Draft
Environmental Impact Report



Irwindale
Materials Recovery Facility
and Transfer Station Project

State Clearinghouse
Number
2013051029

April 2014

IRWINDALE
MATERIALS RECOVERY FACILITY
AND TRANSFER STATION PROJECT

Draft Environmental Impact Report



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PREPARED BY:

THE CITY OF IRWINDALE
PLANNING DEPARTMENT
5050 NORTH IRWINDALE AVENUE
IRWINDALE, CALIFORNIA 91706

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EXECUTIVE SUMMARY

ES-1 INTRODUCTION

The City of Irwindale has prepared this Environmental Impact Report (EIR) to provide information about the potential environmental effects associated with the *Irwindale Materials Recovery Facility and Transfer Station* (Proposed Project) to the public, governmental and/or responsible agencies, and other interested parties. The Proposed Project site is located within the City of Irwindale, Los Angeles County, California. The proposed materials recovery facility and transfer station (MRF/TS) constitutes a "project" under the California Environmental Quality Act (CEQA) as it requires discretionary approval by the City of Irwindale (State CEQA Guideline §15378). The City of Irwindale is the Lead Agency under CEQA (State CEQA Guideline §15367).

This EIR was prepared in compliance with CEQA [Public Resources Code §§21000-21178] and the 2014 State CEQA Guidelines [California Code of Regulations, Title 14, Chapter 3, §15000-15387]. As defined by State CEQA Guideline §15121, this EIR is an informational document intended to inform public agency decision makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency. CEQA requires that State and local government agencies consider the environmental consequences of projects over which they have discretionary authority. It is not the purpose of an EIR to recommend either approval or denial of a project. Rather, an EIR is a document whose primary purpose is to disclose the potential environmental impacts associated with an action or project.

Pursuant to State CEQA Guideline §15123, this chapter presents a brief summary of the proposed action and its consequences. Also identified within this chapter are each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; areas of controversy known to the Lead Agency; and issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.

The reader should not rely exclusively on the Executive Summary as the sole basis for judgment of the Proposed Project and Alternatives. The complete EIR should be consulted for specific information about the potential environmental effects and implementation of the mitigation program.

ES-2 SUMMARY OF THE PROPOSED PROJECT

Athens Services (Applicant/Operator) submitted an application to the City of Irwindale to construct and operate a materials recovery facility and transfer station with a fueling facility/convenience store (referred to as the *Irwindale Materials Recovery Facility and Transfer Station Project*).

The Proposed Project will require the following discretionary approvals by the City:

- General Plan Amendment (from commercial to commercial/industrial land use);
- Zoning Ordinance Amendment (to allow a MRF/TS use as a permitted land use in the M-2 zone with approval of a development agreement, and to revise the distance requirements for the sale of alcoholic beverages);
- Zone Change (from Heavy Manufacturing to Planned Development Overlay);
- Conditional Use Permit (required for the approval of the sale of alcoholic beverages in the proposed convenience store and for the gas station);
- Site Plan and Design Review Permit;
- Development Agreement pursuant to Government Code §§65864, et seq.;
- Sale/Disposition and Development Agreement; and
- Franchise and Facility Operations Agreement.

The Proposed Project site is addressed as 2200 Arrow Highway, and located at the northwestern intersection of Live Oak Avenue and Arrow Highway, within the City of Irwindale, in eastern Los Angeles County, California. Refer to **Exhibit ES-1 Regional Map**, **Exhibit ES-2 Vicinity Map**, **Exhibit ES-3 Location Map**, **Exhibit ES-4 Exterior Elevation**, and **Exhibit ES-5 Site Rendering Aerial View Looking North West**.

The irregular-shaped, triangular Proposed Project site is unimproved, and bordered on the south by Live Oak Avenue, on the east by the Santa Fe Dam and property owned by the U.S. Army Corps of Engineers (USACE), on the northeast by Arrow Highway, and on the west and northwest by an existing business/industrial parking lot. The site is crossed by a City of Los Angeles Department of Water and Power (LADWP) electricity transmission easement along the south side totaling approximately 2.84 acres of the total site area. In addition, Southern California Edison (SCE) Company holds a 23-foot-wide underground utility easement totaling approximately 0.5 acres along the entire length of the site frontage on Arrow Highway.

The Proposed Project site is approximately 17.22 acres (Assessor's Parcel Number 8535-001-911); and is currently zoned for Heavy Manufacturing and is designated for commercial land use in the City's General Plan. The site is located in an existing industrial area, with various commercial/industrial, residential, and recreational land uses in surrounding areas. Existing land uses that currently surround the site include a mixture of commercial and industrial to the west, east, and south, recreation/open space to the north, and residential to the south [beyond the commercial/industrial districts in the City of Baldwin Park].**Table ES-1 Surrounding Land Uses** demonstrates the existing land uses in the vicinity, including the City of Irwindale and adjacent City of Baldwin Park's General Plan land use designation and zoning.

Table ES-1 Surrounding Land Uses		
Direction	**Existing Land Use**	**General Plan land use designation / Zoning**
North	Arrow Highway, and Santa Fe Dam and Recreation Area	Open space/easements Agricultural (A-1)
South	South of Live Oak Avenue is the City of Baldwin Park - Developed industrial and commercial including Valley County Water District storage facility, Waste Management yard, and Allan Company MRF/TS (along Arrow Highway/Live Oak Avenue), with residential development south of those industrial uses.	Northern Industrial Focus Area Commercial/Industrial, General Industrial, and Single-Family Residential Industrial zone (all City of Baldwin Park zones)
East	Developed commercial and light industrial	Industrial/Business Park Agricultural (A-1)
West	Developed industrial/business park uses, commercial truck parking facility	Industrial/Business Park Heavy Manufacturing (M-2) and Agricultural (A-1)
Source: City of Irwindale General Plan Update (2008), City of Irwindale Zoning Map, and City of Baldwin Park 2020 General Plan (2002) and City of Baldwin Park Zoning Map (2006).		

Single Phase Construction

The Proposed Project would be constructed in a single phase. The schedule for the construction of the MRF/TS and fueling facility/convenience store at the site is estimated to require 18 months and to be completed in late 2015 to early 2016. It is estimated that an average daily construction crew of 84 employees would be present on site during construction. The Proposed Project is not anticipated to require the construction of any public infrastructure.

On-Site Management Plans

The Applicant has identified several *On-Site Management Plans*, which have been designed to eliminate or reduce potentially significant environmental impacts and to ensure on-site operational safety. Each of the management plans is based on current, functioning management plans in use at the Applicant's City of Industry MRF. These management plans are designed to comply with federal, state and/or local laws, regulations and ordinances and will be subject to review and approval by the City, including any future amendments. The *On-Site Management Plans* are identified below and are contained in their entirety within **Appendix B** of the EIR.

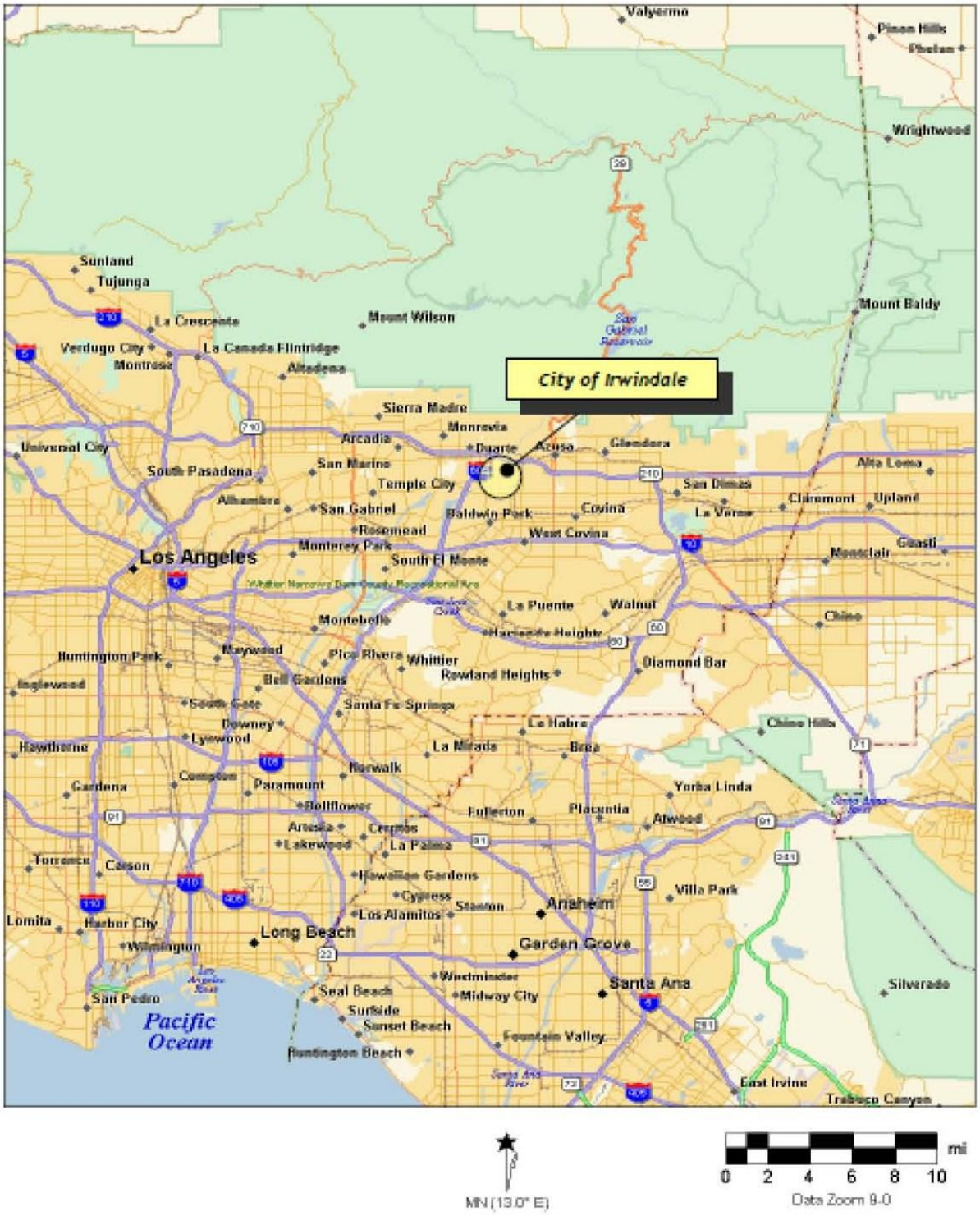
On-Site Management Plan #1 - Athens Services Litter Prevention Program
On-Site Management Plan #2 - Athens Services Pest Control Program

On-Site Management Plan #3 - Athens Services Odor Control Program
On-Site Management Plan #4 - Athens Services Noise Control Program
On-Site Management Plan #5 - Athens Services Hazardous Materials Program
On-Site Management Plan #6 - Athens Services Fire Prevention Control and Mitigation Plan
On-Site Management Plan #7 - Emergency Action Plan / Emergency Response Training Plan

Project Variant

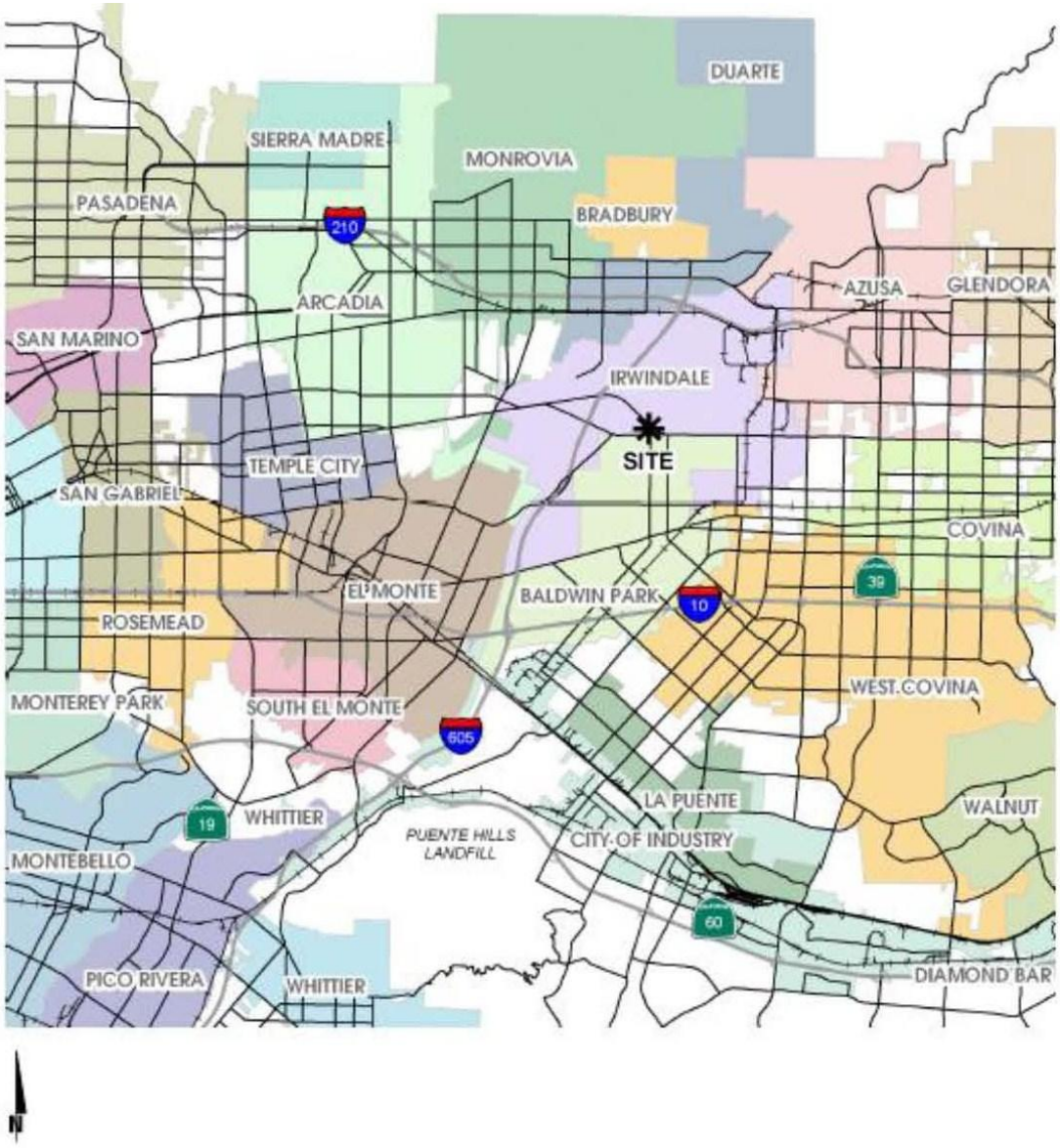
On the far eastern corner of the site, the Valley County Water District (VCWD) has expressed interest in acquiring 1.9 acres for placement of two water storage tanks. Development by the VCWD on this section of the site, owned by the City of Irwindale, is referred to as the "Project Variant." In the event that VCWD does acquire the 1.9 acres, the Proposed Project site would not be able to accommodate the required overnight parking for transfer trucks or the administrative office/maintenance building. In that event, the Applicant would need to hire sub-hauler vendors for all transfer truck operations, and the office/visitors' center would be incorporated into the main MRF/TS building. Under this alternative development option, the MRF/TS facility would essentially be the same as the Proposed Project described above, except that due to the reduced acreage available, there would be no transfer trucks parked or maintained at the facility.

Exhibit ES-1 Regional Map



Source: Irwindale General Plan Update, 2008

Exhibit ES-2 Vicinity Map



Source: Urban Crossroads, 2013

Exhibit ES-3 Location Map



Exhibit ES-4 Exterior Elevation



Exhibit ES-5 Site Rendering Aerial View looking North-West



ES-3 STATEMENT OF OBJECTIVES

Pursuant to State CEQA Objectives 15124(b), the Project Description shall include a statement of objectives. These objectives assist the City in developing a reasonable range of alternatives to evaluate in the EIR, and aid the decision-makers in preparing findings or a statement of over-riding considerations, if necessary. The objectives are designed to demonstrate the underlying purpose of the project. The City of Irwindale has identified the following list of criteria as the objectives for the *Irwindale Materials Recovery Facility and Transfer Station.*

- The City of Irwindale seeks long term economic development that provides a range of employment opportunities to local citizens.

- Assembly Bill 341 [2011] sets a 75% recycling goal for California by 2020; therefore, the City of Irwindale seeks to achieve and surpass waste reduction and diversion goals and mandates, by providing additional processing capacity to increase diversion of recyclable commodities from the mixed municipal waste stream, thereby reducing the consumption of landfill capacity and prolonging the operational period of the region's current permitted landfill capacity.

- Provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts to the extent feasible.

- Construct the facility at a location with nearby Interstate access for both ingress and egress and which minimizes the traffic on local communities, and on the regional transportation network.

- Provide a disposal outlet accessible to local waste haulers during non-peak traffic hours with a goal to reduce traffic loading to area roads during peak hours.

ES-4 ISSUES OF CONCERN / AREAS OF CONTROVERSY

In accordance with State CEQA Guidelines §§15082, 15103, and 15161, the City submitted a Notice of Preparation (NOP) to the State Office of Planning and Research, Clearinghouse and Planning Unit (SCH) on May 10, 2013. The CEQA-mandated 30-day public review period extended from May 13, 2013 through June 12, 2013. The comment period was extended to July 12, 2013 to accommodate a public scoping meeting held July 9, 2013 in response to a comment letter which pointed out that such a meeting is required for any project that involves a General Plan Amendment (State CEQA Guidelines §15082). The purpose of a scoping meeting is to provide the public with information on the Proposed Project; in turn, the scoping process can be helpful in identifying the range of actions, alternatives, mitigation measures and significant

effects to be analyzed in depth in the EIR and in eliminating from detailed study issues not found to be significant. A copy of the SCH-stamped NOP, NOP/EIR Distribution List, Notice of NOP, Notice of Scoping Meeting, and comment letters received in response to the NOP and related scoping efforts are included in **Appendix A – Project Scoping Materials** of the EIR.

Pursuant to State CEQA Guidelines §15123(B)(2), the areas of controversy known to the City of Irwindale, including issues raised by agencies and the public are summarized below. The complete index of written comment letters received are presented in **Appendix A** of the EIR.

Written Comment Letters

State Governor's Office of Planning and Research (May 13, 2013)

- State Clearinghouse Project Number 2013051029
- NOP sent to reviewing agencies

County of Los Angeles, Public Health (May 20, 2013)

- Please discuss these items in the EIR: permitted area; peak daily tonnage; peak vehicle count; days of operation; hours of operation; design capacity; acceptable wastes; procedure for handing incoming incidental hazardous waste; tonnage; all incoming materials must use scales; design characteristics of significant improvements; where materials will be handled; operational design features; location/duration of materials storage; maps of operational areas, Odor Management Plan; comply with Southern California Air Quality Management District; permits required, including the Solid Waste Facility Permit; potentially significant environmental impacts; cumulative impacts; land use compatibility; traffic system impacts; air quality; noise; risk of upset/human health risk; and mitigation Program.
- Acting as the Local Enforcement Agency, requests EIR, and all future project correspondence. Send any other environmental documents to CalRecycle's Waste Compliance and Mitigation Program permitting and LEA Support Division/Environmental Review at 1011 "I" Street, Sacramento, CA 95814.

Patricia Chamberlain (May 21, 2013)

- Believes that the Proposed Project will not affect Irwindale, rather Baldwin Park.

Gabrieleno Band of Mission Indians/Kizh Tribe of the Los Angeles Basin, Orange County, and the Channel Islands (May 21, 2013)

- Requests one of the Tribes' certified Native American Monitors to be on-site during all ground disturbances.

Bella Hernandez (May 23, 2013)

- Residents of Baldwin Park oppose for several reasons: current air quality is already beyond acceptable levels due to freeway, and businesses nearby; project will increase cancer risk due to increased contaminants found in waste, more rodents due to increased odors, and more truck traffic leading to increased air pollution and noise. Facility will reduce properties values based on these impacts.
- Residents will oppose a project that worsens air quality and puts public health at risk.

City of Arcadia (June 6, 2013)

- Requests copy of the traffic study.

Bette Lou Lowes (no date)

- Opposes project. Will impact residents of Baldwin Park but not Irwindale residents due to location. Does not want extra traffic, noise pollution, and smells. Schools, businesses homes, and Santa Fe Dam recreation area within walking distance.

Paul Lin (June 11, 2013)

- Opposes project. Following points should be considered by the City: air pollution, smell condition, environmental vision, traffic, image, quality of communication, and property value.
- Build project in non-residential area, and care of human rights.

California Department of Transportation (June 11, 2013)

- Requests evaluation of potential transportation impacts to I-605 and I-210 as well and nearby on- and off-ramps.
- Requests that the traffic study be conducted and include the following elements: inclusion of all appropriate traffic volumes; analysis of AM and PM peak hour volumes for existing and future at I-605/Live Oak Ave and I-210/Irwindale Ave; presentation of assumptions and methods used; travel modeling to be consistent with regional and local forecasts; discussion of mitigation measures, and refer to CalTrans website in preparing the traffic report.
- Requests: truck vehicle access to/from highways may be slower than other vehicles; turning radii; shoulder widths; sight distance; cargo spills; and designated truck routes.
- Requests project truck trips are limited to off-peak commute periods as much as possible. Project should avoid platooning of truck.

County of Los Angeles, Department of Parks and Recreation (June 12, 2013)

- The EIR should address: aesthetics; air quality; noise and recreation.

Valley County Water District (June 11, 2013)

- The agency states its intentions of negotiating a sale agreement with the City of Irwindale to purchase 1.9 acres of the project site, and intends to do so within the 2013 calendar year.

Remy, Moose, Manley LLP (June 13, 2013)

- Letter is written on behalf of client "Waste Management".
- Duty to consult with the California Department of Transportation and hold scoping meeting citing various regulations.
- Traffic and circulation concern. Traffic study should explain basis for route assumption.
- Waste Management recommends the City consult with the City of Azusa's engineering staff regarding traffic impacts to Azusa's roadways.

Jane and John Maguire (June 10, 2013)

- Opposes project. San Gabriel Valley has the worst air quality in the county. Traffic is an issue in Baldwin Park. Environmental justice issue. Noise, air quality, dust and lights will affect Baldwin Park residents. Look at other sites to build project.

Julie Pena (June 13, 2013)

- Opposes project due to traffic, noise and environmental pollution, odors, and project location.

D Squyres (June 15, 2013)

- Concerned about location, smell and insects. Look to another location. Supports recycling.

County Sanitation Districts of Los Angeles County (June 13, 2013)

- The agency provides the following comments in regards to sewage service.
- Project may require permit for Industrial Waste Discharge. Project developers to contact Industrial Waste Section 562.98.4288 ext 2900. Waste flow from the project site will discharge into local line, not the District's.
- Wastewater will be treated at the San Jose Creek Water Reclamation Plant. Expected flow rates are provided.
- The District is authorized to charge a connect fee.
- The District intends to provide the project with service up to the levels that are legally permitted and based on regional growth forecast by the Southern California Associate of Governments.

City of Azusa (June 12, 2013)

- Project Description Variant concerns regarding traffic.
- Project Description – confirm consideration of off-site lot on Vincent Avenue for use as truck storage.
- Requests EIR evaluation of air quality, hazards, noise, odors, operating hours, project alternatives, cumulative impacts, Santa Fe Dam recreation area, and water infrastructure.

Jessie Almada (no date)

- Baldwin Park is the worst location for the project. Air quality impacts to the Santa Fe Dam recreation area, homes, and schools. Traffic congestion not needed. Use location near rock quarries. Air quality article attached.

Ken Woods (no date)

- Concerned for truck traffic cutting through Baldwin Park and backing up light signals.

Faith Cruz (July 10, 2013)

- Opposes project. Traffic is already busy from Waste Management and Allen Recycling. Concerns of accidents, current air pollution, nearby food distribution, schools and dam, and smells. Use different location. No tax benefit to Baldwin Park. Not fair to residents. Project meeting time a concern.

City of West Covina (July 8, 2013)

- Requests evaluation of truck route to and from MRF/TS, and air quality effects given prevailing winds currents (and odor impacts) in regards to the effect on properties within West Covina

Jane and John Maguire (July 12, 2013)

- Complaint that the scoping meeting was held too early in day (4:00-5:30 PM). Don't build project near Baldwin Park residents. Concern for increase in traffic, air pollution, light, noise, and further disruption of the neighborhood, property values, and existing land uses. Project would be 500ft from house. Project is about money not consideration of residents.

Leon Ornellas (July 12, 2013))

- Concerns are hazardous material, traffic, and contaminated water.

Ernie Cardona (July 12, 2013)

- Hazardous materials recovery facility near our clean water source is not recommended.

Miguel Escoto (July 12, 2013)

- Hazardous materials recovery facility near our clean water source is not recommended.

Manuel Chavez (July 12, 2013)

- Concerns for rodents, foul smell, traffic, and possible universal household waste that may not be recycled properly ends up at the MRF and seep into groundwater.

Mario Cruz (July 12, 2013)

- Opposes project. Facility will increase already congested streets. Concern for contaminated water with drinking water cross the street. Already a nearby recycling center, and MRF.

F. Javier Torres (July 12, 2013)

- What becomes of the hazardous waste from housing? Bad odors from facility? Is it not too close to food processing facility? What will the traffic impact be? Trucks leaking fluid from garbage? Why build another when one is being built? What about leakage of on-site fuel facility? Transfer station will cause CHP to do check points, creating traffic jam on main roads. What happens when older trucks break down on roads?

Valley County Water District (July 12, 2013)

- Primary concerns include; odor control capabilities; increase of trucks and exhaust emissions as they relate to possible absorption of air contaminants into water tanks. Pest management, storage of toxic waste and leaching into ground and groundwater. Potable water for wash down and discharge.

Jesus Ramirez (July 12, 2013)

- Opposes project due to health concerns and location to homes. Not in favor of building the recycling center here because there will always be bad odors, rodents and traffic. Current odor problem will increase.

Phone Log:

1. Stephanie [last name unknown] (phone call)
2. Jessie Almada (phone call and letter)
3. Los Angeles County Department of Public Health

Speakers at Scoping Meeting

1. Mike Mohajer – traffic and waste management concerns
2. Ken Woods – traffic and waste management concerns
3. Linda Noriega – Valley County Water District interest in using portion of the site for water storage tanks

The EIR addresses each of these topic areas of concern or controversy, examines project-related and cumulative environmental impacts, identifies significant adverse environmental impacts and proposed mitigation measures designed to reduce or eliminate potentially significant impacts. The EIR is being made available for public review and comment for a period of 45-days beginning on April 2, 2014 and ending on May 16, 2014.

ES-5 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

The Proposed Project would result in significant and unavoidable impacts to air emissions, noise and traffic.

Air Quality – All impacts related to air quality, greenhouse gases, odor, and health risks would be less than significant except for the following, which are significant and unavoidable: 1) Project operation regional air quality impacts; and 2) Cumulative impacts of criteria pollutants. The Proposed Project would result in a significant ROG and NO_x impacts during operations. Therefore, the Proposed Project would result in a regional cumulative operations impact given that the Basin is in nonattainment for ozone and the Proposed Project would exceed the regional daily emissions thresholds for ROG and NO_x, which are ozone precursors.

Noise – The Proposed Project would result in significant short-term construction, permanent ambient operational noise impacts on the western/northwestern border, and traffic related noise impact. These noise impacts would occur along the property boundary during construction activities and during operations. Traffic-related noise would be significant at the exterior area of offices and business between the site and the freeways along Arrow Highway west of Rivergrade Road. Also, the operational noise impacts on the western/northwestern border and the traffic-related noise impacts would be considered significant and unavoidable; and therefore, they would contribute to a significant and unavoidable cumulative noise impact.

Traffic – Implementation of the recommendations referred to within this EIR as the traffic Mitigation Program would reduce potential transportation and circulation impacts to a less than significant level; and therefore there are no residual impacts after implementation of the identified Mitigation Program. However, as the Proposed Project would contribute to the existing and forecasted deficient freeway segments, the Project's contribution to these cumulative traffic impacts is considered cumulatively considerable.

All other potentially significant environmental impacts would be reduced to a less than significant impact level with implementation of the Mitigation Program identified within this EIR.

ES-6 PROPOSED PROJECT ALTERNATIVES SUMMARY

State CEQA Guidelines §15126.6 require that an EIR describe and evaluate the comparative merits of a range of alternatives to the project that could feasibly attain most of the objectives of the project but would avoid or substantially lessen significant effects. An EIR is not required to consider alternatives which are infeasible, however, State CEQA Guidelines §15126.6(b) specifies that the EIR shall evaluate alternatives capable of avoiding or substantially lessening significant effects of the project even if these alternatives could impede to some degree attainment of project objectives, or impose additional costs.

The alternatives evaluated in this EIR were identified based on: 1) input from the City; 2) input from the Applicant; (3) input provided by the NOP comment letters; and (4) potential environmental impacts of the Proposed Project identified within the EIR.

The alternatives to the Proposed Project are discussed and analyzed in **Chapter 5.0** of this EIR and include: alternative locations, no project alternative, and reduced tonnage capacity alternative. The findings are summarized below.

The City reviewed seven (7) different locations for their potential siting of the Proposed Project. The potential alternative locations initially considered by the City were later rejected as infeasible during the environmental review process based in part on not meeting some or all of the Project Objectives, as well as not reducing or avoiding potential impacts to a greater extent than the Proposed Project.

The No Project alternative will not contribute to attainment of AB 939 waste management goals in the vicinity and region. In addition, the No Project Alternative does not assist the Project's objective to comply with Assembly Bill 341 whereby supporting California's 75% recycling goal by 2020, or its objective to provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts. The No Project scenario also does not contribute to attainment of the City's short-term and long-term economic development employment goals.

The Reduced Tonnage Alternative would result in lessened environmental impacts compared to the Proposed Project by reducing the total traffic volume and related air emissions and traffic noise. However, this alternative does not capture the full potential to recover materials from the local and regional waste stream prior to transfer and/or disposal, which will therefore need to occur at another site in the region.

ES-7 PUBLIC REVIEW

This EIR document is being circulated to State, regional, and local agencies, and to interested individuals that may wish to review and comment on the MRF/TS EIR. Publication of this EIR marks the beginning of the 45-day public review period during which the City will receive written comments at the following address:

Ms. Paula Kelly, Senior Planner
City of Irwindale
5050 North Irwindale Avenue
Irwindale, California 91706
Telephone: (626) 430-2200 / Facsimile: (626) 962-2018

Copies of the EIR are available to the public at the City Clerk's office and the Irwindale Public Library located at 5050 North Irwindale Avenue in the City of Irwindale, California 91706.

ES-8 SUMMARY OF IMPACTS AND MITIGATION

This EIR addresses the potential environmental impacts related to implementation of the Proposed Project. The EIR also proposes a Mitigation Program intended to reduce significant adverse impacts to a level that is less than significant, where applicable and feasible. Implementation of the Proposed Project may result in the potentially significant impacts summarized below, and which are evaluated in detail in **Chapter 3.0 Environmental Settings and Impact Analysis** of this EIR.

Table ES-2 Potentially Significant Effects and Mitigation Program [below] identifies the project environmental impacts, mitigation program, and level of significance after implementation of the Mitigation Program.

The Final EIR will contain a Mitigation Summary chapter including a Mitigation Monitoring and Reporting Program (MMRP). The MMRP will provide a verification schedule for the mitigation measures and will be incorporated into the City's Conditions of Approval for this Proposed Project. An initialed box for the date of compliance will be monitored by a designated staff member to indicate the timing of such compliance [i.e., prior to building permit, prior to earthwork activities, etc] to fulfill the City's monitoring requirements with respect to Assembly Bill 3180 (Public Resources Code §21081.6).

Table ES-2 Potentially Significant Effects and Mitigation Program *Irwindale Materials Recovery Facility and Transfer Station EIR*		
Potentially Significant Effects	**Proposed Mitigation Measures**	**Level of Impact After Mitigation**
3.2 Aesthetics		
No significant or potential significant aesthetic impacts from either construction or operational activities are anticipated with implementation of the Proposed Project.	No mitigation measures relative to this resource topic are proposed or required.	No impact.
3.3 Air Quality / GHG / Odor and HRA		
Air emissions attributable to construction activities are potentially significant, including vehicle emissions, construction equipment, and building coatings. Mitigation measures MM AQ-1 through AQ-12 are recommended to mitigate these potential effects.	**MM AQ-1** The Applicant shall ensure that contractors implement a fugitive dust control program pursuant to the provisions of SCAQMD Rules 402 and 403. This program shall include, but not limited to the following: • Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes. • Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday. • A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site. • All haul trucks hauling soil, sand, and other loose materials shall maintain at least six inches of freeboard in accordance with California Vehicle Code Section 23114. • All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive	Less than significant with mitigation for construction impacts. Unavoidable significant regional air quality impacts from Project operations, and for contribution to cumulative impacts of criteria pollutants.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	dust emissions). • Traffic speeds on unpaved roads shall be limited to 15 miles per hour. • Operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour. • On-site stock piles shall be covered or watered at least twice per day. **MM AQ-2** The Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications. **MM AQ-3** The Construction Constructor shall ensure Construction be discontinued during second-stage smog alerts. **MM AQ-4** Electricity from power poles rather than temporary diesel- or gasoline-powered generators shall be used, where available. **MM AQ-5** All construction vehicles shall be prohibited from idling in excess of five minutes, both on- and off-site. **MM AQ-6** Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations. **MM AQ-7** Heavy equipment operations shall be suspended during first and second stage smog alerts. **MM AQ-8** The use of 2010 model or newer construction equipment shall be required, where feasible.	

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	MM AQ-9 Older (prior to 2010 model year) construction equipment shall be retrofitted with appropriate emission control devices prior to onsite use. **MM AQ-10** Construction equipment idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. **MM AQ-11** Contractors shall use varying-pressure-low-volume paint applicators or other application techniques with equivalent or higher transfer efficiency. **MM AQ-12** Use super compliant VOC coatings for all architectural applications. (Rule 1113 of the SCAQMD established a schedule of VOC limits for architectural coatings. However, many manufacturers have reformulated their coatings to levels well below these limits. These are referred to as "Super-Compliant" and contain less than 10 grams of VOC per liter.)	
Air emissions of ROG and NOx attributable to project operations are potentially significant, including heavy duty vehicle emissions, on-site machinery and equipment, employee and convenience store traffic and related vehicle trips. Mitigation	**MM AQ-13** Applicant shall properly maintain ROG emission control devices within the gasoline dispensing station pursuant to SCAQMD Rule 461. **MM AQ-14** All gasoline dispensing facilities shall meet the requirements of SCAQMD's Rule 461 to limit ROG emissions from gasoline dispensing facilities, including but not limited to using CARB-certified vapor recovery systems and spill boxes and periodic testing of the equipment.	Unavoidable significant regional air quality impacts from Project operation, and cumulative impacts of criteria pollutants.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
measures MM AQ-13 through AQ-19 are recommended to mitigate these potential effects.	**MM AQ-15** Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations. **MM AQ-16** The use of 2010 model or newer transfer trucks shall be required whenever older vehicles are replaced or upgraded, per SCAQMD Rule 1193. **MM AQ-17** Older (prior to 2010 model year) transfer trucks shall be equivalent to Tier 2 emission standards (such as particulate filter traps) prior to onsite use. **MM AQ-18** The Project Applicant shall require all on-site off-road heavy-duty equipment to meet USEPA Tier 3 or higher emissions standards such that all off-road diesel-powered operational equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. **MM AQ-19** All diesel truck operators shall strictly abide by the applicable State law requirements for idling, as described in the Airborne Toxic Control Measure (CCR, Title 13, Section 2485), which limits vehicles with gross vehicular weight ratings of more than 10,000 pounds to no more than five minutes of idling of the primary engine or the diesel-fueled auxiliary power system at any location.	

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
Odors from wastes and organic materials attributable to project operations are potentially significant. Mitigation measures MM AQ-20 through AQ-23 are recommended to mitigate these potential effects.	**MM AQ-21** Applicant shall minimize odors during operation of the MRF/TS by properly maintaining design features and equipment designed to reduce and eliminate odors and pursuant to provisions of SCAQMD Rule 410. **MM AQ-22** On-Site Management Plan No. 3, Athens Services Odor Control Program shall include a requirement that any and all odor complaints shall be referred directly to the City of Irwindale Community Development Department Code Enforcement Division. Odor complaints shall be substantiated by the City as follows: a. Inspection and confirmation by Code Enforcement Division Staff; and/or b. Inspection and confirmation by the SCAQMD; and/or c. A qualified consultant, as determined and selected by the City, will be retained to collect samples to quantify odor intensity using a Nasal Ranger or other comparable instrument. Such consultant shall be retained by the City at the sole expense of the Applicant. Upon substantiation of an odor complaint, Applicant shall meet with the City within 48 hours to determine actions to remedy the odor complaint. A detailed action plan shall be prepared within 72 hours of the meeting identifying the steps to be taken to remedy the issue. All remedies shall be at the sole expense of the Applicant, and shall be implemented / installed as soon as feasible. **MM AQ-23** As a means to address public concerns and complaints regarding odors, the Project Applicant shall publicly post the SCAQMD odor complaint phone number [1-800-CUT-SMOG (1-800-288-7664)] and website address (http://www.aqmd.gov/complain/reporting_aq_problems.html) on signs that are visible from the street at all entrances to the MRF/TS facility.	Less than significant with mitigation.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
GHG emissions attributable to project operations are potentially significant. Mitigation measure MM AQ-24 is recommended to address this potential impact.	**MM AQ-24:** The Project Applicant shall purchase verifiable and certified GHG offset credits and provide verification to the City of the purchase. Off-set credits shall be purchased in an amount that is based on one of the following: (1) Offset-credits for 21,152 metric tons) or, (2) Offset-credits in an amount computed on the basis of the Project's actual GHG emissions the previous year compared to actual Project-related emissions compared to emissions from the baseline condition [what MRF was used in 2013] minus 10,000 metric tons of CO2e per year. The calculation must be prepared and certified by a professional Air Pollution expert, acceptable to the City as determined by the Director of Community Development. When feasible, offset purchases would be prioritized by proximity to the Project Site, with greatest preference given to projects within the jurisdictional boundaries of the SCAQMD, then California, and then finally nationally. Carbon offsets are widely available in a number of markets (e.g., GreenX and IntercontinentalExchange) and exists at levels that greatly exceed the potential needs of the Proposed Project.	Less than significant with mitigation.
3.4 Biological Resources		
Grading and construction activities undertaken for the Proposed Project may disturb birds protected under the federal Migratory Bird Treaty Act and California Fish and Game Codes. Mitigation measure **Bio-1** is recommended to address this	**MM BIO-1** The Applicant shall comply with the regulatory requirements of the federal Migratory Bird Treaty Act and California Fish and Game Codes §3503, §3503.5, and §3513 regarding Proposed Project grading and construction activities. *Pre-construction Surveys for Nesting Birds* The Applicant shall implement the following protective measures to ensure implementation of the	Less than significant with mitigation.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
potential effect.	Migratory Bird Treaty Act and compliance with State regulations during construction. To the extent feasible, the Applicant and/or the construction contractor(s) shall trim/remove all vegetation/tree limbs necessary for Proposed Project construction between September 1 and January 31. Should construction activities or vegetation removal commence between February 1 to August 31, pre-construction surveys for nesting birds shall be conducted for any affected tree(s) located within the public right of way by a qualified biologist to ensure that no active nests would be disturbed during project implementation. A preconstruction survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities. During this survey, the qualified person shall inspect the street trees located within the public right of way and areas immediately adjacent to the project site for nests. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist, in consultation with the California Department of Fish and Wildlife, shall determine the extent of a construction-free buffer zone to be established around the nest until the young have fledged.	
3.5 Cultural Resources		
Although it is not expected that historical, archaeological or paleontological resources, or human remains will be found on site, it is possible that construction grading and excavations may encounter such materials. Mitigation measures **MM CR-1** through **CR-4** are recommended to	**MM CR-1** The Applicant and City shall consult with the Gabrieleño Band of Mission Indian Tribe, prior to on-site earthwork activities, to invite a Native American Monitor at the project site for the excavation and ground disturbance activities. **MM CR-2** In the event any previously undetected archaeological resources are encountered during project construction, all excavation and ground disturbance activities shall cease and a qualified archaeologist will be contacted within 24 hours to evaluate the nature and significance of any such discoveries. If a discovery proves to be significant, additional work (such as	Less than significant with mitigation.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
address these potential effects.	data recovery excavation) may be warranted. Work may be resumed with approval of the attending archeologist and City Staff. Further, should unforeseen artifacts become uncovered during site grading, the Applicant would be required to adhere to all City and State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the MRF/TS project would not have an adverse effect on cultural resources. **MM CR-3** In the event that any unknown (remaining) paleontological or geological resources are encountered during project implementation, the Applicant shall cease earthwork immediately and contact a qualified paleontologist or geologist within 24-hours to evaluate the nature and significance of any such discoveries. Work may be resumed with approval of the attending archeologist and City Staff. **MM CR-4** If human remains are discovered during project activities, the City of Irwindale Planning Department and the Los Angeles County Coroner's office shall be notified within 24 hours under state law (California Health and Safety Code § 7050.5) and all activities in the immediate area of the find shall cease until appropriate and lawful measures have been taken. If the Coroner determines that the remains are Native American, the NAHC shall also be contacted (California Public Resources Code § 5097.98). In accordance with Section 5097.98 of the *California Public Resources Code*, the NAHC shall designate a Most Likely Descendent, who may make recommendations concerning the disposition of the remains in consultation with the City and the project archaeologist.	

Table ES-2 Potentially Significant Effects and Mitigation Program *Irwindale Materials Recovery Facility and Transfer Station EIR*		
Potentially Significant Effects	**Proposed Mitigation Measures**	**Level of Impact After Mitigation**
3.6 Environmental Justice		
Environmental justice was assessed in response to scoping comments, and is not required to be analyzed under CEQA. The assessment concludes that the Proposed Project will not have any disproportionate effects on any disadvantaged population within the Los Angeles region or among local communities, and does not raise environmental justice issues beyond those attributable to the region as a whole.	No mitigation measures specific to environmental justice are required. The City is sensitive to the environmental effects of projects on the local community, and as documented throughout this DEIR, has identified a comprehensive Mitigation Program to avoid or minimize the potential impacts of this Proposed MRF/TS Project.	No impact.
3.7 Geology and Soils		
The entire region is an active seismic zone, requiring site specific consideration of foundation building requirements for safety. In addition, ground disturbance during construction could be susceptible to erosion and sedimentation during storm	**PDF GEO-1** The Applicant shall have a California Registered Geotechnical Engineer prepare a site-specific Geotechnical Report to the satisfaction of the City Engineer prior to issuance of the grading permit. This report will be undertaken in accordance with the CGS Guidelines for Evaluating and Mitigating Seismic Hazards in California. This report will provide design specification to assure the Proposed Project is developed within accepted federal, State, and local laws, regulations, and guidelines. **MM WQ-1**	Less than significant with mitigation.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
events. Project Design Feature **Geo-1** and mitigation measure **WQ-1** are recommended to address these potential impacts.	The Applicant shall comply with the project-specific National Pollutant Discharge Elimination System (NPDES) Permit requirements (such as the Storm Water Pollution Prevention Plans (SWPPPs) and Best Management Practices (BMPs) including: limiting construction access routes and stabilizing access points; staking/marking construction limits; protection of cut and fill surfaces from sheet, rill and gully erosion; stabilizing temporarily denuded areas with seeding, mulching, jute netting, hay bales and silt fences or other methods; designating specific areas for the stockpiling, handling, preparation and disposal of construction materials; quickly establishing groundcover and landscaping of areas designated to remain pervious; and/or waste material and litter control to prevent existing drainages).	
3.8 Hazards and Hazardous Materials		
Potential hazards and hazardous materials related to the project include the management of waste materials, and the possibility of illegally dumped hazardous wastes to be encountered in the recycling operations. Project Design Features **Haz-1** and **Haz-2** are recommended to address these potential effects.	**PDF HAZ-1** The Applicant shall form a Safety Committee and include a minimum of one (1) City Staff personnel as a participating member. The Safety Committee shall function with two roles. One function will be to annually review the *On-Site Management Plans.* The second function will include monthly review of the MRF/TS Daily Operational Report for waste stream capacity review. <u>On-Site Management Plans</u> The purpose of the annual review shall be to confirm or update the standard of practice for the management plans. The review will include utilizing information obtained from operational records, vendors, and suggestions from insurance companies. <u>MRF/TS Operational Report</u> The purpose of the monthly review shall be to ensure compliance with the 6,000 tons per day (maximum).	Less than significant impact.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	PDF HAZ-2 The Applicant shall prepare and have approved by the City *On-Site Management Plans.* Any and all future amendments to these management plans must be approved by the City. These plans include: 1) Litter Prevention and Control Plan; 2) Pest Control Plan; 3) Odor Control Plan; 4) Noise Control Plan; 5) Hazardous Materials Exclusion and Management Plan; 6) Fire Prevention, Control and Mitigation Plan; 7) Emergency Action Plan; and 8) Emergency Response Training Plan	
3.9 Land Use and Planning		
The Proposed Project has been reviewed in consideration of all of the goals, plans, and policies in the City's General Plan and concludes that the Proposed Project does not conflict with any goal, plan or policy of the City's General Plan, or other land use plan, policy, or regulation. The Proposed Project also does not conflict with the City of Baldwin Park's General Plan.	No mitigation required related to conformance with adopted land use plans, codes and standards.	No impact.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
3.10 Noise		
Noise generation attributable to the Proposed Projects includes construction activities and long term operations. Operational noise includes on site waste management and recycling operations, and traffic noise along truck haul routes on Arrow Highway and Live Oak Boulevard. Mitigation measures **N-1** through **N-7** are recommended to address these potential impacts to the extent feasible.	**MM N-1** Prior to construction, the Construction Contractor shall obtain authorization from Irwindale's building inspector to exceed the ambient base noise level by more than five (5) dBA during construction activities at the property boundary for industrial zoned land use. **MM N-2** The Construction Contractor shall limit all construction activities from 7 a.m. to 7 p.m. Monday through Saturday. No construction activity shall be conducted on Sundays or during legal holidays. **MM N-3** The Construction Contractor shall construct the masonry soundwall around the site perimeter during the initial construction phase to establish the means for noise reduction during subsequent construction and operations. In the event that the soundwall is not constructed prior to construction of the buildings, a temporary sound barrier or curtain shall be used as a temporary measure to reduce noise impacts (by at least 5 decibels) until the soundwall can be constructed. **MM N-4** The Construction Contractor shall operate and maintain a City-approved haul truck traffic route restricted to major traffic arteries, and prohibited from using Baldwin Park Boulevard south of Live Oak Avenue. **MM N-5** The Construction Contractor shall provide construction equipment equipped, operated, and maintained with manufacturer recommended mufflers or the equivalent. The construction contractor shall locate staging and delivery areas as far as feasible from sensitive land uses or adjacent occupied buildings and	Less than significant impacts with mitigation for most surrounding land uses. Unavoidable significant noise impacts for the adjacent commercial building to the west, and along Arrow Highway north of the Proposed Project site. Operational and traffic-related noise impacts would therefore contribute to a significant and unavoidable cumulative noise impact.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	schedule deliveries during daytime hours when residential areas south of the project site are less susceptible to annoyance from outside noise. **MM N-6** The Construction Contractor shall post rules visible to drivers that require turning-off construction equipment when not in operation (for more than 5 minutes). The construction contractor shall shield stationary equipment operating under full power for more than 60 minutes that would otherwise not be shielded by the perimeter soundwall. **MM N-7** The Applicant shall implement all of the following: • For the western/southwestern property boundary (for approximately the first 450 feet of the property boundary north of Live Oak Avenue), the Applicant shall construct the 8-foot perimeter masonry soundwall on top of a two-foot berm so that the effective height of the soundwall would be 10 feet (with the exception that the berm is not required to be constructed on any utility easements). • The Applicant shall modify nighttime operations (10 p.m. – 7 a.m.) that result in verified noise complaints to eliminate objectionable noise during the nighttime hours. The applicant shall notify the City of any noise complaints received within 24 hours of receiving the complaint and provide a proposed amendment to the On-Site Management Plans to demonstrate a reduction in ambient noise within one (1) week, subject to review and approval of the City upon a finding that the amendment will result in compliance with adopted noise standards of the City of Irwindale and the City of Baldwin Park. The Applicant shall obtain authorization by permit from the City to exceed ambient noise levels from facility operations on the western/northwestern boundary and the southern boundary (for 5 a.m. to 7 a.m.) pursuant to IMC	

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	Section 9.28.120. If the applicant does not obtain authorization by permit to exceed noise levels, the applicant will be required to modify operations to reduce noise levels between 5 a.m. to 7 a.m. to 65 dBA.	
3.11 Public Services		
No significant impacts on public services or utilities systems would result from either construction or operation of the Proposed Project.	No mitigation measures pertaining to public services are required.	No impacts.
3.12 Traffic Generation and Circulation		
Potential traffic impacts attributable to the project include high volume heavy duty trucks used in waste hauling and for transport of processed materials, as well as lighter duty vehicles for self-haul operations, employee trips, and trips for convenience store customers. The traffic impact assessment examined traffic flow and routing at the site and adjacent roadways, and haul routes to	<u>Recommended Off-Site Improvements</u> Existing plus Project, Interim Year (2016) Without and With Project, and Long Range (2035) conditions, the following improvements are recommended: **MM T-1** To mitigate potential traffic impacts at I-605 NB Off-Ramp (NS) / Live Oak Avenue (EW)(#8), the developer will be required to construct or fund the following improvement: a. Install a traffic signal. b. Construct a 2nd northbound right turn lane. c. Provide a 3rd westbound through lane by modifying the existing raised median. This will also provide additional queuing storage for the westbound left turn lane at the intersection of I-605 SB On-Ramp (NS) / Live Oak Avenue (EW).	Less than significant with mitigation. The Proposed Project is expected to contribute to cumulative impacts to existing deficiencies or projected deficiencies on the I-210 freeway mainline segments eastbound and westbound of the Irwindale Avenue on and off ramps, and the I-605 northbound off-ramp at Live Oak Avenue and the I-210 westbound off-ramp at

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
and from the freeway system, including both freeway ramp and mainline analyses as requested by Caltrans. Mitigation measures **T-1** through **T-7** are recommended to address these potential impacts.	In addition, the following improvements are recommended for 2035 with Project Conditions: **MM T-2** To mitigate potential traffic impacts to I-605 SB Off-Ramp (NS) / Arrow Highway (EW)(#3), the developer will be required to construct or fund the following improvements: Construct a 2nd southbound left turn lane. <u>On-Site Improvements Required to Mitigate Potential Traffic Impacts from Vehicles Entering and Exiting the Site</u> In addition to the impacts analysis provided above, the *Traffic Impact Analysis* (Appendix G) identified additional improvements that would eliminate potential impacts to Arrow Highway and Baldwin Park Boulevard, from vehicles entering and exiting the site. Vehicle queuing on-site at the Arrow Highway / Driveway 1 intersection is estimated to require approximately 240 feet of back-up / storage length during peak hours. The Project site plan accommodates this on-site peak hour queuing activity. Inbound Project traffic does not cross the paths of outbound vehicles in the vicinity of Driveway 1. However, the site access recommendation shown on **Exhibit 3.12-39,** provided in the *Traffic Impact Analysis* in Appendix G, include changes to the convenience store/gas pump access configuration in order to reduce conflicting auto turning movements in the vicinity of Driveway 1, as well as changes to reduce impacts from Driveway 2, 3 and 4. These recommendations will be required as mitigation measures as provided below. **MM T-3** To mitigate potential traffic impacts to Arrow Highway (NS) / Driveway 1 (EW), the Applicant shall be required to do the following: Prior to commencement of operations, the Applicant shall install a traffic signal and construct the intersection with the following geometrics:	Irwindale Avenue.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	• Northbound Approach: One left turn lane (two way turn lane) and two through lanes. • Southbound Approach: Two through lanes and one right turn lane. • Eastbound Approach: One left turn lane and one right turn lane. • Westbound Approach: N/A **MM T-4** To mitigate potential traffic impacts to Arrow Highway (NS) / Driveway 2 (EW), the Applicant shall be required to do the following: Prior to commencement of operations, the Applicant shall install a stop control on the eastbound approach and construct the intersection with the following geometrics: • Northbound Approach: One left turn lane (two way turn lane) and two through lanes. • Southbound Approach: Two through lanes and one right turn lane. • Eastbound Approach: One shared left turn and right turn lane. • Westbound Approach: N/A **MM T-5** To mitigate the potential impact to Driveway 3 - Baldwin Park Boulevard (NS) / Live Oak Av. (EW), the Applicant shall be required to do the following: Prior to commencement of operations, the Applicant shall modify traffic signal to include Project Driveway 3 (north leg) and construct the intersection with the following geometrics: • Northbound Approach: Two left turn lanes and one shared through-right turn lane. • Southbound Approach: One left turn lane and one shared through-right	

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
	turn lane. **MM T-6** To mitigate the potential impact to Driveway 3 - Baldwin Park Boulevard (NS) / Live Oak Av. (EW), Applicant shall be required to do the following: Prior to commencement of operations, the Applicant shall construct on the Eastbound Approach with *One left turn lane (100-foot pocket length), two through lanes, and one defacto right turn lane.* **MM T-7** To mitigate the potential impact to Driveway 3 - Baldwin Park Boulevard (NS) / Live Oak Av. (EW), the Applicant shall be required to do the following: Prior to commencement of operations, the Applicant shall construct a Westbound Approach: *One left turn lane, two through lanes, and one right turn lane.* • Provide a right-in/right-out access for the convenience store located between Driveway 1 and Driveway 2 along Arrow Highway. • Eliminate convenience store Driveway located immediately to the north of Driveway 1 along Arrow Highway. • Move Convenience Store/Gas pump access further into the site (away from signalized intersection, increasing the throat length of the driveway). • Provide a 28-foot internal access driveway connecting MRF main driveway to convenience store with gas pumps. • On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for the project site. • Sight distance at the project driveways shall be reviewed with respect to standard Caltrans and City of Irwindale sight distance standards at the time of preparation of final grading, landscape and street improvement plans.	

Table ES-2 Potentially Significant Effects and Mitigation Program *Irwindale Materials Recovery Facility and Transfer Station EIR*		
Potentially Significant Effects	**Proposed Mitigation Measures**	**Level of Impact After Mitigation**
3.13 Water Quality and Hydrology		
Potential water quality impacts attributable to the Proposed Project include the possibility for contaminants to be transported off-site in stormwater runoff. By design, discharges from the tipping floor and sorting area are enclosed within the Main Recovery Facility, eliminating the possible water runoff to stormwater discharge points. Green wastes are also stored in enclosed locations and would not be exposed to rainwater. All liquid waste from the power scrubbing of the tipping and green waste floors are proposed to be discharged to the municipal sewer system under permit from the Los Angeles County Sanitation Districts. Therefore, potential impacts are less than significant. Project Design Feature **WQ-1** is recommended for	**PDF WQ-1** The Proposed Project shall be conditioned by the City to be certifiable at the Silver level utilizing U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) green building rating systems. The LEED rating system requires water efficiency in the design of a project through water use reduction, efficient landscaping, and innovative wastewater treatment technologies, as well as sustainable site selection; energy performance standards; materials and resource selection criteria; and indoor air quality practices.	Less than significant impact.

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
implementation to assure that the facility operates at a high level of water efficiency and effective wastewater treatment.		
4.0 Mandatory CEQA Considerations		
Growth Inducement: The vacant site is currently zoned for Heavy Industrial use and is designated for commercial land use [now proposed for commercial/industrial land use] in fulfillment of the City's long-term economic development goals. The Project will add approximately 345 employees to the local and regional workforce. It is anticipated that prospective employees will come primarily from underemployed citizens from the City and surrounding communities, and therefore the new employment opportunities are not expected to induce substantial new population growth from outside the region. The Proposed Project does not remove any barriers to growth, and does not have characteristics that could induce growth locally or regionally. Therefore, potential growth inducing impacts are found to be less than significant.		
Significant Irreversible Effects and Irretrievable Commitment of Resources: In addition to the commitment of land to urban uses, implementation of the Proposed Project would involve the consumption of energy derived from nonrenewable sources for electricity to power on-site equipment and fossil fuels for project-related vehicle trips. Building materials could be considered permanently consumed. These changes would be irreversible, but are the result of long-term land use planning, fulfill regional recycling and waste management needs, and benefit the City's long-term economic development goals and plans. These changes are also not unique to this site, and would occur anywhere a MRF/TS was developed in the region. As such, these changes do not constitute significant adverse impacts.		
Significant and Unavoidable Adverse Impacts: With implementation of the Mitigation Program identified within the MRF/TS EIR the potentially significant environmental impacts identified for resource topics throughout this EIR would be less than significant, with the exception of air quality, noise, and cumulative traffic impacts.		
Energy Conservation: The Proposed Project has been designed to play a role in the integration of energy saving recycling of materials as		

Table ES-2 Potentially Significant Effects and Mitigation Program
Irwindale Materials Recovery Facility and Transfer Station EIR

Potentially Significant Effects	Proposed Mitigation Measures	Level of Impact After Mitigation
mandated by the State of California; as such, the Proposed Project is intended to help achieve existing and future recycling and waste reduction mandates, and waste management. The transfer station is also an energy efficient function, allowing processing of materials close to sources, with more efficient transport of processed materials to ultimate destinations. Numerous energy conservation mitigation measures are identified within the air quality chapter of the EIR, and are included as recommended conditions of project approval.		

1.0 INTRODUCTION

The City of Irwindale (City) has prepared this Draft Environmental Impact Report (EIR) to evaluate the potential environmental impacts related to development of the *Irwindale Materials Recovery Facility and Transfer Station Project* (Proposed Project or MRF/TS). The City is the Lead Agency pursuant to CEQA ([Public Resources Code §§21000-21178 and the 2014 State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §§15000-15387.)

This introductory chapter of the *Irwindale Materials Recovery Facility and Transfer Station Project* EIR discusses the purpose of preparing an EIR and provides an overview of the CEQA EIR process. This chapter provides an overview of the public scoping process with summarized comments from the public and various agencies. Lastly, this chapter lists the content and organization of the EIR document; and incorporates by reference several of the City's planning documents, as well as, scientific and technical reports reviewed for the environmental assessment provided in the EIR.

Pursuant to State CEQA Guidelines §15121:

> *(a) An EIR is intended as an informational document which will inform public agency decision makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency;*
>
> *(b) While the information in the EIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the EIR by making findings under Section 15091 and if necessary by making a statement of overriding consideration under Section 15093; and*
>
> *(c) The information in an EIR may constitute substantial evidence in the record to support the agency's action on the project if its decision is later challenged in court.*

1.1 PURPOSE OF THE EIR

The purpose of this EIR is to present information relevant to existing conditions, evaluate potential environmental impacts, and recommend feasible mitigation measures to reduce any identified significant adverse environmental effects that could result either from the construction or operation of the proposed MRF/TS in the City of Irwindale. Approval of the Proposed Project requires discretionary approval by the City, and therefore constitutes a "project" under CEQA

(State CEQA Guidelines §15378). CEQA requires that an EIR be prepared for any project to be undertaken or approved by a State or local agency that has the potential to have a significant effect on the environment.

The City has prepared this EIR pursuant to State CEQA Guidelines §15161 regarding a Project EIR. CEQA defines a Project EIR in the following terms:

> *"The most common type of EIR examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation".*

The purpose of a Project EIR is to inform governmental decision makers and the public about the potential significant environmental effects associated with a proposed action or "project". State CEQA Guidelines §15378 defines a "project" as "*the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment…*".

Mitigation measures are identified and may be adopted as conditions of approval, intending to reduce or offset potential environmental effects from implementation of the Proposed Project. Where the mitigation program is unable to fully mitigate a significant adverse impact, the impact is deemed "significant and unavoidable". If the Lead Agency approves a project with significant and unavoidable impacts, the Agency shall explain in writing specific reasons for approving the project, based on the Final EIR, and any other information within the public record for the project (State CEQA Guidelines §15093).

This *Irwindale Materials Recovery Facility and Transfer Station Project* EIR describes actions required to carry out construction and operation of the MRF/TS. A sufficient degree of analysis is presented to provide decision-makers with information that will enable them to make a decision which intelligently accounts for any environmental consequence (State CEQA Guidelines §§15146 & 15151). Using its best efforts to find out and disclose all that it reasonably can, an EIR must utilize some degree of forecasting, but must avoid speculation (CEQA Guidelines §§15144-15146).

1.2 CEQA EIR PROCESS OVERVIEW

Under State CEQA Guidelines §15002(f)(1), an "*EIR is prepared when the public agency finds substantial evidence that the project may have a significant effect on the environment*." The City, acting in its Lead Agency capacity, is the agency with the greatest responsibility for supervising or approving the project as a whole. The Lead Agency may develop and circulate an initial study of potential environmental impacts, or it may forgo further initial review of the project and begin work directly on the EIR. Once the range of scope for the EIR has been determined, the Lead Agency begins analyzing and documenting all potential environmental impacts. Once complete, the Draft EIR is released for a public review period. The Lead Agency may also conduct public meetings or hearings to solicit additional input from interested parties on the content and conclusions in the Draft EIR. All comments received on the Draft EIR during the public review period must be addressed in the Final EIR. The Final EIR reflects comments and responses as well as any changes to the text, maps, exhibits or other elements of the EIR. The Lead Agency then considers certification of the EIR, and subsequently, makes its decision regarding project approval or denial.

The steps to be taken are summarized as:

Decision to Prepare an Environmental Impact Report

- Notice of Preparation / Scoping Process
  - ***Draft Environmental Impact Report***
    - Notice of Completion/Notice of Availability
      - Public Comment Period
        - Response to Comments
          - ***Final Environmental Impact Report***
            - Certification / Hearing / Decision on Proposed Project
              - Notice of Determination
                - Statement of Overriding Considerations (as necessary)

DRAFT EIR

The Draft EIR is circulated to federal, State, regional and local agencies, and interested organizations and individuals that may wish to review and comment on the report. Publication of the Draft EIR marks the beginning of a 45-day public review period during which written comments may be submitted to the City at the following address:

Ms. Paula Kelly, Senior Planner, City of Irwindale
5050 North Irwindale Avenue, Irwindale, California 91706

Telephone: (626) 430-2200
Facsimile: (626) 962-2018
Email: paulakelly@ci.irwindale.ca.us

Copies of the Draft EIR are available to the public at the City Clerk's office and the Irwindale Public Library located at 5050 North Irwindale Avenue, and may also be downloaded from the City's website at: http://www.ci.irwindale.ca.us/

FINAL EIR

Pursuant to State CEQA Guideline §15132, the Final EIR will consist of:

- The Draft EIR;
- Comments and recommendations received on the Draft EIR;
- A list of persons, organizations and public agencies commenting on the Draft EIR;
- The response of the Lead Agency to significant environmental points raised on the review and consultation process; and
- Any other information added by the Lead Agency.

In addition, after the Final EIR is completed and 10 days prior to the public hearing to certify the EIR and approve/deny the project, a copy of the responses to comments made by public agencies on the Draft EIR will be provided to each commenting agency (State CEQA Guidelines §15088(b)).

1.3 NOTICE OF PREPARATION AND PUBLIC SCOPING PROCESS

When a Lead Agency determines that an EIR is required for a project, a Notice of Preparation (NOP) must be prepared. The purpose of the NOP is to provide the responsible agencies with sufficient information describing the Proposed Project and the potential environmental effects to enable the responsible agencies to make a meaningful response. (A copy of the State Governor's Office of Planning and Research stamped NOP, NOP/EIR Distribution List, Notice of NOP, Notice of Scoping Meeting, and comment letters received in response to the NOP and related scoping efforts are included in **Appendix A** of the EIR.)

In compliance with the State CEQA Guideline §15082, the City prepared a NOP that was submitted to the State Governor's Office of Planning and Research (State Clearinghouse or SCH). It is the role of the State Clearinghouse to distribute the NOP to the appropriate State agencies. In addition, the City distributed the NOP to various agencies, organizations, and interested parties.

The City circulated the NOP to the State Clearinghouse, responsible and trustee agencies, and interested persons and organizations on May 10, 2013. The CEQA-mandated 30-day public review period was held May 13, 2013 through June 12, 2013. The comment period was extended to July 12, 2013 to accommodate a public scoping meeting held July 9, 2013 in response to a comment letter which pointed out that such a meeting is required for any project that involves a General Plan Amendment (State CEQA Guidelines §15082). The State Clearinghouse sent the NOP to Caltrans, as required. The City initiated consultation with Caltrans in July as well, and coordinated with the local Caltrans office during preparation of the Traffic Impact Study.

The purpose of a Scoping Meeting is to provide information on the Proposed Project, provide information about the CEQA requirements for the scoping and EIR process, solicit input from individuals/agencies, and to assist in the determination of the scope of analyses and issues to be addressed in the EIR.

The Scoping Meeting was held on Tuesday, July 9, 2013, 4:00-5:30 PM in the Irwindale Recreation Department Gymnasium located at 5050 North Irwindale Avenue, Irwindale, California 91706. Public notification of the Scoping Meeting was sent out to businesses and residents in a 500-foot radius from the Project Site, and a 2,500-foot radius from the Project Site extending into Baldwin Park. Additionally, the Scoping Meeting was noticed at City Hall, the Post Office, and the Library, and distributed to individuals and agencies on the NOP/EIR Distribution List. The notice was provided in both English and Spanish. The Scoping Meeting presentation was followed by a question/comment period. Three persons provided comments at the meeting. Their comments are summarized below and can be read in their entirety in the meeting transcript provided in Appendix A.

Comment forms were also available for those attendees interested in providing written comments. Attendees were invited to submit their comments to the City by the close of business on July 12, 2013, or to leave them with City staff following the Scoping Meeting, in order to ensure their concerns could be addressed in the EIR.

Thirty (30) written comment letters were received during the scoping process. These comments are summarized below, and the original comment letters are presented in **Appendix A**. The City's Planning Department received three phone calls related to project scoping (see below for phone log).

Written Comment Letters Summarized

State Governor's Office of Planning and Research (May 13, 2013)

- State Clearinghouse Project Number 2013051029
- NOP sent to reviewing agencies

County of Los Angeles, Public Health (May 20, 2013)

- Please discuss these items in the EIR: permitted area; peak daily tonnage; peak vehicle count; days of operation; hours of operation; design capacity; acceptable wastes; procedure for handing incoming incidental hazardous waste; tonnage; all incoming materials must use scales; design characteristics of significant improvements; where materials will be handled; operational design features; location/duration of materials storage; maps of operational areas, Odor Management Plan; comply with Southern California Air Quality Management District; permits required, including the Solid Waste Facility Permit; potentially significant environmental impacts; cumulative impacts; land use compatibility; traffic system impacts; air quality; noise; risk of upset/human health risk; and mitigation Program.
- Acting as the Local Enforcement Agency, requests EIR, and all future project correspondence. Send any other environmental documents to CalRecycle's Waste Compliance and Mitigation Program permitting and LEA Support Division/Environmental Review at 1011 "I" Street, Sacramento, CA 95814.

Patricia Chamberlain (May 21, 2013)

- Believes that the Proposed Project will not affect Irwindale, rather Baldwin Park.

Gabrieleno Band of Mission Indians/Kizh Tribe of the Los Angeles Basin, Orange County, and the Channel Islands (May 21, 2013)

- Requests one of the Tribes certified Native American Monitors to be on-site during all ground disturbances.

Bella Hernandez (May 23, 2013)

- Thank you for opportunity to review environmental document.
- Residents of Baldwin Park oppose for several reasons: current air quality is already beyond acceptable levels due to freeway, and businesses nearby; project will increase cancer risk due to increased contaminants found in waste, more rodents due to increased odors, and more truck traffic leading to increased air pollution and noise. Facility will reduce properties values based on these impacts.
- Residents will oppose a project that worsens air quality and puts public health at risk.

City of Arcadia (June 6, 2013)

- Requests copy of the traffic study.

Bette Lou Lowes (no date)

- Opposes project. Will impact residents of Baldwin Park but not Irwindale residents due to location. Does not want extra traffic, noise pollution, and smells. Schools, businesses homes, and Santa Fe Dam recreation area within walking distance.

Paul Lin (June 11, 2013)

- Opposes project. Following points should be considered by the City: air pollution, smell condition, environmental vision, traffic, image, quality of communication, and property value.
- Build project in non-residential area, and care of human rights.

California Department of Transportation (June 11, 2013)

- Reviewed the NOP.
- Requests evaluation of potential transportation impacts to I-605 and I-210 as well and nearby on- and off-ramps.
- Requests that the traffic study be conducted and include the following elements: inclusion of all appropriate traffic volumes; analysis of AM and PM peak hour volumes for existing and future at I-605/Live Oak Ave and I-210/Irwindale Ave; presentation of assumptions and methods used; travel modeling to be consistent with regional and local forecasts; discussion of mitigation measures, and refer to CalTrans website in preparing the traffic report.
- Requests: truck vehicle access to/from highways may be slower than other vehicles; turning radii; shoulder widths; sight distance; cargo spills; and designated truck routes.
- Requests project truck trips are limited to off-peak commute periods as much as possible. Project should avoid platooning of truck.

County of Los Angeles, Department of Parks and Recreation (June 12, 2013)

- The EIR should address: aesthetics; air quality; noise and recreation.

Valley County Water District (June 11, 2013)

- The agency reiterates its intentions of negotiating a sale agreement with the City of Irwindale to purchase 1.9 acres of the project site, and intends to do so within the 2013 calendar year.

Remy, Moose, Manley LLP (June 13, 2013)

- Letter is written on behalf of client "Waste Management".
- Duty to consult with the California Department of Transportation and hold scoping meeting citing various regulations.

- Traffic and circulation concern. Traffic study should explain basis for route assumption.
- Waste Management recommends the City consult with the City of Azusa's engineering staff regarding traffic impacts to Azusa's roadways.

Jane and John Maguire (June 10, 2013)

- Opposes project. San Gabriel Valley has the worst air quality in the county. Traffic is an issue in Baldwin Park. Environmental justice issue. Noise, air quality, dust and lights will affect Baldwin Park residents. Look at other sites to build project.

Julie Pena (June 13, 2013)

- Opposes project due to traffic, noise and environmental pollution, odors, and project location.

D Squyres (June 15, 2013)

- Concerned about location, smell and insects. Look to another location. Supports recycling.

County Sanitation Districts of Los Angeles County (June 13, 2013)

- The agency provides the following comments in regards to sewage service.
- Project may require permit for Industrial Waste Discharge. Project developers to contact Industrial Waste Section 562.98.4288 ext 2900. Waste flow from the project site will discharge into local line, not the District's.
- Wastewater will be treated at the San Jose Creek Water Reclamation Plant. Expected flow rates are provided.
- The District is authorized to charge a connect fee.
- The District intends to provide the project with service up to the levels that are legally permitted and based on regional growth forecast by the Southern California Associate of Governments.

City of Azusa (June 12, 2013)

- Thank you for the opportunity to review the NOP.
- Project Description Variant concerns regarding traffic.
- Project Description – confirm consideration of off-site lot on Vincent Avenue for use as truck storage.
- Requests EIR evaluation of air quality, hazards, noise, odors, operating hours, project alternatives, cumulative impacts, Santa Fe Dam recreation area, and water infrastructure.

Jessie Almada (no date)

- Baldwin Park is the worst location for the project. Air quality impacts to the Santa Fe Dam recreation area, homes, and schools. Traffic congestion not needed. Use location near rock quarries. Air quality article attached.

Ken Woods (no date)

- Concerned for truck traffic cutting through Baldwin Park and backing up light signals.

Faith Cruz (July 10, 2013)

- Opposes project. Traffic is already busy from Waste Management and Allen Recycling. Concerns of accidents, current air pollution, nearby food distribution, schools and dam, and smells. Use different location. No tax benefit to Baldwin Park. Not fair to residents. Project meeting time a concern.

City of West Covina (July 8, 2013)

- Appreciates the opportunity to provide written comment.
- Requests evaluation of truck route to and from MRF/TS, and air quality effects given prevailing winds currents (and odor impacts) in regards to the effect on properties within West Covina

Jane and John Maguire (July 12, 2013)

- Complaint that the scoping meeting was held too early in day (4:00-5:30 PM). Don't build project near Baldwin Park residents. Concern for increase in traffic, air pollution, light, noise, and further disruption of the neighborhood, property values, and existing land uses. Project would be 500ft from house. Project is about money not consideration of residents.

Leon Ornellas (July 12, 2013))

- Concerns are hazardous material, traffic, and contaminated water.

Ernie Cardona (July 12, 2013)

- Hazardous materials recovery facility near our clean water source is not recommended.

Miguel Escoto (July 12, 2013)

- Hazardous materials recovery facility near our clean water source is not recommended.

Manuel Chavez (July 12, 2013)

- Concerns for rodents, foul smell, traffic, and possible universal household waste that may not be recycled properly ends up at the MRF and seep into groundwater.

Mario Cruz (July 12, 2013)

- Opposes project. Facility will increase already congested streets. Concern for contaminated water with drinking water cross the street. Already a nearby recycling center, and MRF.

F. Javier Torres (July 12, 2013)

- What becomes of the hazardous waste from housing? Bad odors from facility? Is it not too close to food processing facility? What will the traffic impact be? Trucks leaking fluid from garbage? Why build another when one is being built? What about leakage of on-site fuel facility? Transfer station will cause CHP to do check points, creating traffic jam on main roads. What happens when older trucks break down on roads?

Valley County Water District (July 12, 2013)

- Primary concerns include; odor control capabilities; increase of trucks and exhaust emissions as they relate to possible absorption of air contaminants into water tanks. Pest management, storage of toxic waste and leaching into ground and groundwater. Potable water for wash down and discharge

Jesus Ramirez (July 12, 2013)

- Opposes project due to health concerns and location to homes. Not in favor of building the recycling center here because there will always be bad odors, rodents and traffic. Current odor problem will increase.

Phone Log:

1. Stephanie [last name unknown] (phone call)
2. Jessie Almada (phone call and letter)
3. Los Angeles County Department of Public Health

Speakers at Scoping Meeting

1. Mike Mohajer – traffic and waste management concerns
2. Ken Woods – traffic and waste management concerns
3. Linda Noriega – Valley County Water District interest in using portion of the site for water storage tanks

1.4 SCOPE AND ORGANIZATION OF THE EIR

In determining the scope and content for the environmental analysis of the EIR, the City took into consideration all comments received during the scoping period, review of the Project application and supporting materials, evaluation of existing site conditions, and additional background research conducted for the Proposed Project. All issues raised during the scoping process were reviewed by the City in determining the appropriate consideration and level of environmental analysis. As a result, and consistent with the nature of the Proposed Project, the following environmental resource topics will be evaluated in this EIR:

Executive Summary
This chapter presents a summary of the Proposed Project and Project Alternatives, identifies areas of controversy and significant unavoidable impacts, and provides mitigation program directly related to each potential environmental impact. A comprehensive Mitigation Monitoring and Reporting Program matrix is included to provide the reader an overview of each mitigation measure, the party responsible for implementing the program, mitigation timeframe, and verification required.

Chapter 1.0 – Introduction
This chapter describes the purpose and scope of the EIR. Public scoping efforts are discussed, including environmental issues to be analyzed in the EIR. The public review and intent of the EIR document are addressed, followed by an organizational list of EIR chapters. Documentation of various City planning documents incorporated by reference is explained.

Chapter 2.0 – Project Description
This chapter defines the Project Description, including location, operations, and identification of potential environmental issues. Within this chapter are the Project Objectives, and a description of the existing environment and background. This chapter concludes with a list of responsible agencies expected to use the EIR document for review of other approvals and permits required for implementation of the Proposed Project.

Chapter 3.0 – Environmental Setting and Impact Analysis
This chapter describes the regional and local environmental setting for the Proposed Project. The chapter also describes the regulatory setting (if applicable), thresholds of significance, and includes a discussion of potentially significant adverse environmental impacts associated with the Proposed Project for each environmental issue area. This chapter defines a mitigation program based on project design features, standard conditions of approval, and mitigation measures to reduce potentially significant impacts to a less than significant level, and identifies the residual level of significance of the impact once the mitigation program is implemented.

3.1 Effects Not Found To Be Significant – Based on preliminary project assessment and scoping, Agriculture & Forestry Resources and Mineral Resources were found to have no potential for significant environmental impacts, and are therefore not required to be included in primary analysis sections of the EIR (State CEQA Guidelines §15128).

3.2 Air Quality / Greenhouse Gas / Odor / Health Risk Assessment – Construction, operational activities, and truck and automotive traffic anticipated and planned at the MRF/TS will generate emissions, dust, and odors that may have an effect on local and/or regional air quality.

3.3 Aesthetics – The physical character of the site will be modified. The overall aesthetic appearance of the facilities as viewed from off-site requires evaluation to ensure consistency with City standards.

3.4 Biological Resources – Construction and operational activities anticipated and planned at the MRF/TS site may have an effect on biological resources. A discussion of the site-specific biological assessment findings is followed by a qualitative and quantitative analysis of potential effects on biological resources associated with implementation of the Proposed Project.

3.5 Cultural Resources – Construction and operational activities anticipated and planned at the MRF/TS site may have an effect on cultural resources. A discussion of the site-specific historical information is followed by an analysis of potential effects on cultural resources associated with implementation of the Proposed Project.

3.6 Environmental Justice – CEQA does not require analysis of environmental justice. However, in response to comments raised during the scoping process, the City has determined that the EIR will address potential environmental justice issues following the guidelines of the California Environmental Protection Agency's California Communities Environmental Health Screening Tool Report.

3.7 Geology & Soils – Construction and operational activities anticipated and planned at the MRF/TS site may have an effect on site specific geological conditions. A discussion of the site-specific information is followed by an analysis of potential effects of implementation of the Proposed Project.

3.8 Hazards & Hazardous Materials – Construction and operational activities anticipated and planned at the MRF/TS will include the environmental and worker safety plans such

as a vector control plan, litter control plan, noise control plan, OSHA worker safety plan, and fire prevention plan. This chapter will address these unique elements and features of the MRF/TS.

3.9 Land Use & Planning – The existing land use is a vacant parcel that has been previously disturbed. This site was previously developed and has been subsequently cleared and vacant for about 20 years. Development on this site will be evaluated for compatibility with surrounding land uses and will correspond with the City's long term goals. This chapter will also include evaluation of potential impacts on recreational activities at the Santa Fe Dam recreation area, population and housing in the surrounding communities, and the water agencies tentative plan to acquire a portion of the property for installation of water storage tanks.

3.10 Noise – Construction and operational activities of a MRF/TS could generate increased noise levels adversely affecting surrounding sensitive receptors.

3.11 Public Services & Utilities - Construction and operational activities have the potential to affect public service capacities, response times, and availability of utilities.

3.12 Traffic Generation & Circulation – Construction activities and operations of the MRF/TS may have the potential to prolong and increase impacts on roadway segments and intersections and the structural integrity of roadways and pavement conditions.

3.13 Water Quality & Hydrology – Construction activities and operations of the MRF/TS may have the potential to effect existing hydrology, hydrological conditions, drainage patterns, and water quality.

Chapter 4.0 – Mandatory CEQA Considerations

This chapter discusses potentially significant irreversible effects and irretrievable commitments of resources, the potential for growth inducing impacts, and cumulative impacts. Additionally, this section considers the effects of the Proposed Project that would result in a commitment of resources and uses of the environment that could not be recovered if the Proposed Project were constructed, as well as describing the potential for unavoidable adverse impacts from the Proposed Project.

Chapter 5.0 – Alternatives to the Proposed Project

The purpose of the alternatives analysis is to identify ways to mitigate or avoid the significant effects a project may have on the environment. This chapter begins by providing an overview of the alternative selection process, and describes the alternatives to the Proposed Project and

compares their relative impacts to those of the Proposed Project. This chapter also provides a description of alternatives considered but rejected from further analysis, as well as selection of the environmentally superior alternative.

Chapter 6.0 – List of Preparers / Persons & Organizations Consulted
This chapter identifies the individuals, agencies, and organizations consulted in preparing the EIR, including names of the City staff, and consulting scientists and planners who contributed to preparation of the EIR.

Chapter 7.0 – References
This chapter provides a list of the sources of information cited in the EIR.

Chapter 8.0 – Draft EIR Comments and Responses (Final EIR)
Following completion of the review process for the Draft EIR, this chapter will contain the written comments received by the City on the Draft EIR and the City's responses to those comments. Where necessary, minor changes or clarifications to the Draft EIR were made in response to comment received. Such changes are included in the errata list within this chapter.

Chapter 9.0 –Mitigation Monitoring / Reporting Program (Final EIR)
This chapter presents a comprehensive matrix of the mitigation program required by the EIR which catalogs the thresholds of significance, potential environmental impacts, related mitigation measures, and discussion of any residual impacts after implementation of the mitigation program. The Mitigation Monitoring and Reporting Program table is a verification tool provided to the Lead Agency, Applicant / Owner / Operator that lists the mitigation program task, entity responsible for implementation, timing of compliance, and record of date of compliance.

Chapter 10.0 Technical Appendices
Appendices include procedural documentation for the administrative record, and supporting technical information and reports used in preparation of the Draft and Final EIR, including:

Appendix A – Project Scoping

- NOP / EIR Distribution Lists
- State Clearinghouse stamped Notice of Preparation
- Public Notice of the Notice of Preparation
- Public Notice of the Scoping Meeting
- Scoping Meeting Summary
- Scoping Meeting Transcript
- Scoping Meeting Sign-In Sheets
- Comments Received During Scoping Period

Appendix B – Athens Services On-Site Management Plans

Appendix C – Air Quality Data, Greenhouse Gas Emission Report and Health Risk Assessment

Appendix D – Biological Impact Analysis Letter Report

Appendix E – Cultural Resources Assessment

Appendix F – Phase I & II Environmental Site Assessment Reports

Appendix G –Traffic Impact Assessment

Appendix H – Southern California Association of Governments Intergovernmental Review Criteria

Appendix I – Noise Calculations

Appendix J – California Environmental Protection Agency's California's Communities Environmental Health Screening Tool Version 1.1

1.5 INCORPORATION BY REFERENCE

Pursuant to State CEQA Guidelines §15150, this EIR incorporates by reference several of the City's planning documents, as well as scientific and technical reports. These documents are considered a matter of public record and can be viewed at the City's Planning Department during normal business hours. The following City documents are specifically noted to be "incorporated by reference":

- *City of Irwindale 2020 General Plan* (2008)
- *Irwindale Municipal Code*
- *City of Irwindale Commercial and Industrial Design Guidelines (2009)*
- *City of Irwindale Zoning Map*

2.0 PROJECT DESCRIPTION

This chapter of the *Irwindale Materials Recovery Facility and Transfer Station Project* EIR presents the project description which includes a discussion of the project location, project features, and a general description of the technical, economic, and environmental characteristics. This chapter provides a statement of project objectives, the intended uses of the EIR including a list of list of public agencies that are expected to use this EIR, as well as, a list of agreements/approvals/permits required to implement the project. Pursuant to State CEQA Guidelines §15124, the description of the project shall contain the above mentioned information, but does not require extensive detail beyond that needed for evaluation and review of the environmental impact report. Lastly, this chapter defines a material recovery facility and transfer station according to the California Department of Resources, Recycling, and Recovery (CalRecyle) Public Resource Codes (PRC) 40194 and 40200 (http://www.calrecycle.ca.gov/SWFacilities/Permitting/FacilityType/Transfer/#What).

PRC Section 40194:

"Solid waste facility" includes a solid waste transfer or processing station, a composting facility, a transformation facility, and a disposal facility.

PRC Section 40200:

(a) "Transfer or processing station" or "station" includes those facilities utilized to receive solid wastes, temporarily store, separate, convert, or otherwise process the materials in the solid wastes, or to transfer the solid wastes directly from smaller to larger vehicles for transport, and those facilities utilized for transformation.

(b)"Transfer/processing station" or "station" does not include any of the following:

(1) A facility, whose principal function is to receive, store, separate, convert, or otherwise process in accordance with State minimum standards, manure.

(2) A facility, whose principal function is to receive, store, convert, or otherwise process wastes which have already been separated for reuse and are not intended for disposal.

(3) The operations premises of a duly licensed solid waste handling operator who receives, stores, transfers, or otherwise processes wastes as an activity incidental to the conduct of a refuse collection and disposal business in accordance with regulations adopted pursuant to Section 43309.

2.1 PROJECT LOCATION AND SETTING

The *Irwindale Materials Recovery Facility and Transfer Station Project* (Proposed Project or MRF/TS) involves the development of a materials recovery facility and transfer station, and convenience store/fueling station. The Proposed Project site is addressed as 2200 Arrow Highway, and located at the northwestern intersection of Live Oak Avenue and Arrow Highway, within the City of Irwindale, in eastern Los Angeles County, California (**Exhibit 2-1 Regional Map**).

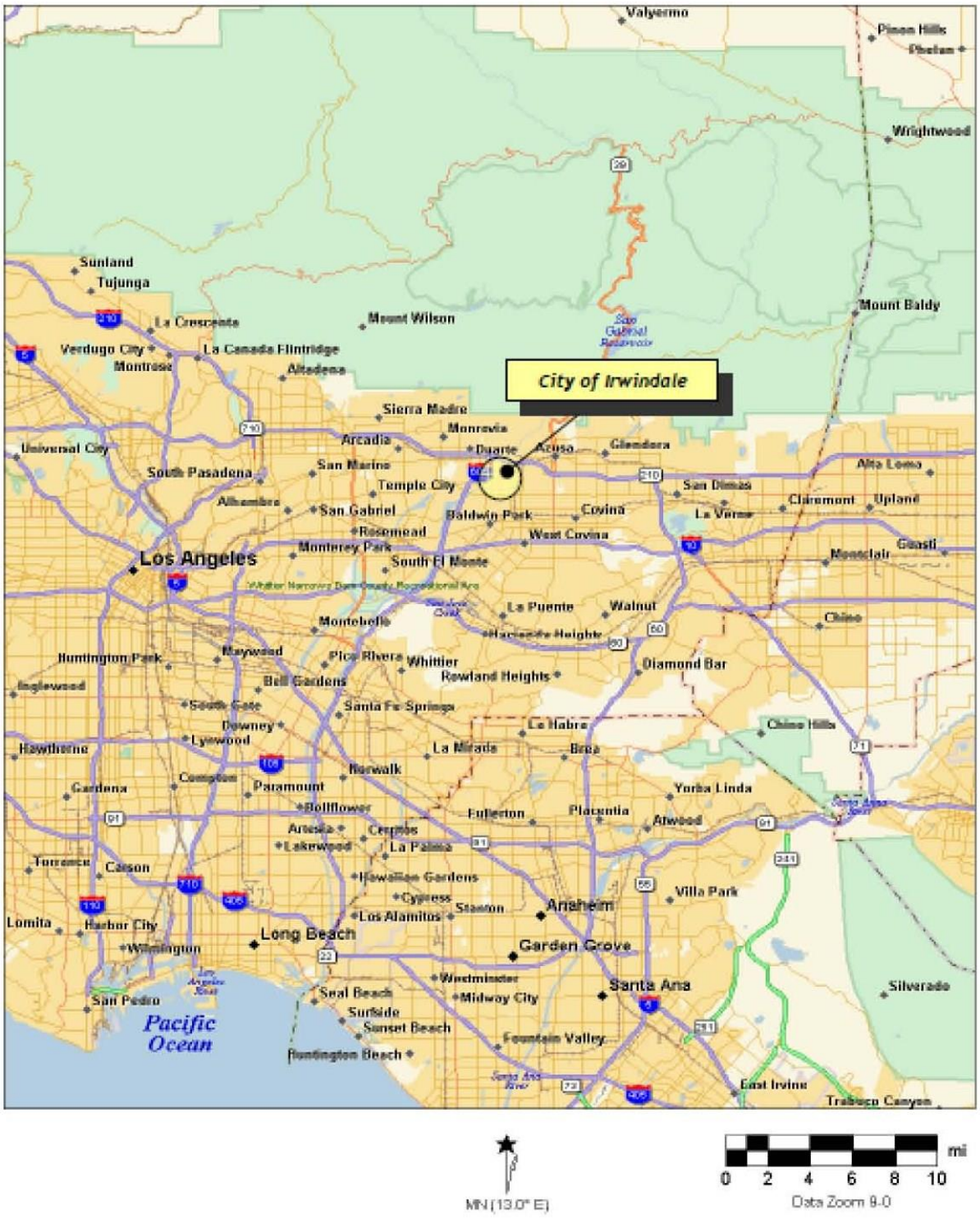
The City encompasses approximately 9.5 square miles within the San Gabriel Valley and is located approximately 20 miles east of downtown Los Angeles. The City of Irwindale shares boundaries with seven neighboring municipalities, including Duarte (to the north and west), Azusa (to the north and east), West Covina (to the southeast), Baldwin Park (to the south), Monrovia (to the southwest and northwest), El Monte (to the southwest), and Arcadia (to the west) (see **Exhibit 2-2 Vicinity Map**).

The Proposed Project site is approximately 17.22 acres (Assessor's Parcel Number 8535-001-911); and is currently zoned for Heavy Manufacturing and is designated for commercial land use in the City's General Plan. The site is located in an existing industrial area, with various commercial/industrial, residential, and recreational land uses in surrounding areas. Existing land uses that currently surround the site include a mixture of commercial and industrial to the west, east, and south, recreation/open space to the north, and residential to the south [beyond the commercial/industrial districts in the City of Baldwin Park].**Table 2-1 Surrounding Land Uses** demonstrates the existing land uses in the vicinity, including the City of Irwindale and adjacent City of Baldwin Park's General Plan land use designation and zoning.

The irregular-shaped, triangular Proposed Project site is unimproved, and bordered on the south by Live Oak Avenue, on the east by the Santa Fe Dam and property owned by the U.S. Army Corps of Engineers (USACE), on the northeast by Arrow Highway, and on the west and northwest by an existing business/industrial parking lot (**Exhibit 2-3 Location Map**). The site is crossed by a City of Los Angeles Department of Water and Power (LADWP) electricity transmission easement along the south side totaling approximately 2.84 acres of the total site area. In addition, Southern California Edison (SCE) Company holds a 23-foot-wide underground utility easement totaling approximately 0.5 acres along the entire length of the site frontage on Arrow Highway.

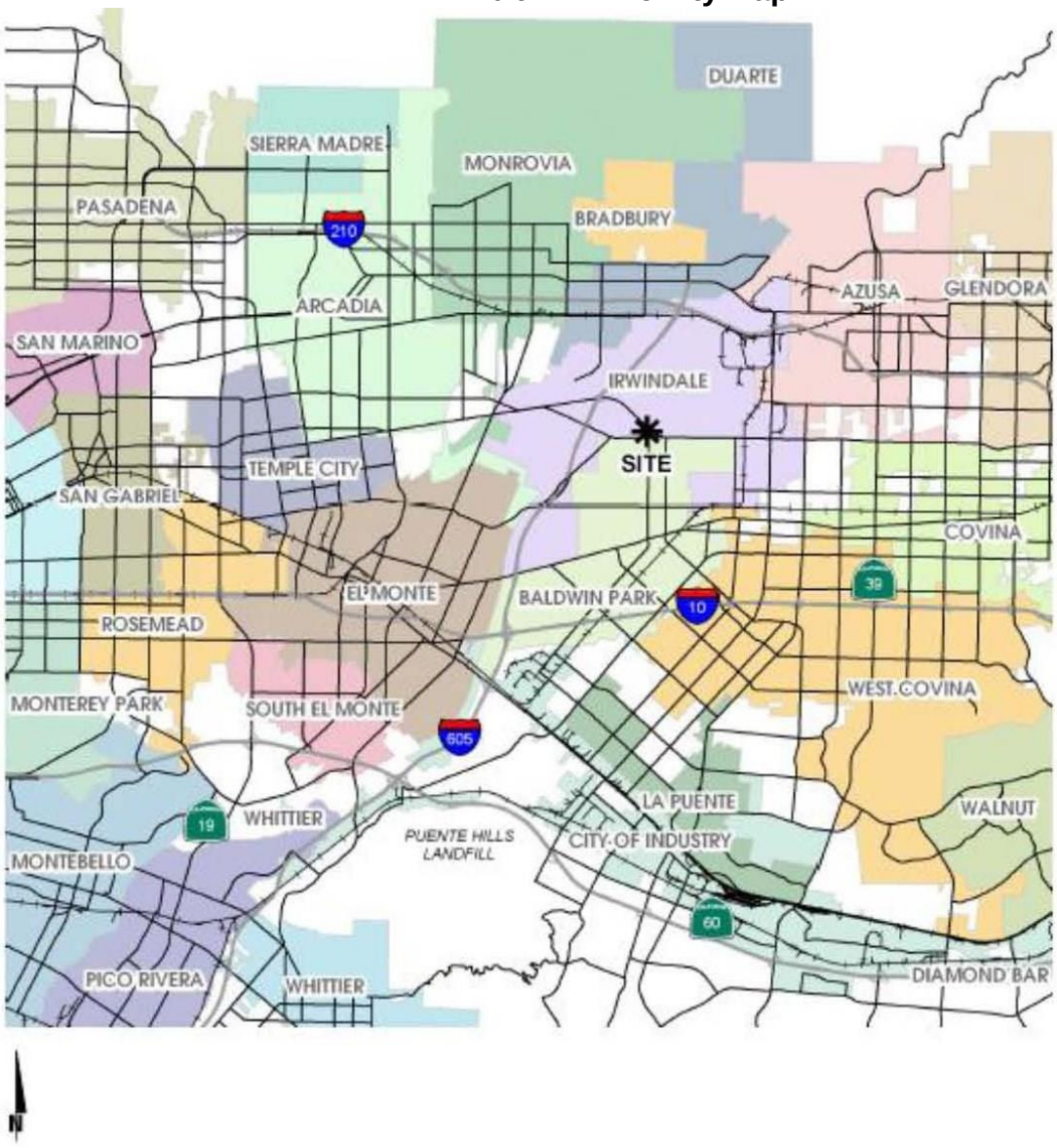
Table 2-1 Surrounding Land Uses		
Direction	**Existing Land Use**	**General Plan land use designation / Zoning**
North	Arrow Highway, and Santa Fe Dam and Recreation Area	Open space/easements Agricultural (A-1)
South	South of Live Oak Avenue is the City of Baldwin Park - Developed industrial and commercial including Valley County Water District storage facility, Waste Management yard, and Allan Company MRF/TS (along Arrow Highway/Live Oak Avenue), with residential development south of those industrial uses.	Northern Industrial Focus Area Commercial/Industrial, General Industrial, and Single-Family Residential Industrial zone (all City of Baldwin Park zones)
East	Developed commercial and light industrial	Industrial/Business Park Agricultural (A-1)
West	Developed industrial/business park uses, commercial truck parking facility	Industrial/Business Park Heavy Manufacturing (M-2) and Agricultural (A-1)
Source: City of Irwindale General Plan Update (2008), City of Irwindale Zoning Map, and City of Baldwin Park 2020 General Plan (2002) and City of Baldwin Park Zoning Map (2006).		

Exhibit 2-1 Regional Map



Source: Irwindale General Plan Update, 2008

Exhibit 2-2 Vicinity Map



Source: Urban Crossroads, 2013

Exhibit 2-3 Location Map



2.2 PROJECT FEATURES

Athens Services (Applicant/Operator) has submitted an application to the City to construct and operate a materials recovery facility and transfer station, with a fueling facility/convenience store, together comprising the "Proposed Project" as referred to throughout this EIR document (see **Exhibit 2-4 Project Site Plan**.) The Proposed Project will require the following discretionary approvals by the City:

- General Plan Amendment (from commercial to commercial/industrial land use);
- Zoning Ordinance Amendment (to allow a MRF/TS use as a permitted land use in the M-2 zone with approval of a development agreement, and to revise the distance requirements for the sale of alcoholic beverages);
- Zone Change (from Heavy Manufacturing to Planned Development Overlay);
- Conditional Use Permit (required for the approval of the sale of alcoholic beverages in the proposed convenience store and for the gas station);
- Site Plan and Design Review Permit;
- Development Agreement pursuant to Government Code §§65864, et seq.;
- Sale/Disposition and Development Agreement; and
- Franchise and Facility Operations Agreement.

A MRF/TS is a regional facility where residential, commercial, and/or industrial municipal solid waste and recyclable materials are delivered by commercial and non-commercial haulers, and sorted and processed in one central location prior to delivery at end use distributors.

The Proposed Project would create a regional asset needed to address and implement a series of legislative measures over the years designed to both promote and mandate the time-certain reduction, recycling, and reuse of solid waste in California; including, but not limited to: Assembly Bill 341 (Chapter 476, Statutes of 2011); Senate Bill 1016 (Chapter 343, Statutes of 2007); and Assembly Bill 939 (Chapter 1095, Statutes of 1989).

The California Department of Resources, Recycling, and Recovery (CalRecycle, successor agency to the California Integrated Waste Management Board)[1] is the State department designated to oversee, manage, and track California's 92 million tons of waste generated each year. CalRecycle is responsible for ensuring that the State's waste management programs are carried out through Local Enforcement Agencies (LEAs). LEAs have the primary responsibility for ensuring the correct operation and closure of solid waste facilities in the state. They also have responsibilities for guaranteeing the proper storage and transportation of solid wastes. CalRecycle (in conjunction with the County of Los Angeles, Public Health) is the LEA for the *Irwindale Materials Recovery Facility and Transfer Station Project*.

In response to the fact that many landfills in the State of California are reaching their capacities and/or will reach their capacities in the foreseeable future, and in response to the fact that land suitable for landfill development or expansion is highly constrained due to numerous environmental, regulatory, and political factors, the State Legislature passed the California Integrated Waste Management Act in 1989 (Assembly Bill 939). AB 939 requires every city and county in the state to divert at least 50 percent of wastes generated in their jurisdiction from going to a landfill. The purpose of AB 939 is to "reduce, recycle, and reuse solid waste generated in the State to the maximum extent feasible." The bill imposes fines up to $10,000 per day on jurisdictions (cities and counties) for non-compliance. It is, therefore, a City and County objective to comply with AB 939 by maximizing the capacities of existing landfills in the County through the use of waste disposal options. The Proposed Project, designed to enable and facilitate the separation of recyclables from solid waste, would directly assist the City, surrounding communities, and County to comply with AB 939.

Senate Bill 1016 (SB 1016) builds on AB 939 compliance requirements by implementing a simplified measure of a jurisdiction's performance with respect to minimizing waste disposal in landfills. SB 1016 accomplishes this by changing to a disposal-based indicator—the per capita disposal rate—which uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities. The purpose of the new per capita disposal measurement system is to make the process of goal measurement as established by AB 939 simpler, timelier, and more accurate.

The need for additional recycling processing capacity for all types of waste has become even more urgent with the passage and implementation of AB 341. This law requires virtually all commercial waste to be processed for recovery of recyclables and sets a goal for the state to

[1] CalRecycle was created on January 1, 2010 as a result of legislation signed by the Governor on July 28, 2009, [Chapter 21, Statutes of 2009 (Strickland, SB 63)]. This legislation abolished the California Integrated Waste Management Board and transferred its duties, programs, and staff to the new Department of Resources, Recycling, and Recovery under the Natural Resources Agency. The legislation also moved the Division of Recycling from the Department of Conservation to CalRecycle, along with its responsibilities related to beverage container recycling.

achieve 75% recycling by the year 2020. The definition of "recycling" in AB 341 is different than the term "diversion" found in AB 939. Substantial quantities of materials considered to be diverted under AB 939 via "disposal-related" means, such as landfill alternative daily cover and beneficial reuse at landfills, will not be considered "recycled" and substantial quantities of materials being managed by these means will need to be shifted to other management methods to achieve the 75% goal.

According to CalRecycle's *California's New Goal: 75% Recycling Report (2008),* in order to achieve this recycling goal in 2020, approximately 22 million tons of material currently managed annually in "disposal-related" activities will need to be managed with alternative methods/approaches, which will necessitate the development of substantially more material processing capacity and the associated infrastructure. Given that Los Angeles County represents approximately 25% of the state's population and 25% of its economic activity, it stands to reason that no less than 25% of the additional material processing infrastructure will need to be developed for the Los Angeles County market. Whenever possible, the infrastructure should be built in close proximity to the centers of population and economic activity to permit maximum utilization of the capacity and minimize the impacts of long haul transportation to more distant facilities. The Los Angeles County market's access to an extensive network of roads, rail, and maritime shipping ports make it an ideal center for the processing and recovery of recyclables from the waste stream.

MATERIALS RECOVERY FACILITY AND TRANSFER STATION PROJECT

The MRF/TS consists of a fully enclosed building with the interior designed to provide separate areas to receive, process, and transfer mixed municipal solid waste (MSW), green waste, construction and demolition (C&D) materials, and waste hauled in by self-haulers. MRF/TS operations would consist of sorting, consolidating, and compacting received materials, and then re-loading all material into transfer trucks for transport to additional processing and/or disposal facilities (end use distributors).

The MRF/TS facility would be designed to receive, process and transfer up to 6,000 tons per day (tpd) based upon estimated averages of 3,000 tpd of municipal solid waste, 1000 tpd of green waste, 1000 tpd of construction & demolition materials, and 1,000 tpd of self-haul waste. Actual processing volume of each type of material per day will depend on market factors and seasonal variations.

Entry and exit from the fully enclosed MRF/TS facility would be at controlled access points to mitigate odors, dust and liter. Negative pressure will be maintained at the building entrance to minimize the amount of untreated air leaving the building. An odor neutralizer may be mixed with dust control water in the ceiling mounted misting systems for extra odor mitigation, as

needed. The building will be equipped with exhaust fans to provide multiple air exchanges every hour, as needed. The air leaving the building at the roof exhaust fans will be treated by an odor neutralizing misting system to mitigate any odors.

Upon entry onto the site, each commercial waste collection truck would follow the circulation roadway into the scale house for inbound weighing. While waiting for the scale, the tarp would be removed from the debris box. Once the weight capacity of each truck was determined, the truck driver would obtain a receipt from the weighmaster. The truck would then proceed into the designated indoor tipping area, where roll-up doors would then close behind each truck. While the roll-up doors are open [allowing for entry of a waste collection truck] the interior building ventilation system draws the airflow into the building's ventilation system. Once inside the tipping area, materials from the unloading trucks would be released onto the tipping floor. A safety spotter then opens rear doors [on the trucks, if manual] and the driver tips the load. Materials are then placed onto large conveyor belts and sorted using both mechanical and hands-on sorting operations. The materials then go through a series of sorting configurations based on the selected materials.

After completion of the final sorting and baling processes, the materials are re-loaded and/or baled and placed into transfer trucks for delivery to disposal facilities such as composting facilities, recycling centers, ports for overseas destinations for recycling, and/or landfills. The commercial waste collection truck then proceeds to the designated cleaning area and exits the facility and proceeds to the assigned route or parking area. Operational activities for a transfer truck are similar to those of a waste collection truck, with the exception that transfer trucks remove the materials from the MRF/TS site and proceed to the assigned disposal site or material end user site.

Hazardous wastes would be prohibited at the MRF/TS. Only non-hazardous solid waste and non-hazardous recyclables are accepted at MSW transfer station sites. The facility would have a load checking program, per Title 14 California Code of Regulations Section 17409.5. Federal, State, and local regulated hazardous waste (e.g., oils, medical, radioactive, and/or other types of hazardous materials) are not handled by MSW facilities. Operational plans will be required to ensure that any incidental hazardous wastes that enter the site will be handled and transported off-site consistent with all local, state, and federal laws. (Refer to **Chapter 3.8 Hazards and Hazardous Materials** for complete discussion and analysis). A licensed hazardous waste handling contractor will pack and remove hazardous materials every 90 days

In addition to the MRF/TS, on-site improvements include operations offices, administrative offices and visitor center, maintenance facility, scale houses, and a fueling facility/convenience store open to the public. The fueling facility/convenience store would be a separate structure located in the north-eastern portion of the site adjacent to Arrow Highway and includes a fueling

island with pump canopy, convenience store, and parking for customers. Administrative offices, a visitor's center, and equipment maintenance facilities will be housed in a building located along Arrow Highway and to the east of the MRF/TS building. The equipment maintenance portion of the building will provide areas for maintenance of the transfer trucks and heavy equipment servicing the facility. The maintenance area will contain maintenance bays, a wash bay, and storage. Building element specifics are provided below in **Table 2-2 Proposed Project Building Specifications**.

Table 2-2 Project Building Specifications[2]

Project Building Elements	**Specifications (square feet "SF")**
Materials Recovery Facility / Transfer Station	82,593
Green waste	65,483
Self-haul and Construction & Debris	73,270
Operations	6,636
Maintenance Building	10,653
Administrative / Visitor Center	5,532
Scale Houses	450
Convenience Store	2,390
Total Area	247,007
Parking Provided[3]	
Standard and handicap parking stalls	115
Office and convenience store standard and handicap parking stalls	32
Transfer truck stalls (12'x80')	23
Total Parking Stalls (planned/required/transfer)	**147/23**

MUNICIPAL SOLID WASTE

Municipal solid waste (more commonly known as trash or garbage) consists of everyday items used and thrown away, such as food scraps, newspaper, product packaging, clothing, and bottles. This waste comes from residential uses, schools facilities, hospitals, and businesses.

The waste would be unloaded from collection vehicles and briefly held while it is reloaded onto larger, long-distance transport vehicles for shipment to landfills. MSW residual waste (unrecoverable waste) is expected to be transported to the Mid Valley landfill in Rialto (San Bernardino County), San Timoteo landfill in Redlands (San Bernardino County) or Chiquita Canyon landfill in Castaic (Los Angeles County).

[2] Areas indicated for individual components are approximate and subject to change in final design.

[3] Parking requirements are based upon number of employees. 345 employees divided by 3 shifts equals 115 spaces required, plus Office and Convenience Store parking 32 spaces, for a total of 147 required parking stalls.

Approximately 80% of the MSW residual waste would be transferred to the Mid Valley landfill which is approximate 30 miles east. Distances from the site to the landfills are approximately 30, 45, and 55 miles, respectfully. Recyclables recovered from the waste stream would be processed, baled, and sent to the ports of Los Angeles and Long Beach for overseas shipping to recycling plants.

GREEN WASTE

Municipal curbside green waste generally consists of yard and landscape clippings, tree branches, other wood trimmings, and food waste (typically less than 5%). Greenwaste processing would operate at 80 tons/hour for 16 hours per day. Two grinders would be used, one in the C&D area for wood waste and dimensional lumber, and another one in the green waste area for the woody/oversized fraction of the incoming green waste. The grinders would reduce the size of this material for subsequent use as biomass fuel, and compost feedstock.

Municipal curbside green waste that has allowed residential food waste participation will be segregated and sent to a compost facility. Based upon Athen's experience at the Sun Valley C&D Facility, processed green waste and wood waste is expected to be transferred to the Athens Service compost facility in Victorville (American Organics in San Bernardino County) or other closer facilities when available. All other green waste will be ground and sent to the landfill for alternative daily cover (ADC). CalRecycle defines ADC as "cover material" other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. Public Resources Code section 41781.3 establishes that ADC use is considered diversion through recycling.

CONSTRUCTION & DEMOLITION MATERIAL

Waste generated in construction or demolition activities includes large quantities of material found in the general waste stream. For example, the C&D waste stream also includes corrugated cardboard from packaging, a variety of plastics (PVC pipe, packaging, etc), glass, and yard wastes from site work and clearing, as well as, lumber, concrete, asphalt, metals, soil, rock, and brick. Typical C&D waste composition consists of: 25% wood; 20% concrete/asphalt/dirt; 20% trash; 12% drywall/ceiling; 5% packing/paper; 5% roofing; 5% glass; 5% plastic; and 3% carpet.

Inbound trucks with C&D materials or self-haul trucks would drive around to the southern end of the building to unload material. Unloading areas within the C&D End Dump/Roll-Off area would be able to accommodate 5 end dump or roll-offs and the C&D self-haul area would be able to accommodate 16 stake beds or pickup trucks at any one time. C&D processing would operate at 80 tons/hour for 16 hours per day.

Based on operational activities at the Applicant's City of Industry MRF, it is anticipated the facility would achieve a diversion rate of approximately 80 percent of total tonnage received and processed.

SELF-HAUL MATERIAL

CalRecycle defines self-hauler material as waste that is hauled to a transfer, processing, or disposal facility by someone other than a franchise waste hauler or by someone whose primary business is not waste hauling. Households and businesses may haul their own waste to the self-haul portion of the MRF/TS site for a fee.

LOADOUT

The below-grade loadout area tunnel would be located along the northwest side of the building. The load out area is where the residual waste is loaded onto hauling trucks leaving the site. Once the trucks are loaded, they exist the interior of the MRF building through the loadout area tunnel. The tunnel would be approximately 45 feet wide to accommodate 3 lanes of traffic, and approximately 15 feet tall. Truck axle scales will be installed beneath each of the four planned load-out ports (two ports for MSW, one GW port, and one C&D debris port).

The queue area for the transfer trucks accessing the load out tunnel would be one lane wide by 400 feet long, which provides space for approximately five transfer trucks. The queue area for the collection vehicles accessing the MRF/TS and the green waste inbound scales would be two lanes wide by a length of 431 feet, which provides space for approximately 18 vehicles. The queue space for vehicles accessing the C&D/Self-haul inbound scales would be two lanes wide by 350 feet long, which provides space for approximately 6 end dumps or 18 pick up or stake bed trucks.

EQUIPMENT

The Proposed Project would use a variety of equipment in order to efficiently import, process, and export material. The Proposed Project would use and house most of the equipment and vehicles, as shown below in **Table 2-3 Equipment Used in the MRF/TS Operations**. Maintenance of the MRF/TS facility, equipment, and vehicles could occur on-site 24/7. The types of fuels that would be used in the on-site equipment are also reported in **Table 2-3**.

Table 2-3 Equipment Used in the MRF/TS Operations			
Operation/Location	**Equipment Description**	**Quantity**	**Fuel Type**
MRF/TS	Forklifts	3	Propane
	Loaders (Cat 966 or equivalent)	4	Diesel
Construction & Debris	Loaders (Cat 966 or equivalent)	2	Diesel
	Excavator (Cat 320 DL or equivalent)	1	Diesel
Greenwaste	Loaders (Cat 966 or equivalent)	3	Diesel
	Excavator (Cat 320 DL or equivalent)	2	Diesel
Self-Haul	NA		
Facility Maintenance	Manlift	2	Propane
	Forklift	1	Propane
	Pickup trucks	4	Gasoline
	Golf Carts	4	Electric
	Service Truck	1	Diesel
	Street Sweepers	2	CNG
	Skid Steer (Cat 236 or equivalent)	1	Diesel
	Roll-Off Trucks	4	Diesel
	Transfer Trucks*	23	Diesel

*Under Project Variant these trucks would be housed offsite by independent haulers

ADMINISTRATIVE OFFICES

Administrative offices, meeting rooms, visitor center, classrooms, restrooms, and an employee station will be housed together within the administrative building. Visitors to the site may include the general public for site tours as offered at the Applicant's City of Industry site. Training classrooms would be for employees of the MRF/TS. Three separate consecutive work shifts are expected for employees of the MRF/TS and one shift (presumably 9AM-5PM) for administrative staff.

CONVENIENCE STORE / FUELING STATION

The Applicant has also proposed a convenience/fueling station as part of the Proposed Project. The fueling facility/convenience store would be a separate structure, approximately 2,390 SF located in the northern portion of the site adjacent to Arrow Highway. The fueling facility/convenience store would be available to the public and is planned for eight (8) gas or diesel pumps on an island with an overhead canopy. Anticipated hours of operation would be 4:00 AM-12:00 PM. The convenience store would have parking for its customers, separate from that of the MRF/TS building. In the event SCE does not grant use of the utility easement, the fueling facility/convenience store may not be permitted. The EIR analyzed the Proposed Project assuming the convenience/fueling station would be allowed and as such, has considered worst case scenario impacts.

DESIGN AND LANDSCAPING

The exterior design of the facility buildings would be consistent with the City's *Commercial and Industrial Design Guidelines*, including varying parapet heights, vertical tower elements,

arcades, arched entry structures, and deeply recessed exterior fenestrations. As designed, the parapet walls will vary in design height ranging from 30-51 feet and allow for a maximum of 64 feet at the top of the pitched roof (tower elements). Proposed exterior materials include varying plaster colors consistent with the Design Guidelines, wrought iron and decorative tile accents, accentuated building cornices, and plaster building ornaments to create a "village" of buildings that cohesively work together under a single architectural theme.

All buildings would be constructed from steel for primary and secondary framing elements. The exterior walls would be light gauge frame with plaster finish. A metal "cool" roof is proposed for the majority of the roofing areas in conjunction with the decorative roof tile accents on the tower elements; (a "cool" roof reflects and emits the sun's heat back to the sky instead of transferring it to the building below thereby reducing energy costs). The Loadout Area tunnel, associated ramps, and all operational areas would be poured concrete slab (see **Exhibits 2-10** through **2.19** for exterior elevation plans, the overall floor plan, and conceptual site renderings).

Landscaping would be developed to screen the site perimeter and throughout the MRF/TS facility with particular focus on the public view areas. In addition, a decorative concrete block wall would be constructed with wrought iron gates at facility access points. The site would have secured perimeter fencing and/ or a block wall along the entire property boundary. Landscaping would cover approximately 99,623 SF (13%) of the site (see **Exhibit 2-8 Preliminary Landscape Plan**).

HOURS OF OPERATION

The MRF/TS is proposed to be open for waste receipt 24 hours per day, seven days per week with the majority of waste receipt typically occurring between the hours of 6:00 AM to 8:00 PM from Monday through Friday, 6:00 AM to 4:00 PM on Saturday, and from 8:00 AM to 4:00 PM on Sunday.

The MRF/TS is proposed to be open (24 hours per day, seven days per week) to provide service operations and activities that require off-hour waste management services (Caltrans off-hour road maintenance, emergency-related clean ups, etc.), and to encourage waste hauling during non-peak traffic hours to reduce traffic congestion. The hours of operation for the MRF/TS are shown in **Table 2-4 Hours of Operation** below. While the Proposed Project is proposed to be allowed to operate 24/7, the facility will not be required to be operated 24/7, and actual operating hours will be dependent upon market conditions.

Table 2-4 Project Hours of Operation

Planned Activity	Days	Hours
Receipt of Material	Monday – Sunday	24/7

Transfer of Material Off-site (both solid waste and recovered materials)	Monday – Sunday	24/7
Processing of Materials (indoors)	Monday – Sunday	24/7
MRF/TS maintenance (indoors)	Monday – Sunday	24/7
Vehicle maintenance	Monday – Sunday	24/7

EMPLOYMENT

The MRF/TS anticipates to employ approximately 345 full-time employees. There would be three (3) full-time working shifts. Employee shifts are likely to be scheduled as follows:

- Shift 1) 6:00am – 2:30pm
- Shift 2) 2:30pm – 10:30pm
- Shift 3) 10:00pm – 6:30am

PARKING AND CIRCULATION

The site would be developed for parking areas for the transfer fleet and for the private vehicles operated by the drivers and maintenance facilities for the operation of a 23 truck transfer truck fleet. Although it is expected that 100% of residual waste will be handled by Athens trucks, additional transfer truck capacity beyond the Athens-owned fleet would be provided if needed via various sub-hauler vendors operating in the Los Angeles basin, as well as extensive use of trucking back-haul arrangements, in which vehicles transporting materials into the vicinity of the San Gabriel Valley would be utilized to haul waste or recycled commodities from the Irwindale MRF to facilities located near the point of origin of these trucks or located along their return routes. Utilization of back-hauls is a way of maximizing efficiency of existing truck trips by providing a payload for vehicles that would otherwise be operating empty.

Based on an average haul distance of 38 miles one-way to Mid Valley (assumes 80% of landfill routing) anticipated to be utilized by the Proposed Project, and two-10 hour transfer truck operating shifts, the planned fleet of 23 trucks is adequate to move 100% of the projected residual wastes and landfill ADC to the landfills. Transfer trucks would operate 20 hours/day; there will be a period of approximately 4 hours/day, in the evening, during which the trucks will undergo maintenance and be parked on the property. When transfer trucks are loaded during the hours that the trucks are not departing immediately for their outbound destination, the loaded trailers will be parked at the MRF in the areas designated for transfer trucks. Any vehicle loaded with putrescible materials parked at the facility outside the building will be equipped with water tight seals and be tarped/covered to minimize potential for litter or odors. Under normal operating conditions, trucks loaded during the 4-hour non-operating period will be removed from the site upon commencement of the next shift, and the staging period would not exceed 4 hours. All vehicles loaded with putrescible residual materials will be removed from the site within of 24 hours of being loaded, and will be stored inside the MRF building for odor control.

Other vehicles operating on the property, such as outbound containers with recyclable materials and roll-off containers with recyclable materials will either be enclosed containers or tarped/covered. Inert materials such as rock, stone, metal, glass, soil, etc. stored in containers or vehicles outside of the building will not be required to be tarped/covered until such time that they are transported off site as these materials are not odorous or attractive to vectors.

Design of the parking stall size and driveways would be built to City and Fire Department standards. Parking for the site is currently proposed at 180 parking stalls and 23 transfer truck stalls, to allow for employee parking as well as convenience store parking. Included within these transfer parking stalls is the availability for on-site truck parking for the transfer trucks used for the transport of solid waste material off of the site to additional processing or disposal facilities.

The majority of the facility parking would be located within the LADWP easement located on the southern portion of the site. Transfer truck parking would be provided along the northwestern side of the site on the outer lane of the perimeter access road. Fire department access requires a 26-foot (minimum) wide lane along the perimeter of the MRF/TS and would comply with City engineering requirements and fire department standards. Parking, circulation, and hardscape areas would occupy approximately 510,021 SF (about 68%) of the total site.

Sole access for transfer trucks to and from the site would be to and from Arrow Highway, and directed towards Interstate 605 for regional transport, utilizing Irwindale roadways. Transfer trucks will not have access to the site from Live Oak Avenue. Thirty percent (30%) of the Transfer Trucks are anticipated to travel to/from the south (via the I-605 Freeway) and 70% to/from the north (via the I-605 Freeway). There are two (2) driveways from Live Oak Avenue; 1) Fire Department access only (western most driveway); and 2) employee and visitor access at the intersection located at Baldwin Park Boulevard. Site access into the fueling facility/convenience store is located on Arrow Highway (**Exhibit 2-6 Project Circulation Plan** and **Exhibit 2-7 Project Variant Circulation Plan**). The Project Variant site plan does not modify site access or driveways; rather it modifies on-site parking only. (Refer to **Chapter 3.12 Traffic Generation and Circulation** for complete discussion and analysis).

SINGLE PHASE CONSTRUCTION

The Proposed Project would be constructed in a single phase. The schedule for the construction of the MRF/TS and fueling facility/convenience store at the site is estimated to require 18 months and to be completed in late 2015 to early 2016. It is estimated that an average daily construction crew of 84 employees would be present on site during construction.

The Proposed Project is not anticipated to require the construction of any public infrastructure.

ON-SITE MANAGEMENT PLANS

The Applicant has identified several *On-Site Management Plans*, which have been designed to eliminate or reduce potentially significant environmental impacts and to ensure on-site operational safety. Each of the management plans is based on current, functioning management plans in use at the Applicant's City of Industry MRF. These management plans are designed to comply with federal, state and/or local laws, regulations and ordinances and will be subject to review and approval by the City, including any future amendments. The *On-Site Management Plans* are identified below and are contained in their entirety within **Appendix B – Athens Services On-Site Management Plans**.

On-Site Management Plan #1 - Athens Services Litter Prevention Program
On-Site Management Plan #2 - Athens Services Pest Control Program
On-Site Management Plan #3 - Athens Services Odor Control Program
On-Site Management Plan #4 - Athens Services Noise Control Program
On-Site Management Plan #5 - Athens Services Hazardous Materials Program
On-Site Management Plan #6 - Athens Services Fire Prevention Control and Mitigation Plan
On-Site Management Plan #7 - Emergency Action Plan / Emergency Response Training Plan

2.3 PROJECT VARIANT

On the far eastern corner of the site, the Valley County Water District (VCWD) has expressed interest in acquiring 1.9 acres for placement of two water storage tanks. Development by the VCWD on this section of the site, owned by the City of Irwindale, is referred to as the "Project Variant." In the event that VCWD does acquire the 1.9 acres, the Proposed Project site would not be able to accommodate the required overnight parking for transfer trucks or the administrative office/maintenance building. In that event, the Applicant would need to hire sub-hauler vendors for all transfer truck operations, and the office/visitors' center would be incorporated into the main MRF/TS building. Building element specifics are provided below in **Table 2-5 Project Variant Building Specifications.** (See **Exhibit 2-5 Project Variant Site Plan** and **Exhibit 2.7 Project Variant Circulation Plan**).

Under this alternative development option, the MRF/TS facility would essentially be the same as the Proposed Project described above, except that due to the reduced acreage available, there would be no transfer trucks parked or maintained at the facility. In the absence of the on-site parking and maintenance facility for Applicant-owned transfer trucks, all transfer truck operations would be supplied via various sub-hauler vendors and similar contract arrangements; and therefore, transfer trucks would not be parked at the MRF/TS when not in operation.

As a result of the broad use of sub-hauler vendors, there are numerous vendors operating in the Los Angeles market. A brief search for sub-hauler trucking vendors found no less than five such

vendors operating within a 15 to 35-mile driving distance of the proposed Irwindale MRF/TS. Athens would expect to utilize various vendors as needed with the selection of these vendors being based on a variety of considerations such as availability of back-haul arrangements, vendor ability to supply needed trucking capacity, cost of hauling services, quality and dependability of services, etc.

Other vehicles operating on the property, such as outbound containers with recyclable materials and roll-off containers with recyclable materials would either be enclosed containers or tarped/covered. Inert materials such as rock, stone, metal, glass, soil, etc. stored in containers or vehicles outside of the building would not be required to be tarped/covered until such time that they are transported off site as these materials are not odorous or attractive to vectors.

Table 2-5 Project Variant Building Specifications[4]

Project Building Elements	Specifications (square feet "SF")
Materials Recovery Facility / Transfer Station	82,593
Green waste	65,483
Self-haul and Construction & Debris	73,270
Administrative / Visitor Center	6,636
Scale Houses	600
Convenience Store	2,390
Total Area	**230,972 SF**
Parking Provided	
Standard and handicap parking stalls	115
Office and convenience store standard and handicap parking stalls	32
Total Parking Stalls (planned/required)	**147**

For most of the impact areas assessed in Chapter 3, the Project Variant is not expected to have different impacts than the Project based on the above description of the Project Variant and the Project. The Project Variant will be separately assessed in the EIR only to the extent that it is reasonably foreseeable that it will have different impacts than the Project. If the EIR does not separately assess the Project Variant in an impact assessment in the EIR, the City has found that the impacts for the Project Variant is the same as for the Project.

[4] Areas indicated for individual components are approximate and subject to change in final design.

2.4 STATEMENT OF OBJECTIVES

Pursuant to State CEQA Objectives 15124(b), the Project Description shall include a statement of objectives. These objectives assist the City in developing a reasonable range of alternatives to evaluate in the EIR, and aid the decision-makers in preparing findings or a statement of over-riding considerations, if necessary. The objectives are designed to demonstrate the underlying purpose of the project. The City of Irwindale has identified the following list of criteria as the objectives for the *Irwindale Materials Recovery Facility and Transfer Station.*

- The City of Irwindale seeks long term economic development that provides a range of employment opportunities to local citizens.

- Assembly Bill 341 [2011] sets a 75% recycling goal for California by 2020; therefore, the City of Irwindale seeks to achieve and surpass waste reduction and diversion goals and mandates, by providing additional processing capacity to increase diversion of recyclable commodities from the mixed municipal waste stream, thereby reducing the consumption of landfill capacity and prolonging the operational period of the region's current permitted landfill capacity.

- Provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts to the extent feasible.

- Construct the facility at a location with nearby Interstate access for both ingress and egress and which minimizes the traffic on local communities, and on the regional transportation network.

- Provide a disposal outlet accessible to local waste haulers during non-peak traffic hours with a goal to reduce traffic loading to area roads during peak hours.

2.5 INTENDED USES OF THE EIR

The City of Irwindale is the Lead Agency for the preparation of the EIR and has discretionary approval of the project proposal. This EIR is part of the environmental review process for the *Irwindale Materials Recovery Facility and Transfer Station Project.* The intent of this EIR is to enable the City and other responsible agencies and interested parties to understand the potential environmental effects of the Proposed Project.

State CEQA Guidelines §15124(d) directs the Project Description to provide information, not extensive detail, needed for evaluation and review of the environmental impact report; including:

agencies expected to use the EIR in their decision-making process, list of permits and other approvals required to implement the project, list of related local, state and federal requirements, and public agency decisions subject to CEQA.

The EIR is expected to be used for the following purposes:

- To inform the public, decision-makers, elected officials and other stakeholders regarding the Proposed Project;
- To disclose to the public, decision-makers, elected officials and other stakeholders the potential environmental effects associated with short-term construction and long-term operation of the Proposed Project, and to solicit input on the potential environmental effects;
- To identify ways to avoid or minimize potential environmental effects of the Proposed Project and evaluate alternatives to the proposed action(s);
- To provide the Irwindale Planning Commission, and Irwindale City Council and the Successor Agency to the former Irwindale Community Redevelopment Agency with a technically and legally adequate environmental document to be used as one basis for their decision-making process for the Proposed Project; and To provide regulatory agencies with information necessary to determine if they have jurisdiction over the Proposed Project and, if so, to identify project permitting requirements.

The City of Irwindale has discretionary approval of the following items for construction and operation of the *Irwindale Materials Recovery Facility and Transfer Station Project,* which may include but are not limited to:

Environmental Review
The City's environmental review process for an EIR requires the Planning Commission's recommendation to the City Council for project approval or denial and possible certification of the EIR.

General Plan Amendment No. 1-2008
The General Plan Amendment is required to change the land use designation from Regional Commercial to Commercial/Industrial so that both commercial and industrial development uses are allowed.

Zoning Ordinance Amendment No. 4-2008
The Zoning Code Amendment is required to revise the distance requirement for alcohol sales (Section 17.58.040), and to allow a MRF/TS in the M-2 zone with approval of a Development Agreement.

Site Plan & Design Review Permit No. 4-2008
A Site Plan and Design Review Permit is required for consistency analysis with the City of Irwindale Commercial and Industrial Design Guidelines.

Conditional Use Permit No. 12-2008
A Conditional Use Permit is required for the approval of alcohol sales at the proposed convenience store, unless otherwise covered by the Development Agreement.

Development Agreement No. 1-2008
The Development Agreement is an assurance that a developer may proceed with a project in accordance with existing policies, rules and regulations and subject to certain conditions of approval. The Development Agreement assures some additional benefit to the public in exchange for the vested rights granted under the agreement. The Development Agreement will also allow for the following:

- Allow construction and operation of a MRF/TS in the M-2 zone, subject to the approval of a Development Agreement;
- Provide specific standards for a MRF/TS; and
- Allow construction and operation of a gas station/convenience store if it is part of a larger development project.

Disposition and Development Agreement, or other disposition document
The Disposition and Development Agreement defines the financial and development responsibilities of both the City and Applicant in carrying out the Proposed Project, and describes the process for sale of the site (currently owned by the Successor Agency), and which is subject to the approval by the State Department of Finance.

Franchise and Facility Operations Agreement
The Franchise and Facility Operations Agreement establishes the terms by which the City will grant a franchise to Athens for the exclusive operation of a MRF/TS within City limits and governs how Athens will operate the Facility and its appurtenant uses and maintain the Site.

In addition to the above approvals and entitlements, the City may require a rezone, and an additional text amendment to allow the proposed use at the Proposed Project site, including by way of a Development Agreement.

Table 2-6 Approvals/Agreements/Permits demonstrates the anticipated entitlement approvals, agreements and/or permits for the Proposed Project. Project construction and/or operation may be subject to the review and/or approval of several agencies.

Table 2-6 Proposed Project Approvals / Agreements / Permits

AGENCY	APPROVAL / AGREEMENT / PERMIT
City of Irwindale	General Plan Amendment; Zoning Ordinance Amendment; Site Plan and Design Review Permit; Conditional Use Permit; Development Agreement; Disposition and Development Agreement; Franchise and Facility Operations Agreement; Storm Water Pollution Prevention Plan; and Standard Urban Storm Water Mitigation Plan
Los Angeles County Department of Public Works	Building, Plumbing, Electrical, Industrial Wastewater Disposal, and Underground Storage Tanks containing hazardous substances permits
Los Angeles County Public Health Solid Waste Management Program (acting as the Local Enforcement Agency [LEA]) in conjunction with the California Department of Resources Recycling and Recovery (CalRecycle);	Solid Waste Facility Permit, Tire Hauler Permit[5]
Los Angeles County Sanitation District	Industrial Waste Water Discharge Permit
South Coast Air Quality Management District (East San Gabriel Valley)	Permits to construct and operate odor control devices, and gasoline dispensers
California Department of Industrial Relations, Division of Occupational Safety and Health	Work area design approval and compressor air tank permits
California Department of Conservation, Division of Recycling	Beverage container recycling certifications
California Environmental Protection Agency, Division of Toxic Substance Control	Hazardous Waste Handler Identification Number, hazardous waste generator/hauler permits, electronic waste handler/hauler permit[6]
California Department of Food and Agriculture Division of Measurement Standards	Weighmaster license
California Department of Transportation (District 7)	Biannual inspection of terminals

[5] Required for incidental use on-site
[6] Required for incidental hazardous waste that enters the site

Table 2-6 Proposed Project Approvals / Agreements / Permits	
AGENCY	**APPROVAL / AGREEMENT / PERMIT**
California State Water Resources Control Board, Regional Water Quality Control Board (Los Angeles Region 4)	Waste Discharge Identification Number in compliance with the National Pollution Discharge Elimination System, and Storm Water Pollution Prevention Plan
Southern California Edison	Access right over underground easement along Arrow Highway
United States Army Corp of Engineers	Access easement along Arrow Highway
Los Angeles Department of Water and Power	Access under transmission easement parallel to Live Oak Avenue

Exhibit 2-4 Project Site Plan

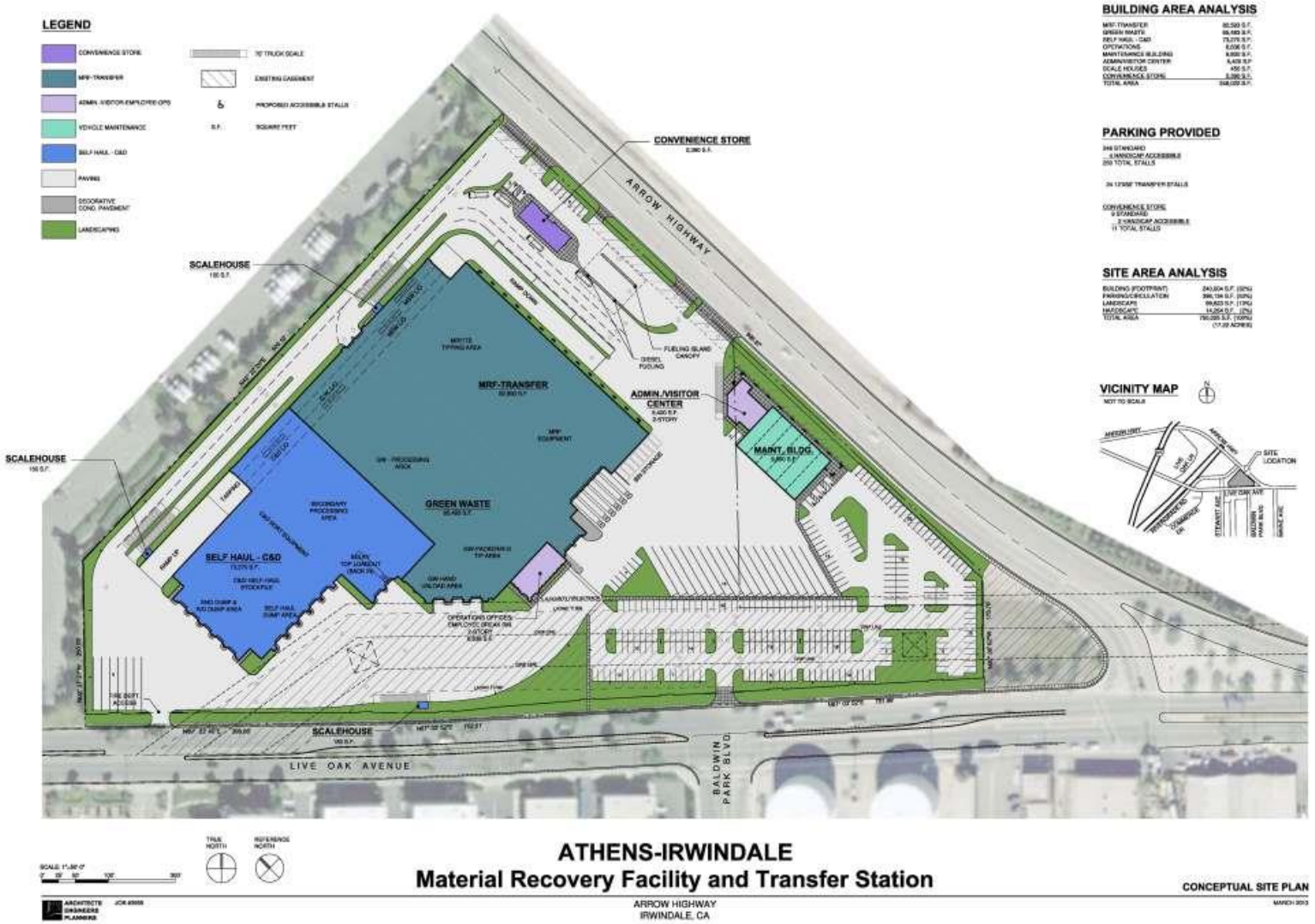


Exhibit 2-5 Project Variant Site Plan

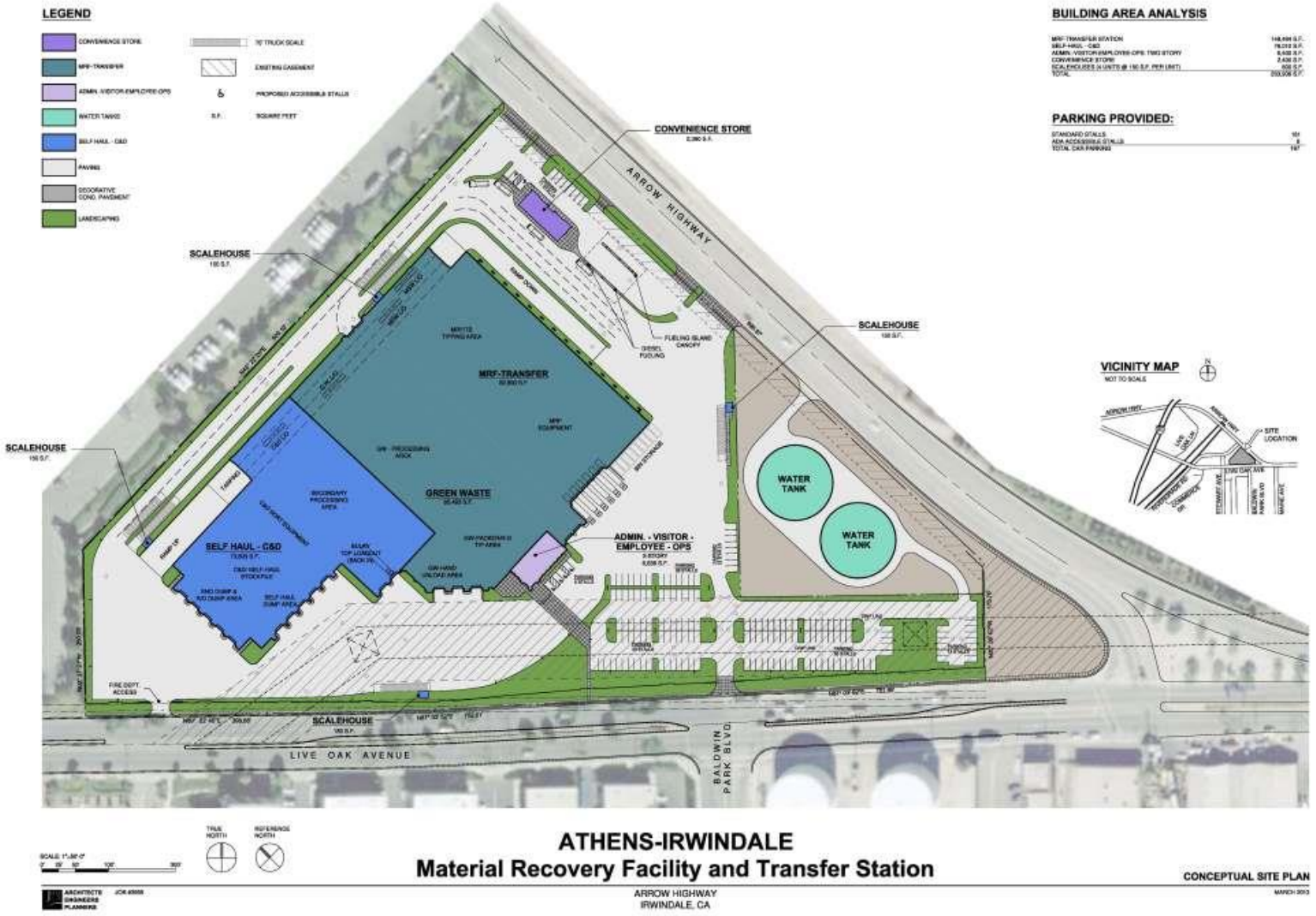


Exhibit 2-6 Project Circulation Plan



Exhibit 2-7 Project Variant Circulation Plan



Exhibit 2-8 Preliminary Landscape Plan

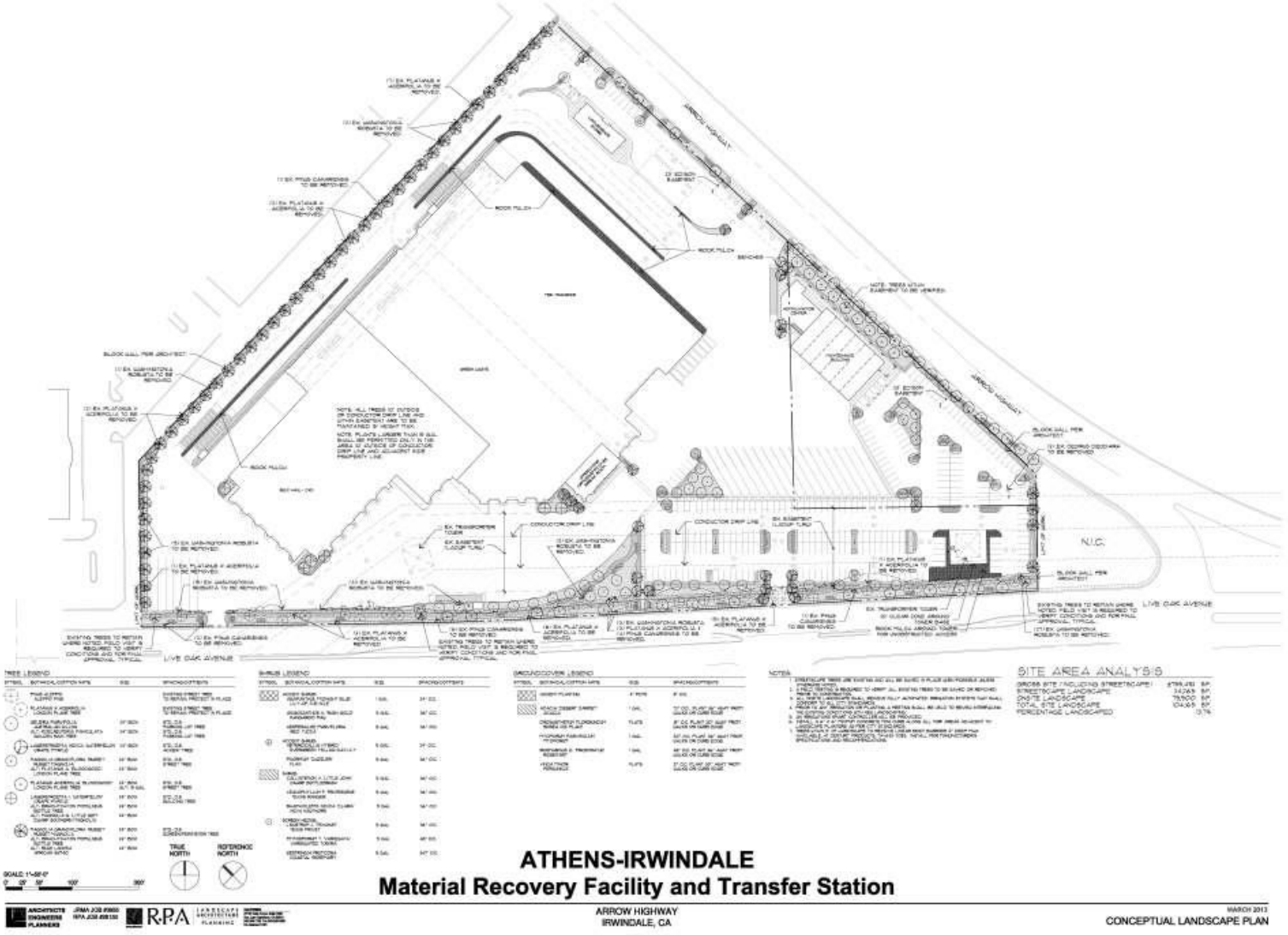


Exhibit 2-9 Preliminary Grading Plan

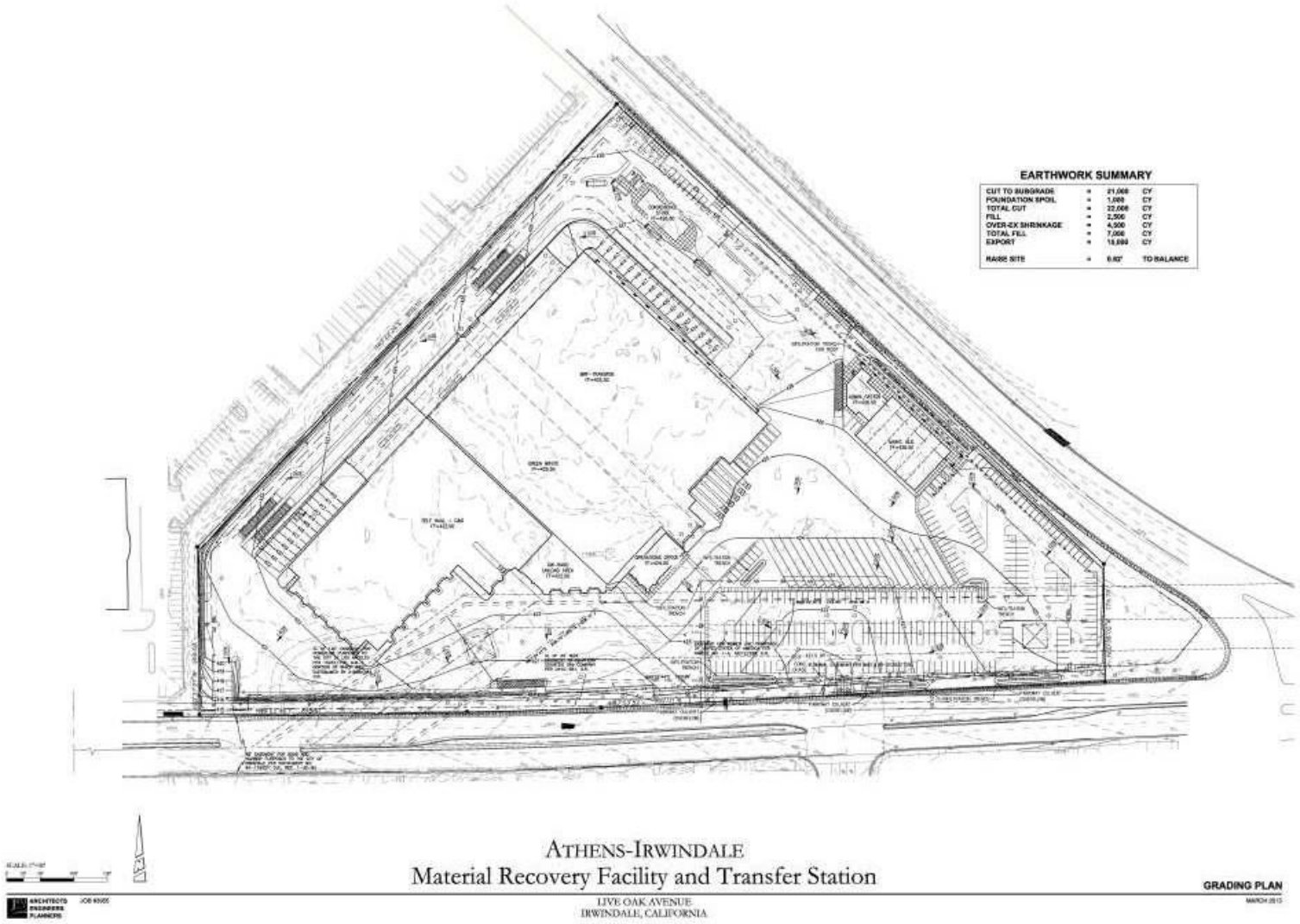


Exhibit 2-10 Exterior Elevations



Exhibit 2-11 Exterior Elevations of Maintenance & Administrative Building

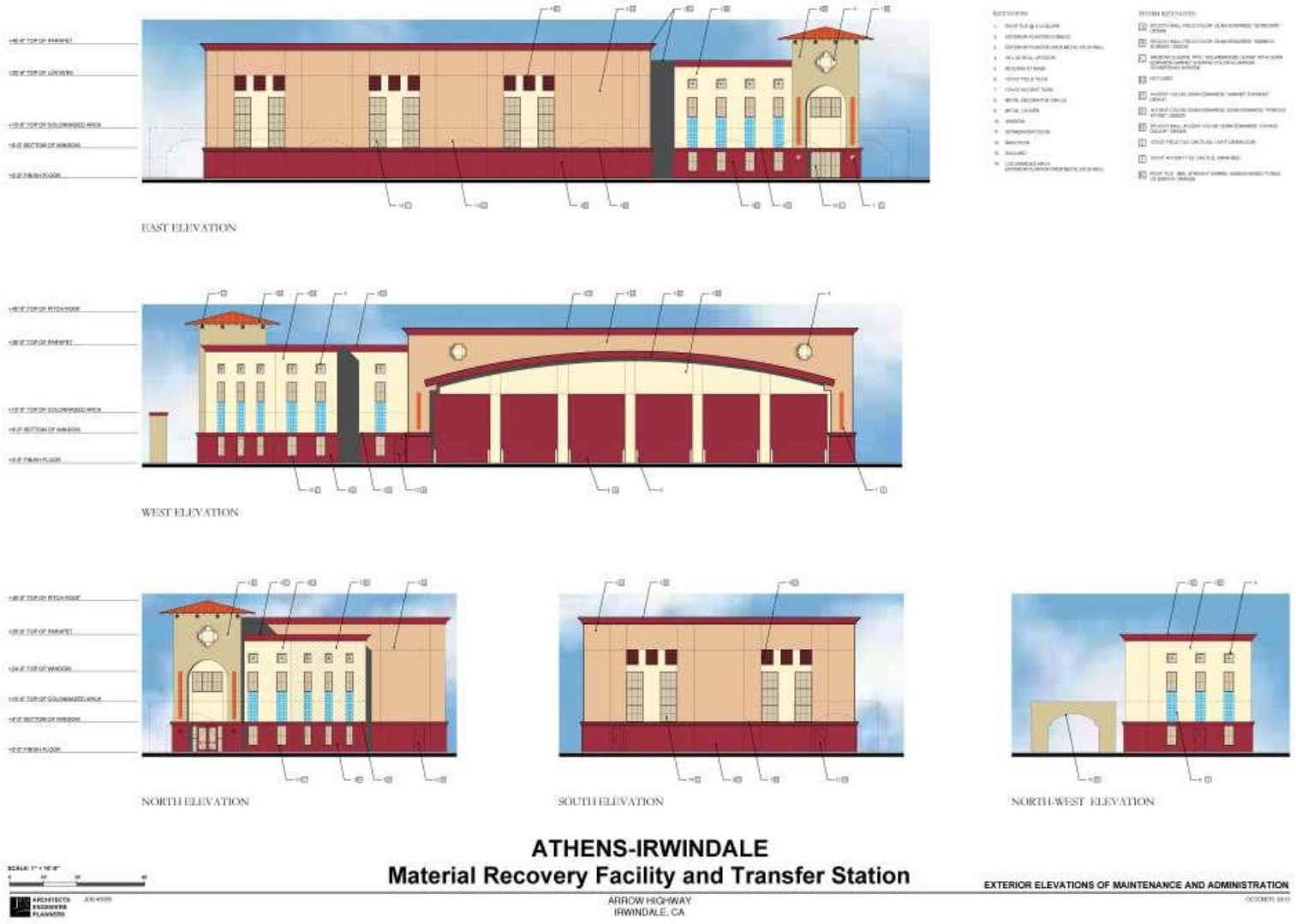


Exhibit 2-12 Overall Floor Plan

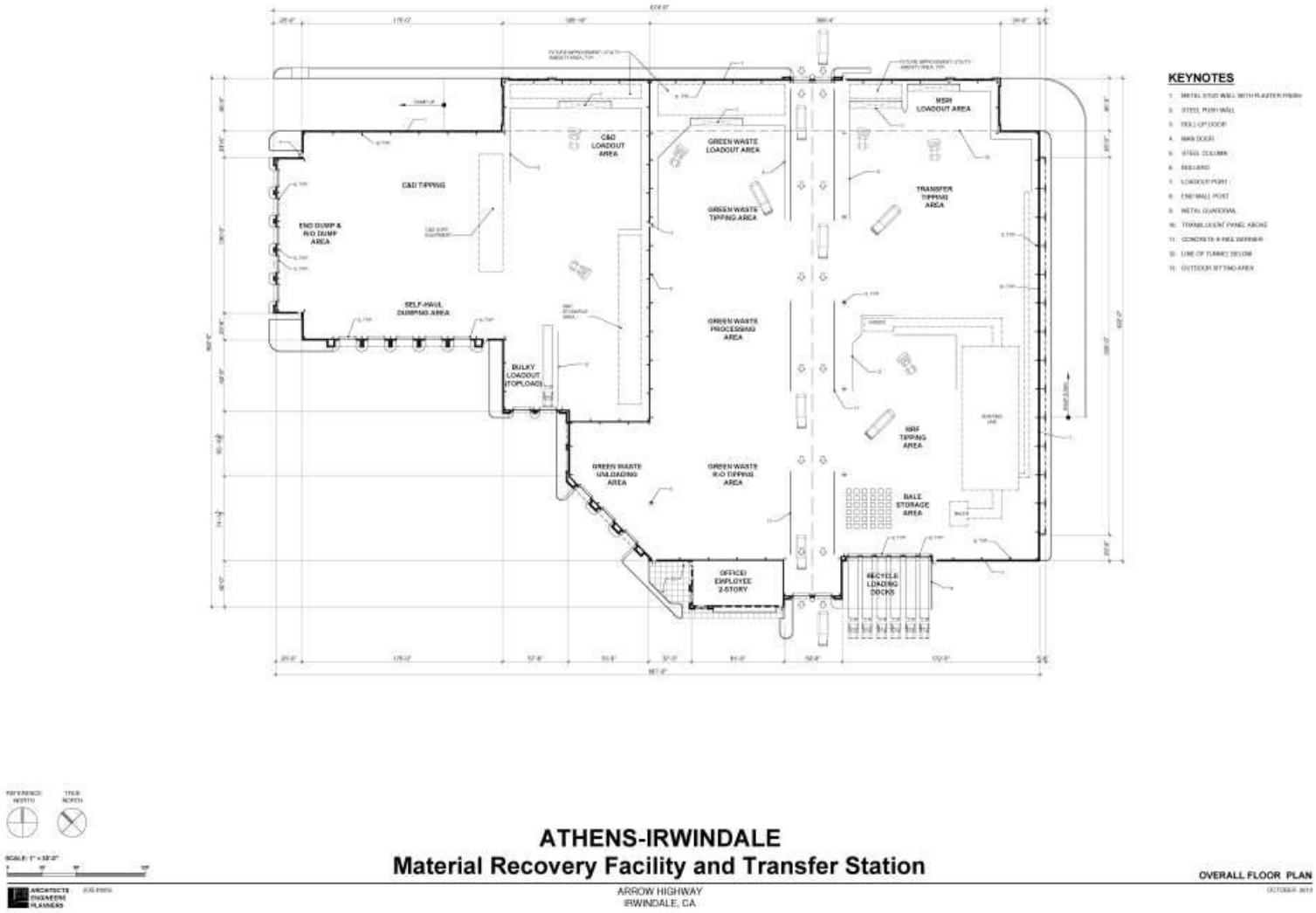


Exhibit 2-13 Maintenance & Administrative Building Floor Plan

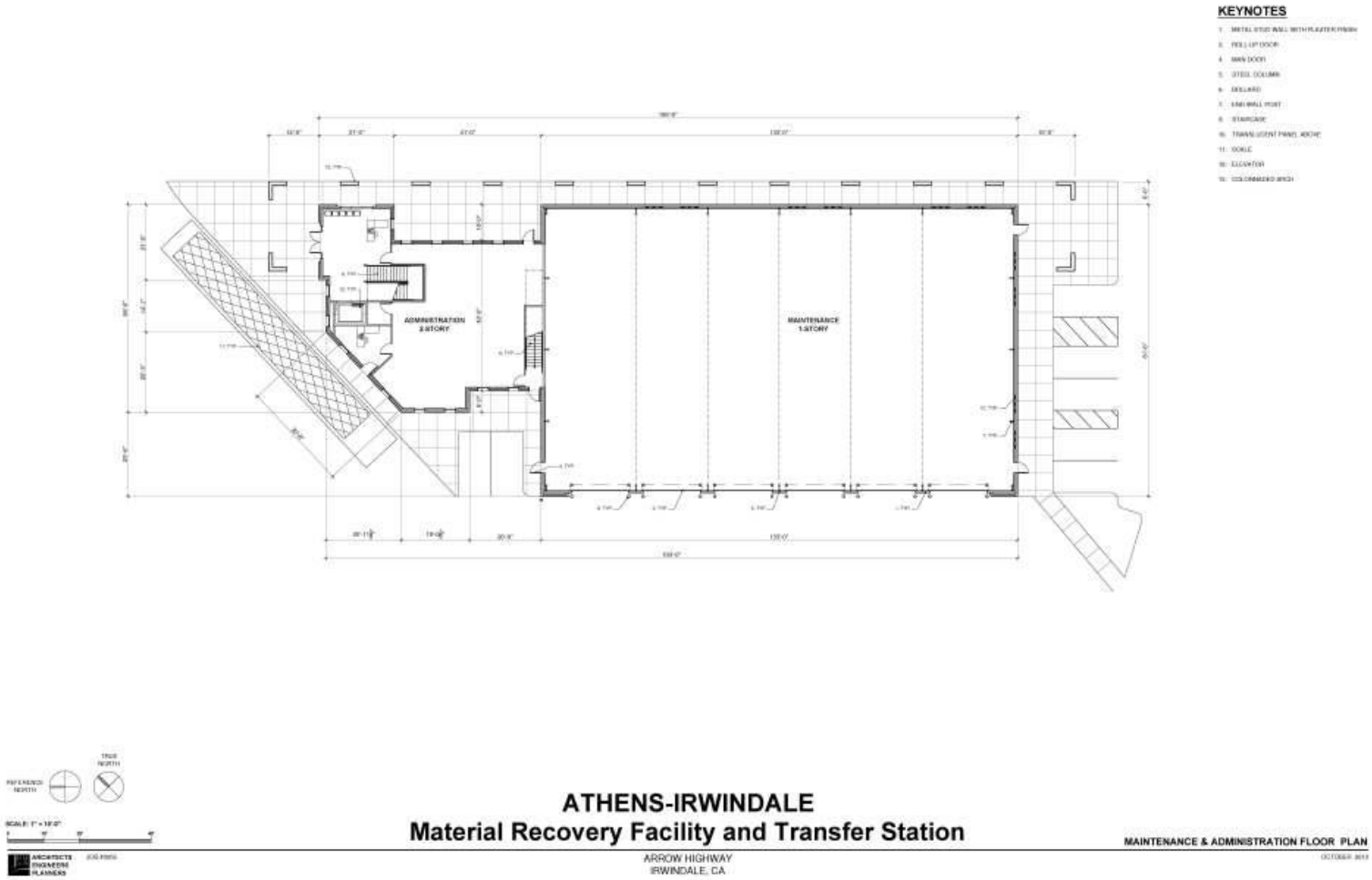


Exhibit 2-14 Site Rendering Aerial View looking South-West



Exhibit 2-15 Site Rendering Aerial View looking South-East



Exhibit 2-16 Site Rendering Aerial View looking North-East



Exhibit 2-17 Site Rendering Aerial View looking North



Exhibit 2-18 Site Rendering Aerial View looking North-West



Exhibit 2-19 Site Rendering Aerial View looking North



3.0 ENVIRONMENTAL SETTING AND IMPACT ANALYSIS

This chapter presents a detailed environmental assessment for resource topics with potential environmental effect. The chapter contains the following subsections:

- Chapter 3.1 Effects Found Not to be Significant;
- Chapter 3.2 Air Quality / Greenhouse Gas / Odor / Health Risk Assessment;
- Chapter 3.3 Aesthetics;
- Chapter 3.4 Biological Resources;
- Chapter 3.5 Cultural Resources;
- Chapter 3.6 Environmental Justice[1];
- Chapter 3.7 Geology & Soils;
- Chapter 3.8 Hazards & Hazardous Materials;
- Chapter 3.9 Land Use & Planning;
- Chapter 3.10 Noise;
- Chapter 3.11 Public Services &Utilities;
- Chapter 3.12 Traffic Generation & Circulation; and
- Chapter 3.13 Water Quality & Hydrology.

Subsection 3.1 is provided as required by State CEQA Guideline §15126.2, and is based on the results of scoping, site characteristics, and preliminary environmental assessment of the Proposed Project. Subsections 3.2 through 3.13 are outlined and presented for analysis in the following manner:

Existing Environmental Setting

Also referred to as the baseline environment from which to determine a potential environmental impact, the existing environmental setting describes the physical setting that exists at the present time (2013) as it may influence or effect the resource topic area's assessment. CEQA requires to particular location or format for an EIR's discussion of environmental setting. Each resource topic chapter individually describes the environmental setting and how the environmental setting is considered for each impact section. For example, the relevant environmental setting for air quality is an air basin. Whereas, for public services, it may be the City limits.

Pursuant to State CEQA Guideline §15125(a), an EIR must include:

> "*…a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no*

[1] Environmental Justice is not part of any CEQA statue or regulation; and is included in the EIR at the City's discretion.

> *notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives*."

Regulatory Setting

Laws, ordinances, and regulations that apply to the project are identified with applicable federal, State, and local governing settings.

Thresholds of Significance Criteria

This section provides the thresholds that are the basis for conclusions of significance based on the 2014 State CEQA Guidelines Appendix G, regulatory guidelines from various federal, State and local agencies, and City of Irwindale development standards.

Impact Analysis and Mitigation Program

Impact Analysis

This section describes potential environmental effects to the existing physical conditions, which may occur if the Project is implemented. Evidence, based on factual and scientific data, is presented to show the cause and effect relationship between the Project and the potential changes in the environment. Impacts are classified into various levels of significance. In evaluating the potential environmental impacts of the Proposed Project and Alternatives, the level of significance is determined by applying the threshold of significance presented for each resource evaluation area. The following terms [and terminology] are used to describe each potential environmental impact:

No Impact: A finding of no impact is appropriate if the analysis concludes that the project would not affect the particular resource in any way.

Less than Significant Impact: A less than significant impact would be identified when the Proposed Project would cause no substantial adverse change in the environment (i.e., the impact would not reach the threshold of significance). No mitigation program is necessary.

Less than Significant Impact with Mitigation Incorporated: A significant, but mitigable or avoidable, impact would create a substantial or potentially substantial adverse change in any of the physical conditions within the area affected by the Proposed Project. Such an impact would exceed the applicable significance threshold, but would be reduced to a less than significant level by the required application of a mitigation measure.

Significant and Unavoidable: As required by Section 15126.2(b) of the State CEQA Guidelines, an impact is significant and unavoidable when a residual impact that would cause a substantial adverse effect on the environment could not be reduced to a less than significant level through any feasible mitigation measure(s).

Mitigation Program

As required by CEQA, mitigation measures are identified and intended to reduce or eliminate significant adverse impacts to the extent feasible. Mitigation measures may include:

- Avoiding the impact completely by not taking a certain action or parts of an action;
- Minimizing the impact by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations, during the life of the action;
- Compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures are required as a condition of Project approval and will be monitored to ensure compliance and implementation. All direct and indirect impacts that can be avoided or reduced to less than significant levels by the mitigation program are discussed in the EIR.

In addition to mitigation measures (sometimes referred to as "MM"), the Proposed Project is required to comply with project design features (sometimes referred to as "PDF"). PDFs are designed during the initial planning phase and are incorporated into the physical design of a project. PDFs can be introduced by either the Applicant or the Lead Agency as a way to reduce an anticipated effect. The Mitigation Program, which incorporates both MMs and PDFs, is designed as a condition of project approval. The Mitigation Program serves as a means to reduce or avoid any identified potentially significant adverse impacts from implementation of the Proposed Project. When these potentially significant adverse impacts remain significant, even after imposing the Mitigation Program, such impacts are identified as significant and unavoidable.

Residual Impact after Mitigation Program

This section describes the residual impacts that may remain after implementation of the Mitigation Program, and whether that residual impact is significant and unavoidable or less than significant.

Cumulative Impacts

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed project. According to State CEQA Guidelines §15130(a), "*an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable*." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by §15130). As defined in the State CEQA Guidelines §15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> *". . . the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time."*

In addition, State CEQA Guidelines §15130(b) identifies that the following five elements are necessary for an adequate cumulative analysis:

1) *Either:*
    a. *A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or*
    b. *A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projects may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.*
2) *When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.*
3) *Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*

4) *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*
5) *A reasonable analysis of the cumulative impacts of the relevant projects, including examination of reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

Where a Lead Agency is examining a project with an incremental effect that is not cumulatively considerable, a Lead Agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

As stated above, the State CEQA Guidelines require the use of a list of past, present, and probable future projects and/or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. The "list" approach has been used in this EIR.

In reference to the geographical scope, some of the potential cumulative impacts associated with the Proposed Project are more localized in nature and, thus, are analyzed at a project level (for example: cultural resources, geology and soils, noise). Other cumulative impacts are regional in nature and are, therefore, analyzed at a regional level rather than at a project level (for example: air quality, greenhouse gas emissions). As such, these impacts are evaluated on a regional basis to analyze potential cumulative impacts.

Projects that may have a cumulative effect on the resources of this area are referred to as "related projects" in this cumulative impacts analysis. **Table 3-1 Cumulative Project List** provides the list of approved, proposed, and reasonably foreseeable projects used in the cumulative analysis.

The City of Irwindale compiled a cumulative projects list in early 2013 after consultation with neighboring cities. Responses were received from the cities of Azusa, Baldwin Park, Duarte, Glendora, and West Covina. In total, there are 65 cumulative projects.

Table 3-1 Cumulative Project List

Number	Project Name	Location	Summary Description	Status
IRWINDALE				
1.	KARE Youth League/ Santa Fe Dam Sports Park	Northeast corner of Arrow Highway and I-605, Irwindale	Development of a youth sports park to be constructed over a ten-year period. Multiple baseball fields, basketball courts, and soccer fields, all with grandstand seating. Restrooms, Administrative/Retail Buildings, and Club room/Office Building.	Approved
2.	Infill Housing Project	Various	8 new units	In negotiation with developer
AZUSA				
3.	Residential Project	710 South Azusa Avenue	Residential Condominiums (81 DU)	Approved
4.	Monrovia Nursery Specific Plan		Single Family Residential (752 DU), Residential Condominiums (823 DU), Elementary School (245 students), Middle School (175 students), Park (6 acres), and Transit Commercial (50,000 SF)	Tract construction on-going
5.	Azusa Pacific University Specific Plan	Azusa Pacific University East & West Campuses	East Campus and West Campus - 8,484 Students, 896 Staff, 495 Faculty. Total count at completion of implementation of Specific Plan	Ongoing
6.	"The Village" at Citrus Crossing. Building Permits issued but expired. Final Map recorded.	S/W portion of the Citrus Crossing Shopping Center property located at the s/w corner of Citrus and Alosta Avenues.	Multi-Family Residential Townhomes (103 MFR Units)	Applicant is expected to submit for building permits
7.	Azusa Rock Revised Conditional Use Permit and Reclamation Plan **approved, not constructed**	Northerly terminus of Encanto Parkway and Fish Canyon Road	Mineral Resource – Mining (Revised Conditional Use Permit and Reclamation Plan; Modify operations and reclamation approach)	Mining operation expected to begin October 2013
8.	Residential Project **approved, not constructed**	9th Street & Alameda Avenue	Residential Townhomes (14 DU)	Construction anticipated in November 2013

Table 3-1 Cumulative Project List

Number	Project Name	Location	Summary Description	Status
9.	New Metro Gold-Line light rail station and parking structure. Draft EIR currently under revision for parking facility.	Santa Fe Avenue and Alameda Ave	Station Platform and Parking Structure. Proposed Park & Ride facility: 3 level parking structure (plus rooftop), an electric bus charging station with bus bays and turnouts for Foothill Transit buses. (Up to 550 Parking Spaces)	Ongoing Operational 2015-2016
10.	New Metro Gold-Line Light rail station and parking structure. EIR for project approved, design of parking facility not approved.	Citrus Avenue just north of railroad right-of-way	Station Platform and three level parking structure (42,498 SF / 200 parking spaces minimum)	Ongoing Operational 2015-2016
11.	Waste Management Material Recovery Facility	1501 W. Gladstone Street	Material Recovery Facility (125,000 SF)	Tentative start date 9.16.13
12.	Dhammakaya Meditation Facility	865 Monrovia Place	Religious meeting and conference building (60,000 SF estimate)	Environmental review process
13.	Industrial business Park	1001 N. Todd	19.72 acre with 7 Industrial buildings (414,100 SF)	In process, anticipated approval hearings in 2014
14.	Equestrian Facility	3751 Fish Canyon Road	Equestrian Center for 10 horses (2,400 SF stables)	Approved and operating
BALDWIN PARK				
15.	Residential	3519 Mangum Street	SFR	Under construction
16.	Residential	14461 Palm Avenue	SFR	Under construction
17.	Residential	14465 Palm Avenue	SFR	Under construction
18.	Residential	3525 Big Dalton Avenue	SFR	Under construction
19.	Residential	4503 Park Avenue	SFR	Plan check
20.	Residential	4457 Park Avenue	SFR	Under construction
21.	Residential	13286 Earl Avenue	SFR	Under construction
22.	Residential	14146 Benbow Street	SFR	Under construction
23.	Residential	4505 Park Avenue	SFR	Under construction

Table 3-1 Cumulative Project List

Number	Project Name	Location	Summary Description	Status
24.	Commercial Building	SEC of Puente Avenue and Francisquito Avenue	7,500 SF	Completed design review need to submit for plan check.
25.	Restaurant	14622 Dalewood Street	15,295 SF	In design review
26.	Replica of #1 Store In-N-Out	13752 Francisquito Avenue	112 SF	Under construction
27.	Office	3323 Baldwin Park Boulevard	4,950 SF	Obtained building permits
28.	Dental Office	4814 Maine Avenue	1,390 SF	Need to submit for plan check
29.	Office	14137 Garvey Avenue	5,029 SF	Under construction
30.	Office and Warehouse	13329 Garvey Avenue	13,620 SF	Under construction
31.	Industrial Office/warehouse	5029 Bleecker St.	8,748 SF	In design review
32.	Industrial/Warehouse	5014 Heintz St.	1,502 SF	In design review
33.	Industrial Building	13127 Garvey Avenue APN's 8556-022-037, 038, 039, and 040	14,500 SF	Need entitlements for lot line adjustment
34.	Residential Care Facility	3562 Vineland St.	Institution 15,686 SF	In entitlement phase
35.	Residential Care Facility	12749-12755 Torch Street	Institution 11,050 SF	In design review
36.	Ground Water Treatment Facility	15342 Ramona Blvd.	Mechanical equipment which will clean ground water. Maybe 1-2 trips per week, unmanned facility.	Obtained entitlements, working with State on obtaining grants to construct project
37.	Ground Water Treatment Facility Expansion	1712 and 1720 Dundry Avenue; 14121, 14127 and 14137 Corak Street; and 1707 Big Dalton Avenue	Mechanical equipment which will clean ground water. Maybe 1-2 trips per week, unmanned facility.	Completed entitlements and CEQA. Finalizing the 30-day NOD posting period.
38.	Conversion of 2 existing static faced billboards into 3 digital faces	S/W of 410 and North of 446 Cloverleaf Drive	No vehicle trips anticipated after construction is completed. Placement of digital faces will be done remotely via computer and wireless transmission. To billboard.	In entitlement process

Table 3-1 Cumulative Project List

Number	Project Name	Location	Summary Description	Status
DUARTE				
39.	Rose Gardens At Santa Teresita	800 Block of Buena Vista Street	Skilled nursing facilities Specific Plan Zone. Increase of 229,292 SF	Entitled projects; not constructed
40.	Andres Duarte Terrace Phase II	1700 Block Huntington Drive	High-Density Residential (Specific Plan) 43 DU	Entitled projects; not constructed
41.	Huntington Courts Phase III	2400 Block Huntington Drive	Medium-Density Residential. 16 DU	Entitled projects; not constructed
42.	City Of Hope Kaplan Family Pavilion	1500 Duarte Road	Hospital 6,954 SF	Entitled projects; not constructed
43.	Magellan Self-Storage Facility	1727 Buena Vista Street	Manufacturing. Building will be two-three stories tall, with a footprint of 48,476 s.f. and a total floor area of 112,028 s.f.	Entitled projects; not constructed
44.	Huntington Courts Phase II	2400 Block Huntington Drive	14 DU SFR and MFR	Entitled projects; under construction
45.	Attalla Ranch (Las Lomas Estates)	NE Corner of Sunnydale/Woodbluff	6 DU SFR	Entitled projects; under construction
46.	Duarte Goldline Light Rail	METRO ROW, north of Duarte Rd. from west to east city boundary line. Parking lot and streetscape improvements on Highland Avenue from Evergreen to Duarte Rd.	Construction of approximately 1.5 miles of two-light rails tracks, light-rail station platform, quad-arm crossing gates, and new railroad crossings and modified intersection.	Entitled projects; under construction
47.	Duarte Tod	Duarte Road/Highland Ave	290 DU, 75,000 SF of retail, 5,000 SF of office, retain existing 25,000 SF of retail, 1,500 space parking garage	Pending; no entitlements
48.	Former Texaco Site	1263 Huntington Drive	3500 SF of retail commercial	Pending; no entitlements
GLENDORA				
49.	The Fairways	Northwest corner of Foothill Boulevard and Cataract Avenue	17 townhomes	Under construction; completion expected mid 2013

Table 3-1 Cumulative Project List

Number	Project Name	Location	Summary Description	Status
50.	City Ventures Station Project	Southwest corner of Glendora Avenue and Ada Avenue	53 townhomes	Under construction; completion expected mid to late 2013
51.	Avalon Bay Project	Northeast corner of Route 66 and Glendora Avenue	256 apartments and 4,000 square feet of commercial space	Approved; construction expected to begin late 2013
52.	Walmart Expansion	1950 Auto Centre Drive	29,925 square foot addition to existing Walmart	Approved; construction expected to begin late 2013
53.	Monrovia Nursery Specific Plan	Former Monrovia Nursery in northwest Glendora (generally bounded by railroad tracks to the south, Sierra Madre Avenue to the north, Barranca Avenue to the east, and Azusa city boundary to the west)	121 single family homes	Approved; construction expected to begin late 2013 or early 2014 pending approval of annexation by LAFCO
54.	Olson Company Project	Northwest corner of Gladstone Street and Bonnie Cove Avenue	23 detached townhomes	Application in process; construction expected to begin late 2013 if approved
55.	Unnamed	601 N. Grand Avenue	12 single family homes	Application in process; schedule unknown
56.	Unnamed	422 W. Route 66	20 small-lot single family homes; 113 townhomes and stacked flats; 5,000 square feet of commercial space	Pre-application review in process; schedule unknown
WEST COVINA				
57.	Mixed-Use Project	301 S. Glendora Avenue	Residential 412 DU Commercial 20,000 SF	Approved
58.	Service Station	150 S. Citrus Street	Retail/Convenience Store 2,370 SF	Under construction
59.	Medical Imaging Center	1700 West Covina Parkway	Medical Office 9,300 SF	Under construction
60.	Chase Bank	Workman	Commercial 4,988 SF	Approved
61.	LA Fitness	3041-3133 E. Garvey Avenue	Commercial 45,000 SF	Approved

Table 3-1 Cumulative Project List

Number	Project Name	Location	Summary Description	Status
62.	Fast Food Restaurants (McDonalds & El Pollo Loco)	501 S. Vincent	Restaurant 6,826 SF	Approved
63.	Brandywine Homes	512 S. Valinda Avenue	Single-Family Residential 19 DU	Approved

3.1 EFFECTS NOT FOUND TO BE SIGNIFICANT

Pursuant to the CEQA Guidelines §15128, "*An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR*." This chapter describes the resource areas which were found not to pose any potentially significant effects related to the Proposed Project.

Based upon the scope of the Proposed Project, comment letters in response to the Notice of Preparation (NOP), site visits, review of project file materials and technical reports, and additional background research on the construction and operational features of the Proposed Project, the following resource topics were found to not have any potential impacts that would be considered significant or adverse. These topics, therefore, are not subject to more detailed analysis in the EIR.

3.1.1 AGRICULTURE AND FOREST RESOURCES

CEQA Guidelines, Appendix G, provides that there will be a significant impact to the environment where a project will result in Converting Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; conflict with existing zoning for agricultural use, or a Williamson Act contract; conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)); result in the loss of forest land or conversion of forest land to non-forest use; or involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

The Proposed Project area is located within a highly urbanized region of Los Angeles County, surrounded by industrial and commercial uses, aggregate mining, freeways and major arterial roadways, and a regional flood control and recreational project (Santa Fe Dam and Recreation Area). The site is not designated Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. The existing zoning and proposed zoning does not include any agricultural zoning designation or land use. No Williamson Act contracts are associated with the Project site. Implementation of the Proposed Project would not result in changes that have the potential to induce conversion of agricultural lands in the vicinity of the Project to non-agricultural uses. Therefore, no impacts would occur to agriculture resources.

The surrounding area is developed with various land uses, none of which are forested lands. Forestry operations do not occur with the Project vicinity, nor would the Project convert, alter or

impact forested lands. The Proposed Project site has been vacant, surrounded by high density urban uses, and unused for 20 years. As such, the Proposed Project does not have the potential to have any impacts on agriculture or forest resources. Therefore, no further discussion of this resource area is provided in this EIR.

3.1.2 MINERAL RESOURCES

CEQA Guidelines, Appendix G, provides that there will be a significant impact to the environment where a project will result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state or would result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The project site is not within a mineral resource recovery site delineated on a general plan, specific plan or other land use plan. Although, there may be materials under the proposed project site that may be a mineral resource of value to the region or residents of the state, they are not currently available and would not be foreseeably available in the future.

The nature of the bedrock materials in the mountains and canyons north of Irwindale make the alluvial rock found in the City a valuable mineral source for aggregate used in production of concrete and asphalt products and as a base-rock for other construction projects including roads. In many cases, construction projects within the Los Angeles Basin specify "Irwindale-grade" aggregate for use in building materials. As a result of the presence of this high quality mineral resource, aggregate mining activities have been ongoing within the City for more than 100-years. A total of six aggregate surface mines are currently operating within the City. These mines are expected to continue to operate for decades to come under the Conditional Use Permit(s) granted by the City.

The proposed project site is land previously developed for industrial uses, and is presently surrounded by urban development, including single-family homes within approximately 425 feet. The project site, at a little over 17 acres, is too small to support mining, and is not contiguous with any mined lands. As noted in the General Plan, all active quarries in the City are over 70 acres, with most being over 100 acres, the largest being 462 acres. Based upon this, the project site would not be feasible to support mining operations and is not planned to support quarry activities.

The City's considerable mining development – including recently approved expansion of local operations precludes the value of or need for the Project site for mineral resources development. Based on all of the above, the Proposed Project is determined not to have any potential effects on mineral resources, and no further discussion of this resource area is provided in this EIR.

3.2 AESTHETICS

This chapter describes the existing aesthetic character, urban landscape, and visual setting of the Proposed Project and vicinity. Aesthetic and visual resources encompass the natural and cultural features of the environment that can be seen by the public and influence the aesthetic appeal an area may have for viewers. Aesthetic resource impacts are normally associated with the visual contrast between human-made facilities and the natural elements of the surrounding landscape, or in more urban settings, with contrasting and complimentary characteristics relative to the existing built environment.

The analysis of the potential effects on aesthetics identifies the range and type of impacts to the landscape and aesthetic character of the project site that could result from implementation of the Proposed Project. The analysis evaluates regulatory compliance of the Proposed Project with applicable local laws, ordinances, regulations, and standards. This chapter includes mitigation measures (where necessary), followed by the residual impacts after application of the mitigation program, as well as, a discussion of cumulative impacts. This evaluation is based on review of project materials and site reconnaissance.

3.2.1 EXISTING ENVIRONMENT

The City of Irwindale encompasses approximately 9.5 square miles and is located 20 miles east of downtown Los Angeles. Elevation within the City ranges from approximately 625 feet above mean sea level (MSL) in the northern part of the City to about 310 feet above MSL in the southern part of the City. The City currently hosts a permanent population of approximately 1,721 residents; however, the weekday population of workers is estimated to exceed 38,000 persons (*General Plan Update, Community Development Element, 2008*).

The City's motto is "*Jardin de Roca*," Spanish for "*Garden of Rocks*" referring to the high quality rock and gravel found in the City and the prominence of mining in the City's history. As of 2008, mining operations occupied over 39 percent of the City's total land surface area. Presently, Irwindale has six active aggregate mining operations (*General Plan Update, Resource Management Element, 2008*).

The topography of the Irwindale area is a result of the historical alluvial fan that has formed at the base of the San Gabriel Mountains. With the exception of the large mines in the City, the Irwindale area drops approximately 50 feet in elevation for every mile in distance. In general, the City slopes from north to south at an average slope of roughly one percent. The land surface has been bisected by a braided stream network with local relief of a few feet to tens of feet. This was most evident along the San Gabriel River prior to the construction of levees to control

flooding. These land patterns represent significant topographic relief features within the City and surrounding areas.

The Proposed Project site is located in an urbanized area of the greater Los Angeles region, within the San Gabriel Valley. The San Gabriel Valley is a densely populated valley crossed by Interstates 210, 605 and 10. The site is located adjacent to seven neighboring municipalities which include Duarte (to the north and west), Azusa (to the north and east), West Covina (to the southeast), Baldwin Park (to the south), Monrovia (to the southwest and northwest), El Monte (to the southwest), and Arcadia (to the west). The greater Los Angeles County region encompasses a highly varied natural setting that includes alluvial fans, high desert, beaches and coastal plains, mountains, and valleys. The plains and valleys within the Los Angeles basin, which includes the Proposed Project site, have largely been cleared of natural vegetation as part of the region's urbanization over more than 100 years. Native vegetation occurs within the forested and vegetated slopes in the lower elevations of the San Gabriel Mountains, located to the north of the City of Irwindale (approximately 10 miles from the base of the San Gabriel Mountains or 30 minutes driving time). Much of the remainder of the undeveloped areas found to the north of Irwindale consist of sage scrub and chaparral plant communities and annual grasses (*General Plan Update, Introduction, 2008*).

The 17.22 acre site is located on the northwestern intersection of Live Oak Avenue and Arrow Highway; and is approximately ½-mile east of the San Gabriel River Freeway (Interstate 605). Arrow Highway and Live Oak Avenue are both considered major arterial roadways (classified as major and secondary highways, respectively) and the City of Irwindale has designated each of these roadways as truck routes.

The irregular-shaped, triangular project site which was historically developed but which is currently unimproved cleared land, and bordered on the south by Live Oak Avenue, on the east by the Santa Fe Dam and property owned by the U.S. Army Corps of Engineers (USACE), on the northeast by Arrow Highway, and on the west and northwest by an existing business/industrial parking lot. The project site is crossed by a City of Los Angeles Department of Water and Power (LADWP) electricity transmission easement along the south side totaling approximately 2.84 acres of the total site area. In addition, Southern California Edison (SCE) Company holds a 23-foot-wide underground utility easement totaling approximately 0.5 acres along the entire length of the project site frontage on Arrow Highway.

Existing land uses that currently surround the Proposed Project site include a mixture of commercial and industrial to the west, east, and south, recreation/open space to the north, and residential to the south [beyond the commercial/industrial districts in the City of Baldwin Park].

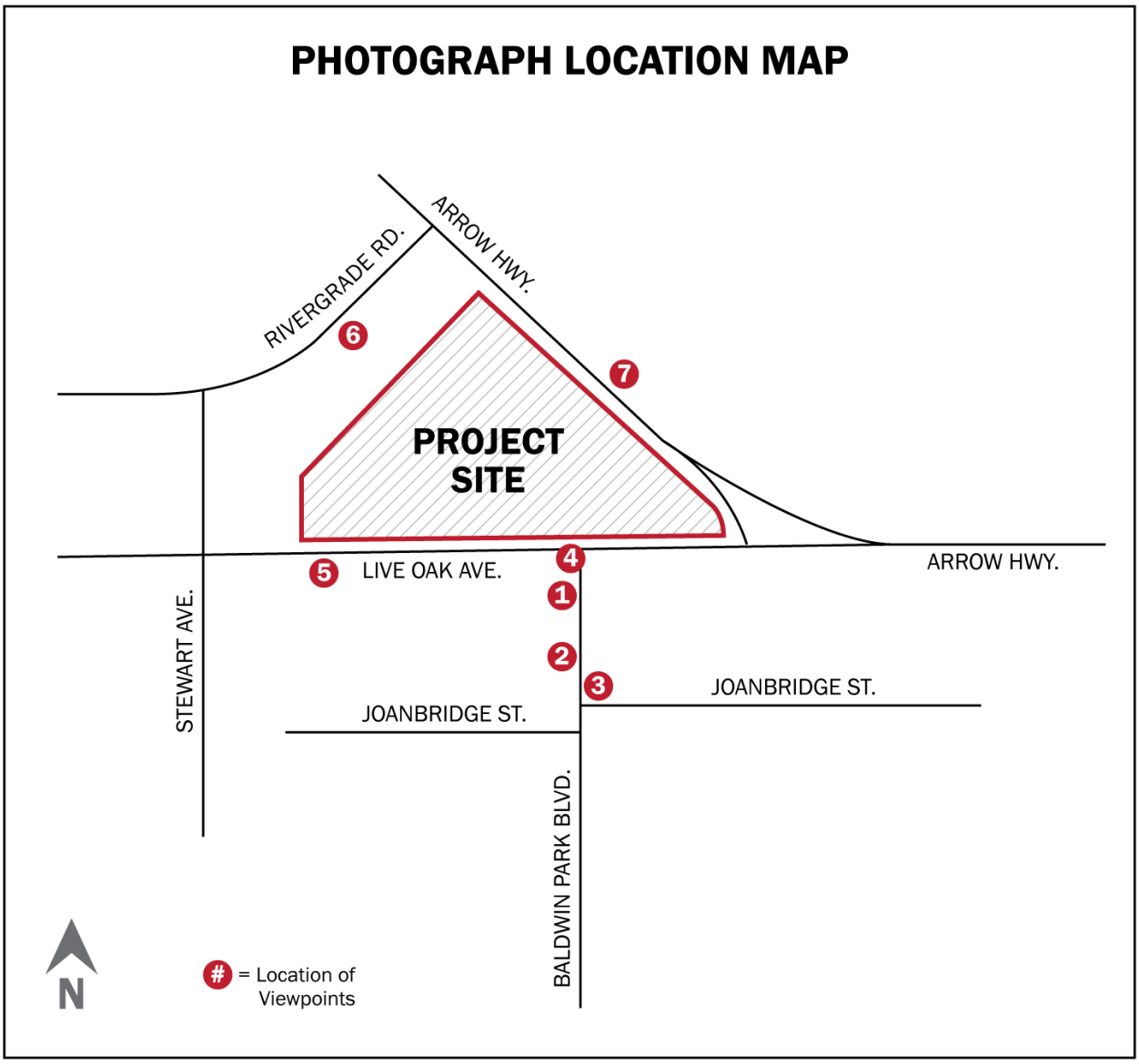
The vacant site is currently surrounded by chain-link fencing, and trees and shrubs line the western and southern boundaries. The site historically appeared to be undeveloped land as early as 1928-29. By 1936, the site was developed as a portion of a larger industrial facility (United Concrete Pipe Corporation) until 1990. The site has remained largely vacant since 1991 (Converse, 2009).

Adjacent to the north and northeast is the Santa Fe Dam and Recreation Area; which is the largest single land use in terms of land area in the City and serves as a flood control basin and as a regional recreational facility. Open space and broad expanses of parkland provide visual relief from the urban landscape and contribute to the character of a city. Aside from the private recreation facilities associated with certain residential developments, the greatest amount of open space in the region consists of the nearby San Gabriel Mountains and the Santa Fe Dam Recreational Area. The San Gabriel River Bike Path passes through this recreational area, atop the Santa Fe Dam. The top of the Dam is approximately 100 feet higher than the City streets and site below. The trail extends from Seal Beach through Whittier Narrows Recreation Area, continuing north into El Monte (via the Rio Hondo), north through Irwindale and into Azusa (via the San Gabriel River Trail). The path traces the rim of the Dam around to the east of the flood basin and park, with access at Azusa Canyon Road (main entrance to park). As the trail runs near the northern boundary of the site, views for hikers and bikers generally consist of the highly urbanized cities to the south, east, and west. Views to the north are dominated by the San Gabriel Mountains.

Adjacent to the south is the city boundary of Irwindale and Baldwin Park. Along Live Oak Avenue are various industrial and commercial businesses (for a complete listing of surrounding business names/types, refer to **Chapter 3.9 Land Use & Planning**). South of the site, on the other side of Live Oak Avenue, is land owned by the Valley County Water District (VCWD) that is currently developed with two above-ground water tanks, office buildings, parking, and other outdoor utility structures. Southeast of the site is a commercial office park. Beyond the buffering commercial and industrial developments that line Live Oak Avenue, the area is developed with single-family residences.

Exhibit 3.2-1 Photograph Location Map depicts the location of seven (7) street-level viewpoints surrounding the Proposed Project site for which photographs in Exhibits 3.2-2 to 3.2-8 have been provided.

Exhibit 3.2-1 Photograph Location Map



Exhibits 3.2-2 through **3.2-8** include street-level photographs taken from the seven (7) viewpoints labeled in **Exhibit 3.2-1**. For a reference of measurement scale, the photographs may include vehicles, fire hydrant, above-ground water tanks, street trees and/or the Santa Fe Dam. For estimation purposes the vehicles represent a height of approximately 4-6 feet; the fire hydrant approximately 3 feet; street trees approximately 25+ feet; above-ground water tanks approximately 40 feet; and approximately 100 feet in height for the Santa Fe Dam.

Exhibits 3.2-9 and **3.2-10** are panoramic photographs taken from atop the Santa Fe Dam, along the San Gabriel River Bike Trail. These photographs display the existing view of the Proposed Project site and surrounding San Gabriel Valley. Taking into consideration the vast visual space of the San Gabriel Valley, the view from atop the Dam include snapshots of the San Gabriel mountains, various mining operations, commercial/industrial buildings, residential development, interstate and roadways, views into the Santa Fe Dam Recreation Area, transmission lines, the VCWD water tanks, and various other urban land development sites.

Exhibits 3.2-11 through **3.2-16** are conceptual renderings of the built MRF/TS site. These aerial photo simulations provide a 'real life" example of the developed MRF/TS site and surrounding area. Photo simulations (also referred to as the "after" pictures) allow for visualization for land development changes. As designed, the Proposed Project buildings will have parapet walls which vary in design height ranging from 30-51 feet and allow for a maximum of 64 feet at the top of the pitched roof (towers). Refer to **Exhibits 3.2-17** and **3.2-18** for the Exterior Elevations.

The various locations of the following exhibits demonstrate the existing urban pattern from a visual resource viewpoint. Sensitive receptors within a quarter-mile of the Proposed Project site include single and multi-family residences to the south of Live Oak Avenue and Arrow Highway, off-site workers within the industrial and commercial areas surrounding the site and along Live Oak Avenue and Arrow Highway, and the Santa Fe Dam bike/pedestrian path (this is approximately 480 feet from the nearest property line of the site).

Exhibit 3.2-2 Viewpoint 1



Viewpoint 1 provides the existing line of sight from Baldwin Park Boulevard and Live Oak Avenue, looking north towards the Proposed Project site. In this image, the viewer observes transmission towers and lines, traffic signals, utility poles, street lights, sidewalks and roadway, vehicles, street trees, the Proposed Project site, the Santa Fe Dam and the San Gabriel mountains. In the foreground, vehicles are traveling westbound onto Live Oak Avenue, which is the southern boundary of the Proposed Project site. These vehicles provide the viewer an estimation of measurement. In the background, the viewer sees the Dam (approximately 100 feet) and the San Gabriel mountains (approximately 10,000 feet elevation at its highest point; however that peak not seen in this photo). As designed, the Proposed Project will have a maximum height of 61 feet atop its decorative towers (Refer to **Exhibits 3.2-17** and **3.2-18** for Exterior Elevations).

Refer to **Exhibit 3.2-15** for photo simulation of the developed MRF/TS site from this location.

Exhibit 3.2-3 Viewpoint 2



Viewpoint 2 provides the existing line of sight along the western sidewalk of Baldwin Park Boulevard, looking north towards the intersection of Live Oak Avenue. In this image, the viewer observes the existing transmission lines, traffic signals, street lights, sidewalks and roadway, vehicles, street trees, the Proposed Project site, the Santa Fe Dam and the San Gabriel mountains, as well as, the Valley County Water District's water tank and single-level commercial building.

Refer to **Exhibit 3.2-15** for photo simulation of the developed MRF/TS site from this location.

Exhibit 3.2-4 Viewpoint 3



Viewpoint 3 provides the existing line of sight from the corner of Baldwin Park Boulevard and Joanbridge Street. This viewpoint provides the existing view of the Valley County Water District water tanks (approximately 40 feet high), a commercial center, Proposed Project site, and Santa Fe Dam this viewpoint provides a visual snapshot of the existing conditions from the closest sensitive receptor within line of sight of the site. The approximate measurement is ~428 feet from the southern property line to the closest residential property line (measurement taken from Google earth map) The southeastern corner of Baldwin Park Boulevard and [eastern] Joanbridge Street is addressed as 5130 Baldwin Park Boulevard and the northwestern corner of Baldwin Park Boulevard and [western] Joanbridge Street is addressed as 14156 Joanbridge Street.

Refer to **Exhibit 3.2-15** for photo simulation of the developed MRF/TS site from this location.

Exhibit 3.2-5 Viewpoint 4



Viewpoint 4 provides the existing line of sight from Baldwin Park Boulevard and Live Oak Avenue, looking north directly at the Proposed Project site. The vehicle provides the viewer an estimation of measurement (approximately 6 feet in height). As designed, the Proposed Project will have a maximum height of 61 feet atop its decorative towers. In the background, the viewer sees the Dam (approximately 100 feet) and the San Gabriel mountains (approximately 10,000 feet elevation at its highest point; however that peak not seen in this photo).

Refer to **Exhibit 3.2-15** for photo simulation of the developed MRF/TS site from this location.

Exhibit 3.2-6 Viewpoint 5



Viewpoint 5 provides the existing line of sight from the property line along Live Oak Avenue. This viewpoint provides a direct view onto the site (north). The Proposed Project site is currently bound by chain-link fencing. From this line of sight, the viewer observes small boulders, dead vegetation, grasses and dirt. In the background are large street trees (northwest) which border the site from a regional trucking parking lot, as well as, the Santa Fe Dam and San Gabriel mountains.

Refer to **Exhibits 3.2-13** and **3.2-14** for photo simulations of the developed MRF/TS site from this location.

Exhibit 3.2-7 Viewpoint 6



Viewpoint 6 provides the existing line of sight from the property line from the Regional Trucking parking lot located along Rivergrade Road. Looking on-site the viewer observes small boulders, grasses, an orange construction cone/delineator, and transmission towers. Adjacent to the south and southeast are the Valley County Water District's water tanks and other industrial/commercial land uses along Live Oak Avenue.

Refer to **Exhibit 3.2-12** for a photo simulation of the developed MRF/TS site from this location.

Exhibit 3.2-8 Viewpoint 7



Viewpoint 7 provides the existing line of sight from the property line along Arrow Highway looking south onto the site. In the foregreound the viewer observes a sidewalk, underground utility easement, chain link property fencing and the site. On-site there are grasses and small boulders. In the distance are the Valley County Water Ditrict water tanks (approximalety 40 feet in height) and commercial/industrial buildings along Live Oak Avenue.

Refer to **Exhibit 3.2-11** for a photo similuaiton of the developed MRF/TS site from the approximate location

Exhibit 3.2-9 Panoramic View atop of the Santa Fe Dam – Central Portion of the Project Site



From this line of sight to the south (atop the Santa Fe Dam bike trail), the viewer observes the central portion of the site and the urban surroundings. Refer to **Exhibit 3.2-11** for a photo simulation of the developed MRF/TS site from this approximate location.

Exhibit 3.2-10 Panoramic Views from the top of the Santa Fe Dam - Western Corner of the Project Site



From this line of sight looking southwest (atop the Santa Fe Dam bike trail), the viewer observes the central portion of the site and the urban surroundings. Refer to **Exhibits 3.2-11** and **3.2-16** for photo simulations of the developed MRF/TS site from this approximate location.

Exhibit 3.2-11 Site Rendering Aerial View looking South-West



Exhibit 3.2-12 Site Rendering Aerial View looking South-East



Exhibit 3.2-13 Site Rendering Aerial View looking North-East



Exhibit 3.2-14 Site Rendering Aerial View looking North



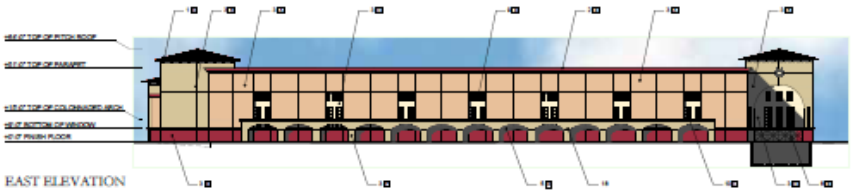
Exhibit 3.2-15 Site Rendering Aerial View looking North-West



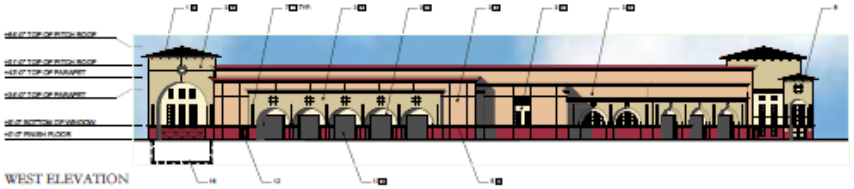
Exhibit 3.2-16 Site Rendering Aerial View looking North



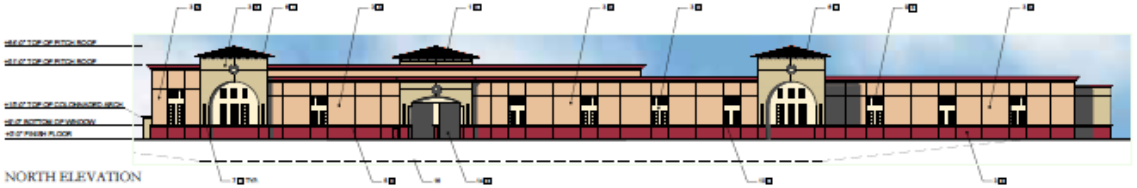
Exhibit 3.2-17 Exterior Elevations



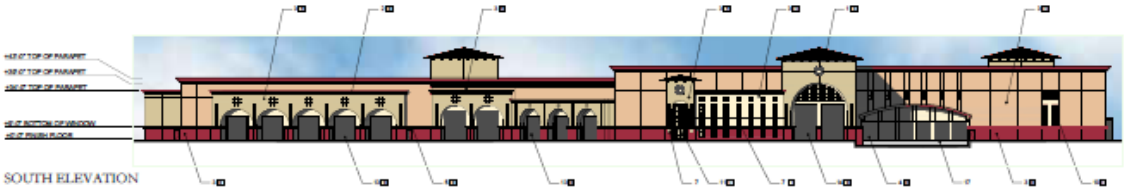
EAST ELEVATION



WEST ELEVATION

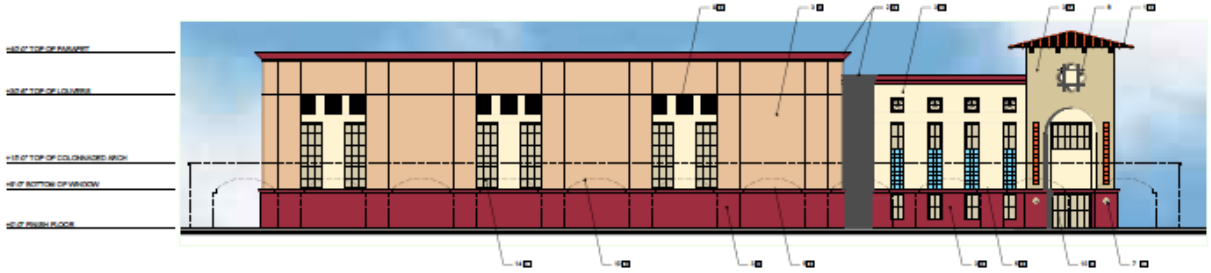


NORTH ELEVATION

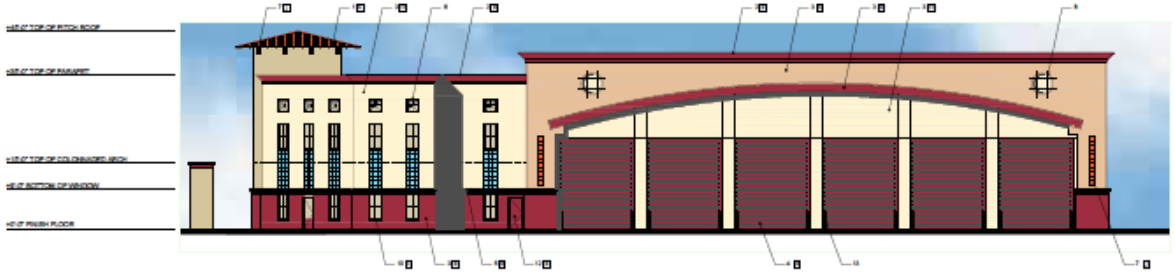


SOUTH ELEVATION

Exhibit 3.2-18 Exterior Elevations



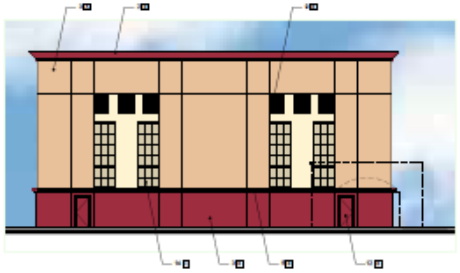
EAST ELEVATION



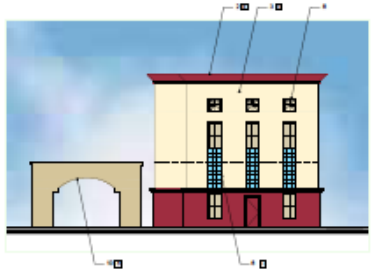
WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION



NORTH-WEST ELEVATION

3.2.2 REGULATORY SETTING

California Environmental Quality Act

CEQA requires assessment of potential impacts to aesthetic resources, including, impacts on scenic vistas, impacts on designated scenic highways, visual character of the project area in general, and potential for a project to emit light or glare that could adversely affect nighttime views.

California Scenic Highway Program

This program was created by the California Legislature to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of land adjacent to those highways. When a city or county nominates an eligible scenic highway for official designation, it must adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist in various portions of local codes. These ordinances make up the scenic corridor protection program. Scenic corridor protection programs and policies are intended to preserve the scenic qualities of the highway corridor, including regulation of land use and density of development, detailed land and site planning, control of outdoor advertising (including a ban on billboards), careful attention to and control of earthmoving and landscaping, and careful attention to design and appearance of structures and equipment (California Streets and Highways Code Section 260-284). The site is not located along a State Scenic Highway, and neither the Arrow Highway nor Live Oak Avenue corridors qualify for special scenic status; therefore, these regulations do not apply to the project site and vicinity.

California Department of Resources Recycling and Recovery (CalRecycle)

CalRecycle is a department within the California Natural Resources Agency and administers programs formerly managed by the California Integrated Waste Management Board (CIWMB, now defunct) and Division of Recycling. CalRecycle is responsible for managing California's solid waste stream and regulates waste management facilities to ensure that State waste management programs are primarily carried out through Local Enforcement Agencies (LEAs). For the Proposed Project, the Los Angeles County Department of Public Health Solid Waste Management Program is the LEA. LEAs have the primary responsibility for ensuring the correct operation and closure of solid waste facilities in the State.

CalRecycle's laws and regulations pertaining to aesthetics (California Code of Regulations, Title 14, Division 7, Chapter 3) for nonhazardous waste management in California will be required at the site and governed by the *Los Angeles County Department of Public Health Solid Waste Management Program*. The following items are the CalRecycle guidelines for siting and design, operating standards, dust control, liter control, signs, housekeeping, lighting, and visual

screening. The Proposed Project will be designed and/or conditioned to comply with CalRecycle's laws and regulations pertaining to aesthetics.

Article 6.1 - Siting and Design

17406.2. General Design Requirements

(a) The design of a new operation or facility shall utilize expert advice, as appropriate, from persons competent in engineering, architecture, landscape design, traffic engineering, air quality control, and design of structures.

(b) The design shall be based on appropriate data regarding the expected service area, anticipated nature and quantity of wastes to be received, climatological factors, physical settings, adjacent land use (existing and planned), types and number of vehicles anticipated to enter the operation or facility, adequate off-street parking facilities for transfer vehicles, drainage control, the hours of operation and other pertinent information. If the operation or facility is to be used by the general public, the design shall take account of safety features that may be needed to accommodate such public use.

(c) The operation or facility shall be designed in such a manner as to restrict the unloading area to as small an area as practicable, provide adequate control of windblown material, minimize the propagation or attraction of flies, rodents or other vectors and the creation of nuisances by reason of solid wastes being handled at the operation. Other factors which shall be taken into consideration are: dust control, noise control, public safety, and other pertinent matters related to the protection of public health at the operation or facility.

(d) In reviewing the design of a proposed operation or facility, the LEA may require the applicant to describe how he or she has complied with applicable local and State requirements regarding odor control measures, personnel health and safety, and sanitary facilities.

(e) Solid waste storage containers shall be durable, easily cleanable, designed for safe handling, and constructed to prevent loss of wastes from the container during storage. If such a container is used to store garbage, other wet or liquid producing wastes, or wastes composed of fine particles, such container shall in all cases be non-absorbent and leak-

resistant. Unloading areas shall be easily cleanable, designed for safe handling, and constructed to prevent loss of wastes.

Article 6.2 – Operating Standards

Section 17407.2. Cleaning

(a) Operations, facilities, and their equipment, boxes, bins, pits and other types of containers shall be cleaned using the following schedule, or at a lesser frequency approved by the EA, in order to prevent the propagation or attraction of flies, rodents, or other vectors:

(1) All operations and facilities shall be cleaned each operating day of all loose materials and litter;

(2) All operations or facilities that operate 24 hours per day must clean the operations or facilities at least once every 24 hours.

(b) The entrance and exit shall be cleaned at a frequency which prevents the tracking or off-site migration of waste materials.

Section 17407.4. Dust Control

(a) The operator shall take adequate measures to minimize the creation, emission, or accumulation of excessive dust and particulates, and prevent other safety hazards to the public caused by obscured visibility. The operator shall minimize the unnecessary handling of wastes during processing to prevent the creation of excessive dust. Measures to control dust include, but are not limited to: reduced processing, periodic sweeping and cleaning, misting systems or ventilation control. One or more of the following may be an indication that dust is excessive:

(1) Safety hazards due to obscured visibility; or

(2) Irritation of the eyes; or

(3) Hampered breathing;

(4) Migration of dust off site.

Section 17408.1. Litter Control

Litter at operations and facilities shall be controlled, and routinely collected to prevent safety hazards, nuisances or similar problems and off-site migration to the greatest extent possible given existing weather conditions.

Section 17409.4. Signs

(a) For operations or facilities not open to the public, each point of access from a public road shall be posted with an easily visible sign indicating the operation or facility name and location of nearest public operation or facility.

(b) If the operation or facility is open to the public, there shall be an easily visible sign at all public entrances indicating the name of the operator, the operator's telephone number, schedule of charges, hours of operation, and a listing of the general types of materials which either (1) WILL be accepted, or (2) WILL NOT be accepted.

Article 6.35 – Additional Operating Requirements for Facilities Only

Section 17416.1. Housekeeping.

The operator shall provide adequate housekeeping for the maintenance of facility equipment and shall minimize accumulations of fuel drums, inoperable equipment, parts, tires, scrap, and similar items.

Section 17416.2. Lighting

The facility and/or equipment shall be equipped with adequate lighting, either through natural or artificial means, to ensure the ability to monitor incoming loads, effectiveness of operations, and [protection of] public health, safety and the environment.

Section 17419.1. Visual Screening

The facility shall have appropriate treatment of areas open to public view to create and maintain an aesthetically acceptable appearance as approved by the local land use authority, or if none exist, in consultation with the EA. Compliance with specific provisions regarding visual screening in a local land use approval, such as a conditional use permit, or CEQA mitigation measures shall be considered compliance with this standard.

City of Irwindale General Plan Update

The City's General Plan Update 2008 provides the guidance for development projects within the City. The General Plan is considered a living document intended to change and evolve with the dynamics of the changing community. As with all development proposals, the City's Planning Department staff reviews design plans for consistency with these design guidelines, after which, the Planning Commission and City Council approve or deny the project proposal.

The site is currently designated for commercial land use and zoned for Heavy Manufacturing (M-2) (City of Irwindale, *General Plan Update 2008*). The Proposed Project includes a General Plan Amendment and Zoning Code Amendment to establish a land use designation consistent with the existing zoning, and to permit a MRF/TS at the site. The surrounding area is dominated by industrial, commercial, and residential land uses.

The Proposed Project will be designed or conditioned to comply with the General Plan. The General Plan policies pertaining to aesthetics/visual resources and which apply to the Proposed Project include:

Community Development Element

Issue Area – Urban Design. The City of Irwindale will continue its efforts in improving the appearance of the community.

> *Community Development Element 12.* The City of Irwindale will continue to promote quality design in the review and approval of commercial and industrial development through the application of the commercial and industrial design guidelines.

City of Irwindale Municipal Code

The Proposed Project will be required to comply with the City's Municipal Code for guidelines regarding aesthetics.

Section 17.70.050(b) Findings and standard of review – Outlines the Site Plan and Design Review Criteria. In reviewing any site plan or design review application pursuant to the requirements of this chapter, the planning director, planning commission, or city council, as the case may be, shall utilize the following criteria, as included in the city of Irwindale design guidelines. The overall development plan integrates land with building forms and achieves architectural unity and environmental harmony within the development, consistent with the objective of emphasizing and enhancing the positive aesthetic characteristics existing, developing or to be developed in the surrounding area.

Section 17.58.060(e) - Conditional use permit – Factors regarding public convenience or necessity. In deciding whether to issue the conditional use permit, the planning commission shall consider whether the public convenience or necessity would be served by the proposed alcoholic beverage [sales] establishment and make findings to justify such conclusion based upon review and consideration of relevant factors such as the aesthetic character and ambiance of the proposed establishment.

City of Irwindale Commercial and Industrial Design Guidelines

The City's *Commercial and Industrial Design Guidelines* provide detailed design guidelines for topics such as circulation, parking, and building placement. The items listed below will be required to be approved by the City during final design:

- Site materials (reflecting the natural Californian landscape and using materials that represent historic sand and gravel industry of Irwindale);
- Landscaping patterns, irrigation, and streetscapes (minimum 10% of the total gross site shall be landscaped with drought tolerant plants using water conservation techniques);
- Building design elements and detailing (primary architectural heritage is Spanish with Mission and Spanish Colonial Revival specifying materials and colors, roof, doorways, and arcades/columns); and
- Signs (all signs on buildings, driveways and within the project site).

3.2.3 THRESHOLDS OF SIGNIFICANCE

The analysis of potential aesthetic impacts associated with the implementation of the Proposed Project assesses the degree to which the Project's short-term (construction-related) activities and long-term (operational) operations would change the existing visual quality and characteristics of the area.

The significance thresholds for potential aesthetic impacts were determined based upon the State CEQA Guidelines Appendix G Using these criteria, the Proposed Project would be considered to have significant adverse aesthetic impact if it were to:

a. Have a substantial adverse effect on scenic vistas or substantially degrade the existing visual character or quality of the project site and its surroundings;
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway; and/or
c. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

3.2.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD AES-1

Would the Proposed Project have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact

The Proposed Project would result in development of an unimproved, vacant site. Implementation of the Proposed Project includes land development of a MRF/TS building complete with an operations office, administrative office/visitor center, maintenance facility, and a fueling facility/convenience store open to the public. The fueling facility/convenience store would be a separate structure located in the north-eastern portion of the site adjacent to Arrow Highway and includes a fueling island with pump canopy, convenience store, and parking for customers. In addition, site development includes a landscaped parking area for employees and visitors, on-site and perimeter landscaping, and a decorative concrete block wall.

The proposed development of the site is characterized as a redevelopment improvement to the current visual setting. The existing visual quality of the site is a disturbed, urban infill property. Current on-site conditions generally consist of street trees, sparse vegetation, and debris. The entire perimeter of the parcel is currently secured with chain-link fencing. The adjacent industrial and commercial buildings which surround the site to the south, west, and northwest are compatible with and consistent with buildings to be constructed on the project site. Existing land uses that surround the site include a mixture of commercial and industrial uses to the west, east, and south, recreation/open space to the north, and beyond the commercial/industrial uses that line Live Oak Avenue in the City of Baldwin Park to the south lie residential areas. To the north, the Santa Fe Dam and Recreation Area is buffered by its dam walls purposely designed as a flood control barrier. On the top of the Santa Fe Dam, is a bike trail that provides panoramic view of the San Gabriel Valley and San Gabriel Mountains.

The view of the 17.22-acre site would be modified from that of a previously developed but currently vacant parcel to that of a built development, with parking area and landscaped areas. Generally, developing a previously developed but abandoned site is not considered a degradation to a visual resource. However, some members of the public may prefer the aesthetic attributes of undeveloped land over developed land, When taking into consideration the entire viewshed of the San Gabriel Valley (as seen from the trail), and all of the uses surrounding the Proposed Project site, the Proposed Project would not degrade the dominant urbanized setting which currently consists of electrical transmission corridors, mining and mine reclamation operations, residential development, commercial/industrial land uses, water tanks, and open space (consisting of highly disturbed terrain and landscaping with non-native plant species.).

Currently, views afforded to hikers and bikers traveling along the trail are of the vacant Arrow Highway parcel in the foreground, with vistas beyond. Views of the Proposed Project site would be modified to that of a developed parcel with a large building, parking area and landscaped areas, consistent with the developed parcels surrounding the Proposed Project site. As the facility would be entirely enclosed, and operations taking place inside the buildings or in the below-grade loadout, those along the trail and viewers from the street would not see waste materials being processed on the Proposed Project site. This view would be consistent with current views to the south afforded along the trail. Views along this segment of the trail also consist of several transmission corridors, mining pits in various stages of mining and reclamation, residential development, commercial/industrial land uses, water tanks, and open space. Due to the elevation difference between the Proposed Project site and the trail, the developed Project would not obstruct or significantly alter vistas from atop the trail. The viewshed, as represented in **Exhibits 3.2-2** to **3.2-16**, is not unique to the City or the San Gabriel Valley, and is typical of urbanized areas in Southern California; therefore, the siting of the MRF/TS within this setting is not considered an adverse effect on the trail or surrounding vicinity.

The exterior design of the facility buildings is required to be consistent with the City's *Commercial and Industrial Design Guidelines.* As designed, the building design includes varying parapet heights, vertical tower elements, arcades, arched entry structures, and deeply recessed exterior fenestrations. The parapet walls vary in height ranging from 30-51 feet and allow for a maximum of 64 feet at the top of the pitched roof (tower elements). Proposed exterior materials include varying plaster colors consistent with the City's *Commercial and Industrial Design Guidelines*, wrought iron and decorative tile accents, accentuated building cornices, and plaster building ornaments to create a "village" of buildings that cohesively work together under a single architectural theme.

All Project buildings would be constructed from steel for primary and secondary framing elements. The exterior walls would be light gauge frame with plaster finish. A metal "cool" roof is proposed for the majority of the roofing areas in conjunction with the decorative roof tile accents on the tower elements; (a "cool" roof reflects and emits the sun's heat back to the sky instead of transferring it to the building below thereby reducing energy costs). The Loadout Area tunnel, associated ramps, and all operational areas would be poured concrete slab (see **Exhibits 3.2-17** and **3.2-18** for Exterior Elevation plans).

Landscaping would cover approximately 99,623 SF (13%) of the site and would be designed and maintained to screen both the site perimeter and interior site, with particular focus on areas of the site that are visible to the public. Landscaping will include perimeter trees except at driveways and utility easements. The variety of trees to be planted on-site may include the following species: London Plan tree, Golden Raintree, Crepe Myrtle and Magnolias. A variety of shrubs

including Lily Of The Nile, Kangaroo Paw, Red Yucca, and Texas Ranger will be planted as accents though out the site, and accent ground coverings include accent plantings of acacia, rosea ice plant, rosemary, and periwinkle.

The existing street trees along Live Oak Avenue (southern property line) and the northwestern property line are upwards of 15-25+ feet in height, will remain intact where they would not interfere with a major project feature, and will provide screening of the site from public views. The existing non-native vegetation consists primarily of ornamental plantings. The most dominant species are pine, California fan palm, Japanese honeysuckle, white mulberry, Brazilian pepper tree, Chinese elm, and carrotwood. To a lesser extent, native opportunistically established species occurring among the ornamental species include laurel sumac, California sagebrush, mule fat, narrow-leaved willow, Gooding's black willow, and red willow. The non-native grassland is the most dominant vegetation community onsite, and consists of disturbance tolerant grasses and herbaceous species.

During construction, activities such as excavation, trenching, and dirt/ debris removal off-site would be expected to occur on the Proposed Project site. From the street level, views of construction activities would be minimal due to fencing and other visual barriers. Due to its elevation, those utilizing the Santa Fe Dam bike trail would have uninterrupted views of construction activities. Construction activities are expected to last the duration of 18 months resulting in a short-term visual alteration. Those potential short-term impacts would not foreseeably degrade the visual character of the area based on the context of the entire viewshed.

Table 3.2-1 Existing and Future Line of Sight Features from Sensitive Receptors presents a snapshot of the existing and future line of sight sources with implementation of the Proposed Project. The line of sight [taken from the closest sensitive receptors – industrial/commercial workers along Arrow Highway/Live Oak Avenue and residents along Baldwin Park Boulevard] would be changed to include a MRF/TS building and site, in addition to the existing views of a 4-lane with center lane designated truck route, commercial buildings and parking, above-ground VCWD water tanks (approximately 40 feet in height), utility structures, the Santa Fee Dam, and the San Gabriel mountains.

Table 3.2-1 Existing and Future Line of Sight Features from Sensitive Receptors

Existing Visual Resource	Visual Resource Change with Project Implementation?	Significant Impact?
Designated Truck Route, Baldwin Park Boulevard (within City of Baldwin Park)	No	Less than significant impact
Commercial Building (west)	No	Less than significant impact
Street trees (north)	Yes Project landscaping	Less than significant impact
Portions of vacant parcel (north)	Yes Portions of developed site	Less than significant impact
Santa Fe Dam (north)	No	Less than significant impact
San Gabriel Mountains (north)	No	Less than significant impact
Two above-ground painted water tanks (east)	No	Less than significant impact
Utility structures (east)	No	Less than significant impact

No structures or features from the Proposed Project would damage views of any known or identified off-site scenic resources (by anyone travelling on I-605 or any other place in and around the Project site.).Therefore, there are no reasonably foreseeable potential impacts to scenic resources from implementation of the Proposed Project.

There is no scenic vista within the City (General Plan, 2008). However, the view of the San Gabriel Mountains may be considered a scenic vista. The line of sight [taken from the closest sensitive receptors – industrial/commercial workers along Arrow Highway/Live Oak Avenue and residents along Baldwin Park Boulevard at Viewpoint 3] would be changed to include a MRF/TS building and site, in addition to the existing views of a 4-lane with center lane designated truck route, commercial buildings and parking, above-ground VCWD water tanks (approximately 40 feet in height), utility structures, the Santa Fee Dam, and the San Gabriel mountains. The visual change resulting from Project implementation will not eliminate a scenic view of the mountains from any direction; and therefore, the Proposed Project will not have a substantial adverse effect on a scenic vista.

The Proposed Project is required to be designed according to the City standards set forth in the *City of Irwindale's Commercial and Industrial Design Guidelines*. In addition, final project design will require review and approval from several City departments including Planning for site planning and Building & Safety for regulating and controlling the construction, quality of materials, use, occupancy, location, and maintenance of all buildings.

Therefore, it is not reasonably foreseeable that the Proposed Project would have a substantial adverse effect on scenic vistas or substantially degrade the existing visual character or quality of the project site and its surroundings.

THRESHOLD AES-2

Would the Proposed Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant Impact

Interstate 605 is located in the vicinity of the site but is not a State designated scenic highway (California Streets and Highways Code Section 260-284), and the site is not visible to motorists on the Interstate in any case. The site and surrounding area does not contain any known or identified scenic resources, such as trees, rock outcroppings, or historic buildings. As discussed above, there are existing streetscape trees along the perimeter of Live Oak Avenue (south edge of parcel) and the northwestern property line which screen views onto the site, and would therefore be considered to provide aesthetic and visual screening benefit as development of the site occurs. But these trees are not identified in any City plan or otherwise as an existing scenic resource. As detailed on **Exhibit 2.8 Conceptual Landscape Plan** (see **Chapter 2.0 Project Description**), existing streetscape landscaping will remain in place where noted. It is expected the implementation of the Proposed Project will require some of the trees to be removed to provide driveway access onto and from the site and to allow for related essential Project features. As designed, overall Project landscaping will exceed the City's minimum requirement of 10% of surface area, and would cover approximately 99,623 SF (13%) of the site. Therefore, there are no reasonably foreseeable potential impacts to scenic resources from implementation of the Proposed Project.

THRESHOLD AES-3

Would the Proposed Project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less Than Significant Impact

Implementation of the Proposed Project would alter the parcel's appearance from a vacant and disturbed site to a fully developed site resulting in the establishment of a new source of light at the site. As stated above under **Threshold AES-1**, and as a standard condition of approval, all outdoor lighting at the site would be in accordance with the City's General Plan and zoning ordinance and the City's *Commercial and Industrial Design Guidelines* to avoid interference with, or nuisance to, adjacent properties. These City regulations require that outdoor lighting be directed downward and be shielded to minimize light spillage effects. Additionally, the

conceptual design plans demonstrate that the building exterior would not utilize reflective materials or glare-inducing materials. Therefore, the Proposed Project would not create a new source of substantial light or glare that would significantly impact or affect day or nighttime views in the area.

Mitigation Program

No significant or potential significant aesthetic impacts from either construction or operational activities are anticipated with implementation of the Proposed Project. Therefore, no mitigation measures relative to this resource topic is proposed or required.

3.2.5 RESIDUAL IMPACTS AFTER MITIGATION IMPLEMENTATION

No mitigation program is required.

3.2.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in Chapter 3.0, Environmental Setting and Impact Analysis, above.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on aesthetics?

No

Based on the cumulative project list, future development may result in new residential, commercial, industrial, or recreational development and/or mining/reclamation operations in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

The project-specific potential impacts to aesthetics are not cumulatively considerable, because there are no cumulative projects in the Proposed Project's viewshed. Impacts of other projects would be unique to each site, and unrelated to this proposed site. No mitigation is required.

3.3 AIR QUALITY, GREENHOUSE GAS, ODOR, AND HEALTH RISK ASSESSMENT

This chapter provides an overview of the existing air quality conditions at the Proposed Project site and surrounding region, the regulatory framework, an analysis of potential air quality impacts that would result from implementation of the Proposed Project, and identification of mitigation measures. Other issues related to air emissions covered in this chapter include greenhouse gas (GHG) emissions, odors, and assessment of emissions related to air quality health risks (Health Risk Assessment or HRA).

Intermittent (short-term construction emissions that occur from activities, such as site-grading and haul trucks) and long-term effects related to the operation of the Proposed Project are evaluated in this chapter. The analysis focuses on daily and annual emissions from construction and operations (mobile, area, and stationary sources) activities. This air quality analysis is consistent with the methods described in the South Coast Air Quality Management District (SCAQMD) *CEQA Air Quality Handbook.*

The air quality analysis includes a review of criteria pollutant emissions such as carbon monoxide (CO), nitrogen oxides (NO_x), sulfur dioxide (SO_2), volatile organic compounds (VOC) as reactive organic gases (ROG), and particulate matter less than 10 micrometers (PM_{10}), particulate matter less than 2.5 micrometers ($PM_{2.5}$), and lead. The HRA addresses the diesel particulate matter (DPM) emissions from transfer trucks and self-haul trucks and air toxics from fuel dispensing at the proposed service station. An assessment of greenhouse gas (GHG) emissions is also included.

Estimation models used to determine air quality impacts include:

- California Air Resources Board's (CARB) EMFAC2011 emissions inventory model. EMFAC2011 is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects CARB's current understanding of how vehicles travel and how much they emit. EMFAC2011 can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future.

- CALEEMod (Version 2013.2.2) land use emissions model, designed to estimate construction emissions, as well as operational emissions.

- CAL3QHC roadway intersection dispersion model, developed by the United States Environmental Protection Agency (USEPA) to predict CO concentrations from motor vehicles at roadway intersections

3.3.1 EXISTING ENVIRONMENT

The Proposed Project is located in Los Angeles County within the South Coast Air Basin (Basin). The Basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties.

Climate

In general, Southern California has a warm, dry Mediterranean climate; hot in the summer and mild in the winter. Temperatures are cooler near the coast and hotter near inland areas. Most of the precipitation occurs as rain during the winter months, although rain showers are common during the summer in higher-elevation desert areas. Average annual precipitation is approximately 19 inches and temperatures reach 90 degrees Fahrenheit 100 days of the year on average. August daily highs average 95 degrees while daily lows average 64 degrees Fahrenheit. January typically exhibits average daily highs of 68 degrees and average daily lows of 43 degrees Fahrenheit. The predominant wind directions are either out of the northwest or southeast. Gusts greater than 15 miles per hour occur infrequently, less than two percent of the time.

Basin climate increases the potential to create air pollution problems. Air quality within the Basin generally rates from fair to poor. Sinking, or subsiding, air from the Pacific High Pressure System creates a temperature inversion (known as a subsidence inversion), which acts as a lid to vertical movement of air masses and dispersion of pollutants. The lower bound of this inversion at any given time is known as the "mixing height." Restricted maximum mixing heights are 3,500 feet above sea level or less. Weak summertime pressure gradients suppress winds and further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic (human-made) emissions, combined with strong sunshine, lead to photochemical reactions that create ozone (O_3) in this surface layer. Daytime onshore air flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures, and leads to air pollutants being blown out to sea at night and returning to land the following day.

Existing Air Quality in the Study Area Vicinity

The SCAQMD maintains a network of monitoring stations within Los Angeles County that monitor air quality and compliance with applicable ambient standards. CO, O_3, PM_{10} and $PM_{2.5}$ data from the Azusa air quality monitoring station, located approximately two miles northeast of the Proposed Project, were evaluated. This monitoring data for 2010 through 2012 from the Azusa air quality monitoring station is summarized in **Table 3.3-1 Air Quality Data Summary**.

Table 3.3-1 Air Quality Data Summary (2010 - 2012)

Pollutant	Monitoring Data by Year			
	Standard[a]	**2010**	**2011**	**2012**
Ozone				
Highest 1 Hour Average (ppm)[b]	0.09	**0.104**	**0.111**	**0.134**
Days over State Standard		5	13	10
Highest 8 Hour Average (ppm)[b]	0.075	**0.075**	**0.082**	**0.079**
Days over National Standard		3	12	18
Carbon Monoxide				
Highest 1 Hour Average (ppm)[b]	9.0	3.0	2.3	2.6
Days over State Standard		0	0	0
Highest 8 Hour Average (ppm)[b]	20	1.3	1.4	1.2
Days over State Standard		0	0	0
Particulate Matter (PM_{10})				
Highest 24 Hour Average ($\mu g/m^3$)[b]	50	**70**	**65**	**78**
Days over State Standard		5	9	6
State Annual Average ($\mu g/m^3$)[b]	20	**29.8**	**32.7**	**30.3**
Particulate Matter ($PM_{2.5}$)				
Highest 24 Hour Average ($\mu g/m^3$)[b]	35	**35.4**	26.9	**39.6**
Days over National Standard		1	0	1
State Annual Average ($\mu g/m^3$)[b]	12	10.9	11.4	11.0

NOTES: Values in **bold** are in excess of at least one applicable standard. NA = Not Available.

a. Generally, state standards and national standards are not to be exceeded more than once per year.

b. ppm = parts per million; µg/m3 = micrograms per cubic meter.

c. PM_{10} is not measured every day of the year. Number of estimated days over the standard is based on 365 days per year.

Source: USEPA (http://www.epa.gov/air/data/) CARB Air Quality Data Statistics (http://www.arb.ca.gov/adam/welcome.html, 2010–2012.

The following provides a brief summary of the potential health and welfare effects and typical sources of each of the criteria air pollutants and air toxics.

Criteria Air Pollutants

"Criteria" air pollutants refer to those air pollutants for which the USEPA has established National Ambient Air Quality Standards (NAAQS) under the Federal Clean Air Act, including CO, NO_x, SO_2, PM_{10}, $PM_{2.5}$, O_3 and lead.

Ozone (O_3)

O_3 is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. O_3 is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through

a complex series of photochemical reactions involving ROG and NO_x. ROG and NO_x are known as precursor compounds for O_3. Substantial ozone production generally requires O_3 precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. O_3 is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of wind and sunlight. O_3 concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional air subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds.

Carbon Monoxide (CO)

CO is a non–reactive pollutant that is a product of incomplete combustion of organic material, and is mostly associated with motor vehicle traffic, and in wintertime, with wood–burning stoves and fireplaces. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground–level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen–carrying capacity, resulting in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California, but in more recent years, CO measurements and modeling are not a priority in most California air districts due to the retirement of older vehicles, fewer emissions from new vehicles, and improvements to fuels.

Nitrogen Oxides (NO_x)

When combustion temperatures are extremely high, as in aircraft, truck and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO_2) are the most significant air pollutants generally referred to as NO_x. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO_2 and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema. Inhaling NO_2 can lead to respiratory illnesses such as bronchitis and pneumonia.

Particulate Matter (PM_{10} and $PM_{2.5}$)

PM_{10} and $PM_{2.5}$ consists of airborne particles that measure 10 microns or less in diameter and 2.5 microns or less in diameter, respectively. PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects. Particulate matter in the atmosphere results from many kinds of dust– and fume–producing

industrial and agricultural operations, fuel combustion, wood burning stoves and fireplaces, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition, construction activities and mining, are more local in nature, while others, such as vehicular traffic and wood burning stoves and fireplaces, have a more regional effect.

Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain adsorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Dust comprised of large particles (diameter greater than 10 microns) settles out rapidly and is easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance rather than a health hazard. The remaining fractions, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the Federal and State ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) is thought to have greater effects on health, because these particles are so small and thus are able to penetrate to the deepest parts of the lungs.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health. The CARB has estimated that achieving the ambient air quality standards for PM_{10} could reduce premature mortality rates by 6,500 cases per year.

Sulfur Dioxide (SO_2)

SO_2 is a combustion product of sulfur or sulfur–containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter, and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. The maximum SO_2 concentrations recorded in the project area are well below federal and State standards; as a result, the area is in attainment status with both federal and State SO_2 standards.

Lead

Ambient lead concentrations meet both the federal and State standards in the project area. Lead has a range of adverse neurotoxin health effects, and was released into the atmosphere via leaded gasoline products. The phase–out of leaded gasoline in California has resulted in dramatically decreased levels of atmospheric lead.

Toxic Air Contaminants (TACs)

Non-criteria air pollutants or toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines and asbestos.

In August of 1998, CARB identified particulate emissions from diesel-fueled engines as TACs. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles.* The document represents a proposal to reduce diesel particulate emissions, with the goal to reduce emissions and the associated health risk by 75 percent in 2010 and by 85 percent in 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

Diesel particulate matter (DPM) is the most complex of diesel emissions. Diesel particulates, as defined by most emission standards, are sampled from diluted and cooled exhaust gases. This definition includes both solid and liquid material that condenses during the dilution process. The basic fractions of DPM are elemental carbon; heavy hydrocarbons derived from the fuel and lubricating oil and hydrated sulfuric acid derived from the fuel sulfur. DPM contains a large portion of the polycyclic aromatic hydrocarbons (PAH) found in diesel exhaust. Diesel particulates include small nuclei particles of diameters below 0.04 µm and their agglomerates of diameters up to 1 µm. DPM is a major factor in total TAC exposure in California.

California State law defines TACs as air pollutants having carcinogenic effects. A total of 243 substances have been designated as TACs under California law; they include the 187 (federal) Hazardous Air Pollutants (HAPs) adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources but AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. Depending on the risk levels, emitting facilities are required to implement varying levels of risk reduction measures.

CARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* in 2005. The primary goal in developing the *Handbook* was to provide information that would help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. The *Handbook* highlights recent studies that have shown that public exposure to air pollution can be substantially elevated near freeways and certain other

facilities. However, the health risk is greatly reduced with distance. For that reason, CARB provided some general recommendations aimed at keeping appropriate distances between sources of air pollution and sensitive land uses, such as residences.

The most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study (MATES-III), conducted by the SCAQMD. The monitoring program measured more than 30 air pollutants, including both gas and particulates. The monitoring study was accompanied by a computer modeling study in which SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-III found that the average cancer risk in the region from carcinogenic air pollutants ranges from approximately 870 in a million to 1,400 in a million, with an average regional risk of approximately 1,200 in a million.

Odorous Emissions

Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress, generating citizen complaints to local governments. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

3.3.2 REGULATORY SETTING

Air Quality

United States Environmental Protection Agency

The United States Environmental Protection Agency (USEPA) has established NAAQS for outdoor concentrations of the following "criteria" pollutants: CO, NO2, O3, SO2, and PM10, PM2.5, and lead. An ambient air quality standard establishes the concentration above which the pollutant is known to cause adverse health effects to sensitive groups within the population such as children and the elderly. The goal is for localized project effects not to cause or contribute to an exceedance of the standards. Ambient air quality standards are classified as either "primary" or "secondary" standards. Primary standards define levels of air quality, including an adequate margin of safety, necessary to protect the public health. Secondary ambient air quality standards define levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Clean Air Act

Under the federal Clean Air Act (CAA), each state must identify non-attainment areas that do not meet the NAAQS. For any non-attainment designation, a State Implementation Plan (SIP) is developed to define actions to be taken to achieve future attainment of the applicable NAAQS. In summary, an attainment area is any area that meets the NAAQS; a non-attainment area is any

area that does not meet the NAAQS; and a maintenance area is any area previously designated non-attainment but is in transition back to attainment. Notably, Los Angeles County, including the City of Irwindale, is currently in "severe" non-attainment of the 8-hour O_3 NAAQS, non-attainment of the $PM_{2.5}$ NAAQS, and maintenance for CO.

California Air Resources Board

The California Air Resources Board (CARB) manages air quality, regulates mobile emissions sources, and oversees the activities of county and regional Air Pollution Control Districts and Air Quality Management Districts. CARB regulates local air quality indirectly by establishing State ambient air quality standards and vehicle emissions and fuel standards; and by conducting research, planning and coordinating activities. California has adopted ambient standards (CAAQS) that are more stringent than the federal standards for some criteria air pollutants.

California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. These are shown in **Table 3.3-2 State and National Criteria Air Pollutant Standards, Effects, and Sources**. Under the California Clean Air Act patterned after the CAA, areas have been designated as attainment or non-attainment with respect to the state standards.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and addresses regional issues relating to transportation, the economy, community development, and the environment. SCAG is the federally designated metropolitan planning organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. As the designated MPO, SCAG is mandated by the federal government to develop and implement regional plans that address transportation, growth management, hazardous waste management, and air quality issues. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the Los Angeles County region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation components of the Air Quality Management Plan (AQMP) and are utilized in the preparation of air quality forecasts and the consistency analysis that is included in the AQMP.

South Coast Air Quality Management District

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles. This area includes all of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The previously discussed Basin is a subregion of the SCAQMD jurisdiction. While air quality in this area has improved, the Basin requires continued diligence to

meet air quality standards. The SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. These plans require control technology for existing sources, control programs for area sources and indirect sources, a SCAQMD permitting system designed to allow no net increase in emissions from any new or modified permitted emission sources and transportation control measures.

The SCAQMD adopted a comprehensive AQMP update, the 2007 AQMP for the Basin, on June 1, 2007. The 2007 AQMP outlines the air pollution control measures needed to meet federal health-based standards for O_3 (8-hour standard) by 2024, and $PM_{2.5}$ by 2015. This revision to the AQMP also addresses several State and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. The 2007 AQMP is consistent with and builds upon the approaches taken in the 2003 AQMP for the attainment of the federal O_3 air quality standard but highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under Clean Air Act (CAA).

In February of 2013, the SCAQMD completed the 2012 AQMP which incorporated the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The 2012 AQMP demonstrates attainment of the federal 24-hour $PM_{2.5}$ standard by 2014 in the Basin through adoption of all feasible measures. The 2012 AQMP also updates the USEPA approved 8-hour ozone control plan with new measures for NO_x and VOC reductions. The 2012 AQMP also addresses several state and federal planning requirements, incorporating new scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models.

The SCAQMD has published a *CEQA Air Quality Handbook* that is intended to provide local governments such as the City of Irwindale and the County of Los Angeles, with guidance for analyzing and mitigating project-specific air quality impacts. The *Handbook* provides standards, methodologies and procedures for conducting air quality analyses.

Table 3.3-2 State and National Criteria Air Pollutant Standards, Effects, and Sources

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 Hour 8 Hour	0.09 ppm 0.07 ppm	– 0.075 ppm	High concentrations can directly affect lungs, causing irritation. Long–term exposure may cause damage to lung tissue.	Formed when reactive organic gases and nitrogen oxides react in the presence of sunlight. Major sources include on–road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
Carbon Monoxide (CO)	1 Hour 8 Hour	20 ppm 9.0 ppm	35 ppm 9.0 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline–powered motor vehicles.
Nitrogen Dioxide (NO_2)	1 Hour Annual	0.18 ppm 0.03 ppm	0.10 ppm 0.053 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish–brown.	Motor vehicles, petroleum–refining operations, industrial sources, aircraft, ships, and railroads.
Sulfur Dioxide (SO_2)	1 Hour 3 Hour 24 Hour Annual	0.25 ppm – 0.04 ppm –	– 0.5 ppm 0.14 ppm 0.03 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
Respirable Particulate Matter (PM10)	24 Hour Annual	50 µg/m^3 20 µg/m^3	150 µg/m^3 –	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume–producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind–raised dust and ocean sprays).
Fine Particulate Matter (PM2.5)	24 Hour Annual	– 12 µg/m^3	35 µg/m^3 15 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including nitrogen oxides, sulfur oxides, and organics.
Lead (Pb)	Month Rolling 3 Month	1.5 µg/m^3 –	– 0.15 µg/m^3	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction.	Present sources: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.

SOURCE: California Air Resource Board, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, June 4, 2013.
ppm = parts per million; µg/m3 = micrograms per cubic meter

The SCAQMD adopts rules and regulations to implement portions of the AQMP. For the Proposed Project, the relevant rules and regulations include:

- **Rules 201 and 203 (Permits to Construct and Operate):** These rules require that owners of applicable construction or operation equipment obtain written permits from the SCAQMD prior to construction and operation.
- **Rule 402 (Nuisance):** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 (Fugitive Dust):** This rule requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.
- **Rule 410 (Odors from Transfer Stations and Material Recovery Facilities):** This rule establishes odor management practices and requirements to reduce odors from municipal solid waste transfer stations and material recovery facilities. Facilities subject to this rule and with throughputs greater than 250 tons per day (TPD) and less than or equal to 1,000 TPD are required to implement a Level 1 odor control strategy for the tipping floor. Facilities subject to this rule and with throughputs greater than 1,000 TPD are required to implement a Level 2 odor control strategy for the tipping floor, transfer tunnel, and material recovery facility (see THRESHOLD AQ-6 for further description).
- **Rule 461 (Gasoline Transfer and Dispensing):** This rule establishes emission control requirements for the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or motor vehicle fuel tank.
- **Rule 1113 (Architectural Coatings):** This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146 (Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters):** This rule requires boilers, steam generators, and process heaters of equal to or greater than 5 million British

thermal units (Btu) per hour rated heat input capacity used in all industrial, institutional, and commercial operations to meet NO_X emissions limits as specified in this rule.

- **Rule 1146.1 (Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters):** This rule requires boilers, steam generators, and process heaters that are greater than 2 million Btu per hour and less than 5 million Btu per hour rated heat input capacity used in any industrial, institutional, or commercial operation to meet NO_X emissions limits as specified in this rule.
- **Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters):** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule. This rule applies to units that have a rated heat input capacity less than or equal to 2 million Btu per hour.
- **Rule 1193 (Clean On-Road Residential and Commercial Refuse Collection Vehicles):** This rule requires public and private solid waste collection fleet (15 or more) operators to acquire alternative-fuel solid waste collection vehicles, roll-off vehicles, or transfer vehicles when procuring or leasing these vehicles for use by or for governmental agencies. In general, additions to an existing fleet or formation of a new fleet shall be by purchase or lease of alternative-fuel, pilot ignition, or dual-fuel heavy-duty vehicles as stipulated in this rule. The rule does not apply to solid waste collection vehicles used by a private solid waste collection fleet operator that provide services to a governmental agency not requiring a contract or franchise agreement.
- **Rule 2202 (Employee Commute Reduction Program Guidelines)**: This rule is designed to assist employers in understanding the development and implementation requirements of the Employee Commute Reduction Program (ECRP) at their worksites. The ECRP focuses on reducing work related vehicle trips and vehicle miles traveled to a worksite with the purpose of achieving and maintaining the employers' designated average vehicle ridership targets.

Greenhouse Gases

Greenhouse Gases and Global Climate Change

Greenhouse gases (GHG) include both naturally occurring and anthropogenic gases that trap heat in the earth's atmosphere. GHGs include but are not limited to carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydro fluorocarbons (HFC), perfluorocarbons (PFC), nitrogen trifluroide (NF_3), and sulfur hexafluoride (SF_6).

Gases that trap heat in the atmosphere are referred to as GHGs because they capture heat radiated from the sun and re-radiated from the Earth's surface as it is reflected back into the atmosphere, roughly analogous to the retention of heat energy in a greenhouse. The accumulation of GHGs has been implicated as a driving force for Global Climate Change. Definitions of climate change vary between and across regulatory authorities and the scientific community, but in general can be described as the changing of the earth's climate caused by natural fluctuations and the impact of human activities that alter the composition of the global atmosphere. Both natural processes and human activities emit GHGs.

The accumulation of GHGs in the atmosphere regulates the earth's temperature; however, emissions from human activities such as electricity production and motor vehicles have elevated the concentration of GHGs in the atmosphere.

Clean Air Act

The federal CAA requires the USEPA to define national ambient air quality standards (national standards) to protect public health and welfare in the U.S. The CAA does not specifically regulate GHG emissions; however, on April 2, 2007 the U.S. Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency*, determined that GHGs are pollutants that can be regulated under the CAA. Currently, there are no federal regulations that establish ambient air quality emissions standards for GHGs.

On April 17, 2009, the USEPA Administrator proposed to find that GHGs in the atmosphere threaten the public health and welfare of current and future generations. The Administrator also proposed to find that GHGs from new motor vehicles and new motor vehicle engines are contributing to the concentration of GHGs in the atmosphere. This action is being taken under Section 202(a) of the CAA. The action, if finalized, would not itself impose any requirements on industry or other entities.

The USEPA annually publishes the *Inventory of U.S. Greenhouse Gas Emissions and Sinks* for estimating sources of GHGs that is generally consistent with the IPCC methodology developed in its *Guidelines for National Greenhouse Gas Inventories*.

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring, and that there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and therefore makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG

emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

There are currently no State regulations in California that establish ambient air quality standards for GHGs. However, California has passed laws directing CARB to develop actions to reduce GHG emissions, and several state legislative actions related to climate change and GHG emissions have come into play in the past decade.

Assembly Bill 1493 (Pavley)

In 2002, then-Governor Gray Davis signed AB 1493 (Chapter 200, Statutes of 2002, amending Section 42823 of the California Health and Safety Code and adding Section 43018.5 to the code). AB 1493 required CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. The regulations would reduce GHG emissions from California passenger vehicles by about 22 percent by 2012 and about 30 percent by 2016. USEPA denied California's request for the waiver to implement AB 1493 in late December 2007. California filed a suit against USEPA for its decision to deny the CAA waiver. On January 21, 2009, CARB submitted a letter to USEPA Administrator Jackson regarding California's request to reconsider the waiver denial. USEPA approved the waiver on June 30, 2009.

Executive Order S-3-05

Governor Schwarzenegger established Executive Order S-3-05 in 2005, in recognition of California's vulnerability to the effects of climate change. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The executive order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The Secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on

California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of CalEPA created the California Climate Action Team, made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through state incentive and regulatory programs.

Assembly Bill 32 (California Global Warming Solutions Act of 2006)

California passed the California Global Warming Solutions Act of 2006 (AB 32; California Health and Safety Code Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished by enforcing a statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs CARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires CARB to adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state reduces GHG emissions enough to meet the cap. AB 32 also includes guidance on instituting emissions reductions in an economically efficient manner, along with conditions to ensure that businesses and consumers are not unfairly affected by the reductions. Using these criteria to reduce statewide GHG emissions to 1990 levels by 2020 would represent an approximate 25 to 30 percent reduction in current emissions levels. However, CARB has discretionary authority to seek greater reductions in more significant and growing GHG sectors, such as transportation, as compared to other sectors that are not anticipated to significantly increase emissions. Under AB 32, CARB must adopt regulations to achieve reductions in GHGs to meet the 1990 emissions cap by 2020.

Senate Bill 1368

SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed by Governor Schwarzenegger in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by

June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

Executive Order S-1-07

Executive Order S-1-07, which was signed by Governor Schwarzenegger in 2007, stated that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) has been adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

The LCFS would reduce GHG emissions from the transportation sector in California by about 16 million metric tons (MMT) in 2020. The LCFS is designed to reduce California's dependence on petroleum, create a lasting market for clean transportation technology, and stimulate the production and use of alternative, low-carbon fuels in California.

Senate Bills 1078 and 107 and Executive Order S-14-08

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008 Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Energy Standard to 33 percent renewable power by 2020.

Senate Bill 375

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocations. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable community strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in the MPO's regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. The first targets were approved in February of 2011 and for the SCAG the per capita emissions reduction target for 2020 is 5 to 10 percent relative to year 2005 emissions. CARB is also charged with reviewing each MPO's SCS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects will not be eligible for funding programmed after January 1, 2012. SCAG developed its SCS to meet the recently

approved goals for the region as part of the 2012 Regional Transportation Plan, which was adopted April of 2012.

California Climate Action Registry General Reporting Protocol

The Climate Registry (CR, formally the California Climate Action Registry) was established in 2001 by SB 1771 and SB 527 (Chapter 1018, Statutes of 2000, and Chapter 769, Statutes of 2001, respectively) as a nonprofit voluntary registry for GHG emissions. The purpose of the CR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CR is currently encouraging its members to transition to the new regional Climate Registry, a sister organization for reporting throughout North America.

The CR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry. This protocol provides the principles, approach, methodology, and procedures required for participation in the CR. It is designed to support the complete, transparent, and accurate reporting of an organization's GHG emissions inventory in a fashion that minimizes the reporting burden and maximizes the benefits associated with understanding the connection between fossil fuel consumption, electricity use, and GHG emissions in a quantifiable manner.

CARB Climate Change Proposed Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap of CARB's plans to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California will implement to reduce CO2e emissions by 169 MMT, or approximately 30 percent, from the State's projected 2020 emissions level of 596 MMT of CO2e under a Business as Usual (BAU) scenario (this is a reduction of 42 MMT CO2e, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020).

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors, i.e., transportation, electrical power, commercial and residential, and industrial. CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

CARB's Scoping Plan also breaks down the amount of GHG emissions reductions CARB recommends for each emissions sector of the state's GHG inventory. CARB's Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO2e);
- The Low Carbon Fuel Standard (15.0 MMT CO2e);
- Energy efficiency measures in buildings and appliances, and the widespread development of combined heat and power systems (26.3 MMT CO2e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO2e).

CARB's Scoping Plan states that successful implementation of the plan relies on local governments' land use, planning, and urban growth decisions because local governments have primary authority to plan, zone, approve, and permit land development to accommodate population growth and the changing needs of their jurisdictions. CARB further acknowledges that decisions on how land is used will have large effects on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. CARB's Scoping Plan does not include any direct discussion about GHG emissions generated by construction activity.

In October of 2013, the CARB submitted the First Update to the Climate Change Scoping Plan for public review and comment. The Update builds upon the initial Scoping Plan with new strategies and expanded measures. The Update identifies opportunities to leverage existing and new funds to drive GHG emission reductions through strategic planning and targeted program investments.

South Coast Air Quality Management District

On December 5, 2008, the SCAQMD adopted GHG significance thresholds for Stationary Sources, Rules, and Plans where the SCAQMD is lead agency. The threshold uses a tiered approach. The project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt from SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold.

For industrial stationary source projects, the SCAQMD adopted a screening threshold of 10,000 MT CO2e per year. This threshold was selected to capture 90 percent of the GHG emissions from these types of projects where the combustion of natural gas is the primary source of GHG emissions. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact. Tier 4 consists of three decision tree options.

Under the first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. Under the second option the project would be excluded if it had early compliance with AB 32 through early implementation of CARB's Scoping Plan measures. Under the third option, the project would be excluded if it met sector based performance standards. However, the specifics of the Tier 4, or fourth option were not adopted by the SCAQMD board in order to allow further time to develop the options and coordinate with CARB's GHG significance threshold development efforts. Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

At the most recent meeting of the SCAQMD GHG working group (September 2010), SCAQMD staff recommended extending the 10,000 MT CO2e per year industrial project threshold for use by all lead agencies. SCAQMD staff also stated that they are no longer proposing to include a 25,000 MT CO2e per year maximum emissions requirement for compliance with Tier 4. Staff indicated that they hoped to bring the proposed GHG significance thresholds to the board for their December 2010 meeting; however, this did not occur.

For the proposed project, the 10,000 MT CO2e per year industrial project screening threshold is used as the significance threshold in addition to the qualitative thresholds of significance from section VII of Appendix G to the CEQA Guidelines. The methodology recommends that total construction emissions be amortized over a 30-year period or the project's expected lifetime if it is less than 30 years. Although the SCAMQD's 10,000 MT CO2e per year screening threshold initially applied to stationary sources, discussions at the last GHG working group meeting indicated that this threshold would be utilized for all industrial related emissions that include both stationary and mobile sources.

Local Sensitive Receptors and Health Risk Assessment

Land uses such as schools, children's daycare centers, hospitals, and convalescent homes are considered to be more sensitive than the general public to poor air quality because the population groups associated with these uses have increased susceptibility to respiratory distress. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality.

Residential areas are considered more sensitive to air quality conditions than commercial and industrial areas, because people generally spend longer periods of time at their residences,

resulting in greater exposure to ambient air quality conditions. Recreational uses are also considered sensitive, due to the greater exposure to ambient air quality conditions and because the presence of pollution detracts from the recreational experience.

Some land uses are considered more sensitive to changes in air quality than others, depending on the types of population groups and the activities involved. The CARB has identified the following people as most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and those with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive population groups. Locations that may contain a high concentration of sensitive population groups include hospitals, daycare facilities, elder care facilities, schools, and parks. These locations are classified as sensitive receptors.

Sensitive receptors within a quarter-mile of the project site (threshold sited within CARB *Air Quality and Land Use Handbook* as distance of concern) are as follows:

- Single- and multi-family residences to the south of Live Oak and Arrow Highway. The nearest residence is located on the south side of Live Oak Avenue behind other industrial land uses in the City of Baldwin Park and approximately 325 feet from the Project.
- Off-site workers within industrial and commercial areas surrounding the project site and along Live Oak and Arrow Highway.
- Santa Fe Dam bike/pedestrian path (approximately 480 feet from the nearest property line).

Sensitive receptors beyond a quarter-mile of the project site are as follows:

- Margaret Heath Elementary (1,370 feet), Pleasant View Elementary (3,400 feet), Olive Junior High (3,500 feet), Walnut Elementary (4,400 feet), Santa Fe Elementary (3,900 feet), Jerry Holland Junior High (2,800 feet), Ernest Geddes Elementary (3,900 feet), and North Park High School (4,500 feet) as well as additional single- and multi-family residences and industrial and commercial areas.

3.3.3 THRESHOLDS OF SIGNIFICANCE

The significance of potential impacts was determined based on State CEQA Guidelines, Appendix G, the SCAQMD thresholds for criteria pollutants and other relevant considerations. These guidelines identify certain thresholds that may be pertinent in determining whether an impact is significant. Using these thresholds, the Proposed Project would be considered to have significant air quality impacts if it were to:

a. Conflict with or obstruct implementation of the applicable air quality plan (**THRESHOLDS AQ-1** through **AQ-4**);

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation (**THRESHOLDS AQ-1** through **AQ-4**);

c. Expose sensitive receptors to substantial pollutant concentrations (**THRESHOLDS AQ-3** through **AQ-5**);

d. Create objectionable odors affecting a substantial number of people **(THRESHOLDS AQ-6**);

e. Conflict with or obstruct implementation of California Global Warming Solutions Act of 2006 (AB32) (**THRESHOLD AQ-7**); or

f. Result in a cumulatively considerable net increase of any non-attainment pollutant (including releasing emissions that exceed quantitative thresholds for O_3 precursors) (**CUMULATIVE IMPACTS**);

Because of the SCAQMD's regulatory role in the Basin, the significance thresholds and analysis methodologies in the SCAQMD's *CEQA Air Quality Handbook* are also used in evaluating project impacts for construction, operations, air toxics, and GHG. These significance thresholds, under which the Proposed Project was evaluated, are described within the following.

Construction. The project would result in a significant construction air quality impact if regional emissions from the project exceed the significance thresholds set forth in **Table 3.3-3 Air Quality Significance Thresholds**.

Operations. The project would result in a significant operational air quality impact if any of the following occur:

a. Regional emissions exceed the significance thresholds set forth in **Table 3.3-3 Air Quality Significance Thresholds**.

b. Either of the following conditions occur at an intersection or roadway within one-quarter mile of a sensitive receptor:

   - The project causes an exceedance of the California one-hour or eight-hour CO standards of 20 or 9.0 parts per million (ppm), respectively; or
   - For intersection or roadways where existing CO levels exceed California standards, the incremental increase due to the project is equal to or greater than 1.0 ppm for the one-hour CO standard, or 0.45 ppm for the eight-hour CO standard.

c. The project would not be compatible with SCAQMD, SCAG, County of Los Angeles and/or City of Irwindale air quality goals and policies.

Table 3.3-3 Air Quality Significance Thresholds

Pollutant	Construction	Operation
NOx	100 lbs./day	55 lbs./day
VOC (ROG)	75 lbs./day	55 lbs./day
PM10	150 lbs./day	150 lbs./day
PM2.5	150 lbs./day	55 lbs./day
CO	550 lbs./day	550 lbs./day

SOURCE: South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, http://www.aqmd.gov/ceqa/hdbk.html

Toxic Air Contaminants. The Proposed Project would result in a significant air quality impact if the carcinogenic or toxic air contaminants individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0.

3.3.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD AQ-1

Would Project-related construction activities conflict with or obstruct implementation of the applicable air quality plan (SCAQMD 2012 AQMP, dated February 2013) or violate any air quality standards or contribute substantially to an existing or projected air quality violation of SCAQMD?

Less than Significant Impact with Mitigation Program

To test if the Project-related construction activities would conflict with the applicable air quality plan, the projected emissions were compared to the significance thresholds identified in Section 3.3.3. Daily emissions during construction were estimated by applying the mobile-source and fugitive dust emissions factors derived from air quality emissions model CALEEMod. The CALEEMod output sheets, which detail construction equipment assumptions, are provided in Appendix C of this EIR.

The MRF/TS and Fueling Facility/Convenience Store project would be constructed in a single phase estimated to require 18 months. Construction of the Proposed Project would commence in 2016. An average daily construction crew of 84 employees would be present on-site during construction.

Construction-related emissions are expected to be short-term, but may still cause adverse effects on air quality. Construction activities include site preparation, earthmoving, and general construction. Site preparation includes land clearing and grubbing. Earthmoving activities include cut-and-fill operations, soil compaction, and grading. General construction includes adding improvements such as roadway surfaces, structures, and facilities. The emissions generated from these construction activities include:

- Dust (including PM_{10} and $PM_{2.5}$) primarily from "fugitive" sources (i.e., emissions released through means other than through a stack or tailpipe) such as soil disturbance;
- Combustion emissions of criteria air pollutants (ROG, NO_x, CO, PM_{10}, and $PM_{2.5}$) primarily from operation of heavy off-road construction equipment (primarily diesel-operated), portable auxiliary equipment, and construction worker automobile trips (primarily gasoline-operated); and
- Evaporative emissions (e.g., ROG) from asphalt paving and architectural coatings.

Construction-related fugitive dust emissions would vary from day to day, depending on the level and type of activity, silt content of the soil, and the weather. High winds (greater than 10 miles per hour) occur infrequently in the area, less than two percent of the time. In the absence of mitigation, construction activities may result in significant quantities of dust, and as a result, local visibility and PM_{10} concentrations may be adversely affected on a temporary and intermittent basis during construction. In addition, the fugitive dust generated by construction would include not only PM_{10}, but also larger particles, which would fall out of the atmosphere within several hundred feet of the site and could result in nuisance-type impacts.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for fugitive dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas.

Erosion control measures and water programs are typically undertaken to minimize these fugitive dust and particulate emissions. A dust control efficiency of 75 percent due to daily watering and other measures was estimated. Application of water reduces fugitive dust emissions by a factor of approximately 34 to 68 percent (per SCAQMD *CEQA Air Quality Handbook*). It is assumed that one water application per day reduces fugitive dust by 34 percent, two water applications per day reduces fugitive dust by 50 percent, and three water applications per day reduces fugitive dust by 68 percent. Applying soil stabilizers to inactive areas reduces fugitive dust by 84 percent. Additional measures would allow for a total fugitive dust control efficiency of at least 75 percent

and compliance with SCAQMD Rule 403. Furthermore, application of appropriate emission control devices, the use of newer equipment, or other exhaust mitigation measures would reduce exhaust particulate matter by 50 percent.

NO_x, ROG, PM_{10}, $PM_{2.5}$, and CO construction emissions for the proposed project were estimated for a worst-case day based on maximum crew and truck trips. Emissions are based on criteria pollutant emission factors from CALEEMod.

As shown in **Table 3.3-4 Estimated Worst Case Daily Unmitigated Emissions from Project Construction (Pounds per Day)**, the estimated maximum daily ROG emissions, for all construction related emissions (including combustion engines and evaporative emissions) without mitigation, would be greater than the significance criteria. Thus, construction-related ROG emissions would be potentially significant without mitigation. Of note, over 95 percent of the ROG emissions would occur during the application of architectural coatings. Without mitigation, the estimated maximum daily NOx, CO, PM_{10}, and $PM_{2.5}$ would not exceed the SCAQMD threshold and would not conflict with or obstruct implementation of the applicable air quality plan or violate any air quality standards or contribute substantially to an existing or projected air quality violation.

Table 3.3-5 Estimated Daily Mitigated Emissions from Project Construction (Pounds per Day) displays the maximum daily mitigated emissions for all construction related emissions, (including from dust, combustion engines and evaporative emissions). With mitigation, the estimated maximum daily ROG would not exceed the SCAQMD threshold and would not conflict with or obstruct implementation of the applicable air quality plan or violate any air quality standards or contribute substantially to an existing or projected air quality violation,

Table 3.3-4 Estimated Worst Case Daily Unmitigated Emissions from Project Construction (Pounds per Day)

Construction Year	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
2015	5.3	57.0	43.9	21.4	12.8
Significant (Yes or No)?	No	No	No	No	No
2016	**375**	34.0	32.9	3.90	2.42
Significant (Yes or No)?	**Yes**	No	No	No	No
SCAQMD Thresholds of Significance	75	100	550	150	55

NOTE: Values in **bold** are in excess of the applicable SCAQMD significance threshold.
SOURCE: KB Environmental Sciences, Inc., 2014.

Table 3.3-5 Estimated Worst Case Daily Mitigated Emissions From Project Construction (Pounds Per Day)

Construction Year	ROG	NOx	CO	PM_{10}	$PM_{2.5}$
2015	2.3	34.5	33.6	8.9	5.3
Significant (Yes or No)?	No	No	No	No	No
2016	15.2	29.0	32.2	2.8	1.58
Significant (Yes or No)?	No	No	No	No	No
SCAQMD Thresholds of Significance	75	100	550	150	55

NOTE: Values in **bold** are in excess of the applicable SCAQMD significance threshold.
SOURCE: KB Environmental Sciences, Inc., 2014.

In order to offset potential impacts, the Project will adhere to the provisions of SCAQMD Rules 402 and 403 regarding construction-related fugitive dust control (**MM AQ-1**). **MM AQ-2** through **AQ-10** are designed to minimize combustion emissions during construction activities. The Applicant shall limit ROG construction emissions during the application of architectural coatings and solvents pursuant to the provisions of SCAQMD Rule 1113 (**MM AQ-11 and AQ-12**). Construction emissions would also be reduced by portions of **MM AQ-18** that apply to construction equipment.

MM AQ-1

The Applicant shall ensure that contractors implement a fugitive dust control program pursuant to the provisions of SCAQMD Rules 402 and 403. This program shall include, but not limited to the following:

- Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.
- Track-out shall not extend 25 feet or more from an active operation and track-out shall be removed at the conclusion of each workday.
- A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site.
- All haul trucks hauling soil, sand, and other loose materials shall maintain at least six inches of freeboard in accordance with California Vehicle Code Section 23114.
- All haul trucks hauling soil, sand, and other loose materials shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).
- Traffic speeds on unpaved roads shall be limited to 15 miles per hour.
- Operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour.

- On-site stock piles shall be covered or watered at least twice per day.

MM AQ-2

The Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications.

MM AQ-3

The Construction Constructor shall ensure Construction be discontinued during second-stage smog alerts.

MM AQ-4

Electricity from power poles rather than temporary diesel- or gasoline-powered generators shall be used, where available.

MM AQ-5

All construction vehicles shall be prohibited from idling in excess of five minutes, both on- and off-site.

MM AQ-6

Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.

MM AQ-7

Heavy equipment operations shall be suspended during first and second stage smog alerts.

MM AQ-8

The use of 2010 model or newer construction equipment shall be required, where feasible.

MM AQ-9

Older (prior to 2010 model year) construction equipment shall be retrofitted with appropriate emission control devices prior to onsite use.

MM AQ-10

Construction equipment idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

MM AQ-11

Contractors shall use varying-pressure-low-volume paint applicators or other application techniques with equivalent or higher transfer efficiency.

MM AQ-12

Use super compliant VOC coatings for all architectural applications. (Rule 1113 of the SCAQMD established a schedule of VOC limits for architectural coatings. However, many manufacturers have reformulated their coatings to levels well below these limits. These are referred to as "Super-Compliant" and contain less than 10 grams of VOC per liter.)

With implementation of **MM AQ-1 through AQ-12**, it is concluded that the Project-related construction activities would not conflict with or obstruct implementation of the applicable air quality plan (SCAQMD 2012 AQMP) or violate any air quality standards or contribute substantially to an existing or projected air quality violation of SCAQMD.

THRESHOLD AQ-2

Would the operation of the Proposed Project conflict with or obstruct implementation of the applicable air quality plan (SCAQMD 2012 AQMP, dated February 2013) or violate any air quality standards or contribute substantially to an existing or projected air quality violation of SCAQMD?

Less than Significant Impact for CO, PM_{10}, and $PM_{2.5}$ emissions
Significant and Unavoidable for ROG and NO_x emissions

To test if the Project-related operations would conflict with the applicable air quality plan, the projected (Proposed Project minus Baseline) emissions were compared to the previously mentioned significance thresholds. Operational emissions of criteria pollutants would occur from all of the following, which are separately discussed below:

- off-site vehicle emissions (transfer trucks, self-haul trucks, and employee traffic),
- onsite idling emissions, onsite heavy duty equipment emissions,
- the service station, and
- area sources within the Irwindale MRF.

The supporting methodology and assumptions used in the air quality analysis are provided in **Appendix C** of this EIR.

Off-Site Vehicle Emissions

For purposes of assessing the impacts to air quality from vehicle emissions, the Proposed Project is expected to result in relocated emissions. That is, a significant portion of the truck trips associated with trash collection and transfer of solid waste and recyclable materials that will be coming to and leaving the Project site are and were occurring before and at the time of the publication of the Notice of Preparation and the start of the preparation of this EIR. As described in more detail below, the applicant has provided information to the City that more than two-thirds of the materials that will be driven to and away from the Proposed Project facility are currently being taken to other facilities in the South Coast Air Basin (Basin). Therefore, a substantial amount of emissions that will come from solid waste collection trucks and transfer trucks coming to and from the Project site are existing emissions already occurring in the Basin and will not be new emissions created from new trips that are a reasonable foreseeable result of the development of the Project. To assess air quality impacts from off-site vehicle emissions that will foreseeably result from the Project, the EIR assumes a baseline condition that takes into consideration these existing relocated emissions. However, to be extremely conservative and to avoid under-representing any potential air quality impacts from the Proposed Project, the City has reduced the identified existing truck trips, and their associated emissions, in half. This is explained in more specific detail below.

The Baseline Condition assumes a maximum throughput of 2,180 tons per day and resultant truck trips.[1] As discussed above, this Baseline Condition represents a conservatively low estimate of emissions, which results in a conservatively higher estimate in Project-related emissions. Based on statements and documents provided by the Applicant, the estimated maximum throughput for the Baseline Condition is 4,360 tons per day (based on market share, waste amounts, and trip distances). That is, based on the information provided by the applicant of their current operations that will be relocated to the Project site, 4,360 tons per day of solid waste/recycling materials will be coming on truck trips currently occurring in the Basin. **Table 3.3.6, Regional Efficiency – Distance from Markets to Regional Transfer Stations (miles)** provides data on the tons generated by the applicant's current operations in various cities and distance from markets to regional transfer stations. Table 3.3.7 is information on the current distances for the applicant's operations from the regional transfer stations to landfills, recycling centers and compost sites. The City has conservatively reduced those 4,360 tons per day of throughput, to 2,180 tons per day in the EIR analysis for air impacts to ensure there is no undercounting of new off-site vehicle emissions caused by the Proposed Project that result from unknown variables or unexpected changes in the future in the applicant's operations.

1 Regional Efficiency Study, May 29, 2009 (1,362,507 tons of waste per six days per week, 52 weeks per year and a 50-percent adjustment factor so that the project is conservatively evaluated).

Under the Baseline Condition, or current operations, the truck trips occur but are processed at the Grand Central Recycling and Transfer Station and Athens Services Material Recovery Facility[2] and then transported to the Mid-Valley Landfill (85 percent of trips) and San Timoteo Landfill (15 percent of trips)[3]; with a weighted average one-way travel distance of 41 miles[4]. The recycling materials are sent to the Port of Los Angeles/Long Beach, an average of 35 miles travel distance. The composting materials are sent to Victorville (American Organics), an average of 71 miles travel distance. The waste is estimated to be 46 percent landfill material, 35 percent recycling material, and 19 percent composting material.[5] The average travel distances for the Baseline Condition are estimated to be 15.7 and 12.6 miles for the collection/roll-off trucks and self-haul trucks, respectively.

[2] The material is processed by City of Industry Grand Central Transfer Station (999 Hatcher Ave City Of Industry, CA 91748) and Athens Services Material Recovery Facility (14048 East Valley Blvd, City of Industry, CA 91746) at a split of 50/50 percent.

[3] Athens Services, December 13, 2013.

[4] This average distance was used for purposes of estimating truck mileage and related emissions. However, the most recent project description indicates the unrecoverable materials will be transported to the Mid Valley landfill in Rialto (San Bernardino County), San Timoteo landfill in Redlands (San Bernardino County) or Chiquita Canyon landfill in Castaic (Los Angeles County). Distances from the site to the landfills are approximately 35, 53, and 58 miles, respectfully. Approximately 80% of the MSW residual waste would be transferred to the Mid Valley which is east of the Irwindale site. T`he total miles travelled based upon the latest assumptions could be slightly higher (2-5%) than the assumptions of the modeling described in this section but well below the 50% reduction in total tons the City used to assure a conservative analysis of air emission impacts.

[5] Athens Services, December 13, 2013.

Table 3.3-6 Regional Efficiency – Distance from Markets to Regional Transfer Stations (miles)

Market	Waste (tons)	Miles to Grand Central TS	Miles to Athens Services MRF	Miles to Irwindale MRF/TS
Irwindale	71,382	9.7	8.1	2.2
Azusa	100,414	9.6	11.9	6.7
Baldwin Park	126,118	8.9	4.1	2.0
Covina	100,054	7.5	8.0	5.9
Arcadia	111,556	18.1	13.4	7.8
Duarte	45,980	17.2	9.4	4.1
Bradbury	7,466	17.3	9.5	4.5
Sierra Madre	22,641	22.0	14.2	9.3
Monrovia	79,025	18.5	10.8	5.8
San Gabriel	88,404	14.8	10.5	8.6
Temple City	48,030	14.8	8.4	5.4
Pasadena	424,267	27.0	19.2	13.9
La Canada Flintridge	40,112	32.3	24.6	19.6
San Dimas	28,460	14.7	13.8	12.5
La Verna	68,598	14.8	15.6	13.9
Weighted Average		**18.1**	**13.4**	**9.1**

SOURCE: Proposed Irwindale MRF – Regional Efficiency Study, May 28, 2009 and KB Environmental Sciences, Inc., 2013.

As shown in **Table 3.3-7 Regional Efficiency – Distance from Regional Transfer Stations to Landfill, Recycling, and Composting (miles),** the distance traveled for the Baseline Condition and the distance traveled for the Proposed Project to the landfills, recycling, and composting facilities are similar.

Table 3.3-7 Regional Efficiency – Distance from Regional Transfer Stations to Landfill, Recycling, and Composting (miles)

Location	Miles to Mid-Valley	Miles to San Timoteo	Miles to Port of Los Angeles	Miles to Victorville
Grand Central TS	38.9	48.1	36.5	69.1
Athens Services MRF	40.1	49.2	32.9	71.8
Irwindale MRF/TS	35.0	53.0	34.0	73.0

SOURCE: Athens Services, 2013 and KB Environmental Sciences, Inc., 2013.

Table 3.3.8 Estimated Daily Baseline Emissions from Project Operation (pounds) presents the Baseline Condition daily emissions (i.e., currently occurring within the study area).

Table 3.3-8 Estimated Daily Baseline Emissions from Project Operation (pounds)

Project Phase	ROG	NOx	CO	PM10	PM2.5
Collection Trucks (Local)	8.82	201	35.3	2.46	2.27
Transfer Trucks to Landfill	5.64	129	22.5	1.57	1.45
Transfer Trucks to Recycling	3.64	83.2	14.6	1.02	0.94
Transfer Trucks to Composting	4.01	91.7	16.0	1.12	1.03
Self-Haul Trucks	0.94	16.2	8.46	0.22	0.20
Total Baseline Condition	**23**	**521**	**97**	**6**	**6**
SOURCE: KB Environmental Sciences, Inc., 2014.					

The Proposed Project proposes a maximum throughput of up to 6,000 tons per day. The maximum daily number of truck trips would be 2,456 truck round trips (including collection trucks, transfer trucks and self-haul trucks). The daily trips include 249 self-haul trips, 1,137 packer truck trip, 66 end dump truck trips, 445 roll-off truck trips, and 559 transfer truck trips. The Proposed Project also includes 345 employee trips. An additional 751 daily trips would be associated with the convenience store/service station. The convenience store/service station would occur with the Proposed Project but is not included in the Baseline Condition.

Under the Proposed Project, the truck trips are processed at the Irwindale Facility and then transported to the Mid-Valley Landfill (85 percent of trips) and San Timoteo Landfill (15 percent of trips); with a weighted average one-way travel distance of 38 miles. The recycling materials are sent to the Port of Los Angeles/Long Beach, an average of 34 miles travel distance. The composting materials are sent to Victorville (American Organics), an average of 73 miles travel distance. As with the Baseline Condition, the waste is estimated to be 46 percent landfill material, 35 percent recycling material, and 19 percent composting material for the Proposed Project. The average travel distances for the Proposed Project are estimated to be 9.1, 12.6, and 17.6 miles for the collection/roll-off trucks, self-haul trucks, and employees, respectively.

Vehicular emissions were computed using the CARB's emission factor model, EMFAC2011, to estimate on-road emissions. Transfer trucks, roll-off trucks, packer trucks, and end-dump trucks were modeled using the T7 and T6 Solid Waste Collection Vehicle classification, which is a heavy-heavy duty truck emission factor for solid waste collection vehicles. Self-haul trucks would have substantially smaller payload capacities and were modeled using light-heavy duty truck emission factors. Paved road dust, break wear, and tire wear particulate emissions were also accounted for and included in the analysis using EMFAC2011 factors and methodologies from CARB and the USEPA.

SCAQMD Rule 1193 (Clean On-Road Residential and Commercial Refuse Collection Vehicles) requires public and private solid waste collection fleet operators to acquire alternative-fuel solid

waste collection, roll-off, or transfer trucks when procuring or leasing these vehicles for use by or for governmental agencies. According to data received from the Project Applicant, approximately 58 percent of the trucks operated by the Applicant will be fueled by compressed natural gas (CNG) in 2014 and 59 percent in 2015. As new trucks are procured or replaced, they must comply with the requirements of Rule 1193. This analysis accounts for 58 percent of existing solid waste collection trucks (both owned by the Project Applicant and third parties) being CNG fueled. It is assumed that outbound transfer trucks would be diesel fueled.

On-Site Idling Emissions

Trucks would idle on the Proposed Project during unloading and during load weighing/financial transaction at the scale house. Idling emissions were also calculated using idling emission factors from the EMFAC2011 model and idle limits of five minutes.

On-Site Heavy-Duty Equipment Emissions

Operation of the Proposed Project would require the use of heavy-duty equipment, such as excavators, loaders, forklifts, lifts, and street sweepers. This equipment would be used to load and unload material and otherwise sort and handle material. Emissions from this equipment were estimated using the same approach as construction emissions. Emission factors from the OFFROAD model, as included in CalEEMod were used. Equipment load factors were adjusted using the latest information in the OFFROAD2011 model. All forklifts, lifts, and street sweepers would be powered by natural gas (either CNG or propane).

Service Station Emissions

Fuel-dispensers emit VOCs during dispensing, storage tank breathing, and incidental spillage. Emissions from fuel dispensers are regulated by SCAQMD Rule 461 (Gasoline Transfer and Dispensing), which requires the installation of vapor recovery systems that can reduce vapor loss during dispensing by as much as 95 percent. Based on the average throughput for similar-sized fuel dispensing stations in California, the service station would have an estimated throughput of no more than 2.0 million gallons a year. The VOC emissions from the service station activities, such as breathing, working, refueling, and spillage, were estimated using emission factors from "Scenario 6B" of the California Air Pollution Control Officers Association (CAPCOA) *Air Toxics "Hot Spots" Program Gasoline Service Station Industry-wide Risk Assessment Guidelines*. As stated above, customer trips to the on-site service station were estimated using default vehicle and fleet mix parameters in CalEEMod and trip rates provided by the Project Applicant and the traffic report for the Proposed Project.

Area Source Emissions

Operation of the Proposed Project would also result in area source emissions from the combustion of natural gas for heating, the use of landscaping equipment, and evaporative emissions from the use of consumer products. These emissions were estimated using CalEEMod and were relatively minor contributors to the overall Project emissions.

All of the emissions from operations of the Proposed Project, off-site vehicle, on-site idling, on-site heavy equipment, the service station and the area source emissions were calculated in the air study provided in **Appendix C**. The Proposed Project unmitigated emissions are provided in **Table 3.3-9.**

Table 3.3-9 Estimated Daily Unmitigated Proposed Project Emissions from Project Operation (pounds)

Project Phase	ROG	NOx	CO	PM10	PM2.5
Collection Trucks (Local)	14.1	322	56.4	3.94	3.63
Transfer Trucks to Landfill	14.3	327	57.2	4.00	3.68
Transfer Trucks to Recycling	9.82	224	39.2	2.74	2.52
Transfer Trucks to Composting	11.4	261	45.7	3.20	2.94
Self-Haul Trucks	2.60	44.7	23.3	0.60	0.55
Employee Vehicles	0.95	2.96	35.2	0.06	0.05
On-site Equipment	16.4	124	140	6.92	6.92
Area Sources	8.63	1.62	1.36	0.12	0.12
Convenience Store	1.48	4.61	54.8	0.09	0.09
Service Station	7.09	-	-	-	-
Total Proposed Project[6]	**87**	**1,313**	**453**	**22**	**20**
SOURCE: KB Environmental Sciences, Inc., 2014.					

The Project-related emissions are equal to the Proposed Project's total emissions minus the total Baseline emissions. **Table 3.3-10**, the estimated daily ROG and NO_x emissions would be greater than the significance criteria. The reported emissions are based on activity associated with a daily maximum tonnage of 6,000 tons of material and peak of 345 employees.

[6] No differences were found in the Project Variant compared to the Project.

Table 3.3-10 Estimated Daily Project-Related Unmitigated Emissions from Project Operation (pounds)

Project Phase	ROG	NOx	CO	PM10	PM2.5
Proposed Project	87	1,313	453	22	20
Baseline Condition	23	521	97	6	6
Difference (Project-related)	**64**	**792**	356	15	15
Significant (Yes or No)?	**Yes**	**Yes**	No	No	No
SCAQMD Thresholds of Significance	55	55	550	150	55

NOTE: Values in **bold** are in excess of the applicable SCAQMD significance threshold.
SOURCE: KB Environmental Sciences, Inc., 2013.

Emissions of ROG and NOx would be potentially significant in the South Coast Air Basin. This is primarily due to the trip length for potential outbound transfer truck trips to the Mid Valley Landfill and San Timoteo Landfill.

Although difficult to accurately measure (and therefore not quantified for this analysis), the Proposed Project is reasonably expected to reduce the amount of material (greater sorting and recycling capabilities) sent to regional landfills, thus reducing landfill emissions and truck traffic. The regional efficiencies would reduce both criteria pollutants and GHG emissions below what is stated in this analysis because existing transfer trucks occur between an existing transfer station and landfill. These proposed trips would be shorter in distance due to the Proposed Project's central location and the higher volume of material captured for recycling. As shown in **Table 3.3-6,** the average distance traveled for the Baseline Condition (Grand Central TS and Athens Services MRF) is 18.1 and 13.4 miles while the average distance traveled for the Proposed Project is 9.1 miles.

The following mitigation measures have been identified by the Air Quality Consultants to reduce the potential significant air quality impacts to ROG and NOx emissions from the Project identified in **Table 3.3-10**:

MM AQ-13

Applicant shall properly maintain ROG emission control devices within the gasoline dispensing station pursuant to SCAQMD Rule 461.

MM AQ-14

All gasoline dispensing facilities shall meet the requirements of SCAQMD's Rule 461 to limit ROG emissions from gasoline dispensing facilities, including but not limited to using CARB-certified vapor recovery systems and spill boxes and periodic testing of the equipment.

MM AQ-15

Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.

MM AQ-16

The use of 2010 model or newer transfer trucks shall be required whenever older vehicles are replaced or upgraded, per SCAQMD Rule 1193.

MM AQ-17

Older (prior to 2010 model year) transfer trucks shall be equivalent to Tier 2 emission standards (such as particulate filter traps) prior to onsite use.

MM AQ-18

The Project Applicant shall require all on-site off-road heavy-duty equipment to meet USEPA Tier 3 or higher emissions standards such that all off-road diesel-powered operational equipment greater than 50 horsepower (hp) shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with the Best Available Control Technology (BACT) devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

MM AQ-19

All diesel truck operators shall strictly abide by the applicable State law requirements for idling, as described in the Airborne Toxic Control Measure (CCR, Title 13, Section 2485), which limits vehicles with gross vehicular weight ratings of more than 10,000 pounds to no more than five minutes of idling of the primary engine or the diesel-fueled auxiliary power system at any location.

According to data received from the Project Applicant, approximately 42 percent of the trucks operated by the Applicant will be fueled by diesel in 2014 and thus, subject to the mitigation measures. **MM AQ-13 through MM AQ-19** would reduce NO_X emissions by approximately 25 percent, and PM_{10} and $PM_{2.5}$ emissions by 15 percent for applicable diesel trucks. The Proposed Project mitigated emissions are provided in **Table 3.3-11**:

Table 3.3-11 Estimated Daily Mitigated Proposed Project Emissions from Project Operation (pounds)

Project Phase	ROG	NOx	CO	PM10	PM2.5
Collection Trucks (Local)	14.1	221	56.4	2.53	2.33
Transfer Trucks to Landfill	14.3	224	57.2	2.57	2.36
Transfer Trucks to Recycling	9.82	154	39.2	1.76	1.62
Transfer Trucks to Composting	11.4	179	45.7	2.06	1.89
Self-Haul Trucks	2.60	44.7	23.3	0.60	0.55
Employee Vehicles	0.95	2.96	35.2	0.06	0.05
On-site Equipment	1.48	4.61	54.8	0.09	0.08
Area Sources	8.63	1.62	1.36	0.12	0.12
Convenience Store	1.48	4.61	54.8	0.09	0.09
Service Station	7.09	-	-	-	-
Total Proposed Project[7]	**83**	**971**	**409**	**15**	**14**
SOURCE: KB Environmental Sciences, Inc., 2014.					

As shown in **Table 3.3-12, Estimated Daily Project-Related Mitigated Emissions from Project Operation (pounds)**, the estimated daily ROG and NO_x emissions would be greater than the significance criteria.

Table 3.3-12 Estimated Daily Project-Related Mitigated Emissions from Project Operation (pounds)

Project Phase	ROG	NOx	CO	PM10	PM2.5
Proposed Project	83	971	409	15	14
Baseline Condition	23	521	97	6	6
Difference (Project-related)	**60**	**450**	312	9	8
Significant (Yes or No)?	**Yes**	**Yes**	No	No	No
SCAQMD Thresholds of Significance	55	55	550	150	55
NOTE: Values in **bold** are in excess of the applicable SCAQMD significance threshold. *SOURCE: KB Environmental Sciences, Inc., 2014.*					

Mitigation Measures Found Infeasible

The use of alternative fueled solid waste and transfer trucks (i.e., compressed natural gas) will be required pursuant to SCAQMD Rule 1193 for the applicant's vehicles. An Alternatively Fueled Heavy Duty Vehicle, as defined in SCAQMD Rule 1193, means a heavy-duty vehicle or engine

[7] No differences were found in the Project Variant compared to the Project.

that uses compressed liquefied natural gas, liquefied petroleum gas, methanol, electricity, fuel cells, or other advanced technology that does not rely on diesel fuel. These vehicles generate approximately 46 percent fewer NO_x emissions than average heavy duty fueled trucks. Particulate matter emissions for the alternatively fueled trucks are approximately 42 percent lower than average heavy duty trucks.

Requiring the applicant to limit all transfer trucks and solid waste vehicles that use the Project site and facilities to alternative fuel vehicles, could potentially further reduce significant impacts from ROG and NOx emissions from the Proposed Project. However, the use and/or purchase of all alternative fueled vehicles beyond what is required by Rule 1193 as part of this Proposed Project is infeasible due to the high cost of refuse collection vehicles and existing requirement that alternatively fueled vehicles replace existing vehicles to comply with the SCAQMD Rule 1193. The SCAQMD rule considers what is economically feasible for purposes of imposing Rule 1193 on solid waste operators. For example, rule 1193 includes provisions for economic hardship of small private fleet operators that can allow two one-year extensions to acquire rule compliant vehicles.

Additionally, requiring third party collection trucks that utilize the facility, beyond the requirements they have to comply with under Rule 1193, to be alternatively fueled would foreseeably result in an increase in emissions. Rather than converting their trucks to alternative fuels, third parties would likely choose to travel to the next closest facility (which potentially will result in increased trip lengths and air emissions) that does not have this requirement rather than using the Proposed Project even if it is more convenient with a short travel distance. In this instance, emissions may increase due to a longer travel distance. Nevertheless, compliance with Rule 1193 will reduce emissions. If the third parties contract with governmental agencies in the future they would be subject to the requirements set forth in SCAQMD Rule 1193. Based upon the above, requiring more solid waste and transfer trucks to be alternative fuel than what is already required under the Air District rules is not considered economically, socially or environmentally feasible.

Conclusion

Mitigation measures MM AQ-13 through AQ-19 are not expected to reduce impacts from ROG and NOx emissions to less than significant and no additional feasible mitigation measures have been identified to reduce ROG and NOx emissions to a less than significant level. Based upon this, it is reasonably foreseeable that the Project will conflict with or obstruct implementation of the applicable air quality plan (SCAQMD 2012 AQMP) and violate any air quality standards or contribute substantially to an existing or projected air quality violation of SCAQMD.

Air Quality impacts from ROG and NOx emissions from the Proposed Project are significant and unavoidable.

THRESHOLD AQ-3

Would Project-related construction and operational activities potentially cause an exceedance of the Localized Significance Thresholds (LSTs)?

Less than Significant Impact

Localized impacts of construction and operation of the Irwindale MRF are evaluated using the SCAQMD Localized Significance Thresholds (LSTs) for NO_2, CO, PM_{10}, and $PM_{2.5}$. LSTs are a screening method for determining if emissions have the potential to cause or contribute to an exceedance of a CAAQS. LST tables were used to determine the facility-specific threshold based on the following information:

- The facility is located in Source Receptor Area 9, East San Gabriel Valley;
- The maximum mitigated daily construction and operational emissions estimates occurring onsite (**Tables 3.3-5 and 3.3-8**); and
- The distance to the nearest residence receptor is 325 feet (±100 meters) and the total project site is approximately 17 acres (with seven acre building footprint).

Generally, the LST methodology applies to projects of five acres or less. LST analysis is presented in **Table 3.3-13 LST Analysis (Pounds per Day)**. The Proposed Project would have a less than significant impact on the CAAQS according to the LSTs for construction activities but potentially significant impact of $PM_{2.5}$ for operations.

Table 3.3-13 LST Analysis (Pounds Per Day)

Parameter	PM_{10}	$PM_{2.5}$	NO_2	CO
Onsite Construction Emissions	8.89	5.26	34.5	33.6
Construction Localized Threshold	63	17	286	4,294
Potentially Significant (Yes or No)?	No	No	No	No
Onsite Operational Emissions	5.58	5.58	141	97.2
Operational Localized Threshold	16	5	286	4,294
Potentially Significant (Yes or No)?	No	**Yes**	No	No

Because the $PM_{2.5}$ screening analysis exceeded the threshold, a more refined analysis was required. The LST analysis for operations was supplemented through the use of dispersion modeling. The dispersion modeling was conducted using EPA's AERMOD dispersion model, which is the SCAQMD required model. The analysis was completed according to SCAQMD

guidance. Meteorological data from SCAQMD for Azusa was used. Also per the guidance, urban dispersion coefficients were used.

The dispersion modeling shows that ambient concentrations resulting from the Proposed Project would be below the CAAQS, which is the overall purpose of the LST analysis. Also of note, the $PM_{2.5}$ impact, based on refined dispersion modeling, is well below 5 $\mu g/m^3$ for 24-hour impact and 1 $\mu g/m^3$ for annual impacts, which are thresholds used to determine if a source is below significance impact and whether it impedes the implementation of the regional air quality plan. Thus, it is determined that the construction and operation of the Proposed Project will not cause an exceedance of the CAAQS.

THRESHOLD AQ-4

Would Project-related operational activities cause an exceedance of the CAAQS for CO at traffic intersections?

Less than Significant Impact

To test if the Project-related operational traffic would cause an exceedance of the CO standards at traffic intersections, the projected concentrations were compared to the significance thresholds. CO concentrations have declined dramatically in California due to existing controls and programs and most areas of the State including the Project region have no problem meeting the CO State and federal standards (current concentrations are less than 25 percent of the standards). CO measurements were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements have not been a priority in most California air districts due to the retirement of older polluting vehicles, fewer emissions from new vehicles and improvements in fuels.

There is a direct relationship between traffic/circulation congestion and CO impacts; because exhaust fumes from vehicular traffic are the primary source of CO. CO is a localized gas that dissipates very quickly under normal meteorological conditions. Therefore, CO concentrations decrease substantially as distance from the source (intersection) increases. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections. As such, a preliminary screening method states that the Proposed Project would not create a violation of the CO standard if intersections impacted by the Proposed Project would not be reduced from Level of Service (LOS) A through D to E or F (i.e., would significantly deteriorate).

The traffic analysis in Chapter 3.12 in the Threshold T-2 Section discussion identifies LOS F at Exiting Plus Project for the intersection of I-605 Freeway Northbound off-ramp at Live Oak Avenue and LOS F for I-605 SB Off-ramp/Arrow Highway (EW) at Long range (2035) plus

project. Mitigation measures MM T-1 and MM T-2 to be imposed on the Proposed Project are expected to improve LOS to above E and F. Therefore, it is not anticipated that the Project will cause CO concentrations at these intersections/facilities to exceed CAAQS. No other intersections are expected to be reduced to LOS E or F by the Proposed Project. Therefore, it is not reasonably foreseeable that the Proposed Project will cause CO concentrations at any intersections to exceed CAAQS.

THRESHOLD AQ-5

Would Project operational activities expose sensitive receptors to substantial concentrations of toxic air contaminants (TACs)?

Less than Significant Impact

The Project-related health risk and hazards were compared to the significance thresholds. A health risk assessment (HRA) was conducted in accordance with technical guidelines developed by the federal and California agencies (i.e., USEPA, CalEPA-OEHHA) and the SCAQMD. The methodology and assumptions in the application of a HRA are provided in **Appendix C** of this EIR.

The greatest potential impact from TACs would be diesel particulate emissions from trucks during operations. Additional air toxics may be emitted from service station operations. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The Maximally Exposed Individual represents the worst–case risk estimate, based on a theoretical person continuously exposed for 70 years at the point of highest compound concentration in the air.

The SCAQMD has established the CEQA significance threshold for individuals exposed to TAC sources as the increased incremental cancer risk of 10 in one million or greater. The HRA analyzed the potential incremental cancer risks to residents in the project vicinity of the Proposed Project, using emission rates from CARB's EMFAC2011 model. Emissions were input into the USEPA approved dispersion model AERMOD to calculate ambient air concentrations at receptors in the project vicinity.

The standards are applied to the results of a HRA through a detailed air dispersion modeling effort using the USEPA's AERMOD dispersion model. This assessment is intended to provide a worst–case estimate of the increased exposure by employing a standard emission estimation program and an accepted pollutant dispersion model.

Conservative health risk methodologies were used in the risk assessment in order to estimate maximum potential health risks. These methodologies overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. Therefore, for carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the risk assessment methodology.

In accordance with Office of Environmental Health Hazard Assessment (OEHHA) guidelines, the HRA was accomplished by applying the highest estimated concentrations of TAC at the receptors analyzed to the established cancer potency factors and acceptable reference concentrations for non-cancer health effects. The HRA for this project utilized the CARB Hotspot Analysis and Reporting Program (HARP) to determine both cancer risks and non-cancer health effects. HARP is a computer software package that combines the tools of emission inventory database, facility prioritization, air dispersion modeling, and risk assessment analysis.

For the Proposed Project, the maximum incremental cancer risks from all trucks using the MRF/TS and the service station would be 6.6 (residential adult receptor), 3.2 (residential child receptor), 1.0 (off-site worker), and 0.5 (school children receptor) cancers per million, which are less than the SCAQMD significance threshold of 10 in one million. Therefore, potential Health Risk impacts are determined to be less than significant.

The maximum incremental cancer risk is relatively small compared with the overall lifetime cancer incidence of 200,000 to 250,000 per million in the United States. Conservative health risk methodologies were used in the risk assessment in order to estimate maximum potential health risks. These methodologies are anticipated to overestimate both non-carcinogenic and carcinogenic health risk, possibly by an order of magnitude or more. For carcinogenic risks, the actual probabilities of cancer formation in the populations of concern due to exposure to carcinogenic pollutants are likely to be lower than the risks derived using the risk assessment methodology.

Exposure to non–carcinogenic substances would be significant if the Hazard Index (HI) exceeds 1.0. The Hazard Index is the ratio of a hazardous air pollutant concentration to its Reference Concentration, or safe exposure level. If this “hazard index” exceeds one, people are exposed to levels of hazardous air pollutants that may pose non-cancer health risks. The maximum chronic hazard index is 0.04 and thus less than significant. The maximum acute hazard index is 0.16 and thus less than significant.

Finally, on the basis of average throughput for similar-sized fuel dispensing stations in California, the service station would have an estimated throughput of approximately 2.0 million

gallons a year. This amount of throughput would be below the 3.6 million-gallon threshold established by the CARB *Air Quality and Land Use Handbook* for a large fuel dispensing station and, therefore, would be classified as a typical fuel dispensing station. The CARB advisory guidelines suggest that new typical fuel stations be located a minimum of 50 feet from the nearest sensitive receptor. The fuel canopy would be approximately 325 feet from the nearest residences on the south side of Live Oak Avenue behind other industrial land uses in the City of Baldwin Park; therefore, it would be consistent with the advisory separation distance recommendations.

A cancer burden analysis is a form of population-level risk evaluation that is commonly used for risk communication purposes to provide perspective on the magnitude of the potential public health impacts posed by a facility. The cancer burden was estimated following methods recommended in OEHHA Guidance. The cancer burden for each of these receptors is calculated by multiplying the cancer risk by the residential population at each receptor. The total cancer burden is the sum of the cancer burden for each of the census receptors. The results of the cancer burden analysis provide an estimate of the number of excess cancer cases in the exposed population expected from lifetime (70-year) exposure to proposed facility emissions. The results of the cancer burden analysis indicate that less than one case (0.005) of cancer would be expected within the zone of impact. A value of 0.5 is considered significant by the SCAQMD. Therefore, the Proposed Project would have a less than significant impact towards the cancer burden.

Based upon the above, it is not reasonably foreseeable that the construction and operation of the Proposed Project would expose sensitive receptors to substantial concentrations of TACs.

THRESHOLD AQ-6

Would the Project create objectionable odors affecting a substantial amount of people?

Less than Significant Impact with the Mitigation Program

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding.

The proposed MRF/TS is not expected to generate significant odors because all transfer activities potentially generating odors would take place within an enclosed building designed to minimize odors. Design features in the MRF/TS building include exhaust fans to provide multiple air exchanges every hour (as needed). The air leaving the building at the roof exhaust fans will be treated by a non-toxic odor neutralizing misting system to mitigate any odors. Negative pressure will be maintained at the building entrance to minimize the amount of untreated air leaving the

building. A non-toxic odor neutralizer will be mixed with dust control water in the ceiling mounted misting systems for extra odor mitigation, as needed.

With implementation of the odor control measures as conditions of project approval, it is determined that odor would not impact the water associated with the Project Variant water tanks on the southeast corner of the site, or with the two nearby Clinton O. Nixon storage facilities located at 14521 Ramona Boulevard in Baldwin Park, which have ventilation that allows an exchange of air intake inside the reservoir as the water surface rises and falls.

The SCAQMD resolves complaints through investigation and issuance of a notice to comply when necessary. Continued application of these existing regulations would avoid any impacts associated with objectionable odors and assure that any objectionable odors would not affect a significant amount of people.

Compliance with SCAQMD Rule 410

The proposed project would comply with SCAQMD Rule 410 (Odors from MRF/TS), which establishes odor management practices and requirements to reduce odors from municipal solid waste transfer stations and material recovery facilities. As the project would have a throughput greater than 1,000 tons per day, the project would be required to implement a Level 2 odor control strategy for the tipping floor, transfer tunnel, and material recovery facility. The requirements for a Level 2 odor control strategy are as follows:

Tipping Floor Level 2 Control Strategies:

- Partial enclosure, consisting of a permanent roof structure covering the tipping floor and two or more walls that act as a wind barrier, in combination with a handheld or overhead misting system (odor maskants or odor neutralizers are any non-toxic odor maskant or odor neutralizer that meets all applicable local, state and federal requirements); or
- Full enclosure, consisting of a permanent roof structure covering the tipping floor and four walls. Openings for ventilation and access shall not exceed 5 percent of the total surface area of the enclosure's exterior walls, floor and the horizontal projection of the roof for a full enclosure, or the minimum percentage required by a local or state regulation, in combination with a handheld or overhead misting system; or
- A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school or school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the tipping floor located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or

- Other approved equivalent odor control method.

Transfer Tunnel Level 2 Control Strategies:

- Placement of physical barriers, such as plastic flaps, at the entrance or exit to the transfer tunnel, whichever is more directly downwind of the prevailing wind at the facility (the prevailing wind is the direction the wind originates from); or
- Maximum drop height from the tipping floor into transfer trucks of 3 feet or less, above the lip of the transfer truck; or
- Operation of a misting system at the entrance or exit to the transfer tunnel, whichever is more directly downwind of the prevailing wind at the facility; or
- A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school or a school under construction as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the transfer tunnel located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or
- Other approved equivalent odor control method.

Material Recovery Facility Level 2 Control Strategies:

- Partial enclosure, consisting of a permanent roof structure covering the material receiving area and two or more walls that act as a wind barrier; or
- Full enclosure, consisting of a permanent roof structure covering the tipping floor and four walls. Openings for ventilation and access shall not exceed 10 percent of the total surface area of the enclosure's exterior walls, floor and the horizontal projection of the roof for a full enclosure, or the minimum percentage required by a local or state regulation; or
- A buffer zone where the facility is located more than 1,000 feet from any property zoned for residential or mixed land use as of January 1, 2008, and from any property designated as a site for a school as of January 1, 2008. The 1,000 foot buffer zone shall be measured from the side of the material recovery facility located nearest to the area zoned for residential or mixed land use, or school site to the closest property line of the receptor; or
- Other approved equivalent odor control method.

On-Site Management Plans

In addition to compliance with SCAQMD rules and regulations, the Proposed Project would implement *On-Site Management Plans* to control odors and emissions. These plans are approved by the City and made conditions on the Proposed Project and as such, will be enforceable by the City. The management methods and control techniques listed have been developed by Athens Services and have been incorporated as applicable, into operations and permits for its two existing MRF/TS located at 14048 East Valley Boulevard, in the City of Industry, and at 11121 Pendleton Street, in the Sun Valley District of the City of Los Angeles. These *On-Site Management Plans* meet or exceed the minimum standards established by CalRecycle, the County of Los Angeles, the SCAQMD, and other responsible agencies. All of the following project components are described in the on-site management plans, presented in full in Appendix C.

Litter Prevention and Control Plan

Site Litter Prevention

The Proposed Project MRF/TS and green waste processing areas, including the tipping areas, will be located within an enclosed building. Ingress and egress points to this building, including the transfer tunnel for waste vehicles, will be equipped with fast acting roll-up doors to minimize the amount of time doors are open and minimize the potential for windblown litter emanating from within the building. All waste materials will be discharged, stored, and processed inside the building. This is consistent with the requirements of SCAQMD Rule 410.

The C&D processing area, including the tipping area, will be located within an enclosed building. Doorways for ingress and egress of waste delivery trucks will also be equipped with roll up doors. To minimize the potential for windblown litter emanating from within the building, the roll-up doors will be closed except when waste delivery vehicles are accessing the building or tipping their loads. All waste materials will be discharged, stored, and processed inside the building. This is consistent with the requirements of SCAQMD Rule 410.

The paved areas around the site structures will be swept by a mechanical street sweeper routinely throughout each operational day as necessary to pick up litter and prevent it from leaving the property. The project site perimeter will be surrounded with a combination of walls and fences with landscaped buffer areas which will prevent litter from leaving the site. These features will be cleaned of any litter regularly throughout the day by a litter control crew.

Roadway Litter Prevention

To prevent the generation of litter along haul routes exterior to the project site, all incoming and outgoing hauling vehicles are required to be either fully covered and/or tarped or be a fully enclosed vehicle/trailer. Signs will be posted at the site exit points notifying all drivers of the

requirement for their load to be fully covered and/or tarped prior to accessing public roads. The facility will maintain a supply of extra tarps to replace faulty tarps or missing tarps on haul vehicles to ensure loads leaving the project site are properly covered. The only vehicles permitted to leave the site without a cover or tarp are those vehicles that are completely empty or completely enclosed.

To prevent vehicle track out of materials from the project site to the public roads, Athens will utilize tire cleaning methods, such as rumble plates and speed bumps, to retain these materials either inside the processing buildings and/or within the project site. Regular sweeping of the paved areas of the project site will prevent track out of material onto the surrounding public roads.

Street Sweeping

The eastbound and westbound curb lanes of both Live Oak Avenue and Arrow Highway, and the middle turn lane of Arrow Highway will be swept at least once each operational day by an Athens Services street sweeper.

Pest Control Plan

Facility Design

The project buildings will be designed to minimize places of harborage for pests, and facilitate the cleaning of the interior of the building, thus minimizing the accumulation of debris and lessen the attraction of pests. Pest control features of the building design include construction using pest-proof materials such as metal and concrete; minimizing hiding places such as dark corners, crevices, and inaccessible void spaces where debris can accumulate; and ensuring that all areas of the facility including machinery pits, baler sumps, etc., are easily accessible and adequately lit for cleaning purposes.

Operational Practices and Procedures

The paved areas around the site structures will be swept by a mechanical street sweeper routinely throughout each operational day as necessary. Sorting machinery, conveyors, work platforms, and equipment pits are cleaned using dry methods on a frequency of at least once per week and more frequently, if deemed necessary.

Putrescible materials accepted at the facility for processing or transfer will be handled in a first-in/first-out basis, and in all cases processed and the non-recyclable residue removed from the site within 48 hours of first arrival. Organic materials such as yard clippings and food/restaurant wastes will be shipped off site within 24-hours of receipt. This will limit the potential for materials to generate odorous emissions.

Recovered recyclables will be handled on a first-in/first-out basis and shipped out as full container loads are completed to minimize the material inventories and to minimize material residence time (maximum 30 days), thus reducing the attraction of pests. All recovered paper, plastic, and organic materials will be stored inside the building or in enclosed containers.

Inspection/Eradication by Pest Control Professionals

The project site and building interiors will be inspected at least once per month by licensed, professional pest control personnel, and more frequently when pests are detected that are not controlled on the monthly management basis. Traps and bait stations will be deployed and pesticide sprays will be applied in accordance with the recommendations of the pest-control professional, to ensure the project site is maintained in a pest-free condition to the satisfaction of the Local Enforcement Agency (LEA).

Odor Control Plan

Regulatory Requirements (SCAQMD Rule 410)

As noted above, SCAQMD Rule 410 imposes odor management practices and requirements to limit odors from transfer stations and material recovery facilities that receive municipal solid waste (MSW) or green waste, and the project areas where MSW and green waste will be handled or processed are subject to the requirements of this rule. The rule establishes certain facility design and operational requirements and requires the development and implementation of an Odor Management Plan (subject to review and approval by the SCAQMD) or an Alternative Odor Management Plan (AOMP), subject to review and approval by the LEA. An AOMP will be developed and implemented, in cooperation with the LEA, for the Irwindale project. The AOMP provides the odor control strategies and techniques to be applied in all areas within the facility where MSW or green waste will be handled, processed, or stored. The AOMP also identifies personnel responsible for the implementation and coordination of the plan and protocols and procedures for response to odor complaints. SCAQMD Rule 410 does not apply to the Construction and Demolition recycling activities due to the absence of odorous and putrescible materials in this material.

Facility Design

The portions of the buildings that will handle, process, or store MSW and green waste will be enclosed to prevent the migration of odors. Ingress and egress points to this building, including the transfer tunnel for waste vehicles, will be equipped with fast acting roll-up doors to minimize the amount of time doors are open and minimize the potential for odors to escape the building. All MSW and green waste materials will be discharged, processed, and stored inside the building. This is consistent with SCAQMD Rule 410.

To further minimize uncontrolled odors from the enclosed MSW and green waste process/handling/storage areas of the building, roof-mounted ventilation fans will be operated to maintain a negative air pressure within the building. The fans will draw air into the building whenever the roll up doors open to allow vehicles to enter or exit the building. When no doors are open, air will be drawn in through wall mounted ventilation louvers.

To control odors within the building, high-pressure misting systems will be installed in the ceiling above areas where odorous materials are handled, and at all door openings. These systems emit an enzymatic odor neutralizing product mixed with tap water at high pressures that creates a very fine mist and effectively minimizes odors. Air exhausted through the roof-mounted ventilation fans will also be treated in the same manner with the installation of misting nozzles at the exhaust louvers and application of the odor neutralizing product to the exiting air stream. These facility design features are essentially the same features that have been successfully implemented at the Los Angeles County Sanitation Districts Puente Hills MRF.

The C&D processing area, including the tipping area, will be located within an enclosed building. Doorways for ingress and egress of waste delivery trucks will also be equipped with roll up doors. To minimize the potential for windblown litter emanating from within the building, the roll-up doors will be closed except when waste delivery vehicles are accessing the building or tipping their loads. All waste materials will be discharged, stored, and processed inside the building.

Operational Practices and Procedures

The paved areas around the site structures will be swept by a mechanical street sweeper routinely throughout each operational day as necessary. Sorting machinery, conveyors, work platforms, and equipment pits are cleaned using dry methods on a frequency of at least once per week and more frequently if deemed necessary.

Putrescible materials accepted at the facility for processing or transfer are handled in a first-in/first-out basis, and in all cases processed and the non-recyclable residue removed from the site within 48 hours of first arrival. Organic materials such as yard clippings and food/restaurant wastes will be shipped off site within 24-hours of receipt. This will limit the potential for materials to generate odorous emissions.

Recovered recyclables are also handled on a first-in/first-out basis and shipped out as full container loads are completed to minimize the material inventories and to minimize material residence time (maximum 30 days), thus reducing the attraction of pests. All recovered paper, plastic, and organic materials are stored inside the building or in enclosed containers.

Odor neutralizing will be accomplished by a combination of carbon adsorption and enzymatic neutralization. Exhaust ventilation will flow through beds of activated carbon, which will adsorb odors, then will be treated with a fine mist of highly diluted neutralizer dissolved in tap water to reduce any remaining odors before the air is exhausted outside the plant. A misting system will also be placed in strategic locations inside the plant to knock down odor and dust with a fine mist of atomized micro-droplets of diluted solution where waste materials are being handled in such a way to potentially release them. Both activated carbon and odor neutralizing agents are available from numerous commercial sources. The hardware used to distribute and atomize the diluted neutralizing agent is manufactured by the MicroCool division of Walter Meier Climate (USA) Inc. Adsorption and misting systems are mechanically simple and have been found to be highly reliable.

The transfer tunnel will employ fast opening/closing doors on both ends of the tunnel. This area is included within the ventilated space and will be at a lower air pressure than outside the facility. Doors will be made of rubberized fabric material with top, side and bottom draft seals, and with an opening speed of up to 60" per second and closing speed of 30" per second (exact speed is dependent upon door size and type). Doors may be operated manually or by automated sensors depending on location and purpose.

In addition to the On-site Management Plans and the SCAQMD Rule 410 requirements, the following mitigation measures will be required to further assure that there will be no impacts from the odor emissions from the Project:

MM AQ-21
Applicant shall minimize odors during operation of the MRF/TS by properly maintaining design features and equipment designed to reduce and eliminate odors and pursuant to provisions of SCAQMD Rule 410.

MM AQ-22
On-Site Management Plan No. 3, Athens Services Odor Control Program shall include a requirement that any and all odor complaints shall be referred directly to the City of Irwindale Community Development Department Code Enforcement Division. Odor complaints shall be substantiated by the City as follows:

a. Inspection and confirmation by Code Enforcement Division Staff; and/or
b. Inspection and confirmation by the SCAQMD; and/or
c. A qualified consultant, as determined and selected by the City, will be retained to collect samples to quantify odor intensity using a Nasal Ranger or other comparable instrument. Such consultant shall be retained by the City at the sole expense of the Applicant.

Upon substantiation of an odor complaint, Applicant shall meet with the City within 48 hours to determine actions to remedy the odor complaint. A detailed action plan shall be prepared within 72 hours of the meeting identifying the steps to be taken to remedy the issue. All remedies shall be at the sole expense of the Applicant, and shall be implemented / installed as soon as feasible.

MM AQ-23

As a means to address public concerns and complaints regarding odors, the Project Applicant shall publicly post the SCAQMD odor complaint phone number **[1-800-CUT-SMOG (1-800-288-7664)]** and website address (http://www.aqmd.gov/complain/reporting_aq_problems.html) on signs that are visible from the street at all entrances to the MRF/TS facility.

Based upon the proposed project's required compliance with SCAQMD Rule 410, required implementation of the On-Site Management Plans, and imposition of **MM AQ-21** through **AQ-23** as required measures to control odors and emissions, the Proposed Project is not expected to generate significant odors. Thus, it is determined that the Proposed Project would not create odors affecting a substantial amount of people and this impact would be less than significant with mitigation.

THRESHOLD AQ-7

Would the Project conflict with implementation of State goals for reducing greenhouse gas emissions?

Less than Significant with Mitigation

The primary source of emissions associated with the construction and operation of the project would occur from vehicles including collection trucks, transfer trucks, self-haul trucks and employee vehicles. Additional emissions would result from the on-site operation of equipment, and on-site area sources.

Importantly, CEQA Guidelines 15064.4 provides the relevant rules for determining significance of impacts from Greenhouse Gas Emissions.[8] Section 15064.4 allow for quantitative and

[8] A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or rely on a qualitative analysis or performance based standards. A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment: (1) The extent to which the project may increase or reduce

qualitative discussion in the absence of method or models. Also, to the extent possible, the GHG emission calculations should be based on best available scientific and factual data. Lastly, the lead agency should consider whether the project would increase or decrease compared to the existing environmental setting.

For the proposed project, the City is adopting the SCAQMD, 10,000 MT CO2e per year industrial project screening threshold as the significance threshold in addition to the qualitative thresholds of significance from *Section VII of Appendix G to the CEQA Guidelines*. The methodology recommends that total construction emissions be amortized over a 30-year period or the project's expected lifetime if it is less than 30 years. Four types of analyses were used to determine whether the Proposed Project would be in conflict with the goals for reducing GHG emissions. The analyses are reviews of:

a. The potential conflicts with the CARB' thirty-nine (39) recommended actions identified in **Table 3.3-14 List of Recommended Actions by Sector**;

b. The proposed project emissions compared to the SCAQMD significance threshold of 10,000 MT CO2e per year; and

c. The basic parameters of a project to determine whether its design is inherently energy efficient, will lead to wasteful energy use, or is neutral with regard to future energy use.

d. Potential conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

With regard to Item a., the project does not pose any apparent conflict with the CARB recommended actions listed in **Table 3.3-14 List of Recommended Actions by Sector**. Of note, the project would help achieve Measure RW-3, which promotes high recycling.

With regard to Item b., baseline operational GHG emissions would be approximately 21,152 metric tons of CO_2e per year and the Proposed Project operational GHG emissions would be approximately 52,665 metric tons of CO_2e per year. (See Appendix C). Thus, the Project-related operational GHG emissions would be approximately 31,513 metric tons of CO_2e per year. The project would be classified as potentially significant (greater than 10,000 metric tons of CO_2e per year SCAQMD significance threshold). The construction emissions would be approximately 686 metric tons CO_2e (or 23 metric tons CO_2e amortized over 30 years) and would not be considered significant under the SCAQMD threshold.

greenhouse gas emissions as compared to the existing environmental setting; (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

As with the criteria pollutants, the Baseline Condition represents a conservatively low estimate of emissions, which results in a conservatively higher estimate in Project-related emissions (i.e., Proposed Project minus Baseline). That is, estimated maximum throughout for the Baseline Condition is 4,360 tons per day (based on market share, waste amounts, and trip distances) but conservatively evaluated at 2,180 tons per day. Therefore, it is not expected that the Proposed Project will, in fact, result in 31,513 metric tons of CO_2e per year. Based on this, the City will be requiring the applicant to purchase carbon offset credits to reduce the expected GHG emissions to less than significant level, but will allow the applicant an opportunity to demonstrate that the Proposed Project produces less GHG emissions than estimated by the conservative analysis provided above. Mitigation measure MM AQ-24 will require the following:

> **MM AQ-24:** The Project Applicant shall purchase verifiable and certified GHG offset credits and provide verification to the City of the purchase. Off-set credits shall be purchased in an amount that is based on one of the following:
>
> (1) Offset-credits for 21,152 metric tons) or,
>
> (2) Offset-credits in an amount computed on the basis of the Project's actual GHG emissions the previous year compared to actual Project-related emissions compared to emissions from the baseline condition [what MRF was used in 2013] minus 10,000 metric tons of CO2e per year. The calculation must be prepared and certified by a professional Air Pollution expert, acceptable to the City as determined by the Director of Community Development.
>
> When feasible, offset purchases would be prioritized by proximity to the Project Site, with greatest preference given to projects within the jurisdictional boundaries of the SCAQMD, then California, and then finally nationally. Carbon offsets are widely available in a number of markets (e.g., GreenX and IntercontinentalExchange) and exists at levels that greatly exceed the potential needs of the Proposed Project.

With regard to Item c., the project is efficient with regard to energy use since project operations would reduce overall energy consumption by reducing the transfer truck trip mileage within the region and reducing the amount of solid waste material that is ultimately disposed of at a landfill. Additionally, the Project will be required to be LEED certifiable and built to the Green Building Code standards under **PDF WQ-1**; whereas, the Proposed Project shall be conditioned by the City to be certifiable at the Silver level utilizing U.S. Green Building Council's LEED green building rating systems. Therefore, the buildings and facilities are expected to be energy efficient.

With regard to Item d., based upon the imposition of **MM AQ-24**, the Proposed Project would not be expected to conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. CARB is continuing to develop strategies to reduce statewide GHG emissions, including heavy-duty vehicle emission reductions, as directed by AB 32. The Proposed Project will be required to comply with all new State laws and regulations, including as they may be implemented by SCAQMD. As noted previously, a number of design features and regional efficiencies are part of the Proposed Project. These design features and regional efficiencies would reduce GHG emissions below what is stated in this analysis. In addition, **MM AQ-24** is provided to reduce GHG emissions to less than significant.

Table 3.3-14 List of Recommended Actions by Sector

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
Transportation		
T-1	Pavley I and II – Light Duty Vehicle Greenhouse Gas Standards	31.7
T-2	Low Carbon Fuel Standard (Discrete Early Action)	15
T-3[1]	Regional Transportation-Related Greenhouse Gas Targets	5
T-4	Vehicle Efficiency Measures	4.5
T-5	Ship Electrification at Ports (Discrete Early Action)	0.2
T-6	Goods Movement Efficiency Measures. • Ship Electrification at Ports • System-Wide Efficiency Improvements	3.5
T-7	Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)	0.93
T-8	Medium- and Heavy-Duty Vehicle Hybridization	0.5
T-9	High Speed Rail	1
Electricity and Natural Gas		
E-1	Energy Efficiency (32,000 GWh of Reduced Demand) • Increased Utility Energy Efficiency Programs • More Stringent Building & Appliance Standards Additional Efficiency and Conservation Programs	15.2
E-2	Increase Combined Heat and Power Use by 30,000 GWh (Net reductions include avoided transmission line loss)	6.7

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
E-3	Renewables Portfolio Standard (33% by 2020)	21.3
E-4	Million Solar Roofs (including California Solar Initiative, New Solar Homes Partnership and solar programs of publicly owned utilities) • Target of 3000 MW Total Installation by 2020	2.1
CR-1	Energy Efficiency (800 Million Therms Reduced Consumptions) • Utility Energy Efficiency Programs • Building and Appliance Standards • Additional Efficiency and Conservation Programs	4.3
CR-2	Solar Water Heating (AB 1470 goal)	0.1
Green Buildings		
GB-1	Green Buildings	26
Water		
W-1	Water Use Efficiency	1.4†
W-2	Water Recycling	0.3†
W-3	Water System Energy Efficiency	2.0†
W-4	Reuse Urban Runoff	0.2†
W-5	Increase Renewable Energy Production	0.9†
W-6	Public Goods Charge (Water)	TBD†
Industry		
I-1	Energy Efficiency and Co-Benefits Audits for Large Industrial Sources	TBD
I-2	Oil and Gas Extraction GHG Emission Reduction	0.2
I-3	GHG Leak Reduction from Oil and Gas Transmission	0.9
I-4	Refinery Flare Recovery Process Improvements	0.3
I-5	Removal of Methane Exemption from Existing Refinery Regulations	0.01
Recycling and Water Management		
RW-1	Landfill Methane Control (Discrete Early Action)	1
RW-2	Additional Reductions in Landfill Methane • Increase the Efficiency of Landfill Methane Capture	TBD†
RW-3	High Recycling/Zero Water • Commercial Recycling	9†

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
	• Increase Production and Markets for Compost • Anaerobic Digestion • Extended Producer Responsibility • Environmentally Preferable Purchasing	
Forests		
F-1	Sustainable Forest Target	5
High Global Warming Potential (GWP) Gases		
H-1	Motor Vehicle Air Conditioning Systems: Reduction of Refrigerant Emissions from Non-Professional Services (Discrete Early Action)	0.26
H-2	SF_6 Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)	0.3
H-3	Reduction of Perfuorocarbons in Semiconductor Manufacturing (Discrete Early Action)	0.15
H-4	Limit High GWP Use in Consumer Products Discrete Early Action (Adopted June 2008)	0.25
H-5	High GWP Reductions from Mobile Sources • Low GWP Refrigerants for New Motor Vehicle Air Conditioning Systems • Air Conditioner Refrigerant Leak Test During Vehicle Smog Check • Refrigerant Recovery from Decommissioned Refrigerated Shipping Containers • Enforcement of Federal Ban on Refrigerant Release during Servicing or Dismantling of Motor Vehicle Air Conditioning Systems	3.3

H-6	High GWP Reductions from Stationary Sources
	• High GWP Stationary Equipment Refrigerant Management Program:
	  ○ Refrigerant Tracking/Reporting/Repair Deposit Program
	  ○ Specifications for Commercial and Industrial Refrigeration Systems
	• Foam Recovery and Destruction Program
	• SF Leak Reduction and Recycling in Electrical Applications
	• Alternative Suppressants in Fire Protection Systems
	• Residential Refrigeration Early Retirement Program
		10.9

H-7	Mitigation Fee on High GWP Gases	5
Agriculture		

Measure No.	Measure Description	GHG Reductions (Annual Million Metric Tons CO_2e)
A-1	Methane Capture at Large Dairies	1.0†

[1] This is not the SB 375 regional target. CARB will establish regional targets for each Metropolitan Planning Organization (MPO) region following the input of the regional targets advisory committee and a consultation process with MPO's and other stakeholders per SB 375.

† GHG emission reduction estimates are not included in calculating the total reductions needed to meet the 2020 target.

The Proposed Project would foreseeably exceed the SCAQMD thresholds of significance for GHG emission. With implementation **MM AQ-24**, the GHG emissions will not exceed the SCAQMD thresholds of significance and would therefore not conflict with State goals.

3.3.5 RESIDUAL IMPACTS AFTER MITIGATION PROGRAM

Implementation of the Mitigation Program, and adherence to various federal, State, and local laws, ordinances, and regulations, as well as the *On-Site Management Plans* would result in the following findings of potential air quality, greenhouse gas emissions, odor and health risk assessment impacts associated with the construction and operation of the MRF/TS:

All impacts related to air quality, greenhouse gases, odor and health risks would be less than significant except for the following, which are significant and unavoidable:

- Project operation regional air quality impacts.
- Cumulative impacts of criteria pollutants.

3.3.6 CUMULATIVE IMPACTS

Would the Project result in a cumulative impact of criteria pollutants including ozone precursors (NO_x and ROG) or GHG emissions?

Significant and unavoidable for operation phase ozone precursors

The Proposed Project would result in a significant ROG and NO_x impacts during operations (see **THRESHOLD AQ-2**). Therefore, the Proposed Project would result in a regional cumulative

operations impact given that the Basin is in nonattainment for ozone and the Proposed Project would exceed the regional daily emissions threshold for ROG and NO_x, ozone precursors.

The GHG emissions from this Proposed Project would be reduced to a less than significant impact by the mitigation measures. Since all GHG impacts are essentially cumulative impacts, this cumulative impact would be reduced to a less than significant impact.

3.4 BIOLOGICAL RESOURCES

This chapter presents a discussion of the existing biological resources on the Proposed Project site and surrounding area, followed by a description of relevant federal, State and local laws and regulations. A discussion of the site-specific biological assessment findings is followed by a qualitative and quantitative analysis of potential effects on biological resources associated with the Proposed Project. Where necessary, a Mitigation Program designed to avoid, eliminate, or reduce potential impacts to a less than significant level has been identified.

This biological assessment is compiled largely from the *Biological Impact Analysis Letter Report* prepared for the site by Merkel & Associates, Inc. (October 2009). The site conditions have been reviewed in 2012 and 2013 and determined to have had no substantial change since that time, and the report is considered to be still current for purposes of the analysis. The purpose of this biological report was to document the existing biological conditions within the Proposed Project study area; identify potential impacts to biological resources that could result from implementation of the Proposed Project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with CEQA and all applicable federal, State, and local rules and regulations. Additional data sources were used in this analysis including the California Department of Fish & Game Natural Diversity Data Base, site investigations, aerial photo interpretation, and publicly available environmental documents for projects within and adjacent to the Proposed Project area. The Biological *Impact Analysis Letter Report* report is included as **Appendix D** of this EIR.

In addition, historical and currently available biological literature and data pertaining to the Proposed Project area were reviewed prior to initiation of the field investigation. This review included examination of: 1) geological substrates and soil types mapped on site (Morton and Miller 2003 and USDA 1969, respectively); 2) National Wetland Inventory (NWI) maps of the project region (USFWS 1985); 3) federally designated critical habitat for the region (USFWS 2009b); and 4) the biological constraints analysis report prepared by BonTerra Consulting for a portion of the site (June 2009).

3.4.1 EXISTING ENVIRONMENT

The Proposed Project site is situated between Arrow Highway and Live Oak Avenue, in the City of Irwindale. The site is in the general shape of a triangle, with light industrial operations and facilities to its northwest and south, and the Santa Fe Flood Control Basin/Santa Fe Damn is located to the northeast. One block south of the industrial uses along Live Oak Avenue south of the project property are residential areas within the City of Baldwin Park.

The topography of the site is relatively flat with a consistent dip to the southwest. The surface texture is rough with an abundance of cobble, rock, small boulders, and striations created by periodic vegetation clearing activities and grading. No water conveyance features carrying runoff sheet flow to storm drains or wetland indicators were noted during the survey. The site is located at an approximate elevation of 427 feet above mean sea level (amsl) (USGS, *Map Showing Late Quaternary Faults and 1978-84 Seismicity of the Los Angeles Region, California*). Refer to **Exhibit 3.4-1 Biological Resources Map.**

The urban/developed Proposed Project site consists of two LADWP transmission line towers (both located near the southern boundary) and two locations with cement slabs, one of which supports an abandoned water storage tank and water pump. In addition, Southern California Edison (SCE) Company holds a 23-foot-wide underground utility easement totaling approximately 0.5 acres along the entire length of the Proposed Project site frontage on Arrow Highway.

The Proposed Project site not located within federally designated Critical Habitat for any listed Threatened or Endangered species.

Underlying geology is mapped as Young Alluvial-Fan Deposits of late Holocene (Morton and Miller 2003), and soils are mapped as Hanford Association (USDA, *Natural Resources Conservation Service*).

General Biological Survey

Merkel & Associates conducted a general biological survey of the entire Proposed Project site on-foot (Refer to **Appendix D** of the EIR for the complete biological report). Existing vegetation types were delineated onto a 1" = 117' scale, color aerial photograph (Air Photo USA 2007) with topographical overlay of the Proposed Project site. The vegetation types were classified according to the Holland (1986) code classification system.

A list of detectable flora and fauna species was recorded in a field notebook. Plant identifications were either resolved in the field or later determined through verification of voucher specimens, and wildlife species were determined through direct observation (aided by binoculars), identification of songs, call notes and alarm calls, or by detection of sign (e.g., burrows, tracks, scat, etc.).

In addition, a directed search for special status species on the site was conducted. The potential for sensitive species to occur on the Proposed Project site, but not identified during the survey, was assessed based on the existing biological conditions, as well as historical and currently available species data. The scientific and common names utilized for the floral and faunal resources were noted according to the following nomenclature: flora, Baldwin et al. (2008); birds, American

Ornithologists' Union (1998 and 2008); and mammals, (species level) Wilson and Reeder (2005) and (sub-species level) Hall (1981).

Photographs of the Proposed Project area were taken to record the biological resources present within the study area, and data collected from the survey were digitized into current Geographical Information System (GIS) Environmental Systems Research Institute (ESRI) software platforms.

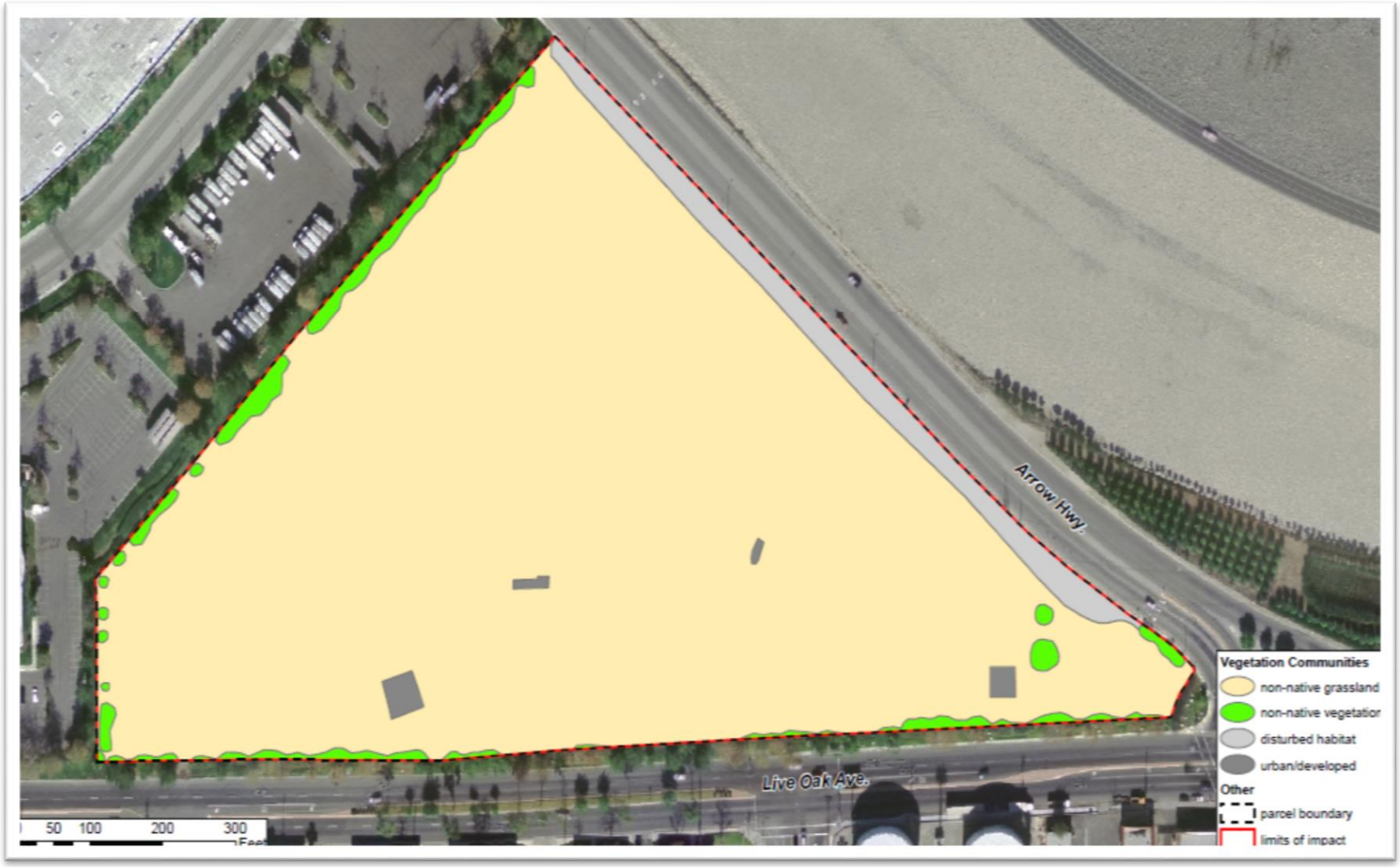
Burrowing Owl Habitat Assessment/Burrow Survey

Merkel & Associates conducted a habitat assessment/burrow survey for the burrowing owl (*Athene cunicularia*), which is designated as a California special concern species by the CDFG, according to the most recent guidelines used by the CDFG, as noted in the *Burrowing Owl Survey Protocol and Mitigation Guidelines, prepared by the California Burrowing Owl Consortium in April 1993.* The assessment consisted of searching for the presence of potential natural or artificial burrows (culverts, debris piles, storm drains, etc.) by walking transects through potentially suitable habitat on the Proposed Project site and areas within 150 meters (approximately 500 feet) of the Proposed Project impact zone to allow 100 percent visual coverage of the ground surface. The entire Proposed Project site was surveyed on-foot; the portions of the study area that extended beyond the Proposed Project site were visually surveyed only from the property boundary lines or areas of public access. Biologist, Edward L. Ervin conducted a general biological survey of the site on October 26, 2009 from 0625-0915. Conditions start to end were: weather: 0%-0% cloud cover, wind: 1-1 Beaufort scale: temperature: 66°-74° Fahrenheit.

Survey Limitations

Biological inventories are generally subject to various survey limitations. Depending on the season and time of day during which field surveys are conducted, some species of annual plants, invertebrates, amphibians, reptiles, birds, and mammals may not be detected due to temporal species variability. All portions of the site were accessible during the biological survey. Permission to access the City-owned land was granted by the City of Irwindale. Some annual plants, migratory or nesting birds, and crepuscular or nocturnal wildlife may not have been detected during the biological survey; however, based on the biological literature and data review performed, as well as knowledge of species-specific habitat requirements, it is anticipated that any additional species potentially present on the Proposed Project site can be fairly accurately predicted, and that the survey conducted was sufficient in obtaining a thorough review of the biological resources present on the Proposed Project site.

Exhibit 3.4-1 Biological Resources Map



Four vegetation types were identified on the Proposed Project site during the biological survey see **Table 3.4.1 Existing Habitats/Vegetation Communities on the Proposed Project Site**. In addition, **Tables 3.4.2** and **3.4.3** provide a complete list of the plant and animal species observed or detected on the site during the biological survey. The disturbed habitat onsite is configured as a long narrow strip, and is located parallel to, and on the south side of Arrow Highway. The surface of this area is compacted bare soil and gravel. The occurrence of several sewer manhole covers indicates that this strip is a sewer easement, and likely the SCE and USACE easements.

Table 3.4-1 Existing Habitats/Vegetation Communities on the Proposed Project Site

Vegetation Type	Holland Code	Existing On-Site Acres
Urban/developed	N/A	0.1
Non-native vegetation	N/A	0.5
Disturbed habitat	N/A	0.7
Non-native grassland	42200	15.9
	Total:	**17.2 acres**

Table 3.4-2 Plant Species Observed On Site

Scientific Name	Common Name	Habitat
GYMNOSPERMS		
Pinaceae—Pine Family		
**Cedrus deodara*	Deodar cedar	G
**Pinus* sp.	pine	V
DICOTYLEDONS		
Amaranthaceae—Amaranth Family		
**Amaranthus albus*	tumbleweed	G
**Salsola tragus*	Russian-thistle	G
Anacardiaceae—Sumac Family		
Malosma laurina	laurel sumac	V
**Schinus terebinthifolius*	Brazilian pepper tree	V
Asteraceae—Sunflower Family		
Ambrosia acanthicarpa	annual bur-sage	G
Artemisia californica	California sagebrush	V
Baccharis salicifolia	mule fat, seep-willow	V
**Bidens pilosa* var. *pilosa*	common beggar's tick	V
Conyza Canadensis	horseweed	D, G
Helianthus annuus	western sunflower	V
Heterotheca grandiflora	telegraph weed	D, G
**Lactuca serriola*	prickly lettuce	D, G

Table 3.4-2 Plant Species Observed On Site

Scientific Name	Common Name	Habitat
Brassicaceae—Mustard Family		
**Brassica nigra*	black mustard	D, G
Caprifoliaceae—Honeysuckle Family		
**Lonicera japonica*	Japanese honeysuckle	V
Convolvulaceae—Morning-Glory Family		
**Convolvulus arvensis*	field bindweed	V
Euphorbiaceae—Spurge Family		
**Ricinus communis*	castor-bean	V, G
Moraceae—Mulberry Family		
**Morus alba*	white mulberry	V
Onagraceae—Evening-Primrose Family		
Oenothera elata ssp. *hirsutissima*	great marsh evening primrose	
Platanaceae—Sycamore Family		
Platanus racemosa	western sycamore	V
Salicaceae—Willow Family		
Salix exigua	narrow-leaved willow	V
Salix gooddingii	Goodding's black willow	V
Salix laevigata	red willow	V
Sapindaceae—Soapberry Family		
**Cupaniopsis anacardioides*	carrotwood	V
Simaroubaceae—Quassia Family		
**Ailanthus altissima*	tree of heaven	G
Tamaricaceae—Tamarisk Family		
**Tamarix parviflora*	four-petal European tamarisk	V
Ulmaceae—Elm Family		
**Ulmus parviflora*	Chinese elm	V
Arecaceae—Palm Family		
**Washingtonia robusta*	Mexican fan palm	V
Poaceae—Grass Family		
**Avena barbata*	slender wild oat	G
**Bromus diandrus*	ripgut grass	G
**Cynodon dactylon*	Bermuda grass	G
**Pennisetum setaceum*	African fountain grass	G
**Piptatherum miliaceum*	smilo grass	G

Habitat Types:
U = Urban/developed
V = Non-native vegetation
D = Disturbed habitat
G = Non-native grassland
** Denotes non-native plant species*

Table 3.4-3 Animal Species Observed or Detected on Site

Scientific Name	Common Name	Habitat	Abundance	Status
BIRDS				
Falconidae (Caracaras and Falcons)				
Falco sparverius	American kestrel	U, G	C	R
Charadriidae (Plovers and Relatives)				
Charadrius vociferous	killdeer	G	C	R
Columbidae (Pigeons and Doves)				
Zenaida macroura	mourning dove	U, V, G	C	R
Trochilidae (Hummingbirds)				
Calypte anna	Anna's hummingbird	V	C	R
Tyrannidae (Tyrant Flycatchers)				
Sayornis nigricans	black phoebe	V, G	C	R
Tyrannus verticalis	western kingbird	V	C	M, S
Corvidae (Jays, Magpies, and Crows)				
Corvus brachyrhynchos	American crow	FO	A	R
Aegithalidae (Bushtit)				
Psaltriparus minimus	bushtit	V, G	C	R
Emberizidae				
Pipilo maculatus	spotted towhee	FO	C	R
Fringillidae (Finches)				
Carpodacus mexicanus	house finch	V	A	R
MAMMALS				
Didelphidae (American Opossums and Opossums)				
****Didelphis virginiana***	Virginia opossum	V		
Geomyidae (Pocket Gophers)				
Thomomys bottae	Botta's pocket gopher	G		

Habitat/Observation Types:
U = Urban/developed
V = Non-native vegetation
D = Disturbed habitat
G = Non-native grassland
FO = fly over
**** Denotes introduced species***
Abundance Codes (birds only):
A = Abundant: Almost always encountered in moderate to large numbers in suitable habitat and the indicated season.
C = Common: Usually encountered in proper habitat at the given season.
U = Uncommon: Infrequently detected in suitable habitat. May occur in small numbers or only locally in the given season.
R = Rare: Applies to species that are found in very low numbers.
"Numbers" indicate the number of individuals observed during the field survey work.
Status Codes (birds only):
M = Migrant: Uses the site for brief periods of time, primarily during the spring and fall months.
R = Year-round resident: Probable breeder on-site or in the vicinity.
S = Spring/summer resident: Probable breeder on-site or in the vicinity unless combined with transient status.
T = Transient: Uses site irregularly in summer but unlikely to breed. Not a true migrant and actual status often poorly known.
W = Winter visitor: Does not breed locally.
V = Casual vagrant: Not expected; out of normal geographic or seasonal range and by definition rare.

Non-native vegetation consists primarily of ornamental plantings. The most dominant species were pine (*Pinus* sp.), California fan palm (*Washingtonia filifera*), Japanese honeysuckle (*Lonicera japonica*), white mulberry (*Morus alba*), Brazilian pepper tree (*Schinus terebinthifolius*), Chinese elm (*Ulmus parviflora*), and carrotwood (*Cupaniopsis anacardioides*). While to a lesser degree, native opportunistically established species occurring among the ornamental species include laurel sumac (*Malosma laurina*), California sagebrush (*Artemisia californica*), mule fat (*Baccharis salicifolia*), narrow-leaved willow (*Salix exigua*), Goodding's black willow (*Salix gooddingii*), and red willow (*Salix laevigata*).

The non-native grassland is the most dominant vegetation community onsite, and consists of disturbance tolerant grasses and herbaceous species. Invasive non-native grasses include Bermuda grass (*Cynodon dactylon*), slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), smilo grass (*Piptatherum miliaceum*), and fountain grass (*Pennisetum setaceum*). The most common herbaceous species include castor bean (*Ricinus communis*), Russian-thistle (*Amaranthus albus*), tumbleweed (*Salsola kali*), prickly lettuce (*Lactuca serriola*), and black mustard (*Brassica nigra*). Also included in this vegetation were a few disjunct clusters of native mule fat.

Despite the presence of some wetland associated plants such as great marsh evening primrose (*Oenothera elata*), four-petal European tamarisk (*Tamarix parviflora*), mule fat, and willows, the individual plants were dispersed among the non-native vegetation and sparsely across the non-native grassland, and are not associated with any streambed on or offsite and do not function as wetland habitat.

Fauna observed onsite included common birds, such as mourning dove (*Zenaida macroura*), house finch (*Carpodacus mexicanus*), killdeer (*Charadrius vociferous*), common bushtit (*Psaltriparus minimus*), spotted towhee (*Pipilo maculates*), and black phoebe (*Sayornis nigricans*), western kingbird (*Tyrannus verticalis*), American crow (*Corvus brachyrhynchos*), and American kestrel (*Falco sparverius*), and mammals, such as Botta's pocket gopher (*Thomomys bottae*) and opossum (*Didelphis virginiana*). No avian nests were observed during the biological survey; however, the grassland and non-native trees could provide potentially suitable nesting habitat for urban tolerant species.

Although no raptors were observed during the survey, it is likely that the Proposed Project site is opportunistically used by raptors traveling from the larger vegetated foraging areas to the north within the Santa Fe Flood Control Basin. In regard to large mammals, the isolated position of the Proposed Project site and the continuous chain link fence would likely prohibit usage of the site by large mammals such as mule deer (*Odocoileus hemionus fuliginata*) and coyote (*Canis*

latrans clepticus). Wildlife use of the property is expected to be minimal and restricted to urban tolerant species given the disturbed condition of the property.

CEQA Guidelines §15206 (b)(5) (Title 14, Chapter 3, Article 13) defines "sensitive wildlife habitats" as those "including but not limited to riparian lands, wetlands, bays, estuaries, and marshes and habitats for endangered, rare and threatened species as defined by §15380 (Chapter 3)". The urbanized setting of this Proposed Project site significantly limits what types of flora and fauna can persist on this isolated property to common disturbance tolerant species.

The Santa Fe Flood Control Basin, located adjacent Arrow Highway to the north of the Proposed Project property is designed as a catchment area to entrap the large volumes of debris (sand, gravel, cobble, rock, boulders, vegetative material) and episodic high flow volumes that occur during periods of seasonally high precipitation. The river course that emerges from the high gradient San Gabriel Canyon and onto the San Gabriel Valley historically meandered across a widespread alluvial fan. This river has now been directed into a wide channel engineered to contain and guide these episodic high volume flows to the Pacific Ocean avoiding dangerous flooding of populated areas, and the flood control system has become surrounded by urbanization.

Although non-native grassland can provide breeding and foraging habitat for some special status species and raptors, as well as habitat linkages between patches of higher value native vegetation, this site has little biological conservation value due to the general level of previous site disturbance and isolation within urban development, and is not considered to be a "sensitive wildlife habitat" as defined under CEQA.

Special Status Species

State CEQA Guidelines §15380 (Title 14, Chapter 3, Article 20) define "endangered, rare or threatened species" as "*species or subspecies of animal or plant or variety of plant*" listed under the Code of Federal Regulations, Title 50, Part 17.11 or 17.12 (Volume 1, Chapter I) or California Code of Regulations, Title 14, Sections 670.2 or 670.5 (Division 1, Subdivision 3, Chapter 3), or a species not included in the above listings but that can be shown to be "endangered" meaning "*when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors" or "rare" meaning "although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the*

Federal Endangered Species Act". CEQA guidelines Appendix G, Section IV generally refers to species that fall under the above criteria as "special status species".

For the purposes of the EIR, special status species include: species or subspecies of animal or plant or variety of plant listed under the Code of Federal Regulations, Title 50, Part 17.11 or 17.12 (Volume 1, Chapter I) or California Code of Regulations, Title 14, Sections 670.2 or 670.5 (Division 1, Subdivision 3, Chapter 3); and species designated as "Special Plants" or "Special Animals" in the CNDDB, which the CDFG uses to track the status of plants and animals in California designated as "rare" on multiple federal, State, and local lists.

No special status plant and animal species were identified on the Proposed Project site during the biological survey, and none are expected to occur based on the lack of potentially suitable habitat.

No CNDDB records of burrowing owl are located near the Proposed Project site (CDFG 2009d), and no burrowing owls were observed during the biological survey. In addition, no potentially suitable burrows or active sign (i.e., molted feathers, cast pellets, prey remains, eggshell fragments, and/or excrement) were identified on the Proposed Project site during the habitat assessment/burrow survey. Burrowing owls have a low potential to occur onsite based on the level of disturbance and lack of potentially suitable habitat.

Jurisdictional Wetlands and Waterways

No evidence of jurisdictional wetlands or waterways on or adjacent to the Proposed Project site was found during the biological survey.

3.4.2 REGULATORY SETTING

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) (7 United States Code (USC) 136; 16 USC 460 et seq. [1973]) extends legal protection to plants and animals, listed as endangered or threatened by the United States Fish and Wildlife Service (USFWS), and gives authorization to the USFWS to review proposed federal actions to assess potential impacts to species listed as endangered or threatened. The ESA generally prohibit the "taking" of a federally listed species. "Taking" of a threatened or endangered species is deemed to occur when an intentional or negligent act or omission results in any of the following actions: "*to harass, harm, pursue, hunt, shoot, kill, trap, capture, or collect, or attempt to engage in any such conduct.*" Such acts may include significant habitat modification or degradation if it results in death or injury. Likewise, import, export, interstate, and foreign commerce of listed species are all prohibited. Sections 7 and 10 of the ESA permit "incidental take" of a listed species via a federal or private action, respectively,

through formal consultation with the USFWS. In lieu of a separate Section 10a Permit, an applicant may be included in a local Habitat Conservation Plan (HCP).

Clean Water Act

The Federal Water Pollution Control Act, more commonly known as the Clean Water Act (CWA) (33 USC ss/1251 et seq. [1977]), establishes the basic structure for regulating discharges of pollutants into the waters of the United States and is the primary regulatory body affecting wetlands. The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The CWA gives the United States Environmental Protection Agency (USEPA) authority to implement pollution control programs, set water quality standards for all contaminants in surface waters, and to address nonpoint source pollution. The CWA makes it illegal for any person to discharge pollutants into navigable waters, unless a permit is first obtained. Section 404 of the CWA regulates the discharge of dredged or fill material into navigable waters and defines standards under which these types of activities may be permitted.

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Birds Treaty Act (MBTA) of 1918 (Title 16, USC Sections 703-711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 Code of Federal Regulations (CFR) Part 10, except as allowed by implementing regulations (50 CFR 21). This includes the Bald Eagle Protection Act (16 USC 668). The administrating agency is the USFWS.

California Endangered Species Act

Similar to the federal ESA, the California Endangered Species Act (CESA) (California Fish and Game Code 2050-2116), along with the Native Plant Protection Act (Fish and Game Code Sections 1900 *et seq*), authorizes the California Department of Fish and Wildlife (CDFW) to designate, protect, and regulate the taking of special-status species in the State of California. Special-status species are those designated by the State as *endangered*, *threatened* or *species of concern*. CESA defines *endangered* as those species whose continued existence in California is jeopardized. State-listed *threatened* species are those not presently threatened with extinction, but which may become endangered if their environments change or deteriorate. Most "*species of concern*," are species whose breeding populations in California may face local extirpation. To avoid the future need to list these species as endangered or threatened, the CDFW recommends consideration of these species, which do not as yet have any legal status, during analysis of the impacts of proposed projects.

CFG Code Section 2080 prohibits the taking of State-listed plants and animals. CFG Code Sections 3511 and 5050 prohibit CDFW from authorizing the incidental take for possession of species designated as "fully protected".

CFG Code Section 3503
This code section prohibits the taking, possession, or needless destruction of the nest or eggs of any bird. Section 3503.5 specifically protects birds of prey by making it unlawful to take, possess, or destroy any birds of prey or their nests or eggs. The administrating agency is the CDFW. *[Note: The CDFG has been renamed CDFW as of January 1, 2013]*

CFG Code Section 3513
This code section makes it unlawful to take or possess any migratory bird designated in the Migratory Bird Treaty Act. The administrating agency is the CDFW.

California Environmental Quality Act Guidelines

Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines §15380(d) provide that a species not listed on the federal or State list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in ESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. CEQA Guideline §15380(d) allows a public agency to undertake a review to determine if a significant effect would occur on species that have not yet been listed by either the USFWS or CDFW (i.e., species of concern). Thus, if warranted under special circumstances, CEQA provides an agency with the ability to protect a species from a Proposed Project's potential impacts until the respective government agencies have an opportunity to designate the species as formally protected.

Pursuant to the requirements of CEQA, an agency reviewing a Proposed Project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the Proposed Project area and determine whether the Proposed Project will have a potentially significant impact on such species.

Irwindale General Plan

The City of Irwindale's General Plan Update 2008, does not include any special biological resources, policies or programs.

3.4.3 THRESHOLDS OF SIGNIFICANCE

The analysis of potential biological impacts associated with the implementation of the Proposed Project assesses the degree to which the Proposed Project's short-term (construction-related) activities and long-term (operational) operations would change the existing characteristics of the site.

The significance thresholds for potential biological resource impacts were determined based upon the 2013 State CEQA Guidelines Appendix G. Using the criteria listed below, the Proposed Project would be considered to have a significant adverse biological resource impact if it were to:

a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS;

c. Have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, riparian, and seasonal wetlands) through direct removal, filling, hydrological interruption or other means;

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites;

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

3.4.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD BIO-1

Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

No Impact

The Proposed Project would not result in impacts to special status species since none were detected or are expected to occur on or adjacent to the site.

THRESHOLD BIO-2

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS?

Less than Significant Impact

The Proposed Project would result in permanent, direct impacts to the vegetation on the entire site through permanent loss of these resources by conversion of the land to industrial/business (**Table 3.4-5 Habitats/Vegetation Communities, Impacts and Mitigation**). Impacts to urban development land, disturbed habitat, and non-native vegetation would not be significant because these habitats do not support special status species on-site, and regionally, are not considered to have high conservation value requiring mitigation. Although the non-native grassland on-site does provide some biological value, the habitat is not considered to be a sensitive habitat type and does not provide a critical linkage to other areas of native habitat; therefore, impacts to non-native grassland would not be significant.

Table 3.4-5 Habitats/Vegetation Communities, Impacts, and Mitigation

Vegetation Type	Existing (acres)	On-Site Impacts (acres)	Off-Site Impacts (acres)	Mitigation Ratio	Mitigation Required (acres)
Urban/developed	0.1	0.1	0.0	N/A	0.0
Non-native vegetation	0.5	0.5	0.0	N/A	0.0
Disturbed habitat	0.7	0.7	0.0	N/A	0.0
Non-native grassland	15.9	15.9	0.0	none	0.0
Total:	**17.2**	**17.2**	0.0	none	0.0

THRESHOLD BIO-3

Would the project have a substantial adverse effect on federally-protected wetlands as defined by Section 404 of the federal Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption or other means?

No Impact

The Proposed Project would not result in impacts to jurisdictional wetlands or waterways because none were identified on the project site during the biological survey.

THRESHOLD BIO-4

Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact

Due to the isolation of the Proposed Project site, level of previous disturbance, and lack of adjacent natural habitats, development of the property would not create artificial wildlife corridors or substantially interfere with connectivity to off-site habitat, or substantially limit access to potential foraging/breeding habitat or water sources necessary for the successful reproduction of resident wildlife species.

THRESHOLD BIO-5

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significnat with Mitigation Program

There are no local policies or ordinances protecting biological resources are applicable to the Proposed Project site or biological resources thereupon.

However, under the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C. section 703-712; Ch. 128; July 3, 1918; 40 Stat. 755; as amended 1936, 1956, 1960, 1968, 1969, 1974, 1978, 1986 and 1998), it is unlawful, except as permitted by the USFWS, to "take, possess, transport, sell, purchase, barter, import, or export all species of birds protected by the MBTA, as well as their feathers, parts, nests, or eggs (USFWS 2003). "Take" means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect (50 CFR 10.12). Birds protected by the MBTA include all birds covered by the treaties for the protection of migratory birds between the United States and Great Britain (on behalf of Canada, 1916), Mexico (1936), Japan (1972), and Russia (1976), and subsequent amendments."

It is important to note that since the MBTA addresses migratory birds by family rather than at a lower taxonomic level, most bird species are protected by the MBTA because most taxonomic families include migratory members. In addition, "take" as defined under the federal MBTA is not synonymous with "take" as defined under the federal Endangered Species Act (ESA). The MBTA definition of "take" lacks a "harm and harassment" clause comparable to "take" under the ESA, thus, the MBTA authority does not extend to activities beyond the nests, eggs, feathers, or specific bird parts (i.e., activities or habitat modification in the vicinity of nesting birds that do not result in "take" as defined under the MBTA are not prohibited). Further, "a permit is not required to dislodge or destroy migratory bird nests that are not occupied by juveniles or eggs;

however, any such destruction that results in take of any migratory bird is a violation of the MBTA (i.e., where juveniles still depend on the nest for survival) (USFWS 2003)."

Sections 3503, 3503.5, and 3513 of the California Fish and Game Code also prohibit the "take, possession, or destruction of bird nests or eggs." Section 3503 states: "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." Section 3503.5 provides a refined and greater protection for birds-of-prey and states: "It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." The distinctions made for birds-of-prey are the inclusion of such birds themselves to the protections and the elimination of the term "needlessly" from the language of §3503. Section 3513 states: "It is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act."

The definition of "take" under the California Fish and Game Code is not distinct from the definition of "take" under California Endangered Species Act (CESA), which is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (California Fish and Game Code §86); however, it is important to note that the state definition of "take" again does not include a "harm and harassment" clause, and thus, activities or habitat modification in the vicinity of nesting birds that do not result in "take" as defined under the California Fish and Game Code/CESA are not prohibited.

Since some resident and/or migratory avian species have a potential to nest in the grassland and non-native trees on-site, project construction could result in "take" of these species under the Federal MBTA and California Fish and Game Codes §3503 and §3513; the Proposed Project has the potential to conflict with State and/or Federal policies protecting a biological resource.

The Proposed Project will be required to adhere to mitigation measure **MM BIO-1** whereby, all grading and construction activities undertaken for the Proposed Project shall comply with the regulatory requirements of the federal MBTA and California Fish and Game Codes §3503, §3503.5, and §3513.

MM BIO-1

The Applicant shall comply with the regulatory requirements of the federal Migratory Bird Treaty Act and California Fish and Game Codes §3503, §3503.5, and §3513 regarding Proposed Project grading and construction activities.

Pre-construction Surveys for Nesting Birds

The Applicant shall implement the following protective measures to ensure implementation of the Migratory Bird Treaty Act and compliance with State regulations during construction. To the extent feasible, the Applicant and/or the construction contractor(s) shall trim/remove all vegetation/tree limbs necessary for Proposed Project construction between September 1 and January 31. Should construction activities or vegetation removal commence between February 1 to August 31, pre-construction surveys for nesting birds shall be conducted for any affected tree(s) located within the public right of way by a qualified biologist to ensure that no active nests would be disturbed during project implementation. A preconstruction survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities. During this survey, the qualified person shall inspect the street trees located within the public right of way and areas immediately adjacent to the project site for nests. If an active nest is found close enough to the construction area to be disturbed by these activities, the qualified biologist, in consultation with the California Department of Fish and Game, shall determine the extent of a construction-free buffer zone to be established around the nest until the young have fledged.

THRESHOLD BIO-6

Would the project conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

No Impact

As stated above, biological impacts within the City of Irwindale have not been analyzed under the General Plan or a related, adopted planning document. In addition, the biological survey review included examination of: 1) geological substrates and soil types mapped on the site (Morton and Miller 2003 and USDA 1969, respectively); 2) National Wetland Inventory (NWI) maps of the region (USFWS 1985); 3) federally designated critical habitat for the region (USFWS 2009b); 4) California Department of Fish and Game (CDFG) California Natural Diversity Database (CNDDB) and U.S. Fish and Wildlife Service (USFWS) special status species records for the vicinity (CDFG 2009d and USFWS, respectively); and 5) the biological constraints analysis report prepared by BonTerra Consulting for a portion of the site, dated June 9, 2009. In addition, there is no applicable HCP or NCCP or other local regional or state habitat conservation plan; and therefore, no known impact would be expected to occur.

Mitigation Program

MM BIO-1

The Applicant shall comply with the regulatory requirements of the federal Migratory Bird Treaty Act and California Fish and Game Codes §3503, §3503.5, and §3513 regarding Proposed Project grading and construction activities.

Pre-construction Surveys for Nesting Birds

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3.4.5 RESIDUAL IMPACTS AFTER MITIGATION PROGRAM

Potential biological resource impacts associated with the grading and construction of the Proposed Project could result in the "take" of resident or migratory avian species due to their potential to nest in the grassland and non-native trees on-site; however with implementation of the **MM BIO-1** these potential impacts would be considered **less than significant**.

3.4.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in Chapter 3.0, *Environmental Setting and Impact Analysis*, above..

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on biological resources?

No

Based on the cumulative project list, cumulative development may result in development of new residential, commercial, mining activities, industrial, recreation, and medical facilities in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

The Proposed Project would result in additional cumulative affects to non-native grassland, as well as loss of potential foraging habitat for some resident wildlife species; however, the onsite habitat is of low conservation value, and does not provide habitat for special status species or habitat linkages to higher value native habitat offsite. Thus, the Proposed Project impacts would be less than cumulatively considerable under CEQA.

3.5 CULTURAL RESOURCES

This chapter describes the existing cultural resources setting of the Proposed Project site and surrounding vicinity. The Proposed Project site does not contain any structures, buildings, or other features that could constitute historic or prehistoric resources. The environmental analysis contained in this chapter has been summarized by the research and findings contained within the *Phase I Cultural Resources Study* performed for the project site by ASM Affiliates (October 2009), to satisfy the requirements of CEQA regulations. The site conditions have been reviewed in 2012 and 2013 and determined to have had no substantial change since the 2009 investigation, and the report is considered to be still current for purposes of the analysis.

The analysis evaluates the Proposed Project's compliance with applicable laws, ordinances, and regulations. The purpose is to evaluate whether any cultural resources are exposed on the surface of the project area and whether there is a potential for subsurface deposits. If resources are discovered, management recommendations would include evaluating the resources for California Register of Historical Resources eligibility. A Mitigation Program designed to avoid, eliminate, or reduce potential impacts to a less than significant level has been identified.

The Proposed Project involves a General Plan Amendment, and therefore, compliance with Senate Bill 18 (SB 18) is required. SB 18 requires local governments to consult with the State of California Native American Heritage Commission (NAHC) prior to the adoption or amendment of a General Plan. The intent of SB 18 coordination is to obtain information regarding the potential presence of traditional lands, cultural places or sacred lands of a California Native American tribe within the Project site. The City initiated consultation with the NAHC in 2008 (with an earlier rendition of the project and CEQA process) and again in 2013 as a part of the current project scoping process.

In 2008, the NAHC performed a Sacred Lands File (SLF) search of the Project's "area of potential effect" and the results determined that "*No known Native American Cultural Resources were identified; however, the NAHC SLF is not exhaustive and local tribal contacts should be consulted*". The NAHC provided a list of five (5) local tribal contacts, all of whom were sent correspondence regarding SB 18 consultation. Correspondence was received from the Gabrieleño Band of Mission Indians requested site monitoring during any excavation or ground disturbances. In 2013, a similar letter was sent certified mail to the NAHC. SB 18 provides a 90-day window for tribal consultation to commence. No response was received from the NAHC, and no further SB18 compliance was required by the City. However, a comment letter on the NOP was received from the Gabrieleno Band of Mission Indians/Kizh Tribe of the Los Angeles Basin, Orange County, and the Channel Islands requesting that a certified Native American Monitor be on-site during all ground disturbances. The City has agreed to include this request

within the Mitigation Program. (Refer to **Appendix E Cultural Resources** for all documents referenced herein).

3.5.1 EXISTING ENVIRONMENT

The proposed MRF/TS project area is a vacant lot located immediately west of the intersection of Arrow Highway and Live Oak Avenue in the City of Irwindale. The Santa Fe Flood Control Basin/Santa Fe Dam Recreational Area is immediately to the north, across Arrow Highway. The San Gabriel River Channel is approximately one-half mile to the west. The project area contains several transmission towers and modern debris, and has been disturbed. Several conifer trees were noted near the eastern end of the property, but the only other vegetation in the area is along the southernmost edge of the property, which is densely vegetated with native and nonnative trees and shrubs. Numerous waterworn cobbles and small boulders are scattered throughout the project area. The soils consist of very fine to coarse sands, with pea gravel present in places where the sand has been removed by wind.

Cultural Setting

Paleo-Indian Period

The Paleo-Indian period, sometimes referred to as the Paleocoastal tradition (see Jones and Klar 2007), is poorly documented for the southern California coast and the Channel Islands. The time span of this period has been the subject of some debate, particularly as it relates to the earliest occupation. Nevertheless, it is generally thought to date between about 13,000 and 9000 "years Before the Present" (referred to as BP), although some scholars place the inception of the period at least 2,000 years earlier. The hallmark artifact of this period is the projectile point known as Clovis. Some examples of sites with a Paleo-Indian period occupation include Santa Rosa Island (the Arlington Springs woman at SRI-173; Johnson et al. 2002), San Miguel Island (Daisy Cave at SMI-261; Erlandson et al. 996), SBA-1951 (a Clovis point; Erlandson et al. 1987), and the Surf site (radiocarbon dates at SBA-931; Glassow 1996).

During the Paleo-Indian period, populations were mostly likely hunter-gatherers who came into the region prior to about 11,000 years ago (Moratto 1984:162). They would have consisted of small initial groups with low population density (Glassow et al. 2007:192). Shellfish and fish were likely the primary food sources. Lakes, seashores, marshlands, estuaries, and riparian zones were the preferred habitation locales. Although the bow and arrow had not yet been introduced, the hunting technology probably included traps, nets, clubs, and spears (Moratto 1984:73).

Early Period

The Early period (ca. 9000–3000 BP) is known by a variety of terms depending on geographic location, including the Lake Mojave Complex (e.g., Campbell et al. 1937; Wallace 1962), the Western Pluvial Lakes Tradition (e.g., Bedwell 1973), the Western Lithic Co-Tradition (e.g.,

Davis et al. 1969), and the San Dieguito Complex (e.g., Gallegos 1991; Warren 1967). These types of sites are generally located near estuaries and river channels; inland sites dating to this period are typically situated near marshes or on terraces above ancient lake beds (e.g., Ciolek-Torrello 2006; Erlandson and Colten 1991). The artifact assemblages of this time period have contained crescents, choppers, hammerstones, large flake and core scrapers, drills, and gravers (e.g., Kowta 1969; Warren 1967). Several sites on the northern Channel Islands have been dated to this time period (Glassow et al. 2007:195).

Early period sites on the coast were adapted to wetland environments with abundant resources. The subsistence focus was on hunting, with an extensive flaked stone technology (Kowta 1969; Warren 1967). Ground stone implements are rare to absent at the earliest sites of the Early Period, but appear in abundance later in this period (during the Millingstone horizon), which may reflect a response to fluctuating environments through time. Millingstones were used to grind hard seeds from a variety of plants that were highly dependable and abundant resources. Kowta (1969) argued that the Millingstone horizon was the result of a long-term relationship between the desert and inland areas during the Early period.

Middle Period

During the Middle period (ca. 3000–850 BP), there was a substantial increase in population size and sociopolitical complexity. Marine mammals and fish became more important between about 2500 and 800 BP (Johnson 2000:307), and the diversity of fish species that were captured increased due to the introduction of the single-piece fishhook about 2,500 years ago (Glassow 1996:22).

In Middle period archaeological assemblages, the number of manos and metates decreases concomitant with an increase in mortars and pestles. Quarries and workshops for the production of stone tools have been discovered in the Santa Barbara Channel region (e.g., Conlee 2000), perhaps laying the foundation for later craft specialization. Harpoons began to be used along the California coast about 1,000 years ago, suggesting the existence of substantial watercraft by at least that time (King 1990; Gamble et al. 2002; Rick et al. 2002; Cassidy et al. 2004; Glassow et al. 2007). Bow and arrow technology also emerged in many parts of California about 2,000 to 1,500 years ago, which was a major technological innovation (e.g., Glassow et al. 2007:204; Yohe 1992, 1998). The manufacture of *Olivella* shell beads, as well as different types of bone and stone ornaments, fluoresced by about 2000 BP. By about 1500 years ago, villages became larger and more sedentary, such as those at Muwu (VEN-11), Simo'mo (VEN-24/26), and VEN-110 (Raab 1994). All of these factors led to increasing sociopolitical complexity that culminated dramatically during the subsequent Late period (Glassow et al. 2007:204).

Middle period society along the coast has been linked to coastal immigration from desert locations (Kowta 1969). Migration from the desert to the southern California coast by Takic groups appears to have occurred at this time, as evidenced by the appearance of a distinct cultural assemblage, including the bow and arrow, small projectile points, cremations, and pottery. The timing of this migration is unclear, although Koerper (1979) suggested that it may have occurred as early as 500 BP, while Kowta (1969) argued that it occurred much earlier (ca. 3000 BP).

Middle/Late Transition Period

The Middle/Late Transition period (ca. 850–700 BP) was a time of environmental instability along with changing sociopolitical complexity. Scholars working on the Channel Islands since the late 1980s have argued that settlement disruptions, disease, and violence that are apparent in the archaeological record were the result of maritime subsistence distresses related to increased sea surface temperature between 850 and 700 BP (Arnold 1992a, 1992b, 1995; Raab and Larson 1997). These stresses may have been related to the environment fluctuations such as the Medieval Climatic Anomaly (MCA) (e.g., Arnold 1992a; Colten 1994; Gardner 2007; Glassow et al. 1988; Lambert 1993; Lambert and Walker 1991).

Basgall (1987) and Bouey (1987) argued that the intensification of acorn exploitation during the Middle/Late Transition period was a key factor in the emergence of cultural complexity in California. At the same time, there was a decline in marine productivity that eventually increased the manufacture of shell beads, which became the standard currency (Arnold 1991). Along with environmental deterioration brought on by the MCA, these factors eventually led to the disruption of settlement patterns, the development of an elite class that controlled the production of craft items (primarily bead ornaments and canoes), and deteriorating health conditions on the Channel Islands and California coast (Arnold 1992a; but see Raab and Larson 1997; Gamble 2005). Kennett and Kennett (2000:379) maintained that during this transitional period, hunter-gatherer cultures along the southern California coast rapidly became more socially and politically complex. They suggested that there was a strong relationship between unstable climatic conditions and sociopolitical and economic responses, including the intensification of fishing as well as increases in sedentism, violence, and trade (Kennett and Kennett 2000:379).

Late Period

During the Late period (ca. 700–150 BP), the manufacture of Olivella shell beads culminated in fully developed craft specialization on the southern California coast (e.g., Arnold 1987, 1992b). This has been verified by mission data analyzed by Johnson (2000), which described marriage practices and settlement patterns that "served as the basis for an exchange system that distributed goods throughout the Northern Bight and beyond" (Glassow et al. 2007:210). Fish increased in importance during this time, while shellfish and sea mammals decreased in importance. Hook-

and-line kits, harpoons, and nets were used to capture the fish. During the same period of time, there was a reduction of long-distance trade. Village sites that may have been abandoned during the Middle-Late Transition period were reoccupied during the Late period (Glassow et al. 2007:207). This time also witnessed a decline in violence and a general improvement in health among island and coastal populations.

Some differentiation is apparent between coastal and inland sites during the Late period. Sites along the mainland coast seem to have decreased in number, although they increased in overall size. In some neighboring regions, such as the Santa Monica Mountains, a greater diversity in temporary inland settlements emerged (Leonard 1971). There is evidence to suggest an increase in trade and interaction among mainland coastal, island, and inland settlements.

Gabrielino Ethnography

The project area is located in an area that was occupied during the Late Prehistoric Period by the Gabrielino, who generally refer to themselves as Tongva (Kroeber 1925; Bean and Shipek 1978; Bean and Smith 1978). The term "Gabrielino" refers to those people who were under the control of the Spanish at Mission San Gabriel. The territory of the Gabrielino extended from northern Orange County to the San Fernando Valley in Los Angeles County. They are part of the Takic language family of the Uto-Aztecan linguistic stock, which also includes the Juaneño, Serrano, and Cahuilla in Orange, San Bernardino and Riverside counties.

The Gabrielino/Tongva arrived in the Los Angeles Basin sometime before 2,500 BP as part of the so-called Shoshonean Wedge from the Great Basin and gradually displaced the previous residents, who were probably Hokan speakers. Large, permanent villages were established along rivers and streams and in protected areas along the coast. Gabrielino territory ultimately encompassed the majority of the Los Angeles Basin, the coastal regions from Topanga Canyon to Aliso Creek, and the southern Channel Islands of San Clemente, San Nicholas, and Santa Catalina (Bean and Smith 1978:538–540). At their peak prior to contact, the Gabrielino population may have numbered as many as 10,000 individuals.

The Gabrielino were hunters and gatherers who lived in a resource-abundant environment that included mountains, foothills, valleys, deserts, and coasts. At least late in time, acorns were the staple food, supplemented by numerous plants, such as cactus, yucca, sage, and agave). Fresh and saltwater fish, shellfish, birds, insects, as well as large and small mammals, were common food resources (Johnston 1962; Bean and Smith 1978). Hunting was accomplished with bow and arrow technology, as well as traps, nets, blinds, throwing sticks, and slings. Fish were captured through the use of nets, traps, spears, harpoons, hooks, and poisons. For groups living along the Pacific shore, plank canoes and tule balsa canoes were used for fishing and travel (Moratto 1990:63). Foods were processed with the use of mortars and pestles, leaching baskets and bowls,

knives, bone saws, and wooden drying racks. Steatite was used to manufacture ollas and cooking vessels (Kroeber 1925:629).

Gabrielino houses were large, circular domed structures consisting of willow poles thatched with tule. Other structures included sweathouses, menstrual huts, and ceremonial enclosures (Bean and Smith 1978). Kroeber (1925:621) considered the Gabrielino to have been the most complex and wealthiest group south of Tehachapi, with the exception of the Chumash.

Regional History

Juan Rodriguez Cabrillo is considered to have been the first European to come into contact with the Gabrielino on the Channels Islands as he sailed along the California coast in 1542. In 1769, the first Europeans, led by Gaspar de Portolá, entered Los Angeles County. Mission San Gabriel in Los Angeles County was established in September 1771. The effects of mission influence on the native populations were immediate and devastating. Their traditional subsistence patterns and social customs were disrupted, and introduced diseases reached epidemic proportions, decimating Gabrielino populations (Johnston 1962:135). Interestingly, some Gabrielinos refused to surrender their traditional lifeways and escaped into the interior regions of California. On February 2, 1848, the Mexican-American War ended and the Treaty of Guadalupe Hidalgo established California as a United States possession.

The San Gabriel Mission used Irwindale as cattle grazing land. The area was later settled by farmers. The Irwindale Community was first settled by the families of Gregorio Fraijo and Fecundo Ayon during the 1850s. Beginning in the 1950s, the community became an important crushed rock and gravel producer. On August 6, 1957, the City of Irwindale, the 56th city of Los Angeles County, became incorporated (City of Irwindale 2009).

Cultural Resources Records Search

A literature review was conducted at the SCCIC on October 26, 2009, to research literature and site records on file that pertain to the project area. The SCCIC conducted a review of records, reports, and historic maps in their files on October 27, 2009 (see **Appendix E Cultural Resources**). The review included an examination of the Baldwin Park, California, 7.5-minute USGS topographic quadrangle to evaluate the project area for any sites recorded or cultural resources studies conducted within the project area of potential effect (APE) and within a one-mile radius of the project APE. In addition, the *California Points of Historical Interest*, *California Historical Landmarks*, *California Register of Historical Resources*, *National Register of Historic Places*, and *California State Historic Resources Inventory* were reviewed.

The results of the records search revealed that 10 cultural resources studies have been conducted within a mile of the project area (**Table 3.5-1**), none of which was performed directly within the

project area. A cultural study was conducted by Bonterra Consulting for the project area (Brown and Maxon 2009), which also reported that there were no cultural resources present. The SCCIC also noted that there were 14 studies that are also on the Baldwin Park topographic quadrangle that were not mapped due to insufficient locational information but that may fall within the one-mile radius. No prehistoric sites or historic resources were identified during the records search.

Table 3.5-1 Previous Cultural Resources Studies within the One-Mile Records Search Radius of the Project Area

Report No.	Author(s)/Year	Title
LA-00186	Brock and Elliott 1988	A Cultural Resources Assessment for the Raiders Stadium Project, Irwindale, California
LA-00261	Rosen 1975	Evaluation of the Archaeological Resources and Potential Impact of the Proposed Removal and Recreation Developments at the Santa Fe Dam and Basin, Los Angeles County
LA-02412	Singer 1968	UCLA Archaeological Survey, Field Project Number UCAS-086
LA-02782	Boxt 1992	A Cultural Resource Assessment of the Three Potential Treatment Plant Sites in the Cities of Irwindale, Baldwin Park, and West Covina, Los Angeles County
LA-03101	White 1994	Cultural Resource Investigation of Eight Monitoring Well Locations for the San Gabriel Basin Demonstration Project, Los Angeles County
LA-03509	Cottrell et al. 1985	Cultural Resource Overview and Survey for the Los Angeles County Drainage Area Review Study
LA-03824	Greenwood and Assoc. 1995	Cultural Resources Report for the Baldwin Park Operable Unit Water Delivery Plan
LA-04880	Smith and Sriro 2000	Pavement Rehabilitation Along Route 605 within the Cities of Long Beach, Lakewood, Cerritos, Downey, Pico Rivera, Santa Fe Springs, Whittier, City of Industry, Baldwin Park, and Irwindale
LA-06281	Storey 2001	Highway Project Construction of Wheelchair Ramps at Ramona Blvd., Lower Azusa Road, Live Oak Avenue and Arrow Highway Along Route 605 in the City of Irwindale
LA-07245	Bonner 2005	Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Vy-309-01, Monteleone Industrial, 14020 Live Oak Avenue, Baldwin Park

Source: ASM Affiliates, 2009

Field Survey

The field survey began at the southeastern corner of the property and generally ended at the western corner of the property. Transects were walked at intervals of approximately 15 meters north to south ending in the western portion of the project area. The project area consists of a primarily flat, empty, rock-strewn field, with several conifers within the central eastern end of

the property. Most of the project area has recently been tilled and weeded, so visibility was very good.

No historic or prehistoric cultural resources were discovered during the survey. Large flat pieces of granite and numerous round and/or flat granite cobbles were examined, but none had been culturally modified. Two modern electrical towers were observed across the southern edge of the property area. There are also a few pieces of broken red brick, small pieces of thick asphalt, concrete fragments, and a few pieces of rusted metal within the survey area. No human remains were found within the project area.

Historical Background Research

A historical background research was conducted at the City of Irwindale Library, Baldwin Park Historical Society, West Covina Regional Library, Cal Poly Pomona University Library, and Los Angeles Public Library. The SCCIC did not report any known cultural resources within the project APE or within a one-mile radius that are listed in the *National Register of Historic Places*, the *California Register of Historical Resources*, *California Points of Interest*, *California Inventory of Historic Resources*, or the *California State Historic Landmarks*.

Historical Use of the Site

The United Concrete Pipe Corporation occupied the approximately 17-acre lot located at Live Oak Avenue and Arrow Highway from 1936 until 1990, when the facility was demolished (Converse Consultants 2009; Los Angeles Times 1936a). The corporation began as the Polich Construction Company established 1919 and was later changed to the United Concrete Pipe & Construction Company, Inc. in 1924.

Utilizing concrete as the construction medium, the company manufactured and laid concrete pipe, constructed concrete bridges, laid concrete roads, poured foundations for buildings, and installed complete irrigation systems (Outcalt 1925). By 1936, the company had constructed a new plant in Baldwin Park (present-day Irwindale). The Pacific Electric Railway spur was planned to provide necessary shipment transport. The new plant was scheduled to start manufacturing concrete pipe for the Metropolitan Water District's (MWD) 31-mile aqueduct from Parker Dam. While the plant may still have been under construction in May, the company was one of three working on the massive precast concrete pipe for the MWD's aqueduct. The Baldwin Park plant was specifically built for manufacturing pipe for this project (Los Angeles Times 1936a, 1936b, 1936c).

By 1951, the Baldwin Park plant was known for its high headwater pipes (Moody's Manual of Investments 1951). By 1954, United Concrete Pipe Corporation had become a subsidiary of U.S. Pipe & Foundry Company. While the company garnered a number of large water works and

other projects, it faltered. On March 10, 1962, United Concrete Pipe Corporation had been indicted, along with other companies, for rigging bids and allocating sales of steel and concrete water pipes in 10 western states. By January 21, 1966, the Baldwin Park plant, which had been one of the primary producers of concrete pressure pipe in the State, had been indicted for price fixing in Texas (Los Angeles Times 1966). The plant survived the indictment and may have operated until 1990.

Known Information about the Baldwin Park Plant

The Baldwin Park plant grew between 1943 and 1958 to meet the demands of a successful operation of the United Concrete Pipe Corporation. The facility expanded to include a large industrial building, another building attached by external cables, a railway spur north of the large industrial building, and container sheds, as well as a few large sheds and other buildings. Building permits indicate that the corporation expanded the facility between 1957 and 1960 by adding a batch plant, craneway, bins, altering monorails, and adding associated buildings and structures, including cesspools and onsite sewer septic tanks. Changes to the facility between 1958 and 1987 included the expansion of the original industrial building and the other main building northeast of that original building. By 1987, the facility consisted of a main shop building, a personnel office, water well and pump, office building, craneway, ring plant, batch plant, boiler room, and a centrifugal machine. The facility was demolished in 1990 and the site was graded in 1992 (Converse Consultants 2009:10-12).

3.5.2 REGULATORY SETTING

California Public Resources Code and the California Environmental Quality Act

These statutes were used as the basic guidelines for the Cultural Resources Study. CEQA requires that all private and public activities that are not specifically exempted be evaluated against the potential for environmental damage, including effects to historically significant resources. Pursuant to State CEQA Guidelines § 15064.5(a), historically significant resources are defined as:

> *(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).*
>
> *(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.*

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852) including the following:

(A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(B) Is associated with the lives of persons important in our past;

(C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

(D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

The State Historic Preservation Office (SHPO) maintains the California State Register of Historic Resources (CRHR). Properties that are listed on the National Register of Historic Places (NRHP) are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

Pursuant to State CEQA Guideline §15064.5 and the findings of the Phase I Cultural Resources Survey, the site was not found to meet the standards to be required or presumed to be historically significant. The City has also not chosen to exercise its discretion to treat the site as historically significant.

City of Irwindale General Plan Resource Management Element

The City's General Plan Resource Management Element provides the following policies and programs related to cultural resources.

Issue Area – Natural Resources
The City of Irwindale will continue to cooperate in the maintenance and conservation of the area's natural resources.

Resource Management Element Policy 4
The City of Irwindale will continue to protect the use of the area's resources through appropriate land use controls and planning.

Issue Area – Resource Preservation
The City of Irwindale will maintain and preserve those natural and man-made amenities that contribute to the City's livability.

Resource Management Element Policy 8
The City will identify and preserve those sites/ buildings that are important to the community for the benefit of the future generations that will reside or work in the City.

Resource Management Element Policy 10
The City of Irwindale will continue to cooperate with surrounding cities in the formulation and implementation of regional resource management plans and programs.

The following three (3) programs are effective in implementing the City's Resource Management Element policies.

Cultural Awareness
A cornerstone of this program will be the identification of a site/location that may be used for the storage and collection of artifacts, photographs, books, and displays. The City will cooperate with local organizations (such as the local historical society, Chamber of Commerce, etc.) and individuals to acquire resource materials concerning local history and culture. These materials include books, photographs, artifacts, furniture, etc., that may be displayed in a future City museum. The City will continue to support cultural resource conservation and preservation efforts in Irwindale.

Cultural Resource Management
Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K of the CEQA Guidelines shall be followed for excavation monitoring and salvage work that may be necessary.

Environmental Review

The City shall continue to evaluate the environmental impacts of new development and identify applicable mitigation measures prior to development approval, as required by CEQA. Environmental review shall be provided for those projects that will have a potential to adversely affect the environment. Issue areas that will be addressed in the environmental analysis related to resource issues include: air quality, water and hydrology, plant life, animal life, natural resources, energy, aesthetics, recreation, and cultural resources. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of any mitigation measures.

3.5.3 THRESHOLDS OF SIGNIFICANCE

The environmental analysis contained within this chapter is primarily based upon the *Phase I Cultural Resources Study* performed for the proposed project site (ASM Affiliates, October 2009). The *Phase I Cultural Resources Study* follows the Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (Office of Historic Preservation 1990). The *Phase I Cultural Resources Study* (also referred to as the cultural report) included a records search at the South Central Coastal Information Center (SCCIC) at California State University, Fullerton; a historical background research; consultation with the NAHC; an intensive pedestrian survey of the project area; preparation of the technical report detailing the findings of the investigation; and providing management recommendations for the proposed MRF/TS project. The Cultural Report can be found in full in **Appendix E** of the EIR.

The significance thresholds for potential cultural resource impacts were determined based upon the 2013 State CEQA Guidelines Appendix G. Using the criteria listed below, the Proposed Project would be considered to have significant adverse cultural resource impact if it were to:

a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
c. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; and/or
d. Disturb any human remains, including those interred outside of formal cemeteries.

3.5.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD CR-1

Would the Proposed Project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

and

THRESHOLD CR-2

Would the Proposed Project cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?

Less than Significant with Mitigation Program

State CEQA Guideline §15064.5 provides the definition of "historical resources" [presented earlier in the chapter]; using this definition, the Proposed Project does not meet the listed criteria. Specifically, the site is not listed State Historical Resources Commission, nor is the site a resource included in a local register of historical resources. Furthermore, the Lead Agency has not determined the site or any structure on site to be historically significant.

The City of Irwindale has a Local Official Register of Historic Resources. There are two buildings listed on the Register: Our Lady of Guadalupe Catholic Mission, located at 16233 Arrow Highway; and El Divino Salvador Presbyterian Church, located at 5116 Irwindale Avenue. No other buildings or sites are listed on the Register. Both of these historically designated resources or more than a mile and a half away from the Subject Site and are not expected to be impacted by the Project (Irwindale City Council Resolution No. 2009-60-2418).

No archaeological or historic resources were identified during the *Phase I Cultural Resources Study (ASM, 2009)*; and therefore the project would not cause a substantial adverse change in the significance of a historical or archeological resource. Based on this finding, no further cultural resources work was recommended by the survey. In addition, Bonterra Consulting surveyed the same project area (Brown and Maxon 2009), which also reported that there were no cultural resources present on-site. No prehistoric sites or historic resources were identified during the records search (ASM, 2009).

The background research indicated that in the past, the United Concrete Pipe Corporation, was operating at this location early in the twentieth century and may have incorporated the boundaries of the current project area. Although there is currently no evidence of its existence, there remains slight possibility that historically significant resources may still be present just under the surface of the Project area.

Although it is not reasonably expected that historical or archaeological resources will be found on site, to ensure the proper handling of the identification, protection, and proper disposition of any found archaeological or historical resources, should they accidentally be discovered and in response to SB18 consultation, **MM CR-1** is required. **MM CR-1** requires the Applicant and City to consult with the Gabrieleño Band of Mission Indian Tribe, prior to on-site earthwork activities, to invite a Native American Monitor at the project site for the excavation and ground disturbance activities (as requested by the Tribe during SB18 consultation).

Additionally, to ensure that any unknown (remaining) historical or archaeological resources are not impacted by construction activities, **MM CR-2** requires that in the event that any previously undetected historic (or archaeological) resources are encountered during project implementation, all work should cease and a qualified archaeologist should be contacted to evaluate the nature and significance of any such discoveries. If a discovery proves to be significant, additional work (such as data recovery excavation) may be warranted.

With implementation of **MM CR-1** and **MM CR-2**, there would be less than significant impacts to historical or archeological resources.

THRESHOLD CR-3

Would the Proposed Project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Less than Significant with Mitigation Program

No unique paleontological resources or sites or unique geological features were discovered during the *Phase I Cultural Resources Study*. Large flat pieces of granite and numerous round and/or flat granite cobbles were examined, but none had been culturally modified. Two modern electrical towers were observed across the southern edge of the property area. There are also a few pieces of broken red brick, small pieces of thick asphalt, concrete fragments, and a few pieces of rusted metal within the survey area. Numerous waterworn cobbles and small boulders are scattered throughout the project area. The soils consist of very fine to coarse sands, with pea gravel present in places where the aeolian sand has been removed.

Although there is currently no evidence of its existence, impacts to unknown paleontological or geological resources could be significant prior to standard mitigation. To ensure that any unknown (remaining) paleontological resources are not impacted by construction activities, **MM CR-3** recommends that in the event that any paleontological or geological resources are encountered during project implementation, all earthwork should cease and a qualified paleontologist should be contacted to evaluate the nature and significance of any such discoveries. With implementation of **MM CR-3** there would be less than significant impacts to paleontological resources and geological resources.

THRESHOLD CR-4

Would the Proposed Project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation Program

No human remains have been previously found within the project area, nor are any expected to exist within the project area. However, there is always potential to uncover unknown human remains during excavation activities. Should human remains be discovered during project activities, **MM CR-4** would apply, whereas; the City of Irwindale Planning Department and the Los Angeles County Coroner's office shall be notified within 24 hours under state law (California Health and Safety Code § 7050.5) and all activities in the immediate area of the find shall cease until appropriate and lawful measures have been taken. If the Coroner determines that the remains are Native American, the NAHC shall also be contacted (California Public Resources Code § 5097.98). In accordance with Section 5097.98 of the *California Public Resources Code*, the NAHC shall designate a Most Likely Descendent, who may make recommendations concerning the disposition of the remains in consultation with the City and the project archaeologist.

Mitigation Program

MM CR-1

The Applicant and City shall consult with the Gabrieleño Band of Mission Indian Tribe, prior to on-site earthwork activities, to invite a Native American Monitor at the project site for the excavation and ground disturbance activities.

MM CR-2

In the event any previously undetected archaeological resources are encountered during project construction, all excavation and ground disturbance activities shall cease and a qualified archaeologist will be contacted within 24 hours to evaluate the nature and significance of any such discoveries. If a discovery proves to be significant, additional work (such as data recovery excavation) may be warranted. Work may be resumed with approval of the attending archeologist and City Staff. Further, should unforeseen artifacts become uncovered during site grading, the Applicant would be required to adhere to all City and State of California procedures, including Section 21083.2(i) of the CEQA Statutes and Section 15064.5 of the CEQA Guidelines regarding stoppage of work, handling of discovered materials, and notification of proper authorities to ensure that the construction/operation of the MRF/TS project would not have an adverse effect on cultural resources.

MM CR-3

In the event that any unknown (remaining) paleontological or geological resources are encountered during project implementation, the Applicant shall cease earthwork immediately and contact a qualified paleontologist or geologist within 24-hours to evaluate the nature and significance of any such discoveries. Work may be resumed with approval of the attending archeologist and City Staff.

MM CR-4

If human remains are discovered during project activities, the City of Irwindale Planning Department and the Los Angeles County Coroner's office shall be notified within 24 hours under state law (California Health and Safety Code § 7050.5) and all activities in the immediate area of the find shall cease until appropriate and lawful measures have been taken. If the Coroner determines that the remains are Native American, the NAHC shall also be contacted (California Public Resources Code § 5097.98). In accordance with Section 5097.98 of the *California Public Resources Code,* the NAHC shall designate a Most Likely Descendent, who may make recommendations concerning the disposition of the remains in consultation with the City and the project archaeologist.

3.5.5 RESIDUAL IMPACTS AFTER MITIGATION PROGRAM

Cultural resources are unique and non-renewable resources. The loss of any one archaeological site can affect others in a region because these other properties are often best understood completely in the context of the cultural system of which they were a part. While culturally significant resources have not been previously detected on the site or surrounding areas, it is always possible for subsurface resources to be present. The potential cultural resources impacts associated with the Proposed Project would be considered **less than significant** with implementation of the mitigation program.

3.5.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in **Chapter 3.0 Environmental Setting and Impact Analysis.**

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on cultural resources?

No

Based on the cumulative project list, cumulative development may result in development of new residential, commercial, mining activities, industrial, recreational, and medical facilities in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

Due to the nature of cultural resources, individual projects within the area would be assessed on a project-by-project basis. When, and if resources would be found, all applicable California Native Tribe regulations, as well as applicable federal, State, and local regulations would be applied to protect artifacts or remains; and therefore, potential cumulative impacts would be less than cumulatively considerable under CEQA.

3.6 ENVIRONMENTAL JUSTICE

This chapter provides a discussion of environmental justice issues in the context of Project implementation.

There are no requirements within CEQA that necessitate a Lead Agency consider the potential environmental effects of a Proposed Project on the human environment. Rather, CEQA focuses on the potentially significant adverse impacts of a Proposed Project to the physical environment. Section 15360 of the State CEQA Guidelines defines "environment" as:

> "*…the physical conditions which exist within the area which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The environment includes both natural and man-made conditions."*

Effects that may be considered solely social or economic in nature do not constitute an effect to the physical environment. Whereas, Section 21080(e)(2) of the Public Resources Code states:

> "*Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative, evidence that is clearly inaccurate or erroneous, of evidence of social or economic impacts that do not contribute to, or are not caused by, physical impacts on the environment*."

Based upon the above, this section is provided for informational purposes only for the public and the decision-makers. Analysis in this section is not subject to "substantial impact" analysis and/or findings required for certification of the EIR and approval of the project pursuant to State CEQA Guideline §§15090-15093.

3.6.1 SCREENING FOR ENVIRONMENTAL JUSTICE

During project scoping, members of the public asked the City to consider and evaluate potential environmental justice issues associated with project implementation. Copies of the scoping comment letters are included in **Appendix A** of this EIR. The City determined that inclusion of this analysis in the environmental review process conducted for the Proposed Project is warranted following guidelines of the California Environmental Protection Agency (Cal/EPA or Agency). Together, with the Office of Environmental Health Hazard Assessment (OEHHA), they (Cal/EPA and OEHHA) have developed a science-based tool for evaluating multiple pollutants and stressors in communities, called the "California Communities Environmental

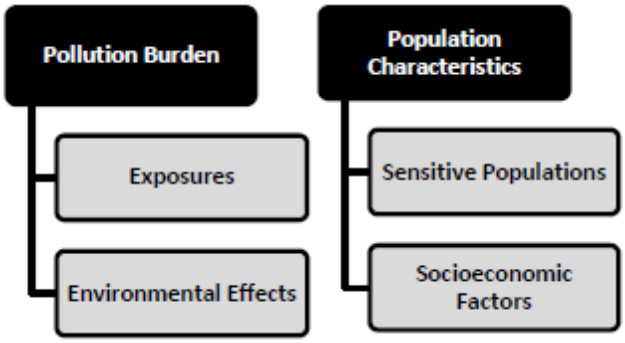
Health Screening Tool, Version 1.1" (CalEnviroScreen, April 2013, updated September 2013). This report is summarized below.

CalEnviroScreen is primarily intended to assist the Agency in carrying out its environmental justice mission: to conduct its activities in a manner that ensures the fair treatment of all Californians, including minority and low-income populations. The tool is the next step in the implementation of the Agency's 2004 Environmental Justice Action Plan, which called for the development of guidance to analyze the impacts of multiple pollution sources in California communities. The California Communities Environmental Health Screening Tool acknowledges that while the data gathered in developing this screening tool may be useful for decision makers when assessing existing pollution sources in an area, more precise data are often available to local governments and would be more relevant in conducting such an examination.

The CalEnviroScreen scoring results are not directly applicable to the cumulative impacts analysis required under CEQA. The statutory definition of "cumulative impacts" contained in CEQA is substantially different than the working definition of "cumulative impacts" used to guide the development of this tool. Therefore, the information provided by this tool cannot be used as a substitute for an analysis of the cumulative impacts of any specific project for which an environmental review is required by CEQA (California Environmental Protection Agency and Office of Environmental Health Hazard Assessment, *California Communities Environmental Health Screening Tool, Version 1.1*).

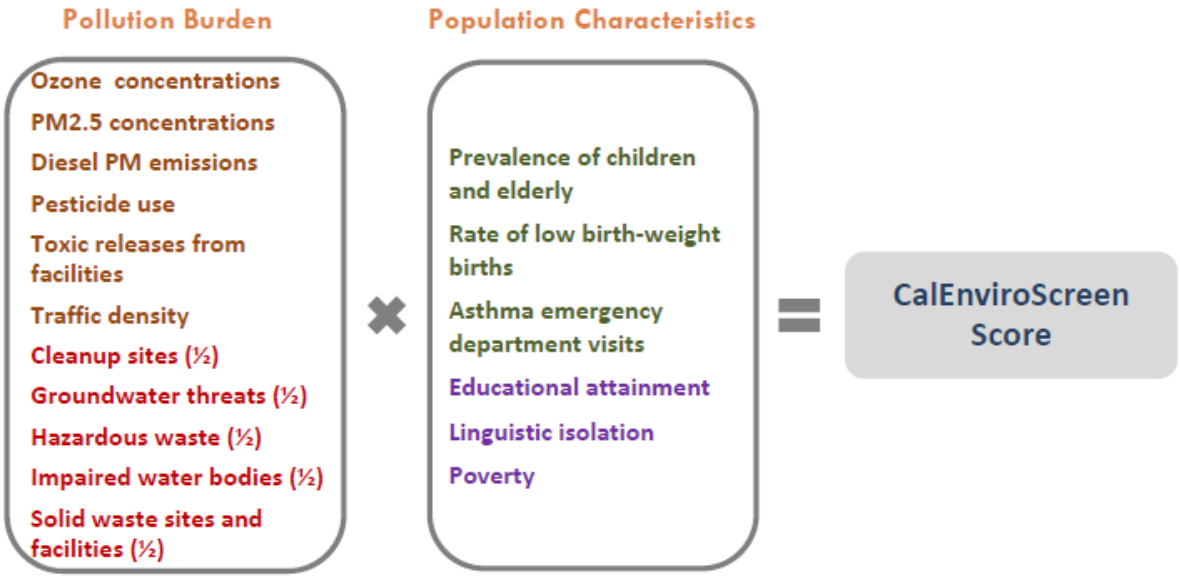
The screening tool model is "place-based" and provides information based on geographical location by given ZIP ("Zone Improvement Plan" or zip codes). For the use of the assessment within this chapter as it pertains to the Proposed Project, the zip code of 91706 is given. The zip code 91706 includes the cities of Irwindale (53.18%), Baldwin Park (46.67%), West Covina (0.07%), and Industry (0.01%) (http://www.city-data.com/zips/91706.html#ixzz2j9ZagJNj Accessed October 2013).

The screening tool model is based on two components - pollution burdening and population characteristics - using statewide indicators that are summarized as:



Once the predictors for pollution burden and population characteristics are known, the *California Communities Environmental Health Screening Tool* provides a score. A mathematical formula is provided, upheld by scientific support for this approach to scoring involving scientific literature, risk assessment principles, and established risk scoring systems.

The model characteristics combine statewide indicators to characterize both pollution burden and population characteristics; a limited set of indicators to keep the model simple; assigns scores for each of the indicators in a given geographic area; uses a scoring system to weigh and sum each set of indicators with pollution burden and population characterizes components; and derives a CalEnviroScreen score for a given place relative to other places in the state.



Pollution burden scores for each ZIP code are derived from the average percentiles of the six exposure indicators (ozone and PM2.5 concentrations, diesel PM emissions, pesticide use, toxic releases from facilities, and traffic density) and five environmental effects indictors (cleanup sites, impaired water bodies, groundwater threats, hazardous waste facilities and generators, and solid waste sites and facilities). The environmental effect component indictors were then given half the weight of the exposure component indictors. The calculated average percentile (up to 100th percentile) was then divided by 10 and rounded to one decimal place for a pollution burden score ranging from 0.1-10.

Population characteristics scores for each ZIP code are derived from the percentiles of three sensitive indictors (children/elderly, low birth rate, and asthma) and three socioeconomic indicators (educational attainment, linguistic isolation and poverty). The calculated percentile is divided by 10 for a population characteristic score ranging from 0.1-10.

CalEnviroScreen Score and Maps

- The overall CalEnviroScreen score is calculated from the Pollution Burden and Population Characteristics groups of indicators by multiplying the two scores. Since each group has a maximum score of 10, the maximum CalEnviroScreen Score is 100.
- The geographic areas are ordered from highest to lowest, based on their overall score. A percentile for the overall score is then calculated from the ordered values. As with the percentiles for individual indicators, a geographic area's overall CalEnviroScreen percentile equals the percentage of all ordered CalEnviroScreen scores that fall below the score for that area.
- Maps are developed showing the percentiles for all the ZIP codes of the state. Maps are also developed highlighting the ZIP codes scoring the highest.

The zip code 91706 has a total population of 76,571 residents. The CalEnviroScreen Score for 91706 is 55.25, Percentile Range: 91 - 100% (Highest Scores), as it is throughout most of the Los Angeles Basin and San Gabriel Valley regions (see figures 3.6-1 and 3.6-2 below).

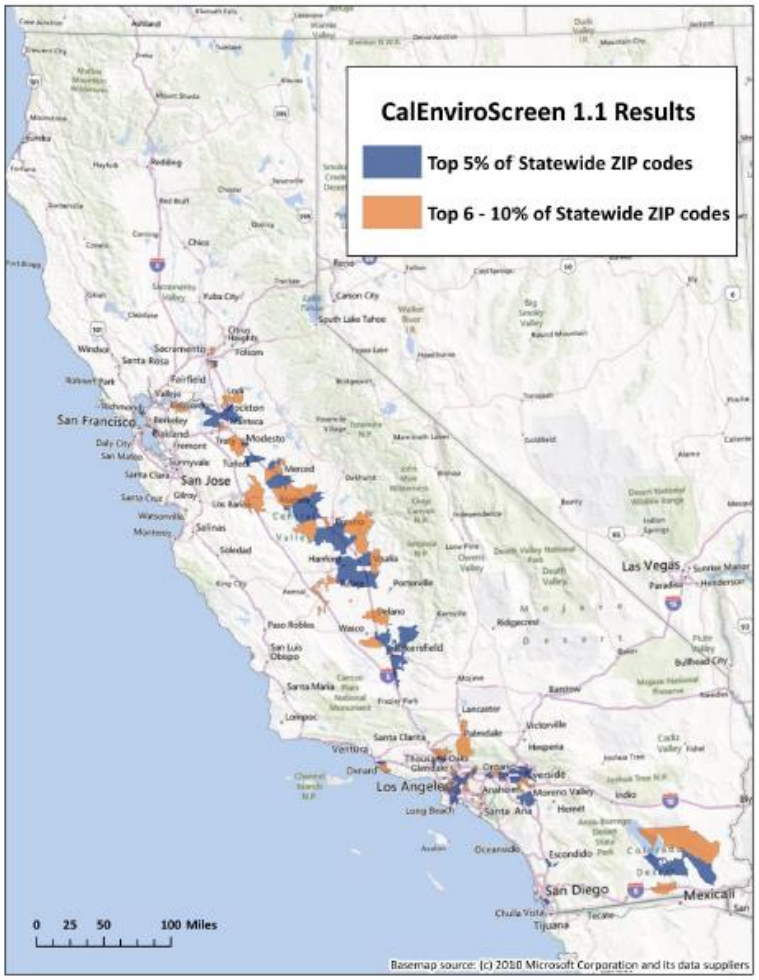
Table 3.6-1 CalEnviroScreen Indicators and Scores for 91706

Pollution Burden	Population Characteristics
Air Quality: Ozone (76)	Age: Children And Elderly (28)
Air Quality: Pm2.5 (84)	Asthma (65)
Diesel Particulate Matter (87)	Low Birth Weight Infants (54)
Pesticide Use (55)	Educational Attainment (92)
Toxic Releases From Facilities (91)	Linguistic Isolation (84)
Traffic Density (92)	Poverty (74)
Cleanup Sites (82)	-
Groundwater Threats (98)	-
Hazardous Waste Facilities And Generators (99)	-
Impaired Water Bodies (72)	-
Solid Waste Sites (99)	-

Source: California Communities Environmental Health Screening Tool, Version 1.1 (2013)

Exhibit 3.6-1 demonstrates the overall results for the State of California and for the Los Angeles region. **Exhibit 3.6-2** is specific to the 91706 zip code area that includes the Proposed Project site.

Exhibit 3.6-1 CalEnviroScreen Results California Statewide & Los Angeles Area



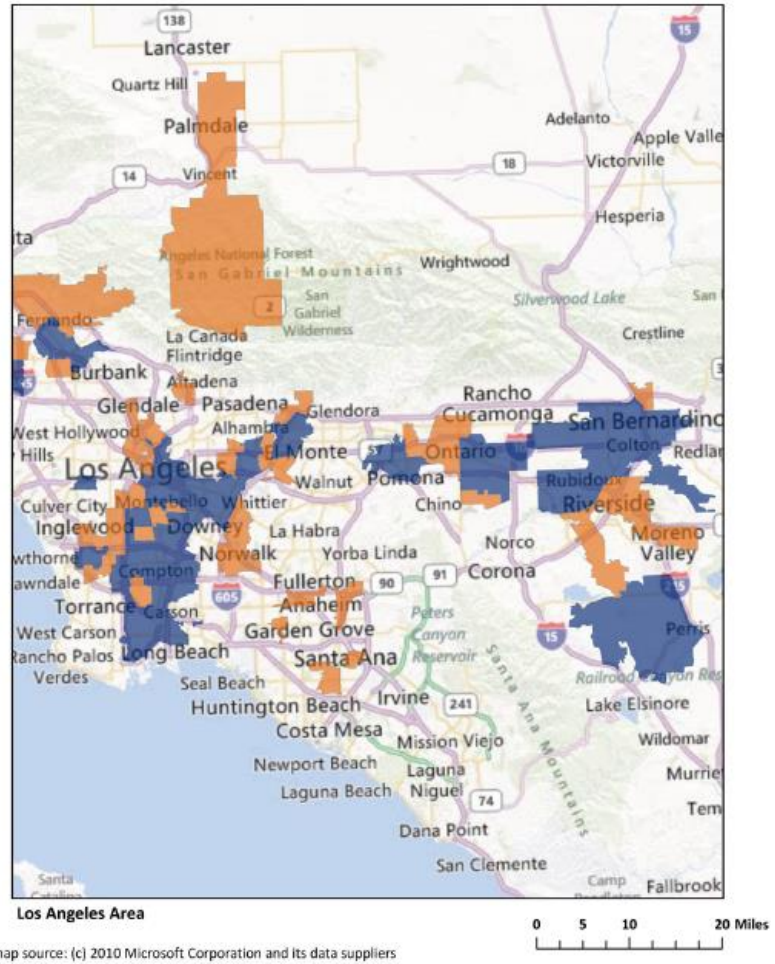
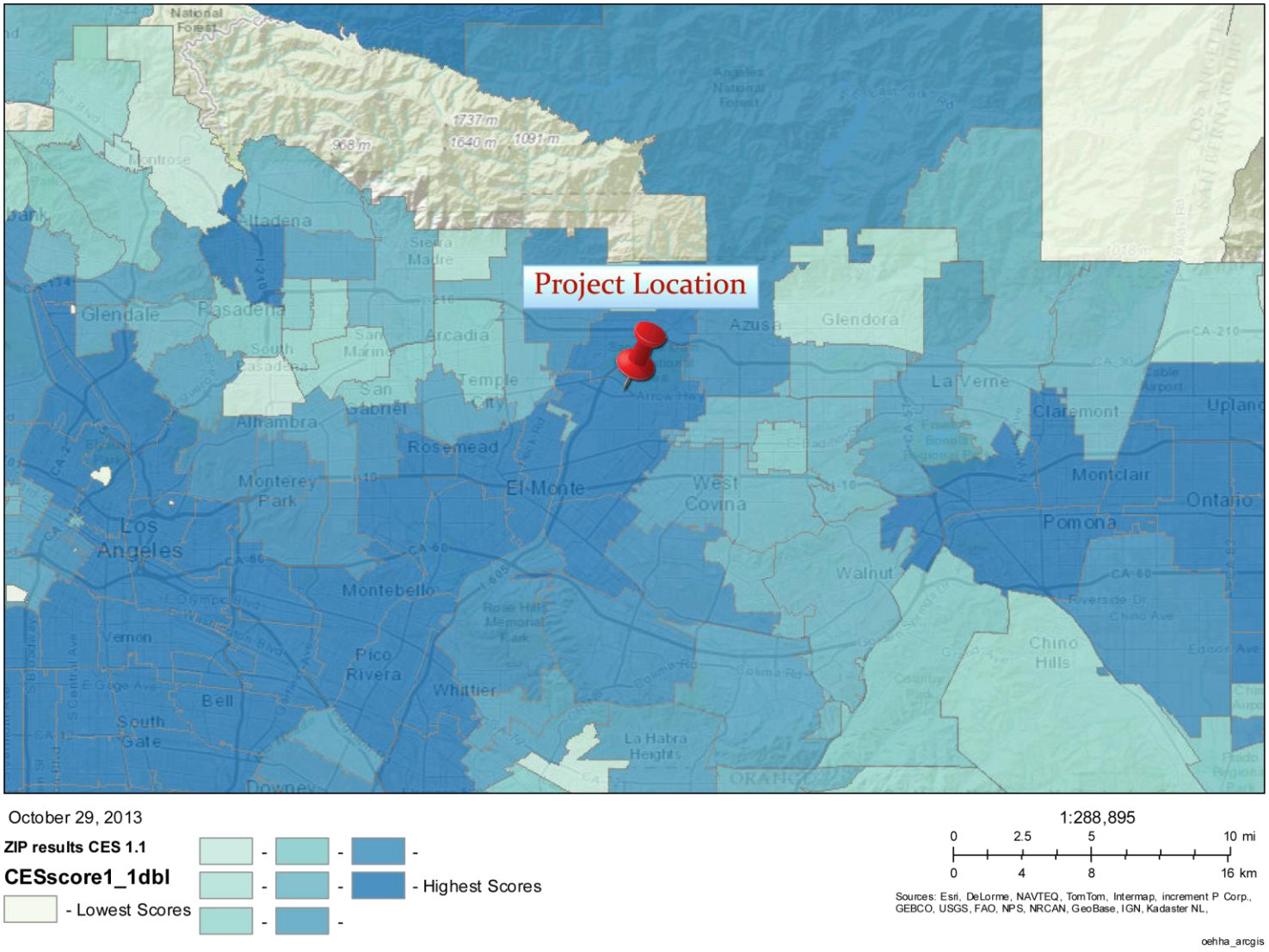


Exhibit 3.6-2 CalEnviroScreen Results for 91706 Zip Code

CalEnviroScreen 1.1 Statewide ZIP Code Results



3.6.2 CALIFORNIA REGULATORY CONSIDERATIONS

California Governor's Office of Planning & Research

To ensure a commitment to environmental justice, certain state agencies are required to consider certain goals and policies in their respective programs, policies, medium- and long-range plans, and environmental decision-making. The Governor's Office of Planning & Research (OPR) is the coordinating agency in state government for environmental justice programs (Government Code Section 65040.12). It is important to note that while some state agencies have internal goals and policies pertaining to environmental justice, these stated goals and policies pertain to internal agency specific analyses and guidelines for permitting a proposed project. It is neither the responsibility nor the legal requirement of the City of Irwindale, acting in its capacity as the Lead Agency under CEQA to make this environmental assessment under CEQA.

California Environmental Quality Act Guidelines

The 2013 *State CEQA Guidelines* do not have an established protocol or process to analyze environmental justice effects of actions subject to CEQA. However, the following State legislation pertains to environmental justice as summarized below:

California Department of Resources Recycling and Recovery

The California Department of Resources Recycling and Recovery's (CalRecycle) Strategic Plan (2001) includes the following Goal related to environmental justice: "Continuously integrate environmental justice concerns into all of the Board's programs and activities, including administrative and budgetary decisions" (Goal 6). This goal included the following four objectives: (1) develop an environmental justice strategy with input from stakeholders, especially concerned or impacted communities; (2) educate Board staff on environmental justice concepts and promote awareness of the Board's environmental justice strategy and implementation among external stakeholders and concerned or impacted communities; (3) ensure greater public and community participation, including low-income and minority populations, in the development, adoption, and implementation of environmental regulations, policies, and programs; and (4) develop and maintain an information system to support Board efforts to develop and implement its environmental justice strategy.

South Coast Air Quality Management District

In 1990, South Coast Air Quality Management District (AQMD) established an Ethnic Community Advisory Council to advise on the impact of air quality in ethnic communities. In October 1997, the AQMD adopted guiding principles and initiatives to ensure environmental justice for all. As of 2009, the Governing Board restructured the group into the Environmental Justice Advisory Group (EJAG), with a focus on air quality and environmental justice through the reduction and prevention of air pollution.

Senate Bill 89 (Escutia, 1998)

This legislation requires the Secretary for Environmental Protection, on or before January 15, 2002, to convene a Working Group on Environmental Justice, composed of various representatives, as specified, to assist the California Environmental Protection Agency in developing an interagency environmental justice strategy. The law requires the working group to take various actions relating to the development and implementation of environmental justice strategies.

Senate Bill 115 (Solis, 1998)

This legislation requires that the State Office of Planning and Research (OPR) be the coordinating agency in state government for environmental justice programs. It also requires the Director of Planning and Research to consult with the secretaries of specified state agencies, and other parties to coordinate the office's efforts and, share specified information with certain federal agencies, and review and evaluate other federal information, as provided. "Environmental justice" is defined to mean the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies. SB 115 requires the Cal-EPA to take specified actions in designing its mission for programs, policies, and standards within the agency, and to develop a model environmental justice mission statement for boards, departments, and offices within the agency, by January 1, 2001.

Assembly Bill 1553 (Keeley, 2001)

AB 1553 requires OPR to adopt guidelines for addressing environmental justice matters in City and County general plans. This may be beneficial to local governments that are interested in incorporating environmental justice into their planning but are unsure of how to do so. This bill does not require any jurisdiction to adopt the guidelines.

Senate Bill 828 (Alarcon, 2001)

SB 828 required the Secretary for Environmental Protection to convene the working group on or before January 1, 2002. The bill required the working group to assist Cal-EPA in developing that agency wide strategy by July 1, 2002, and to examine data, make recommendations, and hold public meetings, among other things, on or before April 1, 2002. The bill required each board, department, and office within Cal-EPA to review its programs and identify gaps that would impede achievement of environmental justice by December 31, 2003. The Secretary for Environmental Protection shall, not later than January 1, 2004, and every three years thereafter, prepare and submit to the Governor and the Legislature a report on the implementation of this part. This bill does not require any jurisdiction to participate in this working group.

City of Irwindale

The City of Irwindale has established the following General Plan, *Resource Management* policy related to environmental justice as follows:

Irwindale 2020 General Plan Resource Management Element Policy 19

The City of Irwindale will consider environmental justice issues as they are related to potential health impacts associated with air pollution and ensure that all land use decisions, including enforcement actions, are made in an equitable fashion to protect residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location from the health effects of air pollution.

3.6.3 PUBLIC OUTREACH AND SCOPING

Public outreach to, and involvement of, any and all communities and residents affected by the Proposed Project has been conducted in the public noticing, consultation, and scoping processes completed in preparation of this EIR, pursuant to 2013 State CEQA Guidelines.

In compliance with the CEQA Guideline §15082, a Notice of Preparation was prepared by the City and submitted to the State Governor's Office of Planning and Research (SCH) on May 10, 2013. The CEQA-mandated 30-day public review period was held May 13, 2013 through June 11, 2013. In response to a comment received, the comment period was extended to July 12, 2013, and a Scoping Meeting was held July 9, 2013. Public noticing was issued for both the NOP and Scoping Meeting. An English/Spanish translator was provided at the Scoping Meeting. In addition, the City hosts a web page with Proposed Project materials for public access to information (http://www.ci.irwindale.ca.us).

All project-related noticing, meetings and materials are available to the public and regulatory agencies. These materials remain on-file with the City's Planning Department, City Clerk, and/or City website.

3.6.4 CONCLUSIONS

As shown in **Exhibits 3.6-1** and **3.6-2** above, the entire Los Angeles Basin and 91706 ZIP code region in which the Proposed Project would be located are classified as some of the highest pollution burdened areas with sensitive population characteristics in the State. Neither the City of Irwindale nor the Proposed Project site is unique for these classifications, and there is nothing specific within the region about the Proposed Project site that would contribute a disproportionate impact on surrounding areas.

The Proposed MRF/TS will not cause the generation of any new waste materials, and is intended to improve the regional efficiency of waste management and recovery of materials for reuse and

recycling. Potential air quality impacts are defined in Chapter 3.3, and are assessed for the site-specific traffic conditions and related air emissions that would be present. However, with or without the Proposed Project, the same amount of waste material will be generated and will need to be transported and processed within the Los Angeles Basin (including the San Gabriel Valley), and the effects of those waste management operations will simply occur at another location within the region. Local air quality impacts were determined to be less than significant, and the contribution to significant air quality impacts is regional, and irrespective of income levels and socio-economic conditions. The proposed site was selected in part for its location along designated truck routes, efficient freeway access for trips into and out of the facility, and for its ability to avoid or minimize routing traffic through more sensitive residential routes.

For these reasons, the Proposed Project will not have any disproportionate effects on any disadvantaged population within the Los Angeles region or among local communities, and does not raise environmental justice issues beyond those attributable to the region as a whole. The City is sensitive to the environmental effects of projects on the local community, and as documented throughout this DEIR, has identified a comprehensive Mitigation Program to avoid or minimize potential impacts of this Proposed MRF/TS Project.

3.7 GEOLOGY AND SOILS

This chapter presents a description of the geologic and seismic conditions within the City of Irwindale and vicinity. An analysis of the site-specific potential for geologic hazard impacts associated with implementation of the proposed project is discussed, and is followed by a description of relevant federal, State and local laws and regulations. Where necessary, a Mitigation Program designed to avoid, eliminate, or reduce potential impacts to a less than significant level has been identified.

This section is based on review of the *Phase I and II Environmental Site Assessment* (Converse, 2009 and 2010, respectively), *Geotechnical Input for CEQA Process, Valley County Water District, Proposed Two "Arrow" 3 Mg Welded Steel Water Tanks, APN 8535-001-911, Northwest Corner Of Live Oak Avenue And Arrow Highway, Irwindale, California* (Leighton Consulting, 2009), project materials, and City requirements.

A *Phase I and II Environmental Site Assessment report* was prepared in order to identify potential Recognized Environmental Conditions (RECs) in connection with the site (Converse Consultants, 2009-2010). Based on the findings of the *Phase I Environmental Site Assessment, a Phase II* was recommended to: 1) Include assessment activities to assess historic features associated with the former United Concrete Pipe Corporation facility; 2) Include soil sampling at a minimum for methyl tertiary butyl ether (MTBE), and a soil vapor survey; 3) Include assessment in the general area of the current observed AST and associated pump feature; and 4) Analyze the roofing debris material for asbestos prior to disposal. The site remains vacant and undisturbed since preparing of the Phase I and II studies. The City is unaware of any other basis for which any of the facts relied upon in the studies would have changed.

3.7.1 EXISTING ENVIRONMENT

Surface soils within the City consist mostly of sands, gravels, cobbles, and larger rocks to approximately 5-feet in depth. These soils are moderately to rapidly permeable and well drained. Water runoff from these soils is generally slow and is a light erosion hazard. Most of the soils within the City have been disturbed by a century or more of mining and urban development.

Soil on the Proposed Project site is identified as Qalos, which is very course-grained material associated with older alluvium of the Holocene period. Large deposits of material were the result of historical flow of the San Gabriel River into various parts of the valley. The current channel of the San Gabriel River is north of the Proposed Project site where it exits the Santa Fe Flood Control Basin.

California is tectonically active. Historical plate tectonic activities in the State have resulted in down-warped sedimentary basins, uplifted mountain belts, and horizontal displacement of the local crustal blocks by faults. Effects of these forces have created the mountains, valleys, deserts, and coastal lowlands found in the State. Additionally, these geologic activities and processes have resulted in an endless variety of rocks, geologic structures (e.g., faults and folds), and surface materials in California.

Geologically, California is separated into 11 general geomorphic provinces or regions. These geomorphic provinces are naturally defined geologic regions that display a distinct or unique landscape or landform. As a result, each of these provinces displays unique and definable features based on their geology, faults, topographic relief, and climate. Most of the regional provinces in southern California are shaped in one way or another by the San Andreas Fault system (located northeast of the City). The San Andreas Fault system generally forms the boundary between the North American Plate and the Pacific Plate.

Local Geology and Topography

The topography of the Irwindale area is a result of the historical alluvial fan formed by the San Gabriel River. Except for the large aggregate mines in the City, the area slopes approximately 50-feet every mile toward the south. The surface area in the region has been dissected by a braided stream network with local relief of a few feet to a few tens of feet. This was the most evident along the San Gabriel River prior to the construction of channels to control flooding. Beneath these alluvial deposits, the geologic materials consist of Cretaceous to Miocene age sedimentary rock composed primarily of sandstone, conglomerate, and shale; Cretaceous granitic and related igneous rock; and older metamorphic rock (Wildermuth, 2004).

Elevation within the City ranges from approximately 625-feet above mean sea level (MSL) in the northern part of the City to approximately 310-feet above MSL in the southern part of the City. The Proposed Project site is relatively flat, at an elevation of approximately 420-feet above mean sea level (MSL). The alluvial fan deposits blanket the entire City except where man-made fill has been placed, or where younger streams have reworked the fan materials to form young alluvium. No basement or bedrock is exposed in the City; the nearest rock outcrops are located in the San Gabriel Mountains to the north and the San Jose Hills to the south.

Seismic and Related Hazards

Geologic hazards associated with the region include earthquake-induced hazards (e.g., ground shaking, surface fault ruptures, and soil liquefaction), slope instability, ground subsidence, and soil erosion. These hazards are further defined as:

- **Ground Shaking** – Ground shaking is a term used to describe the vibration or movement of the ground during an earthquake.

- **Surface Faulting** – Surface faulting is the result of the differential movement of two sides of a fracture at the earth's surface.
- **Liquefaction** – Liquefaction is a process by which water-saturated sediments temporarily lose strength and act as a liquid. Liquefaction can cause three types of conditions – lateral spread (movements of blocks of soil), flow failures (material riding on a layer of liquefied soil), and loss of soil bearing strength.
- **Slope Instability or Landslides** – There are several types of landslides that can take place in conjunction with earthquakes. The most abundant types of earthquake-induced landslides are rock falls and slides of rock fragments from a steep slope. Landslides can also be caused by water-saturated soils on steep slopes.
- **Ground Subsidence** – Subsidence is a decrease in relative elevation of the ground surface as a result of various natural or man-induced phenomena. Natural induced phenomena include tectonic movement, consolidation, hydrocompaction, or rapid sedimentation. Human activities that can cause subsidence are withdrawal of water or petroleum hydrocarbons in subsurface soils.
- **Erosion** – Erosion is the removal of surface soil as a result of wind or water flow (e.g., rain or irrigation runoff).

Seismicity

Seismic hazards in California are generally considered to be high in most areas. The seismic activity in California is the result of large plate tectonic movements between the North American and Pacific plates. As a result, a number of large fault systems and earthquakes have occurred historically in both northern and southern California. For southern California, the last great earthquake occurred in the Fort Tejon area (near present day Bakersfield) on January 9, 1857. This earthquake had a magnitude of 7.9. More frequent smaller earthquakes have occurred regularly in the southern California region. These earthquakes include the 1971 San Fernando and the 1994 Northridge earthquakes. Both of these earthquakes had a magnitude of 6.7.

Seismologists use magnitude scales to express the seismic energy released by an earthquake. Since Charles Richter developed the original magnitude scale in the 1930s, there has been a proliferation of magnitude scales for measuring the size of earthquakes occurring in southern California using relatively high-frequency data from nearby seismograph stations. This scale (designated M_L for Local Magnitude) eventually became known as the Richter magnitude. As more seismograph stations were installed around the world, it became apparent that the method developed by Richter was strictly valid only for certain frequency and distance ranges. New magnitude scales, including body-wave magnitude (Mb) and surface-wave magnitude (M_s) were developed based on Richter's original scale, but each is valid only for a particular frequency range and type of seismic signal. Because of the limitations of the M_L, Mb, and Ms scales, a new, more uniformly applicable extension of the magnitude scale, known as moment magnitude

(M_w) was developed. Moment magnitude generally gives the most reliable estimate of earthquake size, especially for large earthquakes, and seismologists generally favor the M_w scale.

A scale used by many geologists is the Modified Mercalli Scale (MM). This scale is used for measuring the intensity of an earthquake. This scale determines the effect of an earthquake on the surface of the earth as well as the effects it has on humans, object of nature, and man-made structures. The lower portion of the MM Scale generally determines the effects of an earthquake on humans; while, the upper scale observes the effect the earthquake has on objects. A general representation of the MM scale is provided in **Table 3.7-1 Abridged Version of the Modified Mercalli Intensity Scale**.

Earthquakes have occurred on numerous faults in southern California and some have been felt in the City, but none has caused serious damage or injury within the City of Irwindale. Most of the faults near the City are strike-slip faults, but also, a few dip-slip faults are located in the region. Strike-slip faults are sometimes described as "side-by-side" faults, because they are generally vertical fractures where the blocks mostly move horizontally. These faults are considered "right-lateral" (dextral) or left lateral" (sinistral) depending upon the direction of movement. Dip-slip faults are generally angular fractures that move in a vertical or up and down direction. If the rock mass moves down, it is termed "normal". However, if it moves up, it is termed "reverse". In addition, a number of unknown blind-thrust faults are located in the Los Angeles region. These types of faults generally do not have surface displacement features to identify them. The intensity of earthquakes is normally dependent upon the distance from the earthquake epicenter, the characteristics of the soil, depth of groundwater, and topography.

The largest and most famous earthquake fault in California is the San Andreas Fault. The San Andreas Fault begins near the Salton Sea and extends northwards to Point Delgada, along the northern California coast. The total distance of this fault system is approximately 745-miles. The maximum credible earthquake (MCE) for the San Andreas Fault is believed to be 8.5 M_w. However, for the San Andreas Fault segment near the City, it is believed capable of generating a maximum earthquake of about 7.8, which would result in peak ground acceleration (g) of approximately 0.16-g at the City. This fault is approximately 24-miles northeast of the Proposed Project site. Seismologists estimate that a major earthquake in the 7.5 to 8.5 magnitude range has a 50 percent chance of occurring along the San Andreas Fault within the next 30 years (Jennings 1992 and City of Irwindale 2003). A search radius of 100-kilometers (62-miles) for active faults (e.g., faults capable of causing the highest estimated ground motions in the City) was chosen for this study (Blake, 1989). The 100-kilometers (km) radius is a conservative envelope for potentially high magnitude events. Events beyond the 100-km radius are not considered to be as significant. Even major faults identified within a 100-km radius would not substantially impact the Proposed Project site under normal consideration. Therefore, the long list of faults was reduced to those within approximately 25-miles of the City.

Table 3.7-1 Abridged Version of the Modified Mercalli Intensity Scale

Magnitude	Shaking Severity	Summary of Damage	Average Peak Velocity (cm/sec)	Average Peak Acceleration (% gravity)	Intensity Value and Description
I	-	-	<0.1	<0.17	Not felt except by a very few under especially favorable circumstances (I Rossi-Forel scale). Damage potential: None.
II	-	-	0.1 – 1.1	0.17 – 1.4	Felt only by a few persons at rest, especially on upper floors of high-rise buildings. Delicately suspended objects may swing. (I to II Rossi-Forel scale). Damage potential: None.
III	-	-	0.1 – 1.1	0.17 – 1.4	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration like passing of truck. Duration estimated. (III Rossi-Forel scale). Damage potential: None.
IV	-	-	1.1 – 3.4	1.4 – 3.9	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like a heavy truck striking building. Standing automobiles rocked noticeably. (IV to V Rossi-Forel scale). Damage potential: None. Perceived shaking: Light.
V	Light	Pictures Move	3.4 – 8.1	3.9 – 9.2	Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. (V to VI Rossi-Forel scale). Damage potential: Very light. Perceived shaking: Moderate.
VI	Moderate	Objects Fall	8.1 - 16	9.2 – 18	Felt by all, many frightened and run outdoors. Some heavy furniture moved, few instances of fallen plaster and damaged chimneys. Damage slight. (VI to VII Rossi-Forel scale). Damage potential: Light. Perceived shaking: Strong.
VII	Strong	Nonstructural Damage	16 - 31	18 – 34	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars. (VIII Rossi-Forel scale). Damage potential: Moderate. Perceived shaking: Very strong.

Magnitude	Shaking Severity	Summary of Damage	Average Peak Velocity (cm/sec)	Average Peak Acceleration (% gravity)	Intensity Value and Description
VIII	Very Strong	Moderate Damage	31 - 60	34 – 65	Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed. (VIII+ to IX Rossi-Forel scale). Damage potential: Moderate to heavy. Perceived shaking: Severe.
IX	Violent	Heavy Damage	60 - 116	65 – 124	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. (IX+ Rossi-Forel scale). Damage potential: Heavy. Perceived shaking: Violent.
X	Very Violent	Extreme Damage	> 116	> 124	Some well-built wooden structures destroyed; most masonry and frame structures destroyed; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks. (X Rossi-Forel scale). Damage potential: Very heavy. Perceived shaking: Extreme.
XI	-	-			Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	-	-			Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into air.
Source: California Department of Conservation 2004 and Modified from Bolt (1993) and Wald et al. (1999)					

Table 3.7-2 Major Faults Within A 25-Mile Radius Of The City Of Irwindale provides the fault name, location, distance to the respective faults within 25-miles of the Proposed Project, the estimated maximum earthquake magnitude for each fault, and the estimated peak horizontal ground acceleration (PHGA) and Modified Mercalli Intensity (MM). The PHGA and MM are presented for the median case and the more conservative one-sigma (one standard deviation) case.

Table 3.7-2 Major Faults within a 25-Mile Radius of the City Of Irwindale

Fault	Approximate Distance from Project Site (miles)	Estimated Maximum Earthquake Event				
		Maximum Earthquake Magnitude (Mw)	Peak Horizontal Site Acceleration (g)		Estimated Modified Mercalli Intensity	
			Median	One-Sigma	Median	One-Sigma
Sierra Madre	3.7	7.2	0.68	1.02	XI	XI
Raymond	6.5	6.5	0.45	0.74	X	XI
Clamshell-Sawpit	7.2	6.5	0.42	0.68	X	XI
San Jose	9.9	6.4	0.30	0.49	IX	X
Puente Hills Blind Thrust	11.7	7.1	0.35	0.52	IX	X
Upper Elysian Park Blind Thrust	13.6	6.4	0.22	0.35	VIII	IX
Cucamonga	13.9	6.9	0.27	0.42	IX	X
San Andreas – Whole	24.0	8.0	0.21	0.32	VIII	IX

An analysis was also performed to determine the number and size of historic earthquake patterns which have occurred within 100-miles of the City of Irwindale and surrounding area. The reference point selected (within the Santa Fe Flood Control Basin) is central at latitude 34.1145 and longitude 117.9578. These results of this analysis are presented in **Table 3.7-3 Historical Earthquake Pattern Within 100-Miles within 100-Miles of the City Of Irwindale And Surrounding Area**. Historical earthquake data from 1800 to 2002 were evaluated, with the number of times earthquakes with varying magnitudes were exceeded and the return period of each magnitude.

Table 3.7-3 Historical Earthquake Pattern within 100-Miles of the City Of Irwindale and Surrounding Area

Earthquake Magnitude	Number of Times Exceeded	Return Period-Years
4.0	1290	<1
4.5	486	<1
5.0	165	1
5.5	55	4
6.0	27	8
6.5	12	17
7.0	6	34
7.5	2	102
Source: Blake, 2002		

The following fault discussions concentrate on those faults that are capable of causing strong earthquake shaking in the City (and referenced in **Table 3.7-2 Major Faults within a 25-Mile Radius of the City Of Irwindale**). The most significant near-field faults are the Sierra Madre (including the Upper Duarte/Duarte), Clamshell-Sawpit, and Raymond faults. The San Andreas Fault is the most significant distant fault. However, there are no Alquist-Priolo Special Study Zones within the City.

The Sierra Madre fault is the longest fault within or very near the City, and would produce the highest amplitude ground shaking within the City in the event of a major earthquake. The surface fault is located about 3.7-miles north of the Proposed Project site. The Sierra Madre Fault is a reverse fault with a maximum credible magnitude of approximately 7.2, assuming that the entire length of the fault ruptures (Petersen et al., 1996). The Upper Duarte, Duarte, and associated smaller faults discussed above are considered to be part of the Sierra Madre fault system that bounds the edge of the southern foothills of the San Gabriel Mountains.

The surface expression of the Raymond fault lies about 6.5-miles from the Proposed Project sites. The maximum magnitude of the fault estimated by the California Geological Survey (CGS2003) is approximately 6.3 compared to a magnitude of 6.7 estimated by the Southern California Earthquake Center (SCEC 2006). The Clamshell-Sawpit fault surface expression is approximately 7.2-miles north of the Proposed Project area. The maximum magnitude of the Clamshell-Sawpit fault estimated by the CGS (2003) is about 6.5.

Surface Fault Ruptures

Surface fault rupture occurs when displacement along a fault plane propagates to the earth's surface, causing some measure of offset and disturbance. Sufficient offset along the dip of a dip-slip fault can create a discrete step or fault scarp. Slippage along the strike of a strike-slip fault (e.g., San Andreas Fault) may manifest significant shearing along a single fault line. Alternatively, it can manifest as a zone of fracturing and ground cracking. The location of

potential surface fault rupture sites are identified in Alquist-Priolo Special Study Zones (APSSZ). There are no APSSZ locations within the City of Irwindale.

The propagation of an earthquake can depend upon how the earthquake waves subside (attenuate) as they travel from their source to a given location. Soil and rock type may act to amplify or attenuate seismic waves and consequent ground shaking. Generally, seismic waves attenuate more rapidly in solid rock and may be amplified in unconsolidated material such as alluvium or fill materials.

Landslides

Landslides, rock falls, and debris flows are all forms of mass wasting, the movement of soils and rock under the influence of gravity. A landslide may occur if source material on a slope is triggered by some mechanism. Source materials include fractured and weathered bedrock and loose soils. Triggering mechanisms include earthquakes, saturation from rainfall, and erosion. Catastrophic slides may result in the destruction of foundations, offset of roads, and breaking of underground pipes within and along the margins of a landslide. Additionally, landslides can override property and structures down-slope of the slide.

Liquefaction

Liquefaction is a phenomenon in which saturated soils lose strength and cohesion when subjected to dynamic forces, such as shaking during an earthquake. Liquefaction can also occur in unsaturated soils with low cohesion, such as sand. Liquefaction and related phenomena have been responsible for a tremendous amount of damage during historical earthquakes. This damage occurs when soil cohesion is lost which directly affects the support that it normally supplies to building foundations. Ground failure resulting from liquefaction can include sand boils, ground settlement, ground cracking, lateral spreading, slope toe failure, and ground warping.

Under the Hazards Mapping Act by the State Mining and Geology Board a liquefaction area must meet one or more of the following criteria:

- An area known to have experienced liquefaction during historic earthquakes;
- All areas of uncompacted fill containing liquefaction susceptible materials that are saturated, nearly saturated, or may be expected to become saturated.
- An area where sufficient existing geotechnical data and analyses indicate that the soils are potentially liquefiable; and/or
- An area where existing geotechnical date are insufficient.

Generally, liquefaction occurs where groundwater is within 30-feet of the surface. Groundwater elevations within the City can vary significantly depending upon rainfall and groundwater

recharge. Reported groundwater elevations in the City usually range from 50- to 150-feet below the ground surface (bgs). Liquefaction areas have been identified in the southwestern corner of the City and in locations within Baldwin Park. The Proposed Project area has not been identified as a liquefaction area.

Tsunami and Seiche

Most tsunamis are triggered by earthquake ruptures along subduction zones (e.g., a tectonic fault rupture on the bottom of the ocean). However, tsunamis can also be caused by major submarine landslides in large undersea mountain ranges or by submarine volcanic eruptions. A seiche is a periodic oscillation or "sloshing" of water in an enclosed basin (e.g., lake or reservoir) caused by an earthquake. The period of oscillation is dependent upon the size and configuration of the water body and may range from minutes to hours.

The nearest potential large basins of water near the Proposed Project site are the United States Army Corp of Engineers (USACE) Santa Fe Control Basin site and various aggregate mines within the City. The Santa Fe Control Basin is used to control flood waters from the San Gabriel River. However, the only time large volumes of water are in this Basin is during heavy rain periods when flood control of the San Gabriel River is necessary. The water that accumulates within this Basin is used for groundwater recharge. The Santa Fe Control Basin is adjacent to the Proposed Project site. It is unlikely the Santa Fe Control Basin would result in a seiche due to maintenance control of it by the USACE and Los Angeles County Flood Control District.

A number of mines (Hanson Aggregate, United Rock No. 2 and 3, and Vulcan Durbin) have been mined below groundwater. Although these water bodies at the bottom of the mines could be subject to potential seiches, the City has determined the risk of seiches from these water bodies are minimal due to the elevation of the exposed water table within the mine pits and the steepness and height of the quarry walls.

Subsidence

Soil subsidence can result from both natural and man-made phenomena. Natural phenomena that may induce subsidence include seismically induced settlement (liquefaction); soil consolidation (hydrocompaction); oxidation or dewatering of organic-rich soils; and collapse of subsurface cavities. Human activities may also induce subsidence include by decreasing pore pressure due to the withdrawal of subsurface fluids (pumping), including groundwater and hydrocarbons.

The compaction of unconsolidated aquifer systems that can accompany excessive groundwater pumping is a primary cause of subsidence. The overdraft of aquifer systems has resulted in permanent subsidence and related ground failures. In aquifer systems that include semi-consolidated silt and clay layers (aquitards) of sufficient thickness, long-term groundwater level declines can result in aquitard compaction, which manifests itself as land subsidence. This

reduction in the pore volume of compacted aquitards is largely unrecoverable and permanently reduces the total storage capacity within the material.

3.7.2 REGULATORY SETTING

Uniform Building Code

The Uniform Building Code (UBC) was developed by the International Conference of Building Officials (ICBO) and is used by most states, including California, as well as local jurisdictions to set basic standards for acceptable design of structures and facilities. The UBC provides information on criteria for seismic design, construction, and load-bearing capacity associated with various buildings and other structures and features. Additionally, the UBC identifies design and construction requirements for addressing and mitigating potential geologic hazards. New construction generally must meet the requirements of the most recent version of the UBC.

State Alquist-Priolo Earthquake Fault Zoning Act

The State Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) of 1972 was passed to mitigate the hazards associated with surface faulting in California. This act is administered by the California State Department of Conservation, California Geological Survey. The A-P Act prevents construction of buildings used for human occupancy on the surface traces of active faults. Before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. Los Angeles County has been designated an A-P Act earthquake fault area.

Department of Conservation, California Geological Survey

1990 Seismic Hazards Mapping Act

The 1990 Seismic Hazards Mapping Act and related regulations establish a statewide minimum public safety standard for mitigation of earthquake hazards. The purpose of this Act is to protect the public from the effects of strong ground shaking; liquefaction, landslides, or other ground failure as well as other hazards caused by earthquakes. The 1990 Seismic Hazards Mapping Act provides the minimum level of mitigation needed to reduce the risk of a building collapse. Under this Act, the lead agency can withhold permits until geologic investigations are conducted and mitigation measures are incorporated into building plans. In addition, the Act addresses not only seismically induced hazards but also expansive soils, settlement, and slope stability. The program and actions mandated by this Act closely resemble those of the A-P Act by requiring:

- The State Geologist to delineate various "seismic hazard zones";
- Cities, counties, and/or other local permitting authority to regulate certain development "projects" within these zones by withholding the development permits for a site until the geologic and soil conditions are investigated and appropriate mitigation measures (if required) are incorporated into development plans;

- The State Mining and Geology Board (SMGB) to develop regulations, policies, and criteria in guiding cities and counties in their implementation of the law; and
- Sellers (and their agents) of real estate property within a mapped hazard zone to disclose that property lies within such a zone at the time of sale.

California Building Code

The California Building Code (CBC) specifies the acceptable design and construction requirements associated with various facilities or structures. This Code specifies criteria for open excavation, seismic design, and load-bearing capacity directly related to construction in the State. The CBC augments the UBC and provides information for specific changes to various sections in it. The seismic building requirements under the CBC are more stringent than the federal UBC.

County of Los Angeles / City of Irwindale Building Code

The County of Los Angeles has adopted the CBC; in addition, the City of Irwindale has adopted the County's Code as its own Building Code with minor exceptions (Irwindale Municipal Code 15.04.010 - Adoption of code).

Chapter 15 of the Irwindale Municipal Code defines the City's Building and Construction Code. Further, section 15.04 states the adoption of codes, copies files, terms defined, and fee schedule-modification by resolution. Section 15.4.010 states:

A. There is hereby adopted, as the city building code, except as provided in this chapter, that certain building code known and designated as the Los Angeles County Building Code, 2011 Edition (Title 26 of the Los Angeles County Code), which incorporates and amends the 2010 California Building Code, including all appendixes thereto and changes made by the county of Los Angeles and by the city of Irwindale, and such code shall be and become the building code of the city, regulating and controlling the design, construction, quality of materials, grading, use, occupancy, location and maintenance of all buildings or structures and prescribing conditions under which such work may be carried on within the city and providing for the issuance of permits and the collection of fees therefor.

B. Los Angeles County Ordinance No. 2010-0053, as adopted by county of Los Angeles, is adopted in its entirety, with City's Amendments to Appendix "J".

Building permits are required for construction of new facilities. Consequently, the Applicant must submit detailed design drawings of the development for approval by the City. The design specifications undergo a "plan check" to make sure they meet all federal, State, and local codes and other applicable development regulations and requirements dealing with structural integrity

as a result of local geologic factors. The City is then required to monitor the construction of the facility to make sure it is constructed in accordance with the approved design and related conditions of approval.

3.7.3 THRESHOLDS OF SIGNIFICANCE

The analysis of potential geological and soils impacts associated with the implementation of the Proposed Project assesses the degree to which the Project's short-term (construction-related) activities and long-term (operational) operations would alter the existing soil conditions on-site, and whether the resources are adequate for a development project or would otherwise adversely affect project construction or operations.

The significance of these potential geology and soils impacts is determined based on relevant State CEQA Guidelines, Appendix G. Using these thresholds, the Proposed Project would be considered to have a significant impact if it were to:

a. Expose people or structures to a potential substantial adverse effect, including the risk of loss, injury or death involving
    i. Rupture of a known earthquake fault or based on other substantial evidence of a known fault?
    ii. Strong seismic ground shaking?
    iii. Seismic-related ground failure, including liquefaction?
    iv. Landslides?
b. Result in substantial soil erosion or the loss of topsoil?
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?
d. Be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are unavailable for the disposal of waste water.

3.7.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD GEO-1

Would the Project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: rupture of a known earthquake fault or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides?

Less than Significant Impact with Mitigation Program

The site is not located within a known earthquake fault; and therefore, implementation of the Proposed Project is not expected to expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving seismic hazards. Additionally secondary seismic hazards related to ground shaking [including: soil liquefaction, ground subsidence, slope instability, tsunamis, and seiche] are not expected to expose people or structures to potential substantial adverse effects with adherence to **PDF GEO-1**. This project design feature requires the Applicant to prepare a site-specific Geotechnical Report to the satisfaction of the Lead Agency.

The Proposed Project will be designed and constructed in accordance with the CBC, and City of Irwindale Building Standards and Codes. As a result, the maximum probable seismic ground acceleration will be taken into consideration when designing all structures to minimize potential seismic hazards. Furthermore, it is standard practice for major projects to develop a site specific Geotechnical Report, which is prepared by a California Registered Geotechnical Engineer. This report shall be prepared and submitted to and approved by the City of Irwindale prior to issuing any project permits (e.g., grading permit). This report will be undertaken in accordance with the CGS Guidelines for Evaluating and Mitigating Seismic Hazards in California. This report will provide design specification to assure the Proposed Project is developed within accepted federal, State, and local guidelines. The requirement of this report is referred to as **PDF GEO-1**.

For these reasons, potential impacts associated with seismic hazards will be reduced to the level of any other development in the area; and therefore, seismic risk would be less than significant.

Surface Rupture

The site is not within an Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards, as there are no Alquist-Priolo Special Study Zones within the City of Irwindale (General Plan, page 130). Therefore, the potential for surface rupture due to fault plane displacement propagating to the surface at the site is considered low, and no significant surface rupture impact would occur.

Strong Seismic Ground Shaking / Ground Failure

No active or potentially active faults pass directly through the Proposed Project site. The closest active fault to the Proposed Project site is the Sierra Madre Fault. This fault is located approximately 3.7-miles north of the site. As with most development in southern California, the site could be subject to strong ground motion in the event of an earthquake. This potential hazard is common in southern California; however, the adverse effects of ground shaking would be reduced because the Proposed Project would be constructed in conformance with current building codes and engineering practices.

Liquefaction and Landslides

Liquefaction is associated with seismic activity. Soils at the site are not susceptible to liquefaction based on CGS mapping and Guidelines for Evaluating and Mitigating Seismic Hazards in California (1997b). Furthermore, groundwater occurs at an estimated depth of over 50-feet bgs under the Proposed Project site. Although groundwater level in this area is subject to seasonal and year-to-year fluctuations, a significant increase in groundwater levels at the Proposed Project site is considered a very low probability. Therefore, given the depth to groundwater and the nature of soils at the site, liquefaction is not anticipated to be a potential problem. For these reasons, impacts associated with potential liquefaction would be less than significant.

Based on the fact that the Proposed Project site is on relatively flat topography and away from steep terrain, the chance of landslide is very low to nonexistent.

Based upon all of the above, including the imposition of **PDF GEO-1**, it is not reasonably foreseeable that the Project will expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: rupture of a known earthquake fault or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. Therefore, all seismic related and landslide related impacts would be less than significant.

THRESHOLD GEO-2

Would the Project result in substantial soil erosion or the loss of topsoil?

Less than Significant with Mitigation Program

The Proposed Project site will require grading, as well as possible excavation and filling, and erosion of stockpiled soil or of exposed soil surfaces could occur as a result. Specifically, excavation, grading, stockpiling, and other earth moving activities could expose site soils to wind- or water-generated erosion. Best Management Practices (BMPs) would be outlined in the project-specific Storm Water Pollution Prevention Plans (SWPPP) for construction to minimize soil erosion (refer to **MM WQ-1** regarding the required National Pollutant Discharge Elimination System Permit (NPDES) requirements). BMPs, to be identified in the SWPPP, will be employed and will include conditions, such as timing for practices during periods of precipitation; when earth moving activities are being conducted; and/or when soil has been exposed by earthmoving activities in order to eliminate or reduce erosion to the extent possible.

Implementation of soil erosion-related BMPs during the above periods will ensure that the Proposed Project will not result in substantial soil erosion. Based upon the above, including implementation of MM WQ-1, it is not reasonably foreseeable that the Project will result in

substantial soil erosion or the loss of topsoil. Therefore, erosion related impacts would be less than significant with adherence to the mitigation program.

THRESHOLD GEO-3

Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact with Mitigation Program

Based on the analysis contained within the Phase I and Phase II assessments, there is no evidence that the Project will be located on a geologic unit or soil that is unstable.

In addition, as concluded in **Threshold GEO-1**, a Geotechnical Study (**PDF GEO-1**) shall be performed to specify design requirements to minimize the potential effects from strong seismic ground shaking. Secondary seismic hazards related to ground shaking include: soil liquefaction, ground subsidence, slope instability, tsunamis, and seiche (also refer to **Chapter 3.13 Water Quality and Hydrology**). These actions are not expected to occur with implementation of the Proposed Project; and therefore, the project will not be subject to or result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

The Proposed Project is located on relatively flat topography and away from steep terrain. Based on the relatively flat topography, the site's granular soils, and the planned slab-on-grade construction, the probability of landslides or slope instability at or to the Proposed Project site appears to be very low. No portions of the Proposed Project site are identified on the Ontario Quadrangle official Seismic Hazard Zones Map within a zone of earthquake-induced landslide potential (CGS, 2000). Therefore, the area is not in an area identified as prone to earthquake-induced landslides.

Another potential impact associated with seismic activity is liquefaction. Soils at the site are not susceptible to liquefaction based on CGS mapping and Guidelines for Evaluating and Mitigating Seismic Hazards in California (1997b). Furthermore, groundwater occurs at an estimated depth of over 50-feet bgs under the Proposed Project site. Although groundwater level is in this area is subject to seasonal and year-to-year fluctuations, a significant increase in groundwater levels at the Proposed Project site is considered a very low probability. Therefore, given the depth to groundwater and the nature of soils at the site, liquefaction is not anticipated to be a potential problem.

Lateral spreading is the lateral movement of gently to steeply sloping, saturated soils deposits caused by earth-quake induced liquefaction. Typically this occurs when large amounts of water

are removed from an aquifer. Lateral spreading is not expected to occur on-site due to the groundwater level and relatively flat topography.

Land subsidence is the gradual settling or sinking of soils moving in a downward shift in an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur as a result of human activities. The Project is not expected to induce tectonic movement, consolidation, hydrocompaction, or rapid sedimentation; nor withdrawal water or petroleum hydrocarbons in subsurface soils; subsidence is not expected to pose a significant hazard within the project site.

For these reasons, impacts associated with potential liquefaction, lateral spreading, and subsidence/collapse would be less than significant.

Based upon the above, including implementation of **PDF GEO-1**, it is not reasonably foreseeable that the Project will result in landslides, lateral spread, subsidence, liquefaction or collapse. Therefore, the risk of on- or off-site landslides lateral spread, subsidence, liquefaction or collapse has been determined to be less than significant.

THRESHOLD GEO-4

Would the Project be located on expansive soils, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less than Significant Impact

As confirmed by field observations and research, the soil at the site is composed of sand, gravel, and rock associated with older alluvium. These soils do not generally have expansive qualities.

Based upon the above, it is not reasonably foreseeable that the Project will result in substantial risk to life or property related to expansive soils. Therefore, expansive soil related impacts are less than significant.

THRESHOLD GEO-5

Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are unavailable for the disposal of waste water?

Less than Significant Impact

The Proposed Project will dispose of all of their municipal wastewater to the public sewer system, and will not utilize septic tanks. Additionally, the grading of the site and the bioretention system planned for the Proposed Project will ensure that stormwater from the site will not cause

significant impacts. The perimeter of the site will be covered with vegetation landscaping and a wall; thus, preventing off-site runoff from entering the facility. The site will be graded so that no stormwater flow can leave the site without first passing through the bioremediation swale system. The purpose of a bioremediation system is to introduce organics to remove or neutralize pollutants, as a waste management technique. The bioretention system is composed of a series of landscaped depressions used to treat many types of pollutants found in stormwater runoff. These systems are effective in removing suspended solids (e.g., sediments and soils), hydrocarbons, metals, nutrients, and bacteria. They also are effective in reducing the peak runoff rates from a site as well as increasing stormwater infiltration. A bioretention system basically consists of the following three components:

- A drainage system containing perforated pipes covered with washed gravel,
- A mixture of specialized sand, soil, and organic mix over the drainage system, and
- A vegetation cover (e.g., trees, shrubs, and/or grass) over the sandy, soil, and organic mix. (New Jersey, 2009).

The surface soils consist mostly of sands, gravels, cobbles, and larger rocks to approximately 5-feet in depth. These soils are moderately to rapidly permeable and well drained. Water runoff from these soils is generally slow and is a light erosion hazard. These soils are highly suitable for operation of the proposed bioretention system.

Based upon the above, it is not reasonably foreseeable that the Project will result in significant impacts related to soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are unavailable for the disposal of waste water. Therefore, soil issues related to septic and water disposal systems will not cause a significant impact.

Mitigation Program

PDF GEO-1

The Applicant shall have a California Registered Geotechnical Engineer prepare a site-specific Geotechnical Report to the satisfaction of the City Engineer prior to issuance of the grading permit. This report will be undertaken in accordance with the CGS Guidelines for Evaluating and Mitigating Seismic Hazards in California. This report will provide design specification to assure the Proposed Project is developed within accepted federal, State, and local laws, regulations, and guidelines.

MM WQ-1

The Applicant shall comply with the project-specific National Pollutant Discharge Elimination System (NPDES) Permit requirements (such as the Storm Water Pollution Prevention Plans (SWPPPs) and Best Management Practices (BMPs) including: limiting construction access routes and stabilizing access points; staking/marking construction limits; protection of cut and fill surfaces from sheet, rill and gully erosion; stabilizing temporarily denuded areas with seeding, mulching, jute netting, hay bales and silt fences or other methods; designating specific areas for the stockpiling, handling, preparation and disposal of construction materials; quickly establishing groundcover and landscaping of areas designated to remain pervious; and/or waste material and litter control to prevent existing drainages).

3.7.5 RESIDUAL IMPACTS AFTER THE MITIGATION PROGRAM

Project construction would involve grading activities over the entire project site. Short-term earthwork activities during construction may result in soil erosion or the loss of topsoil in the absence of mitigation. As such, **PDF GEO-1** requires a site-specific City-approved design assessment be completed; therefore off-setting any potential geological impact. Additionally, the project is conditioned with **MM WQ-1** whereby the Applicant shall comply with the project-specific National Pollutant Discharge Elimination Permit requirements which includes measures intended to offset or reduce impacts to soils such as: limiting construction access routes and stabilizing access points; staking/marking construction limits; protection of cut and fill surfaces from sheet, rill and gully erosion; stabilizing temporarily denuded areas with seeding, mulching, jute netting, hay bales and silt fences. Adherence to the mitigation program would result in **less than significant** effects regarding geology and soils.

3.7.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in Chapter 3.0, *Environmental Setting and Impact Analysis*, above.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on geology and soils?

No

Based on the cumulative project list provided in **Chapter 3.0 Environmental Setting and Impact Analysis**, cumulative development may result in development of new residential, commercial, mining activities, industrial, recreational, and medical facilities in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

The geotechnical characteristics of each project site would be evaluated on a project-by-project basis, and appropriate mitigation measures would be required, as necessary, in addition to federal, State and local regulations.

3.8 HAZARDS AND HAZARDOUS MATERIALS

This chapter addresses the potential for the proposed project to expose the public to hazards or hazardous materials as a result of Project implementation. Safety measures unique to a MRF/TS and compliance with applicable federal, state, and local laws, ordinances, regulations, and standards are evaluated. Where potential environmental impacts are identified, a mitigation program is developed to reduce these impacts to the extent feasible.

For the purpose of this EIR, hazards and hazardous materials are considered any material which may cause a potentially adverse impact to human health and safety, or to the environment. Hazardous materials and wastes are classified in four categories as (1) toxic, (2) ignitable, (3) corrosive, and (4) reactive. This can include a wide range of materials and products, including for example, fluorescent lights, batteries, computers/televisions, paint and solvents, electric switches and relays, mercury thermometers, household and landscape chemicals, building materials (asbestos and treated wood), as well as, automobile oil and antifreeze (http://www.calrecycle.ca.gov/HomeHazWaste/info/ Accessed September 2013). Hazardous wastes are materials that no longer have practical use and are meant for disposal rather than recycling and/or reuse. The Los Angeles County Department of Public Health defines household hazardous waste as any product labeled as toxic, poison, combustible, corrosive, flammable or irritant that is disposed of (http://dpw.lacounty.gov/epd/hhw/ Accessed September 2013).

This section is based on review of the *Phase I and II Environmental Site Assessment* (Converse, 2009 and 2010, respectively), *Geotechnical Input for CEQA Process, Valley County Water District, Proposed Two "Arrow" 3 Mg Welded Steel Water Tanks, APN 8535-001-911, Northwest Corner Of Live Oak Avenue And Arrow Highway, Irwindale, California* (Leighton Consulting, 2009), project materials, and City requirements.

A *Phase I and II Environmental Site Assessment report* was prepared in order to identify potential Recognized Environmental Conditions (RECs) in connection with the site (Converse Consultants, 2009-2010). The *Phase I Environmental Site Assessment* was completed in accordance with the limitations set forth in ASTM Practice E1527-05 and complies with standards and practices set forth in 40 Code of Federal Regulations (CFR) Part 312. The primary function of a Phase I Environmental Site Assessment is to search various recognized federal, State, and local databases to identify locations that use, store, or dispose of hazardous materials as well as sites which have had historical incidents dealing with hazardous materials, interviews with property owner and public agencies, and a site inspection. Environmental Data Resources, Inc. (EDR) maintains extensive databases of all agencies dealing with hazardous materials and wastes.

Based on the findings of the *Phase I Environmental Site Assessment, a Phase II* was recommended to: 1) Include assessment activities to assess historic features associated with the former United Concrete Pipe Corporation facility; 2) Include soil sampling at a minimum for methyl tertiary butyl ether (MTBE), and a soil vapor survey; 3) Include assessment in the general area of the current observed AST and associated pump feature; and 4) Analyze the roofing debris material for asbestos prior to disposal. The Phase I and II Environmental Site Assessments remain reliable due to perimeter fencing of the Project site and the fact that there has been no evidence of dumping.

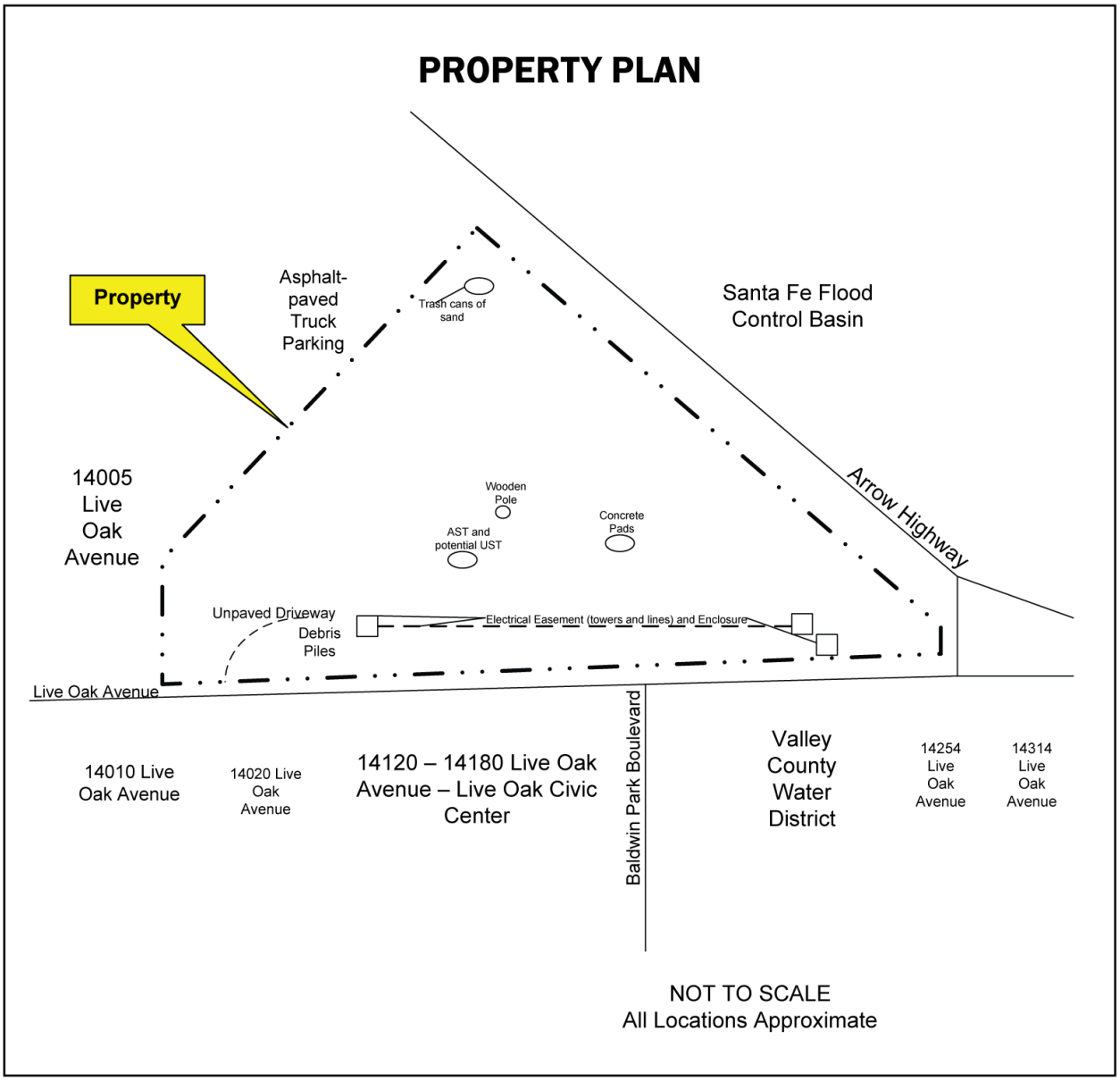
3.8.1 EXISTING ENVIRONMENT

The *Phase I Environmental Site Assessment* identified the project site as the location of a United Concrete Pipe Corporation manufacturing facility. According to the records, the original facility was developed by 1936. A large expansion occurred between 1957 and 1960, with the construction of a concrete batch plant, craneway, bins, alterations of monorails, and other related buildings and structures (including cesspools and onsite sewer septic tank systems). The facility was demolished by 1990, and the property was cleared and graded in 1992. The surrounding area had become densely urbanized by the 1940s with a mix of residential, commercial and industrial uses, including mining operations.

During the site reconnaissance, the following was observed on the property (refer to **Exhibit 3.8-1 Property Plan**):

- An approximate 10,000-gallon aboveground storage tank (AST) and associated pump on the south-central portion of Property.
- Concrete pads on the eastern portion of the Property that may have been used for either building foundations or equipment pads.
- Several piles of concrete debris and roofing materials on the southern portions of the Property. In addition to the concrete and roofing materials piles, minor trash and debris including trash cans full of sand, metal and plastic piping, and rubber hosing was observed onsite. No leaks, stains, or odors were observed or detected in the vicinity of the trash and debris observed.
- Powerlines and concrete enclosures with electrical meters on the southern portion of Property.

Exhibit 3.8-1 Property Plan



The Project site appears on several environmental databases. A summary of the EDR search is provided below. The complete Phase *I and Phase II Environmental Site Assessment*s are provided within **Appendix F**.

ENVIROSTOR

The Department of Toxic Substances Control's (DTSCs) Site Mitigation and Brownfields Reuse Program's ENVIROSTOR database identifies sites that have known contamination or sites for which there may be reasons to investigate further. According to the EDR report, United Concrete Pipe Corporation was listed as an historical ENVIROSTOR site, where in 1990 "No Further Action" was reported by the DTSC. It appeared that in 1990 and 1994, the DTSC oversaw a site screening and Preliminary Endangerment Assessment Report. The DTSC gave the site a no further action designation due to the lack of significant hazardous constituents in the soil. Mineral oil was listed as the primary contaminant in the soil which the DTSC does not consider to be a hazardous waste. The EDR report stated that the site manufactured large concrete pipe sections for water and sewer pipelines. One (1) 8,000-gallon and two (2) 10,000-gallon underground storage tanks (USTs) near the centrifugal area (north-central portion of the Property) were removed in October 1987. Sample results indicated the maximum concentration of petroleum hydrocarbons detected was 140 milligrams per kilogram (mg/kg). Based on the report, closure was granted by the Los Angeles County, Department of Public Works (DPW). In May 2000, a Regional Water Quality Control Board (RWQCB) letter indicated that the previous UST removals and closures at the United Concrete Pipe facility did not include testing for methyl tertiary butyl ether (MTBE). (Refer to the conclusion of the Phase II ESA detailed below).

RCRA Generators List (RCRA-SQG/RCRA-LQG)

The EPAs RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. This is a database which lists facilities that generate, store, transport, treat, or dispose of hazardous waste. According to the EDR report, the site was reported as a small quantity generator and a historic large quantity generator with no violations reported.

Facility Index System/Facility Registry System (FINDS)

The FINDS database contains both facility information and 'pointers' to other sources that contain more detail.

Hazardous Waste & Substances Sites List (HIST CORTESE)

Historic database of sites which have been identified as leaking underground storage tank sites, landfills, or Cal-Sites.

Leaking underground Storage Tanks (LUST) Sites

An inventory of reported leaking underground storage tank incidents reported to the state. According to the EDR report, United Concrete Pipe Corporation was listed as a "completed-case closed" LUST site as of 1994.

Historical and Active Underground Storage Tank (UST) Sites

An inventory of USTs identified on the following databases: Facility Inventory Database (CA FID UST); UST; Hazardous Substance Storage Container Database (HIST UST); and Statewide Environmental Evaluation and Planning System (SWEEPS UST).

RWQCB – Site Cleanup (SLIC)

Review of the RWQCB SLIC list. According to the EDR report, no further action (United Concrete Pipe Corporation) was required by the RWQCB SLIC unit; however, no other information regarding this case was provided.

Los Angeles County Site Mitigation Log (LA Co. Site Mitigation)

Review of the Los Angeles County Site Mitigation Log from the Community Health Services. No pertinent information was provided in the database listing.

RWQCB Well Investigation Program (WIP)

WIP cases in the San Gabriel and San Fernando Valley areas are recorded by the RWQCB. According to the EDR report, United Concrete Pipe Corporation was identified as having a historical WIP case.

Air Resources Board Emissions (EMI)

Toxics and criteria pollutant emissions data are collected by the Air Resources Board and local air pollution agencies. According to the EDR report, United Concrete Pipe Corporation was permitted by the South Coast Air Quality Management District (SCAQMD) to emit organic hydrocarbon gases, reactive organic gases, carbon monoxide, oxides of nitrogen and sulphur, and particulate matter in 1987.

Various other surrounding properties within ¼ mile of the site were listed on databases in the EDR report. However, the potential for environmental impact to the Property from these adjacent sites are determined to be low due to one or more of the following: type of regulatory listing; location with respect to the direction of regional groundwater; distance from the Property; and status of the case (i.e., case closed).

Other off-site locations of concern identified by EDR within a maximum 1¼-mile radius from the property included an Area of Concern (a large portion of the San Gabriel Valley, an area with

known groundwater contamination), solid waste landfills, LUST sites, UST sites, WIP sites, LA County HMS sites, and HAZNET sites. The potential for environmental impact to the Property from these off-site locations of concern are determined to be low due to one or more of the following: type of regulatory listing; location with respect to the direction of regional groundwater; distance from the Property; and status of the case (i.e., case closed).

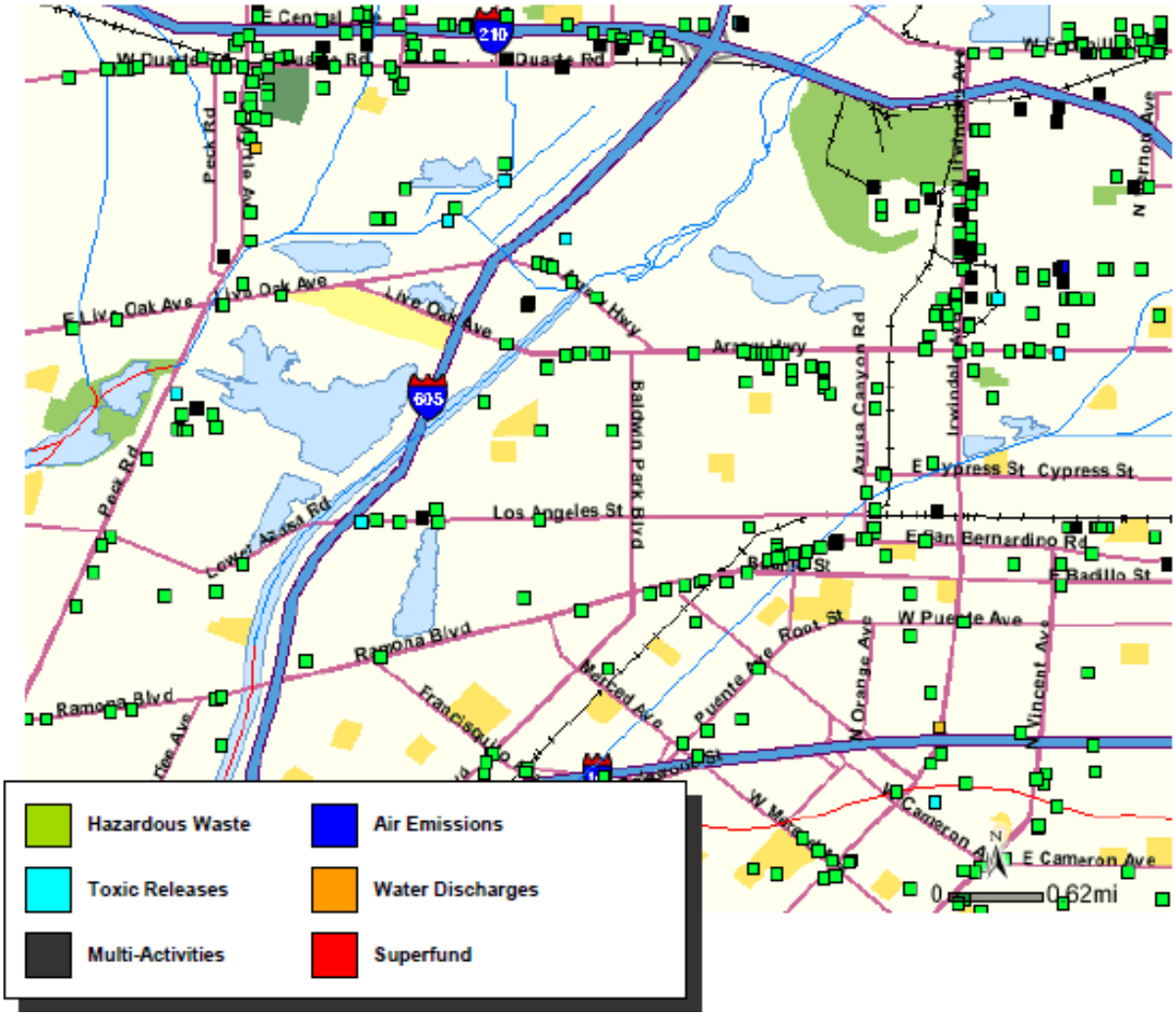
A number of agencies are involved in remediating the historical groundwater contamination within the San Gabriel Valley. These agencies include the Los Angeles Regional Water Quality Control Board, the Watermaster, the San Gabriel Valley Water Quality Authority, and the U.S. Environmental Protection Agency. This contamination was caused by improper uses and disposal of industrial and agricultural chemicals throughout the Valley historically. Industrial practices resulted in the improper disposal of chemicals such as Volatile Organic Carbons (VOC). Poor agricultural practices by farmers have also resulted in contamination of the groundwater with nitrates (NO_3). Consequently, a large portion of the San Gabriel Valley groundwater is considered a Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLA) and National Priority List - Superfund (NPL) cleanup site. A more detailed discussion regarding groundwater contamination in the region is provided in Chapter 3.13, *Water Quality and Hydrology*.

A number of regulated sites are located within the City of Irwindale and in adjacent communities. A listing of hazardous waste, toxic releases, air emissions, water discharges, and superfund sites are provided in **Exhibit 3.8-2 Regulated Sites in the City of Irwindale and Surrounding Cities**. Because these businesses use hazardous materials, they are required to obtain necessary permits from various public agencies. Most of these sites are located to the west of the site along both Arrow Highway and Live Oak Avenue, and are most likely comprised of sites that use, store, or dispose of hazardous materials or waste off-site. This exhibit identifies those registered hazardous waste generators and handlers in the City.

The *Phase I Environmental Site Assessment* revealed no evidence of Recognized Environmental Conditions (REC) in connection with the Property, except for the following:

- The historic industrial use of the Property including manufacturing, the use of underground storage tanks (USTs), an above ground storage tank (AST), and cesspools;
- The historic and current use of industrial properties that adjoin the Property; and
- Roofing material debris.

Exhibit 3.8-2 Regulated Sites in the City Of Irwindale and Surrounding Cities



Source: City of Irwindale General Plan Update 2020, Exhibit 6-4

Note: Most of the groundwater in the San Gabriel Valley near the Proposed Project site is considered a CERCLA Superfund site with varying levels of contamination. Consequently, the area of the City of Irwindale and surrounding Cities is within the overall San Gabriel Valley Superfund site. This Superfund site has been and currently is under groundwater remediation. However, the Proposed Project site is currently vacant with no improvements and has not attributed to contamination associated with the Superfund site.

As a follow-up to the *Phase I Environmental Site Assessment*, a *Phase II Environmental Site Assessment* was completed to screen the site for subsurface contamination from historical uses identified in the *Phase I Environmental Site Assessment*. Based on the analytical results, the following conclusions and recommendations are made:

- The reported concentrations of TPH in the diesel and oil range in the soils samples analyzed are below the current MSSLs based on a depth to groundwater of approximately 230 feet bgs.
- The reported concentrations of VOCs (benzene, toluene, and m,p xylenes) and SVOCs (Bis 2-ethylhexyl phthalate) in the soil samples analyzed are below their current RSLs for both residential or commercial land use and MSSLs, with the exception of benzene. However, the only reported concentration of benzene (1.66 ug/kg from location GP9A at 5 feet bgs) only exceeds the RSL for residential land use.
- All reported metals are below their respective RSL-r, with the exception of arsenic. However, concentrations of arsenic are less than the DTSC screening level for school sites of 12.0 mg/kg.
- A total of 14 VOCs were reported in the soil vapor samples. Currently, CHHSLs are only established for four of the 14 detected VOCs. The maximum reported concentrations of PCE, toluene and xylenes (150, 550, and 714 ug/m3, respectively) reported in samples from this assessment were below their respective residential CHHSLs. Benzene was reported at a concentration of 241 ug/m3 in the sample from location GP9C at 10 feet bgs, which exceeds the CHHSL-r of 122 ug/m3. No concentrations of benzene were reported in any of the other samples analyzed as part of this investigation.
- The maximum reported concentrations of all VOCs in soil vapor samples are less than their respective commercial RSLs for indoor air with the following exceptions: 1,3-Butadiene, Chlorobenzene, and Ethylbenzene. Based on the limited number of detections of each of these three compounds, and their concentrations in soil vapor relative to their respective indoor air screening levels, these compounds are not considered to pose a significant risk.

Based on the analytical results of the initial samples collected during the December 2009 sampling event, additional sampling was conducted to further evaluate reported concentrations of PCE in soil vapor at location GP8, as well as concentrations of TPH and SVOCs in soil and VOCs in soil vapor at location GP9. The reported concentrations of metals, TPH, VOCs and SVOCs in soil samples and VOCs in soil vapor samples from the other eight sample locations at the site were below current screening levels and did not warrant further investigation.

3.8.2 HAZARDS RELATED TO THE PROPOSED PROJECT

Only mixed municipal solid wastes will be accepted at the MRF/TS facility. The facility will not accept liquid wastes, designated wastes, hazardous wastes, and/or radioactive or medical wastes. This does not, however, preclude the possibility that radioactive and/or other hazardous materials or wastes could unknowingly be concealed in loads brought to the facility. No municipal waste will remain at the site for extended periods (such materials will not remain on site longer than 48-hours per State regulations), and municipal wastes are continually moved through the facility either directly to transfer trucks or into the MRF for sorting and then to transfer trucks.

The MRF/TS facility may include use of the equipment or activities which may create a potential for safety hazards. The equipment and activities expected to be used on-site may involve the use of bulldozers and scrappers within the tipping floor area; a compactor for compressing recovered (recyclable) goods into bales; a grappler to lift compacted recovered (recyclable) goods; and wheel loaders, forklifts, and fork trucks on-site in the MRF/TS. On-site activities may involve ignitable, radioactive or other hazardous materials, removal of animals (dead or alive) in the waste stream; storage or use of propane, oil, diesel fuel, and gasoline; and elevated noise levels, dust inhalation, and accidental exposure to hazards. The potential risk associated with these activities may include bodily injury from heavy equipment, trucks, and sharp objects; elevated noise levels near heavy equipment; dust inhalation; fire; explosion; and exposure to hazardous materials.

On-Site Management Plans

The Applicant has established several safety management plans as part of the Proposed Project. These plans will be made mandatory conditions of the project, subject to approval by the City, and enforceable by the City. The *On-Site Management Plans* are referred to as Project Design Features (PDFs) in this EIR. The contents of the *On-Site Management Plans* have been derived from State, County, and City regulations and guidelines, as well as day-to-day operations at the Applicants City of Industry MRF (refer to **Appendix B – On-Site Management Plans**). The *On-Site Management Plans* will be updated periodically based on changes in applicable government policies and as necessary. The *On-Site Management Plans* consist of various site-specific administrative, construction-related and operational functions, and will include:

1. Litter Prevention and Control Plan
2. Pest Control Plan
3. Odor Control Plan
4. Noise Control Plan
5. Hazardous Materials Exclusion and Management Plan
6. Fire Prevention, Control, and Mitigation Plan

7. Emergency Action Plan
8. Emergency Response Training Plan

As another PDF, the Applicant will form a Safety Committee that participates in the yearly review/update to the *On-Site Management Plans* (referred to as **PDF HAZ-1**). The Safety Committee would be comprised of Athens personnel, including the Risk Management Coordinator, the department heads of each area of the operation (i.e., waste hauling, maintenance, MRF), and an accounting department manager representing the office staff, as well as, a minimum of one (1) staff member from the City of Irwindale. With the implementation of **PDFs HAZ-1** and **HAZ-2**, the potential risks to people in and around the site, including employees and visitors, from risk of bodily injury, elevated noise levels, dust inhalation, fire, explosions, and exposure to hazardous materials are expected to be less than significant. (Refer also to analysis below and in **Chapters 3.3 Air Quality**, **3.10 Noise**, and **3.12 Traffic**).

3.8.3 REGULATORY SETTING

U.S. Environmental Protection Agency / Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) grants the U.S. Environmental Protection Agency (EPA) authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. The 1984 Federal Hazardous and Solid Waste Amendments to RCRA focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

Comprehensive Environmental Response, Compensation, and Liability Act / Superfund Amendments and Reauthorization Act

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Superfund Amendments and Reauthorization Act (SARA), an amendment to CERCLA, identify requirements for planning, reporting, and notification concerning hazardous materials and hazardous material releases into the environment. SARA and CERCLA regulations are presented in Title 40, CFR, Parts 305 through 355.

Occupational Safety and Health Act

The federal [and State of California] Occupational Safety and Health Administrations (OSHA) are the primary agencies responsible for enforcing workplace regulations which govern worker

safety. Separate OSHA standards have been developed for construction and operations workers. Generally, Title 29, CFR, Part 1926 governs construction worker safety, and Title 29, CFR, Part 1910 applies to industrial workers. The California Division of Occupational Safety and Health (Cal-OHSA) provides construction and operation worker safety issues under the California Occupational Safety and Health Act of 1970. Cal-OSHA is also responsible for developing and enforcing workplace safety regulations. Most of these regulations are provided in Title 8 of the California Code of Regulations (CCRs) and enforced by the Cal-OHSA.

United States Department of Transportation

The United States Department of Transportation (U.S.DOT) regulates the interstate transport of hazardous materials and wastes through implementation of the Hazardous Materials Transportation Act (HMTA). The provisions of the HMTA contain requirements for hazardous materials shipments and packaging and contain guidelines for marking, manifesting, labeling, packaging, placarding, and spill reporting. Specific regulations dealing with hazardous materials are covered under Title 49, CFR, Part 107.600 (Registration of Persons Who Offer to Transport Hazardous Materials), Title 49, CFR, Part 173.56 (Hazardous Material Regulations, Shippers – General Requirements for Shipping and Packaging), and Title 49, CFR, Part 397 (Transportation of Hazardous Materials; Driving and Parking Rules).

Uniform Building Code and Uniform Fire Code

Federal fire protection codes are provided in the Uniform Building Code (UBC) and the Uniform Fire Code (UFC). The 1997 UBC establishes building materials, spacing, and other items or practices that must be used to minimize the risk of fires to structure and facilities. The 1997 UFC addresses fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards and safety measures, hazardous material storage and use, and other general and specialized fire-safety requirements. The California Building Code augments the UBC and provides information for specific changes to various sections in it. The County of Los Angeles has adopted these codes, and the City of Irwindale has adopted the County's Building Code.

California Department of Toxic Substance Control

The Department of Toxic Substance Control (DTSC) is responsible for regulating hazardous waste facilities (facilities that generate, treat, store, or dispose of hazardous waste) overseeing the cleanup of hazardous waste sites and identifying ways to reduce hazardous waste produced in California. DTSC jurisdiction may overlap somewhat with the Regional Water Quality Control Board (RWQCB), but generally, DTSC is the lead agency in managing hazardous waste.

California statutes and regulations on hazardous materials and waste are contained in the Health and Safety Code Section 25100 and Title 22, CCR, which contain regulations adopted and administered by DTSC. Title 22 defines hazardous materials and waste according to their physical or chemical properties. Hazardous wastes are materials that no longer have practical

use and are meant for disposal. Hazardous materials and wastes are classified in four categories: (1) toxic, (2) ignitable, (3) corrosive, and (4) reactive. Division 4.5 of Title 22 defines hazardous and special waste, identifies State and federal hazardous waste criteria, and regulates the storage, transportation, and disposal of wastes. The California regulations specifically identify petroleum products as hazardous material.

California Air Resources Board

One of California Air Resources Board's (CARB) major goals is to protect the public from exposure to toxic air contaminants. The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk.

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program, by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) develops and enforces water quality objectives and implementation plans that protect beneficial uses of the State's waters. The City of Irwindale is located within the jurisdiction of the Los Angeles RWQCB, the primary regulatory agency for stormwater discharges and for sites that impact or have the potential to impact the quality of surface or groundwater.

The **Litter Control, Recycling and Resource Conservation Act of 1977** created the curbside recycling infrastructure. This Act promoted local governments, nonprofits, and private companies to develop recycling programs.

The **Solid Waste Disposal and Site Hazard Reduction Act of 1987** established new landfill requirements for financial assurances. These financial assurances must cover the operation of the facility as well as planning and funding post-closure activities for the facility.

California Highway Patrol

In California, the California Highway Patrol (CHP) has the primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. Section 31303 of the California Vehicle Code requires the shortest transit time possible to be used when transporting hazardous materials on State or interstate highways. For CHP purposes, hazardous material is defined as any substance, material, or device posing an unreasonable risk to health, safety, or property during transportation, as defined by regulations

adopted pursuant to Section 2402.7. "Hazardous material" includes explosives and hazardous wastes or substances as defined by regulations adopted pursuant to Section 25141 of the Health and Safety Code and medical wastes, as defined in Section 117690 of the Health and Safety Code.

California Accidental Release Prevention

The California Accidental Release Prevention (CalARP) program has taken the EPA's Risk Management Program and made it more stringent for California. The purpose of the program is to prevent the catastrophic release of regulated substances. This is a performance based regulation that has different prevention elements for different program levels. The program also required regulated sources to perform an off-site consequence analysis looking at the potential impact of a release of a regulated substance under a worst case and alternate release scenarios. The CalARP program is implemented by the Certified Unified Program Agencies (CUPAs) and requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. A Risk Management Plan must contain an offsite consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses submit their plans to the CUPA, which makes the plans available to emergency response personnel. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

California Hazardous Materials and Waste Codes

California laws and regulations associated with the storage, handling, use, and/or disposal of hazardous materials are provided in various California Health and Safety Code (H&SC) and CCR. The federal RCRA allows individual states to develop their own programs to regulate hazardous waste discharges. A state program, however, must be at least as stringent as RCRA requirements. California has developed its own hazardous waste control program through the passage of the California Hazardous Waste Control Law (HWCL). It should be noted, however, the HWCL includes hydrocarbon waste (e.g., oils, lubricants, and greases) that are not classified as hazardous waste under the federal RCRA regulations. California regulations also cover generators of universal waste (e.g., batteries, mercury control devises, dental amalgams, aerosol cans, and lamps/cathode ray tubes) not specified in federal regulations. This regulation is found in H&SC, Section 25100 (et seq.). Administration and enforcement of the HWCL is through DTSC.

H&SC, Section 25500, et seq. (known as the Water Bill), and the regulations in Title 19, CCR, Section 2620, et seq., requires that local governments be responsible for the regulation of facilities that store, handle, or use hazardous materials above threshold quantities (TQs). The law mandates that facilities, which store these hazardous materials in excess of their TQ, must

prepare a Hazardous Material Business Plan (HMBP). The HMBP identifies the facility's internal response requirements to accidental spills such as emergency contacts, hazardous material inventory, control methods, emergency response, and training. The law also requires that the HMBP be submitted to the local administering agency (normally the local fire department or public health agency). All spills from a facility must be reported to both the local administrative agency and the Governor's Office of Emergency Services. The threshold quantities for identified hazardous materials are 55 gallons for liquids, 500 pounds for solids, and 200 cubic feet for compressed gases measured at standard temperature and pressure.

Proposition 65, the Safe Drinking Water and Toxics Enforcement Act, regulates cancer-causing and reproduction-impairing chemicals. Users of regulated chemicals identified under this law are responsible for informing the public regarding potential exposure to the materials. The law is intended to prevent discharges of specified hazardous materials into drinking water sources, provides a periodically updated listing of chemicals of concern (COC). Proposition 65 is administered through California's Office of Environmental Health Hazard Assessment (OEHHA).

The California Unified Hazardous Waste and Hazardous Material Management Regulatory Program Act was established in Chapter 6.11, Division 20, and Section 25404 of the H&SC. This program establishes requirements for dealing with hazardous waste locally by creating the Certified Unified Program Agency (CUPA). This responsibility is delegated through a Memorandum of Understanding (MOU) between the CalEPA and the local agency. The main CUPA agency for the City of Irwindale is the Los Angeles County Fire Department; although, the Los Angeles County Public Works Department is the CUPA agency for dealing with Underground Storage Tanks (UST).

Other requirements dealing with hazardous materials are provided as follows:

- Title 19, CCR, Section 66262 requires generators of waste to determine whether it is a "hazardous waste" as defined on the list of hazardous materials specified in federal or State regulations. This regulation also specifies a labeling requirement for hazardous waste and identifies requirements for small quantity generators (SQG) as well as manifesting requirements.
- H&SC, Section 117600 identifies and provides requirements in dealing with medical wastes.
- H&SC, Section 25189 specifies what constitutes illegal hazardous waste disposal activities.
- Title 19, CCR, Section 66265 requires facilities to properly store hazardous materials in such a way as to minimize the possibility of fire, explosion, or any unplanned release to air, soil, or surface water. This regulation also provides inspection for areas storing hazardous materials, training for people handling hazardous wastes, and emergency preparedness and prevention provisions.

- H&SC, Section 25250, et seq., specifies that used oil is a hazardous material under State regulations and includes handling and disposal requirements.
- H&SC, Section 25143 details recycling and reporting requirements for hazardous materials.
- H&SC, Section 25187 and 25404 establish site assessment guidelines for contaminated sites that may require remediation as a result of a spill.
- H&SC, Chapter 6.5 requires generators of hazardous material to manifest, establish pre-transport requirements, maintain records, train personnel, and develop contingency and emergency response plan(s) for dealing with hazardous materials.
- H&SC, Sections 25270 through 2270.5 (Aboveground Petroleum Storage Act) apply to facilities with a single aboveground storage tank with a capacity greater than 1,320 gallons. This law ensures compliance with the federal CWA regulation specified earlier.

Storage of Petroleum Products

Requirements regarding installation of underground Storage Tanks (USTs) are provided in CCR, Title 23, Chapter 16. These regulations are administered by the SWRCB. These regulations address UST design, construction, and monitoring requirements; tank and upgrade requirements; site-specific variance procedures; local agency involvement; permit application, quarterly reporting, and trade secret requirements; corrective action requirements; and laboratory data submission reports.

County of Los Angeles Department of Public Health

The Los Angeles County Department of Public Heath's Solid Waste Management Program (acting as a Local Enforcement Agency [LEA]) for the CalRecycle) enforces the standards for solid waste handling and disposal. The County of Los Angeles Department of Public Health also provides Solid Waste Facility Permits and Tire Hauler Permits.

County Sanitation Districts of Los Angeles

The County Sanitation Districts of Los Angeles (Sanitation Districts) are a partnership of 24 independent special districts providing wastewater and solid waste management services for Los Angeles County. The County Sanitation Districts of Los Angeles also provides Industrial Waste Water Discharge Permits.

Los Angeles County Fire Department
Health and Hazardous Materials Division / Los Angeles County Public Works Department

Senate Bill (SB) 1082 was passed in 1993. This bill required the administrative consolidation of six hazardous materials and waste programs under identified local CUPAs. For the City of Irwindale, these agencies are the Los Angeles County Fire Department and the Los Angeles

County Public Works Department. The program elements consolidated under the CUPA program include the following:

- Hazardous Waste Generators and On-site Hazardous Waste Treatment Programs;
- Aboveground Petroleum Storage Tank Spill Prevention Control and Countermeasure Plan (SPCC);
- Hazardous Materials Response Plans and Inventory Program;
- California Accidental Release Prevention Program (Cal-ARP);
- Underground Storage Tank Program (UST); and
- Uniform Fire Code Plans and Inventory Requirements.

The Los Angeles County Department of Public Works has been given jurisdictional authority over the regulation of USTs, while the Health Hazardous Materials Division (HHMD) of the Los Angeles County Fire Department has been designated to administer five of the above programs. The goal of the HHMD is to protect the public health and environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight.

California Building Code / County of Los Angeles / City of Irwindale

Most state fire regulations for structures are covered in the California Building Code (CBC). The CBC specifies the acceptable design and construction requirements associated with fire protection for various facilities or structures. The CBC augments the UBC and provides information for California-specific changes. These regulations are enforced through county or city building departments. Fire-related concerns and regulations are administered by the California Department of Forestry and Fire Protection, the Office of the State Fire Marshal and by the county or city fire chief or marshal.

The County of Los Angeles has adopted the CBC; in addition, the City of Irwindale has adopted the County's Code as its own Building Code with minor exceptions (Irwindale Municipal Code [IMC] 15.04.010 - Adoption of code). The entirety of Title 15 of the IMC defines the City's Building and Construction Code which includes building codes, electrical codes, fire codes, mechanical and plumbing codes. IMC section 15.04 states the adoption of codes, copies files, terms defined, and fee schedule-modification by resolution.

Section 15.4.010 states:

> *A. There is hereby adopted, as the city building code, except as provided in this chapter, that certain building code known and designated as the Los Angeles County Building Code, 2011 Edition (Title 26 of the Los Angeles County Code), which incorporates and amends the 2010 California Building Code,*

including all appendixes thereto and changes made by the county of Los Angeles and by the city of Irwindale, and such code shall be and become the building code of the city, regulating and controlling the design, construction, quality of materials, grading, use, occupancy, location and maintenance of all buildings or structures and prescribing conditions under which such work may be carried on within the city and providing for the issuance of permits and the collection of fees therefor.

B. Los Angeles County Ordinance No. 2010-0053, as adopted by county of Los Angeles, is adopted in its entirety, with City's Amendments to Appendix "J".

In addition, the City of Irwindale relies on state and County of Los Angeles local laws, ordinances, regulations, and standards and their enforcement agencies regarding solid waste material and environmental safety regulations. As such, the City has adopted IMC Title 8, Health and Safety 15.04.010 IMC 8.04.010 - Title 11 and Division 1 of Title 8 of county code—Adopted—Copies on file states:

The "Health and Safety Code of the County of Los Angeles," the same being Title 11 of the Los Angeles County Code, and the "Public Health Licenses Code of the County of Los Angeles," the same being Division 1 of Title 8 of the Los Angeles County Code, as those titles have been amended through and including March 1, 1998, are adopted as the health and safety code for the city (hereinafter referred to as "health code"). Three copies of the health code are on file in the office of the city clerk of the city. (Ord. 549 § 1, 2000: Ord. 218 § 1(part), 1968: Ord. 150 § 1(part), 1964: Ord. 88 § 1(part), 1960: prior code § 5400(a)).

The City's *Public Safety Element* of the General Plan Update (2008) identifies the City's policy relative to the reduction and mitigation of natural and man-made hazards as a means to improve the safety of its citizens, employment base, and visitors. The Safety Element is concerned with identifying existing hazards and ways to reduce risk to people and property from the hazards on persons and of property. Many of the City's industries produce, use, and store hazardous materials; therefore, public safety issues involve not only the use of these materials, but also the transport and disposal of the substances. City policies relating to health risks and environmental safety include:

Issue Area – Emergency Preparedness

The City of Irwindale will strive to maintain the highest levels of readiness to respond to disasters or local emergencies.

Safety Element Policy 1
The City of Irwindale will continue to review and if necessary, update its comprehensive emergency preparedness plan and hazard mitigation plan.

Safety Element Policy 2
The City of Irwindale, at a minimum, will maintain current emergency response standards.

Safety Element Policy
The City of Irwindale will work to reduce potential hazards through conscientious land use planning. The City shall require liquefaction assessment studies as part of development proposals in areas identified by the California Geological Survey as susceptible to liquefaction. The studies shall be conducted in accordance with the California Geological Survey's Special Publication 117; Guidelines for Evaluating and Mitigating Seismic Hazards in California, and the Southern California Earthquake Center's (1999) procedures to implement Special Publication 117 – Liquefaction Hazards (both documents are incorporated herein by reference). On sites shown to be susceptible to liquefaction, the City shall require the implementation of mitigation measures designed to reduce this hazard to an acceptable level. The City shall require a state certified engineering geologist or registered civil engineer; having competence in the field of seismic hazard evaluation and mitigation, to review the study at the Applicant's expense. The review shall determine the adequacy of the hazard evaluation and proposed mitigation measures and determine whether the requirements of State law are satisfied, as described in Special Publication 117 by the California Geological Survey

The City implements several Public Safety Element Programs such as building code review and code enforcement, disaster response database, hazardous materials control, fire prevention, emergency preparedness plan, environmental review, safety development review program, and police & fire control.

3.8.4 THRESHOLDS OF SIGNIFICANCE

The methodology for analyzing impacts related to health risks and environmental safety include identifying general types of hazardous materials and techniques that are likely to be used during Proposed Project construction, operation, and maintenance activities. In addition, federal, State, and local agency local laws, ordinances, regulations, and standards were analyzed to determine mandated mitigation measures required at the site.

The significance of impacts was defined based upon the 2013 State CEQA Guidelines, Appendix G. Using these thresholds, the Proposed Project would be considered to have a significant impact related to hazards and hazardous materials impacts if it were to:

a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?
b. Create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or environment?
e. Be located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working within two miles of a public use airport?
f. Be located within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
h. Expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?

3.8.5 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD HAZ-1

Would the Proposed Project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

And

THRESHOLD HAZ-2

Would the Proposed Project create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact with Mitigation Program

Construction

The use of hazardous material for construction of the MRF/TS facility could pose a potential hazardous material-related impact on the Proposed Project site and local transportation routes if a

spill or accident occurred. These potential impacts are common to the construction of a wide variety of buildings, and would be associated with transportation, storage, use, and disposal of various hazardous substances during construction. Typical hazardous materials used during construction of these types of facilities include:

- Motor oils
- Automatic transmission fluids
- Canned spray paints
- Gasoline and diesel fuels
- Mastic coatings
- Bottled oxygen and acetylene
- Propane and butane
- Lubricating grease
- Paint thinners
- Lubricants (such as WD-40)
- Brake fluids
- Paints (oil based and latex)
- Brazing and solder compounds
- Cleaning solvents
- Disinfectants
- Pressurized gases
- Hydraulic fluids
- Antifreeze

Hazardous materials would be stored in proper containers in material storage yard(s). Cleanup materials would also be stored at these location(s) in order to address potential spills. Hazardous waste (e.g., used oil, used oil filters, spent batteries, and other items) would be collected regularly and disposed of in accordance with all applicable federal, State, and local laws, ordinances, regulations, and standards. Detailed information about the use, storage, and disposal of hazardous materials would be provided in the State-mandated (OSHA) construction Hazardous Communication (HAZCOM) Plan. The HAZCOM Plan defines specific procedures for vehicle refueling and servicing, transportation and storage of hazardous materials, and disposal of hazardous wastes. For example, construction vehicles and equipment would be required to be serviced or refueled at least 100-feet from environmentally sensitive resources and ignition sources.

Except for gasoline and diesel fuel stored on or transported to the site as a part of the long-term convenience store operations, the potentially hazardous construction materials used at the site will be in small quantities (e.g., 1- to 10-gallons containers). Therefore, a spill of these materials will be localized and easily cleaned up. These small quantities of hazardous material used or stored at the site are routine for construction throughout the region and would not foreseeably pose a risk to the public or the environment.

HAZCOM procedures, in addition to Federal and state regulatory laws, are defined to minimize the chance of a fuel spill during servicing and refueling of vehicles and equipment. For example, vehicles would be required to carry absorbent materials to handle potential spills, inspected for fuel leaks regularly, and equipped with fire extinguishers. Hazardous material would be transported in U.S. DOT approved containers and allowed only on approved access roads.

Vehicles carrying hazardous materials would be equipped with appropriate materials to contain a small spill should one occur during transport. Vehicles and storage containers would be properly marked and inspected for leakage and other potential safety problems.

If unknown wastes or suspect materials are discovered during construction [that are believed to involve hazardous waste or materials], the Contractor is required to notify the County's Health Hazardous Materials Division. This division of the County's Fire Department is designed to ensure public safety in the event of an accidental occurrence, through the California Accidental Release Prevention Program (Cal-ARP). The goal of the program is to protect the public health and environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. With this preventative program, no adverse impacts would be expected to occur during construction.

Operations

The Proposed Project does not propose to receive, process, or transfer hazardous wastes at the MRF/TS, pursuant to California Code of Regulations Sections 14 17407.5 and 17408.2.
The use of hazardous materials during operational activities would include maintenance supplies and operational storage. Hazardous materials used for maintenance of on-site equipment and vehicles may include:

- Motor oils
- Automatic transmission fluids
- Paints and thinners
- Hydraulic fluids
- Lubricating grease
- Bottled oxygen and acetylene
- Cleaning solvents
- Antifreeze
- Brake fluid

Most of these hazardous materials would be limited to manufacturer-supplied containers of 55-gallon drums or less. These hazardous materials will be stored within specially designed hazardous material cabinets designed to meet federal and State regulations. At times, it may be necessary to transport these chemicals on-site for the repair or maintenance of equipment and/or vehicles.

The MRF/TS would be subject to compliance with the County's Health Hazardous Materials Division (HHMD) requirements pertaining to handling and storage of hazardous wastes. The HHMD would also regularly inspect the facilities, provide emergency response and enforcement services, and conduct mitigation oversight, if necessary, during MRF/TS operations. With the implementation of existing Federal, state, and local regulations pertaining to hazardous materials

handling and storage, impacts from reasonably foreseeable upset and accident conditions during the Project operations would be less than significant.

In addition, the MRF/TS is subject to compliance with the CalARP as implemented by the CUPAs; which requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

Employee Safety Hazards

Cal-OSHA is also responsible for developing and enforcing workplace safety regulations. Operational employee safety hazards at MRF/TS facilities are associated with motor vehicles and use of heavy equipment (e.g., trucks, forklifts, and front-end loaders, movement of transfer trucks), compactor/compressor units, handling of putrid materials (e.g., spoiled meat and dead animals), elevated noise levels, dust inhalation, and illegal disposal and temporary storage of hazardous materials. Consequently, the employees working at the facility could be exposed to potential risk such as injury from motor vehicles, sharp objects, vapor emissions, fires, and hazardous materials. Proper training and compliance with federal OSHA and CalOSHA standards is intended to minimize the potential risk of injury to operational personnel from the employee safety hazards, and proposed operations will not present any risks that are different from those routinely managed in similar facilities throughout the State. Therefore, it is not reasonably foreseeable that the Proposed Project will result in a risk to the public, including employees and visitors on site, and the environment from employee safety hazards.

Employees will be required to follow OSHA guidelines, as well as the **On-Site Management Plans**: Athens Services Hazardous Materials Program (**Appendix B** of the EIR), and all other local, State and Federal laws and regulations to handle and clean up any spills of hazardous materials. Based upon the Federal, State and local regulations and the limited nature of the use of these materials for the maintenance of equipment, it is not reasonably foreseeable that the routine storage and use of these chemicals would create a significant risk to employees, the public or the environment.

Convenience Store/Fueling Station

The concession area of the Proposed Project will include a fueling station; which would dispense gasoline, diesel, and compressed gas. This fuel station will be constructed in accordance with federal, State, and local required fire and safety standards. In addition, the fueling station will be periodically inspected by the Los Angeles County Fire Department to assure compliance with

these standards. Therefore, the operation of this fuel station would not foreseeably represent a potential risk.

The convenience store/fueling station will have underground storage tanks (USTs). These USTs will contain and dispense gasoline and diesel fuels to the public. USTs installation and operation are regulated under various federal, State, and Los Angeles local laws, ordinances, regulations, and standards. New USTs are required to meet rigorous design requirements, with leak prevention lining, and leak detection and recovery systems. Operation of the USTs at the site will be routine (to modern standards), and would not foreseeably result in risk to the public or the environment.

Based upon the Federal, State and local regulations, it is not reasonably foreseeable that the routine use of these fuels or USTs would create a significant risk to employees, the public or the environment.

Litter Control

Although trucks bringing MSW to the facility will be enclosed or covered, there is a potential that litter (e.g., paper, plastic, or other inert material) may not be contained within the truck or building. The Applicant has submitted a litter control plan designed to prevent this material from leaving the facility (**On-Site Management Plans**; *MRF Litter Prevention Program*).

Litter control measures will be undertaken at the site and on surrounding roadways to prevent escape of materials from trucks or the tipping floor. All registered waste haulers are required to have their loads contained in enclosed compactor trucks or in covered roll-off bins. The facility is fully enclosed, and trucks enter through automatic doors that close behind them prior to uncovering or dumping their loads. Trucks are then closed or recovered prior to leaving the enclosed building. (The facility maintains a supply of extra tarps at all times for replacement of faulty or missing tarps.) External litter control consists of regular sweeping and pick-up as needed throughout the day, including use of a mechanical sweeper on paved surfaces. Finally, a street sweeper will be used to sweep the haul truck ingress and egress routes on a daily basis each day of active operations at the facility.

Based upon the above, it is not reasonably foreseeable the Proposed Project will result in a risk to the public or the environment caused by litter from the facility.

Vectors

Vectors are defined as organisms that carry pathogens from one host to another. Vectors include certain insects (e.g., mosquitoes, flies, and ticks), small rodents (e.g., rats and mice), birds (e.g., gulls, crows, vultures, and pigeons), and microorganisms.

All materials brought to the MRF/TS site by licensed waste haulers will be delivered in enclosed compactor trucks or in covered roll-off bins. These vehicles contain and prevent litter from leaving the trucks as well as preventing vector accessibility to the solid waste. Additionally, these trucks go through the wash bay prior to leaving the site, which helps prevent and resist vectors.

To minimize the risk of vectors and pests at the facility, a pest control program has been developed by the applicant and submitted to the City; (**On-Site Management Plans**; *MRF Pest Control Program*). Elements of the plan include pest control, cleaning requirements, and design features to eliminate nesting sites. For example, standard traps will be placed inside and outside of the building in areas which could contain or provide access to rodents. These traps will be inspected weekly by station employees and – at a minimum – monthly by a licensed contracted pest control company. To minimize potential attraction of rodents or insects, the tipping floor and sorting area will be routinely swept daily to remove any debris that may attract these vectors. Furthermore, the tipping floor will be periodically (as necessary) power scrubbed to remove buildup of materials to ensure against attracting the vectors. Cal-OSHA and the County of Los Angeles, Department of Public Health regulations and requirements would control the handling and use of disinfectants for minimizing the presence of biological related vectors within the site. Non-recyclable wastes are also removed on a continuing basis throughout the day, thus, minimizing breeding and development of vectors.

The Proposed Project will use a "direct-transfer" system to remove green waste from the facility. All municipal solid waste will be processed and removed from the facility the day it is collected and deposited on the tipping floor. Under State of California regulations, all municipal solid waste collected at MRF/TS must be transported to permitted landfills in the region within 48-hours of collection. The rapid removal will help to minimize the potential presence of vectors at the facility. However, vectors would still be attracted to the facility for food and shelter. The attraction of vectors to the site could pose a potential significant impact if not mitigated. The implementation of the *On-Site Management Plans* and procedures (see **PDF HAZ-2**) as well as compliance with State and local laws, ordinances, regulations, and standards, which require increased response when vectors are evident on site, are designed to minimize potential vector hazards to less than significant.

Based upon the above, including **PDF HAZ-2**, it is not reasonably foreseeable that the Proposed Project will result in a risk to the public or the environment from vectors.

Fire Hazards

Most solid waste is flammable (e.g., paper and cardboard). Therefore, various items brought to the site could burn if an ignition source occurs. Possible ignition sources at the Proposed Project

site include burning or smoldering materials in a load entering the facility; sparks from vehicles or machinery; or lighted cigarettes or matches.

As a part of the Applicant's submittals to the City, a fire control program has been developed which outlines fire controls, emergency response procedures and training (see **Appendix B – On-Site Management Plans**; *MRF Fire Prevention, Control and Mitigation Plan*). The Proposed Project will be constructed in accordance with all UBC, CBC, UFC, and other State and local regulations to minimize the risk of a fire. State fire regulations require that specific and tailored fire control measures for the MRF/TS facilities be implemented as part of the Proposed Project.

These fire control rules and regulations are specified during design Plan Checks by the County of Los Angeles Fire Prevention Bureau for the City of Irwindale and require that the entire building be equipped with automatic overhead sprinklers for fire suppression. Fire extinguishers will also be strategically located in the recycling area, the tipping floor, and at other locations throughout the facility. Fire hoses will be positioned in the tipping building in accordance with Los Angeles County fire code requirements. Facility personnel will be trained in use of fire extinguishers and hoses, and periodic fire drills will be conducted at the facility. Operational personnel will be responsible for conducting rigorous maintenance, inspection, and repair of vehicles and equipment to minimize the risk of mechanical failures, which could result in sparks from a vehicle or machinery. In the event a fire occurs at the facility, the Los Angeles Consolidated Fire District station is approximately one mile east of the site, with an estimated response time of under six minutes (Project communication with Loretta Bagwell, Los Angeles County Fire Department, October 2013).

Flammables requiring storage at the facility would be in containers containing relatively low volumes (e.g., less than 55-gallon drums) and in accordance with federal, State, and local standards. The storage procedures of these flammables would also be subjected to periodic inspections by the Los Angeles County Fire Department.

Implementation of State and Los Angeles County laws, ordinances, regulations, and standards and internal regulations and plans would reduce the risk of fire to an acceptable limit. Based upon all of the above, it is not reasonably foreseeable that the Proposed Project will result in a risk to the public or the environment from a fire.

Waste Stream

The Proposed Project will be permitted to handle MSW, green waste, and C&D waste only. Under State regulations, all MSW collected at the MRF/TS must be removed and transported to permitted landfills in the region within 48-hours of collection. Consequently, MSW is

continually moved through the facility either directly to long-haul transfer trucks or into the MRF for separation of recyclable materials prior to transfer of recyclables and residual wastes to long-haul trucks. The Proposed Project will regularly transfer the recycled materials collected at the facility, with the maximum storage time of 30-days for recyclables per Calrecycle regulations. The recovered [recycled] materials such as paper, plastic and glass would be baled and/or bound, and stored inside the building. Loads of green wastes, go out as often as there are containers or trailers of it ready for transport to an appropriate facility for either recycling or disposal; yet are not permitted to remain on the site for more than 24-hours under CalRecycle regulations.

Household Hazardous Waste

The potential exists for household hazardous wastes could be transported to the site in the municipal solid waste transfer/collection trucks. Household hazardous wastes (HHWs) can include universal wastes such as household chemicals, cleaning solvents, and electronic or e-waste. These HHWs can include compressed gas cylinders, used pesticides or herbicides containers, batteries, used oily products, old paint cans, mercury switches, electronic components, radioactive waste, medical waste, and/or used solvents. Generally, most HHWs identified in the waste stream are discovered in small containers (e.g., quarts, gallons, or 5-gallons) or single items/container (e.g., a computer or bag). The existence of these wastes in loads dumped on the tipping floor could pose a significant impact to workers and the environment. The MRF/TS will not accept construction or other debris containing asbestos, lead-based materials, or other contaminated material.

Facility "spotters" are responsible to oversee the collection truck unloading process. These spotters are required to be trained, responsible for identifying, and removing any noticeable HHW found on the tipping floor. In addition, hazardous materials found during trash sorting and recovery would be spotted and removed by trained operational personnel. Any HHW found will be retrieved, identified, logged and labeled by supervisory personnel, and transported to a specially designed fire-rated, lockable, waterproof, and ventilated containment shed.

A radiation detector will be located at the scale house to screen each truck entering the proposed MRF/TS facility for radioactive materials. If radioactive materials are detected in the load, the truck will be immediately dispatched from the facility to an appropriate facility qualified to handle this type of material. Any radioactive materials detected in loads entering the facility will be handled per Los Angeles County Radiation Management Protocol/ Procedures. Furthermore, the California Highway Patrol and possibly other regulatory agencies will be contacted to determine the origin of this illegal material, and prevent its improper disposal.

If an unidentified potential hazardous material is found in the solid waste stream, the material will be isolated and moved to a covered container until it is identified. If this material is found to

be a potential hazardous waste or material, the Contractor is required to notify the County's Health Hazardous Materials Division. This division of the County's Fire Department is designed to ensure public safety in the event of an accidental occurrence, through the California Accidental Release Prevention Program (Cal-ARP). The goal of the program is to protect the public health and environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight. With this preventative program, no adverse impacts would be expected to occur during operational activities.

Under State regulations, the Applicant is required to obtain a 90-day temporary hazardous waste storage permit. This permit requires the facility to remove all classified hazardous materials at the facility within a period not to exceed 90-days from identification. All HHW collected at the site will be manifested in accordance with federal and State regulations. HHW would then be transported by licensed hazardous waste haulers to a regulated disposal site. Most hazardous material removed from the MRF/TS will be disposed at a Class 1 landfill, or to a fully licensed special treatment and/or disposal facility.

Based upon the above, it is not reasonably foreseeable that the Proposed Project will result in a risk to the public or the environment from household hazardous waste on the site.

PDF HAZ-1 and **PDF HAZ-2** are designed to for site safety. **PDF HAZ-1** requires the Applicant to form a Safety Committee. The Safety Committee will have two functions: 1) Annual review the *On-Site Management Plans;* and 2) Monthly review of the MRF/TS Daily Operational Report for waste stream capacity. The purpose of the annual review is to confirm or update the standard of practice for the *On-Site Management Plans*. The purpose for reviewing the daily operational log is to ensure the MRF/TS is complying with the permitted capacity for daily waste streams. Any modification for adaptive management to the management plans or daily permitted capacity will require City approval within the appropriate department. **PDF HAZ-2** requires that the Applicant prepares and has approved *On-Site Management Plans.* The purpose of the On-Site Management Plans is to ensure the facility functions as a start-of-art facility whereby it meets or exceed the minimum standards established by CalRecycle, the County of Los Angeles, the South Coast Air Quality Management District, and/or other responsible agency.

Based on the analysis presented above, including adherence to **PDFs HAZ-1** and **HAZ-2**, and all federal, State and local regulations pertaining to hazardous materials, it is not reasonably foreseeable that the Proposed Project would create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials.

THRESHOLD HAZ-2

Would the Proposed Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact with Mitigation Program

The nearest public school to the Proposed Project site is the Margaret Heath Elementary School located at 14321 School Street, in the City of Baldwin Park. This school is located approximately 1,370-feet (0.26-miles) south of the eastern tip of the Proposed Project property line.

As discussed at length above under **THRESHOLD HAZ-1**, it is possible that small quantities of hazardous materials could be transported to the facility within these waste streams and may be used operationally for the equipment and vehicles use on-site. The only large volume of hazardous materials stored at the facility would be the USTs at the convenience store/fueling station. These USTs will be constructed in accordance with federal, State, and local laws, ordinances, and regulations and will not foreseeably result in spillages or emissions that would leave the Project site.

Based upon all of the above, including **PDF HAZ-1** and **PDF HAZ-2**, it is not reasonably foreseeable that the Project will emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

THRESHOLD HAZ-4

Would the Proposed Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or environment?

Less than Significant Impact

The Proposed Project site is not listed as a site containing hazardous materials as defined in Government Code, Section 65962.5. Therefore, no adverse effect would occur as a result.

THRESHOLD HAZ-5

Would the Proposed Project be located within an airport land use plan or where such a plan has not been adopted, within two miles of a public airport or public use airport? Would the project result in a safety hazard for people residing or working within two miles of a public use airport?

No impact

The Proposed Project is not located within two-miles of an existing public airport or an airport land use plan and would not contribute to any airport safety hazard.

THRESHOLD HAZ-6

Would the Proposed Project be located within the vicinity of a private airstrip, resulting in a safety hazard for people residing or working in the project area?

Less than Significant Impact

The Proposed Project is not located within the vicinity of any private airstrips.

THRESHOLD HAZ-7

Would the Proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact

The City of Irwindale has established Arrow Highway and Live Oak Avenue as Major Emergency Evacuation Routes. The Proposed Project is located along both of these routes with Arrow Highway along the northern boundary of the site and Live Oak Avenue along the south border. Generally, operational traffic to and from the site would be distributed throughout the 24-hour operation of the facility and not result in queuing of trucks into access point along Arrow Highway and Live Oak Avenue. Therefore, queuing of truck into Arrow Highway and Live Oak Avenue lanes should not occur on a regular basis. During an emergency, all trucks would be rerouted so they would not interfere with these evacuation routes. Furthermore, the Proposed Project will not construct any physical structures or provide other obstructions which would interfere with these two routes. In addition, **PDF HAZ-2** includes a site-specific *Emergency Action Plan and Emergency Response Training Plan* within the *On-Site Management Plans*. Therefore, potential impacts associated with impairing evacuation along these roadways would be less than significant.

THRESHOLD HAZ-8

Would the Proposed Project expose people or structures to a significant risk of loss, injury or death involving wild land fires, including where wild lands are adjacent to urbanized areas or where residences are intermixed with wild lands?

Less than Significant Impact

The Proposed Project, however, is located entirely in a heavily urbanized area within the City of Irwindale. No wild lands are adjacent to the site. To the north of the Project site is the Santa Fe Dam and Recreational Area, which may have seasonal dry grassland; however based on the high

structure of the Dam walls, the masonry walls would act as a barrier in the event of a fire inside the Project Site. Therefore, the Proposed Project would not expose people or property to wildland fire hazards.

Mitigation Program

PDF HAZ-1

The Applicant shall form a Safety Committee and include a minimum of one (1) City Staff personnel as a participating member. The Safety Committee shall function with two roles. One function will be to annually review the *On-Site Management Plans.* The second function will include monthly review of the MRF/TS Daily Operational Report for waste stream capacity review.

On-Site Management Plans

The purpose of the annual review shall be to confirm or update the standard of practice for the management plans. The review will include utilizing information obtained from operational records, vendors, and suggestions from insurance companies.

MRF/TS Operational Report

The purpose of the monthly review shall be to ensure compliance with the 6,000 tons per day (maximum).

PDF HAZ-2

The Applicant shall prepare and have approved by the City *On-Site Management Plans.* Any and all future amendments to these management plans must be approved by the City. These plans include:

1) Litter Prevention and Control Plan;
2) Pest Control Plan;
3) Odor Control Plan;
4) Noise Control Plan;
5) Hazardous Materials Exclusion and Management Plan;
6) Fire Prevention, Control and Mitigation Plan;
7) Emergency Action Plan; and
8) Emergency Response Training Plan

3.8.6 RESIDUAL IMPACTS AFTER THE MITIGATION PROGRAM

Implementation of the various federal, State, and local laws, ordinances, and regulations, and the Mitigation Program would reduce potential hazards and hazardous material impacts associated with the construction and operation of the MRF/TS to less than significant. No residual significant adverse impacts from either construction or operational activities are anticipated with implementation of the Proposed Project.

3.8.7 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in **Chapter 3.0 Environmental Setting and Impact Analysis**.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on hazards and hazardous materials?

No

Based on the cumulative project list, it can be assumed that future development may result in new residential, commercial, industrial, educational, medical or recreational development, and new mining activities in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

The use, storage, disposal, and transport of hazardous materials could result in a foreseeable number of spills and accidents. Construction and operational activities of the Proposed Project will adhere to all federal, State, and local regulations related to hazards and hazardous materials. It is reasonably expected that any future new development would be subject to these same terms. In addition, future development would be required to evaluate their respective hazards and hazardous materials impacts on a project-by-project basis. For these reasons, potential impacts to hazards and hazardous materials are not cumulatively considerable.

3.9 LAND USE AND PLANNING

This chapter presents a discussion of the existing land use conditions and evaluates compatibility with surrounding land uses, recreation, and population and housing. The analysis contained in this chapter evaluates compliance of the Proposed Project with policies and plans of the City of Irwindale's *General Plan* (2008) and *Municipal Code* (Title 17 – Zoning), as well as, relevant federal, State, and local laws, ordinances, and regulations. Where potential environmental impacts are identified, a mitigation program is provided to reduce these impacts to the extent feasible.

3.9.1 EXISTING ENVIRONMENT

The City of Irwindale is located in the eastern portion of Los Angeles County, within the San Gabriel Valley. The City is centrally located within the San Gabriel Valley and is bisected by the San Gabriel River into eastern and western sections. The San Gabriel Valley and the surrounding cities contain a wide variety of land uses including residential communities, commercial/retail shopping centers, manufacturing, and industrial developments, including mining and mine reclamation.

The City is generally bounded on the north by the City of Duarte, on the east by the City of Azusa, on the south by the City of Baldwin Park, and on the west by the cities of Monrovia, Arcadia, and Duarte and islands of unincorporated Los Angeles County (General Plan Update, 2008).

The City of Irwindale was initially founded as a small residential settlement though sand and gravel extraction has long been the predominant land use dating back more than one hundred years. As such, Irwindale is viewed as an industrial community due to the presence of the existing large-scale mining operations along with the supporting mining-related businesses and heavy manufacturing facilities. Presently there are six active mining and mine reclamation sites in the City.

Contributing to Irwindale's image as an industrial town is the large number of open yard businesses found in the City. Typical open yard land uses include the following:

- material recycling businesses (soil, glass, metal, tires, and paving),
- material and product storage yards,
- auto dismantlers,
- contractor storage yards,
- equipment storage yards,
- RV storage yards,
- truck (fleet) parking yards,

- container storage yards,
- vehicle and equipment maintenance yards, and
- utility company yards.

The majority of the developable land in the City is zoned Heavy Manufacturing; including many of the City's quarry sites and landfills. The predominant types of industrial land uses and activities found in the City include mining and quarry uses, heavy industry, light industry/business parks, warehousing and yard uses (General Plan Update, 2008).

In the late 1940s, the USACE constructed the Santa Fe Dam for flood control improvements which eliminated one-third of the City's land area from future development. In addition to providing flood control, this site serves as a regional recreational facility. The Santa Fe Dam Recreation Area represents the largest single land use in terms of total land area in the City. The Santa Fe Dam and the Santa Fe Dam Recreation Area are owned and maintained by the USACE and the Los Angeles County Flood Control District (General Plan Update, 2008).

Regional transportation access to the City is provided by the Foothill Freeway (Interstate 210) that crosses the northerly portion of the City in an east/west orientation, and the San Gabriel River Freeway (Interstate 605) that roughly parallels the San Gabriel River (north/south orientation). The majority of the City's population and development is located in that portion of the City located east of the San Gabriel River. Land uses found in the western portion of the City are dominated by large-scale aggregate quarry operations with limited areas of more traditional urban development (General Plan Update, 2008).

The Proposed Project site is addressed as 2200 Arrow Highway, positioned at the northwestern intersection of Live Oak Avenue and Arrow Highway, within the City of Irwindale. The site is approximately 17.22 acres in size (Assessor's Parcel Number 8535-001-911). The site is currently zoned for Heavy Manufacturing and is designated for commercial land use in the City's General Plan.

Existing land uses that currently surround the Proposed Project site include a mixture of commercial and industrial uses to the west, east, and south, recreation/open space to the north, and beyond the commercial/industrial uses that line Live Oak Avenue in the City of Baldwin Park to the south lie residential areas. **Table 3.9-1** identifies the surrounding land uses including the City of Irwindale and the City of Baldwin Park's General Plan land use designation and zoning (refer to **Exhibit 3.9-1 Land Use Map** and **Exhibit 3.9-2 Zoning Map**).

Table 3.9-1 Surrounding Land Uses

Direction	Existing Land Use	General Plan Land Use Designation /Zoning
North	Arrow Highway, and Santa Fe Dam and Recreation Area	Open space/easements Agricultural (A-1)
South	South of Live Oak Avenue is the City of Baldwin Park - Developed industrial and commercial including Valley County Water District storage facility, Waste Management yard, and Allan Company MRF/TS (along Arrow Highway/Live Oak Avenue), with residential development south of those industrial uses.	Northern Industrial Focus Area (Baldwin Park) Commercial/Industrial, General Industrial, and Single-Family Residential Industrial zone
East	Developed commercial and light industrial	Industrial/Business Park Agricultural (A-1)
West	Developed industrial/business park uses, commercial truck parking facility	Industrial/Business Park Heavy Manufacturing (M-2) and Agricultural (A-1)
Source: City of Irwindale General Plan Update (2008), City of Irwindale Zoning Map, and City of Baldwin Park 2020 General Plan (2002) and City of Baldwin Park Zoning Map (2006).		

The Proposed Project site is an irregular shaped triangular parcel which is currently unimproved, vacant, and relatively flat. The site is bordered on the west and northwest by an existing business/industrial park and regional truck parking lot, on the south by Live Oak Avenue (the City of Baldwin Park's northern boundary lies south of Live Oak Avenue), and on the northeast by Arrow Highway (adjacent to the Santa Fe Dam Recreation Area).

There are three (3) utility easements on-site. Along the southern property line there is a transmission easement owned by the Los Angeles Department of Water and Power (LADWP) encompassing approximately 2.84 acres of the total site area. Along the northeastern property line (along Arrow Highway) there is an easement owned by United States Army Corps of Engineers (USACE). Adjacent and south of the USACE easement, the Southern California Edison (SCE) company holds a 23-foot-wide utility easement totaling approximately 0.5 acre. Refer to **Exhibit 3.6-1 Land Use Map** and **Exhibit 3.6-2 Zoning Map** below.

Of the City's 9.5 square-mile land area, Irwindale has less land devoted to typical urban land uses (residential, commercial, and industrial development) when compared to its neighboring communities, as demonstrated in **Table 3.9-2 Comparison of Irwindale's Land Uses With Neighboring Cities**.

Table 3.9-2 Comparison of Irwindale's Land Uses with Neighboring Cities
(Percentage of Total Land Area Devoted to Major Land Uses)

City	Residential	Commercial	Industrial*
Irwindale	1%	0.25%	15%
Azusa	54%	14%	32%
Baldwin Park	63%	9%	13%
Covina	49%	10%	4%
Duarte	25%	3%	2%
El Monte	58%	18%	10%
Monrovia	78%	9%	13%
West Covina	76%	20%	4%

*Land area does not include quarry uses or the Santa Fe Dam flood control and recreation area. *Source: City of Irwindale General Plan Update, 2008*

According to the 2010 United States Census, the City of Irwindale has a population of 1,422 residents (estimated at 1,436 residents as of July 2012). The population density is 147.9 people per square mile (57.1/km²). There are 390 housing units. The Census reported that 1,372 people (96.5% of the population) lived in households, 50 (3.5%) lived in non-institutionalized group quarters, and 0 (0%) were institutionalized. The homeowner vacancy rate was 0.8%; the rental vacancy rate was 2.6%. 992 people (69.8% of the population) lived in owner-occupied housing units and 380 people (26.7%) lived in rental housing units. The average household size is 3.67 persons with an average family size of 3.93 persons. The median resident age is 34 years (http://factfinder2.census.gov/faces/nav/jsf/pages/community_facts.xhtml and http://en.wikipedia.org/wiki/Irwindale,_California#Demographics - accessed September 2013).

The Santa Fe Dam and Recreation Area (consisting of 1,920 acres) serves to provide flood control and resource conservation recreation land use. The City has a Recreational Center located on Irwindale Avenue which offers public use of basketball courts, a softball field, banquet room kitchen, picnic area and a swimming pool. The significant open space areas in the City include the Irwindale Park, El Nido Park, and the Jardin de Roca 5-acre park, located west of the Civic Center. The City's commercial recreation land use category refers to those uses that are non-public recreational and entertainment uses. The Irwindale Speedway is included in the commercial recreation land use category. All parks in the City of Irwindale other than the Santa Fe Dam Recreation Area are managed and maintained by the City.

3.9.2 REGULATORY SETTING

United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE) owns property along the northeast boundary of the site between the site and Arrow Highway. The City is engaged in consultation with the USACE to obtain permission to cross the USACE easement to gain access at Proposed Project driveways, and to provide landscaping for the Project.

Southern California Edison

The Southern California Edison (SCE) company owns a 23-foot wide underground easement adjacent to the south edge of the USACE easement. The City is engaged in consultation with SCE to obtain permission to use a portion of the easement for project driveways and to provide parking and landscaping for the Project.

Los Angeles Department of Water and Power

Near the southern property line, the Los Angeles Department of Water and Power (LADWP) has a transmission easement totaling approximately 2.84 acres. The City is engaged in consultation with LADWP to obtain permission to utilize a portion of the easement for driveways and for some of the employee parking area.

California Code of Regulations - Title 27, Division 2 Solid Waste

This section of the California Code of Regulations promulgated by the CalRecycle sets forth the method of application for a solid waste facility permit for a materials recovery facility and transfer station. This section contains the procedures for review and action on the application package including periodic revision or modification of permits; defining terms; criteria for all waste management units, facilities, and disposal sites; documentation and reporting for regulatory tiers, permits, waste discharge requirements, and plans; enforcement; financial assurances; special treatment storage and disposal units. The Project is required to adhere to these State regulations.

Southern California Association of Governments

Pursuant to CEQA, the Southern California Association of Governments (SCAG) Intergovernmental Review (IGR) Section is responsible for reviewing regionally significant local plans, projects, and programs for consistency with SCAG's adopted regional plans (http://www.scag.ca.gov/programs/Pages/IGR.aspx. – accessed November 2013).

The SCAG IRG provides the criteria for projects of regional significance are outlined in the CEQA Guidelines§§15125 and 15206, and projects that directly relate to the policies and strategies contained in the Regional Comprehensive Plan and Guide and the Regional Transportation Plan (*Intergovernmental Review Procedures Handbook – November 1995).*

SCAG works through an established system, maintained by the State Clearinghouse. Upon notification and receipt of projects within the SCAG region, the IGR Team determines whether the project is regionally significant. SCAG responds with comment letters early in the environmental review process to ensure sufficient time for review and response to comments.
SCAG is the nation's largest metropolitan planning organization, representing six counties, 191 cities and more than 18 million residents. SCAG undertakes a variety of planning and policy initiatives to encourage a more sustainable Southern California now and in the future. SCAG functions as the Metropolitan Planning Organization (MPO) for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. SCAG's responsibilities include:

- Preparing the Regional Transportation Plan and a Regional Transportation Improvement Program;
- Development of demographic projections plus the integrated land use, housing, employment, transportation programs, measures, and strategies portions of the South Coast Air Quality Management Plan, as well as serving as co-lead agency for air quality planning for the Central Coast and Southeast Desert air basin districts
- Responsibility under the federal Clean Air Act for determining conformity to the Air Plan of projects, plans and programs.
- To function as the authorized regional agency for intergovernmental review of programs proposed for federal financial assistance and direct development activities.
- Review of environmental impact reports for projects having regional significance for consistency with regional plans.
- Pursuant to federal water pollution control statutes, the Association functions as the authorized area wide waste treatment management planning agency.
- Responsibility under State law for preparation of the Regional Housing Needs Assessment.
- Responsible for preparing the Southern California Hazardous Waste Management Plan pursuant to the California Health and Safety Code (with the San Diego Association of Governments and the Santa Barbara County/Cities Area Planning Council).

County of Los Angeles Department of Parks and Recreation

The County of Los Angeles Department of Parks and Recreation maintains 153 recreation facilities, including the Santa Fe Dam Recreation Area in Irwindale (Los Angeles Department of Parks and Recreation, *Annual Report 2008-2010*). On July 1, 1944, the Department of Parks and Recreation was created by ordinance and all functions of the Park Division and Department of Recreation, Camps and Playgrounds were merged into this new Department. Since then, the

County of Los Angeles Department of Parks and Recreation has been meeting the recreational needs of residents and visitors from all over the world through programming, facilities, land acquisition and environmental stewardship.

County of Los Angeles Department of Public Works

The Los Angeles County Department of Public Works is responsible for preparing and administering two regional documents to meet AB 939 requirements: the Los Angeles County *Countywide Integrated Waste Management Plan - Summary Plan and Siting Element Assessments*. The *2012 Management Plan Annual Report* includes discussion on the status of the revised Siting Element which is anticipated to be disseminated for public comment during 2014 and submitted to CalRecycle in 2016. The *2012 Management Plan Annual Report* also includes: permit changes; in-depth assessments of the County's disposal capacity needs; detailed updates on the remaining permitted in-County disposal capacity; and the County's strategies for maintaining adequate disposal capacity through 2027.

The *Countywide Integrated Waste Management Plan 2012 Annual Report* states the County would meet the disposal capacity requirements of AB 939:

> *"…through a multi-pronged approach which includes successfully permitting and developing proposed in-County landfill expansions, utilizing available or planned out-of-County disposal capacity, developing necessary infrastructure to facilitate exportation of waste to out-of-County landfills, and developing conversion and other alternative technologies. Additionally, by continuing to enhance diversion programs and increasing the Countywide diversion rate, jurisdictions in Los Angeles County may further ensure adequate disposal capacity is available to serve the needs of the residents and businesses through the planning period."*

City of Irwindale

The City of Irwindale is the primary agency with discretionary approval authority to approve and regulate the Proposed Project, and therefore the Lead Agency under CEQA. The Project will require the following discretionary approvals by the City of Irwindale to construct and operate a Materials Recovery Facility and Transfer Station, (including the Convenience Store/Fueling Station) at the site:

General Plan Amendment No. 1-2008

The General Plan Amendment is required to change the land use designation from Regional Commercial to Commercial/Industrial so that both commercial and industrial development uses are allowed.

Zoning Ordinance Amendment No. 4-2008
The Zoning Code Amendment is required to revise the distance requirement for alcohol sales (Section 17.58.040), and to allow a MRF/TS in the M-2 zone with approval of a Development Agreement.

Site Plan & Design Review Permit No. 4-2008
A Site Plan and Design Review Permit is required for consistency analysis with the City of Irwindale Commercial and Industrial Design Guidelines.

Conditional Use Permit No. 12-2008
A Conditional Use Permit is required for the approval of alcohol sales at the proposed convenience store, unless otherwise covered by the Development Agreement.

Development Agreement No. 1-2008
The Development Agreement is an assurance that a developer may proceed with a project in accordance with existing policies, rules and regulations and subject to certain conditions of approval. The Development Agreement assures some additional benefit to the public in exchange for the vested rights granted under the agreement. The Development Agreement will also allow for the following:

- Allow construction and operation of a MRF/TS in the M-2 zone, subject to the approval of a Development Agreement;
- Provide specific standards for a MRF/TS; and
- Allow construction and operation of a gas station/convenience store if it is part of a larger development project.

Disposition and Development Agreement, or other disposition document
The Disposition and Development Agreement defines the financial and development responsibilities of both the City and Applicant in carrying out the Proposed Project, and describes the process for sale of the site (currently owned by the Successor Agency), and which is subject to the approval by the State Department of Finance.

Franchise and Facility Operations Agreement
The Franchise and Facility Operations Agreement establishes the terms by which the City will grant a franchise to Athens for the exclusive operation of a MRF/TS within City limits and governs how Athens will operate the Facility and its appurtenant uses and maintain the Site.

In addition to the above approvals and entitlements, the City may require a rezone, and an additional text amendment to allow the proposed use at the Project site, including by way of a Development Agreement.

City of Irwindale General Plan

The City of Irwindale's General Plan Update (2008) is the City's planning policy document that establishes, through its policies, the general direction for the physical planning and form of the City. The General Plan is considered a living document intended to change and evolve with the dynamics of the changing community. The 2008 General Plan land use designation for the site is commercial; however, historically, the site had an industrial land use designation, and was developed for industrial uses. Implementation of the Proposed Project would require a General Plan Amendment (GPA) to convert the site to support a commercial/industrial land use. This GPA would resolve the current conflict between the existing land use designation and current zoning (Heavy Manufacturing).

The following implementing policies and action programs of the General Plan Elements are relevant to the Proposed Project for land use development and design. The impact analysis section provides a consistency analysis with applicable City General Plan policies adopted for the purpose of avoiding or mitigating an environmental effect (refer to **Table 3.9-3 General Plan Consistency Analysis**). The Proposed Project will be designed and conditioned to comply with the General Plan, as the City deems appropriate.

Community Development Element

The City's Community Development policies focus on the following three major issue areas: 1) The City's commitment to comprehensive land use planning; 2) The City's commitment in continuing its pursuit of economic development; and 3) The City's continued commitment in promoting quality urban design as a means to make Irwindale a more desirable place to live, work, and invest.

Issue Area – Economic Development

The City of Irwindale intends to continue its pursuit and promotion of economic development that will provide jobs and revenue for the community.

> *Community Development Element Policy 10*
> The City of Irwindale will promote development that will benefit the community as a whole in terms of both jobs and revenue generation.

Issue Area – Urban Design

The City of Irwindale will continue its efforts in improving the appearance of the community.

Community Development Element 12
The City of Irwindale will continue to promote quality design in the review and approval of commercial and industrial development through the application of the commercial and industrial design guidelines.

Community Development Element Policy 13
The City of Irwindale will continue to employ a design theme in the review of future commercial and industrial development and in the rehabilitation of existing commercial and industrial uses.

Community Development Element Policy 14
The City of Irwindale will continue to promote property maintenance in all areas of the City.

Infrastructure Element

Issue Area – Maintenance of Service Standards
City of Irwindale will continue to maintain the highest levels of public service to respond to the existing and future demand for such services.

Infrastructure Element Policy 4
The City of Irwindale will strive to ensure that all new development implements its "fair-share" of infrastructure improvements to offset the potential adverse impacts associated with the additional traffic that will be generated by the new development.

Resource Management Element

Resource Management Element Policy 11
The City of Irwindale supports the ethic of conservation of non-renewable resources. This includes efforts to reduce the use of energy (in any form), greenhouse gas (GHG) emissions (consistent with AB 32) and efforts to find new and more energy efficient methods for delivering services. The City supports the development of building standards that enable the community to design energy saving features such as solar energy systems, water efficient landscaping, and sustainable, green, and energy efficient building standards.

Public Safety Element

Safety Element Policy 5
The City of Irwindale will work towards reducing noise exposure in the City by considering noise and land use compatibility in land use planning.

Additionally, the City has several programs to assist in the implementation of these City policies as they relate to community development. These programs are as follows:

- *Building Code Review Program* - Irwindale will periodically review, and if necessary, update the Uniform Building Code (UBC) to reflect current technology and regulations.
- *Code Enforcement* - Code enforcement is an integral part of the City's efforts to correct or eliminate substandard structures, properties, and signage.
- *Design Guidelines and Review Program* - The purpose of the design review process is to ensure that building design and site layouts are compatible with surrounding development.
- *Environmental Review* - In compliance with CEQA, environmental review shall be provided for major projects, as well as those that will have the potential to adversely impact the environment. Land use and development are among the issue areas that will be addressed in the environmental analysis.
- *Fire Prevention.* The City shall continue to work with the County of Los Angeles Fire Department to promote fire prevention and fire safety programs.
- *Safety Development Review Program.* Certain design standards have been established by the City of Irwindale and the Los Angeles County Fire Department to ensure that site planning and building design consider public safety and fire prevention.

City of Irwindale Municipal Code

The City of Irwindale's Zoning Ordinance (Title 17 of the Irwindale Municipal Code) implements the policies of the General Plan by regulating the distribution and intensity of land uses. In addition, the Project will be required to adhere to Title 8 Health and Safety and Title 15 Buildings and Construction regulations. As outlined in the Irwindale Municipal Code (IMC) Section 17.04.020(a), the purpose of the Irwindale Zoning Code is to:

> "*Encourage, classify, designate, regulate, and restrict, so as to permit the highest and best use of buildings, structures and land; to serve the needs of agricultural, residential, commercial and industrial developments within the city; to regulate and limit the height, number of stories, size, and location of buildings and other structures, hereafter designed, erected, or altered; to regulate and determine the size of yards and open spaces; to regulate and limit the density of population; to facilitate adequate provisions for community utilities, such as transportation, water, sewage, schools, parks and other public requirements; to lessen congestion on streets; and to promote the public health, safety, welfare and general prosperity with the aim of preserving a wholesome, serviceable and attractive community*."

The City defines a MRF/TS as a facility operated by a city-franchised waste hauler for the recovery of recyclable materials from the municipal waste stream, including its city-approved

related or incidental uses (IMC Section 17.56.080) The collection, transportation, and disposal of solid waste is a service to be performed in the City in accordance with the provisions of Chapter 8.20 Solid Waste Collection and Salvage of Recyclable Materials.

The Proposed Project would require a Zoning Code Amendment to allow the proposed use under the existing zoning of Heavy Manufacturing (M-2). Further, the Proposed Project will be subject to review and compliance with several municipal codes. The purpose of this review is to determine whether the characteristics of any such use are compatible with the types of uses generally permitted in the surrounding area and further, to stipulate reasonable mitigation measures as may be deemed necessary to assure that the basic purposes of this ordinance are being served. Project review will include review with the following list of ordinances (please note: the following list is not exhaustive):

- *Chapter 8.20 Solid Waste Collection;*
- *Chapter 8.24 Waste or Refuse Disposal Sites;*
- *Chapter 8.28 Stormwater and Urban Runoff Pollution;*
- *Chapter 15.04 Building Code;*
- *Chapter 15.08 Electrical Code;*
- *Chapter 15.10 Green Building Standards Code;*
- *Chapter 15.12 Fire Code;*
- *Chapter 15.16 Plumbing Code;*
- *Chapter 15.20 Mechanical Code;*
- *Chapter 17.80 Zone Variances and Conditional Use Permits;*
- *Chapter 17.70 Site Plan and Design Review;*
- *Chapter 17.56 Heavy Manufacturing Zone;*
- *Chapter 17.84 Amendments; and*
- *Chapter 17.68 Yard, Area and Height Requirements*

City of Irwindale Commercial and Industrial Design Guidelines

The Project is required to adhere to the City's *Commercial and Industrial Design Guidelines* and will undergo independent review by the City. Detailed design guidelines include:

- Site design (circulation, parking, and building placement);
- Landscaping patterns, irrigation, and streetscapes (minimum 10% of the total gross site shall be landscaped with drought tolerant plants using water conservation techniques);
- Building design elements and detailing (primary architectural heritage is Spanish with Mission and Spanish Colonial Revival specifying materials and colors, roof, doorways, and arcades/columns); and
- Signs.

Exhibit 3.9-1 Land Use Map

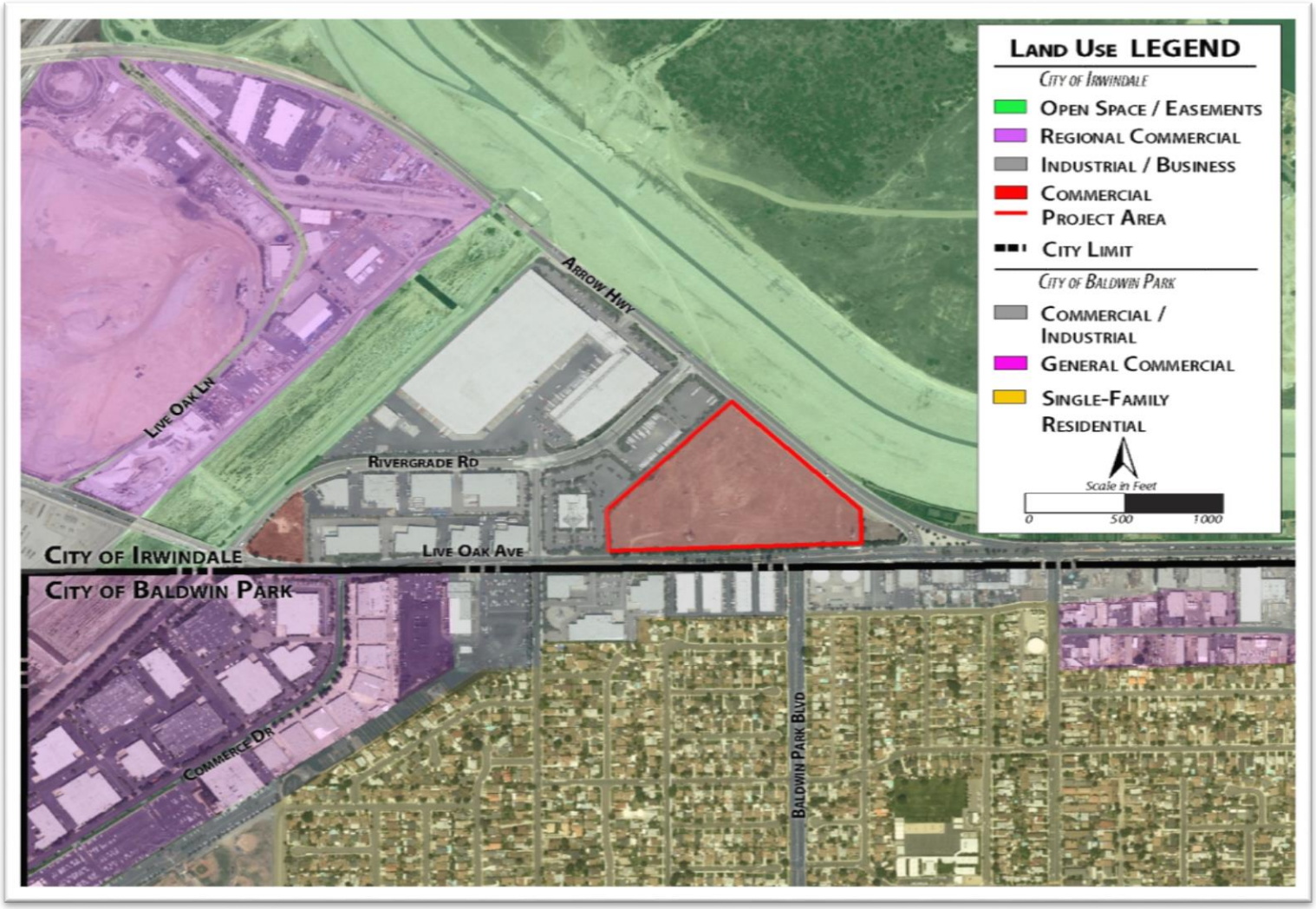
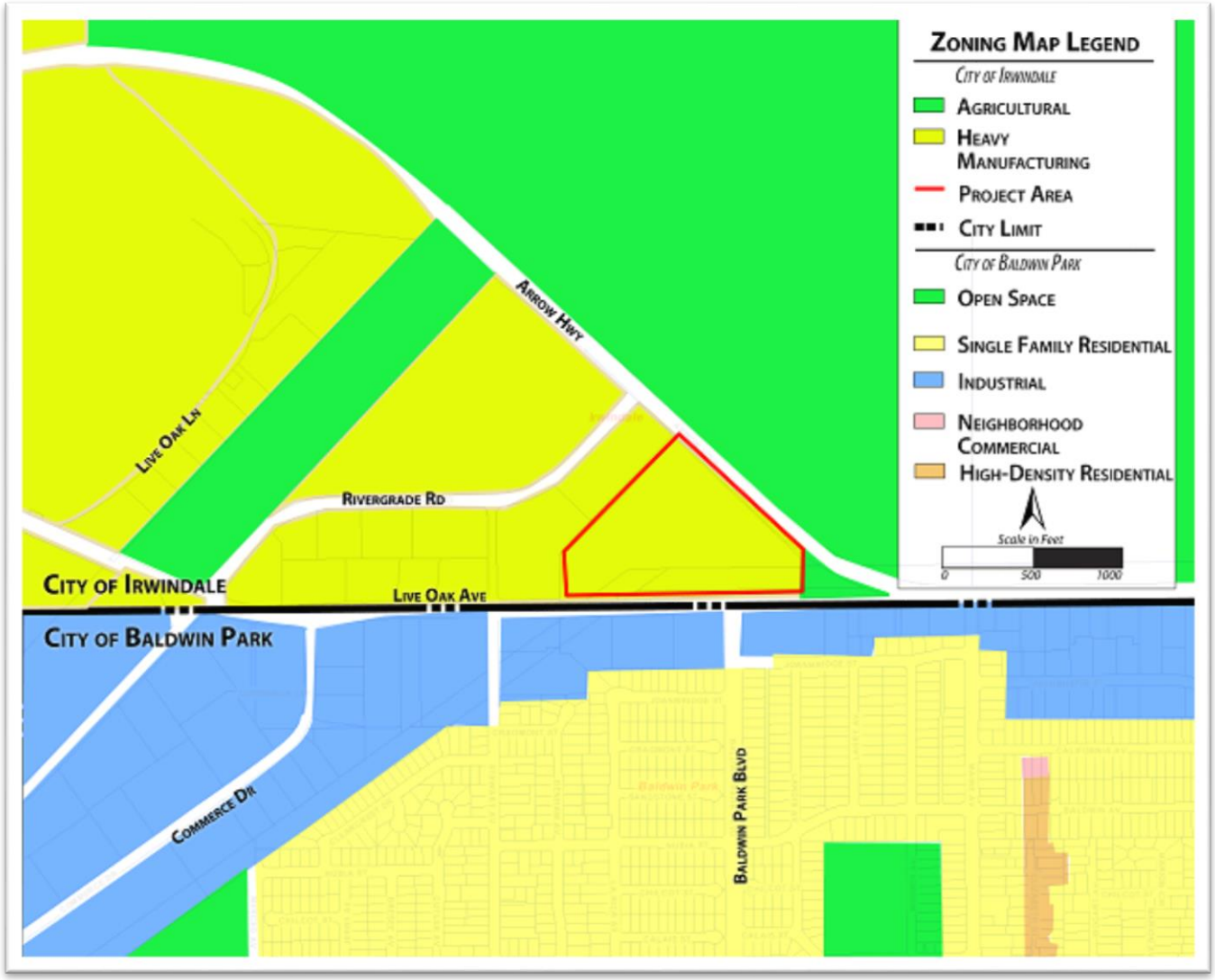


Exhibit 3.9-2 Zoning Map



3.9.3 THRESHOLDS OF SIGNIFICANCE

Literature review and field surveys (2009 and again in 2013) were undertaken for analysis of potential land use, population and housing, or recreational impacts associated with the implementation of the Proposed Project. These include short-term activities (construction-related) and long-term (operational) operations that could result in conflict with the City's General Plan or zoning designations or other applicable land use regulations. The significance of impacts was determined based on the 2014 State CEQA Guidelines, Appendix G. Using these thresholds, the Proposed Project would be considered to have a significant impact related to land use and planning, population and housing, or recreation if it were to:

a. Physically divide an established community;
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance adopted for the purpose of avoiding or mitigating environmental effects;
c. Conflict with any applicable Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP);
d. Induce substantial population growth in an area, either directly or indirectly;
e. Displace substantial numbers of existing housing or substantial number of people, necessitating the construction of replacement housing elsewhere;
f. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
g. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment.

3.9.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD LUP-1

Would the Project physically divide an established community?

Less than Significant Impact

Access to all land uses within the greater area near the Project site would be maintained throughout construction and operational activities. The Proposed Project would not result in any

permanent road closures; and therefore, the Proposed Project would not divide an established community.

The vacant site is located within an area of varied land uses supporting a mix of heavy industrial, light industrial, residential, recreational and commercial uses. According to the Phase I ESA and the cultural resources investigation, the site was undeveloped land as early as 1928-29. By 1936, the Project site was developed as a portion of a larger industrial facility (United Concrete Pipe Corporation) that occupied the site until 1990. The Property has remained vacant since 1991. Since incorporation in 1957, the City of Irwindale has been primarily developed with industrial land uses. Residential communities account for approximately 1,422 residents (2010 US Census) down slightly from the 2000 census report. In comparison, the City's commercial land use is slightly smaller in terms of land area (refer to **Table 3.9-1**).

Roadways adjacent to the site include Arrow Highway and Live Oak Avenue; which are classified as "Major Arterials" and "Major Designated Truck Routes" in the City's General Plan. The main function of a Major Arterial is to provide regional, sub-regional, and intra-City travel service. Through traffic on these roadways comprises the bulk of traffic volumes on major arterial roadways. Major arterials typically have four to six travel lanes. (General Plan Update, 2008).

The Proposed Project would result in the construction and operation of a materials recovery facility and transfer station, including convenience store and fueling station, within the City of Irwindale. Operations at the MRF/TS would consist of materials recovery sorting, consolidating, compacting received materials, and then re-loading all recyclable, compostable, and solid waste material into transfer trucks for transport to additional processing and/or disposal facilities. As a primary function, the MRF/TS would reduce the amount of regionally-produced solid waste that would otherwise be land filled by recovering materials that can be recycled or reused. The net effect of the Project is to reduce the volume of material that is disposed of at a landfill, and obtain City [and County] compliance with State mandates (Assembly Bill 939; AB 939, 1989); which mandates that every city and county in the State divert at least 50 percent of solid waste material generated in their jurisdiction from going to a landfill.

Based upon all of the above, it is not reasonably foreseeable that the Proposed Project will physically divide an established community. Therefore, land use impacts related to dividing a community would be less than significant.

THRESHOLD LUP-2

Would the Project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific

plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating environmental effects?

Less than Significant Impact

City of Irwindale Plans, Policies and Regulations

The Proposed Project site is currently zoned Heavy Manufacturing with a General Plan land use designation for commercial development. The Proposed Project includes a General Plan Amendment to commercial/industrial land use. Converting the City's General Plan land designation from commercial land use to commercial/industrial land use would resolve the current conflict between the existing land use designation and zoning code[1]. Reverting the land use designation back to industrial use is not considered a significant impact due to the fact that prior to the General Plan Update in 2008, the site had a land use designation of industrial. Additionally, the site has historically been used for an industrial facility, and the surrounding area is dominated by industrial and commercial land uses to the west, south, and east; and therefore, the Proposed Project is compatible with all immediately surrounding existing land uses (refer to **Exhibit 3.9-1 Land Use Map** and **Exhibit 3.9-2 Zoning Map**).

Table 3.9-3 demonstrates the applicable City General Plan policies and programs adopted for the purpose of avoiding or mitigating an environmental effect in comparison to the Proposed Project.

Table 3.9-3 Irwindale General Plan Consistency Analysis

General Plan Program or Policy	Is the Proposed Project Consistent?
Design Guidelines and Review Program	*Consistent.* The Proposed Project is required to undergo the City's design review process to ensure building design and layout are compatible with the surrounding area.
Environmental Review	*Consistent.* The Proposed Project is being reviewed under this EIR, as required by CEQA.
Nonconforming Section of the Zoning Ordinance / Zoning Conformity Program.	*Consistent.* As stated above, the Proposed Project includes a GPA to commercial/industrial land use and ZCA to include the Planned Development Overlay zone. Converting the City's General Plan land designation from commercial land use to commercial/industrial land use would resolve the current conflict between the existing land use designation and zoning code.

[1] Prior to the General Plan Update in 2008, the City of Irwindale's General Plan designated the 17.2 acre parcel for industrial land use. This parcel was historically used for industrial use. The General Plan Update (2008) changed the land use designation to commercial.

General Plan Program or Policy	Is the Proposed Project Consistent?
Community Development Element Policy 12 The City of Irwindale will continue to promote quality design in the review and approval process of commercial and industrial development through the application of the commercial and industrial guidelines.	*Consistent.* The Proposed Project is required to meet these guidelines during the approval process.
Infrastructure Element Policy 4 The City of Irwindale will strive to ensure that all new development implements its "fair-share" of infrastructure improvements to offset the potential adverse impacts associated with the additional traffic that will be generated by the new development.	*Consistent.* The Proposed Project is subject to review by the City's Engineer order to ensure that the proposed development complies with all applicable Municipal Code standards and regulations, and polices. Refer to Chapter 3.12 Traffic Generation and Circulation for details.
Resource Management Element Policy 26 The City of Irwindale will design traffic plans, including the development of suggested routes for trucks, to minimize truck idling time.	*Consistent.* The Proposed Project's circulation plan is subject to review by the City's Engineer. Refer to Chapter 3.12 Traffic Generation and Circulation for details.
Resource Management Element Policy 28 The City of Irwindale will require conditions for discretionary approvals that require fugitive dust controls and compliance mechanisms for stationary sources (landfill, composting facilities, aggregate facilities, etc.).	*Consistent.* The Proposed Project is required to comply with the California Air Resources Board and the South Coast Air Quality Management District regulation pertaining to air quality; in addition to the City's discretionary review process. Refer to Chapter 3.2 Air Quality for details.
Stormwater Pollution Prevention Program This program is designed to prevent contaminants from entering the storm drain system. A key element of this program is the National Pollution Discharge Elimination System (NPDES) requirements, which are administered through a countywide permit. These requirements call for measures to be imposed during construction activities, handouts for residential uses, and best management practices (BMPs) for non-residential uses. The City shall also continue to implement projects to maintain storm water quality, such as street sweeping, catch basin grills, signs, etc.	*Consistent.* The Regional Water Quality Control Board is the primary regulatory agency for stormwater discharges. The Proposed Project is required to comply with the project specific NPDES Permit requirements (e.g., Storm Water Pollution Prevention Plans (SWPPP) and Erosion and Sediment Control Plan with BMPs). Refer to Chapter 3.13 Water Quality and Hydrology for details.

General Plan Program or Policy	Is the Proposed Project Consistent?
Fire Prevention Program The City shall continue to work with the County of Los Angeles Fire Department to promote fire prevention and fire safety programs. The City shall also encourage periodic inspections of existing structures by the Fire Department for compliance with fire safety standards and practices. All new development plans must be submitted to the Fire Department for review and comment during the plan check process. This review must be completed for the development process to continue. New development must conform to applicable standards and regulations.	*Consistent.* The Proposed Project is subject to review and approval by both the City and County for fire safety standards and regulations. The Applicant has designed several *On-Site Management Plans* for fire prevention, which are subject to review and approval by the City. Refer to Chapters 3.8 Hazards and Hazardous Materials and 3.11 Public Service and Utilities for details.
Hazardous Materials Control Program The City shall continue to cooperate with County, State, and Federal agencies involved in the regulation of hazardous materials storage, use, and disposal. The City shall work with the County Fire Department in requiring hazardous materials users and generators to identify safety procedures for responding to accidental spills and emergencies. The Fire Department shall also work with local law enforcement officials in regulating the transport of hazardous materials through the City. The City will continue to promote the safe disposal of "hazardous and toxic substances" used in private households through the support of "Hazardous Materials Collections" conducted at specific locations and times within the City.	*Consistent.* As designed, the Proposed Project will not accept hazardous materials. The Proposed Project is subject to numerous state and local regulation in the management of hazardous materials including: California Hazardous Materials and Waste Codes; California Accidental Release Prevention; and the Los Angeles County Department of Public Heath's Solid Waste Management Program. The Applicant has designed several *On-Site Management Plans*, subject to the review and approval of the City, regarding load checking, employee training "spotters" on the tipping floor, and disposal. Refer to Chapter 3.8 Hazards and Hazardous Materials.

Additionally, City Planning staff has reviewed the Proposed Project in consideration of all of the goals, plans, and policies in the City's General Plan and have found that the Proposed Project does not conflict with any goal, plan or policy of the City's General Plan.

As part of the Conditional Use Permit, Site Plan and Design Review Permit, and City Planning Department application package requirement, the Applicant's conceptual site plan, floor plans and building elevations, landscape and circulation plans will be required to demonstrate consistency with the City's development standards prior to project approval. Therefore, the Proposed Project would not conflict with any City land use plan, policy, or regulation.

City of Baldwin Park Plans, Policies and Regulations

Located across Live Oak Avenue from the southern site boundary is the boundary for the City of Baldwin Park and the Baldwin Park Northern Industrial Focus Area (located along Arrow Highway / Live Oak Avenue). As stated in the Baldwin Park 2020 General Plan, this focus area

encompasses the northern industrial portion of Baldwin Park, which is characterized by a variety of older manufacturing and heavy commercial land uses, interspersed with existing, non-conforming residential land uses (Baldwin Park 2020 General Plan, Land Use Element, 2002). In addition, the City of Baldwin Park's existing industrial uses along Live Oak Avenue (characterized as older manufacturing and commercial buildings, a Valley County Water District storage facility (large water tanks), a Waste Management yard, and Allan Company MRF/TS) further act as a buffering zone between Baldwin Park's residential neighborhoods and the Proposed Project site.

Based upon the above, the Proposed Project does not conflict with the City of Baldwin Park General Plan.

SCAG Plans, Policies and Regulations

Pursuant to Public Resources Code Sections 21083 and 21087 and CEQA Guidelines §§15206 and 15125(b), SCAG is responsible for reviewing projects of regional significance for consistency with regional plans.

As discussed above, the Proposed Project requires a General Plan Amendment. Converting the City's General Plan land designation from commercial land use to commercial/industrial land use would resolve the current conflict between the existing land use designation and zoning code. Reverting the land use designation back to industrial use is not considered a significant impact due in part to the fact that prior to the General Plan Update in 2008, the site had a land use designation of industrial. In addition, the Proposed Project is compatible with surrounding existing land uses and would not adversely impact the patterns of urban development and land use. The Proposed Project is consistent with and will not conflict with the SCAG 2012-2035 Regional Transportation Plan/Sustainable Communities Strategies Final Program EIR.

Los Angeles County Plans, Policies and Regulations

The Countywide Integrated Waste Management Plan's 2012 Annual Report states there is a projected shortfall of available permitted disposal capacity. In order to meet disposal needs during the planning period, jurisdictions in the County must further enhance their waste reduction and diversion efforts, continue to encourage development of alternative technologies such as waste-to energy and conversion technology facilities, support the use of a waste-by-rail system to Mesquite Regional Landfill, as well as expand solid waste processing facilities in areas where processing capacity is inadequate if found to be environmentally sound and technically feasible (*Countywide Integrated Waste Management Plan Annual Report 2012).*

In support of diversion efforts, the Proposed Project is designed to assist in the shortfall of disposal capacity by the creation of a new facility for source separation [the MRF/TS]. Based on the nature of its concept as a solid waste recovery facility (sorting recyclables to be transported

for end use distribution, municipal waste transported to a landfill and green waste to be transferred to a compost facility) it contributes to accomplishing the County's goal.

In addition, and in response to AB 341 (2011) that established a State policy goal that no less than 75-percent of solid waste generated be source reduced, recycled, or composted by 2020, and requiring CalRecycle to provide a report to the Legislature by January 1, 2014 that recommends strategies to achieve the policy goal, one of the recommendations of the *Management Plan* is to revise the hierarchy to reflect the best management practices that puts the highest emphasis on product redesign and producer responsibility, followed in order of preference by waste prevention, reuse, recycling, composting, conversion technologies, transformation, and last, landfill disposal if no other management option is reasonably feasible. The Proposed Project is consistent with and will not conflict with the County's Countywide Integrated Waste Management Plan.

Based upon all of the above, it is not reasonably foreseeable that the Proposed Project will result in an impact to the physical environment based upon a conflict with a land use plan, policy or regulation adopted for the purpose of avoiding or mitigating environmental affects. Therefore, land use conflict related impacts are less than significant.

THRESHOLD LUP-3

Would the Project conflict with any applicable Habitat Conservation Plan (HCP) or Natural Community Conservation Plan (NCCP)?

No Impact

The Proposed Project site is located in an urbanized area. There is no adopted habitat conservation plan or natural community conservation plan that would be affected by implementation of the Proposed Project. Thus, the Proposed Project will have no impact on any HCP or NCCP.

THRESHOLD LUP-4

Would the project induce substantial population growth in an area, either directly or indirectly?

No Impact

There is no residential component to the Proposed Project. The creation of 411 new jobs within the City's (and region's) employment base would not be expected to result in adverse effects on population growth. With unemployment of about 10.1 percent in Los Angeles County (August 2013), there is a substantial labor force available locally and regionally, and it is anticipated that these employees would live in the City and/or neighboring communities, thereby not inducing workers to relocate from outside of the area and causing direct or indirect population growth (State of California Employment Development Department, September 20, 2013; http://

www.calmis.ca.gov/file/lfmonth/la$pds.pdf; accessed 10/31/13). The MRF/TS would not remove any barriers to growth and would not create any dwelling units nor would residential growth be induced by implementation of the Proposed Project.

Based upon the above, it is not reasonably foreseeable that the Proposed Project will induce substantial population growth in any area. Therefore, the population growth related impacts are less than significant.

THRESHOLD LUP-5

Would the project displace substantial numbers of existing housing or substantial number of people, necessitating the construction of replacement housing elsewhere?

No Impact

See **Threshold LUP-4**. Proposed construction [and operation] would not be expected to permanently displace people nor any existing, developing, or approved urban/industrial buildings or activities. The Proposed Project site has been historically developed for urban/industrial uses and is currently vacant and uninhabited.

Based upon the above, it is not reasonably foreseeable that the Proposed Project will displace any housing or populations. Therefore, the housing and population related impacts are less than significant.

THRESHOLD LUP-6

Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact

There is no residential component to the Proposed Project. The creation of 411 new jobs within the City's (and region's) employment base would not be expected to result in adverse effects on either the provision of existing recreational services or existing recreational facilities. As discussed in **Threshold LUP-4**, the Proposed Project is not expected to result in a population growth in the City or area and therefore, the Proposed Project does not have the potential to increase population in a manner that could substantially increase the use of, nor cause substantial physical deterioration of existing neighborhood and regional parks or recreational facilities. With no potential to increase population, no increase to use of recreational facilities and, therefore, no significant impact.

Based upon the above, it is not reasonably foreseeable that the Proposed Project will increase the use of parks and recreational facilities. Therefore, the recreational related impacts are less than significant.

THRESHOLD LUP-7

Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?

No Impact

There is no residential or public recreational component of the project. The MRF/TS facility will provide an employee break room, and that is the extent of recreational functions of the project. Implementation of the Proposed Project would not result in the development of recreational facilities nor would reasonably be expected to require the expansion or construction of recreational facilities.

Based upon the above, it is not reasonably foreseeable that the Proposed Project will increase the use of parks and recreational facilities. Therefore, the recreational related impacts are less than significant.

3.9.4 MITIGATION PROGRAM

No significant or potential significant land use, population and housing or recreational impacts from either construction or operational activities are anticipated with implementation of the Proposed Project. Therefore, no mitigation measures relative to these resource topics are proposed or required.

3.9.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION PROGRAM

No mitigation measures were required.

3.9.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in Chapter 3.0, *Environmental Setting and Impact Analysis*, above.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on land use and planning, recreation, or population and housing?

No

Based on the cumulative project list, future development may result in new residential, commercial, industrial, or recreational development and/or mining/reclamation operations in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

Development of this site with the Proposed Project will not limit or enhance development of any of the cumulative projects identified. Implementation of mitigation measures identified for specific project actions on a case-by-case basis would also reduce potentially significant cumulative impacts to a less than significant level. Project-specific land use incompatibilities would be addressed in the individual project's CEQA review and implementation of mitigation measures.

In addition, because the post-development land use will be consistent with the City's and County's long-term goals, implementation of the Proposed Project in consideration of the cumulative projects would not have a significant cumulative impact on the surrounding area in terms of land use compatibility.

3.10 NOISE

This chapter evaluates the potential impacts of the Proposed Project for environmental acoustics and general noise characteristics in the areas that may be affected by the Proposed Project. This chapter provides a brief technical background on "sound" (noise pressure, exposure existing environment, effect on people), as well as, existing noise sources and levels within the Project vicinity. This evaluation reviews applicable federal, State, and local noise regulations, followed by analysis of potential noise impacts associated with construction and operation of the Proposed Project. Where necessary, a Mitigation Program is identified to reduce potential adverse noise impacts. This noise evaluation also includes a discussion of the cumulative impacts of the Proposed Project.

3.10.1 EXISTING ENVIRONMENT

Technical Background

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise is defined as unwanted sound. Sound is characterized by various parameters that include the rate of oscillation of sound waves (frequency), the speed of propagation, and the pressure level or energy content (amplitude). In particular, the sound pressure level has become the most common descriptor used to characterize the "loudness" of an ambient sound level. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain.

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but rather a broad band of frequencies varying in levels of magnitude (sound power). The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).[1] Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements.

Sample representative noise sources and their corresponding A-weighted noise levels are shown in **Table 3.10-1 Typical Noise Levels**.

[1] All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

Table 3.10-1 Typical Noise Levels

Noise Level (dBA)	Outdoor Activity	Indoor Activity
90+	Gas lawn mower at 3 feet, jet flyover at 1,000 feet	Rock Music Concert
80-90	Diesel truck at 50 feet	Loud television at 3 feet
70-80	Gas lawn mower at 100 feet, noisy urban area	Garbage disposal at 3 feet, vacuum cleaner at 10 feet
60-70	Commercial area	Normal speech at 3 feet
40-60	Quiet urban daytime, traffic at 300 feet	Large business office, dishwasher next room
20-40	Quiet rural, suburban nighttime	Concert hall (background), library, bedroom at night
10-20		Broadcast / recording studio
0	Lowest threshold of human hearing	Lowest threshold of human hearing

Source: Modified from Caltrans Technical Noise Supplement, 1998

Noise Exposure and Community Noise

An individual's noise exposure is a measure of the noise experienced by the individual over a period of time. A noise level is a measure of noise at a given instant in time. The noise levels presented in **Table 3.10-1 Typical Noise Levels** represent noise measured at a given instant in time; however, noise levels rarely persist consistently over a long period of time. Rather, community noise varies continuously over time because of the contributing sound sources of the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise, with the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and wind. What makes community noise constantly variable throughout a day, besides the slowly changing background noise, is the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.

These successive additions of sound to the community noise environment varies the community noise level from instant to instant requiring the measurement of noise exposure over a period of

time to accurately characterize a community noise environment and evaluate cumulative noise impacts. This time-varying characteristic of environmental noise is described using statistical noise descriptors. The most frequently used noise descriptors are summarized below:

Leq: The equivalent sound level is used to describe noise over a specified period of time, typically one hour, in terms of a single numerical value. The L_{eq} is the constant sound level, which would contain the same acoustic energy as the varying sound level, during the same time period (i.e., the average noise exposure level for the given time period).

Lmax**:** The instantaneous maximum noise level for a specified period of time.

L50: The noise level that is equaled or exceeded 50 percent of the specified time. This is the median noise level during the specified time.

L90: The noise level that is equaled or exceeded 90 percent of the specified time. The L90 is often considered the background noise level averaged over the specified time.

DNL: The Day/Night Average Sound Level is the 24-hour day and night A-weighted noise exposure level, which accounts for the greater sensitivity of most people to nighttime noise by weighting noise levels at night. Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dBA to take into account the greater annoyance from nighttime noise. (Also referred to as "Ldn.")

CNEL: Similar to the DNL, the Community Noise Equivalent Level (CNEL) adds a 5-dBA "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dBA penalty between the hours of 10:00 p.m. and 7:00 a.m.

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it

compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dBA;
- Outside these controlled conditions, the trained ear can detect changes of 2 dBA in normal environmental noise;
- It is widely accepted that the average healthy ear, however, can barely perceive changes in the noise level of 3 dBA;
- A change in level of 5 dBA is a readily perceptible increase in noise level; and
- A 10 dBA change is recognized as twice as loud as the original source (Caltrans, 1998).

These relationships occur in part because of the logarithmic nature of sound and the decibel system. The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is based on logarithms, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 to 7.5 dBA per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, either landscaping or manufactured). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles (known as a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA each time the distance doubles from the source, which also depends on environmental conditions (Caltrans, 1998). Noise from large construction sites will exhibit characteristics of both "point" and "line" sources and attenuation will therefore generally range between 4.5 and 7.5 dBA each time the distance doubles. Exterior noises will attenuate between 20 and 25 dBA in interior spaces.

Existing Noise Sources and Levels

Short and Long Term Noise Level Measurements

In order to characterize the noise conditions in the Proposed Project vicinity, ten short-term measurements were made in the Proposed Project area with concurrent observations recorded. The ten noise monitoring locations near the Proposed Project are shown on **Exhibit 3.10-1 Noise Monitoring Location Map** and the noise measurements are summarized in **Table 3.10-2 Existing Noise Levels in the Proposed Project Area**. Typical background noise levels (L90)

ranged from 50 to 65 dBA. Primary noise sources identified during the noise measurement locations included vehicle traffic, and occasional birds and aircraft-related noise.

Nine 24-hour noise measurements were also taken from noise measurement locations 1-3 for three consecutive days (refer to **Exhibit 3.10-1 Noise Monitoring Location Map).** The consecutive three day noise measurement readings are further summarized in **Table 3.10-2**. **Exhibit 3.10-2 Existing Noise Measurement Readings at Locations 1-3 over a 24-Hour Period** include one-hour noise sampling for Leq, Lmax, L50, and L90, over three 24-hour periods at three different locations. The Ldn values for the 24-hour measurements were between 65 - 72dBA. Noise levels throughout the Proposed Project area should be similar to the noise measurements and their corresponding distance to major roadways. Because the major noise source in the area is related to traffic along freeways and major roadway segments, actual noise levels would vary in loudness based upon the distance from these major roads.

Location 1 noise measurements and observations indicate that current noise levels near the Proposed Project (72 CNEL) are conditionally acceptable[2] with City of Irwindale General Plan guidelines for compatibility of noise-sensitive land uses (67 to 78 dB CNEL). The General Plan indicates that commercial/professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL, and are conditionally acceptable within 67 to 78 dB CNEL (for commercial and professional offices only). The categories are based on commonly used California guidelines for compatibility of noise-sensitive land uses. In areas where the noise levels are conditionally acceptable, new construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. In areas where the noise levels are conditionally acceptable, conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice (OPR, 1998)

Location 2 noise measurements and observations indicate that current noise levels near the residential area south of the Proposed Project along Baldwin Park Boulevard (68 CNEL) currently exceed the City of Baldwin Park General Plan exterior noise standards for residential land uses (65 CNEL, as shown in **Table 3.10-4 City of Baldwin Park Interior and Exterior Noise Standards**).

[2] Conditionally acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features are included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice. *Source:* State of California General Plan Guidelines, Office of Planning and Research, November 1998, Appendix A: Noise Element Guidelines.

Location 3 noise measurements indicate that current noise levels near the water tower (62-63 dBA Leq(12)) are expected to be in compliance with City of Baldwin Park General Plan exterior noise standards (65 dBA Leq(12)), shown in **Table 3.10-4 City of Baldwin Park Interior and Exterior Noise Standards**).

In summary, the measurements along Live Oak Avenue (see Location 1 in **Table 3.10-2**) shows CNEL levels of 72 dBA which are in the Irwindale General Plan Conditionally Acceptable range (67 -78 CNEL) for the businesses along Live Oak Avenue, which all fall into the category of commercial/professional office buildings and industrial land uses. The noise measurements along Baldwin Park Boulevard (68 dBA, CNEL) show that the noise levels exceed the exterior noise standards (65 dBA, CNEL) for homes immediately adjacent to Baldwin Park Boulevard (see Location 2 measurements in Table 3.8-2), unless those homes have wooden fences or other noise barriers to reduce the noise to their exterior use areas. Noise measurements at Location 3 (see Table 3.8-2) show that homes that are 90 feet or more from the centerline of Baldwin Park Boulevard have exterior noise levels of 65 CNEL, which is borderline compliance with the standard (65 dBA, CNEL), without any additional attenuation.

Table 3.10-2 Existing Noise Levels in the Proposed Project Area

Monitoring Location Duration	Location Description	Time Period	Noise Levels (dBA)	Noise Sources and Observations – Noise Levels (dBA)
Location 1 *24 Hour*	Fenceline of Proposed Project, 70 feet north of the centerline of Live Oak Ave., 50 feet west of Baldwin Park Blvd.	Monday - Wednesday. June 15-17, 2009	CNELs: 72, 72, 72 Hourly Average Leq's: 57–71 Hourly L90's: 40–58	Long-term measurements do not identify specific noise sources. L90 background levels are relatively quiet (40-58).
Location 1 *10 Minutes*		Thursday, June 18, 2009: 10:03 a.m.–10:13 a.m.	5- minute sampling Leq's: 72, 73 L90's: 52, 58	Vehicle traffic along Live Oak Avenue. (dBA): 68, 59, 76 (bus).
Location 2 *24 Hour*	50 feet west of Baldwin Park Blvd. at T-Intersection of Joanbridge St., behind 14165	Monday - Wednesday. June 15-17, 2009	CNELs: 68, 68, 68 Hourly Average Leq's: 53–72 Hourly L90's: 42–55	Long-term measurements do not identify specific noise sources. L90 background levels are relatively quiet (42-55).

Monitoring Location Duration	Location Description	Time Period	Noise Levels (dBA)	Noise Sources and Observations – Noise Levels (dBA)
Location 2 *10 Minutes*	Joanbridge St.	Thursday, June 18, 2009: 10:03 a.m.–10:13 a.m.	5- minute sampling Leq's: 55, 64 L90's: 50, 52	Vehicle traffic along Baldwin Park Boulevard (dBA): 66, 69, 71, 66, 69, 62, 71, 71. Medium truck (dBA): 57, 63. Helicopter (dBA): 57. Birds and traffic along Live Oak Avenue
Location 2 *5 Minutes*		Tuesday, March 31, 2009: 2:14 p.m.–2:19 p.m.	5- minute sampling Leq: 65 L90: 56	Vehicle traffic along Baldwin Park Boulevard. (dBA): 71, 72, 63, 70, 69, 73. Airplane flyover (dBA): 58. Traffic along Live Oak Avenue and birds.
Location 3 *24 Hour*	25 feet north of Joanbridge St., 90 feet east of Baldwin Park Blvd.	Monday - Wednesday. June 15-17, 2009	CNELs: 65, 65, 65 Hourly Average Leqs: 50–69 Hourly L90's: 44-55	Long-term measurements do not identify specific noise sources. L90 background levels are relatively quiet (44-55).
Location 4 *5 Minutes*	On trail directly above Santa Fe Reservoir	Sunday, June 14, 2009: 1:52 p.m.–1:57 p.m.	5- minute sampling Leq: 58 L90: 53	Vehicle traffic along Arrow Highway.
Location 5 *5 Minutes*	On trail above dam, parallel to Proposed Project,	Sunday, June 14, 2009: 2:05 p.m.–2:10 p.m.	5- minute sampling Leq: 55 L90: 51	Vehicle traffic along Arrow Highway.
Location 6 *5 Minutes*	Near truck parking area northwest of Proposed Project site	Tuesday, March 31, 2009: 1:28 p.m.–1:33 p.m.	5- minute sampling Leq: 54 L90: 51	Airplane flyover (dBA): 57. Birds and distant traffic noise.
Location 7 *5 Minutes*	50 feet southwest of Arrow Highway at northern point of property	Tuesday, March 31, 2009: 1:38 p.m.–1:43 p.m.	5- minute sampling Leq: 68 L90: 54	Vehicle traffic along Arrow Highway (dBA): 63, 67, 68, 76, 72, 68, 67. Cement mixer (dBA): 81

Monitoring Location Duration	Location Description	Time Period	Noise Levels (dBA)	Noise Sources and Observations – Noise Levels (dBA)
Location 8 *5 Minutes*	100 feet west of Arrow Highway and Live Oak Ave at eastern point of property	Tuesday, March 31, 2009: 1:50 p.m.–1:55 p.m.	5- minute sampling Leq: 67 L90: 59	Vehicle traffic at intersection (dBA): 68, 63, 65.
Location 9 *5 Minutes*	50 feet south of Live Oak Ave., at T-intersection with Baldwin Park Blvd.	Tuesday, March 31, 2009: 2:02 p.m.–2:07 p.m.	5- minute sampling Leq: 71 L90: 60	Vehicle traffic along Live Oak Avenue and Baldwin Park Boulevard (dBA): 74, 71.
Location 10 *5 Minutes*	At bus stop bench 50 feet north of center of Live Oak Ave. east of Stewart Ave.	Tuesday, March 31, 2009: 2:36 p.m.–2:41 p.m.	5- minute sampling Leq: 72 L90: 59	Vehicle traffic along Live Oak Avenue Airplane flyover (dBA): 65.
Source: Miller Environmental Consultants, 2009				

Exhibit 3.10-1 Noise Monitoring Location Map

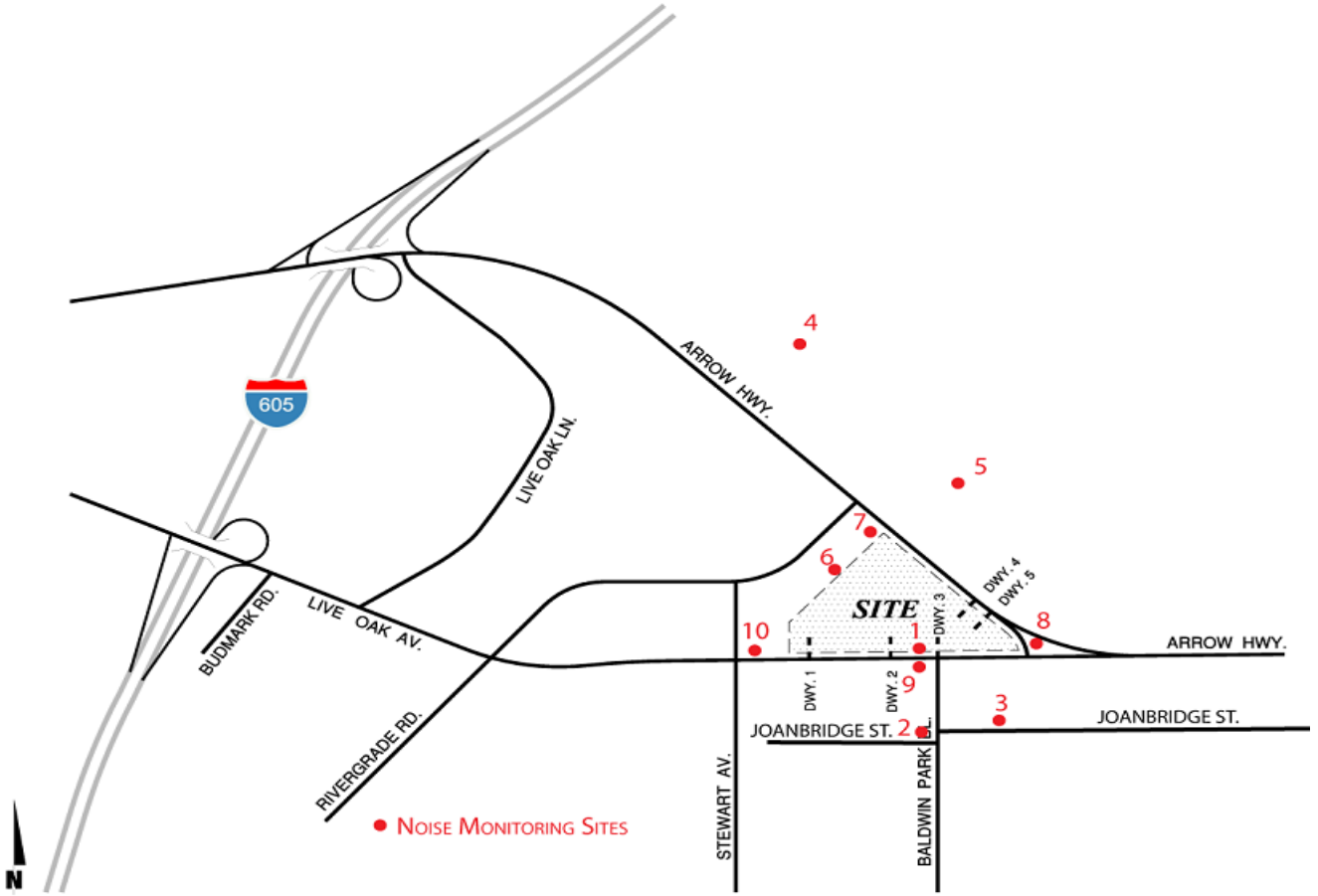
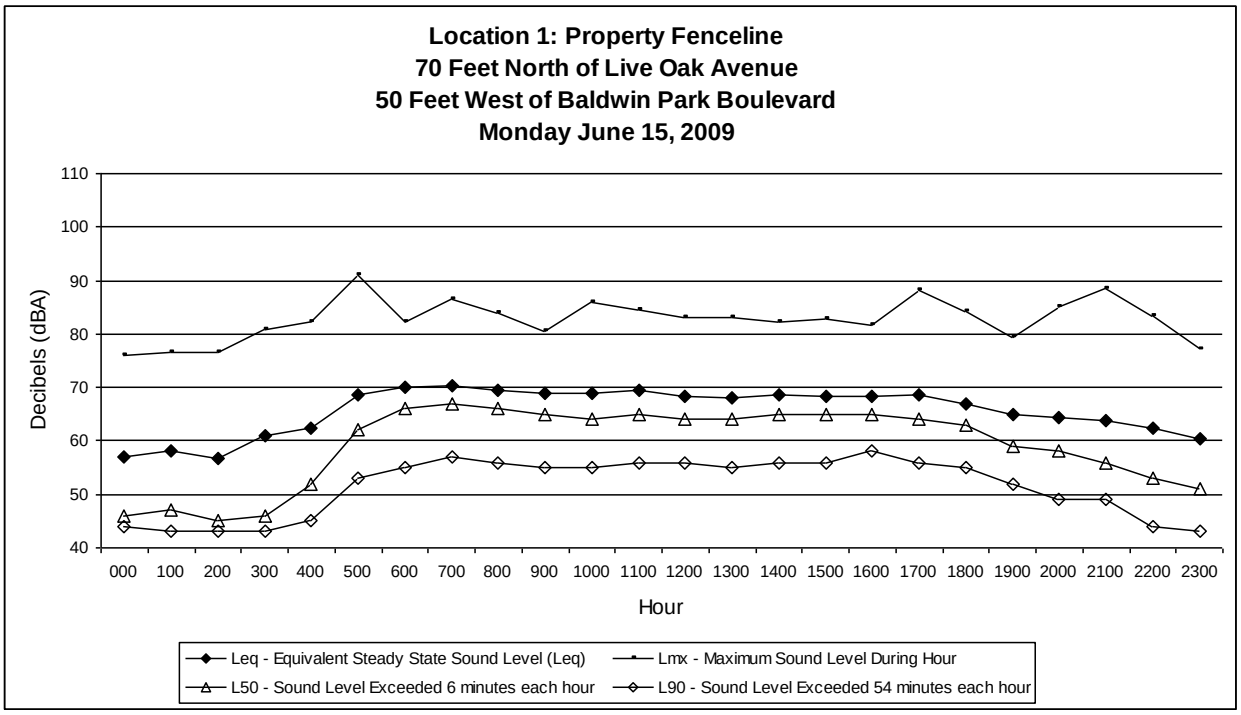
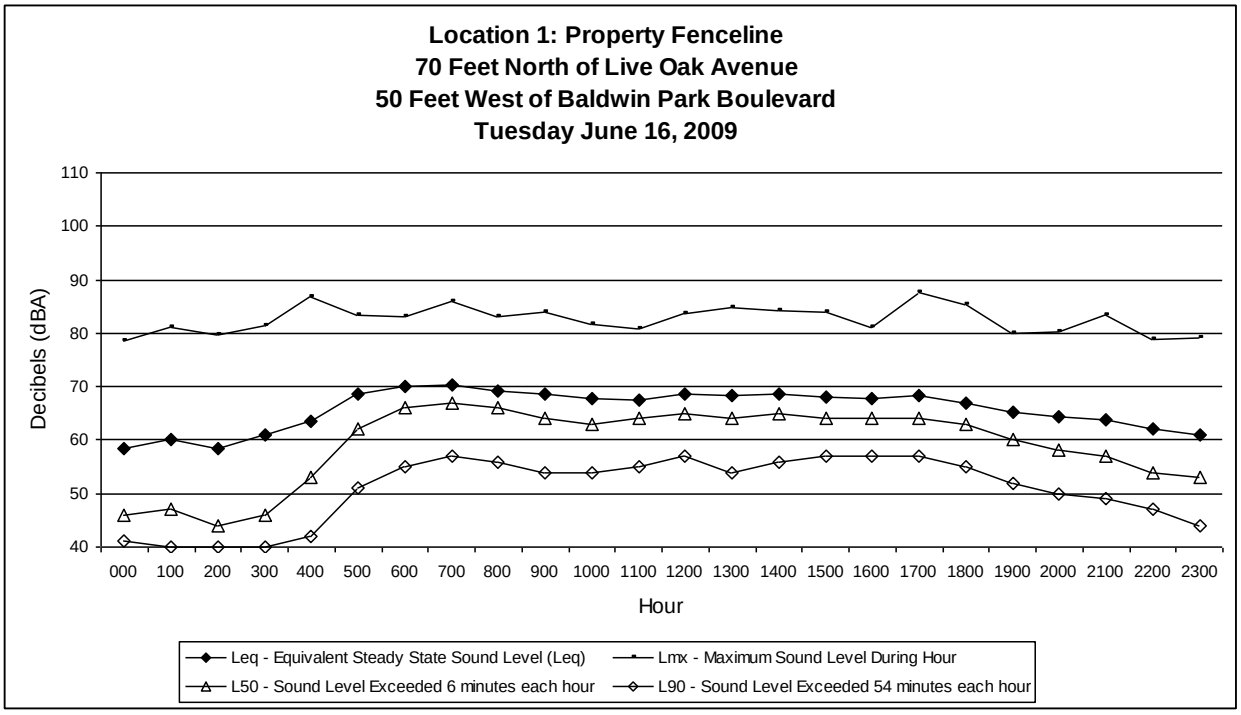
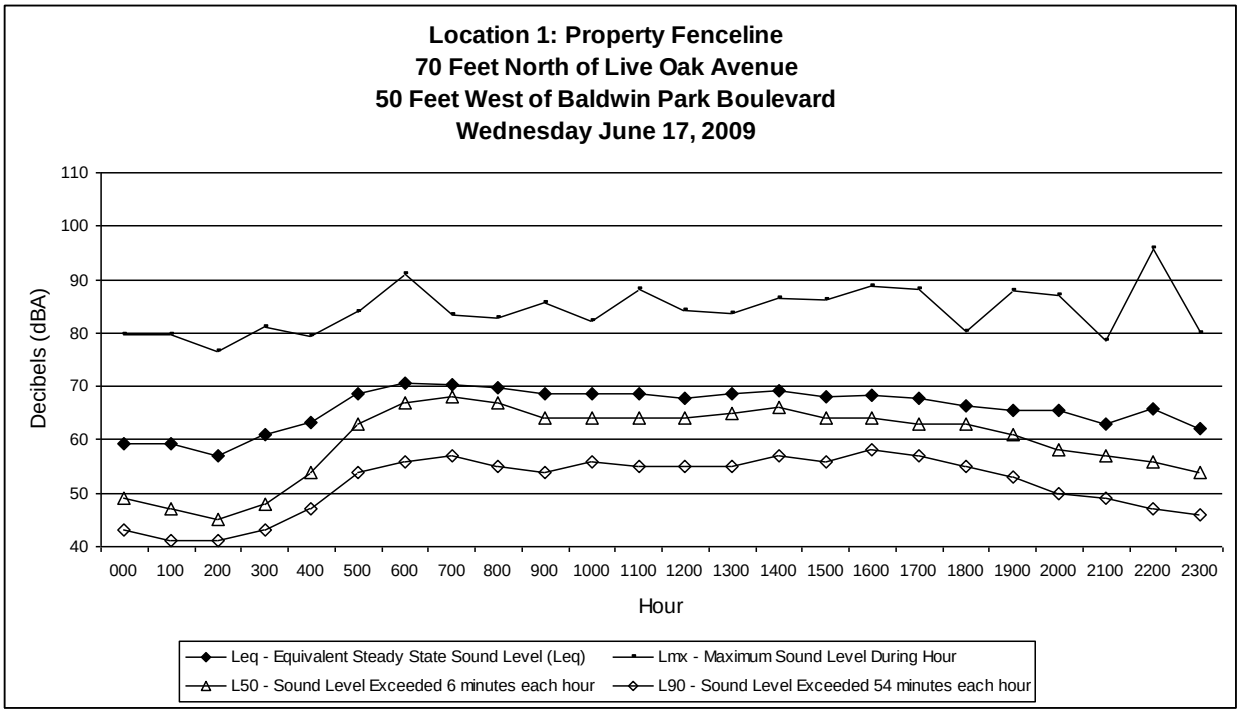
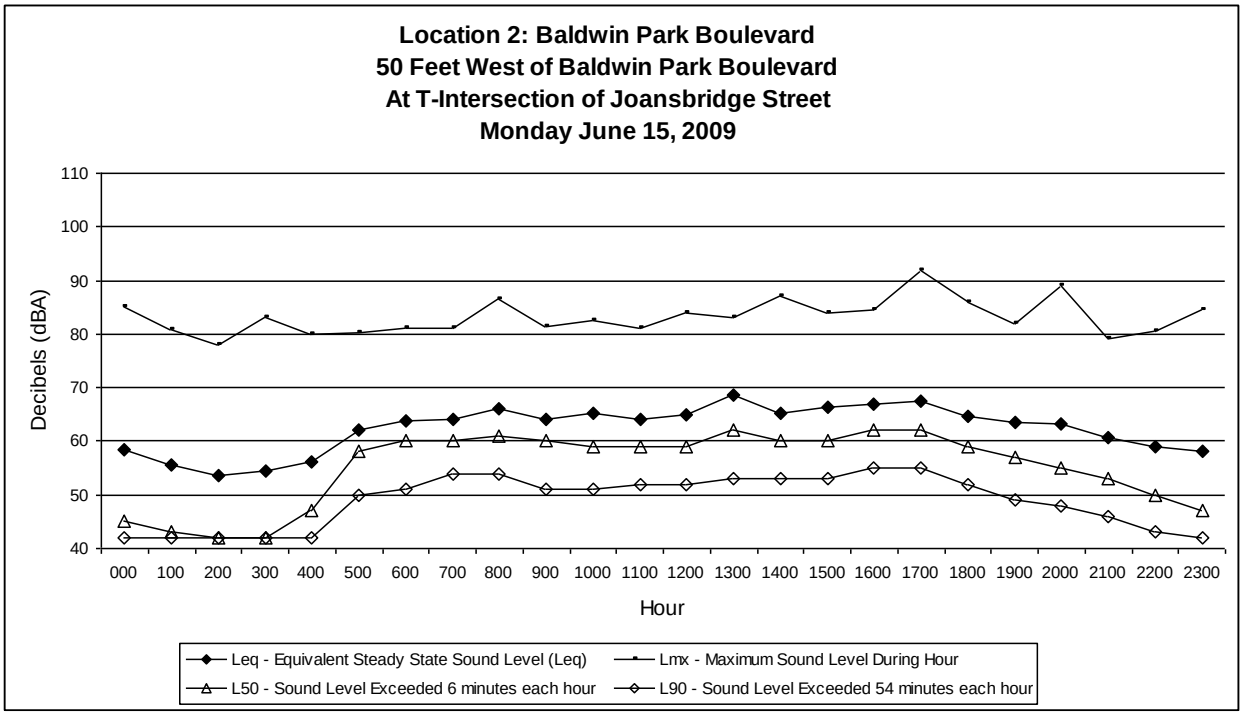


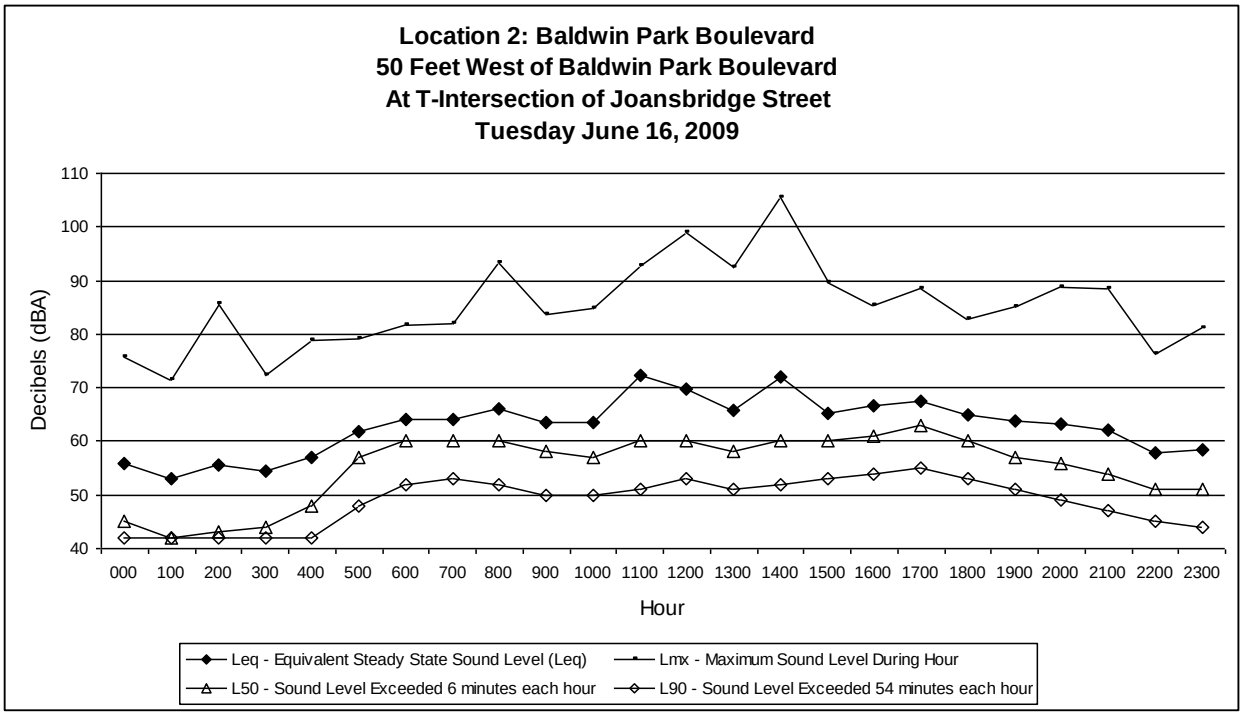
Exhibit 3.10-2 Existing Noise Measurement Readings at Locations 1-3 Over A 24-Hour Period

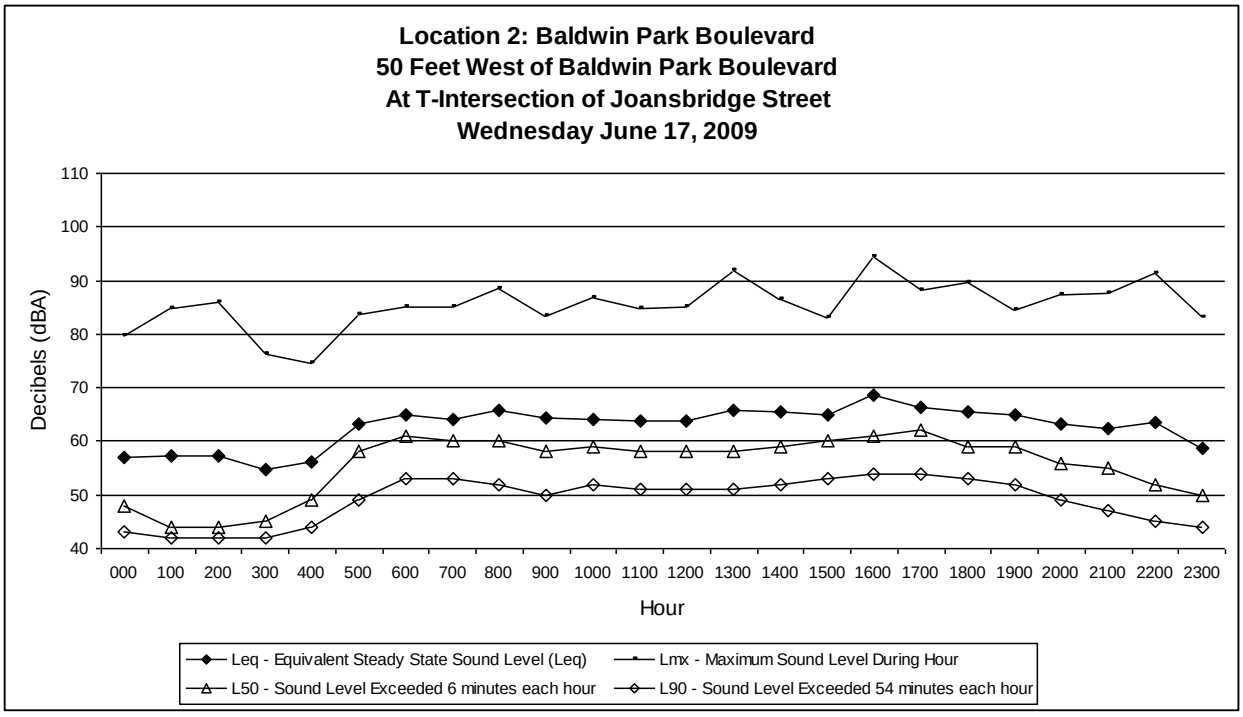


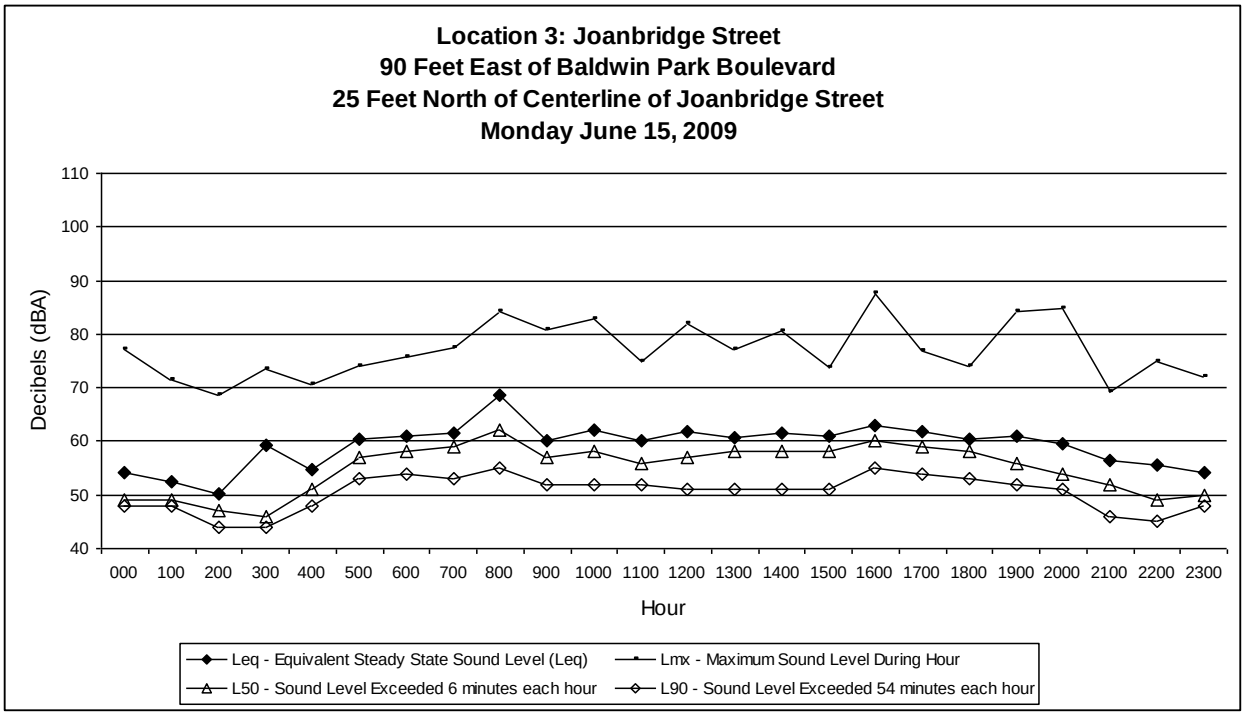


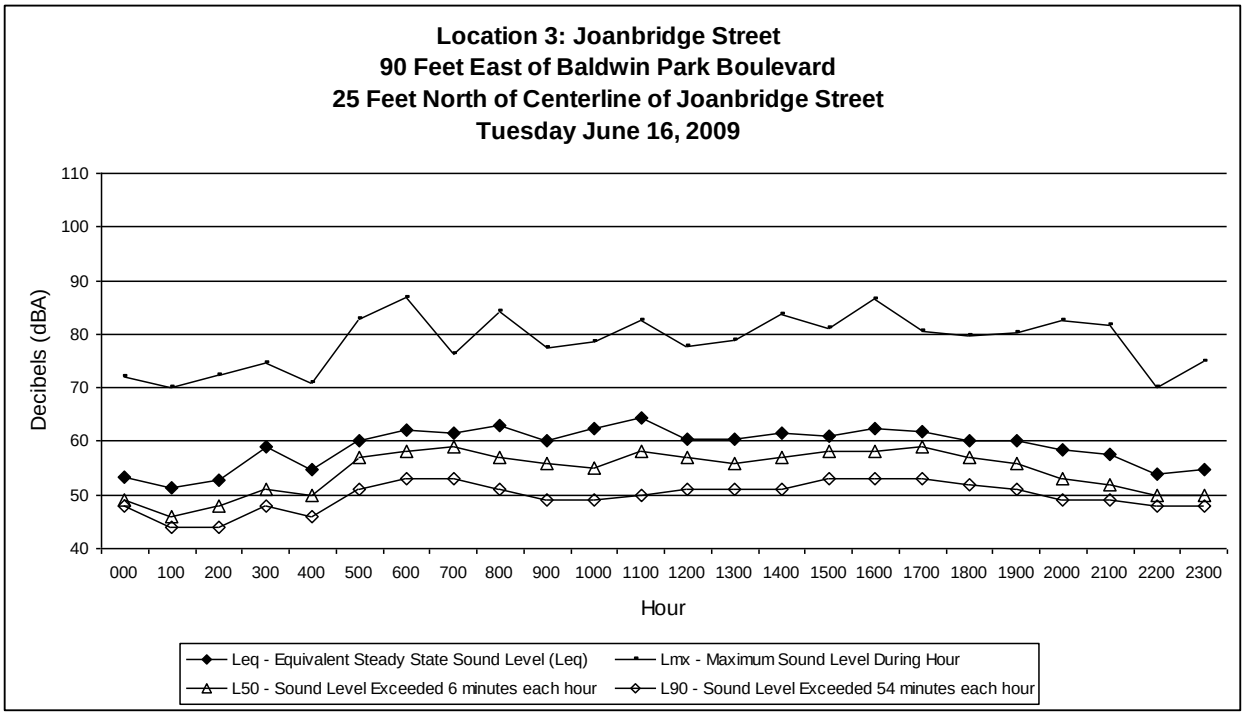

Location 1: Property Fenceline
70 Feet North of Live Oak Avenue
50 Feet West of Baldwin Park Boulevard
Wednesday June 17, 2009
Decibels (dBA)
110
100
90
80
70
60
50
40
000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
Hour
Leq - Equivalent Steady State Sound Level (Leq)
Lmx - Maximum Sound Level During Hour
L50 - Sound Level Exceeded 6 minutes each hour
L90 - Sound Level Exceeded 54 minutes each hour

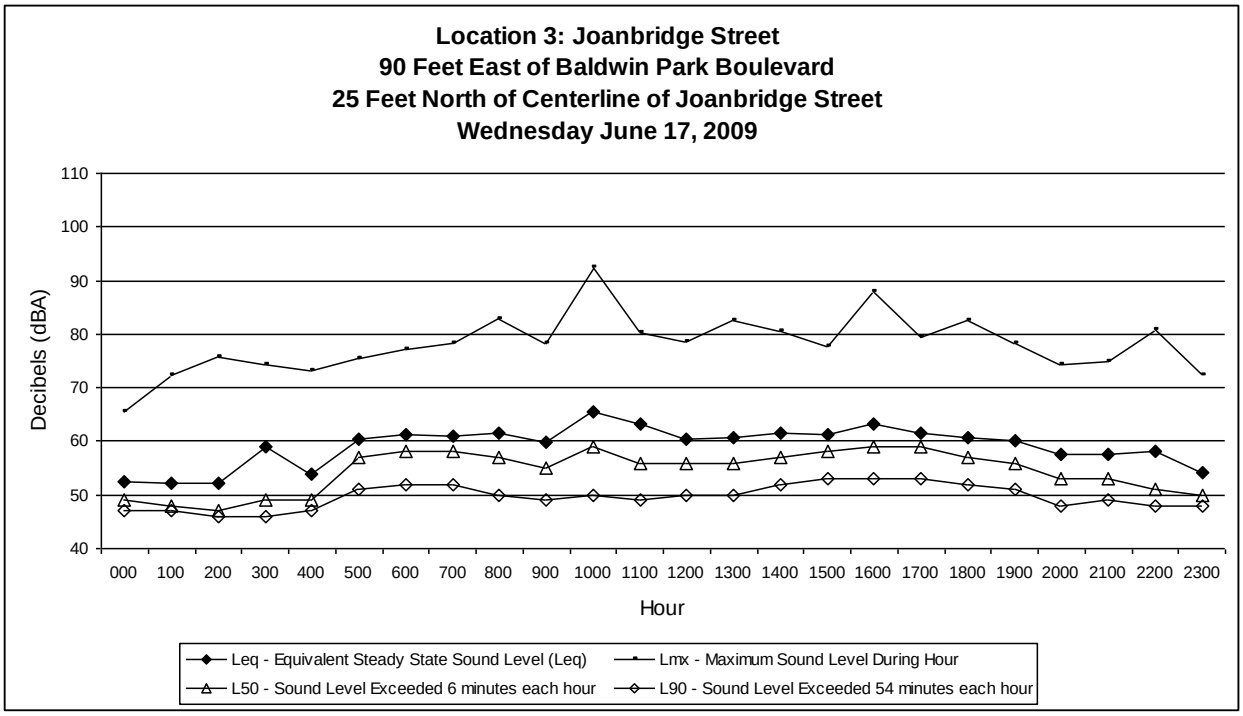

Location 2: Baldwin Park Boulevard
50 Feet West of Baldwin Park Boulevard
At T-Intersection of Joansbridge Street
Monday June 15, 2009
Decibels (dBA)
110
100
90
80
70
60
50
40
000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
Hour
Leq - Equivalent Steady State Sound Level (Leq)
Lmx - Maximum Sound Level During Hour
L50 - Sound Level Exceeded 6 minutes each hour
L90 - Sound Level Exceeded 54 minutes each hour


Location 2: Baldwin Park Boulevard
50 Feet West of Baldwin Park Boulevard
At T-Intersection of Joansbridge Street
Tuesday June 16, 2009
Decibels (dBA)
110
100
90
80
70
60
50
40
000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
Hour
Leq - Equivalent Steady State Sound Level (Leq)
Lmx - Maximum Sound Level During Hour
L50 - Sound Level Exceeded 6 minutes each hour
L90 - Sound Level Exceeded 54 minutes each hour


Location 2: Baldwin Park Boulevard
50 Feet West of Baldwin Park Boulevard
At T-Intersection of Joansbridge Street
Wednesday June 17, 2009
Decibels (dBA)
110
100
90
80
70
60
50
40
000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
Hour
Leq - Equivalent Steady State Sound Level (Leq)
Lmx - Maximum Sound Level During Hour
L50 - Sound Level Exceeded 6 minutes each hour
L90 - Sound Level Exceeded 54 minutes each hour


Location 3: Joanbridge Street
90 Feet East of Baldwin Park Boulevard
25 Feet North of Centerline of Joanbridge Street
Monday June 15, 2009
Decibels (dBA)
110
100
90
80
70
60
50
40
000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
Hour
Leq - Equivalent Steady State Sound Level (Leq)
Lmx - Maximum Sound Level During Hour
L50 - Sound Level Exceeded 6 minutes each hour
L90 - Sound Level Exceeded 54 minutes each hour


Location 3: Joanbridge Street
90 Feet East of Baldwin Park Boulevard
25 Feet North of Centerline of Joanbridge Street
Tuesday June 16, 2009
Decibels (dBA)
110
100
90
80
70
60
50
40
000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
Hour
Leq - Equivalent Steady State Sound Level (Leq)
Lmx - Maximum Sound Level During Hour
L50 - Sound Level Exceeded 6 minutes each hour
L90 - Sound Level Exceeded 54 minutes each hour



Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure, in terms of both duration and insulation from noise, and the types of activities typically involved. Residences, motels and hotels, schools, libraries, churches, hospitals, nursing homes, auditoriums, and parks and other outdoor recreation areas generally are more sensitive to noise than are commercial and industrial land uses. The Proposed Project site is bound to the south by Live Oak Avenue and Arrow Highway to the northeast. The Santa Fe Dam and Santa Fe Recreation Area are approximately 480 feet northeast of the Proposed Project site. Industrial and commercial facilities are located to the northwest, west, southwest, south, and southeast of the site with the nearest commercial facility approximately 100 feet south of the property line. Beyond the existing industrial land uses to the south (in the City of Baldwin Park), residential land uses are situated approximately 325 feet and further south and southeast of the property line. The Margaret Heath Elementary School is located approximately 1,370 feet south of the Proposed Project site in the City of Baldwin Park.

3.10.2 REGULATORY SETTING

Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies. Local regulation of noise involves implementation of general plan policies and noise ordinance standards. Local general plans identify general principles intended to guide and influence development plans; local noise

ordinances establish standards and procedures for addressing specific noise sources and activities.

Occupational Safety and Health Act of 1970

Federal codes, primarily the Occupational Safety and Health Act of 1970 (OSHA), govern worker exposure to noise levels. These regulations would be applicable to all phases of the Proposed Project and are designed to limit worker exposure to noise levels of 85 dB or lower over an 8-hour period (Title 29, Code of Federal Regulations [CFR], Section 1910.95).

United States Environmental Protection Agency

The United States Environmental Protection Agency (U.S. EPA) has established general guidelines for noise levels in sensitive areas in order to provide state and/or local government's guidance in establishing local laws, ordinances, rules, or standards. The U.S. EPA guidelines suggest that the average residential outdoor noise level be 55 dBA, and the indoor level be 45 dBA (U.S. EPA, 1974). The indoor level also applies to sensitive noise receptors such as hospitals and schools. Most metropolitan areas in the U.S. have outdoor noise levels above the 55 dBA guideline.

Federal regulations have established noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under Title 40 Code of Federal Regulations (CFR) Part 205, Subpart B. The federal truck pass-by noise standard is 80 dB at 15 meters from the centerline of the vehicle pathway. These standards are implemented through regulatory controls on truck manufacturers.

California Noise Exposure Regulations and Title 8, CCR, Section 5095

State of California regulations (California Noise Exposure Regulations and Title 8, CCR, Section 5095) address worker exposure to noise levels. These regulations limit worker exposure to noise levels of 85 dB or lower over an 8-hour period. The State has not established noise levels for various non-work-related environments.

The State of California established noise limits for vehicles licensed to operate on public roads. The pass-by standard for heavy trucks is consistent with the federal limit of 80 dB. The pass-by standard for light trucks and passenger cars (less than 4.5 tons, gross vehicle rating) is also 80 dB at 15 meters from the centerline. These standards are implemented through controls on vehicle manufacturers and by legal sanctions on vehicle operators by State and local law enforcement officials.

City of Irwindale General Plan – Public Safety Element

The City of Irwindale 2020 General Plan – Public Safety Element establishes policies relative to the reduction and mitigation of natural and manmade hazards, such as noise, that must be

considered in future planning and decision-making (City of Irwindale, 2008). The City's policies related to noise issues stress the importance of protecting residents from excessive noise and reducing the high levels of noise exposure associated with the existing development and transportation facilities in the City. Specific policies include:

- *Safety Element Policy 5*. The City of Irwindale will work towards reducing noise exposure in the City by considering noise and land use compatibility in land use planning.
- *Safety Element Policy 6*. The City of Irwindale will continue to investigate strategies that will be effective in reducing the community's exposure to harmful noise levels.

The City's General Plan recognizes the State Office of Noise Control's Guidelines for the Preparation and Content of Noise Elements of General Plans, which is a guide for compatibility of noise-sensitive land uses in areas subject to noise levels of 55 to 80 dB CNEL or Ldn. Residential uses are normally unacceptable in areas exceeding 70 dB CNEL; and conditionally acceptable between 55-70 dB CNEL for low-density single-family dwelling units, duplexes, and mobile homes, and between 60-70 dB CNEL for multiple-family units. Schools, libraries, hospitals, and nursing homes are treated as noise-sensitive land uses, requiring acoustical studies within areas exceeding 60 dB CNEL. Commercial/professional office buildings and industrial land uses are normally unacceptable in areas exceeding 75 dB CNEL, and are conditionally acceptable within 67 to 78 dB CNEL (for commercial and professional offices only). While the City's General Plan does not specifically acknowledge the State's noise guidelines for playgrounds and neighborhood parks, these land uses are normally unacceptable in areas exceeding 70 dB CNEL, and are clearly unacceptable in areas exceeding 75 dB CNEL.

Irwindale Municipal Code

The City of Irwindale regulates noise through enforcement of its noise ordinance, Irwindale Municipal Code (IMC) Chapter 9.28 Noise Regulation (City of Irwindale, 2009). Per IMC Section 9.28.030, if the ambient noise level is less than designated in **Table 3.10-3 City of Irwindale Ambient Base Noise Levels** below, the ambient base noise level in **Table 3.10-3** shall govern.

Table 3.10-3 City of Irwindale Ambient Base Noise Levels

Zone	10 p.m. to 7 a.m.	7 a.m. to 10 p.m.
Residential	45 dBA	50 dBA
Commercial	50 dBA	55 dBA
Industrial	60 dBA	70 dBA
Source: Irwindale Municipal Code, Chapter 9.28.030, http://irwindale.ca.us/municipal_code/		

IMC Section 9.28.110 states it is unlawful for any person within a residential zone, or within a radius of five hundred feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects or to operate any pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoist or other construction type device on a development requiring a city permit, in such a manner that noise is produced which would exceed the ambient or the ambient base noise level by more than five (5) dBA when measured at any boundary line of the property from which the noise emanates, unless beforehand authorization therefore has been duly obtained from the building inspector. Such activity is unlawful without a permit during all hours on Sunday. All construction governed by this Section of the IMC is limited to occur between seven (7) a.m. and seven (7) p.m.

Per IMC Section 9.28.120, the noise level from industrial plants shall not exceed the greater of the ambient or the ambient base level (70 dBA) by more than five (5) dBA when measured at any boundary line of the property from which the noise emanates, except as may be specifically authorized by permit from the City.

The Proposed Project is located within the City of Irwindale, in close proximity to the northern boundary of the City of Baldwin Park; therefore, the City of Baldwin Park's noise policies and ordinances are also considered below.

City of Baldwin Park General Plan – Noise Element

The City of Baldwin Park has included noise goals and policies in their 2020 General Plan – Noise Element to ensure that Baldwin Park residents will be protected from excessive noise (City of Baldwin Park, 2002). Specific goals include:

- *Goal 2.0*: Minimize noise spillover from commercial and industrial uses into nearby residential neighborhoods.
- *Goal 4.0*: Reduce noise impacts from transportation noise impacts.
- *Goal 5.0*: Develop measures to control excessive noise citywide.

The City of Baldwin Park has developed noise standards for various types of land uses. These standards are shown in **Table 3.10-4 City of Baldwin Park Interior and Exterior Noise Standards**.

Baldwin Park Code of Ordinances

Sections 130.30 through 130.44 of the Baldwin Park Code of Ordinances establish the City's noise control. Per Section 130.34, it is unlawful for any person within the City to make, cause or allow to be produced noise which is received on property occupied by another person within the designated zone, in excess of the following levels, except as expressly provided otherwise as shown in **Table 3.10-5 City of Baldwin Park Ambient Base Noise Levels.**

Table 3.10-4 City of Baldwin Park Interior and Exterior Noise Standards

Land Use	Interior Noise Standards	Exterior Noise Standards
Residential	CNEL 45 dB	CNEL 65 dB
Private Offices, Churches, Libraries, etc.	Leq(12) 45 dBA	--
Schools	Leq(12) 45 dBA	Leq(12) 67 dBA
General Offices, clerical, etc.	Leq(12) 50 dBA	--
Bank, Lobby, Retail, etc.	Leq(12) 55 dBA	--
Manufacturing, Warehousing, etc.	Leq(12) 65 dBA	--
Parks, Playgrounds	--	CNEL 65 dB
Golf Course, Outdoor Spectator Sports, etc.	--	CNEL 70 dB
CNEL: Community noise equivalent level Leq(12): The A-weighted equivalent sound level averaged over a 12-hour period (usually the hours of operations) *Source: City of Baldwin Park, 2020 General Plan, Noise Element*		

Table 3.10-5 City of Baldwin Park Ambient Base Noise Levels

Zone	7 a.m. to 7 p.m.	7 p.m. to 7 a.m.
Residential – Single Family	55 dBA	45 dBA
Residential – Multi Family	60 dBA	55 dBA
Commercial	65 dBA	60 dBA
Industrial	70 dBA	70 dBA
Source: Baldwin Park Code of Ordinances, Section 130.30, http://www.amlegal.com/nxt/gateway.dll/California/baldwin/titlexiiigeneraloffenses/chapter130generaloffenses?f=templates$fn=altmain-nf.htm$q=[field folio-destination-name:'130.30']$x=Advanced#JD_130.30; Accessed 10/31/13		

Section 130.37(E) states: *It is unlawful for any person within a residential zone, or within a radius of 500 feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects to operate any piledriver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device (between the hours of 7:00 p.m. of one day and 7:00 a.m. of the next day) in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefor has been duly obtained from the Department of Public Works.*

3.10.3 THRESHOLDS OF SIGNIFICANCE

The significance of potential impacts from the Proposed Project on existing noise levels was determined based upon the CEQA Guidelines, Appendix G. These guidelines identify thresholds that may be considered to determine whether an impact is significant. Using these thresholds, the Proposed Project would be considered to have significant noise impacts if it were to:

a. Expose persons to or generate noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standard of other agencies;
b. Expose persons to or generate excessive ground-borne vibrations or ground-borne noise levels;
c. Result in substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
d. Result in a significant increase in noise levels at sensitive receptors in the area;
e. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
f. Be located within an airport land use plan or, where such plan has been adopted, within two miles of a public airport and therefore expose people residing or working in the project areas to excess noise levels; or
g. Be located within the vicinity of a private airstrip and therefore expose people residing or working in the project area to excessive noise levels.

With temporary noise impacts (e.g., construction activities), identification of "substantial increases" depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels. Per the City of Irwindale noise ordinance, if construction activities are within a radius of 500 feet of a residential zone, construction activities exceeding 75 dBA ambient base noise levels between 7 a.m. and 7 p.m. at the property boundary of an industrial zone would be considered a significant impact, unless authorization therefore has been duly obtained beforehand from the building inspector. Per the City of Baldwin Park, if within a radius of 500 feet of a residential zone, construction activities occurring between the hours of 7:00 p.m. of one day and 7:00 a.m. of the next day would be considered a significant impact.

For operational impacts, per the City of Irwindale noise ordinance, operational-related noise levels at the property boundary exceeding 75 dBA ambient base noise levels between 7 a.m. and 10 p.m. or 65A dB between 10 p.m. and 7 a.m. would be considered a significant impact, except as may be specifically authorized by permit from the City. Per City of Baldwin Park, operational-related noise levels exceeding the levels shown in **Table 3.10-4 City of Baldwin Park Interior and Exterior Noise Standards** would be considered significant.

For transportation noise, an increase in noise levels of 5 dBA is considered significant where existing noise levels are less than 60 dBA Ldn (Federal Interagency Committee on Noise [FICON] 1992). In addition, an increase in noise of 3 dBA or more is considered significant for existing noise levels between 60 and 65 dBA Ldn, and an increase in noise by 1.5 dBA or more is considered significant for existing noise levels greater than 65 dBA Ldn.

3.10.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

This section evaluates the potential environmental impacts of noise from the Proposed Project. Impacts were evaluated by measuring the existing noise levels in the Proposed Project area and determining the noise compatibility of the area. Traffic data and a Federal Highway Administration (FHWA) noise model were used to determine future impacts of traffic-related noise.

To gather background data and comparable site use data, a site visit and records search was conducted at the Applicant's materials recovery facility and transfer station (MRF/TS) located in the City of Industry. The noise report prepared by Gordon Bricken & Associates for the Industry MRF/TS site was also reviewed for project information. Additionally, excerpts from potential transportation noise as summarized in the *Traffic Impact Study* (Appendix G of the EIR) have been incorporated by reference.

The following noise analysis considers the suitability of the project area for the proposed industrial use and the effect of Proposed Project noise upon other sensitive receptors in the area.

THRESHOLD N-1

Would the project cause exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standard of other agencies?

Less than Significant Impact with Mitigation Program (During Construction)
Significant and Unavoidable (During Operation)
Project construction would occur in a single phase estimated to require 18 months. Construction activities would be scheduled to ensure that any particularly noisy activities occur primarily during normal weekday business hours and do not occur on Sundays and holidays or between 7 p.m. and 7 a.m. on any days.

Construction

Construction activity noise levels at and near the Proposed Project area would fluctuate depending on the particular type, number, and duration of use of construction equipment. Construction-related material haul trips would raise ambient noise levels along haul routes, depending on the number of haul trips made and types of vehicles used (refer to **Table 3.10-6**

Typical Construction Noise Levels and **Table 3.10-7 Typical Noise Levels from Construction Equipment**). Pile driving would not be required for the Proposed Project.

Table 3.10-6 Typical Construction Noise Levels

Construction Phase	Noise Level (dBA Leq)
Ground Clearing	84
Excavation	89
Foundations	78
Erection	85
Finishing	89

Notes: Average noise levels correspond to a distance of 50 feet from the noisiest piece of equipment associated with a given phase of construction and 200 feet from the rest of the equipment associated with that phase.
dBA = A-weighted decibel; Leq = equivalent sound level
Source: U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, 1971

Table 3.10-7 Typical Noise Levels From Construction Equipment

Construction Equipment	Noise Level (dBA Leq at 50 ft)
Dump Truck	88
Portable Air Compressor	81
Concrete Mixer (Truck)	85
Scraper	88
Jack Hammer	88
Dozer	87
Paver	89
Generator	76
Pile Driver	101
Backhoe	85

Notes: dBA = A-weighted decibel; Leq = equivalent sound level
Source: Cunniff, Environmental Noise Pollution, 1977

Noise from construction activities generally attenuates at a rate of 4.5 to 7.5 dBA per doubling of distance. Depending on the construction phase and equipment and duration of the construction activity, ambient noise levels at the property boundary could exceed 75 dBA. Existing hourly background noise levels near the property boundary range from 40 to 58 dBA. Paving activities (89 dBA) would occur right at the property boundary. Assuming an attenuation rate of 6 dBA per doubling of distance, finishing activities would generate noise levels of 83 dBA at the property boundary.

Per the City of Irwindale noise ordinance, if construction activities are within a radius of 500 feet of a residential zone, construction activities exceeding 75 dBA ambient base noise levels between 7 a.m. and 7 p.m. at the property boundary of an industrial zone would be considered a significant impact, unless authorization therefore has been duly obtained beforehand from the building inspector. Per the City of Baldwin Park, if within a radius of 500 feet of a residential zone, construction activities occurring between the hours of 7:00 p.m. of one day and 7:00 a.m. of the next day would be considered a significant impact.

Based upon the above, it is reasonably foreseeable that construction activities for the Proposed Project could cause exposure of persons to or generation of noise levels in excess of standards established by the City of Irwindale and City of Baldwin Park. Therefore, construction noise would be considered a potentially significant impact.

Mitigation measures **MM N-1** through **MM N-6** have been developed to minimize these potential impacts.

MM N-1

Prior to construction, the construction contractor shall obtain authorization from Irwindale's building inspector to exceed the ambient base noise level by more than five (5) dBA during construction activities at the property boundary for industrial zoned land use.

MM N-2

The construction contractor shall limit all construction activities from 7 a.m. to 7 p.m. Monday through Saturday. No construction activity shall be conducted on Sundays or during legal holidays.

MM N-3

The construction contractor shall construct the soundwall around the site perimeter during the initial construction phase to establish the means for noise reduction during subsequent construction and operations. In the event that the soundwall is not constructed prior to construction of the buildings, a temporary sound barrier or curtain shall be used as a temporary measure to reduce noise impacts (by at least 5 decibels) until the soundwall can be constructed.

MM N-4

The construction contractor shall operate and maintain a City-approved haul truck traffic route restricted to major traffic arteries, and prohibited from using Baldwin Park Boulevard south of Live Oak Avenue.

MM N-5

The construction contractor shall provide construction equipment equipped, operated, and maintained with manufacturer recommended mufflers or the equivalent. The construction contractor shall locate staging and delivery areas as far as feasible from sensitive land uses or adjacent occupied buildings and schedule deliveries during daytime hours when residential areas south of the project site are less susceptible to annoyance from outside noise.

MM N-6

The construction contractor shall post rules visible to drivers that require turning-off construction equipment when not in operation (for more than 5 minutes). The construction contractor shall shield stationary equipment operating under full power for more than 60 minutes that would otherwise not be shielded by the perimeter soundwall.

MM N-1 requires the Applicant to obtain authorization from the City of Irwindale to exceed the 75 dBA between 7a.m. and 7p.m. **MM N-2** would prohibit construction activities occurring after 7 p.m. and before 7 a.m. to comply with the City of Baldwin Park standards. In addition to **MM N-1** and **MM N-2**, **MM N-3, MM N-4, MM N-5** and **MM N-6** would further reduce noise levels during construction from the construction noise sources. With implementation of **MM N-1** through **MM N-6**, it is not expected that construction of the Project would cause exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standard of other agencies. Noise impacts related to construction and adopted standards would be less than significant with mitigation.

Operation

The project Applicant, Athens Services, currently operates a MRF/TS, similar to the Proposed Project, open 24 hours a day, seven days a week in the City of Industry. A noise assessment was performed for that facility in 2003 (*Acoustical Analysis Materials Recovery Facility Second MRF Building Bin Manufacturing Facility and Maintenance Building County of Los Angeles*, Gordon Bricken & Associates, June 3, 2003). The purpose of this report was to analyze whether a proposed installation of a second MRF building, an expanded tipping floor, and the expansion of the capacity of all operations to 8,500 tons per day would comply with the County's noise criteria for the nearest land use. The analysis included noise monitoring of the existing 1,920 tons per day MRF/TS, and subsequently modeled estimated noise levels from a MRF/TS operating at 8,500 tons per day capacity. Noise measurements indicate noise levels ranged from 61-67 Leq dBA approximately 110-375 feet from the existing 1,920 tons per day Industry MRF/TS.

Table 3.10-8, presents the results of the Gordon Bricken & Associates acoustical analysis showing estimated total noise levels at 50 feet from the entrance of the tipping floor for day time and night time at the proposed 8,500 ton per day MRF/TS in the City of Industry. Night time

noise levels were estimated to be slightly less due to fewer pieces of equipment used during the night. Operations would occur 24 hours, 7 days per week, however, some operations were assumed to be restricted between the most sensitive nighttime hours of 10 p.m. and 7 a.m. Operations include unloading at tipping floor and sorting. The tipping floor and sorting line are almost completely enclosed with a large entrance opening and a smaller opening.

Proposed truck maintenance activities at the Irwindale site would be located in the northeastern section of the property. Fueling activities would occur in the northernmost corner with vehicle access from Arrow Highway. The southeastern corner of the site would be used for parking.

The *On-site Management Plan*s, which are subject to review, approval, and enforcement by the City, include a noise control program that includes the following measures:

- All tipping, transfer, and sorting operation occur inside an enclosed building, with doors on all vehicle entrances and exits which are kept closed unless actually in use. A masonry wall will be erected around the perimeter of the site with the exception of location(s) on utility easements which require installation of a removable sound wall. The final design of the wall height and earthern berm will be subject to the approval of City standards.
- Operations and maintenance may occur 24/7. Facility doors will be kept closed when not in use, particularly at night, to prevent escape of noise. Outdoor operations, maintenance, and construction activities shall be scheduled to ensure that any particularly noisy activities occur during normal weekday business hours.
- All Athens Services vehicles accessing the site will be maintained with mufflers in good working order and backup alarms will kept set at the lowest volume allowed by applicable regulations. Use of vehicle horns will be discouraged on site except as necessary to alert workers of an emergency situation. Use of loud speakers will be prohibited. As a safety measure, trucks will utilize back up alarms when in reverse.

Table 3.10-8 Expected Noise Levels 50 Feet from the Entrance of Tipping Floor at the Industry MRF/TS (8,500 TPD)

Source	Lmax	L2	L8	L25	L50
Truck Movements*	75	75	75	72	-
Backup Alarm*	85	-	-	-	-
Hydraulic Pumps	73	73	70	-	-
Truck Unloading	75	75	72	-	-
Air Brake*	85	-	-	-	-
Loader	72	72	72	72	69
Conveyor	65	65	65	65	65
Alarms	82	82	79	-	-
Voices	62	62	62	62	62
Sorting	68	86	68	68	65
Sweepers*	83	83	-	-	-
Total Day	**90**	**87**	**82**	**76**	**73**
Total Night	**89**	**84**	**82**	**76**	**73**

Notes:
Lmax = maximum
L2 = duration of one minute in any hour
L8 = duration of 5 minutes in any hour
L25 = duration of 15 minutes in any hour
L50 = duration of 30 minutes in any hour
The total is the logarithmic sum of all sources in all categories except the Lmax metric.
The total is the highest individual event for the Lmax metric.
The MRF/TS size analyzed for the City of Industry would have a capacity of 8,500 TPD
Asterisk denotes use is restricted to between 10:00 am and 7:00 pm.
Source: Gordon Bricken & Associates, 2003

The noise levels of the City of Industry MRF/TS operations were taken on March 31, 2009. These measurements were short-term (5 minutes) noise measurement taken at the backside of City of Industry MRF/TS approximately 20 feet from the soundwall and 30 feet from the center of the road. Inside inspection verified that the MRF was at full operations with all the conveyors, sorters, and mobile vehicles working at full speed. Noise levels at the backside of the City of Industry MRF/TS included 60-62 dBA due to vehicle passbys and 75 dBA for a street sweeper passby. A rooster crowing across the street reached 50-52 dBA. The Leq was 68 dBA during the measurement period (primarily due to the street sweeper passby), the background at this location (the L90 representing the continuous noise from operations of the City of Industry MRF/TS) was only 50 dBA.

Based on the highest total expected noise levels for the City of Industry MRF/TS facility (from **Tables 3.10-8)**, the Proposed Project in Irwindale could generate noise levels up to 73 dBA during 30 minutes (L50 levels) in any hour during the day and 73 dBA for the same duration during the night (at a location 50 feet from the entrance of the tipping floor). While noise levels from the Proposed Project would likely be lower because it is a smaller facility (fewer truck trips, fewer workers, fewer equipment) than was analyzed in the Gordon Bricken & Associates report (6,000 TPD vs. 8,500 TPD), these estimates are a conservative [worst case scenario] approach to potential noise levels at the Proposed Project site.

Based on the Gordon Bricken & Associates noise report, a 12-foot high soundwall along the property line of the City of Industry MRF/TS was measured to produce an average of 17 dBA of noise reduction at the nearest residential uses approximately 110 feet away. Assuming an average attenuation rate of 5 dBA due to distance, it can be assumed that the soundwall reduces noise levels by 12 dBA at approximately 50 feet. This is consistent with the general rule that a soundwall reduces noise levels by approximately 1 dBA per foot of height.

Based on several factors, such as 2009 noise measurements from the existing City of Industry MRF/TS taken for this analysis, expected noise levels identified in the 2003 Gordon Bricken & Associates Report, and expected noise reduction from an 8-foot soundwall (a proposed design feature of the Proposed Project), the Proposed Project in Irwindale would likely generate noise levels as shown in **Table 3.10-9**.

As discussed above, the City of Irwindale's adopted standards for Industrial uses is 60 dBA between 10 p.m. and 7 a.m. and 70 dBA between 7 a.m. and 10 p.m. (IMC § 9.28.030.) The code provides that no industrial uses may exceed these ambient standards by 5 dBA at the property boundary line without the authorization of the City. Under the Baldwin Park's adopted standards, industrial uses are limited to 70 dBA. (Table 3.10-5.) Additionally, Baldwin Park has no adopted exterior ambient noise level standard for commercial uses, interior standard for commercial uses is 45 dBA; residential exterior standard is 65 dBA and interior standard is 45 dBA.

Based upon the noise levels in **Table 3.10-9** and the noise levels measured in the vicinity of the site (see **Table 3.10-2**) the ambient noise levels from the Proposed Project could exceed the ambient or ambient base level for industrial land uses by more than five (5) dBA at the property boundary line during day or night time as stated in Irwindale Municipal Code Section 9.28.120. The noise levels for the western/northwestern border in Table 3.8-9 would exceed the ambient base levels for industrial land use (60 at night and 70 during the day) by more than 5 dBA between 5 a.m. to 7 a.m.

The levels for properties in Baldwin Park are not expected to exceed Baldwin Parks adopted standards. Exterior noise levels should not exceed the L(12) limit of 65 for BP residential. It

should be <60 and masked by noise from Live Oak not attributable to the project. Additionally, traffic related operation noises are not likely to affect Baldwin Park since most of the traffic is restricted from going south through Baldwin Park.

Table 3.10-9 Expected Noise Levels From Proposed Materials Recovery Facility Operations in Irwindale

Site Location (Property lines)	Day Operations (7 a.m. – 10 p.m.)	Other Night Operations Minimal Truck Moves (10 p.m. to 5 a.m.)	Max. Night Operations With Truck Movements (5 a.m. to 7 a.m.)
	Hourly Average Noise (Leq)		
Southern border facing Live Oak Avenue	58-69	48-59	58-**69**
Northeastern border facing Arrow Highway	60	50	60
Eastern border facing intersection of Arrow Highway and Live Oak Avenue	58	48	58
Western/Northwestern border facing adjacent commercial property	**74**	**64**	**74**
Irwindale Municipal Code (Section 9.28.030) ambient base noise level	**70**	**60**	**60**

Notes: Estimated 82 dBA 50 feet from major MRF, Green Waste, and Self Haul C&D entrance points

- A 4.5 dBA attenuation rate for distance
- An 8-foot soundwall on all facility boundaries (except for traffic cutouts)
- A 10-dBA reduction form night operations with minimal truck movements

Potentially significant noise levels are shown in **bold**. Noise levels cannot exceed the ambient or the ambient base noise level by more than 5 dBA when measured at any property line of the property from which the noise emanates.

Source: RCH Group, 2013

Based upon this, operational noises from the Project could be in excess of standards established in the local General Plan or noise ordinance, or applicable standard of other agencies. The following mitigation measure shall be imposed on the Project:

MM N-7

The Applicant shall implement all of the following:

- For the western/southwestern property boundary (for approximately the first 450 feet of the property boundary north of Live Oak Avenue), the Applicant shall construct the 8-foot perimeter masonry soundwall on top of a two-foot berm so that the effective height of the soundwall would be 10 feet (with the exception that the berm is not required to be constructed on any utility easements).
- The Applicant shall modify nighttime operations (10 p.m. – 7 a.m.) that result in verified noise complaints to eliminate objectionable noise during the nighttime hours. The applicant shall notify the City of any noise complaints received within 24 hours of receiving the complaint and provide a proposed amendment to the On-Site Management Plans to demonstrate a reduction in ambient noise within one (1) week, subject to review and approval of the City upon a finding that the amendment will result in compliance with adopted noise standards of the City of Irwindale and the City of Baldwin Park.
- The Applicant shall obtain authorization by permit from the City to exceed ambient noise levels from facility operations on the western/northwestern boundary and the southern boundary (for 5 a.m. to 7 a.m.) pursuant to IMC Section 9.28.120. If the applicant does not obtain authorization by permit to exceed noise levels, the applicant will be required to modify operations to reduce noise levels between 5 a.m. to 7 a.m. to 65 dBA.

With the implementation of **MM N-7**, the Project is not expected to exceed standards established in the local General Plan or noise ordinance, or applicable standard of other agencies. This impact would be less than significant with mitigation.

Fueling Facility/Convenience Store

The fueling facility/convenience store would be a separate structure located in the northeastern portion of the project site adjacent to Arrow Highway and includes a fueling island with pump canopy, convenience store, and parking for customers. Fueling facility/convenience stores are not usual sources for excessive noise and because this fueling facility location would not be close to residential receptors, no significant noise impacts are expected from operations.

Traffic

After construction is complete and operations at the Proposed Project begin, the additional vehicles traveling to the site would increase noise levels adjacent to nearby roads. Based on the Federal Interagency Committee on Noise standards for transportation noise, a project would be considered to generate a significant impact if it resulted in a 1.5 dBA permanent increase in ambient noise levels in the project vicinity above existing noise levels greater than 65 dBA Ldn at existing residences. Noise levels were determined using the Federal Highway Administration

(FHWA) Traffic Noise Model FHWA-RD-77-108 calculations and the turning movements in the Urban Crossroads Traffic Report for Existing (2013), Existing Plus Project (2013), Existing Plus Project (2016), Future (2035), and Future Plus Project (2035) conditions (see **Appendix G**).

The Project would generate a net increase of 3,897 daily trips that include 346 morning peak hour vehicle trips and 350 late afternoon peak hour vehicle trips. Approximately 63 percent of the daily trips are truck trips (6 percent are 2-axel self-haul trucks; 42 percent are 3-axel trucks; and 14 percent are 4-axel transfer trucks). Peak hour (evening) intersection turning data from the traffic study were analyzed to evaluate project increases and resulting traffic-generated noise increases on roadway links most affected by project-related traffic and nearest the project site. Noise levels at other times would be lower. The resulting noise increases are shown in **Table 3.10-10.**

The maximum project impact is analyzed in the fifth column of numbers in **Table 3.10-10**, which is identified as "C-A". This compares the existing projected traffic in 2016 plus the project traffic at maximum capacity to the existing traffic noise. There would be a significant project noise increase impact adjacent to Arrow Highway, west of Rivergrade Road because all access for transfer trucks to and from the Proposed Project site would be from Arrow Highway. Two additional access points to the south from Live Oak Avenue would serve for employees, visitors and the fire department only. The other roadway segments analyzed would have less than significant project impacts. The significant noise impact on Segments 1 would be to the exterior noise levels and would probably not affect interior noise levels for any of the businesses. The same project impact can be seen in the last column **Table 3.10-10** "E-D". This looks at the project impact in the future (year 2035) and again finds a significant impact for Segment 1.

The cumulative impact of traffic noise is shown in columns marks "E-D" and "E-A". Segment 1 has a significant cumulative impact and the project contribution is cumulatively considerable (equal to a 1.5 dBA increase). On the other Segments, the Proposed Project would have a less than significant cumulative impact (noise increases that in all cases are less than 1.5 dBA). Based on all of the above, it is reasonably foreseeable that the Proposed Project would cause exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standard of other agencies based on traffic related noise on Arrow Highway, west of Rivergrade Road. Therefore, traffic related noise impacts are potentially significant and cumulatively significant.

The only identified potential mitigation for this truck noise impact would be soundwalls. However, it is unlikely soundwalls would reduce the noise levels to adopted City standards unless they were excessively large in proportion to the built environment. That is the scale of the wall would not be consistent with the development along Arrow Highway, west of Rivergrade Road. Additionally, the cost would be substantial based on the size of the wall required and the

cost to obtain property owner consent on multiple properties. The cost could also not be legally imposed on the developer based on the noise impacts being a result of cumulative impacts. Additionally, the City would not support spending public monies for construction of a wall that is not necessary for public health and safety on the basis that the development on this stretch of road is not used for sound sensitive activities, but for minimal landscaping and/or parking.

THRESHOLD N-2

Would the project cause exposure of persons to or generation of excessive ground-borne vibrations or ground-borne noise levels?

Less than Significant Impact

Depending on the construction or operational equipment used, ground-borne vibrations can be perceptible within 30 to 100 feet of a source. Structural damage from pile driving typically does not occur in buildings more than 50 feet from the location of the activity (Caltrans, 2004). Pile driving would not be required for construction of the facility. In addition, neighboring buildings are more than 100 feet away. Therefore, it is not reasonably foreseeable that the Project would result in ground-borne vibrations or noise levels. Therefore, ground-borne vibrations and ground-borne noise impacts would be less than significant impact.

THRESHOLD N-3

Would the project result in substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Significant and Unavoidable

The noise levels would probably exceed the existing actual ambient noise levels for the western/northwestern border by more than 5 dBA along portions of the western/northwestern border (even with an 8-foot soundwall), because the existing use of the Proposed Project site is vacant land, with virtually no activities that generate noise.

As identified in **Table 3.10-9**, (**Threshold N-1** discussion), operation-related noise levels could exceed the ambient base level by more than five (5) dB at the western/northwestern property boundary line during day or night time (Irwindale Municipal Code Section 9.28.120). Therefore, operation-related noise levels would be potentially significant. **MM-N-7** would reduce the impact but not to less than 5 dBA ambient increase. Therefore, permanent increase in ambient noise levels would remain a significant impact.

Traffic-related noise levels would exceed the Federal Interagency Committee on Noise standard, where an increase in noise by 1.5 dBA or more would be considered significant for existing noise levels greater than 65 dBA Ldn. Therefore, traffic-related noise would be considered a

significant impact (and significant cumulative impact) to exterior locations along Arrow Highway west of Rivergrade Road (see **Table 3.10-10**).

Table 3.10-10 Peak-Hour Traffic Noise Levels In the Project Vicinity Existing (2013) Versus Future (2016 And 2035)

Roadway Segment	P.M. Peak Hour Noise Levels, dBA, Leqa								
	(A) Existing (2013)	(B) Existing Plus Project (2013)	(C) Future Plus Project (2016)	(B-A) Net Change Existing Plus Project vs. Existing	(C-A) Net Change Future Plus Project (2016) vs. Existing	(D) Future No Project (2035)	(E) Future Plus Project (2035)	(E-D) Net Change Future + Project (2035) vs. Future No Project (2035)	(E-A) Net Change Future (2035) + Project vs. Existing (2013)
1. Arrow Highway, west of Rivergrade Road [b,c]	72.1	74.0	74.5	**1.9**	**2.4**	73.1	74.6	**1.5**	**2.5**
2. Baldwin Park Boulevard, south of Live Oak Ave. [b,c]	68.2	68.3	68.6	0.1	0.4	68.8	68.8	<0.1	0.6
3. Live Oak Avenue, west of Stewart Ave. [b,c]	75.1	75.3	75.7	0.15	0.6	75.7	75.9	0.1	0.8
4. Arrow Highway, north of Live Oak Ave. [b,c]	70.2	70.3	70.9	0.15	0.8	71.0	71.1	0.1	1.0

a. Considered significant if the incremental increase in noise from traffic is greater than the existing ambient noise level by 1.5 dBA Leq if existing noise levels exceed 65 dBA, Ldn at existing residences, per Federal Interagency Committee on Noise standards for transportation noise. Violations are in bolded text.

b. Road center to receptor distance is 15 meters (approximately 50 feet) for all roadway segments. Noise levels were determined using the Federal Highway Administration (FHWA) Traffic Noise Model FHWA-RD-77-108 calculations.

c. The analysis considered the vehicle mix based on existing vehicle type counts and project trip generation by vehicle type. Existing medium trucks are assumed to be 2% of auto vehicle mix. Traffic speeds for all vehicle classes were set at 40 mph on all roads except Arrow Highway, which is assumed to be 45 mph.

Source: RCH Group, Inc., 2013

THRESHOLD N-4

Would the project result in a significant increase in noise levels at sensitive receptors in the area?

Less Than Significant Impact

Construction – Trail, Recreational Facilities

Based on short term measurements shown in **Table 3.10-2 Existing Noise Levels In Project Area**, L90 noise levels along the Santa Fe Dam and Recreation trail ranged from 51-53 dBA and Leq noise levels ranged from 55-58 dBA. The L90 levels currently comply with the State Office of Noise Control's Guidelines (below 70 dB CNEL) for playgrounds and neighborhood parks. Maximum noise levels due to construction of the Proposed Project would be about 70 dBA at the trail, approximately 480 feet northeast of the Proposed Project site. Actual construction noise levels would be expected to be lower than 70 dBA because the noise source is also about 100 feet below the trail and the dam would attenuate the sound.

Per IMC Section 9.28.110, construction is restricted to occur 7 a.m. to 7 p.m.

Operation

Noise levels due to operations of the Proposed Project would be about 51 dBA at the Santa Fe Dam and Recreation trail, approximately 480 feet northeast of the Proposed Project site. These noise levels do not exceed the State Office of Noise Control's Guidelines for playgrounds and neighborhood parks and thus are in compliance with the noise standards.

Construction - Residential, Commercial Uses and School

Based on short and long term measurements shown in **Table 3.10-2 Existing Noise Levels In Project Area**, L90 noise levels along Live Oak ranged from 40-58 dBA and Leq noise levels ranged from 57-73 dBA. L90 noise levels along Baldwin Park Boulevard ranged from 42-64 dBA and Leq noise levels ranged from 55-73 dBA. The L90 levels currently exceed the City of Baldwin Park Ambient Base Noise Levels shown in **Table 3.10-5 City Of Baldwin Park Ambient Base Noise Levels** for single family residential. Maximum noise levels due to construction of the Proposed Project would be about 83 dBA at the nearest commercial land use, approximately 100 feet south of the Proposed Project site, 73 dBA at the nearest residential land use, approximately 325 feet south of the Proposed Project site, and 61 dBA at the nearest school, approximately 1,370 feet south of the Proposed Project site.

Per Section 130.37(E) of the Baldwin Park Code of Ordinance, construction in Baldwin Park is to be restricted to occur 7 a.m. to 7 p.m. This requirement would be required for the Proposed Project by **MM N-2**.

Operation

Noise levels due to operations of the Proposed Project would be about 64 dBA at the nearest commercial land use, approximately 100 feet south of the Proposed Project site, 54 dBA at the nearest residential land use, approximately 325 feet south of the Proposed Project site, and 42 dBA at the nearest school, approximately 1,300 feet south of the Proposed Project site. The noise levels are well below the City of Baldwin Park Ambient Base Noise Levels. With an attenuation of 20 dBA for interior spaces, noise levels would also be well below the City of Baldwin Park interior noise standards (**Table 3.10-4 City Of Baldwin Park Interior And Exterior Noise Standards**). Noise levels due to the Proposed Project at sensitive receptors beyond these distances would be even lower. Thus, operation-related noise levels from the Proposed Project would not result in a significant increase in noise levels at sensitive receptors in the area. This would be a less than significant impact.

Traffic related noise impacts from the Project to Baldwin Park Boulevard, potentially affecting residences, are expected to be less than significant (see **Table 3.10-10** and discussion).

THRESHOLD N-5

Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Significant and Unavoidable

As noted earlier, construction-related noise levels would exceed the 75 dB City of Irwindale construction noise standard at the property boundary (Irwindale Municipal Code Section 9.28.110). Existing background noise levels near the property boundary range from 40 to 58 dBA. Therefore, construction-related noise levels would be considered a potentially significant impact. With implementation of **MM N-1** to **MM N-6** construction noise would be mitigated and limited to 7 a.m. to 7 p.m., to less than significant based on adopted City standards. But the levels would often be increased by at least 5 dBA above ambient conditions during the construction period that would last for 18 months. No additional mitigation measures are available to reduce this ambient increase. The resulting increases over the construction period would be considered a substantial periodic increase in noise (above existing ambient noise levels) and would be a significant and unavoidable impact of the Proposed Project.

THRESHOLD N-6

Would the project be located within an airport land use plan or, where such plan has been adopted, within two miles of a public airport and therefore expose people residing or working in the project areas to excess noise levels?

No Impact

The Proposed Project site is not located in an airport land use plan or within two miles of a public airport and therefore would not expose people working in the Proposed Project area to excess noise levels.

THRESHOLD N-7

Would the project be located within the vicinity of a private airstrip and therefore expose people residing or working in the project area to excessive noise levels?

No Impact

The Proposed Project is not located in the vicinity of a private airstrip and therefore would not expose people working in the Proposed Project areas to excessive noise levels.

Mitigation Program

Potentially significant noise impacts could occur along the property boundary during construction activities and during operations from traffic-related noise at the exterior area of offices and business between the project site and the freeways along Live Oak Avenue and Arrow Highway. Also, on-site operations could have significant noise effects on residents to the south and commercial uses to the southwest. As a result, the following mitigation measures have been developed to minimize these impacts.

MM N-1

Prior to construction, the Construction Contractor shall obtain authorization from Irwindale's building inspector to exceed the ambient base noise level by more than five (5) dBA during construction activities at the property boundary for industrial zoned land use.

MM N-2

The Construction Contractor shall limit all construction activities from 7 a.m. to 7 p.m. Monday through Saturday. No construction activity shall be conducted on Sundays or during legal holidays.

MM N-3

The Construction Contractor shall construct the masonry soundwall around the site perimeter during the initial construction phase to establish the means for noise reduction during subsequent construction and operations. In the event that the soundwall is not constructed prior to

construction of the buildings, a temporary sound barrier or curtain shall be used as a temporary measure to reduce noise impacts (by at least 5 decibels) until the soundwall can be constructed.

MM N-4

The Construction Contractor shall operate and maintain a City-approved haul truck traffic route restricted to major traffic arteries, and prohibited from using Baldwin Park Boulevard south of Live Oak Avenue.

MM N-5

The Construction Contractor shall provide construction equipment equipped, operated, and maintained with manufacturer recommended mufflers or the equivalent. The construction contractor shall locate staging and delivery areas as far as feasible from sensitive land uses or adjacent occupied buildings and schedule deliveries during daytime hours when residential areas south of the project site are less susceptible to annoyance from outside noise.

MM N-6

The Construction Contractor shall post rules visible to drivers that require turning-off construction equipment when not in operation (for more than 5 minutes). The construction contractor shall shield stationary equipment operating under full power for more than 60 minutes that would otherwise not be shielded by the perimeter soundwall.

MM N-7

The Applicant shall implement all of the following:

- For the western/southwestern property boundary (for approximately the first 450 feet of the property boundary north of Live Oak Avenue), the Applicant shall construct the 8-foot perimeter masonry soundwall on top of a two-foot berm so that the effective height of the soundwall would be 10 feet (with the exception that the berm is not required to be constructed on any utility easements).
- The Applicant shall modify nighttime operations (10 p.m. – 7 a.m.) that result in verified noise complaints to eliminate objectionable noise during the nighttime hours. The applicant shall notify the City of any noise complaints received within 24 hours of receiving the complaint and provide a proposed amendment to the On-Site Management Plans to demonstrate a reduction in ambient noise within one (1) week, subject to review and approval of the City upon a finding that the amendment will result in compliance with adopted noise standards of the City of Irwindale and the City of Baldwin Park.
- The Applicant shall obtain authorization by permit from the City to exceed ambient noise levels from facility operations on the western/northwestern boundary and the southern boundary (for 5 a.m. to 7 a.m.) pursuant to IMC Section 9.28.120. If the applicant does

not obtain authorization by permit to exceed noise levels, the applicant will be required to modify operations to reduce noise levels between 5 a.m. to 7 a.m. to 65 dBA.

3.10.5 RESIDUAL IMPACT AFTER MITIGATION PROGRAM

After implementation of **MM N-1** to **MM N-7**, all noise related impacts are reduced to less than significant with the exception of the following which will remain significant and unavoidable:

- Violation of Adopted Standards from Operations - Traffic Related Noise, Construction Related Noise
- Permanent Ambient – Operations
- Temporary/Periodic Ambient – Construction Related Noise

3.10.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in **Chapter 3.0 Environmental Setting and Impact Analysis** above.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on hazards and hazardous materials?

Yes

As described above, operational and traffic-related noise impacts would be considered significant and unavoidable; and therefore, they would contribute to a significant and unavoidable cumulative noise impact. No feasible mitigation measures have been identified that could reduce these impacts to less than significant.

3.11 PUBLIC SERVICES AND UTILITIES

This chapter discusses public services and utilities consisting of police protection; fire protection; schools; water service and facilities; wastewater services and facilities; electricity; and natural gas. The discussion includes a description of the existing environmental setting which provides a baseline necessary to determine potential impacts of the Proposed Project, followed by regulatory conditions to which the Project will adhere. Threshold of significance criteria by which an impact may be considered potentially significant are provided. Where necessary, a Mitigation Program designed to avoid, eliminate, or reduce potential impacts to a less than significant level has been identified.

3.11.1 ENVIRONMENTAL SETTING

The City of Irwindale has a smaller proportion of its total land area devoted to urban land uses including residential, commercial, and industrial development compared to its neighboring communities similar land uses. Approximately one-third of the City's land area is devoted to a regional flood control and recreation area within the flood plain of the San Gabriel River. This pattern of land use is correlated to the small number of residents in the City, which in turn directly relates to the provision and necessity of public services and utilities within the City. According to the 2010 US Census, Irwindale has a total resident population of about 1,422 residents.

Public Services

Public service facilities [buildings and land] in the City include the Civic Center (City Hall and related professional staff offices and Police Department, the Library, and the City's Recreation Center); Irwindale Park; the Post Office; County Fire Station; and the Community Center/Senior Center/Chamber of Commerce building. Merwin Elementary School is located near the City's southern boundary on Cypress Street and is the only public school facility in the City of Irwindale.

Police Protection

Law enforcement services in the City of Irwindale have been provided by the City of Irwindale Police Department since 1960. The Department has jurisdiction over the City's 9.5 square miles of land. The Department consists of 23 full-time police officers, 3 reserve officers, and 11 civilian employees. The Department's enforcement tools include radar and lidar speed enforcement equipment, Mobile Computer Terminals, Automatic Vehicle License Plate readers, mobile fingerprint readers and stolen vehicle tracking devices. Response times are typically less than five minutes in the City. The Department is responsible for staffing various activities aside

from regular patrol duties that encompass calls for service from the business and residential community including special events at the Irwindale Event Center and City Parks.

The City's Police Department works with the Los Angeles County Sheriff's Department through a mutual aid contract to provide additional resources, including special weapons teams (SWAT) and other specialized equipment or services as needed. Air support services are provided through a contract with the El Monte Police Department and jail bookings are handled under contract with the Glendora Police Department and Baldwin Park Police Department.

For medical issues and related emergencies, two major hospital complexes serve the City of Irwindale including the Inter-Community Campus and Queen of the Valley campus. In addition, there are three industrial medical clinics in the City: the Trans-Valley Medical Clinic, Foothill Medical Clinic and Irwindale Industrial Medical Clinic. The City of Hope medical complex and hospital is located in nearby Duarte, although a small portion of the campus is located in Irwindale. (Communication with Detective Sergeant George Zendejas, September 2013.)

Fire Protection

Fire protection services in the City of Irwindale are provided by the Los Angeles County Fire Department (LACoFD), which maintains one fire station in the City, Station No. 48. This fire station is located at 15546 Arrow Highway near the Civic Center. The station is staffed with a 4-person engine company (1-Captain, 1-Fire Fighter Specialist and 2-Fire Fighters); 24-hours a day. During 2012, the average emergency response time in the City was about 5 minutes. The LACoFD operates under a regional concept in its approach to providing fire protection and emergency medical services, wherein emergency response units are dispatched as needed to an incident anywhere in the District's service territory based on distance and availability, without regard to jurisdictional or municipal boundaries. All proposed development plans (including the plans for this Proposed Project) are reviewed by the Fire Department's Fire Prevention Division. (Communication with Loretta Bagwell, LACoFD Planning Analyst, October 2013.)

Schools

Given the relatively small population in Irwindale, a single elementary school is adequate to serve the kindergarten through eighth grade student population. The Merwin Elementary School is located at 16125 East Cypress Street in Irwindale (Covina-Valley Unified School District). This facility is located several miles southeast of the site and currently has approximately 498 students. The Margaret Heath Elementary School is located at 14321 School Street, and is the school nearest to the Project site [approximately 1,370 feet (0.26 miles) southeast]. This facility is within the municipal boundaries of the City of Baldwin Park (Baldwin Park Unified School District). This school serves students in grades kindergarten through sixth grade and currently serves approximately 525 students (http://www.education.com/schoolfinder/ Accessed October 2013).

Utilities

Public utility facilities and utility easements occupy approximately 180-acres in Irwindale and traverse portions of the Proposed Project site. Electric energy providers occupy the largest share of this land use category. The Los Angeles Department of Water and Power (LADWP) owns and maintains the transmission line that traverses the City, and extends along the southern property boundary of the Proposed Project, totaling approximately 2.84 acres of the site. Along the northeastern property line (along Arrow Highway) there is an easement owned by United States Army Corps of Engineers (USACE). Adjacent to the south edge of the USACE easement, the Southern California Edison (SCE) Company holds a 23-foot-wide underground utility easement totaling approximately 0.5 acres. In addition, the SCE has both transmission corridors and two distribution substation sites in the City. General Telephone Exchange maintains a large equipment yard located on Azusa Canyon Road

Electricity Services and Facilities

Southern California Edison provides basic electrical service for all residential and non-residential customers within the City including the Proposed Project site. Power is available to most service areas, with underground lines situated along several of the major streets. There are no underserved areas, and there are no constraints to additional electric service needed for future development within City boundaries (*City of Irwindale 2020 General Plan, Infrastructure Element*).

Natural Gas Services and Facilities

The Southern California Gas Company (SCG) provides basic residential and business gas services throughout the City. SCG maintains lines ranging in size from 2-inch medium pressure lines to 8-inch high pressure lines to serve customers in Irwindale. There are no underserved areas, and the company does not foresee any constraints to substantial future development within the City (*City of Irwindale 2020 General Plan, Infrastructure Element*).

Water Service and Facilities

The Proposed Project site is located within the Valley County Water District (VCWD) service area. The VCWD serves the area generally bounded by Arrow Highway, Rivergrade Road, and the I-605 Freeway, as well as the Civic Center and areas adjacent to the Civic Center. The VCWD water supply operates groundwater wells located within the Main San Gabriel Groundwater Basin. The City of Baldwin Park accounts for 48% of the service area and 92% of the service connections. The City of Irwindale accounts for 49% of the service area but only 5% of the service connections. The remaining area, only 3%, lies within the cities of West Covina and Azusa. A small portion of the VCWD sphere of influence (less than 1%) is served by the San Gabriel Valley Water District.

The VCWD relies on groundwater pumped from the Main San Gabriel Basin as its sole source of supply. The Main San Gabriel Basin is subject to adjudication, and VCWD is a party to this adjudication with an allotted share of water. VCWD may extract the quantity of groundwater it needs to provide service, and replacement water must be purchased from the Upper San Gabriel Valley Municipal Water District (USGVMWD) for any volume beyond the sum of VCWD's share of the Operating Safe Yield for the Main San Gabriel Basin (including any leases or purchases from other parties to the judgment that VCWD may arrange on its customers' behalf).

In the past, the VCWD has used a combination of methods as needed to deal with the issue of exceeding its adjudicated rights. These methods include (1) purchasing replacement water for the difference, (2) leasing additional rights on a short-term basis, (3) acquiring additional rights on a permanent basis, (4) purchasing surface water from MWD via USGVMWD who acts as the local wholesaler and (5) purchasing potable water from the Covina Irrigation Company (Valley County Water District, *2010 Urban Water Management Plan*).

The Project site is currently underdeveloped and vacant; and therefore places no demand on VCWD for water. Water conveyance infrastructure located in the area of the site includes a 12-inch water main in Live Oak Avenue on the south side of the site and a 12-inch water main in Arrow Highway on the north side of the site.

In addition to the VCWD, five water purveyors serve portions of the City of Irwindale. The California-American Water Company, located in the City of San Marino, serves the area north of the Buena Vista Channel to the Duarte boundary with potable water for domestic, landscaping, and fire protection purposes. The San Gabriel Valley Water Company, located in the City of El Monte, serves approximately 50 customers in the area of Vulcan Materials Company's Durbin Pit as well as the area generally located between Lower Azusa Road and Ramona Boulevard. The City of Azusa Water Department serves a portion of the southeast part of the City, and areas around Irwindale Avenue north of Ornelas Street. The City of Monrovia Water Division serves a very small area of the City near the intersection of Live Oak Avenue and Peck Road. The Southern California Water Company serves a portion of the westernmost part of the City north of Live Oak Avenue.

Wastewater Service and Facilities

The County Sanitation Districts of Los Angeles County (District) provide all of Irwindale's wastewater (sewer) services. The majority of the City is served by District 22, with a small portion of its southwestern area served by District 15. The Proposed Project site is located within the District 22 service area. The District's trunk sewer lines extend throughout the City, with no underserved areas. The Los Angeles County Sewer Maintenance District, located in the City of Alhambra, provides maintenance for the City's six miles of sewers on a contract basis, including emergency services on a 24-hour basis. The District is a partnership of 24 independent districts

that serve the wastewater (and some) solid waste management needs of approximately 5.3 million people in Los Angeles County. The District's service area covers approximately 800 square miles and encompasses 78 cities and unincorporated territory within the County. Within the District's service area, there are approximately 9,500 miles of sewers that are owned and operated by the cities and the County that are tributary to the Sanitation Districts' wastewater collection system. The District owns, operates and maintains approximately 1,400 miles of sewers - ranging from 8 to 144 inches in diameter - that convey approximately 500 million gallons per day of wastewater to 11 wastewater treatment plants.

According to the District, the expected average wastewater flow from the Proposed Project site is 8,436 gallons per day. Wastewater flow originating from the site will discharge to a local sewer line, not maintained by the District, for conveyance to the District's Baldwin Park Trunk Sewer, located in Ramona Parkway at Grace Avenue. The 18-inch diameter trunk sewer has a design capacity of 4.8 million gallons per day (mgd) and conveyed a peak flow of 1.0 mgd when last measured in 2009. From there, wastewater will be treated at the San Jose Creek Water Reclamation Plant (WRP) adjacent to the City of Industry. Wastewater flows that exceed WRP capacity and all biosolids are diverted and treated at the Joint Water Pollution Control Plant in the City of Carson (**Appendix A** - County Sanitation Districts of Los Angeles County, EIR comment letter, June 13, 2013).

Based on daily operations at the Applicants Sun Valley MRF (**Table 3.11-1**), an estimate of the Project's projected water and energy consumption rates is provided in **Table 3.11-2**. These calculations include all landscaping and facility operations.

Table 3.11-1 Water and Energy Consumption Rates at Sun Valley MRF

Month, Year and Tonnage		Electricity	Natural Gas	Water
Month-Year	**Inbound Tonnage**	**kW-hours**	**Therms**	**CF**
Jan-10	64,033	295,821	121	22,650
Feb-10	61,216	321,198	39	22,650
Mar-10	68,977	292,202	4	38,450
Apr-10	64,608	294,215	21	38,450
May-10	60,168	298,855	82	42,150
Jun-10	67,661	313,409	81	42,150
Jul-10	71,267	287,916	83	39,650
Aug-10	73,120	292,215	82	39,650
Sep-10	71,188	319,913	99	46,200
Oct-10	72,671	297,951	105	46,200
Nov-10	73,504	336,420	139	30,000
Dec-10	78,449	307,980	204	30,000
Jan-11	72,072	296,401	108	27,600
Feb-11	66,926	308,122	94	27,600

Month, Year and Tonnage		Electricity	Natural Gas	Water
Mar-11	77,139	255,447	101	25,450
Apr-11	70,922	270,615	90	25,450
May-11	70,835	304,717	80	39,400
Jun-11	74,754	312,336	84	39,400
Jul-11	73,064	290,517	80	37,950
Aug-11	78,984	304,579	71	37,950
Sep-11	74,873	342,399	69	39,600
Oct-11	69,399	304,247	73	39,600
Nov-11	67,463	342,370	34	n/a
Dec-11	76,393	n/a	134	n/a
Avg. Monthly	70,820	303,906	87	35,373
Avg. Annual	**849,843**	**3,646,876**	**1,039**	**424,473**

Source: Athens Services, Actual consumption rates for Sun Valley MRF / Projections for Irwindale MRF
Key: n/a = not available
k/W = kilowatts
therms = natural gas measurement
CF = cubic feet

Table 3.11-2 Estimated Annual Water and Energy Consumption Rates for Proposed Irwindale MRF

Estimated Consumption	Electricity	Natural Gas	Water
1,716,000 Inbound Tonnage/Year	7,363,759 kW/year	2,098 Therms/Year	945,871 CF/Year (21.7 acre-feet)

3.11.2 REGULATORY SETTING

California Building Standards Codes

Title 24 of the California Code of Regulations, known as the California Building Standards Code (Title 24) contains the regulations that govern the construction of buildings in California. The 2010 edition of the California Building Standards Code (Title 24) became effective on January 1, 2011. Projects submitted to the Department of State Architecture on or after this date must be designed and constructed in compliance with the 2010 edition of Title 24. Title 24 of the California Administrative Code contains the California Building Standards, including the California Plumbing Code (Part 5), which promotes water conservation. The Mechanical Code (Part 5) provides minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation, and maintenance or use of heating, ventilating, cooling, refrigeration systems, incinerators and other miscellaneous heat-producing appliances. The Electrical Code (Part 3) provides minimum standards to safeguard life or limb, health, property, and public

welfare, and to protect against hazards that may arise from the use of electricity by regulating and controlling the design, construction, installation, quality of materials, location and operation of electrical equipment, wiring, and systems.

Title 20 addresses Public Utilities and Energy and includes appliance efficiency standards that promote water conservation. In addition, a number of State laws listed below require water-efficient plumbing fixtures in structures:

- Title 24, California Administrative Code, Sections 25352(i) and (j) address pipe insulation requirements, which can reduce water used before hot water reaches equipment or fixtures. Insulation of water-heating systems is also required.
- Title 20, California Administrative Code, Section 1604(g) establishes efficiency standards that give the maximum flow rate of all new showerheads, lavatory faucets, sink faucets, and tub spout diverters.
- Title 20, California Administrative Code, Section 1606 prohibits the sale of fixtures that do not comply with established efficiency regulations.
- Health and Safety Code, Section 17921.3 requires low-flush toilets and urinals in virtually all buildings.
- Health and Safety Code, Section 116785 prohibits installation of residential water softening or conditioning appliances unless certain conditions are satisfied, and includes the requirement that water conservation devices on fixtures using softened or conditioned water be installed.

The County of Los Angeles has adopted the CBC; in addition, the City of Irwindale has adopted the County's Code as its own Building Code with minor exceptions (Irwindale Municipal Code [IMC] 15.04.010 - Adoption of code). The entirety of Title 15 of the IMC defines the City's Building and Construction Code which includes building codes, electrical codes, fire codes, mechanical, and plumbing codes.

Senate Bill X7-7

The California Water Conservation Act of 2009 sets the goal for water use efficiency for all urban retail water suppliers equivalent to a 20% reduction in state-wide water use by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10% by December 31, 2015

Senate Bills 221 and 610

Senate Bills 221 and 610 (January 1, 2002) amended State law to better link information on water supply availability to certain land use decisions by cities and counties. The two companion bills provide a regulatory forum that requires more collaborative planning between local water suppliers and cities and counties. All SB 221 and 610 reports are generated and adopted by the public water supplier. SB 610 requires a detailed report regarding water availability and planning for additional water suppliers that is included with the environmental document for specified projects. All projects that meet any of the following criteria require a water availability assessment:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel and/or motel having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant or an industrial park planned to house more than 1,000 persons, occupying more than 60 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects specified in this subdivision; or
- A project that would demand an amount of water equivalent to or greater than the amount of water required by a 500 dwelling unit project.

Based on the requirements of SB 610, the Project does not meet the definition of a project per Section 10912 of the Water Code and as such, SB 610 does not apply to the Proposed Project. Consequently, a Water Supply Assessment is not required for the Proposed Project.

While SB 610 primarily affects the Water Code, SB 221 principally applies to the Subdivision Map Act. The primary effect of SB 221 is to condition every tentative map for an applicable subdivision on the applicant by verifying that the public water supplier (PWS) has sufficient water supply available to serve it. Under SB 221, approval by a city or county of certain residential subdivisions requires a written verification of sufficient water supply. The Project is not a residential subdivision development; and therefore, based on the requirements of SB 221, written verification of adequate water supply for the Project is not required.

Assembly Bill 3030

Assembly Bill 3030 (AB 3030), referred to as the Groundwater Management Act, became effective on January 1, 1993. The legislation is designed to provide local public agencies with increased management authority over groundwater resources in addition to those existing groundwater management capabilities. AB 3030 was developed in response to Environmental Protection Agency's Comprehensive State Groundwater Protection Programs. AB 3030 (California Water Code Section 10750 et seq.) allows certain defined existing local agencies to develop a groundwater management plan in groundwater basins defined in Department of Water Resources Bulletin 118.

Valley County Water District

In accordance with State legislation, the Valley County Water District (VCWD) prepared its *2010 Urban Water Management Plan (June 2011)* in fulfillment of the requirements of the California Urban Water Management Planning Act (Act) and in compliance with the *Guidebook to Assist Water Suppliers in the Preparation of a 2010 Urban Water Management Plan* as provided by the California Department of Water Resources.

VCWD typically relies on groundwater pumped from the Main San Gabriel Basin as its sole source of supply. As noted above, VCWD is a party to the Main San Gabriel Basin adjudication, and may extract the quantity of groundwater needed to serve its customers, although replacement water must be purchased from Upper San Gabriel Valley Municipal Water District (USGVMWD) for any volume beyond the sum of VCWD's share of the groundwater basin VCWD has multiple sources of replacement water including purchasing water, short-term leases of additional rights, purchasing surface water from MWD, and purchasing potable water from the Covina Irrigation Company.

VCWD is capable of meeting all demand scenarios it is projected to face during the planning horizon of the 2*010 Urban Water Management Plan* (Year 2035) with its current supply portfolio including normal year, single dry year and multiple dry year supply and demand conditions.

City of Irwindale

According to the *Infrastructure Element* (Section 4) of the *City of Irwindale 2020 General Plan,* the City intends to continue to maintain the highest levels of public service to respond to the existing and future demand for these services. To support this goal, the City has adopted the following 2020 General Plan Policies:

- *Infrastructure Element Policy 1.* The City will continue to support the efforts of the City of Irwindale Public Works Department in maintaining the highest service standards feasible.

- *Infrastructure Element Policy 2.* The City will continue to cooperate with those utility providers in the City to ensure that sufficient infrastructure capacity is available to meet current and future service demands.

In addition, the City's Capital Improvement Program (CIP) is a five-year plan that indicates the timing of major capital expenditures. Individual projects are reviewed and ranked on an annual basis, and may include streetscape upgrades, installation of traffic signals, slurry seal for streets, sidewalk repair, flood control infrastructure, and sewer line upgrades. The City will continue to update, review, and implement its CIP to consider infrastructure-related improvements.

The *Public Safety Element (Section 6)* and *Safety Plan* of the *City of Irwindale 2020 General Plan* outlines policies regarding provision of police and fire services in the City and identifies evacuation routes and the locations of emergency shelters. The *Public Safety Element* also emphasizes the importance of emergency preparedness in reducing the impacts of natural and manmade disasters while recognizing that an effective disaster response program requires the cooperation of many governmental agencies.

3.11.3 THRESHOLDS OF SIGNIFICANCE

Literature review, data research, and communication with various utility agencies and public services were completed to determine the potential for significant adverse environmental impacts to public services and utilities as a result of construction and operation of the Proposed Project. The analysis was conducted to determine potential increases in demand for public services and public utilities that could occur with Project implementation. The analysis that follows is based upon several considerations:

- Interruption in Services – Interruption or disruption of utility services could occur as a result of physical displacement and subsequent relocation of public utility infrastructure. Such impacts would be considered significant if the result would be direct long-term service interruption or permanent disruption of essential public utilities;
- Need for Additional Capacity – A significant impact would occur if the Proposed Project results in the need for additional capacity of utility infrastructure or additional services, which would not be supplied by existing service providers; or
- Decrease in Level of Service – A significant impact would occur if operation of the Proposed Project would result in a decrease in existing levels of service in the surrounding area or service territory.

The significance of potential impacts associated with implementation of the Proposed Project was determined based upon CEQA Guidelines, Appendix G, and other relevant considerations including review of existing levels of service and facility locations. Utilizing these significance

thresholds, the Proposed Project would be considered to have a significant impact on public services and/or utilities if it were to:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services ratios, response times or other performance objectives for: fire protection; police protection; schools; and/or other public facilities.

b. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

c. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.

e. Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

f. Be served by a landfill with sufficient permitted capacity to accommodate the Projects solids waste disposal needs. or

g. Comply with federal, State, and local Statutes and regulations related to solid waste.

3.11.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD PSU-1

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services ratios, response times or other performance objectives for: Fire protection; Police protection; Schools; and/or other public facilities?

Police Services and Facilities

Less than Significant Impact

Construction and operation of the Proposed Project would occur on a vacant urban infill site that is located within the existing service area of the Irwindale Police Department. Due to the location and nature of the Proposed Project, no direct adverse physical impacts to existing Police facilities or levels of service is anticipated to occur.

Implementation of the Proposed Project would not require new, expanded or otherwise modified Police facilities or expanded provision of services. Police services would not be adversely affected due to the nature of the Proposed Project as a self-contained facility. In addition, Police response times are typically less than five minutes in the City (Project communication with George Zendejas, Detective Sergeant, Irwindale Police Department, September 2013).

No increased need for police services would be required to maintain acceptable services ratios. No new population growth would occur with implementation of this Proposed Project; and therefore, implementation of the Proposed Project is not expected to have an adverse effect on existing police services, service levels, or facilities.

Fire Services and Facilities

Less than Significant Impact

Construction and operation of the Proposed Project would occur on a vacant urban infill site that is located within the existing service area of the County of Los Angeles Consolidated Fire District which serves the City of Irwindale.

No fire facilities would be directly affected by Project implementation. The emergency response time in the City is 5:15 minutes (Project communication with Loretta Bagwell, Planning Analyst, Planning Division, Los Angeles County Fire Department, October 2013). No increased need for fire services would be required to maintain acceptable services ratios.

The Proposed Project includes multiple project driveways to facilitate emergency access, a 26-foot wide fire access road around the entire perimeter of the main building, and the required fire district turning radii have been incorporated into the site design. The parking of the transfer trucks along the southeast side of the main building, next to bin storage of the site has also been designed to facilitate fire department access to the site. Project plans have been initially reviewed by fire district staff and will be reviewed again prior to issuance of the building permit. The Fire Department review concluded no significant risk of fire based on site plans.

The Proposed Project includes several fire control features within the *On-Site Management Plans* (**Appendix B**) including a *Fire Prevention Control and Mitigation Plan* and an *Emergency Response and Training Plan* which are intended to minimize the potential risk of fire and to establish formal procedures for responding to an emergency. Due to the nature, location and design of the Project, implementation of the Proposed Project is not anticipated to have an adverse effect on fire services, service levels, or facilities.

Schools

No Impact

The Proposed Project would not have a direct physical impact on any school facilities. Project implementation does not include a residential component and therefore would not result in a direct population increase or direct or indirect effect on school facilities or services.

Based upon comments received by the City of Baldwin Park residents during the public scoping phase of the Proposed Project, the Proposed Project site layout, building orientation, and ingress and egress locations were specifically modified to direct both construction and operational traffic away from the intersection of Live Oak Avenue and Baldwin Park Boulevard. This was done to ensure that traffic from the Proposed Project is routed away from this intersection to minimize effects on residences south of the Live Oak Avenue industrial corridor in the City of Baldwin Park, and the Margaret Heath elementary school located approximately 1,370 feet south of Live Oak Avenue on the east side of Baldwin Park Boulevard.

Therefore, no adverse impacts to schools are anticipated to occur with implementation of the Proposed Project.

Water and Wastewater Services and Facilities

Less than Significant Impact

Implementation of the Proposed Project would require the re-establishment of water and wastewater utility services to the site. The Proposed Project is an infill project and water lines and wastewater collection lines have already been extended in proximity to the site to surrounding land uses. A Sanitation District trunk sewer line currently exists within the Live Oak Avenue right-of-way.

Potable water supplies would be required for the site for the Administrative and Visitor Facility, Education Center, Employee Facility, Convenience Store as well as for daily site management, odor control and other related operational activities and landscaping. Wastewater to be directed to the regional sanitary sewer system will include sanitary wastes, wash water, and treated stormwater flows from the site. Solid waste discharges from the tipping floor and sorting area are enclosed within the Materials Recovery Facility. Because this building is enclosed, rainwater runoff to stormwater discharge points would be eliminated. Tipping floor and green waste areas would be periodically power scrubbed. Liquid waste from the power scrubbing of the tipping and greenwaste floors, truck loading areas, and truck wash areas are to be discharged to the municipal sewer system under a permit from the Sanitation Districts of Los Angeles County. This increase in water and wastewater flow would be adequately handled by existing service providers through existing facilities. As an urban infill project on a previously developed site, no significant adverse effects on water or wastewater facilities or services would occur with Project implementation.

Electricity and Natural Gas Services and Facilities

Less than Significant Impact

Implementation of the Proposed Project would require the re-establishment of electrical and natural gas utility lines to the site. The Proposed Project is an infill project and electrical and natural gas distribution lines have already been extended in proximity to the site to support surrounding land uses. The site is crossed by a City of Los Angeles Department of Water and Power (LADWP) electricity transmission easement along the south side totaling approximately 2.84 acres of the total site area. In addition, Southern California Edison (SCE) Company holds a 23-foot-wide underground utility easement totaling approximately 0.5 acres along the entire length of the project site frontage on Arrow Highway. Site design reflects avoidance of the transmission line corridor, to be developed with limited parking spaces and perimeter landscaping. In addition, all buildings have been setback a minimum of 50 feet from the overhead lines in accord with public utility regulations. No permanent facilities would be located on the easement and no adverse impacts are anticipated.

Implementation of the Proposed Project will require the connection of electrical and natural gas lines to the site and will result in a small, long-term increase in the use of these energy resources. The increase associated with Project operation would not be a considered a significant impact on the local and regional energy supply systems.

Based upon all of the above, it is not reasonably foreseeable that the Proposed Project will result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable services ratios, response times or other performance objectives for: Fire protection; Police protection; Schools; and/or other public facilities.

THRESHOLD PSU-2

Would the Project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less than Significant Impact

The site is an urban infill site that is located within the existing service area of the regional Sanitation Districts.

The San Jose Creek Water Reclamation Plant (WRP) and the Joint Water Pollution Control Plant are both subject to permits issued by the Regional Water Quality Control Board. The San Jose WRP is subject to National Pollution Discharge Elimination System (NPDES) Permit No. CA0053911, which regulates the discharge of treated sewage from the plant to the San Gabriel

River and San Jose Creek, while the Joint Pollution Control Plant is subject to NPDES Permit No. CA0053813, which regulates the discharge of treated sewage from the plant to the Pacific Ocean.

The permits that regulate the San Jose Creek WRP and the Joint Water Pollution Control Plant set limitations on the amount of pollutants that the plants can discharge into receiving waters. An increase in the amount of sewage treated at these plants could result in the plants not being able to meet pollutant standards outlined in their respective permits.

Sewage generated by development in the City of Irwindale is treated at the San Jose Creek WRP with any excess sewage and all bio solids treated at the Joint Water Pollution Control Plant. As discussed above, the San Jose Creek WRP currently has over 20 mgd of treatment capacity while the Joint Water Pollution Control Plant currently has over 120 mgd of treatment capacity. Therefore, sewage generated by the Proposed Project will not result in the plant exceeding sewage treatment capacities. By its nature, the MRF/TS does not provide wastewater services (toilets/sewer system) to the general public, but rather its own employees and patrons of the gas station.

As discussed in **Chapter 3.13 Water Quality and Hydrology**, stormwater runoff collection points are located along the northwestern and northeastern perimeter of the site. These collection points are located along areas with the highest possibility of discharges of pollutants (e.g., trucks entering the facility, weight station, long-haul trucks departure area, and entrances into the tipping floor and green waste areas). In addition, a drain near the fueling island as well as grading of the convenience store area would direct flow toward the bioretention system to the west of this area.

Treatment requirements for industrial wastewater [and stormwater as a source of a wastewater treatment plant exceeding standards] from the site are typical for identical types of facilities operated throughout the region (and State), and are subject to review and approval of the Regional Water Quality Control Board and the Sanitation Districts of Los Angeles County and would not exceed the wastewater treatment requirements of either regulatory agency. And further, no hazardous waste is expected to leave the site (refer to **Chapter 3.8 Hazards and Hazardous Waste**). Therefore, the impact of the Proposed Project on sewage treatment requirements is less than significant.

THRESHOLD PSU-3

Would the Project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?

No Impact

Implementation of the Proposed Project would rely on existing Valley County Water District water facilities and Sanitation District wastewater facilities and no new or expanded off-site treatment facilities would be required to adequately serve the Project.

THRESHOLD PSU-4

Would the Project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant Impact

The site is an infill development project within the Valley County Water District service area. Potable water supply demands associated with the Proposed Project (less than 22 acre-feet per year) would be met by the Valley County Water District from existing entitlements and available resources. No new or expanded entitlements would be required to meet the demands of the Project. The VCWD's *2010 UWMP* identified an adequate supply of potable water to meet future demands (through 2035) within its water supply service area under normal, single year dry, and multi-year dry weather conditions. As indicated in **Table 3.11-3**, a surplus of 1,155 acre-feet per year would exist under normal year conditions in 2015, which is the first year after the Proposed Project would be completed.

Table 3.11-3 Valley County Water District Water Supply and Demand (acre-feet per year)

		2015	2020	2025	2030	2035
Normal Year						
Total Supply		10,356	10,356	10,356	10,356	10,356
Demand		9,201	9,372	9,536	9,695	9,846
Difference (Surplus)		*1,155*	*984*	*820*	*661*	*510*
Single Dry Year						
Total Supply		10,763	10,763	10,763	10,763	10,763
Demand		9,781	9,963	10,138	10,306	10,467
Difference (Surplus)		*982*	*800*	*625*	*457*	*296*
Multi-Dry Years						
Year 1	Total Supply	10,648	10,648	10,648	10,648	10,648
	Demand	9,543	9,720	9,890	10,055	10,212
	Difference (Surplus)	*1,105*	*928*	*758*	*593*	*436*
Year 2	Total Supply	10,458	10,458	10,458	10,458	10,458
	Demand	9,622	9,801	9,973	10,139	10,297
	Difference (Surplus)	*836*	*657*	*485*	*319*	*161*
Year 3	Total Supply	10,664	10,664	10,664	10,664	10,664
	Demand	9,702	9,882	10,055	10,222	10,382
	Difference (Surplus)	*962*	*782*	*609*	*442*	*282*

Source: Valley County Water District, 2010 Urban Water Management Plan tables 24, 25,and 26

In addition, according to **Table 3.11-3**, a surplus of 982 acre-feet per year would exist under single dry year conditions in 2015 while a surplus of 1,105 acre-feet per year would occur in the first year of a multi-dry year period, a surplus of 836 acre-feet per year would occur in the second year of a multi-dry year period, and a surplus of 962 acre-feet per year would occur in the third year of a multi-dry year period in 2015. Because of a substantial surplus of supply over demand under all scenarios, the VCWD would not have any problems providing water to the Proposed Project during normal, single dry year, and multi-dry year weather conditions (refer to **Table 3.11-2**, whereas annual water consumption rates project the use of 21.7 acre-feet). No new or expanded entitlements would be required to meet the demands of the Proposed Project and this impact is considered less than significant.

THRESHOLD PSU-5

Would the Project result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact

The site is an infill development project within the Sanitation District No. 22 service area. Wastewater associated with implementation of the Proposed Project can be adequately accommodated through existing treatment facilities maintained by the Sanitation Districts of Los Angeles County. Implementation of the Proposed Project would result in an incremental increase in local wastewater flows and would not result in a significant adverse effect on water treatment facilities.

THRESHOLD PSU-6

Would the Project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less than Significant Impact

The Project itself will not generate significant amounts of solid waste. Solid waste that would be processed at the site would be diverted from the existing local and regional waste streams for sorting and recovery of usable materials to reducing the total volume of waste required to be disposed of in a landfill. This would be a beneficial effect of the Project on solid waste. Residual waste that cannot be recycled or otherwise recovered, including waste generated on-site during construction and operation, would be transported to one of several contracted landfills such as Mid Valley landfill in Rialto (San Bernardino County), San Timoteo landfill in Redlands (San Bernardino County) or Chiquita Canyon landfill in Castaic (Los Angeles County).

THRESHOLD PSU-7

Would the Project comply with federal, State, and local statutes and regulations related to solid waste?

No Significant Impact

The Proposed Project is a solid waste processing and recycling project and has been designed to implement and comply with all applicable regulations pertaining to regional solid waste management. No adverse impacts on solid waste would occur with Project implementation. Project implementation will have a beneficial effect on local and regional solid waste management by diverting recyclable materials from the waste stream and reducing the total amount of remaining material required to be landfilled.

Mitigation Program

No significant impacts on public services or utilities systems would result from either construction or operation of the Proposed Project. Therefore, no mitigation program is required.

3.11.5 RESIDUAL IMPACT AFTER MITIGATION PROGRAM

No Mitigation Program is required.

3.11.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in **Chapter 3.0 Environmental Setting and Impact Analysis**.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on public services and utilities?

No

Based on the cumulative project list, cumulative development may result in development of new residential, commercial, mining activities, industrial, recreational, and medical facilities in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

The Proposed Project would not result in substantial demands for additional fire, police, schools, or parks and therefore would not incrementally contribute to potential cumulative impacts to local public services or utilities.

Implementation of the cumulative projects may increase the need for additional public services and utility systems. Potential impacts would be analyzed in a project-by project manner. It is anticipated that existing services would be adequate to serve these projects with the assumption that the projects pay the required City development fee(s), as necessary. For example, developers

may be required to contribute fees based on the project's proportional demand for new infrastructure to support future demand for public services or utilities.

The Proposed Project in combination with the cumulative projects would result in less than significant cumulative impacts to public services and utilities.

3.12 TRAFFIC GENERATION AND CIRCULATION

This chapter presents a discussion of the existing roadway and circulation system in the vicinity of the Proposed Project site, and analyzes the potential traffic impacts of the proposed materials recovery facility and transfer station project (MRF/TS) on the surrounding circulation system including roadways, intersections, and regional segments. This chapter provides the traffic operation methodology, existing traffic conditions, and future traffic volume with and without the Proposed Project. The traffic analysis includes discussion of freeway mainline and ramp analysis. Recommendations for on- and off-site improvements are presented within the Mitigation Program. This chapter is based on the *Traffic Impact Analysis* (Urban Crossroads, 2014), the full text of which is provided in **Appendix G** of this EIR.

The purpose of the *Traffic Impact Analysis is* to evaluate potential trip generation and traffic circulation effects of the proposed MRF/TS. The following time frames and scenarios have been evaluated in the *Traffic Impact Analysis* to satisfy requirements of the City of Irwindale *Policy Guidelines for Traffic Impact Reports*, the California Department of Transportation (CalTrans) requirements and comments on the Notice of Preparation (NOP), the California Environmental Quality Act (CEQA), and the Los Angeles County Congestion Management Program (CMP),

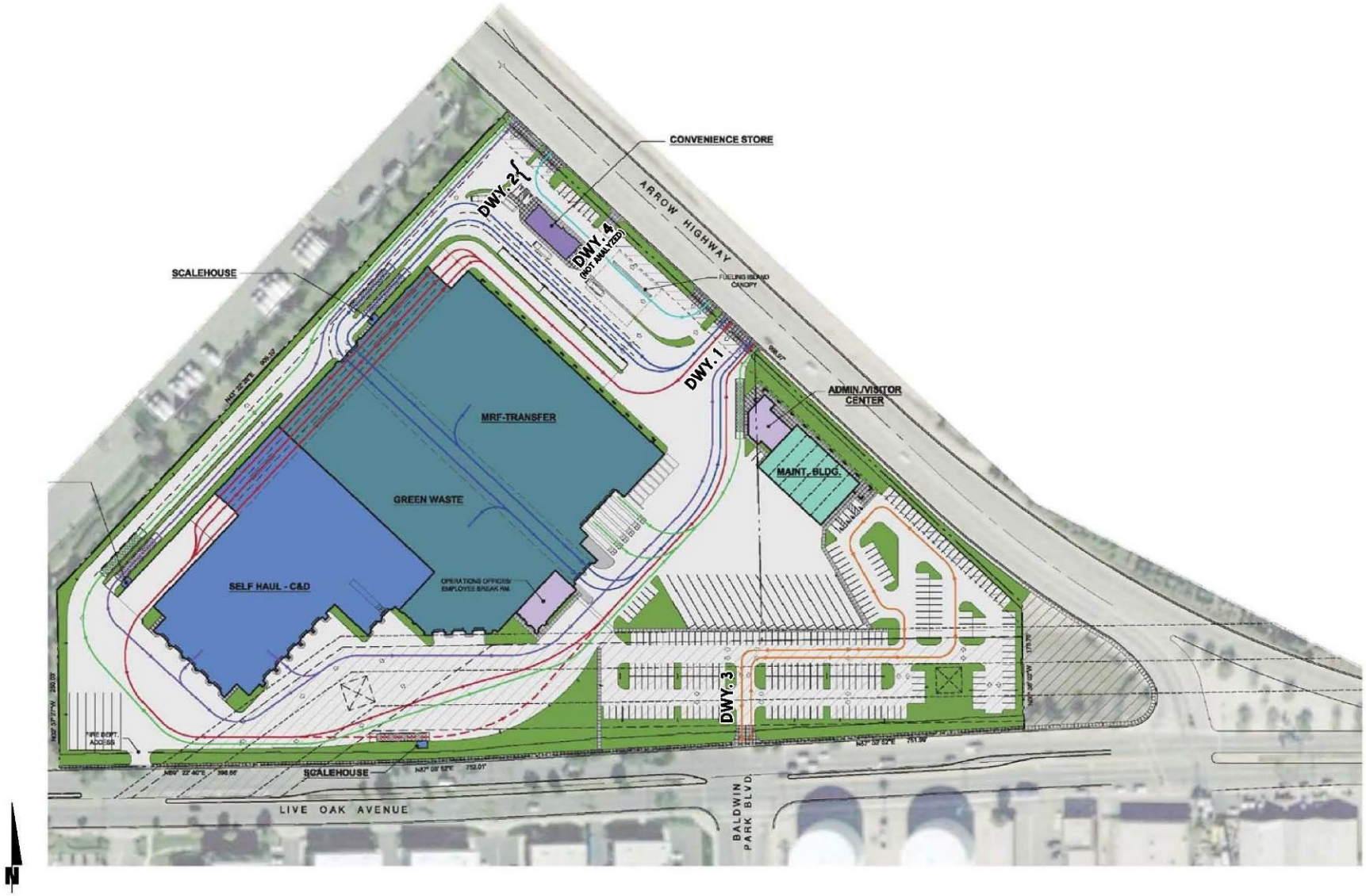
- Existing (2013) Conditions
- Existing Plus Project Conditions
- Interim Year (2016) Conditions Without and With the Project[1]
- Long Range (2035) Conditions Without and With the Project[2]

3.12.1 EXISTING ENVIRONMENT

The Proposed Project site is addressed as 2200 Arrow Highway, positioned at the northwestern intersection of Live Oak Avenue and Arrow Highway, east of Interstate 605 (I-605) within the City of Irwindale. Arrow Highway and Live Oak Avenue exist today as four (4) lane divided roadways east of the I-605 Freeway. The speed limit on both Arrow Highway and Live Oak Avenue is currently 45 miles per hour (mph). The majority of existing land uses east of the I-605 Freeway, south of Arrow Highway (and north of Live Oak Avenue) is currently industrial. Rivergrade Road and Stewart Avenue (between Live Oak Avenue and Arrow Highway) are primarily utilized by trucks traveling to and from the industrial uses that serve this area of Irwindale. The site vicinity is within an existing industrial area, with various commercial/industrial, residential, and recreational land uses in surrounding areas (see Exhibit **3.12-1 Site Plan**).

[1] Project buildout is anticipated to occur in 2016.
[2] The Project requires a General Plan Amendment; therefore, the General Plan horizon year of 2035 was used as a long-term planning timeframe.

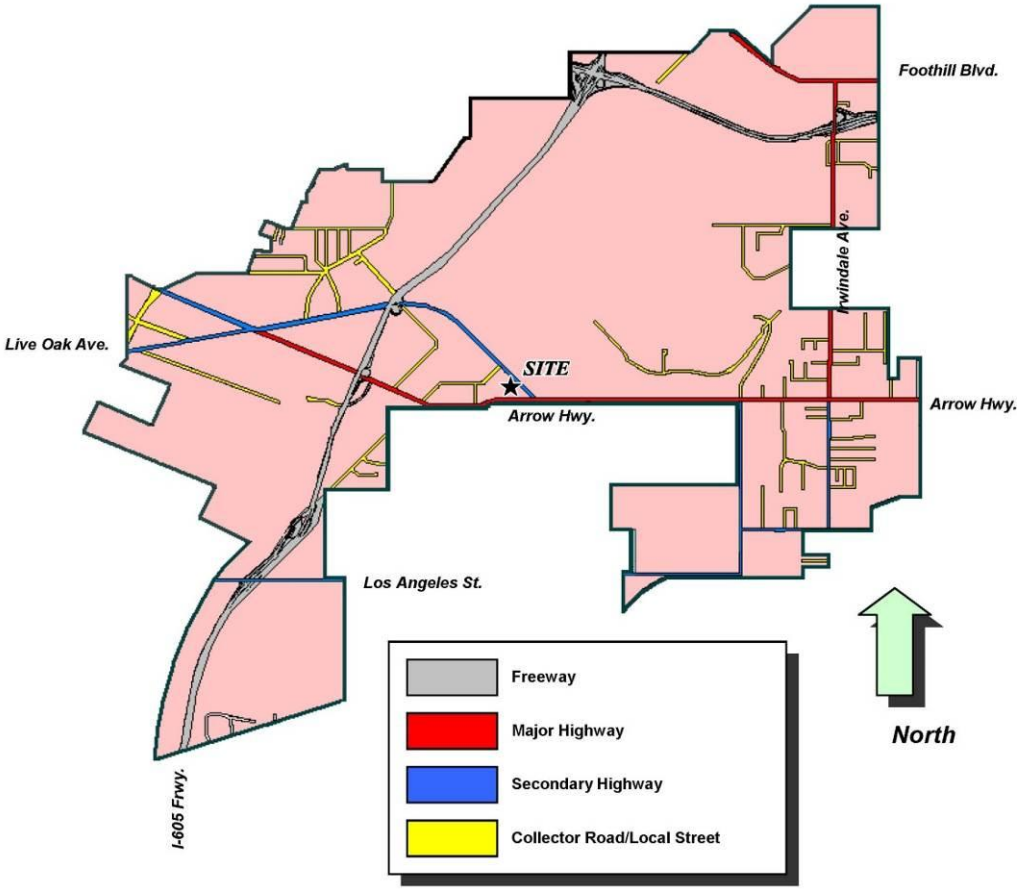
Exhibit 3.12-1 Site Plan



The City's General Plan classifies Live Oak Avenue and Arrow Highway as Major Arterials (General Plan, Infrastructure Element). The City's General Plan Infrastructure Element states: "*The main function of a Major Arterial is to provide regional, sub regional, intra-City travel service. Through-traffic comprises the bulk of traffic volumes on major arterial roadways. Major arterials typically have four to six travel lanes. Additionally, extensive landscaping of the median is provided to reduce headlight glare and to improve the appearance of the street. Major arterial roadways typically contain 84 feet of paving within a 100-foot right-of-way*".

In addition, General Plan Roadway Classification System demonstrates Arrow Highway as both a Major Highway and a Secondary Highway near the site vicinity. Similarly Live Oak Avenue also has a dual classification of Major Highway and Secondary Highway near the site vicinity (refer to **Exhibit 3.12-2 City of Irwindale Roadway Classification System**).

Exhibit 3.12-2 City of Irwindale Roadway Classification System



Source: City of Irwindale General Plan, Exhibit 4-2 Roadway Classification System

3.12.2 REGULATORY SETTING

California Department of Transportation

The California Department of Transportation (Caltrans) publishes a document entitled *Guide for the Preparation of Traffic Impact Studies* for use in preparing a traffic study undergoing State-level review. The objective of the guide is to provide: 1) guidance in determining if and when a traffic impact study (TIS) is needed; 2) consistency and uniformity in the identification of traffic impacts generated by local land use proposals; 3) consistency and equity in the identification of measures to mitigate the traffic impacts generated by land use proposals; 4) lead agency officials with the information necessary to make informed decisions regarding the existing and proposed transportation infrastructure; 5) TIS requirements early in the planning phase of a project to eliminate potential delays later; 6) a quality TIS by agreeing to the assumptions data requirements, study scenarios, and analysis methodologies prior to beginning the TIS; and 7) early coordination during the planning phases of a project to reduce the time and cost of preparing a TIS.

Los Angeles County Metropolitan Transportation Authority

The Los Angeles County Metropolitan Transportation Authority (LACMTA or Metro) serves as transportation planner and coordinator, designer, builder and operator for Los Angeles County. Metro is responsible for the continuous improvement of an efficient and effective transportation system for Los Angeles County. One of Metro's Programs is the Congestion Management Program (CMP).

The Proposed Project site is located within the jurisdiction of the City of Irwindale in Los Angeles County. Therefore, the *Traffic Impact Analysis* is required to address all requirements of the Los Angeles County Congestion Management Program. The CMP is a mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The purpose of the CMP is to address the impact of local growth on the regional transportation system. The goals of the CMP are summarized below:

- To link local land use decisions with their impacts on regional transportation, and air quality;
- To develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel; and
- To provide transportation projects which are eligible to compete for state gas tax funds.

The CMP offers the following mechanisms to meet these goals:

- Tracking and analysis to determine how the regional highway and transit systems are performing;
- Analysis of the impacts of local land use decisions on regional transportation;

- Local implementation of Transportation Demand Management (TDM) design guidelines that ensure new development includes improvements supportive of transit and TDM;
- Tracking new building activity throughout Los Angeles County; and
- Implementation of local strategies which benefit the regional transportation system and offset the impact of new development.

City of Irwindale General Plan

The City's *General Plan, Infrastructure Element* complies with the State requirements for a Circulation Element. This element provides information on the location and extent of existing and proposed streets and roadways, intersection improvements, public transit facilities, railroads, transportation terminals, and other transportation facilities. The Infrastructure Element is responsive to regional transportation plans, such as the County's CMP, which focus on the development of a regional transportation system to accommodate the future traffic demands within the greater metropolitan area. Applicable issue areas and policies from the *General Plan Infrastructure Element* include the following:

Issue Area – Traffic and Circulation

The City of Irwindale will strive to improve safe and efficient circulation in the City. Irwindale will continue to develop and enhance the existing streets and intersections in the City.

Infrastructure Element Policy 4

The City of Irwindale will strive to ensure that all new development implements its "fair-share" of infrastructure improvements to offset the potential adverse impacts associated with the additional traffic that will be generated by the new development.

Infrastructure Element Policy 5

The City of Irwindale will continue to support the development and expansion of the region's public and mass transit system.

Caltrans Coordination

The City continues to coordinate efforts with Caltrans to upgrade area freeways. The purpose of this undertaking is to ensure that the City is fully appraised of roadway and facility improvement efforts in the early stages of planning and design. The City will continue to work with Caltrans and Metro.

Signalization

The City will strive to provide optimum signalization on major thoroughfares to maximize circulation efficiency, such as participation in a regional signalization program. City staff will outline both the need and strategy for improved signalization. Coordination with Caltrans, the Department of Public Works, Los Angeles County, and Metro will be emphasized.

Environmental Review
The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by CEQA.

City of Irwindale Capital Improvement Program
The City's *Capital Improvement Program* (CIP) is a five-year plan that indicates the timing of major capital expenditures. Individual projects are reviewed and ranked on an annual basis, and may include streetscape upgrades, installation of traffic signals, resurface slurry seal for streets, sidewalk repair, sewer line upgrades, and storm drain upgrades. The City will continue to update, review, and implement the CIP to consider transportation-related improvements.

3.12.3 TRAFFIC OPERATIONS ANALYSIS

Methodology and Definitions

Intersection Delay Analysis Methodology
The technical guide used in the *Traffic Impact Analysis* for the evaluation of traffic operations is the *2000 Highway Capacity Manual* (HCM) (Transportation Research Board Special Report 2009). The HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) are:

- LOS "A" represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS "B" is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS "C" is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- LOS "D" represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.
- LOS "E" represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.

- LOS "F" is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

Uninterrupted flow is generally found only on limited access (freeway) facilities in urban areas. The level of service is based on the HCM. The definitions of level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control.

The level of service is typically dependent on the quality of traffic flow at the intersections along a roadway. The HCM methodology expresses the level of service at an intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of intersection control.For signalized intersections, average total delay per vehicle for the overall intersection is used to determine level of service. Levels of service at the study intersections have been evaluated using an HCM intersection analysis program (Synchro Version 8). The level of service has been determined at signalized intersections using data collected describing the intersection configuration, traffic signal timing, and traffic volumes to calculate average intersection delay.

The study area intersections which are stop sign controlled with stop-control on the minor street only have been analyzed using the two-way stop-controlled unsignalized intersection analysis methodology of the HCM. For these intersections, the calculation of level of service is dependent on the occurrence of gaps occurring in the traffic flow of the major street. The level of service criteria for this type of intersection analysis is based on total delay per vehicle for the worst minor street movement(s).

The LOS is defined in terms of average delay for the HCM intersection analysis methodology, and is demonstrated below in **Table 3.12.1**.

Table 3.12-1 Highway Capacity Manual LOS Thresholds

Level of Service	Average Total Delay per Vehicle (Seconds)	
	Signalized	Unsignalized
A	0 to 10.00	0 to 10.00
B	10.01 to 20.00	10.01 to 15.00
C	20.01 to 35.00	15.01 to 25.00
D	35.01 to 55.00	25.01 to 35.00
E	55.01 to 80.00	35.01 to 50.00
F	80.01 and up	50.01 and up

Urban segments (i.e., segments on roadways that are generally signalized) do not typically require segment analysis. Segment requirements can normally be determined by the analysis of lane requirements at intersections.

For Existing and Future 'Without Project' conditions LOS analysis, the existing signal timing plans (in coordination with City staff, Urban Crossroads, and Caltrans staff) have been utilized for the study area intersections. For 'With Project' conditions, the existing signal timing plans in conjunction with potential signal optimization timing opportunities (e.g. – lengthier green times and separate / protected left turn phases, where necessary) were used to calculate 'With Project' LOS.

A saturation flow rate of 1,900 vehicles per hour of green (vphg) per lane is utilized in each scenario for HCM calculation purposes.

The signalized study area intersections have also been analyzed using the Intersection Capacity Utilization (ICU) technique. To calculate an ICU, the volume of traffic using the intersection is compared with the capacity of the intersection. ICU is usually expressed as a volume to capacity (V/C) ratio. The V/C represents that portion of the hour required to provide sufficient capacity to accommodate all intersection traffic if all approaches operate at capacity. For unsignalized study area intersections, explicit ICU volume to capacity ratios cannot be calculated. Per the County of Los Angeles CMP guidelines (page B-5), the V/C ratio for an unsignalized intersection must be converted/extracted from the HCM analysis.

For all study area signalized intersections, ICU analysis has also been performed using the Synchro 8 software. It should be noted that the Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information. Therefore, consistent with the City's guidelines, both the Synchro v/c ratio (ICU) and delay results are presented in this report. The V/C ratio and corresponding Level of Service are provided in **Table 3.12-2**.

Table 3.12-2 Intersection Capacity Utilization Thresholds

Level of Service	Critical Volume To Capacity Ratio
A	0.00 - 0.60
B	0.61 - 0.70
C	0.71 - 0.80
D	0.81 - 0.90
E	0.91 - 1.00
F	>1.00

Freeway Mainline Analysis Methodology

The freeway segments have been evaluated in this report based upon peak hour directional volumes. The freeway segment analysis is based on the methodology described in Chapter 23 of the HCM and performed using HCS+ software. The performance measure preferred by Caltrans to calculate LOS is density. Density is expressed in terms of passenger cars per mile per lane. The three measures of speed, density, and flow or volume are interrelated. **Table 3.12-3** below illustrates the freeway segment LOS thresholds for each density range utilized for this analysis.

Table 3.12-3 Freeway Mainline LOS Thresholds

Level of Service	Description	Density Range (pc/mi/ln)[1]
A	Free-flow operations in which vehicles are relatively unimpeded in their ability to maneuver within the traffic stream. Effects of incidents are easily absorbed.	0.0 – 11.0
B	Relative free-flow operations in which vehicle maneuvers within the traffic stream are slightly restricted. Effects of minor incidents are easily absorbed.	11.1 – 18.0
C	Travel is still at relative free-flow speeds, but freedom to maneuver within the traffic stream is noticeably restricted. Minor incidents may be absorbed, but local deterioration in service will be substantial. Queues begin to form behind significant blockages.	18.1 – 26.0
D	Speeds begin to decline slightly and flows and densities begin to increase more quickly. Freedom to maneuver is noticeably limited. Minor incidents can be expected to create queuing as the traffic stream has little space to absorb disruptions.	26.1 – 35.0
E	Operation at capacity. Vehicles are closely spaced with little room to maneuver. Any disruption in the traffic stream can establish a disruption wave that propagates throughout the upstream traffic flow. Any incident can be expected to produce a serious disruption in traffic flow and extensive queuing.	35.1 – 45.0
F	Breakdown in vehicle flow.	>45.0

[1] *pc/mi/ln = passenger cars per mile per lane. Source: HCM 2000, Chapter 23*

The specification of maximum densities for LOS "A" through "D" is based on the collective professional judgment of the members of the Committee on Highway Capacity and Quality of Service for the Transportation Research Board. The upper value shown for LOS "E" (45 pm/mi/ln) is the maximum density at which sustained flows at capacity are expected to occur.

Freeway Ramp Analysis Methodology

The ramp operation analyses have been based on the following HCM methodologies: Merge, Diverge and/or Weave analysis methods. The Weave analysis method is performed between an on-ramp and an off-ramp of adjacent interchanges spaced less than 2,500 feet apart. For ramps of adjacent interchanges spaced more than 2,500 feet apart, Merge and Diverge analysis methods are used for on-ramps and off-ramps, respectively. For this assessment, Merge and Diverge analyses have been used to be consistent with the Traffic Study Report for I-605/Live Oak Avenue/Arrow Highway Interchanges (2013), prepared by AECOM Technical Services Inc.

The merge/diverge analysis is based on the HCM Ramps and Ramp Junctions analysis method and performed using HCS+ software. The measure of effectiveness (reported in passenger car/mile/lane) are calculated based on the existing number of travel lanes, number of lanes at the on and off ramps both at the analysis junction and at upstream and downstream locations (if applicable) and acceleration/deceleration lengths at each merge/diverge point. **Table 3.12-4** below presents the merge/diverge area LOS thresholds for each density range utilized for this analysis.

Table 3.12-4 Freeway Merge/Diverge Ramp Junction LOS Thresholds

Level of Service	Density Range (pc/mi/ln)[1]
A	0.0 – 10.0
B	10.1 – 20.0
C	20.1 – 28.0
D	28.1 – 35.0
E	>35.0
F	Demand Exceeds Capacity

[1] *pc/mi/ln = passenger cars per mile per lane. Source: HCM 2000, Chapter 25*

Intersection Queuing Analysis Methodology

A traffic signal progression analysis has been conducted at the I-605 freeway on/off ramp intersections to evaluate vehicular queuing and stacking length requirements by considering the signal timing and physical spacing of intersections. The progression results have been based on the output from the Synchro plus SimTraffic 8 software program.

Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with City of Irwindale requirements.

Definition of Deficiency

The City of Irwindale requires the following LOS criteria be implemented:

- LOS will not exceed LOS "D" at all intersections (excluding State Highway facilities) on arterial and collector streets.

In addition, the study intersections along Live Oak Avenue, east of Rivergrade Road, are located on the City boundary of Irwindale and Baldwin Park. The City of Baldwin Park General Plan (November 2002) states that the City will maintain level of service "D" at all City intersections. As such, LOS "D" has also been considered acceptable at any intersections and roadways within the City of Baldwin Park.

For State Highway facilities, the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002) states that Caltrans endeavors to maintain a target LOS at the transition between LOS"C" and LOS "D", however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing Measure of Effectiveness (MOE) which is the existing level of service on the impacted Caltrans facilities, should be maintained. Therefore, for the purpose of this report, LOS "D" is used as the maximum acceptable threshold for study area ramp intersections and freeway mainline and ramp segments.

Definition of Significant Impact

- When a signalized intersection operates at mid-range LOS "D" (45.0 seconds) or better under existing or future baseline conditions and the addition of project trips degrades the intersection operations to LOS "E" or "F". The project mitigation should bring the facility to operate at mid-range LOS "D" at minimum.
- When a signalized intersection operates at mid-range LOS "E" (67.5 seconds) for State Highways or better under existing or future baseline conditions, and the addition of project trips degrades the intersection operations to 67.6 seconds (LOS "E") or worse (LOS "F"). The project mitigation should bring the facility to operate at mid-range LOS "E" at minimum.
- When a signalized intersection operates at LOS "E" for non-state or LOS "F" (for State) under existing or future baseline conditions, and the addition of more than 50 peak hour project trips contributes to the continuing operational failure at the intersection. The project mitigation should bring the facility to pre-project conditions.
- At an unsignalized intersection, when the minor stop-controlled approach operates at LOS "F" and does not have acceptable operation in terms of total control delay, and the addition of project trips increases the total control delay to more than 4.0 vehicle hours for a single

lane approach or 5.0 vehicle hours for a multi-lane approach. The project mitigation should bring the facility to operate at LOS "E" (at a minimum) or bring the total control delay to less than 4.0 vehicle-hours for a single lane approach or 5.0 vehicle-hours for a multi-lane approach (at a minimum).

- At an unsignalized intersection, when the minor stop controlled approach operates at LOS "F" and does not have an acceptable operation in terms of total control delay, and the addition of more than 50 peak hour project trips contributes to the continuing operational failure at the minor approach. The project mitigation should bring the facility to pre-project conditions.

Los Angeles County Congestion Management Program (CMP) Consistency Requirements

The Proposed Project is located within the jurisdiction of the City of Irwindale in Los Angeles County. Therefore, the *Traffic Impact Analysis* was required to address all CMP requirements of the Los Angeles County Congestion Management Program. The purpose of the Los Angeles County Congestion Management Program (CMP) is to address the impact of local growth on the regional transportation system. The goals of the CMP are summarized below:

- To link local land use decisions with their impacts on regional transportation, and air quality;
- To develop a partnership among transportation decision makers on devising appropriate transportation solutions that include all modes of travel; and
- To provide transportation projects which are eligible to compete for state gas tax funds.

The CMP offers the following mechanisms to meet these goals:

- Tracking and analysis to determine how the regional highway and transit systems are performing;
- Analysis of the impacts of local land use decisions on regional transportation;
- Local implementation of Transportation Demand Management design guidelines that ensure new development includes improvements supportive of transit and TDM;
- Tracking new building activity throughout Los Angeles County; and
- Implementation of local strategies which benefit the regional transportation system and offset the impact of new development.

3.12.4 AREA CONDITIONS

This section summarizes existing roadway and traffic conditions in the Proposed Project area. All major intersections anticipated to carry 50 (or more) peak hour trips (passenger car equivalents) have been evaluated in the *Traffic Impact Analysis* and are summarized within this section. The existing number of lanes and traffic control devices for existing intersections are presented, along with existing traffic count data collected. This data was used to analyze existing traffic operations in the study area. Existing plans for roadway improvements are also described in this section.

Exhibit 3.12-3 Location Map with Numbered Intersections illustrates the intersection locations which include the site access driveways, adjacent roadways, and intersections around the site, including the major signalized intersections providing access from the site to the nearest regional corridor (I-605 Freeway). The intersection analysis locations have also been refined based on the *Traffic Impact Analysis* scoping presented in Appendix A of **Appendix G** of this EIR. No Los Angeles County Congestion Management Program (CMP) intersections exist in the study area. Refer to **Table 3.12-5 Intersection Analysis Locations**. It should be noted that, the San Gabriel Freeway (I-605) and the Foothill Freeway (I-210) ramps located in the City of Irwindale are the only Los Angeles County Congestion Management (CMP) - designated facilities in the City of Irwindale.

Exhibit 3.12-4 Existing Number of Through Lanes and Intersection Controls identifies the existing number of through lanes and intersection controls for the *Traffic Impact Analysis* study area roadways. As also shown in this exhibit, all of the existing study area intersections immediately adjacent to the site are signalized. The only existing unsignalized intersections evaluated in the *Traffic Impact Analysis* are the I-605 Freeway Northbound Ramps and Live Oak Lane (private industrial road) intersections along Live Oak Avenue and Arrow Highway.

The study area is currently served by the Foothill Transit Agency with bus service along Live Oak Avenue via Route 492 and Arrow Highway via Route 272. A portion of Live Oak Avenue, within the study area, is also served by the Baldwin Park Transit Agency via Teal Line route.

Existing pedestrian and bicycle facilities (e.g., crosswalks, sidewalks, bike lanes, etc.) within the study area are shown on **Exhibit 3.12-5 Existing Pedestrian and Bicycle Facilities**. As shown in **Exhibit 3.12-6**, the only existing bike path within the study area is located on the west levee of the San Gabriel River.

Exhibit 3.12-3 Location Map with Numbered Intersections

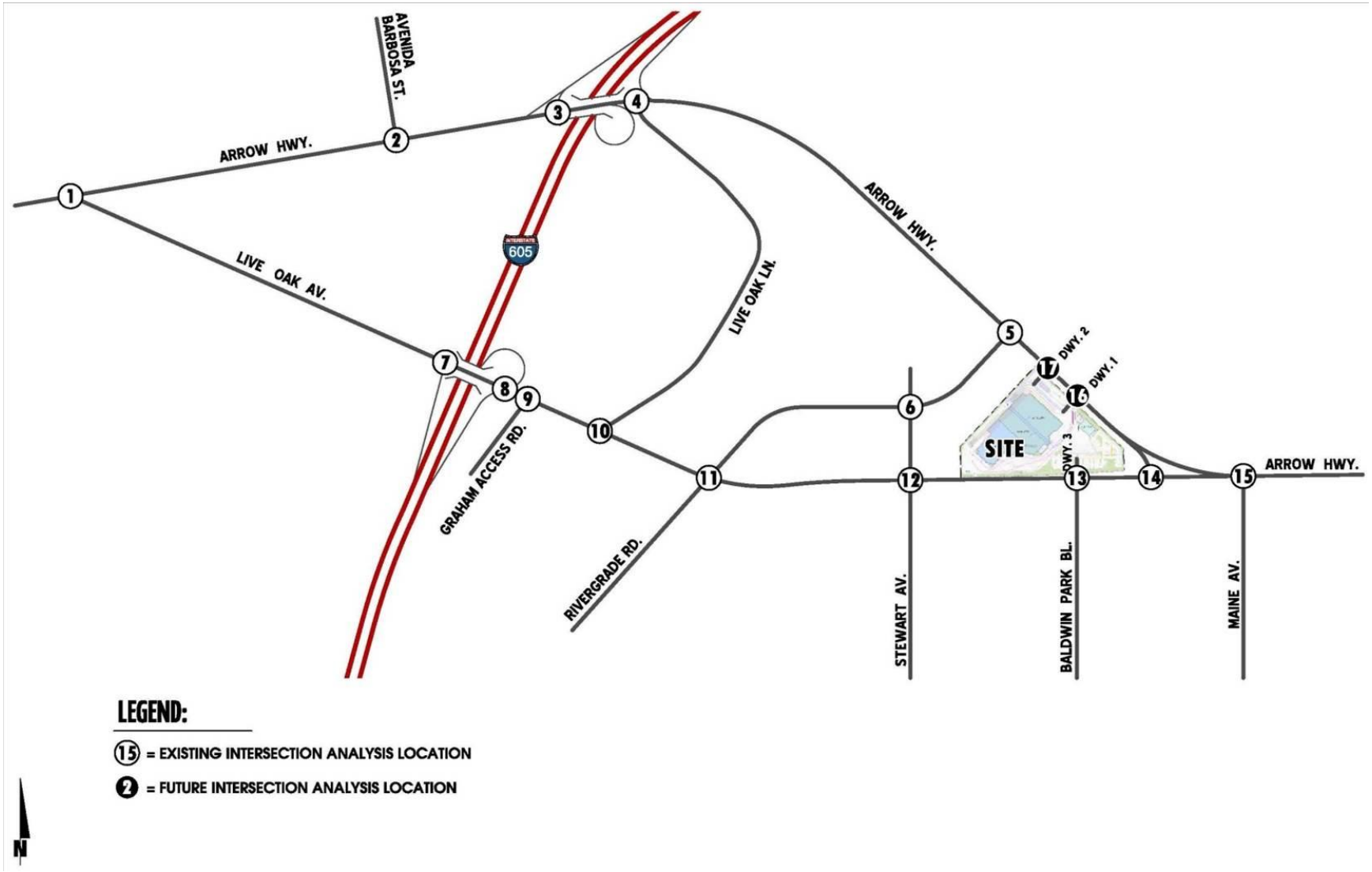


Exhibit 3.12-4 Existing Number of Through Lanes and Intersection Controls

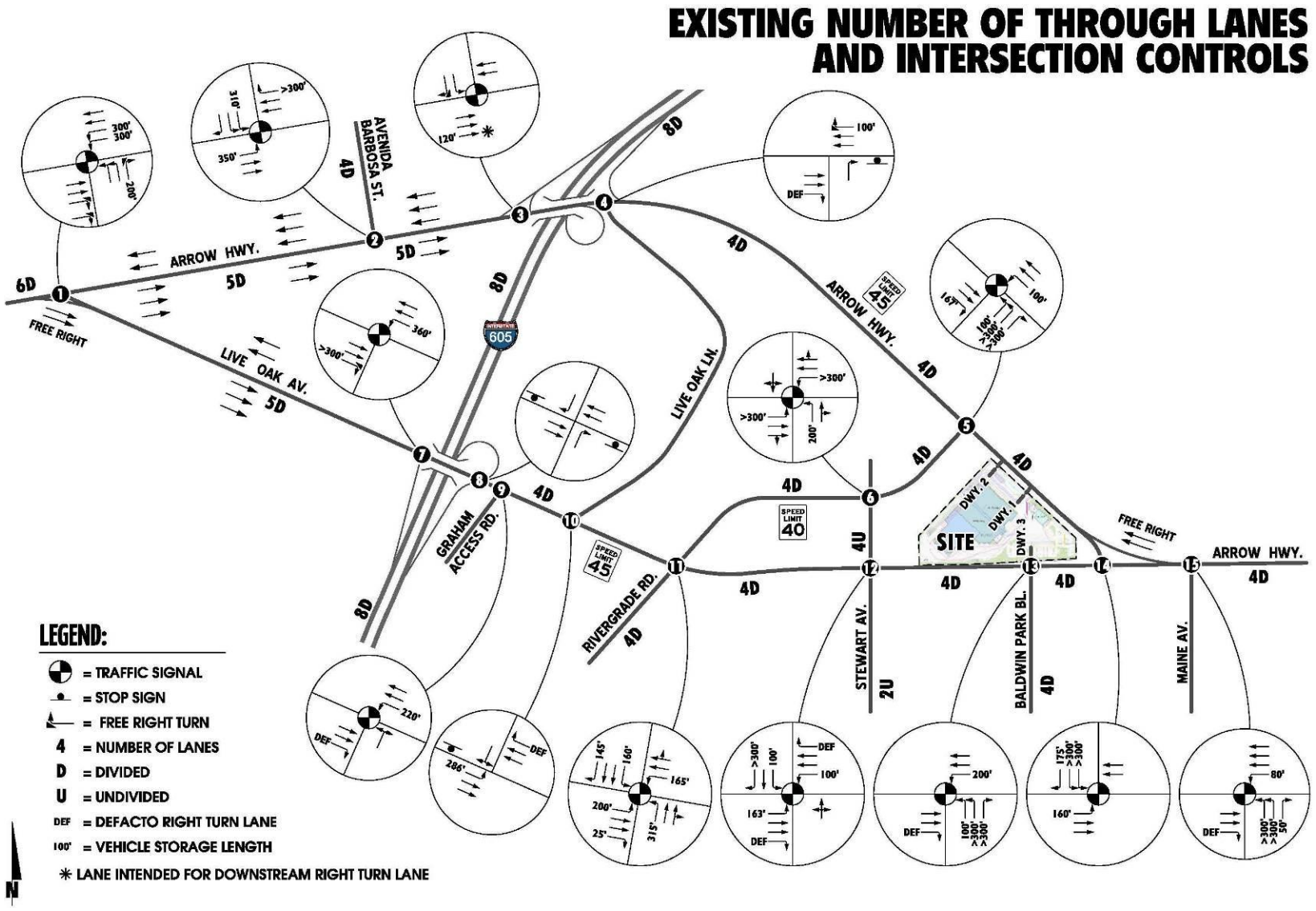


Exhibit 3.12-5 Existing Pedestrian and Bicycle Facilities

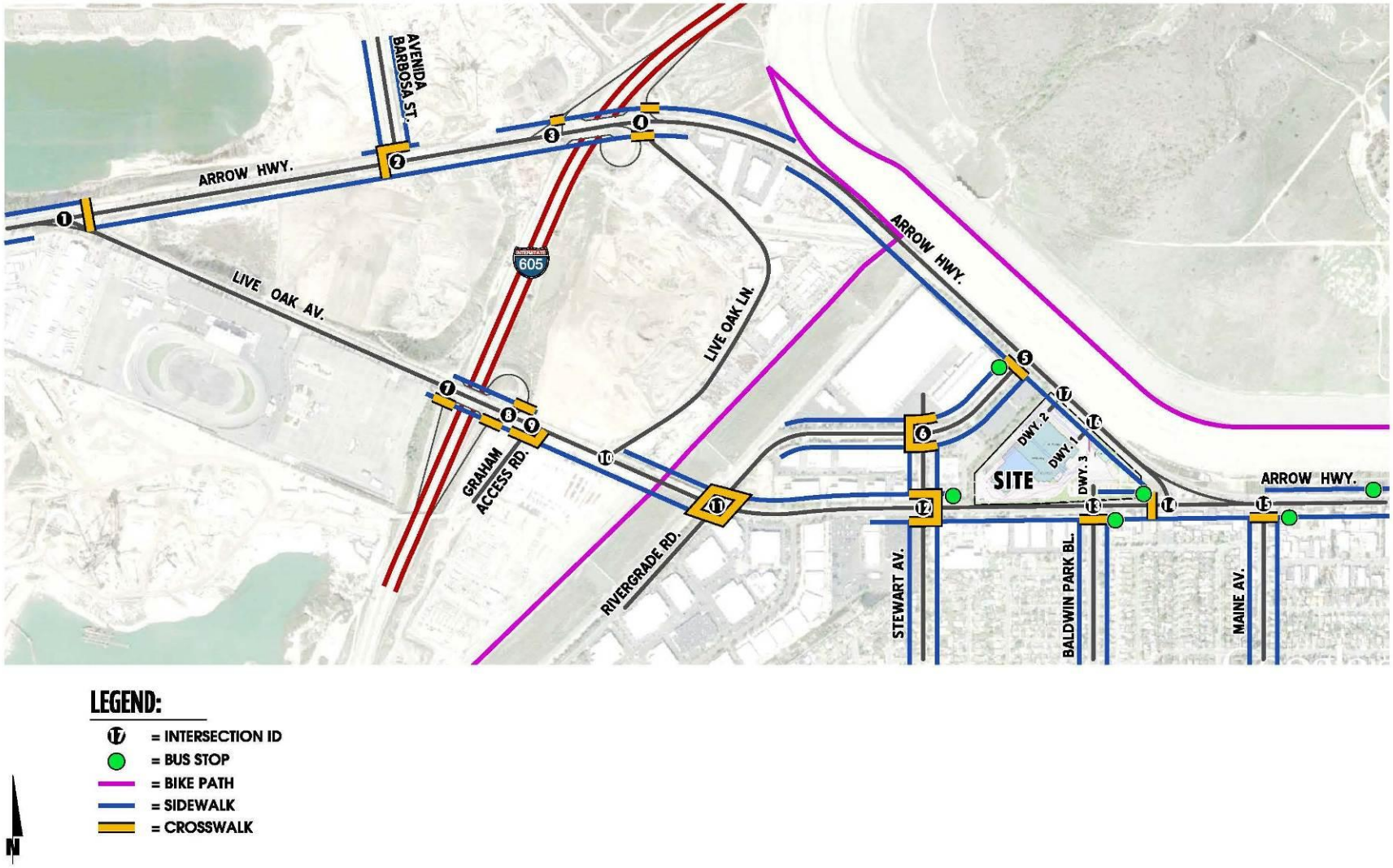


Table 3.12-5 Intersection Analysis Locations

ID	Intersection Location	Traffic Control	Jurisdiction
1	Live Oak Av. (West) (NS) / Arrow Hwy. (EW)	Signalized	Irwindale
2	Avenida Barbosa (NS) / Arrow Hwy. (EW)	Signalized	Irwindale
3	I-605 SB Off-Ramp (NS) / Arrow Hwy. (EW)	Signalized	Caltrans
4	I-605 NB On-Ramp/Live Oak Ln. (NS) / Arrow Hwy. (EW)	Unsignalized	Caltrans
5	Arrow Hwy. (NS) / Rivergrade Rd. (EW)	Signalized	Irwindale
6	Stewart Av. (NS) / Rivergrade Rd. (EW)	Signalized	Irwindale
7	I-605 SB On-Ramp (NS) / Live Oak Av. (EW)	Signalized	Caltrans
8	I-605 NB Off-Ramp (NS) / Live Oak Av. (EW)	Unsignalized	Caltrans
9	Graham Access Rd. (NS) / Live Oak Av. (EW)	Signalized	Irwindale
10	Live Oak Ln. (NS) / Live Oak Av. (EW)	Unsignalized	Irwindale
11	Rivergrade Rd. (NS) / Live Oak Av. (EW)	Signalized	Irwindale
12	Stewart Av. (NS) / Live Oak Av. (EW)	Signalized	Irwindale & Baldwin Park
13	Baldwin Park Bl./Dwy. 3 (NS) / Live Oak Av. (EW)	Signalized	Irwindale & Baldwin Park
14	Arrow Hwy. (NS) / Live Oak Av. (EW)	Signalized	Irwindale
15	Maine Av. (NS) / Arrow Hwy. (EW)	Signalized	Irwindale & Baldwin Park
16	Arrow Hwy. (NS) / Dwy. 1 (EW) *(Future Intersection)*	Signalized	Irwindale
17	Arrow Hwy. (NS) / Dwy. 2 (EW) *(Future Intersection)*	Unsignalized	Irwindale

Consistent with Caltrans NOP comments, the freeway mainline analysis locations include the segments on either side of key study area interchanges where operational analysis has been requested. The study area freeway mainline analysis locations include seven (7) I-605 Freeway mainline segments and six (6) I-210 Freeway mainline segments for both directions of flow as shown in **Table 3.12-6**.

Table 3.12-6 Freeway Mainline Segment Analysis Locations

ID	Freeway Mainline Segments
1	I-605 Northbound, South of Live Oak Avenue
	I-605 Northbound, Between Live Oak Avenue and Eastbound Arrow Highway Loop On-Ramp
	I-605 Northbound, Between Eastbound Arrow Highway Loop On-Ramp and Westbound Arrow Highway On-Ramp
	I-605 Northbound, Immediately North of Arrow Highway On-Ramp
	I-605 Southbound, Immediately North of Arrow Highway Off-Ramps
	I-605 Southbound, Between Arrow Highway Off-Ramps and Live Oak Avenue On-Ramps
	I-605 Southbound, South of Live Oak On-Ramps
	I-210 Westbound, Immediately east of Irwindale Avenue Westbound Off-Ramp
	I-210 Westbound, Between Irwindale Avenue Westbound Loop On-Ramp and Irwindale Avenue Westbound Off-Ramp
	I-210 Westbound, Immediately West of Irwindale Avenue Westbound On-Ramp
	I-210 Eastbound, Immediately West of Irwindale Avenue Eastbound Off-Ramp
	I-210 Eastbound, Between Irwindale Avenue Eastbound Off-Ramp and Irwindale Avenue Eastbound On-Ramp
	I-210 Eastbound, Immediately East of Irwindale Avenue Eastbound Off-Ramp

Similar to the freeway mainline segments, the study area freeway merge/diverge ramp junction analysis locations include five (5) I-605 Freeway ramp junctions and five (5) I-210.

Freeway ramp junctions for both directions of flow are shown on **Table 3.12-7**.

Table 3.12-7 Freeway Merge/Diverge Ramp Junction Analysis Locations

ID	Freeway Merge/Diverge Ramp Junctions
1	I-605 Northbound - Off-Ramp at Live Oak Avenue (Diverge)
2	I-605 Northbound - On-Ramp for Eastbound Arrow Highway (Merge)
3	I-605 Northbound - Direct On-Ramp for Westbound Arrow Highway (Merge)
4	I-605 Southbound - Off-Ramp at Arrow Highway (Diverge)
5	I-605 Southbound - On-Ramp at Live Oak Avenue (Merge)
6	I-210 Westbound - Off-Ramp at Irwindale Avenue (Diverge)
7	I-210 Westbound – Loop On-Ramp at Irwindale Avenue (Merge)
8	I-210 Westbound - Direct On-Ramp at Irwindale Avenue Highway (Merge)
9	I-210 Eastbound - Off-Ramp at Irwindale Avenue (Diverge)
10	I-210 Eastbound - On-Ramp at Irwindale Avenue (Merge)

In addition, **Table 3.12-8** summarizes queuing analysis locations at the following on / off ramp intersections.

Table 3.12-8 Queuing Analysis Locations

ID	Intersection Location	Traffic Control	Jurisdiction
3	I-605 SB Off-Ramp (NS) / Arrow Hwy. (EW)	Signalized	Caltrans
7	I-605 SB On-Ramp (NS) / Live Oak Av. (EW)	Signalized	Caltrans
8	I-605 NB Off-Ramp (NS) / Live Oak Av. (EW)	Unsignalized	Caltrans

Existing (2013) Traffic Conditions

The existing conditions analyses include intersection delay and queuing analyses for surface ramp intersections; mainline analysis for freeway segments; and merge/diverge analyses for ramp exits and entrances.

Existing Peak Hour Traffic Volumes

Existing intersection level of service calculations are based upon manual AM and PM peak period turning movement counts conducted on June 2011, and adjusted for 2013 conditions based upon 24-hour roadway segment counts. Turning Movement traffic count worksheets are included in Appendix C of the TIA contained in **Appendix G** of this EIR. The AM peak hour traffic volumes were determined by counting the two hour period between 7 - 9 AM in the morning. Similarly, the PM peak hour traffic volumes were identified by counting the two hour period from 4 - 6 PM in the evening. The highest four consecutive 15-minute periods traffic counts have been used for analysis. The count includes the following vehicle classifications per the City of Irwindale traffic study guidelines: passenger cars; buses/recreational vehicles; 3 axle trucks; and 4 or more axle trucks.

The overall existing count volumes illustrated on the exhibits and used for the analysis for the study are calculated passenger car equivalent (PCE) volumes. These raw PCE volumes are then reviewed for flow conservation between closely spaced intersections and adjusted to ensure reasonable flow conservation if necessary was also performed.

In addition, link volume growth comparison between 2011 and 2013 counts indicates a 1.018 growth factor (equivalent to 1.8%) during the AM peak hour. However, the PM peak hour comparison presents a decrease in traffic (approximately -4.0%) between 2011 and 2013 counts. Therefore, a final adjustment of 1.018 growth is applied to the 2011 AM peak hour volumes and 2011 PM peak hour counts were utilized as is to reflect 2013 conditions. 2011 and 2013 Link volume growth comparison results are included in Appendix C within EIR **Appendix G**. The [final] Existing (2013) AM and PM Peak hour volumes are shown on **Exhibit 3.12-6** and **Exhibit 3.12-7**, respectively.

Exhibit 3.12-6 Existing (2013) AM Peak Hour Intersection Volumes

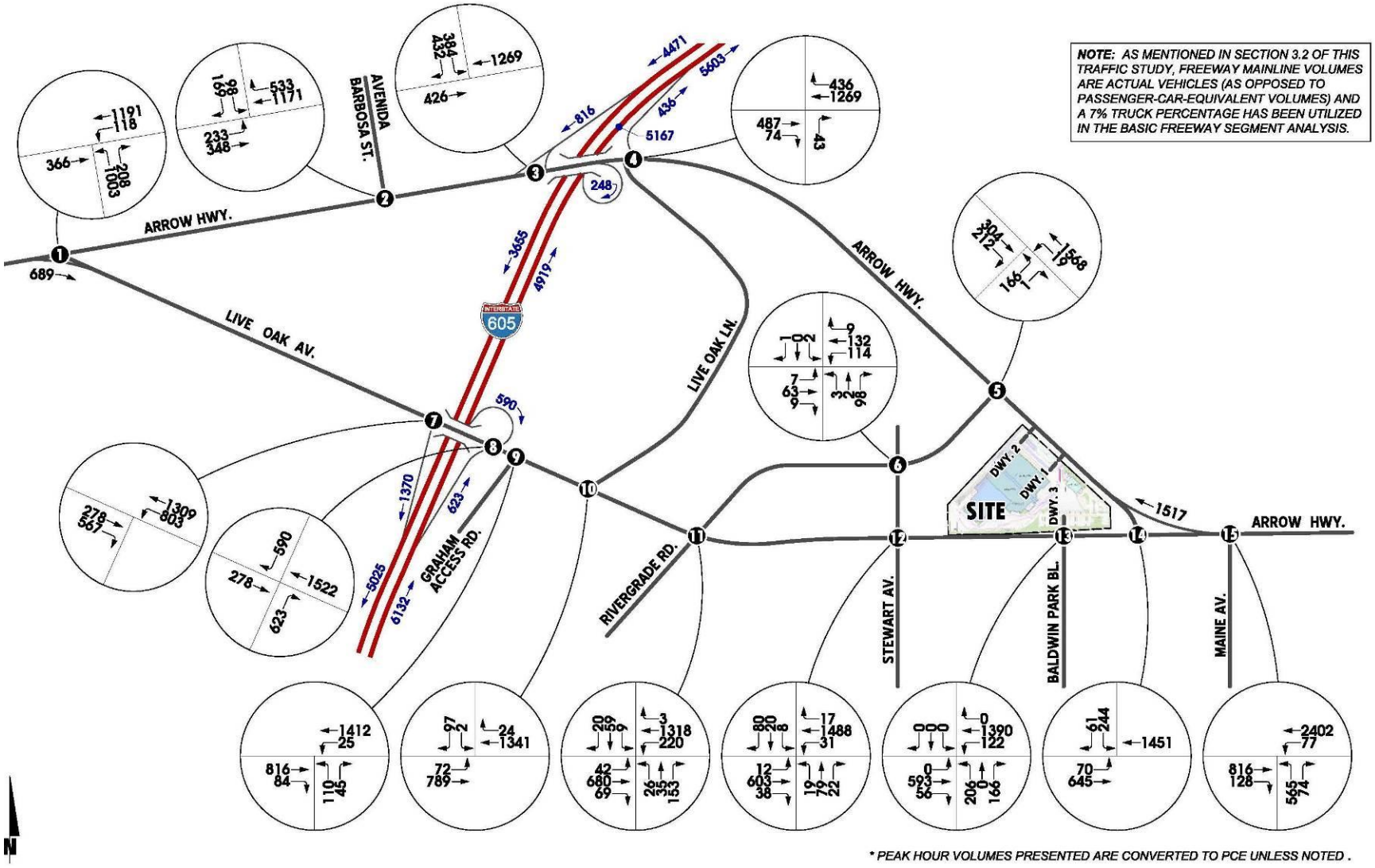
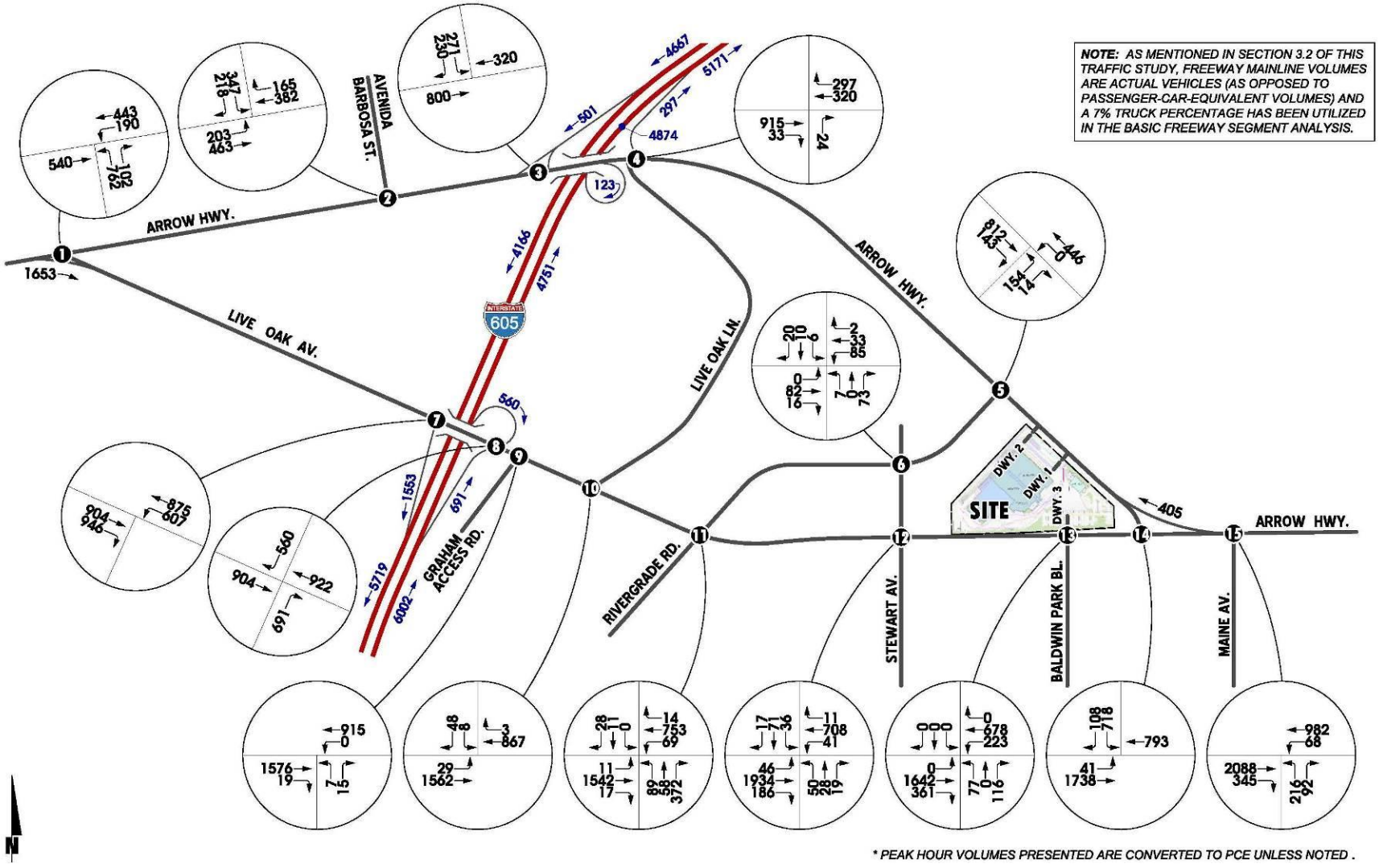


Exhibit 3.12-7 Existing (2013) PM Peak Hour Intersection Volumes



Interstates 210 and 605 Freeway mainline volume data was obtained from the Caltrans Performance Measurement System (PeMS) website for the purposes of the *Traffic Impact Analysis*. Freeway mainline peak hour volumes have been obtained for the week of May 14th through 16th, 2013 and have been flow conserved with freeway-ramp-to-arterial peak hour count data conducted during these same dates. In an effort to conduct a conservative analysis, the maximum value observed within the three (3) day period was utilized for the morning (AM) and evening (PM) peak hours. Therefore, the Caltrans 2011 Annual Average Daily Truck Traffic on the California State Highway System is utilized which presents a 6.79% truck percentage along the I-605 freeway and 6.93% truck percentage along I-210 within the study area. For the purpose of this analysis, actual vehicles (as opposed to passenger-car-equivalent volumes) and a parameter of 7% (rounded value) truck percentage have been utilized for the calculation of the basic freeway segment analysis. The source data and freeway volume summary is included as Appendix D within the TIA in **Appendix G** of this EIR.

Exhibit 3.12-8 depicts the current average daily traffic (ADT) volumes in the study area. The existing data shown has been based on January and May 2013 traffic data (see Appendix B within EIR **Appendix G**). The traffic count data was collected while school was in session and after the completion of the roadway improvements along Arrow Highway. As shown on **Exhibit 3.12-8**, the highest daily traffic volumes in the study area occur on Arrow Highway, east of Maine Avenue, which currently carries approximately 34,500 vehicles per day (VPD). West of Arrow Highway (North), Live Oak Avenue carries approximately 33,600 VPD.

The Existing (2013) freeway mainline directional volumes for the AM and PM peak hours are also provided on **Exhibit 3.12-6** and **Exhibit 3.12-7**, respectively. For freeway ramp facilities, passenger car equivalent volumes have been used. The freeway on/off ramp AM and PM peak hour volumes are also provided on **Exhibit 3.12-6** and **Exhibit 3.12-7**, respectively.

Existing Intersection Delay Analysis

Existing (2013) peak hour traffic operations have been evaluated for the study area intersections. The results of this analysis are summarized in **Table 3.12-8**, along with the existing intersection geometrics and traffic control devices at each analysis location. The supporting HCM delay and ICU calculation worksheets are provided as Appendix E within **Appendix G** of this EIR. For Existing (2013) conditions, the intersection of I-605 NB off-ramp / Live Oak Avenue currently operates at unacceptable levels of service (LOS "E" or worse) during the peak hours.

Exhibit 3.12-8 Existing (2013) Average Daily Traffic

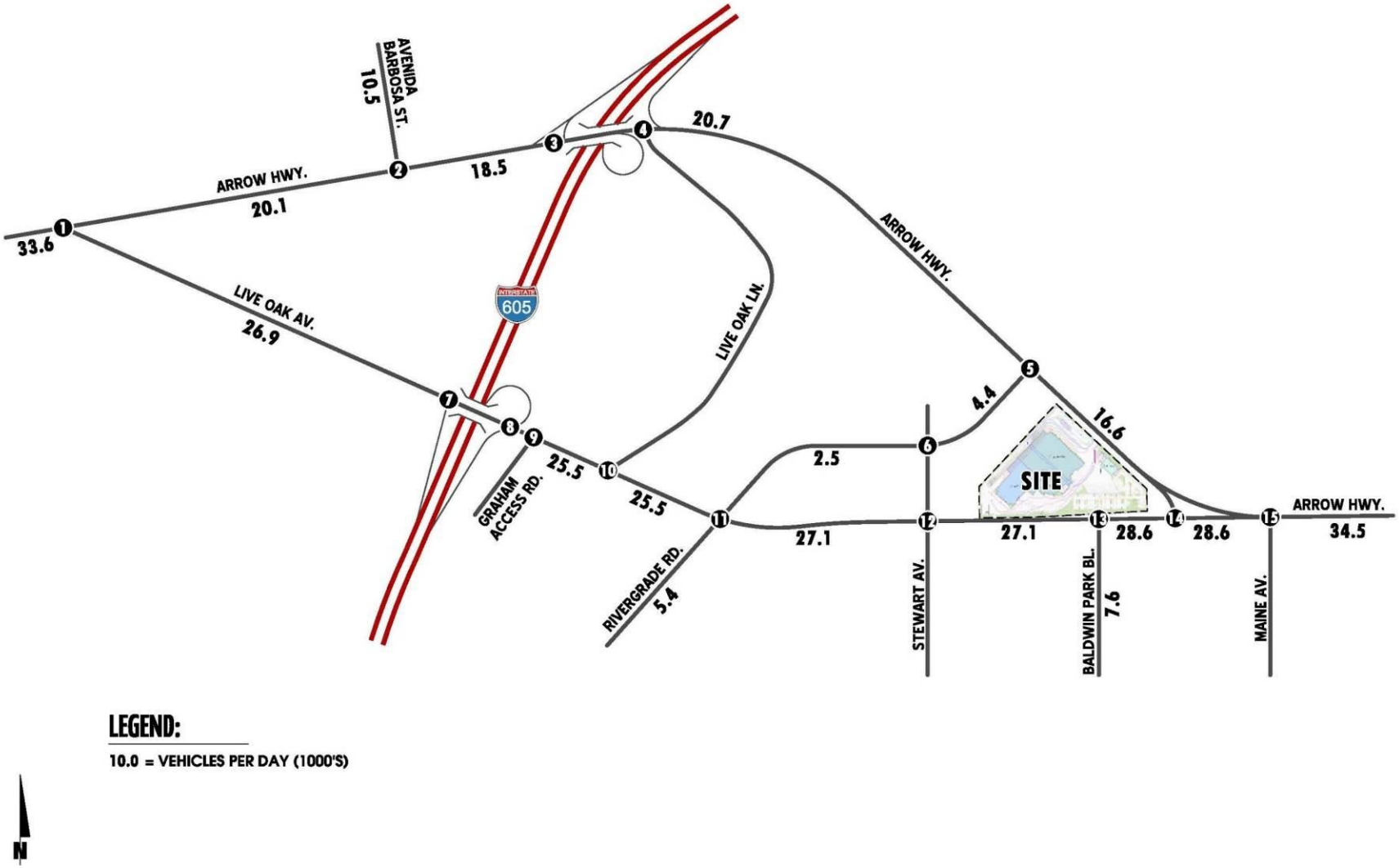


Table 3.12-9 Existing Conditions (2013) Intersection Analysis Summary

#	INTERSECTION	TRAFFIC CONTROL[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	NORTH-BOUND T	NORTH-BOUND R	SOUTH-BOUND L	SOUTH-BOUND T	SOUTH-BOUND R	EAST-BOUND L	EAST-BOUND T	EAST-BOUND R	WEST-BOUND L	WEST-BOUND T	WEST-BOUND R	HCM DELAY[2] (SECS.) AM	HCM DELAY[2] (SECS.) PM	HCM LEVEL OF SERVICE[2] AM	HCM LEVEL OF SERVICE[2] PM	ICU[6] (V/C) AM	ICU[6] (V/C) PM	ICU[6] LEVEL OF SERVICE AM	ICU[6] LEVEL OF SERVICE PM
1	Live Oak Av. (West) (NS) / Arrow Hwy. (EW)	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	19.5	24.2	B	C	0.74	0.50	C	A
2	Avenida Barbosa St. (NS) / Arrow Hwy. (EW)	TS	0	0	0	2	0	1	1	2	0	0	2	1	18.2	22.7	B	C	0.65	0.44	B	A
3	I-605 SB Off-Ramp (NS) / Arrow Hwy. (EW)	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	12.4	8.4	B	A	0.78	0.41	C	A
4	I-605 NB On-Ramp/Live Oak Ln. (NS) / Arrow Hwy. (EW)	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	10.1	10.3	B	B	NA	NA	NA	NA
5	Arrow Hwy. (NS) / Rivergrade Rd. (EW)	TS	1	2	0	0	2	1	2	0	1	0	0	0	5.9	6.7	A	A	0.56	0.32	A	A
6	Stewart Av. (NS) / Rivergrade Rd. (EW)	TS	1	1	0	0	1	0	1	2	0	1	2	0	7.3	9.8	A	A	0.11	0.11	A	A
7	I-605 SB On-Ramp (NS) / Live Oak Av. (EW)	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	8.4	11.0	A	B	0.76	0.78	C	C
8	I-605 NB Off-Ramp (NS) / Live Oak Av. (EW)[4]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	17.6	15.0	C	B	NA	NA	NA	NA
	-NB Slip Off-Ramp to Live Oak Av. Eastbound[5]	CSS	0	0	1	--	--	--	0	2	0	0	2	0	14.4	31.5	B	D	NA	NA	NA	NA
	-NB loop Off-Ramp to Live Oak Av. Westbound[5]	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**74.8**	43.9	**F**	**E**	NA	NA	NA	NA
9	Graham Access Rd. (NS) / Live Oak Av. (EW)	TS	0	1	0	0	0	0	0	2	d	1	2	0	5.9	2.1	A	A	0.59	0.56	A	A
10	Live Oak Ln. (NS) / Live Oak Av. (EW)	CSS	0	0	0	0	1	0	1	2	0	0	2	d	12.2	14.0	B	B	NA	NA	NA	NA
11	Rivergrade Rd. (NS) / Live Oak Av. (EW)	TS	1	2	0	1	2	1	1	2	1	1	2	d	17.6	17.2	B	B	0.62	0.74	B	C
12	Stewart Av. (NS) / Live Oak Av. (EW)	TS	0	1	0	1	1	1	1	2	d	1	2	d	8.8	11.9	A	B	0.58	0.75	A	C
13	Baldwin Park Bl. - Dwy. 3 (NS) / Live Oak Av. (EW)	TS	2	0	1	0	0	0	0	2	d	1	2	0	11.2	16.5	B	B	0.55	0.75	A	C
14	Arrow Hwy. (NS) / Live Oak Av. (EW)	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	7.0	22.1	A	C	0.53	0.81	A	D
15	Maine Av. (NS) / Arrow Hwy. (EW)	TS	2	0	1	0	0	0	0	2	d	1	3	0	14.4	19.0	B	B	0.73	0.75	C	C
16	Arrow Hwy. (NS) / Dwy. 1 (EW)	-	DOES NOT EXIST												-	-	-	-	-	-	-	-
17	Arrow Hwy. (NS) / Dwy. 2 (EW)	-	DOES NOT EXIST												-	-	-	-	-	-	-	-

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (23') for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1>> = Free Right Turn Lane; d = Defacto Right Turn Lane

[2] Delay and level of service (LOS) calculated using the following analysis software: Synchro 8. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown. "NA" value is shown for unsignalized ICU values.

[3] TS = Traffic Signal; CSS = Cross Street Stop.

[4] LOS based on average delay (unsignalized intersection).

[5] LOS based on minor approach operating condition (unsignalized intersection).

[6] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

3.12.5 PROPOSED PROJECT TRAFFIC PARAMETERS

The Materials Recovery Facility and Transfer Station (MRF/TS) is the majority of the building development at the site totaling approximately 228,432 square feet (SF). The Convenience Store / Fueling Facility would be a separate structure located on the north-east portion of the site totaling approximately 2,390 SF. The Administrative/Visitor Center and Maintenance Building is approximately 16,185 SF. As designed, the total building area is 247,007 SF. On-site parking consists of 169 parking stalls and 23 transfer truck stalls at the MRF/TS, and 11 parking stall for the Convenience Store / Fueling Facility. In addition, a traffic signal will be installed at Driveway 1 along Arrow Highway as a Project design feature. Refer to **Exhibit 3.12-9 Project Circulation Plan, Exhibit 3.12-10 Project Variant Circulation Plan**. The project variant site plan does not modify site access or project driveways, rather it modifies on-site parking only.

The Proposed Project proposes a maximum throughput of up to 6,000 tons per day. The maximum daily number of truck trips would be 2,456 truck round trips (including collection trucks, transfer trucks and self-haul trucks). The daily trips include 249 self-haul trips, 1,137 packer truck trip, 66 end dump truck trips, 445 roll-off truck trips, and 559 transfer truck trips. The Proposed Project also includes 345 employee trips. An additional 751 daily trips would be associated with the convenience store/service station. The convenience store/service station would occur with the Proposed Project but is not included in the Baseline Condition.

The Proposed Project is estimated to be constructed in one (1) phase, lasting approximately 18 months. The MRF/TS facility would be designed to receive, process, and transfer up to 6,000 tons per day [tpd] with up to 345 employees. For the purpose of this traffic impact analysis report, the truck trips have been converted to passenger car equivalents (PCE). The project is anticipated to generate a net total of approximately 8,333 (PCE) trip-ends per day, with 664 AM peak hour (PCE) trips and 664 PM peak hour (PCE) trips.

Site Access

Sole access for transfer trucks to and from the site would be from Arrow Highway, and directed towards Interstate 605 for regional transport, utilizing only City of Irwindale roadways. Site access into the Fueling Facility/Convenience Store area is also located on Arrow Highway. Two additional access points to the south from Live Oak Avenue will serve: 1) employees and visitors; and 2) Fire Department access only. For the purpose of the Traffic Impact Analysis, only the full access driveways were analyzed (refer to **Exhibit 3.12-11 Access and On-site Circulation).**

Exhibit 3.12-9 Project Circulation Plan

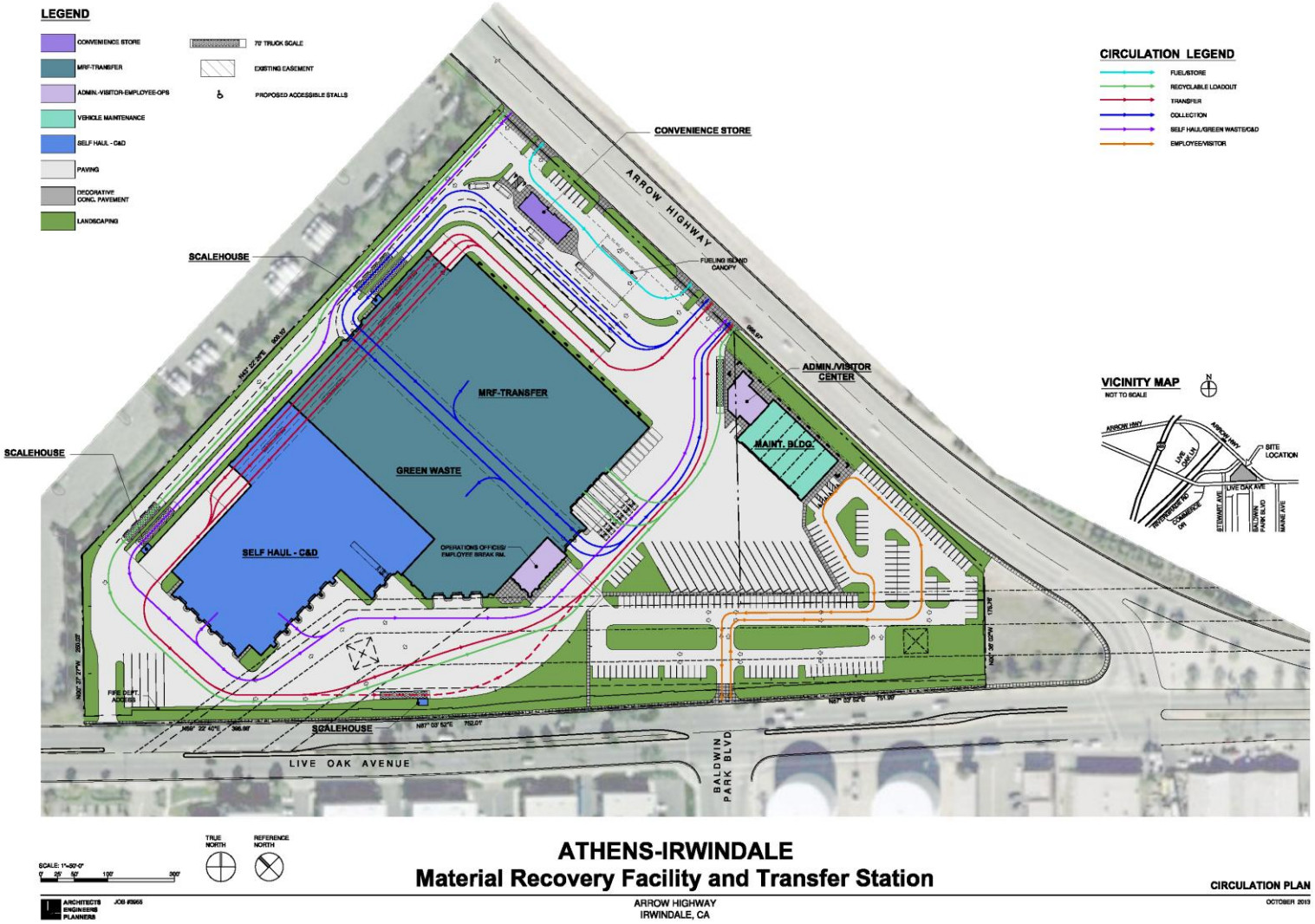
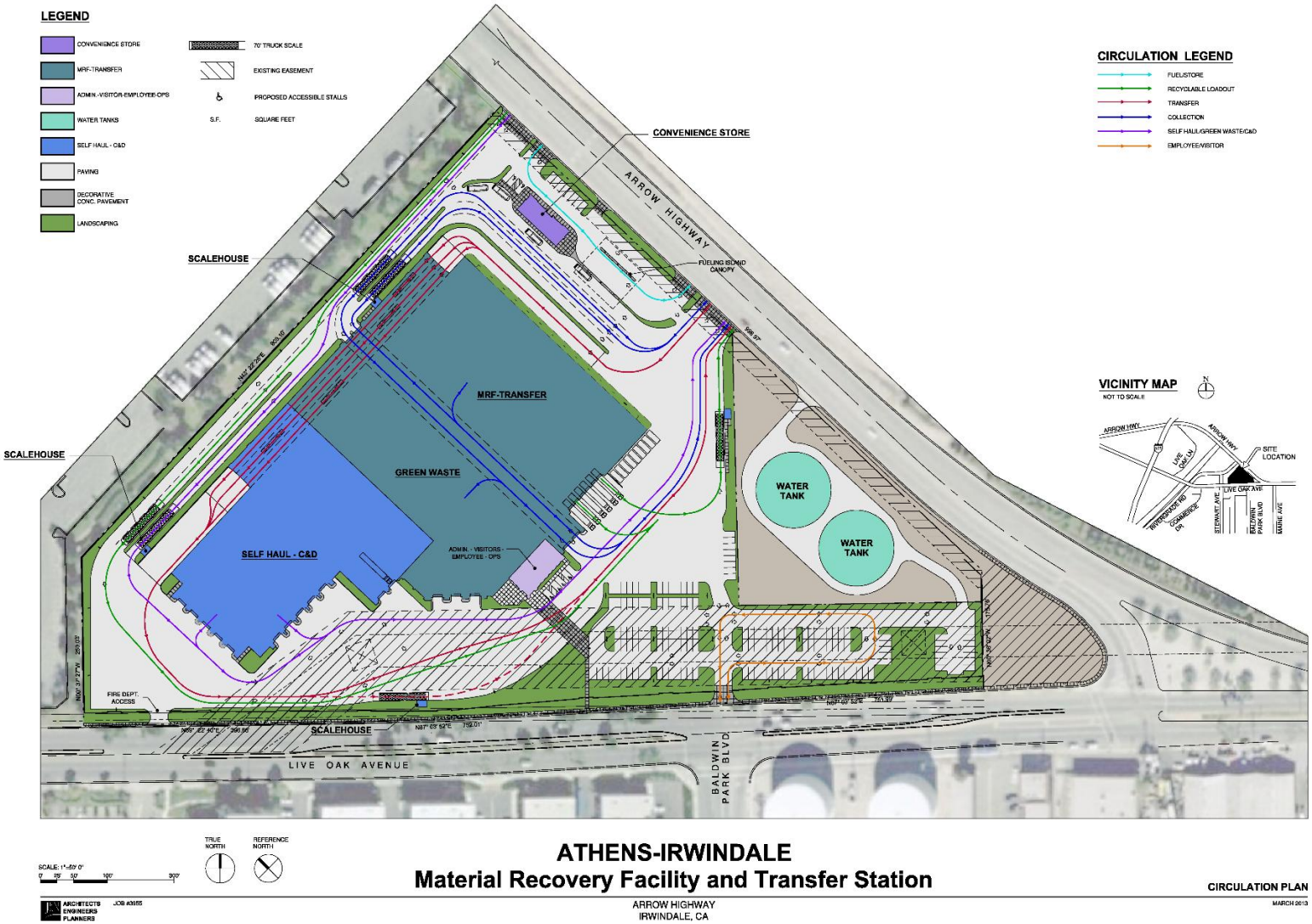


Exhibit 3.12-10 Project Variant Circulation Plan



As shown in **Exhibit 3.12-11,** Driveway 1 [outbound] is proposed to be the only full access driveway for trucks including transfer trucks, collection trucks, recyclable loadout, self-haulers, greenwaste, and C&D. Driveway 1 [inbound] is proposed for transfer and collection trucks. Driveway 2 is proposed for inbound access for recyclable loadout, self-haulers, greenwaste, and C&D, and full access for passenger cars accessing the Convenience Store/Fueling Facility. Driveway 3 is proposed to be utilized by passenger cars only (i.e. – employee and visitor traffic. Visitors may include delivery shipments and/or visitors for the purpose of business in the administrative building or tours of the facility). Driveway 4 is proposed as right-in/right-out only access for the Convenient Store/Fueling Facility. Along Live Oak Avenue, at the southwestern most point of the site, there is a driveway designed for Fire Department emergency access only.

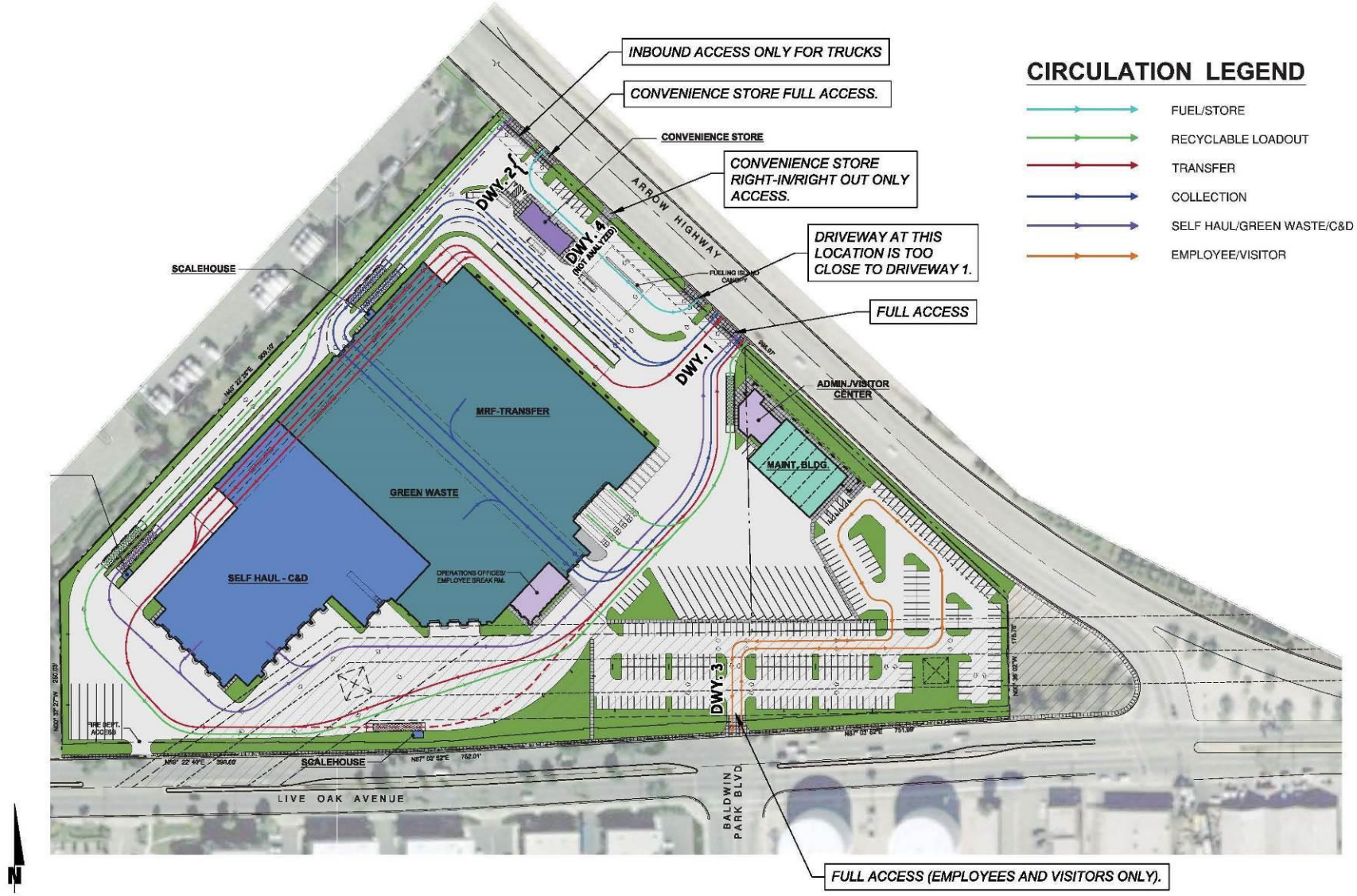
Project Trip Distribution

Under the Proposed Project, the truck trips are processed at the Irwindale Facility and then transported to the Mid-Valley Landfill (85 percent of trips) and San Timoteo Landfill (15 percent of trips); with a weighted average one-way travel distance of 38 miles. The recycling materials are sent to the Port of Los Angeles/Long Beach, an average of 34 miles travel distance. The composting materials are sent to Victorville (American Organics), an average of 73 miles travel distance. The waste is estimated to be 46 percent landfill material, 35 percent recycling material, and 19 percent composting material for the Proposed Project.

Materials/waste headed inbound into the site would be recovered from cities such as the City of Irwindale, Covina, Monrovia, Monterey Park, Glendora, San Marino, Sierra Madre, West Covina, and additional nearby cities. Subsequent to the processing of the inbound materials/waste, recovered materials would be transferred to compost facilities in Victorville or to the ports of Los Angeles and Long Beach for overseas shipping to recycling plants. The remaining/unrecoverable waste materials would be transported to one of several landfills in Los Angeles County, Riverside County, and/or Tulare County.

Regional access to the site will be accessing the freeway system via the I-605 Freeway On and Off Ramps. Local access to the site is anticipated to be served by the following roadways: Rivergrade Road; Stewart Avenue; Baldwin Park Boulevard; Arrow Highway; and Live Oak Avenue. Project trip distribution patterns have been determined by Urban Crossroads Inc. engineers based upon the service areas for each category of travel activity associated with the Proposed Project, including collection trucks (packer, end dump and roll-off trucks), self haul/contractor trucks, transfer and recyclable loadout trucks, employee vehicles (passenger cars), and convenience store/fueling station visitors. The trip distribution patterns presented below are also the result of technical review sessions with City and Caltrans technical staff members.

Exhibit 3.12-11 Site Access and On-Site Circulation



Exhibits 3.12-12A/B presents the Collection Trucks and Roll-Off Trucks trip distribution patterns for the Proposed Project. The trip distribution anticipated for the Collection Trucks and Roll-Off Trucks represent the traffic pattern for trucks/vehicles bringing commodities into the site for processing. As shown in this exhibit, 45% of the "Collection Trucks and Roll-Off Trucks" are anticipated to travel to/from the north (via the I-605 Freeway) and 45% to/from the south (via I-605 Freeway). As also shown this exhibit is the 5% of the "Collection Trucks and Roll-Off Trucks" are anticipated to travel along Arrow Highway to the west.

Exhibits 3.12-13A/B presents the Self-Haul/Contractor trip distribution patterns for the Proposed Project. As shown in this exhibit, 40% of the Self-Haul/Contractor vehicles are anticipated to travel along Arrow Highway to/from the north and 40% along Live Oak Avenue to/from the I-605 Freeway to/from the south. 5% of the Self-Haul/Contractor vehicles are anticipated to travel to the west along Arrow Highway and to the east along Live Oak Avenue. The self-haul/contractor trucks are proposed to utilize Driveway 2 for entering the site and Driveway 1 for exiting the site. The trip distribution anticipated for the "Self-Haul/Contractor" vehicles represent the traffic pattern for trucks/vehicles bringing commodities into the site for processing.

Exhibits 3.12-14A/B presents the Transfer Trucks trip distribution patterns for the Proposed Project. The trip distribution anticipated for the Transfer Trucks represents the traffic pattern for trucks bringing materials out of the site to be transferred to compost facilities in Victorville or to the ports of Los Angeles and Long Beach for overseas shipping to recycling plants. Unrecoverable materials would be transported to one of several landfills in Los Angeles County, Riverside County, Tulare County, or another landfill. Thirty percent (30%) of the Transfer Trucks are anticipated to travel to/from the south (via the I-605 Freeway) and 70% to/from the north (via the I-605 Freeway).

Exhibits 3.12-15A/B presents the Employee trip distribution patterns for the Proposed Project. As shown in this exhibit, 30% of the Proposed Project's employee vehicles are anticipated to travel along the I-605 Freeway to the north and 30% to the south, and 10% to the east towards the northerly portions of Baldwin Park and the easterly portions of Irwindale. As also shown on this exhibit are the 5% of employee traffic is expected to travel to the west along Live Oak Avenue, 5% along Rivergrade Road, 5% along Stewart Avenue and 10% along Baldwin Park Boulevard.

Exhibits 3.12-16A/B presents the trip distribution patterns for the Convenience Store / Fueling Station. As shown on this exhibit, 20% of the Convenience Store / Fueling Station traffic is anticipated to be captured within the site. The following summarizes the other trip distribution percentages for the Convenience Store / Fueling Station:

- 5% to the north along the I-605 Freeway
- 5% to the north along Avenida Barbosa Street
- 5% to the west along Arrow Highway
- 5% to the south to/from the I-605 Freeway
- 5% along Rivergrade Avenue
- 15% within the industrial areas immediately west / northwest of the project site.
- 10% to / from Stewart Avenue
- 10% along Baldwin Park Boulevard
- 10% along Maine Avenue
- 10% to the east along Arrow Highway

Exhibit 3.12-12A Truck Collection Inbound Trip Distribution

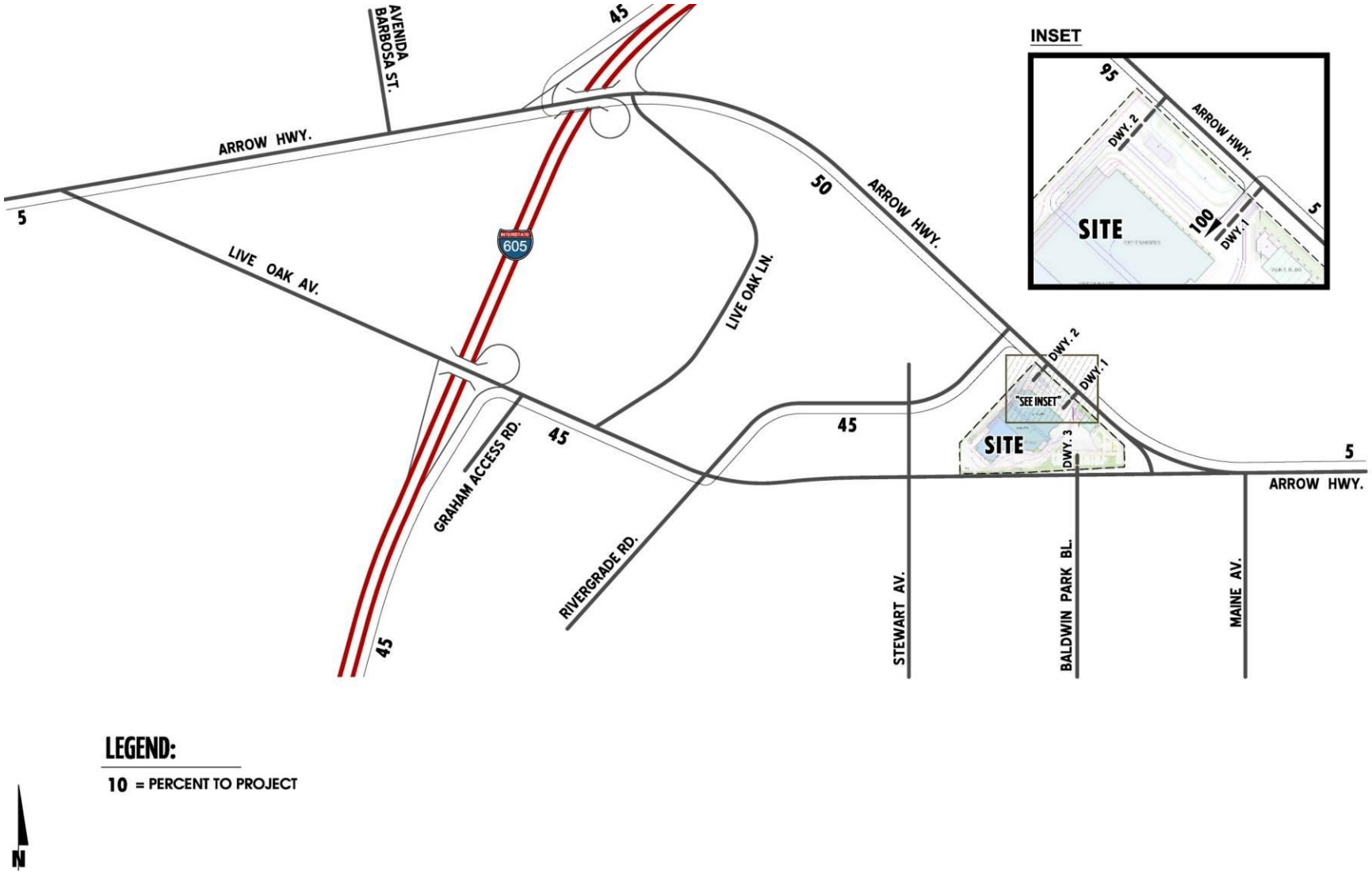


Exhibit 3.12-12B Truck Collection Outbound Trip Distribution

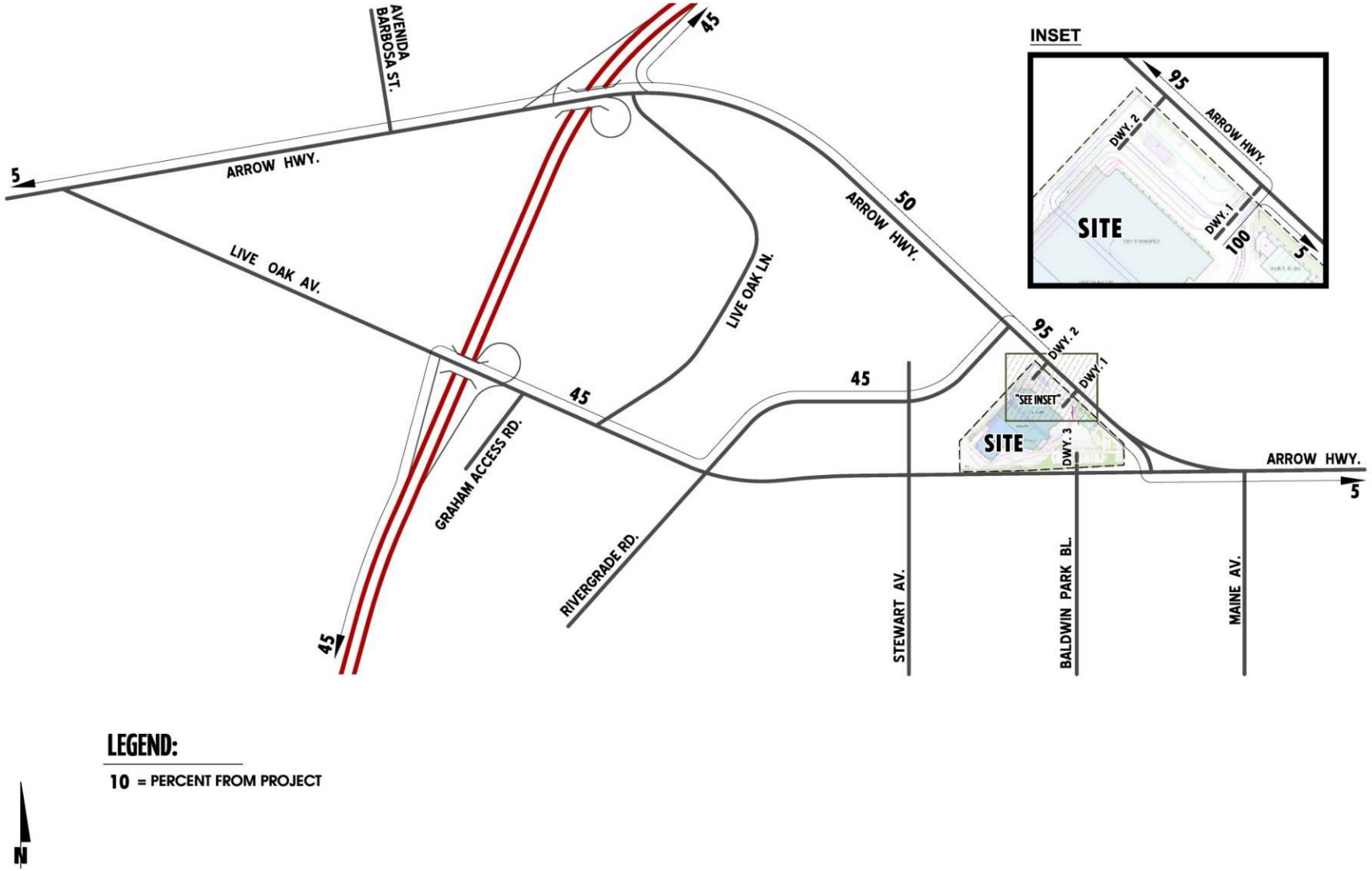


Exhibit 3.12-13A Self Hauler /Contractor Truck Inbound Trip Generation

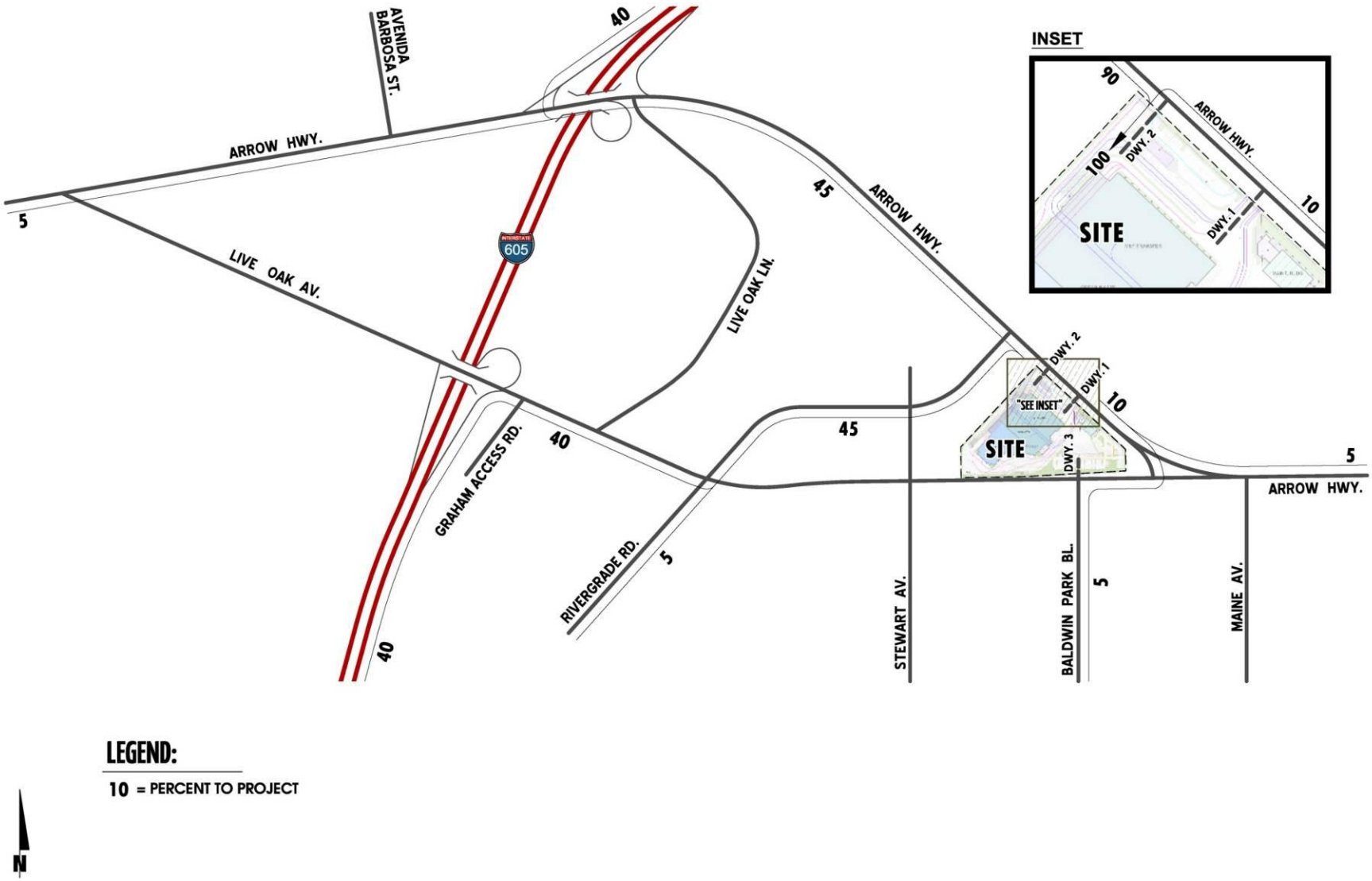


Exhibit 3.12-13B Self Hauler /Contractor Truck Outbound Trip Distribution

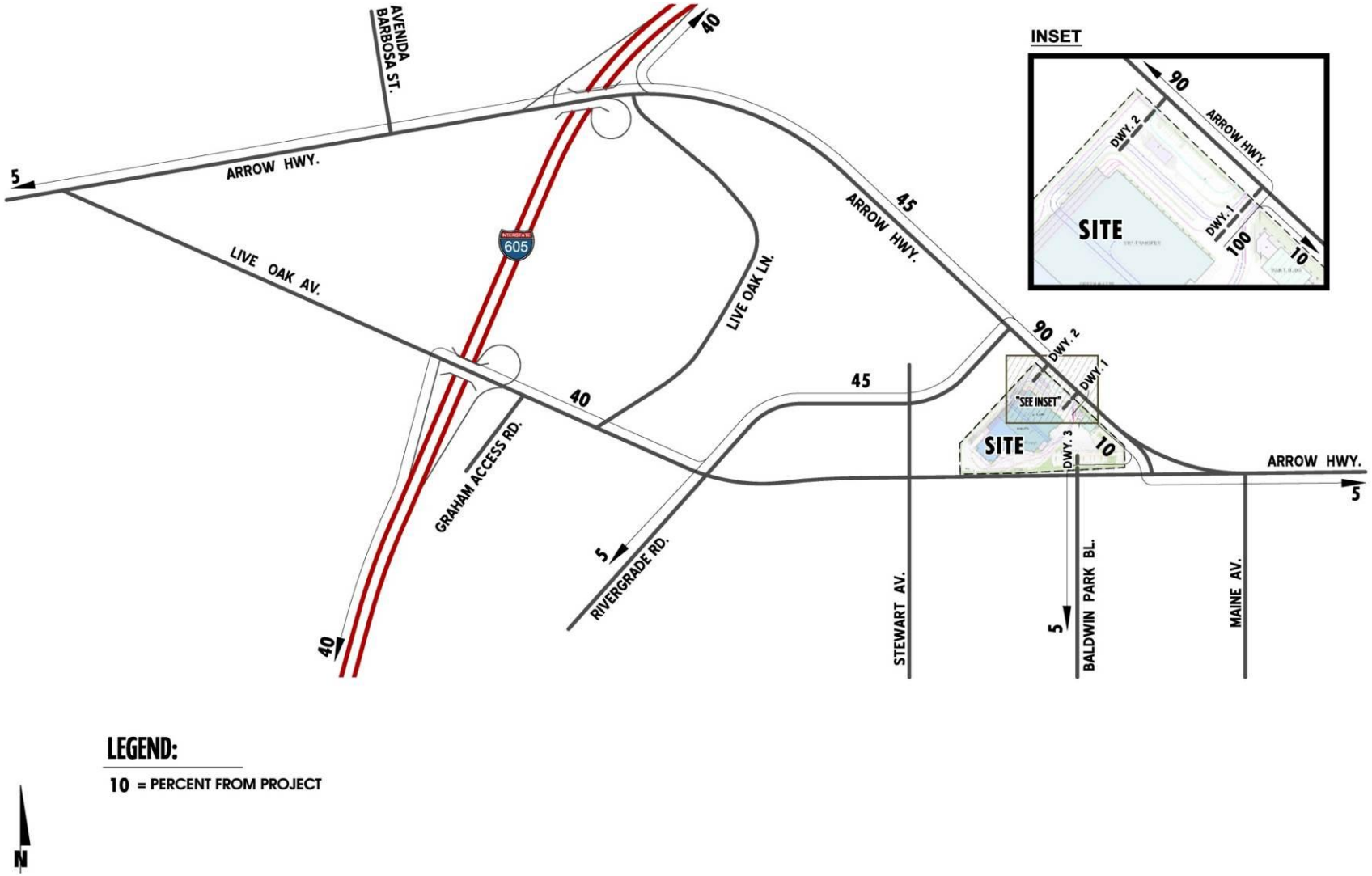


Exhibit 3.12-14A Transfer / Recyclable Loadout Truck Inbound Trip Distribution

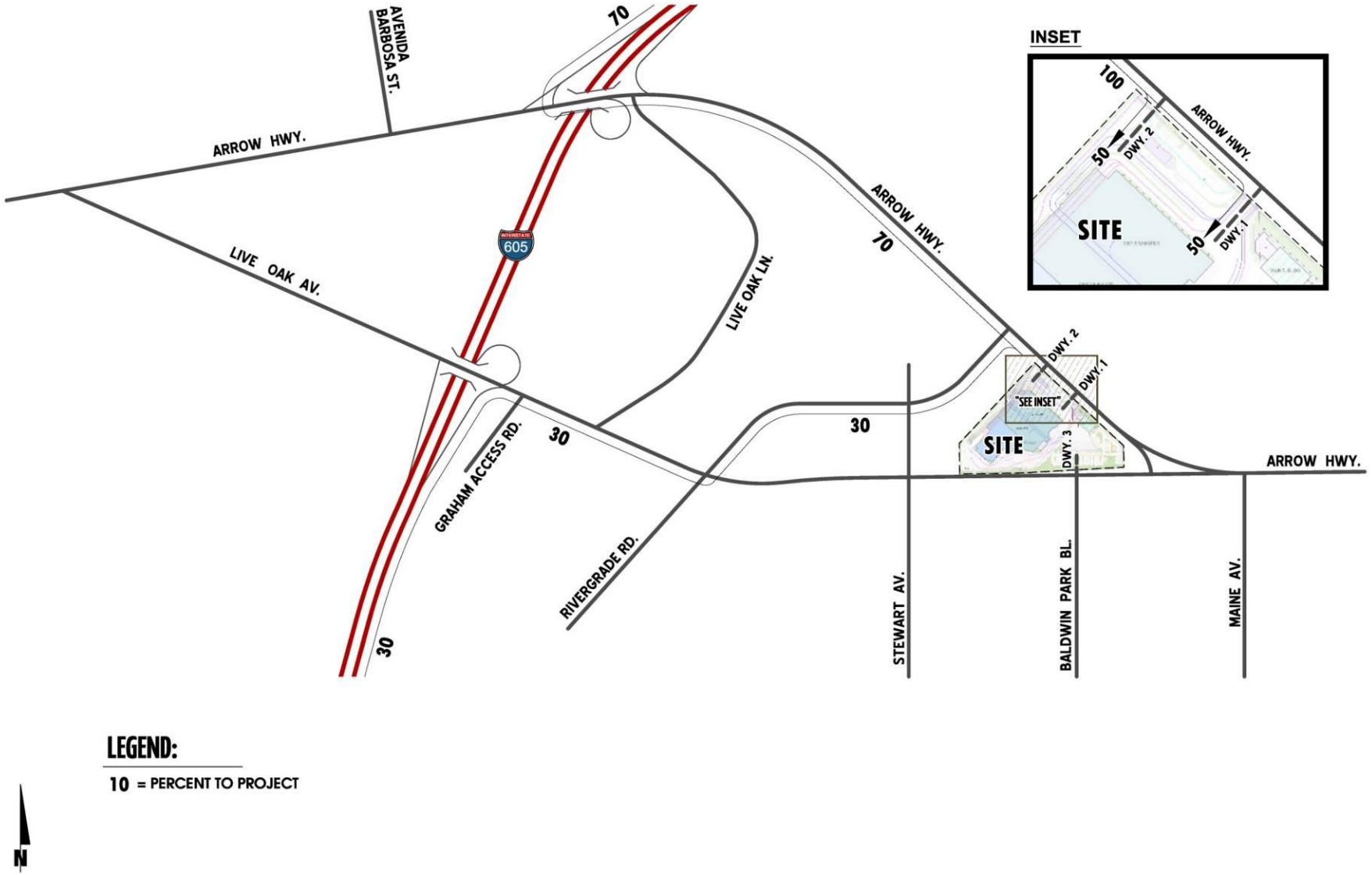


Exhibit 3.12-14B Transfer / Recyclable Loadout Truck Outbound Trip Distribution

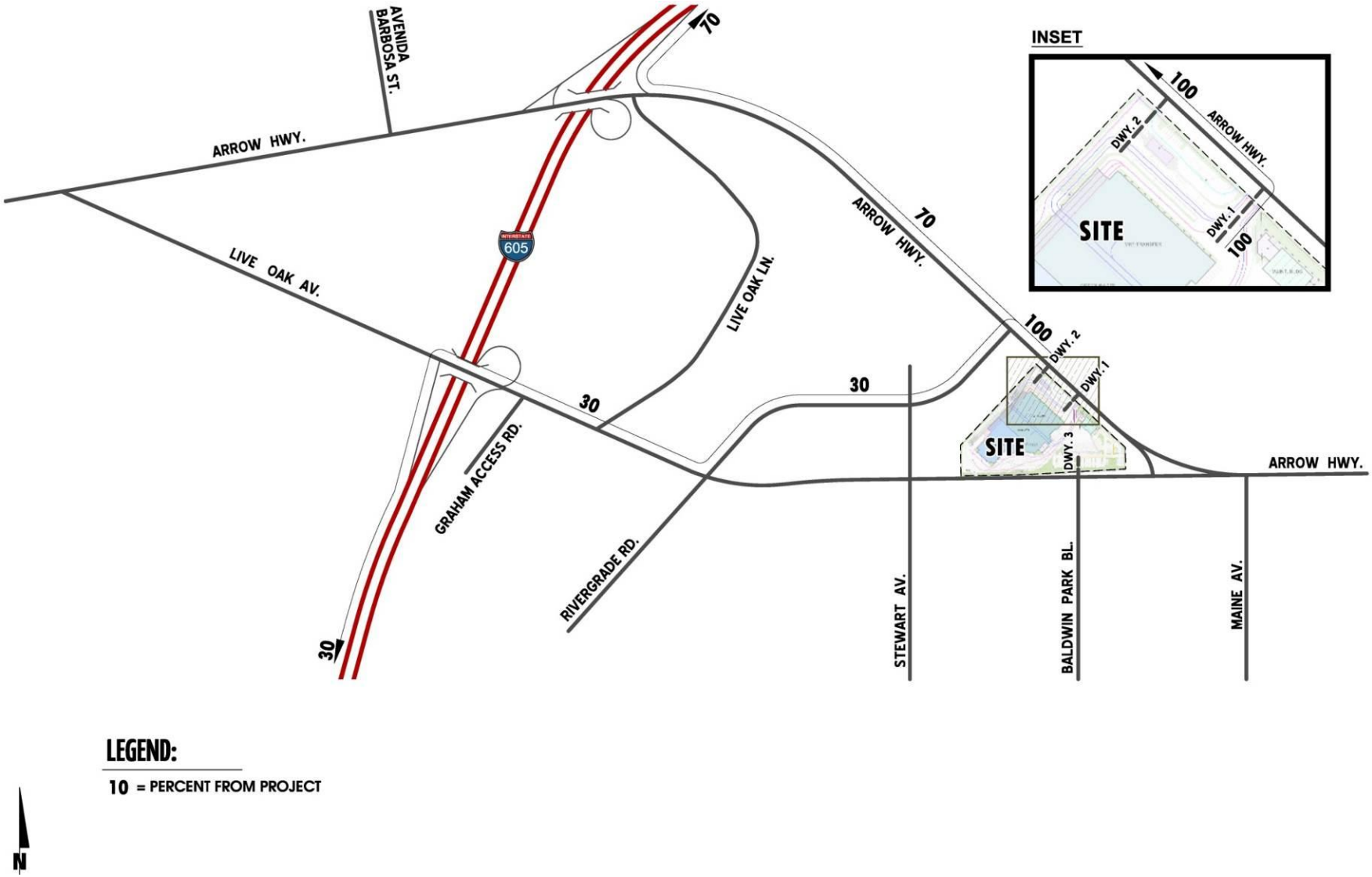


Exhibit 3.12-15A Employee (Passenger Car) Inbound Trip Distribution

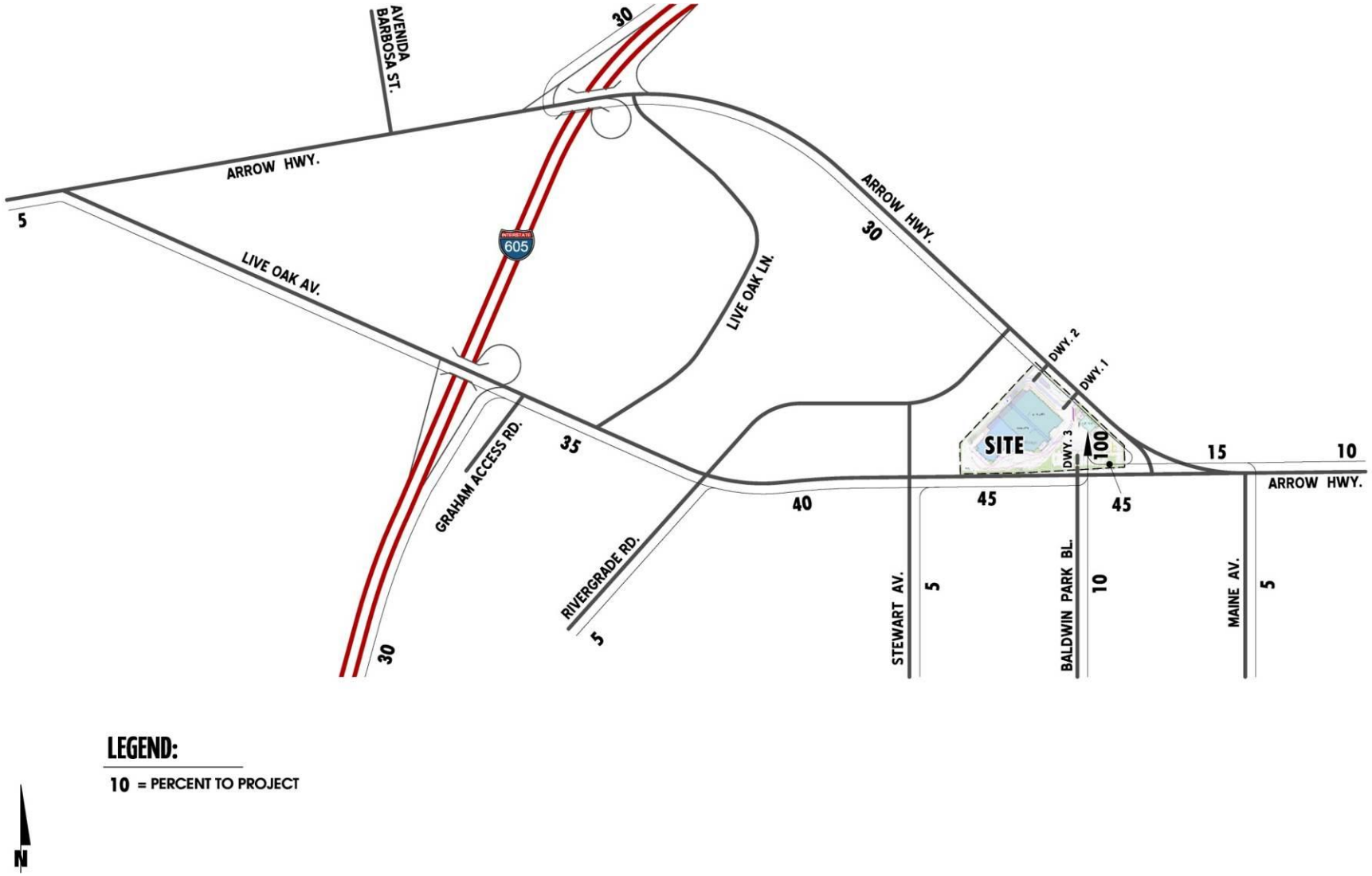


Exhibit 3.12-15B Employee (Passenger Car) Outbound Trip Distribution

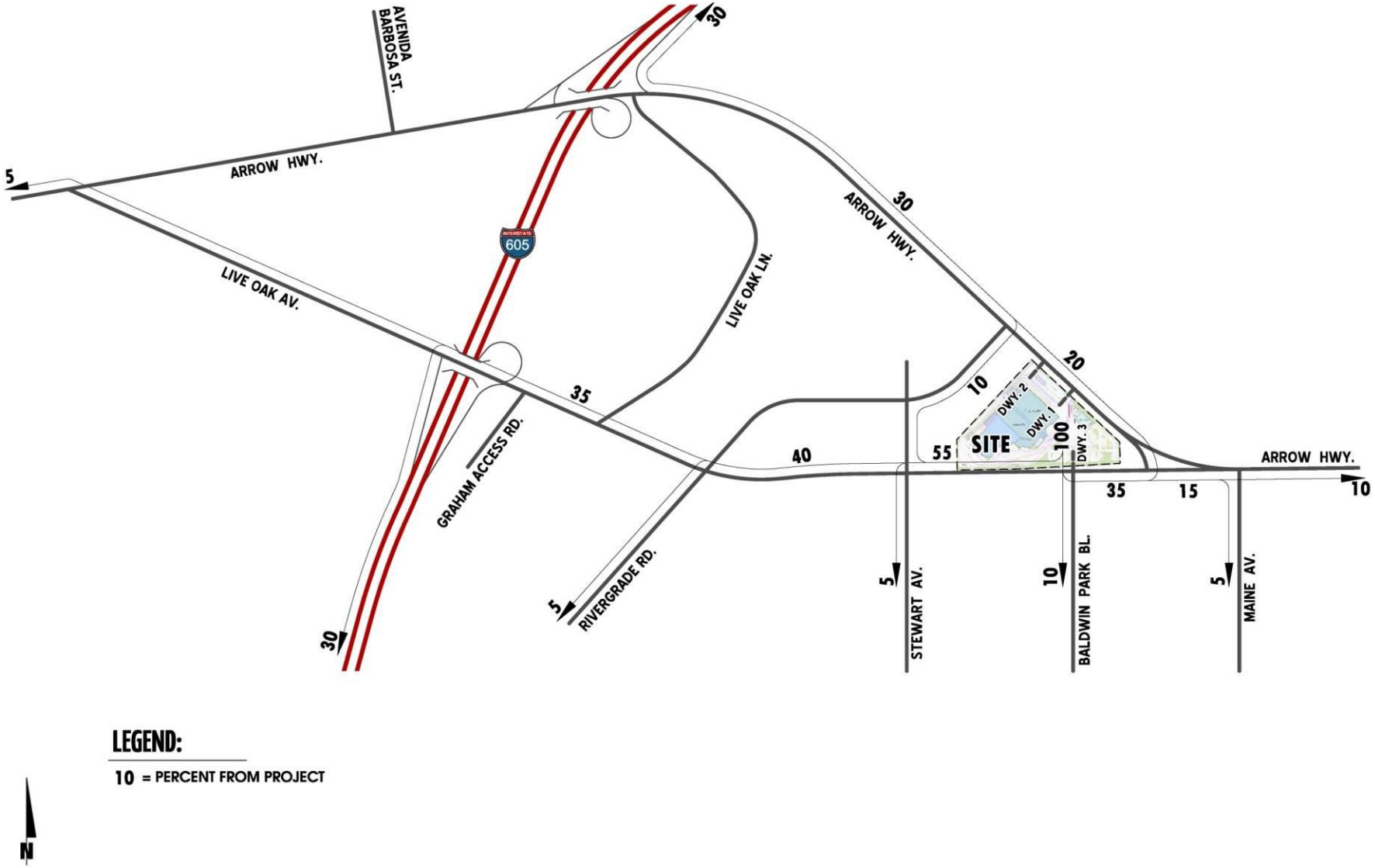


Exhibit 3.12-16A Convenience Store / Fueling Facility Inbound Trip Distribution

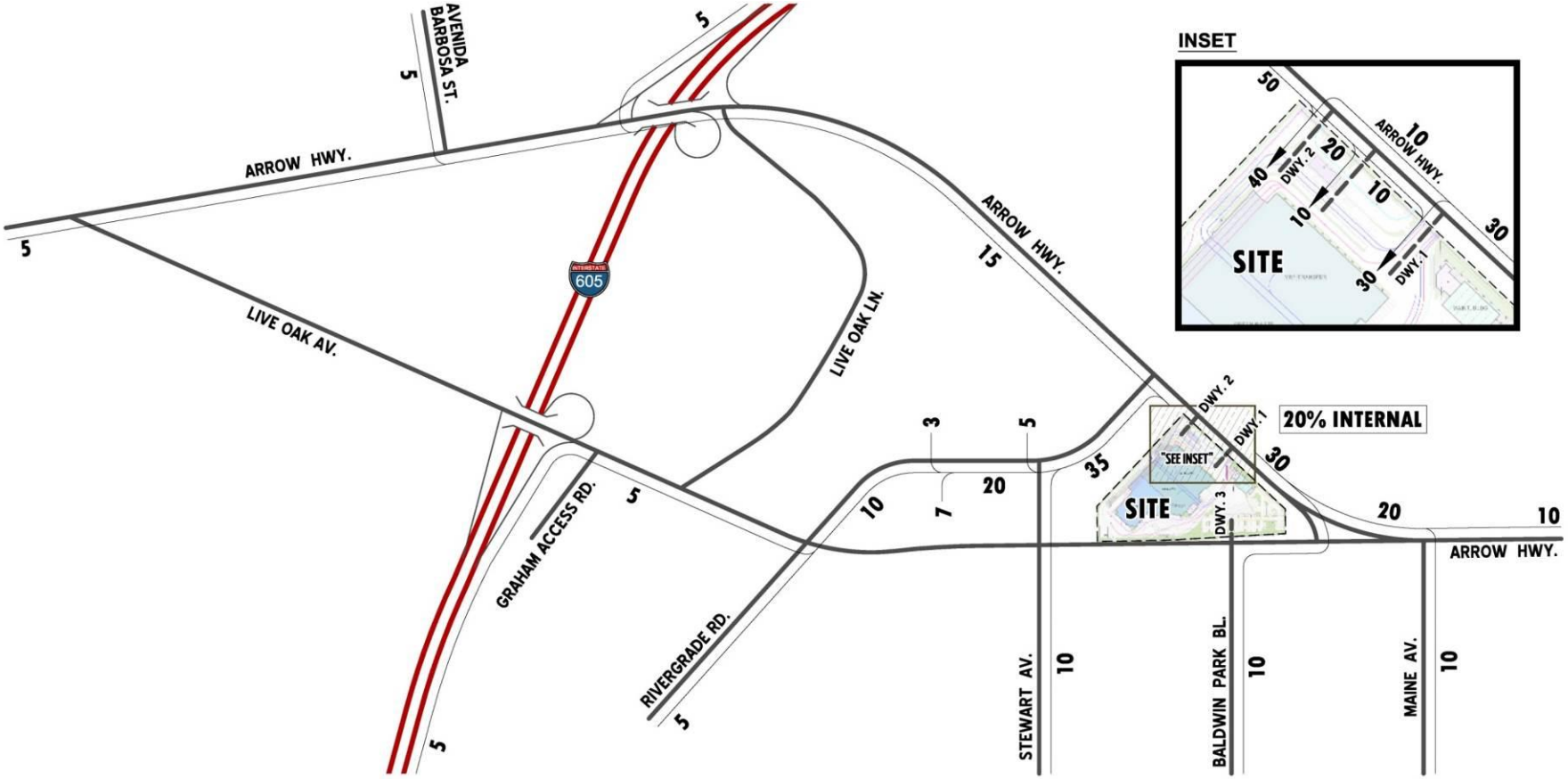
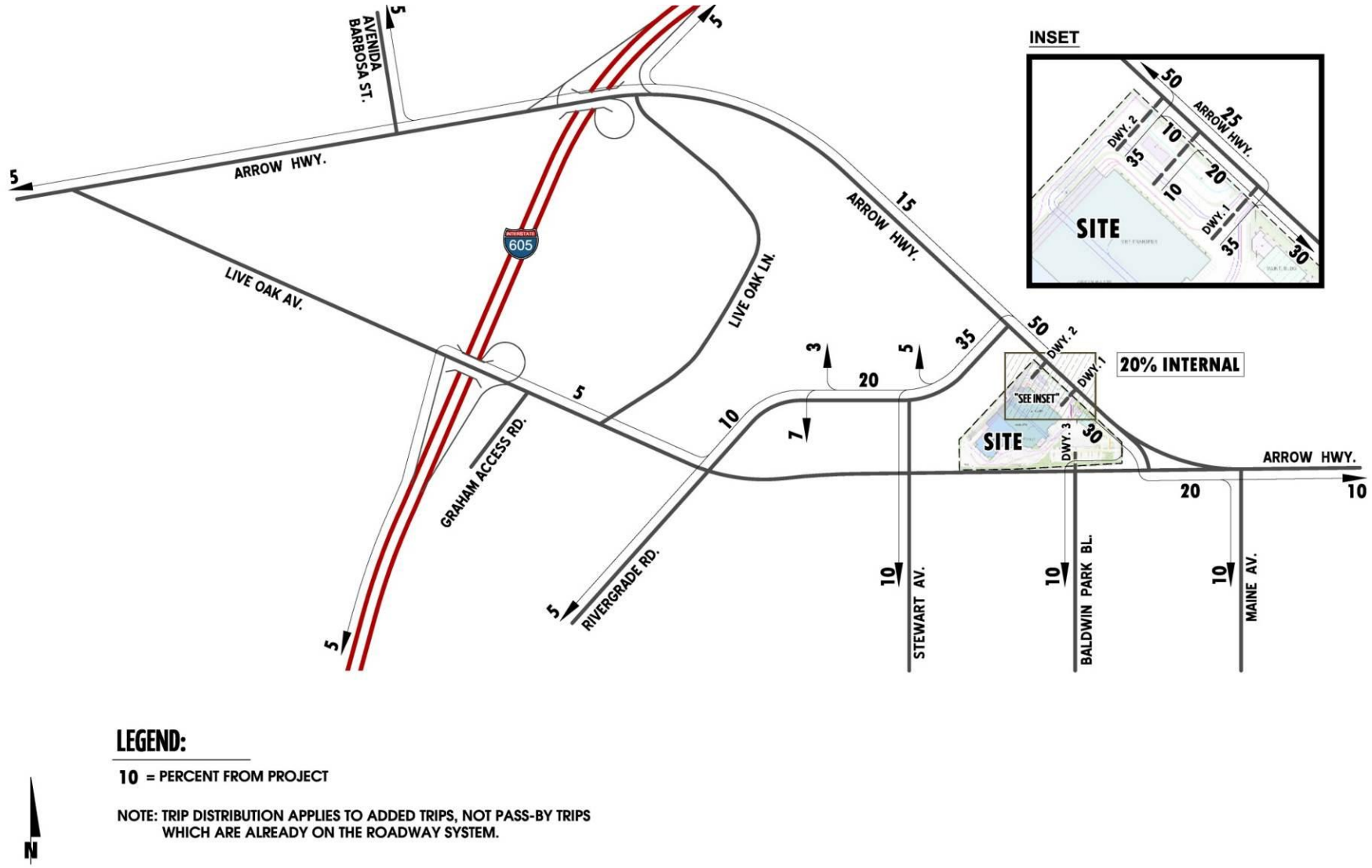


Exhibit 3.12-16B Convenience Store / Fueling Facility Outbound Trip Distribution



Trip Generation

Information on trip generation rates for the Project's proposed use (i.e., solid waste transfer station) is not readily available in the Institute of Transportation Engineers (ITE) Trip Generation Informational Report (9th Edition). However, the trip generation (truck and employee passenger cars) for the Proposed Project has been calculated based on (1) data collected by Urban Crossroads, Inc. for similar existing land uses, and (2) peak to daily relationships (for manufacturing type facilities) illustrated in the ITE Trip Generation Informational Report. The Convenience Store / Fueling Facility store's trip generation has been calculated via ITE trip generation rates (refer to **Table 3.12-10 Project Trip Generation Rates**).

Heavy vehicles, such as Collection Trucks and Transfer Trucks, occupy more space, and experience inferior performance when compared with passenger cars. Historically, the effect of heavy vehicles on traffic flow has been accounted for through the use of Passenger Car Equivalent (PCE) factors. These factors were developed to account for the effects of heavy vehicles when traffic is operating at free-flow conditions. However, the effect of heavy vehicles during congestion is significantly greater than that during free flow conditions. This is mainly due to the fact that the acceleration and deceleration cycles, a situation that is normally experienced during congestion or stop-and-go conditions, impose an extra limitation on the performance of heavy vehicles. With this in mind, a conservative PCE factor of 1.5 has been used for Self-Haul Trucks, 2.7 has been used for Collection Trucks and 3.7 for Transfer Trucks; whereas, these PCE values are consistent with numerous other Solid Waste Facility Permits (SWFP) available for review on the CalRecycle website.

Empirical data collected by Urban Crossroads Inc. at various transfer station locations in southern California were considered in the development of project trip generation rates. The data is included as Attachment 1 within Appendix 1. Attachment 1 also includes calculations performed by Urban Crossroads, Inc. staff to evaluate trip generation patterns and develop trip generation rates for each truck type. The empirical data includes truck axle counts for facilities of various sizes, so the weighted average trip rate was calculated. Although the sample projects are not as large as the proposed Project, the application of derived trip rates to the Irwindale facility yields conservatively high estimates of travel activity associated with the site.

Each employee is assumed to generate two (2) trips per day (e.g., each employee drives individually and enters and exits the site once per day). This is a conservative approach, since many of the employees can be expected to carpool or use alternative modes of transport. At the same time, this conservative approach allows / accounts for incidental trips entering and exiting the site (visitors, etc.).

Table 3.12-11 presents the Proposed Project's trip generation. As shown in **Table 3.12-11**, the site is anticipated to generate a net total of approximately 8,333 passenger car equivalent (PCE) trip-ends per day, with 664 AM peak hour trips and 664 PM peak hour trips.

Table 3.12-10 Project Trip Generation Rates

LAND USE	UNIT[1]	AM PEAK HOUR			PM PEAK HOUR			DAILY
		IN	OUT	TOTAL	IN	OUT	TOTAL	
Truck Trips - 2-axle[2]	Site TPD	0.002	0.003	0.005	0.002	0.002	0.004	0.041
Truck Trips - 3-axle[2]	Site TPD	0.008	0.009	0.017	0.013	0.010	0.024	0.275
Truck Trips - 4-axle[2]	Site TPD	0.004	0.004	0.008	0.002	0.002	0.004	0.093
Employees (Passenger Cars)[3]	EMP	0.274	0.102	0.376	0.149	0.189	0.338	2.000
Convenience Store (ITE LU 853)	TSF	20.46	20.46	40.92	25.46	25.46	50.92	845.60

[1] Site TPD = Tons Per Day for entire site - Appendix A shows empirical data calculations used to develop trip rates; EMP = Employees; TSF = Thousand Square Feet

[2] Daily and peak hour quantities have been obtained from empirical data for similar uses, applied to the site maximum processing of 6,000TPD.

[3] Daily quantities assume 2 trips / employee. AM and PM peak hour to daily relationships have been based on ITE Land Use Code "140 EMP" (Manufacturing)

Table 3.12-11 Project Trip Generation Summary

LAND USE	COMMODITY DIRECTION	QUANTITY	UNIT[1]	AM PEAK HOUR			PM PEAK HOUR			DAILY
				IN	OUT	TOTAL	IN	OUT	TOTAL	
Self-Haul Trucks (525 TPD)[2] - 2-axle	INBOUND	6,000	Site TPD	12	19	31	12	12	24	249
Packer Trucks (3,812 TPD)[2] - 3-axle	*INBOUND*	*6,000*	*Site TPD*	*33*	*37*	*70*	*54*	*43*	*97*	*1,137*
End Dump Trucks (250 TPD)[2] - 3-axle	*INBOUND*	*6,000*	*Site TPD*	*2*	*2*	*4*	*3*	*3*	*6*	*66*
Roll-Off Trucks (1,496 TPD)[2] - Collection & Transfer - 3-axle	*IN / OUT*	*6,000*	*Site TPD*	*13*	*14*	*27*	*21*	*17*	*38*	*445*
Total 3-axle	IN / OUT	6,000	Site TPD	48	53	101	78	63	141	1,648
Transfer Trucks incl. Recyclable Loadout (5,918 TPD)[2] - 4-axle	OUTBOUND	6,000	Site TPD	24	24	48	9	14	23	559
NET TRUCK TRIPS:				**84**	**96**	**180**	**99**	**89**	**188**	**2,456**
Self-Haul Trucks (PCE = Truck x 1.5)				*18*	*29*	*47*	*18*	*18*	*36*	*374*
Collection (Packer and End Dump) and all Roll-Off Trucks (PCE = Truck x 2.7)				*130*	*143*	*273*	*211*	*170*	*381*	*4,450*
Transfer Trucks (PCE = Truck x 3.7)				*89*	*89*	*178*	*33*	*52*	*85*	*2,068*
NET TRUCK TRIPS (PCE):				**237**	**261**	**498**	**262**	**240**	**502**	**6,892**
Employees (Total of 345 Employees daily)[3]				95	35	130	51	65	117	690
Transfer Station Subtotal (PCE)[5]				***332***	***296***	***628***	***313***	***305***	***619***	***7,582***
Convenience Market W/Pumps		2.4	TSF	49	49	98	61	61	122	2,029
- Pass by (63%)[4]				*-31*	*-31*	*-62*	*-38*	*-38*	*-77*	*-1,279*
Convenience Market W/Pumps Subtotal				***18***	***18***	***36***	***23***	***23***	***45***	***751***
TOTAL PROJECT TRIPS (PCE)[5]				**350**	**314**	**664**	**336**	**328**	**664**	**8,333**

[1] Site TPD = Tons Per Day for entire site - Appendix A shows empirical data calculations used to develop trip rates; EMP = Employees; TSF = Thousand Square Feet

[2] Daily and peak hour rates obtained from empirical data for similar uses, are applied to the site maximum processing of 6,000TPD. 3-axle trip gen by truck type is factored based on TPD for each type.

[3] Daily quantities assume 2 trips / employee. AM and PM peak hour to daily relationships have been based on ITE Land Use Code "140 EMP" (Manufacturing)

[4] Pass by % is based on Table 5-12 from the ITE Trip Generation Handbook 2nd Edition (2004)

[5] TOTAL TRIPS (PCE) = Net Truck Trips (PCE) + Employees + Convenience Market W/Pumps.

Project Only Volumes

The Project only related average daily traffic (ADT) volumes are shown on **Exhibit 3.12-17**. Similarly, **Exhibits 3.12-18 and 3.12-19** represent the Project only AM and PM peak hour volumes, respectively. Arrow Highway is projected to carry the most project related traffic with approximately 7,200 vehicles per day (vpd) immediately north of Driveway 2. Project only daily traffic contributions on Live Oak Avenue and other locations along Arrow Highway between the project site and the I-605 Freeway would generally range between 300 and 4,200 vehicles (passenger car equivalents) per day.

The Project is anticipated to generate the most peak hour trips along Arrow Highway immediately north of Driveway 2 (**Exhibit 3.12-20**). A substantial amount of project related traffic is also anticipated to travel along Live Oak Avenue, east of the I-605 Freeway. The 327 AM and 308 PM trips along Arrow Highway are reflective of the truck trips related to cities located north of the project site and of the landfill transfer truck trips destined towards Los Angeles County, San Bernardino County and/or Tulare County.

3.12.6 FUTURE TRAFFIC VOLUMES

Existing Plus Project

For Existing Plus Project conditions, project only traffic volumes were added to the existing (2013) traffic volumes. **Exhibits 3.12-21, 22** and **23** present the Existing Plus Project ADT, AM peak hour, and PM peak hour traffic volumes respectively. As shown on these exhibits, Live Oak Avenue, west of Arrow Highway (North) is projected to carry approximately 33,900 vpd. Arrow Highway adjacent to the project site is projected to carry between 23,700 and 17,200 VPD. The highest daily traffic volume in the study area is 34,900 VPD on Arrow Highway east of Maine Avenue. It should be noted that intersection of Arrow Highway and Project Driveway 1 is anticipated to warrant a traffic signal under Existing plus Project conditions. As mentioned previously, the traffic signal warrant analysis worksheet is included in Appendix G of the TIA contained within **Appendix G** of this EIR.

Interim Year (2016) Without Project

For Interim Year (2016) Without Project conditions, an ambient growth rate of 2.0% per year (consistent with City of Irwindale traffic study guidelines) was applied to the existing (2013) for three years (a total background growth of 6%) in addition to the cumulative project / other development data (refer to **Exhibit 3.12-24**). The trip distributions for each of the cumulative development projects are included as Appendix H within **Appendix G** of the EIR. **Exhibit 3.12-25**, **Exhibit 3.12-26**, and **Exhibit 3.12-27**, present the Interim Year (2016) Without Project ADT, AM peak hour, and PM peak hour traffic volumes, respectively. As shown on these exhibits, Live Oak Avenue, west of Arrow Highway (North) is projected to carry approximately 37,400 vpd.

Exhibit 3.12-17 Project Average Daily Traffic

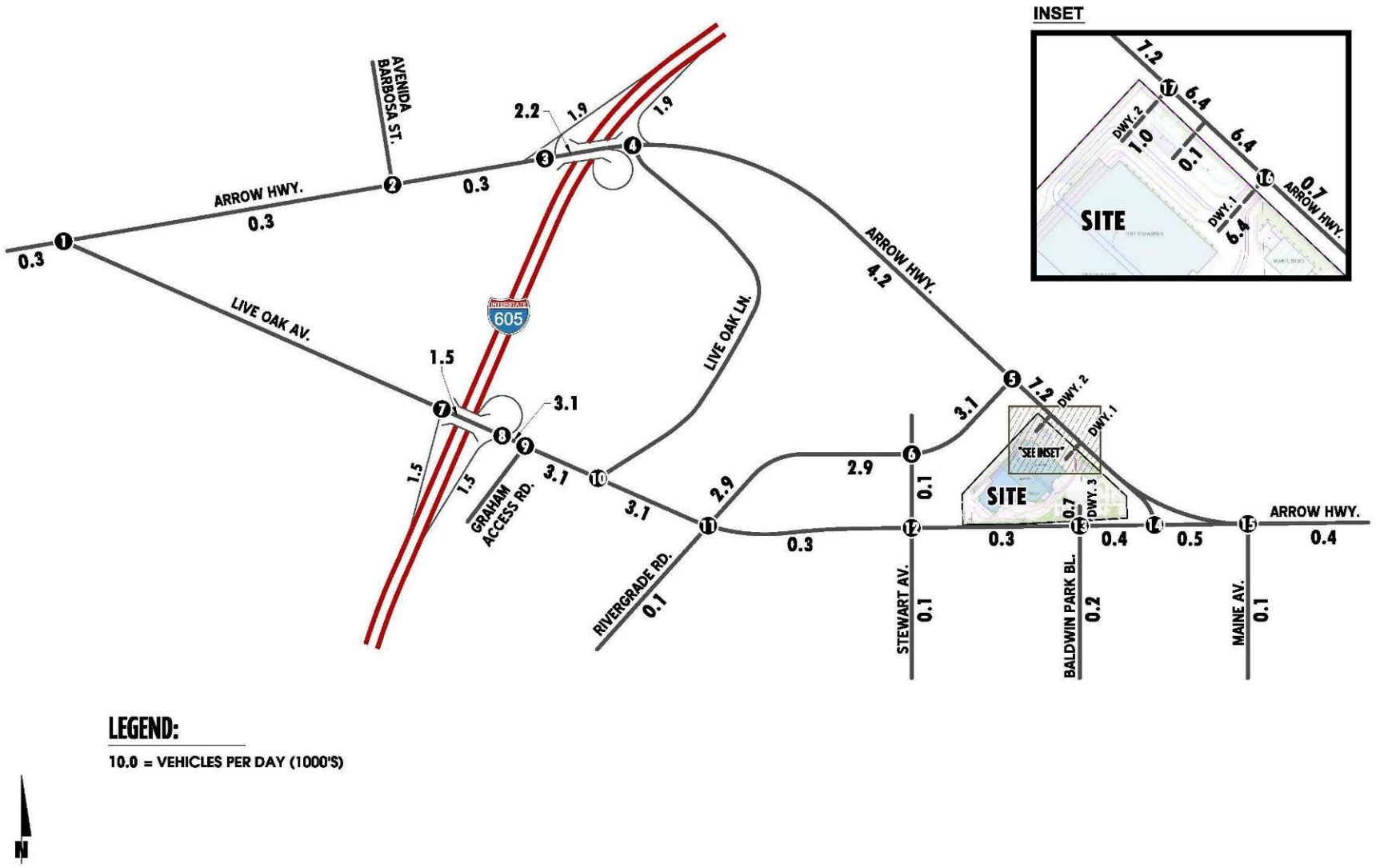


Exhibit 3.12-18 Project AM Peak Intersection Volumes

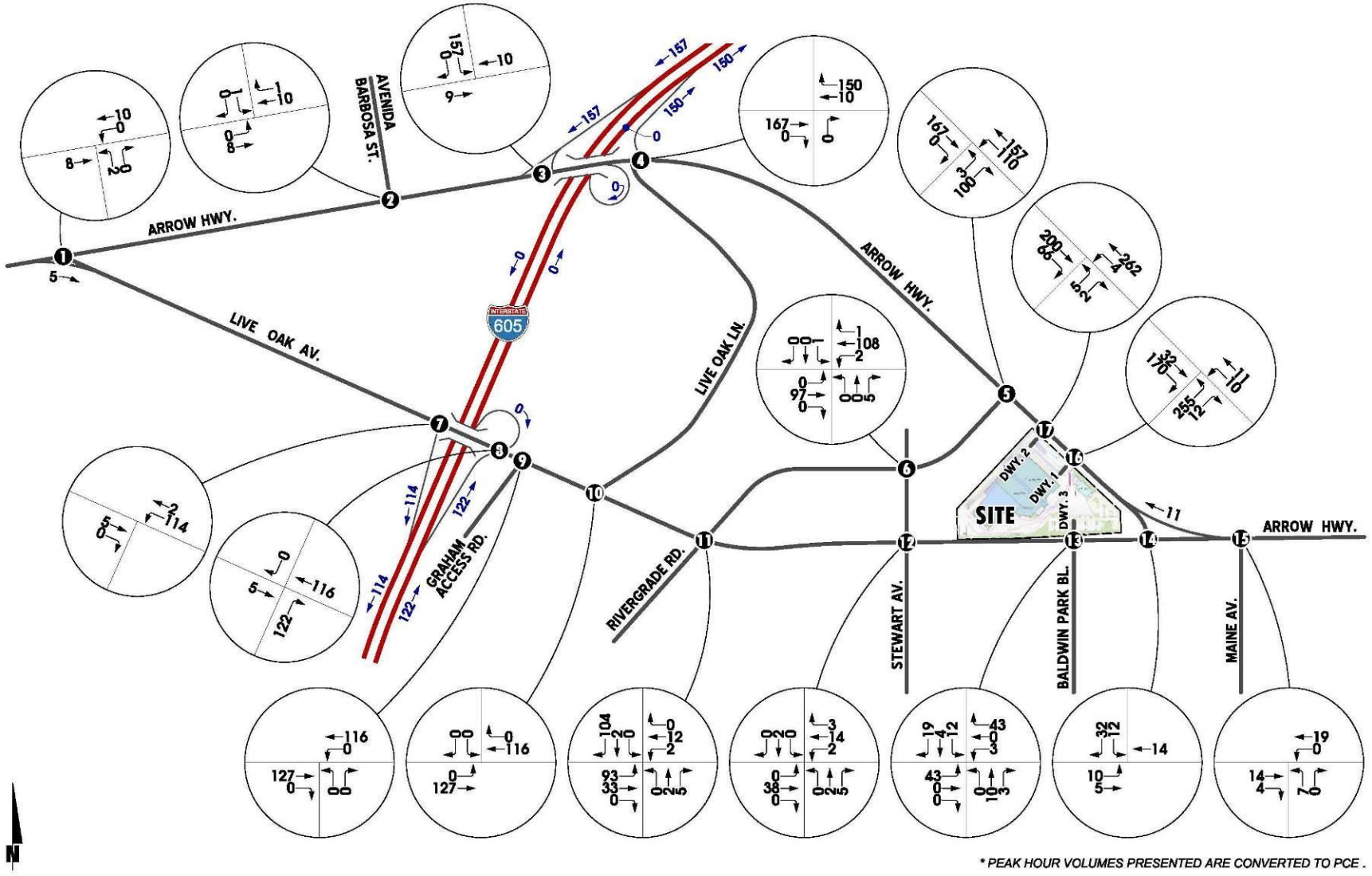


Exhibit 3.12-19 Project PM Peak Intersection Volumes

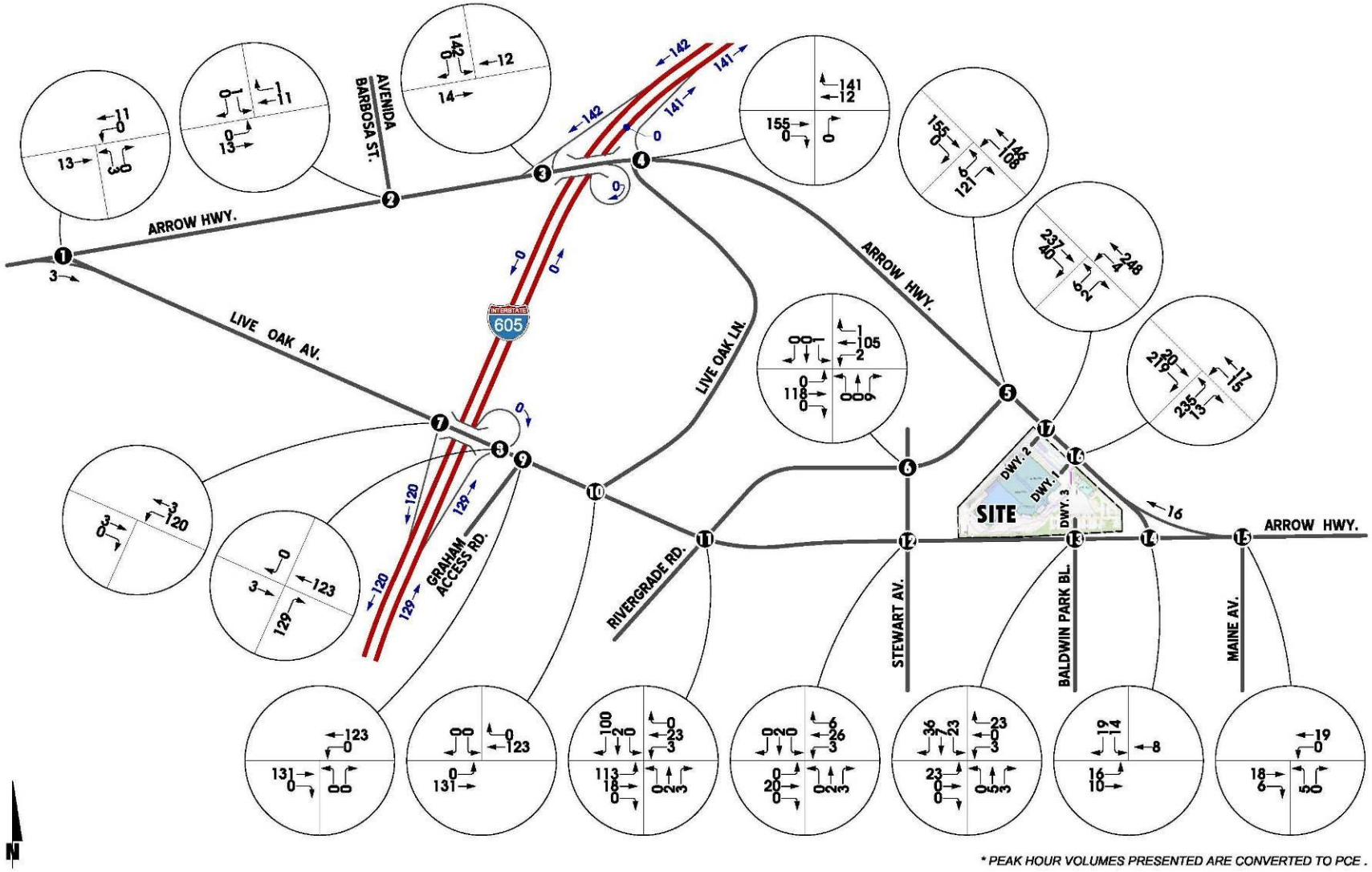
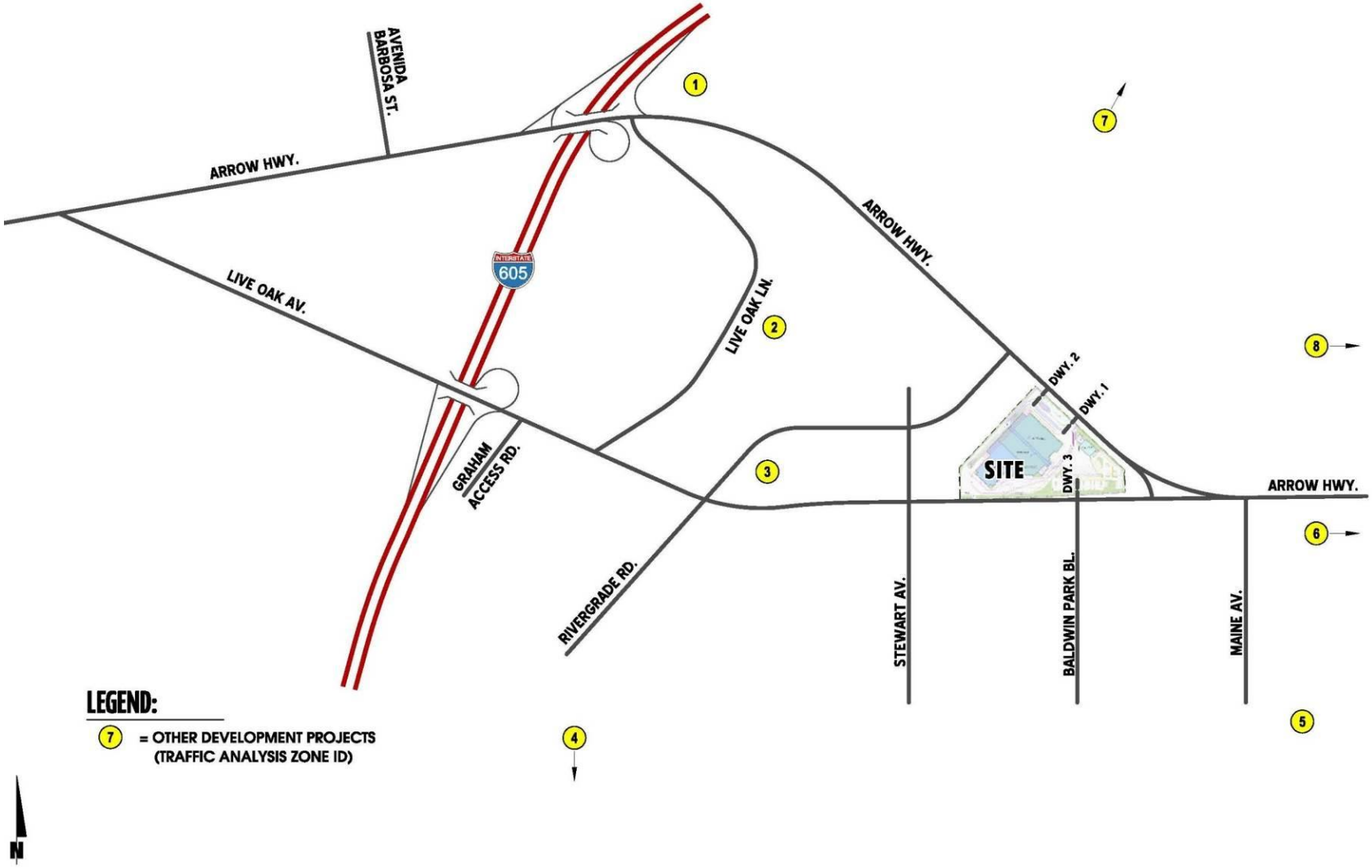


Exhibit 3.12-20 Other Development Location Map



Note: Other Developments Project List is included as Table 4-1 in Appendix G of this EIR

Exhibit 3.12-21 Project Only Peak Hour Link Volumes

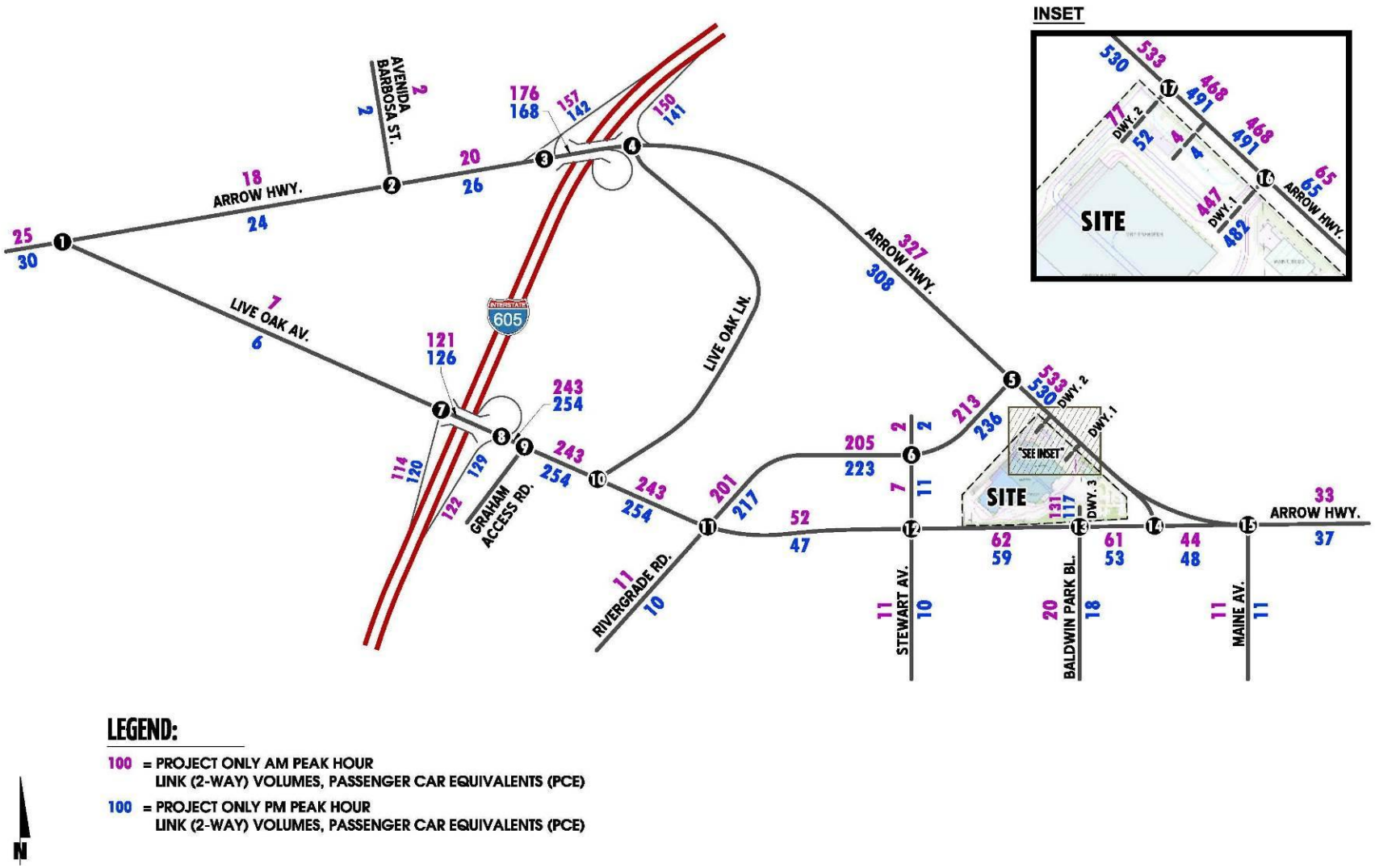


Exhibit 3.12-22 Existing Plus Project Average Daily Traffic

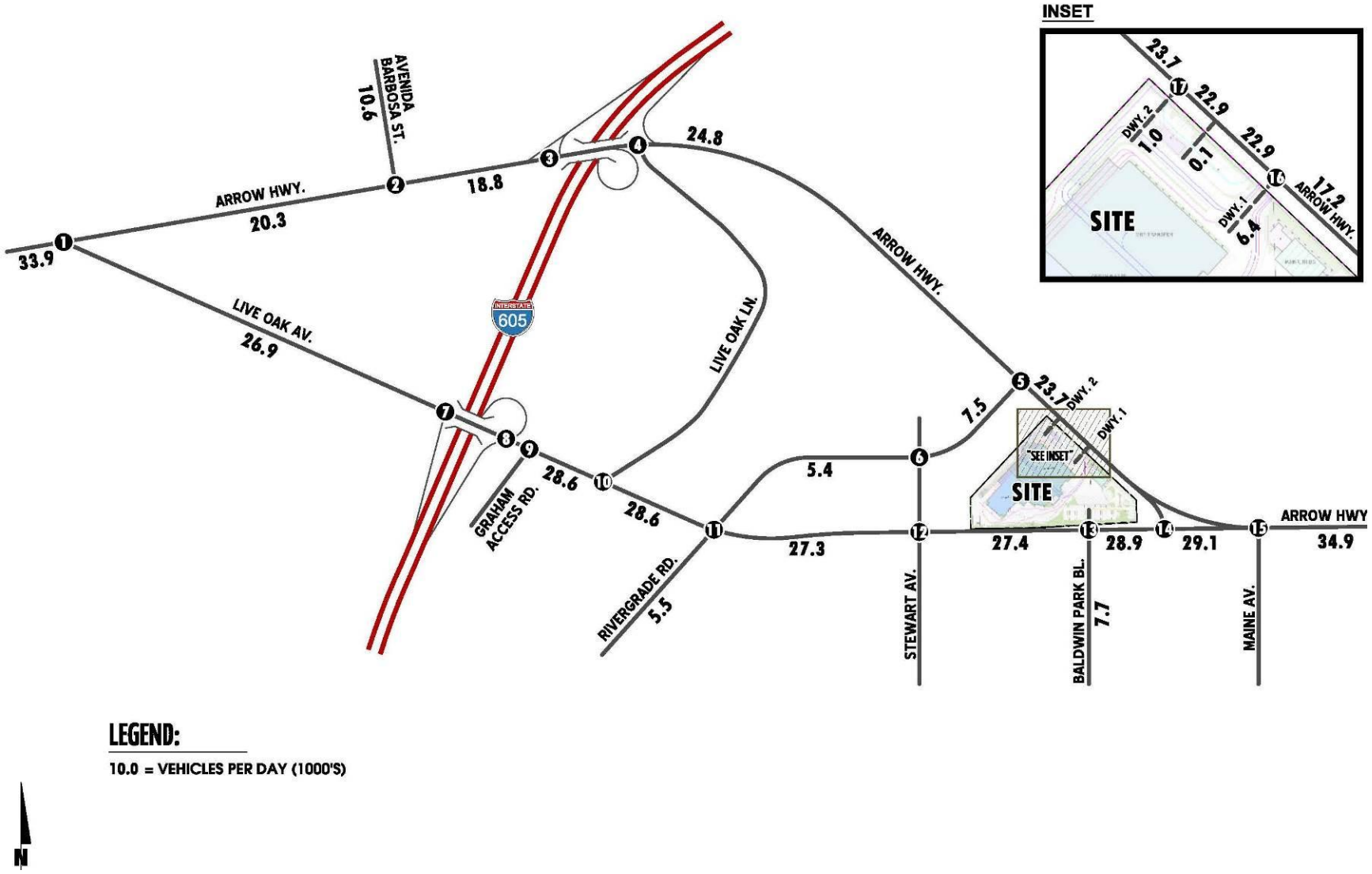


Exhibit 3.12-23 Existing Plus Project AM Peak Hour

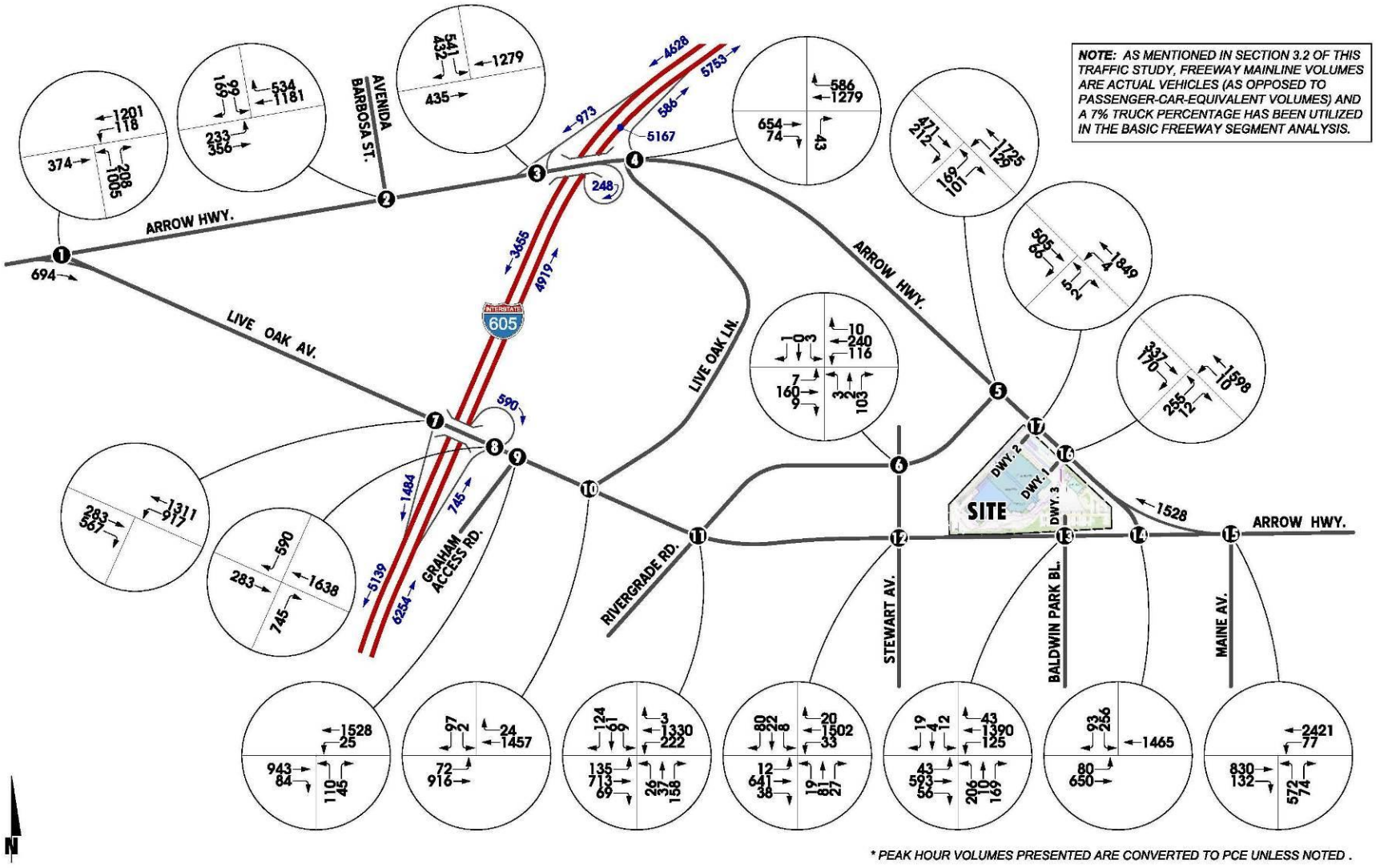


Exhibit 3.12-24 Existing Plus Project PM Peak Hour

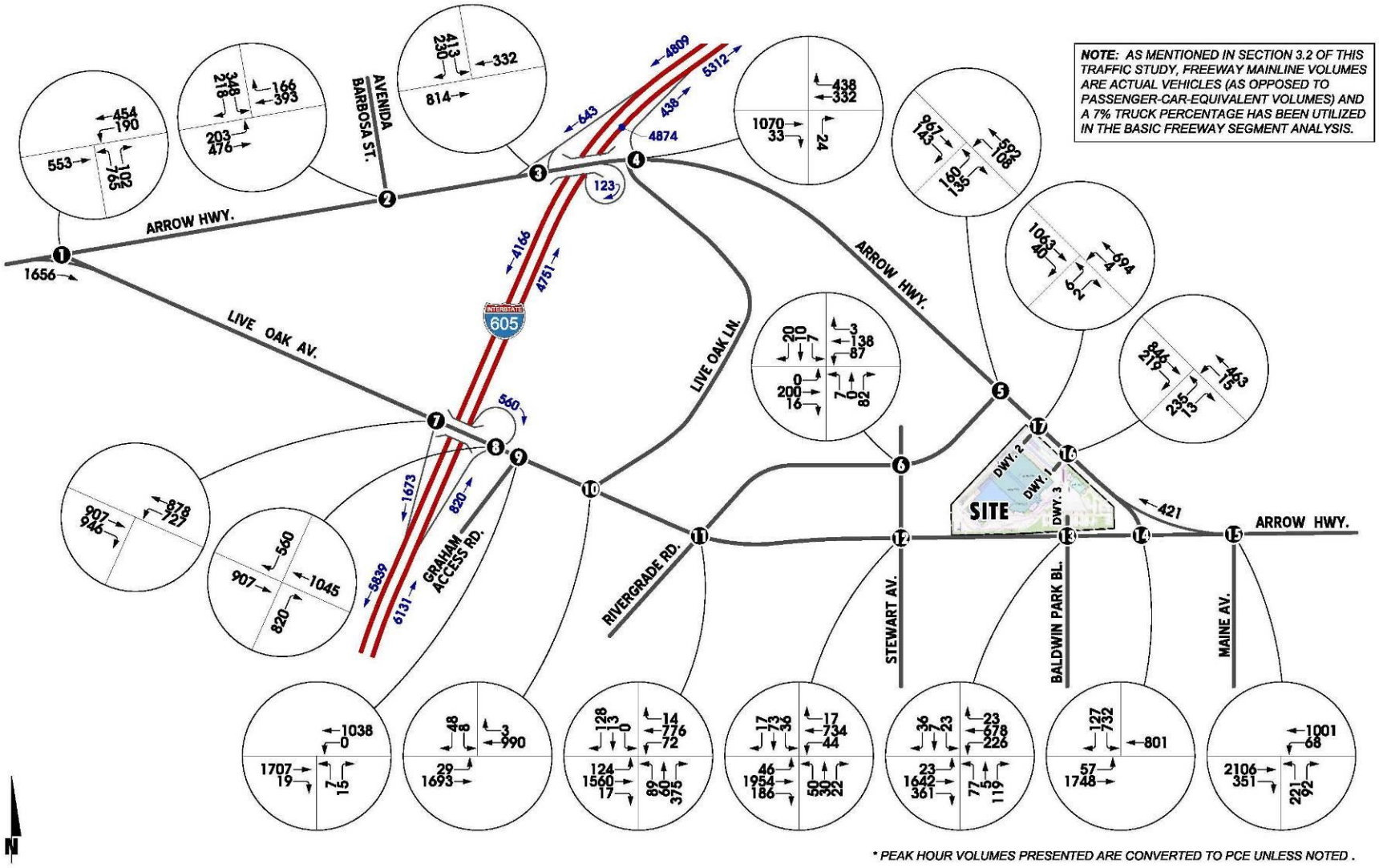


Exhibit 3.12-25 Interim Year (2016) Without Project Average Daily Traffic

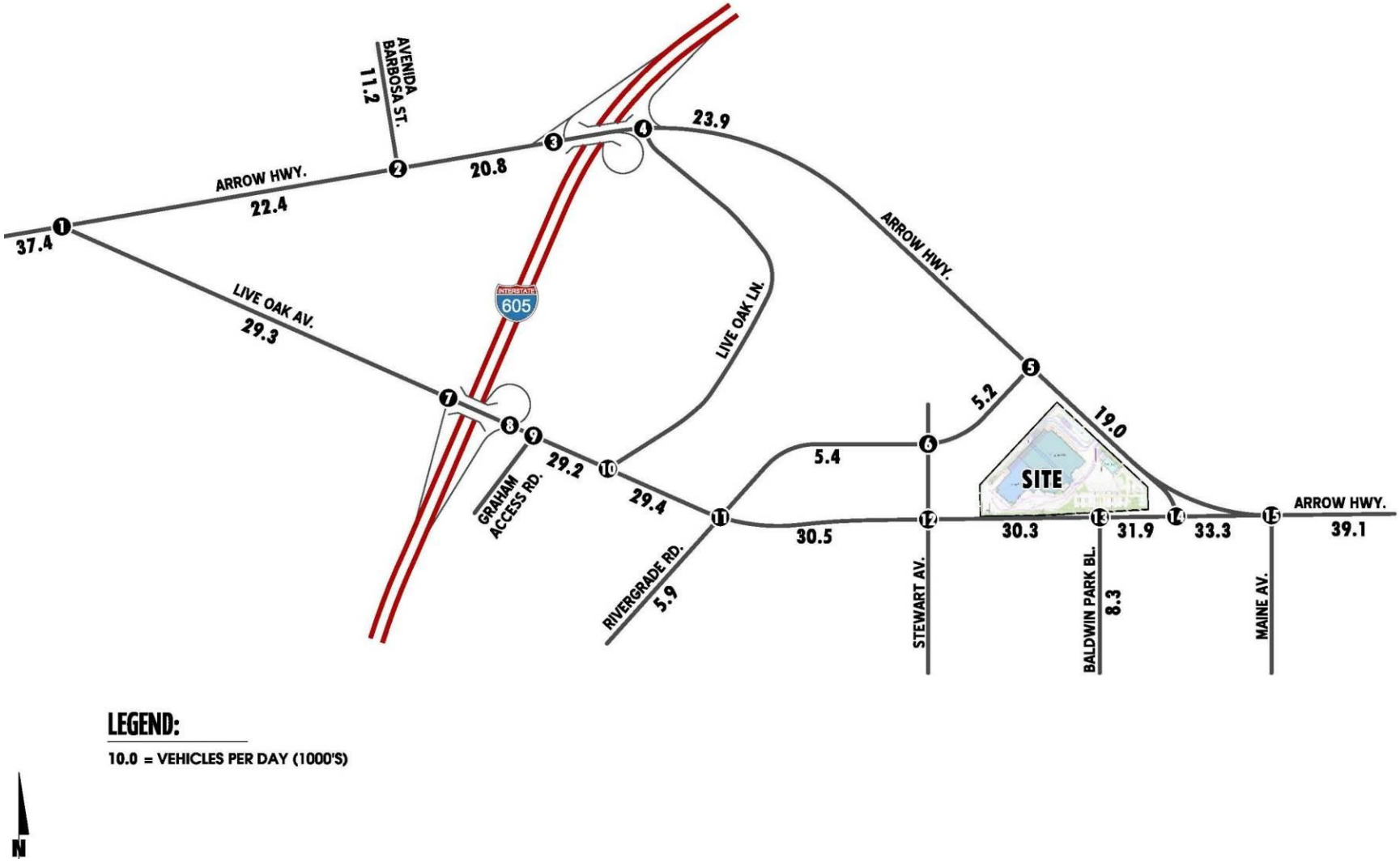


Exhibit 3.12-26 Interim Year (2016) Without Project AM Peak Hour

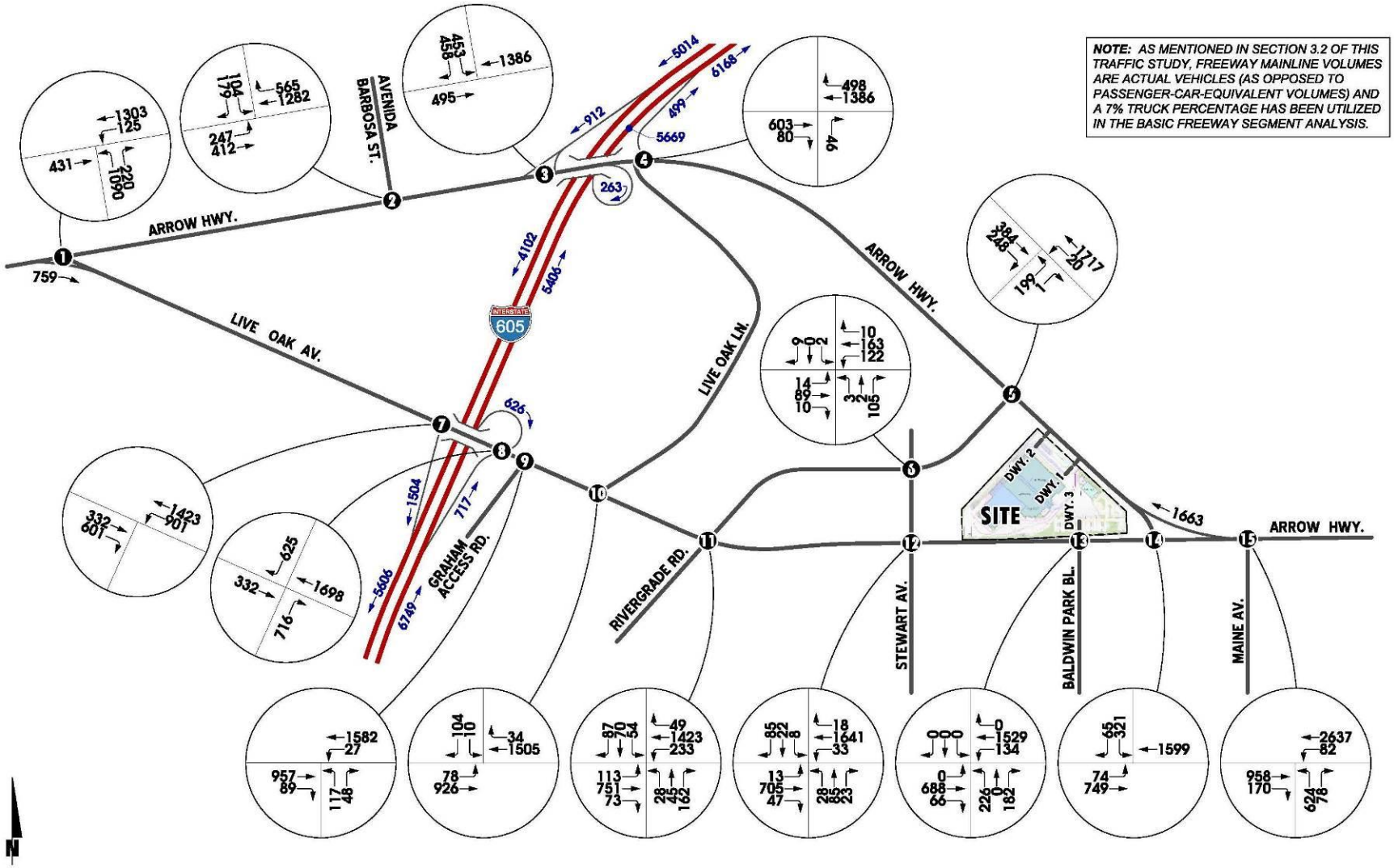
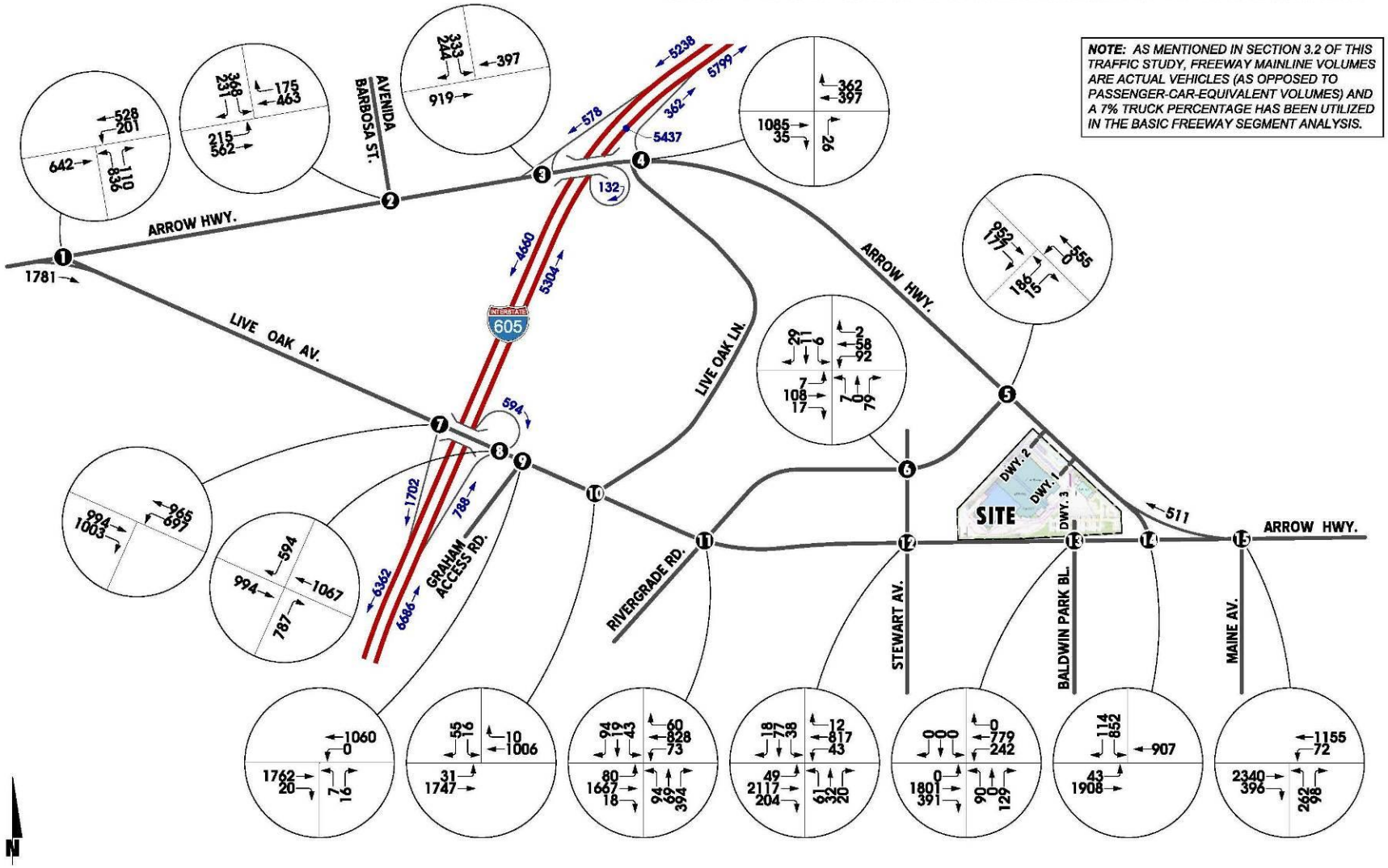


Exhibit 3.12-27 Interim Year (2016) Without Project PM Peak Hour



Interim Year (2016) With Project

For Interim Year (2016) With Project conditions, project only traffic volumes were added to the Interim Year Without Project volumes described above. **Exhibits 3.12-28, 29** and **30** present the Interim Year (2016) With Project ADT, AM peak hour, and PM peak hour traffic volumes, respectively. As shown on these exhibits, Live Oak Avenue, west of Arrow Highway (North) is projected to carry approximately 37,700 vpd. Arrow Highway adjacent to the project site is projected to carry between 26,200 and 19,700 VPD. The highest daily traffic volume in the study area is 39,500 VPD on Arrow Highway east of Maine Avenue.

Long Range (2035) Without Project

Per Appendix D in the Los Angeles County 2010 CMP, the background traffic growth estimates for Horizon Year must use the generalized growth factor (at a minimum) shown in Exhibit D-1 of the LA CMP. Based on Exhibit D-1 of the LA CMP, a general traffic volume growth factor of 1.106 is used for cities (including Irwindale) within the Regional Statistical Area (RSA) 26 for Horizon Year 2035. Therefore, Long Range baseline volumes were developed by applying a general growth factor of 1.106 to existing volumes to reflect 2035 conditions, as identified in the Los Angeles County CMP, in addition to the cumulative project / other development data. Appendix I within Appendix G of the EIR contains the relevant excerpts from the Los Angeles County CMP traffic impact analysis guidelines. **Exhibits 3.12-31, 32,** and **33** present the Long Range (2035) with Project ADT, AM peak hour, and PM peak hour traffic volumes, respectively. As shown on this exhibit, Live Oak Avenue, west of Arrow Highway (North) is projected to carry approximately 38,900 vpd.

Long Range (2035) With Project

For Long Range (2035) With Project conditions, "project only" traffic volumes were added to the Long Range (2035) Without Project volumes described above. **Exhibits 3.12-34**, **35**, and **36** present the Long Range (2035) with Project ADT, AM peak hour, and PM peak hour traffic volumes, respectively. As shown on these exhibits, Live Oak Avenue, west of Arrow Highway (North) is projected to carry approximately 39,300 vpd. Arrow Highway adjacent to the project site is projected to carry between 26,900 and 20,400 VPD. The highest daily traffic volume in the study area is 41,100 VPD on Arrow Highway east of Maine Avenue.

Exhibit 3.12-28 Interim Year (2016) with Project Daily Average Traffic

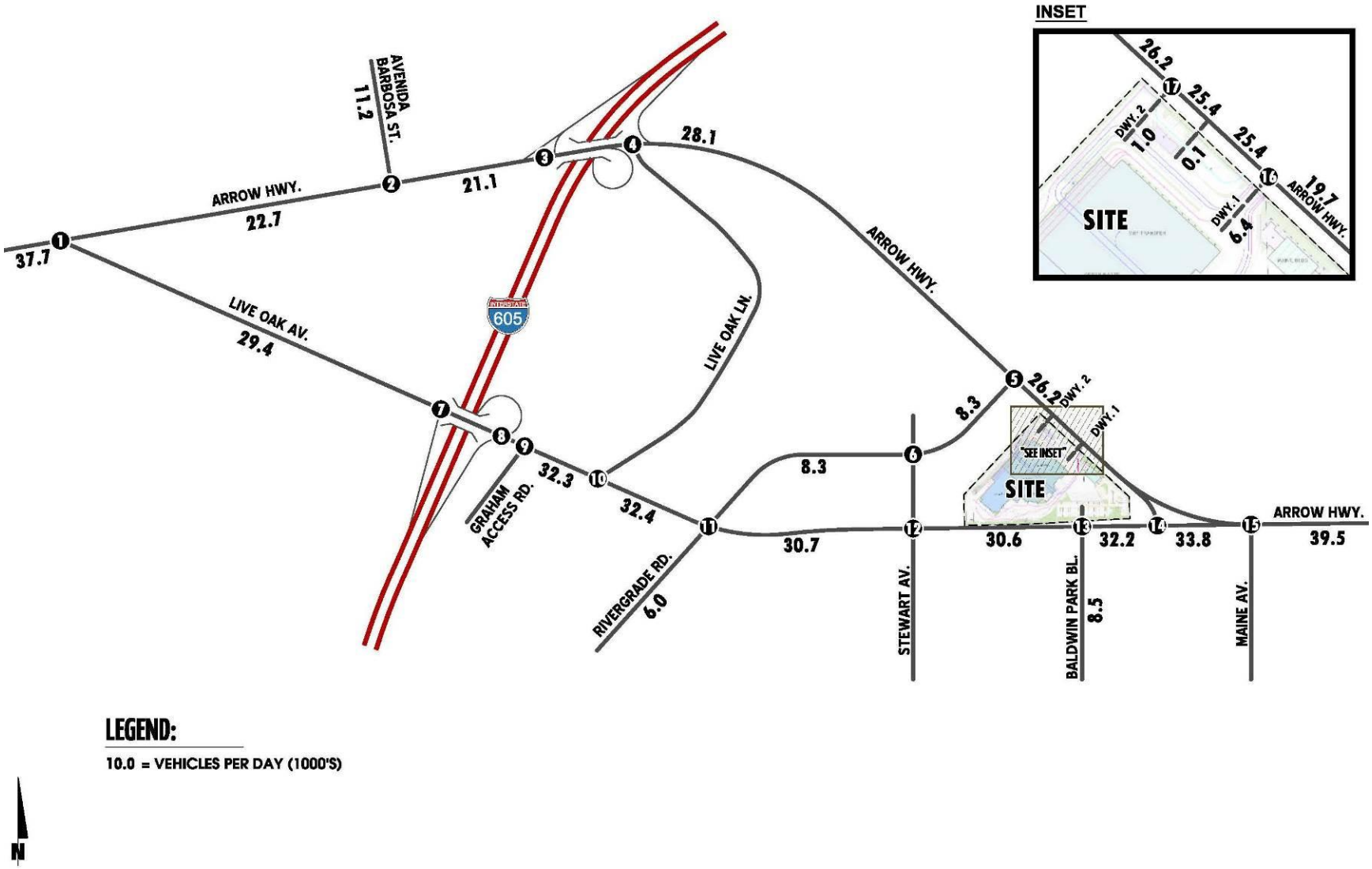


Exhibit 3.12-29 Interim Year (2016) with Project AM Peak Hour Intersection Volumes

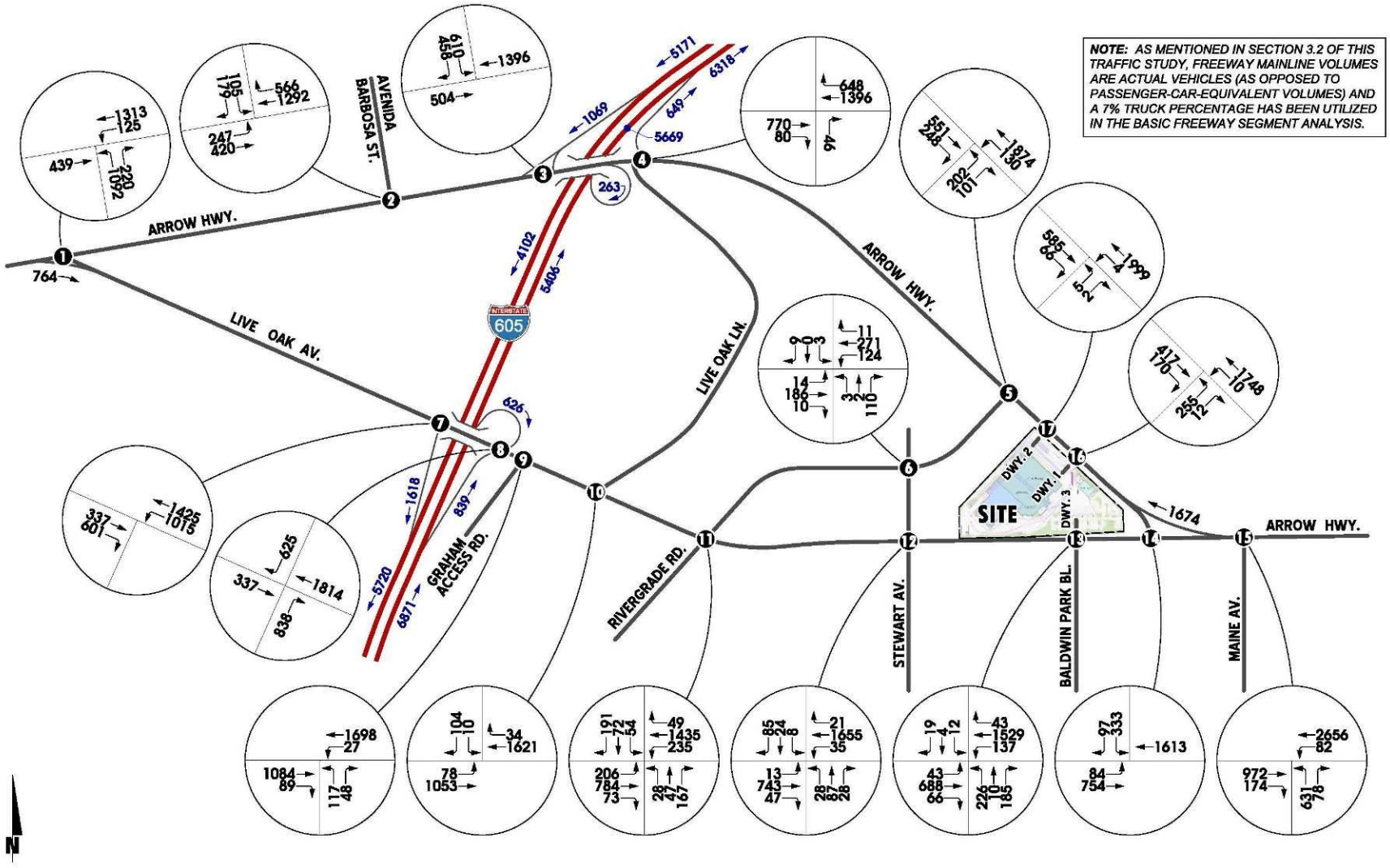


Exhibit 3.12-30 Interim Year (2016) with Project PM Peak Hour Intersection Volumes

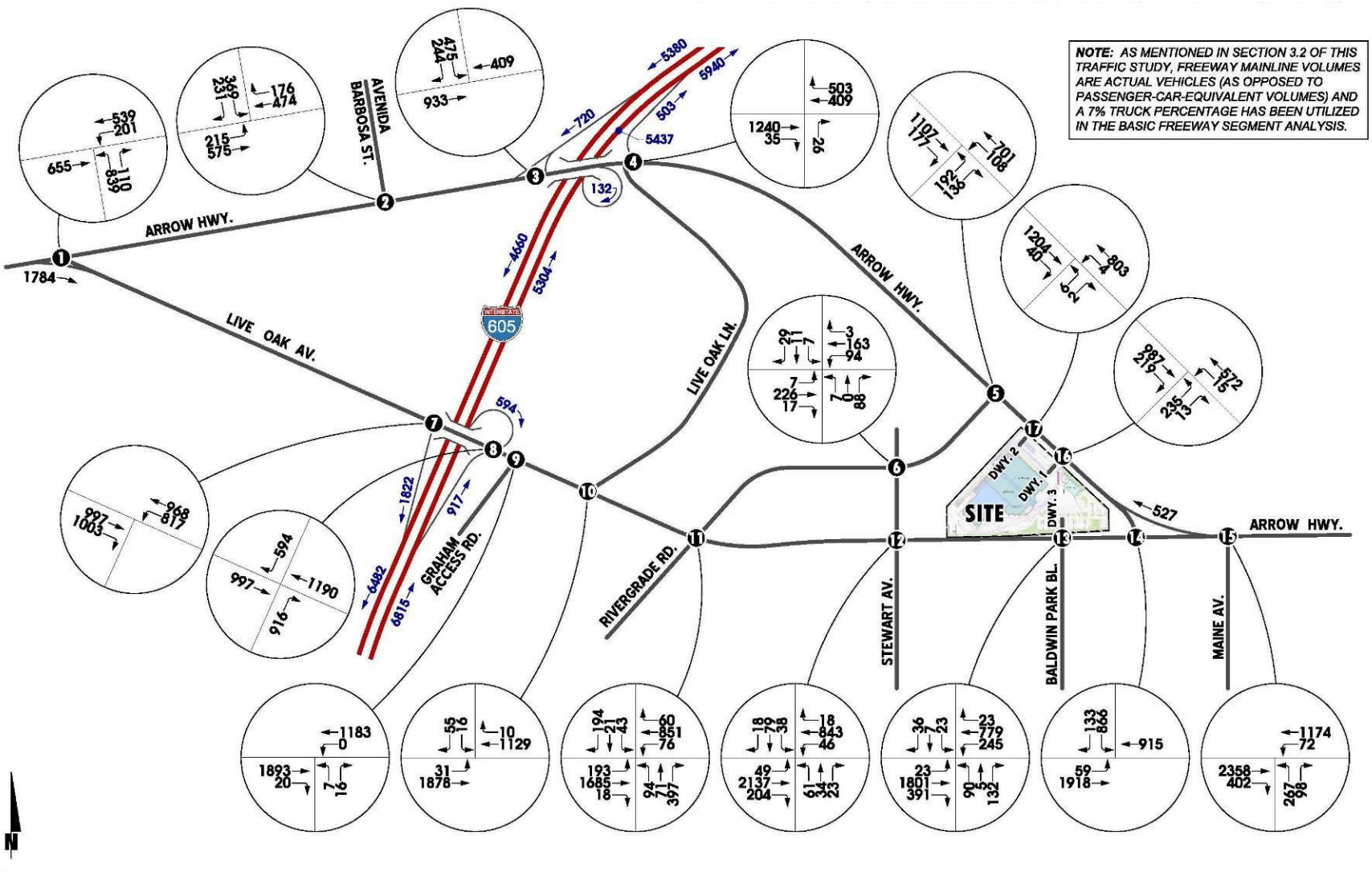


Exhibit 3.12-31 Long Range Horizon Year (2035) Without Project Daily Average Traffic

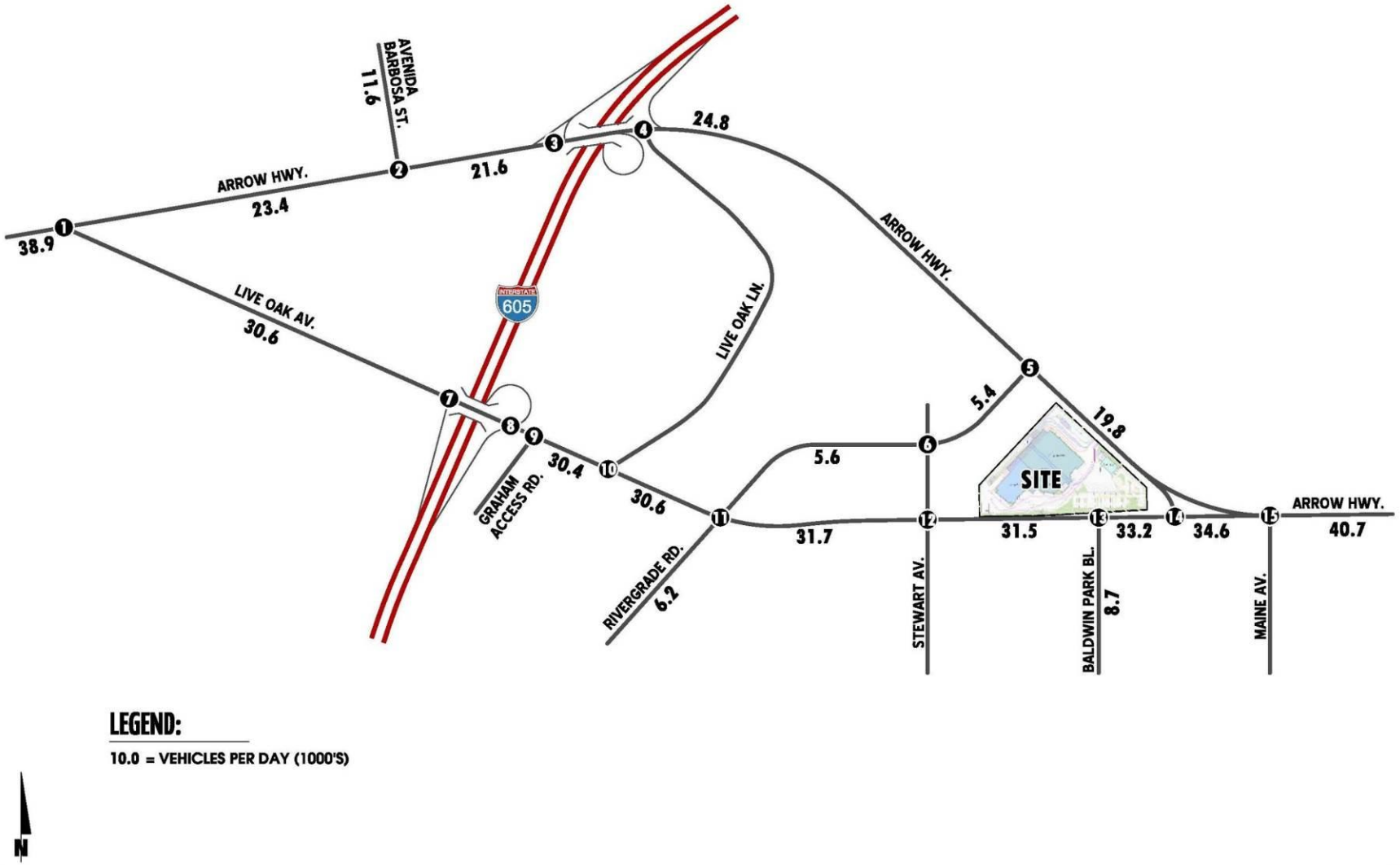


Exhibit 3.12-32 Long Range Horizon Year (2035) Without Project AM Peak Hour Intersection Volumes

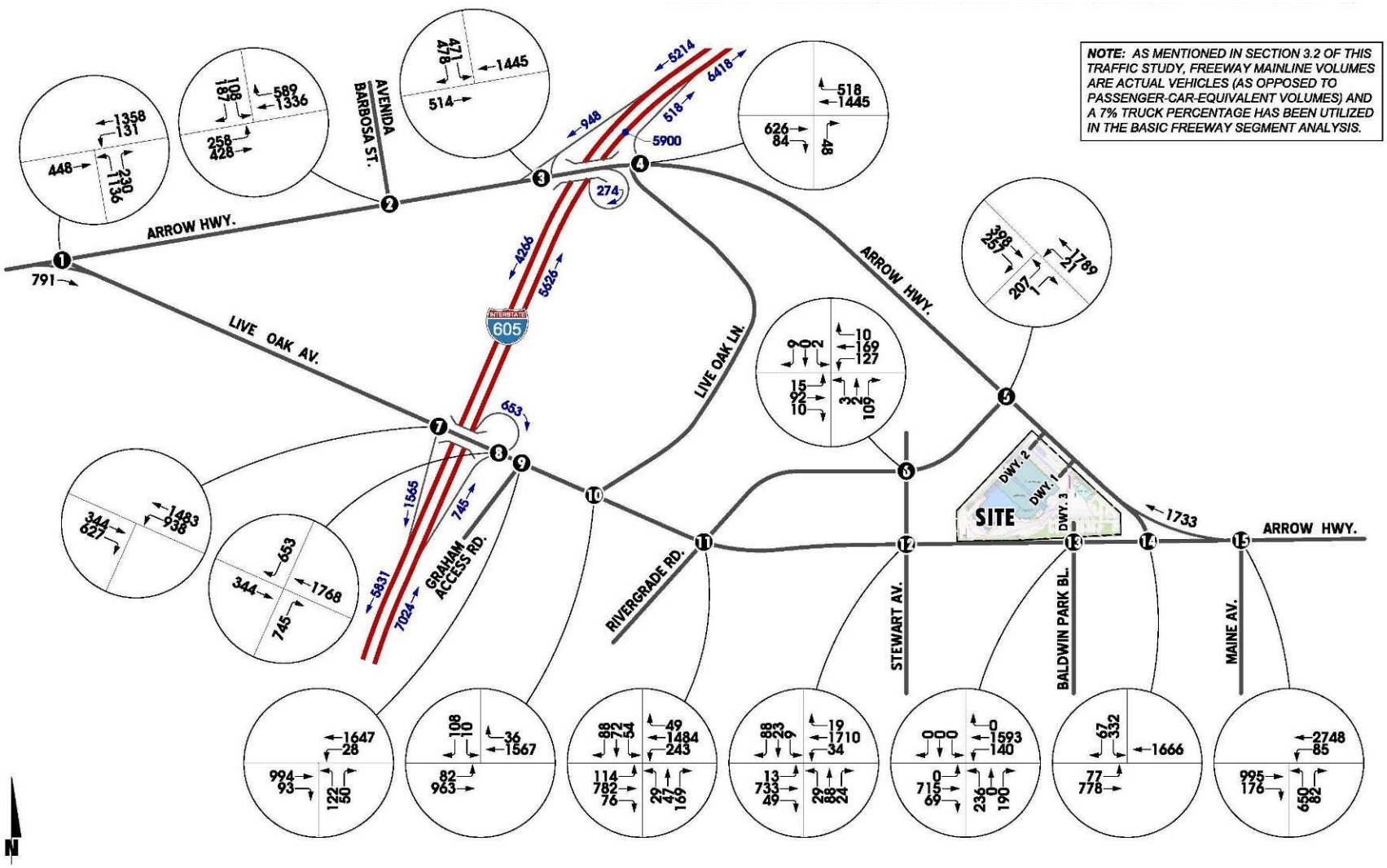


Exhibit 3.12-33 Long Range Horizon Year (2035) Without Project PM Peak Hour Intersection Volumes

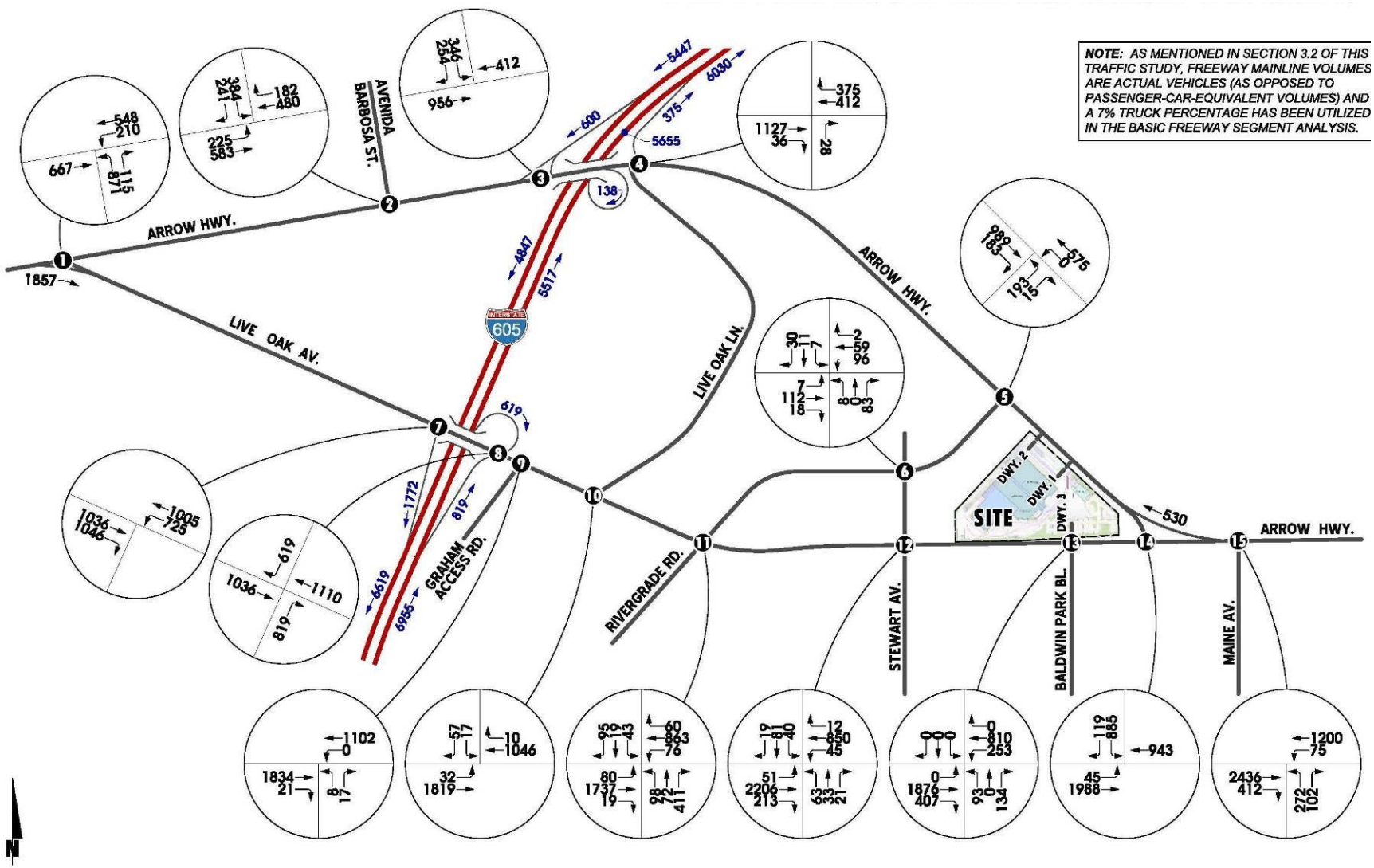


Exhibit 3.12-34 Long Range Horizon Year (2035) With Project Daily Average Traffic

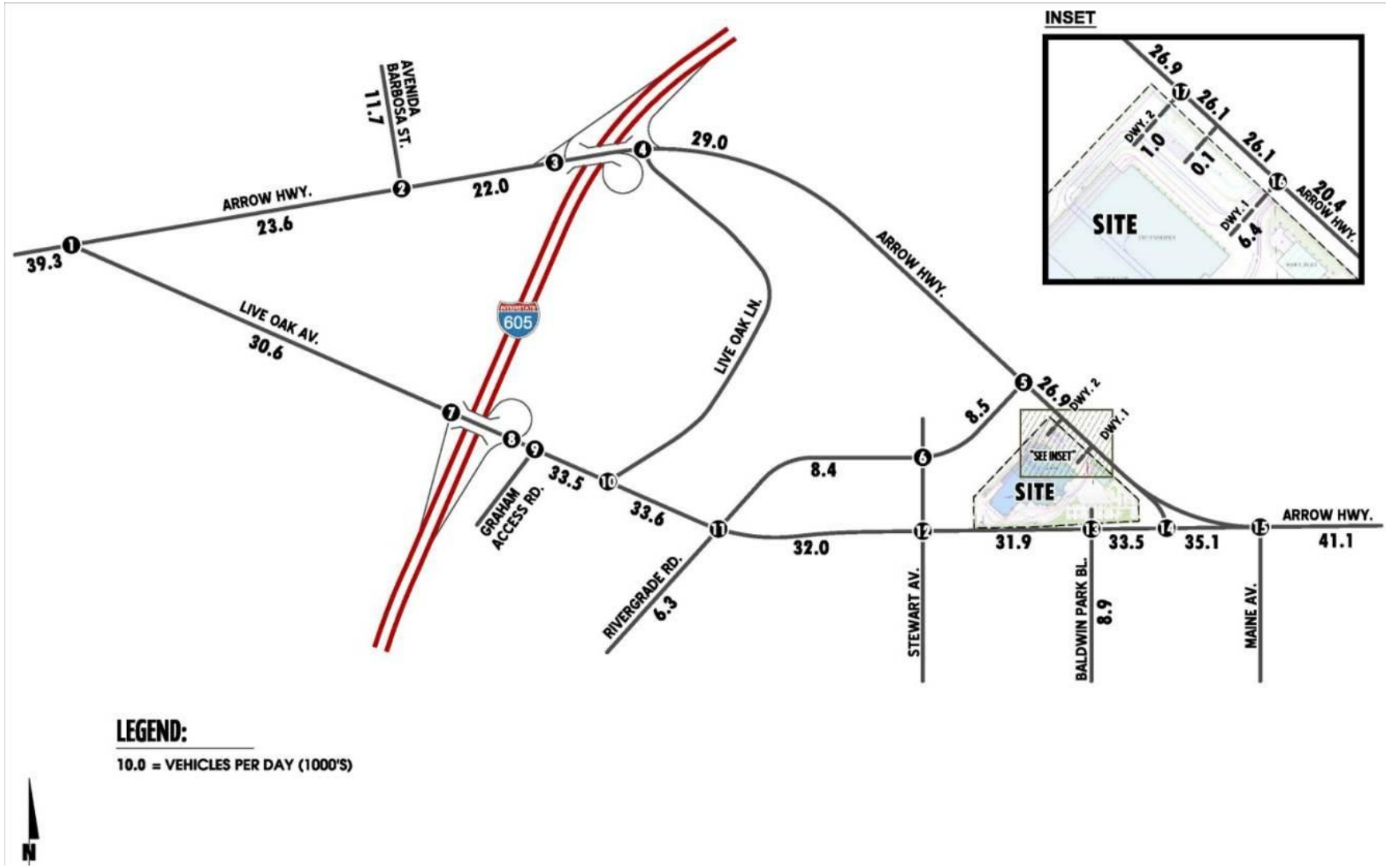


Exhibit 3.12-35 Long Range Horizon Year (2035) With Project AM Peak Hour Intersection Volumes

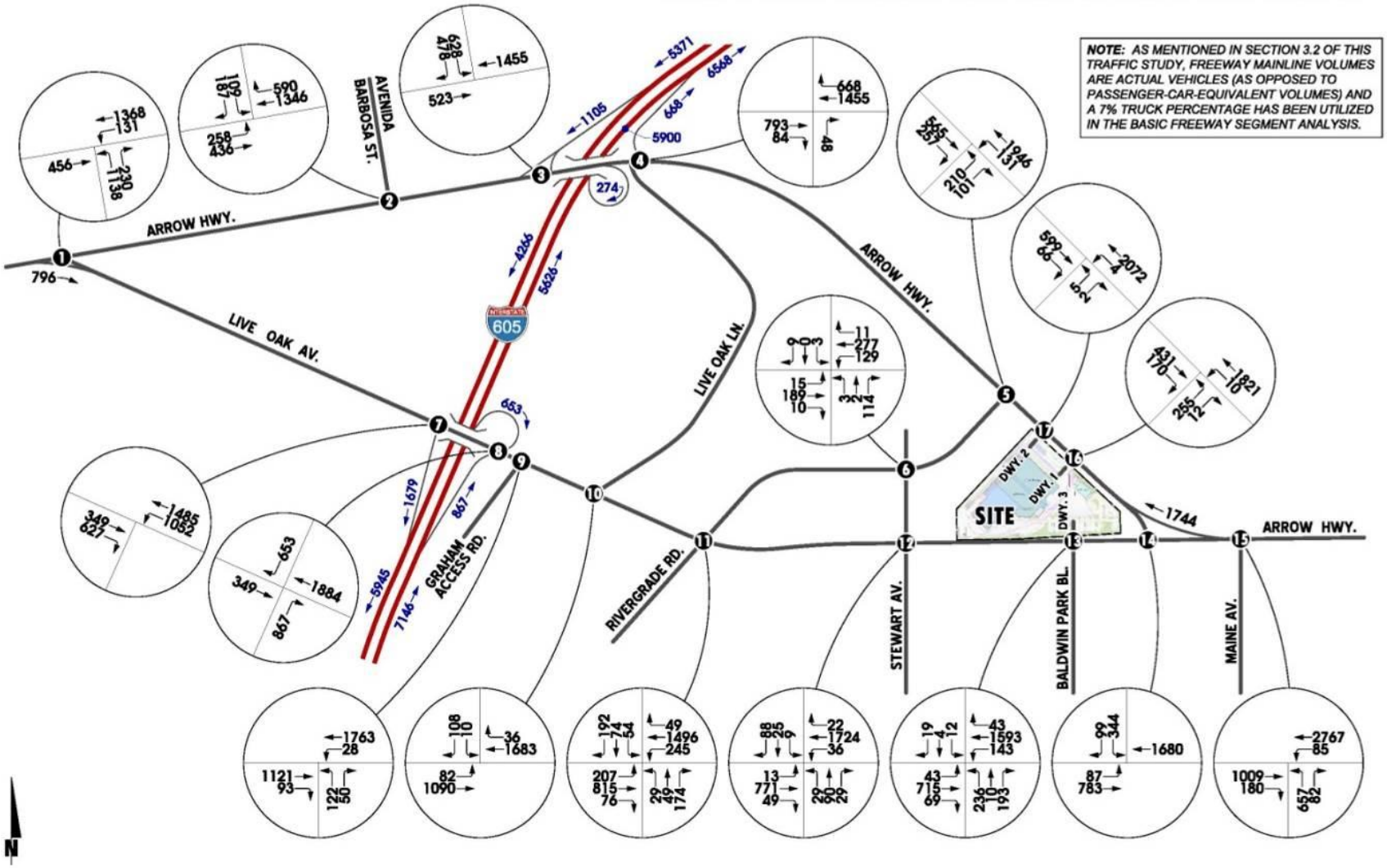
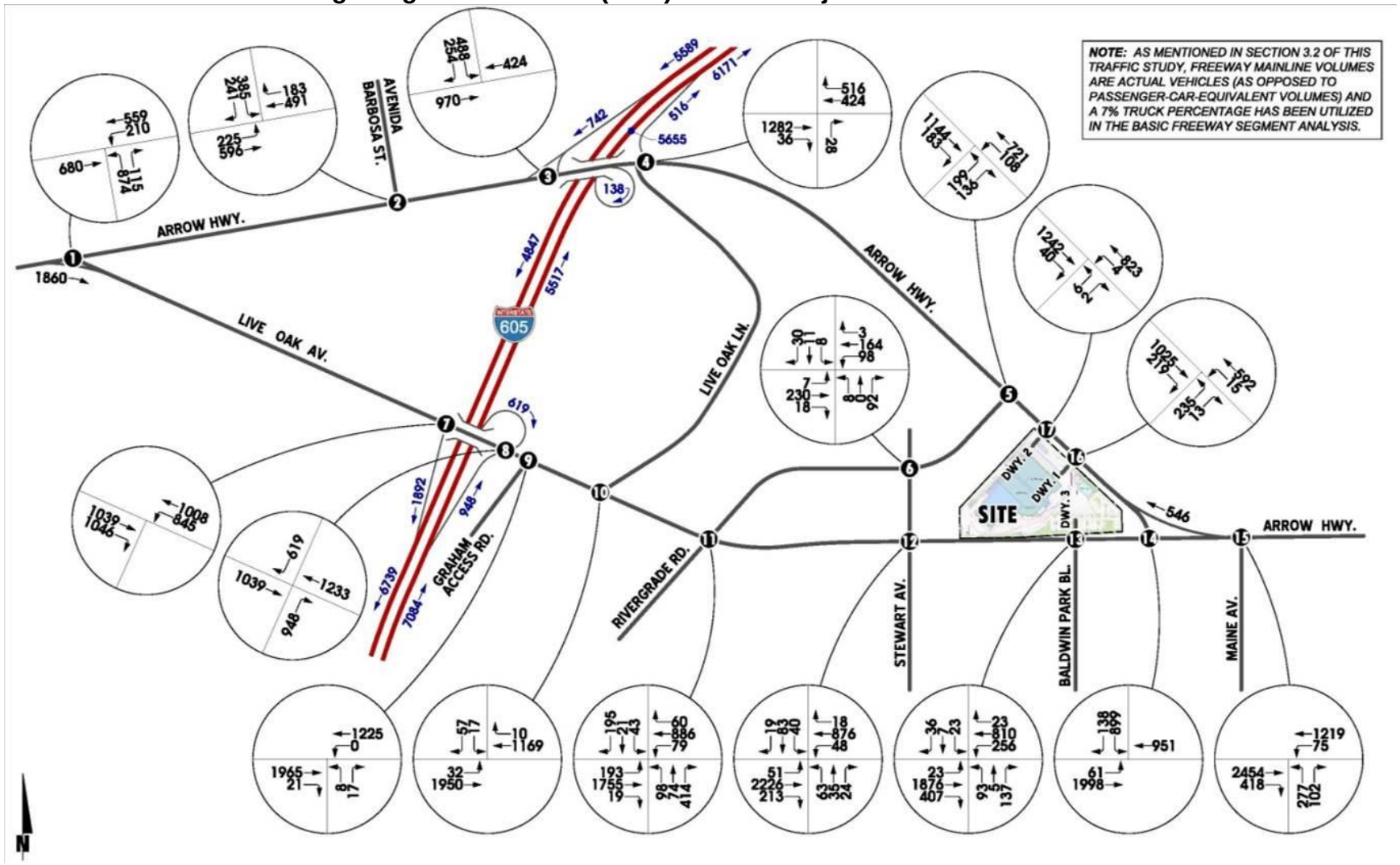


Exhibit 3.12-36 Long Range Horizon Year (2035) Without Project PM Peak Hour Intersection Volumes



3.12.7 THRESHOLDS OF SIGNIFICANCE

The significance of potential impacts was determined based on the 2014 State CEQA Guidelines, Appendix G presented below. Using these thresholds, the Proposed Project would be considered to have a significant impact related to traffic generation and circulation if it were to:

a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
e. Result in inadequate emergency access; and/or
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

3.12.8 IMPACT ANALYSIS AND MITIGATION PROGRAM

Threshold T-1

Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant Impact

The impacts to the City's policies on LOS (and deficiencies in LOS) are addressed in **Threshold T-2**. The City has no other plans, ordinances or policies that "establish measures of effectiveness for the performance of the circulation system, including related to mass transit and non-motorized travel, such as a pedestrian or bicycle circulation plan, which are applicable to the Proposed Project. The only bike path within the City of Irwindale is located on the River bed near the project site. Based on the existing uses near the project site, and the project's trip generation characteristics, pedestrian activity is anticipated to be nominal.

Issue Area – Traffic and Circulation

The City of Irwindale will strive to improve safe and efficient circulation in the City. Irwindale will continue to develop and enhance the existing streets and intersections in the City.

The Project is consistent with this policy because the recommended project on-site and off-site improvements provide for safe and efficient access conditions, and accommodate the travel activities associated with the Proposed Project.

Infrastructure Element Policy 4

The City of Irwindale will strive to ensure that all new development implements its "fair-share" of infrastructure improvements to offset the potential adverse impacts associated with the additional traffic that will be generated by the new development.

Per the City of Irwindale Traffic Study Guidelines, the Proposed Project shall pay its fair share of improvements to eliminate the significant impacts identified in the Traffic Impact Analysis. The Fair Share Contribution towards the required 2035 improvements at each location is based on the Proposed Project's percentage of new traffic for Long Range With Project (2035) conditions. The Proposed Project is anticipated to contribute to approximately 33% of the total new traffic at the intersection of I-605 SB Off-Ramp / Arrow Highway and I-605 NB Off-Ramp / Live Oak Avenue.

Caltrans Coordination

The City continues to coordinate efforts with Caltrans to upgrade area freeways. The purpose of this undertaking is to ensure that the City is fully appraised of roadway and facility improvement efforts in the early stages of planning and design. The City will continue to work with Caltrans and Metro.

The Project is consistent with this policy because Caltrans was consulted on this Project and the City included an analysis of the I-210 interchange at Irwindale Avenue pursuant to their request. The developer will be required to comply with MM-1 and MM-2 to contribute to share of impacts to the intersection of I-605 SB Off-Ramp / Arrow Highway and I-605 NB Off-Ramp / Live Oak Avenue.

Signalization

The City will strive to provide optimum signalization on major thoroughfares to maximize circulation efficiency, such as participation in a regional signalization program. City staff will outline both the need and strategy for improved signalization. Coordination with Caltrans, the Department of Public Works, Los Angeles County, and Metro will be emphasized.

The Project is consistent with this policy because, as noted above, the recommended project on-site and off-site improvements provide for safe and efficient access conditions, and accommodate the travel activities associated with the Proposed Project.

Based upon the above, implementation of the Project would not conflict with adopted policies, plans, or programs that would result in a decrease of the performance or safety of public transit, bicycle, or pedestrian facilities. Impacts are considered less than significant and no mitigation measures are required.

Threshold T-2

Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less than Significant with Mitigation Program

Traffic Analysis

The traffic analysis for the various timing conditions presented in the *Traffic Impact Analysis* is provided utilizing the HCM delay and ICU calculations. The summary is presented below.

Existing Plus Project Conditions

The study area intersections operate at acceptable levels of service during the peak hours for existing plus project conditions, except for the I-605 (NS) / Live Oak Avenue (EW) Avenue intersection (**Table 3.12-12**). As shown in **Table 3.12-12**, the I-605 (NS) / Live Oak Avenue (EW) Avenue intersection is significantly impacted by the project (comparing Existing to Existing Plus Project conditions). At an unsignalized intersection, a significant impact occurs when the minor stop-controlled approach operates at LOS "F" and does not have acceptable operation in terms of total control delay, and the addition of project trips increases the total control delay to more than 4.0 vehicle hours for a single lane approach or 5.0 vehicle hours for a multi-lane approach.

The following improvements are necessary to reduce the Project's proportionate increase in delay to pre-project levels or better, thus reducing the Project's impact to less-than-significant (referred to as **MM T-1** in the Mitigation Program detailed below beginning at page 90).

I-605 NB Off-Ramp (NS) / Live Oak Avenue (#8)

a. Install a traffic signal.
b. Construct a second northbound right turn lane.
c. Provide a third westbound through lane by modifying the existing raised median.

These improvements are generally to be constructed on Caltrans property, unless final engineering plans and specifications indicate additional right-of-way is needed. As shown in **Tables 3.12-13** and **3.12-14**, these improvements at the I-605 (NS) / Live Oak Avenue (EW) Avenue intersection result in acceptable traffic operations with the project.

Table 3.12-12 Existing and Existing Plus Project Intersection Analysis Summary Comparison

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1]												HCM DELAY[2] (SECS.)		HCM LEVEL OF SERVICE[2]		ICU[7] (V/C)		ICU[7] LEVEL OF SERVICE		SIGNIFICANT IMPACT?[4]
			NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND											
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	
1	Live Oak Av. (West) (NS) / Arrow Hwy. (EW)																						
	• Existing (2013)	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	19.5	24.2	B	C	0.74	0.50	C	A	
	• Existing + Project	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	19.5	24.1	B	C	0.74	0.50	C	A	NO
2	Avenida Barbosa St. (NS) / Arrow Hwy. (EW)																						
	• Existing (2013)	TS	0	0	0	2	0	1	1	2	0	0	2	1	18.2	22.7	B	C	0.65	0.44	B	A	
	• Existing + Project	TS	0	0	0	2	0	1	1	2	0	0	2	1	18.2	22.6	B	C	0.65	0.45	B	A	NO
3	I-605 SB Off-Ramp (NS) / Arrow Hwy. (EW)																						
	• Existing (2013)	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	12.4	8.4	B	A	0.78	0.41	C	A	
	• Existing + Project	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	22.7	12.3	C	B	0.90	0.52	D	A	NO
4	I-605 NB On-Ramp/Live Oak Ln. (NS) / Arrow Hwy. (EW)																						
	• Existing (2013)	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	10.1	10.3	B	B	NA	NA	NA	NA	
	• Existing + Project	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	10.7	10.6	B	B	NA	NA	NA	NA	NO
5	Arrow Hwy. (NS) / Rivergrade Rd. (EW)																						
	• Existing (2013)	TS	1	2	0	0	2	1	2	0	1	0	0	0	5.9	6.7	A	A	0.56	0.32	A	A	
	• Existing + Project	TS	1	2	0	0	2	1	2	0	1	0	0	0	8.0	8.5	A	A	0.61	0.38	B	A	NO
6	Stewart Av. (NS) / Rivergrade Rd. (EW)																						
	• Existing (2013)	TS	1	1	0	0	1	0	1	2	0	1	2	0	7.3	9.8	A	A	0.11	0.11	A	A	
	• Existing + Project	TS	1	1	0	0	1	0	1	2	0	1	2	0	5.6	6.8	A	A	0.13	0.13	A	A	NO
7	I-605 SB On-Ramp (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	8.4	11.0	A	B	0.76	0.78	C	C	
	• Existing + Project	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	16.5	12.3	B	B	0.84	0.84	D	D	NO

Table 3.12-12 Existing and Existing Plus Project Intersection Analysis Summary Comparison (Continued)

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1]												HCM DELAY[2] (SECS.)		HCM LEVEL OF SERVICE[2]		ICU[7] (V/C)		ICU[7] LEVEL OF SERVICE		SIGNIFICANT IMPACT?[4]
			NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND											
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	
8	I-605 NB Off-Ramp (NS) / Live Oak Av. (EW)																						
	• Existing (2013)[5]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	17.6	15.0	C	B	NA	NA	NA	NA	
	• Existing + Project[5]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	17.9	25.1	C	D	NA	NA	NA	NA	NO
	- With Improvements	**TS**	0	0	**2**	--	--	1	0	2	0	0	**3**	0	17.6	19.7	B	B	0.82	0.69	D	B	NO
	-NB Slip Off-Ramp to Live Oak Av. Eastbound[6]																						
	• Existing (2013)	CSS	0	0	1	--	--	--	0	2	0	0	2	0	14.4	31.5	B	D	NA	NA	NA	NA	
	• Existing + Project	CSS	0	0	1	--	--	--	0	2	0	0	2	0	19.1	**64.2**	C	**F**	NA	NA	NA	NA	**YES**
	-NB loop Off-Ramp to Live Oak Av. Westbound[6]																						
	• Existing (2013)	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**74.8**	43.9	**F**	E	NA	NA	NA	NA	
	• Existing + Project	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**74.6**	**55.3**	**F**	**F**	NA	NA	NA	NA	**YES**
9	Graham Access Rd. (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	TS	0	1	0	0	0	0	0	2	d	1	2	0	5.9	2.1	A	A	0.59	0.56	A	A	
	• Existing + Project	TS	0	1	0	0	0	0	0	2	d	1	2	0	6.2	2.4	A	A	0.63	0.61	B	B	NO
10	Live Oak Ln. (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	CSS	0	0	0	0	1	0	1	2	0	0	2	d	12.2	14.0	B	B	NA	NA	NA	NA	
	• Existing + Project	CSS	0	0	0	0	1	0	1	2	0	0	2	d	12.5	12.7	B	B	NA	NA	NA	NA	NO
11	Rivergrade Rd. (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	TS	1	2	0	1	2	1	1	2	1	1	2	d	17.6	17.2	B	B	0.62	0.74	B	C	
	• Existing + Project	TS	1	2	0	1	2	1	1	2	1	1	2	d	22.5	19.5	C	B	0.68	0.70	B	B	NO
12	Stewart Av. (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	TS	0	1	0	1	1	1	1	2	d	1	2	d	8.8	11.9	A	B	0.58	0.75	A	C	
	• Existing + Project	TS	0	1	0	1	1	1	1	2	d	1	2	d	9.5	12.3	A	B	0.59	0.76	A	C	NO
13	Baldwin Park Bl. - Dwy. 3 (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	TS	2	0	1	0	0	0	0	2	d	1	2	0	11.2	16.5	B	B	0.55	0.75	A	C	
	• Existing + Project	TS	2	**1**	0	**1**	**1**	0	**1**	2	d	1	2	**1**	18.5	24.7	B	C	0.62	0.79	B	C	NO

Table 3.12-12 Existing and Existing Plus Project Intersection Analysis Summary Comparison (Continued)

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	HCM DELAY[2] (SECS.) AM	PM	HCM LEVEL OF SERVICE[2] AM	PM	ICU[7] (V/C) AM	PM	ICU[7] LEVEL OF SERVICE AM	PM	SIGNIFICANT IMPACT?[4]
14	Arrow Hwy. (NS) / Live Oak Av. (EW)																						
	• Existing (2013)	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	7.0	22.1	A	C	0.53	0.81	A	D	
	• Existing + Project	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	9.0	20.2	A	C	0.53	0.81	A	D	NO
15	Maine Av. (NS) / Arrow Hwy. (EW)																						
	• Existing (2013)	TS	2	0	1	0	0	0	0	2	d	1	3	0	14.4	19.0	B	B	0.73	0.75	C	C	
	• Existing + Project	TS	2	0	1	0	0	0	0	2	d	1	3	0	14.5	19.5	B	B	0.74	0.76	C	C	NO
16	Arrow Hwy. (NS) / Dwy. 1 (EW)																						
	• Existing (2013)	-	DOES NOT EXIST												-	-	-	-	-	-	-	-	
	• Existing + Project	TS	**1**	2	0	0	2	**1**	**1**	0	**1**	0	0	0	13.4	11.7	B	B	0.70	0.45	B	A	NO
17	Arrow Hwy. (NS) / Dwy. 2 (EW)																						
	• Existing (2013)	-	DOES NOT EXIST												-	-	-	-	-	-	-	-	
	• Existing + Project	CSS	0	2	0	0	2	1	0	**1**	0	0	0	0	12.3	15.9	B	C	NA	NA	NA	NA	NO

1 When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (23') for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1>> = Free Right Turn Lane; d = Defacto Right Turn Lane; **1** = Improvement

2 Delay and level of service calculated using the following analysis software: Synchro 8. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown. "NA" value is shown for unsignalized ICU values.

3 TS = Traffic Signal; CSS = Cross Street Stop.

4 Per City of Irwindale traffic study guidelines, a significant impact is identified if one of the following criterias are met:
- For Signalized Intersections
  - When an intersection operates at acceptable LOS ("D" or better) for baseline conditions and the addition of project results in unacceptable LOS ("E" or "F").
  - When a State Highway intersection operates at acceptable LOS ("E" or better) for baseline conditions and the addition of project results in unacceptable LOS "F".
  - When an intersection operates at LOS "F" for baseline conditions and the project adds more than 50 peak hour project trips .
- For Unsignalized Intersections
  - When the minor stop-contolled approach operates at LOS "F" and does not have acceptable LOS in terms of average delay, and the addition of project increases the total control delay to more than 4.0 hours for single lane approach and 5.0 hours for multilane approach.

5 LOS based on average delay (unsignalized intersection).

6 LOS based on minor approach operating condition (unsignalized intersection).

7 The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

Interim Year (2016) Without Project

For Interim Year (2016) Without Project, the intersection of I-605 NB off-ramp / Live Oak Avenue is projected to continue to operate at unacceptable levels of service during the peak hours, with existing geometry as shown on **Table 3.12-13**. It should be noted however that even though the ICU results show that intersection of Arrow Highway / Live Oak Avenue operates at LOS "E" with 0.91 v/c during the PM peak hour under Interim Year (2016) Without Project, the HCM results show that the intersection operates at acceptable LOS (LOS "D" or better). The HCM results present a more accurate representation of the intersection operational level.

The I-605 NB off-ramp (NS) / Live Oak Avenue (EW) Avenue intersection is deficient under Existing, Existing Plus Project, and Interim Year (2016) Without Project conditions, and the MMT-1 improvements result in acceptable traffic operations for Interim Year (2016) Without Project conditions as shown on **Table 3.12-13**

Interim Year (2016) With Project

For Interim Year (2016) With Project conditions, the intersection of I-605 SB off-ramp / Arrow Highway is projected to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, in addition to the location identified under Interim Year (2016) Without Project conditions. It should be noted however that even though the ICU results show that the intersections of I-605 SB off-ramp / Arrow Highway (#3), I-605 SB On-Ramp / Live Oak Avenue (#7), and Arrow Highway / Live Oak Avenue (#14) operates at LOS "E" during peak hours under Interim Year (2016) With Project conditions, the HCM results show that these intersections operate at acceptable LOS (LOS "D" or better). The HCM results present a more accurate representation of the intersection operational level. MM T-1 is required for the Proposed Project as a means to reduce this potentially significant impact to a level that is less than significant (see traffic Mitigation Program below and **Table 3.12-13**).

Long Range (2035) Without Project

Table 3.12-14 shows the operations analysis at the study area intersections with and without improvements for Long Range (2035) Without Project conditions. As shown on **Table 3.12-14**, no additional intersection is projected to operate at unacceptable levels of service compared to Interim Year (2016) Without Project conditions. The I-605 (NS) / Live Oak Avenue (EW) Avenue intersection is deficient under Existing, Existing Plus Project, and Interim Year (2016) conditions without or with the project. It should be noted however that the ICU results for the intersection of Arrow Highway / Live Oak Avenue (#14) indicate that this intersection operates at LOS "E" during peak hours under Long Range (2035) Without Project conditions. However, the HCM results show that the intersection operates at acceptable LOS (LOS "D" or better). The HCM results present a more accurate representation of the intersection operational level.

Table 3.12-13 Interim Year (2016) Intersection Analysis Summary Comparison

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	HCM DELAY[2] (SECS.) AM	PM	HCM LEVEL OF SERVICE[2] AM	PM	ICU[8] (V/C) AM	PM	ICU[8] LEVEL OF SERVICE AM	PM	SIGNIFICANT IMPACT?[5]
1	Live Oak Av. (West) (NS) / Arrow Hwy. (EW)																						
	• 2016 Without Project	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	20.5	24.1	C	C	0.80	0.56	C	A	
	• 2016 With Project	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	20.5	24.1	C	C	0.81	0.57	D	A	NO
2	Avenida Barbosa St. (NS) / Arrow Hwy. (EW)																						
	• 2016 Without Project	TS	0	0	0	2	0	1	1	2	0	0	2	1	19.4	23.1	B	C	0.70	0.49	B	A	
	• 2016 With Project	TS	0	0	0	2	0	1	1	2	0	0	2	1	19.5	23.1	B	C	0.71	0.50	C	A	NO
3	I-605 SB Off-Ramp (NS) / Arrow Hwy. (EW)																						
	• 2016 Without Project	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	16.1	9.7	B	A	0.87	0.49	D	A	
	• 2016 With Project	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	34.1	15.0	C	B	0.99	0.60	E	A	NO
4	I-605 NB On-Ramp/Live Oak Ln. (NS) / Arrow Hwy. (EW)																						
	• 2016 Without Project	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	10.7	10.5	B	B	NA	NA	NA	NA	
	• 2016 With Project	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	10.9	10.9	B	B	NA	NA	NA	NA	NO
5	Arrow Hwy. (NS) / Rivergrade Rd. (EW)																						
	• 2016 Without Project	TS	1	2	0	0	2	1	2	0	1	0	0	0	7.0	7.0	A	A	0.62	0.38	B	A	
	• 2016 With Project	TS	1	2	0	0	2	1	2	0	1	0	0	0	7.9	8.8	A	A	0.67	0.43	B	A	NO
6	Stewart Av. (NS) / Rivergrade Rd. (EW)																						
	• 2016 Without Project	TS	1	1	0	0	1	0	1	2	0	1	2	0	7.0	9.1	A	A	0.13	0.12	A	A	
	• 2016 With Project	TS	1	1	0	0	1	0	1	2	0	1	2	0	5.7	6.8	A	A	0.14	0.14	A	A	NO
7	I-605 SB On-Ramp (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	15.5	15.1	B	B	0.85	0.85	D	D	
	• 2016 With Project	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	30.7	17.7	C	B	0.93	0.94	E	E	NO

Table 3.12-13 Interim Year (2016) Intersection Analysis Summary Comparison (Continued)

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1]												HCM DELAY[2] (SECS.)		HCM LEVEL OF SERVICE[2]		ICU[8] (V/C)		ICU[8] LEVEL OF SERVICE		SIGNIFICANT IMPACT?[5]
			NORTH-BOUND			SOUTH-BOUND			EAST-BOUND			WEST-BOUND											
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	AM	PM	AM	PM	
8	I-605 NB Off-Ramp (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project[6]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	18.4	27.4	C	D	NA	NA	NA	NA	
	• 2016 With Project[6]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	17.5	46.0	C	E	NA	NA	NA	NA	NO
	- With Improvements[6]	**TS**	0	0	**2**	--	--	1	0	2	0	0	**3**	0	21.8	--[4]	C	C	0.89	0.75	D	C	NO
	-NB Slip Off-Ramp to Live Oak Av. Eastbound[7]																						
	• 2016 Without Project	CSS	0	0	1	--	--	--	0	2	0	0	2	0	18.1	**64.0**	C	**F**	NA	NA	NA	NA	
	• 2016 With Project	CSS	0	0	1	--	--	--	0	2	0	0	2	0	27.7	--[4]	D	**F**	NA	NA	NA	NA	**YES**
	-NB loop Off-Ramp to Live Oak Av. Westbound[7]																						
	• 2016 Without Project	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**78.3**	**73.9**	**F**	**F**	NA	NA	NA	NA	
	• 2016 With Project	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**64.1**	**93.7**	**F**	**F**	NA	NA	NA	NA	**YES**
9	Graham Access Rd. (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	TS	0	1	0	0	0	0	0	2	d	1	2	0	6.4	2.6	A	A	0.66	0.63	B	B	
	• 2016 With Project	TS	0	1	0	0	0	0	0	2	d	1	2	0	6.9	2.9	A	A	0.70	0.67	B	B	NO
10	Live Oak Ln. (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	CSS	0	0	0	0	1	0	1	2	0	0	2	d	14.3	15.2	B	C	NA	NA	NA	NA	
	• 2016 With Project	CSS	0	0	0	0	1	0	1	2	0	0	2	d	15.1	13.0	C	B	NA	NA	NA	NA	NO
11	Rivergrade Rd. (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	TS	1	2	0	1	2	1	1	2	1	1	2	d	23.1	25.0	C	C	0.75	0.78	C	C	
	• 2016 With Project	TS	1	2	0	1	2	1	1	2	1	1	2	d	30.9	27.3	C	C	0.80	0.79	C	C	NO
12	Stewart Av. (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	TS	0	1	0	1	1	1	1	2	d	1	2	d	10.1	16.7	B	B	0.64	0.82	B	D	
	• 2016 With Project	TS	0	1	0	1	1	1	1	2	d	1	2	d	10.8	17.6	B	B	0.65	0.83	B	D	NO
13	Baldwin Park Bl. - Dwy. 3 (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	TS	2	0	1	0	0	0	0	2	d	1	2	0	12.7	19.9	B	B	0.61	0.82	B	D	
	• 2016 With Project	TS	2	**1**	0	**1**	**1**	0	**1**	2	d	1	2	**1**	18.2	27.2	B	C	0.69	0.86	B	D	NO

Table 3.12-13 Interim Year (2016) Intersection Analysis Summary Comparison (Continued)

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	HCM DELAY[2] (SECS.) AM	PM	HCM LEVEL OF SERVICE[2] AM	PM	ICU[8] (V/C) AM	PM	ICU[8] LEVEL OF SERVICE AM	PM	SIGNIFICANT IMPACT?[5]
14	Arrow Hwy. (NS) / Live Oak Av. (EW)																						
	• 2016 Without Project	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	8.7	28.9	A	C	0.60	0.91	A	E	
	• 2016 With Project	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	9.4	29.3	A	C	0.60	0.91	A	E	NO
15	Maine Av. (NS) / Arrow Hwy. (EW)																						
	• 2016 Without Project	TS	2	0	1	0	0	0	0	2	d	1	3	0	16.0	36.4	B	D	0.80	0.85	C	D	
	• 2016 With Project	TS	2	0	1	0	0	0	0	2	d	1	3	0	16.2	38.0	B	D	0.81	0.85	D	D	NO
16	Arrow Hwy. (NS) / Dwy. 1 (EW)																						
	• 2016 Without Project	-	DOES NOT EXIST												-	-	-	-	-	-	-	-	
	• 2016 With Project	TS	**1**	2	0	0	2	**1**	**1**	0	**1**	0	0	0	13.2	11.0	B	B	0.75	0.49	C	A	NO
17	Arrow Hwy. (NS) / Dwy. 2 (EW)																						
	• 2016 Without Project	-	DOES NOT EXIST												-	-	-	-	-	-	-	-	
	• 2016 With Project	CSS	0	2	0	0	2	**1**	0	**1**	0	0	0	0	12.6	17.6	B	C	NA	NA	NA	NA	NO

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (23') for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1>> = Free Right Turn Lane; d = Defacto Right Turn Lane; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software: Synchro 8. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown. "NA" value is shown for unsignalized ICU values.

[3] TS = Traffic Signal; CSS = Cross Street Stop.

[4] -- = Delay High (>100.0 secs.) or V/C Ratio exceeding 1.0, Intersection Unstable, Level of Service "F".

[5] Per City of Irwindale traffic study guidelines, a significant impact is identified if one of the following criterias are met:
- For Signalized Intersections
  - When an intersection operates at acceptable LOS ("D" or better) for baseline conditions and the addition of project results in unacceptable LOS ("E" or "F").
  - When a State Highway intersection operates at acceptable LOS ("E" or better) for baseline conditions and the addition of project results in unacceptable LOS "F".
  - When an intersection operates at LOS "F" for baseline conditions and the project adds more than 50 peak hour project trips .
- For Unsignalized Intersections
  - When the minor stop-contolled approach operates at LOS "F" and does not have acceptable LOS in terms of average delay, and the addition of project increases the total control delay to more than 4.0 hours for single lane approach and 5.0 hours for multilane approach.

[6] LOS based on average delay (unsignalized intersection).

[7] LOS based on minor approach operating condition (unsignalized intersection).

[8] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

Table 3.12-14 Long Range (2035) Intersection Analysis Summary Comparison

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	NORTH-BOUND T	NORTH-BOUND R	SOUTH-BOUND L	SOUTH-BOUND T	SOUTH-BOUND R	EAST-BOUND L	EAST-BOUND T	EAST-BOUND R	WEST-BOUND L	WEST-BOUND T	WEST-BOUND R	HCM DELAY[2] (SECS.) AM	HCM DELAY[2] (SECS.) PM	HCM LEVEL OF SERVICE[2] AM	HCM LEVEL OF SERVICE[2] PM	ICU[8] (V/C) AM	ICU[8] (V/C) PM	ICU[8] LEVEL OF SERVICE AM	ICU[8] LEVEL OF SERVICE PM	SIGNIFICANT IMPACT?[5]
1	Live Oak Av. (West) (NS) / Arrow Hwy. (EW)																						
	• 2035 Without Project	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	21.2	24.4	C	C	0.84	0.58	D	A	
	• 2035 With Project	TS	2	0	1>>	0	0	0	0	2	2>>	2	2	0	21.2	24.4	C	C	0.84	0.59	D	A	NO
2	Avenida Barbosa St. (NS) / Arrow Hwy. (EW)																						
	• 2035 Without Project	TS	0	0	0	2	0	1	1	2	0	0	2	1	20.7	24.0	C	C	0.73	0.51	C	A	
	• 2035 With Project	TS	0	0	0	2	0	1	1	2	0	0	2	1	20.7	24.0	C	C	0.74	0.52	C	A	NO
3	I-605 SB Off-Ramp (NS) / Arrow Hwy. (EW)																						
	• 2035 Without Project	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	18.0	10.0	B	A	0.90	0.51	D	A	
	• 2035 With Project	TS	0	0	0	1	0	1>>	0	3	0	0	2	0	--[4]	15.7	F	B	1.03	0.62	F	B	YES
	- With Improvements	TS	0	0	0	**2**	0	1>>	0	3	0	0	2	0	10.8	9.2	B	A	0.69	0.44	B	A	NO
4	I-605 NB On-Ramp/Live Oak Ln. (NS) / Arrow Hwy. (EW)																						
	• 2035 Without Project	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	10.8	10.6	B	B	NA	NA	NA	NA	
	• 2035 With Project	CSS	0	0	1	0	0	0	0	2	d	0	2	1>>	11.0	11.0	B	B	NA	NA	NA	NA	NO
5	Arrow Hwy. (NS) / Rivergrade Rd. (EW)																						
	• 2035 Without Project	TS	1	2	0	0	2	1	2	0	1	0	0	0	7.4	7.1	A	A	0.64	0.40	B	A	
	• 2035 With Project	TS	1	2	0	0	2	1	2	0	1	0	0	0	7.9	8.9	A	A	0.70	0.45	B	A	NO
6	Stewart Av. (NS) / Rivergrade Rd. (EW)																						
	• 2035 Without Project	TS	1	1	0	0	1	0	1	2	0	1	2	0	7.0	9.2	A	A	0.13	0.13	A	A	
	• 2035 With Project	TS	1	1	0	0	1	0	1	2	0	1	2	0	5.7	6.9	A	A	0.15	0.15	A	A	NO
7	I-605 SB On-Ramp (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	19.1	18.1	B	B	0.88	0.89	D	D	
	• 2035 With Project	TS	0	0	0	0	0	0	0	2	1>>	1	2	0	35.6	21.3	D	C	0.96	0.98	E	E	NO

Table 3.12-14 Long Range (2035) Intersection Analysis Summary Comparison (Continued)

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	HCM DELAY[2] (SECS.) AM	PM	HCM LEVEL OF SERVICE[2] AM	PM	ICU[8] (V/C) AM	PM	ICU[8] LEVEL OF SERVICE AM	PM	SIGNIFICANT IMPACT?[5]
8	I-605 NB Off-Ramp (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project[6]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	14.2	32.9	B	D	NA	NA	NA	NA	
	• 2035 With Project[6]	CSS	0	0	1	0	0	1	0	2	0	0	2	0	16.5	**53.0**	C	**F**	NA	NA	NA	NA	**YES**
	- With Improvements	**TS**	0	0	**2**	--	--	1	0	2	0	0	**3**	0	23.6	20.7	C	C	0.93	0.78	E	C	NO
	-NB Slip Off-Ramp to Live Oak Av. Eastbound[7]																						
	• 2035 Without Project	CSS	0	0	1	--	--	--	0	2	0	0	2	0	19.9	**82.2**	C	**F**	NA	NA	NA	NA	
	• 2035 With Project	CSS	0	0	1	--	--	--	0	2	0	0	2	0	32.0	--[4]	D	**F**	NA	NA	NA	NA	**YES**
	-NB loop Off-Ramp to Live Oak Av. Westbound[7]																						
	• 2035 Without Project	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**53.8**	**81.6**	**F**	**F**	NA	NA	NA	NA	
	• 2035 With Project	CSS	--	--	--	0	0	1	0	2	0	0	2	0	**52.2**	--[4]	**F**	**F**	NA	NA	NA	NA	**YES**
9	Graham Access Rd. (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	TS	0	1	0	0	0	0	0	2	d	1	2	0	7.2	2.8	A	A	0.68	0.65	B	B	
	• 2035 With Project	TS	0	1	0	0	0	0	0	2	d	1	2	0	7.8	3.1	A	A	0.72	0.70	C	B	NO
10	Live Oak Ln. (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	CSS	0	0	0	0	1	0	1	2	0	0	2	d	14.6	14.8	B	B	NA	NA	NA	NA	
	• 2035 With Project	CSS	0	0	0	0	1	0	1	2	0	0	2	d	15.4	11.8	C	B	NA	NA	NA	NA	NO
11	Rivergrade Rd. (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	TS	1	2	0	1	2	1	1	2	1	1	2	d	23.6	27.6	C	C	0.77	0.82	C	D	
	• 2035 With Project	TS	1	2	0	1	2	1	1	2	1	1	2	d	35.0	30.4	D	C	0.83	0.83	D	D	NO
12	Stewart Av. (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	TS	0	1	0	1	1	1	1	2	d	1	2	d	10.9	19.6	B	B	0.67	0.86	B	D	
	• 2035 With Project	TS	0	1	0	1	1	1	1	2	d	1	2	d	11.5	21.1	B	C	0.68	0.87	B	D	NO
13	Baldwin Park Bl. - Dwy. 3 (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	TS	2	0	1	0	0	0	0	2	d	1	2	0	12.7	21.2	B	C	0.63	0.85	B	D	
	• 2035 With Project	TS	2	**1**	0	**1**	**1**	0	**1**	2	d	1	2	**1**	18.4	30.4	B	C	0.72	0.90	C	D	NO

Table 3.12-14 Long Range (2035) Intersection Analysis Summary Comparison (Continued)

#	INTERSECTION	TRAFFIC Control[3]	INTERSECTION APPROACH LANES[1] NORTH-BOUND L	T	R	SOUTH-BOUND L	T	R	EAST-BOUND L	T	R	WEST-BOUND L	T	R	HCM DELAY[2] (SECS.) AM	PM	HCM LEVEL OF SERVICE[2] AM	PM	ICU[8] (V/C) AM	PM	ICU[8] LEVEL OF SERVICE AM	PM	SIGNIFICANT IMPACT?[5]
14	Arrow Hwy. (NS) / Live Oak Av. (EW)																						
	• 2035 Without Project	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	8.8	32.1	A	C	0.62	0.94	B	E	
	• 2035 With Project	TS	0	0	0	2	0	1	1	2	0	0	2	2>>	9.6	33.2	A	C	0.63	0.95	B	E	NO
15	Maine Av. (NS) / Arrow Hwy. (EW)																						
	• 2035 Without Project	TS	2	0	1	0	0	0	0	2	d	1	3	0	17.2	46.7	B	D	0.84	0.88	D	D	
	• 2035 With Project	TS	2	0	1	0	0	0	0	2	d	1	3	0	17.4	48.5	B	D	0.84	0.89	D	D	NO
16	Arrow Hwy. (NS) / Dwy. 1 (EW)																						
	• 2035 Without Project	-	DOES NOT EXIST												-	-	-	-	-	-	-	-	
	• 2035 With Project	TS	**1**	2	0	0	2	**1**	**1**	0	**1**	0	0	0	12.9	11.0	B	B	0.77	0.51	C	A	NO
17	Arrow Hwy. (NS) / Dwy. 2 (EW)																						
	• 2035 Without Project	-	DOES NOT EXIST												-	-	-	-	-	-	-	-	
	• 2035 With Project	CSS	0	2	0	0	2	1	0	**1**	0	0	0	0	12.5	18.1	B	C	NA	NA	NA	NA	NO

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width (23') for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; 1>> = Free Right Turn Lane; d = Defacto Right Turn Lane; **1** = Improvement

[2] Delay and level of service calculated using the following analysis software: Synchro 8. Per the 2000 Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for worst individual movement (or movements sharing a single lane) are shown. "NA" value is shown for unsignalized ICU values.

[3] TS = Traffic Signal; CSS = Cross Street Stop.

[4] -- = Delay High (>100.0 secs.) or V/C Ratio exceeding 1.0, Intersection Unstable, Level of Service "F".

[5] Per City of Irwindale traffic study guidelines, a significant impact is identified if one of the following criterias are met:
- For Signalized Intersections
  - When an intersection operates at acceptable LOS ("D" or better) for baseline conditions and the addition of project results in unacceptable LOS ("E" or "F").
  - When a State Highway intersection operates at acceptable LOS ("E" or better) for baseline conditions and the addition of project results in unacceptable LOS "F".
  - When an intersection operates at LOS "F" for baseline conditions and the project adds more than 50 peak hour project trips .
- For Unsignalized Intersections
  - When the minor stop-contolled approach operates at LOS "F" and does not have acceptable LOS in terms of average delay, and the addition of project increases the total control delay to more than 4.0 hours for single lane approach and 5.0 hours for multilane approach.

[6] LOS based on average delay (unsignalized intersection).

[7] LOS based on minor approach operating condition (unsignalized intersection).

[8] The Synchro v/c output results are discussed in the City of Irwindale Policy Guidelines for Traffic Impact Reports under Section B (page insert) and indicated that the v/c ratio results in the Synchro are based on ICU and should be presented in addition to delay information.

* **BOLD** = LOS does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

Long Range (2035) With Project

For Long Range (2035) With Project conditions, the intersection of I-605 SB off-ramp / Arrow Highway is projected to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, in addition to the location identified under Long Range (2035) Without Project conditions as shown on **Table 3.12-14**. It should be noted that even though the ICU results for the intersection of I-605 SB off-ramp / Arrow Highway (#3), I-605 SB On-Ramp / Live Oak Avenue (#7), and Arrow Highway / Live Oak Avenue (#14) operates at LOS "E" or worse during peak hours under Long Range (2035) With Project conditions. However, the HCM results show that the intersection operates at acceptable LOS (LOS "D" or better). The HCM results present a more accurate representation of the intersection operational level.

Table 3.12-14 also identifies any significant impacts (as defined in the City of Irwindale traffic study guidelines). As shown on **Table 3.12-14**, the intersection of I-605 (NS) / Live Oak Avenue (EW) Avenue is significantly impacted by the project. MM T-1 is required for the Proposed Project as a means to reduce this potentially significant impact to a level that is less than significant (see traffic Mitigation Program below and **Table 3.12-14**). In addition to MM T-1, the following improvements are necessary to reduce the Project's proportionate increase in delay to pre-project levels or better, thus reducing the Project's impact to *"less-than-significant" (*referred to as **MM T-2**)

I-605 SB Off-Ramp (NS) / Arrow Highway (EW) (#3)

a. Construct a 2nd southbound left turn lane including the necessary traffic signal modification.

These improvements are generally to be constructed on Caltrans property, unless final engineering plans and specifications indicate additional right-of-way is needed. As shown in **Table 3.12-14**, these improvements at the I-605 (NS) / Live Oak Avenue (EW) Avenue intersection and the I-605 SB Off-Ramp (NS) / Arrow Highway (EW) intersection result in acceptable traffic operations with the project.

As such, **MM T-1** and **MM T-2** are required for the Proposed Project as a means to reduce the Project's potentially significant impact to a level that is less than significant, (see traffic Mitigation Program below).

It should be noted that the recommended interchange improvements I-605 Freeway Northbound Off-Ramp at Live Oak Avenue and Southbound Off-Ramp at Arrow Highway are generally consistent with the *Traffic Study Report for I-605/Live Oak Avenue/Arrow Highway Interchanges (November 2013)*, prepared by AECOM Technical Services, Inc.

Freeway Mainline and Ramp Analysis

The freeway mainline and ramp merge / diverge analysis presented in the *Traffic Impact Analysis* has been performed using the HCS computer program. Per Caltrans request, I-210 interchange at Irwindale Avenue is included in the analysis. The summary is presented below. The I-210 freeway / Irwindale Avenue interchange and freeway volumes are presented on **Exhibit 3.12-36A/B**

Existing (2013)

The Existing (2013) freeway mainline and ramp analysis results are presented on **Table 3.12-15 and 16**, respectively. Based on the freeway analysis results, the freeway mainline segments and ramp locations analyzed for this study were found to operate at acceptable LOS (LOS "D" or better) during the peak hours, with existing geometry.

Existing Plus Project

The Existing Plus Project freeway mainline and ramp analysis results are presented on **Table 3.12-17 and 18**, respectively. Based on the freeway analysis results, the freeway mainline segments were found to operate at acceptable LOS (LOS "D" or better) during the peak hours. However, the I-605 northbound off-ramp at Live Oak Avenue is anticipated to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, with existing geometry.

Interim Year (2016) Without Project

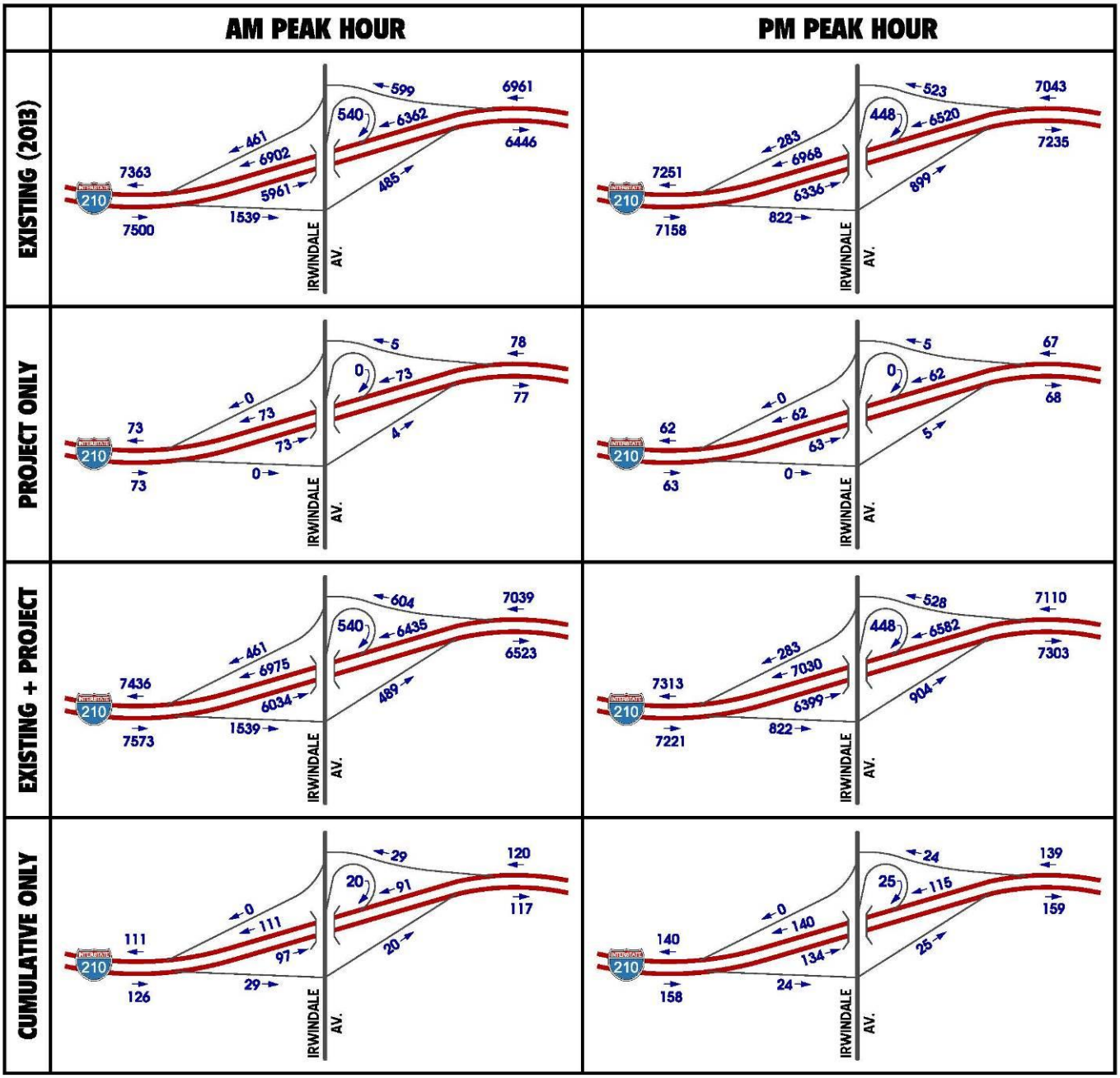
The Interim Year (2016) Without Project freeway mainline and ramp analysis results are presented on **Table 3.12-19 and 20**, respectively. Based on the freeway mainline analysis results, the following study area freeway segments were found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours, with existing geometry:

ID	Freeway Mainline Segments
10	I-210 Westbound, Immediately West of Irwindale Avenue Westbound On-Ramp
11	I-210 Eastbound, Immediately West of Irwindale Avenue Eastbound Off-Ramp
13	I-210 Eastbound, Immediately East of Irwindale Avenue Eastbound Off-Ramp

The Interim Year (2016) Without Project freeway ramp analysis results presented on **Table 3.12-20** indicate that the following study area freeway ramp locations are projected to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, with existing geometry:

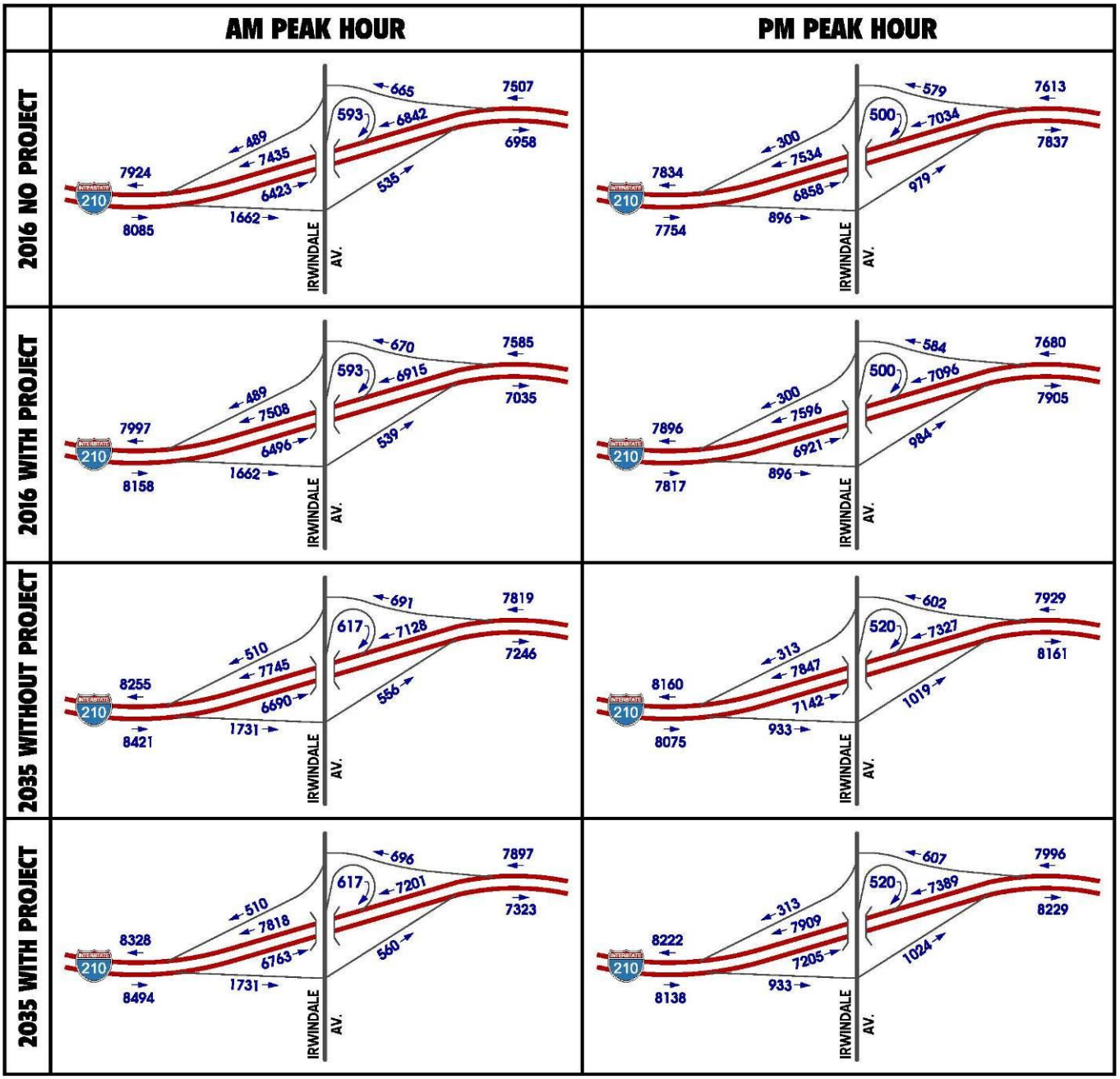
ID	Freeway Merge/Diverge Ramp Junctions
1	I-605 Northbound - Off-Ramp at Live Oak Avenue (Diverge)
6	I-210 Westbound - Off-Ramp at Irwindale Avenue (Diverge)

Exhibit 3.12-36A I-210 Irwindale Avenue Interchange Freeway and Ramp Peak Hour Volumes



NOTE: *AS MENTIONED IN SECTION 3.2 OF THIS TRAFFIC STUDY, FREEWAY MAINLINE VOLUMES ARE ACTUAL VEHICLES (AS OPPOSED TO PASSENGER-CAR-EQUIVALENT VOLUMES) AND A 7% TRUCK PERCENTAGE HAS BEEN UTILIZED IN THE BASIC FREEWAY SEGMENT ANALYSIS.*

Exhibit 3.12-36B I-210 Irwindale Avenue Interchange Freeway and Ramp Peak Hour Volumes



NOTE: *AS MENTIONED IN SECTION 3.2 OF THIS TRAFFIC STUDY, FREEWAY MAINLINE VOLUMES ARE ACTUAL VEHICLES (AS OPPOSED TO PASSENGER-CAR-EQUIVALENT VOLUMES) AND A 7% TRUCK PERCENTAGE HAS BEEN UTILIZED IN THE BASIC FREEWAY SEGMENT ANALYSIS.*

Table 3.12-15 Existing Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	6,132	6,002	25.1	24.5	C	C
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	4,919	4,751	19.8	19.1	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,167	4,874	20.8	19.6	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	5,603	5,171	22.7	20.8	C	C
	SB	Immediately North of Arrow Highway Off Ramps	4	4,471	4,667	18.0	18.8	B	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	3,655	4,166	14.7	16.7	B	B
		Immediately South of Live Oak On Ramps	4	5,025	5,719	20.2	23.2	C	C
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	6,961	7,043	29.8	30.4	D	D
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	6,362	6,520	26.3	27.2	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	7,363	7,251	32.7	31.8	D	D
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	7,500	7,158	33.7	31.2	D	D
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	5,961	6,336	24.3	26.2	C	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	6,446	7,235	26.8	31.7	D	D

[1] Number of lanes are in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-16 Existing Conditions Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,213	1,251	34.2	33.8	D	D
		NB Loop On Ramp for Eastbound Arrow Highway	4	248	123	20.6	19.8	C	B
		NB Direct On Ramp for Westbound Arrow Highway	4	436	297	22.5	20.8	C	C
	SB	SB Off Ramp at Arrow Highway	4	816	501	25.3	24.5	C	C
		SB On Ramp at Live Oak Avenue	4	1,370	1,553	24.8	28.1	C	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	599	523	33.2	33.1	D	D
		WB Loop On Ramp at Irwindale Avenue	4	540	448	29.0	28.8	D	D
		WB Direct On Ramp at Irwindale Avenue	4	461	283	29.0	27.9	D	C
	EB	EB Off Ramp at Irwindale Avenue	4	1,539	822	22.1	20.3	C	C
		EB On Ramp at Irwindale Avenue	4	485	899	26.6	29.2	C	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] Level of service determined using HCS+ : Ramps and Ramp Junction software, Version 5.21

Table 3.12-17 Existing Plus Project Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	6,254	6,131	25.8	20.7	C	C
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	4,919	4,751	19.8	25.1	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,167	4,874	20.8	19.1	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	5,753	5,312	23.3	19.6	C	C
	SB	Immediately North of Arrow Highway Off Ramps	4	4,628	4,809	18.6	19.3	C	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	3,655	4,166	14.7	16.7	B	B
		Immediately South of Live Oak On Ramps	4	5,139	5,839	20.2	23.7	C	C
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	7,039	7,110	30.4	30.8	D	D
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	6,435	6,582	26.7	27.5	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	7,436	7,313	33.2	32.3	D	D
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	7,573	7,221	34.4	31.6	D	D
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	6,034	6,399	24.7	26.5	C	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	6,523	7,303	27.2	32.2	D	D

[1] Number of lanes is in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-18 Existing Plus Project Conditions Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,335	1,380	35.3	35.0	E	D
		NB Loop On Ramp for Eastbound Arrow Highway	4	248	123	20.6	19.8	C	B
		NB Direct On Ramp for Westbound Arrow Highway	4	586	438	23.7	21.5	C	C
	SB	SB Off Ramp at Arrow Highway	4	973	643	26.8	25.9	C	C
		SB On Ramp at Live Oak Avenue	4	1,484	1,673	25.7	29.0	C	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	604	528	33.5	33.4	D	D
		WB Loop On Ramp at Irwindale Avenue	4	540	448	29.2	29.0	D	D
		WB Direct On Ramp at Irwindale Avenue	4	461	283	29.2	28.2	D	D
	EB	EB Off Ramp at Irwindale Avenue	4	1,539	822	22.2	20.5	C	C
		EB On Ramp at Irwindale Avenue	4	489	904	26.9	29.5	C	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+ : Ramps and Ramp Junction software, Version 5.21

Table 3.12-19 Interim Year (2016) Without Project Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	6,749	6,686	28.5	28.1	D	D
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	5,406	5,304	21.8	21.4	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,669	5,437	22.9	21.9	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	6,168	5,799	25.3	23.5	C	C
	SB	Immediately North of Arrow Highway Off Ramps	4	5,014	5,238	20.2	21.1	C	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	4,102	4,660	16.5	18.7	B	C
		Immediately South of Live Oak On Ramps	4	5,606	6,362	22.7	26.3	C	D
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	7,507	7,613	33.8	34.7	D	D
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	6,842	7,034	29.1	30.3	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	7,924	7,834	37.6	36.7	E	E
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	8,085	7,754	39.3	36.0	E	E
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	6,423	6,858	26.6	29.2	D	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	6,958	7,837	29.8	36.7	D	E

[1] Number of lanes is in the specified direction and is based on existing conditions.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-20 Interim Year (2016) Without Project Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,343	1,383	37.5	37.4	E	E
		NB Loop On Ramp for Eastbound Arrow Highway	4	263	133	22.4	21.8	C	C
		NB Direct On Ramp for Westbound Arrow Highway	4	499	362	24.8	22.9	C	C
	SB	SB Off Ramp at Arrow Highway	4	912	578	28.1	27.3	D	C
		SB On Ramp at Live Oak Avenue	4	1,504	1,702	27.5	31.0	C	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	665	579	35.8	36.4	E	E
		WB Loop On Ramp at Irwindale Avenue	4	593	500	25.0	25.9	C	C
		WB Direct On Ramp at Irwindale Avenue	4	489	300	31.1	29.9	D	D
	EB	EB Off Ramp at Irwindale Avenue	4	1,662	896	24.4	21.1	C	C
		EB On Ramp at Irwindale Avenue	4	535	979	28.4	31.7	D	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps.
[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).
[3] Level of service determined using HCS+ : Ramps and Ramp Junction software, Version 5.21

Interim Year (2016) With Project

The Interim Year (2016) With Project freeway mainline and ramp analysis results are presented on **Table 3.12-21** and **Table 3.12-22**, respectively. The freeway mainline analysis results indicated that the following study area freeway segment is found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours, with existing geometry, in addition to the locations previously identified under Interim Year (2016) Without Project conditions; project related traffic using this location equals approximately 78 am & 67 pm peak hour trips, as shown on **Exhibit 3.12-36A**

ID	Freeway Mainline Segments
8	I-210 Westbound, Immediately east of Irwindale Avenue Westbound Off-Ramp

The Interim Year (2016) With Project freeway ramp analysis results indicate that no additional freeway ramp location is projected to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, with existing geometry, in addition to the previously identified location under Interim Year (2016) Without Project conditions.

Long Range (2035) Without Project

The Long Range (2035) Without Project freeway mainline and ramp analysis results are presented on **Tables 3.12-23** and **24**. As shown on **Table 3.12-23**, the following study area freeway segment is found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours, with existing geometry, in addition to the locations previously identified under Interim Year (2016) Without Project conditions:

ID	Freeway Mainline Segments
8	I-210 Westbound, Immediately east of Irwindale Avenue Westbound Off-Ramp

The Long Range (2035) Without Project freeway ramp analysis results presented on **Table 3.12-24** indicate that no additional freeway ramp location is projected to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, with existing geometry, compared to Interim Year (2016) Without Project conditions.

Long Range (2035) With Project

The Long Range (2035) With Project freeway mainline and ramp analysis results are presented on **Table 3.12-25 and 26**. As shown on **Table 3.12-26**, no additional freeway segment location is found to operate at unacceptable LOS (LOS "E" or worse) during the peak hours, with existing geometry, in addition to the locations previously identified under Long Range (2035) Without Project conditions.

The Long Range (2035) With Project freeway ramp analysis results presented on **Table 3.12-36** indicate that no additional freeway ramp location is projected to operate at unacceptable level of service (LOS "E" or worse) during the peak hours, in addition to the locations previously identified under Long Range Year (2035) With Project conditions.

Table 3.12-21 Interim Year (2016) With Project Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	6,871	6,815	29.2	28.9	D	D
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	5,406	5,304	21.8	21.4	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,669	5,437	22.9	21.9	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	6,318	5,940	26.1	24.2	D	C
	SB	Immediately North of Arrow Highway Off Ramps	4	5,171	5,380	20.8	21.7	C	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	4,102	4,660	16.5	18.7	B	C
		Immediately South of Live Oak On Ramps	4	5,720	6,482	23.5	27.0	C	D
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	7,585	7,680	36.8	35.3	E	E
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	6,915	7,096	29.5	30.7	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	7,997	7,896	38.3	37.3	E	E
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	8,158	7,817	40.1	36.6	E	E
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	6,496	6,921	27.1	29.6	D	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	7,035	7,905	30.3	37.4	D	E

[1] Number of lanes is in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-22 Interim Year (2016) With Project Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,465	1,512	38.6	38.6	E	E
		NB Loop On Ramp for Eastbound Arrow Highway	4	263	133	22.4	21.8	C	C
		NB Direct On Ramp for Westbound Arrow Highway	4	649	503	26.0	24.0	C	C
	SB	SB Off Ramp at Arrow Highway	4	1,069	720	29.6	28.7	D	D
		SB On Ramp at Live Oak Avenue	4	1,618	1,822	28.4	32.0	D	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	670	584	36.2	36.1	E	E
		WB Loop On Ramp at Irwindale Avenue	4	593	500	25.6	26.5	C	C
		WB Direct On Ramp at Irwindale Avenue	4	489	300	31.3	30.1	D	D
	EB	EB Off Ramp at Irwindale Avenue	4	1,662	896	25.0	21.7	C	C
		EB On Ramp at Irwindale Avenue	4	539	984	28.7	32.0	D	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+ : Ramps and Ramp Junction software, Version 5.21

Table 3.12-23 Long Range (2035) Without Project Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	7,024	6,955	30.2	29.8	D	D
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	5,626	5,517	22.8	22.3	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,900	5,655	24.0	22.9	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	6,418	6,030	26.6	24.6	D	C
	SB	Immediately North of Arrow Highway Off Ramps	4	5,214	5,447	21.0	22.0	C	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	4,266	4,847	17.1	19.5	B	C
		Immediately South of Live Oak On Ramps	4	5,831	6,619	23.7	27.8	C	D
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	7,819	7,929	36.6	37.7	E	E
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	7,128	7,327	31.0	32.4	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	8,255	8,160	41.3	40.2	E	E
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	8,421	8,075	43.4	39.2	E	E
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	6,690	7,142	28.2	31.1	D	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	7,246	8,161	31.8	40.2	D	E

[1] Number of lanes is in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-24 Long Range (2035) Without Project Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,398	1,439	38.9	38.8	E	E
		NB Loop On Ramp for Eastbound Arrow Highway	4	274	138	23.2	22.6	C	C
		NB Direct On Ramp for Westbound Arrow Highway	4	518	375	25.7	23.7	C	C
	SB	SB Off Ramp at Arrow Highway	4	948	600	29.2	28.3	D	D
		SB On Ramp at Live Oak Avenue	4	1,565	1,772	28.5	32.2	D	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	691	602	37.3	37.3	E	E
		WB Loop On Ramp at Irwindale Avenue	4	617	520	27.7	28.7	C	D
		WB Direct On Ramp at Irwindale Avenue	4	510	313	30.2	29.9	D	D
	EB	EB Off Ramp at Irwindale Avenue	4	1,731	933	27.6	24.2	C	C
		EB On Ramp at Irwindale Avenue	4	556	1,019	29.5	33.0	D	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps unless noted.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+ : Ramps and Ramp Junction software, Version 5.21

Table 3.12-23 Long Range (2035) Without Project Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	7,024	6,955	30.2	29.8	D	D
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	5,626	5,517	22.8	22.3	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,900	5,655	24.0	22.9	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	6,418	6,030	26.6	24.6	D	C
	SB	Immediately North of Arrow Highway Off Ramps	4	5,214	5,447	21.0	22.0	C	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	4,266	4,847	17.1	19.5	B	C
		Immediately South of Live Oak On Ramps	4	5,831	6,619	23.7	27.8	C	D
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	7,819	7,929	36.6	37.7	E	E
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	7,128	7,327	31.0	32.4	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	8,255	8,160	41.3	40.2	E	E
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	8,421	8,075	43.4	39.2	E	E
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	6,690	7,142	28.2	31.1	D	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	7,246	8,161	31.8	40.2	D	E

[1] Number of lanes is in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-24 Long Range (2035) Without Project Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,398	1,439	38.9	38.8	E	E
		NB Loop On Ramp for Eastbound Arrow Highway	4	274	138	23.2	22.6	C	C
		NB Direct On Ramp for Westbound Arrow Highway	4	518	375	25.7	23.7	C	C
	SB	SB Off Ramp at Arrow Highway	4	948	600	29.2	28.3	D	D
		SB On Ramp at Live Oak Avenue	4	1,565	1,772	28.5	32.2	D	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	691	602	37.3	37.3	E	E
		WB Loop On Ramp at Irwindale Avenue	4	617	520	27.7	28.7	C	D
		WB Direct On Ramp at Irwindale Avenue	4	510	313	30.2	29.9	D	D
	EB	EB Off Ramp at Irwindale Avenue	4	1,731	933	27.6	24.2	C	C
		EB On Ramp at Irwindale Avenue	4	556	1,019	29.5	33.0	D	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps unless noted.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+: Ramps and Ramp Junction software, Version 5.21

Table 3.12-25 Long Range (2035) With Project Conditions Basic Freeway Segment Analysis Summary

FREEWAY	DIRECTION	MAINLINE SEGMENT LOCATION	Lanes[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	Immediately South of Live Oak Avenue	4	7,146	7,084	31.1	30.6	D	D
		Between Live Oak Avenue and Eastbound Arrow Highway Loop On Ramp	4	5,626	5,517	22.8	22.3	C	C
		Between Eastbound Arrow Highway Loop On Ramp and Westbound Arrow Highway On Ramp	4	5,900	5,655	24.0	22.9	C	C
		Immediately North of Westbound Arrow Highway On Ramp	4	6,568	6,171	27.4	25.3	D	C
	SB	Immediately North of Arrow Highway Off Ramps	4	5,371	5,589	21.7	22.6	C	C
		Between Arrow Highway Off Ramps and Live Oak On Ramps	4	4,266	4,847	17.1	19.5	B	C
		Immediately South of Live Oak On Ramps	4	5,945	6,739	24.2	28.4	C	D
I-210 FREEWAY	WB	Immediately East of Irwindale Avenue Westbound Off Ramp	4	7,897	7,996	37.3	38.3	E	E
		Between Irwindale Avenue Westbound Loop On Ramp and Irwindale Avenue Westbound Off Ramp	4	7,201	7,389	31.5	32.9	D	D
		Immediately West of Irwindale Avenue Westbound On Ramp	4	8,328	8,222	42.2	40.9	E	E
	EB	Immediately West of Irwindale Avenue Eastbound Off Ramp	4	8,494	8,138	44.4	39.9	E	E
		Between Irwindale Avenue Eastbound Off Ramp and Irwindale Avenue Eastbound OnRamp	4	6,763	7,205	28.6	31.5	D	D
		Immediately East of Irwindale Avenue Eastbound Off Ramp	4	7,323	8,229	32.4	40.9	D	E

[1] Number of lanes is in the specified direction and is based on existing conditions.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+: Basic Freeway Segments software, Version 5.21

Table 3.12-26 Long Range (2035) With Project Basic Freeway Ramp Junction Merge/Diverge Analysis Summary

FREEWAY	DIRECTION	RAMP LOCATION	Lanes on Freeway[1]	VOLUME		DENSITY[2]		LOS[3]	
				AM	PM	AM	PM	AM	PM
I-605 FREEWAY	NB	NB Off Ramp at Live Oak Avenue	4	1,520	1,568	40.1	40.1	E	E
		NB Loop On Ramp for Eastbound Arrow Highway	4	274	138	23.2	22.6	C	C
		NB Direct On Ramp for Westbound Arrow Highway	4	668	516	26.9	24.9	C	C
	SB	SB Off Ramp at Arrow Highway	4	1,105	742	30.7	29.7	D	D
		SB On Ramp at Live Oak Avenue	4	1,679	1,892	29.4	33.2	D	D
I-210 FREEWAY	WB	WB Off Ramp at Irwindale Avenue	4	696	607	37.6	37.6	E	E
		WB Loop On Ramp at Irwindale Avenue	4	617	520	28.3	29.2	D	D
		WB Direct On Ramp at Irwindale Avenue	4	510	313	31.6	31.3	D	D
	EB	EB Off Ramp at Irwindale Avenue	4	1,731	933	28.3	24.8	D	C
		EB On Ramp at Irwindale Avenue	4	560	1,024	29.7	33.3	D	D

[1] Existing conditions for all study area merge/diverge locations consists of single lane on/off ramps.

[2] Density is measured by passenger cars per mile per lane (pc/mi/ln).

[3] Level of service determined using HCS+ : Ramps and Ramp Junction software, Version 5.21

Queuing Analysis

A traffic signal progression analysis has been conducted at the I-605 freeway on/off ramp intersections to evaluate vehicular queuing and stacking length requirements by considering the signal timing and physical spacing of intersections. The progression results have been based on the 95th percentile queue output from the Synchro plus SimTraffic 8 software program.

Table 3.12-27 summarizes the vehicular queues for Existing, Existing Plus Project, Interim Year Without Project, Interim Year With Project, Long Range (2035) Without Project, and Long Range (2035) With Project conditions. Based on the results presented in **Table 3.12-27**, vehicular queue for the I-605 SB On-Ramp / Live Oak Avenue westbound left turn movement is expected to exceed the existing storage length under all scenarios. The **MM T-1** improvements extend the useable westbound left turn lane movement at the intersection of I-605 SB On-Ramp / Live Oak Avenue, as shown on **Exhibit 3.12-37**.

MM T-1 consists of the following improvements at the I-605 NB Off-Ramp (NS) / Live Oak Avenue (EW) intersection, as highlighted in **Exhibit 3.12-38**:

- Install a traffic signal
- Construct a 2nd northbound right turn lane.
- Provide a 3rd westbound through lane by modifying the existing raised median. This will also provide additional queuing storage for the westbound left turn lane at the intersection of I-605 SB On-Ramp (NS) / Live Oak Avenue (EW).

MM T-2 consists of the following improvements at the I-605 SB Off-Ramp (NS) / Arrow Highway (EW) intersection, as highlighted in Exhibit 3.12-38:

- Construct a 2nd southbound left turn lane.

Threshold T-3

Would the Project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact

There are no airports in the vicinity of the Project. Implementation of the Proposed Project would not be expected to have any effect on existing air traffic travel patterns, air traffic levels, or airport facilities; and therefore no mitigation is required.

Table 3.12-27 95th Percentile Intersection Queuing Analysis Summary Comparison

ID	Intersection	Turning Movement Lane	Existing Storage Length[4] (feet)	Existing (2013)						Interim Year (2016)						Long Range (2035)					
				No Project Queue length per lane (ft)		With Project Queue length per lane (ft)		Delta[2] Queue length per lane (ft)		No Project Queue length per lane (ft)		With Project Queue length per lane (ft)		Delta[2] Queue length per lane (ft)		No Project Queue length per lane (ft)		With Project Queue length per lane (ft)		Delta[2] Queue length per lane (ft)	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
3	I-605 SB Off-Ramp (NS) /																						
	Arrow Hwy. (EW)	SBL	980	232	150	404	278	172	128	317	188	470	340	153	152	334	197	488	352	154	155
		SBR	1060	0	0	0	0	-	-	0	0	0	0	-	-	0	0	0	0	-	-
		EBT	1300	46	87	46	89	-	2	53	101	54	103	1	2	55	106	56	108	1	2
		WBT	1160	273	54	277	55	4	1	318	65	324	68	6	3	368	68	405	70	37	2
7	I-605 SB On-Ramp (NS) /																						
	Live Oak Av. (EW)	EBT	1200	70	274	71	275	1	1	82	315	83	317	1	2	85	422	86	336	1	(86) [3]
		EBR	670	0	0	0	0	-	-	0	0	0	0	-	-	0	0	0	0	-	-
		WBL	350	**504**	267	**611**	**423**	107	156	**598**	**395**	**698**	**509**	100	114	**631**	**335**	**719**	**533**	88	198
		WBT	545	0	0	0	0	-	-	0	0	0	0	-	-	0	0	0	0	-	-
8	I-605 NB Off-Ramp (NS) /																						
	Live Oak Av. (EW)																						
	- EBR on Live Oak Av. [6]	NBR	835	147	555	459	459	312	(96) [3]	499	459	480	459	(19) [3]	-	513	459	562	459	49	-
	- WBR on Live Oak Av. [6]	SBR Loop	1560	456	448	427	413	(29) [3]	(35) [3]	374	396	374	374	-	(22) [3]	374	378	485	454	111	76
		EBT	545	0	0	0	0	-	-	0	0	0	0	-	-	0	0	0	0	-	-
	- NWT [6]	WBT	545	0	98	20	15	20	(83) [3]	46	45	26	15	(20) [3]	(30) [3]	42	22	43	23	1	1

[1] Queue length calculated using Synchro 8, traffic signal coordination software or SimTraffic for unsignalized intersections.

[2] Delta = With Project - No Project

[3] Synchro 8 software program calculates the 95th Percentile Queue based on the Average Queue plus a 1.65 standard deviation. The 95th Percentile Queue, which may not ever be observed, is based on statistical calculations and simulations. In some cases, the addition of Project traffic yields a reduction in queue length due to variations in arrival patterns distributed to other intersection movements.

[4] Existing pocket length storage (for turning movements) or link distance (for through movements).

BOLD = 95th% deficiency. Vehicular queue exceeds available storange length.

Exhibit 3.12-37 Conceptual Striping Plan for I-605 / Live Oak Avenue Interchange Recommended Improvements

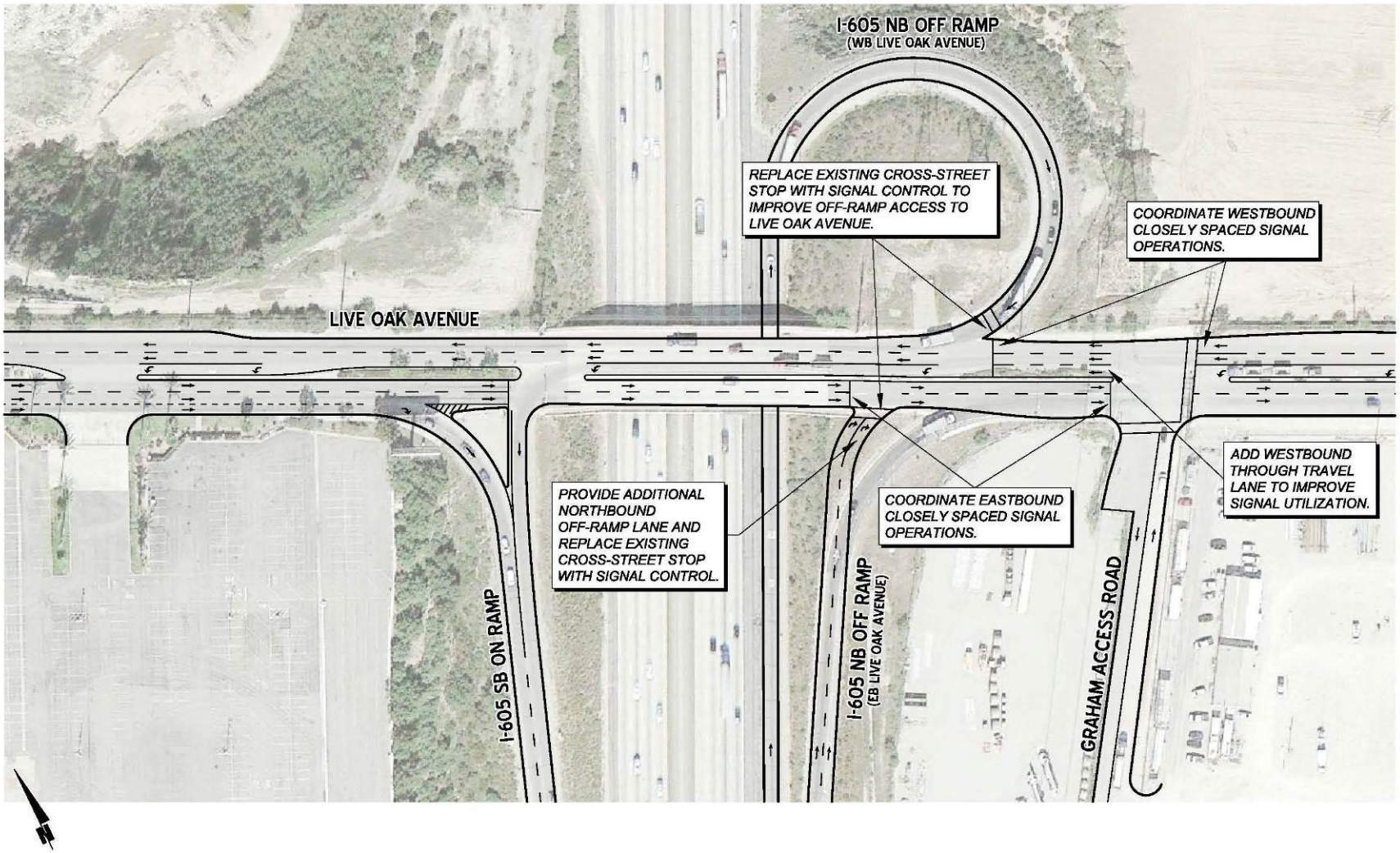
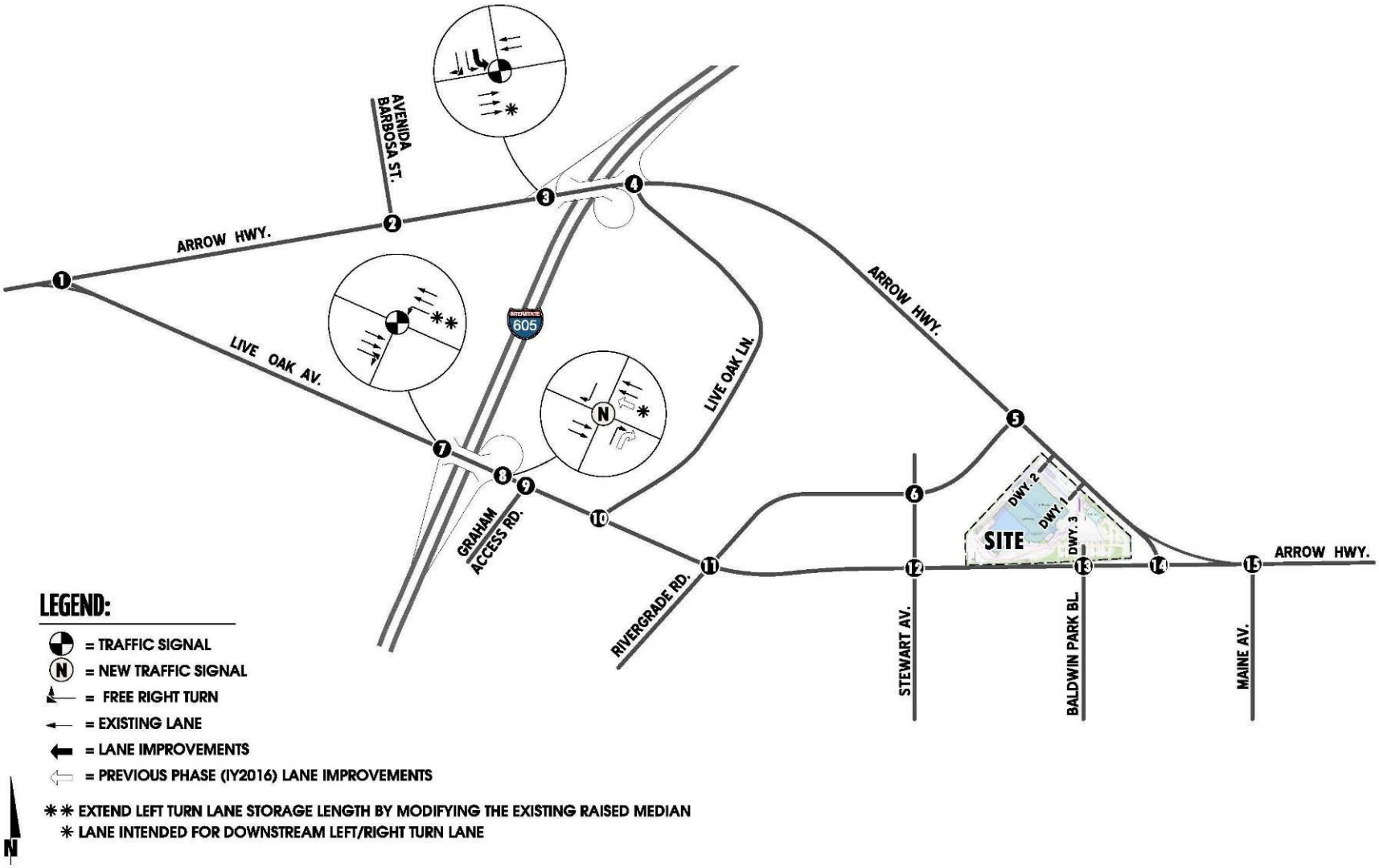


Exhibit 3.12-38 Interim Year (2016) With Project Conditions Required Off-Site Improvements



Threshold T-4

Would the Project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact

The recommended project on-site and off-site roadway improvements provide for safe and efficient access conditions, and accommodate the travel activities associated with the Proposed Project within capacities and Level of Service policies as discussed above. Any development on city streets will be subject to review by public works, city engineer to meet all applicable street standards.

Based upon the above, it is not reasonably foreseeable that implementation of the Proposed Project would involve any potentially dangerous traffic or transportation hazards or propose any incompatible uses that could affect existing traffic or circulation in the Project area. No mitigation is required.

Threshold T-5

Would the Project result in inadequate emergency access?

Less than Significant

Emergency site access to the Proposed Project is available the fire department access driveway (refer to Site Plan). This driveway is designed to provide adequate emergency access to the site for use by emergency vehicles only. The location of this driveway is along Live Oak Avenue, at the southwestern corner of the site. The design of the site access for emergency vehicles complies with the California Fire Code as adopted an implemented in the City and construction will be required to meet Fire Code standards. As such, there are no reasonably foreseeable impacts from inadequate emergency access. No mitigation is required.

Threshold T-6

Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact

The Proposed Project does not conflict with any adopted policies, plans, or programs supporting alternative transportation modes. The City has no other plans, ordinances or policies, that "establish measures of effectiveness for the performance of the circulation system," including related to mass transit and non-motorized travel, such as a pedestrian or bicycle circulation plan, which are applicable to the Proposed Project. The only bike path within the City of Irwindale is located on the west levee of San Gabriel River near the site. Based on the existing uses near the project site, and the project's trip generation characteristics, pedestrian activity is anticipated to

be nominal. No mitigation is required.

Traffic Mitigation Program

The Mitigation Program was analyzed on the ability to reduce or offset the potential impact based on CEQA thresholds. Recommended on-and off-site improvements designed to eliminate all anticipated roadway operational deficiencies throughout the study area have been identified within the *Traffic Impact Analysis* for Long Range (2035) With Project Buildout traffic conditions. The improvements were determined through the operations analysis sections of the *Traffic Impact Analysis*. All recommended off-site and on-site improvements would apply to the Project variant as well.

Per the City of Irwindale *Traffic Study Guidelines*, the Proposed Project shall pay its fair share of improvements to eliminate the significant impacts identified in the *Traffic Impact Analysis*. The Fair Share Contribution towards the required 2035 improvements at each location is based on the Proposed Project's percentage of new traffic for Long Range With Project (2035) conditions. The Proposed Project is anticipated to contribute to approximately 33% of the total new traffic at the intersection of I-605 SB Off-Ramp / Arrow Highway and I-605 NB Off-Ramp / Live Oak Avenue.

Recommended Off-Site Improvements

Existing plus Project, Interim Year (2016) Without and With Project, and Long Range (2035) conditions, the following improvements are recommended:

MM T-1

To mitigate potential traffic impacts at I-605 NB Off-Ramp (NS) / Live Oak Avenue (EW)(#8), the developer will be required to construct or fund the following improvement:

a. Install a traffic signal.
b. Construct a 2nd northbound right turn lane.
c. Provide a 3rd westbound through lane by modifying the existing raised median. This will also provide additional queuing storage for the westbound left turn lane at the intersection of I-605 SB On-Ramp (NS) / Live Oak Avenue (EW).

In addition, the following improvements are recommended for 2035 with Project Conditions:

MM T-2

To mitigate potential traffic impacts to I-605 SB Off-Ramp (NS) / Arrow Highway (EW)(#3), the developer will be required to construct or fund the following improvements:

Construct a 2nd southbound left turn lane.

On-Site Improvements Required to Mitigate Potential Traffic Impacts from Vehicles Entering and Exiting the Site

In addition to the impacts analysis provided above, the *Traffic Impact Analysis* (Appendix G) identified additional improvements that would eliminate potential impacts to Arrow Highway and Baldwin Park Boulevard, from vehicles entering and exiting the site. Vehicle queuing on-site at the Arrow Highway / Driveway 1 intersection is estimated to require approximately 240 feet of back-up / storage length during peak hours. The Project site plan accommodates this on-site peak hour queuing activity. Inbound Project traffic does not cross the paths of outbound vehicles in the vicinity of Driveway 1. However, the site access recommendation shown on **Exhibit 3.12-39,** provided in the *Traffic Impact Analysis* in Appendix G, include changes to the convenience store/gas pump access configuration in order to reduce conflicting auto turning movements in the vicinity of Driveway 1, as well as changes to reduce impacts from Driveway 2, 3 and 4. These recommendations will be required as mitigation measures as provided below.

MM T-3
To mitigate potential traffic impacts to Arrow Highway (NS) / Driveway 1 (EW), the Applicant shall be required to do the following:

Prior to commencement of operations, the Applicant shall install a traffic signal and construct the intersection with the following geometrics:

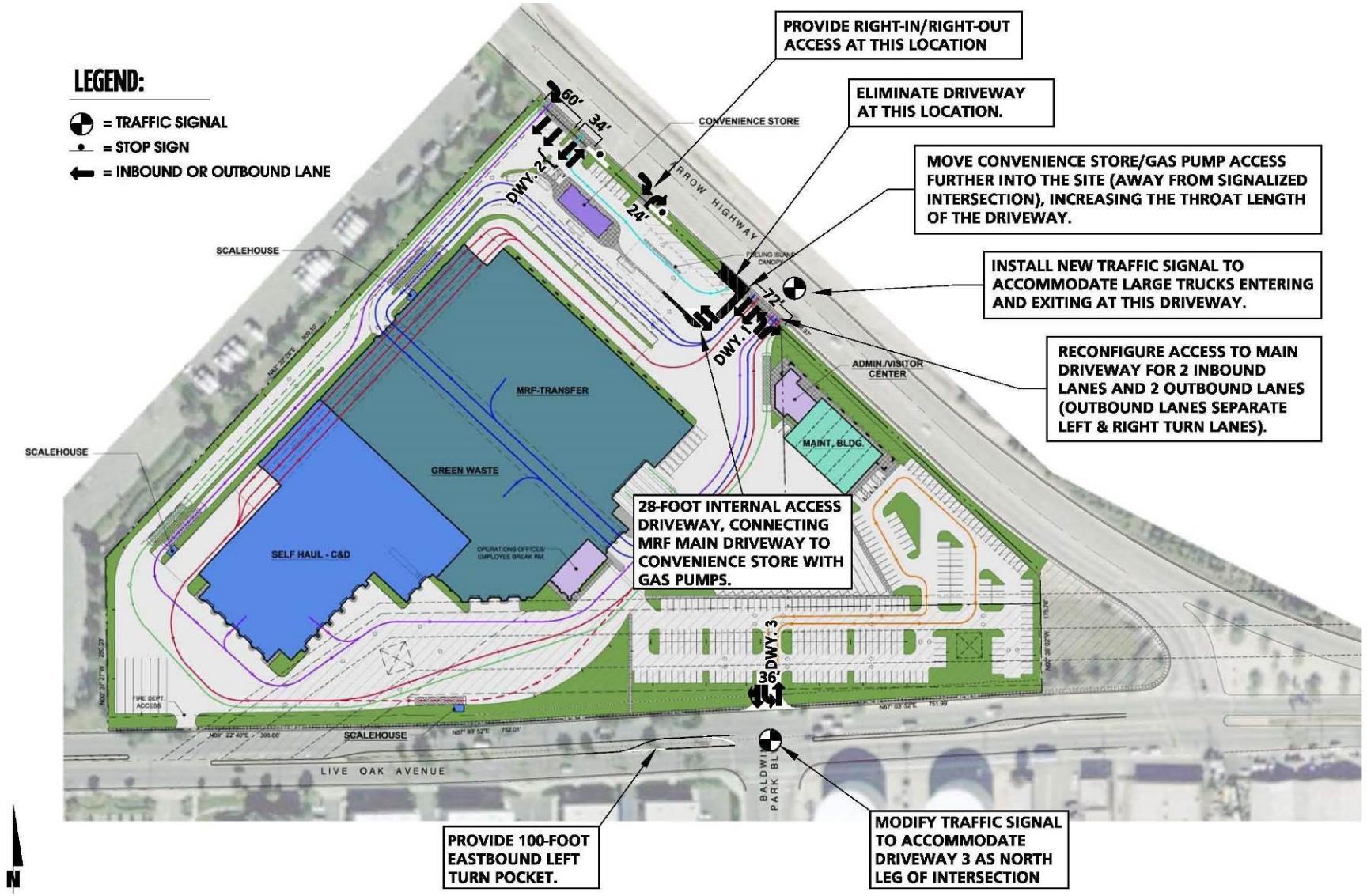
- Northbound Approach: One left turn lane (two way turn lane) and two through lanes.
- Southbound Approach: Two through lanes and one right turn lane.
- Eastbound Approach: One left turn lane and one right turn lane.
- Westbound Approach: N/A

MM T-4
To mitigate potential traffic impacts to Arrow Highway (NS) / Driveway 2 (EW), the Applicant shall be required to do the following:

Prior to commencement of operations, the Applicant shall install a stop control on the eastbound approach and construct the intersection with the following geometrics:

- Northbound Approach: One left turn lane (two way turn lane) and two through lanes.
- Southbound Approach: Two through lanes and one right turn lane.
- Eastbound Approach: One shared left turn and right turn lane.
- Westbound Approach: N/A

Exhibit 3.12-39 Site Access Recommendations



MM T-5
To mitigate the potential impact to Driveway 3 - Baldwin Park Boulevard (NS) / Live Oak Av. (EW), the Applicant shall be required to do the following:

Prior to commencement of operations, the Applicant shall modify traffic signal to include Project Driveway 3 (north leg) and construct the intersection with the following geometrics:

- Northbound Approach: Two left turn lanes and one shared through-right turn lane.
- Southbound Approach: One left turn lane and one shared through-right turn lane.

MM T-6
To mitigate the potential impact to Driveway 3 - Baldwin Park Boulevard (NS) / Live Oak Av. (EW), Applicant shall be required to do the following:

Prior to commencement of operations, the Applicant shall construct on the Eastbound Approach with *One left turn lane (100-foot pocket length), two through lanes, and one defacto right turn lane.*

MM T-7
To mitigate the potential impact to Driveway 3 - Baldwin Park Boulevard (NS) / Live Oak Av. (EW), the Applicant shall be required to do the following:

Prior to commencement of operations, the Applicant shall construct a Westbound Approach: *One left turn lane, two through lanes, and one right turn lane.*

- Provide a right-in/right-out access for the convenience store located between Driveway 1 and Driveway 2 along Arrow Highway.
- Eliminate convenience store Driveway located immediately to the north of Driveway 1 along Arrow Highway.
- Move Convenience Store/Gas pump access further into the site (away from signalized intersection, increasing the throat length of the driveway).
- Provide a 28-foot internal access driveway connecting MRF main driveway to convenience store with gas pumps.
- On-site traffic signing and striping shall be implemented in conjunction with detailed construction plans for the project site.
- Sight distance at the project driveways shall be reviewed with respect to standard Caltrans and City of Irwindale sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

3.12.9 RESIDUAL IMPACTS AFTER MITIGATION PROGRAM

Implementation of the recommendations referred to within this EIR as the traffic Mitigation Program, would reduce potential transportation and circulation impacts to a less than significant level. Under the four (4) scenarios of traffic conditions presented and analyzed in the *Traffic Impact Analysis*, the study area intersections are projected to operate at acceptable levels of service during peak hours [except where noted as an existing deficiency]. Therefore, there are no residual impacts after implementation of the identified Mitigation Program.

3.12.10 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in Chapter 3.0, *Environmental Setting and Impact Analysis*, above.

Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on traffic transportation or circulation?

Yes. The Proposed Project is expected to contribute cumulative impacts to existing deficiencies or projected deficiencies as follows:

Freeway Mainline Segments
I-210 Westbound, Immediately east of Irwindale Avenue Westbound Off-Ramp
I-210 Westbound, Immediately West of Irwindale Avenue Westbound On-Ramp
I-210 Eastbound, Immediately West of Irwindale Avenue Eastbound Off-Ramp
I-210 Eastbound, Immediately East of Irwindale Avenue Eastbound Off-Ramp

Freeway Merge/Diverge Ramp Junctions
I-605 Northbound - Off-Ramp at Live Oak Avenue (Diverge)
I-210 Westbound - Off-Ramp at Irwindale Avenue (Diverge)

Neither Caltrans nor the State has adopted a fee program that can ensure that locally-contributed impact fees will be tied to improvements to freeway mainlines, and only Caltrans has the jurisdiction over mainline improvements. Because Caltrans has exclusive control over state highway improvements, ensuring that fair share contributions to mainline improvements are actually part of a program tied to implementation of mitigation is within the jurisdiction of Caltrans. As such, the City of Irwindale may decide whether specific overriding economic, legal, social, technological, or other benefits of the project outweigh the unavoidable adverse cumulative traffic impacts associated with the project.

3.13 WATER QUALITY AND HYDROLOGY

This chapter presents an analysis of the potential environmental effects of the Proposed Project on existing water quality, hydrology, hydrological conditions, and drainage patterns associated with project construction and/or operations. An analysis of the site-specific potential for water quality and hydrology impacts associated with implementation of the proposed project is discussed, and is followed by a description of relevant federal, State and local laws and regulations. Where necessary, a Mitigation Program to avoid, eliminate, or reduce potential impacts to a less than significant level is been identified.

3.13.1 EXISTING ENVIRONMENT

Surface Water

The City is located in the Los Angeles-San Gabriel Hydrologic Unit. The San Gabriel River watershed is the main surface water body in this Unit, covering approximately 689 square miles. The San Gabriel River flows from northeast to southwest through the City, generally flowing parallel to Interstate 605 (I-605). The San Gabriel River headwaters are located in the San Gabriel Mountains to the north. Most of the stormwater runoff in the region is directed to the San Gabriel River. The Proposed Project site lays approximately one-quarter mile east and south of the San Gabriel River.

The upper two reaches of the San Gabriel River watershed consist largely of undisturbed riparian and woodland habitats. The middle reach of the watershed contains most of the open-pit quarries and large spreading grounds utilized for groundwater recharge. The lower reach of the watershed flows through a concrete-lined channel in a heavily urbanized portion of Los Angeles County before becoming a soft bottom channel where it discharges to the Pacific Ocean in the City of Long Beach (SWRCB, 2004).

Most of the water flow in the San Gabriel River occurs from November through April. However, a few spring and summer thunderstorms can also provide summer water flow in the San Gabriel River. The majority of the City's stormwater runoff flows are directed to this river.

Historically, flood waters from the San Gabriel River washed large alluvium materials from the San Gabriel Mountains and deposited them in the flatlands of the San Gabriel Valley within the City's boundaries; (flood waters are now controlled by the Santa Fe Dam). Within the City, these alluvial deposits can reach a depth of over 600-feet below the current ground level (bgs) and comprise the mineral resource extracted within the City's active mines. South of the Santa Fe Dam, the San Gabriel River flows through a concrete-lined channel. The bottom of this channel is native alluvial deposits consisting mostly of sand and gravel that allow rapid percolation of water into the subsurface.

Other surface waters within or near the City include the Santa Fe Dam (70-acre recreational lake), exposed-groundwater bodies in aggregate mines (e.g., Vulcan Durbin, Hanson Aggregate, and United Rock Nos. 1 and 2), Sawpit Wash, Buena Vista Channel, and Big Dalton Wash. In addition, there are a number of groundwater recharge areas operated by the Los Angeles County Flood Control District in and near the City.

Surface water quality within the San Gabriel River is seasonally variable. During the start of the rainy season in October/November, the main contaminate sources for the river are sediment from runoff in the San Gabriel Mountains and stormwater runoff from local streets. Stormwater runoff contains a variety of material such as organics (e.g., gasoline, oils, and lubricating fluids), non-organics (e.g., dirt and dust), and solid waste (e.g., paper, cans, and plastic). However, after the first few rains ("first flush effect"), the amount of these materials in the stormwater runoff decreases significantly.

Conventional Water Quality Data

The Los Angeles County Department of Public Works routinely conducts conventional water quality testing of both surface and groundwater within the City. Analytical results indicate that none of these waters currently exceed federal or State drinking water standards. Total hardness ranges from 100 to 300 milligrams per liter and pH ranges from 6.8 to 8.4 within the City.

Groundwater

Groundwater basins underlie the surface water network of the Los Angeles Region and are generally composed of young and old alluvial material. These materials consist primarily of sand, gravel, silt, cobbles, and boulders, in various mixtures. The Proposed Project is located within the Main San Gabriel Valley Groundwater Basin (Basin) aquifer that underlies most of the San Gabriel Valley. This Basin is approximately 167 square miles and has a potential fresh water storage capacity of about 8.6 million acre-feet. This Basin is administrated by the Main San Gabriel Basin Watermaster (Watermaster). The extent of this San Gabriel Basin is shown in **Exhibit 3.13-1 Main San Gabriel Basin**. (http://www.watermaster.org/basinmap.html Accessed August 2013).

The Main San Gabriel Basin lies in eastern Los Angeles County. The hydrologic basin or watershed coincides with a portion of the upper San Gabriel River watershed, and the aquifer or groundwater basin underlies most of the San Gabriel Valley. The groundwater basin is bounded by the San Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, and by a series of hills and the Raymond Fault to the west. The watershed is drained by the San Gabriel River and Rio Hondo, a tributary of the Los Angeles River.

Principal water-bearing formations of the basin are unconsolidated and semi-consolidated sediments which range in size from coarse gravel to fine-grained sands. The major sources of

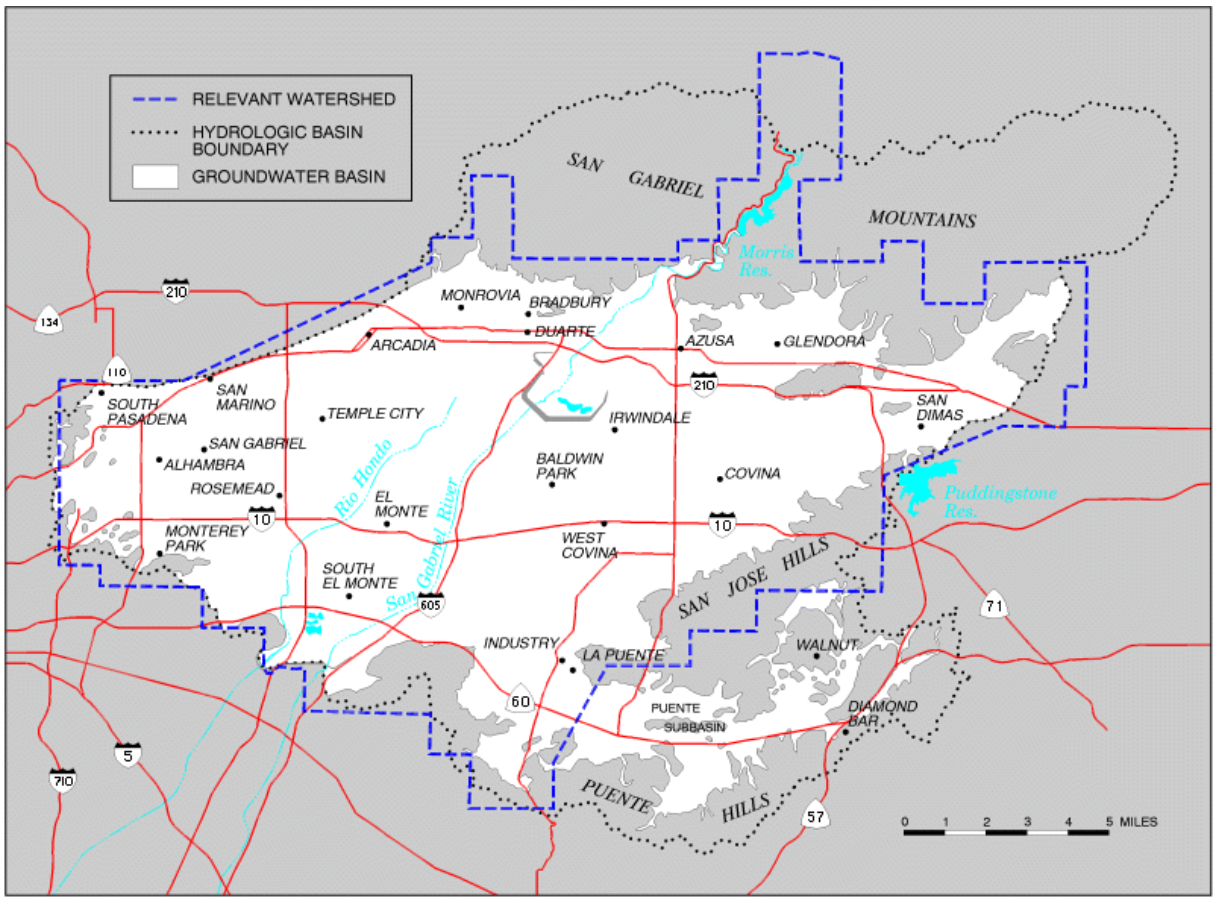
natural recharge are infiltration of rainfall on the valley floor and percolation of runoff from the adjacent mountains. The basin also receives imported water and return flow from applied water.

Groundwater levels fluctuate substantially in the Basin due to natural infiltration from major storms, managed surface water spreading operations along the San Gabriel River, and long-term wet and dry climate cycles that normally affect southern California. For example, annual groundwater recharge from all sources from 1972 through 1994 ranged from a low of 28,000 to a maximum of 300,000 acre-feet per year.

Groundwater levels at the Baldwin Park Key Well are used as the benchmark for determining the groundwater level for the entire aquifer. The management goal of the Watermaster is to keep the Key Well water level between 200- and 250-feet above MSL. The groundwater level is currently nearer the upper end of the recommended operating level for the Basin, and is adequate for meeting current water needs in the region. Groundwater levels within Irwindale range between 50- to 150-feet below bgs. The historic high groundwater level was 343-feet above MSL during 1941. The historic low was 203-feet in 1977.

Significant groundwater contamination was discovered in the San Gabriel Valley in the late 1970s and early 1980s. The groundwater contamination was caused by historic industrial and agricultural practices in the basin that included improper disposal of solvents and other chemical wastes into the groundwater; thereby, resulting in Volatile Organic Carbons (VOC) contamination. Poor agricultural practices by farmers have also resulted in contamination of the groundwater with nitrates (NO_3). Much of the San Gabriel Valley groundwater is considered a Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLA) and National Priority List - Superfund (NPL) cleanup site. A number of agencies are involved in remediating this existing groundwater contamination including the Los Angeles RWQCB, the Watermaster, the San Gabriel Valley Water Quality Authority (WQA), and the U.S. Environmental Protection Agency (U.S. EPA).

Exhibit 3.13-1 Main San Gabriel Basin



Source: http://www.watermaster.org/basinmap.html

Floodplains

Historical flooding has occurred along the San Gabriel River. As a result of this flooding the USACE constructed the Santa Fe Dam to act as a control and storage basin during heavy winter or seasonal summer thunderstorm rainwater flows. Upstream of the Santa Fe Dam, the San Gabriel River flows through a concrete-lined and walled channel. Below the dam the channel bottom is native alluvial material. These USACE projects have been designed to accommodate maximum projected stormwater flows from a 100-year storm.

The Federal Emergency Management Agency (FEMA) has indicated on their FEMA Issued Flood Map (Item ID 06037C1700F, dated 09/26/2008) that the Proposed Project is within a Zone X. A Zone X is defined as: "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Therefore, the potential flooding risk at the site is very low, as would be expected on the downstream side of a major regional flood control dam.

3.13.2 REGULATORY SETTING

Federal Clean Water Act

The Federal Clean Water Act (33 U.S.C. 1251 et seq.) establishes water quality standards and criteria and programs to maintain beneficial uses of water. For example, Section 208 requires the use of Best Management Practices (BMPs) to control releases of pollutants in stormwater at construction sites. Section 303(d) requires that all activities be evaluated for their effect on impaired water bodies and that plans are made for improving the quality of these water bodies. Section 404 authorizes the Army Corp of Engineers (ACOE) to evaluate projects that will discharge dredge or fill materials into waters of the United States and provides mechanisms for wetland protection. Section 401 requires the State Water Quality Control Board (SWQCB) to monitor compliance of site discharges to meet water quality standards. Section 402(p)(3)(B)(iii) authorizes the National Pollution Discharge Elimination System (NPDES) permit program to control water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches.

Stormwater discharges are generated by runoff from land and impervious areas such as paved streets, parking lots, and building rooftops during rainfall events that often contain pollutants in quantities that could adversely affect water quality in local water bodies. Most stormwater discharges are considered point sources and require coverage by an NPDES permit. The primary method to control stormwater discharges is through the use of prescribed BMPs.

California Toxics Rule

The California Toxics Rule (CTR) is a Federal regulation issued by the EPA providing water quality criteria for potentially toxic constituents in receiving waters with human health or aquatic life designated uses in the State of California.

Los Angeles Regional Water Resources Control Board

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) was enacted to establish a regulatory program to protect water quality and beneficial uses of all waters of the State of California. It requires the State Water Resources Control Board (SWRCB) and various Regional Water Quality Control Boards (RWQCBs) to plan, implement, manage, and enforce water quality protection and management. Nine RWQCB are located throughout the State to administrate statewide water quality control programs and to enact programs pertinent to their region. The Los Angeles RWQCB is the local authority for Los Angeles and the Proposed Project area.

For control of stormwater discharges from industrial and construction activities, a NPDES Permitting program has been developed and administered by the SWRCB. However, enforcement of specific NPDES Permit requirements is performed by local RWQCBs. Issuance of a NPDES Permit requires preparation of a Notice of Intent (NOI) with the SWRCB and development of a site specific Stormwater Pollution Prevention Program (SWPPP) and monitoring program that incorporates applicable BMPs. SWPPP are required for all construction sites over one acre. NPDES Permits and SWPPP can be required for industrial sites which may pose a risk to local water quality. Furthermore, construction and industrial activities within the Los Angeles Basin must comply with the Los Angeles Basin Water Quality Control Plan, various Los Angeles RWQCB orders, and County of Los Angeles codes and ordinances.

The County of Los Angeles Department of Public Works prepared a Municipal Separate Storm Sewer System National Pollutant Discharge Elimination System (NPDES) Permit (also referred to as a "MS4 Permit") This Permit was adopted by the Los Angeles Regional Water Quality Control Board on November 8, 2012, and became effective December 28, 2012. In addition to the Los Angeles County Flood Control District and County, the Permit is also issued to 84 municipalities within the County, including the City of Irwindale.

Each Permittee is responsible for implementing its own stormwater program. The MS4 Permit allows Permittees the flexibility to develop Watershed Management Programs to implement the requirements of the Permit on a watershed scale through customized strategies, control measures, and BMPs. Participation in a Watershed Management Program is voluntary and allows a Permittee to address the highest watershed priorities, including complying with the requirements of Receiving Water Limitations, Total Maximum Daily Load Provisions, Prohibitions - Non-Storm Water Discharges, and Minimum Control Measures (http://ladpw.org/wmd/NPDES/ Accessed September 2013).

City of Irwindale

The City relies on regulations established by the State Water Resources Control Board and the Los Angeles Regional Water Quality Control Board for ordinances and codes related to water quality and water rights regulation. The City has also adopted the LA County Building Code, which is based on the State Uniform Building Code.

3.13.3 THRESHOLDS OF SIGNIFICANCE

The analysis of potential water quality and hydrological impacts associated with implementation of the Proposed Project assesses the degree to which the Project's short-term (construction-related) activities and long-term (operational) operations would change the existing characteristics of the site and surrounding areas.

Significance thresholds for potential impacts are determined based upon the 2014 State CEQA Guidelines Appendix G. Using the criteria listed below, the Proposed Project would be considered to have a significant adverse water quality and hydrology impact if it were to:

a. Violate any water quality standards or waste discharge requirements.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

d. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional source of polluted runoff.

e. Otherwise substantially degrade water quality.

f. Place housing within a 100-year flood hazard area as mapped on a FEMA map or other flood hazard delineation map.

g. Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

h. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

i. Create an inundation by seiche, tsunami, or mudflow.

3.13.4 IMPACT ANALYSIS AND MITIGATION PROGRAM

THRESHOLD WQ-1

Would the Project violate any water quality standards or waste discharge requirements?

Less than Significant Impact

Best Management Practices (BMPs) are established actions and procedures to reduce the pollutant loading from on-site sources into local water receiving bodies. The two main categories of BMPs are "source control" and "treatment control." Source control BMPs are normally the most effective and economical approach to controlling runoff from a site, because they prevent pollutants from leaving the site and entering local stormwater drainage channels to streams and rivers. Source control BMPs may include materials management; spill prevention and cleanup; street and storm drain maintenance; special site design modifications; and possibly public education/participation activities.

Treatment control involves physical treatment of the runoff, usually through structural means. Some of the more common treatment controls include oil/water separators; infiltration systems, such as ponds, vaults, trenches, dry wells, porous pavement, and concrete grids; constructed wetlands; biofilters comprised of vegetated strips of land or some other medium; extended detention facilities; and/or a combination of these methods. Generally, source controls are more frequently used during construction, while treatment controls are implemented during operation of a facility.

Water pollutants of concern during construction of the Proposed Project include metals, soil additives, construction chemicals, and miscellaneous wastes. Site preparation activities including grading would remove the existing minimal on-site vegetation and other ground cover at the site. Removal of vegetation would have a minimal effect on the potential velocity and volume of stormwater flows from the Proposed Project site, and given the high permeability and level surface is not likely to produce stormwater runoff with sediment and nutrient loading.

Pollutant discharge from the Proposed Project site must be prevented using BMPs. All construction projects that clear and grade more than one-acre of land must obtain coverage under the NPDES General Permit (administered by the Los Angeles RWQCB under SWRCB Water Quality Order 99-08-DWQ) prior to development.

The NPDES General Permit requires preparation of a site specific Storm Water Pollution Prevention Plan (SWPPP). BMPs would be developed to prevent on-site pollutants from coming into contact with receiving waters, to minimize on-site erosion, and to prevent off-site siltation and other construction pollutants from reaching local waterways. The SWPPP also outlines stormwater sampling and BMP inspection requirements. Preparation of the SWPPP and Erosion and Sediment Control Plan with BMPs is required prior to any site grading, or initiation of construction.

Standard construction BMPs include:

- Limiting construction access routes and stabilizing access points.
- Staking/marking construction limits.
- Protection of cut and fill surfaces from sheet, rill and gully erosion.
- Stabilizing temporarily denuded areas with seeding, mulching, jute netting, hay bales and silt fences or other methods.
- Designating specific areas for the stockpiling, handling, preparation and disposal of construction materials.
- Quickly establishing groundcover and landscaping of areas designated to remain pervious. and/or

- Waste material and litter control to prevent existing drainages (e.g., local storm drain along the perimeter of the site) from potentially becoming clogged.

Compliance with the project specific NPDES Permit requirements (e.g., Storm Water Pollution Prevention Plans (SWPPP) and Erosion and Sediment Control Plan with BMPs) would prevent significant water quality impacts to off-site water bodies during construction, and it is concluded that the Proposed Project is not likely to result in significant water quality impacts during construction with adherence to these regulatory requirements.

The Proposed Project will increase the amount of new pavement and impervious surface and thereby, reduce pre-project stormwater infiltration rates. As currently designed, the conceptual site plan designates parking, circulation, and hardscape areas to cover approximately 300,000 SF (about 40%) of surface area and landscape areas would cover approximately 130,000 SF (~17%) of the total site. Consequently, the overall on-site runoff coefficient at the site will increase. This runoff could transport typical operational pollutants such as organics (e.g., oil, grease, gasoline/diesel, greenwaste, and brake fluids), bacteria and nutrients, solid waste, and sediments to a local water-body (e.g., San Gabriel River) during rain events. These pollutants could also percolate into groundwater as it flows along the San Gabriel River. A listing of the general types and potential location of operational pollutants from the Proposed Project are provided in **Table 3.13-1 Potential Operational Pollution Sources**. The primary potential sources for stormwater pollution at the site are from the municipal and commercial solid wastes handled at the facility and vehicle operations (e.g., road dirt falling from vehicles and fluids leaking from vehicles).

The stormwater flow direction, location of the proposed bioretention/underground storage system, porous asphalt, and discharge points for the Proposed Project site are identified in Exhibit **3.13-2 Conceptual Grading Plan**. The stormwater runoff collection points are located along the northwestern and northeastern perimeter of the site. These collection points are located along areas with the highest possibility of discharges of pollutants (e.g., trucks entering the facility, weight station, long-haul trucks departure area, and entrances into the tipping floor and green waste areas). In addition, a drain near the fueling island as well as grading of the convenience store area would direct flow toward the bioretention system to the west of this area.

Table 3.13-1 Potential Operational Pollution Sources

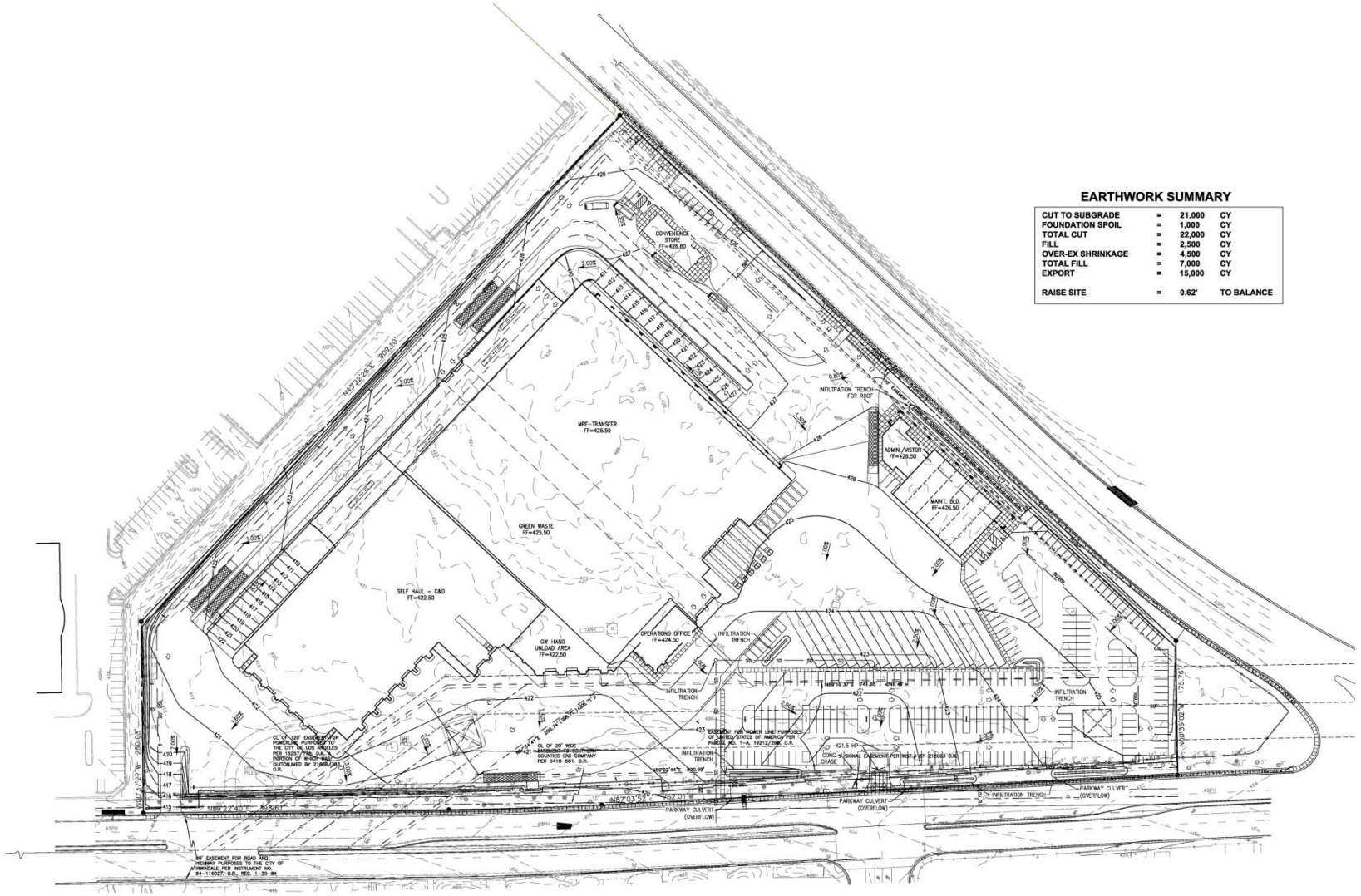
Pollution Sources	Type of Pollutant	Location Within the Project Area
Hazardous fluids & materials found in trash	Organics & non-organic materials	Material Recovery Facility and Temporary Hazardous Material Storage Area
Gasoline, diesel, & fuel pumps	Organics	Convenience Store
Dumpster bin washing & storage	Biological & non-organic materials	Wash Bay Canopy and Pavement Storage Area
Material recycling area	Organics, biological, & non-organic materials	Material Recovery Facility, Transfer Station, and Loading Area

Pollution Sources	Type of Pollutant	Location Within the Project Area
Petroleum storage area	Organics & non-organic materials	Material Recovery Facility
Empty drums	Organic & non-organic	Pavement Storage Areas
Truck, bins, & box storage	Organic	Pavement Storage Areas
Parking areas	Organic	Various
Storage materials & used salvage materials	Organics, biological, & non-organic materials	Green Waste Area
Fork lift operation & parking	Organics	Various Parking Areas
Air compressor	Organic	Material Recovery Facility
Air conditioner	Coolant fluids	Various Buildings

The collection points will convey the stormwater flow toward the bioretention system, located along the western side of the MRF/TS site. A bioretention system is a series of landscaped depressions used to treat many types of pollutants found in stormwater runoff. These systems are effective in removing suspended solids (e.g., sediments and soils), hydrocarbons, metals, nutrients, and bacteria. They also are effective in reducing the peak runoff rates from a site as well as increasing stormwater infiltration. A bioretention system basically consists of the following three components:

- A drainage system containing perforated pipes covered with washed gravel,
- A mixture of specialized sand, soil, and organic mix over the drainage system, and
- A vegetation cover (e.g., trees, shrubs, and/or grass) over the sandy, soil, and organic mix.

Exhibit 3.13-2 Conceptual Grading Plan



As shown in **Exhibit 3.13-2 Conceptual Grading Plan,** the southern portion of the MRF/TS site and all ground outside of the fueling area of the convenience store will be covered with porous asphalt to reduce peak runoff of stormwater from the site. The perimeter of the site will be covered with vegetation landscaping and a wall, thus, preventing off-site runoff from entering the facility. The site will be graded so that no stormwater flow can leave the site without first passing through the bioremediation swale system.

Solid waste discharges from the tipping floor and sorting area are enclosed within the Main Recovery Facility. Because this building is enclosed, rainwater runoff to stormwater discharge points from this source would be eliminated. Likewise, green wastes are also stored in enclosed locations and would not be exposed to rainwater. The tipping floor and green waste areas are swept routinely throughout the day by power sweepers and by janitors with brooms to remove refuse, dust, and debris. These areas are also periodically power scrubbed or scraped during nighttime operations. All liquid waste from the power scrubbing of the tipping and green waste floors, truck loading areas, and canopy wash areas are proposed to be discharged to the municipal sewer system under permit from the Los Angeles County Sanitation Districts.

The operational phase of the Proposed Project would require a NPDES Industrial Storm Water Permit. This permit would require the development of an on-site operational SWPPP and associated BMPs to control pollutants at the site and to prevent them from leaving the site to local stormwater drains. Examples of typical BMPs include:

- Raw materials stored outside are covered.
- Employees are trained and supervised to follow company policy to prevent spills and leaks during service and repair of equipment.
- Trucks are checked for leaks, and if leaks are observed, the trucks are removed and repaired by on-site company personnel.
- When employee vehicles are identified as leaking, the owner is notified to have the leak fixed and fluid spots on the parking surface are cleaned.
- Roll-offs, dumpsters, bins, and boxes are cleaned before being placed in storage.
- Surfaces of roll-offs, dumpsters, bins, and boxes are not washed with faucet water.
- Rainwater does not flow onto the tipping floor.
- When absorbents are used to clean up spills and leaks, the contaminated absorbents are removed by a hazardous waste hauler to be disposed or treated by a vendor in compliance with federal and California State HAZMAT Regulations.
- Housekeeping, Preventive Maintenance and Employee Training Programs are being implemented.
- Provide secondary containment for waste hazardous materials removed from the tipping floor or sorting area.

- Avoid using faucet water for washing, flushing or cleaning surfaces where water can flow on outside surfaces. and/or
- Employee/customer parking area surfaces are cleaned often and as trash and surface pollutants (oil/dirt residues) are observed.

Under the Industrial Stormwater Permit, implementation of BMPs is verified through inspections and the effectiveness of the BMPs is verified in laboratory reports which confirm that any discharges are meeting permit requirements. An Annual Facility Evaluation (including sampling and analysis) is required, and a report must be submitted to the Los Angeles RWQCB to verify compliance with permit requirements. As part of the annual report, written records are required for:

- Non-storm water and stormwater visual observations;
- Laboratory reports on the tests by a State-certified laboratory and measurements done on stormwater quality samples;
- Implementation of Housekeeping Practices and Preventive Maintenance Measures; and
- Implementation of suggested BMPs to control pollution from potential pollutant sources.

The on-going record of tests by a State-certified laboratory provides evidence that the BMPs selected for the site are controlling pollutants in stormwater discharges. Standard tests required in the Industrial Storm Water Permit regulations normally address pH, total suspended solids, conductivity, and oil and grease levels. Additional tests performed for the site could include chemical oxygen demand and bio-chemical oxygen demand. Implementation of the project specific NPDES Permit requirements (e.g., Storm Water Pollution Prevention Plans (SWPPP) and Erosion and Sediment Control Plan with BMPs) are intended by design to prevent water quality degradation and reduce potential impacts to water quality during construction and operational activities; and therefore, are deemed to reduce potential impacts to a level that is less than significant.

THRESHOLD WQ-2

Would the Project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?

Less than Significant Impact

The Proposed Project would not interfere substantially with local groundwater recharge, or produce a net deficit in aquifer volume, or lowering of local groundwater table in the vicinity of the Proposed Project. The project would be conditioned by the City to be certifiable at the Silver level utilizing U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) green building rating systems. The LEED rating system requires

water efficiency in the design of a project through water use reduction, efficient landscaping, and innovative wastewater treatment technologies. The implementation of these design parameters would minimize the use of water at the site (**PDF WQ-1**). As designed, the Proposed Project would not adversely impact groundwater supplies or interfere substantially with groundwater recharge; therefore, potential impacts associated with groundwater supplies or groundwater recharge would be less than significant.

THRESHOLD WQ-3

Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less than Significant Impact

There are no local streams or rivers adjacent to or running through the Proposed Project site. Therefore, no adverse impacts to existing streams or rivers will occur with implementation of the Proposed Project.

The Proposed Project is relatively flat; therefore, terrain modification for the construction of various buildings, the truck loading dock, and other on-site structures would be minimal. After the Proposed Project is constructed, most of the surface of the site would be paved, contain structures, or be landscaped. Erosion or siltation after construction would be minimal with conditions of level terrain, non-erodible surfaces, and high porosity and permeability of surrounding ground. The risk of erosion or siltation from the site during construction and operation would be minimal and less than significant.

THRESHOLD WQ-4

Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less than Significant Impact

As indicated above, the site is relatively flat so the existing drainage pattern of the site or area would remain relatively unchanged. However, construction of the Proposed Project would increase the amount of impervious surface. Approximately 55% of the site would be covered with concrete or asphalt (e.g., parking, circulation, and hardscaped areas) and about 32% of the surface would be covered with buildings. The remaining 13% would be landscaped. The impervious structures would increase stormwater drainage to be directed to the bioremediation/ underground storage or the porous asphalt areas discussed previously. The perimeter of the site will be covered with vegetation landscaping and a wall, thus, preventing off-site runoff from

entering the facility. The site will be graded so that no stormwater flow can leave the site without first passing through the bioremediation swale system. A bioretention system/storage system along the eastern side of the facility will collect stormwater runoff from the northeastern, southeastern, and convenience store areas. Bioretention systems have proven effective in removing pollutants associated with suspended solids, hydrocarbons, metals, nutrients, and bacteria from stormwater runoff. They also are effective in reducing the peak runoff rates.

As designed, the Proposed Project would not adversely impact the existing drainage pattern of the site or area, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site

THRESHOLD WQ-5

Would the Project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional source of polluted runoff?

Less than Significant Impact

The perimeter of the site will be covered with vegetation landscaping and a wall; thus, preventing off-site runoff from entering the facility. The site will be graded so that no stormwater flow can leave the site without first passing through the bioremediation swale system. As described above, the NPDES Industrial Stormwater Permit and associated BMPs – including the bioremediation/underground storage system – would minimize source of polluted runoff to less than significant.

The project is required to comply with the project specific NPDES Permit requirements (e.g., Storm Water Pollution Prevention Plans (SWPPP) and Erosion and Sediment Control Plan with BMPs) as described for **Threshold WQ-1** above. The City of Irwindale has a 54-inch underground stormwater pipe system along both Arrow Highway and Live Oak Avenue, with adequate capacity for handling excess stormwater runoff associated with implementing the Proposed Project. Therefore, potential impacts associated with stormwater runoff would be less than significant.

THRESHOLD WQ-6

Would the Project otherwise substantially degrade water quality?

Less than Significant Impact

As discussed at length within the Impact Analysis section, implementation of the project specific NPDES Permit requirements (e.g., Storm Water Pollution Prevention Plans (SWPPP) and Erosion and Sediment Control Plan with BMPs) would reduce any potential degradation of water quality associated with implementation of the Proposed Project area to less than significant.

THRESHOLD WQ-7

Would the Project place housing within a 100-year flood hazard area as mapped on a FEMA map or other flood hazard delineation map?

Less than Significant Impact

The Proposed Project is a Materials Recovery Facility and Transfer Station. No residential development will be constructed on the Proposed Project site, and the site is not located within a 100-year floodplain. Therefore, there will be no risk of placing residential structures within a 100-year flood hazard area.

THRESHOLD WQ-8

Would the Project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less than Significant Impact

FEMA has designated the Proposed Project area as a Zone X, defined by FEMA as an "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood." Therefore, the potential flooding risk at the site is very low and would not be significant.

THRESHOLD WQ-9

Would the Project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Less than Significant Impact

The only major water bodies near the Proposed Project site are the USACE constructed Santa Fe Dam to the northeast and the San Gabriel River to the west of the site. The only time a significant amount of water is within the dam is during diversion of heavy flows from the San Gabriel River. During the late spring, summer, and early fall, the water within the dam is low. During the low water levels, the area at the bottom of the dam is used as a regional recreational area.

Beyond the Santa Fe Dam, the San Gabriel River flows through a concrete-lined walled channel. These USACE projects abate the 100-year storm threat of the river. Consequently, the risk of loss, injury, or death involving flooding or failure of these flood control structures will be less than significant.

THRESHOLD WQ-10

Would the Project create an inundation by seiche, tsunami, or mudflow?

Less than Significant Impact

The Proposed Project is located approximately 35 to 40 miles from the Pacific Ocean, on relatively flat topography and away from steep terrain. The nearest potential large body of water is the Santa Fe Flood Control Basin controlled by the USACE and various aggregate mining groundwater basins. The Santa Fe Flood Control Basin is used for flood control of the San Gabriel River and groundwater recharge. The potential of seiches within these basins are considered insignificant. Furthermore, a number of recharge locations (e.g., Santa Fe Flood Control Basin, San Fe Spreading Ground, and Buena Vista Spreading Ground) are located near the Proposed Project site and used to maintain groundwater levels. Therefore, the risk of landslides, tsunamis and seiches, and subsidence would be less than significant.

Mitigation Program

PDF WQ-1

The Proposed Project shall be conditioned by the City to be certifiable at the Silver level utilizing U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) green building rating systems. The LEED[1] rating system requires water efficiency in the design of a project through water use reduction, efficient landscaping, and innovative wastewater treatment technologies, as well as sustainable site selection; energy performance standards; materials and resource selection criteria; and indoor air quality practices.

3.13.5 RESIDUAL IMPACTS AFTER MITIGATION PROGRAM

Implementing LEED system design (Silver level), NPDES Permit requirements (e.g., Storm Water Pollution Prevention Plans (SWPPP) and Erosion and Sediment Control Plan with BMPs), as well as, the various federal, State, and local mandated laws, ordinances, and regulations would reduce potential water quality and hydrological impacts associated with the construction and operation of the MRF/TS to less than significant, with no residual impacts.

[1] LEED is a building tool that addresses the entire building lifecycle recognizing best-in-class building strategies. The LEED certification of a project is a program that provides third-party verification of green buildings based on a credit system for the categories of: sustainable site selection; water efficiency; energy performance; materials and resource selection; and indoor air quality. (http://www.usgbc.org/leed/rating-systems)

3.13.6 CUMULATIVE IMPACTS

A list of all cumulative projects is provided in **Chapter 3.0 Environmental Setting and Impact Analysis**. ***Would the Proposed Project, combined with other related cumulative projects, have a substantial adverse impact on water quality and resources?***

No

Based on the cumulative project list, cumulative development may result in development of new residential, commercial, mining activities, industrial, recreational, and medical facilities in the cities of Irwindale, Azusa, Baldwin Park, Duarte, Glendora, and West Covina.

Development at the site and other projects in the vicinity of the Proposed Project may result in similar impacts relative to water quality and hydrology; however, each project's impacts are localized and independent of one another, and are mitigated (minimized or avoided) on a site-specific basis. Further, while water quality impacts have the ability to compound when taking into account regional water basins, the Proposed Project as conditioned will require the Applicant to adhere to the mandatory Federal, State and local laws, ordinances, regulations, and water quality standards (which do not represent added mitigation measures but are required for all MRF/TS projects).

The Proposed Project, when considered with other projects in the same watershed, may result in cumulative impacts to surface and groundwater quality from increased surface impermeability and resultant runoff. Construction projects could result in increased erosion from exposed soil areas, which could contribute sediments into local drainage courses and other waterways. However, it is reasonably assumed that new construction associated with future projects will be required to meet federal, state, and local construction and operation standards at least as rigorous as those required at present. Thus, project impacts would be less than cumulatively considerable under CEQA.

4.0 MANDATORY CEQA CONSIDERATIONS

This chapter contains analysis of the CEQA mandated discussions requiring the consideration of a range of issues extending beyond analysis of project-specific impacts to individual resource areas. The topics included within this chapter include:

- Growth Inducing Effects (CEQA Guidelines §15126.2(d));
- Significant Irreversible Environmental Changes & Irretrievable Commitment of Resources (CEQA Guidelines §15126.2(c));
- Unavoidable Adverse Impacts of the Proposed Project (CEQA Guidelines §15126.2(b)); and
- Energy Conservation (CEQA Appendix F)

4.1 GROWTH INDUCING EFFECTS

Public Resources Code Section 21100(a) (5) requires that the growth-inducing impacts of a project be addressed in the environmental impact report. A project may be growth-inducing if it directly or indirectly fosters economic or population growth or the construction of additional housing, removes obstacles to growth, taxes community service facilities, or encourages or facilitates other activities that cause significant environmental effects.

Pursuant to State CEQA Guidelines §15126.2(d), an EIR must "*discuss the ways in which the Proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…*". The purpose of this section is to evaluate the potential for growth-inducing effects of the Proposed Project. A project would directly induce growth if it would remove barriers to population growth, such as a change to a jurisdiction's General Plan and Zoning Ordinance to allow new residential development or provision of a vital resource such as a sewer trunk line, without which growth could not occur.

The CEQA Guidelines require a discussion of growth inducement, but do not require speculation as to exactly when and where growth may or may not occur, and what form that growth may take. Speculation does not provide the reader with accurate or useful information about the Proposed Project's potential effects. In this case, land development is proposed on a specific property to provide an urban recycling and waste management function with local and regional benefits.

The City of Irwindale has identified the following list of criteria as the objectives for the *Irwindale Materials Recovery Facility and Transfer Station.*

- The City of Irwindale seeks long term economic development that provides a range of employment opportunities to local citizens.

- Assembly Bill 341 [2011] sets a 75% recycling goal for California by 2020; therefore, the City of Irwindale seeks to achieve and surpass waste reduction and diversion goals and mandates, by providing additional processing capacity to increase diversion of recyclable commodities from the mixed municipal waste stream, thereby reducing the consumption of landfill capacity and prolonging the operational period of the region's current permitted landfill capacity.

- Provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts to the extent feasible.

- Construct the facility at a location with nearby Interstate access for both ingress and egress and which minimizes the traffic on local communities, and on the regional transportation network.

- Provide a disposal outlet accessible to local waste haulers during non-peak traffic hours with a goal to reduce traffic loading to area roads during peak hours.

The goals and objectives of the Proposed Project are designed to: 1) comply with Assembly Bill 939 (AB 939) which requires every city and county in the State to divert at least 50 percent of wastes generated in their jurisdiction from going to a landfill; and 2) provide the regional need of a MRF/TS, as a service facilitator, in compliance with AB 939. Operations at the MRF/TS would consist of sorting, consolidating, and compacting received materials, and then re-loading all recyclable, composting, and solid waste material into transfer trucks for transport to additional processing and/or disposal facilities. As a primary function, a MRF/TS reduces the amount of solid waste material which is ultimately disposed of at a landfill.

The vacant site is currently zoned for Heavy Industrial use and is designated for commercial land use [now proposed for commercial/industrial land use] in fulfillment of the City's long-term economic development goals. The Project will add approximately 345 employees to the local and regional workforce. It is anticipated that prospective employees will come primarily from underemployed citizens from the City and surrounding communities, and therefore the new employment opportunities are not expected to induce substantial new population growth from outside the region. The Proposed Project does not remove any barriers to growth, and does not have characteristics that could induce growth locally or regionally. Therefore, potential growth inducing impacts are found to be less than significant.

4.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES AND IRRETRIEVABLE COMMITMENT OF RESOURCES

This section considers the effects of the Proposed Project that would result in a commitment of resources and uses of the environment that could not be recovered with Project implementation. Public Resources Code Section 21100(b)(2)(B) requires an environmental impact report to include a detailed statement setting forth any significant effects on the environment that would be irreversible if a project is implemented. Consideration of significant irreversible environmental changes per §15126.2(c) of the State CEQA Guidelines includes evaluation of:

> *"Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified*."

An irreversible or irretrievable commitment of resources would occur when resources are consumed, committed, or lost as a result of the Proposed Project. The commitment of a resource would be "*irreversible*" if the project started a process (chemical, biological, or physical) that cannot be stopped. As a result, the resource productivity or its utility would be consumed, committed, or lost forever. Commitment of a resource would be considered "*irretrievable*" when the project would directly eliminate the resource, its productivity, or its utility for the life of the project and beyond.

In addition to the commitment of land to urban uses, implementation of the Proposed Project would involve the consumption of energy derived from nonrenewable sources for electricity to power on-site equipment and fossil fuels for project-related vehicle trips. Building materials could be considered permanently consumed. These changes would be irreversible, but are the result of long-term land use planning, fulfill regional recycling and waste management needs, and benefit the City's long-term economic development goals and plans. These changes are also not unique to this site, and would occur anywhere a MRF/TS was developed in the region. As such, these changes do not constitute significant adverse impacts.

The primary function of the MRF/TS is to promote recycling and potential re-use of discarded materials which may otherwise be permanently lost and take up space in a landfill. By receiving, sorting, and promoting the re-use of yard waste, construction & demolition waste, and regular household and commercial waste, a MRF/TS provides a significant environmental benefit in retrieving such materials which would otherwise become essentially irretrievable.

The Proposed Project will result in short-term and long-term consumption of resources including land, building materials, fuels, and electrical energy for site preparation and grading, construction of the facility and related on-site and off-site improvements, and subsequent operation of the MRF and fueling station and convenience store. Except for the parcel of land to be utilized, consumption of these resources are not unique or significant, and will contribute to regional and local waste management goals that would otherwise be met with a similar facility or facilities at another location.

4.3 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

Public Resources Code Section 21100(b)(2)(A) requires an environmental impact report to include a detailed statement setting forth any significant effects on the environment that cannot be avoided if a project is implemented. Pursuant to State CEQA Guidelines §15126.2(b), an EIR must:

> "*Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described*."

The purpose of this section is to describe the potential for unavoidable adverse impacts from the Proposed Project. Adherence to adopted federal, State, and City regulations, as well as implementation of the Mitigation Program recommended in this EIR will eliminate or minimize the potential for significant adverse impacts, with the exception of impacts to air quality, noise and traffic generation. The significant and unavoidable adverse environmental impacts are summarized below.

Air Quality

All impacts related to air quality, greenhouse gases, odor and health risks would be less than significant except for the following, which are significant and unavoidable:

- Project operation regional air quality impacts
- Cumulative impacts of criteria pollutants

These air quality impacts from ROG and NOx emissions from the Proposed Project operation phase are significant and unavoidable. While the Proposed Project is conditioned with an air quality Mitigation Program, no additional feasible mitigation measures have been identified to reduce ROG and NOx emissions to a less than significant level. Based upon this, it is reasonably foreseeable that the Project will conflict with or obstruct implementation of the applicable air

quality plan (SCAQMD 2012 AQMP) and violate any air quality standards or contribute substantially to an existing or projected air quality violation of SCAQMD.

Noise

All noise related impacts are reduced to less than significant with the exception of the following which will remain significant and unavoidable:

- Violation of Adopted Standards from Operations - Traffic Related Noise, Construction Related Noise
- Permanent Ambient – Operations
- Temporary/Periodic Ambient – Construction Related Noise

The Proposed Project would result in significant noise impacts during short-term construction (temporary/periodic ambient noise and truck-related traffic), and operational activities (violation of adopted standards for operation, permanent ambient operations, and truck-related traffic); and therefore, contribute to a cumulative noise impact. A noise Mitigation Program is required of the Proposed Project; however, no feasible mitigation measures have been identified to reduce the cumulative noise impacts to the exterior areas of businesses along Arrow Highway (west of Rivergrade Road) from traffic activity between the Site and freeways. Therefore, operational noise would be considered a significant unavoidable impact to exterior locations along the roadway segments between the Proposed Project Site and the freeways on Live Oak Avenue and Arrow Highway.

4.4 ENERGY CONSERVATION

The CEQA Guidelines §15126.4(A)(1)(C) states: "*Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant. Examples of energy conservation measures are included in Appendix F*."

The CEQA Appendix F *Energy Conservation* recognizes that the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include:

(1) Decreasing overall per capita energy consumption,
(2) Decreasing reliance on natural gas and oil, and
(3) Increasing reliance on renewable energy sources.

The Proposed Project has been designed to play a role in the integration of energy saving recycling of materials as mandated by the State of California; as such, the Proposed Project is intended to help achieve existing and future recycling and waste reduction mandates, and waste management. The transfer station is also an energy efficient function, allowing processing of

materials close to sources, with more efficient transport of processed materials to ultimate destinations.

Project Energy Consumption

Project construction is estimated to take 18 months. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. The Proposed Project is expected to demand 7,363,759 kW of electricity per year and 2,098 therms of natural gas per year (refer to **Chapter 3.11 Public Services and Utilities**).

Mitigation Measures Related to Energy Conservation and Efficiency

Numerous energy conservation mitigation measures are identified within the EIR. These measures shall be included as conditions of project approval.

MM AQ-2

The Applicant shall ensure that construction equipment is properly tuned and maintained in accordance with manufacturer's specifications.

MM AQ-4

Electricity from power poles rather than temporary diesel- or gasoline-powered generators shall be used, where available.

MM AQ-5

All construction vehicles shall be prohibited from idling in excess of five minutes, both on- and off-site.

MM AQ-6

Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.

MM AQ-7

Heavy equipment operations shall be suspended during first and second stage smog alerts.

MM AQ-8

The use of 2010 model or newer construction equipment shall be required, where feasible.

MM AQ-9

Older (prior to 2010 model year) construction equipment shall be retrofitted with appropriate emission control devices prior to onsite use.

MM AQ-10

Construction equipment idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points.

MM AQ-14

All gasoline dispensing facilities shall meet the requirements of SCAQMD's Rule 461 to limit ROG emissions from gasoline dispensing facilities, including but not limited to using CARB-certified vapor recovery systems and spill boxes and periodic testing of the equipment.

MM AQ-15

Heavy-duty diesel trucks shall be properly tuned and maintained to manufacturers' specifications to ensure minimum emissions under normal operations.

MM AQ-16

The use of 2010 model or newer transfer trucks is required, where feasible.

MM AQ-17

Older (prior to 2010 model year) transfer trucks shall be retrofitted with appropriate emission control devices prior to onsite use.

MM AQ-18

The use of alternative fueled transfer trucks as pursuant to SCAQMD Rule 1193.

MM AQ-23

The Applicant shall prioritize the purchase of alternative-fueled, hybrid, or other GHG-efficient passenger vehicles and light trucks for fleet use per Rule 1193.

MM AQ-24

The Applicant shall develop, promote, and encourage participation in employee carpool, vanpool, and ride sharing programs.

Energy Efficient Measures

The Proposed Project would adhere to all federal, State, and local requirements for energy efficiency, including Title 24, California's Energy Efficiency Standards for Residential and Non-residential Buildings. In addition, the Project Applicant will design and construct the MRF/TS

facility and site based on the LEED Silver rating system[1]. The Proposed Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

4.5 CONCLUSION

With implementation of the Mitigation Program identified within this MRF/TS EIR, the potentially significant environmental impacts identified for resource topics throughout this EIR would be less than significant, with the exception of air quality, noise, and cumulative traffic impacts.

If the City of Irwindale decides to approve the Proposed Project while recognizing these significant and unavoidable impacts, it shall be required to make Findings pursuant to State CEQA Guidelines §15091, and adopt a Statement of Overriding Considerations pursuant to Sate CEQA Guidelines §15093 explaining the benefits of the Proposed Project that it believes outweigh the unavoidable effects, and must then file a Notice of Determination with the County Clerk and State Clearinghouse within five (5) working days pursuant to State CEQA Guidelines §15094.

[1] The US Green Building Council's Leadership in Energy and Environmental Design (LEED) is a building tool that addresses the entire building lifecycle recognizing best-in-class building strategies. The LEED certification of a project is a program that provides third-party verification of green buildings based on a credit system for the categories of: sustainable site selection; water efficiency; energy performance; materials and resource selection; and indoor air quality. (http://www.usgbc.org/leed/rating-systems)

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies and considers Proposed Project Alternatives and assesses potential alternatives comparatively to the Project. CEQA requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen significant environmental impacts while substantially attaining the basic objectives of the project (State CEQA Guidelines §15126.6). An EIR should also evaluate the comparative merits of the alternatives. This chapter sets forth potential alternatives to the proposed project and provides a qualitative analysis of each alternative and a comparison of each alternative to the proposed project. Key provisions of the State CEQA Guidelines pertaining to the Alternatives to a Proposed Project analysis are summarized below:

- Describe a reasonable range of alternatives to the project that would "*...feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*" [State CEQA Guidelines Section 15126.6(a)];
- Identify ways to mitigate or avoid significant effects of the project on the environment: "*...the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.*" [State CEQA Guidelines Section 15126.6(b)];
- Include a range of potential alternatives that could feasibly accomplish most of the basic objectives of the project and those that could avoid or substantially lessen one or more of the significant adverse effects. If there is a specific Proposed Project or a preferred alternative, the EIR must explain why other alternatives considered in developing the Proposed Project were rejected in favor of the proposal. "*The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination."* [*State CEQA Guidelines* Section 15126.6(c)];
- Include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. "*If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed."* [*State CEQA Guidelines* Section 15126.6(d)];
- Discuss the "no project" alternative. The purpose of describing and analyzing a no project alternative is to allow "decision-makers to compare the impacts of approving the

Proposed Project with the impacts of not approving the Proposed Project." The State CEQA Guidelines also stipulate that the "no project" analysis "shall discuss the existing conditions at the time the (EIR) Notice of Preparation is published as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans." [State CEQA Guidelines Section 15126.6(e)]; and

- Require a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. "*The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.*" [State CEQA Guidelines Section 15126.6(f)];
- CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR [State CEQA Guidelines §15126.6(f)(2)].

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The Proposed Project would result in significant and unavoidable impacts to air emissions, noise and traffic.

Air Quality – All impacts related to air quality, greenhouse gases, odor, and health risks would be less than significant except for the following, which are significant and unavoidable: 1) Project operation regional air quality impacts; and 2) Cumulative impacts of criteria pollutants. The Proposed Project would result in a significant ROG and NO_x impacts during operations. Therefore, the Proposed Project would result in a regional cumulative operations impact given that the Basin is in nonattainment for ozone and the Proposed Project would exceed the regional daily emissions thresholds for ROG and NO_x, which are ozone precursors.

Noise – The Proposed Project would result in significant short-term construction, permanent ambient operational noise impacts on the western/northwestern border, and traffic related noise impact. These noise impacts would occur along the property boundary during construction activities and during operations. Traffic-related noise would be significant at the exterior area of offices and business between the site and the freeways along Arrow Highway west of Rivergrade

Road. Also, the operational noise impacts on the western/northwestern border and the traffic-related noise impacts would be considered significant and unavoidable; and therefore, they would contribute to a significant and unavoidable cumulative noise impact.

Traffic – Implementation of the recommendations referred to within this EIR as the traffic Mitigation Program would reduce potential transportation and circulation impacts to a less than significant level; and therefore there are no residual impacts after implementation of the identified Mitigation Program. However, as the Proposed Project would contribute to the existing and forecasted deficient freeway segments, the Project's contribution to these cumulative traffic impacts is considered cumulatively considerable.

All other potentially significant environmental impacts would be reduced to a less than significant impact level with implementation of the Mitigation Program identified within this EIR.

5.2 PROJECT OBJECTIVES

Pursuant to State CEQA Objectives §15124(b), the Project Description shall include a statement of objectives. These objectives assist the City in developing a reasonable range of Alternatives to evaluate in the EIR, and aid the decision-makers in preparing Findings or a Statement of Overriding Considerations, if necessary. The objectives are designed to demonstrate the underlying purpose of the project. The City of Irwindale identified the following list of criteria as the objectives for the *Irwindale Materials Recovery Facility and Transfer Station Project.*

- The City of Irwindale seeks long term economic development that provides a range of employment opportunities to local citizens.

- Assembly Bill 341 [2011] sets a 75% recycling goal for California by 2020; therefore, the City of Irwindale seeks to achieve and surpass waste reduction and diversion goals and mandates, by providing additional processing capacity to increase diversion of recyclable commodities from the mixed municipal waste stream, thereby reducing the consumption of landfill capacity and prolonging the operational period of the region's current permitted landfill capacity.

- Provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts to the extent feasible.

- Construct the facility at a location with nearby Interstate access for both ingress and egress and which minimizes the traffic impacts on local communities, and on the regional transportation network.

- Provide a disposal outlet accessible to local waste haulers during non-peak traffic hours with a goal to reduce traffic loading to area roads during peak hours.

5.3 EVALUATION CRITERIA

Once identified, the Alternatives were evaluated based on the following criteria. An Alternative had to meet all criteria to be considered for further analysis in the EIR.

- **Criterion 1:** The Alternative must feasibly attain most of the Proposed Project's Objectives. This criterion focuses on identifying which alternatives were capable of achieving the similar results as the Proposed Project in a feasible manner. "*Feasible*" is defined by State CEQA Guidelines §15364 as: "…*capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.*"; and

- **Criterion 2:** The Alternative must avoid or substantially lessen an identified significant environmental impact of the Proposed Project; and

- **Criterion 3:** For purposes of meeting the project objectives, the Alternative must provide a physical land description sufficient for development and operation of the Proposed Project; including but not limited to: site acreage, freeway system/roadway access, and compatible land uses.

5.4 ALTERNATIVES CONSIDERED BUT REJECTED

The following discussion has been prepared in accordance with the requirements of CEQA Guideline §15126.6(c), which requires that an EIR identify Alternatives that were considered by the Lead Agency but not chosen for further evaluation. The following Alternative was not considered for further evaluation because it failed to achieve the Proposed Project objective or would result in additional significant impacts.

Alternative Locations

The City reviewed seven (7) different locations for their potential siting of the Proposed Project. This list of potential alternative locations was initially considered by the City but each location was later rejected as infeasible during the environmental review process based in part on not meeting some or all of the Project Objectives, as well as not reducing or avoiding potential impacts to a greater extent than the Proposed Project. Based on this, and consistent with the requirements of CEQA Guideline §15126.6(f)(2), all seven site alternatives were rejected from further consideration (refer to **Exhibits 5.0-1** through **5.0-7**).

1. **Reliance II Landfill - 15990 Foothill Boulevard**
   The Reliance II Landfill site was initially selected as an alternative location based on its proximity to the freeway system (less than 0.5 mile of Interstate 210) to address transportation/circulation and regional project needs, and for appropriate site acreage necessary for the operation of the proposed MRF/TS. However, this location was deemed as unsuitable due the timing of potential availability of the site, as landfill operations currently underway would not produce a development-ready site until at least 2019. This presents an unreasonable time delay with respect to the Proposed Project objectives, including AB 341 mandated reduction of waste volume.

2. **Kincaid Pit North – APNs 8616-022-906 & 8616-022-91**
   The Kincaid Pit North was initially selected based upon proximity to the freeway system (less than 0.5 mile of Interstate 210) to address transportation/circulation and regional project needs, compatibility of surrounding land use, and the acreage necessary for operational needs of the Proposed Project. However, this site falls within the jurisdiction of both the City of Irwindale and the City of Azusa and has not yet undergone reclamation to allow for development of the site. Reclamation of this site will take many years, and reclamation planning to ensure proper backfill and compaction to support subsequent urban land development would require separate and independent environmental review. Finally, this site is severely constrained for access with a very narrow frontage on Irwindale Avenue between the west-bound Interstate 210 off-ramp and Foothill Boulevard offering no opportunity for efficient ingress/egress of vehicles, particularly trucks. Access from Foothill Boulevard would involve acquisition of additional property and relocation of existing occupants.

3. **Hanson Spancrete/Southern California Edison – 13131-13025 Los Angeles Street**
   The Hanson Spancrete/Southern California Edison site was initially selected based upon proximity to the freeway system (less than 0.25 mile of Interstate 605) to address transportation/circulation and regional project needs, and compatible surrounding land uses. But, the site is occupied with active businesses at present, and would require displacement and re-location of existing tenants, and was therefore deemed unsuitable. The Hanson Spancrete site has an existing long-term lease which would need to be bought out, the property purchased, and the existing tenant relocated. The Southern California Edison site would also need to be acquired and the use for the Edison storage facility relocated.
4. **Nuway Landfill – APN 8532-002-034**
   The Nu-Way Landfill site was initially considered an option for an alternative site for the Proposed Project due to compatible surrounding land uses and proximity to the freeway

system (adjacent to Interstate 605). However, the backfill at this site has not been properly engineered to support urban development and the operations of the Proposed Project. Possible remediation of the site would require many years and would not satisfy project objectives for timely serving regional waste reduction and management needs.

5. Sunburst Rock – 242 Live Oak Avenue

The Sunburst Rock site offers suitable land use compatibility and therefore was initially considered as an alternative location. However, several factors eliminate this site as a feasible option. Factors such as improper compaction [historical site of an open-pit mine], and the need to relocate the existing 40+ tenants of the contractor yard would deem this location infeasible due to the timing and expense of such an endeavor.

6. 706 - 873 Alpha Street

The location along Alpha Street originally was considered to be an alternative site option for the Proposed Project based on the acreage required to operate the Proposed Project; however, this location was determined to be unsuitable for several reasons. This location hosts 30 established businesses [auto dismantling/wrecking yards] that would need to be relocated, unsuitable compaction (including the tire landfill underground), and adjacent residential land uses to the north and west; each of which make this location infeasible as an alternative location.

7. Gore Point/Triangle Parcel – APNs 8532-001-900 & 8532-001-004

The Gore Point/Triangle Parcel location appears to provide suitable acreage, compatibility with surrounding land uses, and proximity to the freeway system (within ½ mile of Interstate 605); however, there is a substantial grade differential between the two parcels which would require the building pad to be further reduced, or backfill of the Triangle Parcel as reclamation. Therefore, this location does not provide a suitable building pad since a portion of the site has not yet been backfilled and reclaimed, and the subsequent timing of potential availability of this site renders this location as infeasible.

Exhibit 5.0-1 Alternative Location 1 – Reliance II Landfill



Exhibit 5.0-2 Alternative Location 2 – Kincaid Pit North



Exhibit 5.0-3 Alternative Location 3 – Hanson Spancrete/SCE



Exhibit 5.0-4 Alternative Location 4 – Nuway Landfill



Exhibit 5.0-5 Alternative Location 5 – Sunburst Rock



Exhibit 5.0-6 Alternative Location 6 – Alpha Street



Exhibit 5.0-7 Alternative Location 7 – Gore Point/Triangle Parcel



5.5 ALTERNATIVES IDENTIFIED AND ANALYZED

The following section discusses the project alternatives evaluated in this EIR and the comparative environmental effects of each. The project alternatives considered in this analysis include the Reduced Tonnage Capacity Alternative and the No Project Alternative.

Beyond those mandated by CEQA, these alternatives were developed to determine whether they could avoid or substantially reduce the significant impacts of the Proposed Project. A comparison of the impacts for each alternative is presented in **Table 5.0-1**. The comparison is presented based on whether the alternative would have the same impact (=), greater impact (+), or lesser impact (-) than the Proposed Project, for each environmental resource area. Refer to the descriptive analysis below. For those areas where the impacts are not reduced or changed from those of the Proposed Project, the analysis is abbreviated.

Table 5.0-1

Comparative Assessment of Alternatives to the Proposed Project

Environmental Resource Area	Reduced Tonnage Capacity Alternative	No Project Alternative
Aesthetics	=	-
Air Quality / GHG / Odor / HRA	-	-
Biological Resources	=	-
Cultural Resources	=	-
Environmental Justice	=	-
Geology & Soils	=	-
Hazards & Hazardous Materials	=	-
Land Use & Planning	=	-
Noise	-	-
Public Services & Utilities	=	-
Traffic Generation and Circulation	=	-
Water Quality and Hydrology	=	-

Key Symbols:

= Impact likely to be equal to that of the Proposed Project

- Impact likely to be less than that of the Proposed Project

+ Impact likely to be greater than that of the Proposed Project

It is important to note: earlier versions of the Proposed Project have resulted in the current re-design of the site and are now referred to as the Proposed Project and Project Variant as assessed in this EIR. As proposed, the project design incorporates previous "alternatives" such as relocating primary driveway ingress and egress on Arrow Highway (instead of Live Oak Avenue), and re-orientation of the circulation plan both on-site, and truck routing to and from the

site. The previous entrance to the site that was proposed to be located at the Live Oak Avenue / Baldwin Park Boulevard intersection is eliminated, replaced instead with an eight-foot high perimeter wall atop a two-foot earthen berm and street-front landscaping. This "alternative' was formulated in response to concerns raised by residents of the adjacent City of Baldwin Park regarding truck traffic that could utilize Baldwin Park Boulevard south of the site, and general visual and land use compatibility for residential areas south of Live Oak Avenue. Traffic routing for the waste haulers was never proposed to utilize Baldwin Park Boulevard, but the revised site configuration (now the Proposed Project and/or the Project Variant) closes that route in a way intended to provide assurances to the neighboring community.

In addition, the reoriented site access would change off-site traffic patterns in comparison to the previous site plan. All transfer trucks, recyclable load outs, collections, and self-haul truck trips would enter and exit the property on Arrow Highway. The primary route to the site for MRF/TS-related truck trips from Interstates 210 and 605 would use Arrow Highway, and east-bound trucks would return to the 210/605 freeway via Arrow Highway as well. Only southbound trucks would use Live Oak Avenue in route to Interstate 605 south. Currently, only employees and visitors, and convenience store patrons would access the site using the driveway along Live Oak Avenue.

The Proposed Project has been reconfigured to reduce the potential visual effects for Baldwin Park residents traveling northbound on Baldwin Park Boulevard towards Arrow Highway. The original site plan included primary traffic ingress and egress to the MRF from Live Oak Avenue at the intersection with Baldwin Park Boulevard, such that traffic northbound on Baldwin Park Boulevard would be looking directly into the facility's parking areas. The modified site plan evaluated as the proposed project in this EIR has relocated the main driveways for truck traffic to Arrow Highway, and includes a perimeter wall and landscaped areas at the Live Oak Avenue / Baldwin Park Boulevard intersection, with no visual contact with the primary truck traffic or internal operations. Eliminating this visual contact is intended to alleviate perceived land use and planning conflicts for the neighboring residential community south of Live Oak Avenue.

5.6 REDUCED TONNAGE CAPACITY ALTERNATIVE

Description

To reduce air impacts related to the SCAQMD standards to a less than significant level, the project's capacity would have to be reduced to 2,620 tons per day, a 56% reduction from the proposed 6,000 tons per day capacity. Therefore, the Reduced Tonnage Capacity Alternative is defined as a facility permitted for a daily maximum of 2,620 tons of municipal waste to be accepted, processed and transferred. Project traffic volumes would be reduced, with attendant reductions in noise and air emissions. Development under this scenario assumes the same building footprint and overall physical change to the site.

Impacts

Aesthetics

This alternative would still alter the existing visual character of the site, and onto the site from all views. Development of the site would be expected to remain a similar building footprint to that of the Proposed Project. The overall impacts of the Reduced Tonnage Capacity Alternative to aesthetics would be the same as those of the Proposed Project.

Agricultural & Forest Resources

The site does not contain agricultural or timber/forest resources. The impacts to agricultural and forest resources would be less than significant for both the Proposed Project and this Alternative.

Air Quality / Greenhouse Gases / Odor / Health Risk Assessment

The Proposed Project would result in a significant increase in ROG and NO_x emissions during operations. As a result the Proposed Project would result in a regional cumulative operations impact given that the Basin is in nonattainment for ozone and the Proposed Project would exceed the regional daily emissions threshold for ROG and NO_x, which are ozone precursors.

A facility that manages 2,620 tons per day would generate less than half the truck trips required for the Proposed Project capacity of 6,000 tons per day. The relationship between traffic generation and air emissions is essentially linear. Therefore, by reducing the operational capacity and activities by 56%, this alternative would decrease local emissions of criteria pollutants from the transfer trucks and employee vehicles by about 56% as well. Under the analysis and methodology provided in the EIR, this would be expected to reduce significant impacts from the Project related to violation of SCAQMD standards to less than significant. However, because the waste stream exists independently of this Proposed Project, the reduction of emissions from this site does not necessarily mean that emissions attributable to this waste stream will be reduced in the air basin, since the materials will simply be transported to other waste management operations in the region. In addition, because the Basin is currently classified as nonattainment for ozone, any reduction in facility design capacity would not result in a less than significant impact. Lastly, greenhouse emissions from this Proposed Project would be reduced to a less than significant impact with implementation of the Mitigation Program (via offset credits); and comparatively, the same would be expected of a MRF with a 56% decrease in operational activities.

Biological Resources

The Project proposes to develop the vacant site including removal of existing vegetation and several trees; and therefore, may impact resident and/or migratory avian species that which have a potential to nest in the grassland and non-native trees on-site. Project construction could result in "take" of these species under the Federal MBTA and California Fish and Game Codes §3503

and §3513. The development of this alternative on the site is likely to result in similar impacts, since the footprint would be relatively unchanged. Mitigation is available for both the Project and the Reduced Tonnage Alternative to reduce impacts to biological resources to a less than significant level. The overall impacts of the Reduced Tonnage Alternative to biological resources would comparable to those of the Proposed Project and less than significant.

Cultural Resources

Since it is assumed that most of the 17-acre project site would be disturbed by development under the Reduced Tonnage Alternative, the potential impact on undiscovered cultural (archaeological) resources would be similar to that of the Proposed Project. The overall impacts to cultural resources from this alternative would be approximately equal to those of the proposed project and be less than significant, including with identified mitigation.

Geology & Soils

The project site would be subject to the same seismic hazards under the Proposed Project and the Reduced Tonnage Alternative development scenario. For both the proposed project and this alternative, the potential geological and soil impacts would be mitigable to less than significant levels. The overall impacts to geology and soils from this Alternative would be approximately equal to those of the Proposed Project.

Hazards & Hazardous Materials

For both the Proposed Project and this Alternative, the potential release of hazardous materials could occur during construction and operational activities. However, mitigation is available to reduce this impact to a less than significant level under both scenarios. The overall impacts relating to hazards and hazardous materials from the Reduced Tonnage Alternative would be approximately equal to those of the Proposed Project and less than significant.

Land Use & Planning

Under both the Proposed Project and the Reduced Tonnage Alternative development scenario, there would be no significant impacts to land use as a result of project implementation. The site is currently zoned Heavy Manufacturing with a General Plan land use designation for commercial development. Both development scenarios would require a General Plan Amendment to commercial/industrial land use. Converting the City's General Plan land designation from commercial land use to commercial/industrial land use would resolve the current conflict between the existing land use designation and zoning code[1]. Reverting the land use designation back to industrial use is not considered a significant impact due to the fact that

[1] Prior to the General Plan Update in 2008, the City of Irwindale's General Plan designated the 17.2 acre parcel for industrial land use. This parcel was historically used for industrial use. The General Plan Update (2008) changed the land use designation to commercial.

prior to the General Plan Update in 2008, the site had a land use designation of industrial. The site has historically been used for an industrial facility, and the surrounding area is dominated by industrial and commercial land uses to the west, south, and east. The overall impacts relating to land use and planning from the Reduced Tonnage Alternative would be approximately equal to those of the Proposed Project.

Noise

The Proposed Project would result in significant short-term construction, operational, and traffic-related noise impacts. Regardless of design capacity intake levels, the construction noise impacts from the Reduced Project Alternative would likely be comparable to the Proposed Project, since the project would require grading and other activities to build the MRF/TS facility and fueling station building. During project operations, this Alternative would be expected to have decreased noise impacts in comparison to the Project based on a reduction of truck trips and operational acoustics. However, noise generation is not linear with trip counts, and is more complex than air emissions so that a 56% reduction in capacity (and trips) does not equate to a 56% decrease to noise. The noise impact to adjacent properties from on-site operations would decrease. The 56% reduction in traffic on Arrow Highway west of Rivergrade Road would foreseeably reduce the traffic related noise impact to a level that would be less than significant. Additionally, the permanent ambient operational noise impact along the western/northwestern border would be less than significant.

Public Services & Utilities

In comparison to the Proposed Project, this alternative would reduce demands on utility services [such as water and energy], based on the decreased tonnage processed on-site. The overall impacts to *Public Services & Utilities* from this alternative would be slightly decreased to those of the Proposed Project, which were identified as less than significant.

Traffic Generation & Circulation

This Alternative would reduce the operational-related traffic impacts of the Proposed Project by reducing vehicle trips by more than 50%. As with the Proposed Project, this Alternative would result in less than significant impacts to transportation and circulation with implementation of the Mitigation Program. This Alternative involves less material quantity to be transferred on- and off-site; in addition, both incoming and outgoing materials would be reduced and therefore an overall reduction of truck trips is expected under the Reduced Tonnage Alternative. While this Alternative would reduce the Project's contribution to traffic under cumulative (2015 and 2035) conditions, the cumulative traffic effects of the Reduced Project Alternative would likely remain cumulatively considerable.

Water Quality and Hydrology

Development under this alternative would be subject to local regulations that require all storm water runoff to be retained onsite. This alternative is expected to result in site coverage comparable to the proposed project, since the development footprint would be relatively unchanged. For both the Proposed Project and this Alternative, water quality impacts would be avoided by implementation of federal, State and local regulations including Best Management Practices, as well as, erosion control practices. The overall hydrology and water quality impacts of the Reduced Tonnage Alternative would be approximately equal to those of the Proposed Project, which are less than significant.

Summary

The Reduced Tonnage Alternative would result in lessened environmental impacts compared to the Proposed Project by reducing the total traffic volume and related air emissions and traffic noise.

The Reduced Tonnage Alternative would: 1) feasibly attain the Proposed Project's objectives to serve as facilitator for regional compliance Assembly Bill 341; 2) partially assist the City's goal for waste reduction and diversion goals and mandates, by providing additional processing capacity to increase diversion of recyclable commodities from the mixed municipal waste stream; and 3) provide a similar land development project as required for the construction and operation of the proposed MRF/TS. However, this alternative does not capture the full potential to recover materials from the local and regional waste stream prior to transfer and/or disposal, which will therefore need to occur at another site in the region.

Section 5.2 above discusses the objectives of the Proposed Project. In summary, the development of the MRF [at a reduced tonnage capacity] would still be expected to meet the following of City's goals, although at a substantially reduced level:

- The City of Irwindale seeks long term economic development that provides a range of employment opportunities to local citizens.
    - This alternative would still provide employment opportunities, but a facility that has 56% reduction in tonnage capacity would require approximate one half fewer jobs (a projected loss of over 200 employment opportunities).

- Assembly Bill 341 [2011] sets a 75% recycling goal for California by 2020; therefore, the City of Irwindale seeks to achieve and surpass waste reduction and diversion goals and mandates, by providing additional processing capacity to increase diversion of recyclable commodities from the mixed municipal waste stream, thereby reducing the consumption of landfill capacity and prolonging the operational period of the region's current permitted landfill capacity.

  - This alternative would allow the City to participate in the State's waste reduction and diversion goals; however, a 56% reduction in daily tonnage capacity considerably reduces the potential for diversion when compared to the Proposed Project. It should also be noted that because the waste stream exists independently of this Proposed Project, the reduction of traffic and emissions from this site does not mean that traffic and emissions attributable to this waste stream will be reduced in the air basin, since the materials will simply be transported to other waste management operations in the region.

- Provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts to the extent feasible.
  - This alternative would allow the City to achieve and surpass waste reduction and diversion goals and mandates. However, a 56% reduction in tonnage would greatly reduce the overall amount of diversion benefits provided by the facility.

- Construct the facility at a location with nearby Interstate access for both ingress and egress and which minimizes the traffic impacts on local communities, and on the regional transportation network.
  - This alternative would achieve this goal.

- Provide a disposal outlet accessible to local waste haulers during non-peak traffic hours with a goal to reduce traffic loading to area roads during peak hours.
  - This alternative would achieve this goal.

5.7 NO PROJECT ALTERNATIVE

CEQA requires consideration and analysis of a No Project Alternative. In this case, the No Project Alternative assumes the proposed site at Arrow Highway and Live Oak Avenue would remain vacant (State CEQA Guideline §15126.6(e)(3)(B)). Under this Alternative, there would be no significant impacts to air quality, noise or traffic because this Alternative assumes both no project/no build and no project/no plan amendment.

The No Project Alternative does not preclude development of the site. Should another Applicant pursue development of the site, additional environmental analysis would be warranted, as required by the City of Irwindale and in compliance with CEQA. Commercial uses that could be developed under the current General Plan and zoning designations would also be reasonably expected to generate temporary construction noise, and long term employee and operational

traffic, with related air emissions and noise, although the levels of these effects are too speculative to estimate for unknown uses.

In comparison to the Proposed Project, this Alternative would not meet the City's objective for economic growth and local employment, and attaining the goals associated with AB 939 and AB 341 for the State, regional, and local need to reduce the amount of waste going to California landfills. As a primary function, the intent of a MRF/TS reduces the amount of solid waste material which is ultimately disposed of at a landfill.

Further, the No Project Alternative does not preclude development of a MRF/TS at another site; however, the San Gabriel Valley is substantially built-out and it is difficult to find a suitable site that could accommodate a +200,000 square-foot building, and with the attendant truck parking, circulation areas, and freeway access required for efficient operations.

Summary

The No Project alternative will not contribute to attainment of AB 939 waste management goals in the vicinity and region. In addition, the No Project Alternative does not assist the Project's objective to comply with Assembly Bill 341 whereby supporting California's 75% recycling goal by 2020, or its objective to provide a state-of-the-art waste processing and transfer facility that minimizes environmental impacts. Further, the City goals for development of the site will be at least temporarily delayed as other appropriate uses are solicited and advanced. The No Project scenario also does not contribute to attainment of the City's short-term and long-term economic development employment goals.

5.8 DETERMINATION OF THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guideline §15126.6(e)(2) requires that an EIR identify an environmentally superior alternative to the Proposed Project beyond that of the No Project Alternative. In general, the environmentally superior alternative is intended to minimize adverse impacts to the project site and surrounding environment while achieving the basic objectives of the project.

The No Project Alternative scenario is the no development scenario. Because of its no development option, the No Project Alternative would result in reduced environmental impacts when compared to the Proposed Project. This includes elimination of the Proposed Project's significant and unavoidable impacts to air emissions, noise and traffic. However, the No Project Alternative would not meet the Proposed Project's primary objectives of providing long term economic development for the City that provides a range of employment opportunities to local citizens; achievement of AB 341 waste reduction goals by providing a state-of-the-art waste

processing and transfer facility; and for siting such a facility where it is accessible to local waste haulers during non-peak traffic hours; and that minimizes environmental impacts to the extent feasible with nearby access to the interstate road network.

Based on the analysis above and as presented throughout the EIR, the Reduced Tonnage Alternative would be the environmentally superior alternative since it would have fewer environmental impacts when compared to the Proposed Project. However, as noted above, because the waste stream exists independently of this Proposed Project, the reduction of traffic and air emissions with this alternative is only applicable for this site and vicinity, since these truck trips and related emissions will be shifted to other waste handling facilities in the region. Therefore, it is reasonable to conclude that the air quality impacts will not necessarily be reduced to a less than significant impact as the relevant environment for air quality impacts is the Air Basin.

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