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Metro

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PLANNING AND PROGRAMMING COMMITTEE
JANUARY 19, 2005

SUBJECT: **METRO ORANGE LINE—NORTH PARKING LOT FOR THE CANOGA STATION AND PARK-AND-RIDE LOT AND MODIFICATION OF A PLANNED PEDESTRIAN PATH ON CHANDLER BOULEVARD**

ACTION: **APPROVE ADDENDUM/ MODIFIED INITIAL STUDY PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

RECOMMENDATIONS

A. Approve and certify the Addendum/Modified Initial Study (Attachment A) to the Final Environmental Impact Report (FEIR), as revised by the Board on December 13, 2004, for the San Fernando Valley East-West Transit Corridor (now known as the Metro Orange Line) for: (a) the construction of an additional park-and-ride lot (North Parking Lot) on Metro-owned property just north of the previously-approved Canoga Station and Park and Ride Lot; and, (b) the modification of a small portion of a planned pedestrian path along Chandler Boulevard. (Regarding Attachment A, the full Addendum, including the Technical Appendix/Traffic Study is available for review at the Board Secretary's Office and in the Metro Library.);

B. Authorize the Chief Executive Officer to file a Notice of Determination of the Addendum/Modified Initial Study with the Los Angeles County Clerk; and,

C. Approve the development of the North Parking Lot, and authorize the Chief Executive Officer to include this within the design/bid/build construction contract to be awarded for the previously approved one-third mile extension of the Orange Line, landscaping, bicycle and pedestrian paths to the new station and park-and-ride lot to be located on the Boeing site and Metro right-of-way.

ISSUE

In February 2004, the MTA Board certified an Addendum/Modified Initial Study to the Final EIR for the Orange Line and authorized the construction of an approximately one-third mile extension of the Orange Line on Metro right-of-way (including landscaping and bicycle and pedestrian paths) in order to create the Canoga Station and park-and-ride lot on the Boeing site in the Warner Center area. At that meeting, as shown in Attachment B, the Board's motion also included

additional direction and clarifications, including directing staff to prepare another Addendum/Modified Initial Study to environmentally clear the provision of additional surface parking for this station on the Metro right-of-way just across the street to the north.

Unrelated, but also within the current Addendum, staff analyzed another minor modification to the project at the request of the City of Los Angeles' Department of Transportation (LADOT) that entails: (1) the deletion of a pedestrian walkway within the Metro right-of-way along Chandler Boulevard between Leghorn Avenue and Coldwater Canyon Avenue, and (2) the construction of a new sidewalk on the north side of Chandler Boulevard North, extending approximately 300 feet west of Coldwater Canyon Avenue, to replace the pedestrian walkway.

POLICY IMPLICATIONS

The recommended action is consistent with Metro policy. In developing rail and transit lines, Metro has consistently provided park-and-ride lots to encourage transit use and enhance passenger convenience. The minor modification regarding the design of the pedestrian pathway along Chandler Boulevard, undertaken at the suggestion of LADOT, improves pedestrian access, which is also consistent with Metro goals.

OPTIONS

The Board could choose not to adopt and certify the Addendum/Modified Initial Study to the San Fernando Valley East-West Transit Corridor Final EIR. Staff is not recommending this option as the Addendum/Modified Initial Study is consistent with the Board's previous actions and direction to add park-and-ride spaces in the Warner Center area, including an additional Orange Line station if necessary, and to enhance pedestrian linkages.

FINANCIAL IMPACT

In February 2003, the Board adopted the budget for the Orange Line, which included an allowance of $16.5 million for park-and-ride spaces and an additional on-street station in Warner Center. The budget for this work was estimated assuming the addition of several levels to a parking garage planned by a private developer in the area and an on-street station. As this proved to be infeasible, staff studied numerous other options, and in February 2004, the Board adopted a different alternative that included: (a) the acquisition of an approximately 3.8 acre site owned by the Boeing Company (Boeing site); (b) an approximately one-third mile extension of the busway, bicycle/pedestrian paths and landscaping; (c) a new station and (d) development of the new surface park-and-ride spaces, including the lot on the Boeing site and the North Parking Lot under consideration.

Based on a recent cost estimate, the existing $16.5 budget allocation will be inadequate to cover the cost of these improvements. There may not be sufficient Orange Line Project Contingency to cover the potential additional cost beyond the $16.5 million allocation approved within the Orange Line Project Budget. Staff is evaluating optional funding sources to make up the shortfall, and award of the construction contract will not be

undertaken until sufficient funding is identified. In order to help manage costs, the City has agreed to fund over $1.1 million of street and infrastructure improvements on Canoga Avenue adjacent to the new Orange Line station via the Warner Center TDM and Traffic Mitigation Restitution Trust Fund. The widening of Canoga Avenue had been requested by the City as part of the project, and Staff had been concerned that Metro would have to fully fund these improvements out of the project budget.

DISCUSSION

In February 2004, the Board directed staff to extend the Orange Line, landscaping, and bicycle and pedestrian paths for a third-of-a-mile on the Metro right-of-way to the Boeing site and to purchase the site in order to create a new station and a surface park-and-ride lot with approximately 490 spaces. The February Board report recognized the potential of adding additional park-and-ride spaces at the North Parking Lot, but this was not analyzed in that Addendum. As a result, the Board directed staff to prepare a subsequent Addendum specifically addressing the North Parking Lot, which would add approximately 230 parking spaces to the Canoga Station (Attachment C). The design team has continued to examine the parking lot and station design on the Boeing site, and staff currently estimates 610 parking spaces may be possible there, for an upper yield of 840 parking spaces combining the two lots (Attachment D). Metro Construction intends to procure the North Parking Lot construction, as well as the Orange Line extension and the new station and park-and-ride lot on the Boeing site, via a design/bid/build procurement process, separate from the existing Orange Line Design/Build contract.

Should the Board direct staff to complete the North Parking Lot, Metro will need to issue lease terminations to two tenants, Jacobi Building Materials and The Green Scene, who are on month-to-month leases. The Real Estate Department previously sent notices alerting the tenants that their leases could be terminated depending on the Board's action. If the Board certifies the FEIR Addendum and approves the North Parking Lot, Real Estate staff would issue 90-day notices of termination to these tenants on a date appropriate to support the construction schedule. The notices would require the tenants to vacate the premises pursuant to their lease agreements. Staff forwarded copies of the Addendum to the affected parties, informed them of this Board meeting, and continue to consult with them.

MANDATORY FINDINGS OF SIGNIFICANCE AND RECOMMENDED MITIGATIONS UNDER CEQA

Staff and its consultant team prepared this Addendum/ Modified Initial Study to evaluate the environmental impacts of minor project modifications to the previously adopted San Fernando Valley East-West Corridor Project FEIR. Though no public review period is required by the California Environmental Quality Act (CEQA), the Addendum/Modified Initial Study was filed with the County Clerk on July 7, 2004 and was available for public review for thirty days. No comments were received from agencies or interested parties during the comment period. The public will have an opportunity to provide input at the January 2005 Board meeting.

On the basis of the data and analyses contained in the Addendum/Modified Initial Study, no potential adverse environmental effects from the proposed Metro Orange Line North Parking Lot were identified. For each of the environmental categories, the Addendum/Modified Initial Study shows that either the impacts would not be potentially significant or the mitigation measures incorporated in the approved San Fernando Valley East-West Transit Corridor Final EIR would reduce impacts to below significant or that the mitigation measures in the Addendum/Modified Initial Study would reduce impacts to less than significant. The same was true for the minor modification included in the Addendum. Based on the Addendum/Modified Initial Study, staff made the following findings:

1. None of the events listed in Section 21166 of the California Public Resources Code, or in Section 15162 of the State CEQA Guidelines, has occurred; therefore, no subsequent or supplemental environmental impact report shall be required by Metro.

2. Only minor technical changes or additions are necessary to make the February 2002 Final EIR adequate under CEQA to cover the proposed modifications.

3. The changes to the February 2002 Final EIR made by the Addendum/Modified Initial Study do not raise important new issues about significant effects on the environment.

NEXT STEPS

At the Board's direction, assuming consistency with the staff recommendation, staff will file a Notice of Determination with the Los Angeles County Clerk. The North Parking Lot ~~was~~ will included as an option in proposed Construction Contract No. C0739 for the Canoga Station, park-and-ride lot, and Orange Line extension to the Boeing site, ~~which was issued in early January 2005. This would allow the prospective bidders to estimate the work assuming the North Parking Lot should the Board approve it or for Metro to delete the work if the Board does not approve it~~. If the Board approves the North Parking Lot, staff will issue 90-day Notices of Termination to the tenants affected by the Board action, when required by the construction schedule. The tenants would be provided with termination benefits consistent with their leases and applicable regulations, legal requirements, and Metro policies as applied to other tenants similarly affected by the Orange Line project. Concurrently, staff will negotiate an agreement with LADOT to fund and construct the widening of Canoga Avenue, including signal, striping and street lighting relocations. Staff and LADOT will continue to coordinate the design of the Orange Line and City infrastructure improvements, the preparation of the bid documents, the evaluation and choice of the contractor, and the management and construction of the project. Lastly, staff will implement the minor modification to the pedestrian path and sidewalk on Chandler Boulevard evaluated in the Addendum.

ATTACHMENTS

A. Addendum/Modified Initial Study
B. Attachment B to February 2004 Board Report for Boeing Site
C. Project Illustration: North Parking Lot and Station/Parking Lot on Boeing Site
D. Conceptual Drawing: Warner Center Station, Park-and-Ride Striping Plan

Prepared by: Kathleen Sanchez, Transportation Planning Mgr., San Fernando Valley/North County Area Team
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Kevin Michel, Director-San Fernando Valley/North County Area Team
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James L. de la Loza, Executive Officer
Countywide Planning and Development

Roger Snoble
Chief Executive Officer

ATTACHMENT A

ADDENDUM AND MODIFIED INITIAL STUDY

TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE SAN FERNANDO VALLEY EAST-WEST TRANSIT CORRIDOR (METRO ORANGE LINE)

Los Angeles County
Metropolitan Transportation Authority

JULY 2004

Prepared by

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Willdan

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NOTICE OF AVAILABILITY
ADDENDUM/MODIFIED INITIAL STUDY
LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY
SAN FERNANDO VALLEY EAST-WEST TRANSIT CORRIDOR

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1. **Project Description:**
The North Parking Lot and the Pedestrian Path Modification would comprise minor project modifications to the Original Project described in the previously adopted FEIR. Together, the Boeing site and the North Parking Lot would provide an approximately 900-space surface parking facility that would serve patrons at the western terminus of the busway near Warner Center. The North Parking Lot, alone, would provide an expected 236 parking spaces. Patrons would access the North Parking Lot through two entrances: (1) an existing driveway at Canoga Avenue on the western side of the site, or (2) an existing driveway at Vanowen Street on the southern side of the site. Patrons parking at the North Parking Lot would utilize the bus station planned for construction on the south side of the Boeing site. Buses would travel to the bus stop along an extension of the bus route that was already addressed in the December 2003 Addendum and Modified IS. Development of the North Parking Lot would not require an additional bus station or further extension of the bus route. Thus, although patrons using the North Parking Lot would utilize the bus station and route extension, these features are not considered part of the North Parking Lot because they were included as part of the Boeing site project previously addressed in the December 2003 Addendum and Modified IS. In other words, the North Parking Lot analyzed in this document is limited to the construction and operation of an expected 236-space surface parking lot, only.

The Pedestrian Path Modification consists of two elements: (1) Deletion of approximately 500 feet of pedestrian path that was planned (but not yet constructed) between Leghorn and Coldwater Canyon Avenues along the Metro ROW median. The Metro ROW runs in the median between Chandler Boulevard North and Chandler Boulevard South. (2) Construction of approximately 300 feet of sidewalk along the north side of Chandler Boulevard North. Note that the new sidewalk would be an extension of existing sidewalk located to the west. Thus, although the length of the new sidewalk would be shorter than the length of the pedestrian path it would replace, the sidewalk would connect with existing sidewalk and thereby provide a complete walkway that would serve the same function as the 500 feet of pedestrian path. The Pedestrian Path Modification would incorporate a single point intersection at Coldwater Canyon Avenue and improve traffic circulation. The single point intersection could not accommodate the collection area for pedestrians using the planned pedestrian path, and required pedestrians to traverse across turning vehicle traffic.

2. **Project Location:**
The North Parking Lot would be developed on property located at the northeast corner of Vanowen Street and Canoga Avenue in the western San Fernando Valley community of Canoga Park, just north of Warner Center. The Pedestrian Path Modification would be implemented generally along Chandler Boulevard, between Leghorn Avenue and Coldwater Canyon Avenue in the eastern San Fernando Valley community of Van Nuys.

3. **Review Period:**
Metro, as lead agency, will receive comments on the Addendum beginning July 6, 2004 and ending at 9:30 a.m. on July 22nd at our Regular Board of Directors Meeting, 3rd Floor Boardroom. Please address all comments to: Manuel Gurrola, Environmental Compliance, Los Angeles County Metro, One Gateway Plaza (MS 99-17-2), Los Angeles, California, 90012. The Modified Initial Study will be available for public review in: The City of Los Angeles, Planning Department, located at 6251 Van Nuys Boulevard, Van Nuys, California, 91401, in the MTA's 15th Floor Library, One Gateway Plaza, Los Angeles, California, 90012, and via the internet on www.metro.net.

4. **Finding:**
Sections 3 and 4 of this FEIR Addendum present a thorough analysis of the potential impacts of the North Parking Lot and Pedestrian Path Modification to the certified FEIR. In summary, the North Parking Lot and Pedestrian Path Modification are not anticipated to result in significant adverse impacts beyond those impacts already disclosed in the FEIR. In addition, this modified project description and the less-than-significant impacts of such modifications do not reach the threshold for preparing a Subsequent or Supplemental EIR, per §15162 of the State CEQA Guidelines.

FILED

JUL 07 2004

CONNY B. McCORMACK, COUNTY CLERK

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NOTICE WAS POSTED
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STRAR-RECORDER/COUNTY CLERK

ADDENDUM AND MODIFIED INITIAL STUDY

TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT

FOR THE SAN FERNANDO VALLEY EAST-WEST TRANSIT CORRIDOR (METRO ORANGE LINE)

Prepared for

Los Angeles County
Metropolitan Transportation Authority

JULY 2004

Prepared by

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1.0 INTRODUCTION

1.1 Purpose of the Modified Initial Study and Addendum

The Los Angeles County Metropolitan Transportation Authority (Metro) is preparing this Addendum and Modified Initial Study (Modified IS) to evaluate the environmental impacts of minor project modifications to the previously adopted *Final Environmental Impact Report for the San Fernando Valley East-West Transit Corridor* (FEIR), California State Clearinghouse No. 1995101050. On February 28, 2002, the Metro Board of Directors (Board) certified this FEIR and adopted the Findings of Fact and Statement of Overriding Considerations and Mitigation Monitoring and Reporting Program. Since then, the project described by the FEIR (Original Project) has been modified, and the modifications have been analyzed to determine whether their potential impacts were considered previously by the FEIR or would result in changes that would require the preparation of a subsequent EIR.

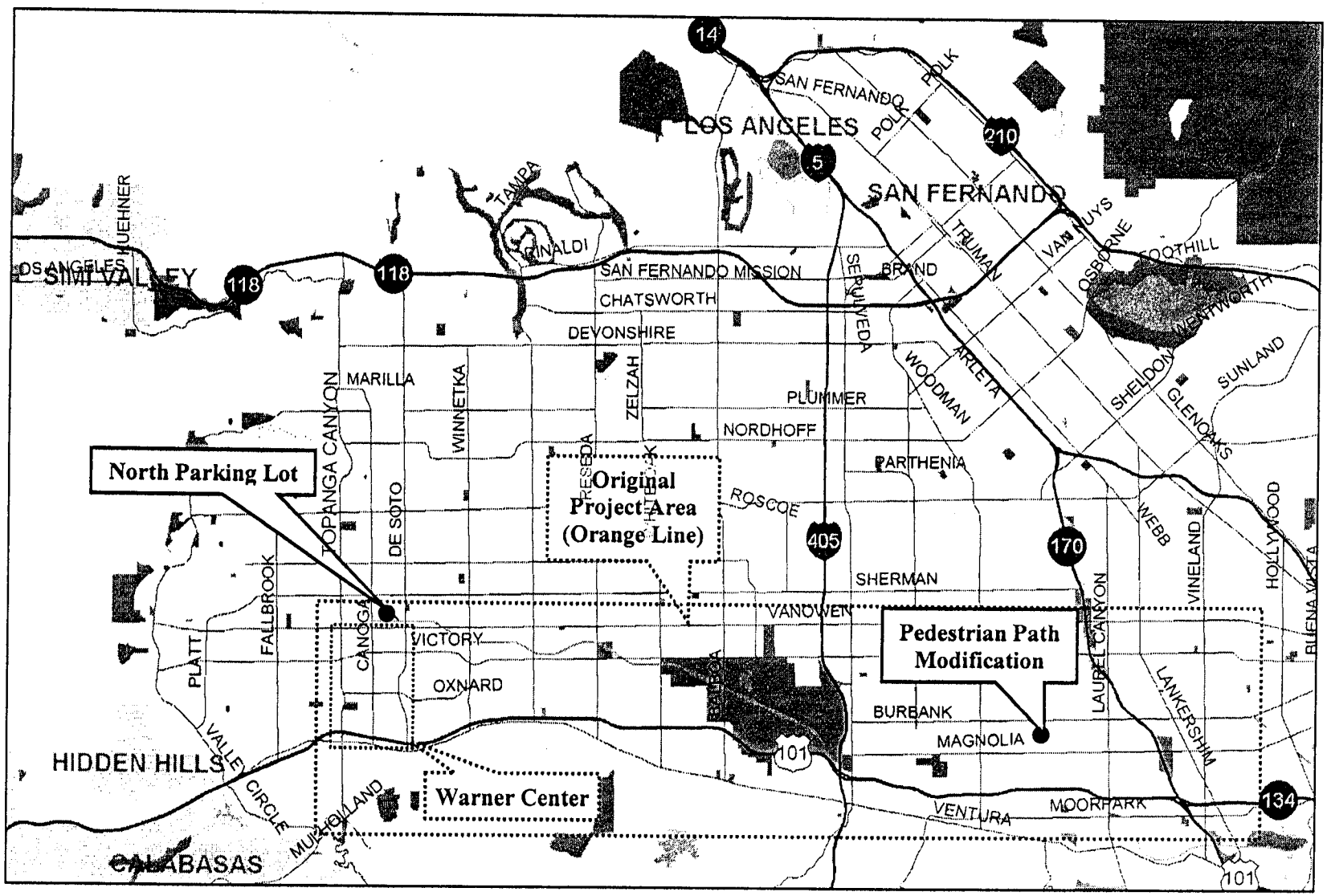
In December 2003, an Addendum and Modified IS to the FEIR was prepared to evaluate the potential environmental impacts of modifying the route of the Orange Line in order to create an additional station in the Warner Center area that included a park-and-ride facility. The other two stations previously approved as part of the Original Project in the Warner Center area (the western terminus of the project) had not included park-and-ride facilities. Three other additional minor modifications were also examined in the December 2003 Addendum and Modified IS: (1) possible substitution of rubberized asphalt concrete pavement for the currently planned portland cement concrete and/or regular asphalt at select busway segments, (2) adding a recycled water pipeline to irrigate landscaping along the busway and the bike path/pedestrian walkway, and (3) incorporating a surfacing option to differentiate the bike path from the pedestrian walkway. These modifications to the Original Project were not anticipated by the approved FEIR, but the changes in impacts were found not to require the preparation of a subsequent EIR.

At this time, under the criteria established within the California Environmental Quality Act (CEQA), a new Addendum and Modified IS to the FEIR is required to evaluate the potential environmental impacts of additional minor project modifications. This Addendum and Modified IS has been prepared in accordance with the requirements of CEQA and the *Guidelines for Implementation of the California Environmental Quality Act* (*State CEQA Guidelines*) for the purpose of analyzing the direct, indirect, and cumulative environmental effects of the proposed minor project modifications. The *State CEQA Guidelines* are codified as §15000 *et seq.* of the California Code of Regulations (CCR).

1.2 Project Background and Overview

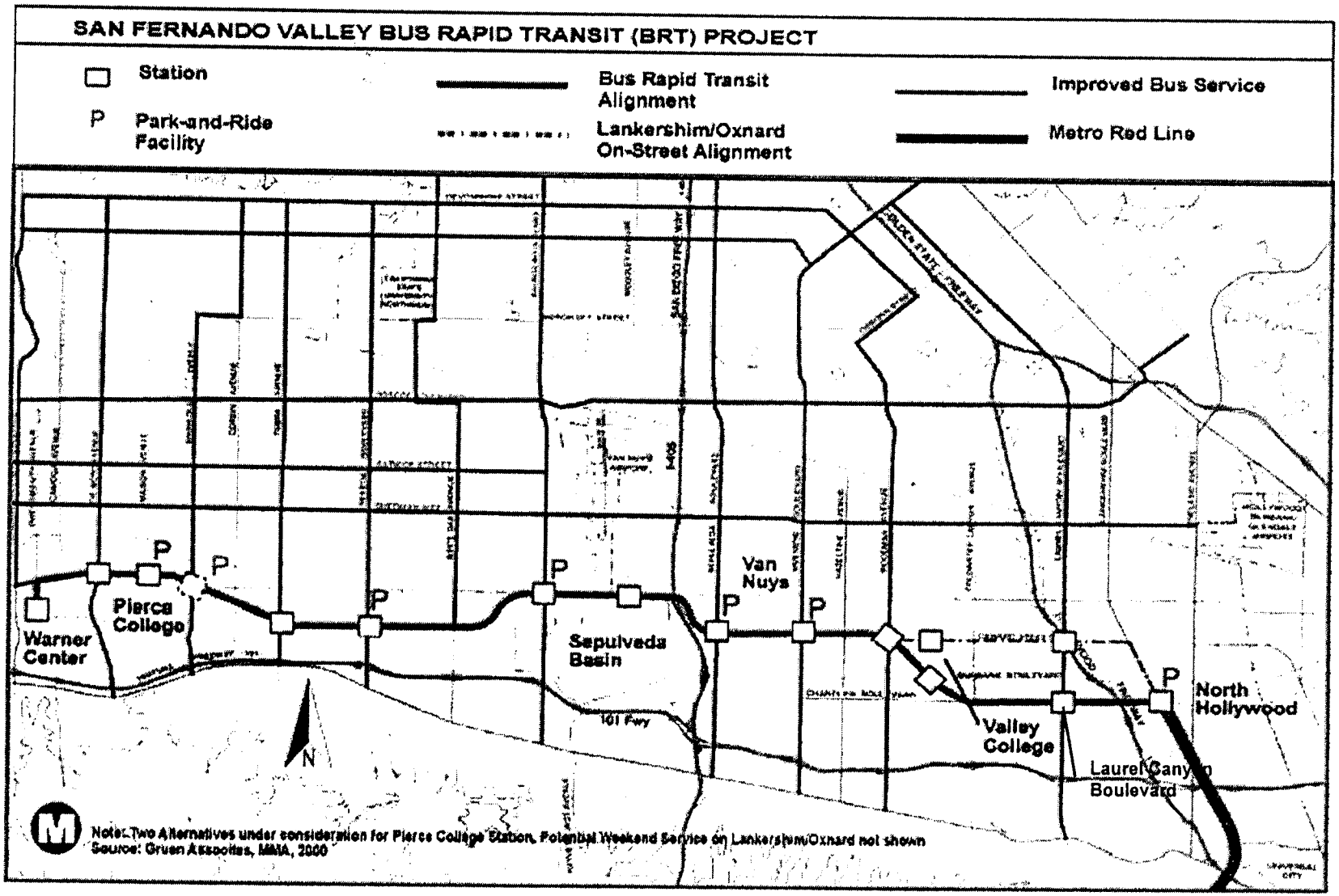
The Original Project is located in the central part of Los Angeles County, as shown in **Figure 1-1** (Regional Map). In June 1999, MTA initiated a Major Investment Study (MIS) to consider the most appropriate transit option generally along the former Southern Pacific/Pacific Red Car rail right-of-way (ROW), known as the Burbank-Chandler corridor, to alleviate projected severe east/west traffic along major arterials and the 101 Freeway within the San Fernando Valley by the year 2020. The MIS considered a range of transportation alternatives, including No Project, Traffic System Management (TSM), Bus Rapid Transit (BRT), Light Rail Transit (LRT), and Heavy Rail Transit (HRT). In July 2001, the Board selected the Full BRT (a variation of the BRT Alternative, running between North Hollywood and Warner Center), as the Locally Preferred Alternative (LPA) for the Original Project. Accordingly, the "Original Project" denotes the Full BRT Alternative, (since renamed the "Metro Orange Line") described in the FEIR.

The Original Project envisioned a multi-modal greenway along the Metro ROW between the North Hollywood Metro Red Line station and the planned Warner Center Transit Hub (see **Figure 1-2**, The



Scale: 1 inch = 2.5 miles
Source: *GeoFinder*

Figure 1-1: REGIONAL MAP



Source: Gruen Associates, 2000 (from *Final Environmental Impact Report for the San Fernando Valley East-West Transit Corridor*, 2002)

Figure 1-2: THE ORIGINAL PROJECT: THE METRO ORANGE LINE (FULL BRT ALTERNATIVE)

Original Project: The Metro Orange Line [Full BRT Alternative]). The Original Project would include a 14-mile, primarily exclusive busway with two 13-foot, at-grade travel lanes generally located in the center of the 100-foot Metro ROW. Buses would stop at 13 bus stations, 6 of which include park-and-ride facilities. The 6 park-and-ride facilities would supply commuters with 2,900 to 3,200 new parking spaces in addition to the existing parking spaces at the North Hollywood Metro Red Line station and at Balboa Boulevard, for a total of 4,000 to 4,300 spaces. The multi-modal greenway would also include a pedestrian path and bike path. Landscaping would be provided along the multi-modal greenway, at the bus stations, and at park-and-ride facilities. The project cost included the purchase of new clean fuel new look buses and enhanced north/south local bus service to feed the Orange Line. The project also included the cost of signal upgrades to enable the buses to have transit priority at traffic signals.

The Original Project, as described by the FEIR adopted in February 2002, did not include parking for patrons at the western terminus of the busway near Warner Center. At the time the Original Project was going through the environmental process, the City's technical staff and the local councilperson determined that the Warner Center Specific Plan (WCSP) did not permit park-and-ride lots for transit in the Plan area. Subsequent to adoption of the FEIR, the City modified its position and determined that a transit station that included a park-and-ride lot would be consistent with the WCSP, and the elected officials and staff of Metro and the City began examining the potential locations for a park-and-ride lot. This involved looking at land adjacent to the two existing stations in the Warner Center area as well as potential locations for a new station in the area.

Several factors supported the inclusion of park-and-ride spaces to serve the Orange Line in the Warner Center area. First, residents commuting east from Warner Center and the West Valley areas via the Original Project would benefit from the availability of parking near the planned Warner Center Transit Hub, and City of Los Angeles staff supported the determination that a park-and-ride facility would be compatible with the Warner Center Specific Plan. Second, experience at the Red Line stations at North Hollywood and Universal indicated a strong demand for parking spaces in order to access transit. Third, a parcel of land, which was to be acquired and developed into a portion of a park-and-ride facility at the Van Nuys station, was deleted from the Original Project. Deletion of this area resulted in the elimination of 55 parking spaces from that park-and-ride facility.

Accordingly, at the February 2003 Board meeting, the Board authorized the Chief Executive Officer (CEO) to evaluate alternatives in order pursue the development of a park-and-ride spaces to serve the Orange Line in the Warner Center area. In December 2003, staff prepared an Addendum and Modified IS for the Board's consideration to evaluate the potential environmental impacts of developing a park-and-ride facility. The study looked at a larger number of potential options at the start of the effort, including the possibility of adding park-and-ride spaces adjacent to the two previously approved Orange Line stations in Warner Center, but determined that the land costs were high, land owners were unwilling to sell, and/or that the owners had already made other long range plans on the available land. As a result, other potential locations were evaluated that involved the creation of an additional station in the area, and these were eventually narrowed to the three potential site alternatives that were evaluated in the Addendum. The analysis evaluated the three site alternatives on a number of criteria and determined that the "Boeing site," a triangular-shaped parcel of land owned by Boeing North American, Inc., (Boeing), was the most suitable of the alternatives for a new Orange Line station, a one-third mile extension of the Orange Line, landscaping, and bike and pedestrian paths to reach the site, and the park-and-ride facility. As part of that effort, the Addendum evaluated several park-and-ride design options, including surface and structured parking, for the Boeing site and recommended an option that would provide surface parking on both the Boeing site and a satellite parking site located north of Vanowen Street. This satellite parking site is referred to as the "North Parking Lot"(see **Figure 1-3**, Boeing Site and North Parking Lot).

At its January 2004 meeting, the Board approved a motion for a 30-day continuation to allow Boeing representatives additional time to review the December 2003 Addendum and Modified IS and for Metro, City and Boeing staff to meet and coordinate efforts. During meetings between the parties in late January and early February 2004, Boeing raised several concerns regarding development of a park-and-ride facility on the Boeing site and North Parking Lot site. In response to these concerns, Metro staff recommended that the December 2003 Addendum and Modified IS be approved and certified, subject to the following five clarifications:[1]

1. ***Addendum for Satellite Parking On MTA Property:*** *Direct the CEO to prepare an Addendum for additional surface parking on MTA owned land adjacent to the northeast corner of Canoga and Vanowen across the street from the Boeing site currently under consideration for the proposed Orange Line station and park-and-ride lot.*

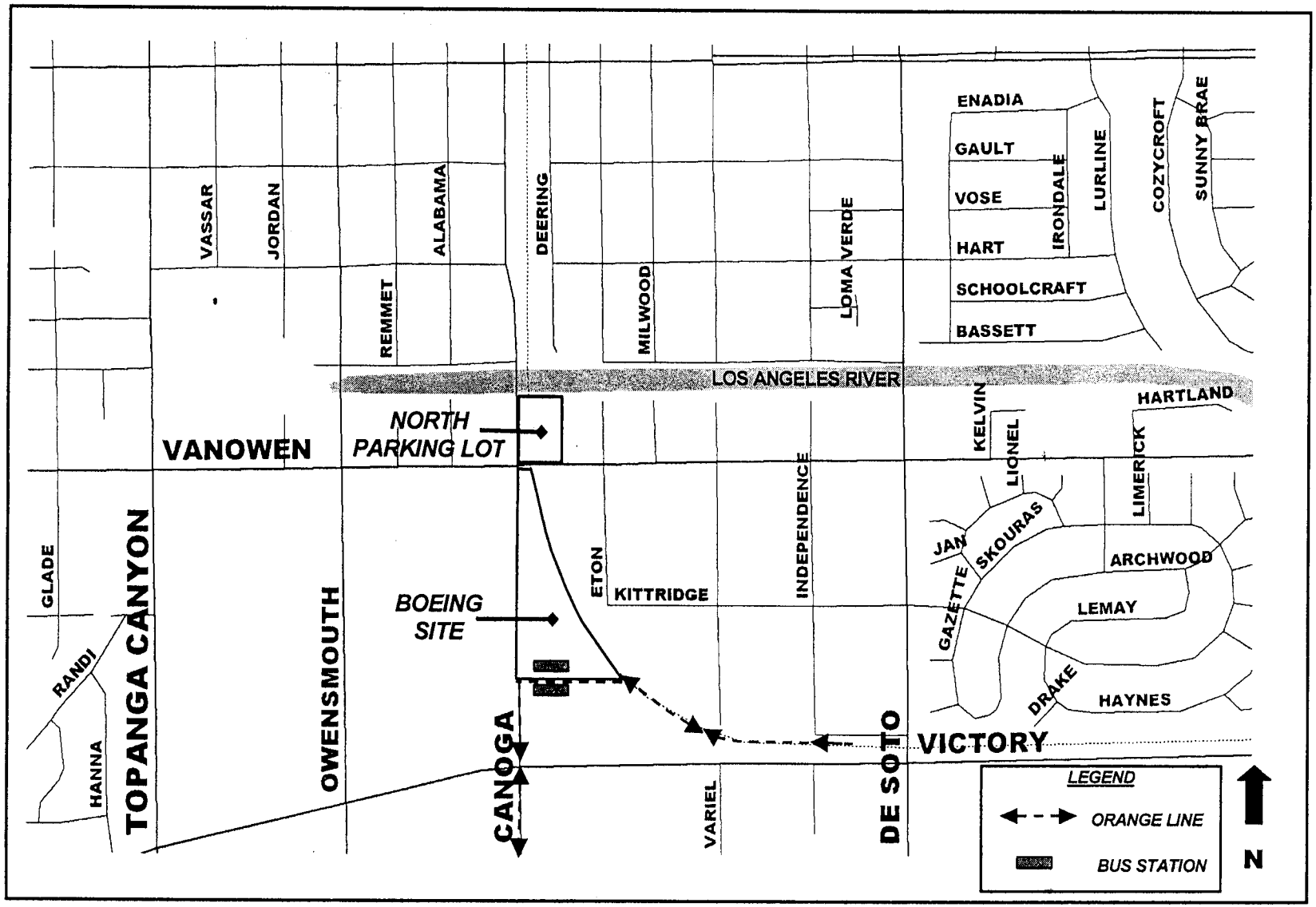
2. ***Metro Orange Line Route****: The proposed Metro Orange Line route will remain as presented in the B-1 option. The route will not be modified by the potential addition of satellite parking on the MTA property to the north, which is to be studied in the subsequent Addendum mentioned above. Customers would walk from satellite parking to the Orange Line station and back should it be implemented.*

3. ***Project Permit Compliance Review Process Under the Warner Center Specific Plan:*** *Direct the CEO to submit the MTA project (the Orange Line extension, landscaped bicycle and pedestrian paths, and the transit park-and-ride lot and station on the Boeing property to be purchased) through the Project Permit Compliance Review process described in the Warner Center Specific Plan as applicable and required by the City, consistent with the rights and privileges conferred to the MTA by the Plan's provisions and other City Codes. It is understood that nothing in this paragraph shall prevent the MTA from exercising its rights and privileges, including applicable exemptions and credits, in accordance with the Warner Specific Plan and applicable City codes.*

4. ***Right-of-Way Dedications and Street Improvements:*** *If required by the City, direct the CEO to make right-of-way dedications and street improvements typically required of projects as defined under the provisions of the Warner Center Specific Plan and other City codes as applicable. Should the City require MTA contributions (such as dedications, street and intersection improvements, fair share contributions, and/or fees) consistent with the Plan and appropriate findings as a result of the Project Permit Compliance Review Process if applicable, the basis for such findings and requirements by the City shall be based on the complete transit project (as described in no. 3 above) that the Board is authorizing by this action and the overall positive impact that the Orange Line and its components will have on future traffic in the area. The CEO shall utilize all the rights and privileges conferred by the Plan to protect the interests of the MTA in this matter and to insure that property owners and developers contribute their fair share to street, intersection, and other transportation improvements meant to be funded on a shared basis based on the traffic impacts generated by their uses and developments as outlined in the Plan.*

5. ***MTA Action - To Approve Surface Parking and Metro Orange Line Station on the Boeing Site****: The Board action at this time solely authorizes the CEO to construct the transit project as described in no.'s 3 and 4 above. Any future extension of the Orange Line to the north beyond the Boeing site along the MTA right-of-way would require a separate environmental review per the California Environmental Quality Act and Board action.*

[1] Reference Attachment B of the Staff Report to Metro Board of Directors for February 26, 2004, Regular Board Meeting, Item 41, Metro Orange Line Warner Center Park-and-Ride Facility.



Scale: 1 inch = 0.2 miles
Source: *GeoFinder*, Thomas Bros.Maps (1997)

Figure 1-3: BOEING SITE AND NORTH PARKING LOT

At the February 2004 Board meeting, the Board approved and certified the December 2003 Addendum and Modified IS to create an additional station in the Warner Center area by adding a one-third mile extension along the Metro ROW of the Orange Line, landscaping, bike and pedestrian paths, as well as a park-and-ride lot subject to these clarifications. In compliance with the first clarification, this document is a subsequent Addendum and Modified IS that evaluates the potential environmental impacts of construction and operation of surface parking at the North Parking Lot to serve the new Orange Line station as an additional proposed enhancement to the Original Project.

In addition, this document evaluates the potential environmental impacts of a second minor project modification to the Original Project, the "Pedestrian Path Modification." The Pedestrian Path Modification would be located in the eastern portion of the Original Project between the Laurel Canyon Station and the Valley College Station (located at the intersection of Fulton Avenue and Burbank Boulevard), as shown in **Figures 1-1** and **1-2**. As shown in **Figure 1-4** (Pedestrian Path Modification), the Pedestrian Path Modification would involve deleting a segment of the pedestrian path that was planned (but not yet constructed) along the south side of the median between the north and south lanes of Chandler Boulevard, and replacing it with sidewalk along the north side of Chandler Boulevard North. The Pedestrian Path Modification would be implemented in response to a request by the Los Angeles Department of Transportation (LADOT) to incorporate a single point intersection at Coldwater Canyon Avenue and improve traffic circulation. The single point intersection could not accommodate the collection area for pedestrians using the planned pedestrian path, and required pedestrians to traverse across turning vehicle traffic.

1.3 Statutory Authority

1.3.1 The California Environmental Quality Act

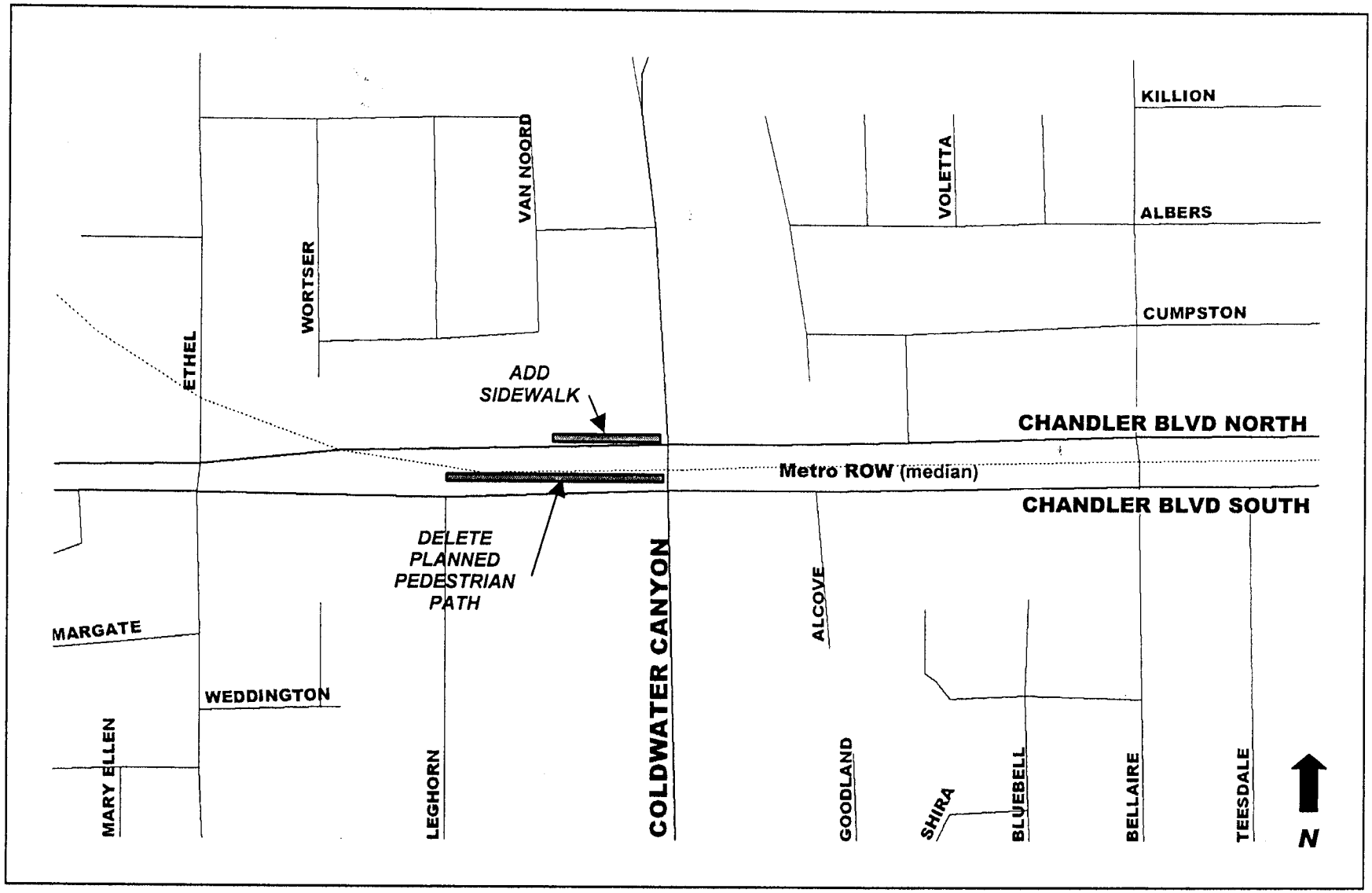
According to §15164 of the *State CEQA Guidelines*, "the lead agency...shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in §15162 calling for the preparation of a subsequent EIR have occurred."

§15162 lists the conditions that require the preparation of a Subsequent EIR rather than an Addendum. These include the following:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effect; or



Scale: Not to Scale
Source: *GeoFinder*, Thomas Bros.Maps (1997)

Figure 1-4: PEDESTRIAN PATH MODIFICATION

(3) *New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:*

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce on or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative;

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

None of the conditions described in §15162 calling for the preparation of a subsequent EIR have occurred. Therefore, an Addendum is the appropriate environmental document to evaluate the North Parking Lot.

1.3.2 Appropriate Environmental Document

Section 2 of this FEIR Addendum describes the North Parking Lot in greater detail. Metro has reviewed the North Parking Lot in light of the relevant sections in the *State CEQA Guidelines* and has assessed the North Parking Lot in this Addendum and Modified IS. As the CEQA lead agency, Metro has determined that this FEIR Addendum and Modified IS is the appropriate environmental documentation for the North Parking Lot.

1.4 Incorporation by Reference

Pursuant to §15150 of the *State CEQA Guidelines*, this Addendum and Modified IS incorporates by reference all or portions of other technical documents that are a matter of public record. Those documents either relate to the North Parking Lot or provide additional information concerning the environmental setting for the North Parking Lot. Where all or a portion of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of this Addendum and Modified IS.

The information contained in this Addendum and Modified IS is based, in part, on the following related technical studies that include the North Parking Lot site or provide information addressing the surrounding area:

- *Final Environmental Impact Report on San Fernando Valley East-West Transit Corridor,* Metropolitan Transportation Authority (MTA), February 2002.

- *Addendum and Modified Initial Study to the Final Environmental Impact Statement for the San Fernando Valley East-West Transit Corridor,* Metropolitan Transit Authority (MTA), December 2003.

- *Revised Metro Staff Report for Item 41 for the February 26, 2004, Board of Directors Meeting*, Metropolitan Transportation Authority, February 2004.

- *Traffic Impact Analysis, Warner Center MTA Park-and-Ride Facility, City of Los Angeles*, Willdan, November 2003.

- *Traffic Impact Analysis—Addendum Study, Warner Center Metro Park-and-Ride Project, City of Los Angeles*, Willdan, June 4, 2004.

- *General Plan Land Use Map for the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan*, City Planning Department, City of Los Angeles, May 1, 2002.

- *Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan of the Land Use Element of the General Plan*, City Planning Department, City of Los Angeles, August 17, 1999.

- *Conservation Element of the General Plan of the City of Los Angeles*, City Planning Department, City of Los Angeles, adopted September 26, 2001.

- *Warner Center Specific Plan*, City of Los Angeles, October 2002.

- *Warner Center Specific Plan Draft Supplemental Environmental Impact Report*, City of Los Angeles, February 1999.

- *Warner Center Specific Plan Final Supplemental Environmental Impact Report*, City of Los Angeles, May 1999.

- *Rarefind 2: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Base, Version 3.0.3*, California Department of Fish and Game (CDFG), Sacramento, CA, updated as of February 3, 2004.

- *Earthquake Hazards Associated with the Verdugo-Eagle Rock and Benedict Canyon Fault Zones, Los Angeles County, California*, F.H. Weber, J.H. Bennett, R.H. Capman, G.W. Chase, and R.B. Saul, California Department of Conservation, Division of Mines and Geology, Open File Report 80-10LA, 1980.

- *Geotechnical Investigation for Limited Preliminary Engineering Program, San Fernando Valley East-West Segment, Metro Red Line Project*, Earth Technology Corporation, Volume I. Prepared for Engineering Management Consultants, 1993.

- *Reconnaissance Seismic Hazard Maps of Portions of Los Angeles and Ventura Counties, California*, Charles R. Real, Mark J. DeLisle, Timothy P. McCrink, Richard B. Greenwood, Pamela J. Irvine, Ralph Loyd, Jack Mc Millan, Cynthia Pridmore, Michael Silva, Jerome A. Treiman, Micahel Reichle, and Theodore C. Smith, California Department of Conservation, Division of Mines and Geology, Open File Report 96-01, 1996.

- *Soil Remedial Action Plan, Building 009 Area, Canoga Park Avenue Facility, 6620 Canoga Avenue, Canoga Park, California*, Haley & Aldrich, Inc., November 2003.

- *Approval of Soil Remediation Action Plan, Building 009 Area, The Boeing Company, Canoga Avenue Facility, Canoga Park,* (SLIC File No. 0273A), California Regional Water Quality Control Board, Los Angeles Region (LARWQCB), February 11, 2004.

- *Workplan for Groundwater Monitoring and Monitoring Well Abandonment, The Boeing Company, Canoga Park Facility, Rocketdyne Propulsion and Power, 6633 Canoga Avenue, Canoga Park, California,* Tait Environmental Management, Inc., February 21, 2001.

- *Approval of Groundwater Monitoring Program and Groundwater Well Abandonment – Boeing Rocketdyne Propulsion and Power Facility, 6633 Canoga Avenue, Canoga Park, California,* (File No. 83-08), California Regional Water Quality Control Board, Los Angeles Region, March 23, 2001.

1.5 Entitlements and Regulatory Permits

The North Parking Lot and Pedestrian Path Modification may require the following regulatory permits:

- Entitlement and ministerial permits from the City of Los Angeles

- Construction Permit from the South Coast Air Quality Management District (SCAQMD)

1.6 Summary and Comparison of Impacts

Sections 3 and 4 of this FEIR Addendum present a thorough analysis of the potential impacts of the North Parking Lot and Pedestrian Path Modification to the certified FEIR. In summary, the North Parking Lot and Pedestrian Path Modification are not anticipated to result in significant adverse impacts beyond those impacts already disclosed in the FEIR. In addition, this modified project description and the less-than-significant impacts of such modifications do not reach the threshold for preparing a Subsequent or Supplemental EIR, per §15162 of the State CEQA Guidelines.

2.0 PROJECT DESCRIPTION

2.1 Project Location

The North Parking Lot and the Pedestrian Path Modification would comprise minor project modifications to the Original Project described in the previously adopted FEIR and subsequent project Addendums, most recently February 2004. As shown in **Figure 1-1**, the Original Project and the proposed project modifications would be located in the San Fernando Valley, a portion of the City of Los Angeles (City), Los Angeles County (County), California. As shown in **Figure 1-3**, the North Parking Lot would be developed on property located at the northeast corner of Vanowen Street and Canoga Avenue in the western San Fernando Valley community of Canoga Park, just north of Warner Center. This would provide additional parking for the new Orange Line extension and station across the street and directly to the south, which the Board approved in their action of February 2004. As shown in **Figure 1-4**, the Pedestrian Path Modification would be implemented generally along Chandler Boulevard, between Leghorn Avenue and Coldwater Canyon Avenue in the eastern San Fernando Valley community of Van Nuys.

2.2 Project Objectives

The project objectives are to implement two minor modifications to the Original Project, as described in the previously adopted Addendum to the FEIR in Feb 2004:

- Construct and operate the North Parking Lot in order to distribute parking spaces over two parking lots and reduce potential impacts associated with implementation of the Boeing site parking lot.

- Implement the Pedestrian Path Modification to increase pedestrian safety and traffic circulation by eliminating a pedestrian crossing at a vehicle turning lane.

The Original Project envisioned a multi-modal greenway along the Metro ROW between the North Hollywood Metro Red Line station and the planned Warner Center Transit Hub (see **Figure 1-2**, The Original Project: The Metro Orange Line [Full BRT Alternative]). The Original Project would include a 14-mile, primarily exclusive busway with two 13-foot, at-grade travel lanes generally located in the center of the 100-foot Metro ROW. Buses would stop at 13 bus stations, 6 of which include park-and-ride facilities. The 6 park-and-ride facilities would supply commuters with 2,900 to 3,200 new parking spaces in addition to the existing parking spaces at the North Hollywood Metro Red Line station and at Balboa Boulevard, for a total of 4,000 to 4,300 spaces. The multi-modal greenway would also include a pedestrian path and bike path. Landscaping would be provided along the multi-modal greenway, at the bus stations, and at park-and-ride facilities. The project cost included the purchase of new clean fuel new look buses and enhanced north/south local bus service to feed the Orange Line. The project also included the cost of signal upgrades to enable the buses to have transit priority at traffic signals.

The Original Project, as described by the FEIR adopted in February 2002, did not include parking for patrons at the western terminus of the busway near Warner Center. At the time the Original Project was going through the environmental process, the City's technical staff and the local councilperson determined that the Warner Center Specific Plan (WCSP) did not permit park-and-ride lots for transit in the Plan area. Subsequent to adoption of the FEIR, the City modified its position and determined that a transit station that included a park-and-ride lot would be consistent with the WCSP, and the elected officials and staff of Metro and the City began examining the potential locations for a park-and-ride lot. This involved looking at land adjacent to the two existing stations in the Warner Center area as well as potential locations for a new station in the area.

Several factors supported the inclusion of park-and-ride spaces to serve the Orange Line in the Warner Center area. First, residents commuting east from Warner Center and the West Valley areas via the Original Project would benefit from the availability of parking near the planned Warner Center Transit Hub, and City of Los Angeles staff supported the determination that a park-and-ride facility would be compatible with the Warner Center Specific Plan. Second, experience at the Red Line stations at North Hollywood and Universal indicated a strong demand for parking spaces in order to access transit. Third, a parcel of land, which was to be acquired and developed into a portion of a park-and-ride facility at the Van Nuys station, was deleted from the Original Project. Deletion of this area resulted in the elimination of 55 parking spaces from that park-and-ride facility.

Accordingly, at the February 2003 Board meeting, the Board authorized the Chief Executive Officer (CEO) to evaluate alternatives in order pursue the development of a park-and-ride spaces to serve the Orange Line in the Warner Center area. In December 2003, staff prepared an Addendum and Modified IS for the Board's consideration to evaluate the potential environmental impacts of developing a park-and-ride facility. The study looked at a larger number of potential options at the start of the effort, including the possibility of adding park-and-ride spaces adjacent to the two previously approved Orange Line stations in Warner Center, but determined that the land costs were high, land owners were unwilling to sell, and/or that the owners had already made other long range plans on the available land. As a result, other potential locations were evaluated that involved the creation of an additional station in the area, and these were eventually narrowed to the three potential site alternatives that were evaluated in the Addendum. The analysis evaluated the three site alternatives on a number of criteria and determined that the "Boeing site," a triangular-shaped parcel of land owned by Boeing North American, Inc., (Boeing), was the most suitable of the alternatives for a new Orange Line station, a one-third mile extension of the Orange Line, landscaping, and bike and pedestrian paths to reach the site, and the park-and-ride facility. As part of that effort, the Addendum evaluated several park-and-ride design options, including surface and structured parking, for the Boeing site and recommended an option that would provide surface parking on both the Boeing site and a satellite parking site located north of Vanowen Street. This satellite parking site is referred to as the "North Parking Lot"(see **Figure 1-3**, Boeing Site and North Parking Lot).

Also subsequent to adoption of the FEIR, LADOT requested that the Original Project be modified to incorporate a single point intersection in order to eliminate the collection of pedestrians in the Metro ROW median at the intersection of Coldwater Canyon Avenue and Chandler Boulevard, where pedestrians would either walk across turning vehicles or return to their previous locations. The adopted FEIR stated that, "pedestrian paths would be constructed within the MTA [Metro] ROW paralleling portions of Chandler Boulevard where sidewalks are not currently installed. The first pedestrian path would be constructed in the median between Ethel and Coldwater Canyon Avenues, north of the South Chandler roadway..."(p. 2-36). Rather than construct the full length of this pedestrian path, the Pedestrian Path Modification would construct sidewalk along the north side of Chandler Boulevard North (see **Figure 1-4**) in place of the portion of pedestrian path that would extend between Coldwater Canyon and Leghorn Avenues.

The potential environmental impacts of the North Parking Lot and the Pedestrian Path Modification were not analyzed as part of the Original Project or in any subsequent environmental document. Accordingly, this document evaluates the potential environmental impacts of construction and operation of the North Parking Lot and the Pedestrian Path Modification.

2.3 Environmental Setting

A complete description of adjacent land uses for the Original Project is provided in the Section 4-1.1.2a of the FEIR. The environmental setting of the North Parking Lot and the Pedestrian Path Modification are described below.

2.3.1 North Parking Lot

The North Parking Lot would be developed on Metro-owned property within the bounds of the City. As indicated by the Zone Information and Map Access System (ZIMAS), an Internet-based system developed by the Department of City Planning to provide property information, the North Parking Lot site is designated as a "PF" Public Facilities zone. Accordingly, the North Parking Lot would adhere to the regulations set forth in Los Angeles Municipal Code (LAMC) Chapter 1 Article 2 Section 12.04.09, which describes the allowed land uses within a PF zone.

The City General Plan's Land Use Element divides the City into distinct Community Plan Areas, and the North Parking Lot would be located in the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Area (adopted August 17, 1999). As shown on the Generalized Land Use Map for the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Area, the North Parking Lot site is designated for Public Facilities land use, which is consistent with zoning. The North Parking Lot site is not within the bounds of any specific plan areas or other plan areas or guidelines. In particular, the North Parking Lot site is located just north of the limits of Warner Center, as defined by the Warner Center Specific Plan.[1] The WCSP identifies the Metro right-of-way and the Orange Line as a key part of the transportation network in the WCSP plan area. The San Fernando Valley North/South Major Investment Study previously adopted by the Board in 2003 identified the Metro right-of-way for a potential extension of the Orange Line northerly to the Chatsworth Metrolink station.

Current land uses on the North Parking Lot site are inconsistent with the zoning and the General Plan land use designation. Metro currently leases the North Parking Lot site to two private businesses: The Green Scene and Jacobi Building Materials. The Green Scene is a landscaping business and occupies the southwest portion of the site. Jacobi Building Materials stores stones, bricks, and other landscaping materials onsite and occupies the remaining part of the site.

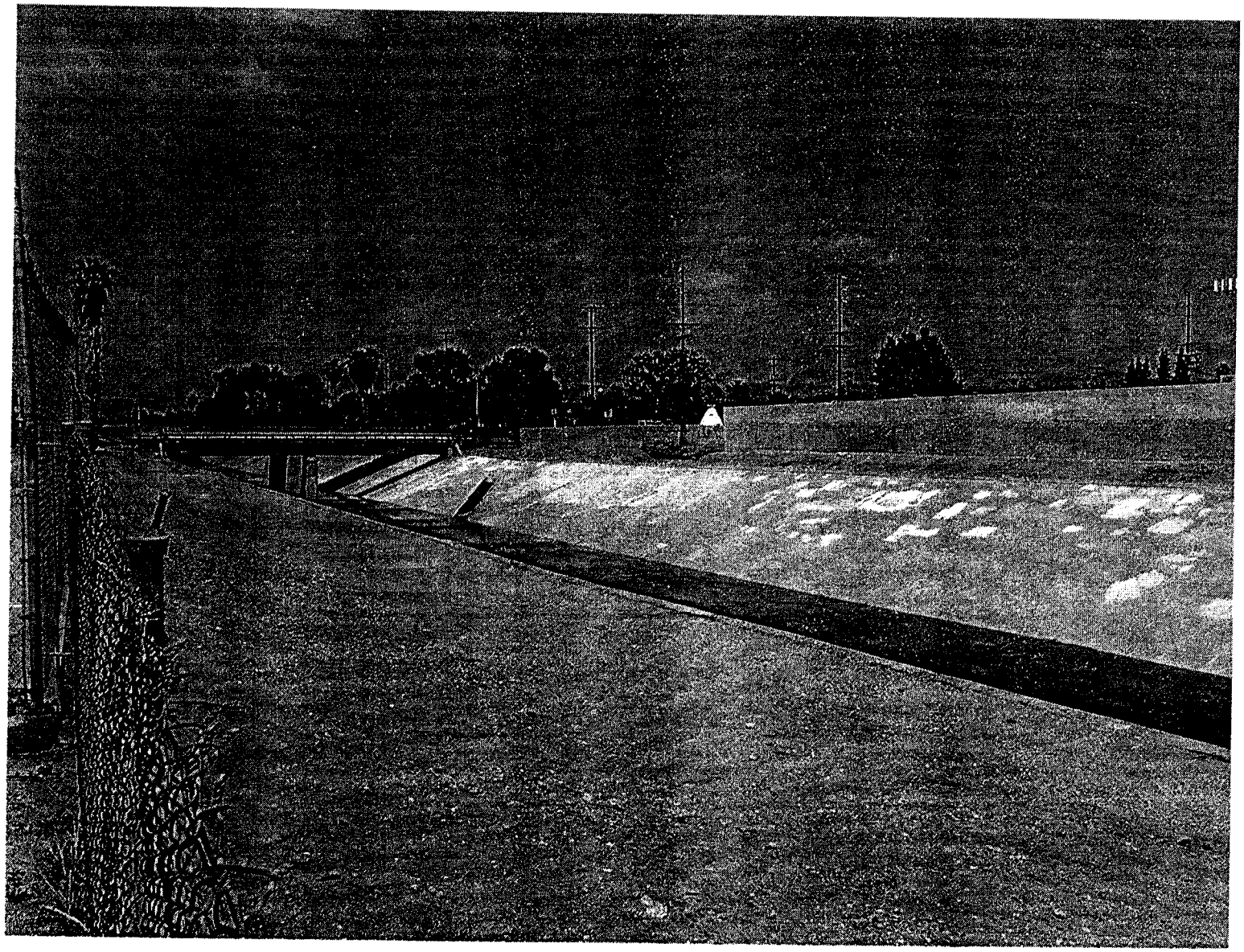
Land uses adjacent to the North Parking Lot site are commercial and industrial, although the area within ½-mile of the site includes residential land uses. Adjacent to the east side of the North Parking Lot site is a commercial property housing a public storage facility, paint store, automotive repair, and other automotive-related facilities. South of the North Parking Lot site, across Vanowen Street, is a Federal Express facility that includes a warehouse and delivery truck parking area. Also, directly south is the Boeing site, on which the Metro Board previously approved the development of a new Orange Line station and park-and-ride lot. West of the North Parking Lot site, across Canoga Avenue, is a large restaurant, a floor covering business, and a carpet cleaning business. Each of these businesses maintains a parking lot. The north side of the North Parking Lot site abuts the Los Angeles River, and north across the river is a concrete manufacturing plant. The portion of the Los Angeles River that abuts the North Parking Lot site is concrete-lined and does not support riparian habitat (see **Figure 2-1**, Los Angeles River Adjacent to the North Parking Lot Site).

[1] Based on personal communication from Tom Glick of City of Los Angeles Department of City Planning to Carrie Barton of Ultrasystems Environmental Inc., June 29, 2004, the northern boundary of Warner Center is at the midline of Vanowen Street. Also reference: (i) ZIMAS (http://zimas.lacity.org/) for a parcel profile report for the North Parking Lot site, and (ii) the Warner Center Specific Plan, especially Map 3a (Land Use Category Map 1 of 4—Northwestern Quadrant) and Map 3b (Land Use Category Map 2 of 4—Northeastern Quadrant).

The only other open space area within ½-mile of the North Parking Lot site is John Quimby Park. The open space areas and other community features within ½-mile of the North Parking Lot site are listed in **Table 2-1** (Community Features Within ½-Mile of the North Parking Lot Site).

Table 2-1
Community Features Within ½-Mile of the North Parking Lot Site

Feature	Location
Schools	
Hart Street Elementary School	21040 Hart Street, approximately ¼-mile northeast of the site.
Canoga Park High School	6850 Topanga Canyon Boulevard, approximately ⅓-mile west of the site.
Coutin School (Private)	7119 Owensmouth Avenue, approximately ½-mile northwest of the site.
Commercial Facilities	
Topanga Canyon Shoppingtown Plaza	City block bound by Vanowen Street, Owensmouth Avenue, Victory Boulevard, and Topanga Canyon Boulevard; approximately ¼-mile southwest of the site.
Public Facilities	
LAUSD Maintenance and Operations, District A	Northeast corner of Eton Avenue and Vanowen Street, just one block east of the site.
LAFD Fire Station 72	6811 De Soto Avenue, approximately ½-mile east of the site.
Canoga Park Chamber of Commerce	7248 Owensmouth Avenue, approximately ½-mile northwest of the site.
Open Space and Recreation	
Los Angeles River	Abuts the north side of the site.
John Quimby Park	7008 De Soto Avenue, approximately ½-mile northeast of the site.



Source: Ultrasystems Environmental Inc.

Figure 2-1: LOS ANGELES RIVER ADJACENT TO THE NORTH PARKTING LOT SITE

As shown in **Table 2-1**, the site is not within a 500-foot School Zone; however, several schools are located within ½-mile. A Los Angeles Unified School District (LAUSD) Maintenance and Operations facility is located one block east of the site, but no classrooms or children's facilities are present at this location. Southwest of the site is the Topanga Canyon Shoppingtown Plaza, a major shopping area that provides a range of retail stores and food venues. Northwest of the site is the Canoga Park Chamber of Commerce. Other Canoga Park community facilities, including a public library, post office, and senior citizen center, are located close to the Chamber of Commerce but at distances slightly greater than ½-mile from the site. Los Angeles Fire Department (LAFD) Fire Station 72 is located within ½-mile east of the site.

2.3.2 Pedestrian Path Modification

The Pedestrian Path Modification would be implemented within the City boundaries. The new sidewalk that would be constructed as part of the Pedestrian Path Modification would be an extension of existing sidewalk located to the west, and would be constructed entirely on property owned by the City[2] and zoned as "RE" Residential Estate zone. (Note that the portion of the pedestrian path that would be deleted as part of the Pedestrian Path Modification would be within a "PF" Public Facilities zone. This land would still be developed as a busway for the Original Project; therefore, deleting the pedestrian path initially planned as part of the Original Project would have no effect on the zoning or land use consistency.) The City General Plan's Land Use Element divides the City into distinct Community Plan Areas, and the Pedestrian Path Modification would be located in the Van Nuys-North Sherman Oaks Community Plan Area (adopted September 9, 1998). The Pedestrian Path Modification sites are not within the bounds of any specific plan areas or other plan areas or guidelines. In particular, the Pedestrian Path Modification sites are located just west of the limits of the Valley Village Specific Plan.

Pedestrian Path Modification would be located in a residential district, far from coastal zones and major scenic areas. The land uses adjacent to the Pedestrian Path Modification sites are residential. Along Coldwater Canyon Avenue, south of the Pedestrian Path Modification sites and south of Chandler Boulevard South, are neighborhood commercial land uses. **Table 2-2** (Community Features Within ½-Mile of the Pedestrian Path Modification Site) provides a list of public facilities, open space areas, and other community features within ½-mile of the Pedestrian Path Modification site.

Table 2-2
Community Features Within ½-Mile of the Pedestrian Path Modification

Feature	Location
Schools	
Emek Hebrew Academy (Private)	12732 Chandler Boulevard, less than ¼-mile southeast of the site.
Los Angeles Valley College	5800 Fulton Avenue, approximately ¼-mile north of the site.
Ulysses Grant High School	13000 Oxnard Street, approximately ½-mile north of the site.
Public Facilities	
LAFD Fire Station 102	13200 Burbank Boulevard, approximately ⅓-mile northwest of the site.
Open Space and Recreation	
Tujunga Wash	Just east of the site, across Coldwater Canyon Avenue.

[2] Based on personal communication from Manuel Gurrola of Metropolitan Transportation Authority to Kendall Jue of Ultrasystems Environmental Inc., May 9, 2004.

Note that the Tujunga Wash is located just east of the Pedestrian Path Modification sites and east of Coldwater Canyon Avenue. The Tujunga Wash flows through a concrete-lined flood control channel in the vicinity of the Pedestrian Path Modification sites, and then continues southward into the Los Angeles River.

2.4 Project Description

2.4.1 North Parking Lot

Together, the Boeing site and the North Parking Lot would provide an approximately 900-space surface parking facility that would serve patrons using the newly approved Orange Line station on the former Boeing site. The North Parking Lot, alone, would provide an expected 236 parking spaces. Patrons would access the North Parking Lot through two entrances: (1) an existing driveway at Canoga Avenue on the western side of the site, or (2) an existing driveway at Vanowen Street on the southern side of the site. Patrons parking at the North Parking Lot would utilize the bus station planned for construction on the south side of the Boeing site, as shown on **Figure 1-3**. Buses would travel to the bus stop along an extension of the bus route that was already addressed in the December 2003 Addendum and Modified IS. Development of the North Parking Lot would not require an additional bus station or further extension of the bus route. Thus, although patrons using the North Parking Lot would utilize the bus station and route extension, these features are not considered part of the North Parking Lot because they were included as part of the Boeing site project previously addressed in the December 2003 Addendum and Modified IS. In other words, the North Parking Lot analyzed in this document is limited to the construction and operation of an expected 236-space surface parking lot, only.

2.4.2 Pedestrian Path Modification

As shown in **Figure 1-4**, the Pedestrian Path Modification consists of two elements:

(1) Deletion of approximately 500 feet of pedestrian path that was planned (but not yet constructed) between Leghorn and Coldwater Canyon Avenues along the Metro ROW median. The Metro ROW runs in the median between Chandler Boulevard North and Chandler Boulevard South.

(2) Construction of approximately 300 feet of sidewalk along the north side of Chandler Boulevard North.

Note that the new sidewalk would be an extension of existing sidewalk located to the west. Thus, although the length of the new sidewalk would be shorter than the length of the pedestrian path it would replace, the sidewalk would connect with existing sidewalk and thereby provide a complete walkway that would serve the same function as the 500 feet of pedestrian path.

The Pedestrian Path Modification would incorporate a single point intersection at Coldwater Canyon Avenue and improve traffic circulation. The single point intersection could not accommodate the collection area for pedestrians using the planned pedestrian path, and required pedestrians to traverse across turning vehicle traffic.

3.0 MODIFIED ENVIRONMENTAL CHECKLIST FORM

3.1 Introduction

1. Project title:	Proposed Addition to the Approved San Fernando Valley Metro Orange Line Project
2. Lead agency name and address:	Los Angeles County Metropolitan Transportation Authority One Gateway Plaza Los Angeles, CA 90012-2932
3. Contact person and phone number:	Manuel R. Gurrola, (213) 922-7305
4. Project location:	*North Parking Lot*: The northeast corner of Vanowen Street and Canoga Avenue, near Warner Center in the western San Fernando Valley community of Canoga Park, City of Los Angeles. *Pedestrian Path Modification*: Along Chandler Boulevard, between Leghorn Avenue and Coldwater Canyon Avenue, in the eastern San Fernando Valley community of Van Nuys, City of Los Angeles.
5. Project sponsor's name and address:	Los Angeles County Metropolitan Transportation Authority One Gateway Plaza Los Angeles, CA 90012-2932
6. General plan designation:	*North Parking Lot*: Public Facility *Pedestrian Path Modification*: Public Facility / Very Low Density Residential
7. Zoning:	*North Parking Lot*: Public Facilities (PF) *Pedestrian Path Modification*: Public Facilities (PF) / Residential Estate (RE)

8. Description of project: (Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

See section 2.4 (Project Description).

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

See section 2.3 (Environmental Setting).

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

City of Los Angeles Department of Transportation
Los Angeles Regional Water Quality Control Board
State of California Department of Transportation.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by that project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards and Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/ Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

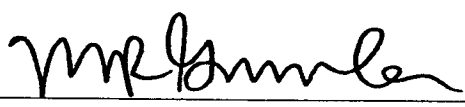
DETERMINATION:

On the basis of this initial evaluation:

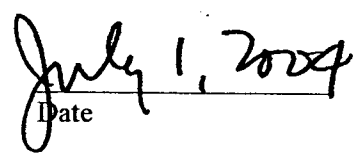
☐ Consistent with *State CEQA Guidelines* §15162, I find that the proposed addition to the Original Project could substantially change the original project and require major revisions of the previous EIR due to the involvement of new significant environmental effects or increase in the severity of previously identified significant effects; could substantially change the circumstances under which the original project is undertaken, which will require major revision of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, and significant effects, mitigation measures and/or alternatives are substantially changed; and therefore, a Subsequent EIR will be prepared.

☐ Consistent with *State CEQA Guidelines* §15163, I find that the proposed addition to the Original Project would meet any of the conditions described in §15162 and would require the preparation of a subsequent EIR; and only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed condition; and therefore, a Supplemental EIR will be prepared.

☑ Consistent with *State CEQA Guidelines* §15164, I find that the proposed addition to the Original Project could change or additions are necessary, but none of the conditions described in §15162 calling for preparation of a subsequent EIR have occurred; and therefore, an Addendum to the EIR will be prepared.



Signature



Date

Signature

Date

3.2 Completed Checklist

This section of the FEIR Addendum and Modified IS summarizes the environmental effects that could result from the proposed modification to the original project, and compares them with those of the original project in the FEIR. The North Parking Lot is evaluated for all Modified IS topical issues, and the topical issues are categorized under one or more of three column headings:

- *Impact Potential?* —A checkmark indicates that the North Parking Lot has the potential to produce a significant environmental effect (an impact that would be above the threshold of significance).
- *If Yes, Discussed in Previous EIR?* —A checkmark indicates whether the significant environmental effect of the North Parking Lot is discussed in the FEIR.
- *If Yes, Substantial Revisions Required to Previous EIR?* —A checkmark indicates that the North Parking Lot contains substantial changes in the project that will require major revisions of the FEIR.

Each of these column headings requires a response of "Yes" or "No."

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
I. AESTHETICS—Would the project:						
a. Have a substantial adverse effect on a scenic vista?	☐	☑	☐	☐	☐	☐
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☑	☐	☐	☐	☐
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☑	☐	☐	☐	☐
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	☐	☑	☐	☐	☐	☐
II. AGRICULTURAL RESOURCES—In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agricultural farmland. Would the project:						
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☑	☐	☐	☐	☐
c. Involve other changes in the existing environment, which, due to their location or nature, could individually or cumulatively result in loss of Farmland, to non-agricultural use?	☐	☑	☐	☐	☐	☐
III. AIR QUALITY—Where available, the significance criteria established by the applicable air quality management or pollution control district may be relied upon to make the following determinations. Would the project:						
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☑	☐	☐	☐	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☑	☐	☐	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emission which exceed quantitative thresholds for ozone precursors)?	☐	☑	☐	☐	☐	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☑	☐	☐	☐	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☑	☐	☐	☐	☐
IV. BIOLOGICAL RESOURCES—Would the project:						
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 California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☑	☐	☐	☐	☐
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☑	☐	☐	☐	☐
c. Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☑	☐	☐	☐	☐
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☑	☐	☐	☐	☐
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☑	☐	☐	☐	☐
V. CULTURAL RESOURCES—Would the project:						
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 a unique archaeological resource pursuant to §15064.5?	☐	☑	☐	☐	☐	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☑	☐	☐	☐	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☑	☐	☐	☐	☐
VI. GEOLOGY AND SOILS—Would the project:						
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:						
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☑	☐	☐	☐	☐
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?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
d. Be located on expansive soil, 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 wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☑	☐	☐	☐	☐
VII. HAZARDS AND HAZARDOUS MATERIALS—Would the project:						
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 the environment through the reasonably foreseeable upset and accident conditions involving the likely 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, would it create a significant hazard to the public or the environment?	☐	☑	☐	☐	☐	☐
e. For a project 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 in the project area?	☐	☑	☐	☐	☐	☐
f. For a project 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 the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☑	☐	☐	☐	☐
VIII. HYDROLOGY AND WATER QUALITY—Would the project:						
a. Violate any water quality standards or waste discharge requirements?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
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 (i.e., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☑	☐	☐	☐	☐
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. 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?	☐	☑	☐	☐	☐	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems to provide substantial additional sources of polluted runoff?	☐	☑	☐	☐	☐	☐
f. Otherwise substantially degrade water quality?	☐	☑	☐	☐	☐	☐
g. Place housing within a 100-year floodplain, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☑	☐	☐	☐	☐
h. Place within a 100-year floodplain structures that would impede or redirect flood flows?	☐	☑	☐	☐	☐	☐
i. 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?	☐	☑	☐	☐	☐	☐
j. Inundation by seiche, tsunami, or mudflow?	☐	☑	☐	☐	☐	☐
IX. LAND USE AND PLANNING—Would the project:						
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 an environmental effect?	☐	☑	☐	☐	☐	☐
c. Conflict with any applicable habitat conservation plan or natural communities conservation plan?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
X. MINERAL RESOURCES—Would the project:						
a. Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?	☐	☑	☐	☐	☐	☐
b. 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?	☐	☑	☐	☐	☐	☐
XI. NOISE—Would the project result in:						
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☑	☐	☐	☐	☐
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☑	☐	☐	☐	☐
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☑	☐	☐	☐	☐
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☑	☐	☐	☐	☐
e. For a project 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 expose people residing or working in the project area to excessive noise levels?	☐	☑	☐	☐	☐	☐
f. For a project within the vicinity of a private airstrip would the project expose people residing or working in the project area to excessive noise levels?	☐	☑	☐	☐	☐	☐
XII. POPULATION AND HOUSING—Would the project:						
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☑	☐	☐	☐	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☑	☐	☐	☐	☐
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
XIII. PUBLIC SERVICES						
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:						
Fire protection?	☐	☑	☐	☐	☐	☐
Police protection?	☐	☑	☐	☐	☐	☐
Schools?	☐	☑	☐	☐	☐	☐
Parks?	☐	☑	☐	☐	☐	☐
Other public facilities?	☐	☑	☐	☐	☐	☐
XIV. RECREATION						
a. 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?	☐	☑	☐	☐	☐	☐
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☑	☐	☐	☐	☐
XV. TRANSPORTATION/TRAFFIC—Would the project:						
a. Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☑	☐	☐	☐	☐
b. Exceed, either individually or cumulatively, a level of service standard 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?	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
f. Result in inadequate parking capacity?	☐	☑	☐	☐	☐	☐
g. Conflict with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☑	☐	☐	☐	☐
XVI. UTILITIES AND SERVICE SYSTEMS— Would the project:						
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☑	☐	☐	☐	☐
b. 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 effects?	☐	☑	☐	☐	☐	☐
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☑	☐	☐	☐	☐
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, which serves or may serve the project determined 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 project's solid waste disposal needs?	☐	☑	☐	☐	☐	☐
g. Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☑	☐	☐	☐	☐
XVII. MANDATORY FINDINGS OF SIGNIFICANCE						
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☑	☐	☐	☐	☐
b. Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals.	☐	☑	☐	☐	☐	☐

	Potentially Significant Impact?		If Yes, Discussed in Previous EIR?		Substantial Revisions Required to Previous EIR?	
	Yes	No	Yes	No	Yes	No
c. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, effects of other current projects, and the effects of probable future projects.)	☐	☑	☐	☐	☐	☐
d. Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☑	☐	☐	☐	☐

4.0 ENVIRONMENTAL EVALUATION

This section provides substantive information based upon the environmental topical issues described in Section 3.0 (*Modified Environmental Checklist Form*). For ease of reference, this evaluation is a Modified IS checklist, as modified by Metro.

The environmental analysis of each environmental issue is organized by the same categories of impact as are enumerated in the checklist form. Any environmental effect that would result from the implementation of the North Parking Lot is compared with that described in the certified FEIR for the Original Project, and, where possible, will be mitigated by the measures adopted in the FEIR or suggested in this document.

I. AESTHETICS

In general, the visual environment of a project area is comprised of both the built environment features (including development patterns, buildings, parking areas, and circulation elements) and natural features (such as hills, vegetation, rock outcroppings, drainage pathways, and soils). Views are characterized by visual quality, viewer groups and sensitivity, duration, and visual resources. Visual quality refers to the general aesthetic quality of a view, including the vividness, intactness, and unity of the view. Viewer groups are the persons most likely to experience the view, and the sensitivity of a viewer describes the relative importance of the view to the persons. Examples of high-sensitivity land uses include residences, schools, playgrounds, religious institutions, and passive outdoor spaces such as parks, playgrounds, and recreation areas. Duration of a view is the amount of time that a particular view can be seen by a specific viewer group. For example, fleeting or intermittent views are those experienced by motorists. Visual resources within a view may include unique views, views identified in local plans, views from scenic highways, or views of specific unique structures or landscape features, including distinct groups of mature trees.

a) Would the project have a substantial adverse effect on a scenic vista?

Project Impacts: No Impact.

Original Project. The Original Project is divided into fifteen visual assessment units, as shown on Figure 4-28 of the FEIR. Each of these visual assessment units is based on common visual characteristics and provides a framework for analyzing the existing visual and aesthetic conditions along the Original Project. A complete discussion of each assessment unit is provided in Section 4-6 of the FEIR.

In general, the Original Project would consist primarily of at-grade elements that would not materially change the visual character of the urban areas. The only new vertical elements introduced along the Original Project would be stations, landscaping, lighting at stations, sound walls, and street furniture, and these new elements would not break the current line of sight by area residents nor interrupt any existing distant views of the Santa Susana Mountains or the Santa Monica Mountains. Most stations would be located in areas adjoining existing streets with multifamily, commercial, or industrial development. All stations would be in scale with existing arrangements and would not obstruct the character of key views. Also, the design of landscaping, walls, bikeways and pedestrian walkways would further reduce the potential for negative impact on views. Thus, the Original Project would be compatible with the existing visual and landscape character of the area and would present no impact on scenic vistas.

Although construction of the Original Project would require temporary installation of fences and sound walls that could block key views, the construction activities would be temporary and short-term. Thus, visual impacts during the 2-year construction phase would be temporary and not adverse.

North Parking Lot. The North Parking Lot would be situated on generally flat topography in a mixed-use urban environment that is distant from coastal zones and scenic areas. The North Parking Lot site and surrounding areas do not contain a "Scenic View Site" as identified on the General Plan Land Use Map for the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan. Furthermore, the only new vertical elements would be minor landscaping and lighting in the parking lot, and these new elements would be in scale with existing surrounding land uses, including the signboards located at the northwest and southwest corners of the site and the business sign located on the commercial property adjacent to the east side of the site. Thus, development of a park-and-ride facility at the North Parking Lot site would present no significant adverse impacts on scenic vistas. (Note that the north side of the site abuts the Los Angeles River; however, this portion of the Los Angeles River is concrete-lined and not considered a scenic resource.)

Pedestrian Path Modification. The Pedestrian Path Modification would be situated on generally flat topography in an urban residential environment that is distant from coastal zones and scenic areas. The Pedestrian Path Modification sites and surrounding areas do not contain a "Scenic View Site" as identified on the General Plan Land Use Map for the Van Nuys-North Sherman Oaks Community Plan. The Pedestrian Path Modification would not include vertical elements. Thus, development of the Pedestrian Path Modification would present no significant adverse impacts on scenic vistas. (Note that the Tujunga Wash is located just east of the Pedestrian Path Modification sites; however, this portion of the Tujunga Wash is concrete-lined and not considered a scenic resource.)

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

Project Impacts: Less Than Significant.

Original Project. The Original Project would be constructed along the existing Metro ROW in a developed urban area. The Metro ROW has approximately 1,300 existing trees, of which approximately 800 are mature trees. Though existing trees would be maintained wherever feasible, development of the Original Project would result in the loss of up to 420 of the trees. However, the Original Project stipulates that approximately 4,000 new trees would be planted along the length of the busway for Original Project, which is considerably more than the number of trees that would be removed.

No scenic rock outcroppings are present within the Original Project area. Also, because the Original Project would be constructed along the existing Metro ROW, no historic resources would be adversely affected. Therefore, no significant adverse impacts on scenic resources would occur as a result of development of the Original Project.

North Parking Lot. The North Parking Lot would be constructed in place of two commercial businesses located onsite: a landscaping business and a landscaping materials business. The North Parking Lot site is highly disturbed, and covered by weathered paving and gravel. No native trees, natural rock outcroppings, or historic buildings are located onsite. Furthermore, the site and the surrounding areas do not contain a "Scenic Freeway," "Scenic Major Highway," or "Scenic Parkway" identified on the General Plan Land Use Map for the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan. Therefore, no significant adverse impacts on scenic resources would occur as a result of the development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would construct new sidewalk entirely on property owned by the City, [1] and would be an extension of existing sidewalk located to the west. The sidewalk would be located along the north side of Chandler Boulevard North, which is not designated as a "Scenic Freeway," "Scenic Major Highway," or "Scenic Parkway" on the General Plan Land Use Map for the Van Nuys-North Sherman Oaks Community Plan. Therefore, no significant adverse impacts on scenic resources would occur as a result of the development of the Pedestrian Path Modification.

Mitigation Measures. Although mitigation measures are **not required** to reduce significant adverse impacts, the following measures (from the FEIR) are proposed to further enhance preservation of scenic resources:

> **V&A-1:** A certified arborist has been retained to conduct a thorough inspection of the eucalyptus trees located between the North Hollywood Metro Red Line Station and Coldwater Canyon Avenue to determine the condition, quality, and estimated life span of the trees and to identify measures that should be taken in the engineering and construction phases to ensure that the trees would be preserved. This report shall be submitted to the MTA [Metro] Planning and Construction Divisions, and the City of Los Angeles Department of Public Works, Street Tree Division. In the event that the arborist or project engineers determine that implementation of the project would prevent preservation of the trees, or that the health of the trees necessitates their removal, the trees shall be replaced in the Chandler Boulevard median with trees of similar qualities (evergreen, vertical, fast-growing) of 24-inch box size or greater at the rate of one new tree for each tree removed.
>
> **V&A-2:** During the Design/Build phase, the alignment of the busway, and placement of elements such as sound walls, fences, and berms, that have been developed in Preliminary Engineering will be followed, and the project will continue to take into account existing mature trees in the right-of-way and avoid their removal where possible.

c) Would the project substantially degrade the existing visual character or quality of the site and its surroundings?

Project Impacts: Less Than Significant.

Original Project. As discussed in sections a) and b), above, the Original Project would not substantially change the visual character of the Original Project area. Therefore, no significant adverse impacts on existing visual character would occur as a result of the Original Project.

North Parking Lot. As discussed in section a), above, the North Parking Lot would not have a significant adverse impact on a scenic vista. As discussed in section b), the North Parking Lot would be constructed in place of two commercial businesses and would not have a significant adverse impact on scenic resources. Thus, the North Parking Lot would not substantially degrade the existing visual character of the site.

The North Parking Lot would also not substantially degrade the existing visual character of the surroundings. East of the site is a commercial property containing automotive-related and similar types of businesses, as well as an accompanying parking lot. South of the site, across Vanowen Street, is the

[1] Based on personal communication from Manuel Gurrola of Metropolitan Transportation Authority to Kendall Jue of Ultrasystems Environmental Inc., May 9, 2004.

Boeing site. Currently, this portion of the Boeing site is a major Federal Express facility that includes a warehouse and parking area for Federal Express delivery trucks. West of the site are three businesses, all with parking lots: a large restaurant, a floor covering business, and a carpet cleaning business. The north side of the site abuts a (not scenic) portion of the Los Angeles River, and north across the river is an industrial land use. Therefore, the North Parking Lot would not materially change the visual character of the surrounding area, and no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. As discussed in sections a) and b), above, the Pedestrian Path Modification would not have a significant adverse impact on a scenic vista or on scenic resources. The Pedestrian Path Modification also would not degrade the existing visual character of the surroundings. Because the Pedestrian Path Modification would construct sidewalk that would be an extension of existing sidewalk located to the west, the Pedestrian Path Modification would be consistent with the existing visual character of the neighborhood. Therefore, the Pedestrian Path Modification would not materially change the visual character of the surrounding area, and no significant adverse impacts would occur due to development of the Pedestrian Path Modification. (Note that the portion of the pedestrian path planned as part of the Original Project has not yet been constructed. Therefore, deleting this portion of the pedestrian path would have no impact on the surrounding areas.)

d) Would the project create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

Project Impacts: No Impact.

Original Project. Construction of the Original Project would create new sources of light from bus stations, park-and-ride facilities, and bus headlights. Only limited additional light would be developed along the ROW between station areas. At bus stations and park-and-ride facilities, impacts from new sources of light would be minimal because there is existing nighttime street lighting in the surrounding areas. Also, new trees would be planted to further minimize the impact of new lights at stations and parking facilities. In residential areas, lighting would be designed and placed so as to minimize glare and nighttime light intrusion on residences. Landscaping, fences, and walls would be arranged to minimize the impact of bus headlights on residents along the busway. Thus, no adverse impacts on views would occur as a result of the Original Project.

North Parking Lot. Construction of the North Parking Lot would create new sources of light from nighttime lighting and vehicle headlights in the parking lot. However, potential impacts from the new sources of light would be minimal because there is existing nighttime lighting on the streets and businesses bordering the site, and because no residences or other sensitive receptors are located adjacent to the site. Therefore, no adverse impacts on views would occur as a result of development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not require any new sources of light. Therefore, the Pedestrian Path Modification would not generate light or glare that would affect views, and no adverse impacts would occur due to development of the Pedestrian Path Modification.

II. AGRICULTURAL RESOURCES

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification are situated in a highly urbanized setting that does not contain land that is designated as Prime Farmland, Unique Farmland or Farmland of Statewide Importance. Therefore, no adverse impacts would occur as a result of development of the projects.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification are not zoned for agricultural use, and there are no Williamson Act contracts on any of the alternative sites. Therefore, no adverse impacts would occur as a result of development of the projects.

c) Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification would not involve any changes that would affect agricultural uses. Therefore, no adverse impacts would occur as a result of development of the projects.

III. AIR QUALITY

The California Air Resources Board (CARB) works to reduce air pollutants while recognizing and considering the effects on the economy of the State. The State is divided into air districts, which are county or regional governing authorities that have primary responsibility for controlling air pollution from stationary sources. The Original Project, the North Parking Lot, and the Pedestrian Path Modification sites are located within the South Coast Air Quality Management District (SCAQMD).

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD is responsible for preparing a regional air quality management plan (AQMP) to improve air quality in the South Coast Air Basin (SCAB). The AQMP includes a variety of strategies to accommodate growth, to reduce the high levels of pollutants within the SCAB, to meet State and federal air quality performance standards, and to minimize the fiscal impact that pollution control measures have on the local economy. Projects that are consistent with the projections of employment and/or population forecasts identified in the Growth Management Chapter of Southern California Association of Government's Regional Comprehensive Plan and Guide (RCPG) are considered consistent with the

growth projections in the AQMP. This is because the Growth Management Chapter forms the basis of the land use and transportation control portion of the AQMP. Therefore, a project needs to be evaluated to determine whether it would generate population and employment growth and, if so, whether that growth would exceed the growth rates forecast in the AQMP.

Project Impacts: Less than Significant.

Original Project. The Original Project would not increase population in the region, but would accommodate the current and projected population growth within the area. The total number of new jobs for the entire Original Project is projected to be about 22,000. This number is consistent with the projected population growth in the region, as estimated by SCAG and incorporated in the adopted 1999 AQMP. Thus, because the Original Project would not generate growth that would exceed the growth rates in the AQMP, the Original Project would not conflict with the AQMP. No significant adverse impacts would occur as a result of development of the Original Project.

North Parking Lot. The North Parking Lot would not construct new residences and would generate only a negligible increase in employment; therefore, the North Parking Lot would not directly generate additional population growth. The North Parking Lot also would not indirectly generate growth because the North Parking Lot would only provide additional parking for the patrons of the Original Project, which was designed to meet the population growth within the area. Thus, the North Parking Lot would be consistent with the AQMP, and no significant adverse impacts would occur as a result of development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not construct new residences. Because the Pedestrian Path Modification would construct sidewalk in place of an equivalent length of pedestrian path that was planned as part of the Original Project, the Pedestrian Path Modification would not result in net additional infrastructure and would not generate new jobs beyond what was expected for the Original Project. Therefore, the Pedestrian Path Modification would not directly or indirectly generate growth. The Pedestrian Path Modification would be consistent with the AQMP, and no significant adverse impacts would occur as a result of development of the Pedestrian Path Modification.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Air quality impacts can be divided into short-term and long-term impacts. Short-term impacts are the result of construction activities, including demolition and grading operations; long-term impacts are associated with the operations of a project. In addition, localized elevations in the concentration of carbon monoxide (CO), termed "CO Hot Spots," can result from long vehicle idling times at congested intersections or parking lots.

Short-Term (Construction) Impacts: Less than Significant with Mitigation Incorporated.

Original Project. The analysis contained in the FEIR indicates that, through all phases of the construction activities, the Original Project would not exceed applicable thresholds for CO, ROGs, NO_X, and SO_X. However, PM_{10} generation would exceed the applicable threshold by approximately 1,075 pounds per day. With incorporation of mitigation measures **AQ-C1** through **AQ-C10** from the FEIR, PM_{10} concentrations could be reduced to 235.26 pounds per day during the excavation/aggregate base

placement phase of construction. This would still exceed the SCAQMD threshold of 150 pounds per day, and is considered an unavoidable significant short-term impact.[2]

North Parking Lot. Construction of the North Parking Lot would involve demolition of the two existing buildings, site grading, and paving. Air pollutants emissions would result from the use of heavy-duty equipment including graders, bulldozers, and front-end loaders, and from construction employee vehicles traveling to and from the North Parking Lot site. For modeling purposes, it is assumed that: (1) a maximum total of four pieces of construction equipment and one truck would be operating simultaneously per day, (2) construction of the North Parking Lot would take about three months to complete, and (3) construction would occur on the approximate dates of January 2, 2005, through March 31, 2005.

Emissions of criteria pollutants from construction activities related to the North Parking Lot were estimated using the construction module of URBEMIS 2002. URBEMIS is a computer program that can be used to estimate emissions associated with land development projects in California, including the construction of those projects, and URBEMIS 2002 is the emissions model approved by the California Air Resources Board (CARB). . The URBEMIS 2002 model uses EMFAC2002 emissions factors for vehicle traffic. See **Appendix A** (Air Emissions Calculations) for specific air emissions calculations worksheets. The calculated air emissions from construction of the North Parking Lot are shown in **Table 4-1** (Maximum Daily Construction Emissions). **Table 4-1** compares the calculated emissions with the SCAQMD thresholds of significance.

Table 4-1
Maximum Daily Construction Emissions

	Pollutant Emission (lbs/day)			
	ROGs	***NO_X***	***CO***	***PM_{10}***
Maximum Daily Construction Emissions	12.34	98.14	90.60	14.56
SCAQMD Significance Thresholds[1]	75	100	550	150
Significant After Mitigation?	**No**	**No**	**No**	**No**

1. Derived from the *CEQA Air Quality Handbook*, SCAQMD, 1993.

As shown in **Table 4-1**, maximum daily emissions would be below the SCAQMD significance thresholds for all criteria pollutants; thus, no significant adverse impacts to air quality would occur due to development of the North Parking Lot. Note, however, that the maximum NO_x emissions would be marginally below the significance threshold. To reduce NO_x emissions to levels that would be well below the threshold, construction equipment could use aqueous diesel fuel or diesel oxidation catalysts. Use of aqueous diesel fuel or diesel oxidation catalysts would reduce NOx emissions to 84.5 lbs/day and 78.5 lbs/day, respectively, which would be well below the threshold.

Pedestrian Path Modification. The Pedestrian Path Modification would construct 300 feet of new sidewalk to replace approximately 500 feet of pedestrian path that was planned for construction (but not yet constructed) as part of the Original Project. Therefore, the Pedestrian Path Modification would effectively result in no net construction and would not generate additional air emissions beyond what was planned as part of the Original Project. No adverse impacts would occur due to development of the Pedestrian Path Modification.

[2] Reference *FEIR* pp. 5-32 through 5-33.

Mitigation Measures: The following mitigation measures (from the FEIR) are proposed to reduce air quality impacts related to construction of the Original Project:

AQ-C1 Low-sulfur fuel shall be used for construction equipment. Consistent with the CARB's diesel-fuel regulations (Title 13, California Code of Regulations, Section 2281 and 2282), the fuel sulfur content shall be less than 0.05 percent. Construction contracts shall explicitly stipulate that all diesel-powered equipment shall be properly tuned and maintained.

AQ-C2 Haul truck staging areas shall be approved by the City of Los Angeles Department of Transportation. Haul trucks shall be staged in non-residential areas, away from school buildings and playgrounds.

AQ-C3 Site wetting shall occur often enough to maintain a ten percent surface soil moisture content during construction, particularly during any site grading or excavation activity. Additionally, watering shall occur often enough such that visible emissions would not extend to more than 100 feet beyond the active construction area. All unpaved parking or staging areas shall be watered at least once every 2 hours of active operations. All on-site stockpiles of debris, dirt, or rusty material shall be covered or watered at least twice per hour of operation.

AQ-C4 All trucks hauling dirt, sand, soil, or other loose substances and building materials shall be covered, and shall maintain a minimum freeboard of two feet between the top of the load and the top of the truck bed sides.

AQ-C5 Within thirty minutes of visible dirt depositions (tracked-out debris), street-sweeping equipment shall be used at all site access points and all adjacent streets used by haul trucks or vehicles that have been in the construction area.

AQ-C6 A fugitive dust control program consistent with the provisions of SCAQMD Rule 403 shall be maintained during construction, particularly construction activities that involve grading and earthmoving operations.

AQ-C7 Construction activities on any unpaved surface shall be suspended during first- and second-stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.

AQ-C8 Water shall be applied to all disturbed surface areas on the last day of active operations prior to a weekend, holiday, or any other periods when construction operations will not occur for more than four consecutive days. The water shall be treated with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months.

AQ-C9 Chemical stabilizers shall be applied to all disturbed surface areas within five working days of grading completion.

AQ-C10 Vehicular speeds on unpaved roads shall be reduced to 15 miles per hour.

Long-Term (Operational) Impacts: Less than Significant.

Original Project. Criteria pollutant emissions for the Original Project were estimated using two scenarios: the lower bound scenario (28.8-minute signal delay) and the upper bound scenario (40-minute signal delay). Slightly more background traffic is anticipated for the upper bound scenario than for the lower bound. The FEIR indicates that, under both scenarios, vehicle miles traveled (VMT) are anticipated to decrease by 0.02 percent when compared to the No Build Alternative. Emissions of CO are projected to decrease under both scenarios compared to the No Build Alternative. Under the lower bound scenario, the overall pollutant concentrations for all criteria pollutants, except ROGs, would decrease when compared to the No Build Alternative. (ROGs are expected to increase by approximately 0.01 percent or 3 tons per year.) Under the upper bound scenario, emissions of NO_x, ROG and PM_{10} would increase by approximately 4, 5, and 1 tons per year, respectively, when compared to the No Build Alternative. The increase in criteria pollutant concentrations of the Original Project over the No Build Alternative would not violate any State or federal standards. Thus, no significant adverse impacts would occur as a result of operation of the Original Project.

North Parking Lot. The operational emissions from the North Parking Lot would derive mainly from the vehicles entering and leaving the facility. Regarding potential effects to the surrounding region, the North Parking Lot would provide a beneficial impact to air quality because the North Parking Lot would facilitate the increased usage of the Original Project, which would result in an overall reduction in traffic volume along regional arterials in the area.

Regarding potential effects to the local area, vehicle traffic entering and exiting the North Parking Lot would generate air emissions. A traffic study prepared in June 2004 and attached to this document as **Appendix B** (Traffic Study) estimated the daily vehicle trips that would be generated by an 898-space park-and-ride facility on the combined North Parking Lot and the Boeing site.[3] Potential traffic impacts at the Boeing site were previously analyzed in a November 2003 traffic study that was prepared as part of the December 2003 Addendum and Modified IS.[4] Note that, pursuant to the Warner Center Specific Plan, LADOT concluded that a park-and-ride facility at the Boeing site has no trips generation and hence would not be considered a project. Nevertheless, LADOT was still asked to review if any significant traffic impacts would be expected from a new park-and-ride facility. For additional information regarding this determination, reference **Appendix C** (Letter from Los Angeles Department of Transportation).

The November 2003 traffic study assumed an 1,000-space park-and-ride facility on the Boeing site; however, development of the North Parking Lot would result in a different allocation of parking spaces: 236 spaces on the North Parking Lot and 662 spaces on the Boeing site.[5] Because development of the North Parking Lot would affect traffic at the Boeing site, the two sites are analyzed together in the June 2004 traffic study. For additional discussion of the traffic study, please see section XV (Transportation/Traffic).

The results of the June 2004 traffic study indicate that the combined Boeing site and the North Parking Lot would generate an average of 4,328 daily vehicle trips comprised of 4,040 passenger vehicle trips and 288 urban bus trips. Air emissions resulting from these vehicle trips were estimated using the URBEMIS

[3] *Traffic Impact Analysis—Addendum Study, Warner Center Metro Park-and-Ride Project, City of Los Angeles*, Willdan, June 4, 2004.
[4] *Traffic Impact Analysis, Warner Center MTA Park-and-Ride Facility, City of Los Angeles*, Willdan, November 2003.
[5] Based on Metro site plan for San Fernando Valley Metro Orange Line, Canoga Station, Warner Center Park and Ride, dated April 22, 2004.

2002 operational emissions module, and the results for Mobile Source Emissions are shown in **Table 4-2** (Daily Operational Emissions). The detailed output sheets are attached to this document as **Appendix A** (Air Emissions Calculations).

As shown in **Table 4-2**, the operational emissions generated by an 898-space park-and-ride facility on both the North Parking Lot and the Boeing site would be less than the SCAQMD significance thresholds. Therefore, no significant adverse long-term air quality impacts would occur due to development of the North Parking Lot (in combination with the Boeing site).

Table 4-2
Daily Operational Emissions

Description	*Pollutant (lbs/day)* [1]			
	ROGs	*NO_X*	*CO*	*PM_{10}*
SCAQMD Significance Thresholds[2]	55	55	550	150
Summer Operational Emissions by 2006[3]	29.81	36.96	426.33	36.31
Is Threshold Exceeded?	**No**	**No**	**No**	**No**
Winter Operational Emissions by 2006[3]	34.14	53.73	409.15	36.31
Is Threshold Exceeded?	**No**	**No**	**No**	**No**

1. Refer to the worksheets in **Appendix A** (Air Emissions Calculations) for detailed assumptions.
2. Derived from the *CEQA Air Quality Handbook*, SCAQMD, 1993.
3. Assumes a net traffic volume increase of approximately 4,328 vehicle trips per day upon completion of the park-and-ride facility in June 2006.

Pedestrian Path Modification. Operation of the Pedestrian Path Modification would not generate any vehicle trips or other operational sources of air emissions. Therefore, no adverse long-term air quality impacts would occur due to development of the Pedestrian Path Modification.

CO Hot Spot Impacts: Less Than Significant.

Original Project. CO Hot Spots may occur at congested intersections or parking lots. In the FEIR, CO concentrations at 21 study intersections were calculated using the USEPA CAL3QHC micro scale dispersion model. As shown in Table 4-31 on page 4-203 of the FEIR, the results of the analysis indicate that none of the 21 study intersections would exceed the State 1- and 8-hour CO standards.

In addition, the FEIR estimated the potential for CO Hot Spots at each of the park-and-ride facilities planned as part of the Original Project. CO emissions were estimated using the USEPA Industrial Source Complex-Short Term Model (ISCST3) air dispersion model. CO concentrations from each facility were calculated based on lot capacity and lot demand of each park-and-ride facility. The results were added to projected year 2020 ambient 1-hour and 8-hour ambient CO concentrations. As shown in Table 4-34 on page 4-206, none of the park-and-ride facilities is anticipated to exceed the State and Federal 1- and 8-hour standards. Therefore, the no significant adverse impacts would occur as a result of the Original Project.

North Parking Lot. According to the June 2004 traffic study, all of the intersections studied for both the Boeing site and the North Parking Lot would operate at acceptable levels of service (LOS). (Please reference section XV (Transportation/Traffic) for a detailed discussion of the findings of the June 2004

traffic study). Therefore CO hot spots would not occur as a result of development of the North Parking Lot, and no adverse impacts would occur.

Pedestrian Path Modification. Operation of the Pedestrian Path Modification would not generate any vehicle trips or otherwise result in congested intersections. Therefore CO hot spots would not occur as a result of development of the Pedestrian Path Modification. No adverse impacts would occur.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Project Impacts: Less than Significant.

Original Project, North Parking Lot, and Pedestrian Path Modification. The AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within the SCAB, to meet State and federal air quality performance standards, and to minimize the fiscal impact that pollution control measures have on the local economy. If the environmental analysis shows that an individual project is consistent with the AQMP performance standards, the project cumulative impact is considered less-than-significant. If the analysis shows that the proposed project does not comply with the standards, then cumulative impacts are considered to be significant, unless there is other pertinent information to the contrary.

As discussed in section a), above, the Original Project, the North Parking Lot, and the Pedestrian Path Modification would not interfere with attainment of the AQMP. In particular, the Original Project has a beneficial impact on air quality because, cumulatively, it would reduce daily regional emissions.[6] Therefore, the projects would not result in a cumulatively considerable net increase in criteria pollutants, and no significant adverse impacts would occur due to development of the projects.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. As stated on page 4-191 of the FEIR, "the CARB has identified the following people as the most likely to be affected by air pollution: children under 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include hospitals, daycare facilities, elder care facilities, elementary schools, and parks.". Because the Original Project would traverse 14-miles in the urban San Fernando Valley, the area in the vicinity of the Original Project includes numerous sensitive receptors. Table 4-9 of the FEIR lists specific sensitive receptors (schools, health care facilities, and parks and recreational facilities) located within the Original Project area.

As discussed in section b), above, operation of the Original Project would not result in significant pollutant concentrations relative to the No Build Alternative, and would not violate any State or federal standards. Thus, operation of the Original Project would not result in significant adverse impacts to sensitive receptors.

[6] Reference *FEIR*, p. S-34.

Regarding construction of the Original Project, mitigation measures **AQ-C1** through **AQ-C10** (from the FEIR) would be required to reduce air emissions; however, even with incorporation of these mitigation measures, PM_{10} concentrations are projected to be 235.26 pounds per day during the excavation/aggregate base placement phase of construction. This would still exceed the SCAQMD threshold of 150 pounds per day, and is considered an unavoidable significant short-term impact.

North Parking Lot. As shown in **Table 2-1** of this document, several schools and one park are located within ½-mile of the North Parking Lot site. However, as discussed in section b), above, the North Parking Lot would not generate substantial pollution concentrations; therefore, the North Parking Lot would not expose sensitive receptors to substantial pollution concentrations, and no significant adverse impacts would occur.

Pedestrian Path Modification. The Pedestrian Path Modification would be developed in a residential neighborhood, and, as shown in **Table 2-2** of this document, several schools are located within ½-mile of the Pedestrian Path Modification sites. However, as discussed in section b), above, the Pedestrian Path Modification would not generate substantial pollution concentrations; therefore, the Pedestrian Path Modification would not expose sensitive receptors to substantial pollution concentrations, and no significant adverse impacts would occur.

Mitigation Measures: Mitigation measures **AQ-C1** through **AQ-C10** (from the FEIR) would be required for construction of the Original Project.

f) Would the project create objectionable odors affecting a substantial number of people?

Project Impacts: Less than Significant.

Original Project, North Parking Lot, and Pedestrian Path Modification. Construction activities associated with the projects would generate airborne odors from operation of construction vehicles (i.e., diesel exhaust), asphalt operations, and the application of paints and coatings. These emissions would occur during daytime hours only, and would be isolated to the immediate vicinity of the construction sites and activities. As such, they would not affect a substantial number of people. When completed, odors from the projects would not significantly differ from those of other land uses and those associated with regular roadway traffic. Operation of the projects would not involve new sources that would generate objectionable odors. Thus, no significant adverse impacts would occur as a result of development of the projects.

IV. BIOLOGICAL RESOURCES

a) 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 California Department of Fish and Game or U.S. Fish and Wildlife Service?

Project Impacts: Less than Significant.

Original Project. Existing biological resources were assessed through reviews of pertinent documents listing candidate, sensitive, or special status species, and a survey of the Original Project area conducted in September 2000. Given the disturbed, urban nature of the Original Project area, it does not support habitat for any species identified as candidate, sensitive or special status in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife

Service. Thus, no direct or indirect significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot would be located at the western terminus of the Original Project in a disturbed, urban area. A review of the California Natural Diversity Database (CNDDB) for the Canoga Park 7.5-minute series topographic quadrangles was conducted to determine which special status species have the potential to occur in the North Parking Lot area and immediate vicinity. This review resulted in 6 occurrences of special status plant and wildlife species. **Table 4-3** (Special Status Species with the Potential to Occur in the North Parking Lot Study Areas) details these species, their status, and their potential for occurrence based on their habitat requirements.

Table 4-3
Special Status Species with the Potential to Occur in the North Parking Lot Study Areas

Species		Status[1]			Potential for Occurrence
Scientific Name	Common Name	USFWS	CDFG	CNPS	
Astragalus brauntonii	Braunton's milk-vetch	FE	None	1B	Low
Calochortus plummerae	Plummer's mariposa lily	None	None	1B	Low
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Candidate	SE	1B	Low
Deinandra minthornii	Santa Susana tarplant	None	Rare	1B	Low
Dudleya blochmaniae	Blochman's dudleya	None	None	1B	Low
Bufo californicus	Arroyo Toad	FE	CSC	NA	Low

Potential for Occurrence:

Low = Low potential for occurrence - No recent or historical records exist of the species occurring in the project area or its immediate vicinity (within approximately 5 miles) and the diagnostic habitat requirements strongly associated with the species do not occur in the Project area or its immediate vicinity.

Moderate = Moderate potential for occurrence - Either a historical record exists of the species in the project area or its immediate vicinity or the diagnostic habitat requirements associated with the species occur in the Project area or its immediate vicinity.

High = High potential for occurrence - Both a historical record exists of the species in the project area or its immediate vicinity and the diagnostic habitat requirements strongly associated with the species occur in the project area or its immediate vicinity.

As shown in **Table 4-3**, no recent or historical records exist of any special status species occurring in the North Parking Lot area or its immediate vicinity (within approximately 5 miles), and the diagnostic habitat requirements strongly associated with the species do not occur in the North Parking Lot area or its immediate vicinity. Therefore, it is anticipated that no significant adverse impacts to special status species would occur due to development of the North Parking Lot.

Pedestrian Path Modification. In place of a segment of the pedestrian path planned for the Original Project, the Pedestrian Path Modification would construct approximately 300 feet of sidewalk along a portion of the north side of Chandler Boulevard North. This portion of Chandler Boulevard is designated as Major Highway (Class II) on the General Plan Land Use Map for the Van Nuys-North Sherman Oaks Community Plan, and is situated in an urban, fully developed residential neighborhood within the bounds of the Original Project area. Due to the facts that (1) the Pedestrian Path Modification would not result in additional net construction, (2) the adjacent street is a major highway, and (3) the Pedestrian Path Modification sites are in an urban setting within the bounds of the Original Project area, it can be concluded that the Pedestrian Path Modification would not generate significant adverse impacts to special status species.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or US Fish and Wildlife Service?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. A survey of the Original Project area conducted in September 2000 determined that the Original Project and immediate vicinity do not support any riparian habitat or other sensitive natural communities. However indirect impacts on a riparian habitat could occur due to the fact that the Original Project crosses the Los Angeles River, which supports a riparian habitat downstream of the planned crossing. Incorporation of mitigation measures **BIO-1** and **BIO-C2** would ensure compliance with §401, §402, and §404 of the Clean Water Act and §1600 of the California Fish and Game Code. With these mitigation measures incorporated, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot site does not support any riparian habitat or other sensitive natural communities. The Los Angeles River abuts the north end of the site; however, a site visit conducted by Ultrasystems Environmental Inc. staff on April 29, 2004, determined that this portion of the Los Angeles River is concrete-lined, lacks vegetation, and does not support riparian habitat. Furthermore, incorporation of mitigation measures **BIO-1** and **BIO-C2** (from the FEIR) would ensure compliance with §401, §402, and §404 of the Clean Water Act and §1600 of the California Fish and Game Code, and no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification sites do not support any riparian habitat or other sensitive natural communities. The Tujunga Wash is located just east of the site where new sidewalk would be constructed; however, incorporation of mitigation measures **BIO-1** and **BIO-C2** (from the FEIR) would ensure compliance with §401, §402, and §404 of the Clean Water Act and §1600 of the California Fish and Game Code, and no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

Mitigation Measures. The following mitigation measures (from the FEIR) are proposed to lessen the potential for adverse effects on biological resources from development of the projects:

> **BIO-1:** The project will be required to comply with applicant provisions of Sections 401 and 402 of the Federal Clean Water Act, including adherence to NPDES standards and permit requirements to minimize adverse impacts under NEPA (significant impacts under CEQA) on vegetation downstream on the Los Angeles River. Included among the likely permit requirements would be installation of best management practices (BMPs) and appropriate drainage provisions to minimize harmful runoff.
>
> **BIO-C2:** MTA [Metro] will comply with Section 404 of the Clean Water Act and Section 1600 of the California Fish and Game Code to ensure that construction of corridor crossings over the Los Angeles River and other drainages do not violate these laws.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project, North Parking Lot, and Pedestrian Path Modification. As discussed in section b), above, the projects would incorporate mitigation measures **BIO-1** and **BIO-C2**. As a result, the projects

would comply with §401, §402, and §404 of the Clean Water Act and §1600 of the California Fish and Game Code, and no significant adverse impacts would occur due to development of the projects.

d) 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 wildlife corridors, or impede the use of native wildlife nursery sites?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. Given the disturbed, urban nature of the project areas, no native resident or migratory wildlife corridors or nursery sites are present on the project areas. Therefore, no significant adverse impacts would occur due to development of the projects.

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The project areas do not include any biological resources protected by local policies or ordinances. No significant adverse impacts would occur due to development of the projects.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Project Impacts: No Impact.

Original Project. No impact would occur because the Original Project site and its vicinity are not part of an adopted Habitat Conservation Plan, Natural Community Conservation Plan (NCCP), or other approved or pending local, regional or state habitat conservation plan.

North Parking Lot and Pedestrian Path Modification. The North Parking Lot and the Pedestrian Path Modification would not conflict with the Conservation Plan of the City of Los Angeles General Plan, and they are not part of any other adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot or the Pedestrian Path Modification.

V. CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

Project Impacts: No Impact.

Original Project. State CEQA Guidelines §15064.5 discusses general criteria for determining impacts on the environment. A project is typically found to have an impact on a historical resource if it causes a change in an otherwise eligible property that would prevent its inclusion in the National Register of Historic Places. The Original Project would be developed primarily within an existing transportation

ROW, and would not result in the direct or indirect use of any protected historic sites. Thus, pursuant to §15064.5, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot site is a disturbed, developed property that is not of historical significance or included in a Historic Preservation Overlay Zone. Thus, pursuant to §15064.5, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would construct approximately 300 feet of sidewalk as an eastward extension of existing sidewalk along a portion of the north side of Chandler Boulevard North. The site for the new sidewalk is not identified as a Cultural/Historical Site on the General Plan Land Use Map for the Van Nuys-North Sherman Oaks Community Plan and is not included in a Historic Preservation Overlay Zone. Thus, pursuant to §15064.5, no significant adverse impacts would occur due to development of the Pedestrian Path Modification. (Note that the portion of the pedestrian path planned as part of the Original Project has not yet been constructed. Therefore, deleting this portion of the pedestrian path would have no impact on a historical resource.)

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Project Impact: Less than Significant with Mitigation Incorporated.

Original Project. Although background studies and a Phase I archaeological survey and Class III inventory did not find evidence of archaeological resources, the ground surface in the vicinity of the Original Project has been heavily disturbed such that any archaeological resources that might exist would probably not be visible. Moreover, the presence of period residential structures adjacent to the ROW increases the likelihood that extant remains may be in the Original Project area. Given that any ground-disturbing activity has the potential to unearth previously unidentified archaeological resources, mitigation measures **CR-C1** from the FEIR would be implemented to reduce impacts to a less-than-significant level.

North Parking Lot. The North Parking Lot site has been heavily disturbed such that any archaeological resources that might exist would probably not be visible. However, given that any ground-disturbing activity has the potential to unearth previously unidentified archaeological resources, mitigation measures **CR-C1** from the FEIR would be implemented to reduce impacts to a less-than-significant level. Furthermore, if development of the North Parking Lot involves significant ground-disturbing activities that could impact an archaeological resource, implementation of additional mitigation measure **ModIS-CR-C1** would reduce potential impacts to a less-than-significant level. Thus, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. Construction of new sidewalk as part of the Pedestrian Path Modification would involve minor ground-disturbing activities. However, given that any ground-disturbing activity has the potential to unearth previously unidentified archaeological resources, mitigation measures **CR-C1** from the FEIR would be implemented to reduce impacts to a less-than-significant level. Furthermore, if development of the Pedestrian Path Modification involves significant ground-disturbing activities that could impact an archaeological resource, implementation of additional mitigation measure **ModIS-CR-C1** would reduce potential impacts to a less-than-significant level. Thus, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

Mitigation Measures. Mitigation measure **CR-C1** (from the FEIR) will be implemented during construction of the projects:

> **CR-C1:** If buried cultural remains are encountered during construction activities, the activities will cease until a qualified archaeologist has evaluated the significance of the site and made a determination of the eligibility for listing in the National Register.

If construction of the North Parking Lot or Pedestrian Path Modification requires excavation or significant ground-disturbing activities other than minor grading and paving, mitigation measure **ModIS-CR-C1** will be implemented to reduce potential impacts to a less-than-significant level. (The "ModIS" designation indicates that this mitigation measure is in this document only and is not in the FEIR.)

> **ModIS-CR-C1:** If construction of the North Parking Lot site or Pedestrian Path Modification site require excavation or significant ground-disturbing activities other than minor grading and paving, Metro shall ensure that a qualified archaeological monitor be present on-site for all necessary ground-disturbing activities. If any significant resources are discovered, all resources shall be protected by the Metro in compliance with *State CEQA Guidelines* §15064 (f).

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. Refer to section b), above.

North Parking Lot. The North Parking Lot site has been heavily disturbed, and there are no unique geologic features on the North Parking Lot site. However, if development of the North Parking Lot involves significant ground-disturbing activities that could potentially impact paleontological resources, implementation of mitigation measures **ModIS-CR-C2** and **ModIS-CR-C3** would reduce potential impacts to a less-than-significant level.

Pedestrian Path Modification. It is anticipated that construction of new sidewalk as part of the Pedestrian Path Modification would involve only minor ground-disturbing activities. However, if development of the Pedestrian Path Modification involves significant ground-disturbing activities that could potentially impact paleontological resources, implementation of mitigation measures **ModIS-CR-C2** and **ModIS-CR-C3** would reduce potential impacts to a less-than-significant level.

Mitigation Measures. If construction of the North Parking Lot or Pedestrian Path Modification requires excavation or significant ground-disturbing activities other than minor grading and paving, mitigation measures **ModIS-CR-C2** and **ModIS-CR-C** would be implemented to reduce potential impacts to a less-than-significant level:

> **ModIS-CR-C2:** Metro shall ensure that a qualified paleontological monitor shall be present during any subsurface work necessary for construction of the North Parking Lot or the Pedestrian Path Modification.

> **ModIS-CR-C3:** If paleontological resources are encountered during construction activities, Metro shall ensure that the activities cease until a qualified paleontologist has evaluated the resources and determined significance. If any significant resources are discovered, all resources shall be protected in compliance with *State CEQA Guidelines* §15064.5 (f).

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. No known or recorded human remains are on the Original Project site. However, given that any ground-disturbing activity has the potential to unearth previously unidentified human remains, incorporation of mitigation measure **CR-C2** (from the FEIR) would ensure that potential impacts would be less-than-significant.

North Parking Lot. The North Parking Lot site has been heavily disturbed, and there are no known or recorded human remains on the North Parking Lot site. However, if development of the North Parking Lot involves significant ground-disturbing activities that could potentially unearth previously unidentified human remains, implementation of mitigation measure **CR-C2** (from the FEIR) would reduce potential impacts to a less-than-significant level.

Pedestrian Path Modification. If development of the Pedestrian Path Modification involves significant ground-disturbing activities that could potentially unearth previously unidentified human remains, implementation of mitigation measure **CR-C2** (from the FEIR) would reduce potential impacts to a less-than-significant level.

Mitigation Measure. The following mitigation measure (as specified in the FEIR) shall be implemented during construction of the projects:

> **CR-C2:** If human remains are exposed during construction, pursuant to State Health and Safety Code §7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition, pursuant to PRC §5097.98.

VI. GEOLOGY AND SOILS

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving;

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. No Alquist-Priolo Earthquake Fault Zones cross the Original Project; the nearest such zone is the Mission Hills segment of the San Fernando Fault Zone, located approximately 7 miles north of the Original Project. The closest fault is an unnamed fault previously mapped by Weber, et al (1980). As mapped, the fault trends parallel to and 250 meters (approximately 800 feet) south of the Original Project; however, a hypothetical extension of this fault crosses the Metro ROW between Laurel Canyon and North Hollywood stations. Although previous investigations of aerial photographs and geomorphic evidence indicate that surface fault rupture is not considered likely on this fault, mitigation measure **GEO-1** (from the FEIR) would require that a comprehensive fault rupture hazard investigation be performed and any necessary design accommodations be made. Incorporation of **GEO-1** would ensure that potential impacts from rupture of a fault would be less-than-significant.

North Parking Lot. The North Parking Lot would not be situated within an Alquist-Priolo Fault Zone. Based on zoning and planning information available on the ZIMAS[7] website maintained by the City Department of City Planning, the nearest fault to the North Parking Lot is at a distance of greater than 12 miles. The North Parking Lot would not intersect the unnamed fault previously mapped by Weber, et al. (1980) because the North Parking Lot would be located at the western terminus of the Original Project and the hypothetical extension of the fault crosses at the eastern end of the Original Project, between the Laurel Canyon and North Hollywood stations. Therefore, the North Parking Lot would not generate substantial risk from surface rupture of a known earthquake fault, and no significant impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not be situated within an Alquist-Priolo Fault Zone. Based on zoning and planning information available on the ZIMAS website, the nearest fault is approximately 5 miles from the Pedestrian Path Modification sites. The hypothetical extension of the unnamed fault previously mapped by Weber, et al. (1980) would be located at least 1 mile east of the Pedestrian Path Modification. Thus, no known fault would cross the Pedestrian Path Modification sites. Furthermore, because the Pedestrian Path Modification would construct sidewalk instead of an equivalent portion of pedestrian path that was planned as part of the Original Project (see **Figure 1-4**), the Pedestrian Path Modification would not result in additional risk from surface rupture beyond what was described for the Original Project. Therefore, the Pedestrian Path Modification would not generate additional risk from surface rupture of a known earthquake fault, and no adverse impacts would occur due to development of the Pedestrian Path Modification.

Mitigation Measure: The following mitigation measure (from the FEIR) is proposed to lessen the effects of potential impacts from development of the Original Project:

> **GEO-1:** The closest fault to the proposed alignments is an unnamed fault previously mapped by Weber, et al. (1980; see Figure 4-54 and Table 4-53 of the FEIR). This fault does not lie within a previously mapped Alquist-Priolo Earthquake Fault Zone. A comprehensive fault rupture hazard investigation will be performed as part of the Design/Build phase to determine if the fault exists, whether it is active, and whether the fault traverses a proposed station. Appropriate design accommodations will be made to allow for this geologic feature.

ii) Strong seismic ground shaking?

Project Impacts: Less than Significant.

Original Project. While surface rupture is unlikely along the Original Project, substantial ground shaking could occur as a result of earthquakes on faults in the surrounding region (see Figure 4-54 of the FEIR). Design of aboveground structures, particularly bridges, would need to accommodate the maximum design earthquake. All structures would be constructed in accordance with Uniform Building Code (UBC) and State seismic safety standards. Adhering to these standard construction requirements would reduce the potential impact from seismic ground shaking to a less-than-significant level. No significant adverse impacts would occur due to development of the Original Project.

[7] The Zone Information and Map Access System (ZIMAS) is an internet-based Geographic Information System (GIS) provided by the City Department of City Planning to present property information to the public. ZIMAS can be accessed online at http://zimas.lacity.org/

North Parking Lot. In place of the two small aboveground businesses currently on the site, the North Parking Lot would develop an at-grade parking lot and accompanying streetlamps for nighttime lighting. Aboveground structures would be constructed in accordance with UBC and State seismic safety standards, and adherence to these standard construction requirements would reduce the potential impact from seismic ground shaking to a less-than-significant level. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. While surface rupture is unlikely along the Pedestrian Path Modification, substantial ground shaking could occur as a result of earthquakes on faults in the surrounding region. However, the Pedestrian Path Modification would not result in additional risk from ground shaking beyond what was described for the Original Project because the Pedestrian Path Modification would replace a portion of the pedestrian walkway planned as part of the Original Project with a similar length of sidewalk located across the street (see **Figure 1-4**), and thereby generate no net new construction. Furthermore, construction of the new sidewalk would adhere to the same UBC and State seismic safety standards as those required for the planned pedestrian walkway. Therefore, the Pedestrian Path Modification would not generate new risk from seismic ground shaking, and no adverse impacts would occur due to development of the Pedestrian Path Modification.

iii) Seismic-related ground failure, including liquefaction?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. Seismic ground shaking could cause ground settlement or liquefaction in areas underlain by loose, unconsolidated sediments. A preliminary geotechnical investigation revealed localized layers of soils subject to ground settlement along the entire length of the Original Project (ETC, 1993). Furthermore, according to Reconnaissance Seismic Hazard Maps published by the California Department of Conservation, the soils underneath the entire Original Project are potentially liquefiable (Real et al., 1996). Liquefaction potential is greatest when the water table is within 10 feet of the ground surface, and a geotechnical survey described in the FEIR failed to find groundwater within 10 feet of the surface. However, due to the non-uniform nature of the subsurface soils, heavy rainfall could create local "perched" groundwater at depths shallower than that of the main water table and increase the liquefaction hazard. Similarly, inundation of the Sepulveda Flood Control Basin, along the Original Project from Encino Avenue to Interstate 405, could potentially raise the water table and increase the liquefaction hazard. Seismic-related ground settlement and soil liquefaction could negatively impact aboveground structures, but compliance with the UBC and State seismic safety standards and the adoption of mitigation measure **GEO-2** (from the FEIR) would ensure that potential impacts would be less-than-significant.

North Parking Lot. As is the case with the Original Project, the soils underneath the North Parking Lot site are potentially liquefiable. However, because the North Parking Lot would construct a surface parking lot, it would present similar (or possibly even less) risk from ground settlement and liquefaction than do the existing onsite land uses. Any aboveground structures built as part of the North Parking Lot would comply with the UBC and State seismic safety standards. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. As is the case with the entire Original Project, the soils underneath the Pedestrian Path Modification sites are potentially liquefiable. However, the Pedestrian Path Modification would not result in additional risk from liquefaction beyond what was described for the Original Project because the Pedestrian Path Modification would effectively result in no net construction; rather, the Pedestrian Path Modification would replace a portion of the pedestrian walkway planned as part of the Original Project with a similar length of sidewalk located across the street (see **Figure 1-4**). Furthermore,

construction of the new sidewalk would adhere to the same UBC and State seismic safety standards as those required for the planned pedestrian walkway. Therefore, the Pedestrian Path Modification would not generate new risk from liquefaction, and no adverse impacts would occur due to development of the Pedestrian Path Modification.

Mitigation Measure. The following mitigation measure (from the FEIR) is proposed to lessen the effects or potential impacts due to development of the Original Project:

> **GEO-2:** Prior to construction of the proposed project, a detailed geotechnical investigation will be performed to delineate specific areas of potential liquefaction or settlement. The details of mitigation measures to address settlement along the proposed alignments will be developed in the Design/Build phase of the project, using proper engineering design and conformance with current building code requirements.

iv) Landslides?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification would be situated on relatively flat topography and are therefore not susceptible to landslides. No significant risk from landslides would occur due to development of the projects.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification would be completely paved and located on flat terrain. Therefore, the projects would not result in the loss of topsoil or substantial erosion, and no significant adverse impacts would occur.

c) 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?

Project Impacts: No Impact.

Original Project. In the easternmost portion of the proposed Chandler alignment (east of Tujunga Avenue), a study by Weber, et al. (1980) found subsidence caused either by groundwater withdrawal or the natural tectonic downwarping of the San Fernando Valley. The subsidence occurred over a very broad area and there was no reported damage to surface structures. There is no evidence that subsidence is currently occurring in the vicinity of the Original Project, and groundwater extraction is no longer a threat because groundwater withdrawal is now regulated to prevent significant changes in groundwater levels over time. Although the Original Project will require excavation into sloped embankments underneath the Interstate Highway 405, a geotechnical engineer will approve design slopes so as to avoid creating instability. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. Because the North Parking Lot would be constructed in a fully developed area on flat terrain, would meet the permit requirements of the City, and would conform to current building

regulations, the North Parking Lot would not significantly impact the stability of underlying soils. Moreover, the North Parking Lot would be constructed in the same general area as the Original Project, where there is no evidence that subsidence is currently occurring. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. Because the Pedestrian Path Modification would be constructed in a fully developed area on flat terrain, would meet the permit requirements of the City, and would conform to current building regulations, the Pedestrian Path Modification would not significantly impact the stability of underlying soils. Moreover, the Pedestrian Path Modification would be located along the alignment of the Original Project, where there is no evidence that subsidence is currently occurring. Therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risk to life or property?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. All on-site structures would be designed and constructed consistent with the UBC, and any expansive soils would be removed or compacted during construction. No further risks related to expansive soils would be created due to implementation of the projects. Therefore, no significant risk from expansive soil would occur due to development of the projects.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification would not require connection to the City sewer system. No further installation of wastewater removal systems would be required for these transportation projects. Therefore, no significant adverse impacts would occur from wastewater disposal systems due to development of the projects.

VII. HAZARDS AND HAZARDOUS MATERIALS

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Project Impact: Less than Significant with Mitigation Measure Incorporated.

Original Project and North Parking Lot. Operation of the Original Project and North Parking Lot would not involve the routine transport, use, or disposal of hazardous materials. However, as shown in Figure 4-54 of the FEIR, contaminated properties and hazardous or potentially hazardous waste sites are known to be present in the project areas. As stated in a March 17, 2004, Metro interoffice memo sent from Cris Liban to Roger Dames, mitigation of arsenic-contaminated soil is being performed along the Metro ROW in the Original Project area. In addition, a report prepared by Haley & Aldrich, Inc., in November 2003 states that excessive concentrations of arsenic were found within the Metro ROW adjacent to the east side of the Boeing site. Thus, it can be reasonably concluded that soils within the Metro ROW in the North

Parking Lot site may also contain excessive concentrations of arsenic, and that these soils will require remediation prior to construction of the North Parking Lot.

The March 17, 2004, Metro interoffice memo also references groundwater remediation that was conducted at the Boeing site from 1985 to 2000. The groundwater remediation system was decommissioned in December 2000, and the Los Angeles Regional Water Quality Control Board approved a modified groundwater monitoring program in February 2001. The program monitors 13 wells, including 2 within the Metro ROW that were found to have increasing concentrations of contaminants. It is possible that groundwater within the Metro ROW in the North Parking Lot site also contains contaminants that would require monitoring and possibly remediation prior to or during construction of the North Parking Lot.

For both the Original Project and the North Parking Lot, adherence to federal and State regulations and to standard construction practices, as described in mitigation measure **GEO-C1** (from the FEIR), would ensure that soil or groundwater contamination would be remediated prior to or during construction of the projects. Furthermore, mitigation measure **GEO-C1** would ensure that the application of standard construction practices would result in no significant adverse impact from exposure to hazardous materials during construction activities. Thus, with incorporation of mitigation measure **GEO-C1**, potential impacts would be reduced to a less-than-significant level.

Pedestrian Path Modification. Operation of the Pedestrian Path Modification would not involve the routine transport, use, or disposal of hazardous materials. Regarding construction of the Pedestrian Path Modification, the new sidewalk would not be located on the Metro ROW; thus, the Pedestrian Path Modification would be less likely than the Original Project or the North Parking Lot to require soil or groundwater remediation. Nonetheless, the Pedestrian Path Modification would adhere to federal and State regulations and to standard construction practices, as described in mitigation measure **GEO-C1** (from the FEIR) to ensure that any onsite soil or groundwater contamination would be remediated prior to or during construction of the new sidewalk. Furthermore, mitigation measure **GEO-C1** would ensure that the application of standard construction practices would result in no significant adverse impact from exposure to hazardous materials during construction activities. Thus, with incorporation of mitigation measure **GEO-C1**, potential impacts would be less-than-significant.

Mitigation Measure: Adherence to standard construction practices, as described in the following mitigation measure, would reduce potential impacts from to a less-than-significant level:

> **GEO-C1:** Federal and State regulations require that certain levels of soil or groundwater contamination be remediated prior to or during construction of the project. Cleanup activities will be conducted in accordance with all applicable regulations and guidelines governing the removal and disposal of hazardous materials. The application of standard construction practices would result in no significant adverse impact from exposure to hazardous materials. These practices include:
>
> - Exploration for hazardous materials in the soil;
> - Monitoring for hazardous materials during construction;
> - Excavation, segregation, and remediation of hazardous materials;
> - Use of drip pans under heavy equipment to minimize leakage of fluids into the soil;
> - Hazardous materials training for employees; and
> - Storage of chemicals in compliance with local hazardous and flammable material storage regulations.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project, North Parking Lot, and Pedestrian Path Modification. Because operation of the Original Project, the North Parking Lot, and the Pedestrian Path Modification would not involve the transport or use of hazardous materials, any reasonably foreseeable upsets or accidents related to operation of the projects would not involve the release of hazardous materials. During construction of the projects, any potential for accidents releasing hazardous materials would be mitigated through adherence to federal and State regulations and to standard construction practices described in mitigation measure **GEO-C1,** above. Thus, with incorporation of mitigation measure **GEO-C1**, potential impacts would be reduced to a less-than-significant level.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. Forty-three existing or planned schools are located within ¼-mile of the Original Project (please reference Table 4-9 of the FEIR for a listing of the schools). As discussed in section III (Air Quality), above, the Original Project would not produce significant long-term hazardous air emissions. Also, the Original Project would be a transportation project that would not involve handling hazardous materials, substances, or waste. Consequently, operation of the Original Project would not emit or handle hazardous materials near schools.

During the construction phase of the Original Project, however, there is the potential for (1) the release of significant hazardous air emissions, as discussed in section III (Air Quality), above, and (2) encountering hazardous materials as a part of construction activities. Incorporation of mitigation measures **AQ-C1** through **AQ-C10** (from the FEIR; listed in section III, a), above) and **GEO-C1** (from the FEIR; listed in section a), above), would mitigate impacts to a less-than-significant level.

North Parking Lot. Hart Street Elementary School is located approximately ¼-mile northeast of the North Parking Lot site. Operation of the North Parking Lot would not emit hazardous air emissions, as discussed in section III (Air Quality), above. However, as discussed in section a), above, there is the potential for soil and groundwater contamination onsite and the potential for encountering hazardous materials during construction activities. Incorporation of mitigation measures **AQ-C1** through **AQ-C10** (from the FEIR; listed in section III, a), above) and **GEO-C1** (from the FEIR; listed in section a), above), would ensure that potential impacts at Hart Street Elementary School would be less-than-significant.

Pedestrian Path Modification. Emek Hebrew Academy is located less than ¼-mile southeast of the site, and Los Angeles Valley College is located approximately ¼-mile north of the site. Operation of the Pedestrian Path Modification would not emit hazardous air emissions, as discussed in section III (Air Quality), above. However, as discussed in section a), above, there is the potential for encountering hazardous materials during construction activities. Incorporation of mitigation measures **AQ-C1** through **AQ-C10** (from the FEIR; listed in section III, a), above) and **GEO-C1** (from the FEIR; listed in section a), above), would ensure that potential impacts at the schools would be less-than-significant.

d) Would the 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 the environment?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. Government Code section 65962.5 requires the California Environmental Protection Agency to develop at least annually an updated "Cortese List," which is the State Department of Toxic Substance Control's (DTSC) Hazardous Waste and Substances Site List. As of April 28, 2004, the Original Project, the North Parking Lot, and the Pedestrian Path Modification are not included on the Cortese List. Therefore, development of the projects would not result in significant adverse impacts from hazardous materials.

e) For a project 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 in the project area?

Project Impacts: No Impact.

Original Project. The Original Project area is located within the airport land use plan for Van Nuys Airport and is within two miles of Burbank Airport. The Original Project would be an at-grade busway that would not include facilities that would pose a safety hazard. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. Because the North Parking Lot would be located at the western terminus of the Original Project, the North Parking Lot would not be within the Van Nuys Airport land use plan or within two miles of Burbank Airport or any other airport. Therefore, the North Parking Lot would not result in a safety hazard for people residing or working in the North Parking Lot area, and no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would be located approximately 3 miles from the Burbank Airport and 5 miles from the Van Nuys Airport. The Pedestrian Path Modification would not result in additional risk from airport activities beyond what was described for the Original Project because the Pedestrian Path Modification would effectively result in no net new construction; rather, the Pedestrian Path Modification would replace a portion of the pedestrian walkway planned as part of the Original Project with a similar length of sidewalk located across the street (see **Figure 1-4**). Furthermore, the Pedestrian Path Modification would not construct any structures that would pose a safety hazard. Therefore, the Pedestrian Path Modification would not result in a safety hazard for people residing or working in the Pedestrian Path Modification area, and no adverse impacts would occur due to development of the Pedestrian Path Modification.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would not situated in the vicinity of a private airstrip. Therefore, no significant adverse impacts would occur due to development of the projects.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. The Original Project exclusive busway would not block or interrupt emergency access or evacuation routes. The limited on-street segments of the Original Project would add buses to mixed-flow traffic, which also would not disrupt emergency access or evacuation routes. As discussed in sections XV (Transportation/Traffic) and XIII (Public Services), operation of the Original Project would not substantially increase traffic at intersections or police and fire protection services emergency response times. In fact, operation of the Original Project could present a beneficial impact to emergency access and evacuation routes. In the event of a substantial emergency of some kind, emergency vehicles could, with permission from Metro, use the busway as an emergency access route. Nonetheless, although mitigation measures are not required for the operation of the Original Project, **S&S-1** (from the FEIR) is proposed as an additional enhancement.

During construction of the Original Project, detours, street closures, and increased traffic at intersections would potentially produce significant effects under CEQA on emergency response. Incorporation of mitigation measures **S&S-C1**, **CF-C1**, and **CF-C2** (from the FEIR) would reduce potential impacts to a less-than-significant level by requiring consultations and communication with emergency service providers and school officials.

North Parking Lot. The North Parking Lot site would be built in place of existing development and on property zoned for public facilities. The North Parking Lot would not extend bus routes or require construction of an additional bus station beyond what was previously analyzed for the Boeing site in the December 2003 Addendum and Modified IS. Thus, operation of the North Parking Lot would not block or interrupt emergency access or evacuation routes. Operation of the North Parking Lot also would not substantially increase police and fire protection emergency response times because it would not substantially increase traffic at intersections (see section XV (Transportation/Traffic) for additional discussion). (In particular, the North Parking Lot would not interrupt emergency access or increase emergency response times from the LAFD Fire Station 72, located approximately ½-mile east of the North Parking Lot site.) Therefore, no significant adverse impacts to emergency response would occur due operation of the North Parking Lot.

Construction of the North Parking Lot would potentially impact emergency response; however, adherence to mitigation measures **S&S-C1**, **CF-C1**, and **CF-C2** (from the FEIR) would reduce potential construction impacts on emergency response or evacuation routes to a less-than-significant level.

Pedestrian Path Modification. In place of a segment of the pedestrian path planned as part of the Original Project, the Pedestrian Path Modification would construct a 300-foot eastward extension of existing sidewalk along the north side of Chandler Boulevard North. Deletion of the segment of the pedestrian path would not present significant adverse impacts to emergency response or evacuation because the deleted path would be replaced with an equivalent portion of sidewalk that would allow for continuous, off-street pedestrian access parallel to the busway. Operation of the sidewalk would not present significant adverse impacts to emergency response or evacuation because the sidewalk would not (1) block the roadway, (2) directly or indirectly interfere with emergency vehicle access, or (3) otherwise interfere with emergency response. In addition, construction of the new sidewalk would adhere to mitigation measures **S&S-C1**, **CF-C1**, and **CF-C2** (from the FEIR) to ensure that potential construction impacts on emergency response or evacuation routes would be less-than-significant. Thus, the Pedestrian Path Modification would present no additional adverse impacts beyond what was previously analyzed for the Original Project. In fact, the Pedestrian Path Modification would provide a potentially beneficial

impact to emergency response and evacuation because the Pedestrian Path Modification would incorporate a single point intersection at Coldwater Canyon Avenue and improve traffic circulation.

Mitigation Measures: Although mitigation measures are not required for the operation of the Original Project, **S&S-1** (from the FEIR) is proposed as an additional enhancement. During construction of the Original Project, North Parking Lot, and Pedestrian Path Modification, mitigation measures **S&S-C1**, **CF-C1**, and **CF-C2** (from the FEIR) would reduce impacts to a less-than-significant level.

S&S-1:

- Bus stop platforms and surrounding areas will be designed to minimize conflicts involving buses, auto traffic, and pedestrian traffic at intersections. Lighting, landscaping, and walkways will be provided for pedestrians.

- Stations will provide lighting, cover, and an open design conducive to surveillance by security personnel. Additional station safety measures may include bike lockers, emergency telephones, public announcement (PA) systems, LAPD patrols, and bus driver/dispatch communication.

- Communication systems will include an emergency radio on the buses to ensure quick response to incidents.

- Transit police will be assigned routine patrol routes along or in proximity of the busway.

- Crossing protection devices including signs, pedestrian "Z" (or similar) gates, and road painting/striping at intersections will be provided.

S&S-C1:

- Emergency services providers and school officials will be consulted regarding the construction process to reduce the intrusiveness of the construction process and provide for continuing two-way communication throughout the construction period.

- School officials will be consulted in order to ensure maintenance of safe student walk routes and access for passenger vehicles and school buses.

- Flagmen will be provided during intersection modifications in active pedestrian communities. Crossing guards or flag men will also be provided at construction sites in proximity to schools and where school pedestrian routes cross construction areas.

- Construction scheduling and haul routes will be sequenced to minimize conflicts with pedestrians, school buses and vehicular traffic during arrivals and dismissals of the school day.

CF-C1: To reduce the potential for restricting access to community facilities and services during construction of the proposed alternatives or alignments, the MTA [Metro] and the construction contractor would adhere to local and state ordinances for areas under construction, and conduct construction under an approved traffic management plan.

CF-C2: Coordination will be conducted with City of Los Angeles Fire and Police Department personnel to provide adequate advance notice of construction activities and

identify, as necessary, any special arrangements that may be needed to facilitate the delivery of emergency services.

h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would be located in an urban area not adjacent to wildlands. Therefore, no significant adverse impacts would occur due to development of the projects.

VIII. HYDROLOGY AND WATER QUALITY

a) Would the project violate any water quality standards or waste discharge requirements?

Project Impacts: Less than Significant with Mitigation Measures Incorporated.

Original Project. The Original Project area is located entirely within the San Fernando Basin, which supports a large, essentially urban watershed. The Original Project would not present significant adverse impacts to the quantity and quality of runoff, or the quantity and quality of groundwater.

Regarding runoff, new impervious surfaces caused by development of the Original Project would produce additional runoff; however, the amount of new impervious surface that would be added and the resulting additional runoff would be small compared to the amount of runoff in the watershed as a whole. Regarding the quality of runoff, as described in mitigation measure **WR-1** (from the FEIR), the Original Project would install oil-water separators in storm drains at proposed parking lots in accordance with Best Management Practices. Oil is a potential stormwater contaminant that could degrade downstream water quality and adversely affect aquatic organisms. Thus, installation of oil-water separators would actually provide a beneficial impact by improving the current quality of stormwater runoff. Furthermore, during construction, the Original Project would potentially impact water quality by adding sediment or contaminants into runoff. This would be of special concern in the vicinity of the biologically important Sepulveda Flood Control Basin, located between Encino Avenue and Interstate 405 as shown in Figure 4-58 of the FEIR. Potential significant impacts would be reduced to a less-than-significant level with the incorporation of mitigation measures **WR-C1** and **WR-C2** (from the FEIR).

Regarding groundwater, operation of the Original Project is not anticipated to have a significant impact on groundwater resources because (1) groundwater recharge from the surface within the San Fernando Valley is limited by layers of impermeable rock, and (2) once constructed, the Original Project would be separated from the water table. For these reasons, spills of contaminants to the ground are unlikely to penetrate deeply enough into the soil to affect water quality. In addition, during construction, the presence of hazardous materials onsite creates the potential for the accidental release of contaminants to local bodies of perched groundwater. However, adherence to Best Management Practices in the transportation, storage, and handling of hazardous materials would ensure that their presence at the construction sites would not negatively impact groundwater quality.

North Parking Lot. The North Parking Lot also would be located entirely within the large, urban watershed of the San Fernando Basin, and would not present significant adverse impacts to the quantity and quality of runoff, or the quantity and quality of groundwater.

Regarding runoff, the North Parking Lot site is currently surfaced with weathered asphalt, weathered concrete, and loose gravel. The North Parking Lot would be completely paved, and the new impervious surfaces would produce additional runoff. However, the amount of new impervious surface that would be added and the resulting additional runoff would be small compared to the amount of runoff in the watershed as a whole. Regarding the quality of runoff, as described in mitigation measure **WR-1** (from the FEIR), any new any storm drains constructed as part of the North Parking Lot would be installed with oil-water separators in accordance with Best Management Practices, and installation of oil-water separators would provide a beneficial impact by improving the quality of stormwater runoff during operation of the North Parking Lot. Furthermore, during construction of the North Parking Lot, incorporation of mitigation measures **WR-C1** and **WR-C2** (from the FEIR) would ensure that construction activities would not add substantial sediment or contaminants into runoff in a manner that would impact water quality in the adjacent Los Angeles River.

Regarding groundwater, operation of the North Parking Lot would not have a significant impact on groundwater resources because (1) groundwater recharge from the surface within the San Fernando Valley is limited by layers of impermeable rock, and (2) once constructed, the North Parking Lot would be separated from the water table. For these reasons, spills of contaminants to the ground are unlikely to penetrate deeply enough into the soil to affect water quality. In addition, adherence to Best Management Practices in the transportation, storage, and handling of hazardous materials would ensure that their presence at the North Parking Lot site would not negatively impact groundwater quality. Thus, no significant adverse impacts to water quality would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification also would be located within the San Fernando Basin, and would not present significant adverse impacts to the quantity and quality of runoff, or the quantity and quality of groundwater.

Regarding runoff, the Pedestrian Path Modification would not generate any net impervious surfaces that would produce additional runoff because the Pedestrian Path Modification would construct new sidewalk in place of an equivalent length of pedestrian path. Regarding the quality of runoff, as described in mitigation measure **WR-1** (from the FEIR), any new any storm drains constructed as part of the Pedestrian Path Modification would be installed with oil-water separators in accordance with Best Management Practices, and installation of oil-water separators would provide a beneficial impact by improving the quality of stormwater runoff. Furthermore, during construction of the Pedestrian Path Modification, incorporation of mitigation measures **WR-C1** and **WR-C2** (from the FEIR) would ensure that construction activities would not add substantial sediment or contaminants into runoff in a manner that would impact water quality in the adjacent Tujunga Wash.

Regarding groundwater, operation of the Pedestrian Path Modification would not have a net impact on groundwater resources because the Pedestrian Path Modification would develop a sidewalk in place of an equivalent segment of pedestrian path planned as part of the Original Project. Furthermore, as is the case with the Original Project, construction of the new sidewalk would adhere to Best Management Practices in the transportation, storage, and handling of hazardous materials, which would ensure that their presence at the new sidewalk site would not negatively impact groundwater quality. Thus, no significant adverse impacts to water quality would occur due to development of the Pedestrian Path Modification.

Mitigation Measures: The following mitigation measures (from the FEIR) shall be implemented during construction activities:

> **WR-1:** Runoff from the busway constructed for [the Original Project] will be managed via Best Management Practices (BMPs) and an appropriate Storm Water Pollution Prevention Plan (SWPPP) as mandated by NPDES permit requirements. Consultation

among the project proponent, U.S. Army Corps of Engineers, and the Regional Water Quality Control Board will be undertaken during the Design/Build phase to establish appropriate permit conditions. A drainage system will be constructed as part of the project that will direct stormwater runoff to the local drainage system. Because the area of new paved surface for [the BRT alternative] is small compared to the area of paved surface in the region, the increase in runoff volume associated with the project would not negatively affect the local storm drainage system. Since Best Management Practices mandate the installation of oil-water separators in storm drains at proposed parking lots, operating of the project would actually improve the quality of stormwater runoff.

WR-C1: Construction will be conducted to comply with building codes, permit conditions, and other regulatory requirements to ensure that discharge of surface water runoff from construction sites will not result in increased erosion or siltation discharge to existing drainage facilities and would mitigate impacts to surface waters.

WR-C2: In compliance with the Nation Pollutant Discharge Elimination System (NPDES) General Construction Permit, implementation of pollution control methods associated with construction activities will be required. As a component of the General Construction Permit, a Storm Water Pollution Prevention Plan (SWPPP) will specifically identify best management practices to mitigate water quality impacts on receiving waters due to surface water runoff from the project site. These practices may include the placement of sandbags around basins, construction of a berm to keep runoff from flowing into the construction site, and covering or stabilizing topsoil stockpiles. Construction industry standard stormwater best management practices can be found in the *State of California Storm Water Best Management Practices Handbook,* Construction Activity.

b) 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 (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The Original Project, the North Parking Lot, and the Pedestrian Path Modification would not substantially affect groundwater supplies. The projects would not require large amounts of groundwater and would not generate significant portions of impervious surfaces relative to the area of the watershed as a whole. Therefore, no significant adverse impacts to groundwater supplies would occur due to development of the projects.

Mitigation Measure: Although mitigation is **not required,** the following mitigation measure (from the FEIR) may be implemented to further ensure that no impact would result:

WR-2: Additional piezometers will be installed within the corridor [path of the Original Project] and monitored prior to final design of the project to better monitor groundwater levels along the chosen alignment. Site-specific design accommodations to local patterns of groundwater flow may be required as a result of this monitoring, and, if so, will be incorporated into the Design/Build phase.

c) 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?

Project Impacts: No Impact.

Original Project. The Original Project would cross five flood control channels: Caballero Creek, the Los Angeles River, Bull Creek, and two branches of the Tujunga Wash. New bridges would be required across some, and perhaps all, of these channels, and bridges would be designed so as not to interfere with the flow of floodwaters through the channel. Thus, the Original Project would not substantially alter the existing drainage pattern of the project area, and no significant adverse impacts would occur.

North Parking Lot. Although the Los Angeles River is located adjacent to the North Parking Lot site, the North Parking Lot would be constructed on an existing developed property and would not extend into the Los Angeles River or otherwise alter the existing drainage pattern. Thus, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. Although the Tujunga Wash is located adjacent to the new sidewalk site of the Pedestrian Path Modification, the new sidewalk would be a 300-foot extension of existing sidewalk and would not extend into the Tujunga Wash or otherwise alter the existing drainage pattern. Thus, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

d) 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?

Project Impacts: Less than Significant with Mitigation Measure Incorporated.

Original Project. As discussed in section c), above, the Original Project would cross five flood control channels. New bridges would be required across some, and perhaps all, of these channels, and the bridges would be designed so as not to interfere with the flow of floodwaters through the channel. The Original Project would slightly increase impervious surfaces, which would slightly increase runoff; however, these slight increases would not substantially impact drainage patterns. Thus, operation of the Original Project would not impact existing drainage patterns or substantially increase surface runoff.

During the construction phase of the Original Project, however, there is the potential for substantial increases in surface runoff. Incorporation of mitigation measure **WR-1** (from the FEIR; described above in section a) would ensure that discharge of surface water runoff from construction sites would not result in flooding. Thus, the Original Project would not impact existing drainage patterns or substantially increase runoff, and no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. As discussed in section c), above, the North Parking Lot would not alter existing drainage patterns. Incorporation of mitigation measure **WR-1** (from the FEIR; described above in section a) would ensure that discharge of surface water runoff from construction of the North Parking Lot would not result in flooding. Although the North Parking Lot would generate new impervious surfaces that would produce additional runoff, the amount of new impervious surface that would be added and the resulting additional runoff would be small compared to the amount of runoff in the watershed as a whole. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. As discussed in section c), above, the Pedestrian Path Modification would not alter existing drainage patterns. Incorporation of mitigation measure **WR-1** (from the FEIR; described above in section a) would ensure that discharge of surface water runoff from construction of the new sidewalk would not result in flooding. In addition, as discussed in section a), above, the Pedestrian Path Modification would not result in additional runoff. Therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Project Impacts: Less than Significant with Mitigation Measures Incorporated.

Original Project and North Parking Lot. The Original Project and the North Parking Lot would be located entirely within the San Fernando Basin, which supports a large, essentially urban watershed. As discussed in section d), above, new impervious surfaces caused by development of the projects would produce additional runoff. However, the amount of new impervious surface that would be added and the resulting additional runoff would be small compared to the amount of runoff in the watershed as a whole. Furthermore, mitigation measure **WR-1** (from the FEIR; described above in section a) provides for a drainage system to be constructed to direct stormwater runoff to the local drainage system, which would have sufficient capacity to handle the additional runoff.

Regarding additional sources of polluted runoff, operation of the Original Project and the North Parking Lot would actually improve the quality of stormwater runoff because the projects would install oil-water separators in storm drains in accordance with Best Management Practices. During the construction phase, the projects would have the potential to contaminate stormwater runoff. However, incorporation of mitigation measures **WR-C2** (from the FEIR; described above in section a) would ensure that construction of the projects would not significantly impact stormwater quality. Therefore, no significant adverse impacts would occur due to development of the projects.

Pedestrian Path Modification. As discussed in section a), above, the Pedestrian Path Modification would not result in additional runoff. Operation of the Pedestrian Path Modification would not generate any sources of pollution to runoff, and construction of the Pedestrian Path Modification would not generate any sources of pollution to runoff beyond what was previously analyzed in the Original Project because the Pedestrian Path Modification would result in no net new construction. Therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

f) Would the project otherwise substantially degrade water quality?

Project Impacts: No Impact.

Original Project, North Parking Lot, Pedestrian Path Modification. The projects would have no additional impacts to water quality beyond those discussed in the preceding sections.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Project Impacts: No Impact.

Original Project, North Parking Lot, Pedestrian Path Modification. The Original Project, North Parking Lot, and Pedestrian Path Modification are transportation projects that do not involve relocating existing housing or constructing new housing. Thus, the Original Project, North Parking Lot, and Pedestrian Path Modification would not place housing within a 100-year flood hazard area, and no significant adverse impacts would occur due to development of the projects.

h) Would the project place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

Project Impacts: No Impact.

Original Project. A review of Flood Insurance Rate Maps (FIRMs) prepared by the Federal Emergency Management Agency (FEMA) indicates that all of the Original Project is within Zone C, which is defined as an area of minimal flooding. No 100-year or 500-year floodplains would be crossed, except where 100-year floodplains are contained entirely within flood control channels (Caballero Creek, the Los Angeles River, Bull Creek, and the Tujunga Wash). New bridges would be required across some, and perhaps all, of these channels. For Caballero Creek, Bull Creek, and the two branches of the Tujunga Wash, the new bridges (if needed) would be complete spans, so they would not interfere with flow of floodwaters through the channels. The bridge across the Los Angeles River would require five to six piers, similar to the existing condition. The final bridge design would be reviewed with the U. S. Army Corps of Engineers to ensure that it is compatible with hydraulic design capacity required for flow through the channel. Thus, no adverse impacts related to a 100-year flood hazard would occur due to development of the Original Project.

Note that, although the Original Project is not within the 100- or 500-year floodplains defined by FEMA, the Original Project is contained within the Sepulveda Flood Control Basin. Please see section i), below, for a discussion of potential impacts related to the Sepulveda Flood Control Basin

North Parking Lot. The North Parking Lot site is not within a 100-year flood hazard area as mapped on a FIRM or other flood hazard delineation map. The North Parking Lot would be located adjacent to the Los Angeles River; however, the Los Angeles River floodplain would be contained entirely within the channel. The North Parking Lot would not cross the Los Angeles River or place any structures within a 100-year flood hazard area, and no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not be located within a 100-year flood hazard area as mapped on a FIRM or other flood hazard delineation map. Although the new sidewalk would be located close to the Tujunga Wash, the Tujunga Wash floodplain would be contained entirely within the channel, and the Pedestrian Path Modification would not cross the Tujunga Wash. The Pedestrian Path Modification would not place any structures within a 100-year flood hazard area, and no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

i) 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?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. As discussed in section h), above, the Original Project would cross five flood control channels and new bridges would be required across some, and perhaps all, of these channels. A determination will be made in preliminary engineering regarding which bridges would require complete replacement. New bridges (if needed) for Caballero Creek, Bull Creek, and the two branches of the

Tujunga Wash, would be complete spans and would not interfere with flow of floodwaters through the channels. As described in mitigation measure **WR-3** (from the FEIR), the bridge across the Los Angeles River would require five to six piers, similar to the existing condition. The final bridge design will be reviewed with the USACE to ensure that it is compatible with hydraulic design capacity required for flow through the channel.

The Original Project includes the area of the Sepulveda Flood Control Basin, located between Encino Avenue and Interstate 405 (shown in Figure 4-58 of the FEIR). The Sepulveda Flood Basin is used by the U.S. Army Corps of Engineers (USACE) to manage flood levels on the Los Angeles River during major storm events. Since the maximum design flood for the Basin would have an elevation of 717 feet, only a small section of the project (the 1000 feet immediately west of the Woodley Station) would be affected by a maximum flood event, in which case the depth of floodwater in the immediate vicinity would be less than approximately 1 foot. With the incorporation of mitigation measure **WR-4** (from the FEIR), potential impacts from flooding would be less-than-significant.

Finally, the Original Project is not within an inundation area of any levees or dams. Therefore, no impact from the failure of a levee or dam would occur.

North Parking Lot. The North Parking Lot site is not within the Sepulveda Flood Control Basin and does not cross any flood control channels. Although the north side of the North Parking Lot site abuts the Los Angeles River, which is used for flood control purposes, the Los Angeles River floodplain would be contained entirely within the channel. Furthermore, because the North Parking Lot would construct an at-grade parking lot and would not include aboveground structures, with the exception of streetlights, the North Parking Lot would not generate increased risk from flooding relative to the current land uses (which include two small buildings). Thus, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification sites are not within the Sepulveda Flood Control Basin and do not cross any flood control channels. Although the new sidewalk site is close to the Tujunga Wash, which is used for flood control purposes, the Tujunga Wash floodplain would be contained entirely within the channel. Furthermore, because the Pedestrian Path Modification would only construct new sidewalk to replace an equivalent segment of pedestrian path (see **Figure 1-4**), the Pedestrian Path Modification would not generate a net risk to people or structures from flooding. Thus, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

Mitigation Measures: The following mitigation measures (from the FEIR) shall be implemented:

> **WR-3:** Construction of a bridge across the Los Angeles River (required as part of the BRT Alternative) will require the reconstruction or new construction of five to six piers within the channel. The final bridge design will be reviewed with the USACOE to ensure that it is compatible with required hydraulic capacity for flow through the channel.
>
> **WR-4:** The USACE requires that any permanent structures placed within the Sepulveda Flood Control basin be floodable. Site-specific design accommodations and drainage facilities may be required, including at the Balboa Boulevard and Woodley Avenue stations. Appropriate specifications will be incorporated into the Design/Build bid package to require coordination with the U.S. Army Corps.

j) Would the project be subject to inundation by seiche, tsunami, or mudflow?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. A seiche is an oscillation of a land-locked large water body, such as a lake. Because no such bodies of water exist in the vicinity of the projects, the projects would not be subject to inundation by a seiche. A tsunami is large ocean wave associated with a seismic event. Because the project sites are outside areas that would be potentially affected by a tsunami, the projects would not be subject to inundation by a tsunami. Lastly, the projects are not within or adjacent to a hillside area subject to mudflows. Therefore, no significant adverse impacts would occur due to development of the projects.

IX. LAND USE AND PLANNING

a) Would the project physically divide an established community?

Project Impacts: Less than Significant.

Original Project. The Original Project is located within a transportation corridor area identified by the City of Los Angeles General Plan, and other specific plans and community plans listed in the FEIR. The residential neighborhoods and the Orthodox Jewish community along Chandler Boulevard have expressed concern that the busway could potentially divide their pedestrian communities. To address these concerns, the portion of the Original Project that would be along Chandler Boulevard would limit project operating speeds to the posted street speed limit, use 40- to 60-foot buses operating on compressed natural gas or other clean fuels, construct no permanent sound walls in the median, provide low fences, retain existing and provide new landscaping, and provide additional pedestrian crossings. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot would be constructed on property designated for use as a public facility and located in a predominantly commercial and industrial area. The North Parking Lot site is not near the concerned communities along Chandler Boulevard or adjacent to any residences. Therefore the North Parking Lot would not physically divide an established community, and no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. As shown in **Figure 1-4**, the Pedestrian Path Modification would effectively relocate a length of walkway out of the Chandler Boulevard median and on to the north side of Chandler Boulevard North. The Pedestrian Path Modification would modify the pedestrian crossing at the intersection of Coldwater Canyon Avenue and Chandler Boulevard, but this small change would not adversely affect pedestrians or divide the community. Therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

b) 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 an environmental effect?

Project Impacts: No Impact.

Original Project. The Original Project passes through or borders five community planning areas and two Specific Plans areas. The Original Project would conform not only to the City of Los Angeles General Plan (Transportation Element), but also to these five community plans and two specific plans in the neighborhoods it traverses. Therefore, the Original Project would not conflict with any applicable adopted land use plan, policy, or regulation, and no significant adverse impacts would occur.

North Parking Lot. The North Parking Lot site is subject to the provisions of the LAMC and the Land Use Element of the General Plan for the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan Area. The North Parking Lot site is not within the bounds of any specific plan areas or other plan areas or guidelines. In particular, the North Parking Lot site in not including the Warner Center Specific Plan.

The North Parking Lot site is zoned as "PF" by the City and designated for public facilities land use by the General Plan; however, the site is currently occupied by two private businesses. Because the North Parking Lot would develop a public facility (specifically, a portion of a public park-and-ride facility to support the Original Project) in place of the businesses currently on the site, the North Parking Lot would provide a beneficial impact to land use and planning. Thus, the North Parking Lot would not conflict with any applicable adopted land use plan, policy or regulation, and no significant adverse impacts would occur.

Pedestrian Path Modification. The Pedestrian Path Modification sites are subject to the provisions of the LAMC and the Land Use Element of the General Plan, specifically the Van Nuys-North Sherman Oaks Community Plan Area. The Pedestrian Path Modification sites are not within the bounds of any specific plan areas or other plan areas or guidelines.

The pedestrian pathway site is zoned as "PF" and designated for public facilities land use by the General Plan. The new sidewalk site is on City-owned property zoned as "RE" and designated for very low density residential land use by the General Plan. Sidewalks are not an incompatible use with residential property. Thus, the Pedestrian Path Modification would not conflict with any applicable adopted land use plan, policy or regulation, and no significant adverse impacts would occur.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would be developed within an urbanized area. Because there is no habitat conservation plan or natural community plan in effect in the project areas, no conflict with such a plan would develop. Therefore, no significant adverse impacts would occur.

X. MINERAL RESOURCES

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Project Impacts: No Impact.

Original Project. The Original Project would be developed in an urbanized area not identified by the Conservation Element of the City General Plan as having known mineral resources. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot would be developed in an urbanized area not identified by the Canoga Park-Winnetka-Woodland Hills-West Hills Community Plan as having known mineral resources. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would be developed in an urbanized area not identified by the Van Nuys-North Sherman Oaks Community Plan as having known mineral resources. Therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

b) Would the project 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?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. Please reference section a), above.

XI. NOISE

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise can be 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 pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level. The decibel (dB) scale is used to quantify sound intensity. Because sound pressure can vary by over one trillion times within the range of human hearing, a logarithmic loudness scale is used to keep sound intensity numbers at a convenient and manageable level. Since the human ear is not equally sensitive to all frequencies within the entire spectrum, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called "A-weighting," written as dBA.

Sound is recorded among several factors. One such factor is the "equivalent continuous noise level" (Leq), a measure of sound energy averaged over a period of time. It is referred to as the equivalent continuous noise level because it is equivalent to the level of a steady sound, which, over a referenced duration and location, has the same A-weighted sound energy as the fluctuating sound. Leqs' for periods of one-hour, during the daytime or nighttime hours, and 24 hours are commonly used in environmental assessments.

Another such factor, is the "Community Noise Equivalent Level" (CNEL). CNEL is a noise measurement system introduced by the State, with particular emphasis on airport noise. CNEL can be measured using ordinary dBA readings and it is the measure of the average noise environment over a 24-hour period, adjusted to an equivalent level to account for the lower tolerance of people to noise during evening and nighttime periods relative to the daytime period. Residential development within the State is generally discouraged in the 60-65 CNEL noise impact area.

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The LAMC Chapter XI (Noise Regulation) establishes the noise standards for various noise sources generated on private property affecting neighboring properties. Parking lot noise sources are not specifically regulated by the LAMC. Article 6 (General Noise) is a "nuisance ordinance," in that it does not contain any specific noise restrictions for specific activities. In general, this type of ordinance is difficult to enforce because it does

not define specific noise levels that are considered nuisances. However, the LAMC does set specific restrictions for specific activities. Three of these LAMC sections relate to the projects:

- *§112.02* regulates air conditioning, refrigeration, heating, pumping, and filtering equipment. Such equipment may not cause the noise level on any adjacent occupied property to exceed the ambient noise level by more than 5 dB.

- *§114.03* regulates loading and unloading of vehicles at loading docks. This section makes it illegal for a person to "load or unload any vehicle, or operate any dollies, carts, forklifts, or other wheeled equipment which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building" between the hours of 7:00 a.m. and 10:00 p.m.

- *§41.40* regulates construction noise. §41.40(a) restricts any construction activity that generates "substantial" noise levels between 7:00 a.m. and 9:00 p.m. §41.40(c), for all construction within 500 feet of residences, restricts construction on Saturdays and national holidays to between 8:00 a.m. and 6:00 p.m., and prohibits construction on Sundays.

Please also see section d), below, for further discussion of the LAMC and its applicability in regulating noise levels.

Construction and operation of the projects would adhere to the requirements of the LAMC; therefore, no impact would occur due to development of the projects.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Impacts are divided into short-term construction impacts and long-term operational impacts.

Short-Term (Construction) Impacts: Less than Significant with Mitigation Incorporated.

Original Project, North Parking Lot, and Pedestrian Path Modification. It is expected that groundborne vibration from construction activities would cause only intermittent, localized intrusion at the project sites. The construction activities most likely to cause vibration impacts are:

- **Heavy construction equipment**. Although all heavy, mobile construction equipment have the potential to cause at least some perceptible vibration when operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as bulldozers, front-end loaders, or cranes would operate close enough to any sensitive receptor to cause vibration impact.
- **Jackhammers and vibratory compaction equipment**. This type of equipment would be used for relatively short periods of time during demolition, preparation of the subgrade, and restoration of the final site. If residents complain about intrusive vibration, the contractor would be required to modify the procedure or arrange to complete the task in a manner that would cause the minimum amount of hardship for the affected sensitive receptors.
- **Impact pile driving.** If possible, impact pile driving would be avoided at distances less than 250 feet from any sensitive receptor. If no other approach is acceptable, the contractor would be required to monitor vibration levels at the sensitive receptor and modify the procedures if the vibration exceeds a threshold of 0.04 in/sec (peak particle velocity).

- **Trucks.** Trucks hauling excavated material from construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes would most likely eliminate the problem.

Incorporation of mitigation measure **N&V-C3** (from the FEIR) would lessen potential impacts to a less-than-significant level.

Mitigation Measure. The following mitigation measure (from the FEIR) is proposed to reduce groundborne vibration impacts associated with construction activities:

> **N&V-C3**: Impacts from construction vibration will be controlled by: (1) including specific vibration limits in contract documents, (2) limiting where and when high vibration activities such as pile driving can take place, and (3) requiring vibration monitoring for any construction process that could cause intrusive or damaging vibration.

Long-Term (Operational) Impacts: Less than Significant.

Original Project. The Original Project would be limited to rubber-tire bus operations. Rubber-tire vehicles rarely create groundborne vibration problems unless they are operating extremely close to vibration-sensitive buildings and there is a discontinuity, pothole, or bump in the roadway. Because the Original Project buses would operate on smooth road surfaces, no significant vibration impact would occur. Therefore, no significant adverse impact would occur due to development of the Original Project.

North Parking Lot. When completed, the North Parking Lot would have background vibration levels typical of any other parking facility and would not expose persons to or generate excessive groundborne vibration or groundborne noise levels. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. Operation of the Pedestrian Path Modification would not produce groundbourne vibration, and no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. Noise associated with the Original Project from the (long-term) operation of the busway is projected to impact 498 residential structures, primarily single-family residences. Residential structures are considered noise-sensitive receptors. Many of these impacts are severe and are therefore considered significant.

Approximately half of the impacts occur in the West San Fernando Valley at homes along the north side of the Topham/Oxnard Street segment of the Original Project, between Winnetka Avenue and White Oak Avenue, where existing noise levels are the lowest. In the East San Fernando Valley, more than half of the impacts occur at homes located along the relatively quiet diagonal section of the Original Project between Oxnard Street and Chandler Boulevard. No impacts are projected in areas where busy roads separate the homes from the Original Project, such as the south side of Topham and Oxnard Streets between Winnetka Avenue and White Oak Avenue, and the north side of Victory Boulevard between Balboa Boulevard and the San Diego Freeway. The Chandler Boulevard segment (from Ethel Avenue to

Lankershim Boulevard) would experience moderate impacts at 11 single-family residences and 29 multi-family residential buildings.

The results of the mitigation analysis for the Original Project in the FEIR indicate that to eliminate essentially all significant long-term impacts of the Original Project, a 3-dBA reduction in vehicle noise (new buses) together with the construction of 28,400 lineal feet (5.4 miles) of 12-foot-high sound wall (measured from the surface of the busway to the top of the sound wall and may include sections of 8-foot high sound wall build on top of 4-foot high earth berm) would be required. In addition, 1,070 lineal feet (0.02 mile) of 8-foot-high sound wall is proposed for construction along the north side of the Sepulveda Boulevard park-and-ride lot, adjacent to Erwin Street. If it is determined that additional vehicle noise control is feasible, the amount of required sound wall could be reduced. Without noise control on the Original Project buses, an estimated 65 receptors could experience residual impacts. With sound insulation, no receptors would experience residual impacts over the long-term. Therefore, long-term impacts would be reduced to a less-than-significant level with the incorporation of mitigation measures **N&V-1**, **N&V-2**, and, possibly, **N&V-3** (from the FEIR).

North Parking Lot. The Noise Element of the General Plan regulates the production of noise within the City. **Table 4-4** (Noise/Land Use Compatibility Chart) lists the maximum noise levels for various land uses and is derived from Exhibit I (Guidelines for Noise Compatible Land Use) of the General Plan. Based on the City of Los Angeles General Plan guidelines, a significant impact would occur if a project were to introduce substantial new sources of noise such that the noise levels would increase to a level considered "normally unacceptable" for sensitive land uses, as shown in **Table 4-4**. In the case where ambient noise levels already exceed the applicable levels, a long-term increase of 3.0 decibel would result in a significant impact.

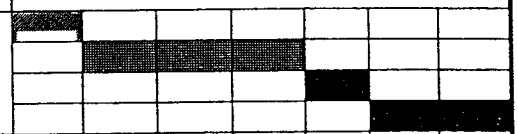
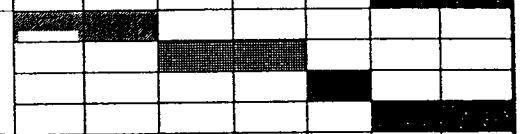
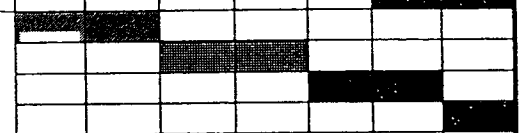
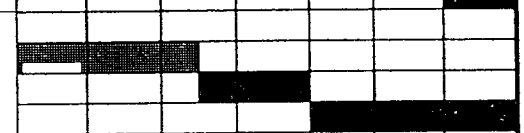
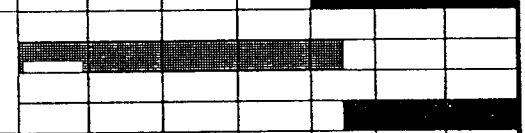
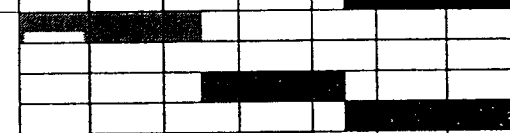
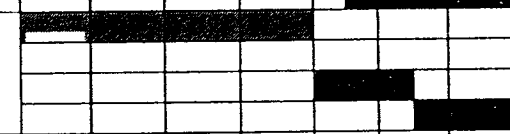
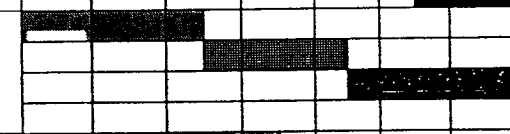
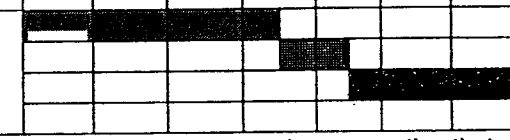
The North Parking Lot area is compatible with the "Office Building, Business, Commercial, Professional" land use in **Table 4-4**, and the existing noise environment in the North Parking Lot area is dominated by traffic noise on Canoga Avenue and Vanowen Avenue. The closest sensitive receptor to the North Parking Lot site is Hart Street Elementary School, located greater than ¼-mile northeast. The school is located across the Los Angeles River and east of a concrete manufacturing site. Therefore, the possibility of a significant noise impact from the North Parking Lot would be minimal.

Traffic noise levels that would occur with operation of the North Parking Lot can be estimated using the Caltrans version of the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (RD-77-108, known as LEQV2), which is widely accepted for estimating traffic noise impacts. The LEQV2 model determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, varying distances from the roadway, finite length roadways, and noise shielding. To compute the Leq during peak-hour traffic, a series of parameters (such as traffic volumes, roadway geometry, and vehicle speed and mix) are input into the model for each roadway link analyzed.

The traffic data, including existing and future peak-hour traffic volumes are derived from the traffic study prepared in June 2004 (attached to this document as **Appendix B)** for the North Parking Lot and the Boeing site.[8] As discussed in section III. (Air Quality), above, because development of the North Parking Lot would affect traffic impacts at the Boeing site, the two sites are analyzed together in the June 2004 traffic study. (For additional discussion of the results of the traffic study, please see section XV

[8] *Traffic Impact Analysis—Addendum Study, Warner Center Metro Park-and-Ride Project, City of Los Angeles,* Willdan, June 4, 2004.

Table 4-4
Noise/Land Use Compatibility Chart

Land Use Category	Noise Exposure (CNEL, dBA) 55 60 65 70 75 80
Residential Single-Family, Duplex, Mobile Homes	
Residential Multi-Family, Transient Lodging , Motel, Hotel	
School, Hospital, Church, Library, Nursing Home	
Auditorium, Concert Hall, Amphitheater	
Sports Arena, Outdoor Spectator Sports	
Playground, Neighborhood Park	
Golf Course, Riding Stable, Waster Recreation, Cemetery	
Office Building, Business, Commercial, Professional	
Agricultural, Industrial, Manufacturing, Utilities	

ZONE A	NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
ZONE C	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. Conventional construction, with windows and fresh air supply systems or air conditioning, will normally suffice.
ZONE N	NORMALLY UNACCEPTABLE: New construction or development generally should be discouraged. A detailed analysis of noise reduction requirement s must be made and needed noise insulation features included in the design.
ZONE U	CLEARLY UNACCEPTABLE: New construction or development generally should not be undertaken.

Source: Noise Element of the City of Los Angeles General Plan, adopted February 3, 1999, p. I-1.

(Transportation/Traffic)). The June 2004 traffic study analyzed the existing traffic volume and the traffic levels projected at build-out of both the North Parking Lot and the Boeing site. For purposes of this noise analysis, the greatest change in peak-hour traffic volume resulting from the projects, a.m. or p.m., was used to determine and compare the existing and future noise levels. Vehicle speeds on each roadway were assumed to be the posted speed limits. Current roadway characteristics, such as the number of lanes and roadway inclines, were determined from field observations and photographs of the roadways.

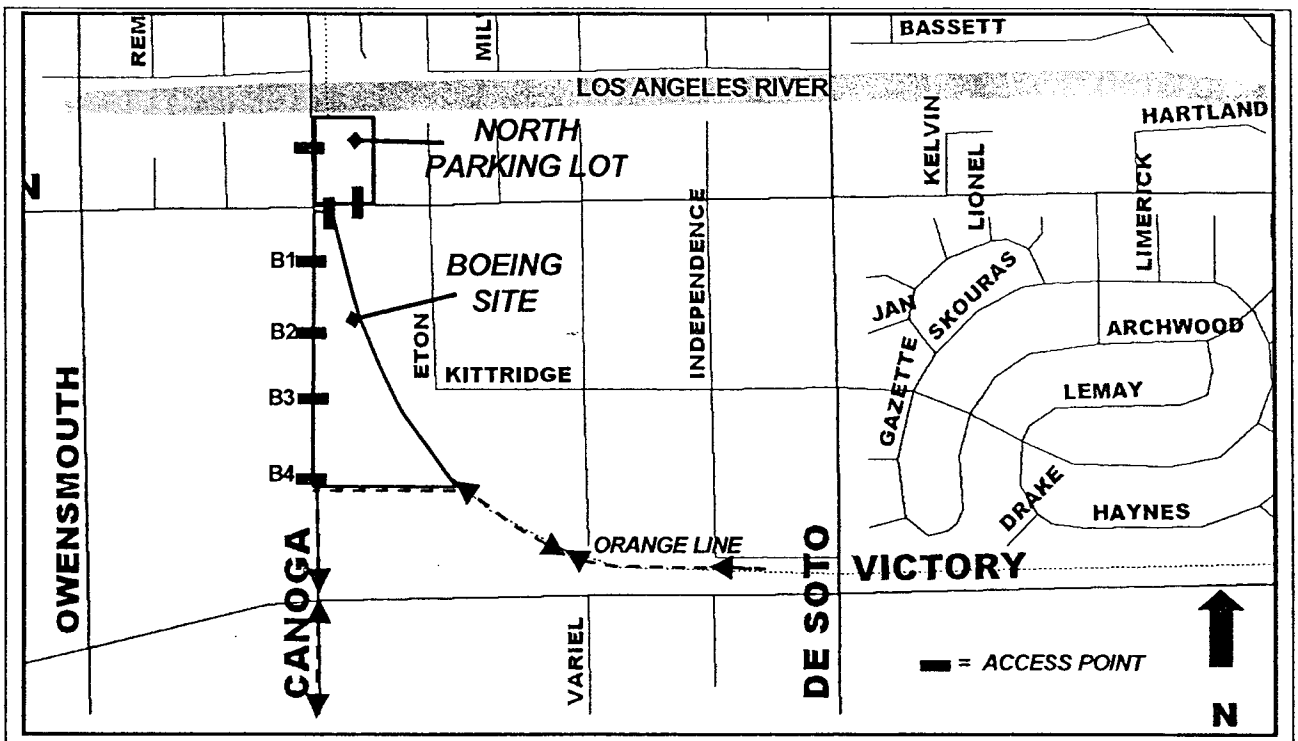
Table 4-5 (Noise Impacts Generated by Operation of North Parking Lot and Boeing Site) summarizes the estimated increase in noise levels (50 feet from the centerline of the nearest lane) that would result from operation of the North Parking Lot and Boeing site. **Table 4-5** lists the potential noise impacts along individual segments of roadway, and **Figure 4-1** (Park-and-Ride Access Points) shows the access points (driveways) used to delineate these roadway segments. Note that the roadway segments presented in **Table 4-5** are listed in order moving from north to south.

As indicated in **Table 4-5**, existing noise levels are approximately 70 dBA. Based on the information provided in **Table 4-4**, the existing noise levels constitute "Conditionally Acceptable" noise exposure for the "Office Building, Business, Commercial, Professional" land use category. Thus, a significant impact would occur if operation of the North Parking Lot and Boeing site were to increase noise levels to "Normally Unacceptable," or approximately 72.5 dBA. As **Table 4-5** shows, the greatest traffic noise level calculated to occur as a result of operation of the North Parking Lot and Boeing site would be 71.01, which is below the threshold of significance of 72.5 dBA. Furthermore, the greatest net increase in noise that would result from operation of the North Parking Lot and Boeing site would be 0.51 dBA (see **Table 4-5**), and this increase is well below the significant value of 3 dBA for projects that already exceed the applicable noise levels. Thus, operation of the North Parking Lot and Boeing site would not result in a significant adverse impact to noise levels.

Table 4-5
Noise Impacts Generated by Operation of North Parking Lot and Boeing Site

Street	*Segment*[1]	*Noise Level (dBA)*		
		Existing 2004	*Future With Project 2006*	*Net Increase*
Canoga Ave.	North Parking Lot access to intersection with Vanowen Ave.	70.51	70.78	0.27
	Vanowen Ave. intersection to northern Boeing site access (B1)	70.51	70.89	0.38
	northern Boeing site access to middle Boeing site access (B2)[2]	70.51	70.95	0.44
	middle Boeing site access to southern Boeing site access (B3)	70.50	70.92	0.42
	southern Boeing site access to bus access (B4)	70.50	71.01	0.51
Vanowen Ave.	North Parking Lot access to Boeing site access	70.04	70.31	0.27
	Boeing site access to intersection with Canoga Ave.	70.04	70.18	0.14

[1] See **Figure 4-1** for the access points used to delineate these roadway segments.
[2] B2 is at an existing signalized intersection with Rocketdyne.



Scale: 1 inch = approximately 0.2 miles
Source: *GeoFinder*, Thomas Bros.Maps (1997)

Figure 4-1: PARK-AND-RIDE ACCESS POINTS

Pedestrian Path Modification. Operation of the Pedestrian Path Modification would not generate noise. Therefore, no adverse impacts to noise levels would occur as a result of the Pedestrian Path Modification.

Mitigation Measures: The following mitigation measures (from FEIR) are recommended to eliminate potential long-term noise impacts:

N&V-1: *Quieter Vehicles*: Whenever practical, noise control at the source is the most desirable approach. In bus procurements intended for use in the corridor, noise limits will be included in the vehicle specifications that would require the bus supplier to minimize vehicle noise emissions. The present noise assessment was based on measurements of existing MTA [Metro] Metro Rapid CNG buses, which were found to generate about 3 dBA more sound energy than the national average for buses. Thus, it is reasonable to specify noise limits that are at least 3 dBA lower than the existing buses; greater reductions will likely be feasible in the future when new technology buses become available. Although such limits will likely add to the vehicle cost, this approach would provide system wide noise benefit.

N&V-2: *Sound Barriers*: In many cases, noise impacts can be reduced or eliminated by blocking the sound path between the source and receiver by using sound walls and/or berms located along the sides of the alignment. Such barriers are most effective when located close to either the source (bus) or the noise-sensitive receptor. To be effective, sound barriers must also break the direct line of sight from the source to the receiver, have a minimum surface density of 4 pounds per square foot, and have no holes, drainage gaps or access openings that act as "sound leaks." Barriers can be walls composed of

masonry blocks, pre-cast concrete, wood, or metal, depending on aesthetic and cost factors. Where space permits, a barrier may also consist of a wall on top of an earth berm to reduce the amount of wall required. However, due to the height of some of the major bus noise sources (e.g. the exhaust and air-conditioning), the total sound barrier height will need to be on the order of 12 feet to provide a substantial noise reduction (in the range of 5 to 10 dBA). The actual noise reduction will depend on the specific site geometry. The locations of sound barrier walls to be constructed as part of the project are listed on Table 4-51 and Table 4-52 and are shown on the engineering drawings. It should be noted that multiple reflections of sound (reverberations) between sound walls on either side of the alignment have the potential to degrade the performance of both barriers substantially (by about 3 to 7 decibels). This effect may be mitigated in several ways, including use of sound-absorptive materials for the barriers or using berm/wall combinations. This issue should be addressed during final design for all areas where sound walls are proposed for both sides of the alignment. In addition, the proposed designs of all sound walls should be reviewed by a qualified acoustician during final design to ensure that they provide the intended benefit.

The following measure (from the FEIR) shall be implemented if the first two mitigation measures do not reduce noise impacts to below the level of significance:

N&V-3: *Sound Insulation*: Although noise control at the receiver is typically the least desirable approach, improving the exterior-to-interior sound insulation of buildings is an option that may be applied in areas where other alternatives for noise mitigation are either impractical or not cost effective. This usually requires replacing or improving windows, weather stripping doors, and installing central air-conditioning systems. Central air-conditioning is needed because opening windows or using wall units for ventilation compromises the sound insulation improvements. Sound insulation improvements will be provided for all severe impacts remaining after sound walls are constructed, without regard for the income of the occupants.

d) 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?

Project Impacts: Less Than Significant with Mitigation Incorporated.

Original Project. Impact from construction noise usually requires that the noise be substantially higher than existing ambient noise levels and the impact criteria for construction noise is almost always substantially higher than the impact criteria for permanent noise sources. For example, the construction noise impact criteria for residential areas included in the FTA Manual are an 8-hour Leq of 80 dBA during daytime hours and 70 dBA during nighttime hours. The equivalent limits for operational noise would be at least 10 dBA lower. The higher limits are considered appropriate for construction activities because: (1) the noise impact is not permanent (although it can go on for an extended period of time for a large project), and (2) projections of construction noise tend to be for the worst case, averaged over the duration of construction, and noise exposure is typically about 5 dBA lower than the projections.

The following noise impact limits, based on the requirements of the LAMC, were used to develop estimates of the degree of impact from construction noise:

- Daytime (7 a.m. to 10 p.m.): The higher of Leq 70 dBA and existing Leq + 5 dBA
- Nighttime (10 p.m. to 7 a.m.): Existing Leq + 5 dBA

The analysis and estimates of construction-related noise emissions for Original Project are reported in the FEIR. The results of the analysis show that without mitigation, there could be substantial impacts from construction noise due to the Original Project. This is particularly true whenever a construction site would be located within about 500 feet of residences, schools, or places of worship and for any construction that would need to be performed during nighttime hours. With implementation of mitigation measures **N&V-C1** and **N&V-C2** (from the FEIR), the impact would be reduced to less-than-significant.

North Parking Lot. Construction of the North Parking Lot would generate intermittent high noise levels on and adjacent to the North Parking Lot site. Construction noise levels vary as a function of several factors. First, construction projects are typically accomplished in several different steps, and each step has a specific equipment mix depending on the work to be accomplished during that stage. Different equipment mixes generate different levels of noise. Second, daily variations in the duration of equipment use also generate variations in noise levels, even when the equipment mix remains the same. Third, the distance between the noise source and the receptor results in variations in noise levels with time.

Table 4-6 (North Parking Lot Construction Noise Levels at Nearby Receptors) presents the average (equivalent) construction noise levels from various types of equipment, projected at nearby sensitive receptors. This table lists the loudest types of equipment anticipated to operate at the construction site, the typical noise levels generated by the equipment at a distance of 50 feet, and the composite averages (equivalent continuous noise level, or Leq) of the noise from all equipment at the nearest receptors at distances of 50, 500, and ¼-mile. For the purpose of this analysis, it is assumed that: (1) a maximum total of four pieces of construction equipment and one truck would be operating simultaneously per day, (2) construction of the North Parking Lot would take about three months to complete, and (3) construction would occur on the approximate dates January 2, 2005, through March 31, 2005. Also, noise emissions levels were calculated using the distance from the nearby receptors to the North Parking Lot site boundary. The nearest sensitive receptor is the Hart Street Elementary School located about ¼-mile northeast of the North Parking Lot site, across the Los Angeles River.

Table 4-6
North Parking Lot Construction Noise Levels at Nearby Receptors

Construction Step	*Loudest Equipment*	*Maximum Sound Level at 50 ft (dBA)*	*Equipment Utilization Factor[1] (%)*	*Composite Noise at Receptors (dBA)*		
				At 50 ft	*At 500 ft*	*At ¼ mile*
Demolition	Dozer	85	40	87	66	58
	Loader	85	60			
	Grader	85	40			
Site Preparation	Excavator	85	30	87	67	59
	Loader	85	60			
	Grader	85	50			
	Dump Truck	88	15			
Asphalt Operations	Grader	85	35	86	66	58
	Paver	89	35			
	Roller	74	35			

[1] Utilization Factor is estimated as percentage of daily shift that the equipment would be operating at full power.

As shown in **Table 4-6**, the North Parking Lot would result in maximum construction noise levels of less than 60 dBA at the closest sensitive receptor. This is well below the LAMC noise impact limits of Leq 70 dBA for daytime construction (see *Original Project*, above). It is expected that the North Parking Lot would be constructed during daytime hours, only. However, if construction activities also occur during nighttime hours, noise levels must not exceed the LAMC noise impact limits of the existing Leq plus 5 dBA for nighttime construction. Implementation of mitigation measure **ModIS-N-C1** would ensure that construction noise would not exceed these limits, and no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. Although construction of 300 feet of new sidewalk is a relatively minor project, the new sidewalk would be located adjacent to residences. Incorporation of mitigation measures **N&V-C1** and **N&V-C2** (from the FEIR) and **ModIS-N-C1** (from this document) would ensure that construction noise would not generate significant short-term impact. No significant adverse impacts would occur due to development of the Pedestrian Path Modification. (Note that the portion of the pedestrian path planned as part of the Original Project has not yet been constructed. Therefore, deleting this portion of the pedestrian path would not generate noise.)

Mitigation Measures. The following mitigation measures (from the FEIR) shall be implemented during construction:

> **N&V-C1**: Two of the primary steps in controlling the noise impacts from construction are: (1) requirements for specific noise mitigation measures, such as sound walls around construction sites, in the contract documents; and (2) residential property line noise limits in the construction specifications that the contractor cannot exceed. One or more of the following approaches shall be used as necessary to ensure that construction is performed in compliance with property line noise limits:
>
> - Performing noise monitoring (by MTA [Metro] or its contractors). Regular noise monitoring should be done in areas where it is expected that the contractor will have trouble meeting the property line noise limits. The contractor can perform this type of monitoring, although communities may put more credence in monitoring performed by, or under the direction of, the MTA [Metro]. The monitoring can be weekly spot checks supplemented with monitoring to respond to complaints. Continuous monitoring using automated, unattended monitors is sometimes justified in particularly sensitive areas.
>
> - Requiring contractors to prepare noise control plans. The goal of the noise control plan is to ensure that contractors consider community noise when designing construction sites, selecting construction procedures and equipment, and determining work schedules.
>
> - Limiting the noise construction activities, particularly during nighttime hours. Example restrictions are requiring predrilled piles, limiting pile-driving to mid-day hours, limiting the use of jackhammers and other pneumatic and impact devices, and restricting construction in residential areas to daytime hours.
>
> - Requiring contractors to have temporary barriers or sound blankets readily available stockpiled that can be used at the Resident Engineer's discretion to immediately address any noise complaints or noise limit violations. An effective temporary barrier can be constructed of plywood at least one inch thick, appropriately placed

and extending to a height sufficient to break the lines of sight between the noise source and receptor.

N&V-C2: General procedures that the contractor will be required to employ to minimize noise impacts are:

- Perform all construction in a manner to minimize noise. The contractor will be required to select construction processes and techniques that create the lowest practicable noise levels. Examples are using predrilled piles in place of pile-driving, mixing concrete off-site instead of on-site, and using hydraulic tools instead of pneumatic tools.

- Use equipment with effective mufflers. Diesel engines are often the major source of noise on construction sites. All noise-generating construction equipment shall be equipped with the most effective commercially available noise control devices, i.e., mufflers lagging, or motor enclosures.

- Minimize the use of backup alarms. Because of the particularly intrusive nature of backup alarms they are often the primary source of complaints about construction noise, even though they are not the loudest noise. Approaches that will be used, as appropriate, to reduce annoyance caused by backup alarms are: lay out construction sites to minimize the need for backup alarms (if permitted by safety regulatory agencies); use strobe lights in place of backup alarms at night (subject to OSHA approval); use flagmen to keep the area behind maneuvering vehicles clear; and use self-adjusting, ambient-controlled backup alarms. Ambient-controlled backup alarms adjust the alarm loudness up and down, depending on ambient noise. The safety implications of any procedure for reducing backup alarm noise must be carefully reviewed before the procedure is implemented.

- Select haul routes and schedules that minimize intrusion to residential areas.

- Lay out construction sites such that the noisiest activities are as separate as possible from noise-sensitive receptors. Sometimes it is even possible to gain acoustical benefits by locating temporary construction offices or other barriers between construction activities and residential areas. There are even examples of locating material storage piles so they act as sound barriers.

In addition to the above mitigation measures from the FEIR, the following additional new mitigation measure shall be implemented during project construction:

ModIS-N-C1: During construction phases, the contractor shall ensure that all construction is performed in accordance with LAMC Chapter IV Public Welfare, Section 41.40 (Noise Due to Construction, Excavation Work.

e) **For a project 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 expose people residing or working in the project area to excessive noise levels.**

Project Impacts: No Impact.

Original Project. The Original Project would be located within the airport land use plan for Van Nuys Airport and is within two miles of the Burbank-Glendale-Pasadena Airport. However, because the project is a bus transit corridor, the proposed project would not impact or be impacted by operations of the airport. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. There is no public or public use airport within two miles of the North Parking Lot site. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would be located approximately 3 miles from the Burbank Airport and 5 miles from the Van Nuys Airport. The Pedestrian Path Modification would not result in additional exposure from airport noise beyond what was described for the Original Project because the Pedestrian Path Modification would result in no net construction; rather, the Pedestrian Path Modification would replace a portion of the pedestrian walkway planned as part of the Original Project with a similar length of sidewalk located across the street (see **Figure 1-4**). Therefore, no adverse impacts would occur due to development of the Pedestrian Path Modification

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Project Impact: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. There are no private airstrips in the vicinity of the project areas. Therefore, no significant adverse impacts would occur due to development of the projects.

XII. POPULATION AND HOUSING

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Project Impacts: No Impact.

Original Project. The Original Project is expected to serve the projected population increase of 27% (between the years 2000 and 2020) in the area within ½ mile of the Original Project. Though the Original Project may tend to focus some of the projected growth to those areas in the immediate vicinity of certain bus stations, the Original Project is not expected to cause any substantial additional population growth in the area. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot would not construct new residences or businesses; therefore, the North Parking Lot would not directly induce substantial population growth. The North Parking Lot also would not indirectly induce substantial population growth in that the North Parking Lot would only provide parking for patrons of the Original Project, and the Original Project is not expected to generate substantial population growth. Thus, although the North Parking Lot could theoretically focus some of the projected growth to those residential areas in the vicinity of Warner Center, the North Parking Lot is not expected to cause any substantial additional population growth. No significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not construct new residences or businesses; therefore, the Pedestrian Path Modification would not directly induce substantial population growth. The Pedestrian Path Modification also would not indirectly induce substantial population growth because the Pedestrian Path Modification would develop no net increase in infrastructure. Thus, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Project Impacts: No Impact.

Original Project. The Original Project would require the termination of 11 residential back yard leases located in the Metro ROW between Woodman and Laurel Canyon Avenues. The residential back yard leases do not contain any residential structures; therefore, the termination of these leases would not involve the displacement of any residences. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot would be constructed on an existing non-residential site, and would not involve the displacement of existing housing. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not involve the displacement of existing housing. Thus, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Project Impacts: No Impact.

Original Project. The Original Project would require the termination of 11 residential back yard leases; however, the lease areas do not contain any residential structures. Therefore, the termination of these leases would not require the displacement of substantial numbers of people, and no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. The North Parking Lot would be constructed on an existing non-residential site, and would not involve the displacement of any people. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would not involve the displacement of any people. Thus, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

XIII. PUBLIC SERVICES

Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:

a) Fire protection?

Project Impacts: No Impact.

Original Project. The Original Project would utilize existing safety procedures implemented by Metro, including the Community Emergency Response Training Program (CERT). In collaboration with the Los Angeles County Fire Department (LAFD), the CERT Program trains employees in earthquake awareness, disaster medical procedures, and rescue operations, and the CERT Program lessens the need for additional fire protection staff or equipment.

Moreover, the Original Project would not significantly alter fire protection emergency response time. To begin with, fire protection emergency response time depends in part on the distance from fire stations to the areas served, and the fire stations identified in the vicinity of the Original Project meet the minimum distance criteria specified by the LAFD (reference Figure 4-27(a) of the FEIR). Secondly, traffic congestion at intersections may also affect emergency response times. Following parameters set by the LAFD, traffic analyses of the Original Project found that 17 of 53 intersections studied could limit fire protection services in 2020, as compared with 13 of 53 intersections if the project is not developed. Thus, traffic congestion at intersections is projected to occur with or without the project. Thirdly, potential access disruptions could also affect emergency response times. Although two fire stations are located adjacent to portions of the Original Project, only incidental disruption to station access would be likely to occur in the rare event that buses were passing the station at the same time as an emergency call. Station platforms and park-and-ride lots would be developed to avoid conflicts between passenger vehicles and emergency vehicles. Buses would be subject to the same signalized intersections as is regular traffic. Consequently, the ability of emergency service vehicles to cross the Original Project would not be substantially different than at present.

Given that the Original Project would not require new fire protection services and would not significantly alter fire protection emergency response time. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. Fire station 72 is within the minimum distance (as specified by the LAFD) to the North Parking Lot site, and existing fire protection staff and equipment are expected to be adequate to service the approximately 236-space parking lot. In addition, the North Parking Lot would not significantly alter fire protection emergency response time for two reasons. First, the North Parking Lot would be developed to avoid conflicts between passenger vehicles and emergency vehicles, thereby minimizing potential disruptions to emergency vehicle access. Second, the North Parking Lot would not extend the bus routes beyond what was analyzed in the December 2003 Addendum and Modified IS, and emergency service vehicles would have the same ability to cross the roads as at present. In conclusion, the North Parking Lot would not require new fire protection services and would not significantly alter fire protection emergency response time. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Pedestrian Path Modification. The Pedestrian Path Modification would construct new sidewalk to replace a segment of pedestrian path planned as part of the Original Project. The Pedestrian Path Modification would result in no net new infrastructure and would not require additional fire protection services. In addition, as discussed in section VII. (Hazards and Hazardous Materials), above, neither

deletion of the pedestrian path nor construction of the sidewalk would present significant adverse impacts to emergency response or access. Thus, the Pedestrian Path Modification would present no additional adverse impacts beyond what was previously analyzed for the pedestrian path in the Original Project. In fact, the Pedestrian Path Modification would provide a potentially beneficial impact to emergency response because the Pedestrian Path Modification would incorporate a single point intersection at Coldwater Canyon Avenue and improve traffic circulation. The single point intersection could not accommodate the collection area for pedestrians using the planned pedestrian path, and required pedestrians to traverse across turning vehicle traffic.

Mitigation Measures. Although mitigation measures are **not required**, the following (from the FEIR) are proposed as enhancements that would further improve Metro safety and security:

S&S-1:

- Bus stop platforms and surrounding areas will be designed to minimize conflicts involving buses, auto traffic, and pedestrian traffic at intersections. Lighting, landscaping, and walkways will be provided for pedestrians.

- Stations will provide lighting, cover, and an open design conducive to surveillance by security personnel. Additional station safety measures may include bike lockers, emergency telephones, public announcement (PA) systems, LAPD patrols, and bus driver/dispatch communication.

- Communication systems will include an emergency radio on the buses to ensure quick response to incidents.

- Transit police will be assigned routine patrol routes along or in proximity of the busway.

- Crossing protection devices including signs, pedestrian "Z" (or similar) gates, and road painting/striping at intersections will be provided.

- Implementation of Los Angeles Department of Transportation (LADOT) standards for bicycle and pedestrian safety will be implemented.

b) Police protection?

Project Impacts: No Impact.

Original Project. Both the Los Angeles Police Department (LAPD) and Los Angeles County Sheriff's Department would provide police protection services. Potential impacts to police protection can be separated into three issues: accident prevention, crime prevention, and emergency response. As explained in the discussion that follows, the Original Project would not adversely impact any of the three issues; therefore, no significant adverse impacts would occur due to development of the Original Project.

Accident Prevention: Regarding accident prevention, the Original Project would incorporate integrated safety features for drivers, bicyclists, and pedestrians, thereby minimizing the potential for accidents. Also, the Original Project would generally place buses within a dedicated corridor, separated from mixed-flow traffic except at intersections, thereby reducing the potential for conflict between normal street traffic and bus operations.

Crime Prevention: Regarding crime prevention, the Original Project is not anticipated to increase the number of crimes occurring on Metro property. Although crimes on Metro buses are a small fraction of the crimes occurring in the surrounding communities, reductions in crime statistics may be possible as a result of additional safety and surveillance measures that would be implemented as part of station design. As described in mitigation measure **S&S-1** (from the FEIR; provided above in section a) these measures include lighting, fencing, and walls around adjacent residential areas; emergency telephones at each platform; bike lockers; fencing, and lighting at stations and parking lots.

Emergency Response: Regarding emergency response, the Original Project would not significantly alter police protection emergency response time. Traffic analyses of the Original Project found that traffic congestion at intersections is projected to occur with or without the project. Because no police stations are located adjacent to the Original Project, the Original Project would not directly affect emergency access. Station platforms and park-and-ride lots would be developed to avoid conflicts between passenger vehicles and emergency vehicles, and buses would be subject to the same signalized intersections as is regular traffic. Thus, the ability of emergency service vehicles to cross the Original Project would not be substantially different than at present.

North Parking Lot. Potential impacts to police protection can be separated into three issues: accident prevention, crime prevention, and emergency response. As explained in the discussion that follows, the North Parking Lot would not adversely impact any of the three issues; therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Accident Prevention: Regarding accident prevention, the North Parking Lot would incorporate the same integrated safety features planned for the Original Project, thereby minimizing the potential for accidents. Also, the North Parking Lot would not extend the bus routes beyond what was analyzed in the December 2003 Addendum and Modified IS; therefore the North Parking Lot would not increase the potential for conflict between normal street traffic and bus operations.

Crime Prevention: Regarding crime prevention, the North Parking Lot would follow the same safety and sercuity measures planned for the Original Project. Therefore, the North Parking Lot would not adversely impact crime prevention.

Emergency Response: Regarding emergency response, the North Parking Lot would not significantly alter police protection emergency response time. The North Parking Lot would be designed to avoid conflicts between passenger vehicles and emergency vehicles, thereby minimizing potential disruptions to emergency vehicle access. Also, because the North Parking Lot would not extend bus routes, emergency service vehicles would have the same ability to cross the roads as at present.

Pedestrian Path Modification. The Pedestrian Path Modification would not adversely impact accident prevention, crime prevention, and emergency response; therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

Accident Prevention: Regarding accident prevention, the Pedestrian Path Modification would incorporate the same integrated safety features planned for the Original Project, thereby minimizing the potential for accidents. In fact, the Pedestrian Path Modification would have a potentially beneficial impact on accident prevention because the Pedestrian Path Modification would improve pedestrian safety by eliminating pedestrian collection in the Metro ROW median and the need for pedestrians to cross against turning vehicles.

Crime Prevention: Regarding crime prevention, the Pedestrian Path Modification would follow the same safety and surveillance measures planned for the Original Project. Therefore, the Pedestrian Path Modification would not adversely impact crime prevention.

Emergency Response: Regarding emergency response, as discussed in section VII. (Hazards and Hazardous Materials) above, the Pedestrian Path Modification would not adversely impact emergency response or access.

c) Schools?

Project Impacts: Less than Significant with Mitigation Incorporated.

Original Project. Please refer to Table 4-9 of the FEIR for a list of schools, public and private, located within ¼ mile of the Original Project. The Original Project would not result in increased student enrollment in the surrounding areas since it would not cause increased residential population. Thus, the Original Project would not result in a need for new schools or expanded school capacities. However, due to the proximity of individual schools to the Original Project, there may be some temporary disruptive impacts during the construction phase. Incorporation of mitigation measures **CF-C3**, **CF-C4**, **CF-C5**, and **CF-C6** (from the FEIR) would ensure that potential impacts would be less-than-significant. Note also that the Original Project would result in an increase in the number of buses in service and would improve transit access to schools, thereby providing a beneficial impact to schools.

North Parking Lot. As shown in **Table 2-1** of this document, the only school located within ¼-mile of the North Parking Lot site is Hart Street Elementary School (located at 21040 Hart Street, approximately ¼-mile northeast of the site). Canoga Park High School and Coutin School are both located within ½-mile of the North Parking Lot. Development of the North Parking Lot would not increase residential population; therefore, the North Parking Lot would not increase student enrollment and would not result in a need for new schools or expanded school capacities. However, due to the proximity of several schools to the North Parking Lot, there may be some temporary disruptive impacts during the construction phase. Incorporation of mitigation measures **CF-C3**, **CF-C4**, and **CF-C6** (from the FEIR) would ensure that potential impacts would be less-than-significant.

Pedestrian Path Modification. **Table 2-2** of this document lists the schools within ½-mile of the Pedestrian Path Modification sites. Development of the Pedestrian Path Modification would result in no net increase in infrastructure or otherwise cause an increase in residential population; therefore the Pedestrian Path Modification would not increase student enrollment and or result in a need for new schools or expanded school capacities. However, there may be some temporary disruptive impacts during the construction phase. Incorporation of mitigation measures **CF-C3**, **CF-C4**, and **CF-C6** (from the FEIR) would ensure that potential impacts would be less-than-significant.

Mitigation Measures: To minimize impacts on schools and students, the following mitigation measures (from the FEIR) shall be implemented during project construction:

CF-C3: Emergency services providers and school officials will be consulted regarding the construction process to reduce the intrusiveness of the construction process and provide for continuing two-way communication throughout the construction period.

CF-C4: School officials will be consulted in order to ensure maintenance of safe student walking routes and access for passenger vehicles and school buses;

CF-C5: Flaggers will be provided during intersection modifications in active pedestrian communities.

CF-C6: Construction scheduling and haul routes will be sequenced to minimize conflicts with pedestrians, school buses, and other vehicles during arrivals at and departures from schools.

d) Parks?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects are not anticipated to increase residential population; thus they would not result in a need for new or expanded parks or recreational facilities. Also the projects would not acquire, involve direct use of, temporarily occupy, or block access to any parks or recreational facilities. Therefore, no significant adverse impacts would occur due to development of the projects.

e) Other public facilities?

Project Impacts: No Impact.

Original Project. Other public facilities include libraries, religious institutions, and health care facilities.

Libraries: The Original Project is not anticipated to increase residential population; thus, operation of the Original Project would not result in a need for new libraries or expanded library capacities. Although eight libraries are located (or have service areas) within ¼ mile of the Original Project, none of the libraries are located immediately adjacent to the Original Project. Thus, construction of the Original Project would not adversely impact libraries. No significant adverse impacts would occur due to development of the Original Project.

Religious Institutions. A number of religious institutions are located adjacent to the Original Project. Community members who attend these facilities include persons of Orthodox Jewish faith, who require pedestrian access to their religious institutions. The Original Project would be designed to provide accessibility to the religious institutions and to maintain walking time to and from these institutions. Therefore, no significant adverse impacts would occur due to operation of the Original Project. Regarding construction of the Original Project, incorporation of mitigation measure **CF-C1** (from the FEIR and included in this document in section VII., Hazards and Hazardous Materials) would reduce the potential for restricting access to religious institutions during construction. Thus, no significant adverse impacts would occur due to construction of the Original Project.

Health Care Facilities. The Original Project would not interfere with access to health care facilities in the vicinity. Conversely, the Original Project would benefit the facilities by offering patients, staff members, volunteers, and visitor's access to a convenient transportation line. Convalescent hospitals would particularly profit from the nearby transit facilities since a large number of the persons served by these hospitals may not be capable of driving. Given that there are no hospitals located within ¼ mile of the Original Project, no significant impact on vehicle access to the hospitals would be expected. Therefore, no significant adverse impacts would occur due to development of the Original Project.

North Parking Lot. Other public facilities include libraries, religious institutions, and health care facilities.

Libraries and Health Care Facilities: The North Parking Lot is not anticipated to increase residential population; thus, it would not result in a need for new libraries or health care facilities, or expanded library or health care facility capacities. No libraries or health care facilities are located within ½-mile of the North Parking Lot; thus, construction activities associated with the North Parking Lot would not adversely impact libraries or health care facilities. Therefore, no significant adverse impacts would occur due to development of the North Parking Lot.

Religious Institutions: Victory Outreach Canoga Park (7024 Deering Avenue) and Templo La Hermosa Apostolic (6914 Eton Avenue) are religious institutions located north of the Los Angeles River, approximately ¼-mile from the North Parking Lot. No religious institutions are located immediately adjacent to North Parking Lot. Because the North Parking Lot is not anticipated to increase residential population, operation of the North Parking Lot would not impact religious institutions. Therefore, no significant adverse impacts would occur due to operation of the North Parking Lot. Regarding construction of the North Parking Lot, incorporation of mitigation measure **CF-C1** (from the FEIR and included in this document in section VII., Hazards and Hazardous Materials) would reduce the potential for restricting access to religious institutions during construction. Thus, no significant adverse impacts would occur due to construction of the North Parking Lot.

Pedestrian Path Modification. Other public facilities in the vicinity of the Pedestrian Path Modification include LAFD Fire Station 102, located at 13200 Burbank Boulevard, approximately ⅓-mile northwest of the site. The Pedestrian Path Modification would develop no net new infrastructure, and construction and operation of the new sidewalk would not impact public facilities beyond what was previously analyzed for the pedestrian path in the Original Project. Therefore, the Pedestrian Path Modification would not result in a need for additional services or other impacts to public facilities. No adverse impacts would occur due to development of the Pedestrian Path Modification.

XIV. RECREATION

a) 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?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects are not anticipated to increase residential population or involve use of any parks. Accordingly, the projects would not increase the use of existing parks such that substantial physical deterioration of the facilities would occur. Therefore, no significant adverse impacts would occur due to development of the projects.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would not acquire any parks or recreational facilities or involve use of any parks or recreational facilities. There would be no temporary occupancy or construction activities at public parks and recreation areas that would result in

a temporary use of those resources. Therefore, no significant adverse impacts would occur due to development of the projects.

XV. TRANSPORTATION / TRAFFIC

a) Would the project cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Impact Thresholds. Traffic flow can be characterized by levels of service (LOS), which are assigned letter grades ranging from "A" to "F." Generally, LOS A through D represent acceptable operations, and LOS E and F represent unacceptable operations. In consultation with the City of Los Angeles Department of Transportation (LADOT), Metro adopted thresholds at which a traffic impact is adverse as follows: "An intersection is considered to be adversely affected if project traffic is projected to cause a deterioration in level of service to E and/or worse, or results in an increase in the average vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions."

Project Impacts: Less than Significant with Mitigations Incorporated.

Original Project. Intersection capacity analyses were performed for the fifty-three critical intersections within the Original Project. The selection of intersections was made based on proximity to the Original Project alignment, potential travel pattern orientation, access routes, and expected level of auto access activity at each station. The analysis found that implementation of the Original Project would affect local traffic conditions in the San Fernando Valley community in several ways.

First, it is anticipated that operation of the Original Project would divert trips from automobile to transit, thereby reducing traffic volume along freeways and regional arterials within the surrounding areas. However, localized increases in traffic could be anticipated near the station areas, especially those with park-and-ride or bus loading/unloading facilities and those expected to be major points for access by kiss-and-ride patrons (those dropped off by another driver). These increases in traffic volumes could delay traffic flow at critical intersections within the Original Project.

Localized increases in traffic could also occur along the Original Project due to cross-traffic conflicts with the at-grade operation of the buses. Implementation of the transit priority system, which gives buses signal priority so as to keep buses from being delayed in general traffic and to maintain bus schedules, could cause delays to motorists using streets that cross the Original Project. Furthermore, transit vehicles would conflict with mixed-flow traffic at certain sections of the Original Project, such as along Oxnard and Erwin streets in the vicinity of the Warner Center Transit Hub.

In summary, 36 of the 53 study intersections would improve in operating conditions; 17 intersections would worsen in operating conditions, but would not experience an adverse effect; and eight intersections would experience an adverse impact. These potential impacts would be mitigated to a less-than-significant level with the incorporation of the measures (from Section 3-3.3 of the FEIR) presented below.

Mitigation Measures for the Original Project: The following mitigation measures (from Section 3-3.3 of the FEIR) shall be implemented to reduce the impacts of the Original Project to a less-than-significant level:

The following modifications to signal timing and phasing plans will be considered in order to give priority to the Original Project buses while minimizing impacts on arterial street traffic:

- Evaluation of impacts on cross traffic when considering signal preferential/priority treatment for BRT buses (utilizing bus detection system to lengthen a signal phase to allow arriving bus to proceed through the intersection unimpeded).

- Coordination of signal phasing and timing to coincide with arriving buses and stops at adjacent station platforms (e.g., red phase occurs during the time needed for passenger boarding and fare collection).

- Transit priority treatment similar to that on Ventura Boulevard for Metro Rapid Bus.

The following conceptual physical intersection improvements would mitigate residual significant traffic impacts:

At De Soto Avenue and Victory Boulevard:
- Add a second left-turn lane on the eastbound approach of Victory Boulevard; will require widening into MTA [Metro] ROW.

At Winnetka Avenue and Victory Boulevard:
- Add a northbound protected left turn lane and phase it to the traffic signal.

At Tampa Avenue and Topham Street:
- Provide protected left-turn lane and phasing on Topham Street.

At Laurel Canyon Boulevard and Chandler Boulevard:
- Add protected left-turn lanes in all directions to traffic signal and widen into the MTA [Metro] ROW.

At Lankershim Boulevard and Burbank Boulevard:
- Add left-turn lanes in each direction; will require widening within existing City right-of-way.

Traffic signals at Haskell Street and Victory Boulevard, Sepulveda Boulevard and Victory Boulevard, Sepulveda Boulevard and Oxnard Street, and Woodman Avenue and Oxnard Street:
- Retime the traffic signals.

North Parking Lot. Development of the North Parking Lot would potentially impact traffic at intersections not previously analyzed as part of the Original Project. To evaluate the potential impacts on traffic at both the Boeing site and the North Parking Lot, in June 2004, a traffic study was conducted for this Addendum and Modified IS, and is attached to this document as **Appendix B.**[9] The June 2004 traffic study compares existing traffic conditions with those projected to occur in the build-out year (2005) and in a future year (2020). The 2005 and 2020 traffic impacts were estimated for two conditions: (1) "with-project," in which a park-and-ride facility spanning both the Boeing site and the North Parking Lot would be built, and (2) "without project," in which the park-and-ride facility would not be built. The June 2004 traffic study analyzed 5 subject intersections (as selected by LADOT). As shown on **Figure 4-1**, two of

[9] Ibid.

the study intersections are at the North Parking Lot site, and five are at the Boeing site.[10] The results of the analyses are presented in **Table 4-7** (Intersection Analyses Summary).

As **Table 4-7** indicates, none of the study intersections would operate at LOS E or F under either the "with project" or "without project" conditions. Therefore, all of the study intersections would operate at acceptable conditions with development of both the North Parking Lot and the Boeing site, and no significant adverse impacts would occur.

In fact, development of the North Parking Lot in conjunction with the Boeing site would provide a potentially beneficial impact to traffic relative to development of the Boeing site, alone. The November 2003 traffic study, which analyzed a 1,000-space park-and-ride facility at the sole Boeing site, found that intersections providing access into the Boeing site from Canoga Avenue would operate at unacceptable LOS. The combined North Parking Lot and Boeing site park-and-ride analyzed in this document results in acceptable LOS for all intersections.

Pedestrian Path Modification. The Pedestrian Path Modification would construct new sidewalk to replace a segment of pedestrian path planned as part of the Original Project. The Pedestrian Path Modification would result in no net infrastructure and or additional vehicle trips. Thus, the Pedestrian Path Modification would present no impacts to traffic beyond what was previously analyzed for the pedestrian path in the Original Project. In fact, the Pedestrian Path Modification would provide a potentially beneficial impact to traffic because the Pedestrian Path Modification would incorporate a single point intersection at Coldwater Canyon Avenue and improve traffic circulation. The single point intersection could not accommodate the collection area for pedestrians using the planned pedestrian path, and required pedestrians to traverse across turning vehicle traffic.

b) Would the project exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Project Impacts: Less than Significant with Mitigations Incorporated.

Original Project. As discussed above in section a), the Original Project would adversely impact eight intersections. However, modifications to signal timing and phasing and physical intersection improvements are projected to mitigate the impacts to a less-than-significant level.

North Parking Lot. As discussed in section a) above, the North Parking Lot would present less-than-significant impacts on level of service.

Pedestrian Path Modification. As discussed in section a) above, the Pedestrian Path Modification would not adversely impact level of service.

[10] The traffic conditions for the five Boeing Site intersections had been analyzed (as "Alternative Site 2") in a November 2003 traffic study prepared for the December 2003 Addendum and Modified IS. However, the June 2004 traffic study reanalyzed these five intersections (in combination with the two North Parking Lot intersections) because their projected traffic conditions are changed by the addition of the North Parking Lot.

Table 4-7
Intersection Analyses Summary

Intersection	Signalized?[1]	Level of Service (LOS)									
		Year 2004 Existing Conditions[2]		Year 2005 (Opening Day)				Year 2020			
				Without Project		With Project		Without Project		With Project	
		AM[3]	PM[3]	AM	PM	AM	PM	AM	PM	AM	PM
North Parking Lot:[4]											
Canoga Avenue access[5]	No	NA	NA	NA	NA	**B**	**C**	NA	NA	**B**	**D**
Vanowen Street access[5]	No	NA	NA	NA	NA	**B**	**B**	NA	NA	**B**	**B**
Boeing Site:[6]											
Vanowen Street access[5]	No	NA	NA	NA	NA	**B**	**C**	NA	NA	**B**	**C**
Canoga Avenue / B1[5]	No	NA	NA	NA	NA	**B**	**C**	NA	NA	**B**	**D**
Canoga Avenue / B2 (existing)	Yes	**A**	**A**	**A**	**A**	**A**	**C**	**B**	**C**	**C**	**D**
Canoga Avenue / B3[5]	No	NA	NA	NA	NA	**B**	**C**	NA	NA	**B**	**D**
Canoga Avenue / B4[5]	Yes	NA	NA	NA	NA	**A**	**B**	NA	NA	**C**	**C**

(1) Signalized intersections were analyzed using the Critical Movement Analysis methodology, which yields a volume/capacity ratio; the unsignalized intersections were analyzed using the Highway Capacity software (HCS 2000), which yields delay in seconds.

(2) Extrapolated from available traffic count data and applying a growth factor of 1.5% per year, as determined with LADOT during project scoping..

(3) AM Peak Hour is 7 a.m. through 10 a.m.; PM Peak Hour is 3 p.m. through 6 p.m.

(4) Referred to in the June 2004 traffic study as the "satellite parking lot."

(5) Intersection would operate only with the development of the proposed parking lots, so is analyzed only under "With Parking Lots" conditions.

(6) Referred to in the June 2004 traffic study as the "park-and-ride lot."

c) 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?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would not result in any change to air traffic patterns. Therefore, no significant adverse impacts would occur due to development of the projects.

d) 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)?

Project Impacts: No Impact.

Original Project and North Parking Lot. The projects would be designed to provide a safe, secure, and comfortable transit system and would not include hazardous design features or incompatible uses. In addition, LADOT and contractor standard safety measures would be taken during construction to avoid increasing any hazards. Therefore, no significant adverse impacts would occur due to development of the projects.

Pedestrian Path Modification. The Pedestrian Path Modification would provide a potentially beneficial impact to safety because the Pedestrian Path Modification would incorporate a single point intersection at Coldwater Canyon Avenue. The single point intersection could not accommodate the collection area for pedestrians using the planned pedestrian path, and required pedestrians to traverse across turning vehicle traffic. Therefore, no significant adverse impacts would occur due to development of the Pedestrian Path Modification.

e) Would the project result in inadequate emergency access?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. As discussed in sections XIII (Public Services) a) and b), the projects would not result substantially impair emergency access. Therefore, no significant adverse impacts would occur due to development of the projects.

f) Would the project result in inadequate parking capacity?

Project Impacts: Less than Significant with Mitigations Incorporated.

Original Project. The Original Project includes six park-and-ride facilities. A parking demand analysis has found that the proposed supply of parking will generally meet demand (please refer to Tables 3-22 and 3-22a in the FEIR). In the event that some transit patrons may attempt to park on nearby residential streets at certain stations, the parking situation should be monitored by LADOT and Metro and mitigation measures implemented if it should cause inconvenience to residents. With implementation of these mitigation measures, potential impacts to parking would be less-than-significant.

North Parking Lot. The purpose of the North Parking Lot is to provide a portion of an additional park-and-ride facility to serve patrons of the Original Project. Therefore, the North Parking Lot would have a beneficial impact on parking capacity, and no significant adverse impacts would occur.

Pedestrian Path Modification. The Pedestrian Path Modification would relocate a portion of a walkway and would have no impact on parking capacity. Therefore, no adverse impacts would occur due to development of the Pedestrian Path Modification.

Mitigation Measures: The following mitigation measures (from the FEIR) shall be considered if LADOT determines that spillover parking is causing a significant impact. (Note that these mitigation measures were not numbered in the FEIR; in this document, they are paraphrased from pages 3-53 through 3-54 of the FEIR.):

- Institute parking controls in neighborhoods. Examples include banning on-street parking, implementing time-limited parking, requiring resident permit parking, and offering non-resident permits for registered carpoolers who work in the zone.
- Negotiate with local property owners to allow leasing of all day parking spaces.

g) Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Project Impacts: No Impact.

Original Project. As discussed in section IX. (Land Use and Planning), above, the Original Project conforms to applicable planning documents. Therefore, the project would not conflict with adopted policies, plans, or programs supporting alternative transportation. Although impacts would not be adverse, a bike path and pedestrian walkway are planned (as a separate project) for development alongside the busway.

North Parking Lot. As discussed in section IX. (Land Use and Planning), above, the North Parking Lot conforms to applicable planning documents. Therefore, the North Parking Lot would not conflict with adopted policies, plans, or programs supporting alternative transportation, and no significant adverse impacts would occur.

Pedestrian Path Modification. The Pedestrian Path Modification would relocate a portion of a walkway and would not conflict with adopted policies, plans, or programs supporting alternative transportation. No significant adverse impacts would occur due to development of the Pedestrian Path Modification.

XVI. UTILITIES AND SERVICE SYSTEMS

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. No wastewater would be generated by the projects. Thus, the projects would not exceed wastewater treatment requirements, and no significant adverse impacts would occur due to development of the projects.

b) 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 effects?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. No wastewater would be generated by the projects. Thus, the projects would not require sewer connections or new wastewater treatment facilities, and no significant adverse impacts would occur due to development of the projects.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Project Impacts: No Impact.

Original Project and North Parking Lot. Additional runoff would be produced by new impervious surfaces associated with the projects. However, the amount of new impervious surface that would be added and the resulting additional runoff would be small compared to the amount of runoff in the regional watershed as a whole. Thus, the projects would not cause a significant environmental effect through the construction of new or expansion of existing storm water drainage facilities. No significant adverse impacts would occur due to development of the projects.

Pedestrian Path Modification. The Pedestrian Path Modification would not generate any net impervious surfaces because the Pedestrian Path Modification would construct new sidewalk instead of a segment of pedestrian path that was planned for the Original Project. Therefore, the Pedestrian Path Modification would not impact storm water drainage, and no adverse impacts would occur due to development of the Pedestrian Path Modification.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. No additional water supplies would be required by the projects. Thus, new or expanded entitlements would not be needed, and no significant adverse impacts would occur due to development of the projects.

e) Would the project result in a determination by the wastewater treatment provider which 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?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. No wastewater would be generated by the projects. Thus, the proposed projects would not require sewer connections or wastewater treatment, and no significant adverse impacts would occur due to development of the projects.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would generate small quantities of construction debris. This debris would be disposed of at an authorized solid waste

disposal facility. Due to the temporary nature of construction, and the relatively low volume of waste, there would be no significant adverse impact on solid waste disposal services.

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. As discussed in section f), above the projects would generate small quantities of construction debris that would be disposed of at an authorized solid waste disposal facility. Thus, the proposed projects would comply with statutes and regulations related to solid waste, and no significant adverse impacts would occur.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. Based on the preceding analysis, the projects would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Therefore, no significant adverse impacts would occur due to development of the projects.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a 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)?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The projects would not directly or indirectly result in other on-site or off-site development activities that, in combination with the Original Project, have the potential to produce cumulatively significant environmental impacts. Therefore, no significant adverse impacts would occur due to development of the projects.

c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. With the implementation of permit and code requirements as well as adoption of the recommended mitigation measures, the projects would not directly or indirectly adversely affect human beings. Therefore, no significant adverse impacts would occur due to development of the projects.

d) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term goals?

Project Impacts: No Impact.

Original Project, North Parking Lot, and Pedestrian Path Modification. The environmental evaluation in this document has determined that the projects would not achieve short-term environmental goals to the disadvantage of long-term goals. Therefore, no significant adverse impacts would occur due to development of the projects.

Appendix A
AIR EMISSIONS CALCULATIONS

CONSTRUCTION EMISSIONS

MAINSAVE.TMP
5205 - Construction emissions
5205 - Parking2
South Coast Air Basin (Los Angeles area)
URBAN
1, 0, 0, 1
LAND.TMP
Single family housing,Single family housing,,,dwelling units, .85, .10, .05
Apartments low rise,Apartments low rise,,,dwelling units, .85, .10, .05
Apartments high rise,Apartments high rise,,,dwelling units, .85, .10, .05
Condominium/townhouse general,Condo/townhouse general,,,dwelling units, .85, .10, .05
Condominium/townhouse high rise,Condo/townhouse high rise,,,dwelling units, .85, .10, .05
Mobile home park,Mobile home park,,,dwelling units, .85, .10, .05
Retirement community,Retirement community,,,dwelling units, .85, .10, .05
Residential planned unit development (PUD),Residential planned unit development (PUD),,,dwelling units, .85, .10, .0
Congregate care (Assisted Living) Facility,Congregate care (Assisted Living) Facility,,,dwelling units, .85, .10, .05
Day-care center,Day-care center,,,1000 sq. ft., .25, .60, .15,5
Elementary school,Elementary school,,, 0,1000 sq. ft., .60, .25, .15,20
Junior high school,Junior high school,,, 0,1000 sq. ft., .65, .25, .10,20
High school,High school,,, 0,1000 sq. ft., .75, .20, .05,10
Junior college (2 yrs),Junior college (2 yrs),,, 0,1000 sq. ft., .95, .05, 0,5
University/college (4 yrs),University/college (4 yrs),,,students, .90, .10, 0,5
Library,Library,,,1000 sq. ft., .45, .45, .10 ,5
Place of worship,Place of worship,,,1000 sq. ft., .65, .25, .10,3
Blank ,Blank (Edit all 5 columns),,,, .90, .10, 0,2
City park,City park,,,acres, .70, .25, .05,5
Racquet club,Racquet club,,,1000 sq. ft.,.50, .40, .10,5
Racquetball/health club,Racquetball/health,,,1000 sq. ft., .50, .40, .10,5
Quality resturant,Quality resturant,,,1000 sq. ft., .50, .40, .10,8
High turnover resturant,High turnover (sit-down) rest.,,,1000 sq. ft., .30, .40, .30,5
Fast food rest. w/ drive-thru,Fast food rest. w/ drive thru,,,1000 sq. ft, .50, .40, .10,5
Fast food rest. w/o drive-thru,Fast food rest. w/o drive thru,,,1000 sq. ft., .30, .30, .40,5
Hotel,Hotel,,,rooms, .60, .35, .05,5
Motel,Motel,,,rooms, .60, .35, .05,5
Discount store,Free-standing discount store,,,1000 sq. ft., .45, .45, .10,2
Discount superstore,Free-standing discount superstore,,,1000 sq. ft., .55, .40, .05,2
Discount club,Discount club,,,1000 sq. ft., .55, .40, .05,2
Regnl shopping cntr,Regnl shop. center,,,1000 sq. ft., .55, .35, .10,2
Electronic superstore,Electronic superstore,,,1000 sq. ft., .45, .40, .15,2
Home improvement superstore,Home improvement superstore,,,1000 sq. ft., .45, .40, .15,2
Strip mall,Strip mall,,,1000 sq. ft., .45, .40, .15,2
Hardware/paint store,Hardware/paint store,,,1000 sq. ft., .45, .40, .15,2
Supermarket,Supermarket,,,1000 sq. ft., .45, .40, .15,2
Convenience market,Convenience market (24 hour),,,1000 sq. ft., .25, .30, .45,2
Convenience market w/gas,Convenience market with gas pumps,,,1000 sq. ft., .25, .30, .45,2
Gas/service station,Gasoline/service station,,,Pumps, .20, .40, .40,2

Bank,Bank (with drive-through),,,1000 sq. ft., .35, .45, .20,2
General office building,General office building,,,1000 sq. ft., .75, .20, .05,35
Office park,Office park,,,1000 sq. ft., .80, .15, .05,48
Government office building,Goverment office building,,,1000 sq. ft., .50, .35, .15,10
Government (civic center),Government (civic center),,,1000 sq. ft., .50, .35, .15,10
Pharmacy/drugstore with drive through,Pharmacy/drugstore with drive through,,,1000 sq. ft., .45, .40, .15,2
Pharmacy/drugstore without drive through,Pharmacy/drugstore without drive through,,,1000 sq. ft., .45, .40, .15,2
Medical office building,Medical office building,,,1000 sq. ft., .60, .30, .10,7
Hospital,Hospital,,, 0,1000 sq. ft., .75, .25, 0,25
Warehouse,Warehouse,,,1000 sq. ft., .90, .05, .05,2
General light industry,General light industry,,, 0,1000 sq. ft., .80, .20, 0,50
General heavy industry,General heavy industry,,, 0,1000 sq. ft., .90, .05, .05,90
Industrial park,Industrial park,,, 0,1000 sq. ft., .80, .20, 0,41.5
Manufacturing,Manufacturing,,,1000 sq. ft., .90, .05, .05,48
ACRES/SQFEET/UNITS: , 0, 0, 0, 0, 0, 0, 0, 0, 0
Residential trips, 0, Non-residential trips, 0
Nonres work trips,0,Nonres shop trips,0,Nonres other trips,0
OP.TMP
operatnlcheckbox, 1, 1, 1, 1, 1, 1, 0, 0, 0
VEHICLE.TMP
2000lightdutyauto,56.3,4.3,95.0,0.7
2000lightdutytruck,15.0,7.3,89.3,3.4
2000lighttrucktwo,15.4,3.9,95.5,0.6
2000mediumdutytruck,6.8,4.4,94.1,1.5
2000lightheavydutytruck,1.1,9.1,72.7,18.2
2000lightheavytwo,0.4,0.0,50.0,50.0
2000mediumheavydutytruck,1.0,10.0,20.0,70.0
2000heavyheavydutytruck,0.8,0.0,12.5,87.5
2000linehaul,0.0,0.0,0.0,100.0
2000urbanbus,0.1,0.0,0.0,100.0
2000motorcycle,1.8,88.9,11.1,0.0
2000schoolbus,0.1,0.0,0.0,100.0
2000motorhome,1.2,16.7,75.0,8.3
2001lightdutyauto,56.4,3.9,95.4,0.7
2001lightdutytruck,15.1,6.6,90.1,3.3
2001lighttrucktwo,15.5,3.3,96.1,0.6
2001mediumdutytruck,6.7,3.0,95.5,1.5
2001lightheavydutytruck,1.0,10.0,80.0,10.0
2001lightheavytwo,0.3,0.0,66.7,33.3
2001mediumheavydutytruck,1.0,10.0,20.0,70.0
2001heavyheavydutytruck,0.8,0.0,12.5,87.5
2001linehaul,0.0,0.0,0.0,100.0
2001urbanbus,0.1,0.0,0.0,100.0
2001motorcycle,1.7,88.2,11.8,0.0
2001schoolbus,0.1,0.0,0.0,100.0
2001motorhome,1.3,15.4,76.9,7.7
2002lightdutyauto,56.4,3.4,95.9,0.7
2002lightdutytruck,15.1,6.0,90.7,3.3

2002lighttrucktwo,15.5,3.2,95.5,1.3
2002mediumdutytruck,6.7,2.9,94.1,3.0
2002lightheavydutytruck,1.0,10.0,80.0,10.0
2002lightheavytwo,0.3,0.0,66.7,33.3
2002mediumheavydutytruck,1.0,10.0,20.0,70.0
2002heavyheavydutytruck,0.8,0.0,12.5,87.5
2002linehaul,0.0,0.0,0.0,100.0
2002urbanbus,0.1,0.0,0.0,100.0
2002motorcycle,1.7,88.2,11.8,0.0
2002schoolbus,0.1,0.0,0.0,100.0
2002motorhome,1.3,15.4,76.9,7.7
2003lightdutyauto,56.1,3.0,96.4,0.6
2003lightdutytruck,15.1,5.3,91.4,3.3
2003lighttrucktwo,15.5,2.6,96.1,1.3
2003mediumdutytruck,6.9,2.9,94.2,2.9
2003lightheavydutytruck,1.1,9.1,72.7,18.2
2003lightheavytwo,0.3,0.0,66.7,33.3
2003mediumheavydutytruck,1.0,10.0,20.0,70.0
2003heavyheavydutytruck,0.8,0.0,12.5,87.5
2003linehaul,0.0,0.0,0.0,100.0
2003urbanbus,0.1,0.0,0.0,100.0
2003motorcycle,1.6,87.5,12.5,0.0
2003schoolbus,0.2,0.0,0.0,100.0
2003motorhome,1.3,15.4,76.9,7.7
2004lightdutyauto,56.1,2.7,96.8,0.5
2004lightdutytruck,15.1,4.6,92.7,2.7
2004lighttrucktwo,15.6,2.6,96.2,1.2
2004mediumdutytruck,6.9,2.9,94.2,2.9
2004lightheavydutytruck,1.0,0.0,80.0,20.0
2004lightheavytwo,0.3,0.0,66.7,33.3
2004mediumheavydutytruck,1.0,10.0,20.0,70.0
2004heavyheavydutytruck,0.8,0.0,12.5,87.5
2004linehaul,0.0,0.0,0.0,100.0
2004urbanbus,0.1,0.0,0.0,100.0
2004motorcycle,1.6,87.5,12.5,0.0
2004schoolbus,0.2,0.0,0.0,100.0
2004motorhome,1.3,15.4,76.9,7.7
2005lightdutyauto,56.1,2.3,97.1,0.6
2005lightdutytruck,15.1,4.0,93.4,2.6
2005lighttrucktwo,15.5,1.9,96.8,1.3
2005mediumdutytruck,6.8,1.5,95.6,2.9
2005lightheavydutytruck,1.0,0.0,80.0,20.0
2005lightheavytwo,0.3,0.0,66.7,33.3
2005mediumheavydutytruck,1.0,10.0,20.0,70.0
2005heavyheavydutytruck,0.8,0.0,12.5,87.5
2005linehaul,0.0,0.0,0.0,100.0
2005urbanbus,0.1,0.0,0.0,100.0
2005motorcycle,1.6,87.5,12.5,0.0

2005schoolbus,0.3,0.0,0.0,100.0
2005motorhome,1.4,14.3,78.6,7.1
2006lightdutyauto,55.6,2.2,97.3,0.5
2006lightdutytruck,15.1,4.0,93.4,2.6
2006lighttrucktwo,15.9,1.9,96.9,1.2
2006mediumdutytruck,7.0,1.4,95.7,2.9
2006lightheavydutytruck,1.1,0.0,81.8,18.2
2006lightheavytwo,0.3,0.0,66.7,33.3
2006mediumheavydutytruck,1.0,10.0,20.0,70.0
2006heavyheavydutytruck,0.9,0.0,11.1,88.9
2006linehaul,0.0,0.0,0.0,100.0
2006urbanbus,0.1,0.0,0.0,100.0
2006motorcycle,1.7,82.4,17.6,0.0
2006schoolbus,0.1,0.0,0.0,100.0
2006motorhome,1.2,0.0,91.7,8.3
2007lightdutyauto,55.2,1.8,97.8,0.4
2007lightdutytruck,15.1,3.3,94.0,2.7
2007lighttrucktwo,16.1,1.9,96.9,1.2
2007mediumdutytruck,7.1,1.4,95.8,2.8
2007lightheavydutytruck,1.1,0.0,81.8,18.2
2007lightheavytwo,0.4,0.0,50.0,50.0
2007mediumheavydutytruck,1.0,0.0,20.0,80.0
2007heavyheavydutytruck,0.9,0.0,11.1,88.9
2007linehaul,0.0,0.0,0.0,100.0
2007urbanbus,0.1,0.0,0.0,100.0
2007motorcycle,1.7,82.4,17.6,0.0
2007schoolbus,0.1,0.0,0.0,100.0
2007motorhome,1.2,8.3,83.3,8.4
2008lightdutyauto,55.0,1.6,98.0,0.4
2008lightdutytruck,15.0,2.7,95.3,2.0
2008lighttrucktwo,16.2,1.2,97.5,1.3
2008mediumdutytruck,7.2,1.4,95.8,2.8
2008lightheavydutytruck,1.1,0.0,81.8,18.2
2008lightheavytwo,0.4,0.0,50.0,50.0
2008mediumheavydutytruck,1.0,0.0,20.0,80.0
2008heavyheavydutytruck,0.9,0.0,11.1,88.9
2008linehaul,0.0,0.0,0.0,100.0
2008urbanbus,0.2,0.0,50.0,50.0
2008motorcycle,1.7,76.5,23.5,0.0
2008schoolbus,0.1,0.0,0.0,100.0
2008motorhome,1.2,8.3,83.3,8.4
2009lightdutyauto,54.9,1.3,98.4,0.3
2009lightdutytruck,15.1,2.6,95.4,2.0
2009lighttrucktwo,16.1,1.2,98.1,0.7
2009mediumdutytruck,7.3,1.4,95.9,2.7
2009lightheavydutytruck,1.1,0.0,81.8,18.2
2009lightheavytwo,0.3,0.0,66.7,33.3
2009mediumheavydutytruck,1.0,0.0,20.0,80.0

2009heavyheavydutytruck,0.9,0.0,11.1,88.9
2009linehaul,0.0,0.0,0.0,100.0
2009urbanbus,0.2,0.0,50.0,50.0
2009motorcycle,1.6,75.0,25.0,0.0
2009schoolbus,0.1,0.0,0.0,100.0
2009motorhome,1.4,7.1,85.7,7.2
2010lightdutyauto,54.7,1.1,98.7,0.2
2010lightdutytruck,15.2,2.0,96.0,2.0
2010lighttrucktwo,16.2,1.2,98.1,0.7
2010mediumdutytruck,7.3,1.4,95.9,2.7
2010lightheavydutytruck,1.1,0.0,81.8,18.2
2010lightheavytwo,0.3,0.0,66.7,33.3
2010mediumheavydutytruck,1.0,0.0,20.0,80.0
2010heavyheavydutytruck,0.9,0.0,11.1,88.9
2010linehaul,0.0,0.0,0.0,100.0
2010urbanbus,0.2,0.0,50.0,50.0
2010motorcycle,1.6,68.8,31.2,0.0
2010schoolbus,0.1,0.0,0.0,100.0
2010motorhome,1.4,7.1,85.7,7.2
2015lightdutyauto,54.4,0.4,99.4,0.2
2015lightdutytruck,15.3,0.7,98.0,1.3
2015lighttrucktwo,16.4,0.6,98.8,0.6
2015mediumdutytruck,7.3,0.0,98.6,1.4
2015lightheavydutytruck,1.1,0.0,81.8,18.2
2015lightheavytwo,0.3,0.0,66.7,33.3
2015mediumheavydutytruck,1.0,0.0,20.0,80.0
2015heavyheavydutytruck,0.8,0.0,0.0,100.0
2015linehaul,0.0,0.0,0.0,100.0
2015urbanbus,0.2,0.0,50.0,50.0
2015motorcycle,1.6,50.0,50.0,0.0
2015schoolbus,0.1,0.0,0.0,100.0
2015motorhome,1.5,0.0,93.3,6.7
2020lightdutyauto,54.4,0.4,99.4,0.2
2020lightdutytruck,15.3,0.7,98.0,1.3
2020lighttrucktwo,16.4,0.6,98.8,0.6
2020mediumdutytruck,7.3,0.0,98.6,1.4
2020lightheavydutytruck,1.1,0.0,81.8,18.2
2020lightheavytwo,0.3,0.0,66.7,33.3
2020mediumheavydutytruck,1.0,0.0,20.0,80.0
2020heavyheavydutytruck,0.8,0.0,0.0,100.0
2020linehaul,0.0,0.0,0.0,100.0
2020urbanbus,0.2,0.0,50.0,50.0
2020motorcycle,1.6,50.0,50.0,0.0
2020schoolbus,0.1,0.0,0.0,100.0
2020motorhome,1.5,0.0,93.3,6.7
2025lightdutyauto,53.5,0.0,100.0,0.0
2025lightdutytruck,15.7,0.0,99.4,0.6
2025lighttrucktwo,16.5,0.0,100.0,0.0

2025mediumdutytruck,7.5,0.0,98.7,1.3
2025lightheavydutytruck,1.0,0.0,80.0,20.0
2025lightheavytwo,0.3,0.0,66.7,33.3
2025mediumheavydutytruck,0.9,0.0,22.2,77.8
2025heavyheavydutytruck,0.8,0.0,0.0,100.0
2025linehaul,0.0,0.0,0.0,100.0
2025urbanbus,0.2,0.0,50.0,50.0
2025motorcycle,1.5,40.0,60.0,0.0
2025schoolbus,0.1,0.0,0.0,100.0
2025motorhome,2.0,0.0,90.0,10.0
2030lightdutyauto,52.5,0.0,100.0,0.0
2030lightdutytruck,15.9,0.0,100.0,0.0
2030lighttrucktwo,16.7,0.0,100.0,0.0
2030mediumdutytruck,7.6,0.0,100.0,0.0
2030lightheavydutytruck,1.0,0.0,80.0,20.0
2030lightheavytwo,0.3,0.0,66.7,33.3
2030mediumheavydutytruck,0.9,0.0,22.2,77.8
2030heavyheavydutytruck,0.7,0.0,0.0,100.0
2030linehaul,0.0,0.0,0.0,100.0
2030urbanbus,0.2,0.0,50.0,50.0
2030motorcycle,1.5,33.3,66.7,0.0
2030schoolbus,0.1,0.0,0.0,100.0
2030motorhome,2.6,0.0,92.3,7.7
2035lightdutyauto,51.2,0.0,100.0,0.0
2035lightdutytruck,16.2,0.0,100.0,0.0
2035lighttrucktwo,17.0,0.0,100.0,0.0
2035mediumdutytruck,7.7,0.0,100.0,0.0
2035lightheavydutytruck,0.9,0.0,77.8,22.2
2035lightheavytwo,0.3,0.0,66.7,33.3
2035mediumheavydutytruck,0.9,0.0,22.2,77.8
2035heavyheavydutytruck,0.7,0.0,0.0,100.0
2035linehaul,0.0,0.0,0.0,100.0
2035urbanbus,0.2,0.0,50.0,50.0
2035motorcycle,1.7,35.3,64.7,0.0
2035schoolbus,0.1,0.0,0.0,100.0
2035motorhome,3.1,0.0,90.3,9.7
2040lightdutyauto,49.9,0.0,100.0,0.0
2040lightdutytruck,16.4,0.0,100.0,0.0
2040lighttrucktwo,17.2,0.0,100.0,0.0
2040mediumdutytruck,7.8,0.0,100.0,0.0
2040lightheavydutytruck,0.9,0.0,77.8,22.2
2040lightheavytwo,0.3,0.0,66.7,33.3
2040mediumheavydutytruck,0.8,0.0,25.0,75.0
2040heavyheavydutytruck,0.7,0.0,0.0,100.0
2040linehaul,0.0,0.0,0.0,100.0
2040urbanbus,0.2,0.0,50.0,50.0
2040motorcycle,2.0,35.0,65.0,0.0
2040schoolbus,0.1,0.0,0.0,100.0

2040motorhome,3.7,0.0,91.9,8.1
YEARSEAS.TMP
yearseason,2004,summer
HOTCOLD.TMP
ambient, 50, 3, 90, 8
TRIPCHAR.TMP
homebasedwork,35, 8,20.0,11.5,11.5
homebasedshop,40, 9,37.0,4.87,4.87
homebasedother,40, 9,43.0,6.02,6.02
commercialbasedcommute,40, 9,10.3,10.3
commercialbasednonwork,40, 9,5.5,5.5
commercialbasedcustomer,40, 9,5.5,5.5
DOUBLECT.TMP
doublecount,0,1
input,,,,
project,,, 0, 0,,, 0, 0,,, 0, 0
VARYSTRT.TMP
0.7,1.0,1.4,2.2,2.6,2.8,2.2,2.6,6.2,8.9,8.6,8.6,8.7,8.7,8.7,8.7,8.7,8.7
3.3,9.5,14.4,18.3,12.2,7.5,4.2,3.6,3.7,2.1,2.6,2.6,2.6,2.6,2.7,2.7,2.7,2.7
6.1,7.6,7.8,7.2,7.0,7.9,6.2,6.6,7.2,4.9,4.0,4.0,4.0,3.9,3.9,3.9,3.9,3.9
2.6,5.0,3.7,4.2,4.7,3.7,3.0,3.3,8.5,10.8,6.3,6.3,6.3,6.3,6.3,6.3,6.3,6.4
5.8,11.3,7.3,7.4,7.7,5.5,4.4,4.4,12.1,13.9,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.7
9.3,14.7,13.2,14.0,6.7,7.1,5.1,4.5,8.8,6.4,1.2,1.2,1.3,1.3,1.3,1.3,1.3,1.3
ROADDUST.TMP
pavedunpaved,100,0
siltloading,0.1
vehicleweight,2.2
EPA, 0
silt,4.3
speed,40
rain, 0.5
CALIFORNIA,-1,2.27
VEHMIT.TMP
mobile1, both
environ1, nodefault
environ2, Side Walks/Paths: No Sidewalks, 0
Street Trees Provide Shade: No Coverage, 0
Pedestrian Circulation Access: No Destinations, 0
Visually Interesting Uses: No Uses Within Walking Distance, 0
environ3, Street System Enhances Safety: No Streets, 0
Pedestrian Safety from Crime: No Degree of Safety, 0
Visually Interesting Walking Routes: No Visual Interest, 0
environ4, Transit Service: Dial-A-Ride or No Transit Service, 0
environ5, Interconnected Bikeways: No Bikeway Coverage,0
Bike Routes Provide Paved Shoulders: No Routes, 0
Safe Vehicle Speed Limits: No Routes Provided, 0.0
environ6, Safe School Routes: No Schools, 0
Uses w/in Cycling Distance: No Uses w/in Cycling Distance, 0

Bike Parking Ordinance: No Ordinance or Unenforceable, 0
totals, pedestrian, 0,transit, 0,bicycle, 0
1,mitigat1, Credit for Existing or Planned Community Transit Service,15
0,Project Density Meets Transit Level of Service Requirements,6
0,Provide Transit Shelters Benches,2
0,Provide Street Lighting,0.5
0,Provide Route Signs and Displays,0.5
0,Provide Bus Turnouts,1
0,Name:,1
0,Name:,1
1,mitigat2, Credit for Surrounding Pedestrian Environment,2
0,Mixed Use Project (Residential Oriented),3
0,Provide Sidewalks and/or Pedestrian Paths,1
0,Provide Direct Pedestrian Connections,1
0,Provide Pedestrian Safety,0.5
0,Provide Street Furniture,0.5
0,Provide Street Lighting,0.5
0,Provide Pedestrian Signalization and Signage,0.5
0,Name:,0.5
0,,0.5
1,mitigat3, Credit for Surrounding Pedestrian Environment,2
0,Mixed Use Project (Commercial Oriented),1
0,Floor Area Ratio 0.75 or Greater,1
0,Provide Wide Sidewalks and Onsite Pedestrian Facilities,1
0,Project Uses Parking Structures/Small Dispersed Lots,1
0,Provide Street Lighting,0.5
0,Project Provides Shade Trees to Shade Sidewalks,0.5
0,Project Provides Street Art and/or Street Furniture,0.5
0,Project Uses Zero Bldg. Setback with Entrance on Street,0.5
0,Provide Pedestrian Safety Designs/Infrastructure at Crossings,0.5
0,Articulated Storefront(s) Display Windows with Visual Interest,0.25
0,No Long Uninterrupted Walls Along Pedestrian Walkways,0.25
0,Name:,0.5
0,Name:,0.5
1,mitigat4, Credit for Surrounding Bicycle Environment,7
0,Provide Bike Lanes/Paths Connecting to Bikeway System,2
0,Name:,1
0,Name:,1
1,mitigat5, Credit for Surrounding Area Bike Environment,5
0,Provide Bike Lanes/Paths Connecting to Bikeway System,2
0,Provide Securre Bicycle Parking,1
0,Provide Employee Lockers and Showers,1
0,Name:,1
0,Name:,1
0, No Charge for Employee Parking, 0
0,Shuttle Bus Service to Transit/Multi-Modal Center,2
0,Preferential Carpool/Vanpool Parking,1.5
0,Parking Limited (below minimum),1

0,Employee Rideshare Incentive Program,1
0,Day Care Center Onsite or Within 1/2 Mile,1
0,Employee Telecommuting Program,, 0
0,Compressed Work Schedule 3/36,, 0
0,Compressed Work Schedule 4/40,, 0
0,Compressed Work Schedule 9/80,, 0
0,Name:,
0,mitop3, Lunch/Shopping Shuttle Service,1.5
0, No Onsite Shops or Services Provided, 0
0,Name:,1
0,Name:,1
0, No Charge for Customer Parking, 0
0,Name:,1
0,Name:,1
1,mitop5, Park and Ride Lots,, 0
0,Satellite Telecommuting Center,,
0,Name:,
0,Name:,
0,mitop6, Park and Ride Lots,,
0,Satellite Telecommuting Center,,
0,Name:,
0,Name:,
0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0
CONST.TMP
constdata,1,1,1,1,0,1,1,1,1
constpart,2005,22,3,1,0,0
constdef,0.1,0.3,2.6,1.4,2.6,0,0,3.9,0.1
constuser,0.6,1.2,10.2,-1,10.2,0,1,-1,0.5
DEMO.TMP
demodust,7000,1,15,1750,1,15,20,30
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, , 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks, , 417, 0.49, 8.0
otherequipment,1 , 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0
roughforklifts, , 94, 0.475, 8.0
rubberdozers, 1, 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0

skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, 1, 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
SITEACRE.TMP
siteacre,2, 0.2,1,0,0,0
level1,10
level2,0,0
level3,0,0,0
level4,0,0,0
soilhauling,0,0,20,20
SITEGRAD.TMP
borehaulrigs, 1,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, 1, 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks,1 , 417, 0.49, 8.0
otherequipment,1, 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0
roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers,, 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0
skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, 1, 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
BUILDINGEQUIP.TMP
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, 1, 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks,, 417, 0.49, 8.0
otherequipment, 1, 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0

roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0
skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors,1 , 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
PAINT.TMP
paintdata,0.0185,1,2.7,0.0185,1,2.0
ASPHALT.TMP
asphaltdata,2,2.62
truckhaul,20,30
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, 1, 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks, , 417, 0.49, 8.0
otherequipment, , 190, 0.62, 8.0
pavers, 1, 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, 2, 114, 0.43, 8.0
roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0
skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, , 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
WORKER.TMP
workerdata,0.36,0.72,0.32,0.42,10
MITCON.TMP
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,2
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,2
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation,90.0,40.0,85.0,90.0,0.0,2
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,2
1,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,2
0,On-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,3
0,On-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,3
0,On-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,3
0,On-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,3

1,On-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,3
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,4
0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,2
0,On-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,3
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,4
0,Soil Disturbance,Apply soil stabilizers to inactive areas,0.0,0.0,30.0,0.0,0.0,5
0,Soil Disturbance,Replace ground cover in disturbed areas quickly,0.0,0.0,15.0,0.0,0.0,5
0,Soil Disturbance,Water exposed surfaces - 2x daily,0.0,0.0,34.0,0.0,0.0,5
0,Soil Disturbance,Water exposed surfaces - 3x daily,0.0,0.0,50.0,0.0,0.0,5
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,6
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,6
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,6
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,6
1,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,6
0,On-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,7
0,On-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,7
0,On-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,7
0,On-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,7
1,On-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,7
0,Stockpiles,Cover all stock piles with tarps,0.0,0.0,9.5,0.0,0.0,5
0,Unpaved Roads,Water all haul roads 2x daily,0.0,0.0,3.0,0.0,0.0,5
0,Unpaved Roads,Water all haul roads 3x daily,0.0,0.0,45.0,0.0,0.0,5
0,Unpaved Roads,Pave all haul roads,0.0,0.0,92.5,0.0,0.0,5
0,Unpaved Roads,Reduce speed on unpaved roads to < 15 mph ,0.0,0.0,40.0,0.0,0.0,5
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,8
0,Soil Disturbance,,0.0,0.0,0.0,0.0,0.0,5
0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,6
0,On-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,7
0,Unpaved Roads,,0.0,0.0,0.0,0.0,0.0,5
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,8
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,9
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,9
1,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,14
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,14
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,14
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,14
0,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,14
0,On-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,15
0,On-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,15
0,On-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,15
0,On-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,15
0,On-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,15
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,10
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,12
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,16

0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,9
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,10
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,12
0,Offgassing,,0.0,0.0,0.0,0.0,0.0,13
0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,14
0,On-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,15
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,16
0,Offgassing,,0.0,0.0,0.0,0.0,0.0,11
AREA.TMP
1, 1, 1, 1, 1, 0
NATGAS.TMP
natgasdata,40,7.26,94,100,0.18,6665.0,4011.5,241611,4.8,2.9,2.0,60,100
STOVE.TMP
noncatalytic,70.4,7.5,9.8,1.4,50, 0.2
catalytic,52.2,7.8,10.2,1.0,50, 0.2
conventional,115.4,21.9,15.3,1.4,0, 0.2
pellet,19.7,0.01,2.1,6.9,0, 0.2
woodburned/residentialunits,1.48,35
FIREP.TMP
fireplace,252.6,229.0,2.6,34.6,1.48,10, 0.4
LANDSCAP.TMP
landscape,180,2004
CONSUME.TMP
consumerproducts,0.0171,2.861
AMITAREA.TMP
0, Solar Water Heaters, Rsdntl Water Heat., 0, 11, 9.5, 4.5, 10, 0
0, Central Water Heater, Rsdntl Space Heat., 1, 9, 8, 4, 8.5, 0
0, Orient Buildings North/South, Rsdntl Space Heat., 2, 14, 13, 4, 8.5, 0
0, Increase Insulation Beyond Title 24, Rsdntl Space Heat., 3, 14, 13, 7.4, 13, 0
0, All Electric Landscape Maintenance Equipment, Rsdntl Lndscp Maint., 4, 100, 100, 100, 100,100
0, Solar Water Heaters, Cmrcl Water Heat., 5, 0.5, 0.5, 0.5, 0.5, 0.5
0, Central Water Heater, Cmrcl Space Heat., 6, 0.5, 0.5, 0.5, 0.5, 0.5
0, Orient Buildings North/South, Cmrcl Space Heat., 7, 11, 13.5, 17.5, 12.5, 0
0, Increase Insulation Beyond Title 24, Cmrcl Space Heat., 8, 10, 9, 7, 9.5, 0
0, All Electric Landscape Maintenance Equipment, Cmrcl Lndscp Maint., 9, 100, 100, 100, 100,100
0, Orient Buildings North/South, Industrial Heat., 10, 2, 3, 2.5, 5.5, 0

0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
RESIDENTIAL WATER: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0

RESIDENTIAL HEAT: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
RESIDENTIAL LAND: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
COMMERCIAL WATER: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
COMMERCIAL HEAT: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
COMMERCIAL LAND: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
INDUSTRIAL HEAT: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
DEFFILE.TMP
MC, CARBON
NCC, MONOXIDE
SC, OXIDES
SDC, NITROGEN
SFBA, PM10
SJV, CLEANAIR
SLOC, POLLUTE
SBC, OZONE
SCAB, ROG
VC, TOXICS
DEFAULT, DEFAULT

OPERATIONAL EMISSIONS

MAINSAVE.TMP
5205 - Operational emissions
5205 - operational
South Coast Air Basin (Los Angeles area)
URBAN
0, 0, 1, 1
LAND.TMP
Single family housing,Single family housing,,,dwelling units,0.85,0.1,0.05
Apartments low rise,Apartments low rise,,,dwelling units,0.85,0.1,0.05
Apartments high rise,Apartments high rise,,,dwelling units,0.85,0.1,0.05
Condominium/townhouse general,Condo/townhouse general,,,dwelling units,0.85,0.1,0.05
Condominium/townhouse high rise,Condo/townhouse high rise,,,dwelling units,0.85,0.1,0.05
Mobile home park,Mobile home park,,,dwelling units,0.85,0.1,0.05
Retirement community,Retirement community,,,dwelling units,0.85,0.1,0.05
Residential planned unit development (PUD),Residential planned unit development (PUD),,,dwelling units,0.85,0.1,0.0
Congregate care (Assisted Living) Facility,Congregate care (Assisted Living) Facility,,,dwelling units,0.85,0.1,0.05
Day-care center,Day-care center,,,1000 sq. ft.,0.25,0.6,0.15,5
Elementary school,Elementary school,,, 0,1000 sq. ft.,0.6,0.25,0.15,20
Junior high school,Junior high school,,, 0,1000 sq. ft.,0.65,0.25,0.1,20
High school,High school,,, 0,1000 sq. ft.,0.75,0.2,0.05,10
Junior college (2 yrs),Junior college (2 yrs),,, 0,1000 sq. ft.,0.95,0.05,0,5
University/college (4 yrs),University/college (4 yrs),,,students,0.9,0.1,0,5
Library,Library,,,1000 sq. ft.,0.45,0.45,0.1,5
Place of worship,Place of worship,,,1000 sq. ft.,0.65,0.25,0.1,3
Blank ,Park & Ride Facility,1,4328,,1,0,0,1
City park,City park,,,acres,0.7,0.25,0.05,5
Racquet club,Racquet club,,,1000 sq. ft.,0.5,0.4,0.1,5
Racquetball/health club,Racquetball/health,,,1000 sq. ft.,0.5,0.4,0.1,5
Quality resturant,Quality resturant,,,1000 sq. ft.,0.5,0.4,0.1,8
High turnover resturant,High turnover (sit-down) rest.,,,1000 sq. ft.,0.3,0.4,0.3,5
Fast food rest. w/ drive-thru,Fast food rest. w/ drive thru,,,1000 sq. ft,0.5,0.4,0.1,5
Fast food rest. w/o drive-thru,Fast food rest. w/o drive thru,,,1000 sq. ft.,0.3,0.3,0.4,5
Hotel,Hotel,,,rooms,0.6,0.35,0.05,5
Motel,Motel,,,rooms,0.6,0.35,0.05,5
Discount store,Free-standing discount store,,,1000 sq. ft.,0.45,0.45,0.1,2
Discount superstore,Free-standing discount superstore,,,1000 sq. ft.,0.55,0.4,0.05,2
Discount club,Discount club,,,1000 sq. ft.,0.55,0.4,0.05,2
Regnl shopping cntr,Regnl shop. center,,,1000 sq. ft.,0.55,0.35,0.1,2
Electronic superstore,Electronic superstore,,,1000 sq. ft.,0.45,0.4,0.15,2
Home improvement superstore,Home improvement superstore,,,1000 sq. ft.,0.45,0.4,0.15,2
Strip mall,Strip mall,,,1000 sq. ft.,0.45,0.4,0.15,2
Hardware/paint store,Hardware/paint store,,,1000 sq. ft.,0.45,0.4,0.15,2
Supermarket,Supermarket,,,1000 sq. ft.,0.45,0.4,0.15,2
Convenience market,Convenience market (24 hour),,,1000 sq. ft.,0.25,0.3,0.45,2
Convenience market w/gas,Convenience market with gas pumps,,,1000 sq. ft.,0.25,0.3,0.45,2
Gas/service station,Gasoline/service station,,,Pumps,0.2,0.4,0.4,2

Bank,Bank (with drive-through),,,1000 sq. ft.,0.35,0.45,0.2,2
General office building,General office building,,,1000 sq. ft.,0.75,0.2,0.05,35
Office park,Office park,,,1000 sq. ft.,0.8,0.15,0.05,48
Government office building,Goverment office building,,,1000 sq. ft.,0.5,0.35,0.15,10
Government (civic center),Government (civic center),,,1000 sq. ft.,0.5,0.35,0.15,10
Pharmacy/drugstore with drive through,Pharmacy/drugstore with drive through,,,1000 sq. ft.,0.45,0.4,0.15,2
Pharmacy/drugstore without drive through,Pharmacy/drugstore without drive through,,,1000 sq. ft.,0.45,0.4,0.15,2
Medical office building,Medical office building,,,1000 sq. ft.,0.6,0.3,0.1,7
Hospital,Hospital,,, 0,1000 sq. ft.,0.75,0.25,0,25
Warehouse,Warehouse,,,1000 sq. ft.,0.9,0.05,0.05,2
General light industry,General light industry,,, 0,1000 sq. ft.,0.8,0.2,0,50
General heavy industry,General heavy industry,,, 0,1000 sq. ft.,0.9,0.05,0.05,90
Industrial park,Industrial park,,, 0,1000 sq. ft.,0.8,0.2,0,41.5
Manufacturing,Manufacturing,,,1000 sq. ft.,0.9,0.05,0.05,48
ACRES/SQFEET/UNITS: ,0,0,0,0,0,0,0,0,1
Residential trips,0,Non-residential trips,4328
Nonres work trips,43.28,Nonres shop trips,21.64,Nonres other trips,4263.08
OP.TMP
operatnlcheckbox, 1, 1, 1, 1, 1, 1, 0, 0, 0
VEHICLE.TMP
2000lightdutyauto,56.3,4.3,95.0,0.7
2000lightdutytruck,15.0,7.3,89.3,3.4
2000lighttrucktwo,15.4,3.9,95.5,0.6
2000mediumdutytruck,6.8,4.4,94.1,1.5
2000lightheavydutytruck,1.1,9.1,72.7,18.2
2000lightheavytwo,0.4,0.0,50.0,50.0
2000mediumheavydutytruck,1.0,10.0,20.0,70.0
2000heavyheavydutytruck,0.8,0.0,12.5,87.5
2000linehaul,0.0,0.0,0.0,100.0
2000urbanbus,0.1,0.0,0.0,100.0
2000motorcycle,1.8,88.9,11.1,0.0
2000schoolbus,0.1,0.0,0.0,100.0
2000motorhome,1.2,16.7,75.0,8.3
2001lightdutyauto,56.4,3.9,95.4,0.7
2001lightdutytruck,15.1,6.6,90.1,3.3
2001lighttrucktwo,15.5,3.3,96.1,0.6
2001mediumdutytruck,6.7,3.0,95.5,1.5
2001lightheavydutytruck,1.0,10.0,80.0,10.0
2001lightheavytwo,0.3,0.0,66.7,33.3
2001mediumheavydutytruck,1.0,10.0,20.0,70.0
2001heavyheavydutytruck,0.8,0.0,12.5,87.5
2001linehaul,0.0,0.0,0.0,100.0
2001urbanbus,0.1,0.0,0.0,100.0
2001motorcycle,1.7,88.2,11.8,0.0
2001schoolbus,0.1,0.0,0.0,100.0
2001motorhome,1.3,15.4,76.9,7.7
2002lightdutyauto,56.4,3.4,95.9,0.7
2002lightdutytruck,15.1,6.0,90.7,3.3

2002lighttrucktwo,15.5,3.2,95.5,1.3
2002mediumdutytruck,6.7,2.9,94.1,3.0
2002lightheavydutytruck,1.0,10.0,80.0,10.0
2002lightheavytwo,0.3,0.0,66.7,33.3
2002mediumheavydutytruck,1.0,10.0,20.0,70.0
2002heavyheavydutytruck,0.8,0.0,12.5,87.5
2002linehaul,0.0,0.0,0.0,100.0
2002urbanbus,0.1,0.0,0.0,100.0
2002motorcycle,1.7,88.2,11.8,0.0
2002schoolbus,0.1,0.0,0.0,100.0
2002motorhome,1.3,15.4,76.9,7.7
2003lightdutyauto,56.1,3.0,96.4,0.6
2003lightdutytruck,15.1,5.3,91.4,3.3
2003lighttrucktwo,15.5,2.6,96.1,1.3
2003mediumdutytruck,6.9,2.9,94.2,2.9
2003lightheavydutytruck,1.1,9.1,72.7,18.2
2003lightheavytwo,0.3,0.0,66.7,33.3
2003mediumheavydutytruck,1.0,10.0,20.0,70.0
2003heavyheavydutytruck,0.8,0.0,12.5,87.5
2003linehaul,0.0,0.0,0.0,100.0
2003urbanbus,0.1,0.0,0.0,100.0
2003motorcycle,1.6,87.5,12.5,0.0
2003schoolbus,0.2,0.0,0.0,100.0
2003motorhome,1.3,15.4,76.9,7.7
2004lightdutyauto,56.1,2.7,96.8,0.5
2004lightdutytruck,15.1,4.6,92.7,2.7
2004lighttrucktwo,15.6,2.6,96.2,1.2
2004mediumdutytruck,6.9,2.9,94.2,2.9
2004lightheavydutytruck,1.0,0.0,80.0,20.0
2004lightheavytwo,0.3,0.0,66.7,33.3
2004mediumheavydutytruck,1.0,10.0,20.0,70.0
2004heavyheavydutytruck,0.8,0.0,12.5,87.5
2004linehaul,0.0,0.0,0.0,100.0
2004urbanbus,0.1,0.0,0.0,100.0
2004motorcycle,1.6,87.5,12.5,0.0
2004schoolbus,0.2,0.0,0.0,100.0
2004motorhome,1.3,15.4,76.9,7.7
2005lightdutyauto,56.1,2.3,97.1,0.6
2005lightdutytruck,15.1,4.0,93.4,2.6
2005lighttrucktwo,15.5,1.9,96.8,1.3
2005mediumdutytruck,6.8,1.5,95.6,2.9
2005lightheavydutytruck,1.0,0.0,80.0,20.0
2005lightheavytwo,0.3,0.0,66.7,33.3
2005mediumheavydutytruck,1.0,10.0,20.0,70.0
2005heavyheavydutytruck,0.8,0.0,12.5,87.5
2005linehaul,0.0,0.0,0.0,100.0
2005urbanbus,0.1,0.0,0.0,100.0
2005motorcycle,1.6,87.5,12.5,0.0

2005schoolbus,0.3,0.0,0.0,100.0
2005motorhome,1.4,14.3,78.6,7.1
2006lightdutyauto,55.6,2.2,97.3,0.5
2006lightdutytruck,25.7,4.0,93.4,2.6
2006lighttrucktwo,15.9,1.9,96.9,1.2
2006mediumdutytruck,0,1.4,95.7,2.9
2006lightheavydutytruck,0,0.0,81.8,18.2
2006lightheavytwo,0,0.0,66.7,33.3
2006mediumheavydutytruck,0,10.0,20.0,70.0
2006heavyheavydutytruck,0,0.0,11.1,88.9
2006linehaul,0.0,0.0,0.0,100.0
2006urbanbus,1,0.0,0.0,100.0
2006motorcycle,1.7,82.4,17.6,0.0
2006schoolbus,0.1,0.0,0.0,100.0
2006motorhome,0,0.0,91.7,8.3
2007lightdutyauto,55.2,1.8,97.8,0.4
2007lightdutytruck,15.1,3.3,94.0,2.7
2007lighttrucktwo,16.1,1.9,96.9,1.2
2007mediumdutytruck,7.1,1.4,95.8,2.8
2007lightheavydutytruck,1.1,0.0,81.8,18.2
2007lightheavytwo,0.4,0.0,50.0,50.0
2007mediumheavydutytruck,1.0,0.0,20.0,80.0
2007heavyheavydutytruck,0.9,0.0,11.1,88.9
2007linehaul,0.0,0.0,0.0,100.0
2007urbanbus,0.1,0.0,0.0,100.0
2007motorcycle,1.7,82.4,17.6,0.0
2007schoolbus,0.1,0.0,0.0,100.0
2007motorhome,1.2,8.3,83.3,8.4
2008lightdutyauto,55.0,1.6,98.0,0.4
2008lightdutytruck,15.0,2.7,95.3,2.0
2008lighttrucktwo,16.2,1.2,97.5,1.3
2008mediumdutytruck,7.2,1.4,95.8,2.8
2008lightheavydutytruck,1.1,0.0,81.8,18.2
2008lightheavytwo,0.4,0.0,50.0,50.0
2008mediumheavydutytruck,1.0,0.0,20.0,80.0
2008heavyheavydutytruck,0.9,0.0,11.1,88.9
2008linehaul,0.0,0.0,0.0,100.0
2008urbanbus,0.2,0.0,50.0,50.0
2008motorcycle,1.7,76.5,23.5,0.0
2008schoolbus,0.1,0.0,0.0,100.0
2008motorhome,1.2,8.3,83.3,8.4
2009lightdutyauto,54.9,1.3,98.4,0.3
2009lightdutytruck,15.1,2.6,95.4,2.0
2009lighttrucktwo,16.1,1.2,98.1,0.7
2009mediumdutytruck,7.3,1.4,95.9,2.7
2009lightheavydutytruck,1.1,0.0,81.8,18.2
2009lightheavytwo,0.3,0.0,66.7,33.3
2009mediumheavydutytruck,1.0,0.0,20.0,80.0

2009heavyheavydutytruck,0.9,0.0,11.1,88.9
2009linehaul,0.0,0.0,0.0,100.0
2009urbanbus,0.2,0.0,50.0,50.0
2009motorcycle,1.6,75.0,25.0,0.0
2009schoolbus,0.1,0.0,0.0,100.0
2009motorhome,1.4,7.1,85.7,7.2
2010lightdutyauto,54.7,1.1,98.7,0.2
2010lightdutytruck,15.2,2.0,96.0,2.0
2010lighttrucktwo,16.2,1.2,98.1,0.7
2010mediumdutytruck,7.3,1.4,95.9,2.7
2010lightheavydutytruck,1.1,0.0,81.8,18.2
2010lightheavytwo,0.3,0.0,66.7,33.3
2010mediumheavydutytruck,1.0,0.0,20.0,80.0
2010heavyheavydutytruck,0.9,0.0,11.1,88.9
2010linehaul,0.0,0.0,0.0,100.0
2010urbanbus,0.2,0.0,50.0,50.0
2010motorcycle,1.6,68.8,31.2,0.0
2010schoolbus,0.1,0.0,0.0,100.0
2010motorhome,1.4,7.1,85.7,7.2
2015lightdutyauto,54.4,0.4,99.4,0.2
2015lightdutytruck,15.3,0.7,98.0,1.3
2015lighttrucktwo,16.4,0.6,98.8,0.6
2015mediumdutytruck,7.3,0.0,98.6,1.4
2015lightheavydutytruck,1.1,0.0,81.8,18.2
2015lightheavytwo,0.3,0.0,66.7,33.3
2015mediumheavydutytruck,1.0,0.0,20.0,80.0
2015heavyheavydutytruck,0.8,0.0,0.0,100.0
2015linehaul,0.0,0.0,0.0,100.0
2015urbanbus,0.2,0.0,50.0,50.0
2015motorcycle,1.6,50.0,50.0,0.0
2015schoolbus,0.1,0.0,0.0,100.0
2015motorhome,1.5,0.0,93.3,6.7
2020lightdutyauto,54.4,0.4,99.4,0.2
2020lightdutytruck,15.3,0.7,98.0,1.3
2020lighttrucktwo,16.4,0.6,98.8,0.6
2020mediumdutytruck,7.3,0.0,98.6,1.4
2020lightheavydutytruck,1.1,0.0,81.8,18.2
2020lightheavytwo,0.3,0.0,66.7,33.3
2020mediumheavydutytruck,1.0,0.0,20.0,80.0
2020heavyheavydutytruck,0.8,0.0,0.0,100.0
2020linehaul,0.0,0.0,0.0,100.0
2020urbanbus,0.2,0.0,50.0,50.0
2020motorcycle,1.6,50.0,50.0,0.0
2020schoolbus,0.1,0.0,0.0,100.0
2020motorhome,1.5,0.0,93.3,6.7
2025lightdutyauto,53.5,0.0,100.0,0.0
2025lightdutytruck,15.7,0.0,99.4,0.6
2025lighttrucktwo,16.5,0.0,100.0,0.0

2025mediumdutytruck,7.5,0.0,98.7,1.3
2025lightheavydutytruck,1.0,0.0,80.0,20.0
2025lightheavytwo,0.3,0.0,66.7,33.3
2025mediumheavydutytruck,0.9,0.0,22.2,77.8
2025heavyheavydutytruck,0.8,0.0,0.0,100.0
2025linehaul,0.0,0.0,0.0,100.0
2025urbanbus,0.2,0.0,50.0,50.0
2025motorcycle,1.5,40.0,60.0,0.0
2025schoolbus,0.1,0.0,0.0,100.0
2025motorhome,2.0,0.0,90.0,10.0
2030lightdutyauto,52.5,0.0,100.0,0.0
2030lightdutytruck,15.9,0.0,100.0,0.0
2030lighttrucktwo,16.7,0.0,100.0,0.0
2030mediumdutytruck,7.6,0.0,100.0,0.0
2030lightheavydutytruck,1.0,0.0,80.0,20.0
2030lightheavytwo,0.3,0.0,66.7,33.3
2030mediumheavydutytruck,0.9,0.0,22.2,77.8
2030heavyheavydutytruck,0.7,0.0,0.0,100.0
2030linehaul,0.0,0.0,0.0,100.0
2030urbanbus,0.2,0.0,50.0,50.0
2030motorcycle,1.5,33.3,66.7,0.0
2030schoolbus,0.1,0.0,0.0,100.0
2030motorhome,2.6,0.0,92.3,7.7
2035lightdutyauto,51.2,0.0,100.0,0.0
2035lightdutytruck,16.2,0.0,100.0,0.0
2035lighttrucktwo,17.0,0.0,100.0,0.0
2035mediumdutytruck,7.7,0.0,100.0,0.0
2035lightheavydutytruck,0.9,0.0,77.8,22.2
2035lightheavytwo,0.3,0.0,66.7,33.3
2035mediumheavydutytruck,0.9,0.0,22.2,77.8
2035heavyheavydutytruck,0.7,0.0,0.0,100.0
2035linehaul,0.0,0.0,0.0,100.0
2035urbanbus,0.2,0.0,50.0,50.0
2035motorcycle,1.7,35.3,64.7,0.0
2035schoolbus,0.1,0.0,0.0,100.0
2035motorhome,3.1,0.0,90.3,9.7
2040lightdutyauto,49.9,0.0,100.0,0.0
2040lightdutytruck,16.4,0.0,100.0,0.0
2040lighttrucktwo,17.2,0.0,100.0,0.0
2040mediumdutytruck,7.8,0.0,100.0,0.0
2040lightheavydutytruck,0.9,0.0,77.8,22.2
2040lightheavytwo,0.3,0.0,66.7,33.3
2040mediumheavydutytruck,0.8,0.0,25.0,75.0
2040heavyheavydutytruck,0.7,0.0,0.0,100.0
2040linehaul,0.0,0.0,0.0,100.0
2040urbanbus,0.2,0.0,50.0,50.0
2040motorcycle,2.0,35.0,65.0,0.0
2040schoolbus,0.1,0.0,0.0,100.0

2040motorhome,3.7,0.0,91.9,8.1
YEARSEAS.TMP
yearseason,2006,summer
HOTCOLD.TMP
ambient, 50, 3, 90, 8
TRIPCHAR.TMP
homebasedwork,35, 8,20.0,11.5,11.5
homebasedshop,40, 9,37.0,4.87,4.87
homebasedother,40, 9,43.0,6.02,6.02
commercialbasedcommute,40, 9,10.3,10.3
commercialbasednonwork,40, 9,5.5,5.5
commercialbasedcustomer,40, 9,5.5,5.5
DOUBLECT.TMP
doublecount,0,1
input,,,,
project,0,,0,0,0,,0,0,0,,0,0
VARYSTRT.TMP
0.7,1.0,1.4,2.2,2.6,2.8,2.2,2.6,6.2,8.9,8.6,8.6,8.7,8.7,8.7,8.7,8.7,8.7
3.3,9.5,14.4,18.3,12.2,7.5,4.2,3.6,3.7,2.1,2.6,2.6,2.6,2.6,2.7,2.7,2.7,2.7
6.1,7.6,7.8,7.2,7.0,7.9,6.2,6.6,7.2,4.9,4.0,4.0,4.0,3.9,3.9,3.9,3.9,3.9
2.6,5.0,3.7,4.2,4.7,3.7,3.0,3.3,8.5,10.8,6.3,6.3,6.3,6.3,6.3,6.3,6.3,6.4
5.8,11.3,7.3,7.4,7.7,5.5,4.4,4.4,12.1,13.9,2.5,2.5,2.5,2.5,2.5,2.5,2.5,2.7
9.3,14.7,13.2,14.0,6.7,7.1,5.1,4.5,8.8,6.4,1.2,1.2,1.3,1.3,1.3,1.3,1.3,1.3
ROADDUST.TMP
pavedunpaved,100,0
siltloading,0.1
vehicleweight,2.2
EPA, 0
silt,4.3
speed,40
rain, 0.5
CALIFORNIA,-1,2.27
VEHMIT.TMP
mobile1, both
environ1, nodefault
environ2, Side Walks/Paths: No Sidewalks, 0
Street Trees Provide Shade: No Coverage, 0
Pedestrian Circulation Access: No Destinations, 0
Visually Interesting Uses: No Uses Within Walking Distance, 0
environ3, Street System Enhances Safety: No Streets, 0
Pedestrian Safety from Crime: No Degree of Safety, 0
Visually Interesting Walking Routes: No Visual Interest, 0
environ4, Transit Service: Dial-A-Ride or No Transit Service, 0
environ5, Interconnected Bikeways: No Bikeway Coverage,0
Bike Routes Provide Paved Shoulders: No Routes, 0
Safe Vehicle Speed Limits: No Routes Provided, 0.0
environ6, Safe School Routes: No Schools, 0
Uses w/in Cycling Distance: No Uses w/in Cycling Distance, 0

Bike Parking Ordinance: No Ordinance or Unenforceable, 0
totals,pedestrian,0.0,transit,0.0,bicycle,0.0
1,mitigat1, Credit for Existing or Planned Community Transit Service,15
0,Project Density Meets Transit Level of Service Requirements,6
0,Provide Transit Shelters Benches,2
0,Provide Street Lighting,0.5
0,Provide Route Signs and Displays,0.5
0,Provide Bus Turnouts,1
0,Name:,1
0,Name:,1
1,mitigat2, Credit for Surrounding Pedestrian Environment,2
0,Mixed Use Project (Residential Oriented),3
0,Provide Sidewalks and/or Pedestrian Paths,1
0,Provide Direct Pedestrian Connections,1
0,Provide Pedestrian Safety,0.5
0,Provide Street Furniture,0.5
0,Provide Street Lighting,0.5
0,Provide Pedestrian Signalization and Signage,0.5
0,Name:,0.5
0,,0.5
1,mitigat3, Credit for Surrounding Pedestrian Environment,2
0,Mixed Use Project (Commercial Oriented),1
0,Floor Area Ratio 0.75 or Greater,1
0,Provide Wide Sidewalks and Onsite Pedestrian Facilities,1
0,Project Uses Parking Structures/Small Dispersed Lots,1
0,Provide Street Lighting,0.5
0,Project Provides Shade Trees to Shade Sidewalks,0.5
0,Project Provides Street Art and/or Street Furniture,0.5
0,Project Uses Zero Bldg. Setback with Entrance on Street,0.5
0,Provide Pedestrian Safety Designs/Infrastructure at Crossings,0.5
0,Articulated Storefront(s) Display Windows with Visual Interest,0.25
0,No Long Uninterrupted Walls Along Pedestrian Walkways,0.25
0,Name:,0.5
0,Name:,0.5
1,mitigat4, Credit for Surrounding Bicycle Environment,7
0,Provide Bike Lanes/Paths Connecting to Bikeway System,2
0,Name:,1
0,Name:,1
1,mitigat5, Credit for Surrounding Area Bike Environment,5
0,Provide Bike Lanes/Paths Connecting to Bikeway System,2
0,Provide Securre Bicycle Parking,1
0,Provide Employee Lockers and Showers,1
0,Name:,1
0,Name:,1
0, No Charge for Employee Parking, 0
0,Shuttle Bus Service to Transit/Multi-Modal Center,2
0,Preferential Carpool/Vanpool Parking,1.5
0,Parking Limited (below minimum),1

0,Employee Rideshare Incentive Program,1
0,Day Care Center Onsite or Within 1/2 Mile,1
0,Employee Telecommuting Program,, 0
0,Compressed Work Schedule 3/36,, 0
0,Compressed Work Schedule 4/40,, 0
0,Compressed Work Schedule 9/80,, 0
0,Name:,
0,mitop3, Lunch/Shopping Shuttle Service,1.5
0, No Onsite Shops or Services Provided, 0
0,Name:,1
0,Name:,1
0, No Charge for Customer Parking, 0
0,Name:,1
0,Name:,1
1,mitop5, Park and Ride Lots,,0
0,Satellite Telecommuting Center,,0
0,Name:,
0,Name:,
0,mitop6, Park and Ride Lots,,0
0,Satellite Telecommuting Center,,0
0,Name:,
0,Name:,
0.0,0.0,0.0,15.000,2.00,2.00,7.00,5.00,0.0,0.0,0.0,0.0,0.0,0.0
CONST.TMP
constdata,0,1,1,1,1,1,0,0,0
constpart,2003,22,12,6,0,5
constdef,0.6,1.2,10.2,2.8,10.2,12,1,12.5,0.5
constuser,0.6,1.2,10.2,2.8,10.2,12,1,12.5,0.5
DEMO.TMP
demodust,,,,,,,20,30
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, , 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks, , 417, 0.49, 8.0
otherequipment, , 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0
roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0

skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, , 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
SITEACRE.TMP
siteacre, 0, 0, 1, 0, 0, 0
level1,10
level2,0,0
level3,0,0,0
level4,0,0,0
soilhauling,0,0,20,20
SITEGRAD.TMP
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, , 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks, , 417, 0.49, 8.0
otherequipment, , 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0
roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0
skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, , 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
BUILDINGEQUIP.TMP
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, , 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks, , 417, 0.49, 8.0
otherequipment, , 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0

roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0
skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, , 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
PAINT.TMP
paintdata,0.0185,1,2.7,0.0185,1,2.0
ASPHALT.TMP
asphaltdata,0,2.62
truckhaul,20,30
borehaulrigs, ,218,0.75,8.0
concretesaws, , 84,0.73, 8.0
cranes, , 190, 0.43, 8.0
crawlertractors, , 143, 0.575, 8.0
crushingequip, , 154, 0.78, 8.0
excavators, , 180, 0.58, 8.0
graders, , 174, 0.575, 8.0
offhighwaytractors, , 255, 0.41, 8.0
offhighwaytrucks, , 417, 0.49, 8.0
otherequipment, , 190, 0.62, 8.0
pavers, , 132, 0.59, 8.0
pavingequipt, , 111, 0.53, 8.0
rollers, , 114, 0.43, 8.0
roughforklifts, , 94, 0.475, 8.0
rubberdozers, , 352, 0.59, 8.0
rubberloaders, , 165, 0.465, 8.0
scrapers, , 313, 0.66, 8.0
signalboards, , 119, 0.82, 8.0
skidsteerloaders, , 62, 0.515, 8.0
surfacingequip, , 437, 0.49, 8.0
tractors, , 79, 0.465, 8.0
trenchers, , 82, 0.695, 8.0
WORKER.TMP
workerdata,0.36,0.72,0.32,0.42,10
MITCON.TMP
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,2
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,2
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation,90.0,40.0,85.0,90.0,0.0,2
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,2
0,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,2
0,On-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,3
0,On-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,3
0,On-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,3
0,On-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,3

0,On-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,3
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,4
0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,2
0,On-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,3
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,4
0,Soil Disturbance,Apply soil stabilizers to inactive areas,0.0,0.0,30.0,0.0,0.0,5
0,Soil Disturbance,Replace ground cover in disturbed areas quickly,0.0,0.0,15.0,0.0,0.0,5
0,Soil Disturbance,Water exposed surfaces - 2x daily,0.0,0.0,34.0,0.0,0.0,5
0,Soil Disturbance,Water exposed surfaces - 3x daily,0.0,0.0,50.0,0.0,0.0,5
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,6
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,6
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,6
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,6
0,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,6
0,On-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,7
0,On-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,7
0,On-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,7
0,On-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,7
0,On-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,7
0,Stockpiles,Cover all stock piles with tarps,0.0,0.0,9.5,0.0,0.0,5
0,Unpaved Roads,Water all haul roads 2x daily,0.0,0.0,3.0,0.0,0.0,5
0,Unpaved Roads,Water all haul roads 3x daily,0.0,0.0,45.0,0.0,0.0,5
0,Unpaved Roads,Pave all haul roads,0.0,0.0,92.5,0.0,0.0,5
0,Unpaved Roads,Reduce speed on unpaved roads to < 15 mph ,0.0,0.0,40.0,0.0,0.0,5
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,8
0,Soil Disturbance,,0.0,0.0,0.0,0.0,0.0,5
0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,6
0,On-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,7
0,Unpaved Roads,,0.0,0.0,0.0,0.0,0.0,5
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,8
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,9
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,9
0,Off-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,14
0,Off-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,14
0,Off-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,14
0,Off-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,14
0,Off-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,14
0,On-Road Diesel Exhaust,Use aqueous diesel fuel ,0.0,14.0,63.0,0.0,0.0,15
0,On-Road Diesel Exhaust,Use diesel particulate filter,0.0,0.0,80.0,0.0,0.0,15
0,On-Road Diesel Exhaust,Use cooled exhaust gas recirculation(EGR),90.0,40.0,85.0,90.0,0.0,15
0,On-Road Diesel Exhaust,Use lean-NOx catalyst,0.0,20.0,0.0,0.0,0.0,15
0,On-Road Diesel Exhaust,Use diesel oxidation catalyst,0.0,20.0,0.0,0.0,0.0,15
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,10
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,12
0,Worker Trips,Use shuttle to retail establishments @lunch,1.0,1.3,1.3,1.3,1.3,16

0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,9
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,10
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,12
0,Offgassing,,0.0,0.0,0.0,0.0,0.0,13
0,Off-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,14
0,On-Road Diesel Exhaust,,0.0,0.0,0.0,0.0,0.0,15
0,Worker Trips,,0.0,0.0,0.0,0.0,0.0,16
0,Offgassing,,0.0,0.0,0.0,0.0,0.0,11
AREA.TMP
1, 1, 1, 1, 1, 0
NATGAS.TMP
natgasdata,40,7.26,94,100,0.18,6665.0,4011.5,241611,4.8,2.9,2.0,60,100
STOVE.TMP
noncatalytic,70.4,7.5,9.8,1.4,50, 0.2
catalytic,52.2,7.8,10.2,1.0,50, 0.2
conventional,115.4,21.9,15.3,1.4,0, 0.2
pellet,19.7,0.01,2.1,6.9,0, 0.2
woodburned/residentialunits,1.48,35
FIREP.TMP
fireplace,252.6,229.0,2.6,34.6,1.48,10, 0.4
LANDSCAP.TMP
landscape,180,2004
CONSUME.TMP
consumerproducts,0.0171,2.861
AMITAREA.TMP
0, Solar Water Heaters, Rsdntl Water Heat., 0, 11, 9.5, 4.5, 10, 0
0, Central Water Heater, Rsdntl Space Heat., 1, 9, 8, 4, 8.5, 0
0, Orient Buildings North/South, Rsdntl Space Heat., 2, 14, 13, 4, 8.5, 0
0, Increase Insulation Beyond Title 24, Rsdntl Space Heat., 3, 14, 13, 7.4, 13, 0
0, All Electric Landscape Maintenance Equipment, Rsdntl Lndscp Maint., 4, 100, 100, 100, 100,100
0, Solar Water Heaters, Cmrcl Water Heat., 5, 0.5, 0.5, 0.5, 0.5, 0.5
0, Central Water Heater, Cmrcl Space Heat., 6, 0.5, 0.5, 0.5, 0.5, 0.5
0, Orient Buildings North/South, Cmrcl Space Heat., 7, 11, 13.5, 17.5, 12.5, 0
0, Increase Insulation Beyond Title 24, Cmrcl Space Heat., 8, 10, 9, 7, 9.5, 0
0, All Electric Landscape Maintenance Equipment, Cmrcl Lndscp Maint., 9, 100, 100, 100, 100,100
0, Orient Buildings North/South, Industrial Heat., 10, 2, 3, 2.5, 5.5, 0

0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
0,,Rsdntl Water Heat., 0,,,,,
RESIDENTIAL WATER: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0

RESIDENTIAL HEAT: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
RESIDENTIAL LAND: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
COMMERCIAL WATER: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
COMMERCIAL HEAT: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
COMMERCIAL LAND: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
INDUSTRIAL HEAT: ROG/NOX/PM10/CO/SOX, 0, 0, 0, 0, 0
DEFFILE.TMP
MC, CARBON
NCC, MONOXIDE
SC, OXIDES
SDC, NITROGEN
SFBA, PM10
SJV, CLEANAIR
SLOC, POLLUTE
SBC, OZONE
SCAB, ROG
VC, TOXICS
DEFAULT, DEFAULT

Appendix B
TRAFFIC STUDY

WARNER CENTER
METRO PARK-AND-RIDE PROJECT
CITY OF LOS ANGELES

TRAFFIC IMPACT ANALYSIS
— ADDENDUM STUDY —

JUNE 4, 2004

Prepared for:

Ultrasystems

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June 4, 2004

Mr. Kendall Jue
Ultrasystems
100 Pacifica, Suite 250
Irvine, CA 92618

SUBJECT: WARNER CENTER METRO PARK-AND-RIDE FACILITY - TRAFFIC STUDY ADDENDUM

Dear Mr. Jue:

This traffic report is an addendum to the ***"Warner Center MTA Park-and-Ride Facility, City of Los Angeles, Traffic Impact Analysis"***, prepared by *Willdan*, dated November 17, 2003. The previously completed study examined the potential traffic impacts of a proposed park-and-ride facility upon three alternative sites in the Warner Center area of Los Angeles. One of the sites under consideration for the proposed Warner Center park-and-ride facility was the Boeing property, a triangular parcel of land located on the east side of Canoga Avenue, just south of Vanowen Street.

This addendum study focuses on the potential traffic impacts related to developing the proposed Metropolitan Transportation Authority (Metro) park-and-ride facility on the Boeing site (east of Canoga Avenue, south of Vanowen Street). Another part of this proposed Metro park-and-ride project is the development of a satellite parking lot on the Metro-owned land located on the east side of Canoga Avenue, just north of Vanowen Street. Traffic factors related to both the proposed park-and-ride facility and the satellite parking lot would be summarized in this addendum report. The analyses contained in this addendum study are based upon information provided by you and Metro representatives,

contact with the City of Los Angeles Department of Transportation (LADOT) Staff, a previously completed study for the San Fernando Valley East-West Transit Corridor[1], field studies conducted by our staff, and standard reference materials.

PROJECT DESCRIPTION

The project proposed by Metro consists of developing a park-and-ride facility on the Boeing property in the Warner Center area of the City of Los Angeles. The Boeing property is a triangular parcel located on the east side of Canoga Avenue, just south of Vanowen Street. Also included as a part of this proposed project is the development of a satellite parking lot on Metro-owned land located on the northeast corner of Canoga Avenue / Vanowen Street. This proposed lot would serve as additional parking for the park-and-ride patrons. ***Figure 1*** illustrates the project site location in relationship to the surrounding street system. The park-and-ride facility on the Boeing site would have 662 parking spaces, while the satellite parking lot would contain 236 parking spaces, for a total of 898 parking spaces to serve the park-and-ride operations. The Opening Day for this proposed park-and-ride facility is anticipated for Year 2005.

The proposed park-and-ride facility on the Boeing property would be located on the west side of the San Fernando Valley East-West Bus Rapid Transit (BRT) Corridor [the Metro right-of-way (R.O.W.)]. The patrons of this proposed park-and-ride facility would utilize the BRT service, which would include stops / layovers at the Warner Center Transit Hub (located on Owensmouth Avenue, across from the Promenade Mall). Buses related to this proposed project would enter and exit the street system from the Metro R.O.W. through the Boeing site only. The patrons parking in the satellite parking lot would need to walk to the Boeing site (cross Vanowen Street) to board the buses.

A total of seven access points are planned for the Warner Center park-and-ride project: five driveways would serve the park-and-ride facility on the Boeing site and the satellite

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[1] *"San Fernando Valley East-West Transit Corridor EIS/EIR"; Chapter 3 - "Transportation Setting, Impacts, and Mitigation"; Los Angeles County Metropolitan Transportation Authority (Metro)*; February, 2002.

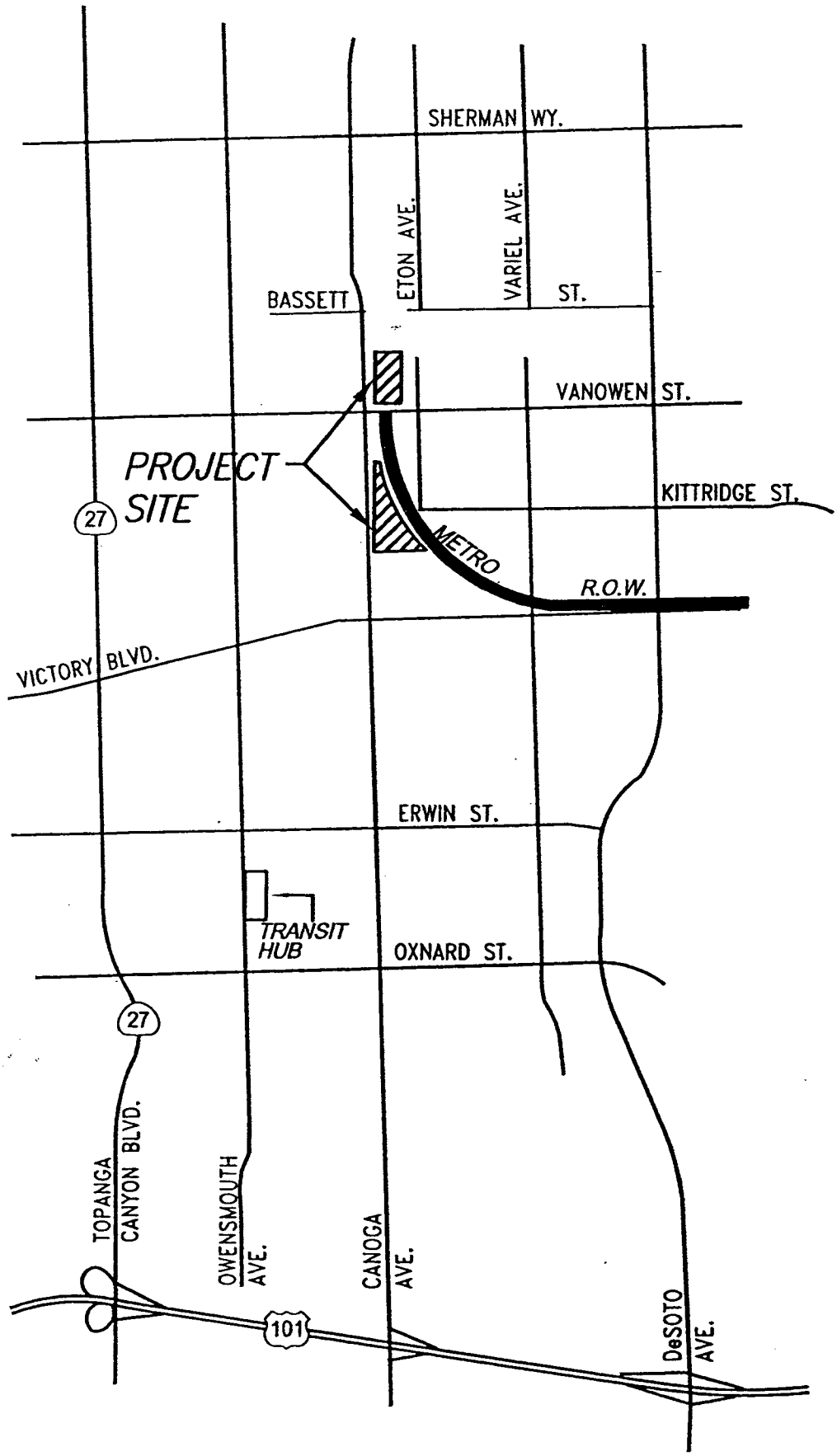

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FIGURE 1

Warner Center Park-And-Ride

parking lot would have two driveways. For the park-and-ride facility (on the Boeing property), four access points are proposed on Canoga Avenue. Full access would be provided at the currently signalized Canoga Avenue / Rocketdyne Access intersection (by adding the westbound approach to this intersection). The southernmost driveway on Canoga Avenue is proposed to be signalized and would provide access for buses only (right turns in / left turns out). The two remaining driveways to serve the park-and-ride facility (Boeing site) on Canoga Avenue would be unsignalized: one driveway would be located north of the Canoga / Rocketdyne intersection and one driveway would be south of this intersection, both providing right turn in and out only access. A right turn in and out only driveway on Vanowen Street, just east of Canoga Avenue is also proposed for the park-and-ride facility (Boeing site). Access to the satellite parking lot would be provided via one driveway on Canoga Avenue (north of Vanowen Street) and one driveway on Vanowen Street (easterly of Canoga Avenue). Both access points to the satellite parking lot are planned to be unsignalized. At the Canoga Avenue driveway to the satellite parking lot, it is proposed that left and right turns in and right turns out only be allowed at this access point; left turns out of this driveway should be prohibited, due to the close proximity of this driveway to the intersection of Canoga / Vanowen. The Vanowen Street driveway to the satellite parking lot would be restricted to right turns in and out only. The project site plan and access locations are shown on ***Figure 2***.

EXISTING (YEAR 2004) CONDITIONS

Canoga Avenue is a north-south roadway through the Warner Center area, which currently provides four lanes of travel adjacent to the proposed project site (both north and south of Vanowen Street). Vanowen Street runs in an east-west direction and is a four-lane roadway in the project area. The Boeing property planned for the proposed Metro park-and-ride facility (east side of Canoga Avenue, just south of Vanowen Street) is currently non-operational. The Metro-owned land proposed for the satellite parking lot (northeast corner of Canoga Avenue / Vanowen Street) is currently undeveloped. The Boeing site has two existing access points on Canoga Avenue which would be utilized for the proposed park-and-ride facility. The existing Canoga / Rocketdyne Access intersection, which would be a primary access point for the proposed park-and-ride project with the addition of the

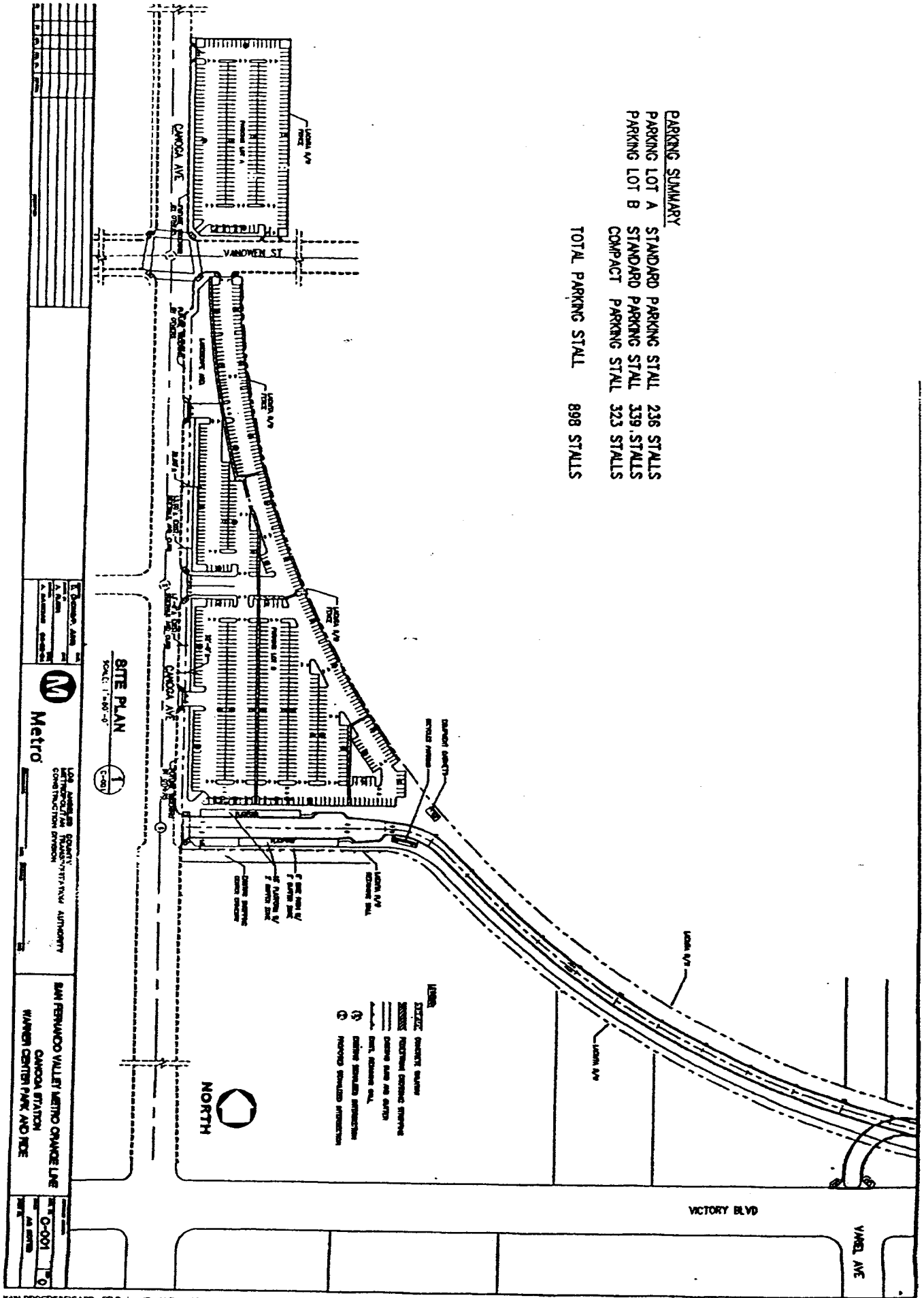

FIGURE 2

3 # 12999

westbound approach, is currently controlled by a two-phase traffic signal. The remaining five access locations for the proposed project currently do not exist.

Existing (Year 2004) Intersection Volumes and Geometrics

Contact was made with the City of Los Angeles Department of Transportation (LADOT) Staff and it was determined, during the scoping process, that only the access points for the proposed park-and-ride project would need to be analyzed in this traffic study addendum. The access locations / intersections examined in this addendum report are listed below.

— PARK-AND-RIDE FACILITY (BOEING SITE) — East of Canoga Ave. - South of Vanowen St.	
SIGNALIZED:	***UNSIGNALIZED:***
Canoga Avenue / Rocketdyne Access	**Canoga Avenue / Northerly Driveway *** (north of Rocketdyne)**
Canoga Avenue / Bus Access Driveway ***	**Canoga Avenue / Southerly Driveway *** (south of Rocketdyne)**
	Vanowen Street / Park-and-Ride Driveway ***
— SATELLITE PARKING LOT — Northeast Corner of Canoga / Vanowen	
SIGNALIZED:	***UNSIGNALIZED:***
	Canoga Avenue / Satellite Parking Driveway ***
	Vanowen Street / Satellite Parking Driveway ***
*** It should be noted that these intersections would only operate with the development of the proposed park-and-ride project; therefore, these locations are only analyzed under "With Project" conditions.	

Existing counts in the project vicinity were previously conducted for use in the original traffic study for the Warner Center park-and-ride project[2]. These counts were performed in

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2 *"Warner Center MTA Park-and-Ride Facility, City of Los Angeles, Traffic Impact Analysis"*, *Willdan*; November 17, 2003.

October 2003 by *The Traffic Solution*, a traffic counting firm, and are again utilized in this addendum study. An existing AM (7:00 - 10:00 AM) and PM (3:00 - 6:00 PM) peak hour traffic count was previously conducted at the signalized study intersection of Canoga Avenue / Rocketdyne Access. It should be noted that the existing AM and PM peak hour through movement volumes at the study intersection of Canoga Avenue / Northerly Driveway were obtained from this count data at Canoga / Rocketdyne. Also, a twenty-four (24) hour directional count was previously performed on Canoga Avenue, southerly of the Rocketdyne Access intersection. This count data was utilized to obtain the existing AM and PM peak hour through movements for the Canoga Avenue / Southerly Driveway and Canoga Avenue / Bus Access Driveway study intersections. LADOT Staff provided us with their most recent count data (Year 2002) at the Canoga Avenue / Vanowen Street intersection, which was used to determine the existing AM and PM peak hour through movement traffic volumes at the remaining study intersections (Canoga Avenue / Satellite Parking Driveway, Vanowen Street / Park-and-Ride Driveway and Vanowen Street / Satellite Parking Driveway). All of the existing count data utilized in this addendum study can be referenced in ***Appendix A***.

In order to obtain Existing (Year 2004) volumes to be utilized in the intersection analyses for this addendum study, a growth factor (1.5 percent per year) was applied to the available existing count data at the study intersections. The resulting Existing (Year 2004) AM and PM peak hour volumes at the study access locations / intersections are illustrated on ***Figure 3***. ***Figure 4*** presents the Existing (Year 2004) intersection geometrics and controls at each of the study access locations.

It should be noted that the signalized Canoga / Rocketdyne intersection is the only study location which is currently operating under Existing (Year 2004) conditions. The remaining study access locations / intersections would only operate with the development of the proposed park-and-ride project; therefore, these intersections are only analyzed under "With Project" conditions in this addendum study.

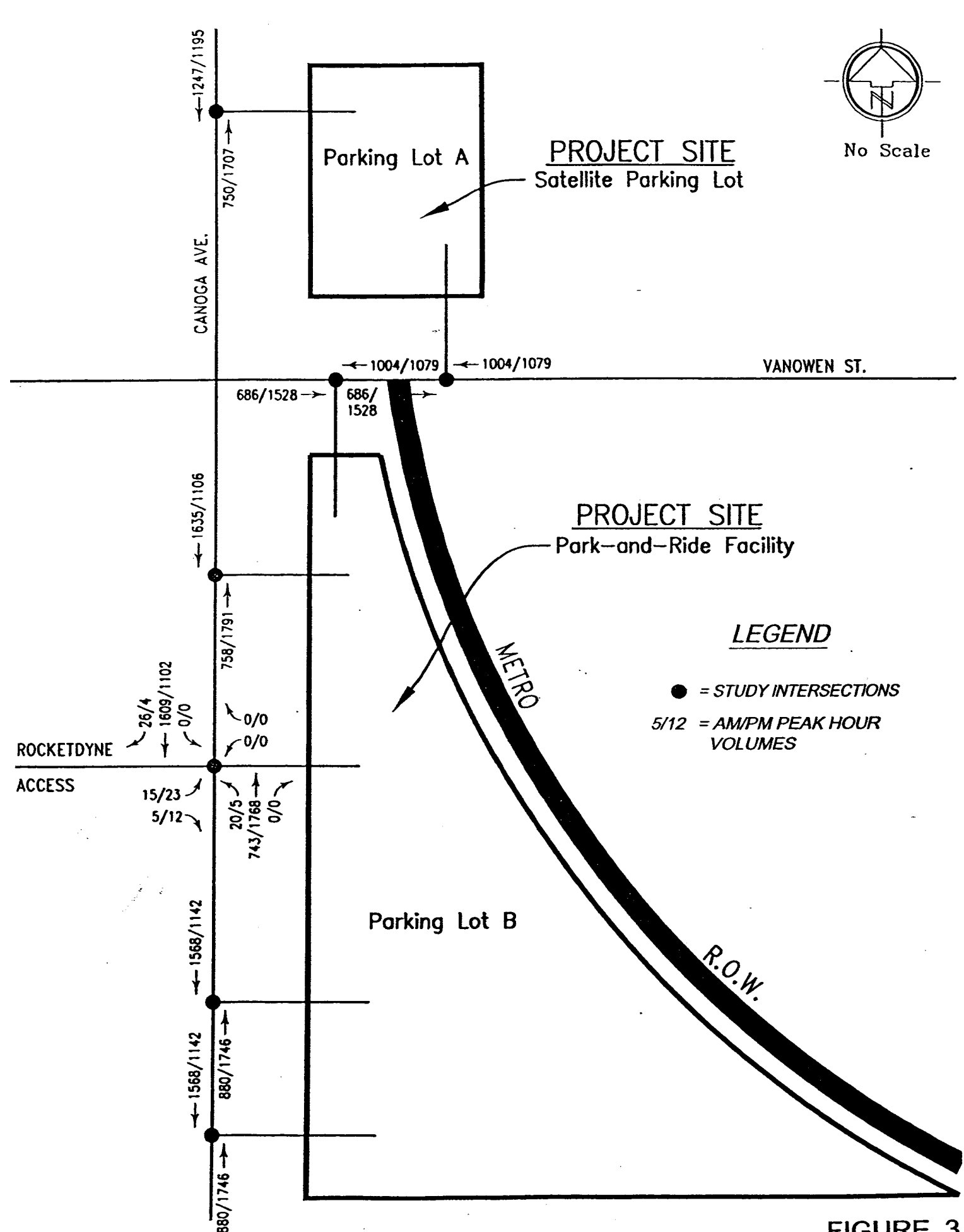

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FIGURE 3
Existing (Year 2004)

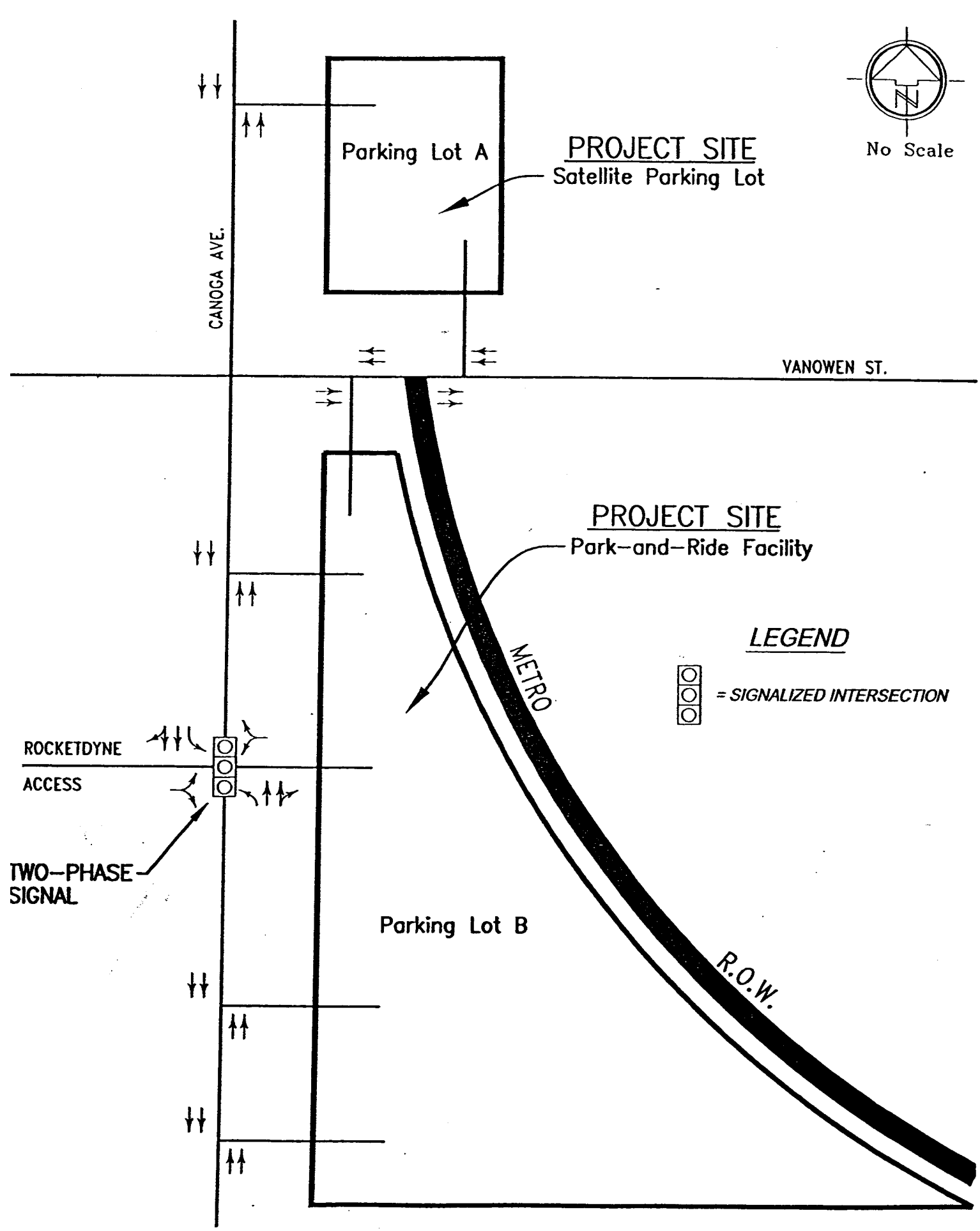

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FIGURE 4
Existing (Year 2004)

Intersection Analyses - Existing (Year 2004) Conditions

The City of Los Angeles Department of Transportation (LADOT) requires the use of the Critical Movement Analysis (CMA) methodology to evaluate signalized intersection operations. The CMA methodology describes intersection impacts in terms of a "sum of critical volumes". The "sum" is then related to a Level of Service (LOS), which ranges from "A" (the best) to "F" (the worst). It is generally recognized that LOS A through D represent acceptable operations, while LOS E and F indicate over capacity operations. ***Table 1*** lists the correlation between the sum of the critical volumes and the Levels of Service. Descriptions of the various Levels of Service are contained in ***Appendix B***.

For the unsignalized study intersections, the Highway Capacity Manual software (HCS 2000) is utilized to analyze intersection operations. In these intersection analyses procedures, the operating conditions are defined in terms of Levels of Service (LOS). The Levels of Service are described as letter "grades", which are associated with vehicle delay times, where "A" is considered the best and "F" is over capacity. As within the CMA procedures, LOS A through D represent acceptable intersection operations, while LOS E and F indicate an over capacity situation. ***Appendix C*** contains an explanation of Level of Service as it relates to vehicle delay for the HCS 2000 analyses.

In this traffic study addendum, utilizing the CMA methodology, the Existing (Year 2004) intersection count data was combined with the Existing (Year 2004) intersection geometric data to determine the critical movements at the signalized study intersection of Canoga Avenue / Rocketdyne Access. The sum of the critical movements at this intersection was then compared to ***Table 1*** (previously presented) for the traffic signal phasing which presently exists (two-phase signal currently at Canoga / Rocketdyne). The CMA worksheets were completed for the signalized study intersection and can be found in ***Appendix D***. It should be noted that LADOT has specified that a volume-to-capacity (V/C) credit of 0.07 may be taken at intersections which currently have "Automated Traffic Surveillance and Control" (ATSAC) traffic signal operations installed. Also, intersections which have been upgraded to include "Adaptable Traffic Control System" (ATCS) operations may take an additional V/C credit of 0.03. Contact with LADOT Staff has

TABLE 1

SUM OF CRITICAL VOLUMES / LEVEL OF SERVICE (LOS) RELATIONSHIP

Warner Center Metro Park-and-Ride Facility With Satellite Parking

LEVEL OF SERVICE	MAXIMUM SUM OF CRITICAL VOLUMES		
	TWO PHASES	THREE PHASES	FOUR OR MORE PHASES
A	900	855	825
B	1050	1000	965
C	1200	1140	1100
D	1350	1275	1225
E	1500	1425	1375
F	— NOT APPLICABLE —		

)URCE: *"Critical Movement Analysis (CMA), Planning Applications"*; *Transportation Research Circular, Number 212*; *Transportation Research Board (TRB)*; January, 1980.

indicated that the signalized study intersection of Canoga Avenue / Rocketdyne Access in the Warner Center area currently has the ATSAC traffic signal operations installed, but not the ATCS. Therefore, a V/C credit of 0.07 has been taken at the existing signalized study intersection of Canoga / Rocketdyne, as identified in the CMA worksheets in ***Appendix D***.

Tables 2A and 2B summarize the results of the intersection analyses under the Existing (Year 2004) conditions during the AM and PM peak hours at both the proposed park-and-ride facility (Boeing site) and at the satellite parking lot site, respectively. As shown in ***Table 2A***, the existing signalized intersection of Canoga Avenue / Rocketdyne Access is currently operating acceptably (at Level of Service A) during both the AM and PM peak hours. The supporting CMA analyses worksheets are available in ***Appendix D***. Also, as previously noted and shown in ***Tables 2A and 2B***, the remaining six study access locations / intersections would only be analyzed under "With Project" conditions, since they do not exist (operate) without the development of the proposed park-and-ride project.

OPENING DAY (YEAR 2005) WITHOUT PROJECT CONDITIONS

Based upon LADOT guidelines, it was indicated that these addendum traffic analyses for the proposed Metro park-and-ride project in Warner Center should include evaluation of the study access locations / intersections under Opening Day conditions (for the proposed project), both without and with the development of the proposed park-and-ride facility and satellite parking lot. The Opening Day Without Project conditions reflect existing (Year 2004) traffic volumes, plus ambient growth in the area (up to the proposed project's Opening Day), plus other area projects traffic volumes. It should be noted that no other area projects in this specific study area were identified to be included in this traffic study.

Ambient Growth of Study Area

The proposed Metro park-and-ride facility and satellite parking lot are anticipated to be fully built and operational in the Year 2005 (in approximately 1.5 years). The Existing (Year 2004) AM and PM peak hour traffic volumes at the study intersections were then projected to the future Year 2005. A growth rate of 1.5 percent per year was identified for the Warner Center area during the scoping process with LADOT and was utilized in these

INTERSECTION ANALYSES SUMMARY - OPENING DAY (YEAR 2005) CONDITIONS

Warner Center Metro Park-and-Ride Facility With Satellite Parking

INTERSECTIONS	LEVEL OF SERVICE (LOS)[1]					
	EXISTING (YEAR 2004) CONDITIONS		OPENING DAY (YEAR 2005) WITHOUT PROJECT CONDITIONS		OPENING DAY (YEAR 2005) WITH PROJECT CONDITIONS	
	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
PARK-AND-RIDE FACILITY - EAST OF CANOGA AVENUE ; SOUTH OF VANOWEN STREET						
SIGNALIZED INTERSECTIONS:						
Canoga Avenue / Rocketdyne	0.502 / A	0.543 / A	0.514 / A	0.557 / A	0.566 / A	0.727 / C
Canoga Avenue / Bus Access Driveway	NA	NA	NA	NA	0.577 / A	0.648 / B
UNSIGNALIZED INTERSECTIONS:						
Canoga Avenue / Northerly Driveway (North of Rocketdyne)	NA	NA	NA	NA	11.6 / B	23.5 / C
Canoga Avenue / Southerly Driveway (South of Rocketdyne)	NA	NA	NA	NA	13.1 / B	22.4 / C
Vanowen Street / Park-and-Ride Driveway	NA	NA	NA	NA	10.9 / B	18.2 / C

Note: **Bolded values** represent unacceptable intersection operations (Levels of Service E or F). The *"San Fernando Valley East-West Transit Corridor EIS/EIR"* (*Chapter 3 - "Transportation Setting, Impacts, and Mitigation"*) previously defined a threshold to determine when a project impact is significant. As referenced in the ***"San Fernando Valley East-West Transit Corridor EIS/EIR"***, *"an intersection is considered to be adversely affected if project traffic is projected to cause a deterioration in Level of Service to E and/or worse, or results in the average vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions."*

(1) The signalized intersections were analyzed utilizing the Critical Movement Analysis (CMA) methodology, which results in a volume / capacity ratio; while the unsignalized intersections were analyzed with the Highway Capacity software (HCS 2000), which results in a delay value in seconds.

TABLE 25

INTERSECTION ANALYSES SUMMARY - OPENING DAY (YEAR 2005) CONDITIONS

Warner Center Metro Park-and-Ride Facility With Satellite Parking

INTERSECTIONS	LEVEL OF SERVICE (LOS)					
	EXISTING (YEAR 2004) CONDITIONS		OPENING DAY (YEAR 2005) WITHOUT PROJECT CONDITIONS		OPENING DAY (YEAR 2005) WITH PROJECT CONDITIONS	
	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SATELLITE PARKING LOT → EAST OF CANOGA AVENUE ; NORTH OF VANOWEN STREET						
UNSIGNALIZED INTERSECTIONS:						
Canoga Avenue / Satellite Parking Driveway	NA	NA	NA	NA	11.2 / B	22.0 / C
Vanowen Street / Satellite Parking Driveway	NA	NA	NA	NA	12.8 / B	12.9 / B

Note: **Bolded values** represent unacceptable intersection operations (Levels of Service E or F). The ***"San Fernando Valley East-West Transit Corridor EIS/EIR"*** (*Chapter 3 - "Transportation Setting, Impacts, and Mitigation"*) previously defined a threshold to determine when a project impact is significant. As referenced in the ***"San Fernando Valley East-West Transit Corridor EIS/EIR"***, *"an intersection is considered to be adversely affected if project traffic is projected to cause a deterioration in Level of Service to E and/or worse, or results in the average vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions."*

(1) The unsignalized intersections were analyzed with the Highway Capacity software (HCS 2000), which results in a delay value in seconds.

addendum analyses. Opening Day (Year 2005), pre-project traffic volumes were calculated by applying the growth factor (1.5 percent per year) to the existing intersection volumes, utilizing the equation $(1 + I)^n$; where "i" is the growth factor and "n" is the number of years of growth. These Opening Day Without Project (existing plus growth to Year 2005) volumes account for any general area traffic growth and also include some impacts for any other area projects which are not specifically identified in these addendum traffic analyses. ***Figure 5*** presents the Opening Day (Year 2005) Without Project AM and PM peak hour traffic volumes at the study access locations / intersections.

Intersection Analyses - Opening Day (Year 2005) Without Project Conditions

Utilizing the volumes in ***Figure 5***, the intersection analyses at the study access locations / intersections were recalculated under the Opening Day (Year 2005) Without Project (existing plus growth) conditions. The results of these intersection analyses for the Opening Day (Year 2005) Without Project conditions are summarized in ***Tables 2A and 2B***, presented earlier in this addendum study. As shown in ***Table 2A***, the signalized intersection of Canoga Avenue / Rocketdyne Access would maintain acceptable LOS A operations during both the AM and PM peak hours under the Opening Day (Year 2005) Without Project conditions. The supporting CMA analyses worksheets can be reviewed in ***Appendix D***. Also, as previously mentioned and presented in ***Tables 2A and 2B***, since the remaining six study access locations / intersections would only exist (operate) with the development of the proposed project (park-and-ride facility and satellite parking lot), they would only be analyzed under "With Project" conditions in this addendum report.

PROJECT CONDITIONS

Trip Generation

In order to analyze the potential traffic impacts of the proposed Metro park-and-ride facility with satellite parking lot, it is necessary to determine the trip generation of the proposed project. Trip generation rates for a Park-and-Ride Lot with Bus Service (Land Use 090) were referenced from the *Institute of Transportation Engineers (ITE)* publication, ***Trip***

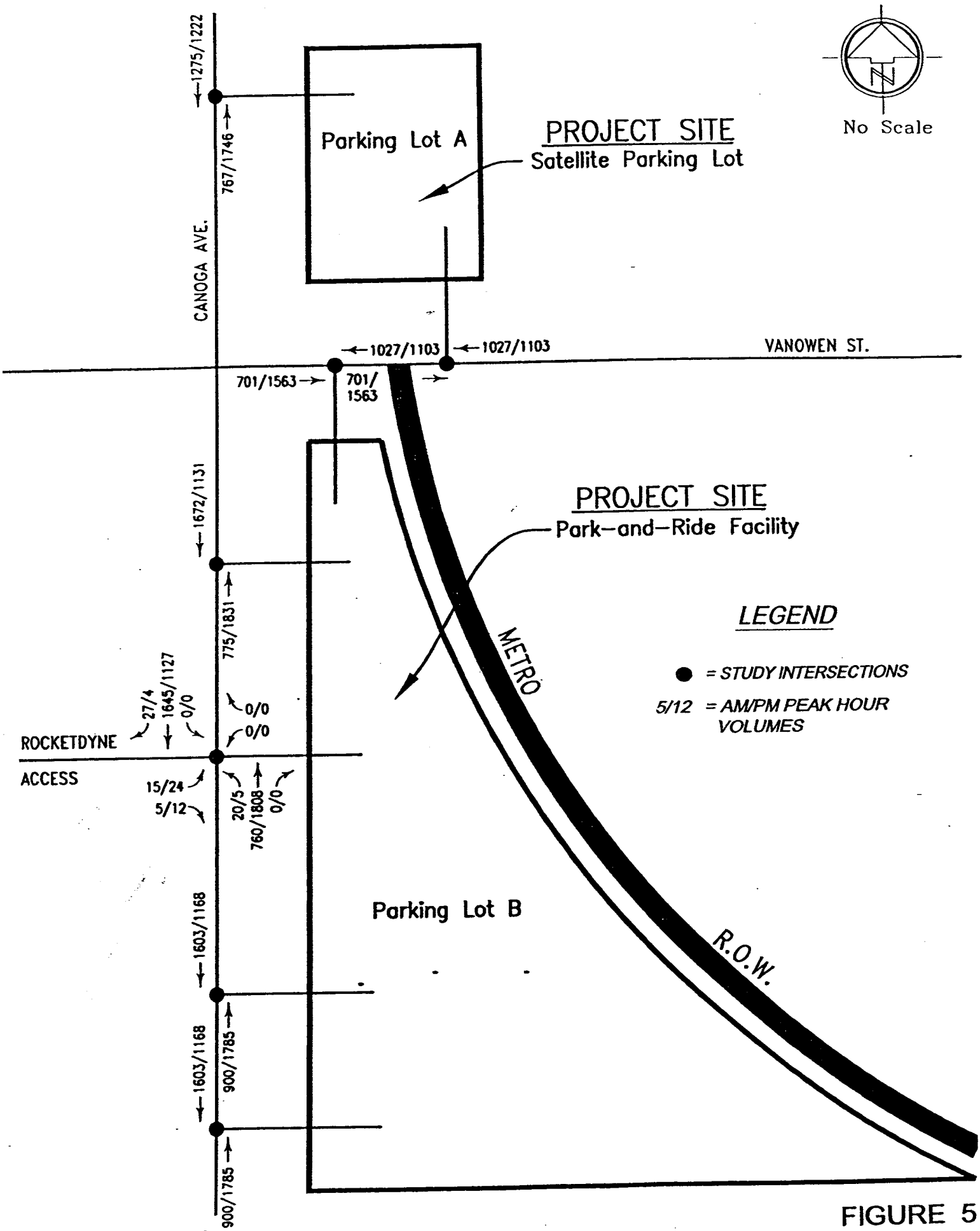

FIGURE 5
Opening Day (Year 2005)

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Generation[3], and are listed in ***Table 3***. The trip generation rates in ***Table 3*** were reviewed and approved for use in this addendum study by LADOT during the scoping process for this proposed project. [It should be mentioned that since the scoping period for this proposed Metro project, the most recent *ITE* trip generation publication[4] was made available. Upon review of this publication (*7th Edition*), it was determined that the trip generation rates for Land Use 090 (Park-and-Ride Lot With Bus Service) had not changed significantly. Therefore, the rates approved during the scoping process (*6th Edition*) were utilized in this addendum report.] The resulting project trip generation is also presented in ***Table 3***. As shown in ***Table 3***, the proposed Metro park-and-ride facility with satellite parking lot (total of 898 spaces) is estimated to generate a total of 4,040 daily trip ends (passenger vehicles), of which 675 (540 In, 135 Out) trip ends would occur during the AM peak hour (street peak) and 565 (125 In, 440 Out) trip ends would occur during the PM peak hour (street peak).

The proposed Metro park-and-ride facility would also generate bus trips, in addition to the passenger vehicles noted above. For the Bus Rapid Transit (BRT) service in the Warner Center area, the projected headway for a bus is every 3.3 minutes[5]. This equates to 18 buses per hour per direction (into and out of the Metro R.O.W.). In order to account for the larger size and slower operation of bus traffic on the street system, the number of buses was converted to passenger car equivalents (PCE). The conversion to PCE was based upon information contained in the ***Highway Capacity Manual***[6]. Each bus was multiplied by a conservative factor of 2.0 to arrive at the PCE value of 36 bus trips into and out of the Metro R.O.W. during both the AM and PM peak hours.

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3 *Trip Generation, 6th Edition; Institute of Transportation Engineers (ITE)*; 1997.

4 *Trip Generation, 7th Edition; Institute of Transportation Engineers (ITE)*; 2003.

5 ***"San Fernando Valley East-West Transit Corridor EIS/EIR"; Chapter 3 - "Transportation Setting, Impacts, and Mitigation"; op.cit.***

6 *2000 Highway Capacity Manual; Transportation Research Board (TRB)*; 2000.

TABLE 3

TRIP GENERATION - PROPOSED PROJECT

Warner Center Metro Park-and-Ride Facility With Satellite Parking

LAND USE	DESCRIPTOR SIZE	TRIP ENDS DAILY	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
TRIP RATES [1] [2]:								
Land Use 090 Park-and-Ride Lot With Bus Service	Per Parking Space	4.50	0.60	0.15	0.75	0.14	0.49	0.63
TRIP ENDS [2]:								
Warner Center Metro Park-and-Ride Facility (662 Spaces) and Satellite Parking Lot (236 Spaces)	**898 Total Spaces**	**4,040**	**540**	**135**	**675**	**125**	**440**	**565**

Rates referenced from ***Trip Generation, 6th Edition***; *Institute of Transportation Engineers (ITE)*; 1997.

These trip generation rates for the proposed park-and-ride facility (with satellite parking) were reviewed for use in this traffic study and approved by City of Los Angeles, Department of Transportation (LADOT) Staff.

It should be noted that LADOT has previously stated that "*pursuant to the Warner Center Specific Plan, a parking project has no trip generation and hence is not considered a project.*"[7] Although the proposed Metro park-and-ride project in Warner Center is anticipated to aid in the increased usage of the Bus Rapid Transit (BRT) service and result in an overall reduction in traffic volume along regional arterials in the area, localized increases in traffic near the park-and-ride access points / intersections could be anticipated[8]. Therefore, this addendum study is examining the potential traffic impacts of the proposed Metro park-and-ride facility (on the Boeing site) with a satellite parking lot (northeast corner of Canoga / Vanowen) upon the proposed project's access locations / intersections located along Canoga Avenue and Vanowen Street.

It should also be mentioned that LADOT has determined that the actual morning peak hour for the proposed park-and-ride project is expected to occur between 6:00 and 7:00 AM (before the AM street peak hour) and the actual afternoon peak hour for the park-and-ride project is expected to occur between 5:30 and 6:30 PM (after the PM street peak hour)[9]. Our addendum traffic study analyzes the potential project impacts during the street peak hours; therefore, this addendum study is examining the "worst case" condition of the proposed park-and-ride facility with satellite parking lot.

Trip Distribution and Assignment

Distribution percentages were developed for the proposed Metro park-and-ride facility and satellite parking lot based upon a review of regional land uses, the type of land use proposed, and the surrounding street system. ***Figure 6*** illustrates the inbound and outbound project distribution patterns (for the passenger vehicles only) for the Boeing site location (park-and-ride facility) and the northeast corner of Canoga / Vanowen (satellite

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7 City of Los Angeles Draft Memo with subject, ***"Peak Hour Impacts of Park and Ride in Warner Center Specific Plan"***; dated February 3, 2003.

8 ***"San Fernando Valley East-West Transit Corridor EIS/EIR"***; ***Chapter 3 - "Transportation Setting, Impacts, and Mitigation"***; op.cit.

9 City of Los Angeles Draft Memo with subject, ***"Peak Hour Impacts of Park and Ride in Warner Center Specific Plan"***; op.cit.

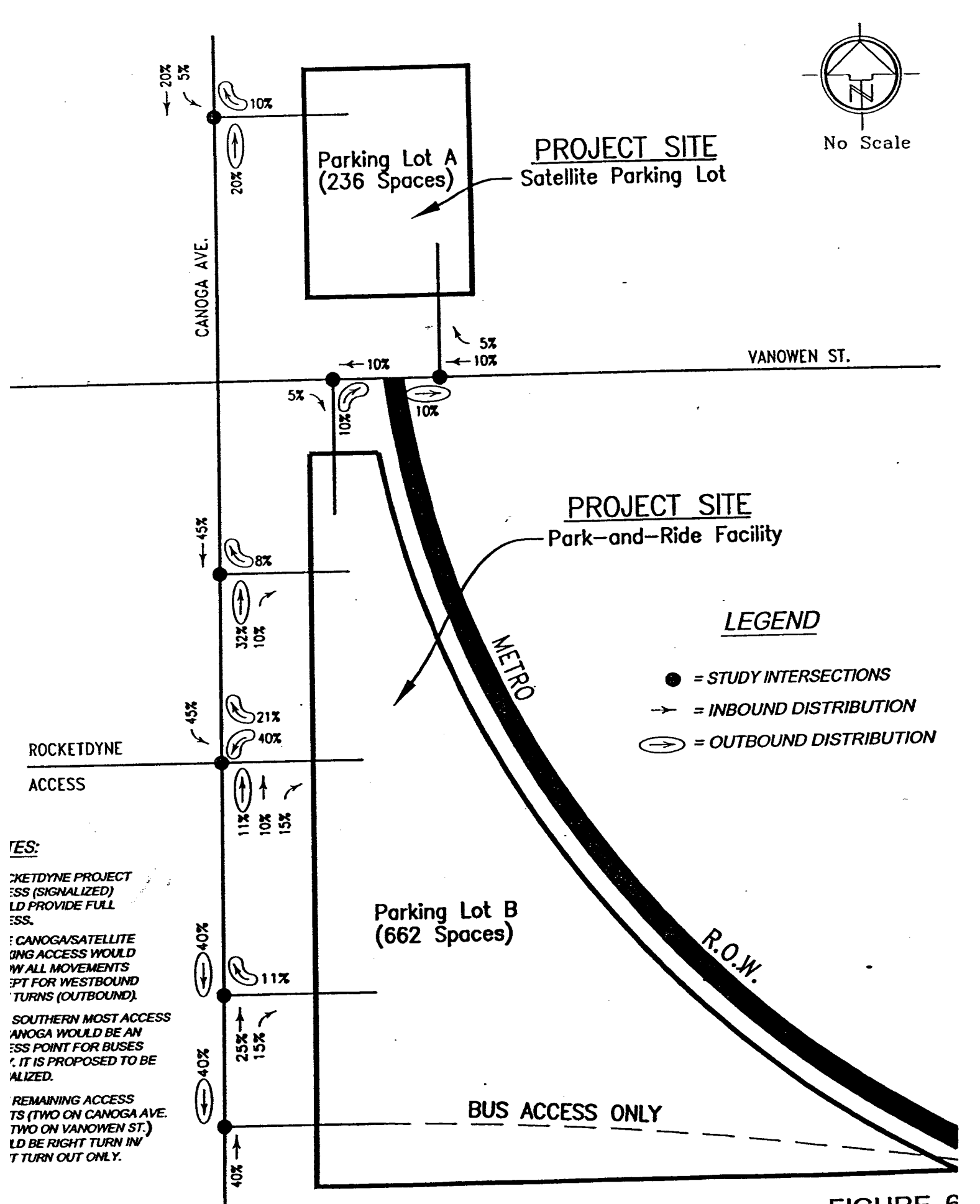

FIGURE 6
Project Distributior

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parking lot) currently being considered by Metro. The distribution patterns were reviewed and approved for use in this addendum study by LADOT during the scoping process. The project generated trip ends (passenger vehicles), previously identified in ***Table 3***, were then assigned to the study project access locations / intersections based upon the distribution patterns. The resulting AM and PM peak hour project only trip assignment volumes at the study access locations / intersections are illustrated on ***Figure 7***.

Metro has also identified the proposed route that the buses would follow on-street when traveling from the proposed park-and-ride facility (at the Boeing site) to the Warner Center Transit Hub (located on Owensmouth Avenue, between Erwin Street and Oxnard Street) and back to the Metro R.O.W. The bus route proposed for the park-and-ride facility (at the Boeing site) is illustrated on ***Figure 8***. The AM and PM peak hour bus trips (converted to passenger vehicles, which equals 36 in and 36 out during both peak hours) are also illustrated on ***Figure 8***. It should be noted that the buses would only access the park-and-ride facility (at the Boeing site), via the southernmost driveway on Canoga Avenue which would be dedicated for bus use only. Buses would not access the satellite parking lot (on the northeast corner of Canoga / Vanowen).

OPENING DAY (YEAR 2005) WITH PROJECT CONDITIONS

The total project only traffic volumes at the seven study access locations / intersections (***Figure 7***, along with the respective project bus trips shown on ***Figure 8***) were then added to the Opening Day (Year 2005) Without Project volumes (presented earlier in this addendum study on ***Figure 5***), so the potential project impacts upon the study access locations / intersections could be evaluated. The resulting Opening Day (Year 2005) With Project (existing plus growth plus project) AM and PM peak hour volumes at the study access locations / intersections are illustrated on ***Figure 9***.

Intersection Analyses - Opening Day (Year 2005) With Project Conditions

The intersection analyses were then recalculated for the Opening Day (Year 2005) With Project (existing plus growth plus project) conditions, utilizing the intersection volumes previously presented on ***Figure 9***. Since the proposed park-and-ride project is assumed

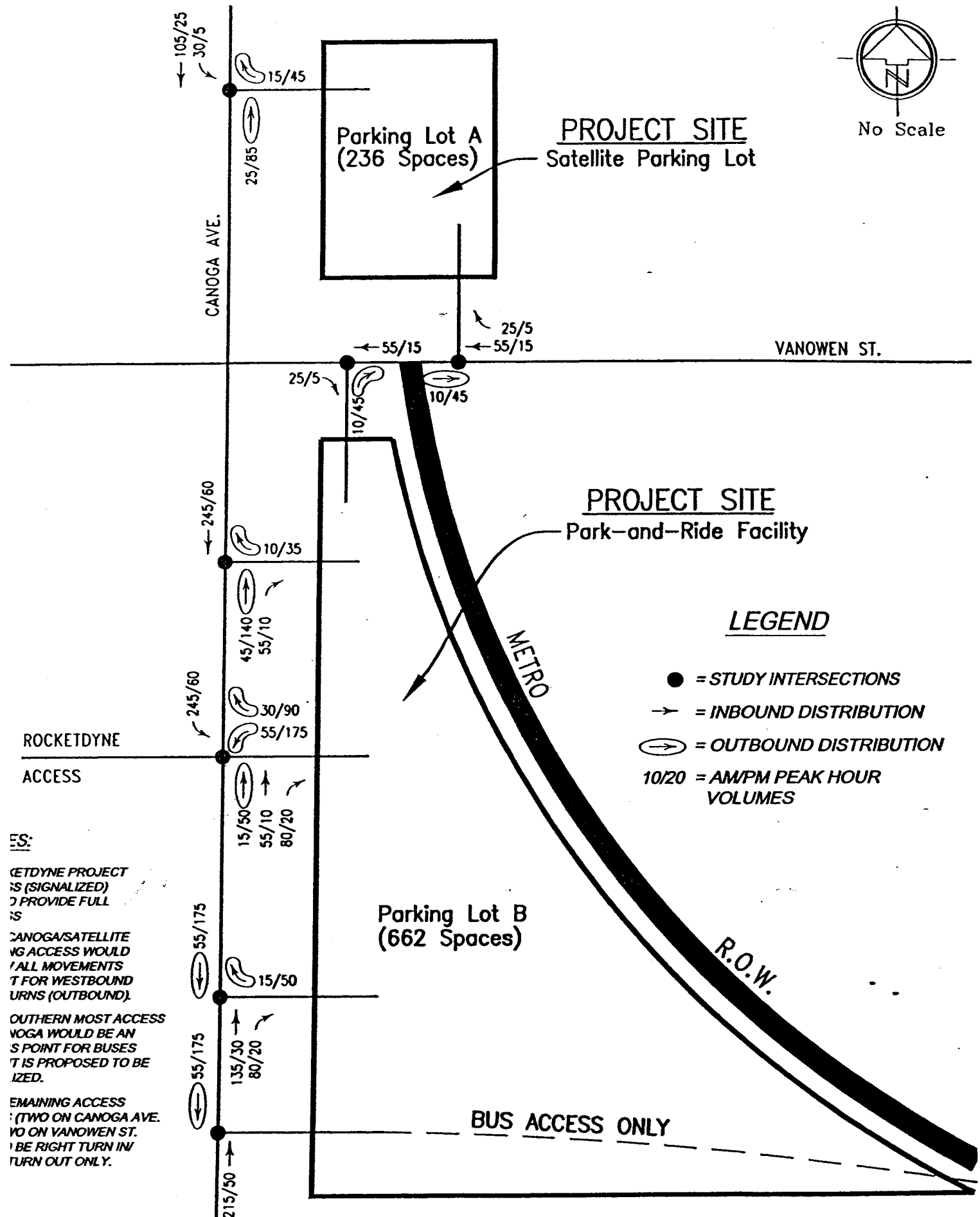

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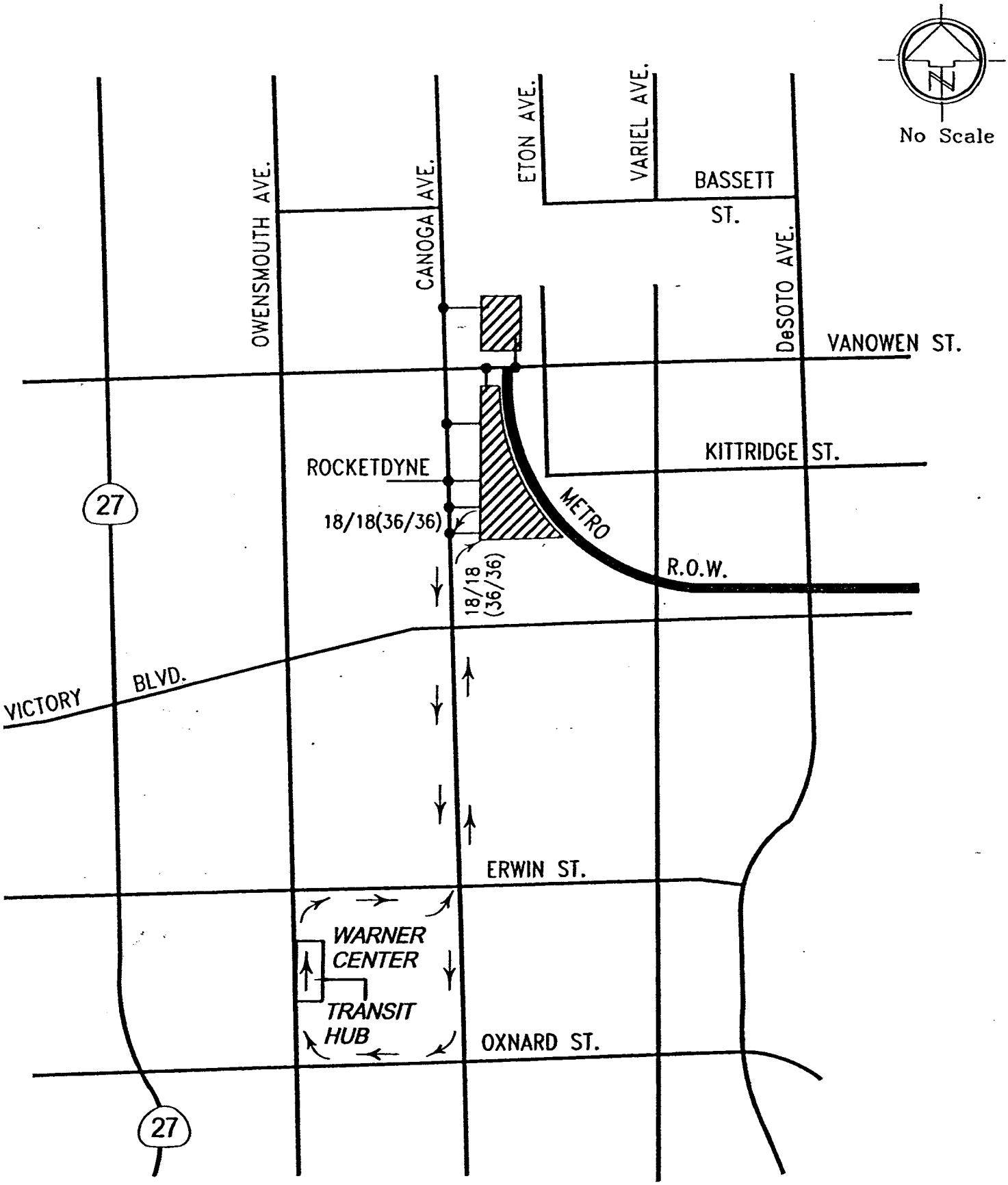
FIGURE 7
Project Volumes
Passenger Vehicles



LEGEND

● = STUDY INTERSECTIONS

18/18 = AM/PM PEAK HOUR BUSES

(36/36) = AM/PM PEAK HOUR BUS TRIPS CONVERTED TO PCE

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FIGURE 8

Proposed Bus Route

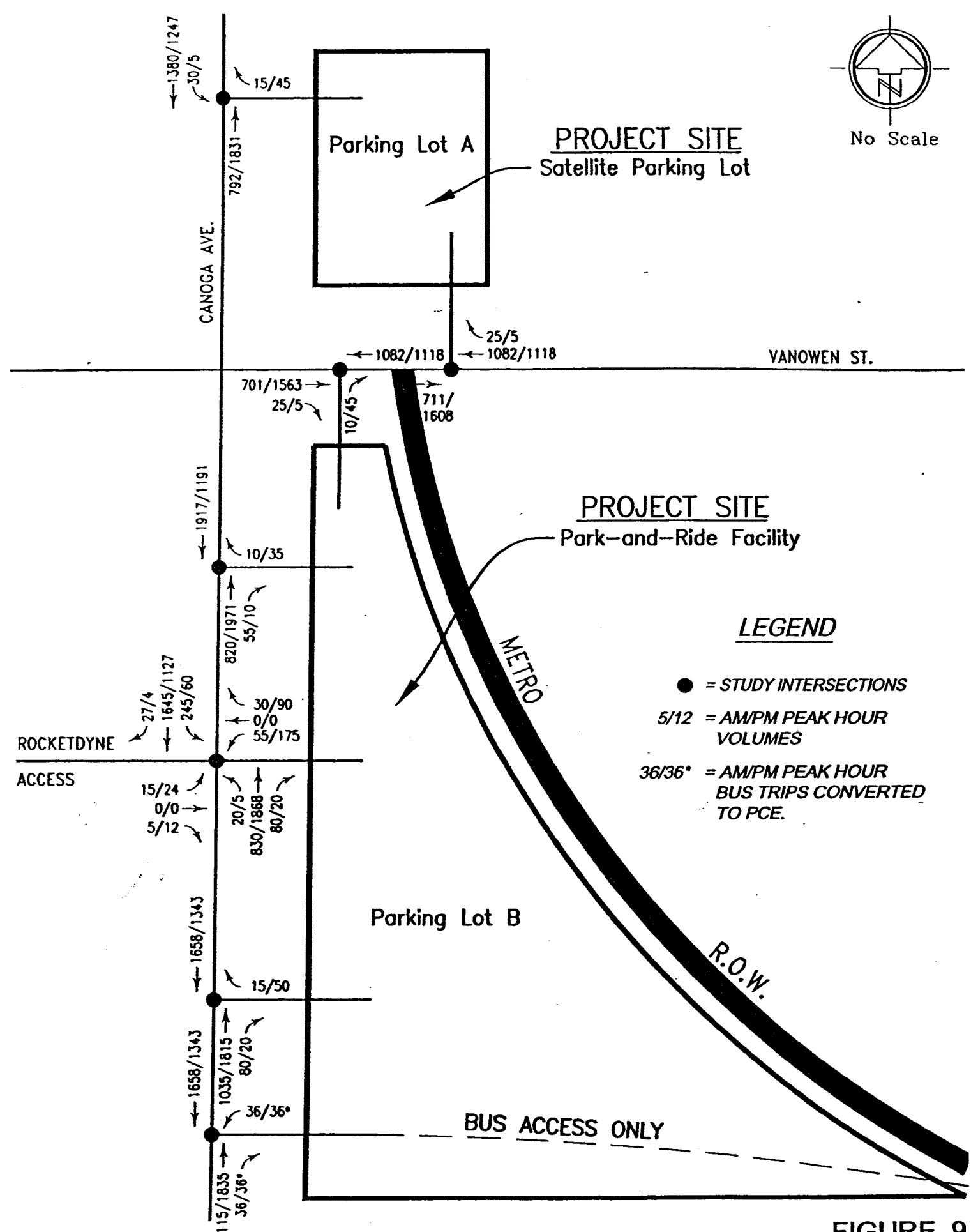

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FIGURE 9
Opening Day (Year 2005)

to be developed and operating under these "With Project" conditions, all seven of the study access locations / intersections would now be analyzed. The geometrics assumed to be implemented at the project access locations / intersections with the development of the proposed park-and-ride facility with satellite parking lot (and utilized in these addendum analyses) are illustrated on ***Figure 10***. As shown on ***Figure 10***, the development of the proposed park-and-ride facility on the Boeing site would add the westbound approach to the signalized Canoga Avenue / Rocketdyne Access intersection. (This westbound approach is anticipated to consist of two left turn lanes and one combination through / right lane.) The southernmost access to the park-and-ride facility (at the Boeing site) is planned to be signalized and for bus use only, allowing only left turns outbound and right turns inbound. The three remaining access points (Canoga Avenue / Northerly Driveway, Canoga Avenue / Southerly Driveway and Vanowen Street / Park-and-Ride Driveway) to the park-and-ride facility (at the Boeing site) would be unsignalized and would allow only right turn in and right turn out movements at these locations. ***Figure 10*** also shows that the two access points to the satellite parking lot (to be located on the northeast corner of Canoga / Vanowen) would be unsignalized. The Canoga Avenue / Satellite Parking Driveway would allow both right turns inbound and right turns outbound, but only left turns inbound. Left turns outbound from this location would be prohibited due to its close proximity to the Canoga / Vanowen intersection. At the Vanowen Street / Satellite Parking Driveway, only right turns in and out would be permitted.

Tables 2A and 2B, presented earlier in this addendum study, summarize the results of the intersection analyses for the Opening Day (Year 2005) With Project conditions. As shown in ***Table 2A***, the signalized intersection of Canoga Avenue / Rocketdyne Access would maintain acceptable operations (Levels of Service A and C) during both the AM and PM peak hours under the Opening Day (Year 2005) With Project conditions. The signalized Canoga Avenue / Bus Access Driveway intersection would also operate acceptably at LOS A and LOS B during the AM and PM peak hours, respectively. ***Tables 2A and 2B*** also show that the remaining five study access points (which are unsignalized) would also have acceptable intersection operations (Levels of Service B and C) during both peak hours under the Opening Day (Year 2005) With Project conditions. The supporting CMA and

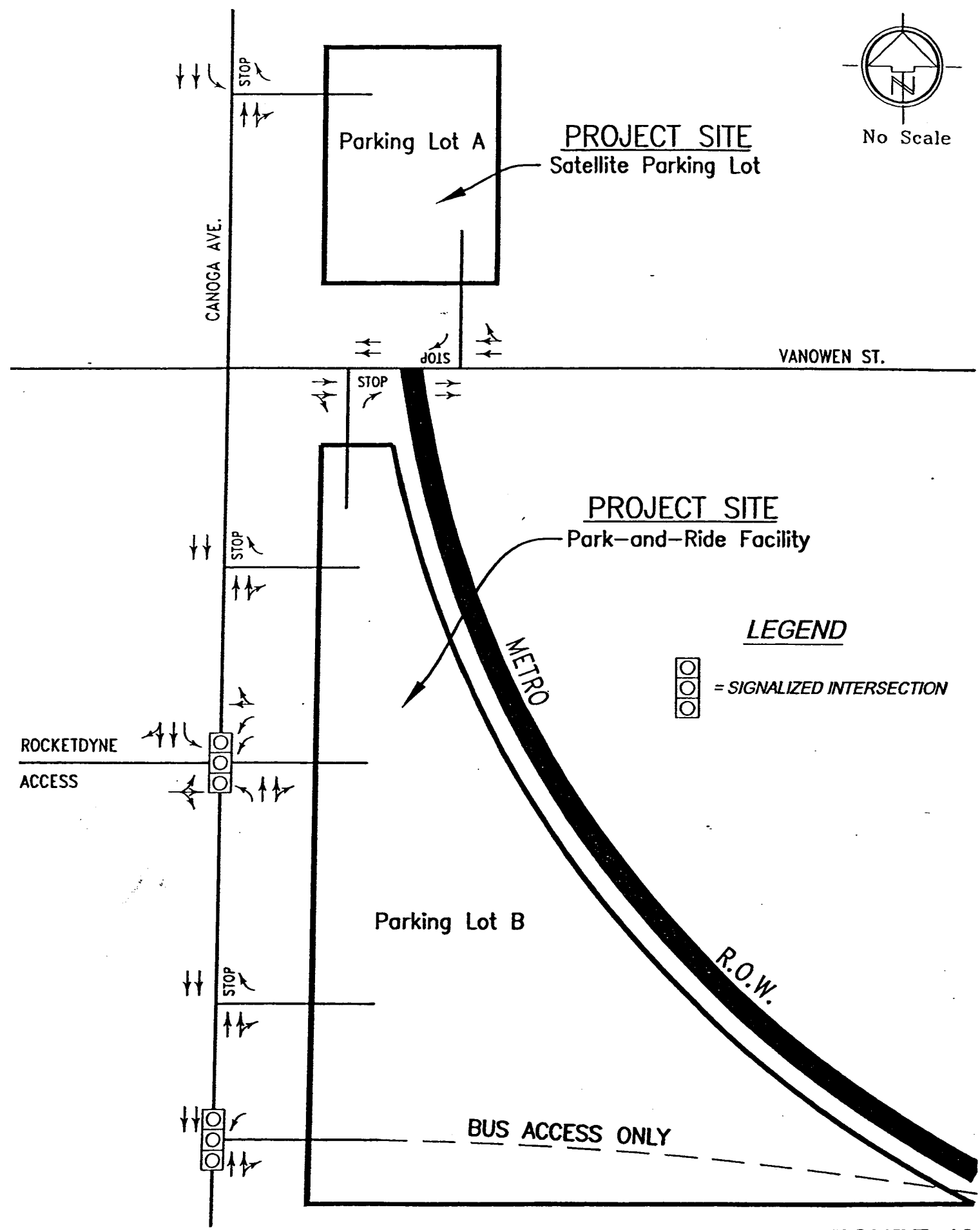

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FIGURE 10

Access Intersection Geometrics & Controls

HCS analyses worksheets are contained in ***Appendix D.*** Since acceptable operations result at all seven of the study access locations / intersections under the Opening Day (Year 2005) With Project conditions, it can be concluded that the development of the proposed park-and-ride facility (on the Boeing site) with the satellite parking lot (on the northeast corner of Canoga / Vanowen) would not cause a significant traffic impact upon the study area.

Traffic Signal Warrant Analyses - Opening Day (Year 2005) With Project Conditions

Five of the seven study access points / intersections examined in these addendum analyses (Canoga / Northerly Driveway, Canoga / Southerly Driveway, Vanowen / Park-and-Ride Driveway, Canoga / Satellite Parking Driveway, and Vanowen / Satellite Parking Driveway) are planned to be unsignalized with the proposed project. The need for signalization at these five locations under the Opening Day (Year 2005) With Project conditions was then evaluated by determining if any location satisfies the traffic signal warrants developed by Caltrans. Examination of the applicable Caltrans Traffic Signal Warrant [***Warrant 11 - Peak Hour Volume Warrant*** - *Urban Conditions (Figure 9-8)*][10], indicates that in order to satisfy the warrant, the lower threshold volume for the minor street approach with one lane must equal at least 100 vehicles per hour (vph). Review of the Opening Day (Year 2005) With Project volumes on ***Figure 9*** (previously presented) shows that at these five unsignalized access locations, the AM and PM peak hour outbound volumes at the driveways (minor street approaches) are all less than 100 vph; the lower threshold volume for the minor street is not met at these access locations. Therefore, the Caltrans Traffic Signal Warrant is not satisfied at these five study access locations / intersections under the Opening Day (Year 2005) With Project conditions. The Caltrans warrant worksheet (*Figure 9-8 - Urban Conditions*) can be referenced in ***Appendix E.***

These five study access locations / intersections were also previously identified to have acceptable operating conditions during both the AM and PM peak hours under the Opening Day (Year 2005) With Project conditions. Since these access points are shown to have

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[10] ***Traffic Manual; Chapter 9, "Traffic Signals and Lighting"***; *California Department of Transportation (Caltrans)*; July, 1996.

acceptable operations as unsignalized locations, signalization would not be recommended under the Opening Day (Year 2005) With Project conditions.

Further justification to support not signalizing these five access locations (Canoga / Northerly Driveway, Canoga / Southerly Driveway, Vanowen / Park-and-Ride Driveway, Canoga / Satellite Parking Driveway, and Vanowen / Satellite Parking Driveway) under the Year 2005 With Project conditions was obtained based upon traffic engineering judgement and review of these five access points as shown on the project site plan (***Figure 2***, presented earlier in this addendum study). Primarily, since these five access points are located in close proximity to existing signalized intersections, it would not be acceptable to signalize these intersections.

FUTURE (YEAR 2020) CONDITIONS

Based upon review of the previously completed EIR for the San Fernando Valley East-West Transit Corridor[11] and discussions with project representatives, it was determined that this traffic study addendum for the proposed Metro park-and-ride facility with satellite parking lot in Warner Center should also include evaluation of the seven study access locations / intersections under the Future (Year 2020) conditions, both without and with the proposed park-and-ride project. The Future conditions reflect growth of the study area and potential future projects up to the Year 2020.

Intersection Analyses - Future (Year 2020) Without Project Conditions

The Future (Year 2020) Without Project volumes were obtained by projecting the Existing (Year 2004) intersection volumes to the future Year 2020 by utilizing the 1.5 percent per year growth factor for Warner Center in the equation $(1 + i)^n$; where "i" is the growth factor and "n" is the number of years of growth. The resulting AM and PM peak hour volumes at all of the study access locations / intersections for the Future (Year 2020) Without Project conditions are illustrated on ***Figure 11***. These volumes were then utilized in the .

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[11] ***"San Fernando Valley East-West Transit Corridor EIS/EIR"; Chapter 3 - "Transportation Setting, Impacts, and Mitigation"***; op.cit.

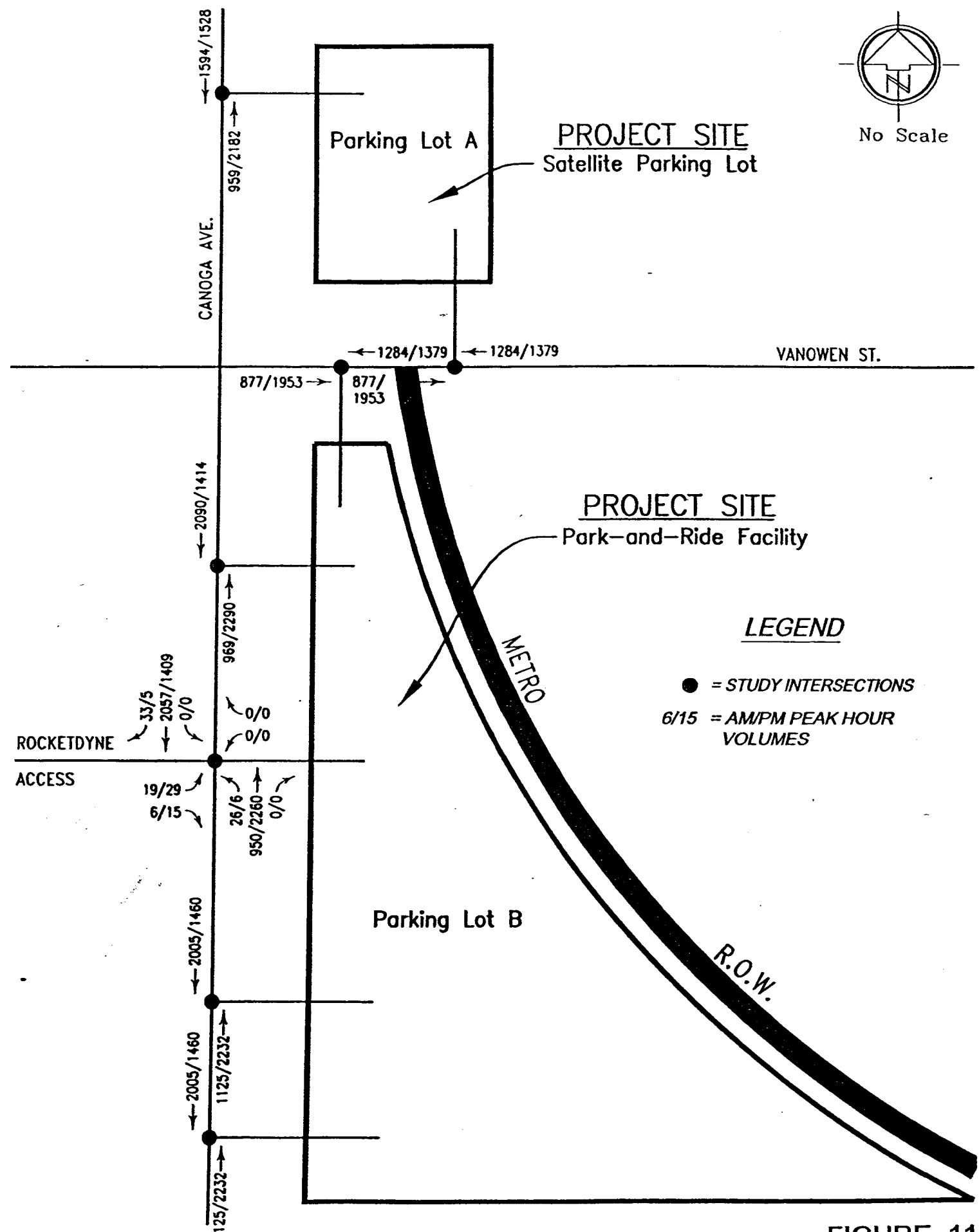

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FIGURE 11
Future (Year 2020)

intersection analyses in order to evaluate the operations of the study access locations / intersections under the Future (Year 2020) Without Project conditions.

Tables 4A and 4B summarize the results of the intersection analyses under the Future (Year 2020) Without Project conditions during the AM and PM peak hours. As shown in ***Table 4A***, the signalized intersection of Canoga Avenue / Rocketdyne Access would operate with acceptable Level of Service B and C operations during the AM and PM peak hours, respectively, under the Future (Year 2020) Without Project conditions. The supporting CMA analyses worksheets are available in ***Appendix D***. Also, as discussed earlier in this addendum report and presented in ***Tables 4A and 4B***, the remaining six study access locations / intersections would only be analyzed under "With Project" conditions, since they do not exist (operate) without the development of the proposed park-and-ride facility and satellite parking lot.

Intersection Analyses - Future (Year 2020) With Project Conditions

The proposed park-and-ride project only traffic volumes at the study access locations / intersections (previously shown on ***Figures 7 and 8***) were then added to the Future (Year 2020) Without Project volumes (as shown on ***Figure 11***), so the intersection analyses could be recalculated for the Future (Year 2020) With Project conditions. The total Future (Year 2020) With Project AM and PM peak hour volumes at the study access locations / intersections are illustrated on ***Figure 12***. These volumes (***Figure 12***), along with the geometrics and controls proposed to be installed with the proposed project (as illustrated earlier on ***Figure 10***) were then utilized in the CMA and HCS 2000 intersection analyses in order to evaluate the proposed project impacts upon the seven study access points / intersections under the Future (Year 2020) With Project conditions.

Tables 4A and 4B, presented earlier in this traffic study, summarize the results of the intersection analyses under the Future (Year 2020) With Project conditions during the AM and PM peak hours. As shown in ***Table 4A***, the signalized intersection of Canoga Avenue / Rocketdyne Access would continue to have acceptable operations (Levels of Service C and D) during both peak hours under the Future (Year 2020) With Project conditions.

INTERSECTION ANALYSES SUMMARY - FUTURE (YEAR 2020) CONDITIONS

Warner Center Metro Park-and-Ride Facility With Satellite Parking

INTERSECTION	LEVEL OF SERVICE (LOS)[1]					
	FUTURE (YEAR 2020) WITHOUT PROJECT CONDITIONS		FUTURE (YEAR 2020) WITH PROJECT CONDITIONS		FUTURE (YEAR 2020) WITH PROJECT WITH MITIGATION CONDITIONS	
	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
PARK-AND-RIDE FACILITY - EAST OF CANOGA AVENUE ; SOUTH OF VANOWEN STREET						
SIGNALIZED INTERSECTIONS:						
Canoga Avenue / Rocketdyne	0.661 / B	0.713 / C	0.720 / C	0.891 / D	—	—
Canoga Avenue / Bus Access Driveway	NA	NA	0.711 / C	0.797 / C	—	—
UNSIGNALIZED INTERSECTIONS:						
Canoga Avenue / Northerly Driveway (North of Rocketdyne)	NA	NA	12.7 / B	34.4 / D	—	—
Canoga Avenue / Southerly Driveway (South of Rocketdyne)	NA	NA	14.8 / B	32.9 / D	—	—
Vanowen Street / Park-and-Ride Driveway	NA	NA	11.8 / B	24.2 / C	—	—

NOTE: **Bolded values** represent unacceptable intersection operations (Levels of Service E or F). The *"San Fernando Valley East-West Transit Corridor EIS/EIR"* (*Chapter 3 - "Transportation Setting, Impacts, and Mitigation"*) previously defined a threshold to determine when a project impact is significant. As referenced in the ***"San Fernando Valley East-West Transit Corridor EIS/EIR"***, *"an intersection is considered to be adversely affected if project traffic is projected to cause a deterioration in Level of Service to E and/or worse, or results in the average vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions."*

(1) The signalized intersections were analyzed utilizing the Critical Movement Analysis (CMA) methodology, which results in a volume / capacity ratio; while the unsignalized intersections were analyzed with the Highway Capacity software (HCS 2000), which results in a delay value in seconds.

INTERSECTION ANALYSES SUMMARY - FUTURE (YEAR 2020) CONDITIONS

Warner Center Metro Park-and-Ride Facility With Satellite Parking

INTERSECTION	LEVEL OF SERVICE (LOS) (1)					
	FUTURE (YEAR 2020) WITHOUT PROJECT CONDITIONS		FUTURE (YEAR 2020) WITH PROJECT CONDITIONS		FUTURE (YEAR 2020) WITH PROJECT WITH MITIGATION CONDITIONS	
	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR	AM PEAK HOUR	PM PEAK HOUR
SATELLITE PARKING LOT - EAST OF CANOGA AVENUE ; NORTH OF VANOWEN STREET						
UNSIGNALIZED INTERSECTIONS:						
Canoga Avenue / Satellite Parking Driveway	NA	NA	12.3 / B	31.5 / D	—	—
Vanowen Street / Satellite Parking Driveway	NA	NA	14.6 / B	14.8 / B	—	—

NOTE: **Bolded values** represent unacceptable intersection operations (Levels of Service E or F). The ***"San Fernando Valley East-West Transit Corridor EIS/EIR"*** (*Chapter 3 - "Transportation Setting, Impacts, and Mitigation"*) previously defined a threshold to determine when a project impact is significant. As referenced in the ***"San Fernando Valley East-West Transit Corridor EIS/EIR"***, *"an intersection is considered to be adversely affected if project traffic is projected to cause a deterioration in Level of Service to E and/or worse, or results in the average vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions."*

(1) The signalized intersections were analyzed utilizing the Critical Movement Analysis (CMA) methodology, which results in a volume / capacity ratio; while the unsignalized intersections were analyzed with the Highway Capacity software (HCS 2000), which results in a delay value in seconds.

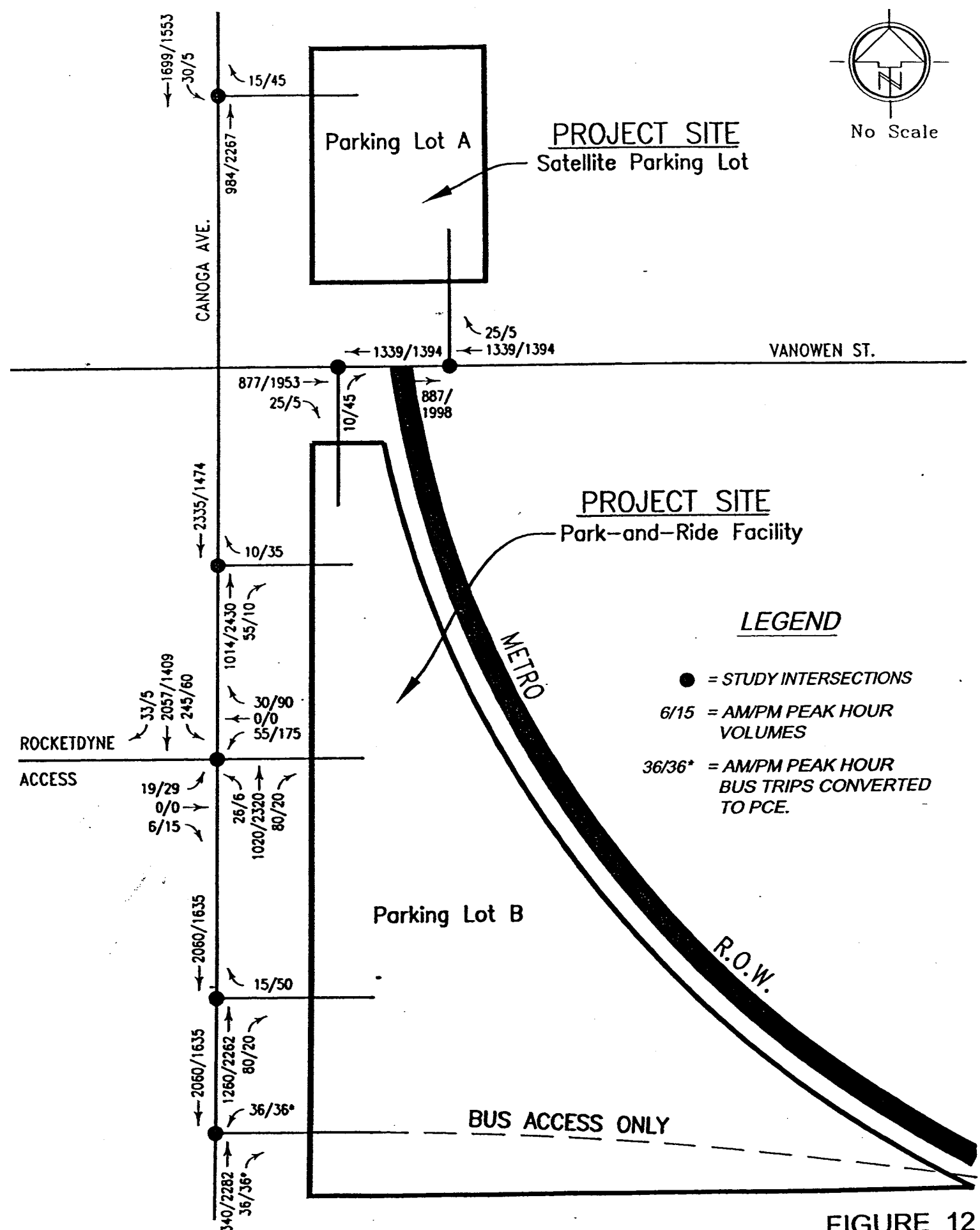

FIGURE 12
Future (Year 2020)

JOB# 12999

WILLDAN

Similarly, the signalized Canoga Avenue / Bus Access Driveway intersection would also operate acceptably at LOS C during both the AM and PM peak hours. Acceptable intersection operations (LOS B through D) would also result at the remaining five unsignalized study access locations / intersections, as presented in ***Tables 4A and 4B***, under the Future (Year 2020) With Project conditions. The supporting CMA and HCS 2000 intersection analyses worksheets can be found in ***Appendix D***. It can be concluded that the development of the proposed park-and-ride facility (on the Boeing site) and the satellite parking lot (on the northeast corner of Canoga / Vanowen) would not cause a significant traffic impact upon the study area in the future, since acceptable operating conditions result at all seven of the study access points / intersections under the Future (Year 2020) With Project conditions.

It should be noted that the previously completed EIR for the San Fernando Valley East-West Transit Corridor[12] defined a specific threshold to determine when a project impact is significant. As referenced from this previously completed EIR, "*an intersection is considered to be adversely affected if project traffic is projected to cause a deterioration in Level of Service to E and/or worse, or results in the average vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions.*"[13] Acceptable operations (LOS A through D) would result at all seven of the study access locations / intersections when the proposed project traffic is added to either Opening Day (Year 2005) conditions [as presented in ***Tables 2A and 2B***] or Future (Year 2020) conditions [as shown in ***Tables 4A and 4B***]. Since Level of Service E or worse operations do not result at any of the study locations, it can be concluded (based upon the EIR criteria noted above) that the project impacts to the study area would be insignificant under both the Opening Day (Year 2005) and Future (Year 2020) conditions.

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12 Ibid.

13 Ibid.

Traffic Signal Warrant Analyses - Future (Year 2020) With Project Conditions

The five unsignalized study access points / intersections (Canoga / Northerly Driveway, Canoga / Southerly Driveway, Vanowen / Park-and-Ride Driveway, Canoga / Satellite Parking Driveway, and Vanowen / Satellite Parking Driveway) were again analyzed to determine if signalization is needed at any of these locations under the Future (Year 2020) With Project conditions. Review of the applicable Caltrans Traffic Signal Warrant (available in ***Appendix E***) along with the Future (Year 2020) With Project volumes at the study locations (previously presented on ***Figure 12***) indicates that the lower threshold volume of 100 vph on the minor street approach would not be met at any of the five study access locations / intersections. Therefore, the five study access locations do not satisfy the warrant for signalization under the Future (Year 2020) With Project conditions.

Also, signalization would not necessarily be considered at these five study locations, since acceptable intersection operations are projected for these five unsignalized locations under the Future (Year 2020) With Project conditions (***Tables 4A and 4B***, shown earlier). Previous review of the proposed project site plan (previously presented on ***Figure 2***) has also indicated that the implementation of traffic signals at these five study access locations / intersections would be unacceptable, due to their close proximity to existing signalized intersections.

SUMMARY

This addendum study has examined traffic factors related to the proposed Metropolitan Transportation Authority (Metro) park-and-ride facility with a satellite parking lot to be located in the Warner Center area of the City of Los Angeles. The project sites currently under consideration by Metro are: for the park-and-ride facility, the Boeing property located on the east side of Canoga Avenue, just south of Vanowen Street; and for the satellite parking lot, the Metro-owned land on the northeast corner of the Canoga / Vanowen intersection. Existing (Year 2004) conditions were reviewed and quantified. Opening Day (Year 2005) analyses were conducted for both without and with the development of the proposed Metro park-and-ride facility and satellite parking lot. Trip generation and assignment analyses were completed for the proposed park-and-ride

project, in order to evaluate the potential project impacts upon the seven study access locations / intersections. Future (Year 2020) conditions were also examined both without and with the addition of the proposed park-and-ride facility and satellite parking lot. The need for signalization at some access points was evaluated, where appropriate.

The following are the principal findings of this study.

1) Under Existing (Year 2004) conditions, the existing signalized study intersection of Canoga Avenue / Rocketdyne Access is currently operating acceptably (at Level of Service A) during both the AM and PM peak hours. The remaining six study access locations / intersections would only be analyzed under "With Project" conditions, since they do not exist (operate) without the development of the proposed park-and-ride project.

2) The Opening Day for the proposed Metro park-and-ride facility with satellite parking lot is anticipated to be in the Year 2005 (approximately 1.5 years). The Opening Day (Year 2005) Without Project volumes at the study locations were calculated by applying the 1.5 percent per year growth rate (obtained from LADOT Staff) to the Existing (Year 2004) AM and PM intersection volumes. No other area projects were identified for inclusion in this traffic study addendum.

3) The signalized study intersection of Canoga Avenue / Rocketdyne Access would maintain acceptable LOS A operations during both the AM and PM peak hours under the Opening Day (Year 2005) Without Project conditions. As previously mentioned, since the remaining six study access locations / intersections would only exist (operate) with the development of the proposed project (park-and-ride facility and satellite parking lot), they would only be analyzed under "With Project" conditions in this addendum report.

4) The proposed Metro park-and-ride facility with satellite parking lot (a total of 898 spaces) in Warner Center is estimated to generate a total of 4,040 daily trip ends

(passenger vehicles), of which 675 (540 In, 135 Out) trip ends would occur during the AM peak hour (street peak) and 565 (125 In, 440 Out) trip ends would occur during the PM peak hour (street peak). A total of 18 buses per hour per direction would also be generated by the proposed park-and-ride facility, which equates to 36 bus trips [converted to passenger car equivalents (PCE)] into and out of the Metro R.O.W. during both the AM and PM peak hours.

5) Under the Opening Day (Year 2005) With Project conditions, all seven of the study access locations / intersections were analyzed. Acceptable Levels of Service A and C would result during the AM and PM peak hours, respectively, at the signalized study intersection of Canoga Avenue / Rocketdyne Access. Also, the Canoga Avenue / Bus Access Driveway intersection (which would be signalized with the proposed project) would operate acceptably at LOS A and LOS B during the AM and PM peak hours, respectively. The remaining five study access points / intersections (which are unsignalized) would also have acceptable intersection operations (Levels of Service B and C) during both peak hours under the Opening Day (Year 2005) With Project conditions. Since acceptable operations result at all seven of the study access locations / intersections under the Opening Day (Year 2005) With Project conditions, it can be concluded that the development of the proposed park-and-ride facility (on the Boeing site) with the satellite parking lot (on the northeast corner of Canoga / Vanowen) would not cause a significant traffic impact upon the study area.

6) The five unsignalized access locations / intersections (Canoga / Northerly Driveway, Canoga / Southerly Driveway, Vanowen / Park-and-Ride Driveway, Canoga / Satellite Parking Driveway, and Vanowen / Satellite Parking Driveway) do not satisfy the applicable Caltrans Traffic Signal Warrant (***Warrant 11 - Peak Hour Volume Warrant***) under the Opening Day (Year 2005) With Project conditions. These five access points have been shown to have acceptable operations as unsignalized locations; therefore, signalization would not be recommended under the Opening Day (Year 2005) With Project conditions. Also, review of the proposed project site

plan (*Figure 2*) has indicated that the implementation of traffic signals at these five study access locations / intersections would be unacceptable, due to their close proximity to existing signalized intersections.

7) The results of the Future (Year 2020) Without Project analyses show that the signalized study intersection of Canoga Avenue / Rocketdyne Access would have acceptable (Levels of Service B and C) operations during both the AM and PM peak hours. The remaining six study access locations / intersections would only be analyzed under "With Project" conditions, since they do not exist (operate) without the development of the proposed park-and-ride facility and satellite parking lot.

8) Under the Future (Year 2020) With Project conditions, the signalized study intersection of Canoga Avenue / Rocketdyne Access would continue to have acceptable operations (Levels of Service C and D) during both peak hours. Similarly, the signalized Canoga Avenue / Bus Access Driveway intersection would also operate acceptably at LOS C during both the AM and PM peak hours. At the remaining five unsignalized study access locations / intersections, acceptable operations (LOS B through D) would also result under the Future (Year 2020) With Project conditions. Therefore, it can be concluded that the development of the proposed park-and-ride facility (on the Boeing site) and the satellite parking lot (on the northeast corner of Canoga / Vanowen) would not cause a significant traffic impact upon the study area in the future, since acceptable operating conditions result at all seven of the study access points / intersections under the Future (Year 2020) With Project conditions.

9) For this proposed Metro park-and-ride project, a significant project impact has been defined (in a previously completed EIR[14]) as *"if project traffic is projected to cause a deterioration in Level of Service to E and/or worse, or results in the average*

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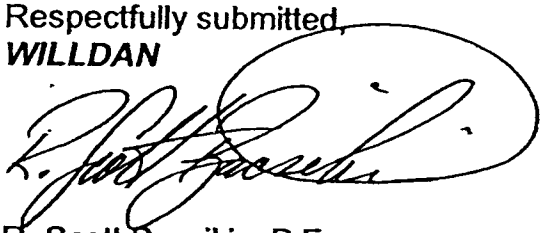
[14] *"San Fernando Valley East-West Transit Corridor EIS/EIR"; Chapter 3 - "Transportation Setting, Impacts, and Mitigation"; Los Angeles County Metropolitan Transportation Authority (Metro)*; February, 2002.

vehicle delay of 5.0 seconds or more at an intersection projected to operate at LOS E or worse under No Build conditions." Since Level of Service E or worse operations do not result at any of the seven study access locations / intersections with the addition of the proposed park-and-ride project, it can be concluded (based upon the EIR criteria noted above) that the project impacts to the study area would be insignificant under both the Opening Day (Year 2005) and Future (Year 2020) conditions.

10) The applicable Caltrans Traffic Signal Warrant (***Warrant 11 - Peak Hour Volume Warrant***) is not satisfied at any of the five unsignalized access locations / intersections (Canoga / Northerly Driveway, Canoga / Southerly Driveway, Vanowen / Park-and-Ride Driveway, Canoga / Satellite Parking Driveway, and Vanowen / Satellite Parking Driveway) under the Future (Year 2020) With Project conditions. These five access points are projected to have acceptable operations as unsignalized locations; therefore, signalization would not be recommended under the Future (Year 2020) With Project conditions. Also, previous review of the proposed project site plan (***Figure 2***) has indicated that the implementation of traffic signals at these five study access locations / intersections would be unacceptable, due to their close proximity to existing signalized intersections.

We trust that these analyses will be of assistance to you, the Metropolitan Transportation Authority (Metro), and the City of Los Angeles Department of Transportation (LADOT) Staff. If you have any questions or require additional information, please do not hesitate to contact us.

Respectfully submitted,
WILLDAN



R. Scott Bacsikin, P.E.
Registered Professional Engineer
State of California Number C48774

RSB:CC
#12999(Addendum)

APPENDIX A

COUNT DATA

Intersection Count Data

in LADOT Format

TRAFFIC COUNT SUMMARY

City of Los Angeles
Department of Transportation
Count by Private Consultant

STREET:
North/South: CANOGA AVE.

East/West: ROCKETDYNS DR.

Date: THURSDAY, OCTOBER 23 , 2003 Weather: CLEAR

Hours: 7-10 AM 3-6 PM

School Day: YES PROJECT: L.A. WOODLAND HILLS AREA.

	N/B	S/B	E/B	W/B
DUAL-WHEELED	0	0	0	0
BIKES	0	0	0	0
BUSES	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
AM PK 15 MIN	204	8.15	429	7.45	14	9.30	0	7.00
PM PK 15 MIN	448	5.15	281	5.15	26	3.00	0	3.00
AM PK HOUR	769	8.00	1623	7.30	37	8.45	0	7.00
PM PK HOUR	1760	4.45	1101	4.30	75	3.00	0	3.00

NORTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	25	671	0	696
8-9	28	741	0	769
9-10	14	687	0	701
3-4	3	1400	0	1403
4-5	0	1701	0	1701
5-6	5	1748	0	1753
TOTAL	75	6948	0	7023

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	1470	24	1494
8-9	0	1464	34	1498
9-10	0	1054	47	1101
3-4	0	978	12	990
4-5	0	1072	4	1076
5-6	0	1092	4	1096
TOTAL	0	7130	125	7255

TOTAL	XING S/L		XING N/L	
N-S	Ped	Sch	Ped	Sch
2190	0	0	0	0
2267	0	0	0	0
1802	0	0	0	0
2393	0	0	0	0
2777	0	0	0	0
2849	0	0	0	0
14278	0	0	0	0

EASTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	13	0	9	22
8-9	24	0	7	31
9-10	26	0	9	35
3-4	62	0	13	75
4-5	39	0	11	50
5-6	19	0	12	31
TOTAL	183	0	61	244

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7-8	0	0	0	0
8-9	0	0	0	0
9-10	0	0	0	0
3-4	0	0	0	0
4-5	0	0	0	0
5-6	0	0	0	0
TOTAL	0	0	0	0

TOTAL	XING W/L		XING E/L	
E-W	Ped	Sch	Ped	Sch
22	0	0	0	0
31	0	0	0	0
35	0	0	0	0
75	0	0	0	0
50	0	0	0	0
31	0	0	0	0
244	0	0	0	0

TRAFFIC COUNT SUMMARY

EET
ly/South CANOGA AVENUE
/West VANOWEN STREET
TUESDAY Date: AUGUST 20TH, 2002 Weather: CLEAR
s: 7 - 10 AM 3 - 6 PM
ol Day: YES District: LOS ANGELES

City of Los Angeles
Department of Transportation
(Rev Apr 82)

	N/B	S/B	E/B	W/B
L-				
ELED	0	0	0	0
S	0	0	0	0
:S	0	0	0	0

	N/B	TIME	S/B	TIME	E/B	TIME	W/B	TIME
[15 MIN	242	9.45	408	7.45	181	7.30	314	7.45
: 15 MIN	483	5.15	317	5.15	345	5.15	290	4.45
HOUR	707	7.30	1427	7.30	620	7.30	1092	7.30
HOUR	1773	4.15	1101	4.15	1180	4.15	1053	4.15

IBOUND Approach

Lt	Th	Rt	Total
28	554	81	841
36	548	83	667
77	622	71	770
142	1121	159	1422
148	1344	201	1691
170	1390	257	1817
597	5579	832	7008

SOUTHBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	92	1138	82	1292
8 - 9	93	1042	84	1219
9 - 10	81	704	74	859
3 - 4	124	747	71	942
4 - 5	130	840	82	1052
5 - 6	146	906	117	1169
TOTAL	666	5377	490	6533

TOTAL N - S

N - S
1933
1888 ✓
1629
2364
2743
2988 ✓
13541

XIN S/L

Pd	Sch
0	0
0	0
0	0
0	0
0	0
0	0
0	0

XIN N/L

Pd	Sch
0	0
0	0
0	0
0	0
0	0
0	0
0	0

UND Approach

Lt	Th	Rt	Total
65	430	65	560
41	495	63	599
48	400	89	571
125	782	76	983
118	956	63	1137
98	1091	85	1254
485	4194	401	5080

WESTBOUND Approach

Hours	Lt	Th	Rt	Total
7 - 8	170	808	127	905
8 - 9	177	661	144	982
9 - 10	102	513	86	701
3 - 4	89	585	145	799
4 - 5	127	718	182	1027
5 - 6	104	770	181	1055
TOTAL	769	3835	865	5489

TOTAL E - W

E - W
1455
1581 ✓
1278
1782
2184
2309 ✓
10549

XIN W/L

Pd	Sch
0	0
0	0
0	0
0	0
0	0
0	0
0	0

XIN E/L

Pd	Sch
0	0
0	0
0	0
0	0
0	0
0	0
0	0

Additional
Intersection Count Data

Y WILLDAN
ION L.A. WOODLAND HILLS AREA.
THURSDAY, OCTOBER 23 , 2003
D 7:00 AM TO 9:00 AM
RECTION N/S CANOGA AVE.
E/W ROCKETDYNE DR.
UMBER 1

MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
00-715	10	284	0	0	0	0	0	168	9	4	0	2
15-730	5	353	0	0	0	0	0	165	9	1	0	4
30-745	6	387	0	0	0	0	0	178	2	1	0	4
45-800	3	426	0	0	0	0	0	166	5	3	0	3
00-815	8	386	0	0	0	0	0	187	6	0	0	6
15-830	9	378	0	0	0	0	0	187	7	1	0	2
30-845	6	356	0	0	0	0	0	171	10	1	0	9
45-900	11	334	0	0	0	0	0	176	5	5	0	7
00-915	6	287	0	0	0	0	0	156	3	2	0	1
15-930	8	264	0	0	0	0	0	195	6	2	0	6
30-945	12	232	0	0	0	0	0	177	2	2	0	12
45-1000	21	251	0	0	0	0	0	159	1	3	0	7

HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	24	1470	0	0	0	0	0	671	25	9	0	13	2212
715-815	22	1572	0	0	0	0	0	706	22	5	0	17	2343
730-830	26	1587	0	0	0	0	0	737	20	5	0	15	2400
745-845	26	1556	0	0	0	0	0	733	28	5	0	20	2368
800-900	34	1464	0	0	0	0	0	741	26	7	0	24	2296
815-915	32	1358	0	0	0	0	0	700	25	9	0	16	2140
830-930	31	1261	0	0	0	0	0	694	26	10	0	23	2045
845-945	37	1137	0	0	0	0	0	704	16	11	0	26	1933
900-1000	47	1054	0	0	0	0	0	687	14	9	0	26	1837

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
300-315	3	240	0	0	0	0	0	339	0	6	0	20
315-330	5	256	0	0	0	0	0	356	0	2	0	15
330-345	3	239	0	0	0	0	0	347	1	4	0	14
345-400	1	243	0	0	0	0	0	356	2	1	0	13
400-415	0	255	0	0	0	0	0	431	0	3	0	13
415-430	2	272	0	0	0	0	0	415	0	2	0	14
430-445	1	276	0	0	0	0	0	426	0	3	0	5
445-500	1	268	0	0	0	0	0	429	0	3	0	7
500-515	3	270	0	0	0	0	0	436	3	3	0	6
515-530	0	261	0	0	0	0	0	446	0	4	0	6
530-545	0	274	0	0	0	0	0	442	2	2	0	4
545-600	1	267	0	0	0	0	0	422	0	3	0	3

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
300-400	12	976	0	0	0	0	0	1400	3	13	0	62	2466
315-415	9	993	0	0	0	0	0	1492	3	10	0	55	2562
330-430	6	1009	0	0	0	0	0	1549	3	10	0	54	2631
345-445	4	1046	0	0	0	0	0	1628	2	9	0	45	2734
400-500	4	1073	0	0	0	0	0	1701	0	11	0	39	2827
415-515	7	1087	0	0	0	0	0	1706	3	11	0	32	2846
430-530	5	1096	0	0	0	0	0	1739	3	13	0	34	2890
445-545	4	1094	0	0	0	0	0	1755	5	12	0	23	2893
500-600	4	1092	0	0	0	0	0	1748	5	12	0	19	2880

AM PEAK 15M

	NB	SB	EB	WB
700-715	172	304	6	0
715-730	174	358	5	0
730-745	177	403	5	0
745-800	173	429	6	0
800-815	203	404	8	0
815-830	204	387	3	0
830-845	181	362	10	0
845-900	161	345	12	0
900-915	159	293	3	0
915-930	203	292	8	0
930-945	178	244	14	0
945-1000	160	272	10	0

PM PEAK 15M

	NB	SB	EB	WB
300-315	339	243	26	0
315-330	356	261	17	0
330-345	348	242	18	0
345-400	356	244	14	0
400-415	431	255	16	0
415-430	415	274	16	0
430-445	426	277	8	0
445-500	429	270	10	0
500-515	439	273	9	0
515-530	446	281	10	0
530-545	444	274	6	0
545-600	422	266	6	0

AM PEAK HR

	NB	SB	EB	WB
700-800	696	1484	22	0
715-815	727	1584	22	0
730-830	767	1623	20	0
745-845	761	1562	25	0
800-900	769	1498	31	0
815-915	725	1387	28	0
830-930	724	1292	33	0
845-945	722	1174	37	0
900-1000	701	1101	35	0

PM PEAK HR

	NB	SB	EB	WB
300-400	1403	990	75	0
315-415	1495	1002	65	0
330-430	1552	1015	64	0
345-445	1630	1050	54	0
400-500	1701	1078	50	0
415-515	1709	1094	43	0
430-530	1743	1101	37	0
445-545	1760	1096	35	0
500-600	1753	1086	31	0

24-Hour Count Data

E TRAFFIC SOLUTION - ADT WORKSHEET

NT: WILLDAN

JECT: WOODLAND HILLS

ATION: CANOGA AVENUE S/O SOUTHERLY PROJECT ACCESS DRWY

E: WEDNESDAY, OCTOBER 22, 2003

NO: A-1

CTION:	NORTHBOUND				
ME:	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	40	40	47	38	165
1:00	26	14	26	24	90
2:00	14	21	27	4	66
3:00	8	13	9	15	45
4:00	10	12	17	25	64
5:00	30	22	50	95	197
6:00	93	108	116	149	466
7:00	173	192	217	243	825
8:00	221	172	162	181	736
9:00	171	180	167	217	735
0:00	204	184	188	217	793
1:00	212	239	255	252	958
2:00	316	293	275	325	1209
3:00	287	306	275	298	1166
4:00	300	285	278	277	1140
5:00	285	320	319	358	1282
6:00	371	371	410	378	1530
7:00	446	426	467	394	1733
8:00	354	339	284	276	1253
9:00	237	202	196	155	790
0:00	185	155	139	156	635
1:00	139	122	129	99	489
2:00	123	86	86	57	352
3:00	68	47	67	32	214
				TOTAL	16933
AK HOUR			11:00-12:00		
ME			958		
AK HOUR			17:00-18:00		
ME			1733		

DIRECTION:	SOUTHBOUND				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
0:00	21	15	15	16	67
1:00	9	5	9	10	33
2:00	12	15	11	12	50
3:00	5	6	13	11	35
4:00	13	8	18	40	79
5:00	28	48	74	129	279
6:00	119	153	196	283	751
7:00	285	328	406	432	1451
8:00	365	353	337	311	1366
9:00	244	254	195	199	892
0:00	203	215	213	193	824
1:00	203	245	237	262	947
2:00	263	274	276	309	1122
3:00	264	243	239	279	1025
4:00	257	223	236	232	948
5:00	253	235	258	229	975
6:00	236	227	264	296	1023
7:00	265	289	284	278	1116
8:00	241	278	228	208	955
9:00	170	167	157	128	622
0:00	116	111	105	123	455
1:00	86	71	72	85	314
2:00	65	55	53	49	222
3:00	41	44	30	28	143
				TOTAL	15694
AM PEAK HOUR			07:30-08:30		
VOLUME			1556		
PM PEAK HOUR			16:45-17:45		
VOLUME			1134		

TOTAL BI-DIRECTIONAL VOLUME	32627

HE TRAFFIC SOLUTION
29 DIAMOND STREET
RCADIA, CALIFORNIA 91006
26.446.7978

APPENDIX B

DESCRIPTIONS OF LEVEL OF SERVICE

FOR

CRITICAL MOVEMENT ANALYSIS (CMA)

METHODOLOGY

APPENDIX B

LEVEL OF SERVICE DESCRIPTIONS FOR INTERSECTIONS

LEVEL OF SERVICE	DESCRIPTION
A	Low volumes; high speeds; speed not restricted by other vehicles; all signal cycles clear with no vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.
B	Operating speeds beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.
C	Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; recommended ideal design standard.
D	Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during traffic periods; often used as design standard in urban areas.
E	Capacity; the maximum traffic volumes an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volume and traffic speed can drop to zero; traffic volume will be less than the volume which occurs at Level of Service E.

APPENDIX C

2000 HIGHWAY CAPACITY MANUAL

(HCS 2000)

EXPLANATION OF LEVEL OF SERVICE

APPENDIX C

LEVEL OF SERVICE CRITERIA
HCS 2000

SIGNALIZED INTERSECTIONS:

LEVEL OF SERVICE	*STOPPED DELAY PER VEHICLE (SEC)*
A	*≤ 10.0*
B	*> 10.0 to 20.0*
C	*> 20.0 to 35.0*
D	*> 35.0 to 55.0*
E	*> 55.0 to 80.0*
F	*> 80.0*

UNSIGNALIZED INTERSECTIONS:

LEVEL OF SERVICE	*STOPPED DELAY PER VEHICLE (SEC)*
A	*≤ 10.0*
B	*> 10.0 to 15.0*
C	*> 15.0 to 25.0*
D	*> 25.0 to 35.0*
E	*> 35.0 to 50.0*
F	*> 50.0*

APPENDIX C

HCM
LEVEL OF SERVICE DESCRIPTIONS
FOR INTERSECTIONS

LEVEL OF SERVICE	DESCRIPTION
A	*Low volumes; high speeds; speed not restricted by other vehicles; all signal cycles clear with no vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.*
B	*Operating speeds beginning to be affected by other traffic; between one and ten percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.*
C	*Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; recommended ideal design standard.*
D	*Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during traffic periods; often used as design standard in urban areas.*
E	*Capacity; the maximum traffic volumes an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.*
F	*Long queues of traffic; unstable flow; stoppages of long duration; traffic volume and traffic speed can drop to zero; traffic volume will be less than the volume which occurs at Level of Service E.*

APPENDIX D

INTERSECTION ANALYSES

WORKSHEETS

CMA & HCS 2000 Analyses Worksheets
— Park-and-Ride Facility —
on Boeing Site

INTERSECTION: CANOGA AVE. & ROCKETDYNE

R1 = Bus Route #1

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST.	PROPOSED	EXIST.	OPEN DAY WITHOUT PROJECT	OPEN DAY WITH PROJ. (R1)	EXIST.	OPEN DAY WITHOUT PROJECT	OPEN DAY WITH PROJECT	OPENING DAY WITHOUT PROJECT	OPENING DAY WITH PROJECT (R1)
NL	1	1	20	20	20	20*	20*			20*
NT	2	2	743	760	830	372	380			455
NR	0	0	0	0	80					
SL	1	1	0	0	245	0	0			245
ST	2	2	1609	1645	1645	818*	836*			836*
SR	0	0	26	27	27					
EL	0	0	15	15	15					
ET	1	1	0	0	0	20*	20*			20*
ER	0	0	5	5	5					
WL	0	2	0	0	55					30*
WT	1	1	0	0	0	0	0			30
WR	0	0	0	0	30					
SUM OF CRITICAL VOLUMES						858	876			906
SIGNAL PHASING LOS E = 1500						2	2			3
LEVEL OF SERVICE (LOS)						A / 0.572	A / 0.584			B / 0.636
CREDIT FOR ATSAC & ATCS						0.07	0.07			0.07
LEVEL OF SERVICE (LOS)						A / 0.502	A / 0.514			A / 0.566

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".
† Indicates movement is utilized, but not striped.
‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.
Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

PM PEAK HOUR

INTERSECTION: CANOGA AVE. & ROCKETDYNE

R1 = Bus Route #1

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST.	PROPOSED	EXIST.	OPEN. DAY WITHOUT PROJECT	OPEN. DAY WITH PROJ. (R1)	EXIST.	OPEN. DAY WITHOUT PROJECT	OPEN. DAY WITH PROJECT	OPENING DAY WITHOUT PROJECT	OPENING DAY WITH PROJECT (R1)
NL	1	1	5	5	5	5	5			5
NT	2	2	1768	1808	1868	884*	904*			944*
NR	0	0	0	0	20					
SL	1	1	0	0	60	0*	0*			60*
ST	2	2	1102	1127	1127	553	566			566
SR	0	0	4	4	4					
EL	0	0	23	24	24					
ET	1	1	0	0	0	35*	36*			36*
ER	0	0	12	12	12					
WL	0	2	0	0	175					96*
WT	1	1	0	0	0	0	0			90
WR	0	0	0	0	90					
SUM OF CRITICAL VOLUMES						919	940			1136
SIGNAL PHASING LOS E = 1500						2	2			3
LEVEL OF SERVICE (LOS)						B / 0.613	B / 0.627			C / 0.797
CREDIT FOR ATSAC & ATCS						0.07	0.07			0.07
LEVEL OF SERVICE (LOS)						A / 0.543	A / 0.557			C / 0.727

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".
† Indicates movement is utilized, but not striped.
‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.
Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

AM PEAK HOUR

INTERSECTION: CANOGA AVE. & BUS ACCESS DRIVEWAY — **R1 = Bus Route #1**

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST	PROPOSED	EXIST	OPEN DAY WITHOUT PROJECT	OPEN DAY WITH PROJ. (R1)	EXIST	OPEN DAY WITHOUT PROJECT	OPEN DAY WITH PROJECT	OPENING DAY WITHOUT PROJECT	OPENING DAY WITH PROJECT (R1)
NL		0			0					
NT		2			1115					576
NR		0			36					
SL		0			0					
ST		2			1658					829*
SR		0			0					
EL		0			0					
ET		0			0					
ER		0			0					
WL		1			36					36*
WT		0			0					
WR		0			0					
SUM OF CRITICAL VOLUMES										865
SIGNAL PHASING LOS E = 1500										2
LEVEL OF SERVICE (LOS)										A / 0.577
CREDIT FOR ATSAC & ATCS										—
LEVEL OF SERVICE (LOS)										A / 0.577

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".
† Indicates movement is utilized, but not striped.
‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.
Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

PM PEAK HOUR

INTERSECTION: CANOGA AVE. & BUS ACCESS DRIVEWAY — **R1 = Bus Route #1**

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROROSED LANES	
	EXIST.	PROROSED	EXIST.	OPEN. DAY WITHOUT PROJECT	OPEN. DAY WITH PROJ. (R1)	EXIST.	OPEN. DAY WITHOUT PROJECT	OPEN. DAY WITH PROJECT	OPENING DAY WITHOUT PROJECT	OPENING DAY WITH PROJECT (R1)
NL		0			0					
NT		2			1835					936*
NR		0			36					
SL		0			0					
ST		2			1343					672
SR		0			0					
EL		0			0					
ET		0			0					
ER		0			0					
WL		1			36					36*
WT		0			0					
WR		0			0					
			SUM OF CRITICAL VOLUMES							972
			SIGNAL PHASING LOS E = 1500							2
			LEVEL OF SERVICE (LOS)							B / 0.648
			CREDIT FOR ATSAC & ATCS							—
			LEVEL OF SERVICE (LOS)							B / 0.648

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".

† Indicates movement is utilized, but not striped.

‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.

Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
nalyst	C. CARDEN	Intersection	CANOGA AVE. & NORTHERLY DWY.
gency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
ate Performed	5/28/2004	Analysis Year	OPEN DAY (2005) WITH PROJECT
nalysis Time Period	AM PEAK HOUR		

roject Description 12999 (MAY 2004)

ast/West Street: NORTHERLY DRIVEWAY 'ARK&RIDE)	North/South Street: CANOGA AVENUE
tersection Orientation: North-South	Study Period (hrs): 0.25

ehicle Volumes and Adjustments

ajor Street	Northbound			Southbound		
ovement	1	2	3	4	5	6
	L	T	R	L	T	R
olume	0	820	55	0	1917	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	863	57	0	2017	0
ercent Heavy Vehicles	0	--	--	0	--	--
edian Type	Undivided					
T Channelized			0			0
nes	0	2	0	0	2	0
onfiguration		T	TR		T	
ostream Signal		0			0	

inor Street	Westbound			Eastbound		
ovement	7	8	9	10	11	12
	L	T	R	L	T	R
olume	0	0	10	0	0	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	0	10	0	0	0
ercent Heavy Vehicles	0	0	0	0	0	0
ercent Grade (%)		0			0	
ared Approach		N			N	
orage		0			0	
Channelized			0			0
nes	0	0	1	0	0	0
nfiguration			R			

ay, Queue Length and Level of Service

proach	NB	SB	Westbound			Eastbound		
vement	1	4	7	8	9	10	11	12
ne Configuration					R			
vph)					10			
m) (vph)					554			
					0.02			
% queue length					0.06			
ntrol Delay					11.6			
S					B			
proach Delay	--	--	11.6					
proach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	CANOGA AVE. & NORTHERLY DWY.
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	OPEN DAY (2005) WITH PROJECT
Analysis Time Period	PM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: NORTHERLY DRIVEWAY (PARK&RIDE) | North/South Street: CANOGA AVENUE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1971	10	0	1191	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	2074	10	0	1253	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	35	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	0	36	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (vph)					36			
C (m) (vph)					230			
v/c					0.16			
95% queue length					0.54			
Control Delay					23.5			
LOS					C			
Approach Delay	--	--	23.5					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
nalyst	C. CARDEN	Intersection	CANOGA AVE. & SOUTHERLY DWY.
gency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
ate Performed	5/28/2004	Analysis Year	OPEN DAY (2005) WITH PROJECT
nalysis Time Period	AM PEAK HOUR		

oject Description	12999 (MAY 2004)
ast/West Street: SOUTHERLY DRIVEWAY (PARK&RIDE)	North/South Street: CANOGA AVENUE
tersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
ovement	1	2	3	4	5	6
	L	T	R	L	T	R
olume	0	1035	80	0	1658	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	1089	84	0	1745	0
ercent Heavy Vehicles	0	--	--	0	--	--
edian Type	Undivided					
T Channelized			0			0
nes	0	2	0	0	2	0
onfiguration		T	TR		T	
ostream Signal		0			0	

Minor Street	Westbound			Eastbound		
ovement	7	8	9	10	11	12
	L	T	R	L	T	R
olume	0	0	15	0	0	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	0	15	0	0	0
ercent Heavy Vehicles	0	0	0	0	0	0
ercent Grade (%)		0			0	
ared Approach		N			N	
orage		0			0	
T Channelized			0			0
nes	0	0	1	0	0	0
onfiguration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
ovement	1	4	7	8	9	10	11	12
ne Configuration					R			
vph)					15			
m) (vph)					459			
					0.03			
% queue length					0.10			
ntrol Delay					13.1			
S					B			
proach Delay	--	--	13.1					
proach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	CANOGA AVE. & SOUTHERLY DWY.
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	OPEN DAY (2005) WITH PROJECT
Analysis Time Period	PM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: SOUTHERLY DRIVEWAY (PARK&RIDE) | North/South Street: CANOGA AVENUE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1815	20	0	1343	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	1910	21	0	1413	0
Percent Heavy Vehicles	0	–	–	0	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	50	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	0	52	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Shared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R*			
v (vph)					52			
C(m) (vph)					258			
v/c					0.20			
95% queue length					0.74			
Control Delay					22.4			
LOS					C			
Approach Delay	–	–	22.4					
Approach LOS	–	–	C					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	*C. CARDEN*	Intersection	*PARK&RIDE & VANOWEN*
Agency/Co.	*WILLDAN*	Jurisdiction	*CITY OF LOS ANGELES*
Date Performed	*5/28/2004*	Analysis Year	*OPEN DAY (2005) WITH PROJECT*
Analysis Time Period	*AM PEAK HOUR*		

Project Description	*12999 (MAY 2004)*
East/West Street:	*VANOWEN STREET*
North/South Street:	*PARK-AND-RIDE DRIVEWAY*
Intersection Orientation:	*East-West*
Study Period (hrs):	*0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*701*	*25*	*0*	*1082*	*0*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*737*	*26*	*0*	*1138*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	–	–	*0*	–	–
Median type	*Undivided*					
LT Channelized?			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*		*T*	
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*10*	*0*	*0*	*0*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*10*	*0*	*0*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Shared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*0*	*0*
Configuration			*R*			

Control Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					*R*			
Volume, v (vph)					*10*			
Capacity, c_m (vph)					*622*			
v/c ratio					*0.02*			
95% queue length (95%)					*0.05*			
Control Delay (s/veh)					*10.9*			
LOS					*B*			
Approach delay (s/veh)	–	–	*10.9*					
Approach LOS	–	–	*B*					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	C. CARDEN
Agency/Co.	WILLDAN
Date Performed	5/28/2004
Analysis Time Period	PM PEAK HOUR

Site Information

Intersection	PARK&RIDE & VANOWEN
Jurisdiction	CITY OF LOS ANGELES
Analysis Year	OPEN DAY (2005) WITH PROJECT

Project Description: 12999 (MAY 2004)

East/West Street: VANOWEN STREET | North/South Street: PARK-AND-RIDE DRIVEWAY

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	1563	5	0	1118	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	1645	5	0	1176	0
Proportion of heavy vehicles, P_{HV}	0	–	–	0	–	–
Median type	Undivided					
LT Channelized?			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	45	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	47	0	0	0
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)	0			0		
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
Volume, v (vph)					47			
Capacity, c_m (vph)					320			
v/c ratio					0.15			
95% queue length					0.51			
Control Delay (s/veh)					18.2			
LOS					C			
Approach delay (s/veh)	–	–	18.2					
Approach LOS	–	–	C					

INTERSECTION: CANOGA AVE. & ROCKETDYNE

R1 = Bus Route #1

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST	PROPOSED	EXIST	FUTURE WITHOUT PROJECT	FUTURE WITH PROJ (R1)	EXIST	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT (R1)
NL	1	1		26	26		26*			26*
NT	2	2		950	1020		475			550
NR	0	0		0	80					
SL	1	1		0	245		0			245
ST	2	2		2057	2057		1045*			1045*
SR	0	0		33	33					
EL	0	0		19	19					
ET	1	1		0	0		25*			25*
ER	0	0		6	6					
WL	0	2		0	55					30*
WT	1	1		0	0		0			30
WR	0	0		0	30					
SUM OF CRITICAL VOLUMES							1096			1126
SIGNAL PHASING LOS E = 1500							2			3
LEVEL OF SERVICE (LOS)							C / 0.731			C / 0.790
CREDIT FOR ATSAC & ATCS							0.07			0.07
LEVEL OF SERVICE (LOS)							B / 0.661			C / 0.720

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".
† Indicates movement is utilized, but not striped.
‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.
Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

INTERSECTION: CANOGA AVE. & ROCKETDYNE

R1 = Bus Route #1

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST.	PROPOSED	EXIST.	FUTURE WITHOUT PROJECT	FUTURE WITH PROJ. (R1)	EXIST.	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT (R1)
NL	1	1		6	6		6			6
NT	2	2		2260	2320		1130*			1170*
NR	0	0		0	20					
SL	1	1		0	60		0*			60*
ST	2	2		1409	1409		707			707
SR	0	0		5	5					
EL	0	0		29	29					
ET	1	1		0	0		44*			44*
ER	0	0		15	15					
WL	0	2		0	175					96*
WT	1	1		0	0		0			90
WR	0	0		0	90					
SUM OF CRITICAL VOLUMES							1174			1370
SIGNAL PHASING LOS E = 1500							2			3
LEVEL OF SERVICE (LOS)							C / 0.783			E / 0.961
CREDIT FOR ATSAC & ATCS							0.07			0.07
LEVEL OF SERVICE (LOS)							C / 0.713			D / 0.891

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".

† Indicates movement is utilized, but not striped.

‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.

Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

AM PEAK HOUR

INTERSECTION: CANOGA AVE. & BUS ACCESS DRIVEWAY — R1 = Bus Route #1

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST.	PROPOSED	EXIST.	FUTURE WITHOUT PROJECT	FUTURE WITH PROJ. (R1)	EXIST.	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT (R1)
NL		0			0					
NT		2			1340					688
NR		0			36					
SL		0			0					
ST		2			2060					1030*
SR		0			0					
EL		0			0					
ET		0			0					
ER		0			0					
WL		1			36					36*
WT		0			0					
WR		0			0					

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

SUM OF CRITICAL VOLUMES	1066
SIGNAL PHASING LOS E = 1500	2
LEVEL OF SERVICE (LOS)	C / 0.711
CREDIT FOR ATSAC & ATCS	—
LEVEL OF SERVICE (LOS)	C / 0.711

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".
† Indicates movement is utilized, but not striped.
‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.
Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

PM PEAK HOUR
INTERSECTION: CANOGA AVE. & BUS ACCESS DRIVEWAY **R1 = Bus Route #1**

MOVEMENT	LANES		VOLUME			VOLUME / EXISTING LANES			VOLUME / PROPOSED LANES	
	EXIST.	PROPOSED	EXIST.	FUTURE WITHOUT PROJECT	FUTURE WITH PROJ. (R1)	EXIST.	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT	FUTURE WITHOUT PROJECT	FUTURE WITH PROJECT (R1)
NL		0			0					
NT		2			2282					1159*
NR		0			36					
SL		0			0					
ST		2			1635					818
SR		0			0					
EL		0			0					
ET		0			0					
ER		0			0					
WL		1			36					36*
WT		0			0					
WR		0			0					
			SUM OF CRITICAL VOLUMES							1195
			SIGNAL PHASING LOS E = 1500							2
			LEVEL OF SERVICE (LOS)							C / 0.797
			CREDIT FOR ATSAC & ATCS							—
			LEVEL OF SERVICE (LOS)							C / 0.797

L = LEFT T = THROUGH R = RIGHT

N = NORTHBOUND
S = SOUTHBOUND
E = EASTBOUND
W = WESTBOUND

* Denotes critical volume to be included in "SUM OF CRITICAL VOLUMES".
† Indicates movement is utilized, but not striped.
‡ A lane is striped only at the intersection and used for right turns only.

Source: "*Circular 212*"; *Transportation Research Board (TRB)*; January, 1980.
Notes: For combination left turn / through lane, left turns need to be converted to PCE volume (Table 3); for dual left turn lanes the split is 55% / 45%.

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
nalyst	C. CARDEN	Intersection	CANOGA AVE. & NORTHERLY DWY.
gency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
ate Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
nalysis Time Period	AM PEAK HOUR		

roject Description 12999 (MAY 2004)

ast/West Street: NORTHERLY DRIVEWAY (PARK&RIDE)	North/South Street: CANOGA AVENUE
ntersection Orientation: North-South	Study Period (hrs): 0.25

ehicle Volumes and Adjustments

lajor Street	Northbound			Southbound		
lovement	1	2	3	4	5	6
	L	T	R	L	T	R
olume	0	1014	55	0	2335	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	1067	57	0	2457	0
ercent Heavy Vehicles	0	--	--	0	--	--
ledian Type	Undivided					
T Channelized			0			0
anes	0	2	0	0	2	0
onfiguration		T	TR		T	
pstream Signal		0			0	

linor Street	Westbound			Eastbound		
lovement	7	8	9	10	11	12
	L	T	R	L	T	R
olume	0	0	10	0	0	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	0	10	0	0	0
ercent Heavy Vehicles	0	0	0	0	0	0
ercent Grade (%)		0			0	
ared Approach		N			N	
torage		0			0	
T Channelized			0			0
anes	0	0	1	0	0	0
onfiguration			R			

elay, Queue Length, and Level of Service

pproach	NB	SB	Westbound			Eastbound		
ovement	1	4	7	8	9	10	11	12
ane Configuration					R			
(vph)					10			
(m) (vph)					475			
c					0.02			
5% queue length					0.06			
ontrol Delay					12.7			
OS					B			
pproach Delay	--	--	12.7					
pproach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	CANOGA AVE. & NORTHERLY DWY.
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
Analysis Time Period	PM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: NORTHERLY DRIVEWAY (PARK&RIDE) | North/South Street: CANOGA AVENUE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	2430	10	0	1474	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	2557	10	0	1551	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	35	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	0	36	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (vph)					36			
C (m) (vph)					158			
v/c					0.23			
95% queue length					0.84			
Control Delay					34.4			
LOS					D			
Approach Delay	--	--	34.4					
Approach LOS	--	--	D					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. GARDEN	Intersection	CANOGA AVE. & SOUTHERLY DWY.
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
Analysis Time Period	AM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: SOUTHERLY DRIVEWAY (PARK&RIDE)	North/South Street: CANOGA AVENUE
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	1260	80	0	2060	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	1326	84	0	2168	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	15	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	0	15	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (vph)					15			
C (m) (vph)					383			
v/c					0.04			
95% queue length					0.12			
Control Delay					14.8			
LOS					B			
Approach Delay	--	--	14.8					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	CANOGA AVE. & SOUTHERLY DWY.
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
Analysis Time Period	PM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: SOUTHERLY DRIVEWAY (PARK&RIDE)	North/South Street: CANOGA AVENUE
Intersection Orientation: North-South	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	2262	20	0	1635	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	2381	21	0	1721	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	50	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	0	52	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Shared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
v (vph)					52			
C(m) (vph)					180			
v/c					0.29			
95% queue length					1.14			
Control Delay					32.9			
LOS					D			
Approach Delay	--	--	32.9					
Approach LOS	--	--	D					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	PARK&RIDE & VANOWEN
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
Analysis Time Period	AM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: VANOWEN STREET | North/South Street: PARK-AND-RIDE DRIVEWAY

Intersection Orientation: East-West | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	877	25	0	1339	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	923	26	0	1409	0
Proportion of heavy vehicles, P_{HV}	0	–	–	0	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	10	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	10	0	0	0
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
Volume, v (vph)					10			
Capacity, c_m (vph)					542			
v/c ratio					0.02			
Queue length (95%)					0.06			
Control Delay (s/veh)					11.8			
LOS					B			
Approach delay (s/veh)	–	–	11.8					
Approach LOS	–	–	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	PARK&RIDE & VANOWEN
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
Analysis Time Period	PM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: VANOWEN STREET	North/South Street: PARK-AND-RIDE DRIVEWAY
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	1953	5	0	1394	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	2055	5	0	1467	0
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	2	0	0	2	0
Configuration		T	TR		T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	45	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	47	0	0	0
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Control Delay/Queue Length/Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration					R			
Volume, v (vph)					47			
Capacity, c_m (vph)					234			
v/c ratio					0.20			
Queue length (95%)					0.73			
Control Delay (s/veh)					24.2			
LOS					C			
Approach delay (s/veh)	--	--	24.2					
Approach LOS	--	--	C					

HCS 2000 Analyses Worksheets
— Satellite Parking Lot —
on NEC of Canoga / Vanowen

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	CANOGA & SATELLITE PKG. ACCESS
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	OPEN DAY (2005) WITH PROJECT
Analysis Time Period	AM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: SATELLITE PARKING ACCESS | North/South Street: CANOGA AVENUE

Intersection Orientation: North-South | Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	792	0	30	1380	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	833	0	31	1452	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	0	1	2	0
Configuration		T	TR	L	T	
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	15	0	0	0
Peak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate, HFR	0	0	15	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (vph)		31			15			
C(m) (vph)		809			591			
v/c		0.04			0.03			
95% queue length		0.12			0.08			
Control Delay		9.6			11.2			
LOS		A			B			
Approach Delay	--	--	11.2					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
nalyst	C. CARDEN	Intersection	CANOGA & SATELLITE PKG. ACCESS
gency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
ate Performed	5/28/2004	Analysis Year	OPEN DAY (2005) WITH PROJECT
nalysis Time Period	PM PEAK HOUR		

roject Description 12999 (MAY 2004)

ast/West Street: SATELLITE PARKING ACCESS	North/South Street: CANOGA AVENUE
tersection Orientation: North-South	Study Period (hrs): 0.25

ehicle Volumes and Adjustments

ajor Street	Northbound			Southbound		
ovement	1	2	3	4	5	6
	L	T	R	L	T	R
olume	0	1831	0	5	1247	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	1927	0	5	1312	0
ercent Heavy Vehicles	0	--	--	0	--	--
edian Type	Undivided					
T Channelized			0			0
nes	0	2	0	1	2	0
onfiguration		T	TR	L	T	
ostream Signal		0			0	

inor Street	Westbound			Eastbound		
ovement	7	8	9	10	11	12
	L	T	R	L	T	R
olume	0	0	45	0	0	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	0	47	0	0	0
ercent Heavy Vehicles	0	0	0	0	0	0
ercent Grade (%)		0			0	
ared Approach		N			N	
orage		0			0	
Channelized			0			0
nes	0	0	1	0	0	0
nfiguration			R			

elay, Queue Length, and Level of Service

pproach	NB	SB	Westbound			Eastbound		
vement	1	4	7	8	9	10	11	12
ne Configuration		L			R			
ph)		5			47			-
m) (vph)		310			259			
		0.02			0.18			
% queue length		0.05			0.65			
ntrol Delay		16.8			22.0			
S		C			C			
proach Delay	--	--	22.0					
proach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*C. CARDEN*
Agency/Co.	*WILLDAN*
Date Performed	*5/28/2004*
Analysis Time Period	*AM PEAK HOUR*

Site Information

Intersection	*SAT. PKG. & VANOWEN*
Jurisdiction	*CITY OF LOS ANGELES*
Analysis Year	*OPEN DAY (2005) WITH PROJECT*

Project Description *12999 (MAY 2004)*

East/West Street: *VANOWEN STREET* | North/South Street: *SATELLITE PARKING ACCESS*

Intersection Orientation: *East-West* | Study Period (hrs): *0.25*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*0*	*711*	*0*	*0*	*1082*	*25*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*748*	*0*	*0*	*1138*	*26*
Proportion of heavy vehicles, P_{HV}	*0*	–	–	*0*	–	–
Median type	*Undivided*					
LT Channelized?			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*			*T*	*TR*
Upstream Signal		*0*			*0*	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Peak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
Proportion of heavy vehicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
Percent grade (%)		*0*			*0*	
Shared approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized?			*0*			*0*
Lanes	*0*	*0*	*0*	*0*	*0*	*1*
Configuration						*R*

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration								*R*
Volume, v (vph)								*0*
Capacity, c_m (vph)								*461*
v/c ratio								*0.00*
Queue length (95%)								*0.00*
Control Delay (s/veh)								*12.8*
LOS								*B*
Approach delay (s/veh)	–	–						
Approach LOS	–	–						

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
nalyst	*C. CARDEN*	Intersection	*SAT. PKG. & VANOWEN*
gency/Co.	*WILLDAN*	Jurisdiction	*CITY OF LOS ANGELES*
ate Performed	*5/28/2004*	Analysis Year	*OPEN DAY (2005) WITH PROJECT*
nalysis Time Period	*PM PEAK HOUR*		

oject Description *12999 (MAY 2004)*

ast/West Street: *VANOWEN STREET*	North/South Street: *SATELLITE PARKING ACCESS*
tersection Orientation: *East-West*	Study Period (hrs): *0.25*

ehicle Volumes and Adjustments

ajor Street	Eastbound			Westbound		
ovement	1	2	3	4	5	6
	L	T	R	L	T	R
olume (veh/h)	*0*	*1608*	*0*	*0*	*1118*	*5*
eak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
ourly Flow Rate (veh/h)	*0*	*1692*	*0*	*0*	*1176*	*5*
oportion of heavy hicles, P_{HV}	*0*	--	--	*0*	--	--
edian type	*Undivided*					
T Channelized?			*0*			*0*
nes	*0*	*2*	*0*	*0*	*2*	*0*
onfiguration		*T*			*T*	*TR*
ostream Signal		*0*			*0*	

inor Street	Northbound			Southbound		
ovement	7	8	9	10	11	12
	L	T	R	L	T	R
olume (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
eak-hour factor, PHF	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
ourly Flow Rate (veh/h)	*0*	*0*	*0*	*0*	*0*	*0*
oportion of heavy hicles, P_{HV}	*0*	*0*	*0*	*0*	*0*	*0*
ercent grade (%)		*0*			*0*	
ared approach		*N*			*N*	
Storage		*0*			*0*	
T Channelized?			*0*			*0*
nes	*0*	*0*	*0*	*0*	*0*	*1*
onfiguration						*R*

elay, Queue Length, and Level of Service

proach	EB	WB	Northbound			Southbound		
ovement	1	4	7	8	9	10	11	12
ne Configuration								*R*
lume, v (vph)								*0*
pacity, c_m (vph)								*456*
ratio								*0.00*
eue length (95%)								*0.00*
ntrol Delay (s/veh)								*12.9*
S								*B*
proach delay (s/veh)	--	--						
proach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
nalyst	C. CARDEN	Intersection	CANOGA & SATELLITE PKG. ACCESS
gency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
ate Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
nalysis Time Period	AM PEAK HOUR		

roject Description 12999 (MAY 2004)

ast/West Street: SATELLITE PARKING ACCESS	North/South Street: CANOGA AVENUE
ntersection Orientation: North-South	Study Period (hrs): 0.25

ehicle Volumes and Adjustments

ajor Street	Northbound			Southbound		
ovement	1	2	3	4	5	6
	L	T	R	L	T	R
olume	0	984	0	30	1699	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	1035	0	31	1788	0
ercent Heavy Vehicles	0	--	--	0	--	--
edian Type	Undivided					
T Channelized			0			0
anes	0	2	0	1	2	0
onfiguration		T	TR	L	T	
pstream Signal		0			0	

inor Street	Westbound			Eastbound		
ovement	7	8	9	10	11	12
	L	T	R	L	T	R
olume	0	0	15	0	0	0
eak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
ourly Flow Rate, HFR	0	0	15	0	0	0
ercent Heavy Vehicles	0	0	0	0	0	0
ercent Grade (%)		0			0	
ared Approach		N			N	
orage		0			0	
T Channelized			0			0
anes	0	0	1	0	0	0
onfiguration			R			

elay, Queue Length, and Level of Service

pproach	NB	SB	Westbound			Eastbound		
ovement	1	4	7	8	9	10	11	12
ne Configuration		L			R			
vph)		31			15			
(m) (vph)		679			508			
		0.05			0.03			
% queue length		0.14			0.09			
ntrol Delay		10.6			12.3			
OS		B			B			
proach Delay	--	--	12.3					
proach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information

nalyst	C. CARDEN
gency/Co.	WILLDAN
ate Performed	5/28/2004
nalysis Time Period	PM PEAK HOUR

Site Information

Intersection	CANOGA & SATELLITE PKG. ACCESS
Jurisdiction	CITY OF LOS ANGELES
Analysis Year	FUTURE (2020) WITH PROJECT

roject Description 12999 (MAY 2004)

ast/West Street: SATELLITE PARKING ACCESS	North/South Street: CANOGA AVENUE
tersection Orientation: North-South	Study Period (hrs): 0.25

ehicle Volumes and Adjustments

ajor Street	Northbound			Southbound		
ovement	1	2	3	4	5	6
	L	T	R	L	T	R
lume	0	2267	0	5	1553	0
ak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
urly Flow Rate, HFR	0	2386	0	5	1634	0
rcent Heavy Vehicles	0	--	--	0	--	--
edian Type	Undivided					
Channelized			0			0
nes	0	2	0	1	2	0
nfiguration		T	TR	L	T	
stream Signal		0			0	

nor Street	Westbound			Eastbound		
ovement	7	8	9	10	11	12
	L	T	R	L	T	R
lume	0	0	45	0	0	0
ak-Hour Factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
urly Flow Rate, HFR	0	0	47	0	0	0
rcent Heavy Vehicles	0	0	0	0	0	0
cent Grade (%)	0			0		
red Approach		N			N	
rage		0			0	
Channelized			0			0
es	0	0	1	0	0	0
nfiguration			R			

Delay, Queue Length, and Level of Service

roach	NB	SB	Westbound			Eastbound		
vement	1	4	7	8	9	10	11	12
e Configuration		L			R			
ph)		5			47			
n) (vph)		205			182			
		0.02			0.26			
queue length		0.07			0.99			
trol Delay		23.0			31.5			
		C			D			
oach Delay	--	--	31.5					
oach LOS	--	--	D					

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	SAT. PKG. & VANOWEN
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE (2020) WITH PROJECT
Analysis Time Period	AM PEAK HOUR		

Project Description: 12999 (MAY 2004)

East/West Street: VANOWEN STREET	North/South Street: SATELLITE PARKING ACCESS
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	887	0	0	1339	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	933	0	0	1409	26
Proportion of heavy vehicles, P_{HV}	0	--	--	0	--	--
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	2	0	0	2	0
Configuration		T			T	TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	0	0	0
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Shared approach		N			N	
Lane Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration								R
Volume, v (vph)								0
Capacity, c_m (vph)								376
v/c ratio								0.00
Queue length (95%)								0.00
Control Delay (s/veh)								14.6
LOS								B
Approach delay (s/veh)	--	--						
Approach LOS	--	--						

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	C. CARDEN	Intersection	SAT. PKG. & VANOWEN
Agency/Co.	WILLDAN	Jurisdiction	CITY OF LOS ANGELES
Date Performed	5/28/2004	Analysis Year	FUTURE(2020) WITH PROJECT
Analysis Time Period	PM PEAK HOUR		

Project Description 12999 (MAY 2004)

East/West Street: VANOWEN STREET	North/South Street: SATELLITE PARKING ACCESS
Intersection Orientation: East-West	Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	1998	0	0	1394	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	2103	0	0	1467	5
Proportion of heavy vehicles, P_{HV}	0	–	–	0	–	–
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	2	0	0	2	0
Configuration		T			T	TR
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	0	0	0	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Hourly Flow Rate (veh/h)	0	0	0	0	0	0
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)		0			0	
Shared approach		N			N	
Lane Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	1
Configuration						R

Control Delay, Queue Length, and Level of Service

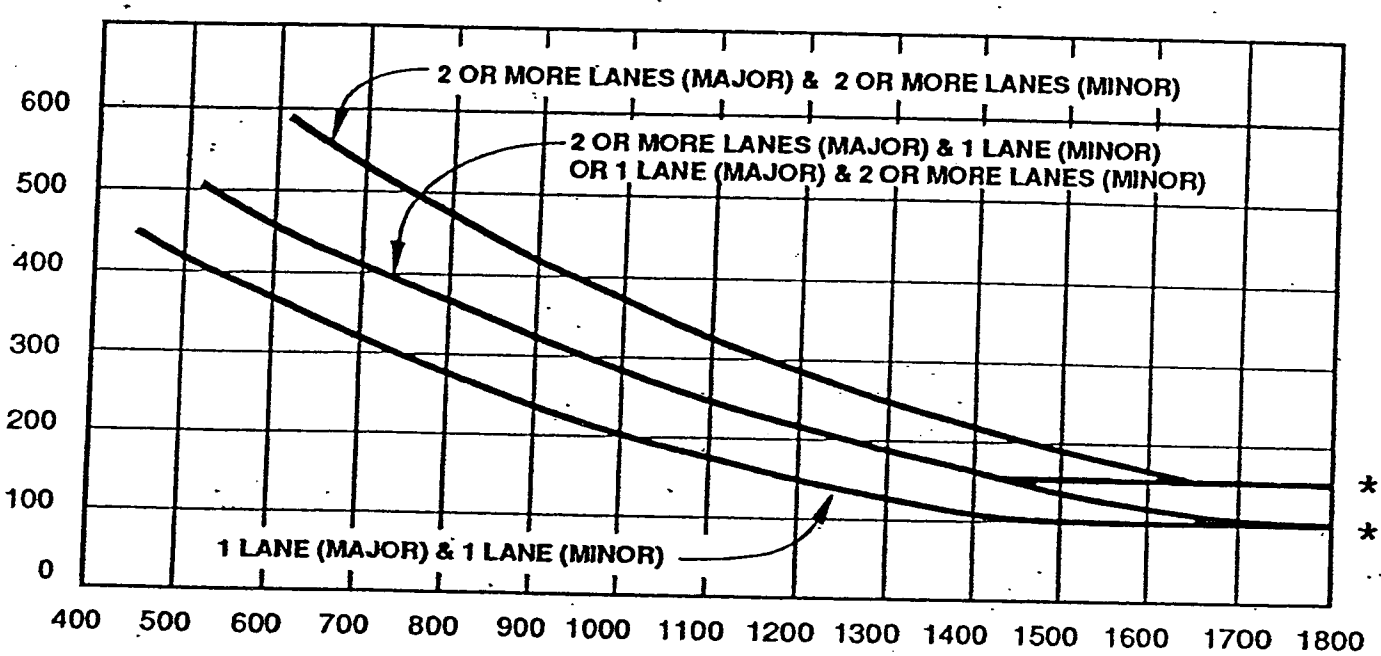
Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration								R
Volume, v (vph)								0
Capacity, c_m (vph)								366
v/c ratio								0.00
Queue length (95%)								0.00
Control Delay (s/veh)								14.8
LOS								B
Approach delay (s/veh)	–	–						
Approach LOS	–	–						

APPENDIX E

TRAFFIC SIGNAL WARRANT

WORKSHEET

Figure 9-8
PEAK HOUR VOLUME WARRANT
(Urban Areas)



* NOTE:

150 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Appendix C
LETTER FROM LOS ANGELES DEPARTMENT OF TRANSPORTATION

E K. TANDA
AL MANAGER

CITY OF LOS ANGELES
CALIFORNIA

ATT B

DEPARTMENT OF
TRANSPORTATION
221 N. FIGUEROA ST. SUITE 500
LOS ANGELES, CA 90012
(213) 580-1177
FAX (213) 580-1188

JAMES K. HAHN
MAYOR

Rec'd KS Mitchell
11/24/03

November 14, 2003

Noelia Custodio
Los Angeles County Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952

Re: Park and Ride Facilities in the Warner Center Specific Plan Area

The Department of Transportation (DOT) has evaluated a proposal for a Park and Ride at the vicinity of Owensmouth Avenue, north of Vanowen Street. The proposal is to construct a parking garage to accommodate approximately 1,000 - 2,000 parking spaces in support of the east-west San Fernando Valley Bus Rapid Transit project.

Pursuant to the Warner Center Specific Plan, a parking project has no trips generation and hence is not considered a project. Notwithstanding that conclusion, DOT was asked to review if any significant traffic impacts would be expected from a new park and ride facility. DOT has determined that there would not be an impact since the traffic pattern would be predominantly outside of the peak hour traffic generation of the surrounding Warner Center street system.

DOT conducted a survey of the park and ride lot at the North Hollywood Metro-Rail red line station on January 8, 2003. This facility is similar to the expected conditions at the proposed expanded site since it is at the terminus of a line-haul rapid transit service. Based upon the survey, it was determined that the park and ride morning peak hour in North Hollywood occurs between 6:00 a.m. and 7:00 a.m. with more than 95% parking lot occupancy before 7:30 a.m. In the afternoon, the park and ride peak hour was between 5:30 p.m. and 6:30 p.m. Since the proposed park and ride lot will be farther away from the transit system's center, the parking peak hour may be expected to be earlier in the morning and later in the afternoon.

To establish a comparable peak hour time for Warner Center traffic, an analysis of traffic counts on arterials feeding into Warner Center was reviewed. The morning peak hours at 7:30 a.m. - 8:30 a.m. significantly later than the expected park and ride peak hour. The afternoon peak hour occurs between 4:45 p.m. and 5:45 p.m. which is earlier that the expected park and ride peak hour.

Ms. Noelia Custodio

Based on this analysis, the Director of Planning and the General of the Department of Transportation find the proposed Park and Ride facility to be consistent with the intent and purpose of the Warner Center Specific Plan.

Should you have further questions regarding this determination, please call Mr. Rifkin at 213-580-1195.

Robert H. Sutton
Deputy Director, Community Planning
Department of City Planning

Allyn D. Rifkin
Principal Transportation Engineer
Department of Transportation

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

Date: February 3, 2003

To: Robert H. Sutton, Deputy Director
Department of City Planning

From: Allyn D. Rifkin, Principal Transportation Engineer
Department of Transportation

Subject: Peak hour impacts of Park and Ride in Warner Center Specific Plan

The Department of Transportation (DOT) has been requested to evaluate a proposal to expand the current Park and Ride at the Topanga Plaza shopping center in the vicinity of the Vanowen Street and Owensmouth Avenue. The expansion proposal is to construct a parking garage to accommodate approximately 1,000 - 1,200 parking spaces in support of the east-west San Fernando Valley Bus Rapid Transit project.

Pursuant to the Warner Center Specific Plan, a parking project has no trip generation and hence is not considered a project. Notwithstanding that conclusion, DOT was asked to review if any significant traffic impacts would be expected from expanding the park and ride facility. DOT has determined that there would not be an impact since the traffic pattern would be predominantly outside of the peak hour traffic generation of the surrounding Warner Center street system.

DOT conducted a survey of the park and ride lot at the North Hollywood Metro-Rail red line station on January 8, 2003. This facility is more similar to the expected conditions at the proposed expanded site since it is at the terminus of a line-haul rapid transit service, as contrasted to the service at the existing park and ride, which is served only by local bus service and carpools. Based upon the survey, it was determined that the park and ride morning peak hour occurs between 6:00 am and 7:00 am with over 95% parking lot occupancy before 7:30 am. In the afternoon the park and ride peak hour was between 5:30 and 6:30 pm. Since the proposed park and ride lot will be farther away from the transit system's center, the parking peak hour may be expected to be slightly earlier in the morning and slightly later in the afternoon.

To establish a comparable peak hour time for Warner Center traffic, an analysis of traffic counts on arterials feeding into Warner Center was reviewed. The morning peak hour occurs at 7:30 - 8:30 am, significantly later than the park and ride peak hour. The afternoon peak hour occurs between 4:45 and 5:45 pm, which is earlier than the expected park and ride peak hour.

If you have further questions regarding the DOT analysis, please call me at 213-580-1195.

cc: Chris Curry, Westfield Development
Noelia Custodio, Los Angeles County MTA

ATTACHMENT B

ATTACHMENT B TO FEBRUARY 2004 BOARD REPORT FOR BOEING SITE

1. **Addendum for Satellite Parking On MTA Property:** Direct the CEO to prepare an Addendum for additional surface parking on MTA owned land adjacent to the northeast corner of Canoga and Vanowen across the street from the Boeing site currently under consideration for the proposed Orange Line station and park-and-ride lot.

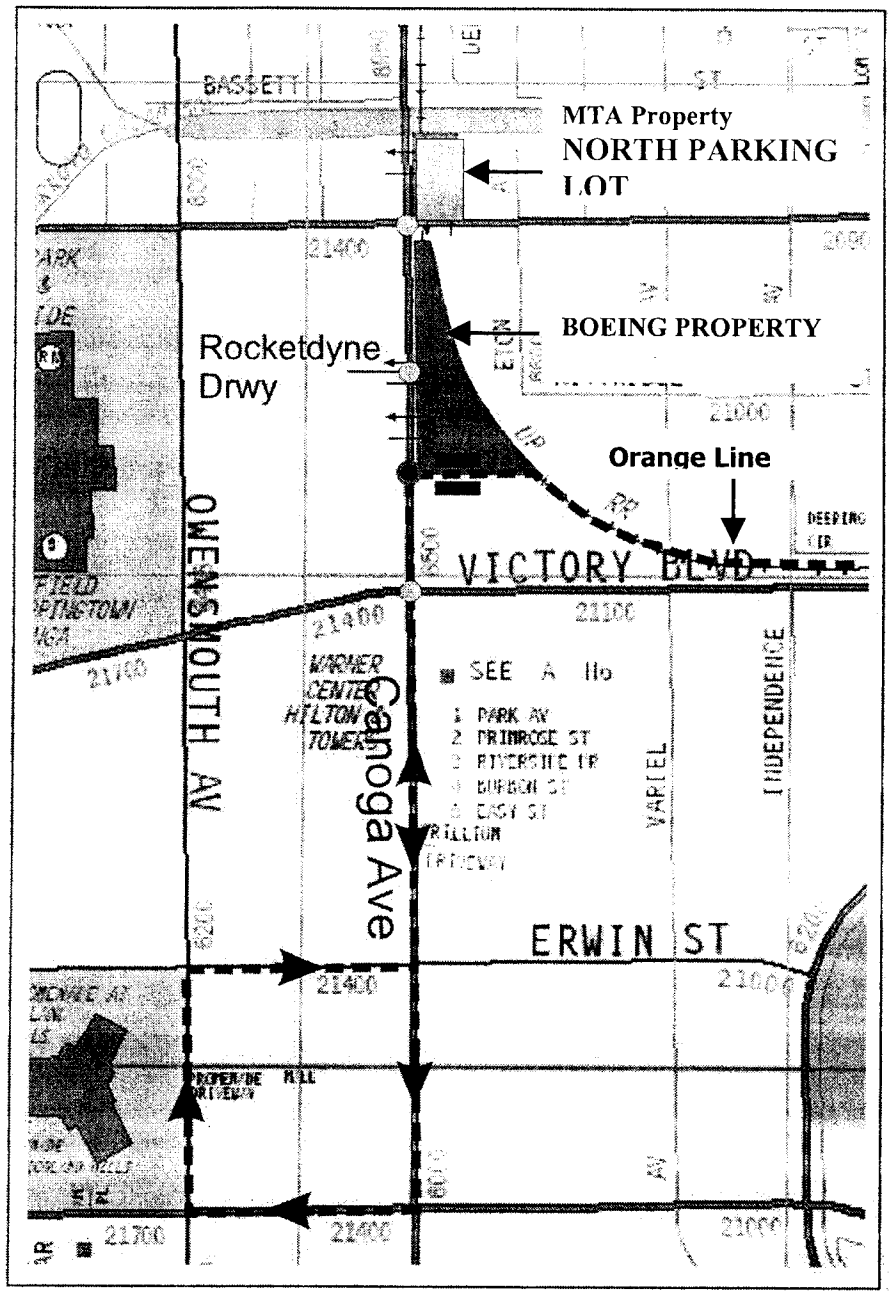
2. **Metro Orange Line Route:** The proposed Metro Orange Line route will remain as presented in the B-1 option. The route will not be modified by the potential addition of satellite parking on the MTA property to the north, which is to be studied in the subsequent Addendum mentioned above. Customers would walk from satellite parking to the Orange Line station and back should it be implemented.

3. **Project Permit Compliance Review Process Under the Warner Center Specific Plan:** Direct the CEO to submit the MTA project (the Orange Line extension, landscaped bicycle and pedestrian paths, and the transit park-and-ride lot and station on the Boeing property to be purchased) through the Project Permit Compliance Review process described in the Warner Center Specific Plan as applicable and required by the City, consistent with the rights and privileges conferred to the MTA by the Plan's provisions and other City Codes. It is understood that nothing in this paragraph shall prevent the MTA from exercising its rights and privileges, including applicable exemptions and credits, in accordance with the Warner Specific Plan and applicable City codes.

4. **Right-of-Way Dedications and Street Improvements:** If required by the City, direct the CEO to make right-of-way dedications and street improvements typically required of projects as defined under the provisions of the Warner Center Specific Plan and other City codes as applicable. Should the City require MTA contributions (such as dedications, street and intersection improvements, fair share contributions, and/or fees) consistent with the Plan and appropriate findings as a result of the Project Permit Compliance Review Process if applicable, the basis for such findings and requirements by the City shall be based on the complete transit project (as described in no. 3 above) that the Board is authorizing by this action and the overall positive impact that the Orange Line and its components will have on future traffic in the area. The CEO shall utilize all the rights and privileges conferred by the Plan to protect the interests of the MTA in this matter and to insure that property owners and developers contribute their fair share to street, intersection, and other transportation improvements meant to be funded on a shared basis based on the traffic impacts generated by their uses and developments as outlined in the Plan.

5. **MTA Action - To Approve Surface Parking and Metro Orange Line Station on the Boeing Site:** The Board action at this time solely authorizes the CEO to construct the transit project as described in no.'s 3 and 4 above. Any future extension of the Orange Line to the north beyond the Boeing site along the MTA right-of-way would require a separate environmental review per the California Environmental Quality Act and Board action.

ATTACHMENT C



N

Legend

- North Parking Lot
- Park-and-Ride
- Bus Path
- Study Intersections (Signalized)
- Proposed BRT Signal
- Bus Stop/Station

Option B1

Approximate Parking Capacity:

Boeing Site:	**610**
North Parking Lot:	**230**
TOTAL:	**840**

ATTACHMENT D