Residential areas are also considered particularly

sensitive to noise during the nighttime hours. Land uses surrounding the Project sites consist of a mixture of suburban residential, commercial, industrial, and vacant land uses. Homes in the vicinity of the project sites are generally single- and multi-family residences.

Based on noise measurements taken at Stowell Street and Sultana Avenue (100 feet from Metrolink platform), noise levels range from 47.2 dBA to 104.3 dBA. A noise environment of 50 dBA CNEL to 60 dBA CNEL is considered to be “normally acceptable” for residential uses. The State indicates that locating residential units, parks, and institutions (such as churches, schools, libraries, and hospitals) in areas where exterior ambient noise levels exceed 65 dBA CNEL is undesirable. The Governor’s Office of Planning and Research (OPR) recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect their lower existing outdoor noise levels in comparison with urban environments.

In addition, Title 25, Section 1092 of the California Code of Regulations, sets forth requirements for the insulation of residential dwelling units from excessive and potentially harmful noise. Whenever residential dwelling units are proposed in areas with excessive noise exposure, the developer must incorporate construction features into the building’s design that reduce interior noise levels to 45 dBA CNEL. The City of Upland requires this noise limitation for residential dwellings. This noise level standard would apply for any of the alternative scenarios selected.

Findings and Recommendations

Pending the selection of alternative scenarios for further consideration, a project-specific noise and vibration study is recommended for the selected alternative scenario to quantify potential noise and vibration impacts. This study would include the collection of ambient noise data for multiple receptor locations to better characterize the severity of potential noise impacts. Since the project sites are located adjacent to an existing Metrolink Station, any of the alternative scenarios may result in the development of residential uses next to a noise generating use. Noise reduction measures would be required to ensure noise levels at the new development under all scenarios meet City interior and exterior noise standards. While this would not result in a “fatal flaw” constraint for the project sites, mitigation measures and project design features would need to be incorporated into the development. Mitigation measures or project design features associated with the selected alternatives scenario may include, but are not limited to, establishing QZ at grade crossings, constructing noise barriers, installing rail lubricators, or installing other noise-absorptive technologies. The establishment of a quiet zone would extend outside of the SANBAG parcel boundaries and could require additional space requirements at the rail crossings for implementation. As part of the overall constraints analysis, a separate preliminary quiet zone analysis is currently being conducted to analyze quiet zone feasibility at the Euclid Avenue, 2nd Avenue, and Campus Avenue rail crossings.

7.2.4 Hazards and Hazardous Material

Data Sources/Methods

The alternative scenarios were assessed for their potential to encounter documented hazardous materials sites. A high level assessment was completed by reviewing the California Department of Toxic Substances Control (DTSC) EnviroStor database (2015) to identify sites of concern located in the vicinity of the alternative sites.

Alternative Scenario Evaluation

The analysis identified four sites of concern located in the vicinity of the study area (see **Appendix L**). The project area contains a mixture of commercial, industrial, institutional, and residential land uses.

Findings and Recommendations

According to the EnviroStor database, there is one Underground Storage Tank (UST) site documented to the west of the project area (see **Figure 7.1**) on Euclid Avenue. Following the selection of one or more of the alternative scenarios for further consideration, further database research and field investigation would be required

to assess the known sites of concern along with identifying other potentially undocumented sources of hazardous materials. A Phase I Environmental Site Assessment (ESA) following American Society of Testing and Materials (ASTM) procedures should be conducted for the alternative scenario selected to verify the accuracy of the site information provided through EnviroStor (2015) and to document actual conditions on the ground. The results of the Phase I ESA will determine whether a Phase II Preliminary Site Investigation (e.g. drilling and sampling) would be required, for one or more of the alternative scenario.

In addition, the following measures related to geologic hazards would likely be required as part of the development process at the two project sites under any of the alternative scenarios:

- Preparation of a site-specific geotechnical investigation for the two project sites, and inclusion of associated applicable findings and recommendations.
- Conformance with appropriate regulatory guidelines and standard engineering practices, including the Uniform Building Code (UBC) and California Building Code (CBC).
- Use of remedial grading and standard engineering/design techniques to address potential issues related to liquefaction and soil-related hazards such as expansion and compression.
- Evaluation of static and pseudo-static slope stability analyses for proposed cut and fill slopes and retaining structures.

With the implementation of such measures, geology/seismicity issues and hazards are unlikely to represent significant site constraints.

7.2.5 Air Quality and Greenhouse Gases

Data Sources/Methods

Air quality is defined by ambient air concentrations of specified pollutants identified by the Environmental Protection Agency (EPA) to be of concern with respect to the health and welfare of the general public. The EPA is responsible for enforcing the federal Clean Air Act (CAA) of 1970, as amended. The CAA required the EPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the EPA established both primary and secondary standards for several pollutants (called 'criteria pollutants').

Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The California Air Resources Board (CARB) is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and California Ambient Air Quality Standards (CAAQS). The project sites are located within the South Coast Air Basin (SCAB) in the southwestern corner of San Bernardino County. Therefore, the South Coast Air Quality Management District (SCAQMD) is the local agency responsible for administration and enforcement of air quality regulations and standards in the SCAB. The SCAQMD and SANBAG are responsible for developing and implementing the Air Quality Management Plan (AQMP) for attainment and maintenance of the ambient air quality standards in the SCAB. Source materials reviewed as part of this evaluation included the SCAQMD's Air Quality Handbook, SCAQMD's AQMP, SCAG's regional transportation plan (RTP), and air quality data summaries provided by the California Air Resource Board (CARB).

Alternative Scenario Evaluation

The SCAB in which the City of Upland is located, is characterized as having a "Mediterranean" climate (a semi-arid environment with mild winters, warm summers, and moderate rainfall. The SCAB is a 6,600-square mile area bounded by the Pacific Ocean to the west, and the San Gabriel, the San Bernardino, and the San Jacinto Mountains to the north and east, with the southern boundary coinciding with the southern most county lines of Orange County and the non-desert portions of Riverside and San Bernardino Counties. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Geronio Pass area in Riverside County. The SCAB's terrain and geographical location (i.e., a coastal

plain with connecting broad valleys and low hills) determine its distinctive climate. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The extent and severity of the air pollution problem in the SCAB is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

Attainment of the standards is the goal of each air basin. The SCAB suffers from periods of poor air quality and exceeds NAAQS for multiple criteria air pollutants. Specifically, the SCAB is designated as "extreme nonattainment" for ozone, "serious nonattainment" for particulate matter (less than 10 microns; PM₁₀), "nonattainment" for PM_{2.5}, and "serious maintenance" for CO (see **Table 7.1**).

Table 7.1: Federal and State Attainment Status for South Coast Air Basin (SCAB)

Pollutant	Federal Classification	State Classification
O ₃ (1-hour standard)	--	Nonattainment
O ₃ (8-hour standard)	Nonattainment	--
PM ₁₀	Nonattainment	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Serious Maintenance	Attainment
NO ₂	Unclassified/Attainment	Nonattainment
SO ₂	Attainment	Attainment
PB	Attainment*	Attainment

Source: CARB 2015

SCAQMD operates a network of ambient air monitoring stations throughout San Bernardino County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS thresholds. The City of Upland is located in the Northwest San Bernardino Valley Source Receptor Area (Area 32), and the nearest monitoring station is located within the City at 1350 San Bernardino Road.

Overall, there has been a trend of improvement in air quality in the SCAB, as indicated by the data collected at the Upland monitoring station. There was a reduction in the annual average of PM₁₀, PM_{2.5}, and nitrogen dioxide detected at the monitoring station over the last few years. However, the Upland monitoring station has regularly experienced higher than acceptable CAAQS threshold for ozone, PM₁₀ and PM_{2.5}. The data from the monitoring station indicate that air quality is in attainment of all other standards.

Sensitive receptors are defined as populations that are more susceptible to the effects of pollution than the population at large. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities. There are currently no existing residential uses or other sensitive receptors adjacent to the project sites. However, the closest off-site sensitive land use to the project sites are the existing residential uses south of the project sites, located approximately 200 feet from the southern boundary of the project sites.

Construction of any of the alternative scenarios would have the potential to create air quality impacts through the use of heavy-duty construction equipment, construction worker vehicle trips, material delivery trips, and heavy-duty haul truck trips generated from construction activities. Similarly, operation of any of the alternative scenarios may have the potential to create operational air quality impacts through the creation of new residential uses.

If the development of either of the project sites is expected to generate additional vehicular traffic (increasing mobile source air emissions) or involve establishment of new sources of stationary source emissions (e.g. electric generators or other fossil fuel burning machinery), air quality and greenhouse gases impacts under CEQA may be significant. Such impacts could also occur as a result of particulate matter generated during construction activities, including dust and diesel exhaust from heavy equipment. In addition, hazardous compounds such as asbestos-containing materials and lead-based paint could be released by demolition of existing structures on SANBAG Site #1. The use of diesel equipment (whether stationary or mobile) during construction or operation of the projects could generate some nuisance odors. Project development would likely be required to consider design measures to avoid or minimize nuisance odors.

Findings and Recommendations

An air quality study would be required to evaluate potential air quality impacts associated with the development of any of the alternative scenarios. If impacts would be significant, mitigation is likely to include construction best management practices (BMPs), such as dust suppression techniques, controls on diesel equipment operation, use of low Volatile Organic Compound (VOC) coatings, and City and State safety requirements for demolition and removal of toxic materials. Overall, however, air quality concerns are not likely to represent significant constraints on the development of the two project sites since the duration of construction can be modified and BMPs implemented for the selected alternative scenario. In addition, operation of the Project may yield air quality benefits (through quantification and reduction of vehicle miles travelled (VMT) when compared to the no project and future without project conditions.

7.2.6 Recreational Resources

Data Sources/Methods

To determine the potential direct and indirect effects to recreational resources, park and recreational resources that would serve the HDUSP area (which includes the project sites) were identified. Resources, such as public parks, trails, and public golf courses were inventoried within the City of Upland. Recreation areas and trails were identified through a review of the City of Upland's General Plan along with a review of local aerial photography and websites.

Alternative Scenarios Evaluation

Table 7.2 identifies the parks and recreation facilities that serve the HDUSP area based on their location and proximity to the Downtown. Olivedale Park (6.5 acres), located just south of the HDUSP's southern boundary, is the nearest park for use by future residents on the project sites. There are an additional 46.0 acres of parkland within proximity to the Downtown area as well as the Gibson Senior Center, located within the Downtown.

Table 7.2: Park and Recreational Facilities within the Study Area

Park/Recreational Facility	Location	Size	Approximate Distance from Project Sites
Gibson Senior Center	250 N. 3 rd Street; 3 rd Street and C Street	13,600 square feet	0.19 mile N of project sites
Olivedale Park	8 th Street, west of Campus Avenue	6.5 acres	0.11 mile SE from project sites
Fern Reservoir Park	8 th Street, between Euclid Avenue and San Antonio Avenue	1.0 acre	0.30 mile SW from project sites
8 th Street Reservoir Park (Warders and Hawkins Fields)	8 th Street, east of Campus Avenue	acres	0.13 mile E from project sites
Memorial Park	1200 Foothill Boulevard	40.0 acres	0.90 mile NE from project sites
Pacific Electric Inland Empire Trail	Along the Old Pacific Electric Rail line	18.1 miles	0.22 mile N from project sites

Source: HDR

Findings and Recommendations

The proposed alternative scenarios would be limited to development within the existing SANBAG parcels. Improvements associated with supporting rail improvements would be contained within the existing rail ROW (anticipated to be a separate project). Implementation of any of the alternative scenarios on the SANBAG parcels would not result in the removal of any identified parklands or resources since the project parcels do not currently contain parkland or trail features nor are the parcels adjacent to park or trail facilities. Development of any of the alternative scenarios may occur in phases over several years, based on market demand; thus, any increase in demand for parks and recreation facilities would occur gradually as additional development is added to the area. Future development within the project sites under any of the alternative scenarios would be required to pay the park acquisition and development impact fee in accordance with Chapter 3.44, Capital Impact Fees, of the City's Municipal Code to compensate for the impacts of the proposed project on park and recreational facilities. Payment of the applicable fees and provision of on-site amenities, as proposed, would reduce potential impacts to a less than significant level.

7.2.7 Hydrology / Water Quality

Data Sources/Methods

The analysis for determining potential impacts to hydrology and water quality was conducted by reviewing the Santa Ana River Basin Water Quality Control Plan, the Federal Emergency Management Agency's (FEMA) flood zone maps, GIS data and other mapping.

The project sites are located within Regional Water Quality Control Board (RWQCB) Region 8, Santa Ana, within the Cucamonga Creek Watershed, which is approximately 92 square miles in area. The watershed includes portions of the Cities of Chino, Ontario, Rancho Cucamonga, and Upland, and sections of unincorporated Riverside and San Bernardino Counties. The City of Upland drainage patterns are generally towards the south and are tributary to existing flood control facilities within the Cucamonga Watershed. These facilities include the South Upland Storm Interceptor Segment 1 and 2. These facilities drain into the 8th Street Detention Basin. The local drainage facilities within the HDUSP area are tributary to West Cucamonga Channel, which confluences with Cucamonga Channel and drains into Prado Basin. The City of Upland's primary receiving waters is Cucamonga Creek which drains into Prado Basin. Prado Park Lake has been listed on the 2006 CWA Section 303(d) list with the main pollutants being Nutrients and Pathogens.

Flood zone maps were reviewed to determine if any of the project alternative scenarios are located within a FEMA Special Flood Hazard Area (SFHA). The SFHA is the area where the National Flood Insurance Program's floodplain management regulations must be enforced and an area where the mandatory purchase of flood insurance is applicable.

Alternative Scenarios Evaluation

Water Quality

Residential and urban developments are often significant sources of storm water pollution. Development and redevelopment activities have two primary effects on water quality; they are sources of erosion and sedimentation during the construction phase and they have long-term effects on runoff once the development is complete. Residential and urban development can affect water quality in three ways:

- Impervious surfaces associated with development increase the rate and volume of storm water runoff, which increase downstream erosion potential.
- Urban activities generate dry-weather ("nuisance") flows, which may contain pollutants and/or may change the ephemeral nature of streams and the degradation of certain habitats.
- Impervious surfaces increase the concentration of pollutants during wet weather flows.

The potential for negative water quality effects is generally correlated with the density of development and the amount of impervious area associated with the development.

The project alternative scenarios would be subject to the requirements of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit, which would require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation of construction BMPs to minimize effects on water quality. Because the City of Upland is a co-permittee, the Municipal Stormwater (MS4) Permit (R8-2010-0036), post-construction BMPs would likely be required as part of project design. In addition, new development or significant redevelopment projects are required to prepare a Water Quality Management Plan (WQMP). WQMPs shall include BMPs for source control, pollution prevention, site design, LID implementation, where feasible, and structural treatment control BMPs. WQMPs shall include control measures for any listed pollutants to an impaired waterbody on the 303(d) list such that the discharge shall not cause or contribute to exceed receiving water quality objectives threshold. Specific source control BMPs for each priority development project shall be included. Treatment control BMPs shall be in accordance with the approved model WQMP.

Hydrology/Hydraulics

Although the project sites do not contain existing drainages or flood control facilities, the development of any of the alternative scenarios could result in additional stormwater generated. It is anticipated that hydrological conditions within the project sites would not likely be substantially altered by these alternatives. However, additional design and hydrological analysis would be required to verify that stormwater generated on site is treated through BMPs before leaving the project site and changes to stormwater flow conditions are analyzed and mitigated accordingly.

Flood Hazard.

Based on Flood Insurance Rate Map (FIRM) Panels 06071C8609H and 06071C8607H, the alternative sites and surrounding areas are not located within a FEMA SFHA and are classified as Zone X. Zone X are areas determined to be outside of the 500-year and 100-year floodplains by FEMA.

Findings and Recommendations

The project alternative scenarios would be subject to the requirements of the NPDES Construction General Permit, which would require the preparation of a SWPPP. Since the City of Upland is a co-permittee of the San Bernardino County MS4 Permit R8-2010-0036, development within the City of Upland is subject to the waste discharge requirements of the MS4 Permit. As a result, requirements from both permits could apply for any of the alternative scenarios. The development of any of the alternative scenarios would also require the preparation of a site specific WQMP.

The project sites are generally located in Zone X and would not require a Physical Map Revision (PMR) or a Letter of Map Revision (LOMR) associated with FEMA's flood map revision process. It is anticipated that the implementation of any of the alternative scenarios would not affect any drainages or flood control facilities. Overall, however, water quality concerns are not likely to represent significant constraints on the development of the two project sites since site design can be modified and BMPs implemented for the selected alternative scenario.

7.2.8 Visual Resources

Data Sources/Methods

The project sites are located in a highly developed, urban area. Developed land uses (industrial, commercial, residential, recreational, public, and institutional) are located throughout the area. Informational sources used for this constraints analysis included the Caltrans – California Scenic Highway Mapping System and the General Plan for the City of Upland.

Alternative Scenario Evaluation

The visual characteristics of future development at either of the two project sites are governed primarily by the development guidelines contained in the HDUSP. These development guidelines are discussed in **Section 4.2**.

Based on a review of the California Scenic Highway Mapping System, the project alternative scenarios are not located near any designated State Scenic Highways. The project alternative scenarios are not likely to result in a substantial change to the visual character because the study area is highly developed and already contains existing buildings and associated infrastructure.

The San Gabriel Mountains and Mount Baldy, situated north of the project sites are scenic resources, since they involve undisturbed natural areas and offer distant vistas of mountain backdrops from portions of Upland. However, the project sites are situated in the southern portion of the City, which is relatively flat and lies at a lower elevation than the northern portion of the City. In consideration of the distance to the mountain range, built-out nature of the area, as well as the density and orientation of the existing buildings and structures, only limited and mostly obstructed views of the mountains are appreciated from the HDUSP area.

There are no General Plan designated scenic views or vistas within the City. Additionally, the HDUSP area is not located within or a part of a designated scenic vista. While the City of Upland does not identify scenic vistas within the City, Euclid Avenue is designated as being within the scenic corridor overlay zone (Euclid Avenue (SC) Zone). Specifically, all lands located within 250 feet of the center line of Euclid Avenue between the north and south City limits are included. Any physical changes to the Euclid Avenue SC Zone as a result of any of the project alternative scenarios would require careful evaluation and further consideration in the CEQA process.

The Scenic Corridor Overlay (SC) zone is intended to provide for and promote orderly growth along major routes of the city designated as being of distinctive scenic, cultural, and/or historical importance, while protecting, preserving, and enhancing the unique attributes of such areas as a valuable resource of the community. Since all of the alternative scenarios would result in development in a portion of the SC zone, the CEQA document prepared would need to provide analysis on the consistency of the selected alternative scenario against the City's guidelines for development within the SC Zone.

Findings and Recommendations

It is anticipated that the development of the two project sites under any of the alternative scenarios would be required to adhere to the City's development guidelines and zoning standards. Adherence to these development guidelines and zoning requirements would ensure that development under any of the alternative scenarios would be consistent with visual character and SC zone in the area. In addition, much of the infrastructure associated with the alternative scenarios would be placed at the ground surface and generally would not represent a prominent visual feature in the existing urban landscape. The exception to this would occur in the case of any new ancillary or supporting facilities (e.g. new pedestrian overcrossing) and residential structures. These facilities would require further evaluation as engineering details become available and, if necessary, visual simulations from sensitive viewing areas. Changes to existing visual landscapes will be particularly importance in downtown Upland.

To analyze the visual impacts of the project alternative scenarios, the existing views of the selected alternative scenario would have to be compared to the post-development views. Key Viewing Areas (KVA's) represent the most significant locations from which the project would be seen and would need to be established as part of the CEQA analysis. KVA's are used to assess impacts on visual resources with various levels of sensitivity, in different landscape types and terrain, and from various vantage points. Analysis within the CEQA document should provide an assessment of the project's impact on the visual character within the area and include an analysis based on visual impact susceptibility and visual impact severity. These criteria should include the following components:

- Visual Impact Susceptibility - an assessment of the degree of visual degradation a project will have on the surrounding views. The impact of Visual Susceptibility is based on visual quality, viewer sensitivity, and viewer exposure.
- Visual quality - a measure of the overall impression or appeal of an area as determined by the particular landscape characteristics. This takes into account the visual quality of the surrounding natural features (trees, vegetation, etc.), and neighboring buildings.

- Viewer sensitivity - reflects the importance placed on a given landscape or urban area based on the human perceptions of the intrinsic beauty or aesthetic quality of the existing landforms and adjacent structures.
- Viewer Exposure - takes into account the residents and other users of the area whose daily views will be most affected by development.
- Visual Impact Severity - a study of the degree of visual alteration of a development on the current environment and is based on visual contrast, project dominance, and view impairment.
- Visual Contrast – is assessed based on how the project affects the current view of visual form, color, and texture in and around the project site. Existing trees, vegetation and landforms are also used to quantify the visual contrast created by the proposed project. In short, Visual Contrast evaluates how well a proposed project fits into the current environment.
- Project Dominance - measures how much area a project takes up within a viewshed based on horizontal and vertical parameters, and analyzes to what extent the project blocks or obstructs existing buildings, landforms and other structures. Dominance can be classified as subordinate, co-dominant, or dominant.
- Visual Impairment - refers to the extent by which lower quality elements visually impede higher quality elements.

Overall, visual/aesthetic concerns are not likely to represent significant constraints on the development of the two project sites under any of the alternative scenarios since site design would be governed by City's development guidelines and standards.

7.2.9 Summary of Environmental Constraints

In summary, the environmental constraints analysis provides a high level, desktop constraints evaluation of the three alternative scenarios currently under consideration by SANBAG and the City of Upland to provide a conceptual and land use constraints analysis for future TOD along the Upland Metrolink Station. The main objective of this evaluation was to identify environmental "fatal flaws" for each alternative scenario with particular focus on biological and cultural resources.

Based on the findings of this analysis, no environmental fatal flaws were identified for any of the alternative scenarios that would otherwise preclude them from further consideration; however, each alternative possesses unique challenges. This evaluation will be need to supplemented at a later date once preliminary engineering becomes available in order to develop a project footprint (or area of potential effect) to allow for the completion of a more detailed environmental analysis of alternative scenario selected for further consideration.

It is anticipated that improvements associated with the Metrolink Upland Station (e.g. platform extensions, station modernization) could be cleared under a Statutory Exemption per CEQA Guidelines Section 15275 Specific Mass Transit Projects) which states:

CEQA does not apply to the following mass transit projects:

- The institution or increase of passenger or commuter service on rail lines or high-occupancy vehicle lanes already in use, including the modernization of existing stations and parking facilities;
- Facility extensions not to exceed four miles in length which are required for transfer of passengers from or to exclusive public mass transit guideway or busway public transit services.

While the station improvements currently contemplated can be cleared with a Statutory Exemption, the development of either or both of the SANBAG properties would require further assessment under CEQA. The level of CEQA document (e.g. Initial Study versus Environmental Impact Report) needed for the development of the properties would be determined once a more defined project footprint and development scenario is identified.

Chapter 8 - Funding and Financial Analysis

This chapter highlights two recently-enacted funding programs in California that could be used to implement the land use concepts described in the HDUSP for the Upland Metrolink Station area. These two programs include:

- SB 628 Enhanced Infrastructure Financing Districts (EIFD), enacted in September 2014, which allow cities to finance infrastructure improvements within specified district boundaries using a more limited version of tax-increment financing than was previously available through local community redevelopment agencies;
- SB 862 Affordable Housing and Sustainable Communities (AHSC) Program, which funds projects integrating both affordable housing development with supportive infrastructure improvements in designated TOD or Integrated Connectivity Project (ICP) areas, typically within a one-half mile radius of “quality” transit stops.

The financial analysis was focused on EIFDs and the AHSC program because both are new opportunities to fund TOD-related infrastructure improvements. In many respects, they represent “unchartered waters,” with no EIFD currently in existence in the State, and with the AHSC program guidelines only having recently been finalized by the Strategic Growth Council (SGC) on January 9, 2015. None of the programmed revenue for the AHSC has been awarded. For FY 2014/15, the SGC plans to announce the first solicitation under the AHSC program later this year and award a total of \$130 million, evenly split between affordable housing projects and supportive housing/transportation-related infrastructure.

The AHSC program is to be funded annually by fees charged to polluters through the State’s cap-and-trade greenhouse gas (GHG) emission reduction program. Because the cap-and-trade program expanded in January 2015 to cover transportation fuel producers, the AHSC program share of annual cap-and-trade revenue is projected to increase steadily through FY 2020, peaking at anywhere from \$250 million to \$1 billion annually, according to LAO and independent estimates. In terms of potential revenue yield for the City of Upland, the AHSC program may provide the best new opportunity in years to secure significant grant funding for implementation of the land use concepts identified in this study and the Historic Downtown Upland Specific Plan.

In addition, EIFDs and the AHSC program are symbiotically related in the sense that the AHSC program creates new value through integrated housing and infrastructure investment in project areas served by transit, while the EIFD captures that incremental new value for reinvestment in the project area. This virtuous circle of public- and private-sector investment and reinvestment empowers local cities like Upland to promote economic revitalization and enhanced livability, consistent with both local planning goals and the SCAG Sustainable Communities Strategy (SCS) element of the Regional Transportation Plan. In fact, the SB 628 legislation for EIFDs specifically cross-references the SCS and “transit priority” areas targeted by the AHSC program. Establishment of an EIFD would therefore not only accelerate implementation of desired TOD-related improvements, but increase the competitiveness of the City’s application for cap-and-trade funds under the AHSC program.

8.1 Funding Programs

8.1.1 SB 628 Enhanced Infrastructure Financing Districts

Program Description

SB 628, signed into law on September 29, 2014, allows cities and counties to create EIFDs to finance specified infrastructure projects and facilities. Intended to fill the funding void created by the dissolution of California redevelopment agencies (RDAs) in 2011, EIFDs can use a variety of funding mechanisms for infrastructure projects, most importantly TIF previously used by RDAs, albeit in a more limited form. In a TIF district, property taxes generated by the incremental increase in the assessed value of properties within the district are made available for infrastructure projects and other facilities. Tax rates do not change when TIF is used.

EIFDs can also use direct assessments, parcel taxes, grants, private loans, or any combination thereof. Given the supermajority voter approval threshold associated with the enactment of direct assessments or increased ad

valorem property taxes, tax increment is typically considered a more viable option for financing infrastructure projects, because it does not involve new fees or increased taxes, and is therefore the most likely to gain voter support.

SB 628 eases some of the requirements for establishing Infrastructure Financing Districts (IFDs) originally enabled by SB 308 in 1990, and offers a number of enhancements over traditional IFDs, including:

- a broader range of eligible projects, including transit priority projects, low- and moderate-income housing, actions under Sustainable Communities Strategies, and environmental remediation, among others;
- the elimination of a voter approval requirement for the establishment of an EIFD;
- the lowering of the required voter approval threshold from a two-thirds majority to a 55 percent vote for the issuance of EIFD-backed debt;
- a bonding period of up to 45 years from the date of bonding approval – at least 15 years longer than traditional IFDs;
- the ability to use tax increment financing, subject to the consent of the taxing entities from which property tax revenues are being diverted (school taxes cannot be diverted under any circumstances);
- joint governance of the EIFD by representatives of multiple taxing entities (e.g., counties, municipalities and special districts), all of whom must consent to the EIFDs' use of property taxes they would otherwise collect;
- the ability to use the revenues generated from the EIFD outside the district boundaries, provided that a communitywide benefit can be demonstrated

Cities or counties begin the process by adopting a resolution of intention to establish an EIFD. The resolution must state a time and place for a hearing on the proposal, the proposed district's boundaries, the types of facilities and/or development to be financed, and the need for the district. The city or county sponsoring the EIFD must also prepare an infrastructure financing plan containing the following elements:

- Maximum amount of incremental tax revenues each participating entity proposes to dedicate to the EIFD
- Revenue projections
- A plan for financing public facilities.
- A limit on the total revenues that may be allocated to the EIFD.
- A date on which the district will cease to exist and when tax allocations to the district will end, which can be up to 45 years from the approval date for issuing EIFD bonds or providing an EIFD loan.
- Fiscal analyses of potential impacts on the city or county and other taxing entities.

For the EIFD to be established, a resolution approving the infrastructure financing plan must be adopted by the governing body of each affected taxing entity participating in the diversion of its tax revenues to the EIFD. Voters who reside within the EIFD must approve by a 55 percent majority any bond issuances backed by EIFD revenues.

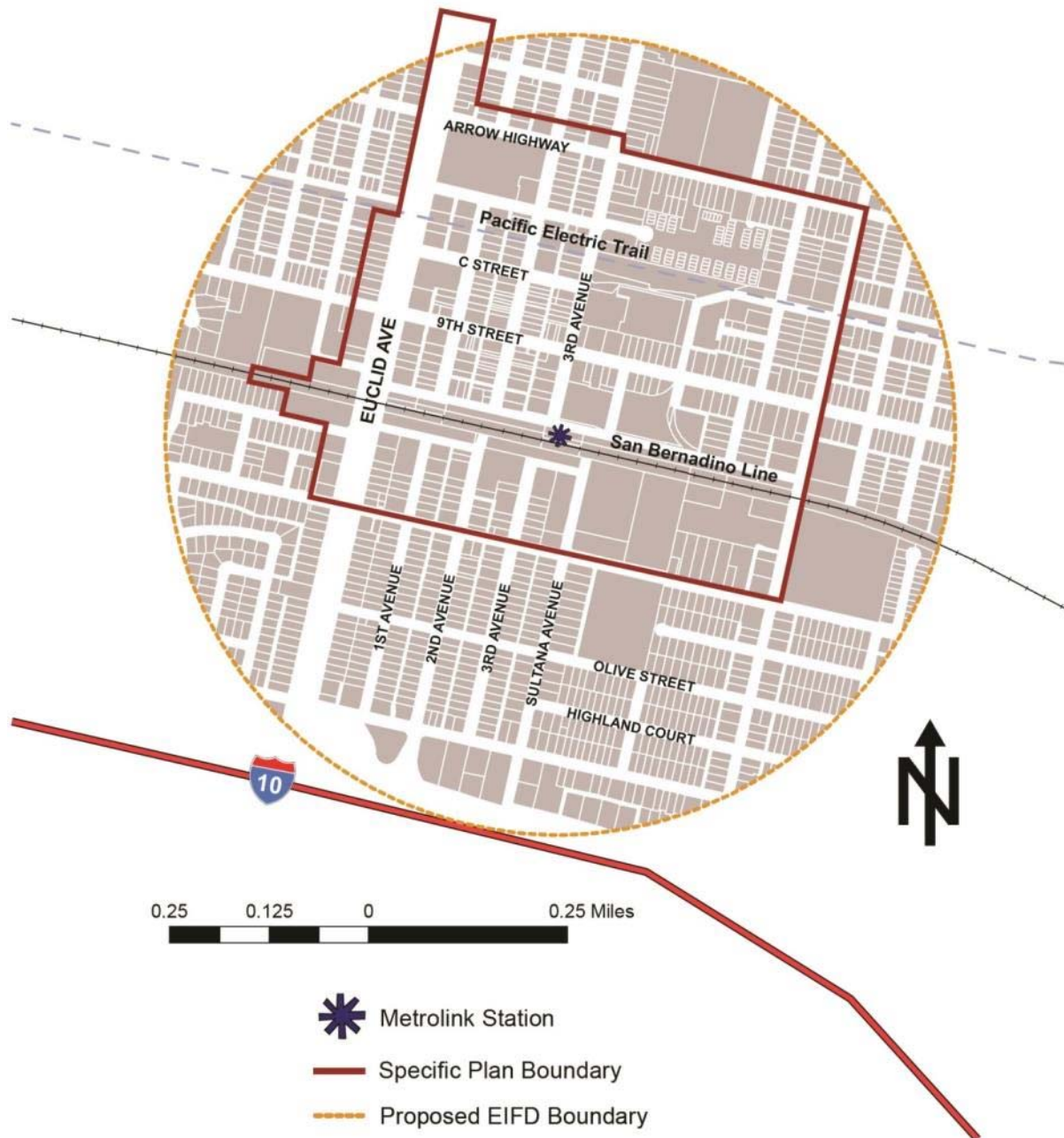
Applicability to Upland Metrolink Land Use Scenario

The Historic Downtown Upland Specific Plan describes the City's vision of a revitalized commercial core characterized by walkable street blocks, a visually appealing streetscape, an active and pedestrian-oriented public realm, and new mixed-use development, including a substantial number of new housing units. The Historic Downtown will be a place where “many people are engaged in many different activities at any one time—living, working, shopping, and engaging in cultural and recreational activities.”

The Upland Metrolink Station is cited in the Plan as a key transportation linkage providing residents with “access to the entire Southern California region.” The establishment of an EIFD around the Upland Metrolink Station would advance many of the City's long-term planning goals by providing dedicated funding for key infrastructure improvements identified in the Specific Plan. These improvements include new public parking garages, streetscape amenities, a new public park, improved access along Pacific Electric Trail, water and sewer improvements, and active transportation elements such as bicycle facilities and sidewalks. All of these are eligible to be funded or financed by an EIFD. **Figure 8.1** below illustrates the parcels included within a one-half mile radius of the Upland Metrolink Station and represents the proposed boundaries of the EIFD for this analysis of TIF

revenue potential. It also shows the relationship between the proposed EIFD boundaries and the Specific Plan area.

Figure 8.1: Map of Proposed EIFD



Source: HDR

Calculation of EIFD Revenue Potential

The revenue potential for a TIF-based EIFD covering a half-mile radius around the Upland Metrolink Station can be calculated using a combination of both existing assessed values and future development value. This section describes the assumptions and step-by-step methodology used to calculate the revenue potential of an EIFD, with results of the analysis summarized in Table 10 at the end of this section. The estimates of revenue generation presented herein are on an order-of-magnitude basis and are purely for illustrative purposes.

Totaling \$379.4 million, the existing assessed value of property located within one-half mile of the station was obtained from the San Bernardino County Assessor roll. This analysis assumes that any future increases in assessed values above this baseline of \$379.4 million will generate property tax revenue available for use by the EIFD.

To calculate the value of future development within the EIFD, several inputs are needed, including projected demand for different uses, existing market values, and the rate of future price appreciation for different property types. A recent market assessment by HR&A Advisors assessing the potential for new development around each of the Metrolink stations on the SB Line, including the Upland Station, supplies some of these inputs. The market study inventories existing rent and vacancy levels. Using demographic and economic growth forecasts, it also projects demand for additional residential, office, retail, and industrial uses within one-half mile of each station area along the SB Line through 2035. The study produces both a “low” and “high” development forecast to account for variable market conditions. The development forecast for the Upland Metrolink Station area is summarized below in **Table 8.1** and **8.2**.

Table 8.1: Low Development Forecast for Metrolink Upland Station Area (1/2 Mile Radius)

Land Use	Units	2014-2020	2021-2035	Total
Residential	DU	200	400	600
Office	SF	7,000	55,000	62,000
Retail	SF	940	42,100	43,040
Industrial	SF	10,000	41,000	51,000

Source: HR&A Advisors ARRIVE Corridor Market Assessment

Table 8.2: Development Forecast for Metrolink Upland Station Area (1/2 Mile Radius)

Land Use	Units	2014-2020	2021-2035	Total
Residential	DU	400	700	1,100
Office	SF	13,000	111,000	124,000
Retail	SF	940	42,100	43,040
Industrial	SF	24,000	95,000	119,000

Source: HR&A Advisors ARRIVE Corridor Market Assessment

In combination with market data on existing rents, the development forecast is used here to calculate the likely value of future additional development within an EIFD covering a half-mile radius around the Upland Metrolink Station, by multiplying the square feet of new development by the average sale price per square feet for a particular use (i.e. residential, office, retail, or industrial). The average sale price per square foot for each type of use is then imputed from existing rents using the capitalization valuation method. This method uses the amount of net operating income (NOI) generated annually by a property (gross rent paid by the tenant(s) net of owner operating expenses) to derive an indication of market value. This calculation can be summarized by the following formula:

$$\frac{\text{NOI (gross rent less operating expenses)}}{k \text{ (capitalization rate)}} = \text{Capitalized market value}$$

The NOI is divided by the capitalization rate (k), or cap rate, which is itself a reflection of the average ratio between the NOI and recorded sale price for comparable properties in the same asset class. This valuation method is generally considered most appropriate for income-producing properties such as apartments, offices, retail stores, and industrial/warehouse space. **Table 8.3** calculates the average imputed sale price per square foot for different property types in Upland based on prevailing market rents in Q1 2015.

Table 8.3: Imputed Sale Price Per Square Foot for New Development, by Building Type

	Residential	Office	Retail	Industrial
Annual Gross Rent Per Square Foot (PSF)	\$22.34	\$19.92	\$23.04	\$5.16
Operating Expense (\$ or % of Gross Rent PSF)	\$3.50	30%	30%	20%
Annual Net Rent PSF	\$18.84	\$13.94	\$16.13	\$4.13
Vacancy Rate (%)	2.70%	10.80%	6.50%	5.60%
Net Operating Income PSF	\$18.33	\$12.44	\$15.08	\$3.90
Cap Rate	5.10%	7.97%	8.00%	7.60%
Imputed Sale Price PSF	\$359.44	\$156.06	\$188.50	\$51.27

Source: HR&A Advisors, CBRE, LoopNet

As summarized above, the likely value of future additional development within an EIFD covering a half-mile radius around the Upland Metrolink Station was calculated by multiplying the projected square feet of new development by the average sale price per square feet for a particular use (ie. residential, office, retail, or industrial). **Table 8.4** below illustrates this calculation of future value. Each new residential dwelling unit (DU) is assumed to average 1,100 square feet.

Table 8.4: Estimated Assessed Value of Future Development Within EIFD Through 2035

	Total	Residential	Office	Retail	Industrial
Imputed Sale Price PSF		\$359.44	\$156.06	\$188.50	\$51.27
Average SF Per DU		1,100			
Development Forecast - Low		600 DU	62,000 SF	43,040 SF	51,000 SF
Development Forecast – High		1,100 DU	124,000 SF	43,040 SF	119,000 SF
New Assessed Value - Low	\$257,633,930	\$237,230,400	\$9,675,720	\$8,113,040	\$2,614,770
New Assessed Value – High	\$468,488,010	\$434,922,400	\$19,351,440	\$8,113,040	\$6,101,130

Source: HDR

In total, the assessed value of future new development located with the EIFD is projected to range from \$258 million to \$468 million (2015 dollars). The analysis assumes that this value will be captured gradually as new development comes online between the establishment of the EIFD in 2016 and 2035. The analysis also assumes that market values for each of these building types will appreciate over this period consistent with historical norms in Southern California. Annual price appreciation has historically averaged approximately 5 percent for residential properties, and 3 percent for non-residential properties. Accounting for both of these factors – the phasing of new development and annual price appreciation, **Tables 8.5** and **8.6** show the annual build-up to the total assessed value of future development in inflation-adjusted terms, estimated to range from \$381 million to \$667 million (in Year of Expenditure [YOE] dollars) by 2035, corresponding to the “low” and “high” demand forecasts.

Table 8.5: Cumulative Assessed Value of Future Development through 2035 (Low Demand Forecast)

Year	Residential	Office	Retail	Industrial	Annual New Assessed Value	Cumulative New Assessed Value
2016	\$11,296,612	\$156,061	\$177,186	\$73,249	\$11,703,108	\$11,703,108
2017	\$11,861,442	\$160,743	\$0	\$75,446	\$12,097,631	\$23,800,739
2018	\$12,454,514	\$165,565	\$0	\$77,710	\$12,697,789	\$36,498,528
2019	\$13,077,240	\$170,532	\$0	\$80,041	\$13,327,813	\$49,826,341
2020	\$13,731,102	\$175,648	\$0	\$82,442	\$13,989,192	\$63,815,533
2021	\$13,456,480	\$663,363	\$613,309	\$162,471	\$14,895,624	\$78,711,156
2022	\$14,129,304	\$683,264	\$631,708	\$167,345	\$15,611,622	\$94,322,778
2023	\$14,835,769	\$703,762	\$650,659	\$172,366	\$16,362,557	\$110,685,335
2024	\$15,577,558	\$724,875	\$670,179	\$177,537	\$17,150,149	\$127,835,483
2025	\$16,356,436	\$746,621	\$690,284	\$182,863	\$17,976,204	\$145,811,688
2026	\$17,174,258	\$769,020	\$710,993	\$188,349	\$18,842,619	\$164,654,307
2027	\$18,032,970	\$792,091	\$732,323	\$193,999	\$19,751,383	\$184,405,689
2028	\$18,934,619	\$815,853	\$754,292	\$199,819	\$20,704,584	\$205,110,273
2029	\$19,881,350	\$840,329	\$776,921	\$205,814	\$21,704,414	\$226,814,687
2030	\$20,875,417	\$865,539	\$800,229	\$211,988	\$22,753,173	\$249,567,860
2031	\$21,919,188	\$891,505	\$824,236	\$218,348	\$23,853,277	\$273,421,136
2032	\$23,015,148	\$918,250	\$848,963	\$224,898	\$25,007,259	\$298,428,395
2033	\$24,165,905	\$945,797	\$874,432	\$231,645	\$26,217,779	\$324,646,174
2034	\$25,374,200	\$974,171	\$900,664	\$238,595	\$27,487,631	\$352,133,805
2035	\$26,642,910	\$1,003,397	\$927,684	\$245,753	\$28,819,744	\$380,953,549

Source: HDR

Table 8.6: Cumulative Assessed Value of Future Development through 2035 (High Demand Forecast)

Year	Residential	Office	Retail	Industrial	Annual New Assessed Value	Cumulative New Assessed Value
2016	\$22,593,224	\$289,827	\$177,186	\$175,797	\$23,236,034	\$23,236,034
2017	\$23,722,885	\$298,522	\$0	\$181,071	\$24,202,478	\$47,438,512
2018	\$24,909,029	\$307,478	\$0	\$186,503	\$25,403,010	\$72,841,521
2019	\$26,154,480	\$316,702	\$0	\$192,098	\$26,663,281	\$99,504,802
2020	\$27,462,204	\$326,203	\$0	\$197,861	\$27,986,269	\$127,491,070
2021	\$23,548,840	\$1,338,788	\$613,309	\$376,458	\$25,877,395	\$153,368,465
2022	\$24,726,282	\$683,264	\$631,708	\$387,752	\$26,429,006	\$179,797,471
2023	\$25,962,596	\$703,762	\$650,659	\$399,384	\$27,716,402	\$207,513,873
2024	\$27,260,726	\$724,875	\$670,179	\$411,366	\$29,067,146	\$236,581,019
2025	\$28,623,763	\$746,621	\$690,284	\$423,707	\$30,484,375	\$267,065,394
2026	\$30,054,951	\$769,020	\$710,993	\$436,418	\$31,971,381	\$299,036,776
2027	\$31,557,698	\$792,091	\$732,323	\$449,511	\$33,531,622	\$332,568,398
2028	\$33,135,583	\$815,853	\$754,292	\$462,996	\$35,168,725	\$367,737,122

Table 8.6: Cumulative Assessed Value of Future Development through 2035 (High Demand Forecast) - continued

Year	Residential	Office	Retail	Industrial	Annual New Assessed Value	Cumulative New Assessed Value
2029	\$34,792,362	\$840,329	\$776,921	\$476,886	\$36,886,498	\$404,623,620
2030	\$36,531,980	\$865,539	\$800,229	\$491,192	\$38,688,940	\$443,312,560
2031	\$38,358,579	\$891,505	\$824,236	\$505,928	\$40,580,248	\$483,892,808
2032	\$40,276,508	\$918,250	\$848,963	\$521,106	\$42,564,827	\$526,457,635
2033	\$42,290,334	\$945,797	\$874,432	\$536,739	\$44,647,302	\$571,104,937
2034	\$44,404,850	\$974,171	\$900,664	\$552,841	\$46,832,528	\$617,937,465
2035	\$46,625,093	\$1,003,397	\$927,684	\$569,427	\$49,125,600	\$667,063,065

Source: HDR

The next step in the analysis is to combine the estimate of the assessed value of future development with the incremental increase in assessed values associated with existing development, known as the “background” value. The increases in the background assessed value are limited to 2 percent per year throughout the term of the EIFD—the maximum rate of increase allowable under California’s Proposition 13. The combination of the new and background assessed values yields the total incremental assessed value on an annual basis above the established baseline set at the formation of the EIFD, assumed to be 2016.

The portion of property tax levies assumed to flow to the EIFD will vary based on the participation of the entities that normally collect a share of the levy. In California, a general agency levy of 1 percent is assessed on all real property (with limited exemptions), with the formula for the distribution of the 1 percent levy set at the County level. That distribution in San Bernardino County is shown in **Table 8.7**:

Table 8.7: Distribution of the 1 Percent General Property Tax Levy in San Bernardino County

Taxing Entity	Share of 1 Percent Levy
City	39%
County	10%
Special District	9%
Schools	41%
County Library	1%
Total	100%

Source: San Bernardino County Auditor

Because by statute EIFDs cannot divert school taxes under any circumstances, the portion of 1 percent general levy capturable by the EIFD is limited to 0.59 percent. This analysis runs three participation scenarios, in order of increasing revenue yield for the EIFD: 1) the City of Upland only (0.39 percent); 2) the City and County (0.49 percent); and 3) all non-school taxing entities (the City, County, Special District [SD] and County Library) (0.59 percent). The likelihood of participation in the EIFD by entities other than the City of Upland would depend on the level of co-benefits generated by the EIFD for those entities and/or the degree of geographical overlap with other special districts. For example, the Upland Library branch, located at 450 North Euclid Avenue, is located within the one-half mile station area radius and would therefore benefit directly from the infrastructure improvements funded by the EIFD, potentially making the participation of the County Library more likely.

As summarized in **Tables 8.8** and **8.9**, the estimates of TIF revenue potential through 2035 for each of these three scenarios were generated using both low and high demand forecasts.

Table 8.8: Potential EIFD Revenue – Low Demand Forecast

Year	Cumulative New Assessed Value	Background Incremental Assessed Value	Total Incremental Assessed Value	City Only EIFD Revenues	City + County EIFD Revenues	City + County + SD EIFD Revenues
2016	\$11,703,108	\$0	\$11,703,108	\$45,642	\$57,345	\$69,048
2017	\$23,800,739	\$7,124,330	\$30,925,068	\$120,608	\$151,533	\$182,458
2018	\$36,498,528	\$14,391,146	\$50,889,673	\$198,470	\$249,359	\$300,249
2019	\$49,826,341	\$21,803,298	\$71,629,639	\$279,356	\$350,985	\$422,615
2020	\$63,815,533	\$29,363,694	\$93,179,226	\$363,399	\$456,578	\$549,757
2021	\$78,711,156	\$37,075,297	\$115,786,453	\$451,567	\$567,354	\$683,140
2022	\$94,322,778	\$44,941,132	\$139,263,911	\$543,129	\$682,393	\$821,657
2023	\$110,685,335	\$52,964,285	\$163,649,619	\$638,234	\$801,883	\$965,533
2024	\$127,835,483	\$61,147,900	\$188,983,383	\$737,035	\$926,019	\$1,115,002
2025	\$145,811,688	\$69,495,187	\$215,306,875	\$839,697	\$1,055,004	\$1,270,311
2026	\$164,654,307	\$78,009,421	\$242,663,727	\$946,389	\$1,189,052	\$1,431,716
2027	\$184,405,689	\$86,693,939	\$271,099,628	\$1,057,289	\$1,328,388	\$1,599,488
2028	\$205,110,273	\$95,552,147	\$300,662,420	\$1,172,583	\$1,473,246	\$1,773,908
2029	\$226,814,687	\$104,587,519	\$331,402,206	\$1,292,469	\$1,623,871	\$1,955,273
2030	\$249,567,860	\$113,803,599	\$363,371,459	\$1,417,149	\$1,780,520	\$2,143,892
2031	\$273,421,136	\$123,204,001	\$396,625,137	\$1,546,838	\$1,943,463	\$2,340,088
2032	\$298,428,395	\$132,792,410	\$431,220,805	\$1,681,761	\$2,112,982	\$2,544,203
2033	\$324,646,174	\$142,572,588	\$467,218,763	\$1,822,153	\$2,289,372	\$2,756,591
2034	\$352,133,805	\$152,548,370	\$504,682,175	\$1,968,260	\$2,472,943	\$2,977,625
2035	\$380,953,549	\$162,723,666	\$543,677,215	\$2,120,341	\$2,664,018	\$3,207,696
EIFD Revenue Total Through 2035				\$19,242,368	\$24,176,308	\$29,110,249

Source: HDR

Table 8.9: Potential EIFD Revenue – High Demand Forecast

Year	Cumulative New Assessed Value	Background Incremental Assessed Value	Total Incremental Assessed Value	City Only EIFD Revenues	City + County EIFD Revenues	City + County + SD EIFD Revenues
2016	\$23,236,034	\$0	\$23,236,034	\$90,621	\$113,857	\$137,093
2017	\$47,438,512	\$7,124,330	\$54,562,841	\$212,795	\$267,358	\$321,921
2018	\$72,841,521	\$14,391,146	\$87,232,667	\$340,207	\$427,440	\$514,673
2019	\$99,504,802	\$21,803,298	\$121,308,100	\$473,102	\$594,410	\$715,718
2020	\$127,491,070	\$29,363,694	\$156,854,764	\$611,734	\$768,588	\$925,443
2021	\$153,368,465	\$37,075,297	\$190,443,762	\$742,731	\$933,174	\$1,123,618
2022	\$179,797,471	\$44,941,132	\$224,738,604	\$876,481	\$1,101,219	\$1,325,958

Table 8.9: Potential EIFD Revenue – High Demand Forecast (continued)

Year	Cumulative New Assessed Value	Background Incremental Assessed Value	Total Incremental Assessed Value	City Only EIFD Revenues	City + County EIFD Revenues	City + County + SD EIFD Revenues
2023	\$207,513,873	\$52,964,285	\$260,478,158	\$1,015,865	\$1,276,343	\$1,536,821
2024	\$236,581,019	\$61,147,900	\$297,728,919	\$1,161,143	\$1,458,872	\$1,756,601
2025	\$267,065,394	\$69,495,187	\$336,560,582	\$1,312,586	\$1,649,147	\$1,985,707
2026	\$299,036,776	\$78,009,421	\$377,046,196	\$1,470,480	\$1,847,526	\$2,224,573
2027	\$332,568,398	\$86,693,939	\$419,262,336	\$1,635,123	\$2,054,385	\$2,473,648
2028	\$367,737,122	\$95,552,147	\$463,289,269	\$1,806,828	\$2,270,117	\$2,733,407
2029	\$404,623,620	\$104,587,519	\$509,211,139	\$1,985,923	\$2,495,135	\$3,004,346
2030	\$443,312,560	\$113,803,599	\$557,116,160	\$2,172,753	\$2,729,869	\$3,286,985
2031	\$483,892,808	\$123,204,001	\$607,096,809	\$2,367,678	\$2,974,774	\$3,581,871
2032	\$526,457,635	\$132,792,410	\$659,250,045	\$2,571,075	\$3,230,325	\$3,889,575
2033	\$571,104,937	\$142,572,588	\$713,677,525	\$2,783,342	\$3,497,020	\$4,210,697
2034	\$617,937,465	\$152,548,370	\$770,485,834	\$3,004,895	\$3,775,381	\$4,545,866
2035	\$667,063,065	\$162,723,666	\$829,786,731	\$3,236,168	\$4,065,955	\$4,895,742
EIFD Revenue Total Through 2035				\$29,871,529	\$37,530,896	\$45,190,262

Source: HDR

For ease of comparison, the result of these scenarios is further summarized in Table 8.10 below. The revenue potential of a TIF-based EIFD over the first 20 years ranges from \$19.2 million to \$45.2 million (YOE dollars), depending on the level of new development and the participation of taxing entities in the EIFD. The annual average revenue under each scenario is also noted.

Table 8.10: Summary of TIF Revenue Scenarios

EIFD Participating Entities	Low Forecast		High Forecast	
	Total Revenue (2016-35)	Average Annual Revenue	Total Revenue (2016-35)	Average Annual Revenue
City Only	\$19,242,368	\$962,000	\$29,871,529	\$1,494,000
City + County	\$24,176,308	\$1,209,000	\$37,530,896	\$1,877,000
All Non-School Taxing Entities	\$29,110,249	\$1,456,000	\$45,190,262	\$2,260,000

Source: HDR

Calculation of EIFD Bonding Capacity

The authority governing the EIFD would have the option to use the proceeds of the TIF on a cash basis or to issue bonds backed by TIF revenues. This section estimates the bonding capacity associated with those revenues, using a simple Present Value (PV) calculation in which future cash flows are discounted to reflect the likely cost of financing for limited obligation debt.

As previously outlined in the program description, SB 628 allows a bonding period of up to 45 years from the date of bonding approval. If the EIFD were established in 2016 and voter approval for a 45-year bond issuance were to be secured at the beginning of 2017, the bonds would reach maturity in 2061. The 45-year revenue stream from

the TIF district can be discounted at a rate of 7 percent, then divided by a debt service coverage ratio of 1.50x, to derive the estimated net bonding capacity of that revenue stream. This calculation uses “back-of-the-envelope” bond financing assumptions and is intended to be an order-of-magnitude estimate for illustrative purposes only.

As presented to the **Table 8.11**, the estimated bonding capacity of a TIF-based EIFD over the maximum 45-year period allowable under SB 628 ranges from \$11.8 million to \$27.1 million, depending on the level of new development and the participation of taxing entities in the EIFD. This range is intended to be indicative and capture the uncertainties inherent in the inputs for this type of analysis, including development forecasts and future financial market conditions. Indeed, because development forecasts are not currently available beyond 2035, this bonding capacity analysis uses a conservative assumption of no additional new development in the EIFD beyond 2035 and annual increases in the background assessed value at the rate of 2 percent allowed under Proposition 13. If additional development were to occur after 2035, the bonding capacity of the EIFD could be higher. Similarly, a cost of financing lower than 7 percent would also result in a higher bonding capacity.

Table 8.11: Estimated EIFD Bonding Capacity Over 45 Years

EIFD Participating Entities	Low Forecast		High Forecast	
	Total Revenue (2017-61)	Est. Bonding Capacity @ 7%	Total Revenue (2017-61)	Est. Bonding Capacity @ 7%
City Only	\$103,610,713	\$11,849,000	\$152,517,223	\$17,935,000
City + County	\$130,177,562	\$14,887,000	\$191,624,203	\$22,533,000
All Non-School Taxing Entities	\$156,744,411	\$17,925,000	\$230,731,184	\$27,132,000

Source: HDR

The issuance of EIFD-backed debt would be at the discretion of the approval of voters located in the district. The proceeds from a bond issuance could be used to implement a number of the high-priority improvements identified in the Specific Plan, subject to their inclusion in the Infrastructure Financing Plan developed as part of the establishment of the EIFD. These proceeds could also be leveraged with other grants or matching contributions from the private sector. One of the potential sources of matching funds for EIFD revenues – the Affordable Housing and Sustainable Communities Program – is accordingly described in the next section.

8.1.2 SB 862 Affordable Housing and Sustainable Communities Program

Program Description

Administered by the Strategic Growth Council (SGC), the AHSC program funds land-use, housing, transportation, and land preservation projects to support infill and compact development that in turn reduces GHG emissions. These projects facilitate GHG emissions reduction by improving non-vehicular mobility options and locating housing in proximity to areas served transit, which decreases household vehicle miles traveled (VMT). By statute, projects funded by the AHSC program must demonstrate how they will reduce GHG emissions subject to methodology and reporting requirements established jointly by the California Environmental Protection Agency (CalEPA) and the CARB. The scoring criteria developed by the SGC assign value to project co-benefits beyond GHG emission reductions, including reductions in energy and water consumption, improved commute times, economic and workforce development, and improved public health.

There are two project prototypes eligible to be funded under the AHSC program in order to achieve quantifiable GHG emissions reductions: 1) a TOD Project Area, or 2) an Integrated Connectivity Project (ICP) Area. Both must be located within one-half mile of a transit station or stop. The transit service level requirement constitutes the major difference between the two Project Area types. To qualify as a TOD Project Area, the project must be served by “high quality” transit with headway frequencies of 15 minutes or less during peak hours. By contrast, ICP Project Areas must be served by rail or bus service, but not “high quality” service as defined by the headway frequencies.

The required components of AHSC-funded TOD or ICP Project Areas are presented in **Table 8.12**.

Table 8.12: Required Components of AHSC Projects

Component	Examples
Affordable housing developments with minimum net density of 30 units per acre	<ul style="list-style-type: none"> • New construction; • Acquisition and substantial rehabilitation of existing affordable housing at-risk of conversion to market-rate housing; • Conversion of non-residential structures to residential dwelling units
Housing-related infrastructure	<ul style="list-style-type: none"> • Capital improvements required by the locality as a condition of affordable housing development approval; • Energy efficiency, low impact design, or urban greening improvements; • Soft costs not related to construction (planning, architectural or design work, appraisals, etc) • Required parking for residential units (limited to one space per unit); • Required environmental remediation; • Real property acquisition; • Impact fees required by local ordinance
Transportation-related infrastructure	<ul style="list-style-type: none"> • Public transit access improvements • New sidewalks and street furniture • Bicycle facilities
Planning and Program Costs	<ul style="list-style-type: none"> • Pre-development costs related to project implementation • Active Transportation Programs • Transit Ridership Programs • Criteria Air Pollutant Reduction Programs

Source: HDR

The AHSC program requires TOD Project Area applicants to combine an affordable housing or housing related-infrastructure component with a transportation-related infrastructure component. ICF Project Area applicants may choose the same combination as TOD Project Area applicants or the combination shown in the lower box of **Figure 8.2**.

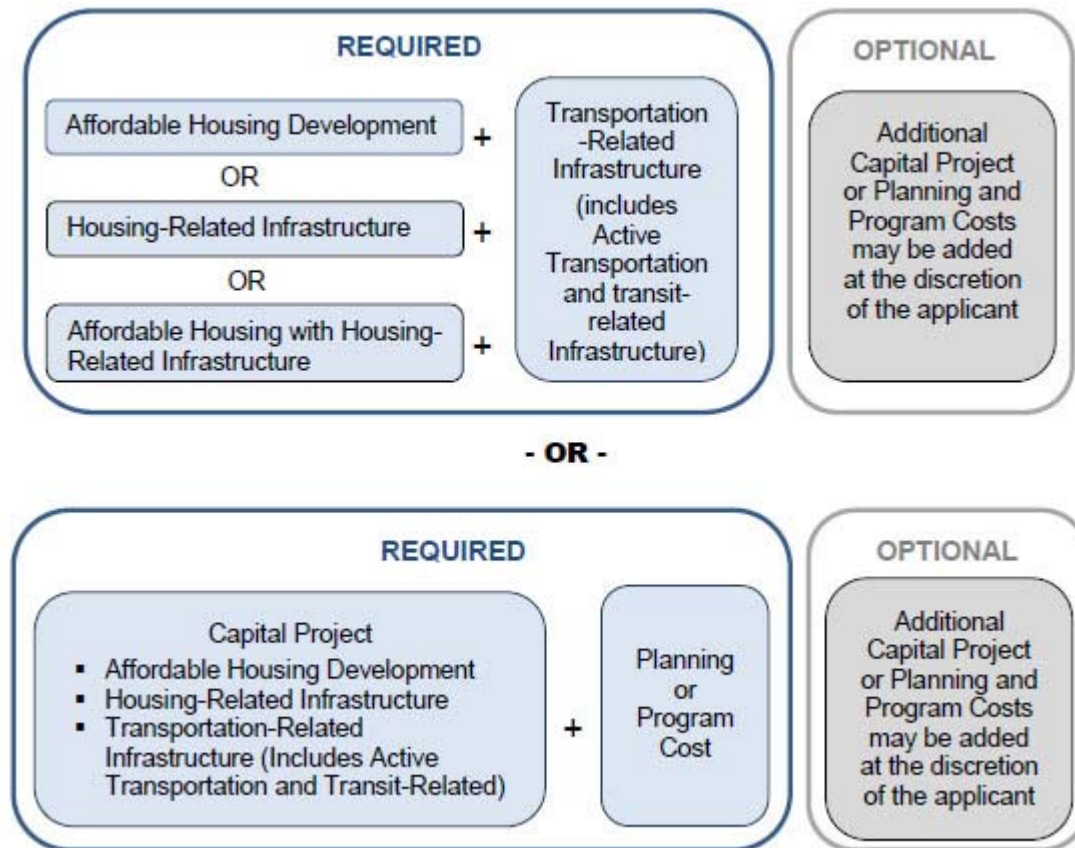
The maximum grant award is \$15 million for a TOD Project Area and \$8 million for an ICP Area. The AHSC Program funds are allocated through a competitive process, based on the merits of the project to support sustainable development that expands and improves transit, walking and bicycling infrastructure and provides opportunities to reduce VMT and GHG emissions by supporting connectivity between housing and Key Destinations.

CalEPA has identified the census tracts in California with the top 25 percent of CalEnviroscreen 2.0 scores as “Disadvantaged Communities.” A project that provides direct, meaningful, and assured benefits to disadvantaged communities may receive additional consideration for funding in order to meet the AHSC Program funding target of 50 percent for disadvantaged communities.

Applicability to Upland Metrolink Land Use Scenario

The HDUSP emphasizes the need for additional housing and an overall vision of balancing existing commercial and retail uses in the downtown area with residential uses to create a vibrant environment in which downtown residents have access to retail amenities and public services without having to use their cars, and also have access to a full range of transit options, including local buses and Metrolink trains, for longer trips.

Figure 8.2: Required Project Components for TOD and ICF Project Area Applicants



Source: Affordable Housing and Sustainable Communities Program, Program Guidelines, January 20, 2015

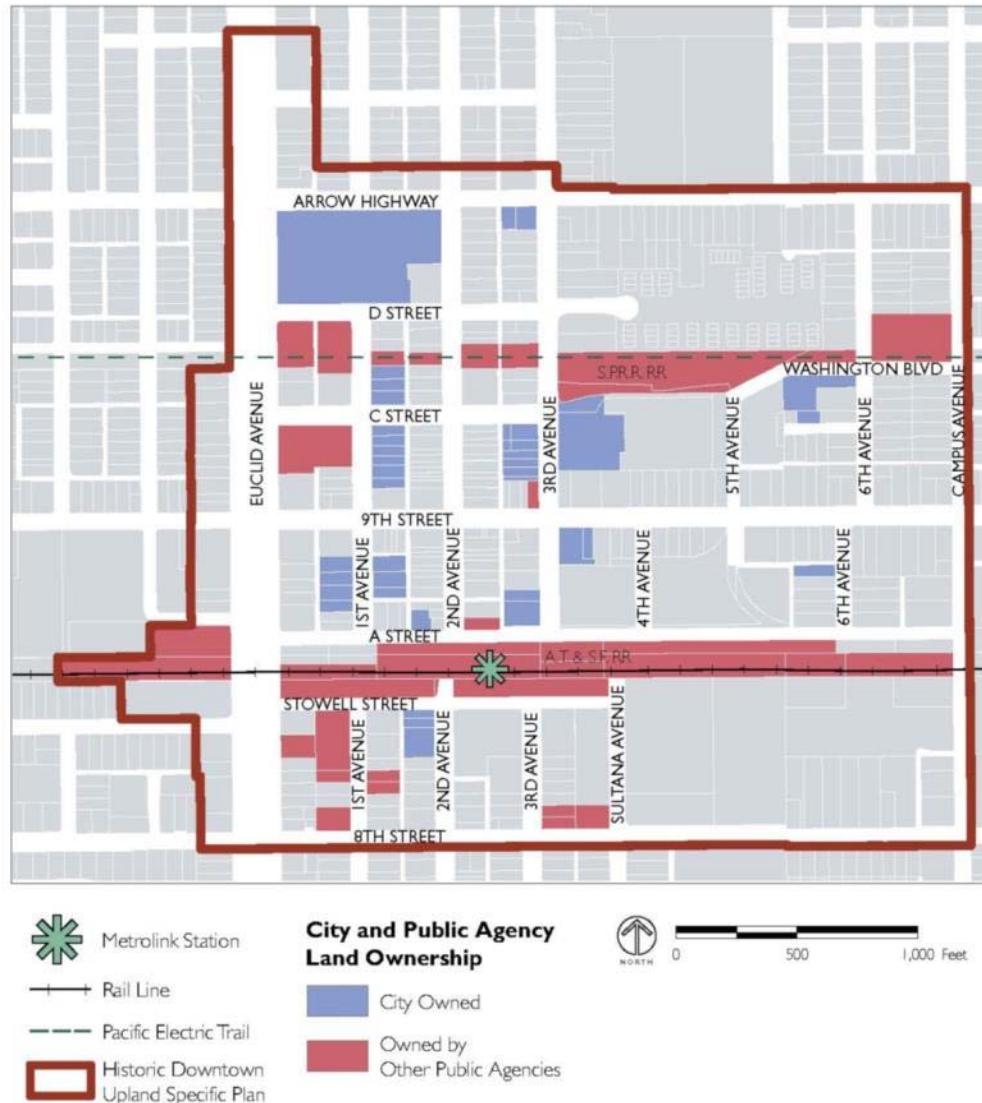
The HR&A study²⁰ calculated that there are approximately 40 acres of vacant or underutilized land within the half-mile radius of the station area, some of which are owned by the City or other public agencies. By virtue of its land ownership, the City has a valuable opportunity to leverage its equity basis in the land to promote the development of new market-rate and affordable housing units in proximity to the Upland Metrolink Station. The contribution of land by the City could in turn be supplemented by a loan or grant award through the AHSC program. Excerpted from the HDUSP, **Figure 8.3** shows the location of publicly-owned parcels in relation to the Metrolink Upland Station.

If the City were to partner with a private developer for an AHSC program grant, the downtown area covered by the Specific Plan offers many opportunities for the public and private sectors to collaborate in the construction of new housing units or the adaptive reuse of existing non-residential structures, such as the historic packing houses located just north of the Upland Metrolink Station along A Street. The AHSC program guidelines specifically encourage this type of collaboration and redevelopment in areas served by transit. Eligible applicants include cities, transit agencies or operators, joint powers authorities, and developers.

²⁰ Executive Summary of the ARRIVE Corridor, Market Assessment Briefing Book, August 20, 2014

As shown in **Figure 8.4**, the historic downtown ranks as in the top 10 percent of census tracts identified by CalEPA as “disadvantaged,” meaning that any project proposed around the Upland Metrolink Station would qualify for the 50 percent program set-aside for disadvantaged communities under the AHSC program.

Figure 8.3: City and Public Agency Land Ownership in Historic Downtown Upland



Source: HDUSP Figure 9-1, Page 9-18, 2011

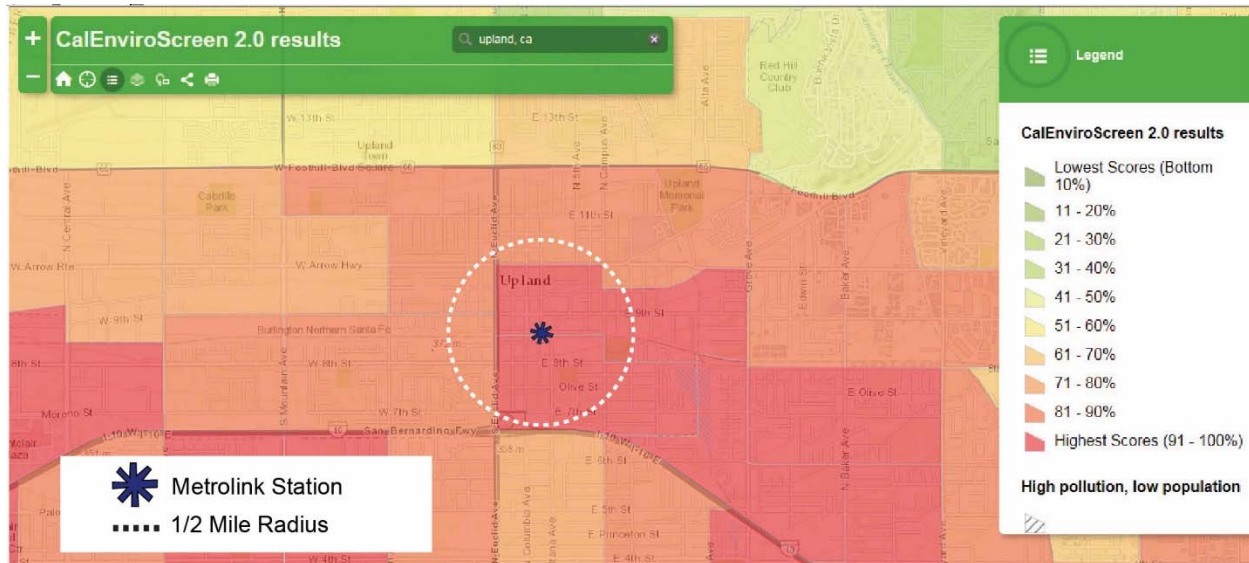
Finally, it should be noted that because Metrolink trains currently run at 30 minute headways during peak hours on the SB Line, any project proposed for funding under the AHSC program would qualify only under the ICP category at this time.

Projected Level of Available Funding Through FY 2020

The amount of future revenue generated by the cap-and-trade program for the AHSC program depends on the price of allowances and the number of allowances purchased versus allocated for free. The Air Resources Board has adopted regulations to keep auction prices within a certain range by setting a minimum and maximum price

for allowances sold at auctions—from \$10 per ton of emissions to \$40 per ton of emissions. Within this range, most economists expect allowances to sell from \$15 to \$20 per ton of emissions.

Figure 8.4: CalEnviroScreen Results for Upland



Source: CalEnviroScreen

ARB has also published the number of state allowances that will be sold each year through FY 2020. Under current policy, the minimum price for allowances increases by 5 percent plus an inflation factor each year. Using ARB's floor and ceiling prices for allowances, as well as a mean price within the \$15-\$20 range expected by most economists, and assuming no inflation factor, the total cap-and-trade revenues from all auctions through 2020 could total from \$7.2 billion to \$31.2 billion through FY 2020, as shown in **Table 8.13**.

Table 8.13: AB 32 Cap and Trade Auction Revenue Projections Through FY 2020

		2015	2016	2017	2018	2019	2020	Total
Allowances (in thousands)								
Aggregate State Cap		394,500	381,627	369,174	357,127	345,473	334,200	
Utilities		156,353	151,251	146,315	141,541	136,922	132,454	
Fuel distributors		238,147	230,376	222,858	215,586	208,551	201,746	
Fuel distributors*		97,955	94,759	91,667	88,675	85,782	82,983	
Price Per Allowance								
Reserve	(Low)	\$11.81	\$12.40	\$13.02	\$13.67	\$14.35	\$15.07	
Mean	(Medium)	\$16.92	\$17.77	\$18.66	\$19.59	\$20.57	\$21.60	
Contingent	(High)	\$17.84	\$19.57	\$21.85	\$24.43	\$28.05	\$32.01	
Revenue Yield (in thousands)								
(Low)		\$1,157,000	\$1,175,000	\$1,193,000	\$1,212,000	\$1,231,000	\$1,251,000	\$7,219,000
(Base)		\$2,812,000	\$2,856,000	\$2,901,000	\$2,947,000	\$2,993,000	\$3,040,000	\$17,549,000
(Realistic)		\$4,030,000	\$4,094,000	\$4,158,000	\$4,224,000	\$4,290,000	\$4,358,000	\$25,154,000
(Aggressive)		\$4,249,000	\$4,508,000	\$4,869,000	\$5,267,000	\$5,850,000	\$6,458,000	\$31,201,000

Source: ARB Resolution 13-7, <http://www.arb.ca.gov/cc/capandtrade/linkage/resolution13-7.pdf>; LAO FY 14/15 Cap and Trade Revenue Estimate

* Alternative estimate of allowances for fuel distributors based on January 2013 covered entities list

The AHSC program received a fixed allocation of \$130 million for FY 2014/15. SB 852 sets the terms of future allocations of cap-and-trade auction revenues beginning in FY 2015/16, with 20 percent appropriated on an ongoing basis to the AHSC program. Thus, the AHSC program can be expected to be funded at an annual level in the ranges, shown in **Table 8.14**.

Table 8.14: AHSC Program Funding Estimate (in thousands)

	2016	2017	2018	2019	2020
Low	\$235,000	\$238,600	\$242,400	\$246,200	\$250,200
High	\$901,600	\$973,800	\$1,053,400	\$1,170,000	\$1,291,600

Source: HDR

With a maximum award of \$8 million per ICP Project Area and \$15 million per TOD Project Area, the AHSC program can therefore be expected to fund at least 30 projects statewide per year assuming the low revenue estimate, and possibly over 100 projects per year assuming the high revenue estimate.

8.1.3 Summary of Findings of Funding Programs

To implement the land use concepts around Upland Metrolink Station elaborated in this study, the City of Upland could focus on two recently-enacted, complimentary funding programs: 1) SB 628 EIFD, which allows cities limited use of TIF for local infrastructure projects and facilities; and 2) SB 862 AHSC Program, which provides grants for integrated affordable housing and transportation infrastructure projects that reduce GHG emissions. While only cities or counties may be sponsors of EIFDs, the AHSC allows a broad range of (co)-applicants, including special districts and joint powers authorities.

This analysis provides an overview of each of these two programs as well as the revenue potential of a TIF-based EIFD, assuming that EIFD boundaries cover a one-half mile radius around the Upland Metrolink Station.

- A TIF-based EIFD would generate a cumulative cash flow of \$19.2 million to \$45.2 million (YOE dollars) over the first 20 years, with the range attributable to the level of new development and the participation of taxing entities in the EIFD.
- The estimated bonding capacity of a TIF-based EIFD over the maximum 45-year maturity period allowable under SB 628 ranges from \$11.8 million to \$27.1 million. The issuance of EIFD-backed debt would require approval of 55 percent of the voters located in the district.
- The upfront proceeds from a bond issuance could be leveraged with a grant from the AHSC program to accelerate implementation of a number of the high-priority infrastructure improvements identified in this study and the HDUSP, including the construction of a public parking garage for Metrolink commuters.
- There are two project prototypes eligible to be funded under the AHSC program; however, the Metrolink Upland station area would only be eligible for one of these, the Integrated Connectivity Project (ICP) category, with a maximum grant award of \$8 million.
- If the City were to partner with a private developer for an AHSC program grant, it could leverage a number of publicly-owned parcels in the vicinity of the Upland Metrolink Station area to subsidize construction of new housing units or adaptively reuse existing non-residential structures, such as the historic packing houses located along A Street.
- Upland's historic downtown ranks in the top 10 percent of Census tracts identified by CalEPA as "disadvantaged," meaning that any ICP Project proposed around the Upland Metrolink Station would qualify for the 50 percent program set-aside for disadvantaged communities under the AHSC program.
- Starting in FY 15/16, the AHSC program will be funded on an ongoing basis with 20 percent of cap-and-trade auction revenue proceeds. As such, it will generate anywhere from \$250 million to \$1 billion

annually through FY 2020, according to the California Legislative Analyst's Office (LAO) and independent estimates.

- The AHSC program can be expected to fund at least 30 projects statewide per year assuming the low estimate for future cap-and-trade auction revenue, and possibly over 100 projects per year assuming the high revenue estimate.

8.2 Financial Analysis of Potential TOD

In seeking a partnership with a private developer for the two SANBAG sites, SANBAG's objective is to leverage the value of its real estate to offset the cost of capital improvements required for the Metrolink Upland Station, including additional parking facilities, a pedestrian overcrossing, and track modifications. A parking needs assessment conducted as part of the Historic Downtown Upland Specific Plan (HDUSP) has determined that 393 net new spaces will be needed in the vicinity of the Upland Metrolink Station to accommodate a projected 40 percent increase in ridership demand between now and 2030. The total cost of infrastructure improvements is still to be determined. That said, this financial analysis can assist SANBAG in understanding the likely range of revenue generated from private development that can then be applied toward such improvements.

The land value range of \$2.3 million to \$7.1 million equates to the construction costs of 68 to 209 structured parking stalls, based on a planning-level estimate of \$34,000 per structured stall. According to a recent estimate by HDR, a pedestrian overcrossing costs in the range of \$3.8 million to \$4.2 million. Proceeds from the sale of the excess site area could fund a variety of improvements currently under consideration.

8.3 Assumptions

This section outlines and documents the sources for the various assumptions used to perform the land residual analysis.

8.3.1 Program of Uses

This analysis assumes that, for each of the alternatives, the portion of the SANBAG-owned parcels made available for private development will be developed as residential units in conformity with the zoning requirements in the HDUSP, with on-site required parking provided for residents only. In other words, no additional parking for Metrolink commuters would be accommodated on site beyond the number of surface parking spaces identified as part of the station-related uses in each of the three alternatives.

The following program of uses (i.e. unit mix) was assumed for each of the nine scenarios modeled in the financial analysis, and presented in **Table 8.15**. The program was derived from a combination of inputs and includes the following:

- maximum buildable area based on height and setback requirements;
- unit densities associated with each building typology;
- typical site design requirements, such as the provision of access roads and common areas;
- a market survey of average unit sizes for one-, two- and three-bedroom apartments in Upland, and
- minimum parking ratio requirements applicable to each of those unit sizes, as set forth in the HDUSP.

8.3.2 Construction and Parking Costs

While the HDUSP allows up to 50 residential units per acre, the analysis finds that current rent levels in the City of Upland do not support the maximum allowable density, the primary reason being that with increased densities come increased construction costs per square foot. **Table 8.16** details the construction cost impact of increasing residential density:

Table 8.15: Unit Mix, by Building Typology and Alternative

	Townhomes	1BR	2BR	3BR	Total Units	Parking Spaces
Alternative 1						
Townhomes	24				24	48
Podium		17	21	4	42	79
Wrap Apartments		22	28	6	56	106
Alternative 2						
Townhomes	15				15	30
Podium		10	13	3	26	50
Wrap Apartments		14	18	4	36	68
Alternative 3						
Townhomes	46				46	92
Podium		32	40	8	80	150
Wrap Apartments		42	53	11	106	200

Source: HDR

Table 8.16: Construction Cost Impact of Increased Density

	3 Story Townhome	4 Story Podium	4-Story Wrap
Dwelling Units Per Acre	19	35-40	40-60
Construction Cost Per Square Foot (Excluding Land and Parking)	\$160	\$216	\$260

Source: City of Ontario Housing Element, RS Means

The construction cost per square foot (PSF) shown in **Table 8.16** uses the base cost provided by RS Means for building and materials, then adds demolition/site preparation and other “soft” costs, such as permits, developer fees, engineering and survey costs, and local development impact fees.²¹ (Note that the construction cost is net of both land and parking costs, and the actual per-square foot cost may vary considerably based on the quality and durability of the building materials used, as well as the level of amenities and finishes provided in the residential units.)

A significant barrier to boosting development intensity is the cost of structured parking. To develop the two SANBAG-owned sites at the highest densities allowable under the HDUSP, structured parking is needed to support the more vertical (4-story podium and wrap) building typologies capable of accommodating those highest densities.

To derive the total per-unit development cost, the cost of required parking was added to the construction cost listed in **Table 8.15**. For townhomes, this includes a 500-square foot ground-floor garage capable of

²¹ Assumes that building costs account for 69 percent of total development costs. See Figure 1, Sources of Development Cost, in Affordable Housing Cost Study, October 2014, released by California Department of Housing and Community Development (“HCD”), the California Tax Credit Allocation Committee (“TCAC”), the California Housing Finance Agency (“CalHFA”), and the California Debt Limit Allocation Committee (“CDLAC”). Demolition/Site Prep and developer fees are the next largest categories, accounting for 8 and 7 percent of total costs, respectively. Local permits and development impact fees comprised 6 percent of total development costs, and costs for architects, engineering and surveys represented 4 percent.

accommodating two vehicles and trash bins. For apartments, parking is assumed to be in a structured garage. A survey of comparable Metrolink parking facilities²² was used to derive a planning-level estimate of \$34,000 per structured parking stall. **Table 8.17** summarizes the added per-unit cost of parking by unit type and size.

Table 8.17: Added Per-Unit Cost of Parking

Unit Type	Added Cost of Parking
Townhome	\$80,000
1 BR	\$42,500
2 BR	\$76,500
3 BR	\$85,000

Source: HDR

8.3.3 Sale Price per Square Foot

The average market value (sale price) per square foot for new residential construction in Upland was imputed from existing rents using the capitalization valuation method. This method uses the amount of net operating income (NOI) generated annually by a property (gross rent paid by the tenant(s) net of owner operating expenses) to derive an indication of market value. This calculation can be summarized by the following formula:

$$\frac{\text{NOI (gross rent less operating expenses)}}{k \text{ (capitalization rate)}} = \text{Capitalized market value}$$

The NOI is divided by the capitalization rate (k), or cap rate, which is itself a reflection of the average ratio between the NOI and recorded sale price for comparable properties. (A cap rate of 5 percent means that, on average, a given property type is valued at a multiple of 20 times its NOI.) This valuation method is generally considered most appropriate for income-producing properties such as apartments. **Table 8.18** calculates the average imputed sale price per square foot for different property types in Upland based on prevailing market rents in Q2 2015.

The capitalized PSF value of \$277 is slightly above the average PSF sale price of \$250 for existing homes in ZIP code 91786 (where the SANBAG-owned site are located) reported for June 2015. The analysis believes that the 10 percent premium over the average sale price would be readily achievable based on the value added by new construction and transit accessibility.

8.3.4 Asking Rents

Average PSF asking rents in the City of Upland for a variety of unit sizes was calculated and this information was used to validate the implied PSF rent of \$1.87 derived from REIS²³ market data and used as the basis for the income capitalization calculation in **Table 8.18**. A survey of seven rental properties presented in **Table 8.19**, found a weighted average PSF asking rent in a slightly lower range of \$1.52 to \$1.76, depending on the unit size. As previously stated, the seven properties included in this survey do not reflect the value premium attached to new construction and a transit-adjacent location. Therefore, a PSF rent assumption of \$1.87 appears justifiable in the current residential market.

²² The Orange Metrolink Station provides the most recent example, with a \$20.7 million price tag for a 611-space structured garage to be completed in 2015 (500 commuter spaces and 111 general use spaces). This equates to an average per-space cost of just under \$34,000.

²³ REIS is a commercial real estate data service. www.reis.com.

Table 8.18: Imputed Sale Price per Square Foot for New Residential Construction in Upland

	Residential
Average Monthly Apartment Rent	\$1,107
Average Unit Size	600
Monthly Gross Rent Per Square Foot (PSF)	\$1.87
Annual Gross Rent PSF	\$22.34
Operating Expense (\$ or % of Gross Rent PSF) ²⁴	35%
Annual Net Rent PSF	\$14.52
Vacancy Rate (%)	2.70%
Net Operating Income PSF	\$14.13
Cap Rate	5.10%
Imputed Sale Price PSF	\$277.04

Source: REIS, NAAHQ

Table 8.19: Asking Rents per Square Foot, by Unit Size

Properties	Unit Size (SF)				Monthly Asking Rent				Monthly Asking Rent \$/PSF			
	Studio	1BR	2BR	3BR	Studio	1BR	2BR	3BR	Studio	1BR	2BR	3BR
College Park Luxury Apartments		753	1066	1336		\$1,439	\$1,640	\$2,200		\$1.91	\$1.54	\$1.65
Alvista Portofino Apartments		905	1100			\$1,425	\$1,884			\$1.57	\$1.71	
The Oaks Apartments		705	840	1050		\$1,235	\$1,350	\$1,690		\$1.75	\$1.61	\$1.61
Mountain View Apartments		530	750	880		\$1,075	\$1,080	\$1,375		\$2.03	\$1.44	\$1.56
Canyon Club Apartments	525	725	1025		\$915	\$1,115	\$1,315		\$1.74	\$1.54	\$1.28	
Parc Claremont		712	948			\$1,371	\$1,601			\$1.93	\$1.69	
Barlow Concord Apartments		594	924			\$1,010	\$1,235			\$1.70	\$1.34	
						Weighted Average			\$1.74	\$1.76	\$1.52	\$1.61

Source: Trulia

8.3.5 Demand Forecast

A recent market assessment by HR&A Advisors assessed the demand for new residential development through 2035 around each of the Metrolink Stations on the SB Line including the Upland Station. The study produces both a “low” and “high” development forecast to account for variable market conditions. The development forecast for the Upland Metrolink Station area is summarized below in **Tables 8.20** and **8.21**. The market assessment confirms that the number of residential units proposed under each of the nine scenarios modeled in this analysis would be easily absorbed in the Upland market.

²⁴ 2013 Survey of Operating Income & Expenses In Rental Apartment Communities. <http://www.naaHQ.org/sites/default/files/naa-documents/income-expenses-survey/2013-Income-Expenses-Summary.pdf>

Table 8.20: Low Development Forecast for Metrolink Upland Station Area (1/2 Mile Radius)

Land Use	Units	2014-2020	2021-2035	Total
Residential	DU	200	400	600
Office	SF	7,000	55,000	62,000
Retail	SF	940	42,100	43,040
Industrial	SF	10,000	41,000	51,000

Source: HDR

Table 8.21: High Development Forecast for Metrolink Upland Station Area (1/2 Mile Radius)

Land Use	Units	2014-2020	2021-2035	Total
Residential	DU	400	700	1,100
Office	SF	13,000	111,000	124,000
Retail	SF	940	42,100	43,040
Industrial	SF	24,000	95,000	119,000

Source: HDR

8.4 Summary of Findings of Financial Analysis for TOD

In summary, three alternatives for use of the SANBAG-owned sites set aside different portions of the parcel for private development and station-related uses. For each of the alternatives, using prevailing construction costs and market values for residential properties in the City of Upland, the analysis assessed the financial feasibility of three different residential building typologies, each of which is capable of accommodating increasing levels of residential density:

- single-family attached townhomes at 20 dwelling units (DU) per acre (AC);
- podium construction at 35 DU per acre; and
- wrap apartments at 46 DU per acre.

The residual land value for the three alternatives was calculated at the above range of development densities, as summarized below in **Table 8.22**.

For the podium construction and wrap apartment building typologies, per-square foot development costs exceed the per-square foot capitalized market value, resulting in a negative residual land value and indicating that these development intensities are not yet feasible in the Upland market. Current rent levels/sale prices per square foot in Upland do appear to support the development of single-family attached townhomes, at a density of 20 units per acre. The analysis estimates that the residual land value of the SANBAG-owned sites under a townhome configuration ranges from **\$2.3 million** to **\$7.1 million**, depending on the site alternative. This range represents the maximum amount that a developer could afford to pay for the land at the specified density level. Conversely, a negative value indicates the subsidy that would be required to underwrite development.

Table 8.22: Residual Land Values, by Alternative

		Alternative 1	Alternative 2	Alternative 3
Parcel Area (SF)		51,140	32,305	99,370
Building Typology	Typical DU/AC	Residual Land Value		
<i>Townhomes</i>	<i>20</i>	<i>\$3,696,000</i>	<i>\$2,310,000</i>	<i>\$7,084,000</i>
<i>Podium</i>	<i>35</i>	<i>(\$968,000)</i>	<i>(\$541,000)</i>	<i>(\$1,802,000)</i>
<i>Wrap Apartments</i>	<i>46</i>	<i>(\$4,130,000)</i>	<i>(\$2,249,000)</i>	<i>(\$8,186,000)</i>

Source: HDR

Chapter 9 - Grade Crossing and Quiet Zones

This chapter evaluates the requirements for at-grade highway/rail crossing (grade crossing) improvements in the vicinity of the Upland Metrolink Station and summarizes the findings and recommendations resulting from an onsite visit of grade crossings in the vicinity of the Station, including providing improvement exhibits and determines the feasibility and scope of work required to upgrade the crossings to QZ status.

Currently, one track of the SCRRRA San Gabriel Subdivision serves the Station. SANBAG proposes to add a second track through the station area (as part of the Control Point Archibald to Control Point Central Second Main Track Project). Although the land use alternatives (**Chapter 5**) assume two Metrolink tracks through Upland Metrolink Station, the grade crossing and QZ analysis was based on three tracks through Upland Metrolink Station (two main tracks and one station track), presenting a lower level of QZ risk index compared to an analysis based on two tracks. While an increase in the number of “other” tracks reduces the QZ risk index, the effect is not significant.

Five at-grade rail crossings exist within the City of Upland as listed in **Table 9.1**; all of these crossings are located on the SCRRRA San Gabriel Subdivision, which serves as the route between Los Angeles and San Bernardino for Metrolink passenger trains. Three of the grade crossings are located within the HDUSP area that includes the Upland Metrolink Station.

Table 9.1: At-Grade Crossings Located Within the City of Upland

USDOT Number	CPUC Number	Roadway Name	HDUSP Area?
026168T	101SG-37.30	Campus Avenue	Yes
026172H	101SG-36.90	2nd Avenue	Yes
026173P	101SG-36.80	Euclid Avenue (SR 83)	Yes
026174W	101SG-36.20	San Antonio Avenue	No
026175D	101SG-35.70	Mountain Avenue	No

Source: HDR

This analysis identifies proposed modifications to the existing grade crossings located within the HDUSP area and takes a citywide view of proposed QZ implementation at all five crossings within the City. **Figure 9.1** provides a map showing the location of each grade crossing.

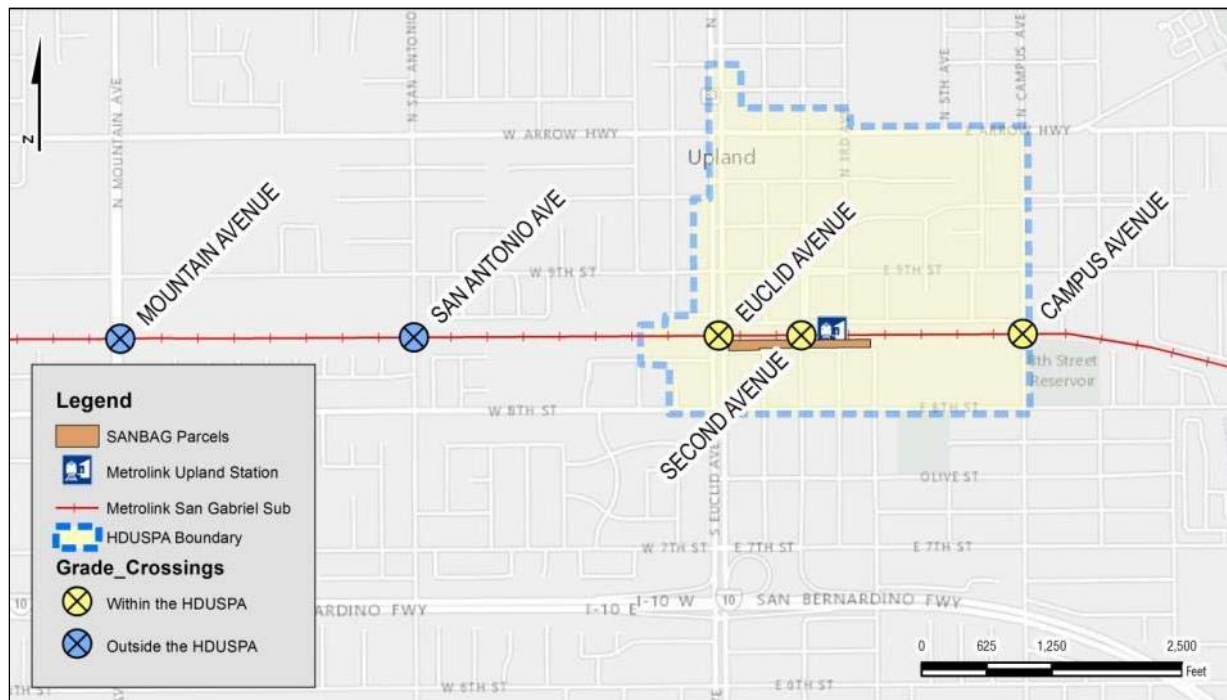
9.1 Quiet Zone Overview

9.1.1 Definition

The term “Quiet Zone” refers to a segment of a railroad line that has one or more consecutive public highway-rail crossings at which locomotive horns are not routinely sounded. However, when a locomotive engineer perceives a dangerous condition, such as trespassers on the railroad or a car stopped on the tracks, he or she can use the locomotive horn at their discretion. Railroad construction activities within a QZ require the locomotive engineer to sound the train horn as an added safety measure. Under normal conditions within the QZ, train horns will not be used. Trains entering a station are required to sound a bell as the train moves adjacent to the platform. The requirement for trains to use their bell within the station area remains once a QZ is established.

Resulting from 1994 law, the FRA issued a Rule²⁵ in 2006 that addresses the use of train horns at public at-grade crossings. The Rule states that all trains must sound their horns at all public crossings; however, the Rule also includes provisions for communities to establish QZ wherein locomotive horns are not sounded. The FRA Rule also allows for either 24-hour QZ or Partial QZ, which are in effect only during the evening or nighttime hours. For the purposes of this Technical Memorandum, the proposed Quiet Zone in Upland would be in effect 24 hours a day. Once implemented, the City would post a “No Train Horn” sign as shown in **Figure 9.2** on each roadway approach to crossings within the QZ.

Figure 9.1: Grade Crossings Located Within the City of Upland



Source: HDR

Figure 9.2: “No Train Horn” Sign, MUTCD W10-9



²⁵ Federal Railroad Administration 2006. Document published in the Federal Register titled *Use of Locomotive Horns at Highway-Rail; Final Rule* and April 27, 2005 subsequently amended on August 17, 2006.

9.1.2 Wayside Horns

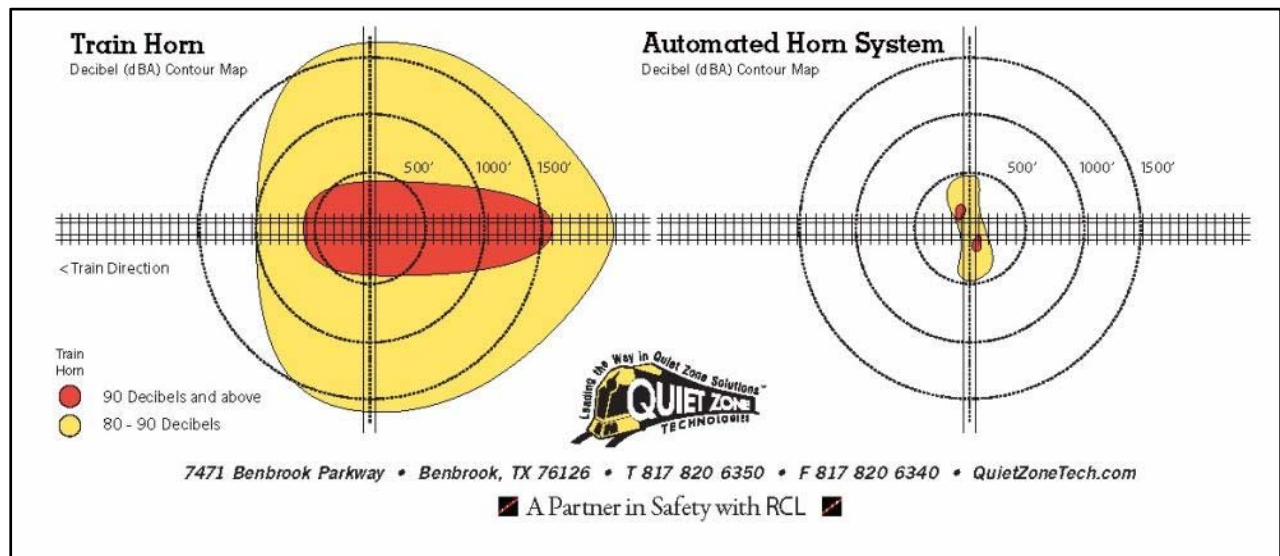
The FRA Rule also allows cities to install Wayside Horns, which are stationary horns that emit a sound similar to a train horn, but directed perpendicular to the railroad ROW. The sound emanating from a Wayside Horn is aimed directly towards vehicles and pedestrians at the roadway thus minimizing and confining the “sound footprint” to a smaller area as compared to the sound footprint of a train horn.

A wayside horn, also known as an Automated Horn System (AHS), consists of a post-mounted, stationary horn located at a highway-rail grade crossing that is designed to provide audible warning to oncoming motorists when a train is approaching. A wayside horn is controlled by the same track circuitry that is configured to activate automatic warning devices at highway-rail grade crossings.²⁶ The audible signal supplants the need for the routine sounding of locomotive horns at railroad crossings.

Figure 9.3 from an AHS vendor website (www.quietzonetech.com) shows the comparative sound-footprint of an AHS and a locomotive moving through a crossing.

The two noise footprints below depict the area impacted by the sound of the train horn and AHS respectively. The comparison of the train horn and AHS shows a dramatic difference between the areas that are impacted at specific decibel levels. By examining the 80 decibel contour on the two footprints it can be seen that the area impacted by the AHS™ is a fraction of the size of the 80 decibel contour produced by the train horn.”

Figure 9.3: Wayside Horn (AHS) Sound Footprint



Source: www.quietzonetech.com

The provision within the Rule for Wayside Horns is mentioned in passing, but is not further evaluated for implementation within the City of Upland.

²⁶ Train Horn Rule Glossary, FRA website, http://www.fra.dot.gov/downloads/safety/trainhorn_2005/glossary_042205.pdf

9.2 The Quiet Zone Approval Process

Establishment of a QZ is a City-initiated process. The City would need to obtain approval from SCRRA, the CPUC and the FRA. Modifications to Euclid Avenue (State Route 83) would also require approval by Caltrans. **Table 9.2** provides a listing of the approving agency as well as its governing process and a contact person from each agency.

Determination of the feasibility of a proposed Quiet Zone relies on two basic parameters: Risk Index and Safety Measures. This analysis is based on three Metrolink tracks through the Upland Station area, although the land use alternatives considered two Metrolink tracks. Generally speaking, by eliminating the station siding, the quiet zone risk index will increase. This is counterintuitive since more tracks would seem to result in greater risk; however, the risk depends on the type of tracks. Although more main tracks will increase the risk index and an increase in the number of “other” tracks will reduce the risk index, the effect of risk index for having three versus two train tracks through Upland Station is not significant.

Table 9.2: Agency Contacts for Quiet Zone Establishment

Agency	Required Process, Procedure or Guidelines	Contact Person
Caltrans (for SR-83 only)	GO 88-B Concurrence and potentially an Encroachment Permit	David Buzon (909) 889-7867
California Public Utilities Commission (CPUC)	General Orders (GO) GO-26D GO-75 GO 88-B	Sergio Licon (213) 576-7085
Federal Railroad Administration (FRA)	49 CFR Parts 222 and 229 Use of Locomotive Horns at Highway-Rail Grade Crossings; Final Rule	Charlie Hagood (916) 798-7814
SCRRA	SCRRA Quiet Zone Guidelines and Procedures and SCRRA Highway-Rail Grade Crossings Manual	Naresh Patel, PE (909) 392-8401

Source: HDR

9.3 Risk Indices

The term “risk index” refers to the predicted cost to society of casualties that are expected to result from collisions at an individual crossing. The two components of a risk index are 1) predicted cost of fatalities; and 2) predicted cost of injuries. These costs are based on a formula published by the United States Department of Transportation (USDOT).

- **Quiet Zone Risk Index (QZRI):**
The average risk index for all public crossings in a proposed quiet zone taking into consideration the increased risk caused by the absence of train horns and any decrease in risk attributable to the use of SSMs or ASMs.
- **Nationwide Significant Risk Threshold (NSRT):**
The average Risk Index of all public gated highway-rail grade crossings in the nation at which train horns are routinely sounded.
- **Risk Index With Horns (RIWH):**
A measure of risk to the motoring public when locomotive horns are routinely sounded at every public highway-rail grade crossing within a quiet zone.

9.4 Quiet Zone Safety Measures

The FRA Rule describes two categories of safety measures that can be implemented to establish a quiet zone:

- Supplemental Safety Measures
- Alternative Safety Measures

9.4.1 Supplementary Safety Measures

Supplementary Safety Measures (SSM) are engineering improvements, which when installed at highway-rail grade crossings within a QZ, would reduce the risk of a collision at the crossing. SSMs are installed to reduce the risk level either to the level that would have existed if the train horn were sounded (compensating for the lack of the train horn) or to a level below the NSRT. Approved SSMs include:

- Four quadrant gates
- Gates with medians or channelization devices,
- One-way streets equipped with gates,
- Temporary closure (closure of the crossing during nighttime hours)
- Permanent closure

9.4.2 Alternative Safety Measures

Alternative Safety Measures (ASM) are a safety system or procedure provided by the appropriate traffic control authority which, after individual review and analysis, is determined by the FRA to be an effective substitute for the locomotive horn at specific highway-rail grade crossings. ASMs include:

- Modified Supplementary Safety Measures:
An SSM that has in some way been adjusted to accommodate unique circumstances existing at a specific highway-rail grade crossing and no longer conforms to the SSM requirements. Modified SSMs are considered ASMs (see definition above). An example would be traffic channelization devices that due to a nearby intersection are only 45 feet in length instead of the required 60 feet.
- Engineering Alternative Safety Measures:
Engineering improvements other than modified SSMs include improvements that address underlying geometric conditions, including sight distance, that are a source of increased risk at the crossing.
- Non-engineering Alternative Safety Measures:
Photo enforcement or a consistent and systematic program of traffic law enforcement, public education programs, or a combination thereof, that produces a measurable reduction of risk at designated quiet zone highway-rail grade crossings.

9.5 Methods for Establishing a Quiet Zone

The FRA Rule describes two methods of establishing a quiet zone:

- Public Authority Designation; and
- Public Authority Application to FRA.

The goal of this Study is to first determine whether a QZ can be met with the Public Authority Designation, which is the preferable approach from the standpoint of streamlined implementation and less stringent monitoring requirements.

9.5.1 Public Authority Designation

With the Public Authority Designation method, a formal application to and approval by FRA is not required. The City, acting as the “public authority” must demonstrate that the implementation of Supplemental Safety Measures (SSM) “reduces the risk index to a level that is equal to or less than the national average risk at gated crossings

with horns, or the risk is reduced enough to compensate for the loss of the safety benefit afforded by a train sounding its horn.”

Two basic prerequisites must be met under the Public Authority Designation Method:

- Each public crossing within a New Quiet Zone must at a minimum be equipped with gates and constant warning time devices.
- A Quiet Zone must be at least one half of a mile in length.

Table 9.3: Public Authority Designation Options

Option	Description	Reporting Requirements Periodic Updates of Inventory Forms
Option 1	A Quiet Zone may be designated if the existing Quiet Zone Risk Index (QZRI), (existing conditions with no SSMs or ASMs) is below the Nationwide Significant Risk Threshold (NSRT).	Every 2 ½ to 3 years
Option 2	A Quiet Zone may be designated if Supplementary Safety Measures (SSMs) are applied to every public at-grade crossing within the Quiet Zone.	Every 4 ½ to 5 years
Option 3	A Quiet Zone may be designated if SSMs/ASMs are instituted and results in a reduction of the Quiet Zone Risk Index (QZRI) to a level below the Nationwide Significant Risk Threshold (NSRT), or to the risk level which would exist if locomotive horns sounded at all crossings within the zone.	Subject to Annual Review by the FRA Periodic updates required every 2 ½ to 3 years.

Source: HDR


9.5.2 Public Authority Application to FRA

The “Application” method, which would employ ASMs or Modified SSMs, is desirable only as a last resort if the requirements of the Designation method cannot be met. The FRA Rule imposes stringent compliance requirements on ASM QZ. This analysis found that the Designation method is feasible, therefore the use of ASMs is not considered as part of the analysis.

9.6 Existing Conditions at the Grade Crossings


The following tables (**Tables 9.4 – 9.8**) document the findings of a site visit to the grade crossings on January 14, 2015, at each of the five crossings located within the City of Upland. **Appendix M** includes grade crossing exhibits indicating the existing and proposed features of these crossings. Each crossing is equipped with automatic warning devices in accordance with the California Public Utilities Commission (CPUC) standards as set forth in CPUC General Order (GO) 75-D: “Regulations Governing Standards For Warning Devices For At-Grade Highway/Rail Crossings In The State Of California.” The CPUC GO 75-D includes two standard warning devices applicable to crossings within the study area: CPUC Standard No. 9, consisting of a mast-mounted set of flashing lights with an automatic gate; and CPUC Standard No. 9A that includes the same features of a No. 9 signal with additional flashing light signals over the roadway on a cantilever arm. **Table 9.4** through **Table 9.8** indicates the existing automatic warning devices at each of the five grade crossings in Upland.

Table 9.4: Campus Avenue Grade Crossing Conditions

Campus Avenue	CPUC No. 101SG-37.30	USDOT 026168T	
Automatic warning devices	Northbound: No. 9		
	Southbound: No. 9		
Crossing Surface	Concrete panels		
Existing medians	North approach: 73' x 4'		
	South approach: 100' x 4'		
Sidewalks:	All quadrants		
<ul style="list-style-type: none">Crossing is characterized by a narrow roadway ROW with minimum-setback commercial developments in the northwest quadrant.Pedestrian treatments are feasible; however, there is limited ROW in the northwest quadrant. Design survey data is required before determining the placement of pedestrian treatments.Intersection with "A" Street on the north approach limits the ability to extend the north-approach median.A park is located in the southeast quadrant.Omnitrans bus service noted.			


Source: HDR

Table 9.5: 2nd Avenue Grade Crossing Conditions

2nd Avenue	CPUC No. 101SG-36.90	USDOT 026172H	
Automatic warning devices	Northbound: No. 9		
	Southbound: No. 9		
Crossing Surface	Concrete panels (10-ft segments)		
Existing medians	North approach: 82' x 3'		
	South approach: 75' x 2'		
Sidewalks:	No sidewalk in southeast quadrant; present in all other quadrants		
<ul style="list-style-type: none">• Crossing abuts an existing station platform in the northeast quadrant.• Non-standard median height.• Pedestrian treatments are feasible; however,• Crossing surface extension required on the west side of the street.• Platform conflicts with pedestrian gate placement in northeast quadrant.• Steep slope in southeast quadrant may require a retaining wall to place pedestrian treatments.			


Source: HDR

Table 9.6: Euclid Avenue (SR 83) Grade Crossing Conditions

Euclid Avenue (SR 83)	CPUC No. 101SG-36.80	USDOT 026173P	
Automatic warning devices	Northbound: Two No. 9s		
	Southbound: Two No. 9s		
Crossing Surface	Concrete panels, gap at median		
Existing medians	North approach: 95'		
	South approach: 115'		
Sidewalks:	All quadrants		
<ul style="list-style-type: none">• Cantilever signal placement would add flashing lights over the middle lanes (there are 3 lanes in each direction)• Wide landscaped median.• Recommend permanent closure of cross-median roadways at Stowell Street. and "A" Street• Non-standard median curb height; missing median-curb on northbound approach.• Pedestrian treatments are feasible.• Wayside railroad signal west of crossing. Could be within the SCRRRA minimum 50-ft. setback if pedestrian gates added.• High school in northwest quadrant; Restaurant in northeast quadrant; Liquor store in southeast quadrant			


Source: HDR

Table 9.7: San Antonio Avenue Grade Crossing Conditions

San Antonio Avenue	CPUC No. 101SG-36.20	USDOT 026174W	
Automatic warning devices	Northbound: Two No. 9s		
	Southbound: Two No. 9s		
Crossing Surface	Concrete panels		
Existing medians	North approach: 50' x 10'		
	South approach: 52' x 10'		
Sidewalks:	All quadrants		
<ul style="list-style-type: none">• Crossing is located in a residential area.• Medical-office complex is located in the northwest quadrant.• Median extension to meet the quiet zone SSM standard is feasible; however, it would eliminate left turns into near-driveways.• Drainage structures in south quadrants.• Retaining wall is required for south quadrant pedestrian treatments.• Pedestrian treatments would eliminate ROW access road on south side of track.			

Source: HDR

Table 9.8: Mountain Avenue Grade Crossing Conditions

Mountain Avenue	CPUC No. 101SG-35.70	USDOT 026175D	
Automatic warning devices	Northbound: One No. 9 One No. 9A		
	Southbound: One No. 9 One No. 9A		
Crossing Surface	Concrete panels		
Existing medians	North approach: 215' x 11'		
	South approach: 328 x 11'		
Sidewalks:	All quadrants		
<ul style="list-style-type: none">• Crossing is a heavily-travelled 6-lane major arterial.• Retail land uses dominate the surrounding areas.• Existing medians exceed the quiet zone standard• Drainage structures in south quadrants.• Pedestrian treatments on the south could be problematic given the ROW constraints.• ADA concerns on south approach.• Traffic analysis of queuing is recommended.			

Source: HDR

9.7 Risk Calculations

The online FRA QZ Calculator is the only official method to determine risk at a particular crossing or within a corridor containing several crossings. The FRA risk calculation method includes the following factors:

Roadway factors:

- Traffic volume
- Posted speed
- Number of traffic lanes
- Urban or rural location
- Paved or non-paved roadway approaches
- Accident history within the past 5 years

Railroad factors:

- Maximum speed
- Number of tracks, both main tracks and non-main tracks
- Train counts: total trains, switching movements, through train
- Daytime and nighttime train movements

Tables 9.9 and 9.10 provide the data collected for each of the crossings in Upland along the SCRRA San Gabriel Subdivision.

Table 9.9: Roadway Data for Upland Grade Crossings

DOT No.	CPUC No.	Street	Present Warning Devices	Annual Average Daily Highway Traffic	Highway Paved? 1 = yes	Number of Highway Lanes	Urban-Rural Location, 1 = urban	Number of Fatal Accidents	Number of Accident Years
026168T	101SG-37.30	Campus Avenue	Gates	8,300	1	2	1	0	5
026172H	101SG-36.90	2nd Avenue	Gates	2,300	1	2	1	1	5
026173P	101SG-36.80	Euclid Avenue (SR 83)	Gates	38,000	1	6	1	0	5
026174W	101SG-36.20	San Antonio Avenue	Gates	8,700	1	4	1	0	5
026175D	101SG-35.70	Mountain Avenue	Gates	44,600	1	6	1	0	5

Source: HDR

Table 9.10: Railroad Data for Upland Grade Crossings

DOT No.	CPUC No.	Street	Total number of train movements per day	Total number of through trains per day	Total number of switch trains *** per day	Number of Main Tracks*	Total Number of Tracks (main and other) **	Number of Through Trains Per Day During Daylight	Maximum Timetable Speed, (mph)
026168T	101SG-37.30	Campus Avenue	40	40	0	2	2	25	79
026172H	101SG-36.90	2nd Avenue	40	40	0	2	3	25	79
026173P	101SG-36.80	Euclid Avenue (SR 83)	40	40	0	2	2	25	79
026174W	101SG-36.20	San Antonio Avenue	40	40	0	2	2	25	79
026175D	101SG-35.70	Mountain Avenue	40	40	0	2	2	25	79

Source: HDR

* The indicated number of tracks presumes completion of the CP Central to CP Archibald Double Track Segment and the Upland Station Siding Track. An increase in the number of tracks increases the risk index for a given crossing.

** Although this study assumes two Metrolink tracks through Upland Metrolink Station, the grade crossing and QZ analysis was based on three tracks through Upland Metrolink Station. While an increase in the number of "other" tracks reduces the risk index, the effect is not significant.

*** A switch train is one that shuttles freight cars into/out of industry tracks. A through train travels between terminals

9.7.1 Accident History

The occurrence of an accident at any crossing within a quiet zone corridor greatly increases the Quiet Zone Risk Index (QZRI). As noted in **Table 9.9**, there was one accident at 2nd Avenue. The accident was a pedestrian-versus-train accident on May 3, 2013, involving the Metrolink express Train 383. From www.trainwreckdb.com:

"TRAIN 383 STRUCK A PEDESTRIAN AT THE 2ND AVENUE GRADE CROSSING IN UPLAND, CA. HE LEFT THE SCENE, WHERE ONLY A SHOE AND SOME BLOOD WAS FOUND. EMERGENCY SERVICES LATER LOCATED HIM, BUT HE DECLINED ANY MEDICAL ATTENTION. MAN IS A TRANSIENT. NO 6180.150 FILED. AGE UNKNOWN"

9.8 Quiet Zone Implementation Scenarios

Three implementation scenarios are included with this Technical Memorandum. Key considerations in identifying these scenarios:

- How many crossings to include?
- What SSMs are most appropriate or feasible at each crossing?

9.8.1 Selection of Supplemental Safety Measures

The FRA Rule allows for fourteen specific SSMs of which ten are allowed in California (exit gates without vehicle presence detection is prohibited per the CA-MUTCD). **Table 9.11** provides an overview of SSM feasibility at each crossing.

9.8.2 Summary of SSM Scenarios

The FRA Quiet Zone Calculator indicates whether a quiet zone is feasible and the findings for the QZ calculator results are presented in **Appendix N**. Two data sets were input into the calculator:

- Data Set 1: HDUSPA Crossings, including Campus Avenue, 2nd Avenue, and Euclid Avenue
- Data Set 2: Citywide Quiet Zone, all five Upland grade crossings.

Although the land use alternatives were based on the assumptions that 2nd Avenue will remain open, the SSM alternatives include scenarios where 2nd Avenue is permanently closed, in case in the future FRA mandates closure of this grade crossing based on safety issues and vehicular volumes.

Tables 9.12 presents the summary of findings for SSM implementation scenarios and **Tables 9.13** through **9.16** presents the findings from each SSM scenario.

Table 9.11: SSM Ratings

SSM Code	SSM	Campus Avenue	2nd Avenue	Euclid Avenue (SR 83)	San Antonio Avenue	Mountain Avenue
1	Temporary (nighttime) closure of a Public Highway-Rail Grade Crossing	☐	☐	☐	☐	☐
2	Permanent Closure of a Public Highway-Rail Grade Crossing	☐	◆	☐	☐	☐
3	Grade Separation of a Public Highway-Rail Grade Crossing	☐	☐	☐	☐	☐
6	Four-Quadrant Gates Upgrade from Two Quadrant Gates, with Vehicle Presence Detection	◆	☒	☒	◆	☒
7	Four-Quadrant Gates Upgrade from Two Quadrant Gates, with medians and Vehicle Presence Detection	☐	☐	☐	☐	☐
10	Four-Quadrant Gates New Installation with Vehicle Presence Detection	☐	☐	☐	☐	☐
11	Four-Quadrant Gates New Installation with medians and Vehicle Presence Detection	☐	☐	☐	☐	☐
12	Mountable medians with Reflective Traffic Channelization Devices	☐	☐	☐	☐	☐
13	Non-Traversable Curb Medians with or without Channelization Devices	■	☐	◆	■	◆
14	One-Way Streets with Gates	☐	☐	☐	☐	☐

Legend

☐	Not Feasible or Not Applicable	☒	Feasible SSM, with moderate challenges
■	Feasible SSM, but having significant challenges	◆	Recommended SSM

Source: HDR

Table 9.12: Summary of SSM Implementation Scenarios

Scenario	Description	Campus Avenue	2nd Avenue	Euclid Avenue (SR 83)	San Antonio Avenue	Mountain Avenue
1	HDUSPA Crossings, 2nd Avenue. Closed	✓	✓	✓	○	○
2	HDUSPA Crossings, 2nd Avenue. Open	✓	✓	✓	○	○
3	Citywide Quiet Zone, 2nd Avenue. Closed	✓	✓	✓	✓	✓
4	Citywide Quiet Zone, 2nd Avenue. Open	✓	✓	✓	✓	✓

Legend

✓	Crossing included in Quiet Zone	○	Crossing not included in Quiet Zone
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Source: HDR

Table 9.13: SSM Scenario 1 – Historic District Crossings Only, Permanently Close 2nd Avenue

Crossings / SSM	Campus Avenue	Exit Gates
	2nd Avenue	Permanent Closure
	Euclid Avenue (SR 83)	Non-Traversable Medians
Risk Values	Risk Index Category	Risk Index
	Nationwide Significant Risk Threshold:	14,347 .00
	Risk Index with Horns:	50,821.89
	Quiet Zone Risk Index	10,734.68
Designation Option	Either Option 2 or Option 3 (refer Table 9.3 for a description of Options)	

Source: HDR

Table 9.14: SSM Scenario 2 – Historic District Crossings Only, 2nd Avenue remains open

Crossings / SSM	Campus Avenue	Exit Gates
	2nd Avenue	Exit Gates
	Euclid Avenue (SR 83)	Non-Traversable Medians
Risk Values	Risk Index Category	Risk Index
	Nationwide Significant Risk Threshold:	14,347 .00
	Risk Index with Horns:	50,821.89
	Quiet Zone Risk Index	18,551.38
Designation Option	Option 3 (refer Table 9.3 for a description of Options)	

Source: HDR

Table 9.15: SSM Scenario 3 – Citywide Quiet Zone, Permanently Close 2nd Avenue

Crossings / SSM	Campus Avenue	Exit Gates
	2nd Avenue	Permanent Closure
	Euclid Avenue (SR 83)	Non-Traversable Medians
	San Antonio Avenue	Exit Gates
	Mountain Avenue	Non-Traversable Medians
Risk Values	Risk Index Category	Risk Index
	Nationwide Significant Risk Threshold:	14,347 .00
	Risk Index with Horns:	50,105.47
	Quiet Zone Risk Index	13,387.03
Designation Option	Either Option 2 or Option 3 (refer Table 9.3 for a description of Options)	

Source: HDR

Table 9.16: SSM Scenario 4 – Citywide Quiet Zone, 2nd Avenue remains open

Crossings / SSM	Campus Avenue	Exit Gates
	2nd Avenue	Exit Gates
	Euclid Avenue (SR 83)	Non-Traversable Medians
	San Antonio Avenue	Exit Gates
	Mountain Avenue	Non-Traversable Medians
Risk Values	Risk Index Category	Risk Index
	Nationwide Significant Risk Threshold:	14,347 .00
	Risk Index with Horns:	50,105.47
	Quiet Zone Risk Index	18,077.05
Designation Option	Option 3 (refer Table 9.3 for a description of Options)	

Source: HDR

9.9 Conceptual Cost Estimate

As required by the SCRRRA QZ Guidelines and Procedures, the City of Upland will all costs for the QZ implementation and will assume responsibilities for future maintenance costs and liability for the crossing.

Table 9.17 presents unit costs for grade crossing of different SSM category while **Table 9.18** presents estimated costs for each SSM implementation scenario. Costs are considered to include the following:

- Engineering design
- ROW costs
- Construction costs
- Railroad costs
- Contingency, 20% of all above costs

Table 9.17: Unit Cost for Grade Crossing based on SSM Categories

SSM	SSM Description	Estimated Cost*
1	Permanent Closure of a Public Highway-Rail Grade Crossing, including ROW fees	100,000
6	Four-Quadrant Gates Upgrade from Two Quadrant Gates, with Vehicle Presence Detection, Presumes Pedestrian Gates Required	1,440,000
13	Non-Traversable Curb Medians with or without Channelization Devices, Presumes Pedestrian Gates Required	480,000

Source: HDR

Table 9.18: Estimated Costs for Each SSM Implementation Scenario

	SSM Scenario 1- Historic District Crossings Only, 2nd Avenue Remains Open		SSM Scenario 2- Historic District Crossings Only, Permanently Close 2nd Avenue		SSM Scenario 3- Citywide Quiet Zone, 2nd Avenue Remains open		SSM Scenario 4- Citywide Quiet Zone, Permanently Close 2nd Avenue	
Street	SSM	Estimated Cost	SSM	Estimated Cost	SSM	Estimated Cost	SSM	Estimated Cost
Campus Avenue	6	1,440,000	6	1,440,000	6	1,440,000	6	1,440,000
2nd Avenue	6	1,440,000	1	100,000	6	1,440,000	1	100,000
Euclid Avenue (SR 83)	13	480,000	13	480,000	13	480,000	13	480,000
San Antonio Avenue					6	1,440,000	6	1,440,000
Mountain Avenue					13	480,000	13	480,000
Total		3,360,000		2,020,000		5,280,000		3,940,000

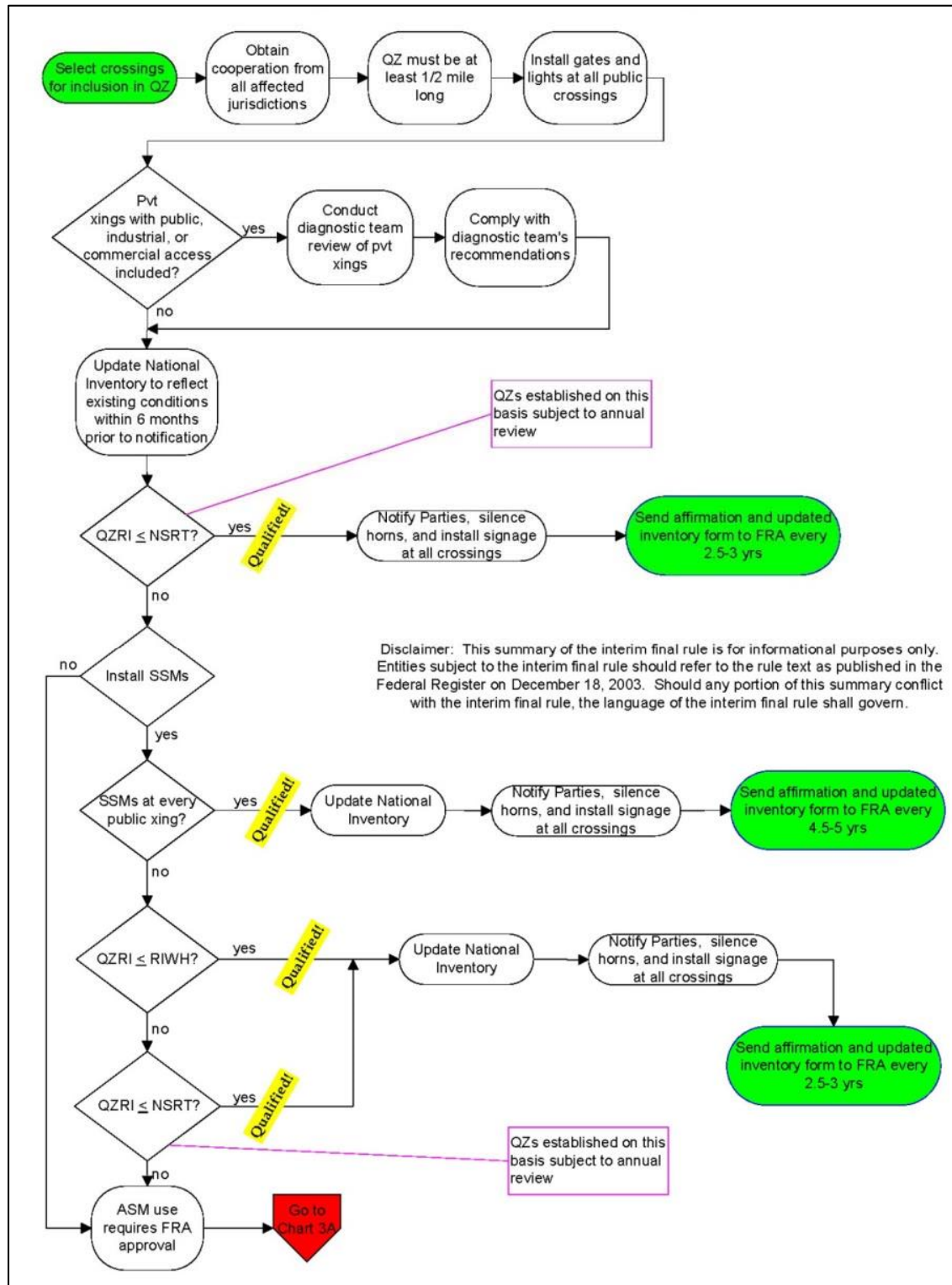
Source: HDR

9.10 Next Steps towards Quiet Zone Implementation

The FRA and SCRRRA each have guidelines and procedures for implementation of a QZ. **Figure 9.4** provides a flowchart overview of the process. SCRRRA's QZ Guidelines provide information specific to the Upland Quiet Zone. The following items are excerpted from both documents:

- Fund the project.
- City pays SCRRRA engineering costs up-front.
- Conduct a diagnostic team meeting with all stakeholders.
- Engineering design.
- Obtain CPUC approval and submit CPUC GO 88-B applications.
- City executes a Construction & Maintenance Agreement; at which time the City pays full cost of the project.
- Submit a Notice of Intent to Create a Quiet Zone to affected parties. Parties will have 60 days to comment.
- Construct crossing improvements.
- City obtains Railroad Liability Insurance (if deemed necessary).
- City updates the FRA Crossings Inventory.
- City provides Notice of Quiet Zone Establishment to affected parties in accordance with FRA Rule Section 222.43.
- City installs required signage at each crossing in accordance with FRA Rule Sections 222.25, 222.27 and 222.35.

Figure 9.4: Guidance on the Quiet Zone Creation Process



Source: FRA

- City prepares and submits CPUC Form G.
- City conducts a Public Awareness Campaign to include Operation Lifesaver presentations at schools near the Quiet Zone.
- Silence the horns.
- City send affirmation and updated crossing inventory forms to FRA every 4 ½ to 5 years.

Chapter 10 - Planning Options and Implementation

The PDT established Project Principles in **Chapter 3** in order to evaluate planning issues (summarized in **Chapter 4**), and the circulation, environmental, funding, and rail corridor crossing issues (summarized in **Chapters 6** through **9**). The outcomes of these evaluations led to the development of the Project design alternatives (summarized in **Chapter 5**). Several major planning preferences that defined the suggested Project planning options were identified:

- In April 2016, the SANBAG Board recommended and approved that the two properties be surplus, and that the revenue generated be used to fund additional parking at the Upland Metrolink Station. Selling the properties reduces the risk associated with owning the property, reduces ongoing maintenance needs, and generates revenue for other projects. In this case, the revenue generated from the sale could be used to fund additional parking at the Upland Metrolink Station pending approval of an agreement with the City for it to be on City-owned property.
- 2nd Avenue will remain open in all alternatives: The City prefers 2nd Avenue to remain a vehicle crossing of the rail corridor. The preference reduces some Metrolink Station and Project design and planning opportunities. As rail corridor traffic and surrounding TOD land use increase, City improvements to the crossing will likely be required to assure safety and accommodate increased crossing activity.
- No Gold Line tracks through the station will be considered in the design due to severe ROW impacts on the Downtown area and the SANBAG properties. The preference to accept this constraint limits transit connections to Metrolink and potential Omnitrans bus re-routing in the Project area.
- Two Metrolink tracks through the station. There will be no third pass-through track. This preference may reduce rail corridor and rail crossing requirements, but may also limit Metrolink and other rail corridor operations, in the future.
- The City desires Omnitrans bus service be connected to the Metrolink Station. However, there is insufficient bus service demand in the area. The PDT, working with Omnitrans, evaluated options and was able to define a long-term potential for bus service when there is sufficient transit oriented land use density in the area. Omnitrans Route 83 could be re-routed (**Figure 6.1**) to the Metrolink Station area when demand is sufficient. Possible bus stop location along Stowell Street was identified in the Project alternatives, however, an alternative bus stop design could be created on the east side of 2nd Avenue south of Stowell Street.

These major planning preferences by the PDT regarding the Project's regional rail corridor components, along with current and potential financial feasibilities of the Project's transit oriented development (TOD) component (identified in **Section 8.2**), greatly influence planning options. This compels defining the Project and the Project's planning options in two parts; one being regional rail transit and rail corridor facilities, and the other being the TOD sites. This two-part organization allows the two parts of the Project to be advanced when each is most optimal, but in a coordinated fashion that achieves overall Project Principles.

In addition, based on the financial analysis presented in **Section 8.2**, Alternatives 1 and 3 were recommended to be moved forward.

10.1 Planning Options that Optimize Development Feasibility Consistent with Project Principles

Planning options that coordinate optimal implementation of the rail transit and rail corridor facilities as well as the development feasibility of the TOD sites are best expressed in a basic order that recognizes project principles, a logical sequence, likely timing, and optimal implementation of possible actions to further each part of the Project. This basic order is presented in **Table 10.1**.

Table 10.1: Planning Options Summary

Project Principle	Rail Corridor Facilities & Bus service Planning Options	TOD Sites Development Planning Options	Likely Timing	Logical Sequence	Optimal Implementation	Lead Agency or Agencies
The site's proposed site plan is compatible with planned improvements to the rail corridor and station.	Additional track		When track capacity is reached and the project is funded	Same as Likely Timing	Just prior to capacity need and with external funding Before TOD development on SANBAG sites due to construction staging and land use compatibility	SANBAG, Metrolink, SCAG, FTA
The site's proposed site plan is compatible with planned improvements to the rail corridor and station.	Additional station platform and passenger connection		When Metrolink passenger capacity dictates and the project is funded	Same as Likely Timing	Just prior to capacity need and with external funding Before TOD development on SANBAG sites due to construction staging and land use compatibility	SANBAG, Metrolink, SCAG, FTA
3. The site's proposed land use will support the Vision of the Historic Downtown Upland Specific Plan and development of a walkable and transit-oriented downtown around the Upland Metrolink Station. 4. The City of Upland will update adopted plans and zoning to incorporate this study's land use and circulation plan recommendations.	Bus Route 83 re-routing and bus stop		When Omnitrans determines sufficient bus ridership warrants	Most likely in next 10-20 years with HDUSP implemented and sufficient TOD land use surrounding the Metrolink	As soon as justified by bus ridership demand	City leads developing sufficient TOD to create bus ridership demand. Omnitrans to implement re-routing and bus stop.
3. SANBAG will assist the City in pursuing implementation of a Quiet Zone through the area if possible. 4. The City of Upland will update adopted plans and zoning to incorporate this study's land use and circulation plan recommendations.	Quiet Zone improvements		Several years	When City has funded design and construction	City funding program established as soon as possible to allow existing/future surrounding land use to contribute Construction coordinated with and concurrent or after rail corridor double tracking and double platform construction	City leads in applying for Quiet Zone improvements. CPUC, FRA, SANBAG, Metrolink will be involved.
Not applicable, as this would be a transportation safety issue	Maintaining safety of City 2nd Avenue Crossing of the Rail Corridor		When required by rail safety requirements	Crossing accidents or changes in the rail corridor may trigger safety improvements		City and SANBAG, CPUC, FRA
The City of Upland and SANBAG will collaborate in order to minimize public costs while achieving the goal of privately-developed transit-oriented development for the sites.		Interim uses on SANBAG TOD sites to help fund TOD feasibility	When request for interim use is received by SANBAG	After SANBAG has defined any rail corridor uses for the sites	After the Project analysis is accepted by SANBAG, and SANBAG has defined any rail corridor uses for the sites	SANBAG
Not applicable, as this would be a SANBAG policy		Define SANBAG land use policy	When SANBAG receives sufficient requests for lease/sale of their land resource	Needed prior to definition of minimum required Return on Investment (ROI)	As soon as possible. A land use policy will define how SANBAG land is planned, managed and under what situations is available for private use	SANBAG
Not applicable, as this would be a SANBAG policy		Define the minimum desired ROI based on surrounding market values for lease/sale of SANBAG land	When SANBAG receives sufficient requests for lease/sale of their land resources	Needed prior to RFP preparation to inform proposers of the minimum required ROI	As soon as possible. An ROI Threshold policy for SANBAG land leases or sales will allow SANBAG to quickly respond to developer inquiries and determine when an RFP will likely be prepared	SANBAG
1. The site's proposed land use and development pattern/intensity is consistent with adopted plans and zoning, or the City of Upland will be able to update the adopted plans and zoning to incorporate the selected Project site plan. 2. The City will provide as much conceptual entitlement approval as practical within the bounds of the Project scope to promote SANBAG's implementation of an RFP for development of the sites.		Prepare RFP for TOD development	Possibly in next 10-15 years when TOD demand and land values increase	Pre-RFP coordination to define or pre-approve allowed development to advance City goals and reduce developer entitlement risk	The Logical Sequence, and when land values are higher and allow TOD development more consistent with the City HDUSP	SANBAG

In implementing these planning options the identification of any implementation cost reductions that SANBAG can offer the City and City can offer SANBAG should be pursued. A memorandum of understanding (MOU) between SANBAG and the City may be desirable to define what those mutual cost reductions can be, how they would be accounted for, and how they would be implemented. Examples of possible cost reductions include:

- Coordinating capital improvement project planning and funding
- Coordinating capital improvement project construction and/or maintenance
- Collaboratively working in advance on concept design, design requirements, and CEQA processing to facilitate efficiencies in the TOD RFP and entitlement process for the SANBAG properties
- Collaboratively working to facilitate efficiencies in the City's pursuit of a Quiet Zone
- Collaboratively exploring potential options for mutually beneficial land swaps
- Other areas of potential mutually beneficial cooperation or collaboration

10.2 Proposed Strategies for SANBAG and City of Upland Collaboration

Strategies for public sector collaboration can be simple or complex. Simple collaboration strategies tend to work best on smaller discrete projects like the Upland Project, while more complex collaboration structures work best (and are typically needed) with large and more integrated or comingled projects. Given the Project's relatively small size and the Project's clear separation of transit station and facilities from the TOD portion of the Project, a simple collaboration strategy appears most suitable.

The Project will have increased complexity due to the required private sector (developer) involvement in delivering TOD. But a simple City and SANBAG collaboration strategy to lay the groundwork and parameters of a Request for Proposal (RFP) from private sector TOD developers would be beneficial. Most developers are risk adverse and appreciate a clear and simple path to get permits to build and try not to get involved in complex formal intergovernmental agreements.

The simplest means of public sector collaboration is a MOU between the City of Upland and SANBAG that would define what each wants from the collaboration, the timeframe of collaboration, and how each would proceed to achieve the collaboration. The MOU should also define under what situations the collaboration would end and if there should be any compensation for one party not fully collaborating according to the MOU. An MOU is particularly suited for collaborations that do not involve a comingling of assets (land, funds, etc.) or resources (staff, budgets, etc.). A Project MOU could be created to define what the City and SANBAG would do separately and collaboratively to implement the Project. The MOU's intricacy or detail would be subject to mutual agreement by the City and SANBAG. In creating a MOU, the City and SANBAG should assure the MOU is fully consistent with their respective government purpose, structure and policies.

Most other collaboration strategies involve more formal legal structures to account for comingling of assets, resources, and authority; incorporating additional project complexity; organizing long-term collaboration; and/or defining specific voting and decision making processes. The most common form is a Joint Powers Authority.

Another potential form of a more involved collaboration strategy is a Development Agreement per California's Planning and Zoning Laws. The City and SANBAG could reach an agreement on the development of the TOD portion of the Project that could help advance this portion of the overall Project. Development Agreements are typically between the City or County and a developer, and are used to reduce development project risk by both parties. A Development Agreement could possibly be creatively used to reduce development risk of the TOD portion of the Project. However, SANBAG may have limitations in entering into such an agreement.

The FTA has established administrative guidance on Joint Development when Federal funds are involved (<http://www.fta.dot.gov/grants/16124.html>). The FTA circular C 7050.1 outlines the guidance, and states it is "FTA's policy is to maximize the utility of FTA assisted projects and to encourage the generation of program

income through joint development. One of the primary benefits of joint development is revenue generation for the transit system, such as income derived from rental or lease payments, as well as private sector contributions to public infrastructure. Other benefits include shared costs, efficient land use, reduced distance between transportation and other activities, economic development, increased transit ridership, and improved transit connectivity.” FTA circular C 7050.1 was included as an attachment in the November 12, 2014 Land Use Planning Assessment Technical Memorandum (**Appendix B**). The FTA circular provides information on potential FTA involvement in joint development, and outlines some of the issues relevant to structuring joint development collaboration.

An alternative strategy to a direct City and SANBAG collaboration to implement the Project would be a disassociation strategy, in which City and SANBAG would separately proceed on Project related actions without collaboration. Such a strategy would potentially reduce opportunities to: achieve mutual beneficial cost savings, pursue alternative funding opportunities, convey Project support to potential TOD Developers, build on collaboration to-date, and/or implement the Project as currently planned.

The City and SANBAG can together collaborate in a variety of ways to most effectively implement the project. Key basic areas of collaboration include:

- Incorporating agreements, procedures and coordinated timing to minimize both City and SANBAG project costs while maintaining project performance and quality goals
- Updating adopted plans, regulations and capital projects to incorporate the project and coordinate actions
- Providing as much conceptual entitlement approval as practical
- SANBAG assisting the City in pursuing implementation of a Quiet Zone if possible

10.3 Key Land Use Implementation Features

Key land use implementation features for the Project primarily relate to promoting feasibility of TOD on the Project’s two SANBAG sites. Promoting feasibility is particularly important due to their long and narrow configuration. Increasing TOD in the entire HDUSP is also a key land use implementation feature as that will foster increased benefits to the City from greater economic development from better utilization of transit infrastructure and reduced City transportation and parking costs. The City improving their current crossings of the rail corridor, primarily for pedestrians and bikes consistent with TOD principles, can help interconnect and broaden these benefits. These three issues are summarized below.

10.3.1 Promoting TOD Feasibility on SANBAG TOD Project Sites

The collaborative work by the City and SANBAG on the Project have helped advance Project implementation by clarifying SANBAG’s and the City’s basic regulatory and policy parameters, exploring TOD and infrastructure options, and finding some areas of possible cooperation. Following are some of the key land use implementation features identified from that collaborative work.

The HDUSP promotes TOD feasibility by planning for more appropriate and dense land use that can foster a pedestrian and transit oriented downtown district.

Chapter 4 recognized the general excellence of the HDUSP, and noted that the City identified the realistic development feasibility of each of the two SANBAG Project sites with ground floor commercial and 46 dwellings per acre, including several minor areas to explore refinement of TOD feasibility on the Project:

- The City indicated that as a result of the Comprehensive General Plan Update, there may be some changes made to the Specific Plan. However, these changes are not expected to trigger an EIR or addendum. The City and SANBAG should collaborate where possible on any proposed HDUSP changes to enhance TOD feasibility, incorporate rail corridor features and the outcomes of this Project. To better

facilitate TOD by tailored regulatory streamlining and expand the City's external TOD funding opportunities, the City should consider making the findings to also adopt the HDUSP as a Transit Village Plan (CA Government Code Section 65460-65460.11) as part of any HDUSP changes. Incorporation of relevant Federal, State and regional rail corridor information and requirements would be helpful in better coordinating City land use planning with regional transit and interstate rail transportation. A modest 3-5 foot open space landscape setback from the rail corridor for land use property maintenance and visual quality in the City, similar to City street parkway setback standards, was discussed during the project and could be considered in any City planning updates.

- Additional background information from the City how the realistic development feasibility of the two SANBAG TOD Project sites was calculated would be helpful in preparing a RFP for TOD of the sites. The City's General Plan Housing Element indicates a realistic capacity of 46 dwelling units per acre for the two SANBAG TOD Project Sites. The City providing a conceptual level of approved development feasibility and density for the RFP (that would help reduce developer risk) would be a significant boost to feasibility.
- Parking costs are critical feasibility issues in TOD – the ability to cost effectively provide parking being vital. The ability to cost effectively provide TOD parking off-site maybe critical to providing development feasibility and desired TOD design features at the narrow SANBAG TOD Project sites. A definition of the ability and costs of providing TOD parking off-site, ether at the other SANBAG TOD site or at another off-site location, should be defined in any RFP.
- During the course of the project, the City confirmed that the SANBAG TOD sites' existing narrow lot nonconformity would not impact possible subdivision, if needed.
- The City's "condo standards", particularly the minimum dwelling unit size requirement, may discourage some TOD housing types that could be particularly well suited for some housing need segments and the particularly narrow Project sites. Outcomes from an RFP may provide market feedback and may lead to potential refinement opportunities.
- The City indicated consideration for considering adjusting some of the building transparency requirements due to the narrowness of the SANBAG TOD lots and the historic non-transparent warehouse character of the south of the rail corridor area. An RFP process may define the extent of market concern for this issue.
- The PDT identified the potential long-term opportunity provide Omnitrans bus service to the Metrolink Station, thus better integrating transit services. The Project Alternatives incorporate this potential opportunity along Stowell Street, although an alternative location could be located at 2nd Avenue south of Stowell Street. This potential for Omnitrans bus service is dependent on the City's ability to develop sufficiently dense TOD around the Metrolink Station, particularly transit dependent land uses. Any update to the HDUSP could incorporate plans and policies to facilitate land use to support Omnitrans bus service.
- The western SANBAG TOD Project site (fronting on Euclid Avenue and Stowell Street) straddles two different development zones in the HDUSP. The City indicated the ability to positively transition and blend the two development standards on this site to promote development feasibility would be possible during the development site planning process.
- The Land Use Planning Assessment Technical Memorandum (Task 2.3) provided detailed information on a range of Project land use implementation issues and suggestions, and should be reviewed for background on the above key features and other less critical features and issues.

10.3.2 Increasing TOD Implementation in the HDUSP

With the improving economy, private sector interest and activity in TOD is increasing. The City's recent proposed \$400,000 sale of an 80-space City parking lot to a mixed-use developer at the southwest corner of 3rd Avenue and C Street is an example of this upward trend²⁷. With a proposed sale price of about \$5,000 per parking space

²⁷ Downtown Upland parking lot slated for mixed-use development; by Liset Marquez, Inland Valley Daily Bulletin; Posted: 02/27/15, 5:12 PM PST [<http://www.dailybulletin.com/business/20150227/downtown-upland-parking-lot-slated-for-mixed-use-development>]

this represents about a \$14-15/square foot price. As private sector interest grows, momentum can be created that will allow the City to more fully benefit from both transit access and efficiencies. Increasing transit and pedestrian orientation with each new development will promote greater transit and pedestrian orientation, and increase economic development activity and land values.

10.4 Summary

In summary, the key, and most fundamental, land use implementation feature is the clear recognition, planning and regulatory support for transit and TOD. The Project is at the heart of the regional Metrolink transit system in Upland. The City of Upland's transit connectivity to the region and the region's transit connection to Upland are centered at around the Project, and enhancing the feasibility of both transit and the Project helps the City of Upland best benefit from this situation.

Subsequent to the recommendations and findings of this report, and after a series of discussions with the City of Upland, SANBAG Board on April 06, 2016, directed the agency to proceed with the sale of the properties and use the revenue collected to fund additional parking at the Upland Metrolink Station in partnership with the City. Following were the Board actions that staff recommended on April 06, 2016, based on the review and unanimous recommendation for approval by SANBAG Commuter Rail and Transit Committee on March 10, 2016:

- Authorized the Executive Director, or designee to develop and enter into an agreement with County of San Bernardino Real Estate Services Department ("RSD") to provide Real Property Disposition Services, in an estimated amount of \$18,250, for the sale of two SANBAG-owned properties adjacent to the Upland Metrolink Station; and direct the properties to be sold through public disposition procedures.
- Authorized the termination of the current "Lease of Land" Agreement for the property located at 201-299 East Stowell Street, in Upland, California (Parcel No. 1046-605-01) at such a time that SANBAG staff deems appropriate.
- Adopted Resolution No. 16-035 declaring the subject properties to be surplus and setting forth the procedures for a proposed sale as developed by staff in consultation with the RSD and as approved by SANBAG General Counsel.
- Allocated the revenue generated from the sale of the properties toward additional parking for the Upland Metrolink Station and direct staff to work with the City of Upland on an agreement, which is approved prior to the sale of the properties that the additional parking will be on City owned land in the vicinity of the station.

It is important to note, that the sale of the properties will not impact the Gold Line extension to Montclair Transit Center, a project included in Measure I 2010-2040 Ordinance. However, if Gold Line is to be extended easterly from the Montclair Transit Center, and aligned south of the existing Metrolink tracks, majority portion of these parcels would have to be acquired for Gold Line right-of-way. Different property takes would occur if in the future Gold Line extends easterly from Montclair and is aligned north of the existing Metrolink tracks.

The details of the SANBAG Board decision is presented in **Appendix O**.

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Upland Metrolink Land Use and Constraints Analysis (Appendices)

June 2016

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Appendix A: Transit Village Development Planning Act of 1994

GOVERNMENT CODE

SECTION 65460-65460.11

Source: [http://www.leginfo.ca.gov/cgi-bin/displaycode?](http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=65001-66000&file=65460-65460.11)
[section=gov&group=65001-66000&file=65460-65460.11](http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=65001-66000&file=65460-65460.11)

65460. This act shall be known, and may be cited, as the Transit Village Development Planning Act of 1994.

65460.1. (a) The Legislature hereby finds and declares all of the following:

(1) Federal, state, and local governments in California are investing in new and expanded transit systems in areas throughout the state, including Los Angeles County, the San Francisco Bay area, San Diego County, Santa Clara County, and Sacramento County.

(2) This public investment in transit is unrivaled in the state's history and represents well over ten billion dollars (\$10,000,000,000) in planned investment alone.

(3) Recent studies of transit ridership in California indicate that persons who live within a one-half-mile radius of transit stations utilize the transit system in far greater numbers than does the general public living elsewhere.

(4) The greater use of public transit facilitated by the development of transit villages improves local street, road, and highway congestion by providing viable alternatives to automobile use.

(5) The development of transit village development districts can improve environmental conditions by increasing the use of public transit, facilitating the creation of and improvement to walkable, mixed-use communities, and decreasing automobile use.

(6) The development of transit village development districts throughout the state should be environmentally conscious and sustainable, and related construction should meet or exceed the requirements of the California Green Building Standards Code, Part 11 of Title 24 of the California Code of Regulations, or its successor code.

(7) Only a few transit stations in California have any concentration of housing proximate to the station.

(8) Interest in clustering housing and commercial development around transit stations, called transit villages, has gained momentum in recent years.

(b) For purposes of this article, the following definitions shall apply:

(1) "Bus hub" means an intersection of three or more bus routes, with a minimum route headway of 10 minutes during peak hours.

(2) "Bus transfer station" means an arrival, departure, or transfer point for the area's intercity, intraregional, or interregional bus service having permanent investment in multiple bus docking facilities, ticketing services, and passenger shelters.

(3) "District" means a transit village development district as defined in Section 65460.4.

(4) "Peak hours" means the time between 7 a.m. to 10 a.m., inclusive, and 3 p.m. to 7 p.m., inclusive, Monday through Friday.

(5) "Transit station" means a rail or light-rail station, ferry terminal, bus hub, or bus transfer station.

65460.2. A city or county may prepare a transit village plan for a transit village development district that addresses the following characteristics:

(a) A neighborhood centered around a transit station that is planned and designed so that residents, workers, shoppers, and others find it convenient and attractive to patronize transit.

(b) A mix of housing types, including apartments, within not more than one-half mile of the main entrance of the transit station.

(c) Other land uses, including a retail district oriented to the transit station and civic uses, including day care centers and libraries.

(d) Pedestrian and bicycle access to the transit station, with attractively designed and landscaped pathways.

(e) A transit system that should encourage and facilitate intermodal service, and access by modes other than single occupant vehicles.

(f) Demonstrable public benefits beyond the increase in transit usage, including any six of the following:

(1) Relief of traffic congestion.

(2) Improved air quality.

(3) Increased transit revenue yields.

(4) Increased stock of affordable housing.

(5) Redevelopment of depressed and marginal inner-city neighborhoods.

(6) Live-travel options for transit-needy groups.

(7) Promotion of infill development and preservation of natural resources.

(8) Promotion of a safe, attractive, pedestrian-friendly environment around transit stations.

(9) Reduction of the need for additional travel by providing for the sale of goods and services at transit stations.

(10) Promotion of job opportunities.

(11) Improved cost-effectiveness through the use of the existing infrastructure.

(12) Increased sales and property tax revenue.

(13) Reduction in energy consumption.

(14) Minimization of the impact of goods movement on air quality, traffic, and public safety through the provision of dedicated loading and unloading facilities for commercial space.

(g) Sites where a density bonus of at least 25 percent may be granted pursuant to specified performance standards.

(h) Other provisions that may be necessary, based on the report prepared pursuant to subdivision (b) of former Section 14045, as enacted by Section 3 of Chapter 1304 of the Statutes of 1990.

65460.3. To increase transit ridership and to reduce vehicle traffic on the highways, local, regional, and state plans should direct new development close to the transit stations. These entities should provide financial incentives to implement these plans.

65460.4. A transit village development district shall include all land within not more than one-half mile of the main entrance of a transit station designated by the legislative body of a city, county, or city and county that has jurisdiction over the station area.

65460.5. A city or county establishing a district and preparing a plan pursuant to this article shall:

(a) Be eligible for available transportation funding.

(b) Receive assistance from the Office of Permit Assistance, pursuant to Section 15399.53, in establishing an expedited permit process pursuant to Section 15399.50, at the request of the city or county.

65460.6. An agency responsible for the preparation and adoption of the congestion management program may exclude district impacts from the determination of conformance with level of service standards pursuant to subdivision (c) of Section 65089.3.

65460.7. (a) A transit village plan shall be prepared, adopted, and amended in the same manner as a general plan, except for plans qualified as transit village plans pursuant to Section 65460.11.

(b) A transit village plan may be repealed in the same manner as it is required to be amended.

65460.8. No transit village plan may be adopted or amended unless the proposed plan or amendment is consistent with the general plan.

65460.9. No local public works project may be approved, no tentative map or parcel map for which a tentative map was not required may be approved, and no zoning ordinance may be adopted or amended within an area covered by a transit village plan unless it is consistent with the adopted transit village plan.

65460.10. A city, county, or city and county may require a developer to enter into a development agreement pursuant to Article 2.5 (commencing with Section 65864) of Chapter 4 to implement a density bonus specified in the transit village plan pursuant to subdivision (g) of Section 65460.2.

65460.11. Any portion of a specific plan or redevelopment plan adopted prior to January 1, 2006, that conforms to the requirements set forth in Section 65460.2, as amended by Chapter 42 of the Statutes of 2004, may be declared a transit village plan by a city, county, or city and county if that entity does both of the following:

(a) After publishing a notice pursuant to Section 6061, in at least one newspaper of general circulation within the entity's jurisdiction at least 10 days prior to the public meeting, makes findings and declarations demonstrating the conformity of the existing plan to Section 65460.2, as amended by Chapter 42 of the Statutes of 2004. The notice shall state the entity's intent to declare a portion of the existing plan as a transit village plan,

describe the general location of the proposed transit village plan, and state the date, time, and place of the public meeting.

(b) Takes action prior to December 31, 2006, to declare that the conforming plan constitutes its transit village plan.

Appendix B: Federal Transit Administration Guidance on Joint Development



U.S. Department
of Transportation

**Federal Transit
Administration**

CIRCULAR

FTA C 7050.1

August 25, 2014

**Subject: FEDERAL TRANSIT ADMINISTRATION GUIDANCE ON JOINT
DEVELOPMENT**

1. **PURPOSE.** This circular provides guidance to recipients of Federal Transit Administration (FTA) financial assistance on how to use FTA funds or FTA-funded real property for joint development. This circular: (1) defines the term “joint development”; (2) explains how a joint development project can qualify for FTA assistance; (3) describes the legal requirements applicable to the acquisition, use, and disposition of real property acquired with FTA assistance; (4) outlines the most common crosscutting requirements applicable to FTA-assisted projects, including FTA-assisted joint developments; and (5) describes FTA’s process for reviewing a joint development project proposal.

This circular incorporates provisions of the Moving Ahead for Progress in the 21st Century Act (MAP-21), Pub. L. 112-141 (2012), advances the goals of 49 U.S.C. § 5315 by informing FTA recipients of opportunities for private sector participation in public transportation projects, and includes the most current guidance for the federal public transportation program.

The requirements outlined in this circular are intended to assist recipients in managing FTA-assisted projects and in complying with federal rules. Recipients must comply with all statutory and regulatory requirements, including those not specifically mentioned in this circular.

Because there is no separate FTA grant program specifically for joint development, this circular does not present grant program requirements that are unique to joint development. Rather, it presents project eligibility requirements for a joint development to qualify as an eligible capital project. This circular also presents requirements generally applicable to FTA’s grant programs from the specific perspective of undertaking a joint development project. FTA funds used for joint development are subject to the requirements of the grant program through which they were received.

2. **AUTHORITY.** Federal transit law, chapter 53 of title 49, United States Code.
3. **CANCELLATION.** This circular consolidates all of the existing FTA guidance¹ on joint development, and supersedes any FTA guidance on joint development contained in other sources, including, but not limited to, the following:

¹ As a result of the passage of MAP-21, FTA is in the process of updating many of its program-specific circulars. This circular will supersede guidance in those circulars pertaining to joint development.

- a. Notice on Final Agency Guidance on the Eligibility of Joint Development Improvements Under Federal Transit Law (72 FR 5788, Feb. 7, 2007);
 - b. Policy on Transit Joint Development (62 FR 12266, Mar. 14, 1997);
 - c. FTA Circular 5010.1D, Grant Management Requirements;
 - d. FTA Circular 4220.1F, Third-Party Contracting Guidance;
 - e. FTA Circular 9030.1E, Urbanized Area Formula Program: Program Guidance and Application Instructions;
 - f. FTA Circular 8100.1C, Program Guidance for Metropolitan Planning and State Planning and Research Grant Programs;
 - g. FTA Circular 9300.1B, Capital Investment Program Guidance and Application Instructions; and
 - h. FTA Circular 9040.1F, Non-Urbanized Area Formula Program Guidance and Grant Application Instructions.
4. **WAIVER.** FTA reserves the right to waive any provisions of this circular to the extent permitted by federal law or regulation.
 5. **FEDERAL REGISTER NOTICE.** When the final circular is published, FTA will add a citation to the *Federal Register* notice that announces its availability.
 6. **AMENDMENTS TO THE CIRCULAR.** FTA reserves the right to update this circular to reflect changes in policy, revised or new guidance and regulations that undergo notice and comment, without further notice and comment on this circular. FTA will post updates on its website at www.fta.dot.gov. The website allows the public to register for notification when FTA issues *Federal Register* notices or new guidance. Please visit the website and click on "sign up for e-mail updates" for more information.
 7. **ACCESSIBLE FORMATS.** This document is available in accessible formats upon request. To obtain paper copies of this circular as well as information regarding these accessible formats, call FTA's Administrative Services Help Desk, at 202-366-4865. Individuals with hearing impairments may contact the Federal Relay Service at 1-800-877-8339 for assistance with the call.



Therese W. McMillan
Acting Administrator

FTA GUIDANCE ON JOINT DEVELOPMENT

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I. INTRODUCTION AND BACKGROUND

1. **THE FEDERAL TRANSIT ADMINISTRATION (FTA)**. FTA is one of ten modal administrations within the U.S. Department of Transportation (DOT). Headed by an Administrator who is appointed by the President of the United States, FTA functions through a Washington, DC, headquarters office, ten regional offices, and five metropolitan offices that assist transit agencies in all 50 States, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, Guam, the Northern Mariana Islands, American Samoa, and federally recognized Indian tribes.

Public transportation means regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income. Public transportation generally includes transportation services provided by buses, heavy rail, light rail, commuter rail, fixed guideway, bus rapid transit, passenger ferryboats, trolleys, inclined railways, people movers, vans, streetcars, jitneys, and aerial tramways. Public transportation can be either fixed-route or demand-response service, but excludes intercity passenger rail provided by Amtrak, intercity bus service, charter bus service, school bus service, sightseeing services, courtesy shuttle services provided by individual businesses, and intra-terminal or intra-facility shuttle services.

The federal government, through FTA, provides financial assistance to develop new transit systems and help improve, maintain, and operate existing systems. FTA administers thousands of grants to hundreds of State and local transit providers, primarily through its regional and metropolitan offices. These recipients are responsible for managing their programs in accordance with federal requirements, and FTA is responsible for ensuring that recipients follow federal statutory and administrative requirements.

Because there is no separate FTA grant program specifically for joint development, this circular does not present grant program requirements that are unique to joint development. Rather, it presents project eligibility requirements for a joint development to qualify as an eligible capital project. This circular also presents requirements generally applicable to FTA's grant programs from the specific perspective of undertaking a joint development project. FTA funds used for joint development are subject to the requirements of the grant program through which they were received

2. **AUTHORIZING LEGISLATION**. Most federal transit laws are codified at 49 U.S.C. Chapter 53. Authorizing legislation is substantive legislation enacted by Congress that establishes or continues the legal operation of a federal program or agency. FTA's most recent authorizing legislation is the Moving Ahead for Progress in the 21st Century Act (MAP-21), Public Law 112-141, signed into law July 6, 2012, and effective on October 1, 2012.
3. **HOW TO CONTACT FTA**. FTA's regional and metropolitan offices are responsible for the provision of financial assistance to FTA recipients, and oversight of grant implementation and project management for most FTA programs. Certain specific

programs are the responsibility of FTA headquarters. Inquiries should be directed to either the regional or metropolitan office responsible for the geographic area in which you are located.

Visit FTA's website, <http://www.fta.dot.gov>,² or contact FTA Headquarters at the following address and numbers:

Federal Transit Administration
Office of Communications and Congressional Affairs
1200 New Jersey Avenue, SE
Washington, DC 20590
Phone: 202-366-4043
Fax: 202-366-3472

4. **GRANTS.GOV.** FTA posts all competitive grant opportunities on Grants.gov. Grants.gov is the one website for information on all discretionary federal grant opportunities. Led by the U.S. Department of Health and Human Services (DHHS) and in partnership with federal grant-makers, including 26 agencies, 11 commissions, and several States, Grants.gov is one of 24 federal cross-agency e-government initiatives. It is designed to improve access to government services via the Internet. More information about Grants.gov is available at <http://www.grants.gov>.
5. **DEFINITIONS.** All definitions in 49 U.S.C. 5302 apply to this circular as well as the following definitions:
 - a. **Community Service Facility:** A facility that provides day care, career counseling, literacy training, education (including tutorial services), recreation, outpatient health care, or a similar service to local residents either free of charge or for an affordable fee³.
 - b. **Disposition:** The settlement of the federal interest in property that is no longer needed for the originally authorized purpose. *See generally* 49 C.F.R. 18.31; FTA Circular 5010.1D Chapter IV.
 - c. **Federal Interest:** Applied to real property, equipment, or supplies, the dollar amount that is the product of (a) the federal share of total project costs, and (b) current fair market value of the property, improvements, or both, to the extent the costs of acquiring or improving the property were included as project costs. 2 C.F.R. § 200.41. The federal interest is applied at the project level, and FTA has a federal interest in all project property regardless of whether such property was acquired using FTA assistance, was provided as local match, donated by a third party, or acquired in some other way. FTA may relinquish its interest in project property through the disposition process outlined at 49 C.F.R. part 18, by the authority of 49 U.S.C. 5334(h), or, in the

² Please refer to FTA's website for links to [guidance and regulations](#) referred to in this circular.

³ Internal Revenue Bulletin: 2003-29, July 21, 2003

case of facilities, equipment, or supplies, when the project property has exhausted its useful life.

- d. FTA Assistance: Also “grant” or “award.” The financial contribution in the form of a grant to a recipient made or managed by FTA. A recipient may use FTA assistance for capital, operating, or planning expenses, according to the conditions of the grant.
- e. Incidental Use: The limited authorized non-transit use of project property. Such use must be compatible with the approved purposes of the project and not interfere with intended public transportation uses of project property. An incidental use does not affect a property’s transit capacity or use. FTA may concur in incidental use after the award of the grant.
- f. Joint Development: A public transportation project that integrally relates to, and often co-locates with commercial, residential, mixed-use, or other non-transit development. Joint development may include partnerships for public or private development associated with any mode of transit system that is being improved through new construction, renovation, or extension. Joint development may also include intermodal facilities, intercity bus and rail facilities, transit malls, or historic transportation facilities.
- g. Original Federal Investment: The FTA share of the original cost of project property that will be incorporated into an FTA-assisted joint development project.
- h. Originally Authorized Purpose: The activities for which an FTA grant was originally awarded as evidenced in the grant agreement. The FTA Master Agreement incorporates “joint development purposes that generate program income to support transit purposes” into the originally authorized purpose even when not specified in the original grant award.
- i. Program Income: Gross income earned by the non-federal entity that is directly generated by a supported activity or earned as a result of the federal award during the period of performance. Program income includes but is not limited to income from fees for services performed, the use or rental of real or personal property acquired under federal awards, the sale of commodities or items fabricated under a federal award, license fees and royalties on patents and copyrights, and principal and interest on loans made with federal award funds. Interest earned on advances of federal funds is not program income. Except as otherwise provided in federal statutes, regulations, or the terms and conditions of the federal award, program income does not include rebates, credits, discounts, taxes, special assessments, levies, and fines raised by a grantee and subgrantee, and interest earned on any of them.
- j. Project Property: Any real property, equipment, supplies or improvements included in the costs of an FTA-assisted project, regardless of whether such property was acquired using FTA assistance, was provided as local match, donated by a third party, or acquired in some other way.

- k. Project Sponsor: An FTA grant recipient that proposes a joint development project that either (a) will be financed with an FTA grant, or (b) will make use of project property that is subject to the federal interest. In this circular, “project sponsor” and “recipient” are used interchangeably.
- l. Public Transportation: Regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income; does not include intercity passenger rail transportation provided by Amtrak, intercity bus service, charter bus service, school bus service, sightseeing service, courtesy shuttle service for patrons of one or more specific establishments, or intra-terminal or intra-facility shuttle services. 49 U.S.C. § 5302(14).
- m. Recipient: *See* Project Sponsor.
- n. Satisfactory Continuing Control: The legal assurance that project property will remain available to be used for its originally authorized purpose throughout its useful life or until disposition. The FTA Master Agreement incorporates “joint development purposes that generate program income to support transit purposes” into a grant’s originally authorized purpose even when not specified in the grant award.
- o. Sub-recipient: An entity that receives an FTA grant indirectly through an FTA recipient.
- p. Shared Use: Instances in which a project partner, separate from the recipient, occupies part of a facility and pays for its pro rata share of the construction, maintenance, and operations costs. Shared uses must be declared at the time of grant award. Shared use and incidental use are distinguishable.
- q. Value Capture: The term “value capture” means recovering the increased value of property located near public transportation resulting from the investments in public transportation. While value capture on the large scale often occurs through a special assessment district, tax-increment financing, or similar mechanisms, joint development is a meaningful value capture mechanism readily available to a project sponsor to be applied on the small scale of one or more parcels of real property it owns. Joint development is the value capture mechanism used most often for public transportation purposes. FTA encourages all forms of value capture that can contribute to the operation, maintenance, or expansion of public transportation service.

II. CIRCULAR OVERVIEW

1. **INTRODUCTION AND CONTEXT.** The purpose of this circular is to provide guidance to recipients on how FTA assistance or real property acquired with FTA assistance may be used for joint development. “Joint development,” irrespective of FTA assistance, commonly refers to the coordinated development of public transportation facilities with non-transit development, including commercial and residential development. Coordinated development may involve private and public entities, and is supportive of the private sector participation provisions of 49 U.S.C. § 5315 and § 20013 of MAP-21. The transit and non-transit developments are integrally related to one another and are often co-located on the same real estate. Joint development may be associated with, or take place on property associated with, any mode of public transportation.

This circular provides instructions on how to use FTA assistance or develop FTA-assisted real property in a manner that improves coordination between the public and private sector, and between public transportation and other forms of transportation for joint development. Strategic, coordinated joint development can enhance the value of both the transit and non-transit, public and private, activities taking place on real property, resulting in an efficient use of real estate, reduced distances between transportation and destinations, and focused economic development for communities.

As a matter of policy, FTA encourages project sponsors to undertake joint development, and promotes the project sponsor’s ability to work with the private sector and others to pursue joint development. Project sponsors can pursue joint development through new grants or with property previously acquired with FTA assistance. The project sponsor maintains satisfactory continuing control over such property used in a joint development project by ensuring that the property continues to serve its originally authorized purpose. Proceeds derived from an FTA-assisted joint development project are considered program income, which the project sponsor may apply to eligible FTA capital or operating expenses.

- a. **Distinction between Joint Development and Transit-Oriented Development (TOD).** Although related in purpose—creating vibrant, compact, mixed-use, economically successful communities near public transportation—joint development and transit-oriented development (TOD) differ in several material respects and for purposes of applying FTA’s rules. In joint development, the recipient is an active partner, contributing either property or funds for use in the joint development project. TOD has a broader, neighborhood scope and can encompass either several parcels of property or as much as an entire community; the recipient is a stakeholder but may not be a partner in TOD. FTA assistance may not be used in construction of TOD projects, although it may be used to plan TOD in conjunction with transit projects. Thus, while joint development can be considered a form of TOD, it is much smaller in scope and uses project property or grant funds owned by the recipient. When the joint development incorporates either real property or other project property for which FTA assistance has been provided, or a direct investment of FTA grant funds, federal requirements apply to the joint development project. The involvement of federal assistance notwithstanding,

FTA's policy is to encourage TOD. Both joint development and TOD leverage FTA-assisted projects to develop local economies and to encourage private investment near public transportation.

- b. Distinction between Joint Development and Pedestrian/Bicycle Projects. Joint development must be distinguished from other transit projects, particularly pedestrian and bicycle projects that enhance or are related to public transportation facilities.⁴ Such projects are statutorily eligible for transit capital funding and can therefore be funded as independent projects or as part of a larger transit project, including as part of a joint development project. Whether pedestrian and bicycle improvements are considered part of a joint development or independent projects will depend, among other considerations, on how the projects are identified in the statewide and metropolitan transportation plans and Transportation Improvement Programs.
 - c. Distinction between Joint Development and Public-Private Partnerships. Another key distinction to note is the difference between a joint development project and a public-private partnership (P3). A joint development project often combines the development of transit and non-transit projects, and, in most circumstances, includes the participation of a private entity. P3s are essentially a form of procurement. Unlike conventional methods of contracting for new construction, in which discrete functions are divided and procured through separate solicitations, P3s entail a single private entity, typically a consortium of private companies, assuming responsibility and financial liability for performing all or a significant number of functions in connection with a project. In transferring responsibility and risk for multiple project elements to the private partner, the project sponsor relaxes its control of the procurement, and the private partner receives the opportunity to earn a financial return commensurate with the risks it has assumed.⁵ Thus, while a joint development project may include coordination between and the sharing of responsibilities by public and private entities, it is not a P3. A project sponsor, however, may use a P3 to procure services from a private partner in a joint development project.
2. APPLICABLE PROGRAMS. Because there is no separate FTA grant program specifically for joint development, this circular does not present grant program requirements that are unique to joint development. However, FTA can support joint development through its various planning and capital assistance programs. This circular should be used in conjunction with FTA's other circulars that provide guidance specific to each program. The FTA programs available for funding joint development are identified in Chapter 3 of this circular.
 3. FTA JOINT DEVELOPMENT POLICY. FTA's policy is to maximize the utility of FTA-assisted projects and to encourage the generation of program income through joint development. One of the primary benefits of joint development is revenue generation for

⁴ See Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law (76 FR 52046, Aug. 11, 2011).

⁵ "Report to Congress on the Costs, Benefits, and Efficiencies of Public-Private Partnerships for Fixed Guideway Capital Projects", FTA, December 2007.

the transit system, such as income derived from rental or lease payments, as well as private sector contributions to public infrastructure. Other benefits include shared costs, efficient land use, reduced distance between transportation and other activities, economic development, increased transit ridership, and improved transit connectivity.

The revenue a project sponsor receives from an FTA-assisted joint development project is treated as program income and may be used towards eligible capital or operating expenses of providing transit service. It is FTA's policy to give project sponsors maximum flexibility within the law to work with the private sector and others to pursue joint development. Therefore, as long as the project sponsor complies with federal requirements, FTA will usually defer to the decisions of the project sponsor about the particulars of a joint development project.

4. FRAMEWORK FOR ANALYZING A PROPOSED JOINT DEVELOPMENT. FTA funds may be used to pay for many aspects of a joint development, including costs associated with eligible planning and capital activities. There are two categories of issues that FTA typically considers when presented with a proposed joint development: (1) eligibility issues associated with either the use of FTA grant funds or the use of program income towards joint development as an FTA-assisted capital project; and (2) issues associated with the acquisition, use, and disposition of FTA-assisted real and other project property.

- a. Eligibility of Joint Development as an FTA-Assisted Capital Project.

- (1) Source of Funds. Project sponsors may fund joint development with new FTA grants or with program income generated by an existing FTA-assisted project. When the source of funds is a new grant, project sponsors shall apply for funding under an authorized FTA program. As with any capital project, FTA grant funds may be used for real property acquisition, design and construction of the project, or for any designated capital activity related to the project. To be eligible for funding, both a stand-alone joint development and a joint development within a larger project must satisfy the eligibility requirements in the definition of capital project at 49 U.S.C. 5302(3)(G). Revenues derived from a joint development are program income as that term is defined at 49 C.F.R. 18.25(g) (throughout this Circular, 49 C.F.R. parts 18 and 19 are referred to as the "Common Grant Rule"). Program income may be used for eligible capital and operating expenses of providing transit service.
- (2) Eligibility Criteria. This circular incorporates the statutory interpretation FTA made in its 2007 guidance on the eligibility of joint development projects under federal transit law (72 FR 5788, Feb. 7, 2007). Per the eligibility criteria set forth at 49 U.S.C. 5302(3)(G), a new joint development project must do the following to be eligible for FTA funding or use of FTA-assisted project property:
 - (a) Create an economic benefit by enhancing economic development or incorporating private investment;

- (b) Provide a public transportation benefit by either: (a) enhancing the effectiveness of a public transportation project and relating physically or functionally to the public transportation project, or (b) establishing new or enhanced coordination between public transportation and other transportation;
 - (c) Provide a fair share of the produced revenue for public transportation; and
 - (d) Provide that a person occupying space in a facility constructed with FTA funds must pay a fair share of the costs of the facility through rental payments or other means.
- b. Use of Real Property Previously Acquired with FTA Assistance for Joint Development.
 - (1) Real Property. Project sponsors may use FTA-assisted real property to pursue joint development. In pursuing the joint development project, the project sponsor must adhere to all requirements designated in the FTA grant from which the financial assistance was provided.
 - (2) Acquisition. Real property must be acquired, managed, and used in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), 42 U.S.C. chapter 61; implementing regulations at 49 C.F.R. part 24; FTA's Master Agreement; FTA Circular 5010.1D, Grant Management Requirements; and all other applicable laws, regulations, and guidance. FTA Circular 5010.1D provides guidance on the use of FTA assistance for the acquisition of real property.
 - (3) Use. The Common Grant Rule at 49 C.F.R. 18.31(b) requires that real property acquired with FTA assistance be used by the recipient for the originally authorized grant purpose as long as needed for that purpose. The Common Grant Rule also prohibits a recipient from disposing of or encumbering its title or other interests in FTA-assisted real property without FTA's approval. Discussed below are several requirements for the use of real property for a new capital project, and for the incidental use of real property previously acquired with FTA assistance.
 - (4) Incidental Use. Incidental use is the limited authorized non-transit use of project property. Such use must be compatible with the approved purposes of the project and may not interfere with the public transportation uses of project property. An incidental use may not affect a property's transit capacity or use. Unlike a shared use, FTA can concur in a project sponsor's proposed incidental use after the award of a grant. With FTA's concurrence, a project sponsor may undertake joint development on property that was acquired using FTA funds.
 - (5) Satisfactory Continuing Control. Project sponsors must maintain "satisfactory continuing control" over project property. Joint development must not interfere with a project sponsor's continuing control over the use of project property or the project sponsor's ability to continue to carry out the originally authorized purpose for which the property was acquired.

5. CROSSCUTTING REQUIREMENTS. Upon receipt of FTA funds, a project sponsor agrees to follow a set of standard terms, conditions, and requirements. These “crosscutting requirements” apply to all FTA-funded projects. Sponsors of a joint development should pay particular attention to those requirements outlined in Chapter 5 of this circular.

III. FTA ASSISTANCE FOR PLANNING AND CAPITAL PROJECTS

FTA can support joint development through its various planning and capital assistance programs. The programs available for funding joint development, and the criteria a project must satisfy to be eligible for FTA assistance as joint development, are described in this chapter.

1. FTA PLANNING ASSISTANCE FOR JOINT DEVELOPMENT. FTA planning assistance is available under 49 U.S.C. 5305 for planning activities that support joint development.⁶ Such assistance is also available for transit station area planning that may facilitate transit-oriented development. In general, these planning grants are available to assist States, authorities of the States, metropolitan planning organizations (MPOs), local governmental authorities, and transit agencies with preparing transportation plans and programs, planning, engineering, designing, and evaluating a public transportation project, and conducting technical studies related to public transportation in addition to other statutorily eligible activities. Also, Federal Highway Administration (FHWA) planning program funds may be available, through the MPO or State, to support planning for joint development. As with all FTA grants, transportation planning funds used for joint development must be programmed in the Unified Planning Work Program, the State Planning and Research Program, or the Transportation Improvement Program in accordance with federal transportation planning requirements.

Joint development planning activities may also be eligible for assistance from other federal agencies such as the U.S. Department of Housing and Urban Development, the U.S. Environmental Protection Agency, the U.S. Department of Commerce, the U.S. Department of Health and Human Services, or the U.S. Department of Agriculture. Please refer to the appropriate agency's website for more information.

2. FTA CAPITAL ASSISTANCE FOR JOINT DEVELOPMENT. Under federal transit law, joint development is a kind of transit capital project.⁷ As such, project sponsors may fund joint development using any FTA funding source that is available to assist a capital project.
 - a. Chapter 53 Programs. When the source of funds is a new grant, the funds will be awarded under a particular FTA program. Each FTA grant program has its own requirements and criteria for eligibility. So, depending on the activities involved, a joint development may not be eligible for funding under every program. The FTA grant programs that can be applied to capital projects are:

- (1) Section 5307: Urbanized area formula grants

⁶ See FTA Circular 8100.1C, Program Guidance for Metropolitan Planning and State Planning and Research program Grants, September 1, 2008.

⁷ 49 U.S.C. 5302(3)(G) (definition of "capital project").

- (2) Section 5309: Fixed guideway capital investment grants (New/Small Starts and Core Capacity Program)
 - (3) Section 5310: Formula grants for the enhanced mobility of seniors and individuals with disabilities
 - (4) Section 5311: Formula grants for rural areas
 - (5) Section 5337: State of good repair grants
 - (6) Section 5339: Bus and bus facilities formula grants
- b. FHWA Flexible Funds. In addition to these FTA grant programs, certain funding programs administered by FHWA, including the Surface Transportation Program and the Congestion Mitigation and Air Quality Improvement Program, may be used for public transportation purposes.⁸ These “flexible” funds are transferred from FHWA, administered as FTA funds, and take on the requirements and eligibility of the FTA program to which they are transferred.
- c. Program Income. Project sponsors are encouraged to earn program income to defray program costs. Program income may be applied to the capital or operating costs of providing transit service.
3. ELIGIBILITY CRITERIA. As an FTA-assisted capital project, a joint development project must satisfy all four eligibility criteria set forth in the statutory definition of capital project at 49 U.S.C. 5302(3)(G). This definition also specifies common joint development activities that are eligible for FTA assistance. Project sponsors of an FTA-assisted joint development must ensure their project satisfies all four eligibility criteria in order to be eligible for capital funding.

⁸ 49 U.S.C. 5334(i).

TABLE 1: THE FOUR JOINT DEVELOPMENT CRITERIA

(i) The economic benefit criterion is satisfied by...	<ul style="list-style-type: none"> Enhancing economic development <p style="text-align: center;">-OR-</p> <ul style="list-style-type: none"> Incorporating private investment
(ii) The public transportation benefit criterion is satisfied by...	<ul style="list-style-type: none"> Enhancing the effectiveness of a public transportation project and relating physically or functionally to that public transportation project <p style="text-align: center;">-OR-</p> <ul style="list-style-type: none"> Establishing new or enhanced coordination between public transportation and other modes of transportation
(iii) The revenue criterion is satisfied by...	<ul style="list-style-type: none"> Providing a fair share of revenue for public transportation that will be used for public transportation purposes
(iv) The tenant contributions criterion is satisfied by...	<ul style="list-style-type: none"> Requiring that a person occupying space in a joint development facility shall pay a fair share of the costs of the facility through rental payments or other means

- a. Criterion One: Economic Benefit. An FTA assisted joint development project must either (a) enhance economic development or (b) incorporate private investment. The statute uses the word “or” when describing this criterion (as opposed to “and”), so a joint development project will satisfy this criterion if it produces either effect.
- (1) Enhances Economic Development. The project sponsor may satisfy this criterion by demonstrating that the joint development will add economic value to privately or publicly-funded economic development activity occurring in close proximity to a public transportation facility.
 - (2) Incorporates Private Investment. Private investment need not be monetary. It can take the form of real property, commercial or residential development, or some other benefit to be generated initially or over the life of the joint development. The amount and form of private investment will be negotiated between the project sponsor and its joint development partners. While FTA will not set a monetary

threshold for private investment, it can decline funding or approval for a joint development project if the level of private investment is not meaningful to promote an economic benefit.

- b. Criterion Two: Public Transportation Benefit. As with the first criterion, the statute provides two ways to satisfy this criterion. The joint development project can either (a) enhance the effectiveness of a public transportation project to which it is related physically or functionally, or it can (b) establish new or enhanced coordination between public transportation and other modes of transportation.

- (1) Enhances the Effectiveness of a Public Transportation Project and Is Related Physically or Functionally to That Public Transportation Project. Any reasonable forecast of how the joint development will enhance the effectiveness of a public transportation project will satisfy this criterion. These impacts may include, but are not limited to, any of the following:

- Increased ridership
- Shortened travel times
- Improved/enhanced wayfinding
- Deferred or reduced transit operating or capital costs
- Improved access or connectivity to public transportation

The alternative requirement for a physical “or” functional relationship allows a joint development to be built separate from, but in functional relationship to, a public transportation project. A joint development satisfies this element if it has a physical or functional nexus to a public transportation project.

- (a) Physically Related. A joint development is physically related to a public transportation project if there is a direct physical connection to public transportation services or facilities. Some examples of physical relationships are:

- Projects built within or adjacent to public transportation facilities
- Avenues of access that connect directly to public transportation, e.g., bicycle paths, pedestrian paths, or parking facilities
- Connections between public transportation and airports, train stations, and other transportation facilities
- Projects using air rights over public transportation facilities

- (b) Functionally Related. A joint development is functionally related to a public transportation project if by activity and use, with or without a direct physical

connection, it enhances the use of, connectivity with, or access to public transportation. A joint development can also be functionally related to a public transportation project if it provides a transportation-related service (such as remote baggage handling or shared ticketing) or public access to community service⁹ facility (such as daycare or health care).

FTA's considerations include, among other things, whether there is a reduction in travel time between the joint development project and the public transportation facility, reasonable access between the joint development and the public transportation facility, and increased trip generation rates resulting from the relationship between the joint development and the public transportation facility.

A functional, rather than physical, relationship permits an FTA assisted joint development to be located outside the structural envelope of a public transportation facility and even to be separated by an intervening street, major thoroughfare, or unrelated property. However, a functional relationship will not ordinarily extend beyond the distance most people can be expected to safely and conveniently walk or bicycle to use the transit service.¹⁰

- (2) Establishes New or Enhanced Coordination between Public Transportation and Other Transportation. FTA will accept reasonably supported judgments of new or enhanced coordination from the project sponsor.
 - (a) "Public transportation" is defined as "regular, continuing shared-ride surface transportation services that are open to the general public or open to a segment of the general public defined by age, disability, or low income," and it does not include school bus, charter, sightseeing, intra-terminal or intra-facility shuttle service, courtesy shuttle service for patrons of one or more specific establishments, intercity bus transportation, or intercity passenger rail transportation provided by Amtrak. FTA interprets the term "other transportation" to mean all forms of transportation that are not public transportation, including, but not limited to, airplane, school bus, charter bus, sightseeing vehicle, intercity bus and rail, automobile, taxicab, bicycle, and pedestrian transportation.
 - (b) Connections that can establish new or enhanced coordination between public transportation and other transportation may include proximate or shared ticket

⁹ See the definition of "community services" at Chapter I.5.a. for types of services considered.

¹⁰ In 2011, FTA published a statement of policy in the *Federal Register* on the subject of the functional relationship between pedestrian and bicycle improvements and public transportation. Within one-half mile of a public transportation stop or station, pedestrian improvements *ipso facto* have a functional relationship to public transportation. Within three miles of a public transportation stop or station, bicycle improvements *ipso facto* have a functional relationship to public transportation. Pedestrian and bicycle improvements beyond these distances may also have a functional relationship to public transportation, but the relationship is not *ipso facto* and must be demonstrated. See Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements under Federal Transit Law (76 FR 52046, Aug. 19, 2011), for detailed information.

counters, termini, park-and-ride lots, taxicab bays, passenger drop-off points, waiting areas, shared or coordinated signage, schedules, ticketing, and bicycle paths and sidewalks that connect public transportation to other transportation facilities. Projects that shorten the distance between public transportation termini and other transportation shall be presumed to enhance coordination. Pedestrian and bicycle improvements that are physically located outside the structural envelope of a public transportation facility may nonetheless be functionally related to the public transportation.¹¹

- c. Criterion Three: Fair Share of Revenue.¹² A “fair share of revenue” is the division of revenue generated from a joint development project that the project sponsor and its partners negotiate and agree that the project sponsor will receive. The fair share of revenue may be amortized over the life of the project. FTA has determined that the minimum threshold for the amount of revenue that a project sponsor receives cumulatively from a joint development must be equivalent to the amount of the original federal investment contributed to the joint development project (see Chapter 6 of this circular for more information). FTA grant funds or other FTA-assisted project property acquired for the purpose of joint development are included in this threshold. The project sponsor must report to FTA the source and expected amount of such fair share of revenue. FTA reserves the right to decline funding for or approval of a joint development project if the project does not generate a minimum threshold of revenue for the project sponsor.

(1) To qualify as a fair share of revenue, FTA requires the following:

- (a) The project sponsor’s General Manager or Chief Executive Officer must certify, following reasonable investigation, that the terms and conditions of the joint development are commercially reasonable and fair to the project sponsor, and that the share of revenues generated for public transportation satisfy FTA’s threshold requirement;
- (b) FTA must review and approve the amount and source of revenue; and
- (c) Such revenue must be used for public transportation services. This enhances the ability of a public transportation provider to negotiate for financial benefits in exchange for the benefits it will convey through the joint development.

- (2) Community Service or Publicly Operated Projects: When a joint development project is a community service or publicly operated facility, FTA recognizes that the revenue generated by the joint development project may be less than what would be generated from commercial, residential, or mixed-use development projects. As such, the resulting “fair share of revenue” can be less than the amount of the original FTA investment contributed to the project, but must be based upon

¹¹ See note 10, *supra*.

¹² Note that this criterion is distinct from Criterion Four, discussed below.

the actual revenue generated by the community service or publicly-operated facility.

- d. Criterion Four: Fair Share of Costs. A joint development must provide that a person making an agreement to occupy space in a facility constructed with FTA assistance must pay a fair share of the costs of the facility to the project sponsor. "Person" here includes natural persons as well as businesses. FTA will not attempt to define what amounts to a fair share of the costs of the facility and will not impose a particular valuation methodology. FTA will accept commercial valuation methodologies used by the project sponsor to determine a fair share of the costs of the facility. However, FTA reserves the right to decline project funding or approval if the rental payment, or other means, is less than the actual cost to the project sponsor to operate and maintain the space in its facility.

The fair share may be paid in the form of rental payments, but may also take other forms, e.g., operating and maintenance agreements. Project sponsors and their partners/tenants have flexibility to form agreements other than for rent, so long as the value of such an agreement is at least equal to the costs of operating and maintaining the leased space.

4. ELIGIBLE ACTIVITIES. Capital costs associated with joint development activities are eligible for FTA assistance. Some of these activities are specifically included in the various definitions of capital project at 49 U.S.C. 5302(3). Those activities not specifically designated under 49 U.S.C. 5302(3)(G), joint development, must be associated with a project that has been identified through the transportation planning process. Common eligible capital costs of joint development projects may include, but are not limited to:
- a. Property acquisition, and the relocation of residents and businesses;
 - b. Demolition of existing structures;
 - c. Site preparation;
 - d. Utilities, including utility relocation and construction;
 - e. Building foundations, including substructure improvements for buildings constructed over transit facilities;
 - f. Walkways, including bicycle lanes and pedestrian connections and access links between public transportation services and related development;
 - g. Pedestrian and bicycle access to a public transportation facility;
 - h. Construction, renovation, and improvement of intercity bus and intercity rail stations and terminals;
 - i. Renovation and improvement of historic transportation facilities;

- j. Open space, including site amenities and related streetscape improvements such as street furniture and landscaping;
 - k. Safety and security equipment and facilities (including lighting, surveillance, and related intelligent transportation system applications);
 - l. Facilities that incorporate community services¹³ such as daycare and health care;
 - m. A capital project for, and improving, equipment or a facility for an intermodal transfer facility or transportation mall;
 - n. Construction of space for commercial uses, although FTA may not fund the outfitting of a commercial space (see "Ineligible Activities" below);
 - o. Capital project and equipment for an intermodal transfer facility or transportation mall, including acquisition of facilities and equipment, roadbeds, tracks and bus ramps, pedestrian concourses, parking facilities, park-and-ride services, improvements to existing bus or rail transit terminals, stations, major transfer points, and shelters as well as other facilities directly related to the linking of public transportation facilities with other modes of transportation;
 - p. Transportation-related furniture, fixtures, and equipment (FFE) are eligible costs in all cases; however, due to the restriction at 49 U.S.C. § 5302(3)(G)(vi) against outfitting commercial spaces (other than intercity bus or rail stations) or public facilities not related to public transportation, FFE for such spaces are ineligible;
 - q. Parking improvements with a public transportation justification and use, or with an intercity bus or intercity rail justification and use, in connection with joint development;
 - r. Project development activities, including design, engineering, construction cost estimating, environmental analysis, real estate packaging and financial projections (operating income and expenses, debt service, and cash flow analysis), and negotiations to secure financing and tenants; and
 - s. Professional services, including reasonable and necessary costs incurred to hire professionals to prepare or perform the activities described above, or to assist the project sponsor in reviewing the same.
5. INELIGIBLE ACTIVITIES. FTA's authorizing legislation expressly prohibits it from funding two kinds of activities as joint development: (1) the "outfitting" of a commercial space and (2) construction of part of a public facility not related to public transportation.
- a. Outfitting of a Commercial Space. With the exception of intercity bus and rail facilities, FTA funds may not be used to "outfit" space that will be occupied by a commercial entity. FTA interprets the terms "outfit" and "outfitting" to mean the

¹³ See the definition of community services at Chapter I.5.a. for types of services considered.

purchase and installation of items needed for exclusively commercial purposes. For example, the products needed to outfit a café or coffee shop would include signage, shelving, displays, furniture, food preparation equipment, lighting, cash registers, etc.

While the statute prohibits FTA from outfitting a commercial space, FTA funds may be used to construct the “shell” of a facility that will be occupied by a commercial entity, as long as the statutory eligibility criteria are met. To illustrate, FTA funds could be used to construct a facility that would be occupied by a coffee shop or news stand in exchange for rent payments. FTA could assist in the construction of the overall facility that includes the commercial space, but could not pay for seating in the commercial areas, shelving, countertops, or other commercial equipment. (Note: as discussed above, occupants of a facility must pay a fair share of the costs of the facility through rental payments or other means, in addition to the commercial outfitting.)

- b. Public Facility Not Related to Public Transportation. To be eligible for FTA assistance as a joint development, a public facility must satisfy all of the four criteria described above, with the additional specification that FTA may not assist the construction of a part of a public facility that is not related to public transportation physically or functionally.

IV. REAL PROPERTY CONSIDERATIONS

1. INTRODUCTION. FTA-assisted joint development often involves using real property that was previously acquired with FTA funds for another transit project, or the transfer of such property to a third party by the project sponsor for the purpose of joint development. Any real property used in an FTA-assisted project, regardless of whether it is purchased by a transit agency or another party, must be acquired, managed, used, and disposed of in accordance with applicable laws and regulations. This chapter clarifies the relationship between federal transit law and regulations, and FTA's policies regarding the acquisition and use of real property for joint development.
2. ACQUISITION OF REAL PROPERTY WITH FTA ASSISTANCE. Property acquisition is an eligible activity under the definition of capital project. Real property must be acquired, managed, and used in accordance with the Uniform Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), 42 U.S.C. chapter 61, as implemented at 49 C.F.R. part 24; the Common Grant Rule of 49 C.F.R. part 18; FTA's Master Agreement; FTA Circular 5010.1D, Grant Management Requirements; and all other applicable laws, regulations, and guidance.

The purposes of the Uniform Act are to ensure: (1) the fair treatment of owners of real property that is acquired for federal and federally assisted projects; (2) that people displaced by a federally supported project are treated fairly and consistently; and (3) that acquiring agencies implement the regulations in a manner that is efficient and cost-effective. The requirements of the Uniform Act apply to all real property to be used in a federally assisted project, regardless of whether the property acquisition was itself federally assisted.

Project sponsors pursuing FTA-assisted joint development shall identify parcels of land that may require the displacement of protected persons or entities and develop solutions to ensure that they are in compliance with the Uniform Act. FTA Circular 5010.1D requires recipients to develop a Real Estate Acquisition Management Plan (RAMP). RAMPs are used to assess the possible issues associated with and feasibility of the acquisition of real estate needed for a capital project. Depending on the complexity of the joint development project,¹⁴ a project sponsor's RAMP shall include, among other things, a relocation plan.¹⁵

3. USE OF REAL PROPERTY. A project sponsor is restricted in how it can use or dispose of property that is subject to the federal interest. FTA encourages the pursuit of joint development that can raise revenue for transit systems and enhance transit ridership. Any portion of the property may be used for joint development. In approving a use of real property, FTA will rely on the project sponsor to determine the appropriate use of real

¹⁴ Relocation planning is required if the property acquisition will displace individuals, families, businesses, or non-profit organizations.

¹⁵ See 49 C.F.R. part 24 for direction on relocation planning.

property for joint development, provided that the project sponsor maintains satisfactory continuing control of the real property to ensure that the real property remains available for its originally authorized grant purpose. Project sponsors must obtain FTA's concurrence for joint development use, including as an incidental use, of FTA-assisted real property.

- a. The Federal Interest. The use of FTA assisted real property is governed by the Common Grant Rule at 49 C.F.R. 18.31(b), which provides: "Except as otherwise provided by federal statutes, real property will be used for the originally authorized purposes as long as needed for that purpose; and the recipient or subrecipient shall not dispose of or encumber its title or other interests." FTA retains an interest in how real property it has funded is used. This federal interest is equal to the federal share of the fair market value of the real property and remains until FTA relinquishes its interest in the property. Accordingly, project sponsors shall not dispose of, modify the use of, or change the condition of the title to real property or any site or facilities in which FTA has an interest without express written consent from FTA. FTA's Master Agreement states FTA's policy on uses of grant property or actions affecting the title of grant property that may impair the federal interest.
- b. Originally Authorized Purposes.¹⁶ Since October 1, 1996, the FTA Master Agreement has allowed the originally authorized purpose of a grant agreement to include "joint development purposes that generate program income to support transit purposes." FTA's interpretation of the Common Grant Rule at 49 C.F.R. 18.25(g)(2) brings revenues derived from a joint development, from leases or other conveyances, within the definition of program income, thereby permitting use of such revenues for eligible capital and operating expenses where the project sponsor maintains satisfactory continuing control of the property, ensures that the federal interest in the property is reasonably protected, and otherwise meets the eligibility criteria set forth in 49 U.S.C. 5302(3)(G).
- c. Conveyances for the Purpose of Joint Development. A project sponsor's ability to secure willing partners to participate in joint development has historically been impeded by an outright prohibition on the encumbrance of title to FTA-assisted real property. The rationale for this prohibition was that FTA viewed any lien against, or other conveyance of, FTA-assisted property as a disposition. Thus, project sponsors and their project partners were unable to secure financing at market rates because the real property could not be used as collateral for a loan.

FTA recognizes that many of the arrangements a project sponsor may enter into pursuant to a joint development may require conveyance of an interest in real property that is subject to the federal interest. Because federal transit law includes joint development as an eligible grant purpose, FTA may authorize a project

¹⁶ For real property acquired prior to the FTA Master Agreement inclusion of joint development as an authorized purpose, the term "originally authorized purpose" should be construed to apply to any public transportation project as defined at 49 U.S.C. 5302(3).

sponsor to convey any interest in real property acquired with FTA assistance, provided that the project sponsor can maintain satisfactory continuing control over the property to ensure that the federal interest in the property will be reasonably protected and the property will continue to be used for authorized grant purposes.

Any such conveyance requires the express written consent of FTA. Absent express written consent from FTA, a project sponsor may not encumber, convey, or otherwise affect title to real property that is subject to the federal interest by executing any written, oral, or other arrangement that would either adversely affect the federal interest in the property or impair the project sponsor's satisfactory continuing control of the use of the project property.

With FTA's express written consent, a project sponsor may enter into the following illustrative arrangements:

- Sale¹⁷
- Exchange
- Lease
- Lien
- Pledge
- Mortgage
- Easement
- Covenant
- Third-party contract
- Sub-agreement
- Grant anticipation note
- Innovative finance arrangement

- (1) Distinguished from Disposition. When FTA-assisted real property is no longer needed for its originally authorized grant purposes, recipients must request disposition instructions from FTA. The disposition process accounts for any remaining federal interest in the property and, once completed, extinguishes the federal interest. The proceeds of a disposition are not considered program income. Because disposition occurs when grant property is no longer needed for its originally authorized purposes (including any potential joint development), disposed of property will thereafter be unavailable for an FTA-assisted joint development project.

In contrast, when FTA permits a conveyance of an interest in FTA-assisted property for the purpose of joint development, it is to enable the property to be used more effectively for an authorized grant purpose.

¹⁷ "Sale" in this circular generally refers to a joint development conveyance after which the federal interest persists. A sale that extinguishes the federal interest is a disposition. See "Disposition" in C5010.1D or "Disposition of Real Property", section 4 of this chapter.

Such a conveyance is not a disposition and does not extinguish the federal interest in how the property is used. Proceeds therefrom are considered program income.

- (2) Protecting the Federal Interest through Mandatory Provisions.¹⁸ Any conveyance of an interest in federally assisted real property for the purpose of joint development must protect the federal interest and preserve the project sponsor's satisfactory continuing control over the property. Any such conveyance must include provisions that:

- Extend the requirements of the grant or cooperative agreement as necessary between the project sponsor and FTA;
- Ensure that the project sponsor maintains satisfactory continuing control of the property (see discussion of satisfactory continuing control, below);
- Ensure that the federal interest in the property will be reasonably protected; and
- Ensure that the federal interest is adequately protected following in any further transfer of the real property in a manner consistent with this and other applicable guidance, laws, or regulations.

If federally assisted real property is to be conveyed away, a project sponsor may wish to include provisions in the conveyance instruments that account for the federal government's proportional share of the value of the property, i.e., the federal interest, in the event the property is someday disposed of.

These requirements should not be a deterrent to the pursuit of joint development. It is FTA's policy to give project sponsors maximum flexibility within the law to enter into arrangements with the private sector and others that are suitable to the joint development and the parties involved.

- d. Satisfactory Continuing Control. FTA does not allow for the unrestricted transfer, conveyance, or encumbrance of property acquired with FTA assistance. FTA-assisted property must remain available and accessible for its intended public transportation purpose at all times. In all circumstances, the project sponsor must obtain FTA concurrence that it has secured "satisfactory continuing control" of FTA-assisted real property.

¹⁸ FTA takes no position on a project sponsor's decision to affect its interest in real property that is not subject to the federal interest.

- (1) Mechanisms for Preserving Original Public Transportation Purpose. Ultimately, FTA will decide whether a proposed conveyance or encumbrance will preserve the property's public transportation purpose. In making this determination, FTA will look to the contractual agreement, deed, or other instrument between the project sponsor and the private developer or other third party to determine whether it incorporates provisions that both allow the project sponsor to adequately maintain satisfactory continuing control and ensure that the private developer or third party will actually proceed with the development as approved of or concurred in by FTA. Such agreement, deed, or other instrument must contain a clause assuring that access to the real property for its originally authorized purpose will be maintained.

Any number of legally enforceable mechanisms may be acceptable. Satisfactory continuing control may be evidenced by a real property transaction, including a conveyance with a restrictive covenant, or clauses in a contract that are totally separate from the land transaction. For example, a conveyance might include a condition that returns the real property to the project sponsor if the conveyee prevents the property from being used for its originally authorized grant purpose. As another example, a project sponsor may receive control in the non-transit portion of the development as payment for the land. This assurance may take the form of an easement, but the particular assurance will depend on the specific joint development conveyance method (easement, fee simple, lease, etc.) being considered.

- (2) Duration. For structures, the requirement that a project sponsor maintain satisfactory continuing control remains for the useful life of the structure. For the underlying real property, the satisfactory continuing control requirement remains in perpetuity or until the project sponsor or transferee disposes of the real property.

- e. Incidental Use. FTA Circular 5010.1D, Grant Management Requirements, defines incidental use as "the authorized use of real property acquired with FTA assistance for purposes of transit service but which also has limited non-transit use due to transit operating circumstances." Incidental uses must be compatible with the approved purposes of the project and may not interfere with either the intended public transportation uses of the property or the project sponsor's ability to maintain satisfactory continuing control. A joint development project satisfying these requirements can be completed on property subject to the federal interest as an incidental use of the property. Such a joint development is analyzed not as a new capital project, but as an incidental use—that is, based on its compatibility with the FTA-assisted transit project. Because an incidental use does not receive additional federal assistance, it is not a new federal action and need not satisfy additional federal eligibility requirements. FTA Circular 5010.1D provides guidelines for the incidental use of real property.

- (1) As stated above, FTA's policy is to permit maximum flexibility in determining the best and most cost-effective use of FTA-assisted property. To this end, FTA encourages incidental use of real property that can raise additional revenues for the transit system and enhance system ridership. Income received from authorized incidental use is program income and may be retained by the project sponsor (without returning the federal share) if the income is used for eligible capital and operating expenses of providing transit service. Program income cannot be used as part of the local share of the grant from which it was derived. However, it may be used as part of the local share of another FTA grant.
 - (2) Many joint development projects also include incidental uses of FTA-assisted real property. The incidental uses are not a capital project, but instead may complement, support, or enhance the existing project. For example, allowing nearby theaters and restaurants to use transit parking spaces during the transit system's off-hours is an incidental use. So is temporary use of transit property as a staging area for nearby construction unrelated to the joint development project. Other examples include, but are not limited to the following:
 - Parking facilities used by public transportation patrons during the day and theater and restaurant patrons at night;
 - Leasing of space in a station for a newspaper stand or coffee shop when the additional uses do not interfere with the original purpose authorized in the grant; and
 - The lease of air rights over transit facilities or utilities associated with transit facilities (such as spare capacity in general utilities and fiber optics communications utilities).
 - (3) FTA concurrence is required before an incidental use may occur.
4. DISPOSITION OF REAL PROPERTY. As required by 49 C.F.R. 18.31(b), real property acquired with FTA assistance must be used for the originally authorized grant purpose. When such real property is no longer needed for the originally authorized purpose, a recipient must request disposition instructions and requirements from FTA, including for the sale of real property to a public agency for a non-transit use. Once disposed of, all federal interest in the real property is extinguished. FTA requirements for real property disposition are set forth in FTA Circular 5010.1D, chapter IV, section 2.
 5. PARKING. FTA-assisted real property that was originally used as a surface parking lot for automobiles can later be converted to a joint development project. These types of projects frequently occur on park-and-ride lots. When surface parking is converted to a joint development use, FTA does not require the project sponsor to replace existing automobile parking spaces at a one-to-one ratio. However, in doing so, the project sponsor must consider the following factors:

- a. Useful Life. FTA must approve of any change in use (or disposition) of an asset before the end of its useful life. Thus, if a project sponsor wishes to replace an FTA-assisted parking lot with a joint development project, it must first consider whether the parking improvement has reached the end of its useful life. If useful life remains, then the project sponsor must account for the remaining federal interest in the improvement prior to any change or disposition. See FTA Circular 5010.1D, chapter IV, section 2j.
- b. Public Transportation Benefit. As with any FTA-assisted joint development project, the change in use from parking to joint development must benefit public transportation. The benefit may accrue by enhancing the effectiveness of public transportation or by establishing new or enhanced coordination between public transportation and other transportation.
- c. Prior Grant Commitments. Projects funded pursuant to a Full Funding Grant Agreement (FFGA), or similar contract, may require the project sponsor to construct specific parking facilities or to achieve a certain level of ridership. Elimination of parking may cause the project sponsor to breach such a contract term. FTA must concur whenever a project sponsor seeks to change the use (or dispose) of real property purchased with funds from such an agreement.

V. CROSSCUTTING FEDERAL REQUIREMENTS

1. MASTER AGREEMENT. FTA's Master Agreement contains the terms and conditions governing the administration of a project supported with assistance from FTA through a grant agreement, cooperative agreement, Transportation Infrastructure Finance and Innovation Act (TIFIA) loan, loan guarantee, or line of credit. The requirements of the Master Agreement will vary depending on the type of project, the program under which it is funded, and the project sponsor's status as a State or local government, private nonprofit entity, or private for-profit entity. This chapter highlights some of the most common requirements encountered by joint developments, regardless of the project sponsor or the FTA program under which the project is financially assisted.
2. PLANNING REQUIREMENTS. When FTA funds will be used for the joint development, transportation planning requirements apply.¹⁹ As for any FTA-assisted capital project, a joint development, or a larger project that includes joint development, must be included in the applicable metropolitan transportation plan and the Transportation Improvement Program (TIP). In rural areas, the long-range statewide transportation plan and Statewide Transportation Improvement Program (STIP) must include the proposed effort.

Planning requirements will vary depending on the nature of the project and FTA's involvement.

3. ENVIRONMENTAL REQUIREMENTS.

How project development is considered and treated in the environmental review process varies depending on the nature of the project and the level of FTA's involvement, regardless if the development is eligible as a federally assisted joint development project as described in this circular. The considerations for the nature of the environmental review responsibilities under the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (Section 106), and other federal environmental laws or requirements include the level of federal control over the proposed development and the degree that the development is reasonably-foreseeable.

Typically, FTA's control over a proposed project is related to the financial assistance provided for project development and/or construction, and the degree of influence it has on the siting and design of such a facility. Federal "control" and responsibilities for environmental reviews may extend to all elements of the project, regardless of whether such elements utilize any FTA assistance, are provided as local match, donated by a third party, or provided in some other way, including the non-transit element of joint development projects. For example, if the construction financing and operation of a FTA-assisted transit project is dependent upon anticipated joint development revenue from leasing station air rights for commercial or residential development, then the FTA

¹⁹ Federal transportation planning regulations are jointly administered by FTA and FHWA. See Statewide and Metropolitan Transportation Planning, Final Rule (72 FR 7224, Feb. 14, 2007).

environmental review for the transit project would consider the environmental effects and mitigation, if needed, of the non-transit development using the transit station air rights.

The term “reasonably foreseeable” in the NEPA context means an action or effect that is sufficiently likely to occur, and not simply a speculation of any action or effect that could be conceived or imagined. Whether a development is reasonably-foreseeable would depend on stated plans by the project sponsor, based on a market analysis. The degree to which a FTA environmental review considers reasonably foreseeable development depends on the level of information and details that are known at the time the environmental process is being conducted.

Any FTA-assisted real property may be used for joint development, in accordance with the FTA Master Agreement. However, if joint development was not specified as an original purpose in the grant, the project sponsor will usually be required to obtain FTA’s concurrence for environmental review purposes prior to pursuing the joint development. If no new grant award is being made for the actual joint development, the FTA environmental requirements would not apply.

- a. Common Joint Development Scenarios. The table below describes how to package the environmental analysis²⁰ of a FTA-assisted joint development project.

TABLE 2: APPROACH TO ENVIRONMENTAL ANALYSIS

Joint Development Project Description	Approach to NEPA
Proposed joint development (regardless of FTA assistance) would occur concurrently as part of a greater project FTA-assisted project, without independent utility from the transit project.	The joint development would be evaluated as part of the larger, FTA-assisted project in a single NEPA evaluation.
Proposed joint development is known and would be (1) co-located with the FTA-assisted project or (2) the FTA-assisted project is being designed to accommodate the future non-transit development that would occur at some time in the future after the FTA-assisted project is operational.	To the extent that information about the proposed joint development is known and is reasonably foreseeable, it should be covered in the NEPA evaluation of the larger FTA-assisted project.

²⁰ Environmental analysis is defined to include compliance with Federal environmental regulations.

Joint Development Project Description	Approach to NEPA
Joint development was unanticipated at the time of the environmental review of the FTA-assisted project. However, the joint development would be co-located with the FTA-assisted transit project and is identified during construction of the FTA-assisted project.	The FTA Regional Office would need to conduct a reevaluation of its NEPA finding to determine if supplemental and public environmental review of the change in the FTA-assisted project and setting is necessary.
Acquisition of real property with FTA-assistance for joint development with the development of a FTA-assisted transit project occurring in the future.	<p>Early acquisition of real property for the purposes of joint development that would be associated with a future FTA-assisted capital project would not be permitted (because it would be considered impermissible segmentation under NEPA) unless the property meets the definition of right-of-way for the purpose of corridor preservation.. A NEPA review would be required for real property acquisition using FTA funds.</p> <p>Acquisition of real property for the purposes of a joint development project with independent utility from a FTA capital project would be covered in its own NEPA evaluation.</p>
Proposed joint development on real property acquired and developed with FTA assistance for a different transit purpose. The original FTA grant for the acquisition and development of the property has closed and the construction funded by the original grant is completed.	If FTA is not funding the actual joint development and is not otherwise involved in project decisions, then a FTA NEPA evaluation would not be necessary.

In many cases, development on or adjacent to an existing federally assisted transit facility may qualify as a categorical exclusion under FTA's NEPA regulations at 23 CFR § 771.118(c)(10). Otherwise, the types of actions described in Table 2 would be handled in a NEPA review involving either a categorical exclusion under § 771.118(d), an environmental assessment, or an environmental impact statement.

- b. Additional Environmental Requirements. In addition to NEPA, there are other federal environmental laws, regulations, or executive orders that project sponsors must comply with. These include:
- Section 106 of the National Historic Preservation Act, 16 U.S.C. 470(f) and the Advisory Council on Historic Preservation's implementing regulations at 36 CFR part 800, involving historic and archaeological preservation;

- Section 4(f) of the Department of Transportation Act, 49 U.S.C. 303 and the FTA/Federal Highway Administration's implementing regulations at 23 CFR part 774, involving the protection of publically owned parklands, wildlife refuges, and historic resources;
 - Endangered Species Act of 1973, 16 U.S.C. 1361 for protection of threatened or endangered wildlife;
 - Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, and FTA Circular 4703.1 on Environmental Justice Policy Guidance for Federal Transit Administration Recipients;
 - Executive Order 11988, Floodplain Management; and,
 - Clean Water Act, 33 U.S.C. 1344 on permits for dredged or fill material in waters of the U.S.
4. PROCUREMENT. Procurements that are assisted with FTA funds, including those for FTA-assisted joint development, must adhere to certain standards. Among these is the general requirement for full and open competition. FTA recipients generally may not use exclusionary or discriminatory specifications, or geographic restrictions in their procurements. For a full description of procurement requirements that must be observed, and for guidance, refer to the Master Agreement and FTA Circular 4220.1, Third-Party Contracting Guidance.
- If the procurement will make use of union labor, any project labor agreement must comply with Executive Order No. 13502, "Use of Project Labor Agreements for Federal Construction Projects."
5. LEASES AND CONVEYANCES. A joint development sponsor may wish to lease or convey an interest (including a lien or other encumbrance on title) in real property that was acquired with FTA assistance. The federal interest that must be represented in such a lease or conveyance will depend on whether FTA is also financially assisting the construction of improvements on the real property.

- a. No FTA Assistance for New Improvements. If the joint development involves a ground lease or transfer of FTA-assisted real property, and there is no FTA financial assistance for new improvements, then the following requirements apply to the lessee or transferee and must be incorporated into the lease or the conveyance instrument:
- (1) Language found at 49 C.F.R. 26.7 binding the lessee or transferee not to discriminate based on race, color, national origin, or sex;
 - (2) Language found at 49 C.F.R. 27.7, 27.9(b), and 37 binding the lessee or transferee not to discriminate based on disability and binding the same to compliance with the Americans with Disabilities Act with regard to any improvements constructed; and

- (3) Language contained in FTA's Master Agreement, updated annually in October, particularly relating to conflicts of interest, debarment and suspension.
- b. FTA-Assisted Construction of Joint Development. If the construction of the joint development is also assisted by FTA, then the following requirements will apply and must be incorporated into the lease or conveyance instrument:
- (1) Buy America. Language making it clear that the steel, iron, and manufactured goods used in the federally assisted project are produced in the United States, as described in 49 U.S.C. 5323(j) and 49 C.F.R. part 661;
 - (2) Planning and Environmental Analysis. Language making it clear that the project sponsor must comply with, and the federally assisted project is subject to the requirements of:
 - (a) The FHWA/FTA metropolitan and statewide planning regulations at 23 C.F.R. part 450;
 - (b) The National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. 4321 *et seq.*
 - (c) Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (59 FR 7629, Feb. 16, 1994);
 - (d) Council on Environmental Quality regulations on compliance with NEPA, 40 C.F.R. part 1500 *et seq.*
 - (e) FHWA/FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. part 771;
 - (f) Section 106 of the National Historic Preservation Act, 16 U.S.C. 470f, involving historic and archaeological preservation;
 - (g) Advisory Council on Historic Preservation regulations on compliance with Section 106, "Protection of Historic and Cultural Properties," 36 C.F.R. part 800; and
 - (h) Restrictions on the use of certain publicly owned parklands and historic resources, unless the FTA makes the specific findings required by 49 U.S.C. 303.
 - (3) Cargo Preference. Language making it clear that items imported from abroad and used in the federally assisted improvements were shipped predominantly on U.S.-flag ships and that the project complies with 46 C.F.R. part 381, to the extent these regulations apply to the joint development;

- (4) Seismic Safety. Language certifying that a structure conforms to seismic safety standards, as contained in 49 C.F.R. part 41;
 - (5) Energy Assessments. Language making it clear that the transferee(s) or joint developer agrees to perform a mandatory, energy assessment as prescribed by 23 C.F.R. part 771 and 42 U.S.C. 8373(b)(1) for any buildings constructed, reconstructed or modified with FTA assistance. The assessment shall be incorporated into the Environmental Impact Statement or Environmental Assessment, if the project has one; otherwise the assessment shall be provided with the application for FTA assistance;
 - (6) Lobbying. Provisions at 49 C.F.R. part 20;
 - (7) Labor Protection. Language making it clear that the transferee or joint development partner will adhere to labor protection requirements applying to federal projects, such as:
 - (a) Davis-Bacon, 49 U.S.C. 5333(a), 40 U.S.C. 3141 *et seq.*, and 29 C.F.R. part 5;
 - (b) Copeland “Anti-Kickback” Act as amended, 18 U.S.C. 874 and 29 C.F.R. part 3;
 - (c) Contract Work Hours and Safety Standards Act, 40 U.S.C. 3701 *et seq.* and 29 C.F.R. part 5; and
 - (d) Provisions concerning the protection of transit employees, 49 U.S.C. 5333(b);
 - (8) Civil Rights Requirements. Title 49 U.S.C. 5332 and DOT implementing regulations at 49 C.F.R. part 21 (effecting Title VI of the Civil Rights Act of 1964), 49 C.F.R. part 26 (participation by Disadvantaged Business Enterprises in DOT financial assistance programs) and 49 C.F.R. parts 27 and 37 (respectively, nondiscrimination on the basis of disability in programs or activities receiving federal financial assistance and transportation services for individuals with disabilities); and
 - (9) Uniform Relocation. If the federally assisted site to be improved is occupied by other than the project sponsor and the occupant is displaced, the transferee(s) or joint development partner must comply with 42 U.S.C. 4601 *et seq.* and the regulations at 49 C.F.R. part 24.
6. CIVIL RIGHTS. Project sponsors and their third-party participants must comply with the federal transit law’s prohibition against discrimination on the basis of race, color, creed, national origin, sex, or age. Project sponsors and third-party participants are subject to Equal Employment Opportunity requirements, myriad federal civil rights requirements (Civil Rights Act, Americans with Disabilities Act, environmental justice requirements, Age Discrimination in Employment Act, etc.), and DOT regulations implementing federal civil rights laws.

Certain civil rights requirements follow real property acquired with FTA assistance until it is disposed, even if FTA funds are not involved in the construction of joint development improvements. See the previous section of this chapter, "Leases and Conveyances."

In addition to the Master Agreement, project sponsors should refer to the most current versions of FTA Circular 4702, Title VI Requirements and Guidelines; FTA Circular 4703, Environmental Justice Policy Guidance; and FTA Circular 4704, Equal Employment Opportunity Program Guidelines.

VI. JOINT DEVELOPMENT PROJECT REVIEW PROCESS FOR FTA-ASSISTED PROJECTS

This chapter describes FTA's process for reviewing an FTA-assisted joint development project proposal. FTA supports joint development projects either by awarding assistance for joint development or by concurring in improvements on real property previously acquired with FTA assistance. When FTA assistance is used, the project sponsor must follow the grant application process for the respective Chapter 53 grant program, as well as the procedures included in this Chapter. When FTA concurs in a joint development project improvement to FTA-assisted real property, the project sponsor must continue to adhere to the conditions stipulated by the grant that awarded the funds for the real property.

FTA's Master Agreement contains the standard terms and conditions governing the administration of a project supported with federal assistance through a grant agreement or supported by FTA through a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan, loan guarantee, or line of credit with the project sponsor. Not every provision of the Master Agreement will apply to every project for which FTA provides federal assistance. The type of project, the federal laws and regulations authorizing federal assistance for the project (or amended use of federally assisted real property), and the legal status of the project sponsor as a State or local government, or private entity will determine which federal laws, regulations, and directives apply. Federal laws, regulations, and directives that do not apply will not be enforced. The project sponsor shall comply with all applicable federal laws, regulations, and directives, except to the extent that FTA determines otherwise in writing. Any violations of a federal law, regulation, or directive applicable to the project sponsor or its project may result in sanctions to, or other actions taken against, the violating party.

Project sponsors are encouraged to discuss their plans for undertaking a joint development project in advance with the respective FTA Regional Office. Early discussions with FTA will identify the applicable federal laws, regulations and directives, the appropriate course of action to take, and any potential impediments to completing the joint development project review. Such discussions will also aid the project sponsor's joint development partners in understanding federal requirements. FTA Regional Office staff will consult with FTA Headquarters staff, as required, in reviewing joint development project proposals.

1. **SUBMITTING A JOINT DEVELOPMENT PROJECT PROPOSAL TO FTA.** Only eligible FTA recipients may submit (sponsor) a joint development project proposal to FTA. Proposals can be submitted at any time to the FTA Regional Office within the respective geographical area. A project sponsor may choose to submit a joint development project proposal for either a preliminary or a formal FTA review. A preliminary review is strongly recommended. As described in the following section, the formal joint development project proposal must include the following: (1) a Joint Development Project Request form, (2) a Certification of Compliance, and (3) the proposed Joint Development Agreement, along with any appropriate supplemental documentation.
 - a. **Preliminary FTA Review.** The project sponsor is strongly encouraged to submit its proposed joint development project for a preliminary FTA review, prior to determining the terms and conditions to be agreed upon by all parties participating in the joint

development project. A preliminary review assists the project sponsor in framing how FTA requirements may be satisfied relative to specific elements of the proposed joint development project, and in identifying explicit terms and conditions to which the joint development partners must agree. A preliminary review is recommended for project sponsors having limited experience with joint development projects to ensure they do not commit themselves to proposal terms that may be unacceptable to FTA. A Joint Development Project Request form, identified as preliminary, is the only document required to be submitted for a preliminary review. A project sponsor may, however, also submit supporting documentation, proposed Joint Development Agreements, and alternative certifications for preliminary review, as necessary. A Certificate of Compliance for preliminary review is only necessary if the project proposes to deviate from the standard FTA requirements. FTA comments provided to the project sponsor during a preliminary review are subject to modification pending submission of the formal joint development review package.

- b. Formal FTA Review. The project sponsor should request a formal FTA review of the proposed joint development project when it is certain that all FTA requirements, terms, and conditions will be satisfactorily met. When requesting a formal FTA review of the proposed project, the project sponsor must submit a completed Joint Development Project Request form (see Section 2. of this chapter, below), an executed Certificate of Compliance (see Section 3. of this chapter, below), and a proposed Joint Development Agreement, along with any supplemental documentation.
2. JOINT DEVELOPMENT PROJECT REQUEST FORM. The Joint Development Project Request form (located at the FTA website) identifies pertinent information about the proposed joint development project, including how the eligibility criteria are to be satisfied. The Request form replaces the previously used Joint Development “Checklist”. The Request form must be used by the project sponsor to prepare for a joint development project and to facilitate discussion with FTA concerning the joint development proposal. The Request form does not include every possible joint development consideration but, rather, reflects those considerations that project sponsors and their partners may find most useful to consider during the project development process.
3. CERTIFICATE OF COMPLIANCE. By submitting a written Certificate of Compliance (Appendix A of this circular), the project sponsor shall certify, that the proposed joint development project conforms to the criteria of 49 U.S.C. 5302(3)(G), and that determinations relative to the value of the federally assisted project property used for the joint development, along with the baseline market analysis, have been made with due diligence (see Section 5.a., iii, 2. of this chapter, below), and that the joint development project also conforms to the requirements of 49 C.F.R. part 18, as discussed in this circular.
4. JOINT DEVELOPMENT AGREEMENT. In addition to the project sponsor, joint development projects requiring FTA approval may impose certain federal requirements on the project partners. Therefore, the project sponsor must submit a proposed Joint Development Agreement for each project partner for FTA review. Once executed, the project sponsor shall submit a signed copy of all Joint Development Agreements to FTA.

5. FTA REVIEW OF THE JOINT DEVELOPMENT PROJECT PROPOSAL. FTA's review of the formal joint development project proposal will include, but not be limited to, the following: (1) determining satisfaction of all four eligibility criteria; (2) examination of issues associated with the use of FTA assistance or program income for the project; and (3) examination of issues associated with the acquisition and use of real property that was or will be acquired with FTA assistance. During its review, FTA may require additional material or data to clarify or expand upon any item.
 - a. Eligibility Requirements. FTA will examine each of the four eligibility criteria independently of one another, although the means of satisfying one criterion may also be involved in satisfying another criterion. All four of the eligibility criteria must be satisfied. There may be more than one way to satisfy some criteria, as discussed in full in Chapter 3.
 - (1) Economic benefit criterion. This criterion is satisfied by enhancing economic development or incorporating private investment.
 - (a) Enhancing economic development. Demonstration that the joint development project will contribute to privately or publicly funded economic development activity occurring in close proximity to the transit facility.
 - (b) Incorporating private investment. Demonstration that the joint development project includes private investment, generally by identification of a joint development partner and its role in the project. Private investment does not need to be monetary; contribution of capital assets to the project, either initially or over the life of the project, will suffice. The amount and form of private investment is up to the project sponsor and its partners.
 - (2) Transit benefit criterion. There are two ways to satisfy this criterion: (1) by enhancing the effectiveness of public transportation as well as being physically or functionally related to public transportation, or (2) by establishing new or enhanced coordination between public transportation and other transportation.
 - (a) Enhancing public transportation effectiveness. Reasonable demonstration of forecasted benefits of the project onto the related transit facility or the transit system as a whole. These include increased ridership, travel time savings, enhanced wayfinding (signage, directions, etc.), deferral of transit operating or capital costs, improved transit access, and increased mobility.
 - (b) Physical relationship to public transportation. Demonstration of a direct physical connection to transit service or facilities. This includes projects built within or adjacent to a transit facility, means of access that connect directly to the transit facility (e.g., bicycle or pedestrian paths, parking spaces), or projects using air rights over a transit facility.
 - (c) Functional relationship to public transportation. Demonstration that the project, by activity and use, with or without a direct physical connection to a transit facility, enhances connectivity with or access to transit. This factor may also be satisfied by demonstrating that a transportation-related service (e.g.,

remote baggage handling or shared ticketing) or a community service (e.g., daycare or health care) facility is provided. Considerations include reduced travel time or improved access between the project and the transit facility, or increased trip generation rates as a result of the relationship. A functional relationship allows the project to be located outside the structural envelope or footprint of the transit facility, or to be separated by an intervening street, major thoroughfare, or unrelated property. A functional relationship generally will not extend beyond the distance the average person can be expected to safely and conveniently walk or bike to use the transit service.

- (d) Establishing new or enhanced intermodal coordination with transit. Demonstrated by any reasonable forecast that the project establishes or improves coordination between transit and another mode of transportation. This may include proximate or shared ticket counters, terminals, parking facilities, taxicab bays, passenger drop-off points, waiting areas, shared or coordinated signage, schedules, ticketing, or bike paths or walkways connecting transit to another mode. Projects that shorten the distance a user must traverse between transit and another mode are considered to enhance coordination.

- (3) Revenue criterion. This criterion is satisfied by demonstrating that the project sponsor receives a fair share of the revenue generated by the joint development project over the term of the contractual agreement.

- (a) Fair Share of Revenue. A “fair share of revenue” is the division of revenue generated from a joint development project that the project sponsor and its partners negotiate and agree that the project sponsor will receive over the term of the contract period. FTA has determined that the minimum threshold for the amount of revenue that a project sponsor receives cumulatively from commercial, residential, or mixed-use development projects must be at least equivalent to the amount of the original federal investment²¹ in the project property contributed to the joint development project. In most instances, the project sponsor contributes its right to use FTA-assisted real property for the joint development. However, FTA grant funds or other project property may also be contributed.

Fair Share of Revenue	\geq	Original FTA Investment Contributed to the Joint Development	$=$	Amount of Revenue to Project Sponsor from Partner(s) over the contract period
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²¹ As federal assistance is provided to an entire project as a percentage of total project costs, the “original FTA investment” in project property contributed to a joint development project equals the original cost of the project property multiplied by the federal share in the project.

In certain circumstances, there may be economic factors that affect the amount of disbursements of revenue generated by the joint development project on a monthly or annual basis. Therefore, FTA's minimum threshold requirement to the project sponsor can be satisfied as long as the equivalent to the original federal investment is ultimately received by the project sponsor over the term of the contract period.

For example, if the "Original FTA Investment in Contributed Project Property" equals \$1 million, and the term of the contract agreement is 25 years, the minimum fair share of revenue expected to the project sponsor is a cumulative \$1 million over the life of the contract. The average annual amount of the fair share of revenue is \$40,000.

$$\frac{\begin{array}{l} \$1 \text{ million} \\ \text{(Original FTA Investment Contributed to the JD)} \end{array}}{25 \text{ years (Term of the Contract Agreement)}} = \$40,000$$

Community Service or Publicly-Operated Projects. When a joint development project is a community service or publicly-operated facility, FTA recognizes that the revenue generated by the joint development project may be less than what would be generated from commercial, residential, or mixed-use development projects. As such, the resulting "fair share of revenue" can be less than the amount of the original FTA investment contributed to the project, but must be based upon the actual revenue generated by the community service or publicly-operated facility.

- (b) Analysis. Project sponsors are expected to exercise due diligence in determining the market value of the FTA-assisted project property contributed to the joint development project. Although FTA does not prescribe any specific methods, a baseline market analysis is required to demonstrate a good faith effort to provide a "fair share of revenue" to the project sponsor. The required baseline market analyses may include the following:

- Real estate (or designated asset) appraisals and analyses
- Joint development project costs and responsibility
- Development trends and plans
- General market conditions
- Project Site conditions analysis
- Benchmark estimates
- Risk analysis
- Industry analysis
- Fair market value determinations

Elements of the baseline market analysis may be undertaken by either the project sponsor or its joint development partners; however, the project sponsor is expected to use professional expertise and exercise professional judgment in its acceptance of the results of any analyses. The various studies relied upon in

conducting the baseline market analysis should be identified in the Joint Development Project Request form submitted to FTA. In addition, the project sponsor must provide certification in writing that it has complied with this requirement using the Certificate of Compliance in Appendix A of this circular.

- (c) FTA Investment and Fair Share of Revenue. Based upon the results of the baseline market analysis, the project sponsor must report the current market value of the FTA-assisted project property that will be contributed to the joint development, as well as the original cost of the project property and the federal share invested in the FTA-assisted project. The project sponsor must determine with its joint development partners the expected revenue to be generated by the joint development project, and their timing over the contract period. The project sponsor is expected to negotiate with its joint development partners to determine the fair share of revenue amount (as described in 1. above) and the timing of the portion of the revenue that it will receive, taking into consideration the type of project to be undertaken and priorities that the project sponsor and/or local government want to advance through the joint development project. The agreed upon amount is to be reported to FTA using the Joint Development Project Request form.
- (4) Tenant contribution criterion. This criterion is applicable only when the project provides space within a federally-assisted transit facility for use by a tenant or for a non-transit purpose. Satisfaction is demonstrated through an agreement whereby the tenant covers his fair share of the operating and maintenance costs of the space being used. The project sponsor must identify the type/purpose of all costs to be provided. Tenant refers to people as well as business entities. FTA does not define "fair share" of the costs nor does it impose any valuation methodology. The project sponsor must demonstrate use of a commercial valuation method to determine what constitutes a fair share of the costs. Although this criterion is generally satisfied using rental payments, agreements other than for rental payments may be used, e.g., agreements for the outright payment of operating and maintenance costs.
- b. Use of Grant Funds or Program Income. FTA does not have a dedicated program or funding source for joint development projects. Rather, joint development projects may seek grants under various FTA assistance programs or use real property acquired using such assistance (refer to Chapter 3 of this circular). As each funding program has its own eligibility and other requirements, FTA will review the activities involved in the project to determine whether the specific program's requirements are met. Program income is another funding source that may be applied to joint development projects. FTA will review any such application of program income to ensure that it conforms to the terms and conditions of the grant funding the project from which the program income was generated.
- c. Federally Assisted Real Property. The joint development project often uses real property owned by the project sponsor that was acquired with FTA financial assistance, i.e., is subject to federal interest. A joint development project sponsor may either transfer or lease this real property to a third-party joint development partner. Acquisition and use of

federally assisted real property is governed by the Uniform Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act) and the Common Grant Rule at 49 C.F.R. part 18. Acquisition of real property for joint development purposes follows the standard guidelines for acquiring real property with FTA assistance and the specific requirements of the FTA funding program through which federal funds are awarded (refer to FTA Circular 5010.1D, Grant Management Requirements, Chapter IV, Section 2). FTA allows maximum flexibility, within the law, for how the project sponsor uses federally assisted real property for joint development purposes. Accordingly, FTA will carefully examine the terms and conditions for the joint development use of the real property. Real property that has been disposed of may not be used for a federally assisted joint development project. Typical real property considerations examined by FTA are as follows:

- (1) Satisfactory continuing control. The project sponsor must ensure that the real property remains available for the transit purpose originally authorized by FTA and that it will satisfactorily maintain transit access and operation of the real property for the duration of the joint development project. The project sponsor must specifically describe any interests in the property to be conveyed, including any encumbrance, easement, long-term lease, or similar interests, the means of conveyance, and elements of property identification or recordation. The project sponsor must also specify the terms and conditions stipulated for preserving satisfactory continuing control to ensure the use of the property for its transit purpose. The conveyance of real property interests requires FTA's written consent.
- (2) Parking. FTA-assisted parking facilities are often removed or modified for use for joint development purposes, e.g., conversion of surface parking to a shared parking structure. Generally, FTA does not require the replacement of parking spaces that will be eliminated or displaced by the project on a one-to-one basis.²² FTA will examine the useful life of any existing parking improvements that are proposed for change for the joint development project. If any useful life remains, the project sponsor must account for the remaining federal interest in the parking improvement through replacement parking or some other method. (Refer to Disposition Alternatives of C5010.1D, p. IV-11.) Any change in existing parking facilities for use as joint development must produce an overall benefit for transit; the project sponsor must demonstrate how this benefit is provided. All prior grant commitments related to the parking facility must be examined to ensure that no terms of the attendant funding agreement are violated. Occasionally, a change in a parking facility for joint development may trigger a need for additional National Environmental Policy Act (NEPA) review. Required NEPA review is dependent upon the use of FTA assistance in the conversion, the timing of the change, and whether the attendant grant remains open. The FTA Regional Office will advise the project sponsor if any additional NEPA review is required.

²² For parking facilities related to a Capital Investment Grant project, or funded pursuant to a Full Funding Grant Agreement or Small Starts Grant Agreement, or similar contract, the project sponsor should consult with the FTA Office of Planning and Environment regarding potential impacts on travel forecast related to that project. FTA must concur that the change will not violate or adversely affect the terms of the funding agreement.

- (3) Protection of the Federal Interest. When FTA assists in the acquisition of real property, FTA has an interest in how the property is used (the “federal interest”). If title to grant funded real property will be altered or encumbered in any way in order to undertake the project, the project sponsor must ensure that the federal interest in the property will be reasonably protected until such time as FTA relinquishes its interest in that property. Any such alteration of title requires express written consent from FTA.
6. JOINT DEVELOPMENT PROJECT APPROVAL. FTA will approve a joint development project proposal submitted for formal review only. The approval shall be contingent upon the project sponsor satisfying the eligibility criteria set forth in law at 49 U.S.C. 5302(3)(G), as well as certifying that the joint development project conforms to these criteria, and that the project conforms to the requirements of the common grant rule found at 49 C.F.R. part 18. FTA will identify any elements of the package that it finds to be unacceptable, and work with the project sponsor to seek resolution. The FTA Regional Administrator has been delegated the authority to approve joint development projects, and will notify the project sponsor of the joint development approval in writing, including any terms and conditions warranting caution.

APPENDIX A**CERTIFICATE OF COMPLIANCE**

Effective as of the date hereof, the undersigned hereby certifies and covenants to the Federal Transit Administration (FTA) as follows:

1. *Eligibility.* The Project Sponsor attests that the Joint Development project to be undertaken fully satisfies the eligibility requirements set forth in 49 U.S.C. 5302(3)(G), and the Project Sponsor has provided sufficient documentation of the same that may be subject to FTA oversight review.
2. *Due Diligence.* The Project Sponsor attests that due diligence has been exercised in determining the value of any FTA-assisted assets contributed to this Joint Development project. The Project Sponsor also attests that due diligence has been exercised in conducting a baseline market analysis to determine that a fair share of revenue will be received from the Joint Development project.
3. *Use.* Except as otherwise provided by Federal statutes, real property shall only be used for the originally authorized purposes (which may include Joint Development purposes that generate program income, both during and after the award period and is used to support public transportation activities) as long as needed for such purposes, and the Project Sponsor shall not dispose of, encumber, or convey its title or other interests without express written consent of FTA.
4. *Disposition.* When real property acquired with funds provided by FTA for the Project is no longer needed for the purpose originally authorized by FTA, the Project Sponsor shall request disposition instructions from FTA and shall agree that, unless otherwise authorized by FTA, such disposition shall be made in accordance with applicable law, including FTA's Master Agreement, 49 U.S.C. 5334(h), and 49 CFR part 18.
5. *Federal Interest.* The Federal Government retains a federal interest in any real property, equipment, and supplies of a federally financed project (Project Property) until, and to the extent that, the Federal Government relinquishes its Federal Interest in such Project Property.
6. *Incidental Use.* Any incidental use of Project Property, as determined by FTA, shall not exceed that permitted under applicable federal laws, regulations, and directives, including the requirements of FTA's Master Agreement.
7. *Encumbrance of Project Property.* The Project Sponsor covenants to FTA that it will not execute any conveyance of any interest in title to the Project Property or enter into an instrument legally binding on the Project Sponsor, or obligate itself in any other manner with respect to Project Property, that would impair the federal Interest in the Project Property or alter the condition of title to the Project Property as it was received by the Project Sponsor, without explicit written consent of FTA.
8. *Notice to Joint Development Partner.* The undersigned has delivered to the Joint Development Partners a duly executed copy of this certificate, dated as of the date hereof, receipt of which has been acknowledged by the Joint Development partners in writing to the undersigned on or before the date of execution of the Joint Development Agreement.
9. *Other Actions.* The Project Sponsor (a) agrees that it will not take any action that impairs the federal interest in the Project Property and (b) hereby affirms that each of its representations and warranties set forth in the Master Agreement is true and correct in all material respects as of the date hereof. The

Project Sponsor agrees that nothing herein shall supersede, amend, modify or otherwise affect the provisions, terms or conditions set forth in the Master Agreement.

10. *Definitions.*

- a. FTA shall have the meaning provided in the preamble of this certificate.
- b. Project sponsor shall have the meaning provided in Section 3 of this certificate.
- c. Joint Development shall mean a capital project as defined by 49 U.S.C. 5302(3)(G) that is eligible for funding pursuant to the guidance set forth in FTA circular 7050.1.
- d. Joint Development Partner(s) shall mean the entity(ies) with which the Project Sponsor has partnered, through a Joint Development Agreement, to construct a joint development project pursuant to 49 U.S.C. 5302(3)(G).
- e. Master Agreement shall mean that certain Master Agreement by and between FTA and the Project Sponsor, as the same may be lawfully revised, superseded or supplemented from time to time.
- f. Project shall have the meaning provided in Section 3 of this certificate.
- g. Project Property shall have the meaning provided in Section 6 of this certificate.

11. *No Estoppel.* The undersigned agrees that acceptance of this Certificate of Compliance by FTA shall not estop the Federal Government from initiating or conducting, and shall not be used as a defense to any investigation, audit or inquiry by the Federal Government following approval by FTA of the project.

(Signature)

Date

Name and Title of Certifying Official



1170 W. 3rd Street, 2nd Floor
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sanbag.ca.gov



In Association With:
Hatch Mott MacDonald
Lance Schulte





Governments
SANBAG
Working Together

Upland Metrolink Land Use and Constraints Analysis (Appendices)

June 2016

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1702



In Association With:
Hatch Mott MacDonald
Lance Schulte



Appendix C: Right-of-Way Impacts of Gold Line Extension through Upland Station



Memo

Date: Thursday, March 03, 2016

Project: SANBAG – Metro Gold Line Ontario Airport Extension

To: Carrie Schindler, SANBAG

From: Mitali Gupta, HDR

Subject: **Impacts of Gold Line Extension between Montclair and Ontario Airport**

Introduction

This memo summarizes the impacts of a Gold Line extension easterly beyond its current planned terminus at Montclair. The purpose of this exercise is to determine very high-level real estate acquisition costs for alignment analysis and funding. The projects limits along the rail track are roughly from Monte Vista Avenue in Montclair to the west, to Vineyard Avenue in Rancho Cucamonga to the east.

Track Alignment and Right-of-Way Requirements

Metrolink

- Preserve existing right-of-way on the San Gabriel Subdivision for double-track build-out, including the CP Archibald to CP Central Project, which is adjacent to the Gold Line Extension.
- Existing main line alignments are not shifted.
- The existing Upland Station depot building and side-platform remain.
- The existing Montclair Metrolink station tracks remain in place, however, the platform and pedestrian underpass require modifications.
- Track-spacing for Metrolink track segments located between the stations is based on Southern California Regional Rail Authority (SCRRA) design criteria minimum of 15-ft.
- Track-spacing within station areas is 20-ft. to accommodate an inter-track fence.
- Right-of-way within station areas includes sufficient width for a side-platform adjacent to the future track: 16-ft. platform width + 5-ft 4" from track centerline to platform edge, for a 25-ft. minimum footprint including room for a back-of-platform wall if required.

Gold Line

- Montclair tie-in point is dictated by the concept received from the Metro Foothill Gold Line Authority: located northerly of the Metrolink SB Line tracks.
- Two concepts were developed as depicted in map series:
 - South Alignment Option (14 maps)
 - North Alignment Option (14 maps)
- Minimum separation between adjacent SCRRA and Metro tracks: 20-ft. minimum, which is sufficient for a fence at 10-ft. offset from track centers.
- Gold Line track spacing of 24-ft. derived from Metro exhibits and would accommodate a center mast for an overhead catenary system.
- Where feasible, existing Metrolink San Bernardino Line right-of-way was used for Metro Gold Line right-of-way.

For reference purpose, attached with this memo is a hand sketch of typical track sectionals (a) between stations, and (b) at the station.

Planning Level Real Estate Acquisition Cost

The corridor was segmented by property type for the purpose of evaluating real estate costs in the Cities of Montclair, Ontario, Rancho Cucamonga, and Upland. The segments were broken out by property type and percentage of vacant versus improved property.

HDR reviewed trends, sales, and listings of vacant land and improved property and came up with average costs per property type. The total square footage and estimate real estate acquisition cost is outlined in the following table. In summary, following is an estimated impact of Gold Line extension beyond Montclair:

- North Alignment – approximately \$41 Million
- South Alignment – approximately \$48 Million

North Alignment

Property Type	Count of Category	Total Square Footage	% Vacant / % Improved	Total
Commercial	14	128,128	20 / 80	\$4,971,350
Industrial (Includes Open Space & Misc. Vacant Parcels)	93	433,721	50 / 50	\$11,927,338
Residential	79	191,615	25 / 75	\$24,318,556
Total	186	753,464		\$41,217,244

South Alignment

Property Type	Count of Category	Total Square Footage	% Vacant / % Improved	Total
Commercial	7	75,039	30 / 70	\$2,716,426
Industrial (Includes Open Space & Misc. Vacant Parcels)	87	430,969	30 / 70	\$14,006,489
Residential	101	231,910	25 / 75	\$30,845,415
Total	186	737,919		\$47,568,330

Assumptions

This exercise is subject to the following assumptions:

- THIS IS NOT AN APPRAISAL: The cost are provided are for preliminary budget analysis purposes so that cost estimates may be prepared and should not be used to make any offers of compensation for the proposed project. Appraisals are required to determine “fair market value”. The market data was obtained from reliable sources; however, it has not been verified.
- The single family residential properties that appear to have buildings within the alignments were considered full acquisitions for this estimate.
- This estimate does not include the Fixtures, Furniture, and Equipment (FF&E) or loss of business goodwill.
- This estimate does not include estimates for damages or mitigation costs (costs-to-cure) associated with partial acquisitions, which will be likely considering there are commercial

and industrial buildings within the proposed alignment which will be impacted. Several buildings will need to be cut and refaced.

- This estimate does not include relocation costs.
- This estimate only includes the cost to purchase the property (time and material is not included).
- Desktop review of properties was performed. No field verifications were conducted.



Project: GOLD LINE TO ONT

Computed: GNR

Date: 2-27-16

Subject:

Checked:

Date:

Task:

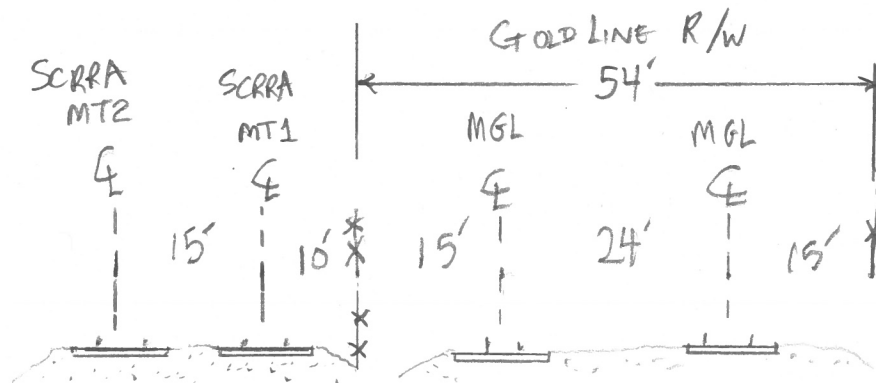
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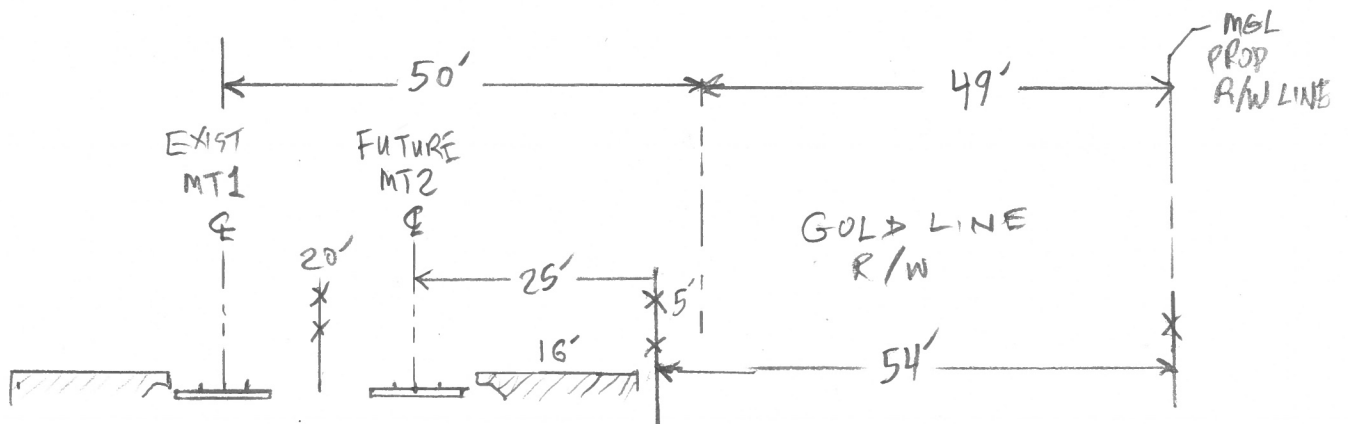
TYPICAL SECTION BETWEEN STATIONS



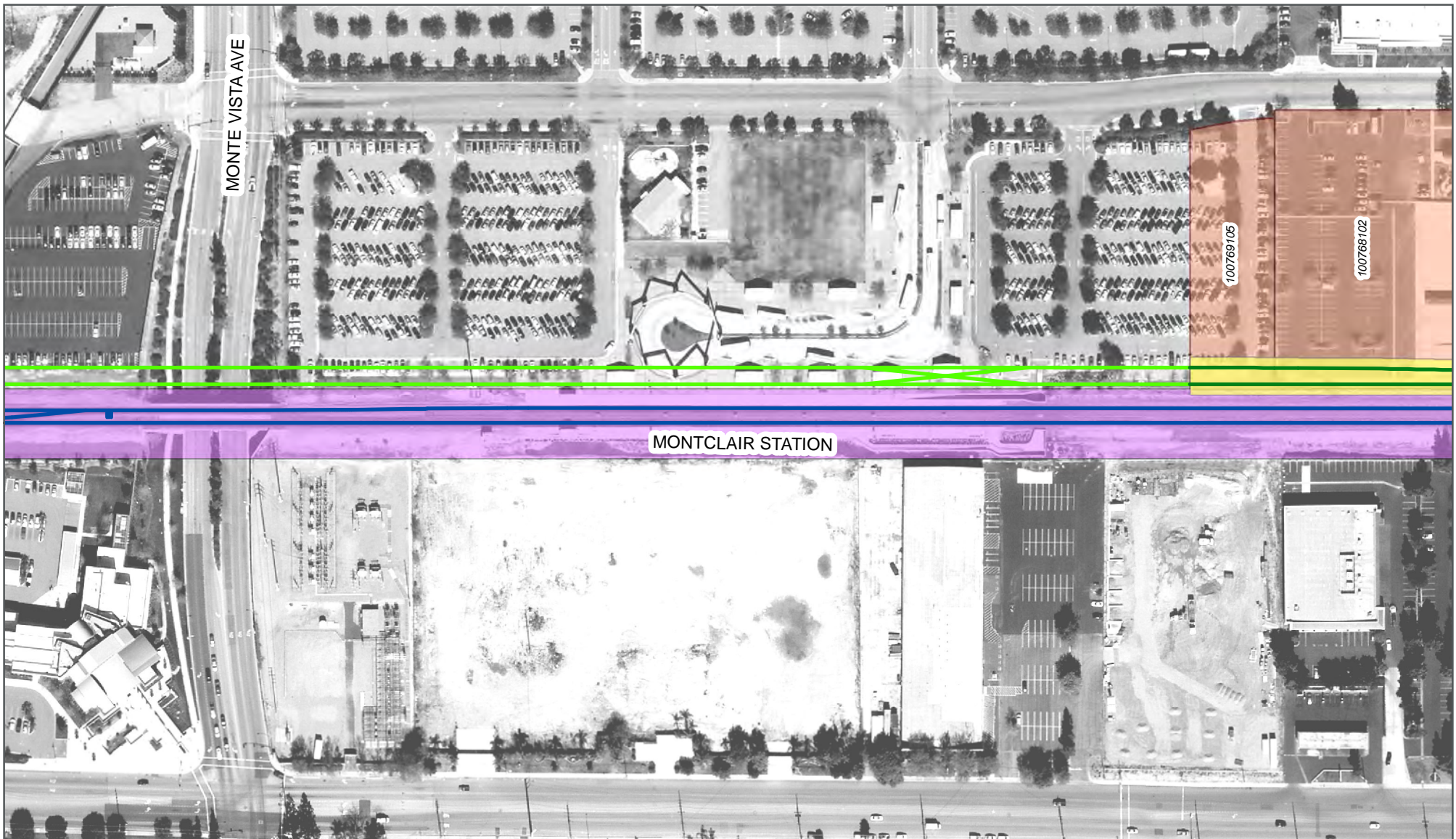


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UPLAND STATION
TYPICAL SECTION
SOUTH ALIGNMENT OPTION



GOLD LINE ALIGNMENT ON NORTH SIDE OF METROLINK TRACKS



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

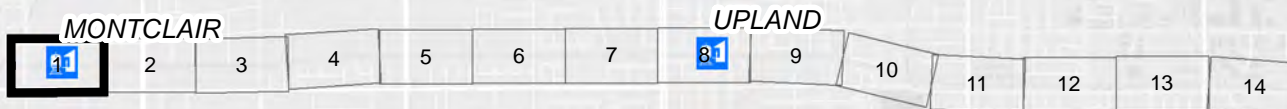
LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

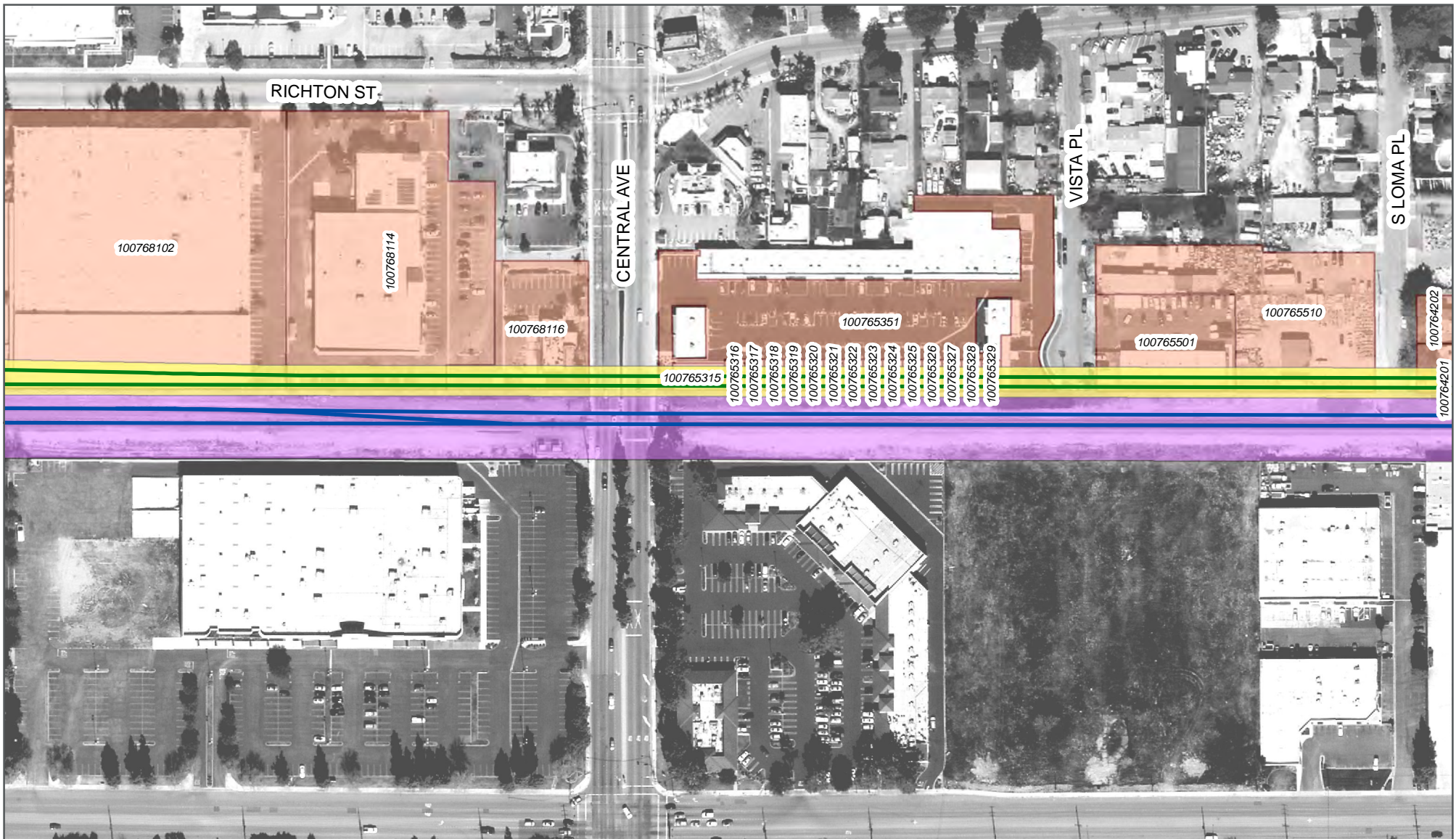


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MAP 1 of 14



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1 IN. = 200 FT.

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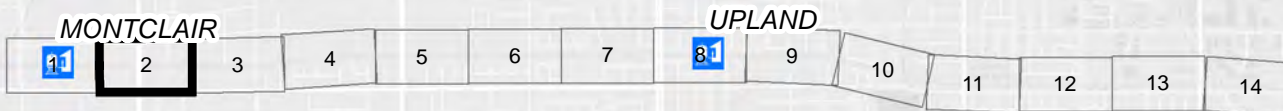
LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

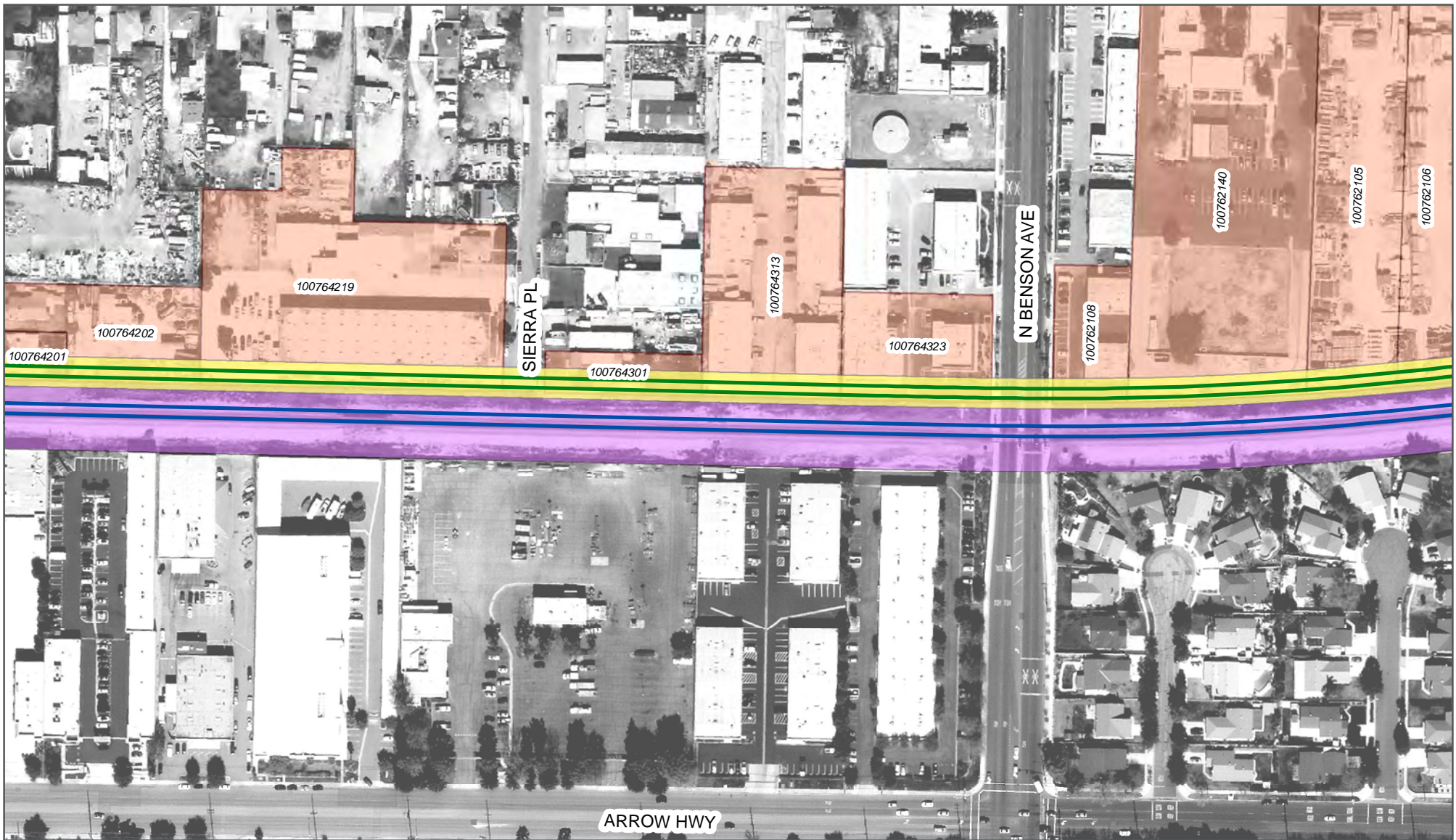


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MAP 2 of 14



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1 IN. = 200 FT.

0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
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- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

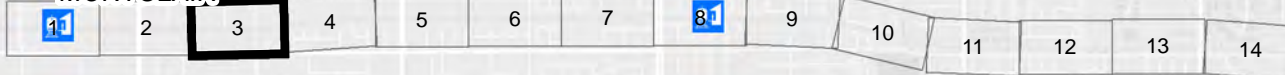


EXHIBIT B

MAP 3 of 14

MONTCLAIR

UPLAND



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1 IN. = 200 FT.

0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
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- Gold Line
- Metrolink SB Line
- Parcel Impacts
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- Flood Control Property

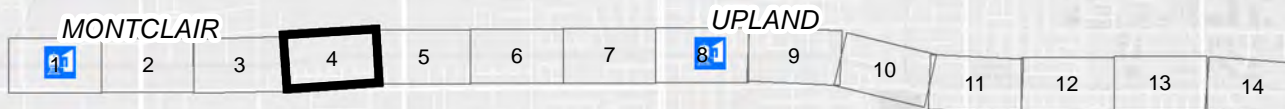
METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

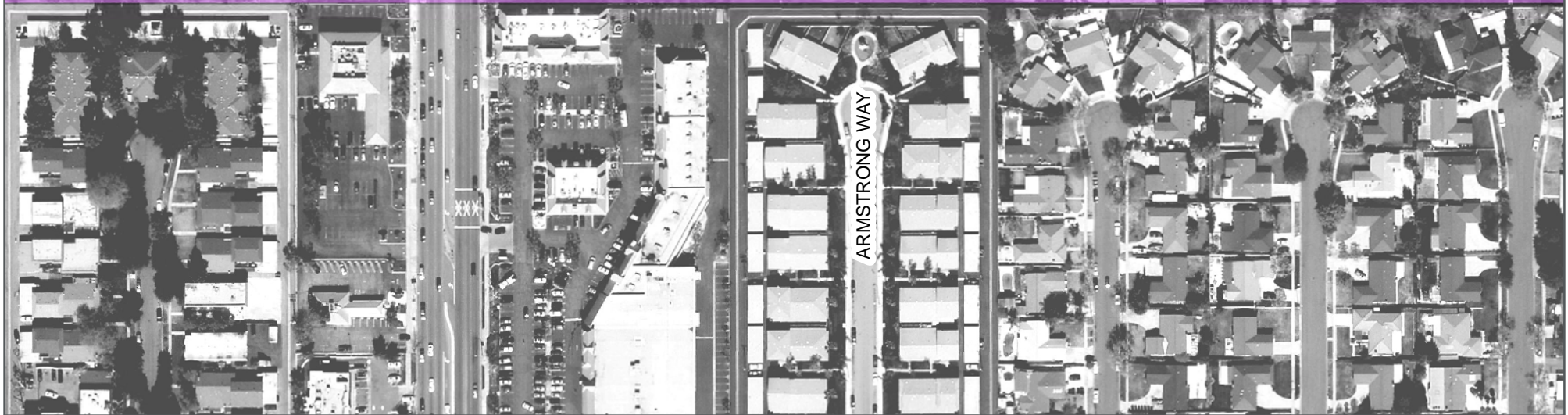
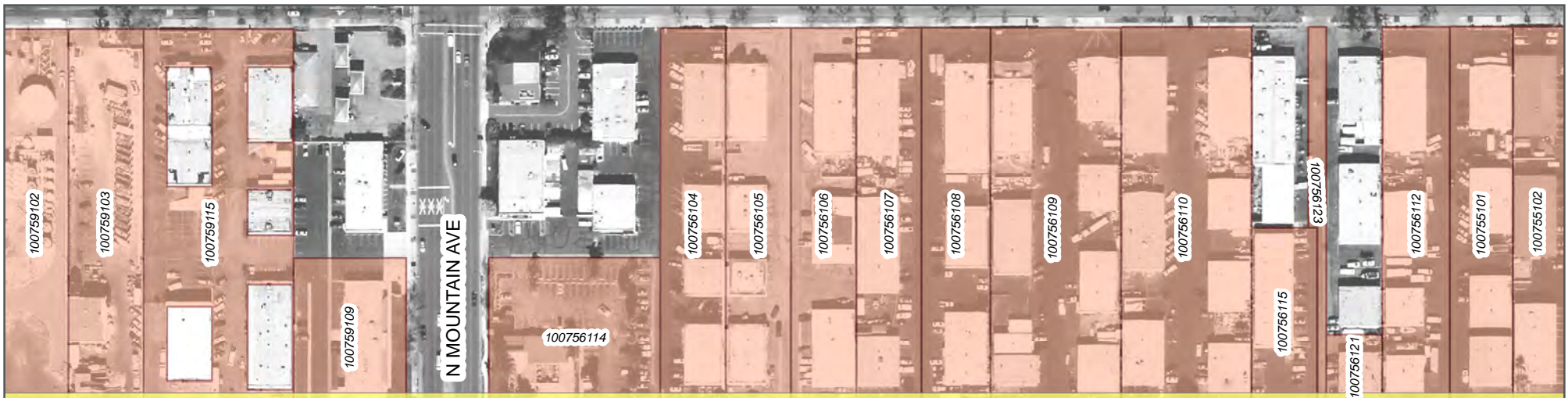


EXHIBIT B

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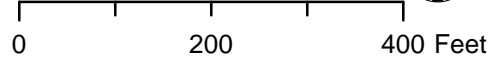
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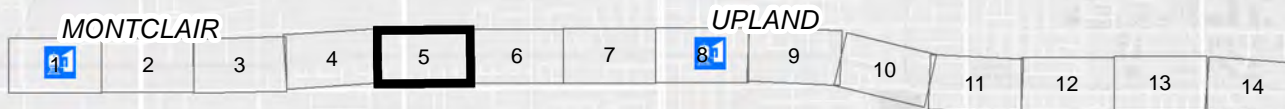


LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to ONT
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- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION PROPERTY REQUIREMENTS

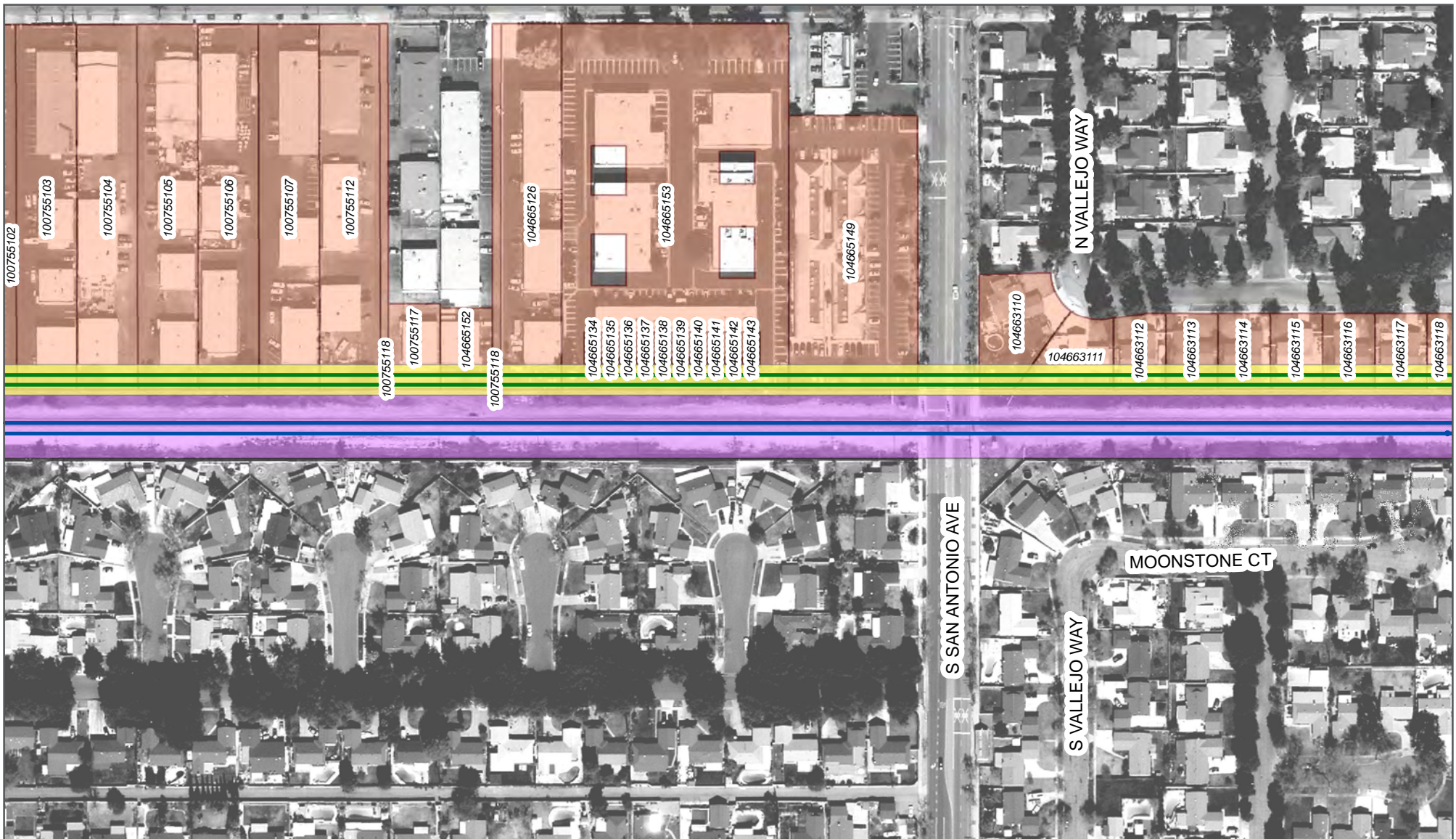


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1 IN. = 200 FT.

0 200 400 Feet

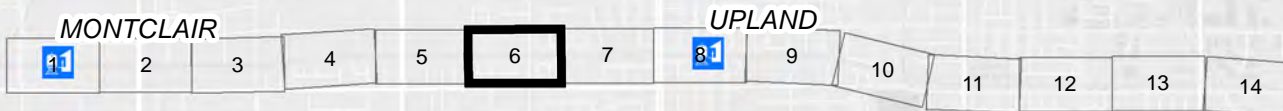
LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to ONT
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS



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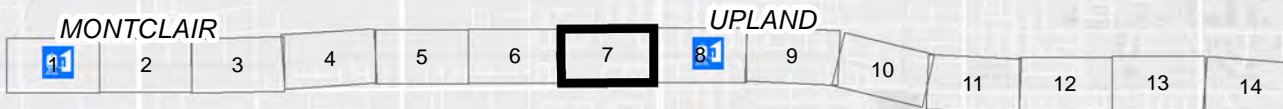
0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION PROPERTY REQUIREMENTS

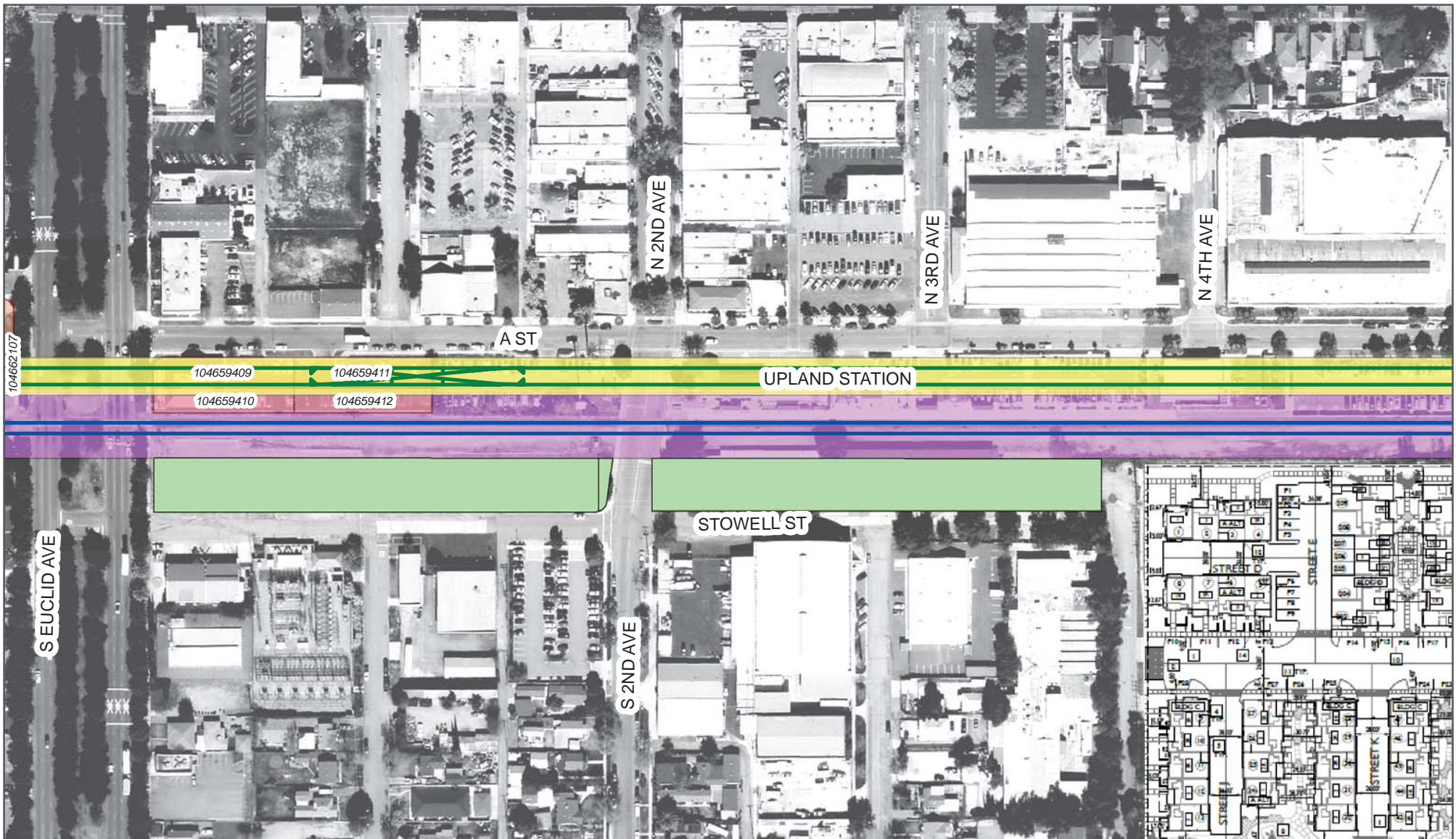


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EXHIBIT B

MAP 7 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.
0 200 400 Feet

LEGEND

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Gold Line Extension to Montclair

- Gold Line
- Flood Control Property
- SANBAG Upland Parcels
- Parcel Impacts
- Metrolink SB Line

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION PROPERTY REQUIREMENTS



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1 IN. = 200 FT.

0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to ONT
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

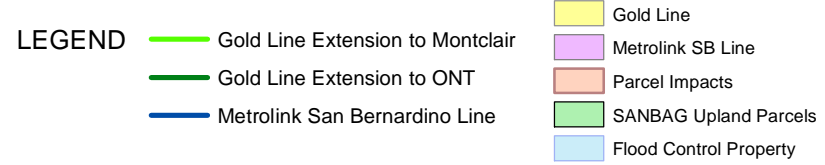
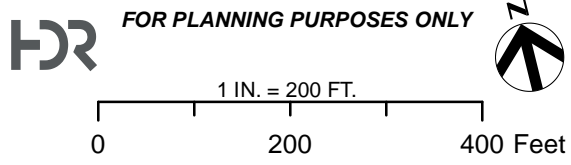
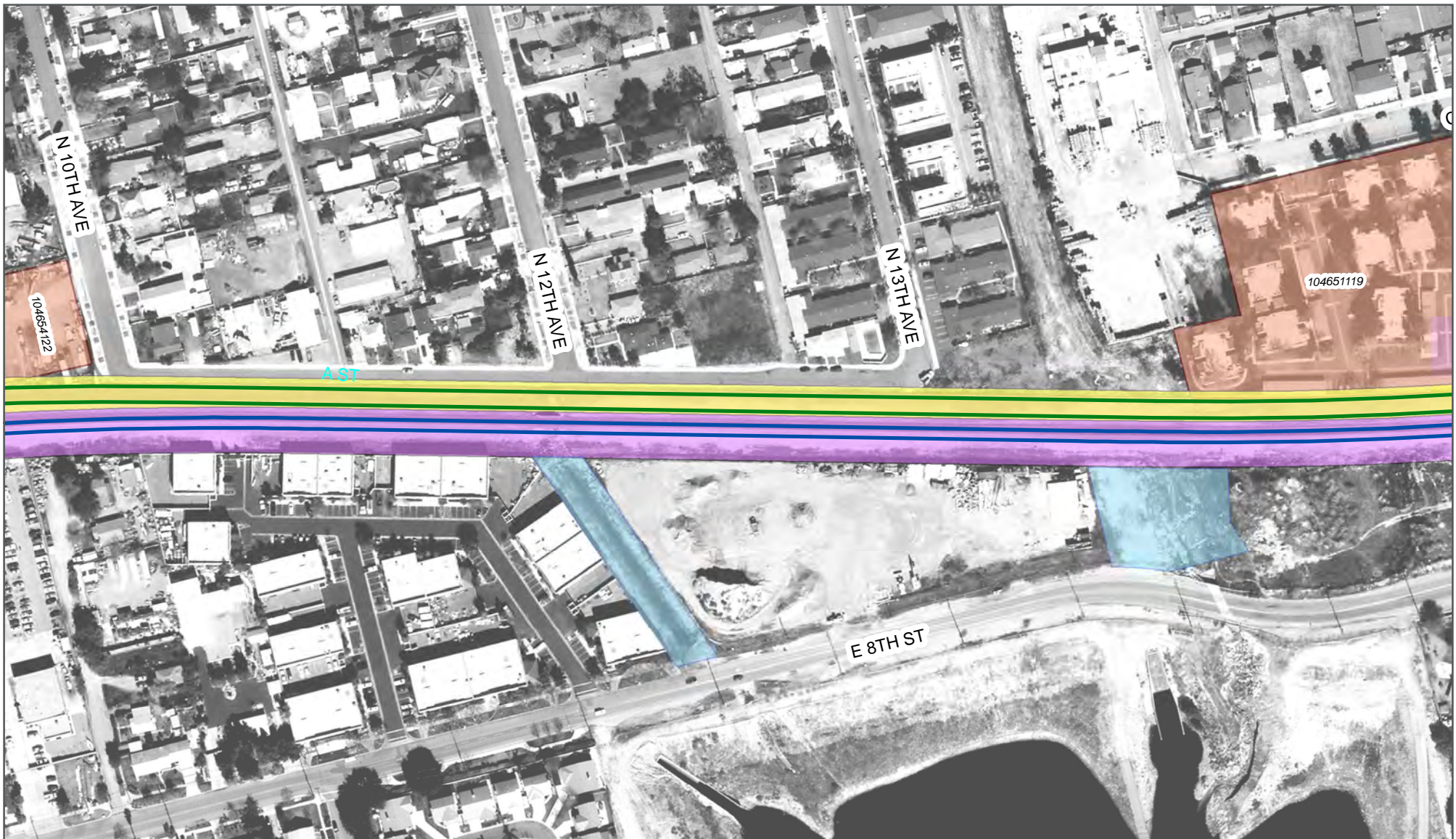


EXHIBIT B

MAP 9 of 14



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**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION**
NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

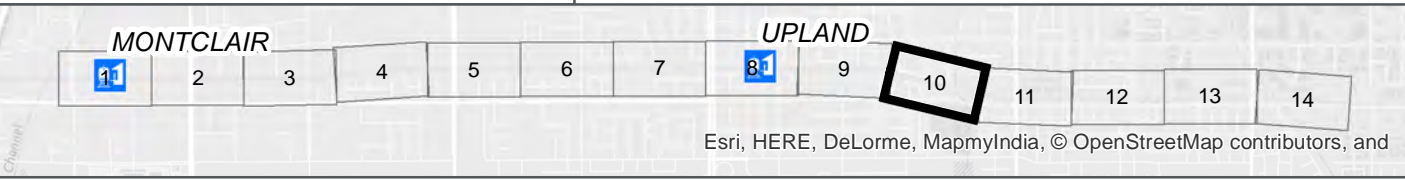
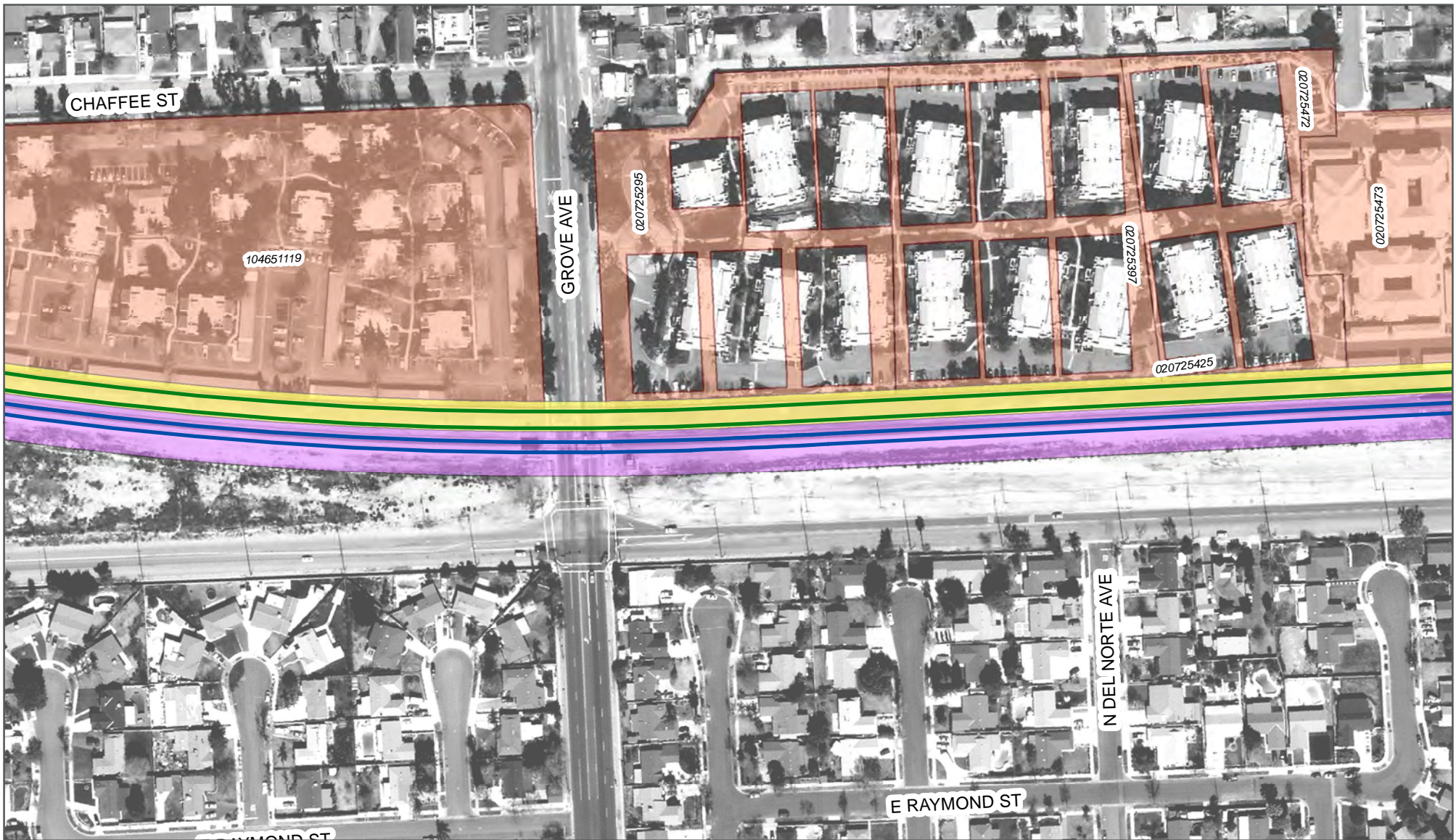


EXHIBIT B

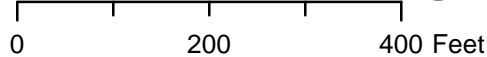
MAP 10 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.



LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to ONT
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION PROPERTY REQUIREMENTS

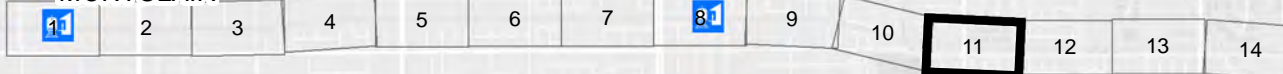


EXHIBIT B

MAP 11 of 14

MONTCLAIR

UPLAND



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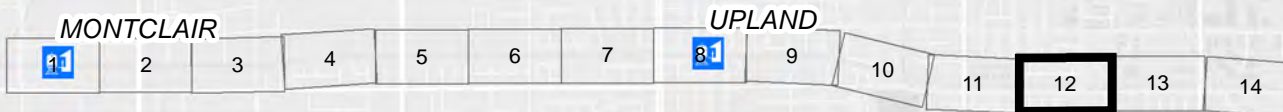
LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to ONT
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

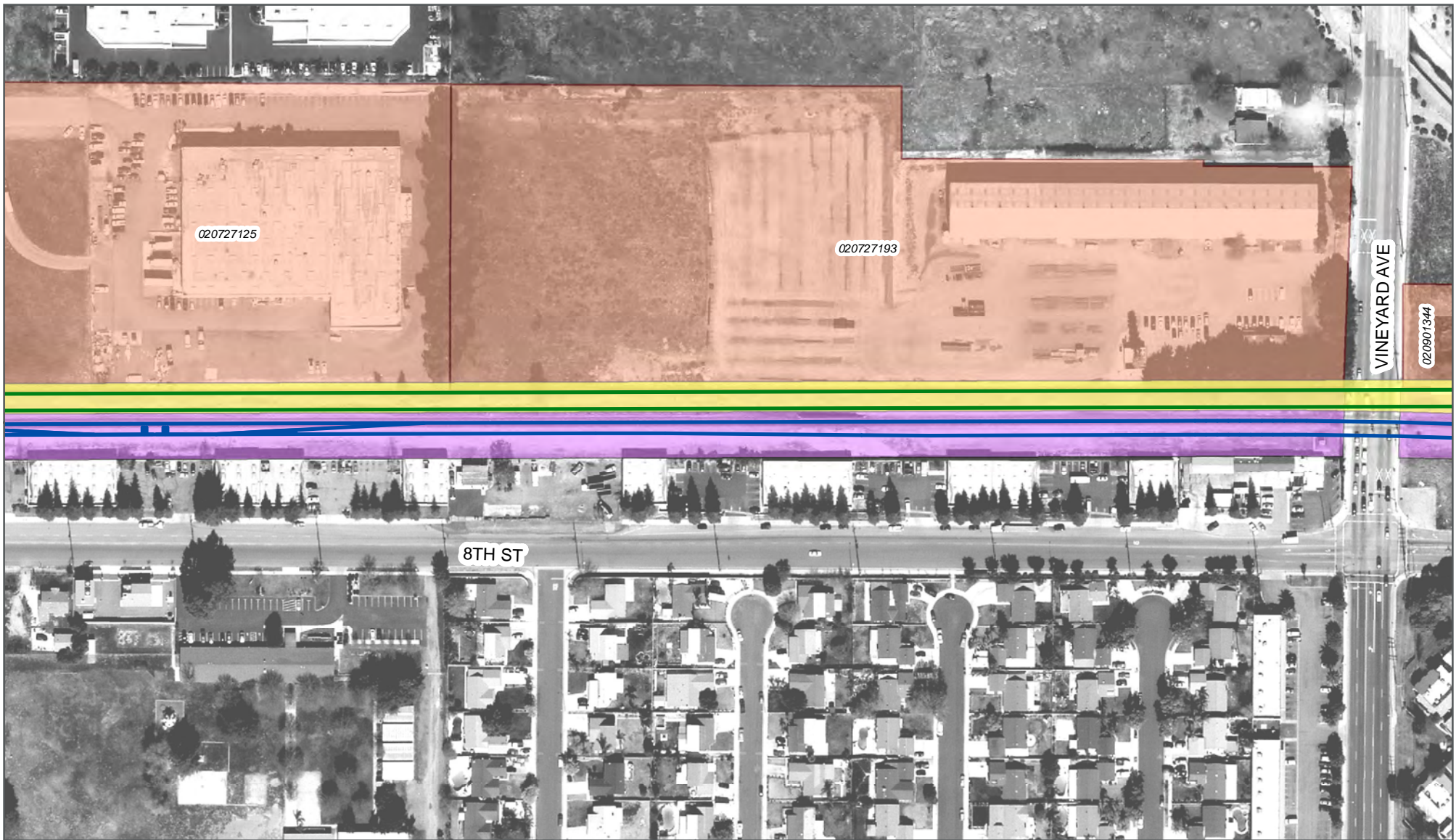


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EXHIBIT B

MAP 12 of 14



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1 IN. = 200 FT.

0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

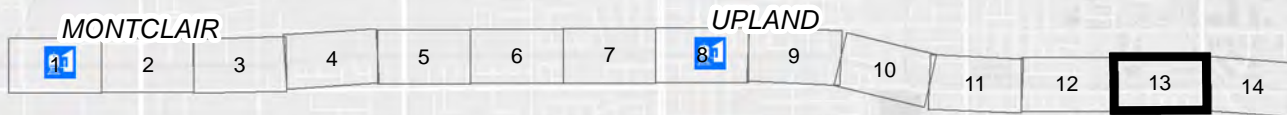
METRO GOLD LINE ONTARIO AIRPORT EXTENSION

NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

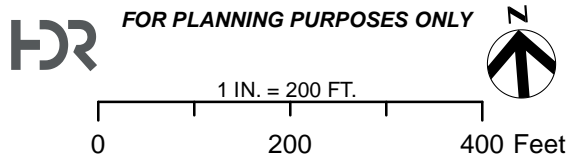
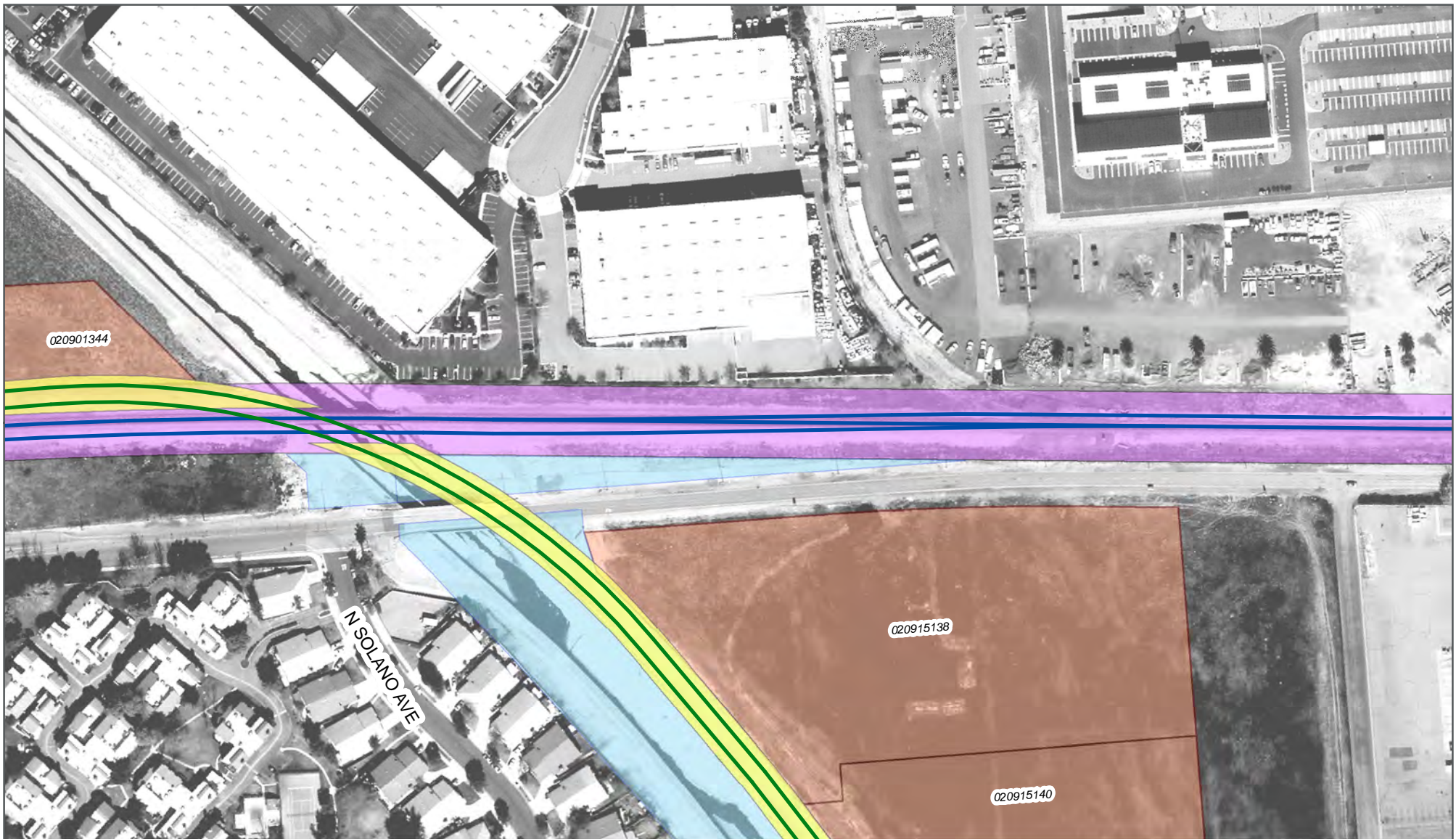


EXHIBIT B

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LEGEND	
—	Gold Line Extension to Montclair
—	Gold Line Extension to Ontario
—	Metrolink San Bernardino Line
—	Metrolink SB Line
—	Parcel Impacts
—	SANBAG Upland Parcels
—	Flood Control Property

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION**
NORTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

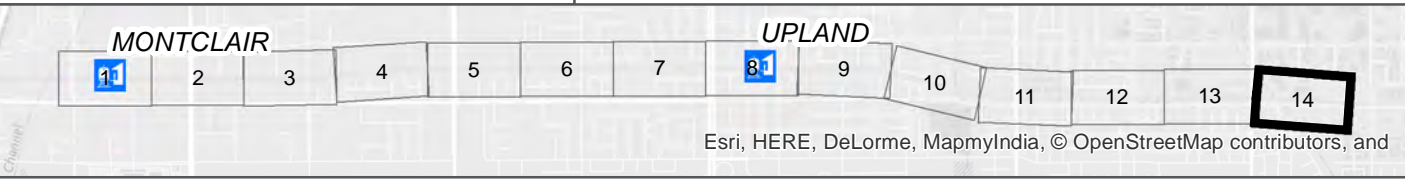
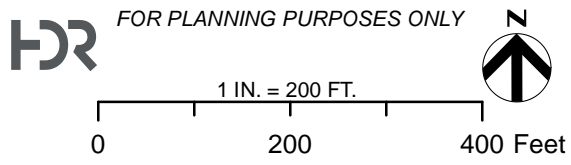
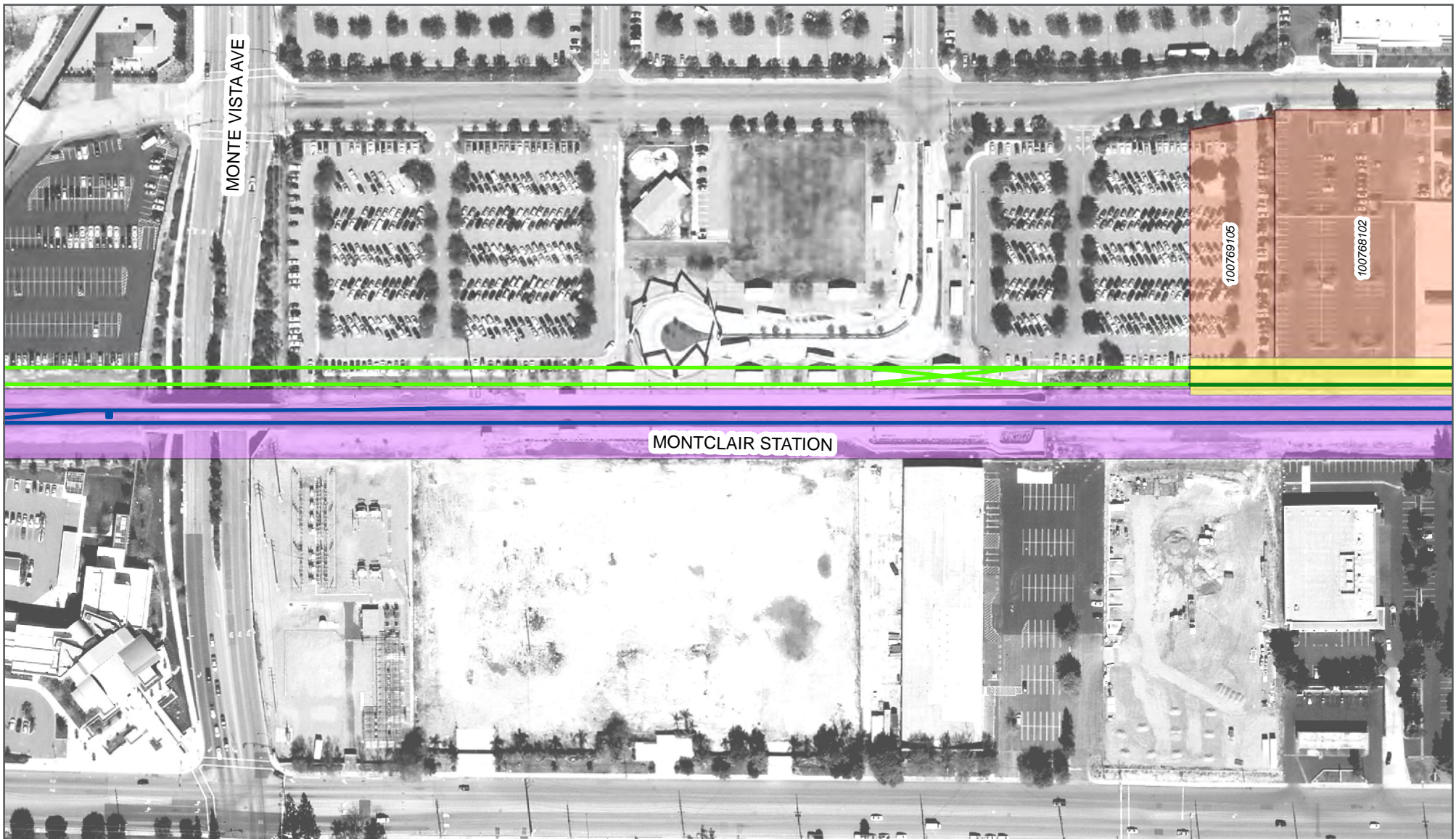


EXHIBIT B

MAP 14 of 14

GOLD LINE ALIGNMENT ON SOUTH SIDE OF METROLINK TRACKS



LEGEND		Gold Line Extension to Montclair		Gold Line
		Gold Line Extension to Ontario		Metrolink SB Line
		Metrolink San Bernardino Line		Parcel Impacts
				SANBAG Upland Parcels
				Flood Control Property

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION**
SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

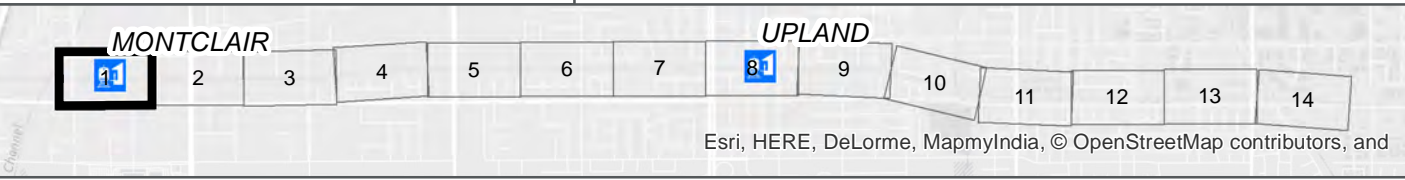
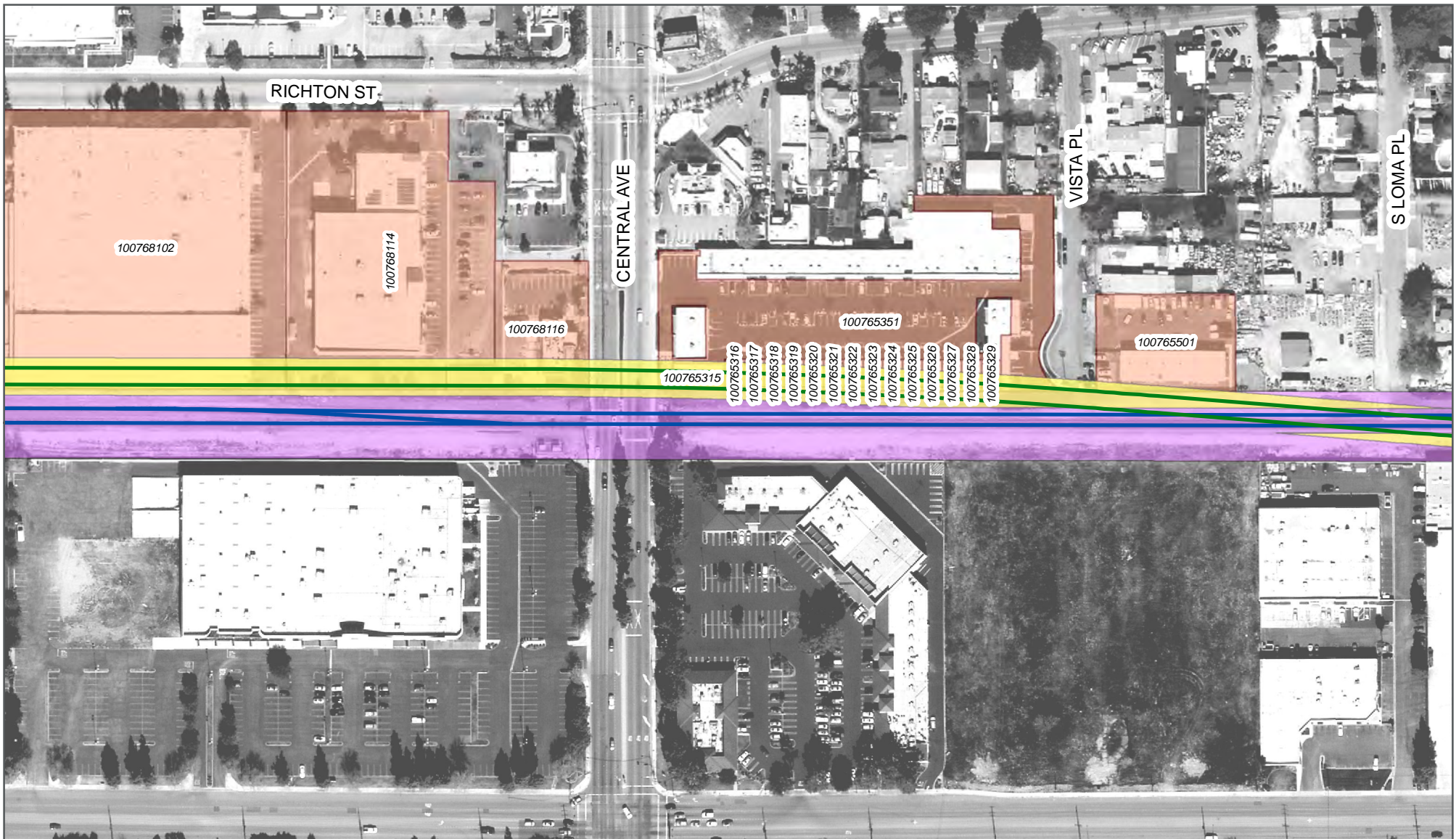


EXHIBIT A
MAP 1 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

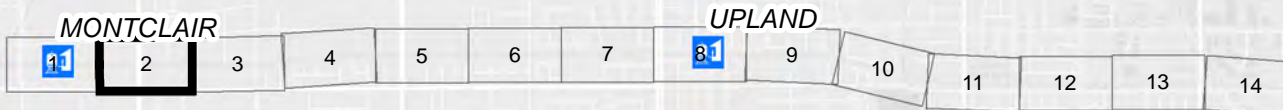
LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

METRO GOLD LINE ONTARIO AIRPORT EXTENSION

SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

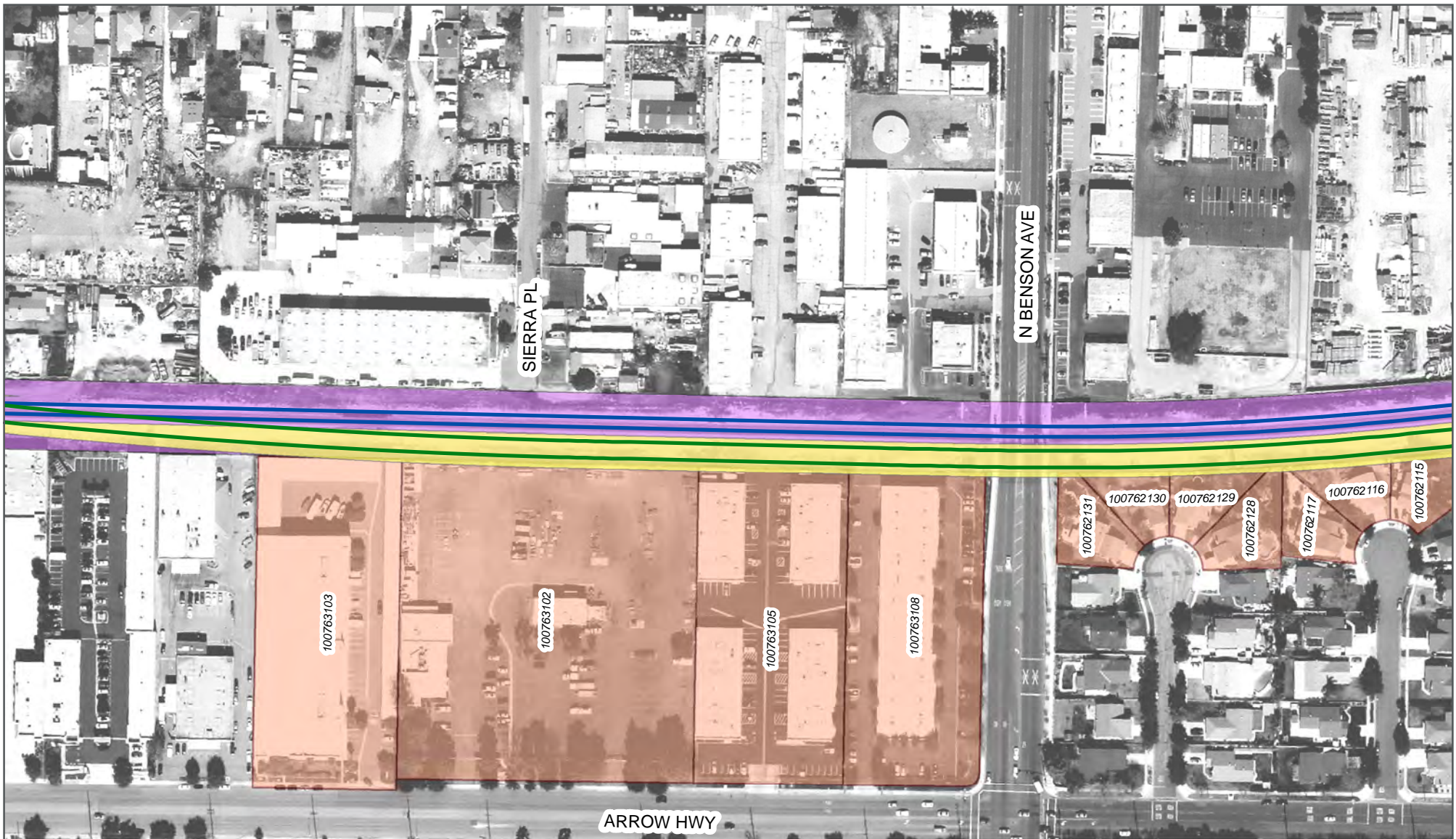


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EXHIBIT A

MAP 2 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

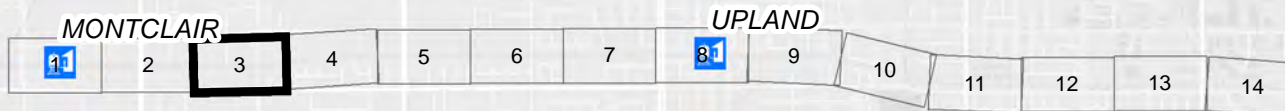
METRO GOLD LINE ONTARIO AIRPORT EXTENSION

SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

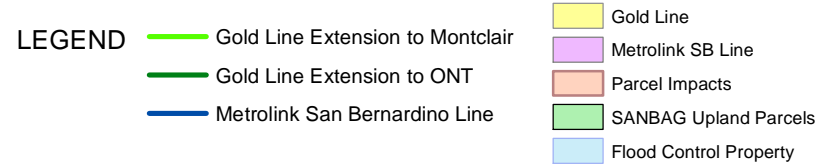
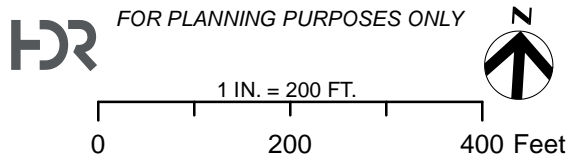


EXHIBIT A

MAP 3 of 14



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**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION**
SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

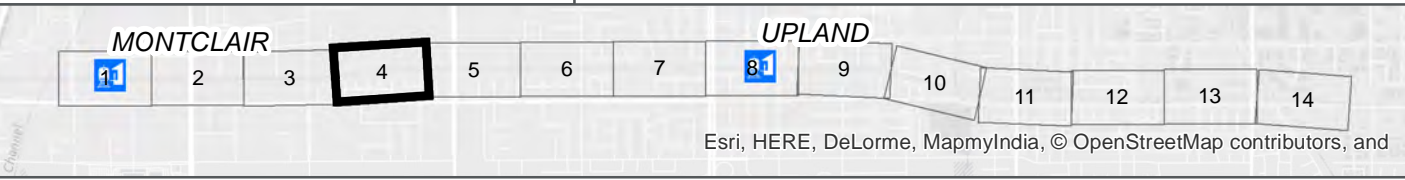
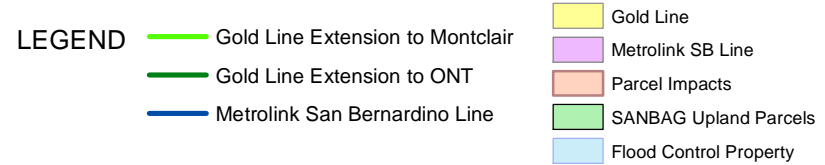
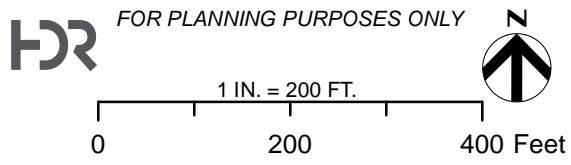


EXHIBIT A
MAP 4 of 14



**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION**
SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

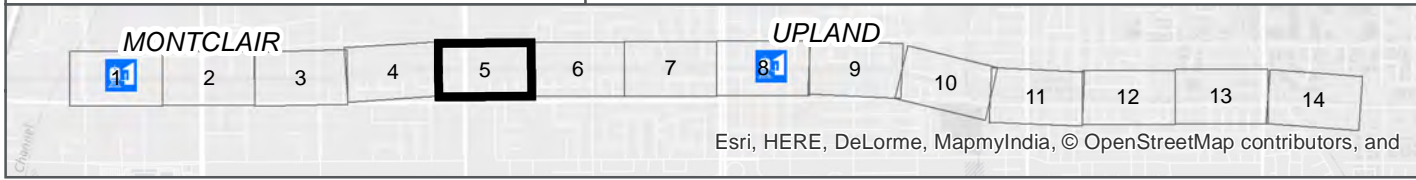
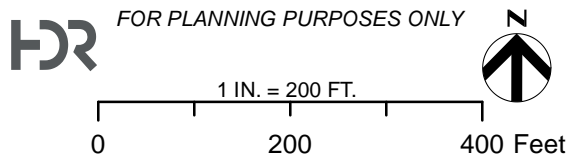


EXHIBIT A

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LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ont
- Metrolink San Bernardino Line
- Gold Line
- Metrolink SB Line
- Parcel Impacts
- SANBAG Upland Parcels
- Flood Control Property

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION**
SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS

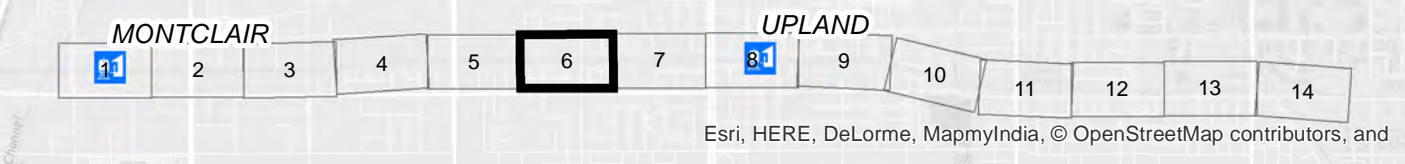
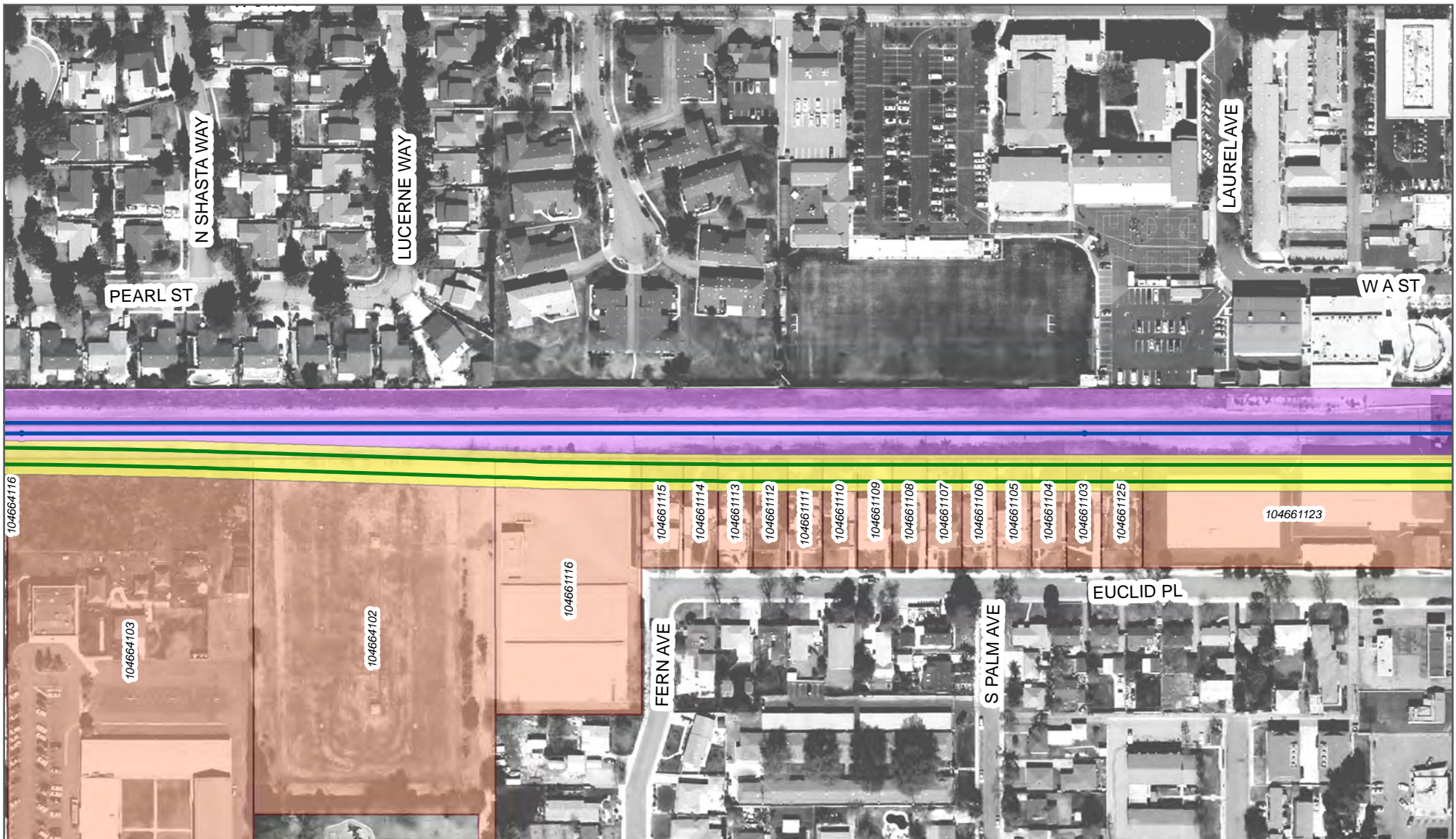


EXHIBIT A

MAP 6 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

LEGEND

- Gold Line Extension to Montclair
- Gold Line Extension to Ontario
- Metrolink San Bernardino Line

- Gold Line
- Metrolink SB Line
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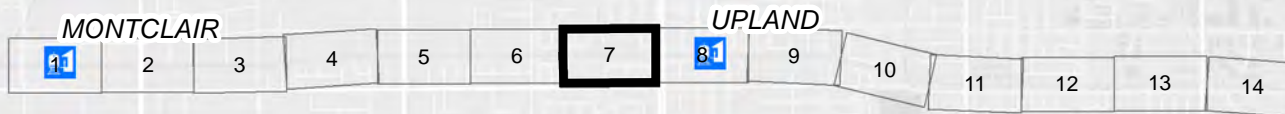
METRO GOLD LINE ONTARIO AIRPORT EXTENSION

SOUTH ALIGNMENT OPTION
PROPERTY REQUIREMENTS



EXHIBIT A

MAP 7 of 14



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Governments
SANBAG
Working Together

1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1702
(909) 884-8276

sanbag.ca.gov



In Association With:
Hatch Mott MacDonald
Lance Schulte





Upland Metrolink Land Use and Constraints Analysis (Appendices)

June 2016

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1702



In Association With:
Hatch Mott MacDonald
Lance Schulte



Appendix D: Identification of Historic Properties along Metrolink Corridor in City of Upland



Memo

Date: Monday, March 21, 2016
Project: SANBAG – Metro Gold Line Impacts on Upland Station and Vicinity
To: Justin Fornelli, SANBAG
From: Nina Delu, Mitali Gupta, HDR

Subject: **Initial Assessment of Impacts of Gold Line Extension between Montclair and Ontario Airport: Identification of Historical Buildings along Gold Line extension alignment to Ontario Airport**

Background

The proposed Metro Gold Line Extension between Montclair and Ontario Airport Project (herein Project) is an undertaking with the potential to cause effects upon historic properties. The term "historic property" is defined in the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register of Historic Places (NRHP). A historic property need not be formally listed on the NRHP to receive NHPA protection, it need only to meet the NRHP criteria (i.e., be eligible for listing in the NRHP).

An early constraints analysis has been conducted to preliminarily identify potential historic properties along the Metrolink corridor between Montclair and Upland, and specifically within two proposed alignments: one located on the north side of the Metrolink Corridor (**Appendix A - Figure 1**) and the second on the south side (**Appendix A - Figure 2**). This analysis was conducted in the full 3-mile span of the alignments utilizing the Office of Historic Preservation's California Historical Landmark and Point of Historical Interest list (http://ohp.parks.ca.gov/?page_id=21476), the National Park Service NRHP Spatial Data and online listing of Historic Properties (http://www.nps.gov/nr/research/data_downloads.htm), the City of Upland's Historic Downtown Upland Specific Plan (HDUSP), and information gleaned from the Development Services Historic Homes website (http://ci.upland.ca.us/?a=Housing#Historic_Homes).

Limitations

This memorandum may be used to encourage consideration of potential historic properties early in the planning and design of the undertaking, but should not be used in lieu of an in-depth inventory of the Project for historic properties in compliance with Section 106 of the NHPA including:

- Development of an Area of Potential Effect (APE)
- Background research on the APE and the regional vicinity including a records search at the regional Information Center
- Consultation about historic properties with interested parties and public participation
- The evaluation of architectural and archaeological resources within the APE using the NRHP Criteria for Evaluation (Code of Federal Regulations [CFR], Title 30, Part 60), and
- The potential effects of the Project on those properties using the Section 106 NHPA Criteria for Adverse Effect (36 CFR Part 800.5).

For the purposes of this constraints analysis, the defined footprint for the entire stretch of the North and South Options of the Project has been used to identify potential historic properties that may be

directly impacted by the proposed undertaking; it does not consider the indirect impacts of structures that are located adjacent to the proposed Project. This initial analysis was tiered, with the first tier identifying buildings in the alignments using Google Earth Street View that appear to meet NRHP age criteria. When the age/era of buildings, or building materials could not be clearly determined using Google Earth Street View, HDR conducted a windshield survey of only a limited number of buildings to be able to analyze them for the purposes of this memorandum.

Gold Line Alignment on North Side of Metrolink Corridor

Based on the data sources reviewed, no California Historical Landmarks have been recorded along the North Side of the Metrolink Corridor. One historical property listed on the NRHP crosses through both the northern and southern corridor alternatives. This resource is identified as Euclid Avenue (National Register Information System ID [SID] #05000843):

- **Euclid Avenue (National Register Information SID #05000843).** This span of Euclid Avenue, from 24th Street in Upland to Philadelphia Street in Ontario was listed on the NRHP in 2005 (<http://focus.nps.gov/AssetDetail/NRIS/05000843>), and is also listed on California State List of Historic Sites. Historic functions of this resource are identified as landscape/plaza use, transportation/road related use, and transportation/rail related use. Periods of significance for the resource range from 1875 to 1949.



Euclid Avenue view north, circa 1885

The City of Upland adopted the HDUSP in 2011. As shown in **Figure 1**, there are three designated historic districts that the proposed North Side of the Metrolink corridor crosses, which are contained within the larger HDUSP overlay. These historic districts include the Euclid Historic District on the west and the Citrus Transportation Historic District and Residential Transit Districts towards the east (**Figure 1**). Until a records search can be completed, it is unclear if these districts are considered NRHP eligible, or if these are simply local planning districts.

According to Appendix C of the HDUSP, the City's Local Register identifies 154 structures with potential national, state, or local historic significance that are located within the Historic Preservation Overlay Zone, of which two are situated within the proposed tracks of the North Side of the Metrolink corridor:

- **210 East A Street, Upland.** The former Santa Fe Depot is a one-story building in the Spanish colonial revival style dating to 1937. Stucco sheathes the exterior and tile covers the front and side gabled roof. Located at the southeast corner of 2nd and A, just north of the tracks, the building consists of three parts. At the west end, flattened arched openings beneath a side gable define an outdoor waiting area. In the center, a taller wing is capped by a front gable and contains a recessed entry. Engaged columns frame the opening. Extending to the east, a side gable wing is fenestrated with a series of windows and multi-paned sash. What appears to be a flat-roofed addition is contiguous with the east wing.

The building, now a retail store/restaurant, appears to be substantially unaltered, recently restored, and in good condition. This building is located within the Citrus Transportation District. This structure should be considered potentially eligible for the NRHP and will need to be formally evaluated by an architectural historian.



210 East A Street, Upland

- **392 East A Street, Upland.** Built close to the tracks and several packing houses, this one-story office building, the historic home to the Upland Lemon Company, is a good example of Art Deco styling. Characteristics include the pylon-like piers that divide the stuccoed exterior into bays: raised, reeded, and curving in to meet the wall of the building. Metal casement windows are recessed between the piers in the central and end bays while double, wood-frame, glazed doors occupy the penultimate bays. Vents punctuate the tops of the bays. A flat roof with no cornice caps the building. This building has been restored and appears to have been modified from its original design (the south side of the building is a new addition). However, it is notable for its architectural style and for its association with the citrus industry. On the bases of its design it is estimated to have been built around 1935 and 1937 as the third and final stage of the expansion of the Upland Lemon Growers Association Plant. The building currently houses a restaurant. This building is located within the Citrus Transportation District. This structure should be considered potentially eligible for the NRHP and will need to be formally evaluated by an architectural historian.



392 East A Street, Upland

Additionally, according to Figure 5-2 of the HDUSP, an unevaluated “Survey Property” is also located within the north side of the Metrolink Corridor alignment:

- **618 A Street, #A, Upland.** This structure is located within the Citrus Transportation District. It is a vernacular wooden structure with a tiled roof and a mission style façade on the western end of the building; the Mission Revival Style was an architectural movement that enjoyed its greatest popularity between 1890 and 1915, particularly in railroad related structures. There are no windows facing the street, but there is a doorway and a garage door opening on the east side of the structure, and a doorway on the western side. With further research the structure's historical function and date of construction should be obtained. This structure should be considered potentially eligible for the NRHP and will need to be formally evaluated by an architectural historian. The building currently houses a flower business.



618 East A Street, #A, Upland

- **109 North Campus Avenue, Upland.** This structure is located within the Citrus Transportation District. It is an unadorned vernacular wooden building with a concrete foundation and a tiled roof with an unknown construction date. The main doorway to the building faces Campus Avenue and is located on the eastern side of the building, along with two sets of windows that may be historical in nature. Two sets of windows also face East A Street. The south side of the structure has a doorway and window opening without glass but with a metal grating across the lower two-thirds of the window. Two sets of rolling garage doors are located on the west side of the structure. A small stand-alone structure is located between the main structure and the railroad tracks (it appears to be a storage structure for the nearby lawnmower business). This smaller structure is built of corrugated metal atop a concrete foundation. While it is unlikely that an unadorned structure (such as this) is eligible for the NRHP, with further research the historical function and dates of both structures can be obtained, and the structures can be assessed to determine if there is a need for further historical documentation. The building currently houses a lawnmower business.



109 North Campus Avenue, Upland

On March 16, 2016, HDR conducted a preliminary windshield survey for historic-era buildings located within the north side of the Metrolink corridor. Based on this survey, an additional historic-era structure was identified at 104 North 9th Avenue, in Upland.

- **104 North 9th Avenue, Upland.** This two story residential structure appears to be historic in age but has been heavily modified through time. The building is built of wood and all windows, along with the front door, have been replaced recently. This structure is not within any of the identified historic districts of the HDUSP. While it is unlikely that a heavily modified building (such as this) is eligible for the NRHP, with further research the dates of the building can be obtained and assessed to determine if there is a need for further historical documentation.



Table 1 presents a summary of the six potential Historic Properties that are located within the north side of the Metrolink Corridor for the Gold Line Alignment. It should not be considered an exhaustive list, as no background and literature search has yet been conducted for the project, and there have been no archaeological and built environment surveys completed.

Table 1. Potential Historic Properties in the Gold Line Alignment on the North Side of Metrolink Corridor

Address	Other Identifier	APN	Comments
#1: Euclid Avenue (24 th St Upland to Philadelphia Ontario)	NR05000843	--	Listed in NRHP
#2: 210 East A Street, Upland	Santa Fe Depot	--	Dates to 1937; Potentially Eligible for the NRHP
#3: 392 East A Street, Upland	Upland Lemon Company	--	Dates to 1935; Potentially Eligible for the NRHP
#4: 618 A Street , Upland	None	104656102	Unknown Date; Potentially Eligible for the NRHP
#5: 109 North Campus Avenue, Upland	None	104656102	Unknown Date; Needs further Assessment as a resource
#6: 104 North 9 th Avenue, Upland	None	104654101	Unknown Date; Needs further Assessment as a resource

Gold Line Alignment on South Side of Metrolink Corridor

Based on the data sources reviewed, no California Historical Landmarks have been recorded along the South Side of the Metrolink Corridor. As mentioned above, based on the data sources reviewed, one historical property listed on the NRHP crosses through both the northern and southern corridor alternatives: Euclid Avenue (National Register Information SID #05000843), as it spans from 24th Street in Upland to Philadelphia Street in Ontario. This resource is discussed in more detail in the above section.

As shown in **Figure 2**, there are three designated historic districts that cross the proposed South Side of the Metrolink Corridor, which are contained within the larger HDUSP overlay. These historic districts include the Euclid District on the west and the Citrus Transportation Historic District and Residential Transit Districts towards the east (**Figure 2**).

According to Appendix C of the HDUSP, the City's Local Register identifies two that are situated within the proposed tracks of the South Side of the Metrolink corridor:

- **100 Sultana Avenue, Upland.** The industrial building that once stood at this address is included on the City's Local Register, but is noted as destroyed. The no longer extant structure was once associated with the Upland Lemon Growers Association. The William Lyon's housing development is now being constructed in this location.
- **127 Euclid Avenue, Upland.** This Industrial building is included on the City's Local Register and is located within the Euclid Historic District. The building is constructed largely of brick in a Monterey Revival style, sitting atop a concrete foundation and with a shallow pitched side-gable tile roof. The windows are narrow and tall. The second story has a narrow wooden balcony, which appears to be a stylistic attribute only, and was never intended for use. The Monterey Revival style generally dates from 1930 to 1955; the date of this building is unknown. While this building appears to have some heavy modifications largely in the form of additions, further research of its historical function and date of construction should be obtained. This structure should be considered potentially eligible for the NRHP and will need to be formally evaluated by an architectural historian. The building currently houses a storage business.



127 Euclid Avenue, Upland

On March 16, 2016, HDR conducted a preliminary windshield survey for historic-era buildings located within the South Side of the Metrolink corridor. Based on this survey, an additional four historic-era structures were identified:

- **255 East Stowell Street, Upland.** The building at this property is an industrial warehouse and is located within the Citrus Transportation District. The building is constructed of corrugated metal, with original windows intact and covered by steel gratings. Both the north and south side of the structure have a low-lying mortar and cobble retaining wall that spans the length of the property. Two large doors made of corrugated metal on rolling tracks face South 2nd Avenue. With further research the building's historical function and date of construction should be obtained. This building should be considered potentially eligible for the NRHP and will need to be formally evaluated by an architectural historian. The building is currently unoccupied.



255 East Stowell Street, Upland.

- **297 East Stowell Street, Upland.** This building was previously used for manufacturing by the Scheu Manufacturing Company and may date to as early as the 1930s, although it appears to have been heavily modified through time. It is located within the Citrus

Transportation District. The building has a stucco coating and is generally unadorned. There is a doorway that has been boarded up on the eastern end of the building. A second, and now the main doorway exists on the southern side of the building. With further research the building's historical function and date of construction can be confirmed. While it is unlikely that an unadorned building (such as this) is eligible for the NRHP, the building should be considered potentially eligible for the NRHP until it can be formally evaluated by an architectural historian. The building currently houses a bicycle business.



297 East Stowell Street, Upland.

- **8720 East 8th Street.** This building is industrial in nature and dates to an unknown time period. The wooden structure is has two rolling metal garage doors, and a single front door entrance that faces towards East 8th Street. The building has no stylistic markers of age. With further research the building's historical function and date of construction can be confirmed. It is unlikely that this unadorned and highly modified building is eligible for the NRHP; with further background research the date of the building can be obtained and it will need to be assessed to determine if there is a need for further historical documentation. The building currently houses a “shotcrete” business.



8720 East 8th Street, Upland.

- **8890 East 8th Street, Upland.** This building houses a restaurant and dates to an unknown time period although it appears to be historic-era in nature. The exterior façade has two registers: a wooden board-and-batten style atop a brick lower register. The windows and doors appear to have been replaced recently. It is unlikely that this building is eligible for the NRHP; with further background research the date of the building can be obtained and it will need to be assessed to determine if there is a need for further historical documentation.



8890 East 8th Street, Upland.

Table 2 (below) presents a summary of the seven potential Historic Properties that are located within the South Side of the Metrolink Corridor for the Gold Line Alignment. It should not be considered an exhaustive list, as no background and literature search has yet been conducted for the project, and there have been no archaeological and built environment surveys completed.

Table 2. Potential Historic Properties in the Gold Line Alignment on the South Side of Metrolink Corridor

Address	Other Identifier	APN	Comments
#1: Euclid Avenue (24 th St Upland to Philadelphia Ontario)	NR05000843	--	Listed in NRHP
#7: 100 Sultana Avenue, Upland	--	104657159	Destroyed. Property needs to be surveyed for historical-era archaeological resources
#8: 127 Euclid Avenue, Upland	--	104661123	Unknown Date; Potentially Eligible for the NRHP
#9: 255 East Stowell Avenue , Upland	--	--	Unknown Date; Potentially Eligible for the NRHP
#10: 297 East Stowell Avenue, Upland	--	--	Unknown Date; Potentially Eligible for the NRHP
#11: 8720 East 8 th Street, Upland		020727131	Unknown Date; Needs further Assessment as a resource
#12: 8890 East 8 th Street, Upland		020727133	Unknown Date; Needs further Assessment as a resource

Preliminary Results and Further Recommendations

Both north and south alignments cross through the NRHP listed Euclid Avenue. Additionally, each alignment contains numerous historic-era buildings that need to be formally evaluated for the NRHP by an architectural historian. In order to properly evaluate the properties, detailed background research, including a records search with the local Information Center and historical museum, needs to be conducted. This records search will help fill in the missing information regarding the design, historic use, and age of each structure. It will also provide historical maps of the project alignments. The search will also reveal records of the built environment and archaeological sites previously recorded by cultural resource professionals and on file with the State clearinghouse. Currently, without this information, there are several properties that should be considered potentially eligible for the NRHP for planning purposes. For the northern alignment, there are three buildings that should be considered potentially eligible for the NRHP:

- 210 East A Street within the Citrus Transportation District.
- 392 East A Street within the Citrus Transportation District
- 618 East A Street within the Citrus Transportation District

The remaining buildings in this alignment do not appear to meet basic NRHP criteria.

For the southern alignment, there are also three buildings that should be considered potentially eligible for the NRHP, with the remaining buildings in this alignment not appearing to meet basic NRHP criteria:

- 127 Euclid Avenue within the Euclid Avenue Historic District
- 255 Stowell Street within the Citrus Transportation District
- 297 Stowell Street within the Citrus Transportation District

The remaining buildings in this alignment do not appear to meet basic NRHP criteria.

.For the NHRP listed Euclid Avenue resource, an architectural historian in consultation with the State Historic Preservation Officer (SHPO) and the public will need to assess the project's impacts on the Euclid Avenue for adverse effects. The consulting parties on the project will then explore ways to avoid or mitigate adverse effects to this historic property. Mitigation measures may be needed if there are adverse effects to this resource and may include documenting the resource for the NPS Library of Congress Historic American Engineering Record (HAER), finding creative ways to give back to the public, etc. It should be noted that the Euclid Avenue resource is located within the Euclid Avenue Corridor Historic District and this should be given further consideration in assessing effects, although it is unclear at this time if this is a NRHP eligible district, a local district, or a district used for planning purposes only.

All buildings identified above will need to be assessed by an architectural historian and a comprehensive cultural resources technical study will need to be completed to identify any other resources that may have been previously recorded in the project alignments. Additionally, this study will take into account the indirect effects of the project, and will likely consider a larger area than just the project footprint to allow for an assessment of indirect impacts. If any of the above mentioned buildings are assessed as eligible for the NRHP, an architectural historian in consultation with the SHPO and the public will need to assess the project's impacts on the historic property/properties for adverse effects. The consulting parties on the project will then explore ways to avoid or mitigate adverse effects to the historic property/properties, with avoidance as a preference. Mitigation measures may be needed if there are adverse effects to the resource(s) and may include documenting the resource for the NPS Library of Congress Historic American Buildings

Survey (HABS), creative ways to give back to the public, and relocating the structures, if feasible. It should be noted that the majority of these structures are located within existing historic districts as noted by the City and this is a further consideration in assessing effects; although it is unclear at this time if these districts are NRHP eligible district, local districts, or a district used for planning purposes only. Each structure should be analyzed as either a contributing or non-contributing element to their respective districts.

The open fields that characterize the eastern portions of both project alignments will need to be inventoried for the presence of archaeological resources. Given the large number of historic buildings that have been recorded within the project alignment, many of which are not longer extant, the open fields should be considered highly sensitive for historical archaeological remains.

The findings in this memorandum should be used to encourage the consideration of potential historic properties early in the planning and design of the undertaking. It should not be used in place of an in-depth inventory of the Project for historic properties in compliance with Section 106 of the NHPA. The current footprint of the Project, in both a Northern and Southern Alignments, has been used to identify only those potential historic properties that may be directly impacted by the proposed undertaking; it does not consider the indirect impacts of structures that are located adjacent to the proposed Project. Based on our findings, we would encourage SANBAG to complete further investigation of these historic properties in order to determine their eligibility for the NRHP, which would in turn, provide an indication as to their status under Section 4(f) in the event federal funding is pursued.

Appendix A: Figures 1 and 2



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.



- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Gold Line Extension to Montclair
- Parcel Impacts

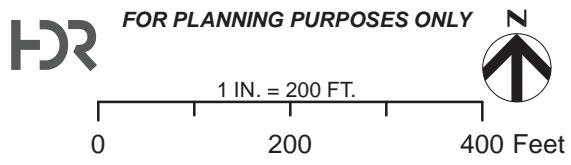
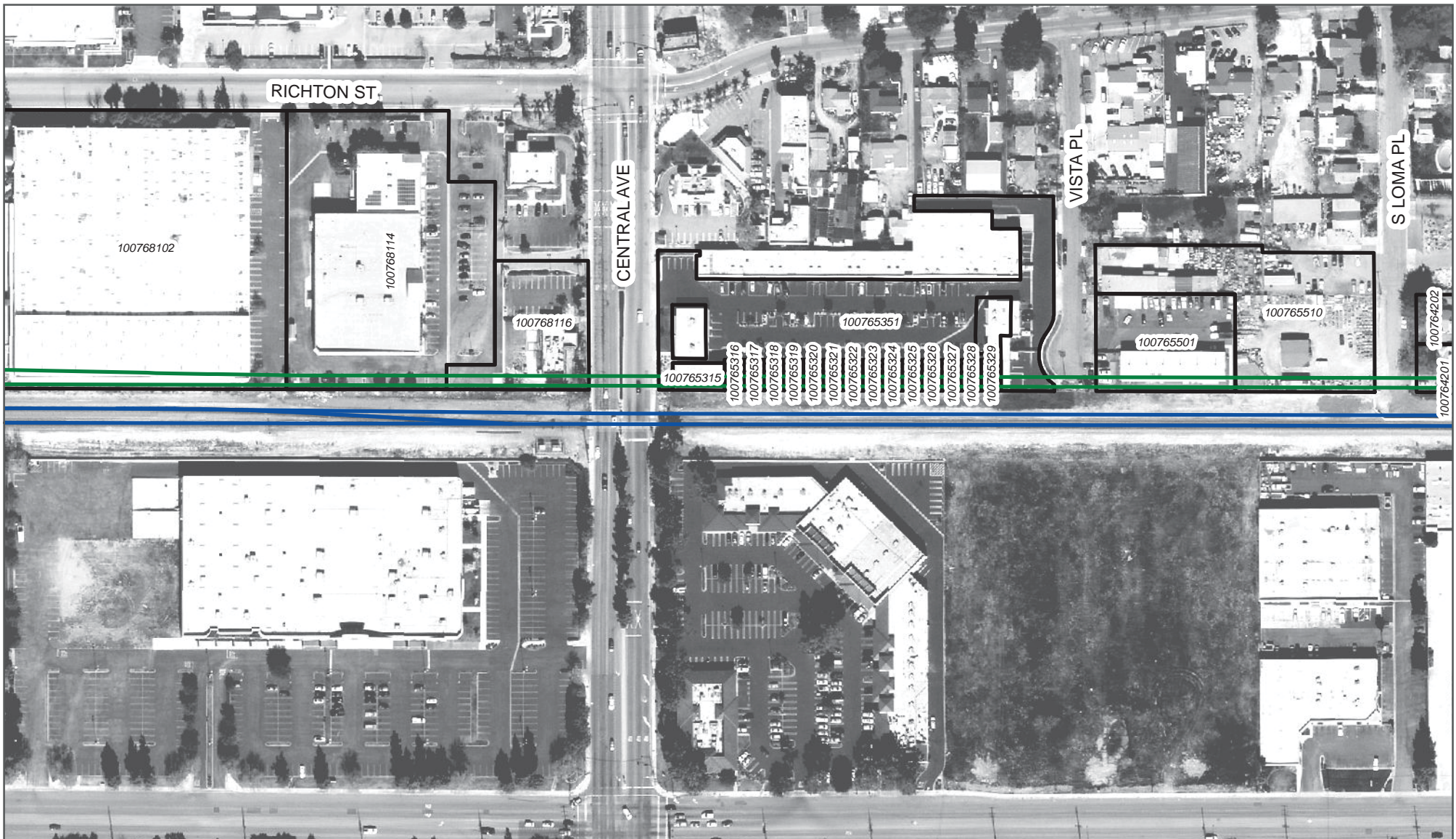
METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION



FIGURE 1

MAP 1 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

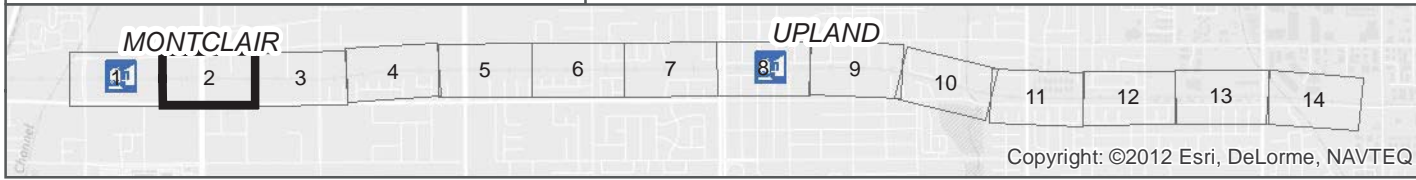
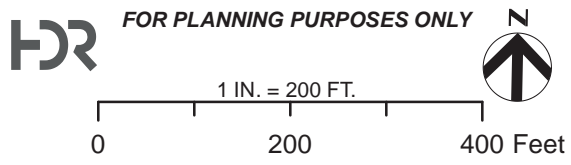


FIGURE 1
MAP 2 of 14



- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

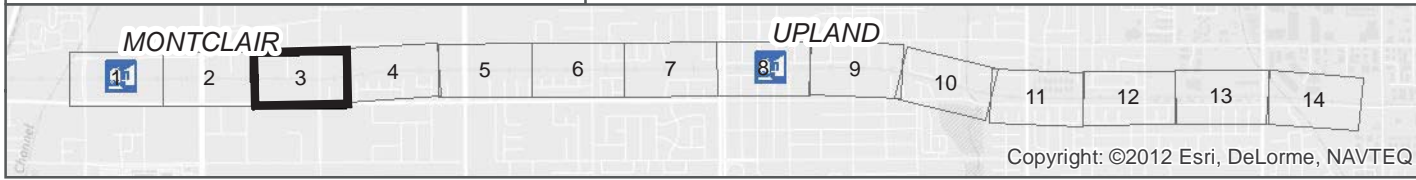


FIGURE 1
MAP 3 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

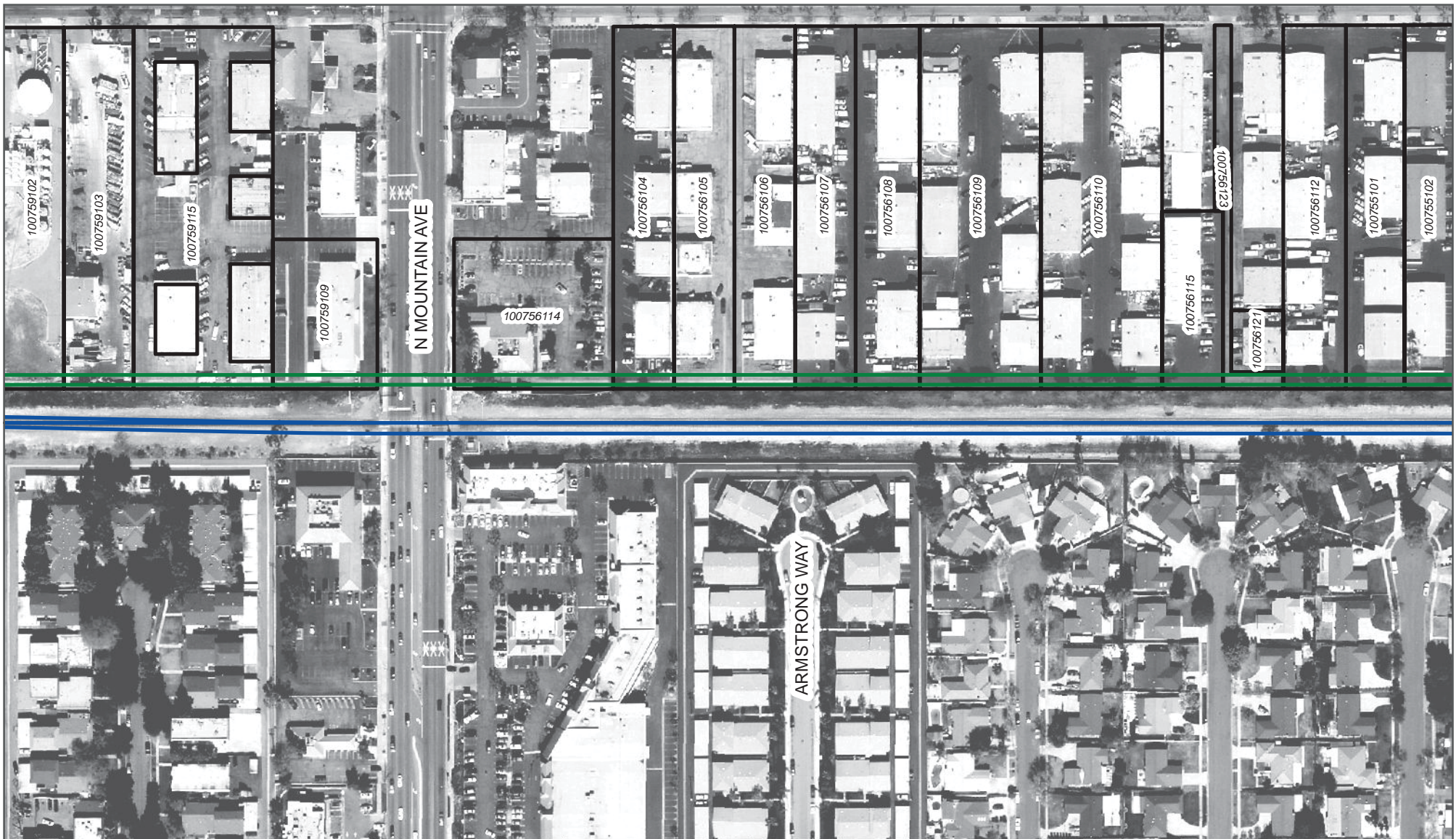
METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION



FIGURE 1

MAP 4 of 14

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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

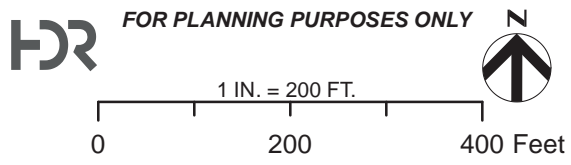
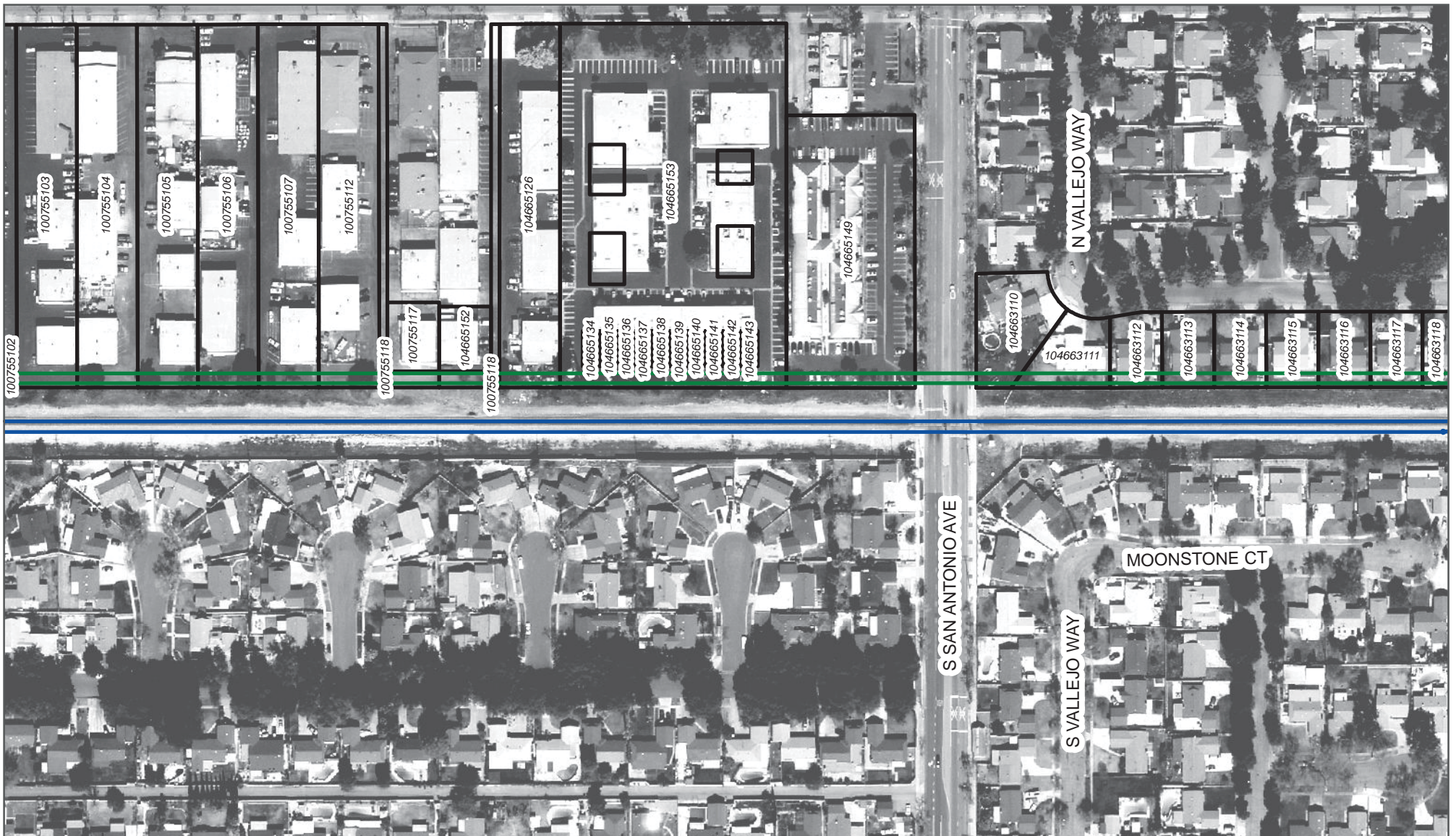
METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION



FIGURE 1

MAP 5 of 14

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- Gold Line Extension to Ontario
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

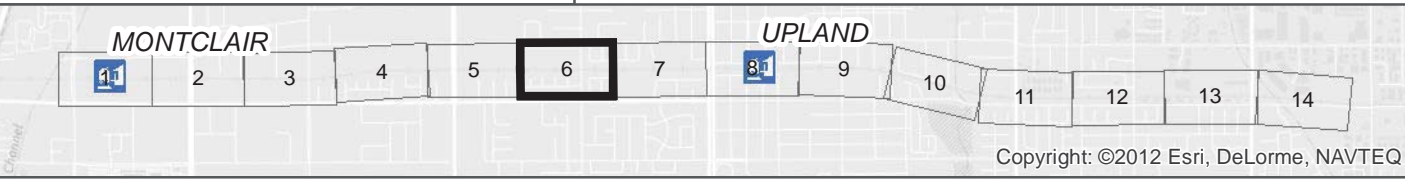


FIGURE 1
MAP 6 of 14

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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.



- Gold Line Extension to Ontario
- Metrolink San Bernardino Line
- Parcel Impacts
- Historic Downtown Upland Specific Plan

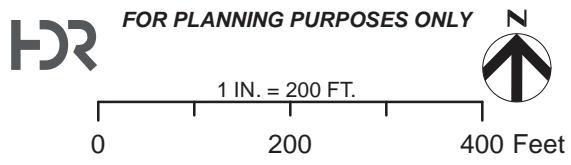
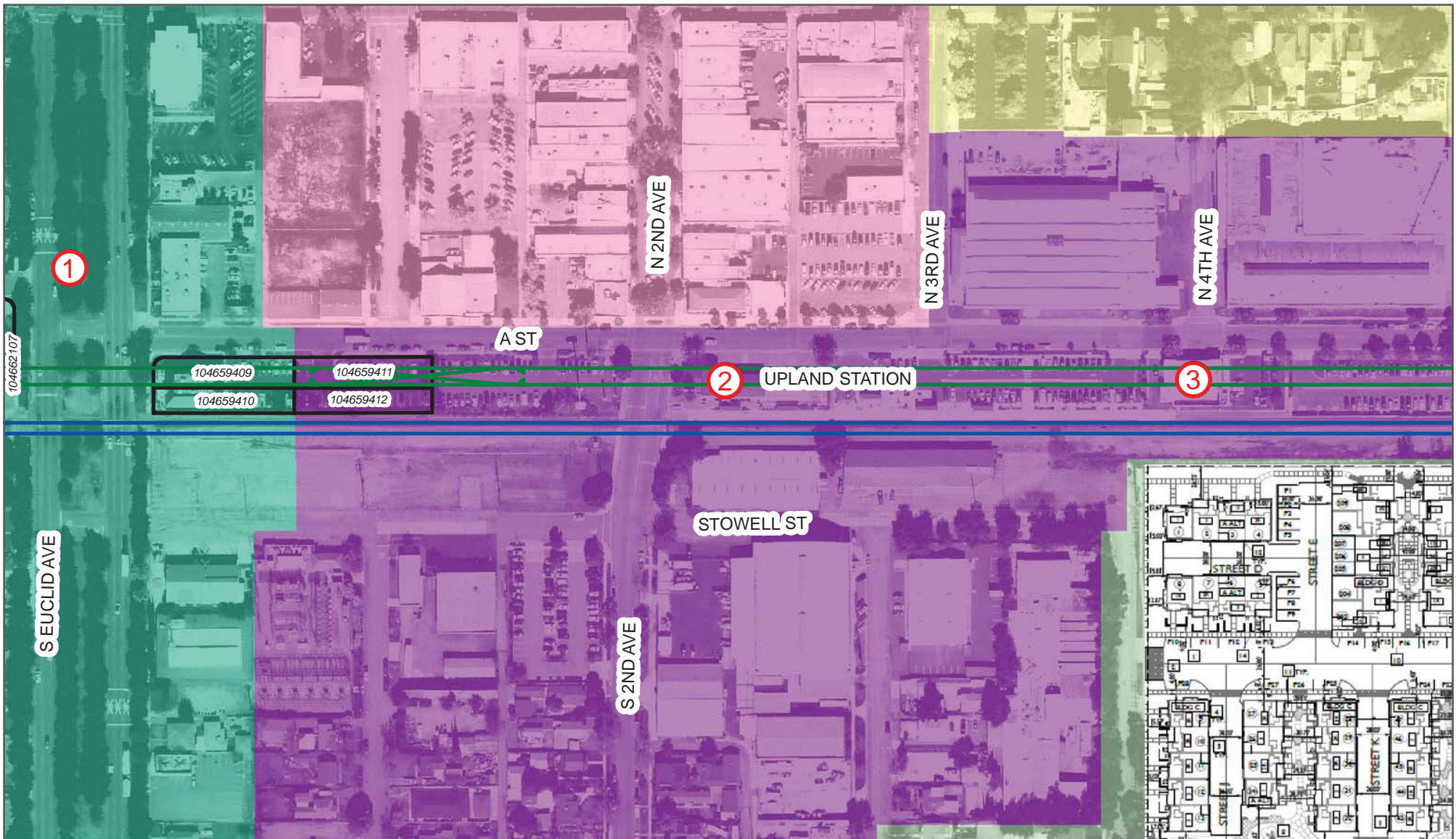
 Euclid District

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION



FIGURE 1
MAP 7 of 14

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- | | |
|---|--|
| <ul style="list-style-type: none"> Gold Line Extension to ONT Metrolink San Bernardino Line Parcel Impacts Historic Downtown Upland Specific Plan | <ul style="list-style-type: none"> Citrus Transportation District Euclid District Old Town District Pleasant View District Residential Transit District |
|---|--|

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION
NORTH ALIGNMENT OPTION**

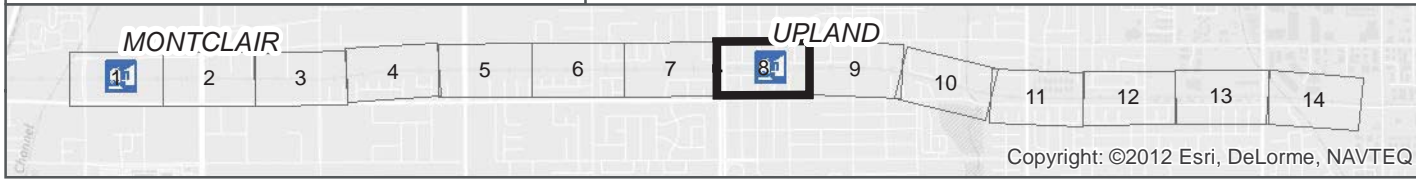
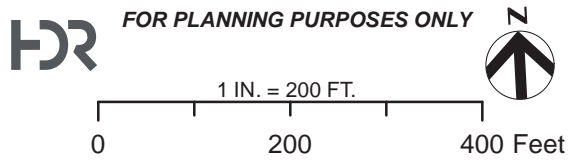


FIGURE 1
MAP 8 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts
- Historic Downtown Upland Specific Plan
- Citrus Transportation District
- Olivdale District
- Pleasant View District
- Residential Transit District

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

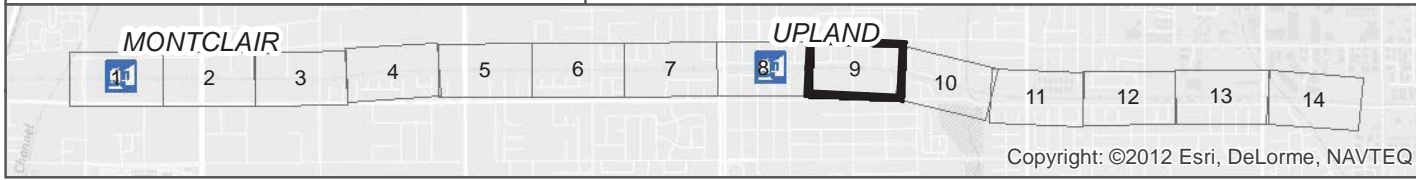
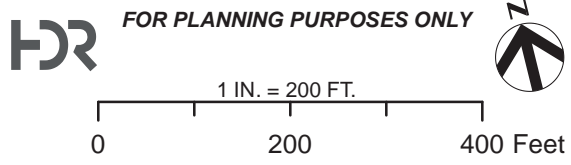
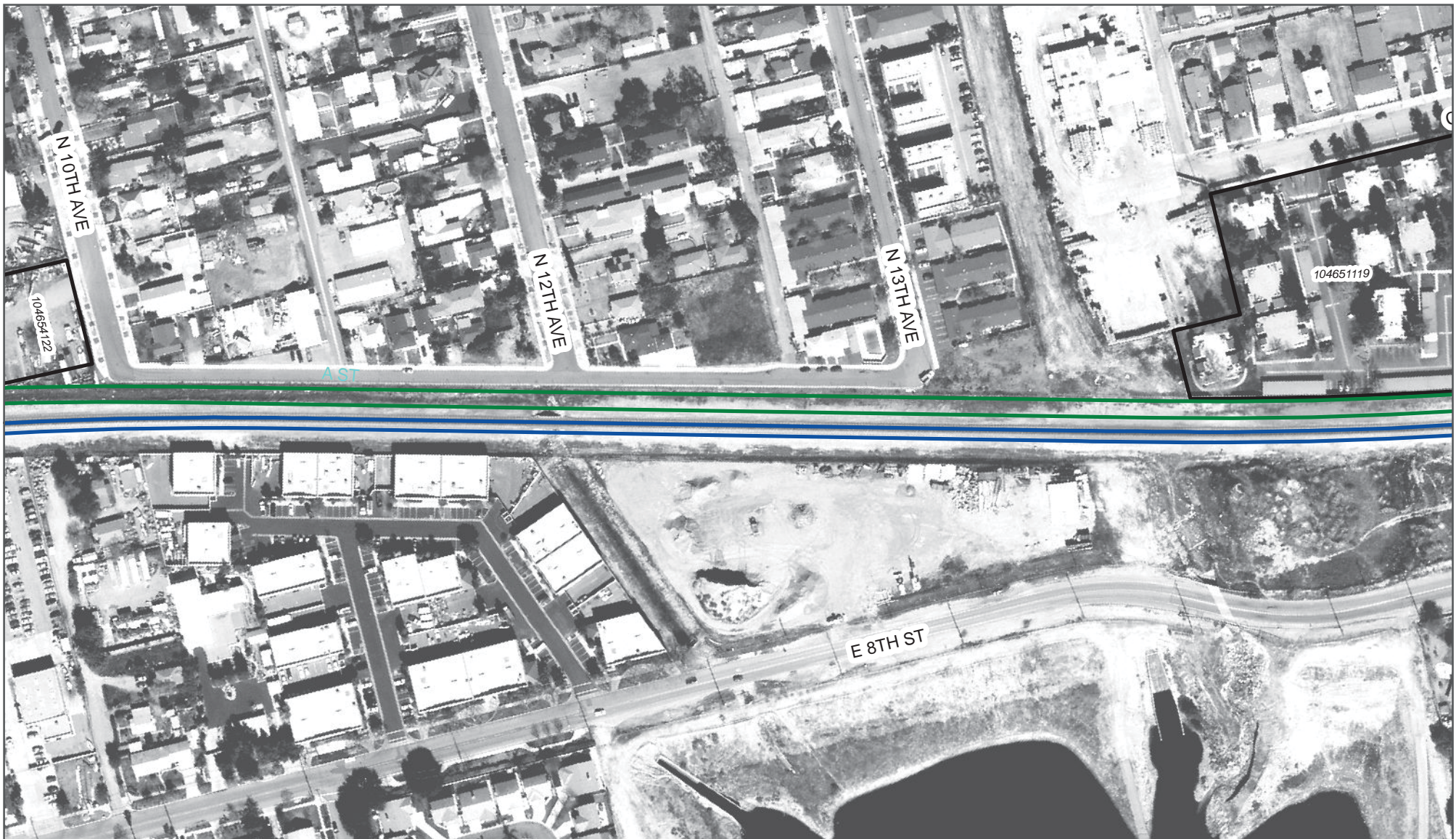


FIGURE 1
MAP 9 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE **ONTARIO AIRPORT EXTENSION** NORTH ALIGNMENT OPTION

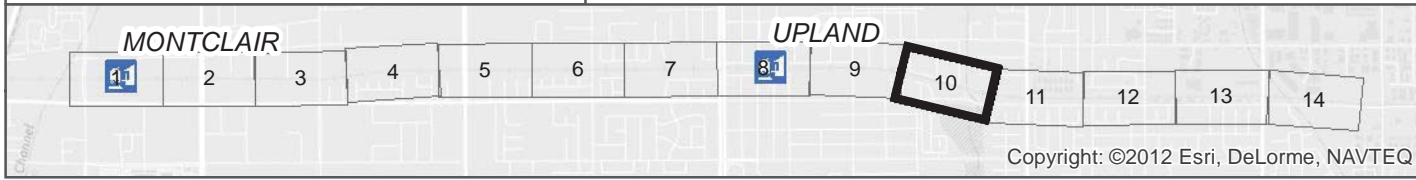
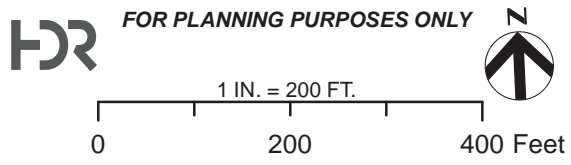


FIGURE 1
 MAP 10 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

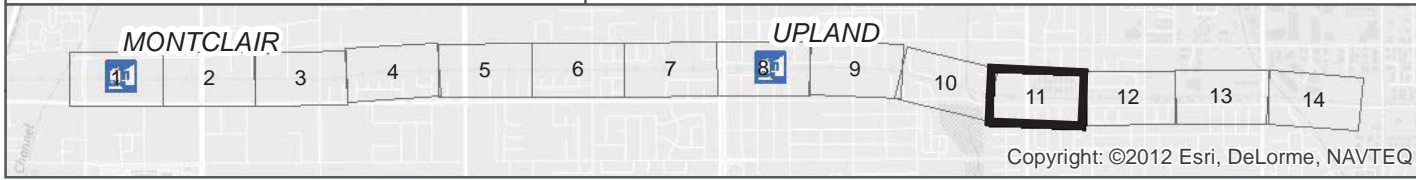
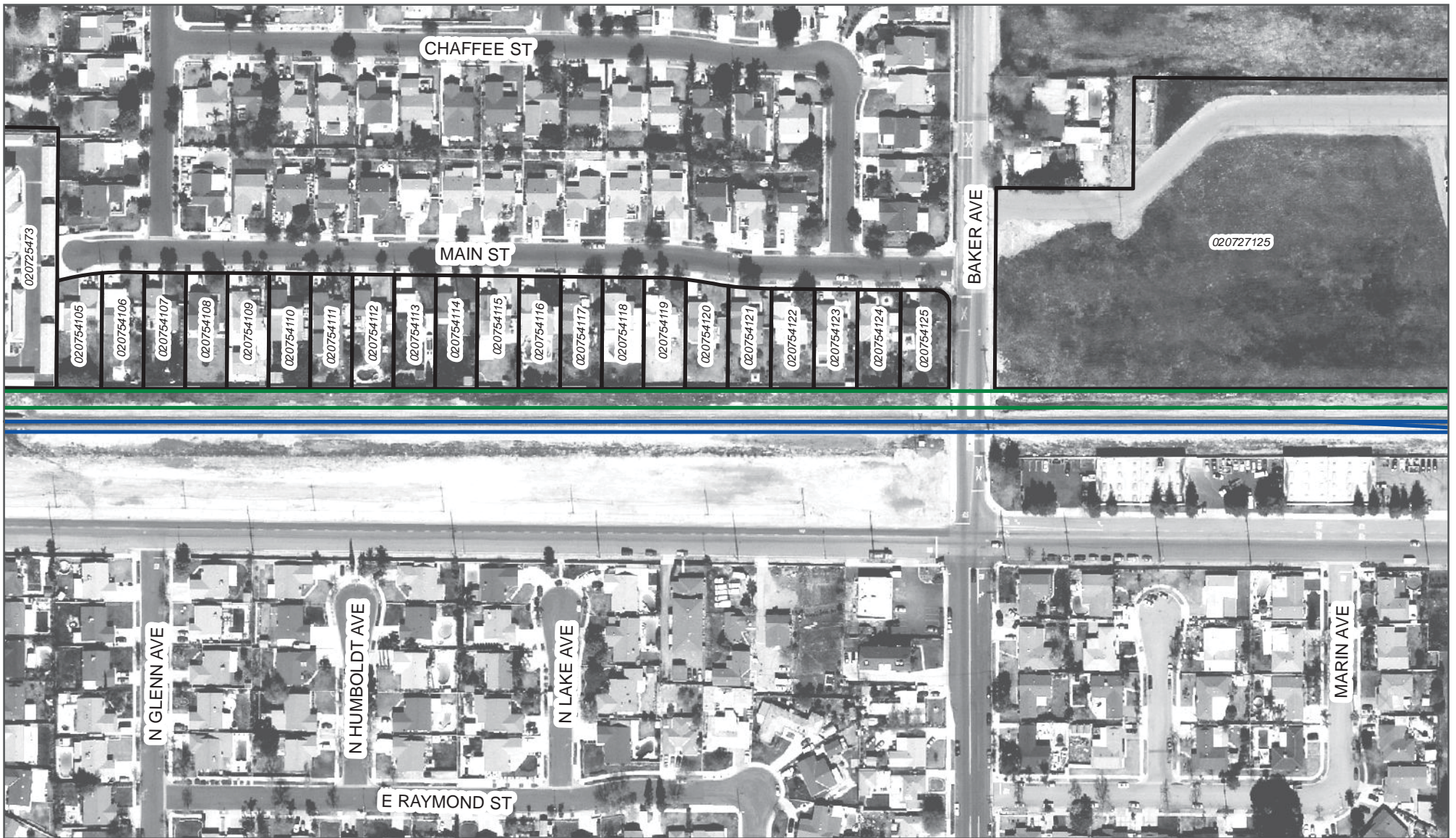


FIGURE 1
MAP 11 of 14

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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

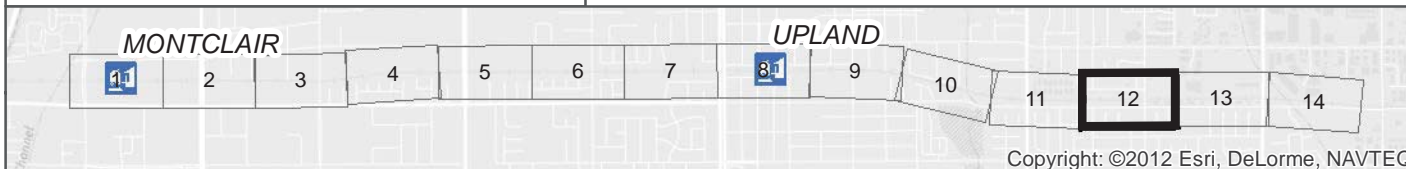
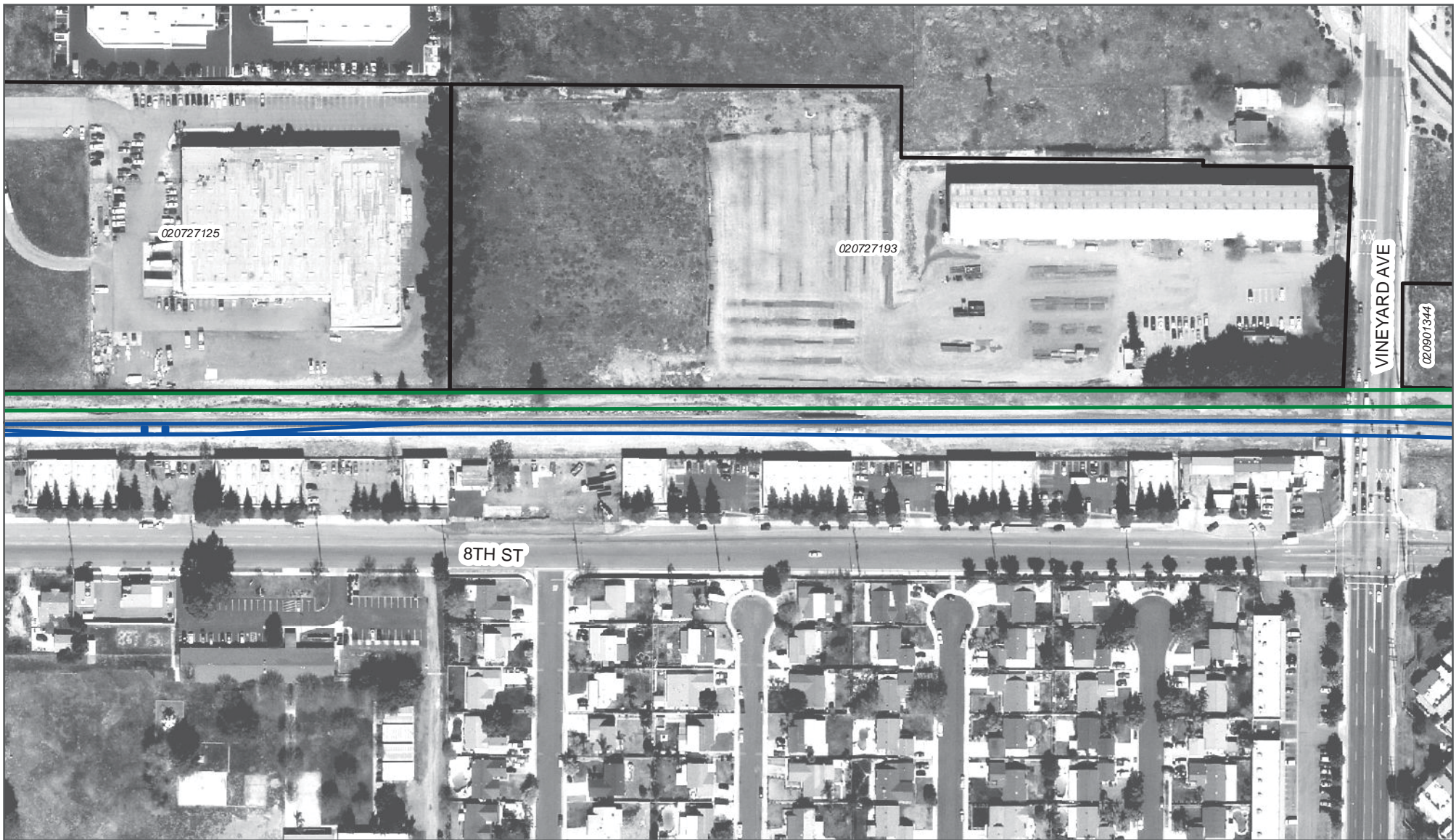


FIGURE 1
MAP 12 of 14

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1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION NORTH ALIGNMENT OPTION

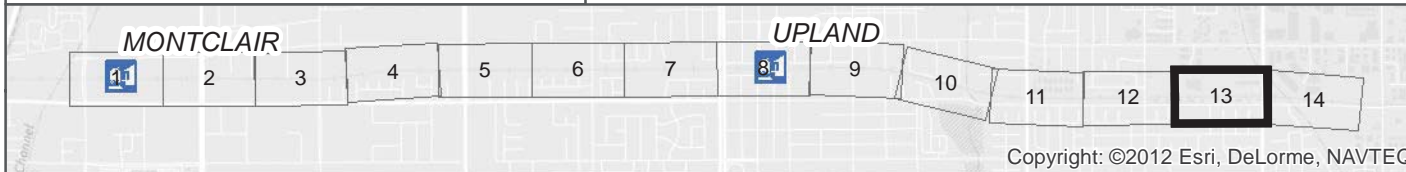
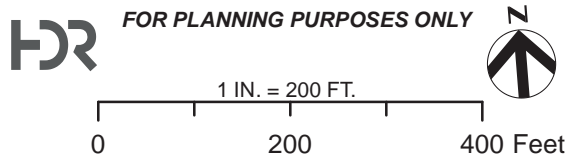


FIGURE 1
MAP 13 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- ▭ Parcel Impacts

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION
NORTH ALIGNMENT OPTION**

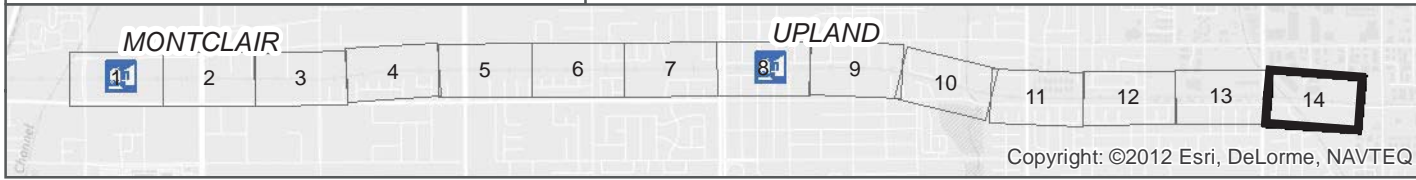


FIGURE 1
MAP 14 of 14

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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Gold Line Extension to Montclair
- Parcel Impacts

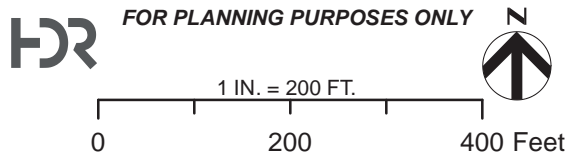
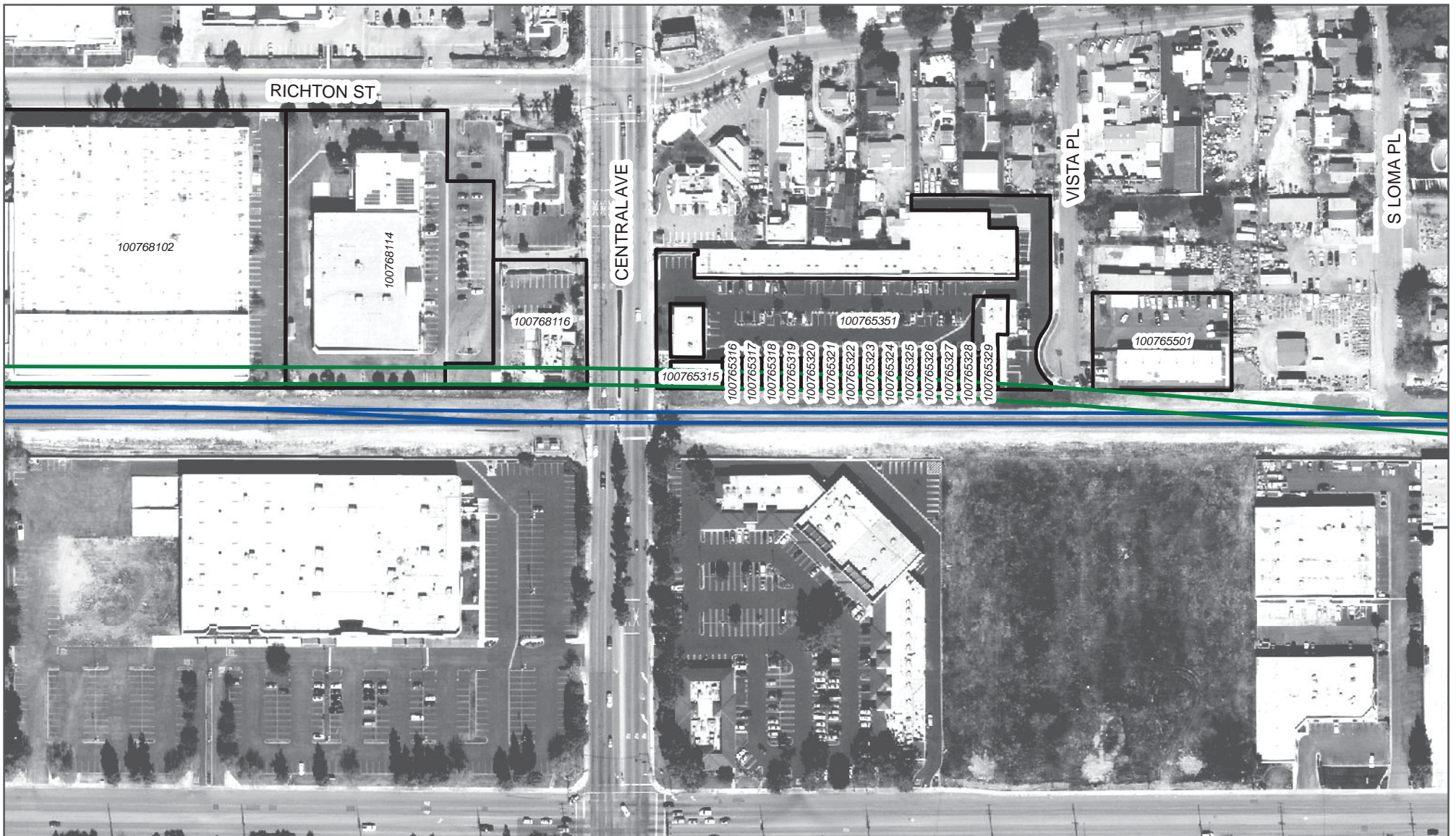
METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION



FIGURE 2

MAP 1 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

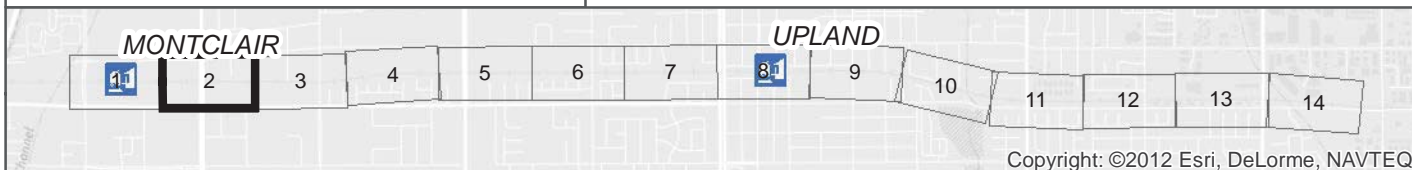


FIGURE 2

MAP 2 of 14

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1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION



FIGURE 2

MAP 3 of 14



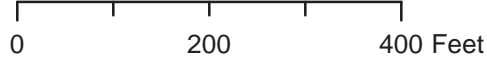
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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.



- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

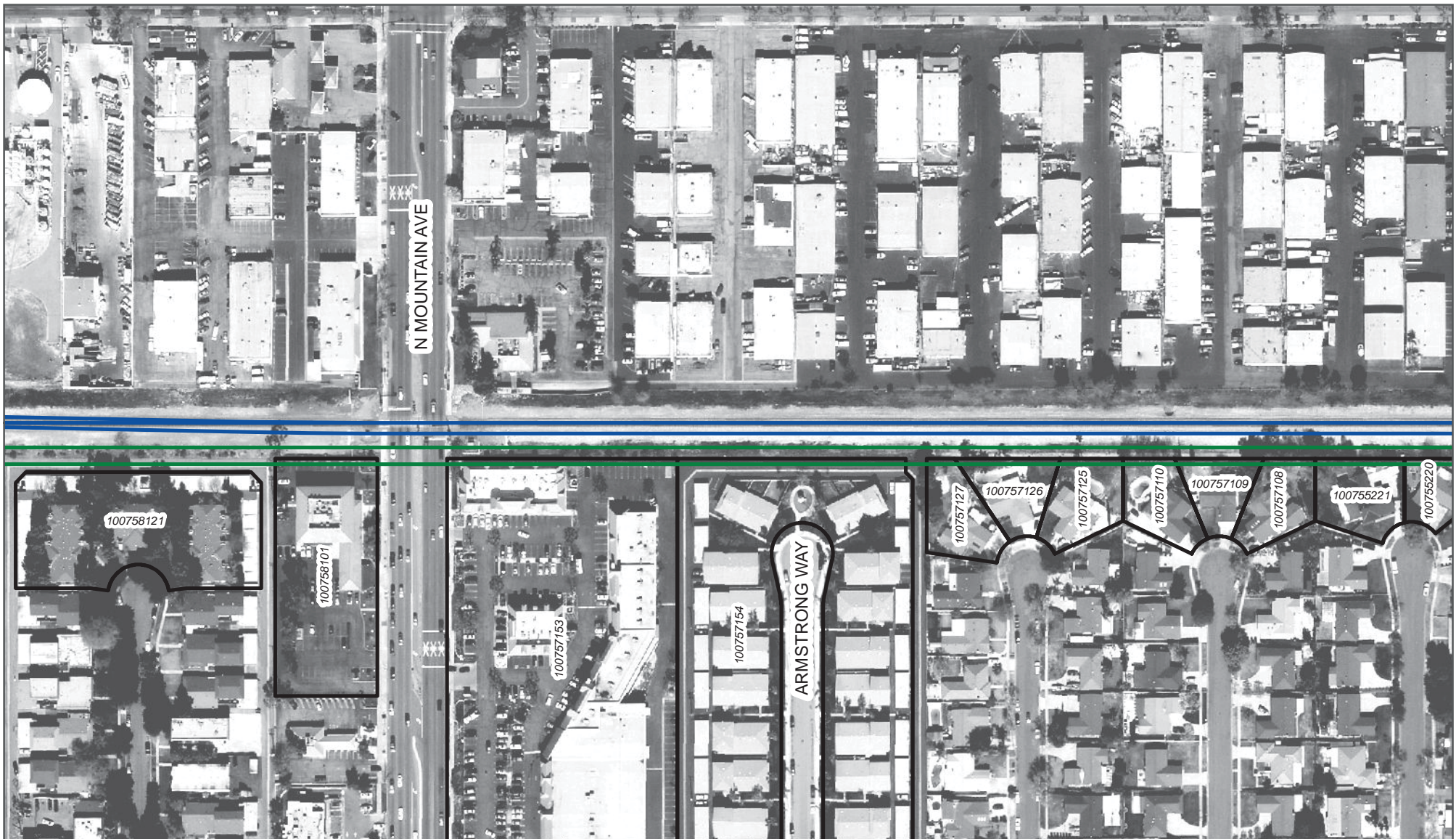
METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION



FIGURE 2

MAP 4 of 14

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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

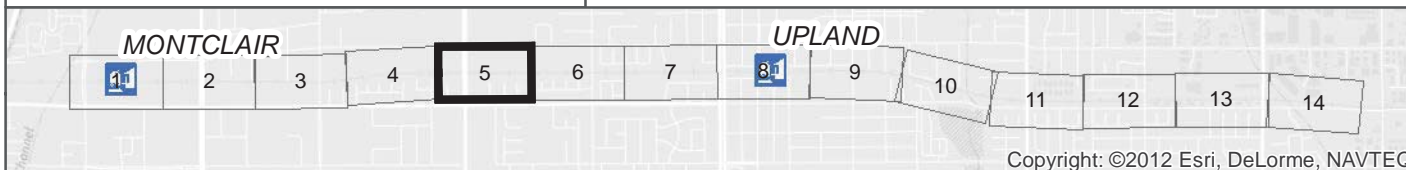
- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

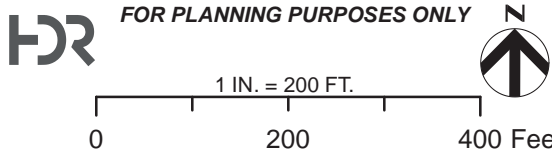


FIGURE 2

MAP 5 of 14



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- Gold Line Extension to Ontario
- Metrolink San Bernardino Line
- Parcel Impacts

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION
SOUTH ALIGNMENT OPTION**



FIGURE 2
MAP 6 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts
- Historic Downtown Upland Specific Plan

Euclid District

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

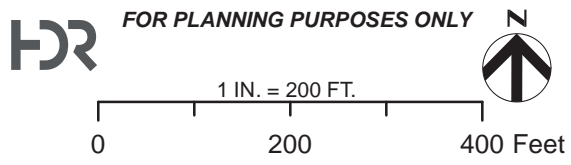
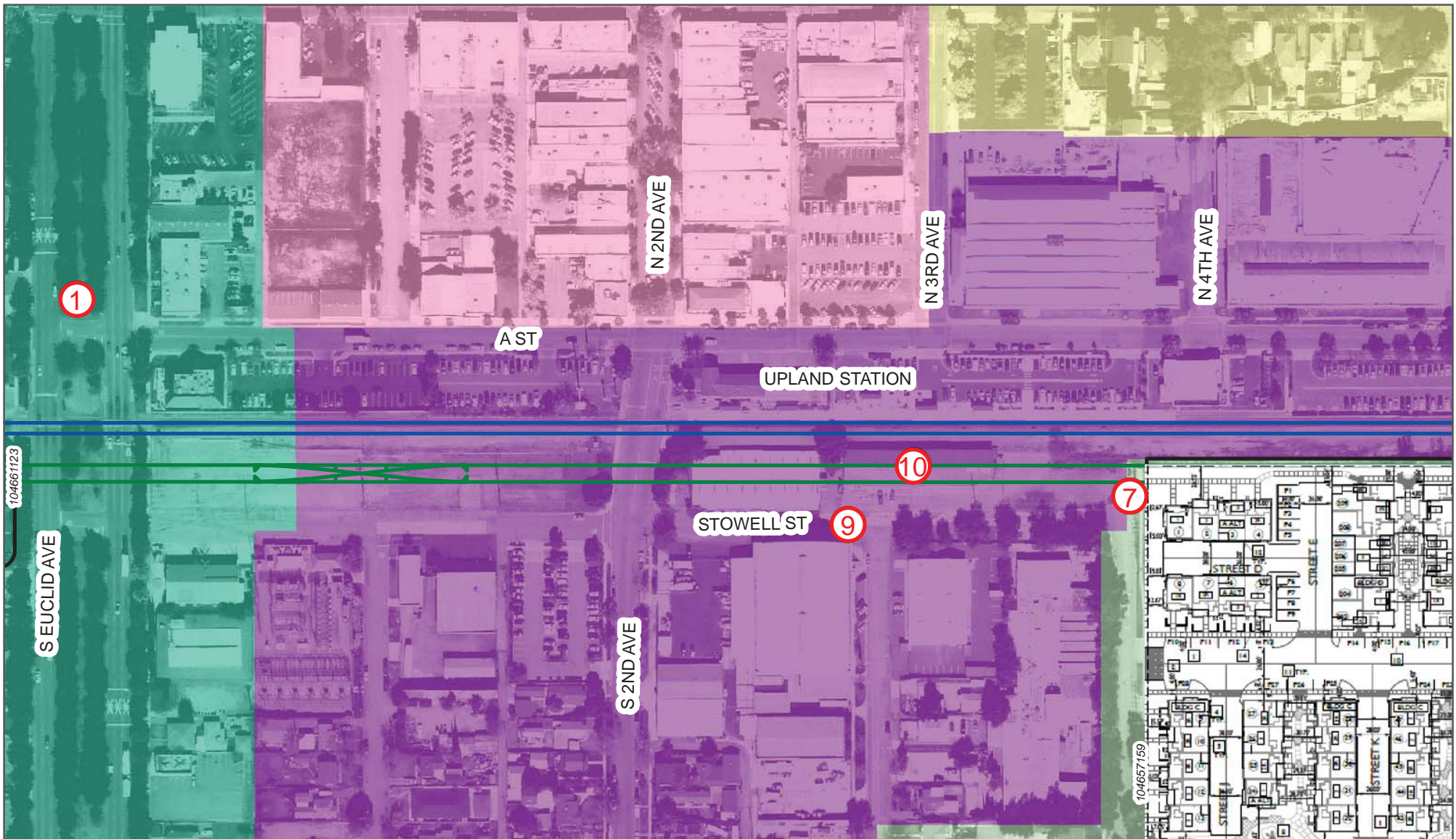


FIGURE 2

MAP 7 of 14



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- | | |
|--|--------------------------------|
| Gold Line Extension to ONT | Citrus Transportation District |
| Metrolink San Bernardino Line | Euclid District |
| Parcel Impacts | Old Town District |
| Historic Downtown Upland Specific Plan | Pleasant View District |
| | Residential Transit District |

**METRO GOLD LINE
ONTARIO AIRPORT EXTENSION
SOUTH ALIGNMENT OPTION**

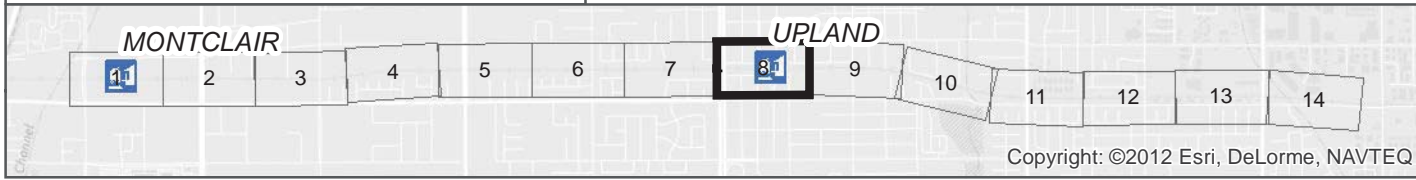


FIGURE 2
MAP 8 of 14



FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.

0 200 400 Feet

- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts
- Historic Downtown Upland Specific Plan
- Citrus Transportation District
- Olivdale District
- Pleasant View District
- Residential Transit District

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

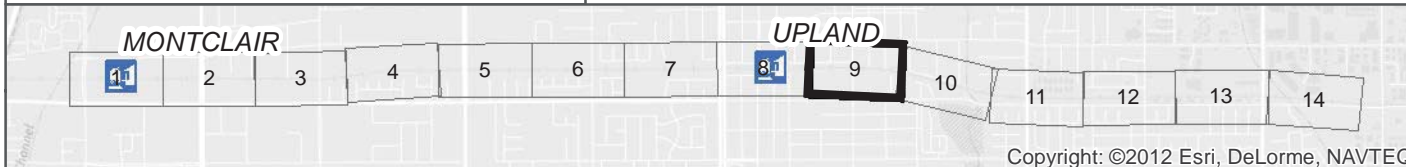
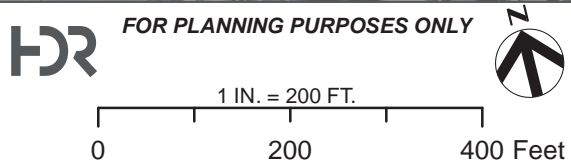
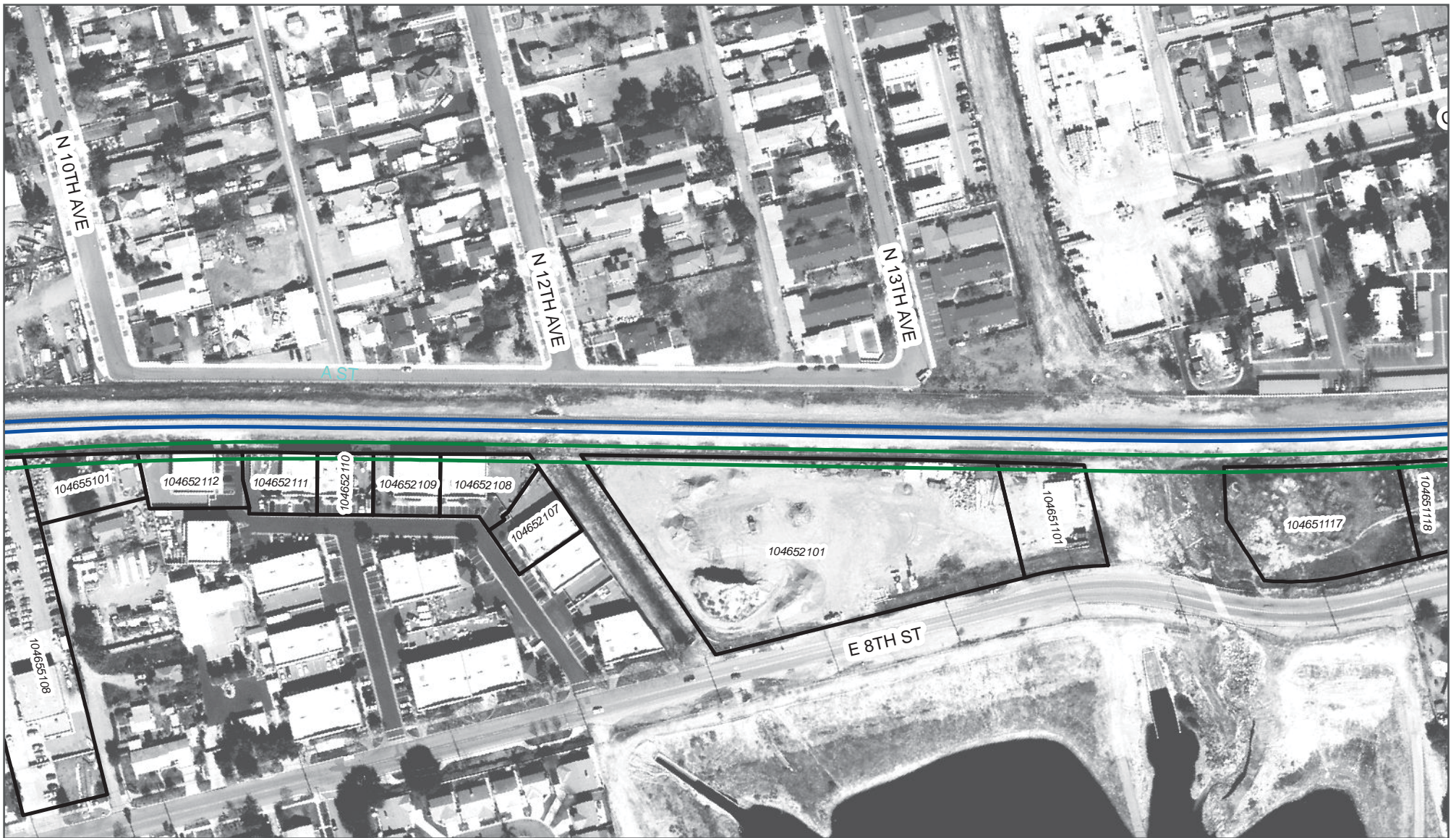


FIGURE 2

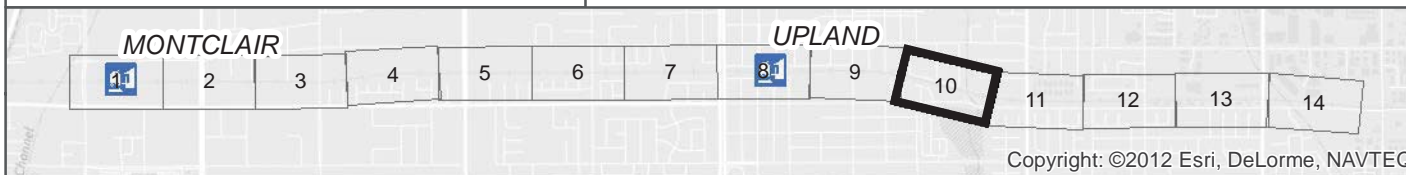
MAP 9 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

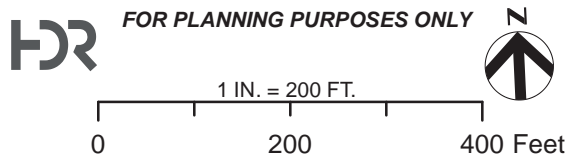
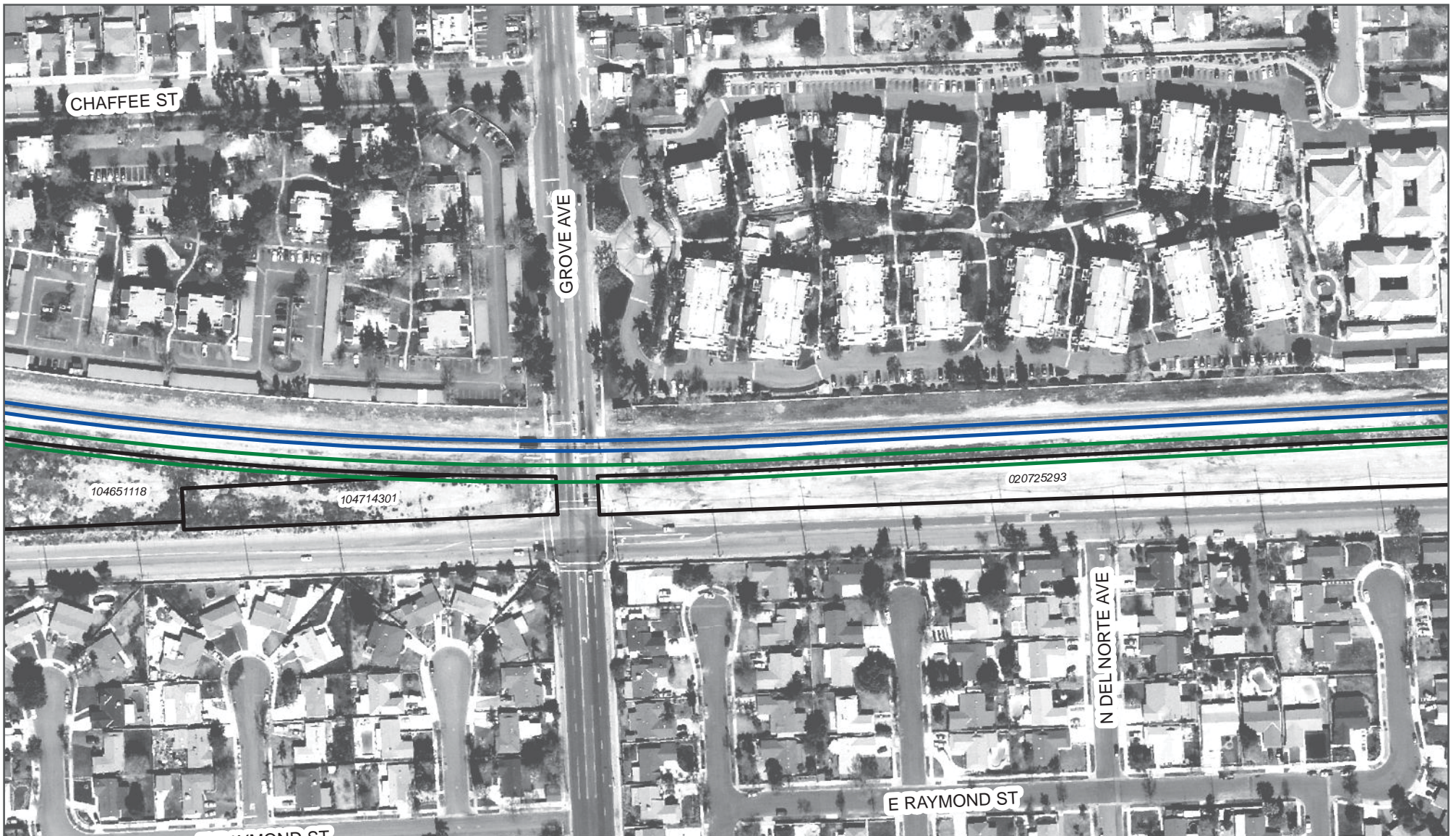
METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION



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FIGURE 2
MAP 10 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE **ONTARIO AIRPORT EXTENSION** SOUTH ALIGNMENT OPTION

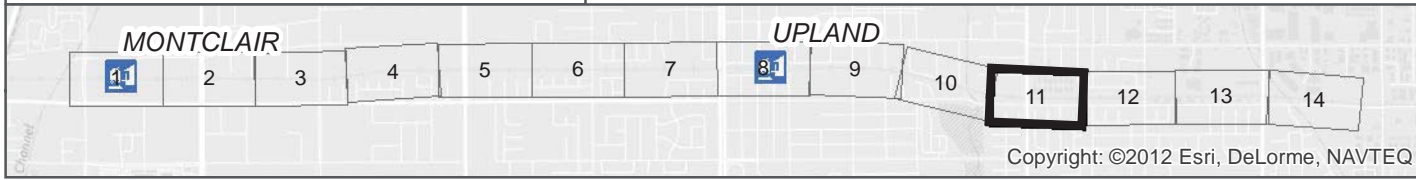
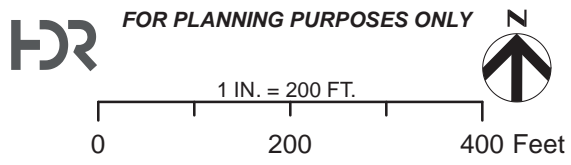
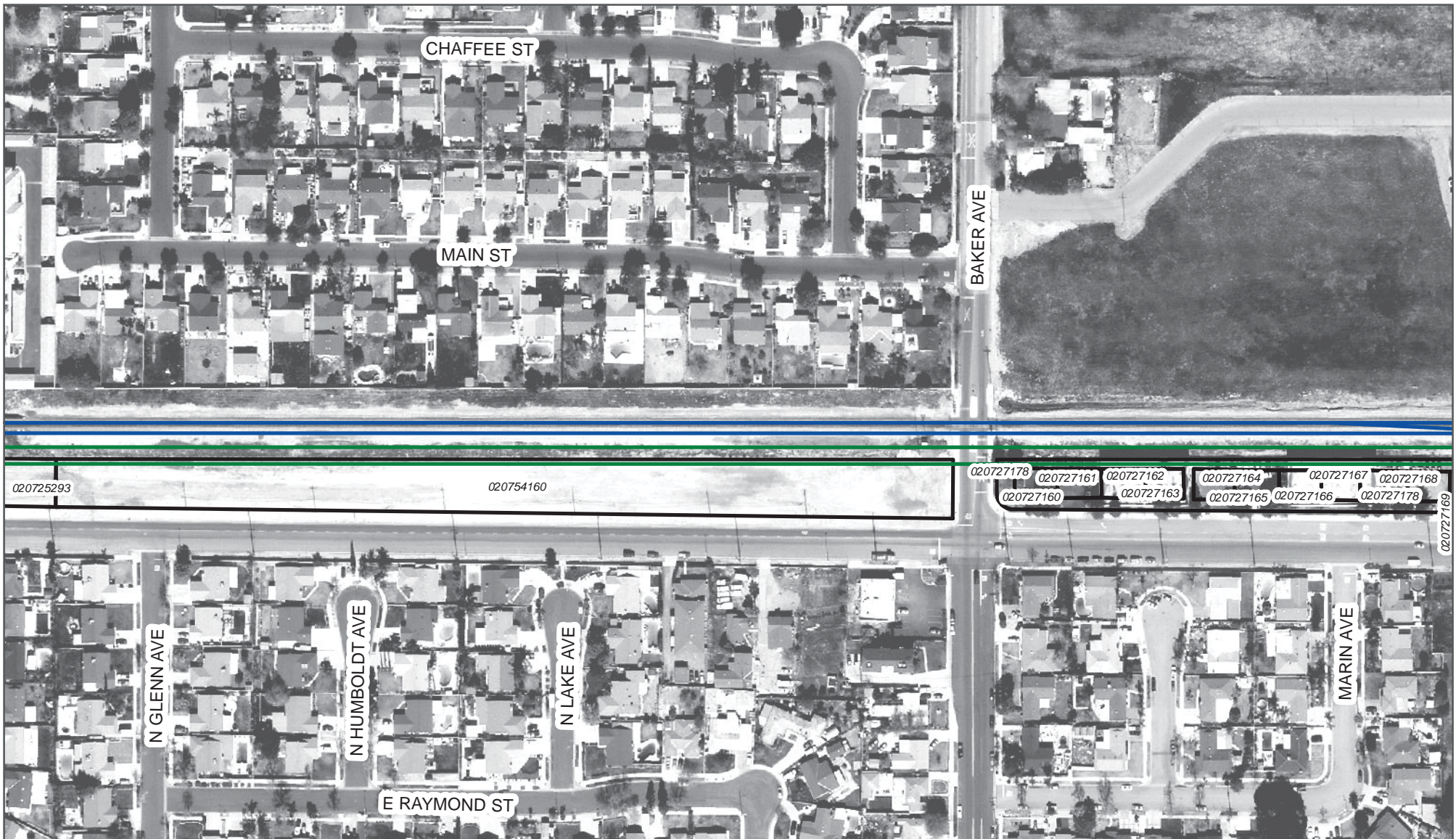


FIGURE 2
 MAP 11 of 14

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- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

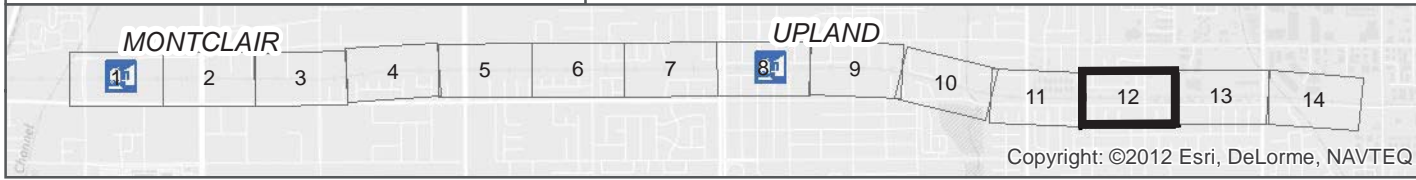
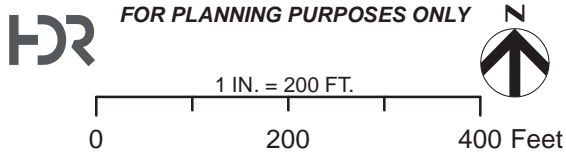


FIGURE 2
MAP 12 of 14



- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

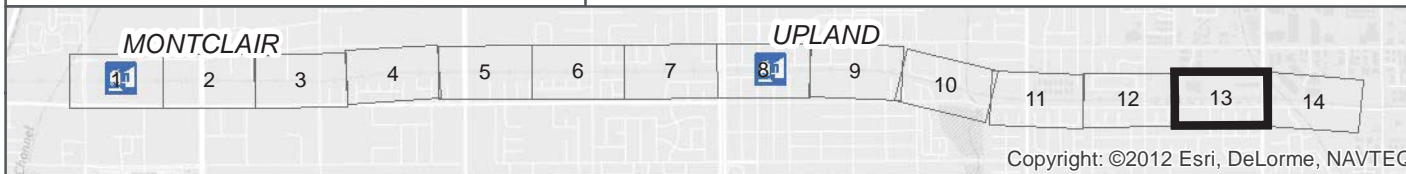


FIGURE 2
MAP 13 of 14

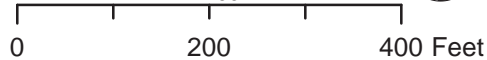
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FOR PLANNING PURPOSES ONLY



1 IN. = 200 FT.



- Gold Line Extension to ONT
- Metrolink San Bernardino Line
- Parcel Impacts

METRO GOLD LINE ONTARIO AIRPORT EXTENSION SOUTH ALIGNMENT OPTION

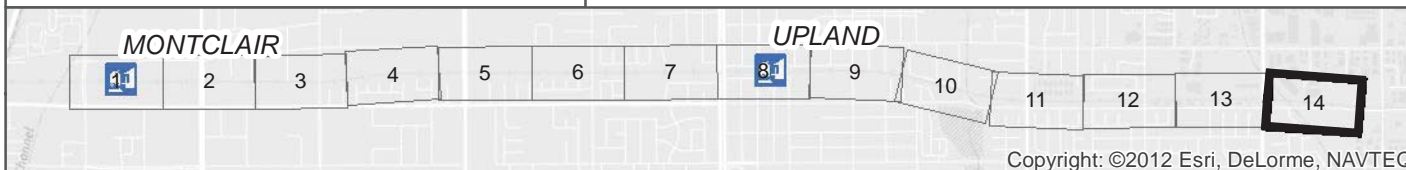


FIGURE 2
MAP 14 of 14

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Lance Schulte





Upland Metrolink Land Use and Constraints Analysis (Appendices)

June 2016

San Bernardino Associated Governments
1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1702



In Association With:
Hatch Mott MacDonald
Lance Schulte



Appendix E: Relocation of Historic Property at 392 E A St, Upland, CA 91786



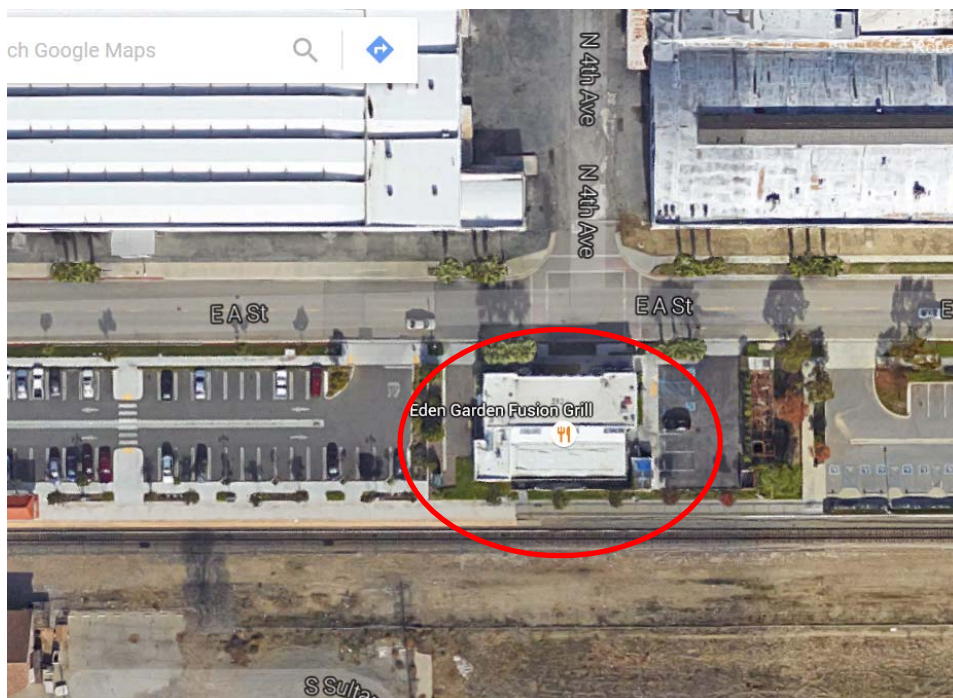
Memo

Date: Monday, March 21, 2016
Project: SANBAG – Metro Gold Line Impacts on Upland Station and Vicinity
To: SANBAG
From: Robert Janik, Mark Harper , Mitali Gupta (HDR)

Subject: **North 4th Avenue and East A Street Historic Building Relocation**

This memorandum presents the findings of responding to SANBAG's question of whether or not the historic building located on the south side of East A Street at North 4th Avenue can be relocated if a Gold Line extension from Montclair to Ontario Airport is constructed on the north side of the existing Metrolink right-of-way (ROW). The historic building in question is currently the home of Eden Garden Fusion Grill, a Mediterranean cuisine inspired restaurant.

On March 14th 2016, a visual observation was performed to evaluate the feasibility of relocating the existing building located at 392 East A Street Upland, California (indicated within the red oval in the figure below). No drawings were available for review and all information provided here is derived from professional experience based on the information gathered from the site visit.



Site Plan

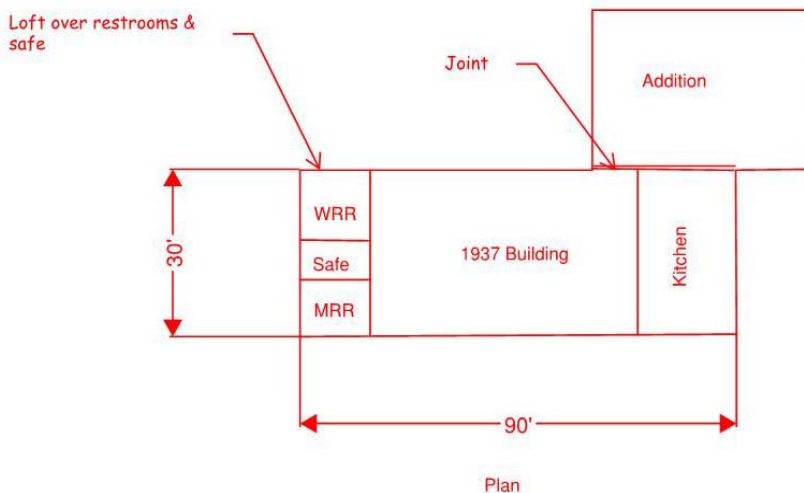


Description:

The structure was built approximately between 1935 and 1937 and was originally used as part of “The Upland Lemon Growers Association”. There was an addition added to the building but it is separated by an expansion joint making it a separate structure. The building appears in good condition, likely due to a recent renovation that to accommodate a restaurant use. It appears modern building systems have been added or updated. Handicap disabled access ramps have been added to the restaurant from the North 4th Avenue sidewalk and easterly parking lot. According to the proprietor, tenant, the building is owned by SANBAG and the City of Upland. Three mature palm trees frame the northwest corner of building on North 4th Avenue. They match similar groupings across North 4th Avenue. The building does not appear to have a plaque describing the building as being historic. There are raised letters on the west wall commemorating “Upland Lemon Growers Association”.

Construction Type:

The building is a wood framed structure sitting on a raised foundation with a wood joist floor and wood framed roof. The stem walls forming the raised foundation are either concrete or concrete block as noted by block used for the vent locations. On the east end of the building over the restrooms there is a small second story that fits within the overall height of the structure.



The building is approximately 90 feet X 30 feet X 19 feet high. The addition is approximately 30 feet X 30 feet. The figure above presents a schematic overall layout plan of the building.

The north and south walls are essentially open with large vertical windows thus would most likely require some temporary support during the moving process.

Access:

Based on a visual observation of the vicinity along East A Street, east of Euclid Avenue and north of the train tracks appears to be free of any over head utilities for several blocks. No bridges or other overhead obstructions were noticed. However it should be noted that a

comprehensive evaluation was not performed at this time and would be needed when a proposed move location is identified.

Feasibly:

Based on the construction type and physical size of the building it is feasible to move the building within several blocks of its existing location. A Street appears unconstrained west to South Euclid Avenue and east to North Campus Avenue. Trees are present north on North 4th Avenue midway to East 9th Street. Moves beyond that would require a more in depth evaluation by professional movers to evaluate path of travel and other potential impacts.

While there is no official federal or state-level guidance about appropriate places to relocate an historic structure, it should be noted that the choice of the relocation site would be decided through formal consultation with the State Historic Preservation Officer (SHPO), with the City, and with the public. Based on the preference identified through consultation (having this building within or outside the Historic District) the relocation may not or may not be feasible. Detailed analysis will be required at that time when potential relocation sites are identified.

Following photographs taken during the site visit are presented to below, to document the building and its immediate surroundings.



North Building Elevation (Note: New Ramp, Canopies, Landscaping and Mature Palms)



West Building Elevation (Note: Upland Lemon Growers Association Signage)



East Building Elevation



East Parking Lot with Building Beyond



Southwestern Building Corner and Outdoor Dining Wall and Canopy



Passenger Access Walkway with Southeast Building Corner and Parking Lot



Building Interior Restaurant/ Bar Facing West (Note: Kitchen Door Next to Bar)



Building Interior Facing East (Note: Restroom Doors Flanking Safe at the Center)



Men's Restroom Facing West



Men's Restroom Facing East (Note: Drop Ceiling for Loft Above)



West Kitchen Service Parking and Ramp



Northwest Building Corner (Note: Masonry Crawl Space Vents, Gas Meter and Drain)



Upland Station at 2nd and A Street, West of Building Study Site



Non-Operational Electrical Substation East of Building Parking Lot

Appendix F: Impacts of Metrolink Double Tracking on Historic Property at 392 E A St, Upland, CA 91786



Memo

Date: Monday, March 21, 2016
Project: SANBAG – Metro Gold Line Impacts on Upland Station and Vicinity
To: Justin Fornelli, SANBAG
From: Gerard Reminiskey, Mitali Gupta, HDR

Subject: **Impacts of Gold Line Extension between Montclair and Ontario Airport:
Impact of Metrolink Double Tracking on Historic Property at 392 E A St, Upland, CA 91786**

Introduction

The Southern California Regional Rail Authority (SCRRRA) operates Metrolink San Bernardino Line (SBL) trains between San Bernardino and Los Angeles via the San Gabriel Subdivision. The San Bernardino County portion of the subdivision is SANBAG-owned railroad right-of-way, acquired from the Santa Fe Railway as part of the service start-up in the early 1990's. The Upland Station is an intermediate stop on the SBL with 38 weekday train stops (per the April 4, 2016 timetable) and limited weekend train service. To improve operational flexibility of Metrolink trains and to allow for capacity expansion on this route, a second main track is planned for a segment of the SBL that includes the Upland Station. This double-tracking project, known as the "CP Central to CP Archibald Capacity Improvement Project" (Central to Archibald Project) was identified as a priority capital improvement project in the 2014 METRO-SANBAG SBL Infrastructure Improvement Strategic Study (SBL Study). This memo summarizes impacts of the Central to Archibald Project on the Upland Station area with a discussion specific to the subject historic property.

Upland Station Site Constraints

The existing configuration of the Upland Station includes a side-platform with canopies located adjacent to a single main track (**Figure 1**). The right-of-way width through the station is 100-ft. with the existing track as the centerline of the right-of-way (**Figure 2**).

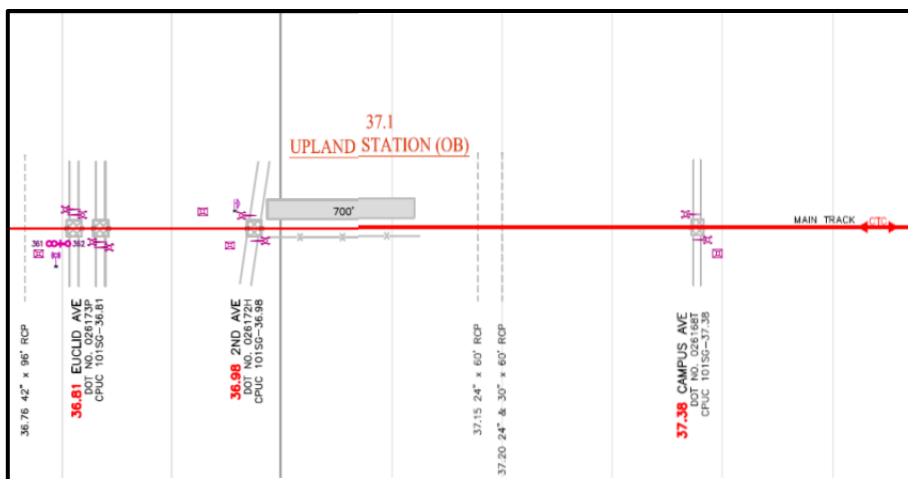


Figure 1 - SCRRRA Track Chart Excerpt, Showing Track and Platform Placement

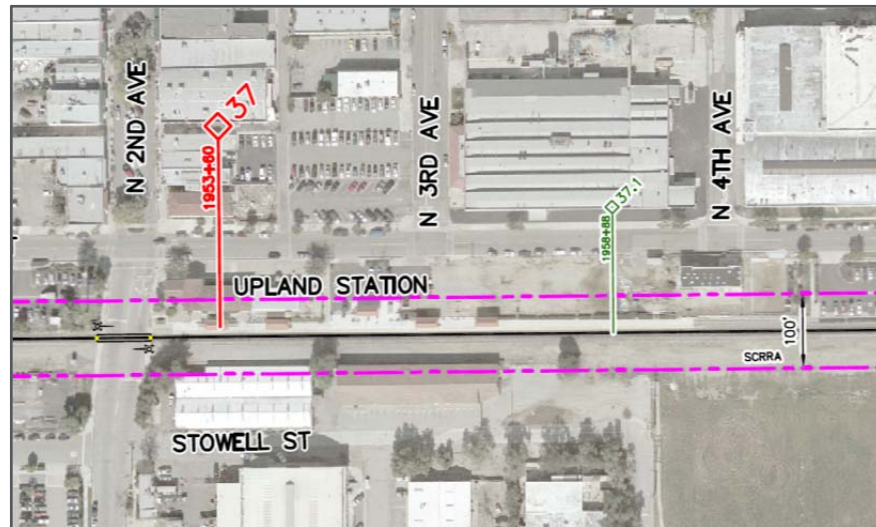


Figure 2 - SCRRA Track Chart Excerpt Showing R/W Width

The historic Upland Depot is located along the northerly side of the platform, as shown in **Figure 3** and **Figure 4**. Located on the platform's westerly end is a mini-high for passengers needing assistance.



Figure 3 - Upland Santa Fe Depot Building



Figure 4 - Platform and Mini-High, Facing West Towards Second Avenue

Right-of-Way Requirements for the Central to Archibald Project

The addition of a second track through the Upland Station requires a decision on the platform configuration. There are two possible platform configurations allowed by the SCRRA Engineering Standards (ES). The following dimensions are stated in SCRRA ES-3003:

- Side Platform: 16'-0" minimum width; increases to 19'-0" adjacent to a mini-high.
- Center Platform: 30'-0" minimum width.

Based on the existing configuration, with an existing side platform adjacent to a main track located at the center of the right-of-way, the optimum future station configuration for the Central to Archibald Project second track would be to build an additional side platform on the south side of the proposed track. This would allow keeping the existing station, track and depot building in place. A secondary justification for the two-side-platform configuration is to minimize track centers at the adjacent at-grade crossings. The photograph below (**Figure 5**) shows the south side of the right-of-way where the proposed platform would be constructed. Please note that the building shown in the photo is located on one of the SANBAG-owned parcels. **Figure 6** (attached) shows a plan view of the proposed double track project with one additional side platform.



Figure 5 - Location of Proposed Second Track and Platform

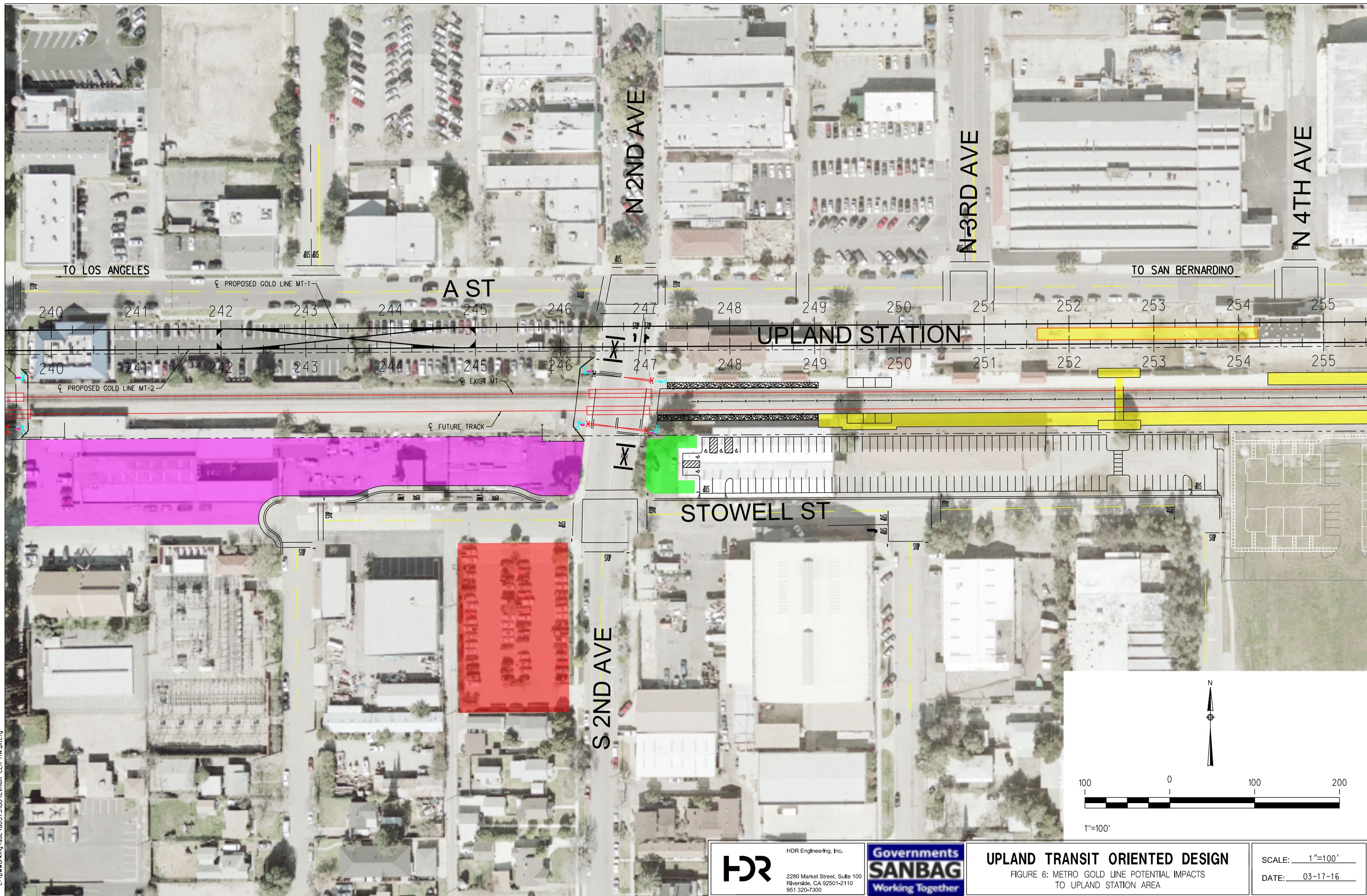
An inter-track fence is desirable for a station with two side-platforms to deter pedestrians from crossing mid-platform, thus requiring minimum track spacing of 20'-0" per SCRRRA ES-3201. Therefore, the track placement for the Central to Archibald Project within the Upland Station would be approximately 94'-4" as shown in **Table 1**.

Table 1 - Proposed Upland Station Footprint Dimensions

From	To	Ft.
Northerly R/W Limit	Existing Main Track Centerline	50.00
Existing Main Track Centerline	Inter-Track Fence	9.50
Inter-Track Fence Envelope		1.00
Inter-Track Fence	Proposed Main Track 2	9.50
Proposed Main Track 2	New South Side-Platform, Track Edge	5.33
New South Side-Platform, Track Edge	South Platform Width, at Mini-High	19.00
Total		94.33

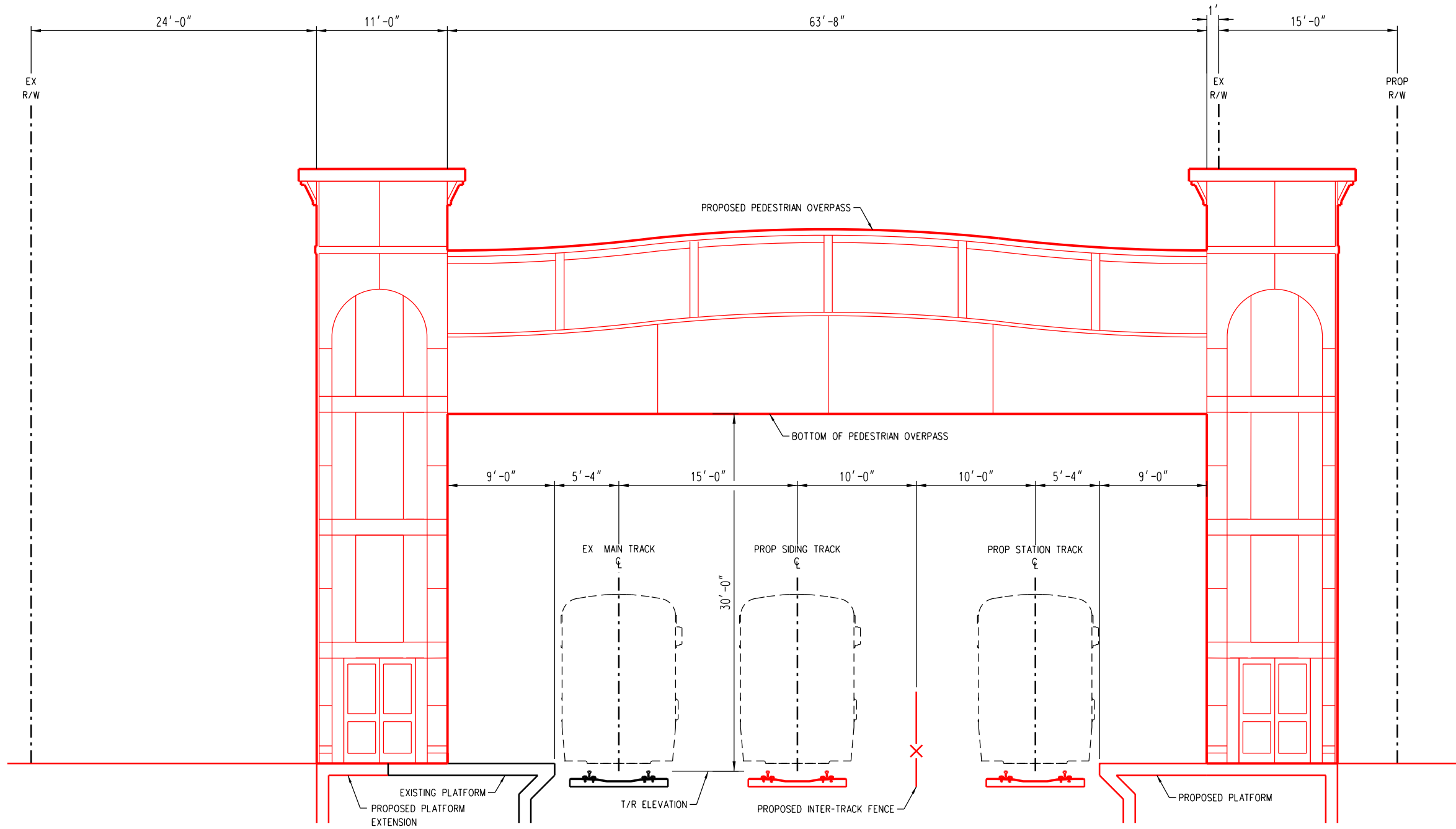
Summary

The foregoing discussion supports the conclusion that the existing 100'-0" San Gabriel Subdivision provides sufficient width to accommodate a second main track for the Central to Archibald Project without modifying the existing station infrastructure features. Moreover, future Metrolink track requirements preclude sharing the existing SANBAG-owned railroad right-of-way with the future Gold Line Extension between Montclair and the Ontario Airport. The Gold Line Extension would likely require displacement of residential and commercial properties, including potential impacts to historically significant structures.



Appendix G: Upland Station Conceptual Pedestrian Crossings

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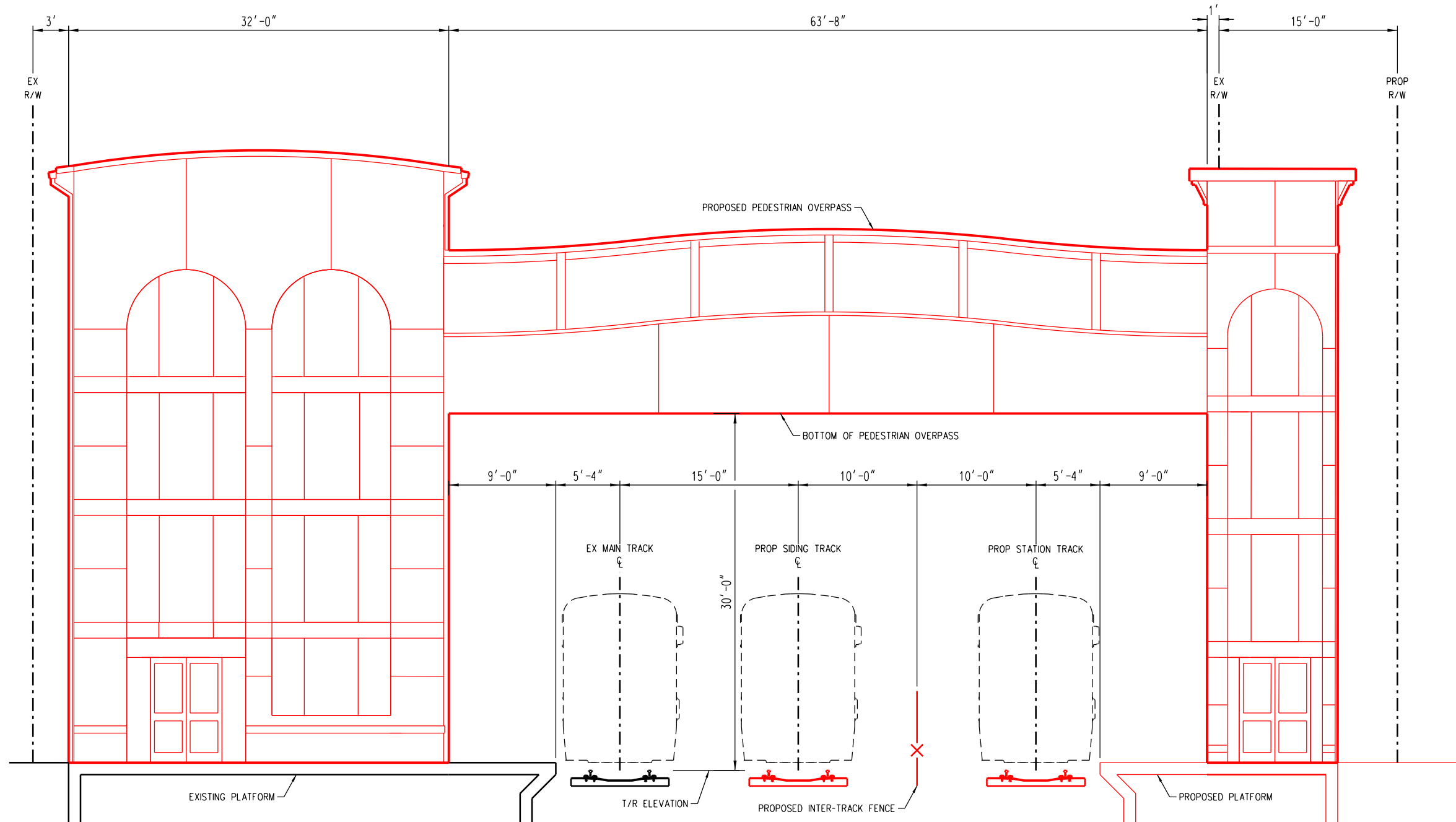
HDR HDR Engineering, Inc.
2280 Market Street, Suite 100
Riverside, CA 92501-2110
951.320-7300

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UPLAND TRANSIT ORIENTED DESIGN
TYPICAL SECTION
ALTERNATIVES 1 AND 2 - PEDESTRIAN OVERPASS

SCALE: _____ NTS
DATE: _____ 12-30-14

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 HDR Engineering, Inc. 2280 Market Street, Suite 100 Riverside, CA 92501-2110 951.320-7300	 Governments SANBAG Working Together	UPLAND TRANSIT ORIENTED DESIGN	SCALE: _____ NTS
		TYPICAL SECTION ALTERNATIVE 3 – PEDESTRIAN OVERPASS	DATE: _____ 12-30-14

Appendix H: ARRIVE Corridor –Projects within ½ mile of Upland Station

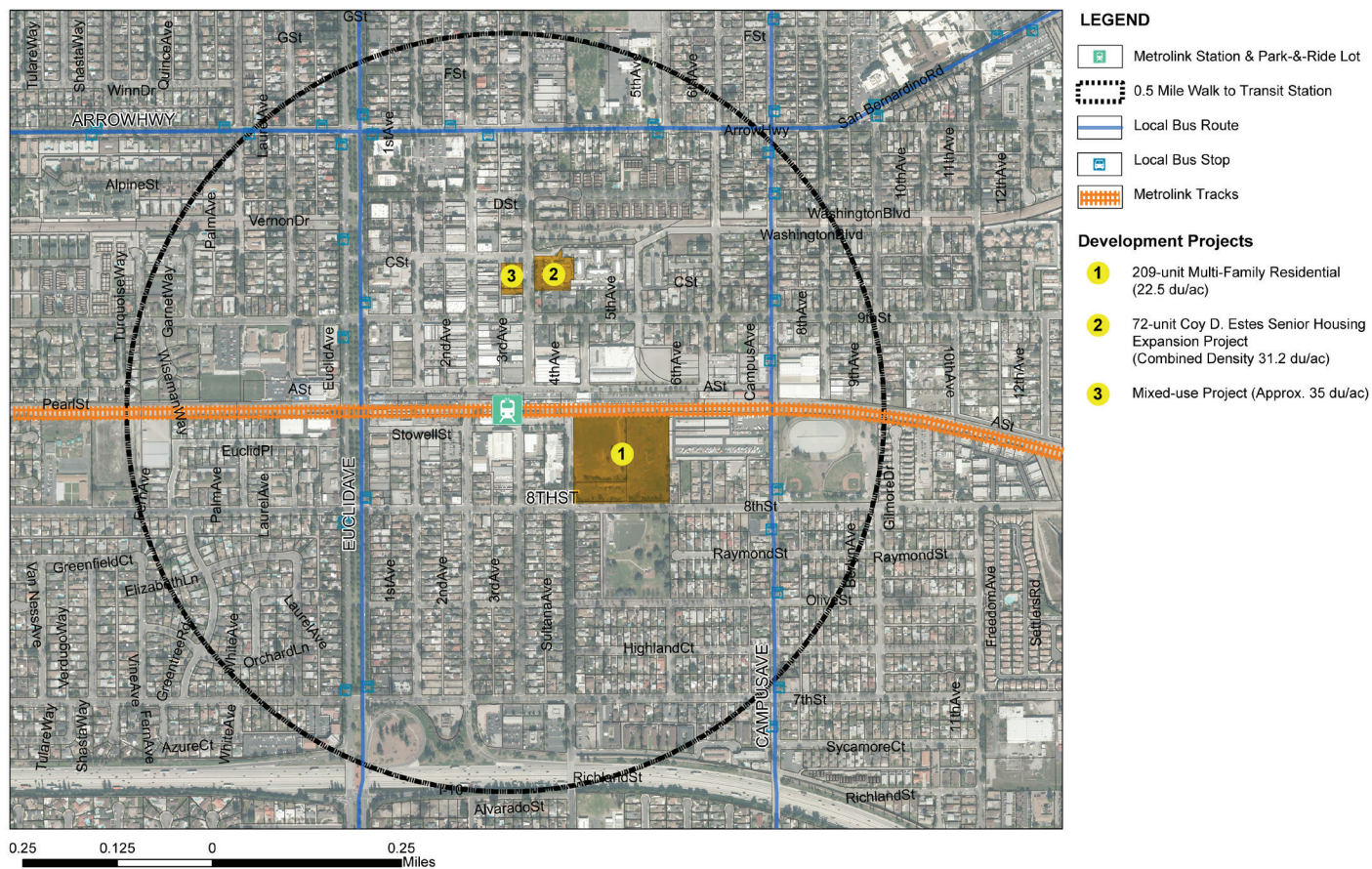


FIGURE 3.29: DEVELOPMENT AND CAPITAL IMPROVEMENT PROJECTS WITHIN 1/2-MILE OF THE STATION AREA

Appendix I: Metrolink Station Boardings (Average Weekday FY 15 Q1)



Metrolink Station Boardings (Average Weekday FY15 Q1)

	FY15 Q1					FY14 Q1					YOY Performance			
STATION	Jul-14	Aug-14	Sep-14	Q1 AVG		Jul-13	Aug-13	Sep-13	Q1 AVG		Jul	Aug	Sep	Q1 AVG
ANAHEIM	488	482	486	485		517	506	491	505		-5.6%	-4.9%	-0.9%	-3.8%
ANAHEIM CANYON	318	332	353	334		311	323	337	324		2.1%	2.9%	4.6%	3.2%
BALDWIN PARK	380	364	344	363		361	366	372	366		5.5%	-0.7%	-7.5%	-0.9%
BUENA PARK	572	575	599	582		588	575	584	582		-2.8%	-0.1%	2.7%	-0.1%
BURBANK	812	804	853	823		900	893	926	906		-9.8%	-10.0%	-7.9%	-9.3%
BURBANK AIRPORT	214	216	220	217		235	224	234	231		-9.2%	-3.4%	-5.8%	-6.1%
CAL STATE LA	330	323	336	330		359	337	356	351		-7.9%	-4.1%	-5.4%	-5.8%
CAMARILLO	106	107	123	112		114	112	128	118		-6.4%	-4.6%	-3.6%	-4.9%
CHATSWORTH	346	347	353	349		324	333	339	332		7.0%	4.5%	4.0%	5.1%
CLAREMONT	401	376	378	385		374	357	382	371		7.2%	5.1%	-1.0%	3.7%
COMMERCE	72	72	67	71		77	70	80	76		-5.8%	2.7%	-15.9%	-6.3%
COVINA	897	879	895	890		919	913	936	923		-2.4%	-3.7%	-4.5%	-3.5%
DELMAR	0	0	0	0		0	0	0	0		0.0%	0.0%	0.0%	0.0%
DOWNTOWN POMONA	245	226	245	239		230	224	235	230		6.6%	1.0%	4.3%	4.0%
EAST ONTARIO	381	407	378	389		385	386	391	387		-0.8%	5.4%	-3.4%	0.4%
EAST VENTURA	39	43	44	42		45	49	53	49		-13.3%	-13.2%	-16.7%	-14.4%
EL MONTE	386	403	416	402		427	424	437	429		-9.7%	-4.8%	-4.8%	-6.4%
FONTANA	434	409	387	410		446	423	416	428		-2.6%	-3.3%	-6.9%	-4.3%
FULLERTON	1,421	1,449	1,599	1,490		1,447	1,449	1,576	1,491		-1.8%	0.0%	1.5%	-0.1%
GLENDALE	617	606	639	621		632	627	657	638		-2.3%	-3.2%	-2.7%	-2.7%
INDUSTRY	919	935	933	929		1,009	1,008	1,035	1,017		-8.9%	-7.2%	-9.8%	-8.6%
IRVINE	1,363	1,377	1,390	1,377		1,315	1,322	1,375	1,337		3.7%	4.2%	1.1%	3.0%
LA UNION	12,485	12,381	12,456	12,441		12,631	12,397	12,635	12,554		-1.2%	-0.1%	-1.4%	-0.9%
LAGUNA NIGUEL/MISSION VIEJO	328	334	348	337		318	337	374	343		3.2%	-0.8%	-7.1%	-1.6%
LANCASTER	378	368	343	363		418	370	344	377		-9.5%	-0.6%	-0.3%	-3.5%
MONTCLAIR	284	272	290	282		277	271	269	272		2.6%	0.2%	7.8%	3.5%
MONTEBELLO/COMMERCE	430	435	450	439		419	420	445	428		2.8%	3.6%	1.3%	2.5%
MOORPARK	228	214	225	222		226	232	256	238		0.7%	-7.8%	-11.9%	-6.4%
NEWHALL	303	289	295	296		312	298	332	314		-3.1%	-3.1%	-11.0%	-5.7%
NORTH MAIN CORONA	967	970	998	978		936	949	1,015	967		3.3%	2.2%	-1.7%	1.2%
NORTHRIDGE	312	331	421	355		325	339	433	366		-4.2%	-2.3%	-2.7%	-3.1%
NORWALK/SANTA FE SPRINGS	718	719	762	733		721	720	754	732		-0.5%	-0.2%	1.1%	0.2%
OCEANSIDE	528	533	515	525		551	532	565	549		-4.2%	0.2%	-8.8%	-4.3%
ORANGE	740	738	770	750		725	725	766	739		2.0%	1.9%	0.5%	1.5%
OXNARD	85	92	103	93		79	81	94	85		7.5%	13.5%	10.0%	10.3%
PALMDALE	372	361	359	364		418	379	373	390		-10.9%	-4.7%	-3.9%	-6.5%
PEDLEY	175	154	167	165		184	180	185	183		-5.2%	-14.2%	-9.8%	-9.7%
POMONA	497	536	572	535		538	533	541	537		-7.6%	0.6%	5.7%	-0.4%
RANCHO CUCAMONGA	820	816	802	812		981	964	970	972		-16.4%	-15.4%	-17.4%	-16.4%
RIALTO	248	242	246	245		275	254	257	262		-9.7%	-4.7%	-4.3%	-6.2%
RIVERSIDE-DOWNTOWN	1,012	1,010	987	1,003		1,054	1,013	1,074	1,047		-3.9%	-0.3%	-8.1%	-4.1%
RIVERSIDE-LA SIERRA	657	647	732	679		644	639	680	654		2.0%	1.3%	7.6%	3.6%
SAN BERNARDINO	754	761	747	754		790	725	733	749		-4.6%	5.0%	1.9%	0.8%
SAN CLEMENTE	125	127	142	131		137	136	144	139		-8.7%	-6.4%	-1.3%	-5.5%
SAN JUAN CAPISTRANO	165	160	165	163		161	162	177	167		2.4%	-1.6%	-6.6%	-1.9%
SANTA ANA	721	770	848	780		727	764	862	784		-0.9%	0.8%	-1.6%	-0.5%
SANTA CLARITA	227	264	261	251		295	285	276	285		-22.9%	-7.2%	-5.5%	-11.9%
SIMI VALLEY	427	386	397	403		384	380	391	385		11.2%	1.6%	1.4%	4.7%
SUN VALLEY	72	74	81	76		84	80	81	82		-14.2%	-7.7%	-0.1%	-7.4%
SYLMAR/SAN FERNANDO	445	454	456	451		482	477	496	485		-7.7%	-4.9%	-8.2%	-6.9%
TUSTIN	1,117	1,115	1,136	1,123		1,115	1,121	1,136	1,124		0.2%	-0.5%	0.0%	-0.1%
UPLAND	468	475	486	477		496	480	489	488		-5.5%	-1.0%	-0.6%	-2.4%
VAN NUYS	177	177	180	178		175	167	185	176		1.4%	6.1%	-2.6%	1.6%
VIA PRINCESSA	418	418	423	420		418	415	430	421		-0.2%	0.8%	-1.6%	-0.3%
VINCENT GRADE/ACTON	102	105	101	103		117	113	113	114		-12.5%	-6.8%	-10.5%	-10.0%
WEST CORONA	394	402	428	408		402	425	443	423		-1.9%	-5.4%	-3.4%	-3.5%

Footnotes:

Ridership estimates are based on ticket sales by origin station and do not reflect returns from corporate consignment sales.

Station boardings do not sum to total system reidership because:

Ridership estimates do not reflect transfers.

Ridership from tickets and passes without a defined destination station is counted at the origin station only.

Appendix J: OmniTrans Route Schedules

 Bus Route

 Tripper Service

A Timepoint—Look for the matching symbol in the timetable section.

 Metrolink Station

 Point of interest

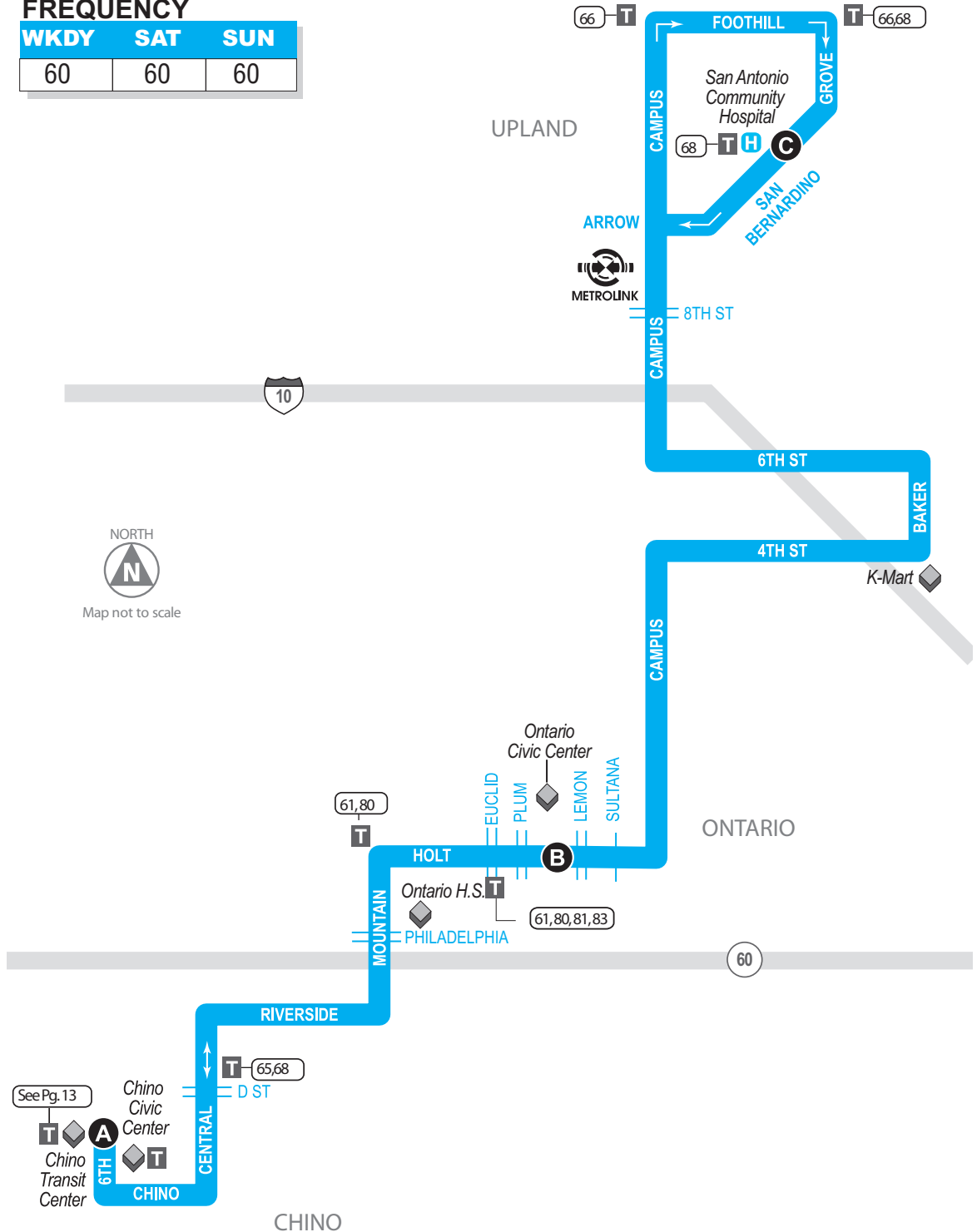
H Medical Center

T Transfer Point

 Connecting Route(s)

FREQUENCY

WKDY	SAT	SUN
60	60	60



ROUTE 63: MONDAY – FRIDAY

A	B	C	C	B	A
Chino Transit Center	Holt & Plum	San Antonio Hospital	San Antonio Hospital	Holt & Lemon	Chino Transit Center
NORTHBOUND			SOUTHBOUND		
5:50	6:09	6:36	5:45	6:07	6:27
6:50	7:09	7:36	6:45	7:09	7:32
7:50	8:14	8:44	7:47	8:11	8:34
8:50	9:14	9:44	8:47	9:11	9:34
9:50	10:14	10:44	9:47	10:11	10:34
10:50	11:14	11:44	10:47	11:11	11:34
11:50	12:14	12:44	11:47	12:11	12:34
12:50	1:14	1:44	12:47	1:11	1:34
1:50	2:14	2:44	1:47	2:11	2:34
2:50	3:14	3:44	2:47	3:11	3:34
3:50	4:14	4:44	3:47	4:11	4:34
4:50	5:14	5:44	4:47	5:11	5:31
5:50	6:14	6:44	5:47	6:11	6:31
6:50	7:14	7:41	6:47	7:11	7:31
7:50	8:09	8:36	7:43	8:07	8:27

ROUTE 63: SATURDAY

A	B	C	C	B	A
NORTHBOUND			SOUTHBOUND		
6:50	7:11	7:41	6:43	7:04	7:30
7:50	8:11	8:41	7:43	8:04	8:30
8:50	9:11	9:41	8:43	9:04	9:30
9:50	10:11	10:41	9:43	10:04	10:30
10:50	11:11	11:41	10:43	11:04	11:30
11:50	12:11	12:41	11:43	12:04	12:30
12:50	1:11	1:41	12:43	1:04	1:30
1:50	2:11	2:41	1:43	2:04	2:30
2:50	3:11	3:41	2:43	3:04	3:30
3:50	4:11	4:41	3:43	4:04	4:30
4:50	5:11	5:41	4:43	5:04	5:30
5:50	6:11	6:41	5:43	6:04	6:30

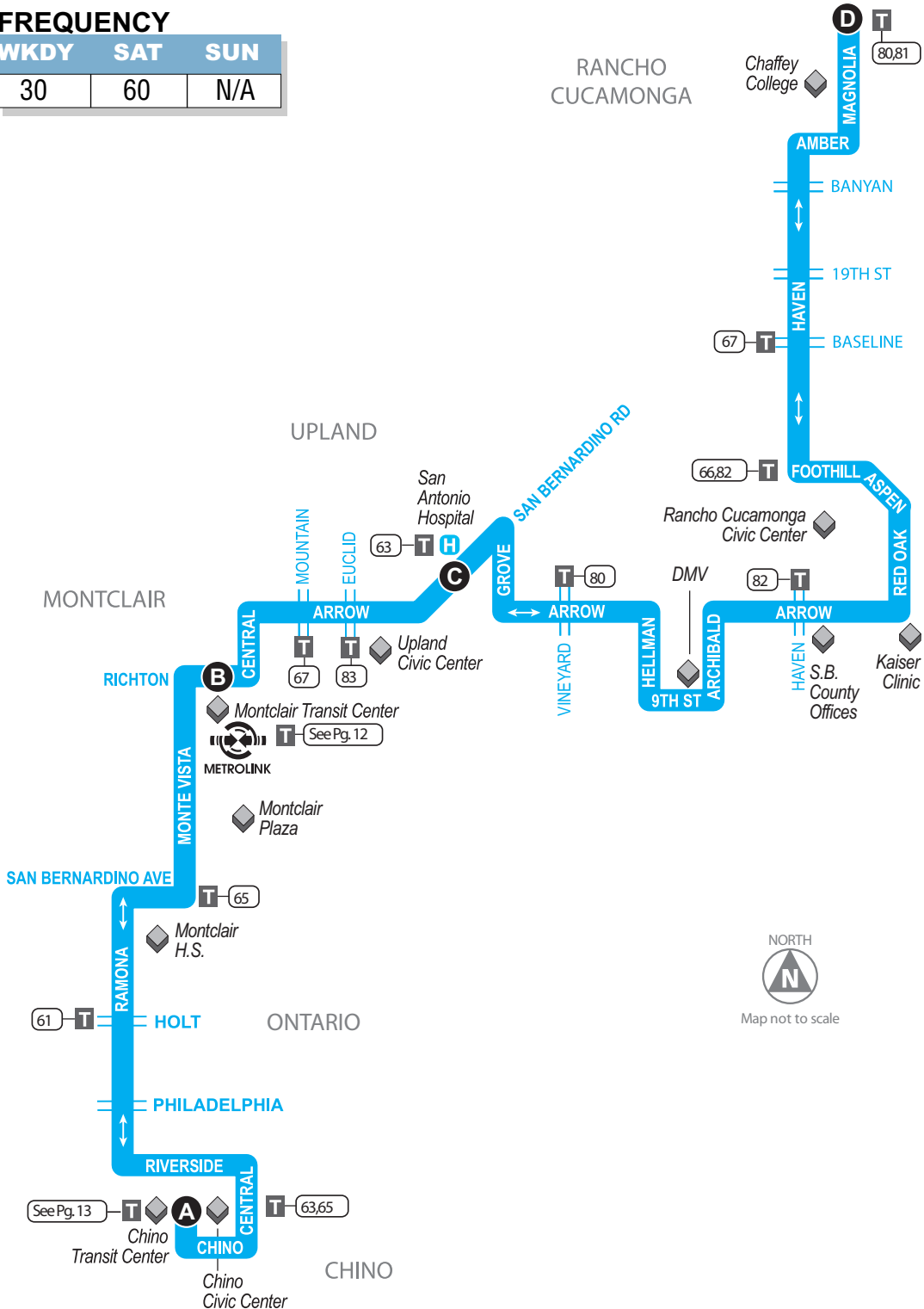
ROUTE 63: SUNDAY

A	B	C	C	B	A
NORTHBOUND			SOUTHBOUND		
6:50	7:11	7:41	6:38	6:59	7:25
7:50	8:11	8:41	7:43	8:04	8:30
8:50	9:11	9:41	8:43	9:04	9:30
9:50	10:11	10:41	9:43	10:04	10:30
10:50	11:11	11:41	10:43	11:04	11:30
11:50	12:11	12:41	11:43	12:04	12:30
12:50	1:11	1:41	12:43	1:04	1:30
1:50	2:11	2:41	1:43	2:04	2:30
2:50	3:11	3:41	2:43	3:04	3:30
3:50	4:11	4:41	3:43	4:04	4:30
4:50	5:11	5:41	4:43	5:04	5:30
5:50	6:11	6:41	5:43	6:04	6:26
			6:43	7:04	7:26

- Bus Route
- Tripper Service
- Timepoint—Look for the matching symbol in the timetable section.
- Metrolink Station
- Point of interest
- Medical Center
- Transfer Point
- Connecting Route(s)

FREQUENCY

WKDY	SAT	SUN
30	60	N/A



ROUTE 68: MONDAY – FRIDAY

A

Chino
Transit
Center

B

Montclair
Transit Center

C

San Antonio
Hospital

D

Chaffey
College

D

Chaffey
College

C

San Antonio
Hospital

B

Montclair
Transit Center

A

Chino
Transit
Center

NORTHBOUND

SOUTHBOUND

4:40	5:12	5:15	5:31	6:06	4:45	5:21	5:36	5:39	6:08
5:20	5:52	5:55	6:11	6:46	5:05	5:41	5:56	5:59	6:28
6:20	6:52	6:15	6:31	7:06	5:45	6:21	6:36	6:39	7:08
6:40	7:12	6:55	7:11	7:46	6:05	6:41	6:56	6:59	7:28
7:20	7:52	7:15	7:31	8:06	6:45	7:21	7:36	7:39	8:08
7:40	8:12	7:55	8:11	8:46	7:05	7:41	7:56	7:59	8:28
8:20	8:52	8:15	8:31	9:06	7:45	8:21	8:36	8:39	9:08
8:40	9:12	8:55	9:11	9:46	8:05	8:41	8:56	8:59	9:28
9:20	9:52	9:15	9:31	10:06	8:45	9:21	9:36	9:39	10:08
9:40	10:12	10:15	10:31	11:06	9:05	9:41	9:56	9:59	10:28
10:20	10:52	10:55	11:11	11:46	9:45	10:21	10:36	10:39	11:08
10:40	11:12	11:15	11:31	12:06	10:05	10:41	10:56	10:59	11:28
11:20	11:52	11:55	12:11	12:46	10:45	11:21	11:36	11:39	12:08
11:40	12:12	12:15	12:31	1:06	11:05	11:41	11:56	11:59	12:28
12:20	12:52	12:55	1:11	1:46	11:45	12:21	12:36	12:39	1:08
12:40	1:12	1:15	1:31	2:06	12:05	12:41	12:56	12:59	1:28
1:20	1:52	1:55	2:11	2:46	12:45	1:21	1:36	1:39	2:08
1:40	2:12	2:15	2:31	3:06	1:05	1:41	1:56	1:59	2:28
2:20	2:52	2:55	3:11	3:46	1:45	2:21	2:36	2:39	3:08
2:40	3:12	3:15	3:31	4:06	2:05	2:41	2:56	2:59	3:28
3:20	3:52	3:55	4:11	4:46	2:45	3:21	3:36	3:39	4:08
3:40	4:12	4:15	4:31	5:06	3:05	3:41	3:56	3:59	4:28
4:20	4:52	4:55	5:11	5:46	3:45	4:21	4:36	4:39	5:08
4:40	5:12	5:15	5:31	6:06	4:05	4:41	4:56	4:59	5:28
5:20	5:52	5:55	6:11	6:46	4:45	5:21	5:36	5:39	6:08
5:40	6:12	6:15	6:31	7:06	5:05	5:41	5:56	5:59	6:28
6:20	6:52	6:55	7:11	7:46	5:45	6:21	6:36	6:39	7:08
6:40	7:12	7:15	7:31	8:06	6:05	6:41	6:56	6:59	7:28
7:20	7:52	7:55	8:11	8:46	6:45	7:21	7:36	7:39	8:08
7:40	8:12	8:15	8:31	9:06	7:05	7:41	7:56	7:59	8:28
8:20	8:52	8:55	9:11	9:46	7:45	8:21	8:36	8:39	9:08
8:40	9:12	9:15	9:31	10:06	8:05	8:41	8:56	8:59	9:28
9:20	9:52	9:55	10:11	10:46	9:05	9:41	9:56	9:59	10:28

ROUTE 68: SATURDAY

A

Chino
Transit
Center

B

Montclair
Transit Center

C

San Antonio
Hospital

D

Chaffey
College

D

Chaffey
College

C

San Antonio
Hospital

B

Montclair
Transit Center

A

Chino
Transit
Center

NORTHBOUND

SOUTHBOUND

6:05	6:30	6:33	6:49	7:25	6:27	6:59	7:15	7:18	7:43
7:05	7:30	7:33	7:49	8:25	7:27	7:59	8:15	8:18	8:43
8:05	8:30	8:33	8:49	9:25	8:27	8:59	9:15	9:18	9:43
9:05	9:30	9:33	9:49	10:25	9:27	9:59	10:15	10:18	10:43
10:05	10:30	10:33	10:49	11:25	10:27	10:59	11:15	11:18	11:43
11:05	11:30	11:33	11:49	12:25	11:27	11:59	12:15	12:18	12:43
12:05	12:30	12:33	12:49	1:25	12:27	12:59	1:15	1:18	1:43
1:05	1:30	1:33	1:49	2:25	1:27	1:59	2:15	2:18	2:43
2:05	2:30	2:33	2:49	3:25	2:27	2:59	3:15	3:18	3:43
3:05	3:30	3:33	3:49	4:25	3:27	3:59	4:15	4:18	4:43
4:05	4:30	4:33	4:49	5:25	4:27	4:59	5:15	5:18	5:43
5:05	5:30	5:33	5:49	6:25	5:27	5:59	6:15	6:30	6:55
6:05	6:25	6:33	6:49	7:25					

Note: No Sunday Service.

ROUTE 83: MONDAY – FRIDAY

A
Chino
Transit
Center

B
Euclid &
Arrow

C
19th &
Campus

C
19th &
Campus

B
Euclid &
Arrow

A
Chino
Transit
Center

NORTHBOUND

SOUTHBOUND

5:55	6:33	6:42	5:49	6:00	6:40
6:55	7:41	7:52	6:46	6:54	7:33
8:00	8:42	8:52	7:53	8:03	8:43
9:00	9:44	9:54	8:53	9:01	9:38
10:00	10:40	10:49	9:55	10:05	10:45
11:00	11:44	11:54	10:50	10:59	11:37
12:00	12:42	12:52	11:55	12:04	12:48
1:00	1:46	1:55	12:53	1:03	1:43
2:00	2:45	2:55	1:56	2:06	2:47
3:00	3:46	3:56	2:56	3:06	3:51
4:00	4:47	4:58	3:57	4:06	4:49
5:00	5:44	5:54	4:59	5:09	5:50
6:00	6:39	6:48	5:55	6:04	6:44
7:00	7:37	7:47	7:00	7:08	7:43
8:00	8:34	8:42	7:48	7:57	8:45
9:00	9:36	9:44	8:43	8:50	9:20

ROUTE 83: SATURDAY

A
Chino
Transit
Center

B
Euclid &
Arrow

C
19th &
Campus

C
19th &
Campus

B
Euclid &
Arrow

A
Chino
Transit
Center

NORTHBOUND

SOUTHBOUND

6:00	6:40	6:50	5:51	6:01	6:41
7:00	7:40	7:50	6:51	7:01	7:41
8:00	8:40	8:50	7:51	8:01	8:41
9:00	9:40	9:50	8:51	9:01	9:41
10:00	10:40	10:50	9:51	10:01	10:41
11:00	11:40	11:50	10:51	11:01	11:41
12:00	12:40	12:50	11:51	12:01	12:41
1:00	1:40	1:50	12:51	1:01	1:41
2:00	2:40	2:50	1:51	2:01	2:41
3:00	3:40	3:50	2:51	3:01	3:41
4:00	4:40	4:50	3:51	4:01	4:41
5:00	5:40	5:50	4:51	5:01	5:41
6:00	6:40	6:50	5:51	6:01	6:41
7:00	7:40	7:50	6:51	7:01	7:36
			7:51	8:01	8:36

ROUTE 83: SUNDAY

A
Chino
Transit
Center

B
Euclid &
Arrow

C
19th &
Campus

C
19th &
Campus

B
Euclid &
Arrow

A
Chino
Transit
Center

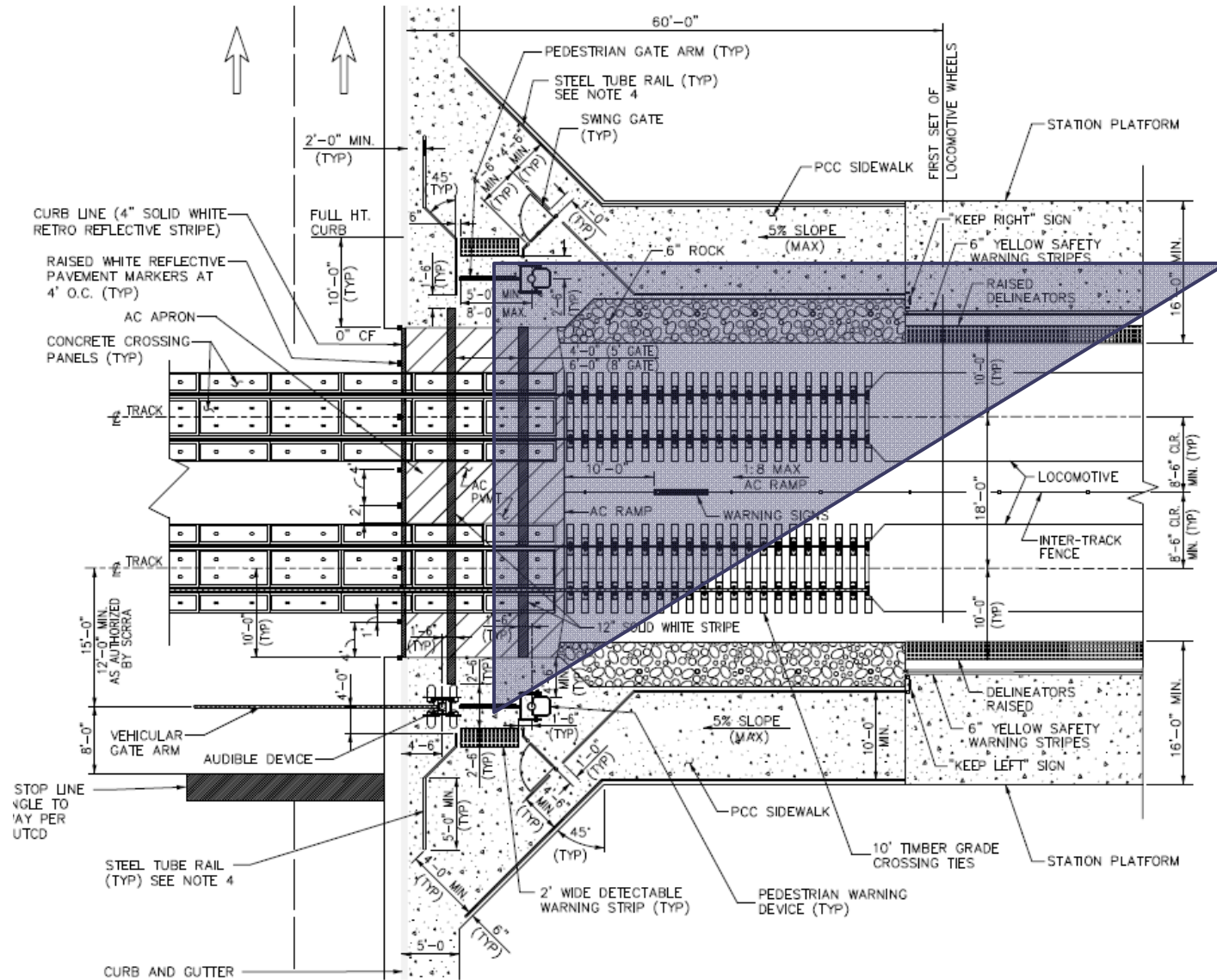
NORTHBOUND

SOUTHBOUND

6:00	6:40	6:50	5:51	6:01	6:41
7:00	7:40	7:50	6:51	7:01	7:41
8:00	8:40	8:50	7:51	8:01	8:41
9:00	9:40	9:50	8:51	9:01	9:41
10:00	10:40	10:50	9:51	10:01	10:41
11:00	11:40	11:50	10:51	11:01	11:41
12:00	12:40	12:50	11:51	12:01	12:41
1:00	1:40	1:50	12:51	1:01	1:41
2:00	2:40	2:50	1:51	2:01	2:41
3:00	3:40	3:50	2:51	3:01	3:41
4:00	4:40	4:50	3:51	4:01	4:41
5:00	5:40	5:50	4:51	5:01	5:41
6:00	6:40	6:50	5:51	6:01	6:41
7:00	7:27	7:37	6:51	7:02	7:32

Appendix K: Sight Triangle

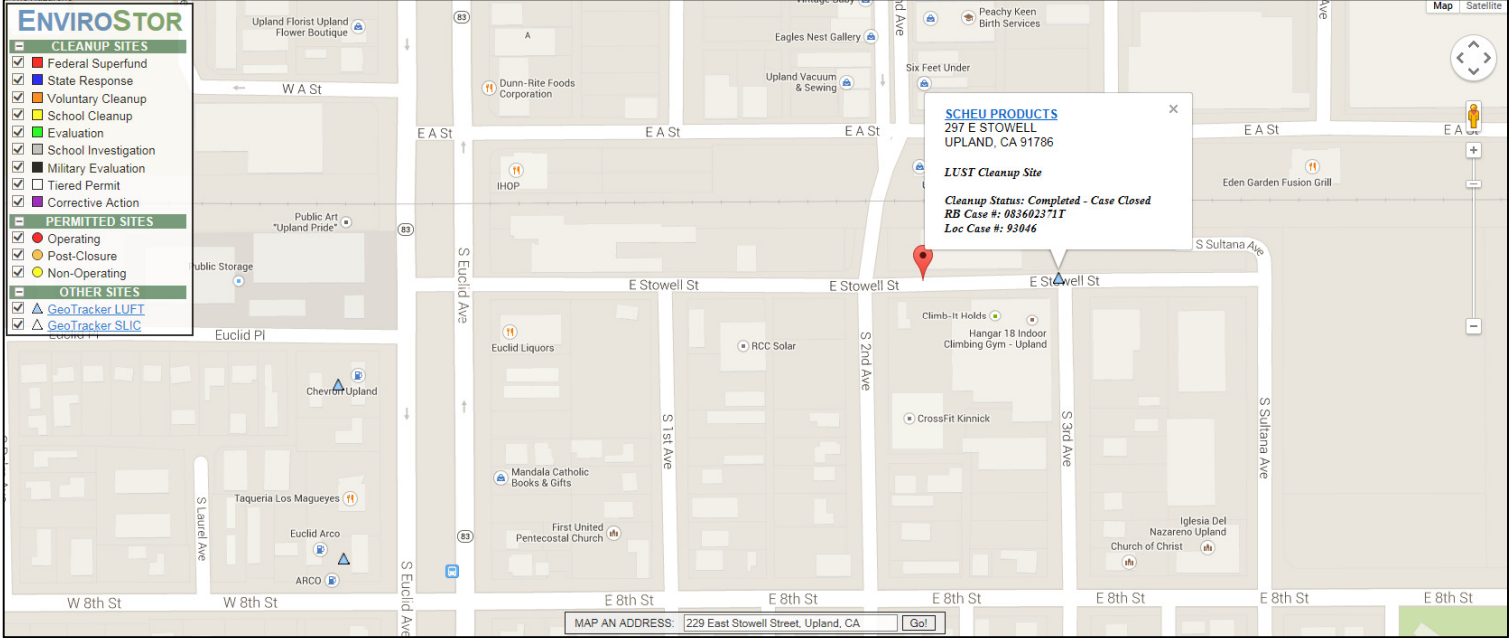
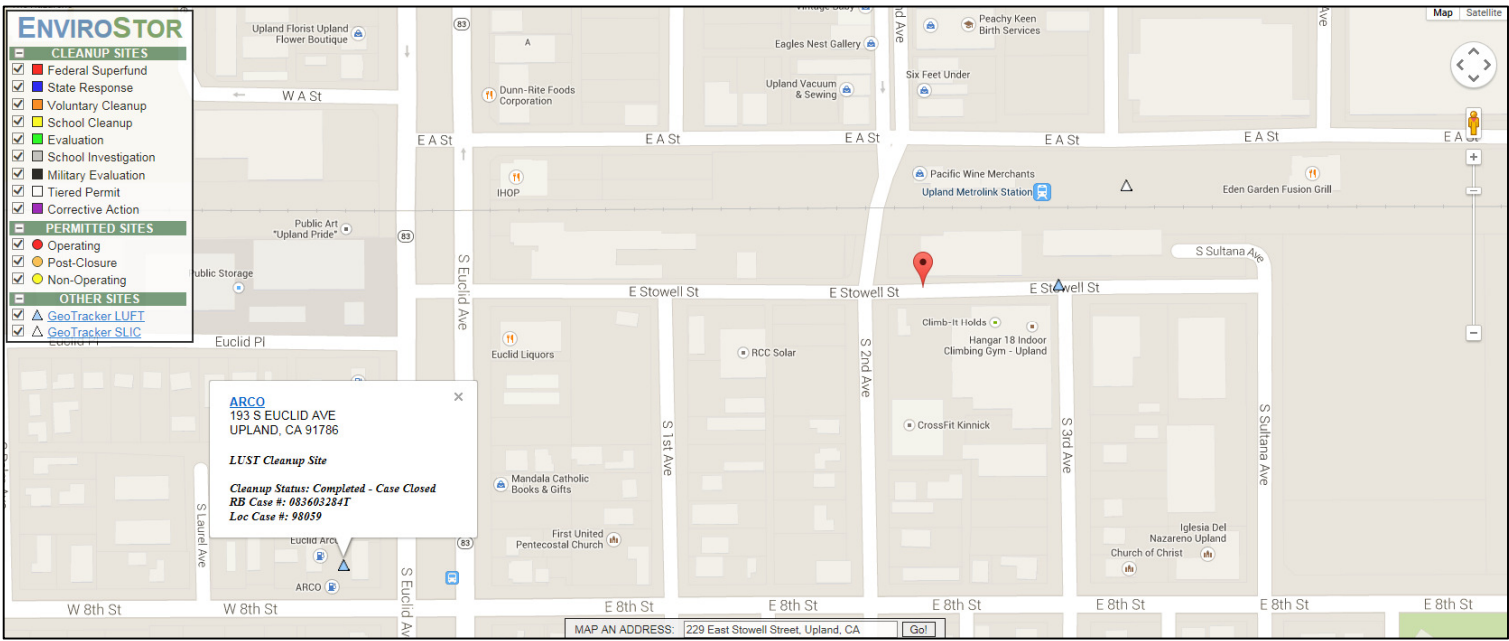
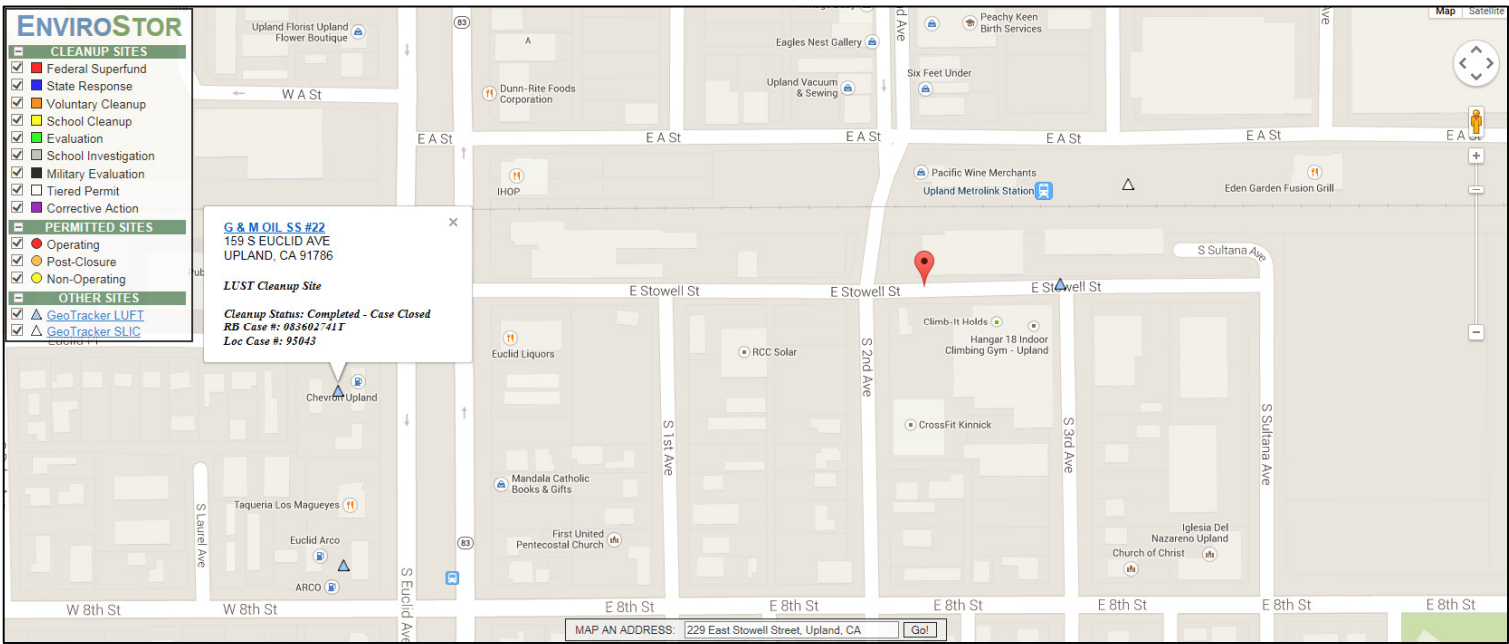
Sight Triangle



Appendix L: Hazardous Material Site Locations within Proximity of Project

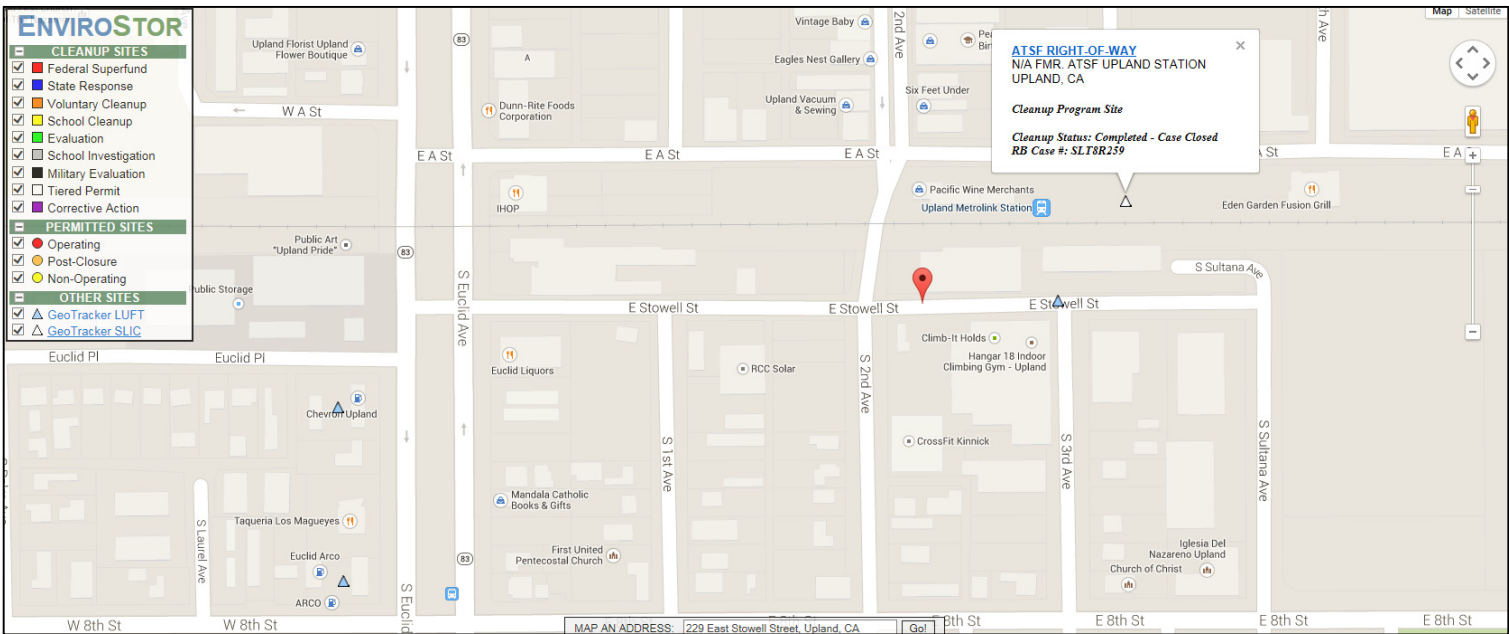
Leaking Underground Fuel Tank (LUFT) Sites

The California State Waterboard regulates Leaking Underground Fuel Tank (LUFT) cleanup sites. A LUFT site is a undergoing cleanup due to an unauthorized release from an UST system. An underground storage tank system (UST) is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. UST regulations apply only to underground tanks and piping storing either petroleum or certain hazardous substances.

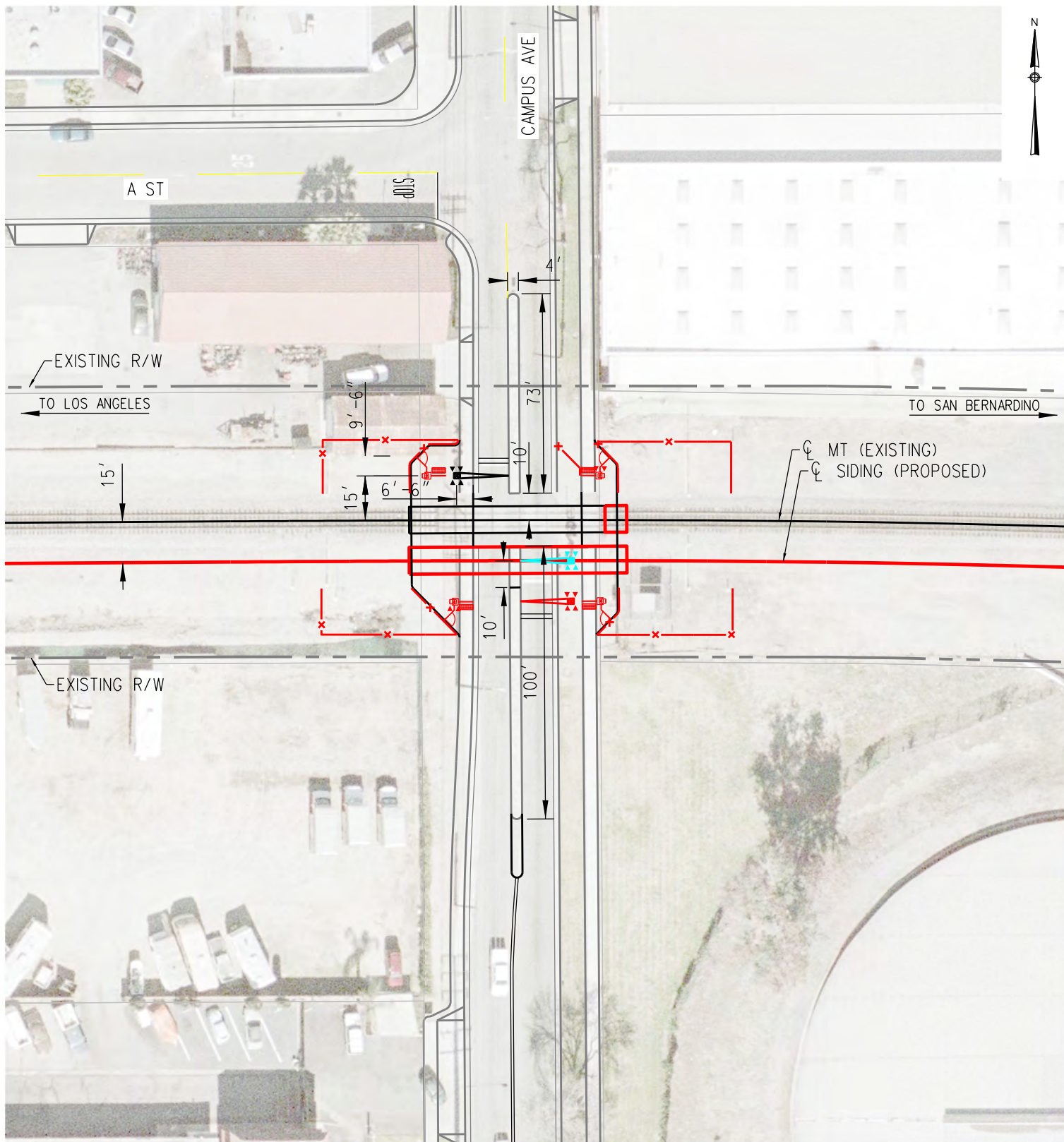


Spills, Leaks, Investigation, and Cleanup (SLIC) Sites

The California State Waterboard regulates Spills, Leaks, Investigation, and Cleanups (SLIC) sites. Data is obtained from GeoTracker <http://geotracker.waterboards.ca.gov/>. The SLIC program investigates and regulates non-permitted discharges.



Appendix M: City of Upland Grade Crossing Exhibits



LEGEND

- | | |
|---|--|
|  EXISTING TRACK |  PROPOSED SIGNAL GATE |
|  PROPOSED TRACK |  EXISTING SIGNAL GATE |
|  PROPOSED FENCE |  REMOVED SIGNAL GATE |



HDR Engineering, Inc.

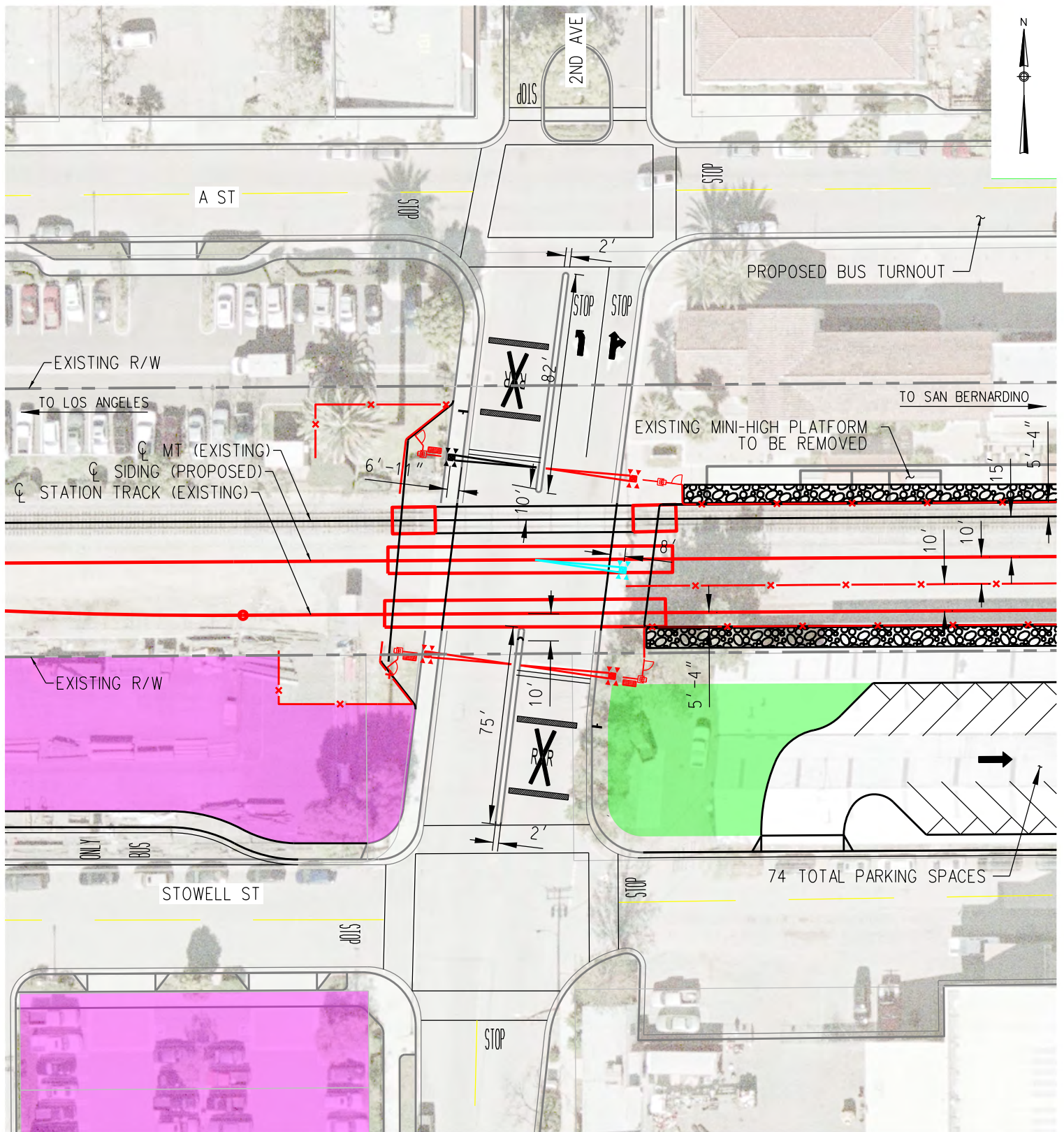
2280 Market Street, Suite 100
Riverside, CA 92501-2110
951 320-7300



UPLAND TRANSIT ORIENTED DESIGN

CAMPUS AVENUE GRADE CROSSING
CPUC No. 101SG-37.30
DOT No. 026168T

SCALE: 1"=50'
DATE: 12-31-14



LEGEND

— EXISTING TRACK	— REMOVED SIGNAL GATE
— PROPOSED TRACK	— PROPOSED PEDESTRIAN PLAZA
— PROPOSED FENCE	— DEVELOPABLE PROPERTY
— PROPOSED SIGNAL GATE	— SCRRRA CAR
— EXISTING SIGNAL GATE	



HDR Engineering, Inc.

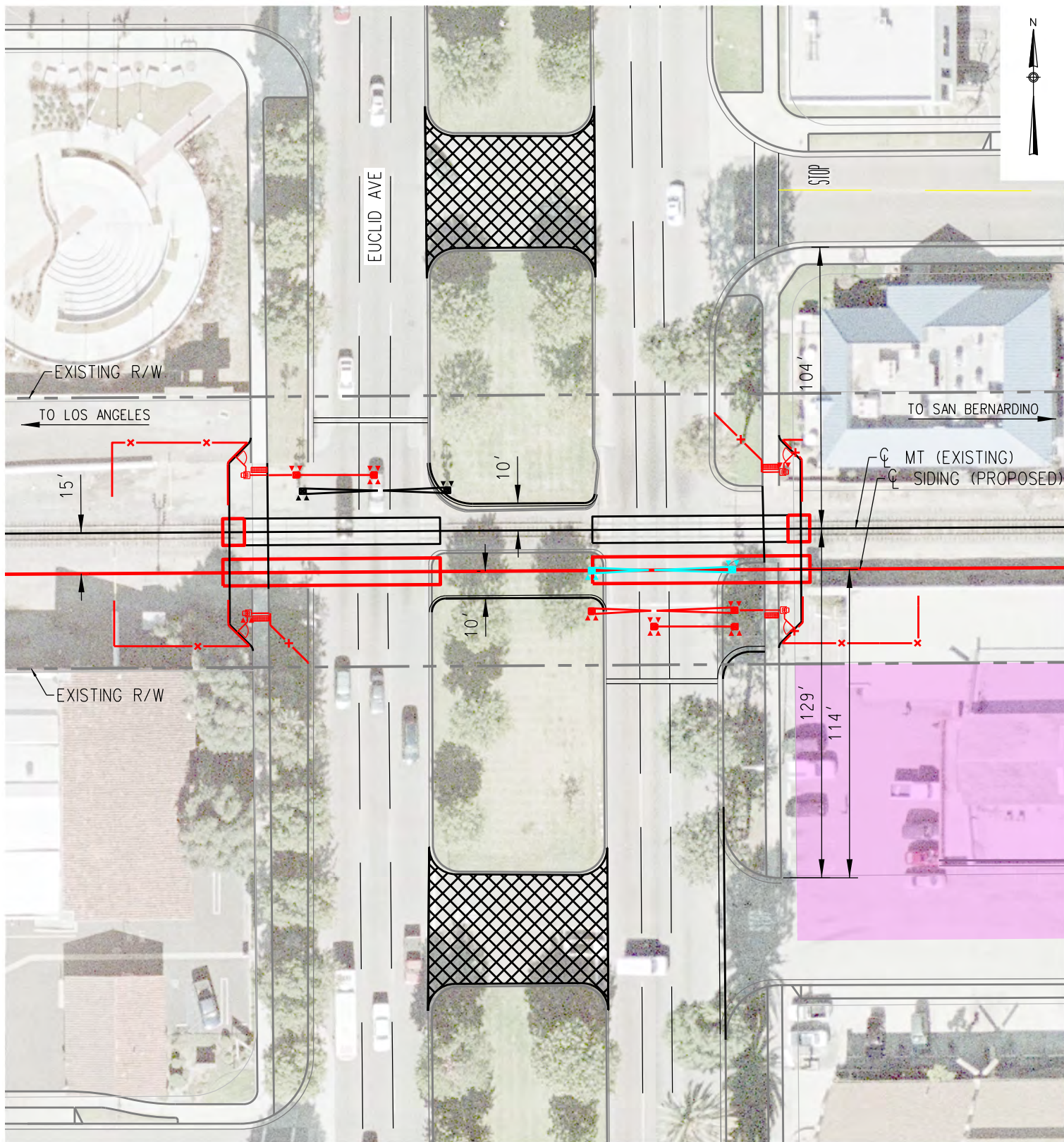
2280 Market Street, Suite 100
Riverside, CA 92501-2110
951 320-7300



UPLAND TRANSIT ORIENTED DESIGN

2ND AVENUE GRADE CROSSING
CPUC No. 101SG-36.90
DOT No. 026172H

SCALE: 1"=50'
DATE: 12-31-14



LEGEND

- | | |
|----------------------|-----------------------|
| EXISTING TRACK | EXISTING SIGNAL GATE |
| PROPOSED TRACK | REMOVED SIGNAL GATE |
| PROPOSED FENCE | PROPOSED ROAD CLOSURE |
| PROPOSED SIGNAL GATE | DEVELOPABLE PROPERTY |



HDR Engineering, Inc.

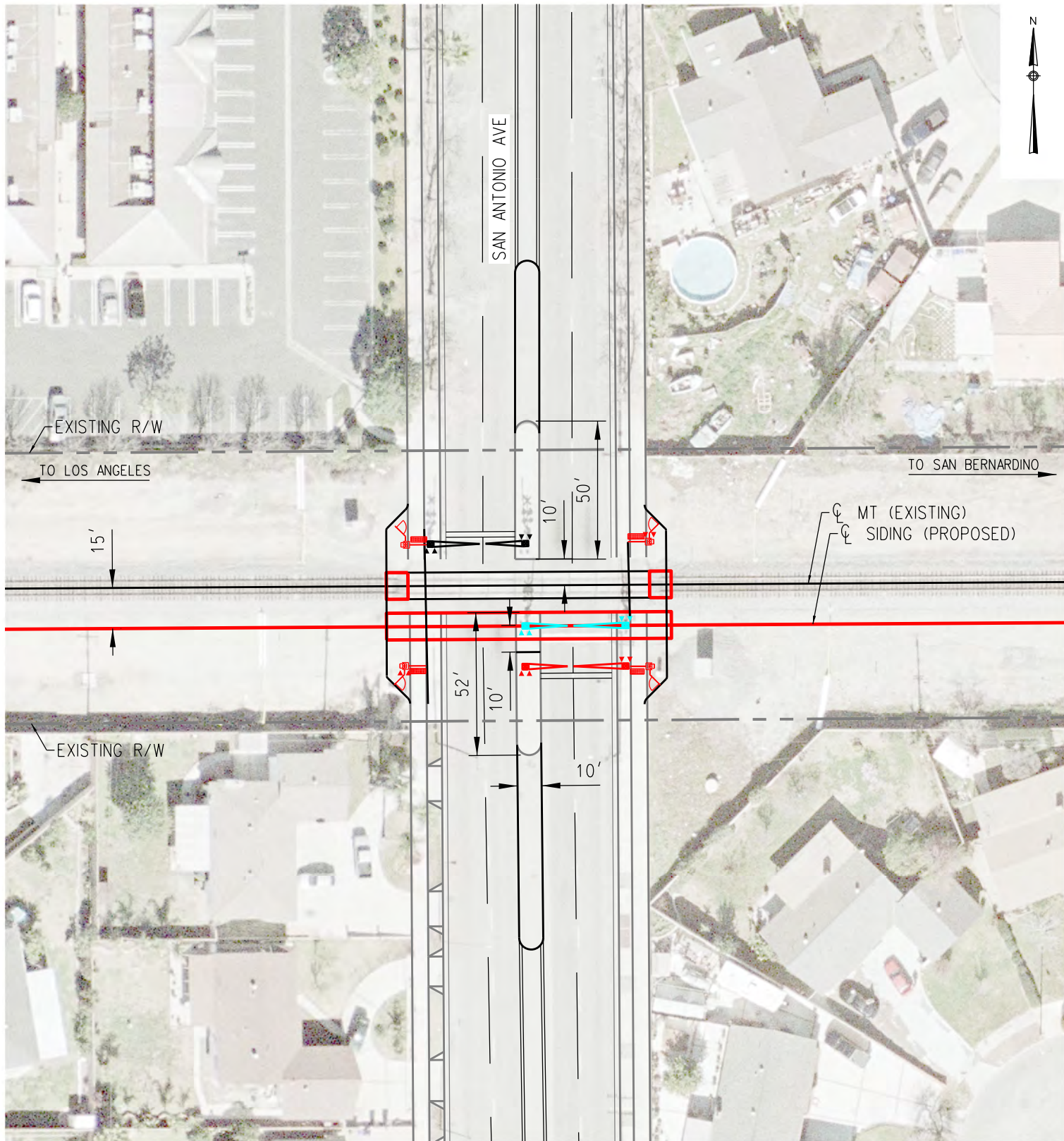
2280 Market Street, Suite 100
Riverside, CA 92501-2110
951 320-7300



UPLAND TRANSIT ORIENTED DESIGN

EUCLID AVENUE GRADE CROSSING
CPUC No. 101SG-37.30
DOT No. 026168T

SCALE: 1"=50'
DATE: 12-31-14



LEGEND

- | | |
|---|--|
|  EXISTING TRACK |  EXISTING SIGNAL GATE |
|  PROPOSED TRACK |  REMOVED SIGNAL GATE |
|  PROPOSED SIGNAL GATE | |



HDR Engineering, Inc.

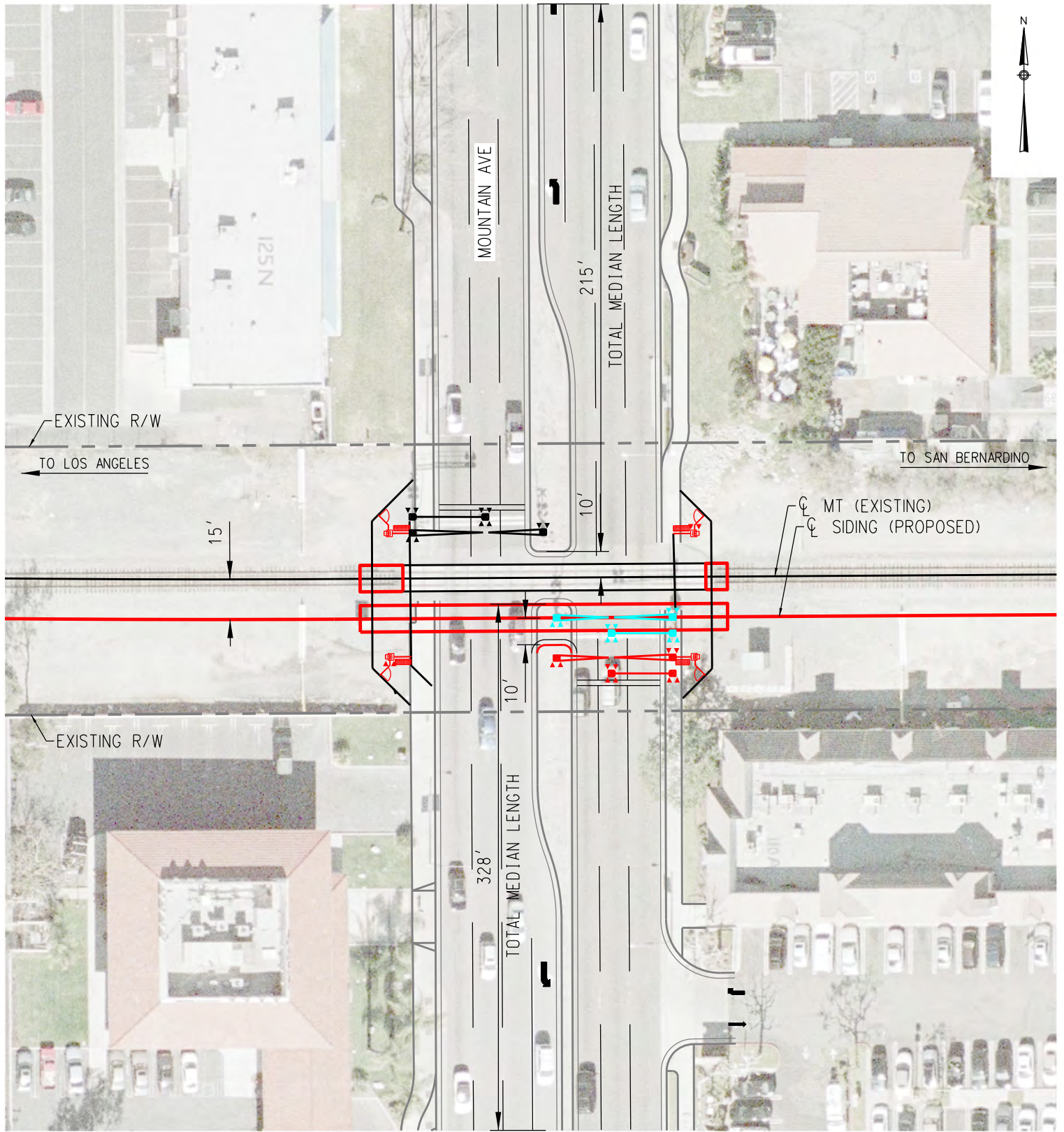
2280 Market Street, Suite 100
Riverside, CA 92501-2110
951 320-7300



UPLAND TRANSIT ORIENTED DESIGN

SAN ANTONIO AVENUE GRADE CROSSING
CPUC No. 101SG-36.20
DOT No. 026174W

SCALE: 1"=50'
DATE: 12-31-14



LEGEND

- | | |
|---|--|
|  EXISTING TRACK |  EXISTING SIGNAL GATE |
|  PROPOSED TRACK |  REMOVED SIGNAL GATE |
|  PROPOSED SIGNAL GATE | |



HDR Engineering, Inc.

2280 Market Street, Suite 100
Riverside, CA 92501-2110
951 320-7300



UPLAND TRANSIT ORIENTED DESIGN

MOUNTAIN AVENUE GRADE CROSSING
CPUC No. 101SG-35.70
DOT No. 026175D

SCALE: 1"=50'
DATE: 12-31-14

Appendix N: Quiet Zone Calculations

Upland Metrolink Land Use and Constraints Analysis

Quiet Zone Calculation for Scenario 1:

FRA - Quiet Zone Calculator - Windows Internet Explorer

[http://safetydata.f...](#)

FRA - Quiet Zone Ca...

Print This Page

Federal Railroad Administration

QUIET ZONE CALCULATOR

Home | Help | Contact | logoff Gerard.Reminiskey@hdrinc.com

Cancel Change Scenario: UPLAND_02_44407 Continue

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
026168T	CAMPUS AVENUE	9300	Gates	0	6	13,212.96	MODIFY
026172H	SECOND AVENUE	0	Closed	0	0	0	Closed
026173P	EUCLID AVENUE	39300	Gates	0	13	18,991.09	MODIFY

Create New Zone
Manage Existing Zones
Log Off

Step by Step Instructions:

* Only Public At Grade Crossings are listed.

Click for Supplementary Safety Measures [SSM]

Click for ASM spreadsheet: **ASM** * Note: The use of ASMs requires an application to and approval from the FRA.

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the **MODIFY** Button

Step 2: Select proposed warning device or SSM. Then click the **UPDATE** button. To generate a spreadsheet of the values on this page, click on **ASM** button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the **SELECT** button is shown at the bottom right side of this page. Note that the **SELECT** button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the **SELECT** button

Summary

Proposed Quiet Zone:	Upland_02_Three_Xings
Type:	New 24-hour QZ
Scenario:	UPLAND_02_44407
Estimated Total Cost:	\$143,000.00
Nationwide Significant Risk Threshold:	14347 .00
Risk Index with Horns:	50821.89
Quiet Zone Risk Index:	10734.68

Select

135%

Upland Metrolink Land Use and Constraints Analysis

Quiet Zone Calculation for Scenario 2

FRA - Quiet Zone Calculator - Windows Internet Explorer

[http://safetydata.f...](#)

FRA - Quiet Zone Ca...

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Change Scenario: Upland_02_44408

Create New Zone

Manage Existing Zones

Log Off

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the [MODIFY](#) Button

Step 2: Select proposed warning device or SSM. Then click the [UPDATE](#) button. To generate a spreadsheet of the values on this page, click on [ASM](#) button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the [SELECT](#) button is shown at the bottom right side of this page. Note that the [SELECT](#) button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the [SELECT](#) button

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
026168T	CAMPUS AVENUE	8300	Gates	0	6	12,936.54	MODIFY
026172H	SECOND AVENUE	2300	Gates	0	6	23,798.90	MODIFY
026173P	EUCLID AVENUE	38000	Gates	0	13	18,918.68	MODIFY

* Only Public At Grade Crossings are listed.

ALERT: Quiet Zone qualifies because SSM has been applied in each crossing.

Click for [Supplementary Safety Measures \[SSM\]](#)

Click for ASM spreadsheet: [ASM](#) * Note: The use of ASMs requires an application to and approval from the FRA.

Summary

Proposed Quiet Zone:	Upland_02_Three_Xings
Type:	New 24-hour QZ
Scenario:	Upland_02_44408
Estimated Total Cost:	\$271,000.00
Nationwide Significant Risk Threshold:	14347 .00
Risk Index with Horns:	50821.89
Quiet Zone Risk Index:	18551.38

135%

Upland Metrolink Land Use and Constraints Analysis

Quiet Zone Calculation for Scenario 3

FRA - Quiet Zone Calculator - Windows Internet Explorer

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FRA - Quiet Zone Ca...

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Change Scenario:

Create New Zone

Manage Existing Zones

Log Off

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
026168T	CAMPUS AVENUE	9300	Gates	0	6	13,212.96	<input type="button" value="MODIFY"/>
026172H	SECOND AVENUE	0	Closed	0	0	0	Closed
026173P	EUCLID AVENUE	39300	Gates	0	13	18,991.09	<input type="button" value="MODIFY"/>
026174W	SAN ANTONIO AVE	8700	Gates	0	6	15,469.20	<input type="button" value="MODIFY"/>
026175D	MOUNTAIN AVENUE	44600	Gates	0	13	19,261.90	<input type="button" value="MODIFY"/>

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the [MODIFY](#) Button

Step 2: Select proposed warning device or SSM. Then click the [UPDATE](#) button. To generate a spreadsheet of the values on this page, click on [ASM](#) button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the [SELECT](#) button is shown at the bottom right side of this page. Note that the [SELECT](#) button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the [SELECT](#) button

* Only Public At Grade Crossings are listed.

[Click](#) for Supplementary Safety Measures [SSM]

[Click](#) for ASM spreadsheet: * Note: The use of ASMs requires an application to and approval from the FRA.

Summary

Proposed Quiet Zone:	Upland_01
Type:	New 24-hour QZ
Scenario:	UPLAND_01_44405
Estimated Total Cost:	\$286,000.00
Nationwide Significant Risk Threshold:	14347 .00
Risk Index with Horns:	50105.47
Quiet Zone Risk Index:	13387.03

135%

Upland Metrolink Land Use and Constraints Analysis

Quiet Zone Calculation for Scenario 4

FRA - Quiet Zone Calculator - Windows Internet Explorer

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FRA - Quiet Zone Ca...

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Change Scenario:

Create New Zone

Manage Existing Zones

Log Off

Step by Step Instructions:

Step 1: To specify New Warning Device (For Pre-Rule Quiet Zone Only) and/or SSM, click the [MODIFY](#) Button

Step 2: Select proposed warning device or SSM. Then click the [UPDATE](#) button. To generate a spreadsheet of the values on this page, click on [ASM](#) button—This spreadsheet can then be used for ASM calculations.

Step 3: Repeat Step (2) until the SELECT button is shown at the bottom right side of this page. Note that the SELECT button is shown ONLY when the Quiet Zone Risk Index falls below the NSRT or the Risk Index with Horn.

Step 4: To save the scenario and continue, click the SELECT button

Crossing	Street	Traffic	Warning Device	Pre-SSM	SSM	Risk	
026168T	CAMPUS AVENUE	8300	Gates	0	6	12,936.54	<input type="button" value="MODIFY"/>
026172H	SECOND AVENUE	2300	Gates	0	6	23,798.90	<input type="button" value="MODIFY"/>
026173P	EUCLID AVENUE	38000	Gates	0	13	18,918.68	<input type="button" value="MODIFY"/>
026174W	SAN ANTONIO AVE	8700	Gates	0	6	15,469.20	<input type="button" value="MODIFY"/>
026175D	MOUNTAIN AVENUE	44600	Gates	0	13	19,261.90	<input type="button" value="MODIFY"/>

* Only Public At Grade Crossings are listed.

ALERT: Quiet Zone qualifies because SSM has been applied in each crossing.

Click for [Supplementary Safety Measures \[SSM\]](#)

Click for ASM spreadsheet: * Note: The use of ASMs requires an application to and approval from the FRA.

Summary	
Proposed Quiet Zone:	Upland_01
Type:	New 24-hour QZ
Scenario:	Upland_01_44406
Estimated Total Cost:	\$414,000.00
Nationwide Significant Risk Threshold:	14347 .00
Risk Index with Horns:	50105.47
Quiet Zone Risk Index:	18077.05
<input type="button" value="Select"/>	

135%

Appendix O: April 06, 2015 SANBAG Board decision on SANBAG-owned Properties Adjacent to the Upland Metrolink Station

-
- San Bernardino County Transportation Commission •San Bernardino County Transportation Authority
•San Bernardino County Congestion Management Agency •Service Authority for Freeway Emergencies
-

AGENDA
Board of Directors Meeting
April 6, 2016

*******Start Time: 10:00 a.m. (CLOSED SESSION)*******
1170 W. 3rd Street, San Bernardino, CA 92410, 2nd Fl. (The Super Chief)

******Convene Regular Meeting at 10:30 a.m.******
1st Floor Lobby

LOCATION

San Bernardino Associated Governments
Santa Fe Depot - SANBAG Lobby 1st Floor
1170 W. 3rd Street, San Bernardino, CA

Board of Directors

President

Ryan McEachron, Council Member
City of Victorville

Vice-President

Robert Lovingood, Supervisor
County of San Bernardino

Rich Kerr, Mayor
City of Adelanto

Curt Emick, Council Member
Town of Apple Valley

Julie McIntyre, Mayor
City of Barstow

Bill Jahn, Mayor Pro Tem
City of Big Bear Lake

Dennis Yates, Mayor
City of Chino

Ed Graham, Council Member
City of Chino Hills

Frank Navarro, Council Member
City of Colton

Michael Tahan, Council Member
City of Fontana

Darcy McNaboe, Mayor
City of Grand Terrace

Eric Schmidt, Council Member
City of Hesperia

Larry McCallon, Mayor
City of Highland

Rhodes "Dusty" Rigsby, Mayor
City of Loma Linda

Paul Eaton, Mayor
City of Montclair

Edward Paget, Mayor
City of Needles

Alan Wapner, Council Member
City of Ontario

L. Dennis Michael, Mayor
City of Rancho Cucamonga

Jon Harrison, Mayor Pro Tem
City of Redlands

Deborah Robertson, Mayor
City of Rialto

R. Carey Davis, Mayor
City of San Bernardino

Joel Klink, Council Member
City of Twentynine Palms

Ray Musser, Mayor
City of Upland

Dick Riddell, Council Member
City of Yucaipa

George Huntington, Council Member
Town of Yucca Valley

Janice Rutherford, Supervisor
County of San Bernardino

James Ramos, Supervisor
County of San Bernardino

Curt Hagman, Supervisor
County of San Bernardino

Josie Gonzales, Supervisor
County of San Bernardino

John Bulinski, Caltrans
Ex-Officio Member

Ray Wolfe, *Executive Director*

Eileen Teichert, *SANBAG Counsel*

11. Second Quarter of Fiscal Year 2016 Right-of-Way Grants of Use Report

Receive second quarter (October, November, December) Right-of-Way Grants of Use Report.

Presenter: Carrie Schindler

This item was received by the Commuter Rail and Transit Committee on March 10, 2016.

12. SANBAG-owned Properties Adjacent to the Upland Metrolink Station

That the Board:

A. Receive and file the final Upland Land Use Constraints Analysis.

B. Authorize the Executive Director, or designee to develop and enter into an agreement with County of San Bernardino Real Estate Services Department ("RSD") to provide Real Property Disposition Services, in an estimated amount of \$18,250, for the sale of two SANBAG-owned properties adjacent to the Upland Metrolink Station; and direct the properties to be sold through public disposition procedures.

C. Authorize the termination of the current "Lease of Land" Agreement for the property located at 201-299 East Stowell Street, in Upland, California (Parcel No. 1046-605-01) at such a time that SANBAG staff deems appropriate.

D. Adopt Resolution No. 16-035 declaring the subject properties to be surplus and setting forth the procedures for a proposed sale as developed by staff in consultation with the RSD and as approved by SANBAG General Counsel.

E. Allocate the revenue generated from the sale of the properties toward additional parking for the Upland Metrolink Station and direct staff to work with the City of Upland on an agreement, which is approved prior to the sale of the properties that the additional parking will be on City owned land in the vicinity of the station.

Presenter: Carrie Schindler

This item was reviewed and unanimously recommended for approval by the Commuter Rail and Transit Committee on March 10, 2016. SANBAG General Counsel and Procurement Manager have reviewed this item.

13. Cooperative Agreement with the University of Redlands for Betterments to the Redlands Passenger Rail Project - University Station

That the Board, acting as the San Bernardino County Transportation Commission:

A. Authorize the Executive Director or his designee to negotiate the final form of and execute a Cooperative Agreement, Contract No. 16-1001469 with the University of Redlands, for the design and construction of betterments to the Redlands Passenger Rail Project University Station, for an amount still being negotiated, but currently estimated at \$1,144,807 as approved by SANBAG legal counsel.

B. Approve an expense budget amendment to the SANBAG Fiscal Year 2015/2016 Budget to increase Task No. 0324 Redland Passenger Rail Project in the amount of \$50,000 in accordance with the final negotiated value of Contract No. 16-1001469 in reimbursable Redlands Passenger Rail Project Funds from the University of Redlands.

Presenter: Carrie Schindler

This item was reviewed and recommended for approval (7-0-1; Abstained: Ramos) by the Commuter Rail and Transit Committee on March 10, 2016. SANBAG General Counsel and Procurement Manager have reviewed this item.

Minute Action

AGENDA ITEM: 12

Date: April 6, 2016

Subject:

SANBAG-owned Properties Adjacent to the Upland Metrolink Station

Recommendation:

That the Board:

- A. Receive and file the final Upland Land Use Constraints Analysis.
- B. Authorize the Executive Director, or designee to develop and enter into an agreement with County of San Bernardino Real Estate Services Department (“RSD”) to provide Real Property Disposition Services, in an estimated amount of \$18,250, for the sale of two SANBAG-owned properties adjacent to the Upland Metrolink Station; and direct the properties to be sold through public disposition procedures.
- C. Authorize the termination of the current “Lease of Land” Agreement for the property located at 201-299 East Stowell Street, in Upland, California (Parcel No. 1046-605-01) at such a time that SANBAG staff deems appropriate.
- D. Adopt Resolution No. 16-035 declaring the subject properties to be surplus and setting forth the procedures for a proposed sale as developed by staff in consultation with the RSD and as approved by SANBAG General Counsel.
- E. Allocate the revenue generated from the sale of the properties toward additional parking for the Upland Metrolink Station and direct staff to work with the City of Upland on an agreement, which is approved prior to the sale of the properties that the additional parking will be on City owned land in the vicinity of the station.

Background:

In August 2014, the Upland Land Use and Constraints Analysis (Analysis) was initiated in collaboration with San Bernardino Associated Governments (SANBAG) and the City of Upland (City), to examine the development potential of two SANBAG owned parcels located south of the Upland Metrolink Station. The two parcels are located on the north side of Stowell Street, between Euclid Avenue and Sultana Avenue, and on either side of 2nd Avenue. The properties have development potential based on their adjacency to the Metrolink Station and their location within the downtown area of the City, which the City would like to advance.

The Executive Summary of the Analysis is included as Attachment A and outlines the study area, objectives, land use and other items discussed and analyzed as part of the process in support of the development of the two parcels. The Analysis incorporated the review of key planning documents – the City of Upland’s adopted “General Plan of 1980” and the “Historical District Upland Specific Plan” (HDUSP), adopted in 2011. In addition, the Analysis identified an estimated residual land value under a townhome development configuration that ranged from \$2.3 million to \$7.1 million at a density of 20 units per acre depending on the developable area. Since completion of the constraints analysis and discussions with the City, SANBAG staff is

Entity: CTC

Board of Directors Agenda Item

April 6, 2016

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recommending that the properties be surplus, or sold, and that the revenue generated be used to fund additional parking at the Upland Metrolink Station in partnership with the City.

As part of the recommendation to dispose of these properties, staff analyzed the potential impact to extending Gold Line east beyond the Montclair Transcenter. It is important to note that the sale of the properties has no effect on the Gold Line Extension to Montclair Transcenter, the project included in the Measure I 2010-2040 Ordinance. However, should the Gold Line proceed east beyond the Montclair Transcenter, property adjacent to the existing Metrolink Corridor is needed. The specific property needed would depend on whether the Gold Line was located north or south of the existing Metrolink tracks. If the Gold Line was located south of the existing Metrolink tracks through Upland a large portion of these parcels would be needed. In addition, right-of-way would be required from the William Lyon Homes development under construction southeast of the Upland Station. If the Gold Line was located north of the existing Metrolink tracks, the majority of the block south of A Street would be impacted including existing Metrolink parking area and the business located adjacent to the Metrolink Corridor. This is not an isolated situation. At various locations along the corridor property would be impacted in order to accommodate an additional rail service in the existing Metrolink Corridor. Attachment B provides a general overview of the parcels likely to be impacted should the Gold Line continue east in the Metrolink Corridor beyond the Montclair Transcenter to Cucamonga Creek Channel. The Cucamonga Creek Channel is the north-south corridor identified in the 2015 SANBAG Ontario Rail Access Study for the Gold Line to proceed south to Ontario Airport. As it is unknown whether the alignment would be north or south of the tracks in certain segments, both the potential impacts north and south of the existing Metrolink tracks were identified for this purpose. Table 1 below identifies some of the pros and cons related to selling or retaining the properties.

Issue	Retain the Properties		Sell the Properties	
	Pro	Con	Pro	Con
Liability			Will reduce risk associated with owning the property	
Lump Sum Revenue			Will generate revenue for a project, possibly parking	
Potential use as Gold Line Right-of-Way	Might reduce the overall right of way need	The properties are likely to remain in their existing state for a long time.		Inhibits City's ability to develop parcels and general area
Ongoing Maintenance			Will reduce ongoing maintenance needs	
Loss in Lease Revenue	Current annual revenue is \$34,000			Loss of \$34,000 in annual lease revenue

At the March 2016 Commuter Rail and Transit Committee an inquiry was made regarding the impact to the historic Upland Lemon Growers Association building located at 4th Avenue and A Street should the Gold Line proceed east of Montclair on the north side of the existing Metrolink track. An analysis was done which indicated that based on the construction type and physical size of the building it is feasible to move the building within several blocks of its existing location. While there is no official federal or state-level guidance about appropriate places to

relocate an historic structure, it should be noted that the choice of the relocation site would be decided through formal consultation with the State Historic Preservation Officer, with the City, and with the public. The additional cost associated with moving the build was not estimated as it is dependent upon several details that are not known at this time.

There are several steps associated with the sale of publically owned property. Some initial steps have been completed to gather the data such as the appraisals, procuring updated preliminary title reports, and conducting a Phase I environmental of both properties. The Phase I environmental analysis was completed and recommended a Phase II environmental analysis. The Phase II environmental analysis has been initiated through one of SANBAG's On-Call contracts through the Contract Task Order (CTO) selection process. The fair market value of the properties could be impacted by the results of the Phase II analysis. Concurrently, legal counsel is researching if SANBAG will need to first offer the property to other public agencies (e.g. city, county, schools, etc.) or adjacent owners, whether or not SANBAG needs to go through an auction process or can sell the land directly, and whether or not a SANBAG Board resolution is required to dispose of the properties. Since the March 2016 Commuter Rail and Transit Committee, staff has determined that in order to be consistent with SANBAG Policy 10300, Surplus Personal Property, the properties are to be sold by auction in accordance with California Government Code Section 25363.

Appraisals for both properties were completed in January 2016. The "As-Is" Market Value of the subject properties' fee simple interest is as follows:

- Property 1 (Parcel Nos. 1046-605-02, 1046-605-03) is a vacant 1.22-acre located at 120 South Euclid Avenue with an "As-Is" Market Value of \$1,670,000.
- Property 2 (Parcel No. 1046-605-01) is located at 201-299 East Stowell Street is an occupied property with an "As-Is" Market Value of \$1,520,000.
- The lease agreement for Property 2 allows for termination with 30-day notice and that the tenant returns the property to the condition it was in prior to the lease.
- The appraisals indicated the highest and best uses for the properties are multi-family developments of 20 to 30 units per acre.
- The analyses, opinions, and conclusions communicated within the appraisal reports were developed based upon the requirements and guidelines of the current Uniform Standards of Professional Appraisal Practice (USPAP), the requirements of the Code of Professional Ethics and the Standards of Professional Appraisal Practice of the Appraisal Institute; and no hypothetical conditions were made for either appraisal.

Currently, the estimated time line for the above steps is approximately 9-12 months; however the timeline may become longer depending on the results of the Phase II environmental analysis, unless SANBAG sells the property "as is." In addition, staff is confirming that the primary source of funding to acquire the properties was local funds and that no action from another funding agency is required.

The San Bernardino County Real Estate Service Department (County RES) provides services to support the sale of surplus properties. As this is a new process for the Transit Program, staff is requesting that the Executive Director, or his designee, be authorized to enter an agreement with County RES for them to assist SANBAG in this effort. At the time of the March 2016 Commuter Rail and Transit Committee meeting the costs of such services were estimated at \$15,000 but have now been revised to \$18,500. As indicated at the March 2016 Commuter Rail and Transit Committee meeting a resolution declaring the subject properties to be surplus is required. Resolution No. 16-035 is attached and recommended for approval.

Board of Directors Agenda Item

April 6, 2016

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Financial Impact:

This item is not consistent with the Fiscal Year 2015/16 Budget. An administrative budget amendment is needed to increase Task No. 0377 Commuter Rail by \$115,000 in Rails Assets Funds.

Reviewed By:

This item was reviewed and unanimously recommended for approval by the Commuter Rail and Transit Committee on March 10, 2016. SANBAG General Counsel and Procurement Manager have reviewed this item.

Responsible Staff:

Carrie Schindler, Director of Transit and Rail

Approved
Board of Directors
Date: April 6, 2016

Witnessed By:



1170 W. 3rd Street, 2nd Floor
San Bernardino, CA 92410-1702
(909) 884-8276

sanbag.ca.gov



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Hatch Mott MacDonald
Lance Schulte

