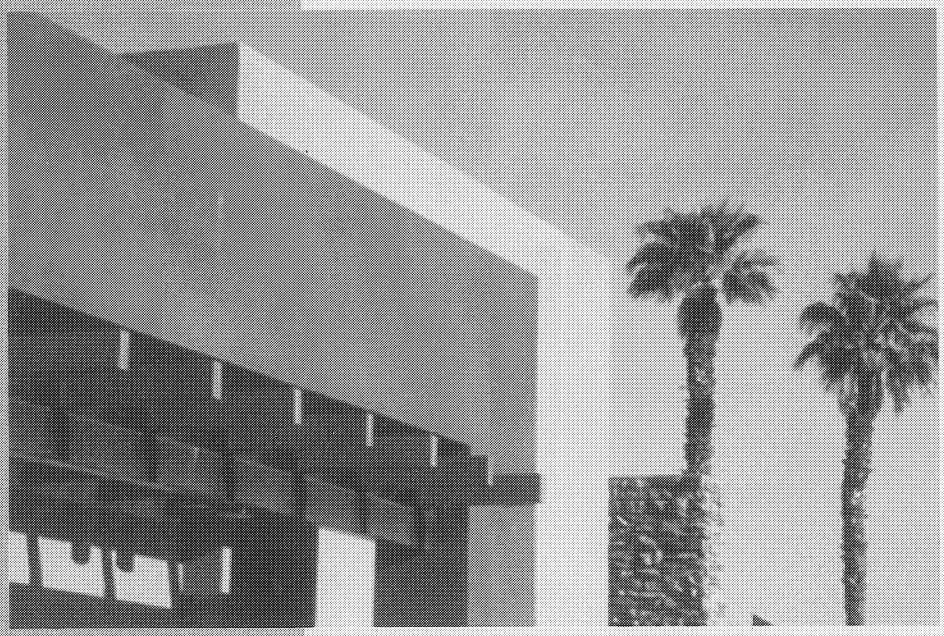
FINAL

ENVIRONMENTAL IMPACT REPORT

(SCH No. 2006041114)

PALMDALE GATEWAY



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November 2006

ATTACHMENT 4

CITY OF PALMDALE
LOS ANGELES COUNTY, CALIFORNIA
RESOLUTION NO. PC-2006-107

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF PALMDALE, CALIFORNIA, CERTIFYING THAT THE FINAL ENVIRONMENTAL IMPACT REPORT (EIR) 06-02 (SCH #2006041114) FOR THE PALMDALE GATEWAY CENTER LOCATED AT THE NORTHWEST CORNER OF AVENUE R AND 47TH STREET EAST (STATE ROUTE 138) HAS BEEN PREPARED AND COMPLETED IN COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

A. RECITALS

(i) Hopkins Real Estate Group has filed an application requiring the certification of Environmental Impact Report (EIR) 06-02 (SCH # 2006041114) for the Palmdale Gateway Center project as proposed under Conditional Use Permit 06-03 and Tentative Parcel Map 066322, described herein (hereinafter referred to as "the Project"). The City of Palmdale has retained Lilburn Corporation to prepare EIR 06-02 to evaluate the development and construction of the commercial shopping center located at the northwest corner of Avenue R and 47th Street East (State Route 138). The site is 46.65 acres and proposes up to 530,000 square feet of building area along with associated parking and landscaping.

(ii) Conditional Use Permit (CUP) 06-03 proposes to develop 46.65 acres into a commercial shopping center totaling 522,766 square feet of building area and Tentative Parcel Map (TPM) 066322 proposes to subdivide 46.65 acres into seventeen (17) lots, located at the northwest corner of Avenue R and 47th Street East (State Route 138).

(iii) Pursuant to Section 15063 of the State CEQA Guidelines and City of Palmdale CEQA Guidelines, the City evaluated the potential environmental impacts of the proposed components of the Palmdale Gateway Center through the use of the Initial Study prepared for the project by Lilburn Corporation. The initial study, which was completed on April 18, 2006, identified that there was substantial evidence that the project may have a significant environmental impact on several environmental resources. Pursuant to State CEQA Guidelines 15064 and 15081, a decision was made to prepare an EIR for the project.

(iv) A Notice of Preparation (NOP) was circulated between April 20, 2006 and May 19, 2006 for the required 30-day review period. The purpose of the

NOP was to solicit early comments from the public agencies with expertise in subjects to be discussed in the Draft EIR. The NOP and written responses to the NOP are contained in Appendix A of the Draft EIR. Relevant comments received in response to the NOP were incorporated into the Draft EIR.

(v) The Draft EIR was released for public review between August 24, 2006 and October 4, 2006, for the 45-day public review period required by the California Environmental Quality Act (CEQA). A Notice of Completion was submitted with the Draft EIR to the Governor's Office of Planning and Research, State Clearinghouse. Additionally, staff sent out a Notice of Availability to surrounding property owners and filed a publication in the Antelope Valley Press.

(vi) Seven (7) comment letters from public agencies were received in response to the Draft EIR circulation. Two of the comment letters were received after the October 4, 2006 cut-off date. However, a response to these comment letters, as well as those received prior to the cut-off date, was completed and are included in the Final EIR. The response to comments were sent on November 2, 2006 exceeding the 10-day notification period prior to the Planning Commission meeting of November 16, 2006.

(vii) The EIR contains a Mitigation Monitoring Program which lists the changes in the project required to mitigate or avoid significant environmental effects. The Mitigation Monitoring Program states the type of monitoring action that will be required for each mitigation measure, who the responsible agency/party will be for each action and the timing requirements for compliance with each action. The Mitigation Monitoring Program is included in the said EIR.

(viii) On November 16, 2006, the Planning Commission of the City of Palmdale conducted a duly noticed public hearing on the Final EIR, and concluded said hearing on that date. Notices of the time, place, and purpose of the aforesaid meeting was duly provided in accordance with California Government Code Sections 65355 and 65090, and Public Resources Code Section 21092.

(ix) The Notice of Preparation, Draft EIR, Comments on the Draft EIR, Responses to Comments, list of persons, organizations, and public agencies commenting on the Draft EIR, Corrections and Clarifications,

Technical Appendices, and the Mitigation Monitoring Program constitute the EIR for this Project. These documents are referred to collectively herein as the Final EIR.

(x) All legal prerequisites to the adoption of this Resolution have occurred.

B. RESOLUTION

NOW THEREFORE, it is hereby found, determined, and resolved by the Planning Commission of the City of Palmdale, as follows:

1. The Planning Commission hereby specifically finds that all of the facts set forth in the Recitals, Part A of this Resolution, are true and correct.

2. Based upon substantial evidence presented to this Commission during the above-referenced November 16, 2006 public hearing, including but not limited to public testimony, and written and oral staff report, the City of Palmdale Planning Commission specifically finds as follows:

   (a) The Final EIR 06-02, prepared for the Palmdale Gateway Center was completed in compliance with CEQA.

   (b) In accordance with CEQA Guideline Section 15126.6, four project alternatives are discussed within the Final EIR, and the potential significance for these alternatives are analyzed. The Planning Commission has considered these alternatives for the development of the Palmdale Gateway project as included in EIR 06-03 and makes the following findings:

      1. Alternative 1, the No Project Alternative would leave the project site in its present condition. The No Project Alternative would avoid the air quality impacts that are associated with the proposed project. Specifically, the site would not generate additional emissions that would exceed the AVAQMD thresholds. Thus, no construction or operational air quality impacts would occur. None of the project objectives would be met by this alternative.

      2. Alternative 2, the Location Alternative would result in the buildout of a vacant property located at the northwest corner of Palmdale Boulevard and 40th Street East within the same

zoning as the proposed project. As the alternative location is approximately twenty (20) percent smaller than the project site, the total square footage was assumed to be twenty (20) percent smaller than that proposed. Construction emissions and total vehicle trips and related emissions generated associated with this alternative would be approximately 20 percent less than those described for the project on a daily basis, however, would still be considered a significant impact and a significant cumulative impact. Operational noise impacts would be slightly higher as existing residential uses are located directly adjacent to the north and west boundaries of the site. This alternative does not fully attain any of the basic project objectives.

3. Alternative 3, the Reduced Scale Alternative assumes that the four shop buildings are eliminated, reducing the total square footage by approximately ten (10) percent. Under this alternative, lower total trip volumes and the associated decrease in the total air emissions from vehicle trips generated are anticipated, as are impacts to intersection as a result of the reduction in vehicle trips. Although air emissions would decrease slightly, impacts would still be considered significant with significant cumulative impacts. Impacts to intersection would remain and both right-of-way and intersections improvements would be required. Cumulative traffic impacts would still be considered significant. Impacts associated with aesthetics and visual quality, biological and cultural resources, stormwater runoff and water quality, noise would be similar to the proposed project with similar mitigation measures. Two of the eight project objectives would not be met by this alternative.

4. Alternative 4, the Residential Alternative assumes that the project site would be developed as a multi-family residential development. The development would require the General Plan Land Use and Zoning designations for the site be amended. Impacts to Aesthetics and Visual Quality would be less, with light and glare issues being reduced due to screening from adjacent properties by streets, walls, trees and residential structures. Construction emissions would be reduced due to less intense site preparation and building. Operational emissions would be reduced but would still exceed AVAQMD thresholds for three of four criteria air pollutants due to vehicle

miles traveled to and from work, stores, and schools. Air quality impacts would be slightly less than those identified for the Proposed Project but would still be considered a significant impact and a significant cumulative impact. Additionally, residences situated along State Route 138 would potentially be affected by the emissions from the high volume of vehicles, which are expected to increase substantially over time. Traffic impacts would be significantly reduced compared, with weekday trip generation anticipated at 4,368 ADT as compared to approximately 15,000 ADT. However, even considering the reduction in vehicle trips, a reduced level of intersection impacts would still be expected and right-of-way and intersections improvements would still be required. Cumulative traffic impacts would still be considered significant.

Alternative 4 is the environmentally superior alternative, in that the impacts to air quality and traffic and circulation will be less than those anticipated under the proposed project. However, this alternative will not meet any of the project objectives.

(a) The Final EIR 06-02 has been presented to the Planning Commission, and the Commission has reviewed and considered the information contained in the Final EIR prior to taking the following actions with respect to the subject project: a) approving Conditional Use Permit (CUP) 06-03 to develop 46.65 acres into a commercial shopping center totaling 522,766 square feet of building area located at the northwest corner of Avenue R and 47th Street East (State Route 138), and b) approving Tentative Parcel Map (TPM) 066322 to subdivide 72.54 acres into seventeen (17) lots plus one remainder located at the northwest corner of Avenue R and 47th Street East (State Route 138).

(b) The Final EIR reflects the Planning Commission's independent judgment and analysis.

(c) Between the time the Draft EIR was completed and the time this EIR is to be certified, no substantial evidence exists or was presented showing that the project evaluated would create a new significant environmental impact not evaluated in the Draft EIR or cause a substantial increase in the severity of any environmental impacts already evaluated in the Draft EIR. The text revisions and

corrections as provided in the Final EIR are not substantial changes to the project, and the Planning Commission specifically finds that there is no substantial evidence in the record to require recirculation of the Draft EIR on any of the grounds set forth in CEQA Section 21092.1 or State CEQA Guidelines Section 15088.5, or any other provision of CEQA or the State CEQA Guidelines.

(d) The following typographical corrections are made to the text of the Final EIR. These corrections, as shown below do not change any of the conclusions reached in the Final EIR.

6.4.4 Residential Alternative

Hydrology and Water Quality

Under this alternative, impacts to hydrology and water quality would be less than those addressed within the Proposed Project, as there will be more landscaped areas onsite. The proposed project will be approximately 90 percent hardscape (i.e. buildings, driveways and parking areas) and approximately 10 percent softscape (i.e. landscaping). The Residential Alternative will provide approximately ~~80~~ 70 percent hardscape (i.e. buildings, driveways and parking areas) and approximately 30 percent softscape (i.e. landscaping). A reduction in stormwater run-off is expected with the Residential Alternative. Impacts for this alternative and the proposed project would both be less than significant.

3. Based on the findings and conclusions set forth in paragraphs 1 and 2 above, the Planning Commission hereby certifies Final EIR 06-02. The Planning Commission's certification is subject to the text changes contained in the Final EIR and those identified in this Resolution.

4. The Planning Commission has also reviewed and considered the Mitigation Monitoring Program for the EIR that has been prepared pursuant to the requirements of Public Resources Code Section 21081.6 and finds that such program designed to ensure compliance with the mitigation measures during project implementation. The Planning Commission therefore, adopts the Mitigation Monitoring Program for EIR 06-02 and attached as Attachment 1.

5. The Deputy City Clerk shall certify to the adoption of this Resolution.

ADOPTED AND APPROVED this 16th day of November, 2006.

AYES: 4 (Chairman Mayfield, Commissioners Berg, Dino and Thompson)

NOES: 0

ABSENT: 1 (ViceChair Ontiveros) ABSTAIN: 0

John Mayfield, Chairman
Planning Commission

ATTEST:

Lynn O'Brien, Deputy City Clerk

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FINAL ENVIRONMENTAL IMPACT REPORT

F.1 INTRODUCTION TO FINAL EIR

This Final Environmental Impact Report (Final EIR) for the Palmdale Gateway (formerly Marketplace) Project (SCH # 2006041114) has been prepared in accordance with the California Environmental Quality Act (CEQA) and the State guidelines for implementation of CEQA. The public comment period for the Draft Environmental Impact Report (Draft EIR) began August 24, 2006 and ended October 4, 2006.

The Final EIR consists of:

(a) Revisions to the Draft EIR;

(b) Comments and recommendations received on the Draft EIR either verbatim or in summary;

(c) A list of persons, organizations and public agencies commenting on the Draft EIR;

(d) The responses of the Lead Agency to significant environmental points raised in the review and consultation process; and

(e) Any other information added by the Lead Agency.

The Final EIR is comprised of the Comments and Responses sections, the revised Draft EIR text and the technical appendices and constitutes the whole of the EIR as defined by CEQA Guidelines Section 15162.

F.2 REVISIONS TO THE DRAFT EIR

Due to another development having the same name, the project's name was recently changed from "Palmdale Marketplace" to "Palmdale Gateway" necessitating the Draft EIR to be revised.

Revisions to the Draft EIR in response to comments and a revised Traffic Impact Assessment (TIA) have been made. The actual pages with revisions are included and the revisions are highlighted by a double underline for new text and strike through for ~~deleted text~~. These revisions do not represent any significant new information nor would it significantly alter the findings of the lead agency, such that recirculation of the Draft EIR is required. In addition, Table 2-2, Summary of Impacts and Mitigation Measures/Regulatory Requirements for the Proposed Project and the Mitigation Monitoring Program (Chapter 8.0 of DEIR) have been included herein.

As a result of comments received and changes to the project name identified above, the following provides a summary of the revisions that have been made to the Draft EIR.

1. Section 1.3.1, page 1-9 has been revised as follows:

   - Palmdale Water District
     - The District, in response to the developer's request for Fire Flow Test results, ~~S~~submitted Fire Flow Test results for the south side of Avenue R between 45th Street East and 47th Street East and at the southeast corner of Palmdale Boulevard and 50th Street East. Indicated that observed flows were 1034 GPM and 1163 GPM respectively.

2. Section 2.6.2, page 2-8 has been revised to include corrected fire station information and to clarify the fire demand issue.

   Fire Protection - The City of Palmdale contracts with the Los Angeles County Fire Department for fire and safety services. There are two fire stations located within 4 miles of the proposed project site. Fire Station 131 is located approximately 3 miles from the site and proposed Fire Station 93 will be located approximately ~~6~~ 1.25 miles from the site. The change of the property from vacant open space to that of retail purposes will increase the demand for fire services but will not cause the need for significant additional fire protection services. The Fire Department has adequate resources to service the City of Palmdale and services will be expanded to meet new demands.

3. Section 2.6.4, page 2-11 has been revised to note that due to uncertainty of right-of-ways (ROWs) being available, impacts to three intersections as listed in table, may be potentially significant.

   Traffic: The traffic assessment found that all intersections studied would meet the City's recommended Levels of Service except for the intersection of Avenue S and 47th Street East. Mitigation to alleviate future traffic impacts to this intersection was deemed infeasible due to insufficient right-of-way ~~available~~ constraints. Due to uncertainty of ROW being available, impacts at three additional intersections as listed in Table 2-2, may be potentially significant.

4. Table 2-2, pages 2-12 through 2-22, "Summary of Impacts and Mitigation Measures/Regulatory Requirements for the Proposed Project" has been revised to add and clarify mitigation measures listed in Section F.2 and is included in its entirety.

5. Section 4.5 has been revised as follows:

   - Page 4.5-1, to provide updated water supply information for Palmdale Water District;

   ~~Groundwater is the primary source of water in the Palmdale Planning Area, with supplemental water supplied from the State Water Project (California Aqueduct).~~Surface water (imported State Water Project water and local surface water from Littlerock Reservoir) accounts for approximately 60 % of the water supply for Palmdale Water District. Groundwater accounts for approximately 40% of the water supply for Palmdale

Water District. Three groundwater sub-units are located within the Palmdale Planning Area. Groundwater movement is generally in a northwesterly direction, from the foothills of the San Gabriel Mountains towards the pumping depression in Lancaster. The location of the three sub-units of the principal (upper) aquifer and the approximate elevation of groundwater surfaces in the spring of 1984 are shown in Figure 4.5-1. Table 4.5-1 shows approximate depth to groundwater for 10 different locations in the Planning Area, as derived from Figure 4.5-1.

- Page 4.5-5, to show correct boundaries of Palmdale Water District on Figure 4.5-3;

- Page 4.5-10, to incorporate additional information on gas station regulations;

Gas Station Regulations

The automotive fueling station would include the installation of one or more underground gasoline storage tanks. Underground storage tanks require permits from and monitoring and reporting to a number of agencies including but not limited to:

- Antelope Valley Air Quality Management District;
- Los Angeles County Fire Department;
- City of Palmdale Building and Safety Department;
- City of Palmdale Engineering Department;
- Regional Water Quality Control Board and;
- Environmental Protection Agency.

These permits and plans must all be issued/approved by the respective agencies prior to Certificate of Occupancy or sooner. In addition, all new automobile fueling stations must be constructed to the following standards:

- All tanks, piping and vent/vapor piping must be double walled and contain leak detection capability;
- All piping and venting must be sloped back to the storage tank sumps to prevent discharge;
- Each pump island must have a containment pan underneath them to prevent spilled fuel from escaping;
- All secondary containment systems are required to be tested;
- Best Available Containment Technology is a minimum requirement of the State Water Board (as fueling stations age, they must be periodically updated to meet current requirements); and
- All equipment associated with underground storage tanks must be tested and approved by a third party laboratory and meet all state and local requirements.

- Pages 4.5-14 and 4.5-15, to add Mitigation Measures HWQ-2 and HWQ-3:

Mitigation Measure HWQ-2

If soils suspected of being contaminated by a toxic substance are discovered during grading or other construction related activities, work in the immediate areas shall cease. Suspected soils shall be tested by a qualified soils engineer and/or laboratory to determine level of contamination.

If tested soils are found to be toxic or hazardous DTSC will be notified and a remediation plan submitted for DTSC review.

Level of Significance After Mitigation

Implementation of Mitigation Measure HWQ-2 would ensure that potential impacts from soil contamination are less than significant.

Mitigation Measure HWQ-3

A Water Quality Management Plan shall be submitted to Palmdale Water District for review prior to the issuance of building permits.

Level of Significance After Mitigation

Implementation of Mitigation Measure HWQ-3 would ensure that potential impacts on water quality are less than significant.

6. Section 4.7 has been revised to incorporate comments received in an October 12, 2006 letter from the State of California Transportation Department (Caltrans) and changes per a revised TIA dated October 2, 2006. The revised Section 4.7 is included in its entirety in this Final EIR. The Revised TIA is available for review at the City of Palmdale Planning Department or a copy can be provided upon request to Ms. Susan Koleda.

   Specific responses to Caltrans comments are included in Chapter 9.0 under Letter Number 3. The principal revision incorporated in the Revised TIA and revised Section 4.7 is the inclusion of the anticipated traffic volumes of the development at the northeast quadrant of Avenue R and SR-138. With these additional volumes, the affected intersections were reassessed for each scenario and traffic volumes and assessments were adjusted accordingly. None of the assessed intersections fell from acceptable to below acceptable LOS with these additional volumes.

   Discussions under **Level of Significance After Mitigation** have been revised to note that due to uncertainty of ROWs being available, impacts to three intersections as listed in Mitigation Measures TC-1, TC-2, and TC-4, may be potentially significant.

F.3 PERSONS, ORGANIZATIONS AND PUBLIC AGENCIES COMMENTING ON THE DRAFT EIR

The public comment period for the Draft EIR ended October 4, 2006. A total of seven comment letters were received. These are listed in Table 9-1 of Chapter 9.0 Public Comments and Responses. Comment letters received and the City's responses are provided in their entirety in Chapter 9.0.

F.4 DISPOSITION OF THE FINAL EIR

Upon certification of the Final EIR, adoption of the Mitigation Monitoring and Reporting Program (MMRP), and approval of the project, the City will file a Notice of Determination (NOD) with the Los Angeles County Clerk.

The Final EIR used to support implementation of the Palmdale Gateway Project will be compiled with the Draft EIR and other pertinent documents (NOD, staff reports, etc.) and will be kept on file at the City. The Final EIR, including the Mitigation Monitoring Program, will be consulted during each phase of the project to ensure that implementation of mitigation measures occurs at the appropriate time.

1.0 INTRODUCTION

The Environmental Impact Report (EIR) (State Clearinghouse No. 2006041114) has been prepared by the City of Palmdale to evaluate the environmental effects of the proposed Palmdale Marketplace, a commercial development on approximately 49.25 acres of undeveloped land.

The City of Palmdale Planning Department is the lead agency as defined in Section 15051(b) of the Guidelines for implementing California Environmental Quality Act (CEQA) which states "If the project is to be carried out by a non-governmental person, the Lead Agency shall be the public agency with the greatest responsibility for supervising or approving the project as a whole."

1.1 PROJECT UNDER REVIEW

The proposed project is the development of a maximum of 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres. The proposed project is located north of Avenue R, west of 47th Street East (State Route 138) and east of 45th Street East. It includes approximately 49.25 acres of contiguous property. Figure 1-1 shows the regional location of the project site and Figure 1-2 shows the project site area and vicinity. The project site is currently vacant and zoned General Commercial (C-3).

The Project Applicant is Hopkins Real Estate Group; the Applicant proposes to construct six (6) major retail structures encompassing approximately 426,263 SF, mainly located along the west property line. The proposed major retail structures may include a home improvement center and an upscale discount retailer, both with garden centers. In addition, the retail center will have four (4) shops and eight (8) general commercial land uses consisting of approximately 38,938 SF and 53,130 SF, respectively (see Table 1-1). The land uses may include two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with a convenience market and an automated car wash. A 10-foot high block wall is proposed along the west property line to limit noise and views of the stores. In addition, the existing cellular tower will be relocated on-site in accordance with City requirements and off-site road and drainage improvements will be constructed. Please refer to Chapter 3.0 for detailed project description information.

The project is located in the easterly portion of the City of Palmdale that currently has residential development with some commercial land uses along SR 138. The eastern portion of the City are expected to see a rapid growth in residential development that would benefit from an increase in available retail shopping opportunities. The City as a whole may benefit by a reduction in traffic trips that are generated specifically for shopping opportunities.

1.2 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The purpose of an EIR is to serve as an informational document to generally inform public agency decision-makers and the public of the potentially significant environmental effects associated with a proposed project, identify ways to minimize or eliminate the significant effects, and evaluate a reasonable range of alternatives that would meet the major objectives of the proposed project but further reduce or avoid significant environmental effects. An EIR provides

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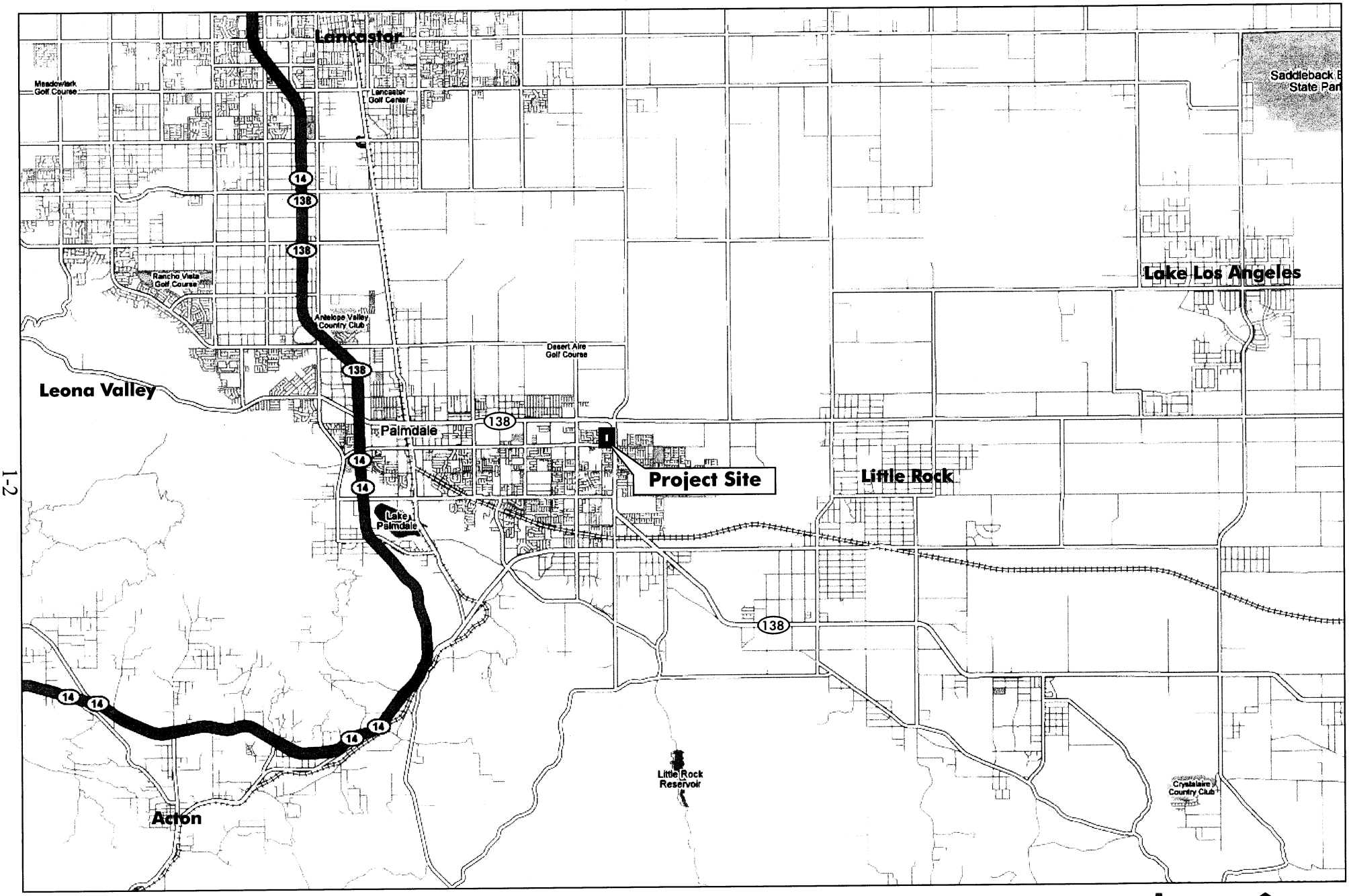
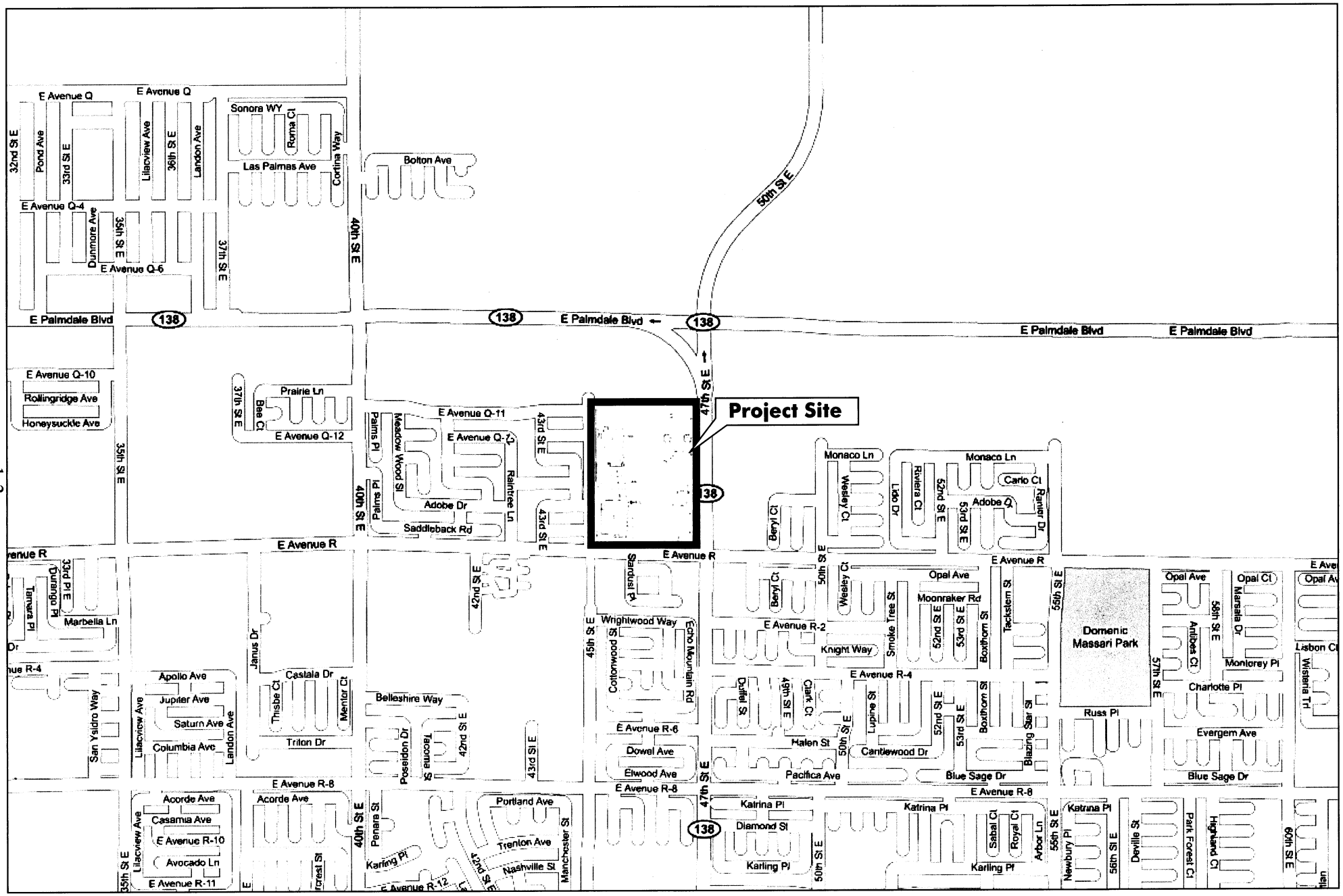


Regional Setting

Palmdale Marketplace
City of Palmdale, California

Figure 1-1



Project Vicinity

Palmdale Marketplace
City of Palmdale, California

Figure 1-2

Table 1-1
Palmdale Marketplace Shopping Center
Proposed Land Uses and Square Feet of Building Area

Land Use	Building Area (Sq. Ft.)
Major 1 Retail	172,815 GC – 10,800
Major 2	85,380
Major 3	
Major 4	
Major 5 Home Improvement	106,300 GC – 29,038
Major 6	21,930
Shops 1	7,579
Shops 2	11,890
Shops 3	11,890
Shops 4	7,579
Pad 1	3,500
Pad 2	7,700
Pad 3	3,530
Pad 4	10,000
Pad 5	4,000
Pad 6	4,000
Pad 7	10,200
Pad 8	10,200
TOTALS	**518,331**

Note: All building areas are preliminary and subject to change with final design.
Source: Hopkins Real Estate Group, Site Plan CA-1n April 2006

objective planning and environmental information to guide and assist decision-makers, lead agency staff and the public in their evaluation of the potential environmental effects that may result from implementation of the project as proposed. The California Environmental Quality Act (CEQA) Guidelines Section 15151 contains the following standards of adequacy:

> *"An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project*

need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection; but for adequacy, completeness, and good faith effort at full disclosure."

The EIR has been prepared in compliance with CEQA, the State Guidelines for Implementation of CEQA, and the City of Palmdale Guidelines for CEQA Implementation to document existing environmental conditions and evaluate the potentially significant environmental effects that could result from the implementation of the proposed project.

1.2.1 Lead Agency

The City of Palmdale is the lead agency as defined in section 15051(b) of the Guidelines for implementing the California Environmental Quality Act (CEQA) which states "If the project is to be carried out by a non-governmental person, the Lead Agency shall be the public agency with the greatest responsibility for supervising or approving the project as a whole."

The Draft EIR will circulate for a 45-day review period. Anyone reviewing the document may submit written comments to the City of Palmdale during this period. Responses to the comments received will be prepared and included in the Final EIR to be prepared prior to the City taking action on the proposed project during a public hearing before the City's Planning Commission.

Comments on the Draft EIR may be sent to:

City of Palmdale Planning Department
Attn: Susan Koleda, Associate Planner
38250 Sierra Highway
Palmdale, CA 93550

1.2.2 Responsible, Trustee, and Other Interested Public Agencies

A responsible agency means a public agency other than the lead agency, which has permitting authority or approval power over some aspect of the overall project. Caltrans and the Regional Water Quality Control Board (RWQCB) are responsible agencies for this project.

A trustee agency is "a state agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the state of California." (CEQA Guidelines Section 15386.) The California Department of Fish and Game (CDFG) is recognized as a trustee agency with jurisdiction over fish and wildlife.

Another agency responsible for the protection of natural resources with interest in the proposed project includes the Antelope Valley Air Quality Management District (AVAQMD). The above mentioned agencies are not meant to be an all inclusive list and other agencies may have responsibility over some aspect of the project.

Required Permits and Approvals

The discretionary actions listed below are required prior to implementation of the Palmdale Marketplace project. The lead agency and responsible agencies will use the EIR in their consideration of Hopkins Real Estate Group's application for the various permits and approvals.

City of Palmdale

- Tentative Parcel Map
- Master Conditional Use Permit
- Grading and Building Permits
- Conditional Use Permits as Required by the Zoning Ordinance for various uses
- Lot Line Adjustment

Regional Water Quality Control Board

- Storm Water Pollution prevention Plan (SWPPP)
- Waste Quality Management Plan (WQMP)

Caltrans

- Encroachment Permits

California Department of Fish and Game (CDFG)

- Consultation with CDFG and possible Incidental Take Permit

Antelope Valley Air Quality Management District

- Air Quality Permits for the storage and dispensing of gasoline

1.3 ENVIRONMENTAL REVIEW PROCESS

1.3.1 Notice of Preparation

A Notice of Preparation (NOP) was prepared and circulated to all responsible agencies and interested parties on April 18, 2006 for a period of 30 days. An Initial Study was attached to the NOP that included a project description and a preliminary evaluation of environmental issues in order to determine the focus of the analysis of the EIR. The NOP was distributed to all responsible agencies and interested parties as required by CEQA and City of Palmdale CEQA procedures. In addition, a public scoping meeting was conducted at City Hall on April 26, 2006 at which no comments were received. A copy of the NOP, the NOP distribution list, and written comments received by the City on the NOP are included in Appendix A. Responses to the NOP were used to establish the scope of issues to be addressed in this EIR.

Issues Raised in Comments on the NOP

The following issues were raised in comments received on the NOP:

- Antelope Valley Air Quality Management District

- The California Air Resource Board (CARB) handbook recommends avoiding siting residences, schools, daycare centers, playgrounds, or medical facilities (i.e. sensitive receptors) within 300 feet of any dry cleaning operation or large gasoline station.
- Indicated that AVAQMD may require the installation of additional air emission control equipment or impose restricted throughout in order to demonstrate the nearby sensitive receptors are protected from local exposure to known air pollutants.

- California Department of Fish and Game
  - Requested a complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique communities.
  - Requested a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.
  - Determined that the site supported habitat for the State threatened Mohave Ground Squirrel. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plant or animals listed under CESA, either during construction or over the life of the project.

- California Department of Health Services
  - The California Department of Health Services, Drinking Water Field Operations-Southern California Branch focused it review on drinking water issues and related issues. Health Services require that any construction and developments must comply with the Department's Policy on Criteria for the Separation of Water Mains and Non-Portable Pipelines. They also requested that all notifications and/or draft building permits be sent to County of Los Angeles Department of Health Services, Bureau of Environmental Protection to ensure compliance with the cross-connection requirements/inspections and the separation criteria and that all Potential Contaminating Activities that may impact domestic production well(s) within or nearby the project site.

- California Department of Transportation (Caltrans)
  - Caltrans provided comments on the project Traffic Study dated March 6, 2006. Caltrans requested additional information, clarification and recalculation of some of the figures presented in the Traffic Report. Caltrans also requested that certain mitigation measures and impact fees are included. Caltrans emphasized the need for an encroachment permit for all work conducted within State right-of-way.

- California Regional Water Quality Control Board
  - Submitted general comments indicating what information is required to be included in the EIR. They also indicated that the City of Palmdale must comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan. They indicated that Low Impact Development (LID) principles must also be

adhered to. LID principles include: Maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge; Reducing the impervious cover created by development and the associated transportation network; and Managing runoff as close to the source as possible.

- Palmdale Water District
  - The District, in response to the developer's request for Fire Flow Test results, ~~Submitted~~ submitted Fire Flow Test results for the south side of Avenue R between 45th Street East and 47th Street East and at the southeast corner of Palmdale Boulevard and 50th Street East. Indicated that observed flows were 1034 GPM and 1163 GPM respectively.
- Southern California Association of Governments (SCAG)
  - Indicated that the EIR must be reviewed for consistency with Destination 2003, 2004 Regional Transportation Plan (RTP); Regional Comprehensive Plan and Guide (RCPG) – 1996 Version; and Compass Growth Vision.
- State of California Public Utilities Commission (PUC)
  - Indicated that certain design elements and safety factors should be considered when developing new projects. Safety factors identified included, but not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings. They also indicated that pedestrian circulation patterns/destinations with respect to railroad right-of-way should be considered.

1.3.2 Draft EIR

Circulation of the Draft EIR begins when a Notice of Completion (NOC) is filed with the State Office of Planning and Research (State Clearinghouse). Filing the NOC starts the 45-day review period for the Draft EIR. Concurrent with the filing of the NOC, the lead agency will also provide a Notice of Availability of the Draft EIR to all organizations and individuals that have previously requested such notice or are located in proximity to the project site. This notice briefly describes the proposed project; identifies the date when comments must be received and where they are to be sent; and provides locations where copies of the Draft EIR can be reviewed (CEQA Guidelines section 15085 through section 15087).

In conjunction with the preparation of the Draft EIR, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared (CEQA section 21081.6). The MMRP contains the mitigation measures along with the action that must be taken to implement them and the method that would be used to document or verify fulfillment of the measure. A procedure for determining and recording compliance is outlined for each action that must be implemented by the project applicant to mitigate impacts as identified in the EIR and adopted when the project is approved. This procedure identifies what action would be taken and when, designates who would be responsible for implementing the action, and to whom and when compliance would be reported. The MMRP is included in this EIR in Chapter 8.0.

1.3.3 Final EIR

At the end of the public review period, written comments on the project will be compiled and responses generated in conjunction with the preparation of the Final EIR. The Final EIR will consist of a list of all persons, organizations, and public agencies commenting on the Draft EIR; copies of the comments received on the Draft EIR; responses to comments; and any other pertinent information added by the lead agency (CEQA Guidelines section 15132).

The Final EIR will serve as the CEQA compliance document for the City of Palmdale and any other agencies that may be responsible for review of the proposed project and issuance of required permits (see Section 1.2.2).

1.4 ORGANIZATION OF THE EIR

The Draft EIR is organized into the following chapters:

Chapter 1.0 - Introduction: Provides an introduction and overview that describes the intended use of the document and the lead agency authority under CEQA. Also provides a list of acronyms and a glossary of terms used to describe and evaluate the project.

Chapter 2.0 - Summary: Summarizes the proposed project, areas of controversy, issues to be resolved, the potential environmental effects that may result from the implementation of the proposed project, the mitigation measures identified to reduce or eliminate significant effects, and a summary of alternatives to the project.

Chapter 3.0 - Project Description: Provides a detailed description of conditions on the project site and vicinity and the various components of the proposed project. This chapter includes a statement of project objectives and provides background data on the project and project site. This chapter also includes a list of permits required to implement the project and responsible agencies or City departments that would issue those permits.

Chapter 4.0 - Environmental Impact Evaluation: Describes the existing environmental conditions on the site and in the vicinity of the project site, and the regulatory environment. Describes the project's characteristics related to each of the topical environmental issues and states the significance criteria used to evaluate potentially significant effects of the proposed project. Evaluates the potential environmental effects, identifies mitigation measures to reduce or eliminate effects found to be significant, and determines the level of significance of the effect after measures have been implemented.

Chapter 5.0 - Other CEQA-Required Analysis: Evaluates environmental effects of the project when considered with the effects of other approved and/or reasonably foreseeable projects that when combined, would be cumulatively significant. Also includes descriptions of: 1) ways in which the project may foster economic or population growth and thereby be growth inducing; and 2) any significant irreversible environmental changes which may result with the implementation of the proposed project (CEQA Guidelines section 15126.2(c)(d)).

Chapter 6.0 - Alternatives: Describes a reasonable range of alternatives to the project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects identified in the environmental analysis of the project.

Chapter 7.0 - References: Includes a list of lead agency staff members who participated in the preparation of the EIR as well as the consultants who prepared the technical reports to support the environmental analysis. Chapter 7.0 also includes a bibliography of information used to prepare the EIR and lists persons and organizations consulted during report preparation.

Chapter 8.0 - Mitigation Monitoring and Reporting Program: Includes a list of all measures, responsible department, timing of implementation and description of whether the measure is time specific or on-going.

1.5 INCORPORATION BY REFERENCE

As permitted by section 15150 of the CEQA Guidelines, this Draft EIR has referenced several technical studies, analyses, and reports, which are included in the technical appendices included in the EIR. Information from documents incorporated by reference has been summarized in the appropriate section(s) that follow. The following documents are hereby incorporated by reference and are available for review at the City of Palmdale offices (see page 1-1 for location).

- City of Palmdale General Plan
- City of Palmdale Zoning Ordinance

1.6 ACRONYMS

AAQS	Ambient air quality standards
AASHTO	American Association of Safe Highway and Transportation Officials
ADT	Average daily traffic
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
AVAQMD	Antelope Valley Air Quality Management District
BACT	Best available control technology
BLM	Bureau of Land Management
BMP	Best Management Practices
CAA	Clean Air Act
CAAA	Clean Air Act Amendments
CAAQS	California Ambient Air Quality Standards
CALTRANS	California Department Of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHL	California Historical Landmarks

CHP	California Highway Patrol
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
CO_2	Carbon dioxide
CPHI	California Points of Historical Interest
CRHR	California Register of Historical Resources
dB	Decibel
dBA	A-weighted decibel scale
EBL	Eastbound Left
EBR	Eastbound Right
EBT	Eastbound Through
EIR	Environmental Impact Report
ESA	Endangered Species Act
EPA	Environmental Protection Agency (federal and state)
F	Fahrenheit
FESA	Federal Endangered Species Act
GPM	Gallons per minute
HCM	Highway Capacity Manual
HRI	Historic Resources Inventory
ITE	Institute of Transportation Engineers
L_{eq}	Equivalent noise levels
L_{max}	Maximum sound level
L_{min}	Minimum sound level
LOS	Level of service
MCE	Maximum Credible Earthquake
MG	million gallons
MGD	Million gallons per day
MMRP	Mitigation Monitoring and Reporting Program
MPE	Maximum probable [earthquake] event
mph	Miles per hour
MSL	Mean sea level
M_w	Moment Magnitude
NAAQS	National ambient air quality standards
NBL	Northbound Left
NBR	Northbound Right
NBT	Northbound Through
NO_2	Nitrogen dioxide
NOC	Notice of Completion
NOI	Notice of Intent
NOP	Notice of Preparation
NO_x	Nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Place
O_3	Ozone

Pb	Lead
PCE	Passenger car equivalent, generally 1 truck being equal to approximately 1.5-2 cars
$PM_{2.5}$	Fine particulate matter (2.5 microns or less)
PM_{10}	10-micron or less particulate matter
ppm	Parts per million
ppm_v	Parts per million by volume
ROWD	Report of Waste Discharge
ROG	Reactive organic gases
RPLI	Regional Paleontologic Location Inventory
RTIP	Regional Transportation Improvement Program
RWQCB	Regional Water Quality Control Board
SCAG	Southern California Association of Governments
SO_2	Sulfur dioxide
SBL	Southbound Left
SBR	Southbound Right
SBT	Southbound Through
SR	State Route
SWPPP	Stormwater Pollution Prevention Program
TAC	Toxic air contaminants
TIA	Traffic Impact Analysis
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	Volatile organic compound
VPHG	Vehicles per hour of green
WDR	Waste discharge requirements
WBL	Westbound Left
WBR	Westbound Right
WBT	Westbound Through

1.7 GLOSSARY OF TERMS

Acre-foot: Volume of liquid or solid required to cover an area of one acre to a depth of one foot. Equals approximately 325,850 gallons of water.

Active fault: Geologic fault with recent seismic activity that has displaced materials not more than 12,000 years old.

Alquist-Priolo Fault Zone: State-identified areas of potentially active and recently active faults.

Alquist-Priolo Special Studies Zones Act: Places specific responsibilities on local governments for identification and evaluation of seismic and geologic hazards, and formulation of programs and regulations to reduce risk in identified locations.

Aquifer: A geological formation that is sufficiently permeable to conduct groundwater and to yield significant quantities of water to wells and springs.

California Endangered Species Act: California state legislation, enacted in 1984, with the intent to protect floral and faunal species by listing them as "rare," "threatened" "endangered," or "candidate" and by providing a consultation process for the determination and resolution of potential adverse impact to the species.

California Environmental Quality Act (CEQA): Policies enacted in 1970, and subsequently amended (through September 2004), the intent of which is the maintenance of a quality environment for the people of California now and in the future.

CALINE4: Computer Model, air quality model developed by the California Department of Transportation.

CNEL: Community Noise Equivalent Level-a noise index that accounts for the greater annoyance of noise during evening and nighttime hours.

Discretionary actions: Conditions which can be imposed on a project action prior to approval for implementation. The approval would thus be "at the discretion" of an agency.

EMFAC2002: A computer program published by the California Air Resources Board (CARB) that calculates on road vehicle emissions.

Endangered species: A species whose prospects of survival and reproduction in the wild are in immediate jeopardy from one or more causes.

Environmental Impact Report (EIR): Document in which the impacts of any state or local, public or private project action which may have a significant environmental effect are evaluated prior to its approval and subsequent construction or implementation, as required by the California Environmental Quality Act.

Fault: A geologic fracture or fracture zone along which there has been displacement of the sides relative to one another.

Groundwater: Water found beneath the land surface in the zone of saturation below the water table.

Hazardous material: Substance which, because of its potential for either corrosivity, toxicity, ignitability, chemical reactivity, or explosiveness, may cause injury to persons or damage to property.

Hydrogeology: The study of surface and subsurface water.

Lead Agency: The public agency which has the principal responsibility for carrying out or approving a project.

Level of Service (LOS): An indicator or traffic conditions at an intersection or on a stretch of roadway, and of the delay that can be expected in the general area; A is the best (no delay) and F is the worst.

Notice of Preparation (NOP): A brief notice sent by the public agency with principal responsibility for carrying out or approving a project to notify other agencies that an EIR is being prepared.

NO_x: A generic term for various oxides of nitrogen.

Ozone (O_3): An end product of complex reactions between reactive organic gases (or non-methane hydrocarbons) and nitrogen oxides (NO_x) in the presence of intense ultraviolet radiation.

Rare species: A species which, although not presently threatened with extinction, is in such small numbers throughout its range that it may become endangered if its present environmental worsens.

Regional Water Quality Control Board (RWQCB): Agency which administers the requirements of the California Administrative Code, Title 23, Division 3, Chapter 15 (Section 2595,g,7) to ensure the highest possible water quality consistent with all demands.

Responsible agency: A public agency which proposes to carry out or approve a project for which a lead agency has prepared an EIR. A responsible agency is any agency with discretionary approval over a project.

Right-of-way (ROW): The right to pass over property owned by another. The strip of land over which facilities such as roadways, railroads, or power lines are built.

Seismicity: The likelihood of an area being subject to earthquakes.

Sensitive species: Generic term for any plant or animal species which is recognized by the government or by any conservation group as being depleted, rare, threatened, or endangered.

Significant environmental impact: As defined by CEQA, Chapter 3, Article 1, Section 15002(g), "a substantial adverse change in the physical conditions which exist in the area affected by the proposed project."

Threatened Species: Species which, although not presently threatened with extinction, is likely to become endangered in the foreseeable future in the absence of special protection and management efforts.

Trustee Agency: A state agency having jurisdiction over natural resources that may be affected by the project, which are held in trust by the state. These include the California Department of Fish and Game, State Lands Commission, and State Department of Parks and Recreation.

Waste discharge requirements: Regulation described in Title 23, Division 3, Chapter 15, of the California Code of Regulations which governs discharge of wastes to land in order to preserve the quality of the state's surface and ground waters.

2.0 SUMMARY

2.1 PROJECT UNDER REVIEW

This Environmental Impact Report (EIR) (State Clearinghouse No. 2006041114) has been prepared in compliance with CEQA and the State Guidelines for Implementation of CEQA (as amended, 2004). The EIR describes the proposed development of the Palmdale Marketplace that encompasses approximately 49.25 acres of undeveloped land, documents the existing conditions within the City of Palmdale in the vicinity of the project, and evaluates the potentially significant environmental impacts that may occur with the proposed project. Several land use entitlements will be required from the City of Palmdale for approval of the proposed Palmdale Marketplace. These include, at minimum:

- Tentative Parcel Map
- Master Conditional Use Permit
- Grading and Building Permits
- Conditional Use Permits as Required by the Zoning Ordinance for various uses
- Lot Line Adjustment

2.1.1 Existing Conditions

The site is located in the eastern portion of the City of Palmdale in the Mojave Desert within the Antelope Valley region of Los Angeles County, approximately 60 freeway miles north of downtown Los Angeles. Palmdale is one of two incorporated cities and several unincorporated communities within the Antelope Valley. The Antelope Valley, approximately 3,000 square miles in size, is located in the westernmost part of the Mojave Desert. The valley is separated on the northwest from the San Joaquin Valley by the Tehachapi Mountains. On the south and southwest, it is separated by the San Gabriel Mountains. The north and east boundaries of the Antelope Valley are distinguished by isolated buttes.

The City of Palmdale is bordered by the City of Lancaster and the unincorporated communities of Quartz Hill to the north; Lake Los Angeles and Littlerock to the east; Acton to the south; and Leona Valley to the west. When Palmdale incorporated in 1962, it had a land area of 2.1 square miles. By 1965, the City contained 22.4 square miles, and by 1983 the City had grown to 45 square miles. Presently (2006), the City encompasses approximately 102 square miles of land, with an additional 72 square miles within the City's Sphere of Influence, together totaling 174 square miles.

The project site is bounded by vacant land designated for future commercial uses to the north, Avenue R and existing single-family residential and future commercial to the south, 47th Street East and vacant land designated for future commercial and residential to the east, and 45th Street East and existing single-family to the west. United States Air Force Plant No. 42 is located approximately 3.75 miles northwest of the project site.

The site is currently vacant except for a cellular tower located on the south side of the site. The project site is relatively level and includes a number of dirt roads and off-road vehicle tracks. Review of aerial photographs indicates that the southeastern section of the site was historically used for agricultural purposes since before 1953. Most of the site has not been graded and has retained its natural contours. The majority of the site is Joshua tree woodlands and desert scrub plant community with visible Joshua trees.

2.1.2 Project Description

The proposed project is the development of a maximum of 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres of land located at the northwest corner of 47th Street East (State Route 138) and Avenue R. The Project proposes to construct six (6) major retail structures encompassing approximately 426,263 SF, mainly located along the west property line. The proposed major retail structures may include a home improvement center and an upscale discount retailer, both with garden centers. In addition, the retail center will have four (4) shops and eight (8) general commercial land uses consisting of approximately 38,938 SF and 53,130 SF, respectively. The land uses may include two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with an automated car wash. One or more alcoholic beverage establishments may also be developed. A 10-foot high screen wall is proposed along the west property line. There is an existing cellular tower that will be relocated on-site in accordance with City requirements. In addition, a detention basin will be constructed along the west boundary of the site behind Major buildings 2, 3, and 4 and off-site road and drainage improvements will be constructed. The project also consists of a parcel map to create 17 lots. Table 2-1 lists the proposed building areas and potential employment.

Table 2-1
Proposed Building Areas and Employment

Building	Size (Sq. Ft.)	Potential No. of Employees
General Merchandise (Major Tenants 1 - 6)	426,263	853 employees
Retail (Pads7 and 8, shops 1- 4)	59,338	119 employees
Restaurant (Pads 2 and 4)	17,700	36 employees
Fast Food with Drive-Thru (Pads 1 and 3)	7,030	14 employees
Bank with Drive-Through (Pad 5)	4,000	8 employees
Gas Station (pad 6)	4,000	8 employees
Totals	**518,331**	**1,039 employees**

Note: Potential employment based on one employee per 500 SF of area.
Source: Hopkins Real Estate Group, 2006

2.2 AREAS OF CONTROVERSY

CEQA Guidelines Section 15123(b)(2) requires a discussion of areas of controversy known to the lead agency, including issues raised by responsible and trustee agencies and the public. The Draft EIR addresses the areas of controversy known to the City of Palmdale or raised by responsible or trustee agencies or the public in response to the Notice of Preparation (NOP). No issues were raised by any agency or the public during the scoping meeting held April 26, 2006. Appendix A also includes letters sent by responsible and trustee agencies in response to the NOP,

which circulated between April 18 and May 19, 2006. Two areas of controversy are included in comments received from AVAQMD and CDFG summarized below.

The AVAQMD indicated that the California Air Resources Board (CARB) "Air Quality and Land Use Handbook: A Community Health Perspective" (April 2005) recommends avoiding siting residences, schools, daycare centers, playgrounds, or medical facilities (i.e. sensitive receptors) within 300 feet of any dry cleaning operation or large gasoline station. The proposed service station on Pad 6 of the site will be located within 300 feet of residentially zoned but currently vacant property to the east. The gas station requires permit approval for the storage and dispensing of gas.

CDFG indicated that the site contains favorable habitat for the State threatened Mohave Ground Squirrel. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plant or animals listed under CESA, either during construction or over the life of the project.

Another area of controversy outside the scope of this EIR is the planned development of a round-about by Caltrans at the intersection of 47th Street East and Palmdale Boulevard (SR 138) and whether this planned improvement would handle future traffic volumes.

2.3 ISSUES TO BE RESOLVED

CEQA Guidelines Section 15123(b)(3) requires a discussion of issues to be resolved including a choice between alternatives and whether or how to mitigate the significant effects of the proposed project. Three issues to be resolved for this project are road improvements agreeable to Caltrans and the City, compensation for potential impacts to Mojave ground squirrel habitat, and consideration of CARB recommendations on the location of sensitive receptors within 300 feet of a large gasoline station.

2.4 EIR IMPACT EVALUATION FORMAT

Chapter 4.0 of this EIR contains an evaluation of environmental impacts that could occur with the implementation of the proposed project. Each section in Chapter 4.0 begins with a description of the environmental setting for each environmental issue. This setting includes a general discussion of the existing conditions taken from the City of Palmdale General Plan, site visits, and from information provided by the organizations and agencies contacted during preparation of this EIR. The setting description is followed by a discussion of applicable plans, policies, and regulations pertaining to the specific issue being addressed. A discussion of identified impacts associated with the proposed project follows, which describes the thresholds used to determine the levels of significance before and after mitigation.

2.5 SUMMARY OF ALTERNATIVES

CEQA requires that an EIR include an evaluation of a reasonable range of alternatives to the proposed project. The alternatives identified should achieve the basic objectives of the proposed

project while substantially lessening or avoiding significant environmental damage (CEQA Guidelines Section 15126(d)). This discussion must focus on feasible alternatives capable of either eliminating any significant adverse effects, or reducing them to a less than significant level. The Guidelines also require that this section include a summary of alternatives considered and found to be infeasible. Finally, the Guidelines require the selection of an environmentally superior alternative (other than the no-project alternative).

Chapter 6.0 of this EIR contains an analysis of alternatives to the proposed project. CEQA Guidelines Section 15126.6 requires that an EIR consider and discuss alternatives that would feasibly attain most of the basic objectives of the proposed project but would avoid or substantially lessen any of the significant effects of the project.

2.5.1 Description of Alternatives Considered and Rejected

- *Buildout Under the Existing Zoning Alternative*: Under this alternative, the project site would be developed as a commercial retail center. It was assumed the building out of the site consistent with the zone would yield similar impacts. This alternative was rejected because a development of similar size would have similar environmental impacts. In addition to that, an analysis of a reduced project (less intensive development) is discussed in this document.

2.5.2 Evaluation of Feasible Alternatives

Four alternatives to the proposed project are evaluated in Chapter 6.0. These are:

- *No-Project/No-Development Alternative*: The No Project/No Development Alternative would allow the continued existence of the proposed project site in its current vacant condition. While this alternative would not meet the project objectives, CEQA requires the alternative to be analyzed. This alternative is similar to the discussion of existing conditions for each issue addressed in Chapter 4.0, Environmental Impact Evaluation (e.g., aesthetics, air quality, biological resources, etc.).

- *Location Alternative*: There are a number of sites in the general vicinity that may be developed into a commercial shopping center. This alternative evaluates a property located at the northwest corner of Palmdale Boulevard and 40th Street East. The alternative site is approximately 39.25 acres in size and is vacant. The alternate site is zoned C-3 as is the Project site. Properties to the west and north of the alternate site are residentially developed and properties to the east and south of the alternate site are vacant. The Location Alternative would reduce the total structures built from approximately 530,000 SF to approximately 424,000 SF (the alternate site is approximately 20 percent smaller than the project site thereby reducing the size of the project).

- *Reduced Scale Alternative*: The Reduced Scale Alternative would allow for the development of a similar project by eliminating one or more uses, or by reducing the size

of one or more of the proposed uses. Reducing the size of one or more of the Major tenant buildings could reduce the economic feasibility of the project since by definition the discount store and home improvement store must be of a certain size to accommodate their inventory and be financially feasible. Therefore, reducing other uses on site would be more palatable.

- *Residential Development Alternative*: The Residential Alternative would require that the general plan and zoning for the site be changed to residential. This alternative would provide for the construction of approximately 500 to 800 dwelling units on the 50-acre site. While this alternative would not meet the project objectives, an alternative land use was recommended to be analyzed.

2.6 SUMMARY OF ENVIRONMENTAL IMPACTS

2.6.1 Findings Of The EIR

Table 2-2, included at the end of this section, summarizes the potential environmental impacts associated with the proposed project, the mitigation measures that would reduce or eliminate potentially significant impacts, and the level of significance of an impact that would occur after mitigation is implemented. This information is presented in detail in Chapter 4.0. The table summarizes all impacts that could occur with implementation of the project. The second column of the table indicates the level of significance of the impact prior to the implementation of any mitigation measures.

2.6.2 Effects Found Not To Be Significant or Found To Be Less Than Significant

The Initial Study, included in Appendix A, identified the following issues where no impacts would occur, or impacts would be less than significant and therefore do not require further evaluation in this EIR:

Geology and Soils - The project site is not located within an Alquist-Priolo Earthquake Fault Zone. Rupture of a known earthquake fault is not anticipated on-site. The project site is not located in an area identified as containing expansive soils. Additionally, there are no septic systems existing on-site and none are proposed as a part of the project. Existing sewer lines adjacent to the project area would be extended to the site. The applicant does not intend to develop a septic system.

Earth (i.e. Soils, Earthquakes, Slopes) - During construction of the proposed project, the potential for erosion and/or runoff may temporarily increase. However, the applicant will comply with best management practices and all storm water measures as required by law prior to and during construction through preparation of, and compliance with, a Storm Water Pollution Prevention Plan (SWPPP) administered by the Lahontan Regional Water Quality Control Board. In this regard, the project proponent is required to file and comply with a City-approved SWPPP prior to initiation of construction activities. The applicant must also comply with dust control measures as regulated by the AVAQMD.

The project's development should not be substantially impacted by unstable geologic conditions and is not located in an area known for subsidence, hydrocompaction, landsliding, lateral spreading, liquefaction, or other issues related to differential settlement. The project applicant will comply with appropriate geologic/soils engineering codes and guidelines, safety regulations, the feasibility and final geotechnical report from Kleinfelder, and appropriate Uniform Building Code (UBC) requirements for the proposed project.

Based on information presented in the Geotechnical Feasibility Study prepared for the project site by Kleinfelder and the City of Palmdale's General Plan, the project site is not located within a designated Alquist-Priolo Earthquake Fault Zone, Special Studies Zone, or a State of California designated Earthquake Fault Rupture Hazard Zone for active surface faulting.

The most significant fault in relation to the proposed project is the San Andreas-Mojave Fault located roughly three miles from the proposed site. There are no known active or potentially active faults that pass directly through or project towards the site. Given the proximity to the San Andreas-Mojave Fault, the proposed project can be expected to be subject to potential strong seismic shaking during its design life.

Building officials and engineers have long recognized the impacts of earthquakes and ground shaking on structures. Appropriate measures which reduce the effects of earthquakes are identified in the Uniform Building Code (UBC), including specific provisions for seismic design of structures. The City of Palmdale has adopted the UBC for design and implementation of all structures within the City, including the proposed project. Short of a catastrophic event, design of structures in accordance with the UBC and current professional engineering practices, is sufficient to reduce the effects of seismic ground shaking below the level of significance.

Liquefaction occurs when saturated, loose gravels, sands, and silty soils are subjected to strong shaking resulting from earthquake motion. The site is not located within any mapped Seismic Hazard Zone for liquefaction potential. In addition, due to a lack of groundwater located at the site within the upper 50 feet of the soil, the liquefaction hazard is considered to be a less than significant impact.

The proposed project location is relatively level in nature with no major sloping or landforms present. Grading of the project site will not increase the risk of landslide, mudslides, or erosion on or around the project site. The project design is not anticipated to create any significant slopes that would be subject to additional risk for landslides, mudslides, or erosion.

According to the Geotechnical Feasibility Study completed by Kleinfelder, the site is not within a Seismic Hazard Zone for Earthquake-Induced Landslides. There are no expected impacts.

The City of Palmdale General Plan and the maps provided from the State Department of Mines and Geology conclude that the proposed project will not impact a significant mineral resource deposit.

Land Use - The City of Palmdale's General Plan provides a General Plan Land Use Designation of Community Commercial (CC) and a Zoning Designation under the City's Zoning Ordinance of

General Commercial (C-3). The retail use for the proposed project is consistent with the underlying Zoning and General Plan Designations and is similar to other retail centers in the area that service the local residential communities. According to the General Plan, given the high growth in residential uses in the City of Palmdale, there is a growing need for Community commercial centers within these newly developed areas in the eastern portions of the City, which will potentially facilitate a reduction in traffic and drive time.

The proposed commercial and retail use for this undeveloped land along 47th Street East is consistent with the proposed land use, zoning, and retail facilities the City of Palmdale is supporting in this region and will help reduce the driving distance for the surrounding residential communities. The proposed project is also consistent with other adopted regional plans such as Destination 2030, 2004 Regional Transportation Plan (RTP) and Regional Comprehensive Plan and Guide (RCPG) 1996 Version and Compass Growth Vision. The proposed project does not involve the creation of new housing units and is served by existing local and regional transportation corridors. Required street improvements or mitigations are included in the project. It is expected that additional retail centers in the eastern areas of the city will reduce cross-town traffic on Palmdale Boulevard, in compliance with goals and policies of the General Plan, Air Quality Management Plan and SCAG and adopted regional plans (i.e. Destination 2030, (RTP), (RCPG) and Compass Growth Vision.) and. Any potential impacts are expected to be less than significant.

In regards to the U.S. Air Force Plant 42, no conflict with the joint land use policies exists.

Natural Resources - The proposed project is not expected to significantly increase the rate of use of natural resources nor will it substantially deplete any non-renewable natural resources. Any impacts are anticipated to be less than significant.

Risk of Upset - The majority of the retail/commercial uses proposed by the project have a negligible potential to create a significant hazard to the public or the environment due to the use of hazardous materials. The operation of a self-serve gas station on-site will result in the transportation and distribution of potentially hazardous petroleum fuel and related products. However, in association with this use, the transport, storage, use, and handling of all hazardous or potentially hazardous materials are extensively regulated at the federal, State and local levels. Consistency with these regulations is realized through mandated compliance with applicable laws and regulations. Potential impacts associated with hazardous or potentially hazardous materials are considered less-than-significant.

Upon review of the General Plan and the City of Palmdale's evacuation routes and emergency facilities, the proposed project will not significantly impact the City's emergency response or evacuation plans. While both the Palmdale Boulevard and 47th Street East are identified in the General Plan as evacuation routes, the proposed project development will improve 47th Street East per City and Caltrans requirements and will not significantly hinder traffic or evacuation opportunities for individuals located in the region. Any impacts are anticipated to be less than significant.

Population - While the proposed project will increase the daily use to the proposed site versus its current status, the project is not anticipated to greatly increase the density of the surrounding residential population. The proposed use is strictly retail in nature which will help meet the retail needs of the surrounding existing and future residential development in the area. Impacts are anticipated to be less than significant.

Housing - The proposed project will not eliminate nor create additional residential or housing units. While the project will increase the number of construction and long-term employment opportunities in the localized area, it is expected that the existing populace in the general area will meet the employment needs without a significant demand for additional housing. The potential need for additional housing to meet the increase in employment is not anticipated to be a significant impact.

Public Services

Fire Protection - The City of Palmdale contracts with the Los Angeles County Fire Department for fire and safety services. There are two fire stations located within 4 miles of the proposed project site. Fire Station 131 is located approximately 3 miles from the site and ~~a~~ proposed Fire ~~S~~station 93 will be located approximately 1.~~6~~ 25 miles from the site. The change of the property from vacant open space to that of retail purposes will increase the demand for fire services but will not cause the need for significant additional fire protection services. The Fire Department has adequate resources to service the City of Palmdale and services will be expanded to meet new demands.

The City of Palmdale has worked with the Los Angeles County Fire Department in identifying and securing sites for new fire facilities and has adopted a Fire Facilities Impact Fee Ordinance. Compliance with the ordinance assists in mitigating impacts to fire protection services resulting from incremental growth in the City.

Further, fire suppression systems in the larger retail buildings, on-site fire protection systems, building construction methods and safety equipment required by the Los Angeles County Fire Department for fuel dispensing and fuel storage facilities, and restaurant exhaust hoods will reduce the potential impacts on fire protection services. Based on the preceding discussion, potential impacts to fire protection services are considered less than significant.

Police Protection - The Los Angeles County Sheriff's Department has a Palmdale Station at 38600 N. Sierra Highway that services the City of Palmdale. Given the retail nature of the proposed use, the project will increase the number of individuals currently utilizing the site. However, it is not expected that the proposed use will create a significant need for, or an impact on, police protection. Through revenues generated from the site's development, the proposed project will help offset any potential impacts. Any impacts are anticipated to be less than significant.

Schools - The project site is located within the Palmdale School District (elementary educational facilities and services); and the Antelope Valley Union High School District (secondary educational facilities and services). The project as proposed is entirely retail/commercial in nature and will not significantly contribute to the capacity of the local school districts for either

elementary or secondary educational facilities. Further, potential impacts to school districts are offset through payment of school impact fees. School impact fees will be assessed at the rate in affect at the time of approval per square foot of commercial construction, to be allocated between the appropriate school districts. No impacts are anticipated.

Other Public Services -The project as proposed is entirely retail/commercial in nature and will not significantly contribute to an increase in residential needs and thus is not expected to have an impact on libraries, existing parks, recreational facilities, trails, or bicycle paths.

Energy - Implementation of the proposed project will result in increased fuel and/or energy consumption. This increase could be considered substantial due to the large commercial nature of the project. However, energy requirements have been evaluated by the City's General Plan EIR and potential impacts were found to be less-than-significant due to the availability of such resources. The project shall comply with Uniform Building Code Title 24 energy conservation requirements. Standard construction practices and economic incentives discourage use of energy and non-renewable resources in a wasteful and inefficient manner. As such, the project's potential to use substantial amounts of fuel or energy or substantially increase demands upon existing sources of energy is considered less-than-significant.

Utilities - The proposed project site is located within a developed region of the City of Palmdale and the site's development is not anticipated to create undue burdens on the existing infrastructure or utilities. The providers in the area should be able to supply all necessary utilities in order to meet the applicant's demands and connections to the site for power, sewer, water, and communications. Detailed information concerning the connections to the various utilities is found in the Application.

The Los Angeles County Division of Sanitation, District 14 and 20, currently oversee the City of Palmdale and can provide appropriate sewer services with adequate existing capacity. According to the City of Palmdale General Plan, sewer and wastewater treatment facilities are being expanded to handle the City of Palmdale's growth. A sewer area study prepared by the applicant shows that sewage flows would be conveyed to the proposed 18" Relief Trunk Sewer that is to run parallel and replace the existing 12" trunk sewer within 45th Street East. Final plans will be approved by the City.

Utilities, including electricity, natural gas, water, drainage, and telecommunications will be extended to the project site from existing easement corridors and lines. Water will be purveyed to the project by the Palmdale Water District. Storm water runoff will be routed to an onsite detention basin. Off-site drainage channels are planned to be constructed north and west for a distance of approximately 2,100 feet and will connect with an existing culvert.

The General Plan states that Los Angeles County has recently approved the expansion of the Antelope Valley Landfill and an application to expand beyond the previous approval is pending with the City. The project applicant will comply with any City of Palmdale regulations in regards to construction debris and recycling requirements. Any solid waste impacts to the landfill are anticipated to be less than significant for the proposed project.

Human Health - The intended use of the project is for retail/commercial purposes and should not create any health hazards nor expose people to potential health hazards. The gas station is required to comply with Antelope Valley Air Quality Management District (AVAQMD) rules pertaining to the storage and dispensing of gasoline. This potential issue and diesel truck exhaust are discussed in Section 4.2. Construction and maintenance of the proposed project will follow best management practices and will comply with all safety requirements that may be applicable to the project such as storage of propane tanks, fertilizers, and pesticides. Potential hazards are considered to be less than significant with compliance of standard safety requirement.

Public Controversy - The project as proposed is not anticipated to be controversial in nature upon disclosure to the public. The project will comply with all required design guidelines, landscaping, safety, circulation, and zoning requirements and will primarily service the surrounding residential community. The proposed project will increase sales tax proceeds to the City of Palmdale and will not be environmentally controversial in nature. Public controversy is not expected to be significant.

2.6.3 Findings of Impacts That Can Be Mitigated To Less Than Significant Levels

Mitigation measures and City imposed conditions of approval have been developed to reduce, or eliminate impacts determined to be potentially significant. Potentially significant impacts evaluated in this EIR can be avoided, eliminated, or reduced to less than significant levels with implementation of the recommended mitigation measures, Conditions of Approval and standard city requirements except for air quality and traffic. Table 2-2 shows a matrix of potentially significant impacts that may occur with project implementation. Mitigation measures have been identified to reduce these impacts to less than significant levels. Most impacts identified will be less than significant after mitigation measures are implemented except for project related air quality and traffic impacts from increased vehicle usage.

2.6.4 Findings of Significant Impacts After Mitigation Measures Have Been Implemented

Table 2-2 lists all impacts identified in Chapter 4.0-Environmental Impact Evaluation, including impacts that cannot be mitigated to less than significant levels. For these impacts, additional discussion is required. The following impacts will remain significant after mitigation measures are implemented.

Air Quality: Air quality impacts are usually discussed in terms of short-term and long-term impacts. Short-term impacts are the result of construction, grading, and painting operations and would end upon construction completion. Long-term impacts are associated with the built out condition of the proposed project.

The primary source of regional emissions generated by the proposed project would be from motor vehicles. Other on-site emissions would be generated from delivery trucks, combustion of natural gas for space heating and cooking, and vapor from gasoline dispensing.

The traffic related to the project will produce emissions of criteria pollutants that would exceed CEQA thresholds and result in unavoidable significant impacts to air quality. Section 4.3 Air Quality discusses these impacts in detail.

Traffic: The traffic assessment found that all intersections studied would meet the City's recommended Levels of Service except for the intersection of Avenue S and 47th Street East. Mitigation to alleviate future traffic impacts to this intersection was deemed infeasible due to insufficient right-of-way ~~available~~ constraints. Due to uncertainty of ROW being available, impacts at three additional intersections as listed in Table 2-2, may be potentially significant.

2.6.5 Findings of Significant Cumulative Impacts

Chapter 5.0 discusses cumulative impacts of the proposed project in conjunction with potential developments within the vicinity of the project site. The proposed project, in conjunction with other proposed projects identified in Table 5-1 in Chapter 5.0 would result in cumulative significant impacts to air quality, biological resources, and traffic.

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
AESTHETICS AND VISUAL QUALITY			
AVQ-1: The development of the proposed project would establish retail buildings and parking lots in a currently vacant area. This would introduce new sources of glare and nighttime light to the area.	Potentially Significant	**AVQ-1:** Prior to issuance of Building Permits, the Applicant shall submit a photometric lighting plan to City of Palmdale staff showing the exact locations and heights of light fixtures and the proposed orientation of the fixtures. If required, shields will be utilized to direct light and glare away from the homes to the west and south.	Less than significant
AIR QUALITY			
AQ-1: Construction activities for the development of the proposed Palmdale Marketplace may violate pollutant level thresholds established by the AVAQMD.	Potentially Significant	**AQ-1:** Comply with AVAQMD Rule 402 which requires that air pollutant emissions not be a nuisance off-site and AVAQMD Rule 403 which requires construction activities to implement the following measures to eliminate visible dust beyond property lines: • Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance; • Take actions sufficient to prevent project-related trackout onto paved surfaces; • Cover loaded haul vehicles while operating on publicly maintained paved surfaces or load trucks to maintain two feet of freeboard;	Less than significant

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
AIR QUALITY (Continued)			
		• Stabilize graded site surfaces upon completion of grading by water or chemical stabilizers when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions; • Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours; and • Reduce non-essential earth-moving activity under high wind conditions (wind gusts greater than 25 mph). For purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance. **AQ-2** • Ensure all equipment is maintained and tuned according to manufacturers specifications. • Schedule production activities to minimize daily equipment operations and idling trucks.	

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
AIR QUALITY			
		• Comply with all existing and future CARB and AVAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel (already required); and (4) use of alternative fuels or equipment. **AQ-3:** • Applicant must comply with VOC limits in architectural coatings as regulated by AVAQMD Rule 1113. • Applicant must limit the area of painting conducted per day based on the VOC content in the paint as estimated in Figure 4.2-2.	
AQ-2: Operation of the Palmdale Marketplace would result in increased emissions of criteria pollutants.	Potentially Significant	**AQ-4:** • Provide adequate ingress and egress at all entrances to public facilities to minimize vehicle idling at curbsides and improve traffic flow into and or out of the parking lot. • Provide roadway improvements to improve traffic-flow per the proposed traffic mitigation.	Significant

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
AIR QUALITY (Continued)			
		• Introduce window glazing, wall insulation, and efficient ventilation methods in accordance with the Uniform Building Code to minimize energy use. **AQ-5:** Comply with Rules 461, 462, and 463 requiring the gas station operator to limit the emissions of volatile organic compounds (VOC) from the evaporation and spillage of gasoline during the transfer, loading and storing of gasoline.	
AQ-3: Traffic increases on roadways serving the project could cause CO concentrations to exceed local air quality standards.	Less than Significant	No mitigation measures are required.	
AQ-4: Onsite Diesel Truck Exhaust Emissions could exceed local air quality standards.	Less than Significant	No mitigation measures are required.	

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
BIOLOGICAL RESOURCES			
BIO-1: The project site and the area proposed of the drainage channel are located within the geographic range of the Mohave ground squirrel (*Spermophilus mohavensis*), which is considered threatened by the CDFG. The California ground squirrel (found on-site) provides potential burrow sites for the burrowing owl, a species of special concern. The habitat within the study areas appeared potentially suitable to support either species.	Potentially Significant	**BIO-1:** A burrowing owl survey shall be conducted 30 days prior to construction activities to ensure burrowing owls are not present. If burrowing owls are discovered the CDFG shall be consulted to determine appropriate measures necessary to ensure potential impacts are minimized. **BIO-2:** If the Mohave ground squirrel is assumed to be present, specific measures will be determined in consultation with CDFG as part of a 2081 permit application. Measures may include purchase of suitable off-site habitat for the species as compensation. If the project proponent elects to trap to determine occupancy, then established protocols for identifying habitat and individuals will be followed as detailed in Section 4.3.3	Less than significant
BIO-2: The project site supports a Joshua Tree Woodland and Joshua trees would be removed and transplanted during site development. Joshua trees are a protected species.	Potentially Significant Impact	**BIO-3:** The project applicant shall submit a Native Vegetation Preservation Plan, comply with all preservation and relocation efforts set forth in the plan and in the City's Municipal Code, Title 14, Chapter 14.04 and receive a permit, only after all other strategies have been implemented, prior to the removal of Joshua trees.	Less than Significant

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
BIOLOGICAL RESOURCES			
BIO-3: The project would result in the reduction of vegetation on-site that may be used as nesting sites.	Potentially Significant	**BIO-4:** To avoid incidental killing of birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code, scheduling initial grading and brush removal of any previously undisturbed habitat shall occur outside the breeding season. No vegetation removal should occur between early spring (15 March) and mid summer (15 July). If construction activities occur during the nesting season, a survey shall be conducted within one week prior to removal of the trees. If active bird nests are found, impacts shall be avoided unless proper permits are obtained.	Less than Significant
CULTURAL RESOURCES			
CR-1: Excavation during development may result in the disturbance of historic or archaeological resources.	Potentially Significant	**CR-1 (for Site 446-1):** A chain of title search shall be performed to determine ownership. The site area shall be monitored during grading at the site location. Any buried deposits or features that are uncovered shall be evaluated. Any artifacts recovered shall be cataloged, identified and curated with an appropriate permanent repository. A monitoring report shall be prepared and submitted to the City.	Less than Significant

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
CULTURAL RESOURCES (Continued)			
		CR-2 (for Site 446-2): The site shall be mapped in detail and a surface collection of diagnostic artifacts be made. A metal detector scan shall be performed to assess the distribution and concentration of buried materials. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City. **CR-3 (for Sites 446-3 and 446-4):** The site shall be mapped in detail and a surface collection of diagnostic artifacts shall be made. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City. **CR-4 (for Site 446-5):** The site shall be mapped in detail and a surface collection of diagnostic artifacts shall be made. Features shall be cleared, measured and photographed. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and	

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
CULTURAL RESOURCES (Continued)			
		curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City. **CR-5:** In the event unanticipated cultural materials (arrowheads, grinding stones, etc.) or features (old foundations, cellars, privy pits, etc.) could be encountered, work shall stop at the discovery site and a professional cultural resource consultant shall be hired to evaluate the find.	
CR-2: Excavation during development may result in the disturbance of previously unidentified human remains.	Potentially Significant	**CR-6:** In the event any bones of possible human origin are uncovered, during excavation or other construction, the Los Angeles County Coroner shall be notified and permitted to investigate the find prior to any further disturbance of the location of discovery. **CR-7:** In the event that Native American cultural resources are discovered during project development/ construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during the assessment period. **CR-8:** If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist shall contact the "Tribe". If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).	Less than Significant

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
HYDROLOGY AND WATER QUALITY			
HWQ-1: Construction activities associated with the project would alter the drainage pattern of the site, increasing on-site flow by changing the impermeable surfaces on-site. Development of the site would also alter the patterns of flows from the existing drainages entering the site from the south.	Potentially Significant	**HWQ-1:** Prior to issuance of grading permits, the applicant shall submit a detailed storm water drainage plan that includes design drawings for the drainage facilities that would capture, hold and/or convey storm water through the site. Discharge from the proposed detention basin shall be 85 percent of the pre-development flows per the City of Palmdale standards. The plans shall be subject to approval of the City of Palmdale Public Works Department. **HWQ-2:** If soils suspected of being contaminated with a toxic substance are discovered during grading or other construction related activities, work in the immediate areas shall cease. Suspected soils shall be tested by a qualified soils engineer and/or laboratory to determine level of contamination. **HWQ-3:** A Water Quality Management Plan shall be submitted to Palmdale Water District for review prior to the issuance of building permits.	Less than Significant
NOISE			
NOI-1: The residents within the vicinity of the proposed project may be subject to noise levels in excess of the City Noise Standards during operation of the commercial retail center.	Potentially Significant	**NOI-1:** • The screen dock walls should be 9 feet high relative to the dock elevation as described above. • The wall heights at the property lines shall range from 8 to 10 feet (relative to subject property elevations).	Less than Significant

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
NOISE (Continued)			
		• Signs shall be used to control truck and other vehicle speed. Signs shall be used to limit use of horns and yelling at loading docks. No paging or radio systems at the south and west property lines. • All doors along the north, south, and west property lines shall be closed when not in use. • Wall materials shall be constructed of a decorative masonry or concrete block, or any other material with a surface weight of 4 pounds per square foot. No gaps or openings are permitted. All gaps are to be sealed. • Post signs to turn off truck engine when not in use or necessary.	

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
TRAFFIC AND CIRCULATION			
TC-1: The proposed project would increase vehicle trips and affect the level of service along arterial roadways and intersections. This could be a significant impact to existing road segments and intersections in the region.	Potentially Significant	**TC-1:** Prior to Issuance of First Certificate of Occupancy for the project (Build Out 2007) 1. Ave. R at 47th St. E./SR 138 • Add one exclusive EBL • Add one exclusive SBR • Modify the Traffic Signal 2. Ave. S at 47th St. E./SR 138 • No feasible mitigation measure **TC-2:** 1. Avenue R at 47th Street East/SR 138 ~~Add one exclusive EBL~~ Add one exclusive SBT ~~Add one exclusive SBT~~ Add one exclusive SBL Add one exclusive WBT (subject to ROW availability) Add one exclusive WBL (subject to ROW availability) Add one exclusive WBR (subject to ROW availability) Add one exclusive NBL (subject to ROW availability) Add one exclusive NBT (subject to ROW availability) Add one exclusive NBR (subject to ROW availability) Add one exclusive EBT Modify the Traffic Signal 2. Ave. S at 47th St. E./SR 138 No feasible mitigation measure	Less than Significant for all intersections except Avenue S at 47th Street East (subject to ROW ~~availability~~ constraints). Due to uncertainty of ROW being available, impacts at three additional intersections as listed, may be potentially significant.

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
TRAFFIC AND CIRCULATION (Continued)			
		3. Ave. R at 40th E. (subject to ROW availability) Add one EBT 4. Palmdale Blvd. at 40th St. E. (subject to ROW availability) Add one exclusive EBR Add one exclusive WBR Add one exclusive SBL Add one exclusive SBR	
		TC-23: ~~Payment of Traffic Impact Fees in effect at the time building permits are issued.~~ Off-Site Mitigation through payment of Traffic Impact Fees by the applicant in effect at the time building permits are issued.	Less than Significant for all intersections except Avenue S at 47th Street East (subject to ROW ~~availability~~ constraints). Due to uncertainty of ROW being available, impacts at three additional intersections as listed, may be potentially significant.

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
TRAFFIC AND CIRCULATION (Continued)			
		TC-~~3~~4: ~~Payment of Traffic Impact Fees in effect at the time building permits are issued.~~ For the future 2025 buildout year, the following mitigation measures are recommended to be implemented if the other three proposed projects were not constructed: 1. Ave. R at 47th St. E./SR 138 The same as 2015 2. Ave. S at 47th St. E./SR 138 No feasible mitigation measure 3. Ave. R at 40th E. (subject to ROW availability) Add one exclusive EBT 4. Palmdale Blvd. at 40th St. E. (subject to ROW availability) Add one exclusive EBT Add one exclusive WBT Add one exclusive SBT Add one exclusive NBL 5. Ave. R-8 at 47th St. E. Modify signal for protected NB & SB left turns 6. Ave R at 40th St. E. Signalize the intersection	Less than Significant for all intersections except Avenue S at 47th Street East (subject to ROW ~~availability~~ constraints). Due to uncertainty of ROW being available, impacts at three additional intersections as listed, may be potentially significant.

TABLE 2-2
SUMMARY OF IMPACTS AND MITIGATION MEASURES/REGULATORY REQUIREMENTS FOR THE PROPOSED PROJECT

IDENTIFIED IMPACTS	LEVEL OF SIGNIFICANCE (Before Mitigation)	MITIGATION MEASURES/ REGULATORY REQUIREMENTS	LEVEL OF SIGNIFICANCE (After Mitigation)
TRAFFIC AND CIRCULATION (Continued)			
TC-2: Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?	Significant Impact	**TC-54:** The new intersection of Palmdale Marketplace Driveway at SR 138/47th Street East shall be signalized by the developer. It is warranted for signalization prior to the issuance of the first Certificate of Occupancy within the project.	Less than Significant

3.0 PROJECT DESCRIPTION

3.1 INTRODUCTION

3.1.1 Purpose and Need for the Project

The proposed project is for the development of a maximum of 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres. The proposed project is located north of Avenue R, west of 47th Street East (SR 138) and east of 45th Street East. The Project Applicant is Hopkins Real Estate Group; the Applicant proposes to construct six (6) major retail structures that may include a home improvement center and an upscale discount retailer, four shops and eight general commercial land uses. The project is located in the easterly portion of the City of Palmdale that currently has residential development with few commercial uses. Existing and future residential development would benefit from an increase in available retail shopping opportunities. The City as a whole may benefit by a reduction in cross-town traffic trips that are generated specifically for shopping opportunities.

3.1.2 Project Objectives

CEQA Guidelines Section 15124(b) requires that the project description include a statement of objectives sought by the project. The goals and objectives of the City, on behalf of its residents and the members of the general public and those of the landowner/developer are vitally important as these factors, in conjunction with the City's regulatory enactments such as the General Plan and its derivative zoning ordinance, guide the review and analysis of development projects. The goals and objectives of all parties, including third parties, are considered in the course of the review of the projects, its potential impacts, mitigation measures, alternatives and conditions imposed upon the land use. The following reflects the primary goals and objectives regarding the proposed development project.

Applicant's Project Objectives

- Increase local employment opportunities: The proposed commercial retail center will create approximately 1,048 new jobs. In addition to hundreds of permanent employees that would work for the retailers on site, the indirect expansion in employment benefiting the macro-economy, as well as the employment created during construction would be a major benefit to the City and the area.

- Increase local shopping availability: This portion of the City of Palmdale has residential development that would benefit from additional locally available retail shopping that would provide a range of retail shopping and services.

- Provide an attractively designed, economically viable Neighborhood Retail Center that will be an amenity for local residents within an approximate 5-mile radius of the project site.

- Provide a conveniently located Neighborhood Retail Center that will utilize, and enhance the existing road network, alleviating traffic on major thoroughfares such as SR 138 (Palmdale Boulevard) and reducing trips from resident's homes to more distant shopping areas.

- Broaden the community's economic base by attracting new commercial uses to the project area, which would attract shoppers from surrounding areas outside the City as well as City residents.

- Encourage expansion of local commercial opportunities.

- Develop a project that is both a financial asset to the city and that self-mitigates environmental impacts to the extent feasible.

- Enhance the economic base of the local and regional revenues through business, property, and sales tax revenues.

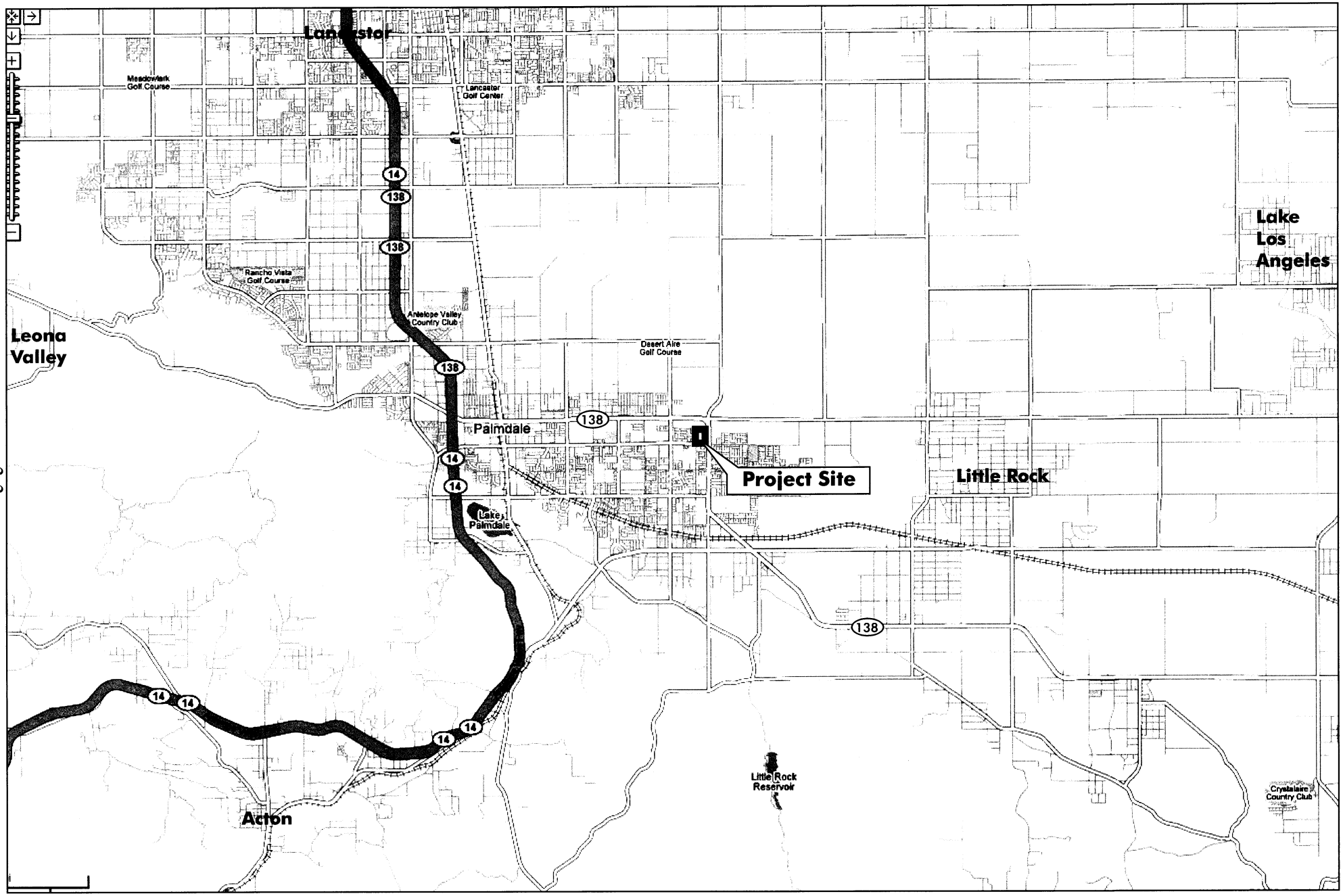
3.2 REGIONAL SETTING

The site is located in the City of Palmdale in the Mojave Desert within the Antelope Valley region of Los Angeles County, approximately 60 freeway miles north of downtown Los Angeles. Palmdale is one of two incorporated cities and several unincorporated communities within the Antelope Valley. The Antelope Valley, approximately 3,000 square miles in size, is located in the westernmost part of the Mojave Desert. The valley is separated on the northwest from the San Joaquin Valley by the Tehachapi Mountains. On the south and southwest, it is separated by the San Gabriel Mountains. The north and east boundaries of the Antelope Valley are distinguished by isolated buttes.

The City of Palmdale is bordered by the City of Lancaster to the north; unincorporated community of Littlerock to the east; the unincorporated community of Acton to the south; and the unincorporated community of Leona Valley to the west. Figure 3-1 shows the regional location of the project site.

When Palmdale incorporated in 1962, it had a land area of 2.1 square miles. By 1965, the City contained 22.4 square miles, and by 1983 the City had grown to 45 square miles. Presently (2006), the City encompasses approximately 102 square miles of land, with an additional 72 square miles within the City's Sphere of Influence, together totaling 174 square miles.

The City's Planning Area boundaries follow the adopted Sphere of Influence, which extends east to 120th Street East, south to the Sierra Pelona ridgeline and the alignment of Avenue W, west to 100th Street West, and north to Avenues M and L. Within this expanse of 174 square miles, the developed portions of the City occupy a more compact area generally bounded by the Littlerock Wash on the east, the California Aqueduct on the south, and 70th Street West on the west. The northern extent of urban development in Palmdale follows an irregular path from Avenue M in the northwest portion of the City, around existing rural residential areas in the north central portion of the Planning Area, and south of airport land along Avenue P.



Regional Setting

Palmdale Marketplace
City of Palmdale, California

Figure 3-1

N

0 2.5

Miles

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The City of Palmdale Planning Area is located within a transitional area between the foothills of the San Gabriel and Sierra Pelona Mountains on the south and the Mojave Desert to the north and east. As a result, the Planning Area contains a variety of plant and animal communities, slope conditions, soil types and other physical characteristics. In general, the Planning Area slopes from south to north-northeast, with surface water flows and subsurface flows trending away from the foothills to Rosamond Dry Lake north of the City of Lancaster, in Kern County.

The major watercourses flowing through Palmdale are Amargosa Creek and Anaverde Creek in the foothills south of Pearblossom Highway, Littlerock Wash, and Big Rock Wash. While foothill areas within and adjacent to the City contain significant slopes, a majority of the Planning Area is relatively flat.

The climate of Palmdale and the Antelope Valley is dominated by the region's Pacific high-pressure system, which contributes to the area's hot, dry summers and relatively mild winters. Wide temperature ranges between day and night characterize the climate. Average low and high temperatures range from 71° Fahrenheit (F) to 95° F, respectively, in the summer months, and 36° F to 58° F, respectively, in the winter months. Average precipitation is eight inches per year.

The City of Palmdale is strategically located with respect to the Antelope Valley, San Joaquin Valley, Owens Valley and the San Fernando Valley/Los Angeles Basin. With direct access to SR 14 (Antelope Valley Freeway) and SR 138 (Pearblossom Highway), as well as rail access via the Union Pacific Railroad (UPRR).

According to the 2000 census, the City of Palmdale population was 116,670 persons, representing an increase of 47,828 people over the 1990 census total of 68,842. Rapid growth in the Antelope Valley has changed the composition of the City's population and housing stock due to affordable land and a large percentage of the Planning Area being undeveloped and vacant. It has also pushed residential development easterly where single-family tracts are now located adjacent to or in close proximity to mining operations.

3.3 LOCAL SETTING

3.3.1 Surrounding Land Uses

The project vicinity is shown on Figure 3-2. Land uses surrounding the site are shown on Figure 3-3 and include vacant land designated for future commercial uses to the north; Avenue R, existing single family residential and future commercial under construction to the south; 47th Street East and vacant land designated for future commercial and single-family residential to the east; and 45th Street East and existing single family to the west. United States Air Force Plant No. 42 is located approximately 3.75 miles northwest of the project site.

Table 3-1 lists surrounding land uses, and General Plan and Zoning designations for surrounding properties as well as the project site.

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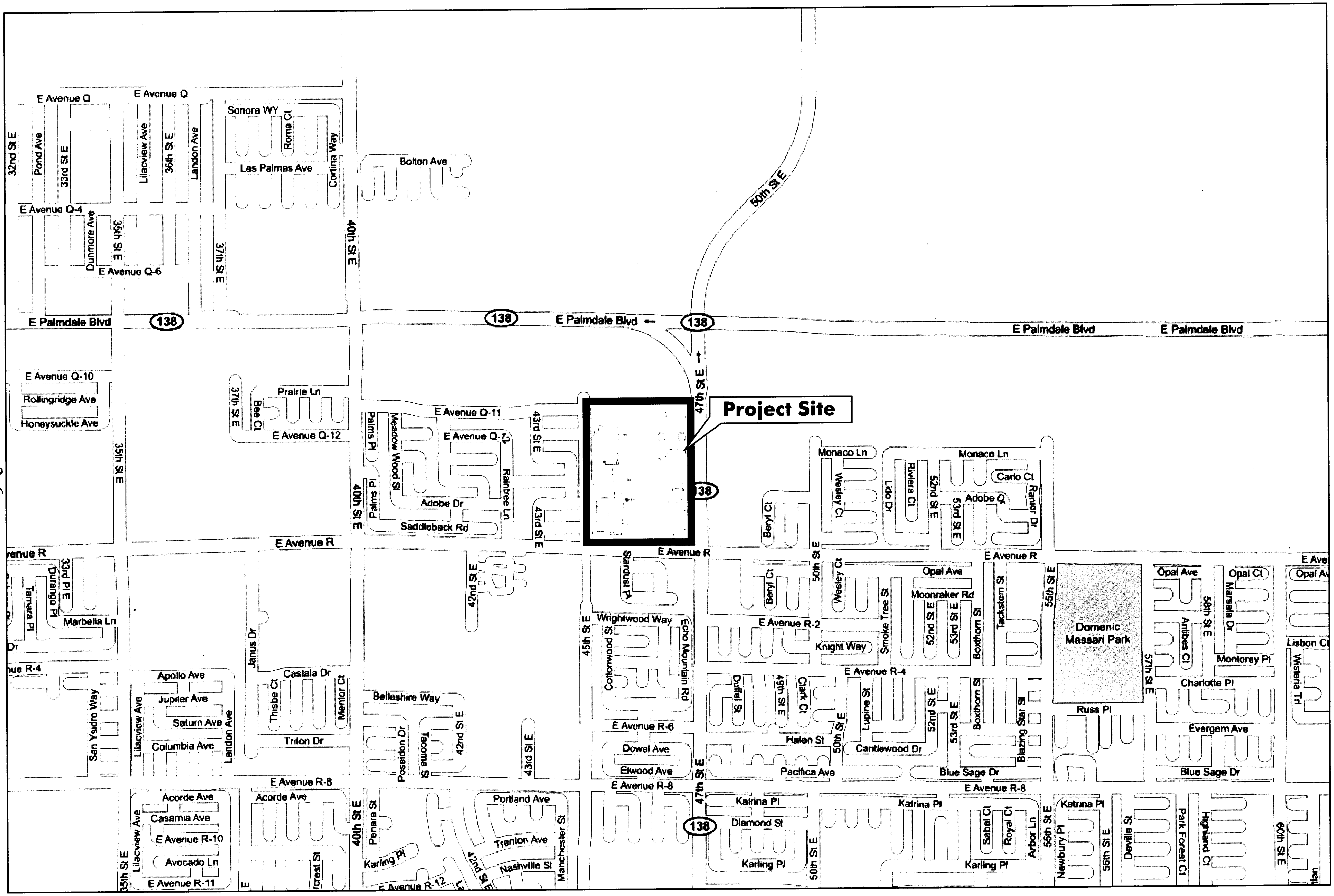

Project Vicinity

Palmdale Marketplace
City of Palmdale, California

Figure 3-2

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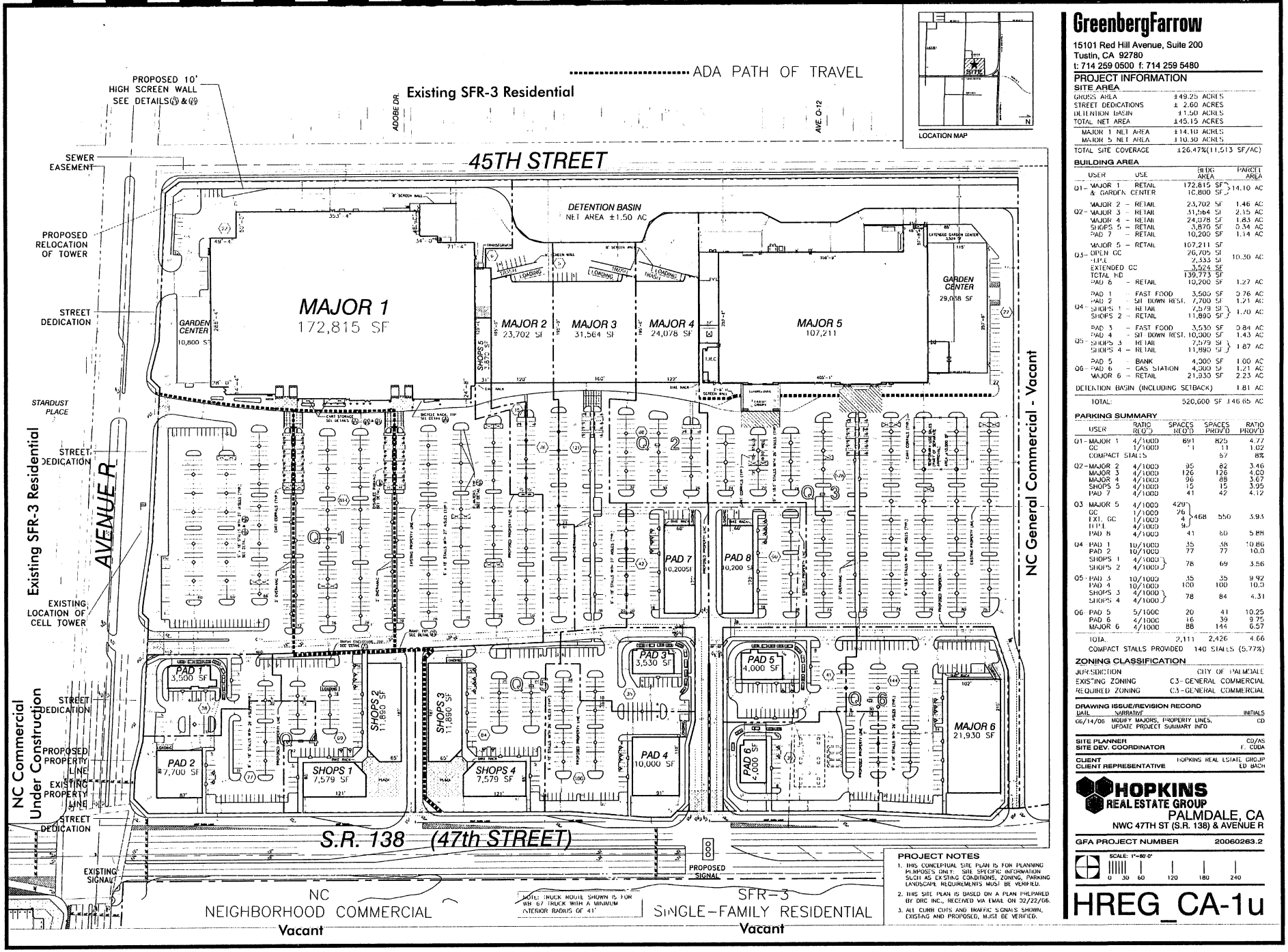

GreenbergFarrow
15101 Red Hill Avenue, Suite 200
Tustin, CA 92780
t: 714 259 0500 f: 714 259 5480

PROJECT INFORMATION

SITE AREA

GROSS AREA	±49.25 ACRES
STREET DEDICATIONS	± 2.60 ACRES
DETENTION BASIN	±1.50 ACRES
TOTAL NET AREA	±45.15 ACRES
MAJOR 1 NET AREA	±34.10 ACRES
MAJOR 5 NET AREA	±10.30 ACRES
TOTAL SITE COVERAGE	±26.47%(11,513 SF/AC)

BUILDING AREA

	USER	USE	BLDG AREA	PARCEL AREA
01	MAJOR 1 & GARDEN CENTER	RETAIL	172,815 SF 10,800 SF	14.10 AC
02	MAJOR 2	RETAIL	23,702 SF	1.46 AC
	MAJOR 3	RETAIL	31,564 SF	2.15 AC
	MAJOR 4	RETAIL	24,078 SF	1.83 AC
	SHOPS 5	RETAIL	3,870 SF	0.34 AC
	PAD 7	RETAIL	10,200 SF	1.14 AC
03	MAJOR 5	RETAIL	107,211 SF	
	OPEN GC		26,705 SF	10.30 AC
	TIPLE		2,333 SF	
	EXTENDED GC		3,524 SF	
	TOTAL GC		139,773 SF	
	PAD 8	RETAIL	10,200 SF	1.27 AC
04	PAD 1	FAST FOOD	3,500 SF	0.76 AC
	PAD 2	SIT DOWN REST.	7,700 SF	1.21 AC
	SHOPS 1	RETAIL	7,579 SF	1.70 AC
	SHOPS 2	RETAIL	11,890 SF	
	PAD 3	FAST FOOD	3,530 SF	0.84 AC
	PAD 4	SIT DOWN REST.	10,000 SF	1.43 AC
05	SHOPS 3	RETAIL	7,579 SF	1.87 AC
	SHOPS 4	RETAIL	11,890 SF	
	PAD 5	BANK	4,000 SF	1.00 AC
06	PAD 6	GAS STATION	4,000 SF	1.21 AC
	MAJOR 6	RETAIL	21,930 SF	2.23 AC
	DETENTION BASIN (INCLUDING SETBACK)			1.81 AC
	TOTAL:		520,600 SF	146.65 AC

PARKING SUMMARY

	USER	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D	RATIO PROV'D
01	MAJOR 1	4/1000	691	825	4.77
	GC	1/1000	11	11	1.02
	COMPACT STALLS			67	8%
02	MAJOR 2	4/1000	95	82	3.46
	MAJOR 3	4/1000	126	126	4.00
	MAJOR 4	4/1000	96	88	3.67
	SHOPS 5	4/1000	15	15	3.95
	PAD 7	4/1000	41	42	4.12
03	MAJOR 5	4/1000	429		
	GC	1/1000	26		
	EXT. GC	1/1000	4	468	550 3.93
	TIPLE	4/1000	9		
	PAD 8	4/1000	41	80	5.88
04	PAD 1	10/1000	35	38	10.86
	PAD 2	10/1000	77	77	10.0
	SHOPS 1	4/1000	78	69	3.56
	SHOPS 2	4/1000			
05	PAD 3	10/1000	35	35	9.92
	PAD 4	10/1000	100	100	10.0
	SHOPS 3	4/1000	78	84	4.31
	SHOPS 4	4/1000			
06	PAD 5	5/1000	20	41	10.25
	PAD 6	4/1000	16	39	9.75
	MAJOR 6	4/1000	88	144	6.57
	TOTAL		2,111	2,426	4.66
	COMPACT STALLS PROVIDED			140 STALLS (5.77%)	

ZONING CLASSIFICATION

JURISDICTION	CITY OF PALMDALE
EXISTING ZONING	C3-GENERAL COMMERCIAL
REQUIRED ZONING	C3-GENERAL COMMERCIAL

DRAWING ISSUE/REVISION RECORD

DATE	NARRATIVE	INITIALS
06/14/06	MODIFY MAJORS, PROPERTY LINES, UPDATE PROJECT SUMMARY INFO	CD

SITE PLANNER	CD/AS
SITE DEV. COORDINATOR	F. CODA
CLIENT	HOPKINS REAL ESTATE GROUP
CLIENT REPRESENTATIVE	ED BACH

HOPKINS REAL ESTATE GROUP
PALMDALE, CA
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER 20060263.2

SCALE: 1"=60'-0"
0 30 60 120 180 240

HREG_CA-1u

Conceptual Site Plan

Palmdale Marketplace
City of Palmdale, California

Figure 3-3

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Table 3-1
Existing Land Use and General Plan/Zoning Designations

Direction	Existing Land Use	General Plan Designation	Zoning Designation
North	Undeveloped Land	Community Commercial (CC)	General Commercial (C-3)
South	Avenue R Single Family Residential Commercial (under construction)	Neighborhood Commercial Single Family Residential (3.1-6 du/ac) (NC) + (SFR-3)	Light Commercial (C-1), Single Family Residential (R-1-7,000)
East	47th Street East (SR 138) Undeveloped Land	Neighborhood Commercial Single Family Residential (3.1-6 du/ac) (NC) + (SFR-3)	Light Commercial (C-1), Single Family Residential (R-1-7,000)
West	45th Street East Single Family Residential	Single Family Residential (3.1-6 du/ac) (SFR-3)	Single Family Residential (R-1-7,000)

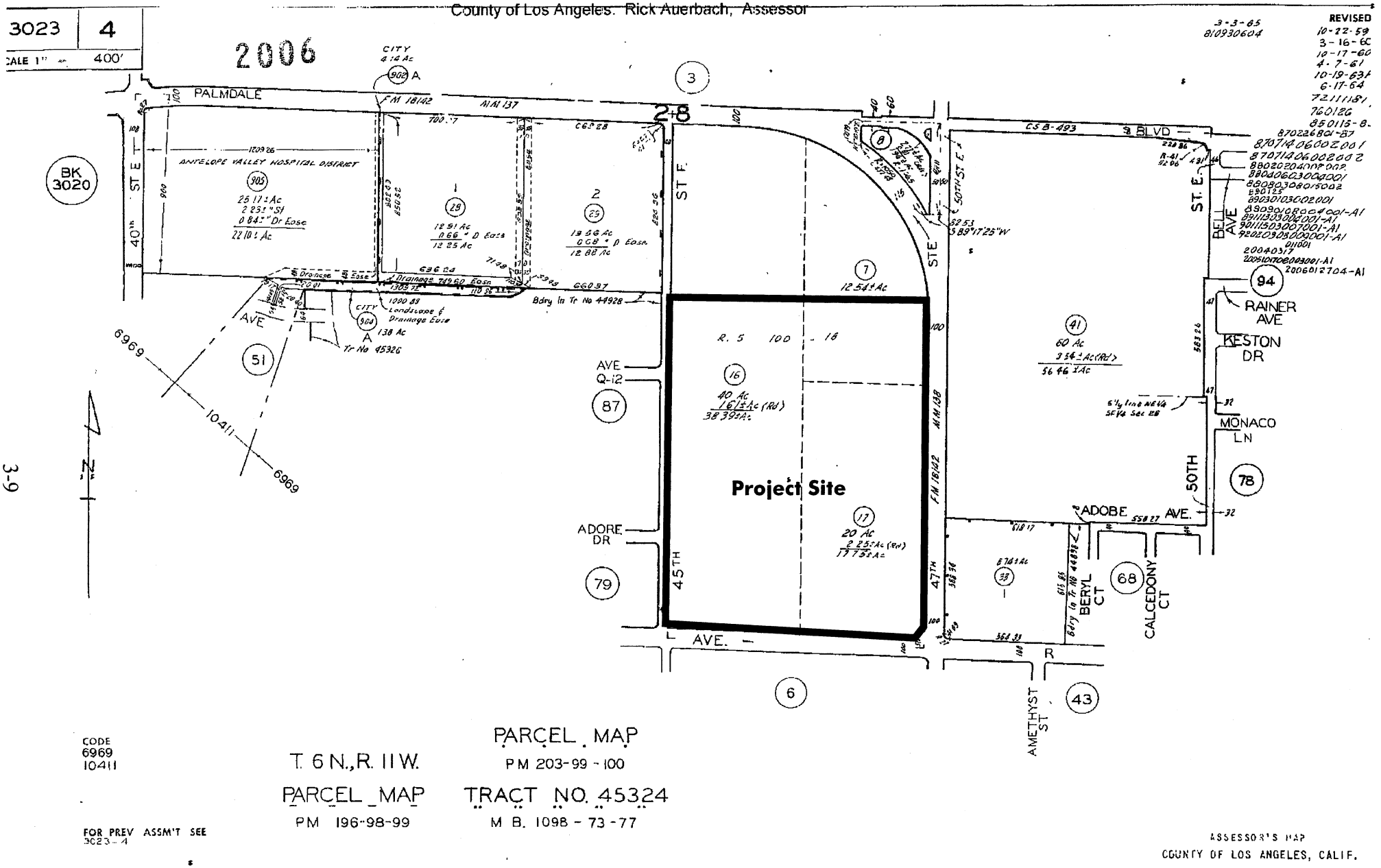
3.4 PROJECT DESCRIPTION

The proposed project is the development of a maximum of 530,000 square feet (SF) of general commercial land uses on a rectangularly shaped site of approximately 49.25 acres located at the northwest corner of 47th Street East (SR 138) and Avenue R in the City of Palmdale (see Figures 3-1 and 3-2). The Project Applicant proposes to construct six (6) major retail structures encompassing approximately 426,263 SF, mainly located along the west property line. The proposed major retail structures may include a home improvement center and an upscale discount retailer, both with garden centers. The project will have an east-west orientation with major tenants facing east.

In addition, the retail center will have four (4) shops and eight (8) general commercial land uses totaling approximately 38,938 SF and 53,130 SF, respectively (refer to Table 3-2). Major Building 6 is located at the northeast corner of the site. The shop and pad buildings are all detached and are primarily located along the east side of the site. The land uses may include two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with an automated car wash. One or more establishments selling alcoholic beverages may also be developed.

A 10-foot high screen wall is proposed along the west property line. There is an existing cellular tower that will be relocated on-site in accordance with City requirements. In addition, drainage improvements and a detention basin will be constructed along the west boundary of the site behind Major buildings 2, 3, and 4. Off-site road improvements will also be constructed. The project will include a lot line adjustment and a parcel map to create 17 lots. The lot line adjustment is expected to be completed prior to certification of the Final EIR, however, this action is Categorically Exempt from CEQA review under Section 15306, Class 5 of the CEQA Guidelines. Table 3-2 lists the proposed building areas based on the Conceptual Site Plan shown as Figure 3-4[1]. Figure 3-5 depicts the Tentative Parcel Map.

[1] Final square footage would depend on the actual tenant mix. For environmental evaluation 530,000 square feet is used to presume a worst-case scenario.



Assessor's Parcel Map

Palmdale Marketplace
City of Palmdale, California

Figure 3-4

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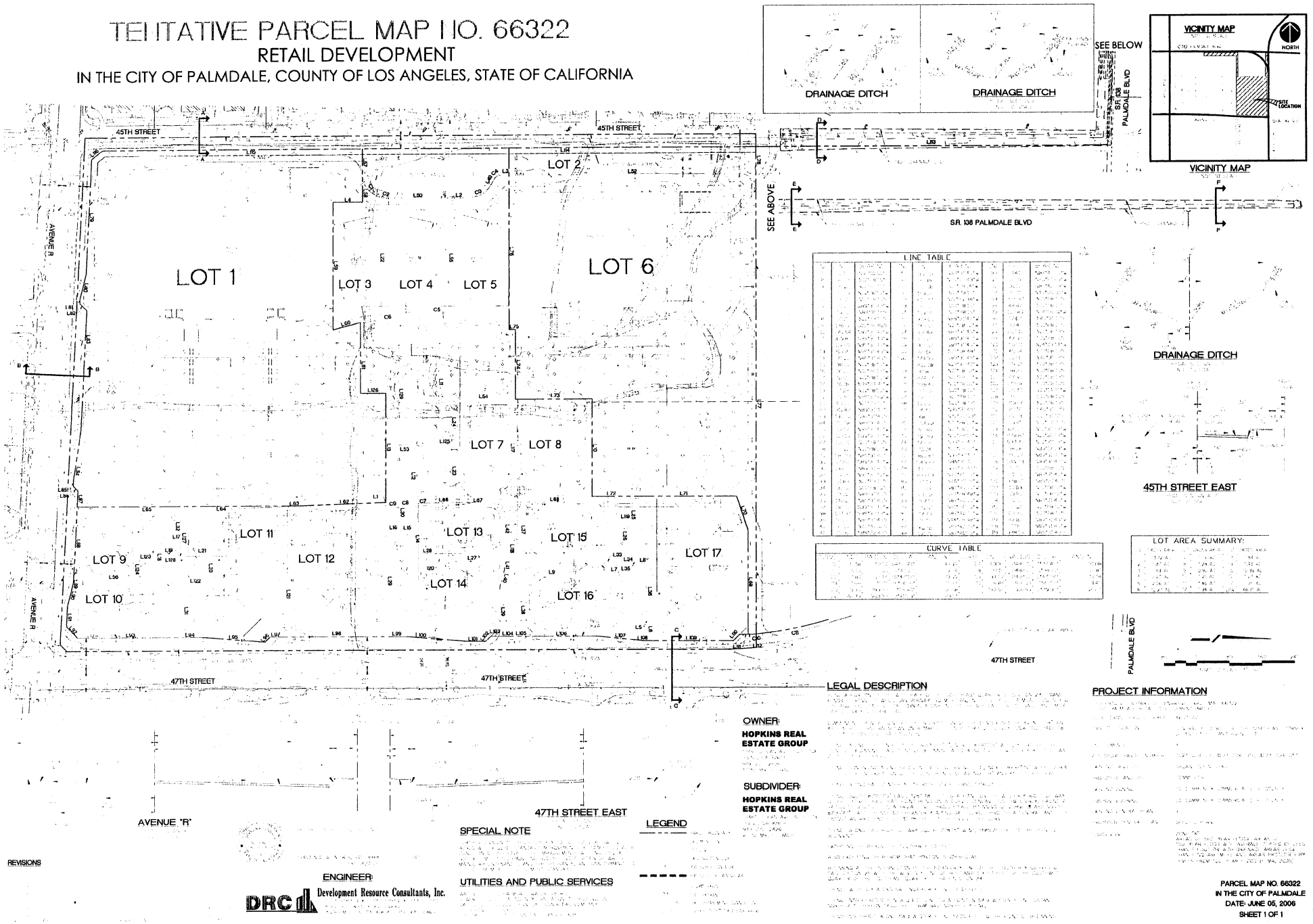

Tentative Parcel Map

Palmdale Marketplace
City of Palmdale, California

Figure 3-5

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Table 3-2
Palmdale Marketplace Shopping Center
Proposed Land Uses and Square Feet of Building Area

Land Use	Building Area (Sq. Ft.)
Major 1 Retail	172,815 GC – 10,800
Major 2	85,380
Major 3	
Major 4	
Major 5 Home Improvement	106,300 GC – 29,038
Major 6	21,930
Shops 1	7,579
Shops 2	11,890
Shops 3	11,890
Shops 4	7,579
Pad 1	3,500
Pad 2	7,700
Pad 3	3,530
Pad 4	10,000
Pad 5	4,000
Pad 6	4,000
Pad 7	10,200
Pad 8	10,200
TOTALS	518,331

Note: All building areas are preliminary and subject to change with final design.
Source: Hopkins Real Estate Group, Site Plan CA-1n April 2006

The site has a total of 2,445 parking spaces with the vast majority of the spaces located in front of major Buildings 1 through 5 (approximately 2/3's of the spaces). The remaining spaces are located near the shops and pads buildings. The drive aisles within the parking lot areas have an east-west orientation. Ingress and egress to the site is via three driveways on 47th Street East and three driveways on Avenue R. The location of the driveways and configuration of the shops and pad buildings near 47th Street East creates three distinct shopping areas.

Landscaping is proposed throughout the interior and along the perimeter of the site. A total of approximately 767 trees will be planted throughout the site. The vast majority of which will be 24-inch box minimum. Approximately 38 trees that will be located near the various entry points will be 36-inch box minimum. All landscaping required of the project will be implemented consistent with the City of Palmdale Zoning Ordinance and applicable Conditions of Approval. A 1.5 acre detention basin is proposed at the rear of the Major Buildings 2, 3, and 4. Also a drainage ditch is proposed along the west property line and will connect to an existing culvert on Palmdale Boulevard north of the site.

3.4.1 Shopping Center Proposed Anchor Tenants (Major 1 and Major 5 Buildings)

Probable tenants have been identified for two of the proposed buildings/pads. Major 1 Building would be occupied by an upscale discount retailer and Major 5 Building would be occupied by a home improvement center. Detailed site design and uses for these two buildings are provided in this section. The remaining four major buildings, four shops, and eight building pads are summarized as potential uses with yet-to-be identified tenants in Section 3.4.2.

Major 1 Building – Proposed Upscale Discount Retailer

The proposed use is for the retail sales of a large variety of retail products offering more upscale, trend-forward merchandise. In addition to general retail, a grocery store section, including produce, deli, meats, liquor, and baked goods is proposed. Firearms will not be sold without obtaining required permits. The store may also feature a coffee shop, a restaurant, a local bank branch, portrait studio, and a specialty store.

The upscale discount retailer will consist of an approximate 172,815-square foot store with an approximate 10,800-square foot outdoor garden center for a total of approximately 183,615-square feet. Code required parking for the upscale discount retailer is 702 spaces; the project proposes to provide 836 spaces.

The Major 1 Building will be located on the southwest portion of the site, with the front of the building facing east. The Garden Center will be located immediately adjacent to the main building on its south side, with internal access to the main sales building and access to the parking lot. Parking will be primarily provided in front on the eastern portion of the site (within the shopping center parking lot).

The project will include the provision of any necessary infrastructure for the upscale discount retailer including stormwater drainage, sewage disposal, water, electricity, natural gas, telecommunications and the disposal of solid waste.

Lighting will be provided throughout the site, including the main parking area and to the west and south of the building. Lighting will be designed for safe travel of customer, vehicles, pedestrians and delivery trucks during operating hours and in accordance with City standards.

Landscaping will be provided throughout the project site and in accordance with the requirements of the City of Palmdale and Conditions of Approval.

Employment: The upscale discount retailer will employ approximately 350 – 370 employees.

Hours of Operation: It is expected to be open from 8 a.m. to 10 p.m.

Delivery Times: May be limited by Conditions of Approval.

Store Design: While the store may share a fairly common big-box store layout, it will be designed as a "discount department store" instead of just a discount store. The store is designed to be more attractive than typical discount stores by having wider aisles, drop ceilings, a more attractive presentation of merchandise and generally cleaner fixtures.

Truck Deliveries: Deliveries will generally be made during store hours typically in the morning before noon. However, grocery deliveries may be made in the early morning prior to 8 a.m.

Major 5 Building – Proposed Home Improvement Center

The proposed use is for the retail sales of building supplies, lumber, hardware, plant and nursery items and associated items such as appliances, barbecues, pool accessories, home furnishings, patio furniture and materials associated with home maintenance and repair. Proposed uses will also include incidental activities such as the rental of tools and equipment for construction, gardening and home improvement projects, propane sales, the sale of trailers and sheds, on-site truck rentals and independent food service vendors. The home improvement center use will include outdoor sidewalk sales and display of special products along the building front sidewalk and seasonal sales within the parking lot in compliance with conditions of approval and/or appropriate permits issued by the City of Palmdale.

The home improvement center will consist of an approximate 106,300 square foot store with an approximate 29,038 square foot outdoor garden center for a total of approximately 135,338 square feet. Required parking for the home improvement center is 460 spaces; the project proposes to provide 567 spaces.

The Major 5 Building will be located on the northwest portion of the site, with the front of the building facing east. The Garden Center will be located immediately adjacent to the main building on its north side, with internal access to the main warehouse building and access to the parking lot. Parking will be primarily provided on the eastern portion of the site.

The project will include the provision of any necessary infrastructure for the new home improvement center including stormwater drainage, sewage disposal, water, electricity, natural gas, telecommunications and the disposal of solid waste.

Lighting will be provided throughout the site, including the main parking area and to the north, and west of the building. Lighting will be designed for safe travel of customer, vehicles, pedestrians and delivery trucks during operating hours and in accordance with City standards.

Landscaping will be provided throughout the project site and in accordance with the City of Palmdale Zoning Ordinance and final Conditions of Approval.

Employment: The home improvement center would employ approximately 200 to 250 employees. There would be three employee shifts per day with between 75 to 80 employees working each shift.

Outdoor Sales: A display of merchandise in front of the store is proposed as part of the project. The display of merchandise in the outdoor sales area focuses on special sales. Merchandise displayed within the outdoor sales area may include, but is not limited to, garden supplies, decorator items, patio furniture, plants, and seasonal items. The display area would be located along the front of the building sidewalk and screened with a 3.5-foot high decorative wall.

Seasonal Sales: A +/-10,000 SF area consisting of a display of seasonal merchandise located adjacent to and east of the garden center is proposed. The seasonal sales area is located within the parking lot and is fenced off during use. Items from the seasonal sales area would be purchased in the same area. The seasonal sales area is typically used six to eight times yearly for sales and promotions with appropriate City permits. The type of merchandise displayed in the area would be seasonal in nature and could include Christmas trees (displayed from the week before Thanksgiving through the Christmas season), pumpkins, trees, plants and other nursery materials.

American Flag: The display of a 6-foot wide by 10-foot long American Flag is proposed on a twenty-three foot high flagpole to be mounted to the inside face of the parapet above the main entrance to the home improvement store.

Propane Exchange: A propane cylinder exchange program display area is proposed in front of the store screened with a 3.5-foot high decorative wall. It would consist of a metal enclosed propane stand, measuring approximately three feet deep and sixteen feet long. The propane service would allow customers to exchange empty propane containers for full containers.

Tool Rental Center: The Tool Rental area would be located inside the building immediately adjacent to the Tool Rental Center storage and washdown area. Tools rented to the home improvement center customers would include, but are not limited to drills, hammers, saws, cement mixers, tile cutters, generators, plumbing tools, welding tools, compactors, paint sprayers, lawn & garden tools, pressure washers, sanders, and ladders. A wash down area (10 foot tall enclosure where hand tools are washed after each rental) would be located close to the Tool Rental Storage Area so that associates may clean and restock tools expeditiously. The Wash Down Area enclosure would include a dedicated drain that connects to the storm drain system through an oil separator.

Truck Deliveries: The home improvement center will receive daily inventories from its vehicles and specialty vendors. Approximately 75 percent of all deliveries will be from a variety of the home improvement center trucks and remaining deliveries are from vendor-owned trucks that supply the store. Merchandise to be picked up by customers will not be staged outside the building.

The largest number of deliveries on one day is estimated to be twenty. Light duty and semi-trucks deliver materials; typically 60 to 75 percent of the trucks are semi-trailers. Approximately

100 deliveries are anticipated in a week. Merchandise sold on the weekends and in the previous week would be ordered on Sunday and Monday and delivered throughout the remaining days in the week. Delivery hours will be limited by final Conditions of Approval and deliveries are discouraged during peak customer periods.

A lumber off-loading area would be located on the southwest corner of the building and would take delivery from flatbed trucks. The lumber area would have a concrete staging area approximately 100 feet by 50 feet to allow merchandise to be quickly unloaded, avoiding unnecessary truck idling. The lumber loading door is approximately 20 feet wide.

Deliveries from enclosed trucks would be received in the depressed loading dock located at the rear of the building. This uncovered loading dock would have a compactor and three truck bays that have a grade difference of approximately four feet from the finished floor to provide a flush connection from the building to the truck bed. A screening wall will be constructed to limit off-site noise impacts.

Garden Center deliveries would be received at the side of the garden center at a 25-foot by 25-foot loading area.

Customer Pick Up/Delivery: A covered area (porte-cochere) located on the southwest side of the building where lumber is sold will allow customers to load merchandise into their vehicles under cover. Customers will also be able to pick up merchandise at a pick up lane in front of the entire store.

Delivery service would also be available to customers. On days deliveries are scheduled, the truck would typically be loaded once and make one trip out to customers.

The home improvement center also offers the "Load 'n' Go" program whereby customers may rent a flatbed truck to transport purchases to their homes. The home improvement center would have one to two "Load 'n' Go" gasoline powered trucks parked in the stores parking lot. Spaces in which these vehicles are parked cannot count towards total number of spaces provided, and must be located on the north side of the Major 5, so as to be screened by building.

Operations & Equipment at Rear of Store: Some mechanical and operational equipment would be located to the rear of the store along the west side of the site, including an enclosure for a transformer, generator and propane rack. The propane rack would hold 8-gallon canisters that would be used to fuel forklifts. An enclosure for temporary storage of empty pallets would also be located to the rear of the store. Pallets and cardboard products would be recycled. Pallets would eventually be returned to vendors and home improvement center's regional distribution facilities. A cardboard baler would be located inside the store (near the rear loading area). Cardboard would be baled and hauled offsite to a recycling facility. A solid dry trash compactor would be located between the loading dock and the rear of the store. Refuse would be loaded into the compactor from a chute inside the home improvement center building. The compactor would have a capacity of +/-40 cubic yards and feed into an enclosed bin that would be emptied twice weekly.

3.4.2 Remaining Shopping Center Proposed Uses

Major 2, 3, 4 and 6 Buildings – Retail

Major 2, 3, 4, and 6 Buildings are proposed retail buildings with a combined total floor area of 107,310 SF. Major 2, 3, and 4 Buildings will be located on the west side of the site between Major Buildings 1 and 5. Major 2, 3, and 4 Buildings will have floor areas of 22,733 SF, 33,434 SF, and 29,213 SF respectively. Major 6 Building will be located near the northeast corner of the site and will be 21,930 SF in size. These four buildings will be occupied by general commercial uses typically found in retail shopping centers. Nationally or regionally known retailers will occupy major tenant buildings. Code required parking for the four major retail buildings is 425 spaces; the project proposes to provide 457 spaces.

Shops 1 - 4 Buildings – Multi-tenant Retail

Shops Buildings 1-4 are proposed multi-tenant retail buildings with a combined total floor area of 38,938 SF. The proposed shop buildings will be located on the east side of the site near 47th Street East and the southern entry driveway. Shop Buildings 1 and 4 will have floor areas of 7,579 SF each and Shop Buildings 2 and 3 will have floor areas of 11,890 SF each. These four buildings will be occupied by general retail uses. The shops buildings are divided into smaller units (generally less than 2,000 SF) and will be occupied by specialty shops. Some of the uses may be restaurants. There is sufficient parking within the overall shopping center to accommodate the mixed tenant use. Code required parking for the four shops buildings is 156 spaces; the project proposes to provide 153 spaces.

Pad 1 - 8 Buildings – Restaurants, Bank, Service Station and Multi-tenant Retail

Pad Buildings 1-6 are located along the east side of the site and Pad Buildings 7 and 8 are located near the center of the site. Pad Buildings 1, 3, and 5 are proposed to be two drive-through restaurants and one drive-through bank. Pad Buildings 1, 3, and 5 will have floor areas of 3,500 SF, 3,530 SF and 4,000 SF respectively. Pad Buildings 2 and 4 are proposed to be restaurants with floor areas of 7,700 SF and 10,000 SF respectively. Pad 6 Building will be a service station with 4,000 SF of floor area and an automated car wash. Pad Buildings 7 and 8 may be single or multi-tenant retail buildings. Pad Buildings 7 and 8 will have floor areas of 7,700 SF and 10,000 SF respectively. Code required parking for the eight pad buildings is 365 spaces; the project proposed to provide 432 spaces.

3.4.3 Related On-Site Improvements

Parking

Parking improvements, along with site and tenant identification signage and landscaping are also included in the project proposal. Parking provided by the project includes approximately 2,445 standard parking spaces and 94 oversized spaces for the disabled, with a resulting ratio of 4.72 parking spaces per 1,000 square feet of building area. This is greater than the 2,112 parking spaces required by City ordinance. The sizes and spacing of all parking spaces will be provided consistent with the City of Palmdale Zoning Ordinance, Article 87, Section 87.05.

Lighting/Signs

Commercial lighting for the project will be provided for safety, identification and aesthetic purposes. Typical applications will include building lighting, area/parking lot lights, and illuminated signage. Proposed lighting for the project will be consistent with the City of Palmdale Zoning Ordinance, Article 86, Sections 86.03 and all signage will be consistent with Article 88, Signs.

Property Definition and Perimeter Treatment

The project site is defined by existing roads including 45th Street East on the west, Avenue R on the south, and 47th Street East (State Route 138) on the east. The area to the north of the project is vacant land bounded on the north by Palmdale Boulevard (State Route 138).

Perimeter landscape and hardscape elements proposed by the project will further define the project site, and enhance views of the project area, particularly as seen from abutting 45th Street East. A solid screen/sound wall will be constructed to the west of the project in order to provide a privacy barrier between the project site and the existing residential neighborhood. The neighborhood to the west will be further separated from the project site by required setbacks, landscaping, and an approximately 1.5-acre detention basin. All perimeter treatments will be provided consistent with the City of Palmdale Zoning Ordinance, Article 86, Section 86.04 and Article 53, Section 53.09.

Landscaping

As noted above, perimeter landscaping is proposed along the project site's street frontages and throughout the interior of the project site. All landscaping required of the project will be implemented consistent with the City of Palmdale Zoning Ordinance, Article 86, Sections 86.01, and the requirements of Municipal Code, Chapter 14.04, which regulates the protection of native desert vegetation. Figure 3-6 shows the Conceptual Landscape Plan. The landscape plan includes the transplanting of 78 Joshua trees and the planting of an additional 22 Joshua trees to comply with City Ordinance 952. This is discussed in Section 4.3, Biological Resources.

Off-Site Improvements

Primary ingress and egress to the site will be provided by a proposed signal and driveway on 47th Street East as well as two additional driveways on 47th Street East and three driveways on Avenue R. There will be no driveways along 45th Street East adjacent to residences. Additional improvements to Avenue R and 47th Street East will include half street improvements, turn lanes, and signal improvements to the intersection of Avenue R and 47th Street East. Details of the road improvements are included in Section 4.7, Traffic, and all improvements will be in accordance with the City of Palmdale Public Works Department, Traffic Engineering Division and Caltrans.

Utilities, including electricity, natural gas, water, sewer, drainage, and telecommunications will be extended to the project site from existing easement corridors and lines. Water will be purveyed to the project by the Palmdale Water District, and sewer services will be provided by the Los Angeles County Sanitation Department, District 14. Storm runoff will be routed to an onsite detention basin. Off-site drainage channels are planned to be constructed to the north and west for a distance of approximately 2,100 feet and will connect with an existing culvert.

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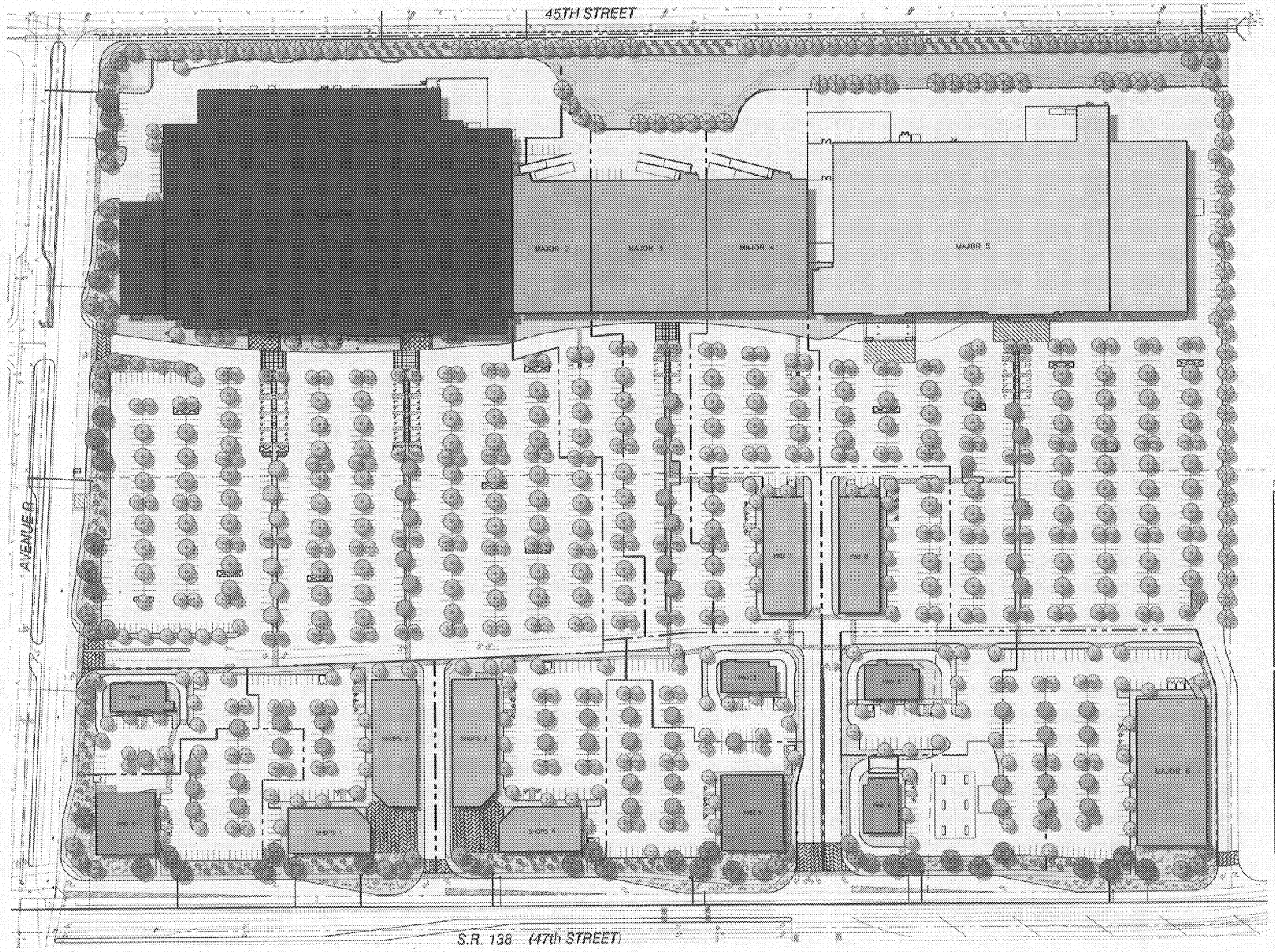

PLANTING LEGEND

SYM	BOTANICAL/COMMON NAME	SIZE	REMARK	QTY.
	TREES			
	CERCIDIUM 'DESERT MUSEUM' BLUE PALO VERDE	36" BOX	MULTI.	38
	CHILOPSIS LINEARIS 'BURGUNDY' DESERT WILLOW	24" BOX	MULTI.	320
	PINUS ELDARICA AFGHAN PINE	24" BOX	NATURAL	97
	PROSOPIS CHILENSIS THORNLESS MESQUITE	24" BOX	STANDARD	36
	QUERCUS ILEX HOLLY OAK	24" BOX	STANDARD	200
	YUCCA BREVIFOLIA JOSHUA TREE (78 JOSHUA TREES ARE EXISTING ON-SITE AND ARE TO BE TRANSPLANTED ON-SITE. REFER TO PLAN)	9'-12' HIGH	STANDARD	100
	SHRUBS / GROUNDCOVERS			
	CASSIA NEMOPHILA DESERT CASSIA	5 GAL.		
	JUNIPERUS CHINENSIS 'GOLD COAST' GOLD COAST JUNIPER	5 GAL.		
	JUNIPERUS SABINA 'ARCADIA' ARCADIA JUNIPER	1 GAL. AT 3'-0" O.C.		
	LEUCOPHYLLUM FRUTESCENS TEXAS RANGER	5 GAL.		
	NANDINA DOMESTICA SACRED BAMBOO	5 GAL.		
	RHUS OVATA SUGAR BUSH	5 GAL.		
	ROSMARINUS O. 'MRS. HARDY' ROSEMARY	5 GAL.		
	ROSMARINUS O. 'HUNTINGTON BLUE' DWARF ROSEMARY	1 GAL. AT 3'-0" O.C.		
	YUCCA GLAUCA SOAPWEED	5 GAL.		

SCALE: 1"=60'-0"
0 30 60 120 180 240

Source: GreenbergFarrow, 6/06

Conceptual Landscape Plan

Palmdale Marketplace
City of Palmdale, California

Figure 3-6

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4.0 ENVIRONMENTAL IMPACT EVALUATION

This section contains an evaluation of environmental impacts that could occur with approval of the proposed Palmdale Marketplace Project. Environmental impacts are evaluated for the following topics:

- Aesthetics & Visual Quality
- Air Quality
- Biological Resources
- Cultural Resources
- Hydrology and Drainage
- Noise
- Traffic/Circulation

Format of Environmental Topic Sections

Each topic identified above is addressed in a section of this chapter. Sections are outlined following the consistent format as follows:

- Introductory paragraph describing the focus of the analysis and summary of background material used to prepare the analysis;
- Description of the environmental setting as it relates to the specific environmental topic;
- Identification of the thresholds of significance;
- Evaluation of project-specific impacts for the commercial development; and a determination of significance based on documented threshold levels;
- Identification of mitigation measures; and
- Determination of the level of significance after mitigation measures are implemented.

The **Introduction** describes the purpose of the section, identifies background reports used to prepare the section, and summarizes the main focus of the analysis.

The **Environmental Setting** describes existing conditions at the local level as well as the regulatory environment where applicable policies, plans and regulations apply to the proposed project. As set forth in CEQA Guidelines Section 15125 (a)(d)(e), the EIR includes a description of the physical environmental conditions in the vicinity of the project as they exist at the time the Notice of Preparation (NOP) was published, from both a local and regional perspective. The EIR discusses any inconsistencies between the proposed project and applicable local and regional plans, and examines the existing physical conditions as well as potential future conditions discussed in these plans.

Thresholds of Significance are used to determine the level of significance of impacts by environmental topic are identified as required by CEQA Guidelines. Thresholds are identifiable quantitative, qualitative, or performance levels of a particular environmental effect.

The **Impact Analysis** focuses on changes in the existing physical environment that would be caused by the proposed project identifying direct and indirect adverse effects of development of the proposed commercial project and development potential associated with the North Portion.

The **Mitigation Measures** to reduce any significant impacts are identified.

Finally, a determination of the **Level of Significance** following implementation of the recommended mitigation measures is provided.

4.1 AESTHETICS & VISUAL QUALITY

4.1.1 Introduction

The immediate vicinity surrounding the project site is developed with residential development to the southwest and west and developing commercial to the southeast. Properties to the north and east across SR 138 are vacant (see Figure 4.1-1). Most of the development in the area occurs to the west and south of the project site. Existing visual resources include views of the San Gabriel Mountains to the south.

4.1.2 Environmental Setting

The proposed project is the development of a retail shopping center on approximately 49.25 acres located on the north side of Avenue R between 45th Street East and 47th Street East (SR 138). The site is located in the City of Palmdale, Los Angeles County. The project site is currently vacant except for a cellular tower located on the south side of the site (see Figure 4.1-2). The property gently slopes to the northwest but appears level with no significant scenic or visual resources. A number of dirt roads and off-road vehicle tracks cross the property. The southeastern section of the property has been graded and historically used (based on aerial photographs) for agricultural purposes since before 1953. Most of the property has not been graded and has retained its natural contours. The majority of the property is Joshua tree woodlands and desert scrub plant community (Figure 4.1-3, looking north). The property is on the fringe of development with existing development located to the south and west of the site (see Figure 4.1-4, west boundary of site). Areas to the north are undeveloped desert land and areas to the east are sparsely developed with residential dwelling units.

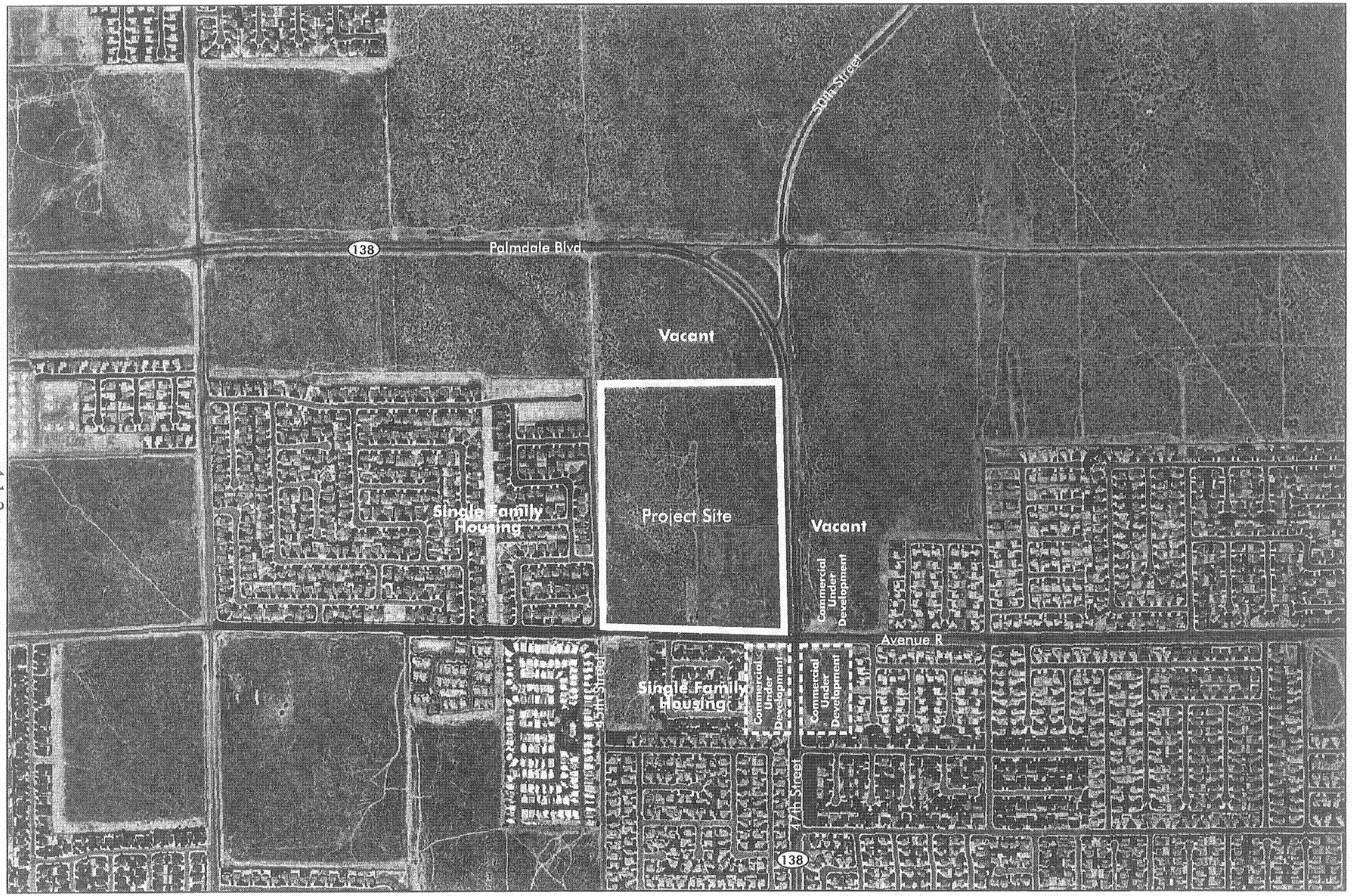
Area-Wide Visual Character

North – The property located to the north of the site is vacant. The view looking north is primarily of level desert terrain with a sparse number of trees in the horizon. The United States Air Force Plant No. 42 is located approximately four miles northwest of the site.

South – Located south of the proposed development across Avenue R is a single-family residential community, and a restaurant and small retail center are being constructed on the southwest corner of the intersection of Avenue R and 47th Street East. The view to the south is characterized by the development of single-family residences and a neighborhood commercial center which is under construction. The San Gabriel Mountains are also visible to the south.

East – Properties immediately east across 47th Street East (SR 138) of the site are vacant, however properties located further east are developed with single-family residences. Residences can be seen in the distance.

West – Existing single-family residences are located across 45 Street immediately west of the site, with their back and side yards abutting 45th Street East. Properties further west consist of a mix of vacant and residentially developed parcels.



4.1-2

Surrounding Land Uses

Palmdale Marketplace
City of Palmdale, California

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Photograph 1: View of existing cellular tower and site looking NE from Avenue R.

Photograph 2: Overview of site looking north from Avenue R.

Photograph 3: West side of site showing 45th Street East and Existing homes west of site (note block wall and landscaping).

Site Photographs

Palmdale Marketplace
City of Palmdale, California

Figure 4.1-2

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Views of the Site From the Surrounding Area

From the North – The project site is visible in the distance from SR 138 to the north. SR 138 which runs east-west north of the site (SR 138 also runs north-south adjacent to the site to the east), is approximately 860 feet from the north boundary of the site. The view looking south from SR 138 is primarily of a level desert terrain with a sparse number of trees and homes in the horizon.

From the East – The view looking west from SR 138 is primarily of a level desert terrain with single-family homes in the horizon.

From the South – The view from the south consists primarily of desert terrain with trees and homes to the west in the distance.

From the West – The view looking east from 45th Street East is primarily of a level desert terrain with homes in the horizon.

4.1.3 Impacts and Mitigation Measures

Project Related Views of the Site from the Surrounding Area

From the North – The garden center (29,038 square feet) and loading area for Major Building 5 (106,300 square feet) would be visible from Palmdale Boulevard (SR 138) to the north. The garden center north elevation depicts an outdoor garden material sales area enclosed with a 20-foot high wrought iron structure with 20-foot high split-face concrete masonry block pilasters placed approximately 40 feet apart. Major Building 5 is constructed of tilt-up concrete panels. The north elevation of the tilt-up concrete panel wall (painted "Blazing Autumn") of Major Building 5 extends to 28 feet in height behind the garden center structure. The north elevation of the loading area depicts an "Autumn" color (brown earth tone) split-face concrete masonry block. The loading area and the garden center will be partially screened by Afghan Pine trees proposed to be planted along the north property line of the site.

Major Building 6 will also be visible from the north. Major Building 6 will have architectural features compatible with the color pallet proposed for the shopping center.

From the East – The westernmost residential homes within the residential tract east of the proposed project site, would have a view of the out pads and have a partial view of the front façade of Major Buildings 1 through 5. Replacing open space with commercial buildings and parking lots would change the character of the area, however, it is not expected to have a significant negative impact on the aesthetic and visual quality of the area.

From the South – The residential homes located south of the project will have a view of the parking lot area, Pads 1 and 2, partial views of Pads 3 and 7 and Shops 1 and 2. Major Building 1 and the attached garden center would also be visible from homes south of the project. The south elevation for Major Building 1 depicts a "Champagne" color tilt-up concrete panel building with "Auburn" color split-face concrete masonry block along the base of the building. A cell tower

facility with an approximate 45 feet high monopole that is currently located directly across from residential homes will be relocated to the southwest corner of the site. Trees proposed along the south boundary of the site will partially screen the project structures.

From the West - Single-family residential homes located west of the project will have views of a ten-foot high screen wall and the rear (top portion) of Major Tenant buildings 1 through 5 (all attached). These existing homes are generally one-story and face west away from the proposed project. Their backyards face to the east and have 6-foot block walls. The loading areas for the tenant buildings will be located in the rear and truck tops may be visible from the residential area. Trees proposed along the west boundary of the site will partially screen the buildings and truck tops from view. The cell tower facility will be at the southwest corner of the site. The facility will be screened with a six to eight foot high split-face concrete block enclosure. The monopole will be approximately 45 feet high and the antennas will be flush mounted.

Design Considerations

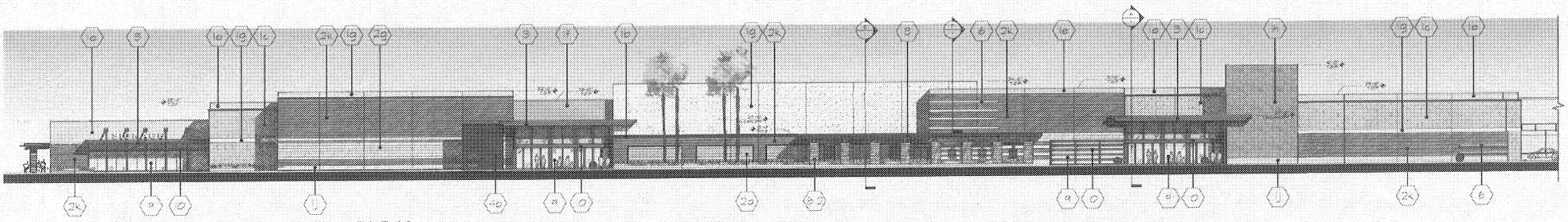
In order to reduce potential visual impacts to the surrounding area, certain architectural designs were taken into consideration. Since Major 1 (172,815 square feet) and Major 5 (106,300 square feet) would be large, the buildings would include characteristics such as parapets, textured building materials, and towers to lessen the monotony of the rectangular stores. All of the stores located along the 47th Street East and Avenue R roadway frontages would be designed with continuity as the goal. Landscaping would also be developed along the perimeter of the site to soften the view for travelers along Avenue R and SR 138. Vegetation and landscaping would also be used as a screen on the western boundary. The proposed block wall along 45th Street will be varied in color with landscaping as approved by the City. Refer to Figures 4.1-3 through 4.1-6 for potential conceptual Building Elevations.

A drainage ditch is proposed from the terminus of 45 Street East, north to State Route 138, then west along the south side of Palmdale Boulevard (SR 138) to connect to existing drainage facilities on Palmdale Boulevard. The drainage ditch will be below grade and therefore will not have any visual impacts.

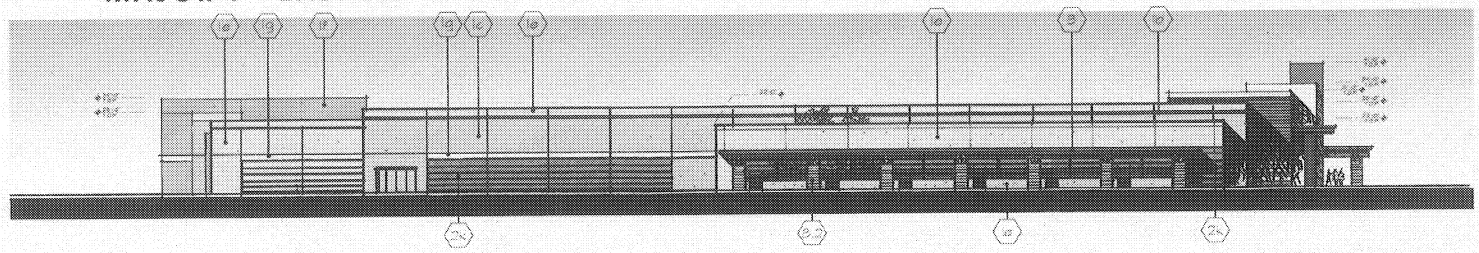
Thresholds of Significance

An impact to aesthetics and visual quality is considered significant if the project would:

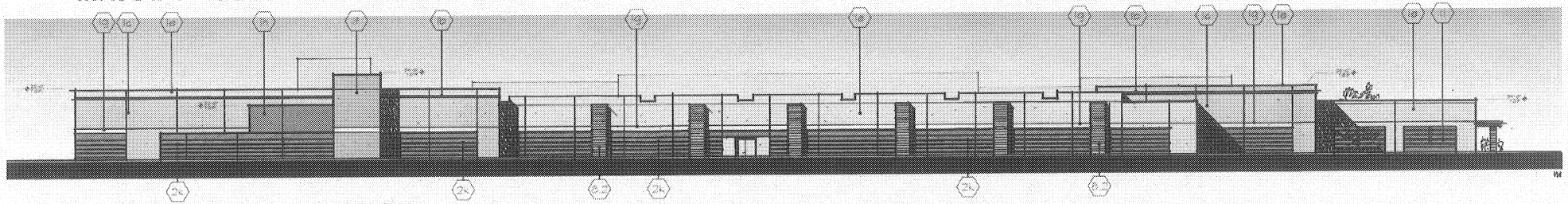
- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantially degrade the existing visual character or quality of the project site and its surroundings;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



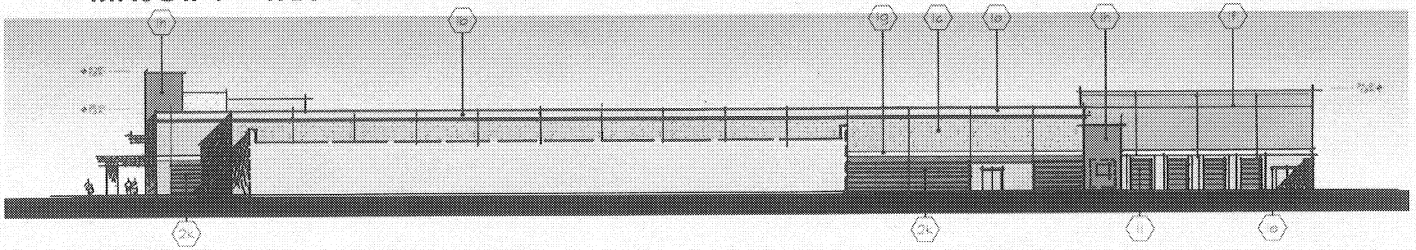
MAJOR 1 - EAST ELEVATION



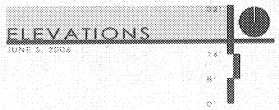
MAJOR 1 - SOUTH ELEVATION



MAJOR 1 - WEST ELEVATION



MAJOR 1 - NORTH ELEVATION



NOTE: This information is conceptual in nature and is subject to substantive revision. Further construction and Client Tenant level development is general assumption. The omission of graphics or any kind does not limit or waive the requirement.

COLOR LEGEND

1 DUNN EDWARDS DE6265 BROWN ROCK	9 DUNN EDWARDS DE6184 COFFEE CREAM
2 DUNN EDWARDS MATCH TAXEY RED	4 DUNN EDWARDS DE6200 LINDEN SPEAR
3 DUNN EDWARDS DE6359 REGENCY CREAM	5 DUNN EDWARDS DE6207 KOHL F KOMPOLE
4 DUNN EDWARDS DE6514 CINNAMON STICK	7 DUNN EDWARDS DE6153 SILVER LINED
5 DUNN EDWARDS DE6324 FINE SAND	8 DUNN EDWARDS DE6194 OWL BRICK
6 DUNN EDWARDS DE6358 BLAZING AUTUMN	6 DUNN EDWARDS DE6478 ENCHANTING IVY

MATERIAL LEGEND

1 TILT-UP CON. PANEL FINISH: STANDARD FINISH	5 WOOD TRELLIS COLOR: CALIFORNIA RUST C-BY OLYMPIC FINISH: NO. 10 COLOR STAIN	4 GLAZING
2 TILT-UP CON. PANEL FINISH: SPLIT FACE, SLOCK FORM LINER	6 ALUMINUM FIN MFG.: KAWNEER COLOR: CLEAR NOTE 4	10 ALUMINUM STORE FRONT MFG.: KAWNEER COLOR: DEAN'S ENCHANTING IVY
3 MTL. CANOPY COLOR: DEAN'S ENCHANTING IVY	7 EXTERIOR CEMENT PLASTER AREA/EIFS MFG.: LA HABRA FINISH: FLOAT FINISH	
4 EXTERIOR CEMENT PLASTER MFG.: LA HABRA FINISH: FINE SAND	8 CON. MASONRY UNIT MFG.: ANGELUS BLOCK FINISH: SPLIT FACE	

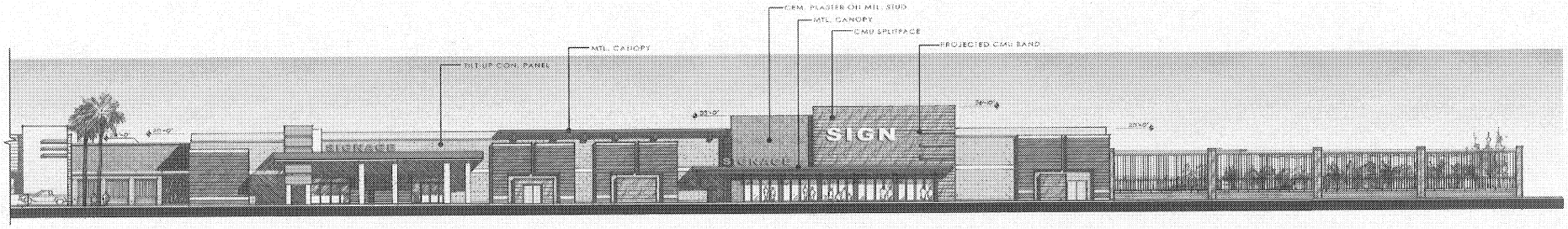
Source: KKe architects, 6/06

Conceptual Elevations

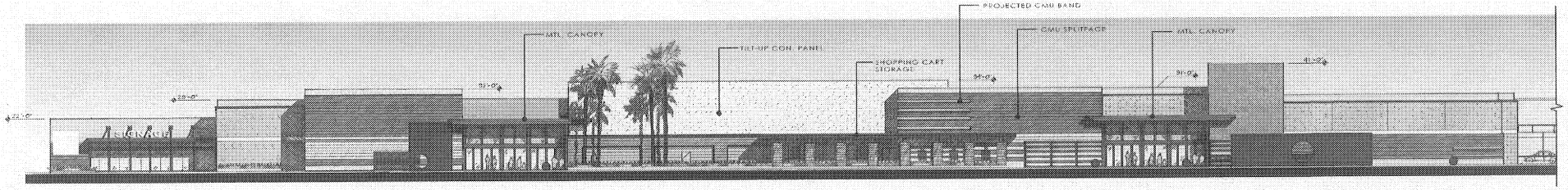
Palmdale Marketplace
City of Palmdale, California

Figure 4.1-3

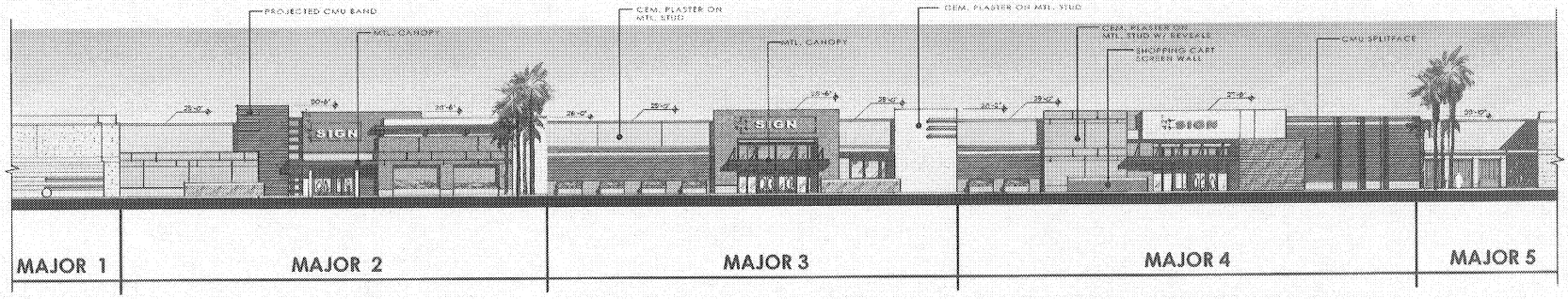
LILBURN CORPORATION



MAJORS 5 - EAST ELEVATION



MAJORS 1 - EAST ELEVATION



MAJORS - ELEVATION

ELEVATIONS
JANUARY 31, 2006

4.1-8

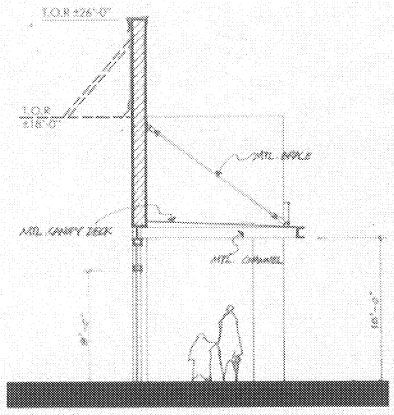
Source: KKe architects, 6/06

Conceptual Elevations

Palmdale Marketplace
City of Palmdale, California

Figure 4.1-4

LILBURN CORPORATION



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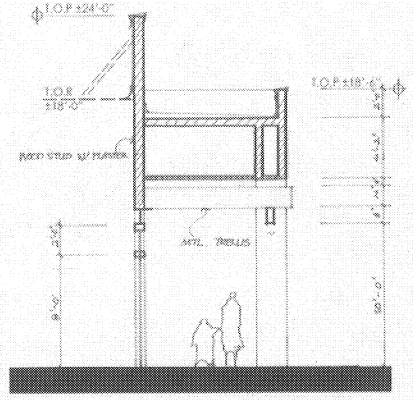

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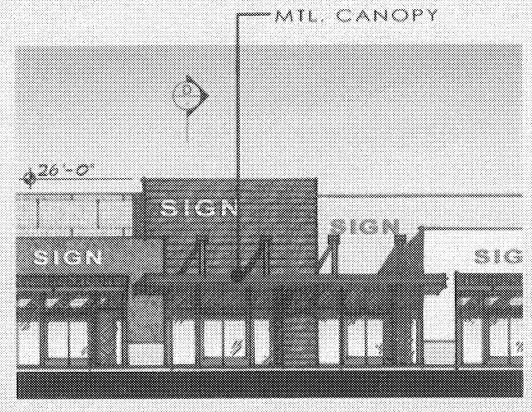

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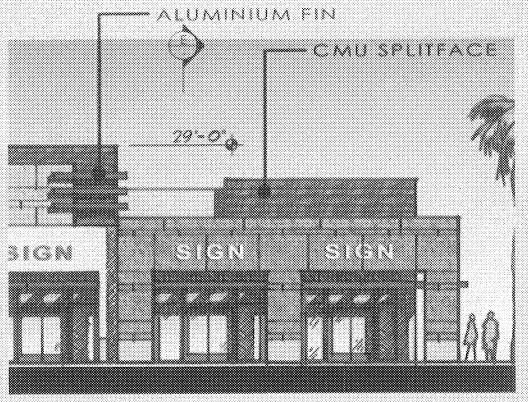

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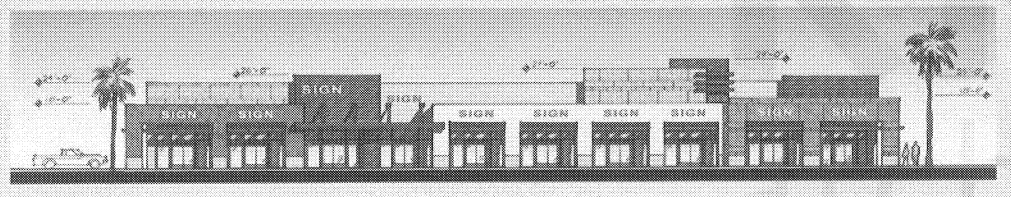


Shops Tenants Criteria:

Primary Elevations:

Shops facade shall be differentiated by several treatments: materials, colors, trellises, canopies, aluminium fin, metal channels, and varied dimensions of pop-outs and projection of parapet.

Each tenant shall have aluminium storefront with clear glazing and noticeable space for signages.

The whole building shall be broken down into comparatively smaller scaled massing of arcades/colonnades which bring more intimate relationship to pedestrians.

4.1-9

SHOPS

MAY 5, 2006

5

Source: KKe architects, 6/06

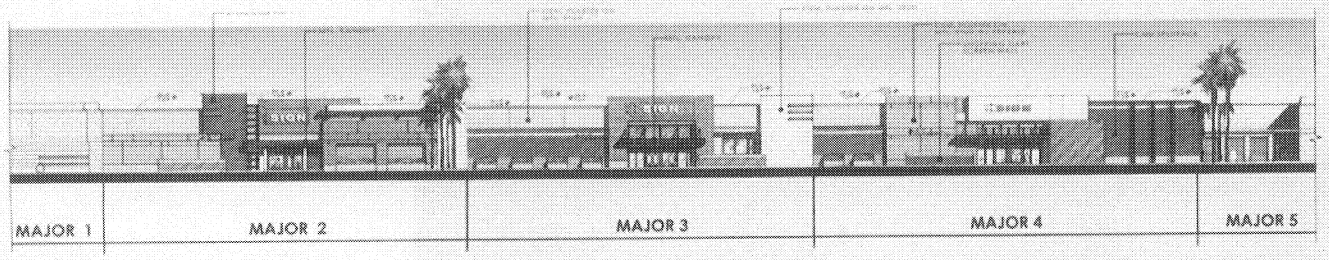
Conceptual Elevations

Palmdale Marketplace
City of Palmdale, California

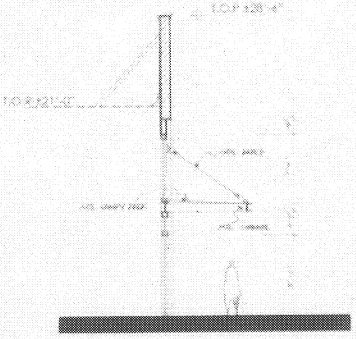
Figure 4.1-5

LILBURN CORPORATION

PALMDALE MARKETPLACE



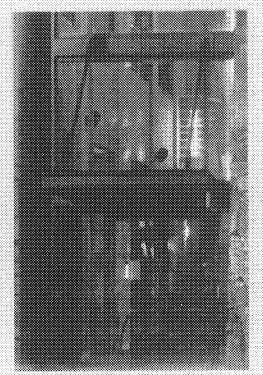
MAJORS - ELEVATION



SECTION C

MAIN ENTRY

MAIN ENTRY



PRIMARY ENTRIES

4.1-10

Conceptual Elevations

Palmdale Marketplace
City of Palmdale, California

Figure 4.1-6

LILBURN CORPORATION

Impacts Determined to Have No Impact

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

The project will not have an impact on a scenic vista. The project does not abut or front on any scenic highways and the project will not obstruct any scenic views.

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

The proposed project will not substantially damage scenic resources. The subject site is not located in an environmentally sensitive area and is not located adjacent to any scenic highways.

Impacts Determined to be Less Than Significant

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

There are single-family residences located to the west and to the south of the site. Properties to the north and east of the site are vacant. Views from the single-family residences to the west would consist of the rear of the shopping center. A ten-foot high screen/sound wall is proposed along the west boundary to screen the loading areas. An 8-foot high screen wall is proposed at the southwest corner of the site along the south boundary line to screen and attenuate the sound from loading and operations activities. Trees and landscaping planted along the screen/sound wall would soften the visual impact of the shopping center. Impacts are expected to be less than significant.

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

Replacing open space with commercial buildings and parking lots would block some views of the foothills and mountains currently seen by travelers along SR 138.

The proposed project also includes three 10-foot high entry monument signs, one on Avenue R and two on 47th Street East. A total of four tenant monument signs, one on Avenue R and three on 47th Street East, which could be approximately five feet tall, and include some minor compatible architectural treatment, are permitted (refer to Figure 4.1-3). These signs would be designed to match the building designs within the project; they would be highly visible for travelers on Avenue R and 47 Street East, as is their intent. These signs would only be approximately 4 feet deep, creating a small amount of visual blockage.

Creating monument signage that correlates to the architecture of the buildings and adding visually pleasing vegetation along 47th Street East helps to reduce the impact of the signage. This, in addition to the relatively short amount of time travelers would be exposed to this impact, reduces the impact to less than significant. Each tenant will also have signage on the building frontages. All signs will comply with the City of Palmdale Zoning Ordinance and Sign Program approved for the development. Refer to Figure 4.1-7 for a detailed potential signage plan.

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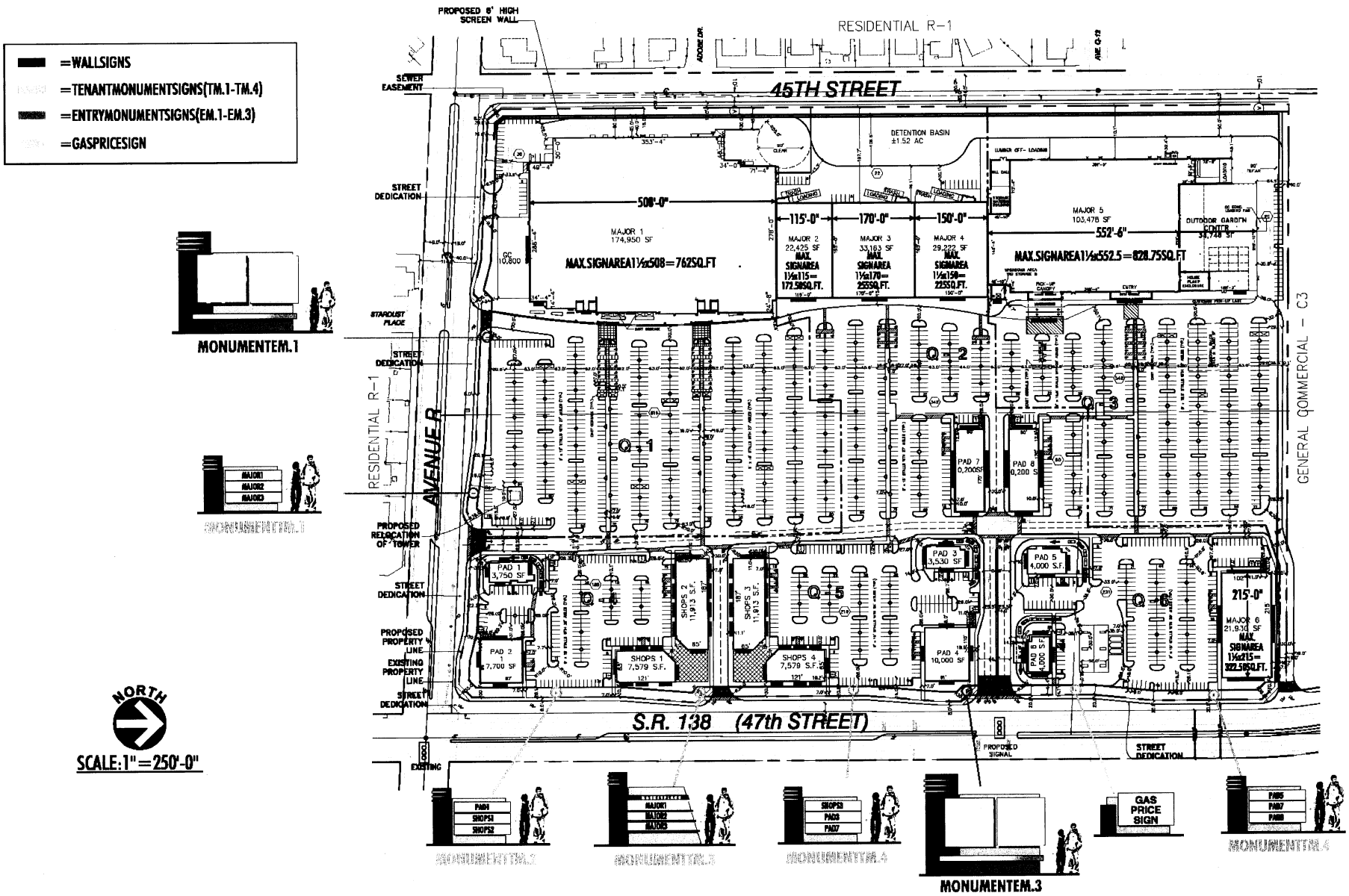


Source: AD/S Architectural Designs & Signs, 6/06

Signage Plan

Palmdale Marketplace
City of Palmdale, California

Figure 4.1-7

LILBURN CORPORATION

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

The development of the proposed project would create a commercial center on a current vacant parcel zoned General Commercial (C-3). The surrounding areas to the west and south are residential in character. Properties to the north and east are vacant. Although this would change the visual character of the area, development of the project site would not substantially degrade the visual character or quality of the project site and its surrounding area.

In order to reduce potential visual impacts to the surrounding area, certain architectural designs were taken into consideration. Since Major Building 1 (172,815 square feet) and Major Building 5 (106,300 square feet) would be large, the buildings would include characteristics such as parapets, textured building materials, and towers to lessen the monotony of the rectangular stores. All of the stores within the shopping center would be designed with continuity as the goal.

A landscaping plan would be submitted to the City for approval prior to development activity. Landscaping would be installed along the perimeter of the site and within the parking areas to aesthetically enhance the site and to soften potential visual impacts residential areas to the west and south.

Impacts Determined to be Potentially Significant

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

Impact AVQ-1

The development of the proposed project would establish retail buildings and parking lots in a currently vacant area. This would introduce new sources of glare and nighttime light to the area. This is a potentially significant impact.

The project would include approximately 160 light fixtures scattered throughout the parking lots and near the buildings. Since the businesses would be open past sundown, the nighttime lights would create an impact to the residences to the west and south. The project site is currently vacant and dark at night. In addition to the parking lot lights, the stores and signage would also create new sources of light. The tenant names on the monument signs would be lit from the inside for nighttime visibility. These signs, building lights and parking lot light poles, would be lit from sundown to sunrise. The proposed project also includes lit signage on the façades of the buildings. The homes to the west of the project would potentially be exposed to security lighting along the backside of Major Buildings 1 through 5. However, these lights would be over 100 feet away from the homes, and would be installed and shielded to shine towards the ground, not perpendicular to the homes.

Daytime glare would be generated by the introduction of buildings, parking lots, vehicles, and windows to a currently vacant area. However, the project site is in a relatively sparsely populated area with properties to the north and east being vacant. Existing residential development to the

west and south may be impacted. Homes to the west would not be significantly impacted though due to the location of Major Buildings 1 through 5. The buildings would block the view of the parking lots, and consequently any associated glare, to the homes. Homes to the south are separated from the site by Avenue R (a 100-foot wide street) and the installation of landscaping along Avenue R and within the parking area would reduce, if not eliminate, glare. Therefore, glare would not be considered a significant impact.

The following mitigation measure is recommended in order to minimize the impacts from nighttime light:

Mitigation Measure AVQ-1

Prior to issuance of Building Permits, the Applicant shall submit a photometric lighting plan to City of Palmdale staff showing the exact locations and heights of light fixtures and the proposed orientation of the fixtures. If required, shields will be utilized to direct light and glare away from the homes to the west and south.

Level of Significance After Mitigation

With appropriate lighting and shielding, the adverse effects of exposure to light and glare from the site can be reduced and/or eliminated. Therefore, the impact would be less than significant.

4.2 AIR QUALITY

4.2.1 Introduction

This section of the EIR provides background air quality information including a regulatory overview, a description of the climate, and existing or ambient air quality in the Palmdale area and the western portion of the Mojave Desert Air Basin (MDAB). This background information is used to assess the potential air quality impacts from the Palmdale Marketplace center. The potential air quality impacts associated with the project, and recommended mitigation measures for impacts determined to be potentially significant are assessed. Background material is referenced from the City of Palmdale General Plan, the Antelope Valley Air Quality Management District (AVAQMD) CEQA Guidelines, and Federal Conformity Guidelines. Information obtained from the report, *Air Quality Assessment for The Palmdale Marketplace, City of Palmdale,* prepared by Lilburn Corporation on May 25, 2006, was used in the formation of this section. The Air Quality Assessment is included in Appendix B.

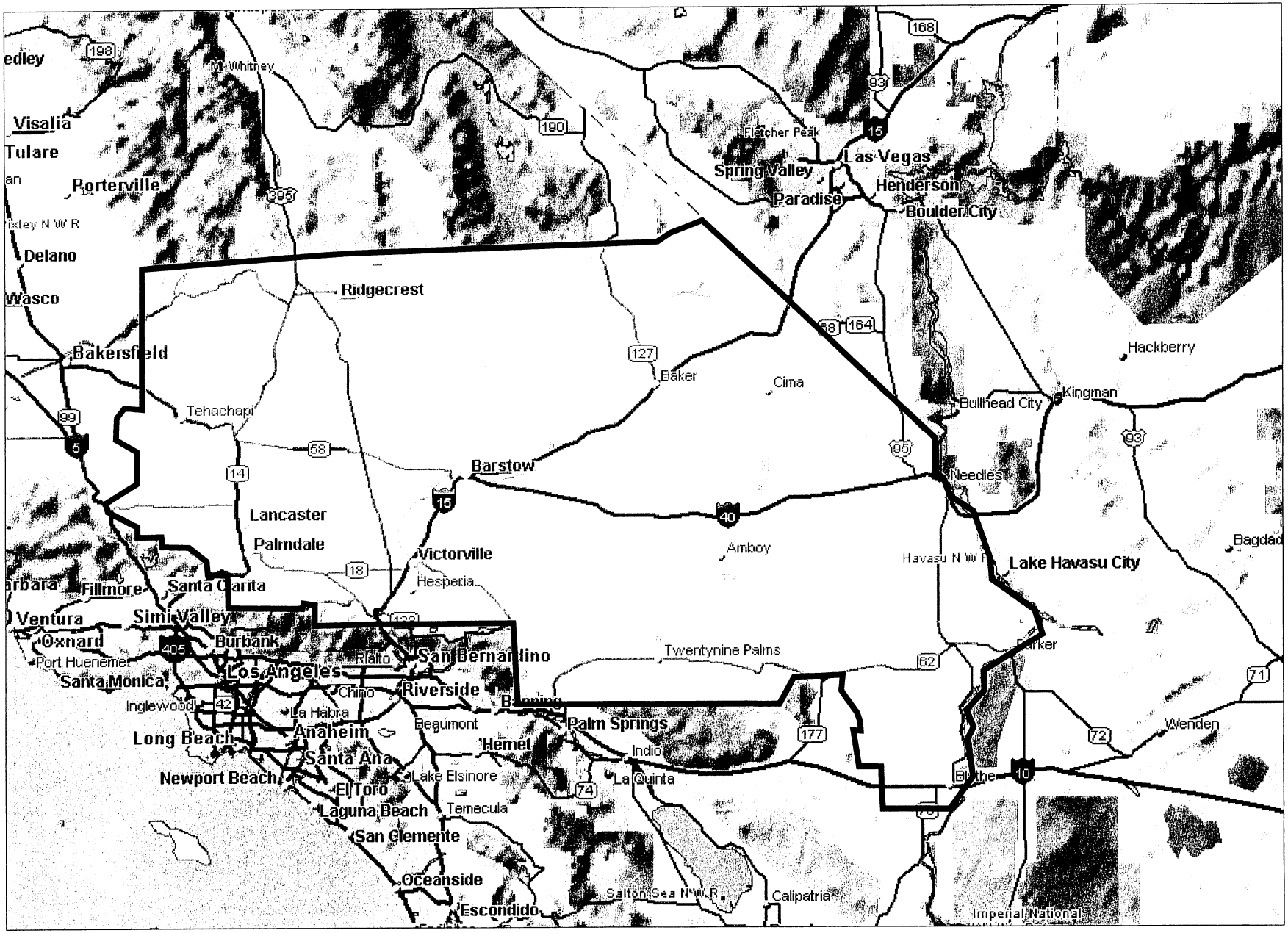
4.2.2 Environmental Setting

Regional Setting

The project site is located in the Antelope Valley within the western portion of the MDAB under the jurisdiction of the AVAQMD. Figure 4.2-1 shows the boundaries of the MDAB. The site is located in the City of Palmdale within the High Desert region of Los Angeles County, approximately 60 freeway miles north of downtown Los Angeles. Palmdale is one of two incorporated cities among several unincorporated communities within the Antelope Valley. The City of Palmdale is bordered by the City of Lancaster to the north as well as the unincorporated community of Quartz Hill, unincorporated communities of Lake Los Angeles and Littlerock border the City to the east, unincorporated community of Acton to the south, and the unincorporated community of Leona Valley to the west.

The Antelope Valley, approximately 3,000 square miles in size, is located in the westernmost portion of the Mojave Desert. The valley is separated on the northwest from the San Joaquin Valley by the Tehachapi Mountains. On the south and southwest, it is separated from the Los Angeles Basin by the San Gabriel Mountains. The north and east boundaries of the Antelope Valley are distinguished by isolated buttes.

The MDAB consists of an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi



4.2-2

Mojave Desert Air Basin

Palmdale Marketplace
City of Palmdale, California

Figure 4.2-1

N

0 40

Feet

LILBURN

Mountains, separated from the Sierra Nevadas to the north by the Tehachapi Pass (3,800 ft. elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 ft).

The climate of Palmdale and the Antelope Valley is dominated by the Pacific high-pressure system, which contributes to the area's hot, dry summers and relatively mild winters. The climate is characterized by its wide swings in temperature between day and night. Average low and high temperatures range from approximately 62° Fahrenheit (F) to 95° F, respectively, in the summer months, and 35° F to 62° F, respectively, in the winter months. Average precipitation is approximately eight inches per year.

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The MDAB is classified as a dry-hot desert climate (BWh), with portions classified as dry-very hot desert (BWhh), to indicate at least three months have maximum average temperatures over 100.4°F.

The City of Palmdale is sheltered from import of inter-basin pollution by mountain barriers extending on the north and south. Air quality is generally good; however, the City receives windborne air pollutants from the greater Los Angeles area via canyons, such as the Newhall Pass and Soledad Canyon, which lie to the south of the City.

Southern California frequently has temperature inversions, which inhibit the dispersion of pollutants. Inversions may be either ground based or elevated. Ground-based inversions, sometimes referred to as radiation inversions, are most severe during clear, cold, early winter mornings. Under conditions of a ground-based inversion, very little mixing or turbulence occurs, and high concentrations of primary pollutants may occur local to major roadways. Elevated inversions can be generated by a variety of meteorological phenomena. An elevated inversion acts as a lid or upper boundary and restricts vertical mixing. Below the elevated inversion dispersion is not restricted. Mixing heights for elevated inversions are lower in the summer and more persistent. This low summer inversion puts a lid over the MDAB and is responsible for the high levels of ozone observed during summer months in the air basin.

Air Quality in the MDAB

The project site is in the Antelope Valley within the western portion of the MDAB, and jurisdictionally, is the responsibility of the AVAQMD and the California Air Resources Board (CARB). The AVAQMD sets and enforces regulations for stationary sources in the basin and develops and implements Transportation Control Measures. The CARB is charged with controlling motor vehicle emissions. CARB establishes legal emission rates for new vehicles and is responsible for the state's vehicle inspection program. Other important agencies involved in the air quality management for the basin include the U.S. Environmental Protection Agency (EPA) and the Southern California Association of Governments (SCAG). The EPA implements the provisions of the federal Clean Air Act. This Act establishes ambient air quality standards

that are applicable nationwide. In areas that are not achieving the standards, the Clean Air Act requires that plans be developed and implemented to meet the standards. The EPA oversees the efforts in the South Coast Air Basin (SCAB) and ensures that appropriate plans are being developed and implemented.

Air quality is determined primarily by the types and amounts of contaminants emitted into the atmosphere, the size and topography of the local air basin, and the pollutant-dispersing properties of local weather patterns. Air quality problems result when airborne pollutants are produced in such volume that they are not dispersed by local meteorological conditions. Dispersion of pollutants in the MDAB is influenced by periodic temperature inversions, persistent meteorological conditions and the local topography. As pollutants become more concentrated in the atmosphere, photochemical reactions occur, producing ozone and other oxidants.

Another major factor that influences the MDAB's ambient air quality is its location downwind from the SCAB with substantial pollution sources. Due to the meteorological and topographical factors of the region, air pollutants from the SCAB are transported into the region contributing significantly to the ozone violations that occur. With the overall reduction in pollutant levels in the SCAB, the result has been a substantial decline in ozone violations in the MDAB.

Air emissions associated with implementation of the proposed expansion is subject to federal, state, and local rules and regulations implemented through provisions of the federal Clean Air Act, California Clean Air Act, and the rules and regulations of the AVAQMD. Under the provisions of the federal and California Clean Air Acts, air quality management districts with air basins not in attainment of the air quality standards are required to prepare an Air Quality Management Plan (AQMP). An AQMP establishes an area-specific program to control existing and proposed sources of air emissions so that the air quality standards may be attained by an applicable target date. The following is an overview of these rules and regulations.

Federal Clean Air Act

The federal Clean Air Act was established in an effort to assure that acceptable levels of air quality are maintained in all areas of the United States. These levels are based upon health-related exposure limits and are referred to as National Ambient Air Quality Standards (NAAQS). The NAAQS establish maximum allowable concentrations of specific pollutants in the atmosphere and characterize the amount of exposure deemed safe for the public. The NAAQS are established for the following criteria pollutants:

Carbon Monoxide (CO)
Sulfur dioxide (SO_2)
Particulate matter less than 10 microns, aerodynamic diameter (PM_{10})
Particulate matter less than 2.5 microns, aerodynamic diameter ($PM_{2.5}$)
Ozone (O_3)
Lead (Pb)

Primary and secondary NAAQS have been established and are shown in Table 4.2-1. Primary standards reflect levels of air quality deemed necessary by the EPA to provide an adequate margin of safety to protect public health. Areas that meet the standards are defined as in attainment and if

Table 4.2-1
State and Federal
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	0.12 ppm (235 µg/m^3)	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (130 µg/m^3)*		0.08 ppm (157 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		50 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon monoxide (CO)	8 Hour	9.0 ppm (10mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		---	---	---
Nitrogen dioxide (NO_2)	1 Hour	0.25 ppm (470 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	---		---		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	---	Ultraviolet Fluorescence	0.030 ppm (80 µg/m^3)	---	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	---	
	3 Hour	---		---	0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		---	--	---
Lead[8]	30 Day Average	1.5 µg/m^3	Atomic Absorption	---	Same as primary Standard	---
	Calendar Quarter	---		1.5 µg/m^3		High Volume Sampler and Atomic Absorption
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape		**No Federal Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[8]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

(1) California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

(2) National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

(3) Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

(4) Any equivalent procedure which can be shown to the satisfaction of CARB to provide equivalent results at or near the level of the air quality standard, may be used.

(5) National Primary Standards: The levels of air quality necessary to protect public health from any known or anticipated adverse effects of a pollutant.

(6) National Secondary Standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effect of a pollutant.

(7) Reference method as described by EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by EPA.

(8) The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

found to be in violation of primary standards are termed as nonattainment areas. Secondary standards reflect levels of air quality necessary to protect public welfare from the known or anticipated adverse effects of a pollutant.

NAAQS have been set for a number of criteria pollutants. The following is a brief description of health effects and whether the MDAB is or is not in attainment for these pollutants based on actual air quality data. The nearest air monitoring stations are located on West Ponderosa Street and Division Street in the City of Lancaster approximately 25 miles northwest from the project site. These monitoring stations were used to provide a complete five-year analysis for the pollutants recorded.

Ozone (O_3) is a toxic gas that irritates the lungs and damages materials and vegetation. Data summarized in Table 4.2-2 indicate that levels of ozone frequently exceed state standards in the project area and occasionally federal standards in the past five years. The MDAB is designated as a non-attainment basin for ozone and an Air Quality Attainment Plan was prepared for the area in 1994. The AVAQMD has prepared a 2004 Ozone Attainment Plan (State and Federal). The District has until 2007 to achieve attainment of the ozone standards.

Table 4.2-2
Hourly Ozone Levels
Number of Days Hourly Ozone Standards Exceeded
At 43301 Division Street, Lancaster

Year	Number of Days Standard Exceeded	
Ozone	State Standard ≥ 0.09 ppm/hour	Federal Standard ≥ 0.12 ppm/hour
2005	42	1
2004	37	0
2003	50	4
2002	46	5
2001	0	0

Source: California Air Resources Board, California Air Quality Data Summaries 2001 to 2005 and AVAQMD.

Carbon monoxide (CO) is a gas produced almost entirely from automobiles that interferes with the transfer of oxygen to the brain. Peak levels of CO occur in winter and are highest where there is heavy traffic. The MDAB is in attainment for CO so it is not a concern in the project area due to the relatively low traffic volumes. CO is not monitored in the area.

Nitrogen dioxide (NO_2) is a gas that can cause breathing difficulties at high concentration levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries and other industrial operations). Federal ambient air quality standards for NO_2 have not been violated in the MDAB since 1991 and the area is in attainment.

Sulfur dioxide (SO_2) is a gas produced when fossil fuels are burned. SO_2 is the main pollutant contributing to the formation of acid rain. This pollutant does not exceed air quality standards in the MDAB and therefore, the basin is in attainment.

Lead (Pb) is a heavy metal used in industry and for years was a component in gasoline. Since the elimination of lead as a gasoline additive, lead in the atmosphere in southern California has been virtually eliminated.

Particulate matter (PM_{10}) consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter that can lodge in lungs contributing to respiratory problems. PM_{10} arises from such sources as road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. PM_{10} scatters light and significantly reduces visibility. PM_{10} poses a health hazard, alone or in combination with other pollutants. As shown in Table 4.2-3, PM_{10} levels do not exceed the state ambient air quality standards and do not exceed federal standards in the project area. However, based on past years, the MDAB is classified as being in nonattainment for State standards.

Table 4.2-3
Number of Days Daily PM_{10} Levels Exceeded
At 43301 Division Street, Lancaster

Year	Number of Days Standard Exceeded	
PM_{10}	State Standard $\geq 50\ \mu g/m^3$/24hours	Federal Standard $> 150\ \mu g/m^3$/24hours
2005	27	0
2004	25	0
2003	26	0
2002	28	0
2001	34	0

Note: PM_{10} measurements are recorded once every six days or 60 times annually. The number of days exceeded is calculated based on those measurements, that is, the number of recorded days that exceed the standard is multiplied by 6.
Source: California Air Resources Board, California Air Quality Data Summaries 2001 to 2005.

Fine Particulate Matter ($PM_{2.5}$) consists of extremely small-suspended particles 2.5 microns or less in diameter and arises primarily from combustion sources not from fugitive dust sources. Standards were established in 1997 and methods to assess this pollutant are undergoing further research. The AVAQMD currently monitors $PM_{2.5}$ in the urban areas of the MDAB. Levels of $PM_{2.5}$ are collected at 43301 Division Street in the City of Lancaster. As shown in Table 4.2-4, $PM_{2.5}$ levels do not exceed federal standards in the project area. There are no State air quality standards for $PM_{2.5}$.

California Clean Air Act

Under the federal Clean Air Act, State and local authorities have primary responsibility for assuring that their respective regions are in attainment of, or have a verifiable plan to attain the NAAQS. The federal Clean Air Act also provides state and local agencies authority to promulgate more stringent ambient air quality standards, which is the case in California. The California Ambient Air Quality Standards (CAAQS) for the above criteria pollutants and the following pollutants are also included in Table 4.2-1.

Nitrogen dioxide (NO_2)

Hydrogen sulfide (H_2S)
Sulfates
Visibility-reducing particles

Table 4.2-4
Daily $PM_{2.5}$ Levels Exceeded
At 43301 Division Street, Lancaster

$PM_{2.5}$	State Standard None	Federal Standard > 65 µg/m³/24hours
2005	N/A	0
2004	N/A	0
2003	N/A	0
2002	N/A	0
2001	N/A	0

Source: California Air Resources Board, California Air Quality Data Summaries 2001 to 2005.

Hydrogen sulfide (H_2S). This pollutant is not commonly found in the ambient atmosphere but can originate from natural sources such as volcanoes, sulfur hot springs, or in the case of the Mojave Desert, related to the mineral brine associated with the dry lakebed at Trona, approximately 85 miles northeast of the project site. The State ambient air quality standard for H_2S is not health-based but rather an aesthetic one, because the compound smells like rotten eggs. However, due to the distance from the source, this is not an issue for the AVAQMD. Furthermore, the proposed project will not contribute additional H_2S to the atmosphere.

Sulfates are produced by the reaction in the air of sulfur dioxide (SO_2), which is a component of acid rain. Sources for sulfur dioxide include coal burning power plants and diesel engines. California does not have any coal burning power plants and all diesel fuels sold in the State are now lower in sulfur; sulfates are not an issue in the area. The proposed project would not contribute to additional sulfates in the atmosphere.

Visibility-reducing particles are common in the MDAB due to the vast open desert area, especially during windy conditions. Particles reduce visibility, obscuring the desert scenery, including views of the mountains.

Reactive Organic Gases (ROG) In addition to these pollutants ROG is also considered in the air quality analysis of projects in the State. Ozone is a secondary pollutant that is the result of chemical reactions between other pollutants, most importantly reactive hydrocarbons (also referred to as ROG), and NO_2, which occurs only in the presence of bright sunlight. The result is the formation of smog. There are no federal or State air quality standards for hydrocarbons or ROG as there are for other pollutants. Emissions are typically associated with vehicle emissions, architectural coating and fuel dispensing (gas station).

Antelope Valley Air Quality Management District

The AVAQMD has local regulatory review and primary permitting and enforcement authority over potential stationary sources of air pollution within the Antelope Valley portion of Los Angeles

County, including all cities and towns. The EPA and CARB serve as technical review and advisory agencies, providing technical advice and guidance when necessary.

The EPA designated the Southeast Desert Modified Air Quality Management Area (Southeast Desert Modified AQMA) as nonattainment for ozone NAAQS pursuant to the provisions of the federal Clean Air Act (FCAA). The Antelope Valley is included in the Southeast Desert Modified AQMA. The CARB has also designated the Antelope Valley non-attainment for ozone CAAQS pursuant to the provisions of the California Clean Air Act (CCAA). SCAQMD adopted attainment plans for the Antelope Valley when the region was under its jurisdiction.

The AVAQMD now has jurisdiction over the Antelope Valley and has reviewed and updated all elements of the 2004 Ozone Attainment Plan (State and Federal). The Attainment Plan must demonstrate that the AVAQMD will meet the NAAQS for ozone and show significant progress towards attainment of the CAAQS for ozone by 2007.

The Antelope Valley is downwind of the Los Angeles basin, and to a lesser extent, is downwind of the San Joaquin Valley. Prevailing winds transport ozone and ozone precursors from both regions into and through the Antelope Valley during the summer ozone season. These transport couplings have been officially recognized by CARB (Ozone Transport: 2001 Review," April 2001), CARB identifies the South Coast Air Basin as having an overwhelming and significant impact on the MDAB, which includes the Antelope Valley, and the San Joaquin Valley as having an overwhelming impact on the MDAB. Local Antelope Valley emissions contribute to exceedances of both the NAAQS and CAAQS for ozone, but the Antelope Valley would be in attainment of both standards without the influence of transported air pollution from upwind regions.

Nonattainment Designations and Classification Status

The USEPA and the CARB have designated portions of the District as nonattainment for a variety of pollutants, and some of those designations have an associated classification. Table 4.2-5 lists these designations and classifications.

The AVAQMD has adopted attainment plans for a variety of nonattainment pollutants. Table 4.2-6 lists the attainment plans applicable to the project area.

AVAQMD regulates emissions from stationary sources through the permitting process and requires permits to Construct/Operate for all stationary equipment with the potential to release air contaminants. For this project, the AVAQMD would require individual permits for any type of dry cleaning services and fueling stations. The AVAQMD cannot issue an air quality permit to operate to projects that may create a significant air quality impact or interfere with the AQMP and progress toward attainment of the federal air quality standards. The goal of the permit regulations is to achieve no net increase of emissions from new permitted sources. New sources must apply reasonably available control measures.

Table 4.2-5
State and Federal Air Quality
Designations and Classifications

Ambient Air Quality Standard	AVAQMD
One-hour Ozone (Federal)	Nonattainment; classified Severe-17
Eight-hour Ozone (Federal)	Unclassified
Ozone (State)	Nonattainment; classified Extreme due to historical SCAB designation
PM_{10} (Federal)	Unclassified
New PM_{10} (Federal)	Unclassified
$PM_{2.5}$ (Federal)	Unclassified
PM_{10} (State)	Nonattainment
Carbon Monoxide (State and Federal)	Attainment
Nitrogen Dioxide (State and Federal)	Attainment
Sulfur Dioxide (State and Federal)	Attainment
Lead (State and Federal)	Attainment
Particulate Sulfate (State)	Unclassified
Hydrogen Sulfide (State)	Unclassified
Visibility Reducing Particles (State)	Unclassified

Source: http://www.avaqmd.ca.gov/forms/av-ceqa.pdf

Table 4.2-6
AVAQMD Attainment Plans

Name of Plan	Date of Adoption	Applicable Area	Pollutant(s) Targeted	Attainment Date
1994 Air Quality Management Plan	Sept-94	Entire District	NO_x and VOC	2007
AVAQMD 2004 Ozone Attainment Plan (State and Federal)	20-Apr-04	Entire District	NO_x and VOC	2007

Source: AVAQMD website and CEQA and Federal Conformity Guidelines, May 2002.

4.2.3 Impacts and Mitigation Measures

Thresholds of Significance

Significant impacts to air quality may result if the proposed project would:

- Result in significant air emissions or deterioration of ambient air quality either from stationary or mobile sources.
- Produce potentially toxic air emissions.
- Conflict with or obstruct implementation of the applicable air quality plan.

- Result in the creation of objectionable odors.
- Result in the alteration of air movement, moisture or temperature, or any change in climate either locally or regionally.

In addition, to determine if a potential project may significantly impact the ambient air quality, the AVAQMD utilizes the following net daily emissions increase in the Antelope Valley as CEQA thresholds of significance. If the potential emissions exceed these thresholds, then the project may have a significant air quality impact and requires additional analysis.

- Carbon Monoxide (CO) 548 lbs/day
- Nitrogen Dioxide (NO_2) 137 lbs/day
- Reactive Organic Gasses (ROG) 137 lbs/day
- Sulfur Dioxide (SO_2) 137 lbs/day
- Particulate Matter (PM_{10}) 82 lbs/day

Impacts Determined to Have No Impact

Conflict with or obstruct implementation of the applicable air quality plan?

On January 25, 1993 the City of Palmdale adopted a comprehensive General Plan which established and analyzed zones for various types of use, development, future development, and traffic patterns. The proposed project as well as all development within the City have been previously analyzed and mitigated per the General Plan through the implementation of roadway, transportation, land use, and energy conservation (building design mitigation measures).

The AVAQMD prepared their 2004 Ozone Attainment Plan based on information on future development from general plans of the cities' and county's located in the District's boundaries. The District regulates future air emissions to attain compliance with air quality standards through its permitting requirements and State and nationwide regulations on mobile sources. Therefore, the proposed project, which is consistent with the City's General Plan, and would be developed and operated in accordance with all rules and regulations established by the AVAQMD, would be consistent with the District's attainment plan and PM_{10} control goals.

Will the project potentially result in the creation of objectionable odors?

The proposed project does not include the burning of any hazardous, medical or municipal waste, and no odors would be emitted from the site.

Could the project result in the alteration of air movement, moisture or temperature, or any change in climate either locally or regionally?

The proposed project is not anticipated to alter air movement, moisture or temperature, or any change in climate either locally or regionally.

Impacts Determined to be Potentially Significant

Will the project result in significant air emissions or deterioration of ambient air quality either from stationary or mobile sources (during construction and/or during operation)?

Impact AQ-1

Construction activities for the development of the proposed Palmdale Marketplace may violate pollutant level thresholds established by the AVAQMD. This is a potentially significant impact.

The impact of the project on air quality is based on estimating the air pollutant emissions potentially caused by the proposed project and comparing them to the significant emissions thresholds and standards listed above. This assessment depends on the project description, the estimated construction period, operational vehicle trips, proposed land uses, and the number of trucks utilizing the site per day.

In addition, the location of adjacent or nearby sensitive receptors is important to determine the potential exposure of people to potential emissions. Surrounding land uses consist of vacant property to the north and east and single-family residences to the south and west. A neighborhood commercial center is currently being developed on the southeast corner of Avenue R and 47th Street East (SR 138). The area to the east within 300 feet of the proposed gas station is zoned for single family residential.

Construction grading and building emissions are considered short-term, temporary emissions and are estimated in Tables 4.2-7 through 4.2-9, respectively. The following construction assumptions were assumed: Site Grading - approximately 4.0-month duration; Building Construction - approximately 11.25-month duration from years 2006 to 2007; and Sub-Phase Asphalt - approximately 0.7 month duration. (Refer to Appendix A, URBEMIS2002.8.7 emissions model worksheets). Once construction is complete, emissions will be generated by energy utilized for on-site building and exhaust from space heating and cooling, and customers and employee traffic.

The emissions calculations for the construction phase include fugitive dust from grading and exhaust emissions from on-site equipment and worker travel. Construction emissions are calculated based on emissions per 1,000 square feet of the project's building area. The fugitive dust emissions are based on approximately 46.65 net acres being graded over a 4.0 month period.

The proposed project was screened using the URBEMIS emissions model as recommended by the AVAQMD. The criteria pollutants screened for included reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), and particulates (PM_{10}). Two of these, ROG and NO_x, are ozone precursors. Construction emissions are screened and quantified to document the effectiveness of control measures. The proposed retail center is assumed to be constructed in one phase to assess a worst case. Grading and building emissions (during years 2006, and 2007) are estimated and compared to AVAQMD significance thresholds for daily construction emissions in Tables 4.2-7, 4.2-8, 4.2-9 and 4.2-10 respectively.

Table 4.2-7
Site Grading Emissions
(Pounds per Day)

Source	ROG	NO_x	CO	PM_{10}
Fugitive Dust	-	-	---	12.5
Off-Road Diesel	15.7	114.4	120.1	5.1
On-Road Diesel	-	-	-	-
Worker Trips	0.1	0.1	2.5	0.0
Totals (lbs/day)	**15.8**	**114.5**	**122.6**	**17.6**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**No**	**No**	**No**

Source: URBEMIS2002.8.7, Lilburn Corp. 2006
* Includes required dust control measures per Rule 403.

Table 4.2-8
URBEMIS2002 Building Phase
Emissions Summary (Pounds Per Day)

Year 2006				
Source	**ROG**	**NO_X**	**CO**	**PM_{10}**
Bldg Const	16.3	124.3	5.6	5.6
Worker Trips	1.1	0.6	13.0	0.1
Arch Coating*	---	---	---	---
Asphalt*	---	---	---	---
Total	**17.4**	**124.9**	**18.6**	**5.7**
AVAQMD Threshold	137	137	548	82
Significance	**No**	**No**	**No**	**No**

Source: URBEMIS 2002
* : Architecture coating and asphalt emissions are calculated once the construction phase is complete as each phase is independent of each other.

Table 4.2-9
URBEMIS2002 Building Phase
Emissions Summary (Pounds Per Day)

Year 2007				
Source	**ROG**	**NO_X**	**CO**	**PM_{10}**
Bldg Const	16.3	119.0	124.0	5.1
Worker Trips	1.0	0.6	12.2	0.1
Arch. Coating*	---	---	---	---
Asphalt*	---	---	---	---
Total	**17.3**	**119.6**	**136.2**	**5.2**
AVAQMD Threshold	137	137	548	82
Significance	**No**	**No**	**No**	**No**

Source: URBEMIS 2002
* : Architecture coating and asphalt emissions are calculated once the construction phase is complete as each phase is independent of each other.

Paving would be the last phase of development and is anticipated to take approximately 0.7-month (refer to Table 4.2-10).

Table 4.2-10
URBEMIS2002 Asphalt Paving
Emissions Summary (Pounds Per Day)

Source	ROG	NO_X	CO	PM_{10}
Asphalt Off-Gas	1.0	---	---	---
Asphalt Off-Road Diesel	9.5	59.2	79.6	2.2
Asphalt On-Road Diesel	0.1	1.7	0.4	<0.1
Asphalt Worker Trips	<0.1	<0.1	0.5	0.0
Total	**<10.7**	**<61.0**	**80.4**	**<2.3**
AVAQMD Threshold	137	137	548	82
Significance	**No**	**No**	**No**	**No**

Source: URBEMIS 2002

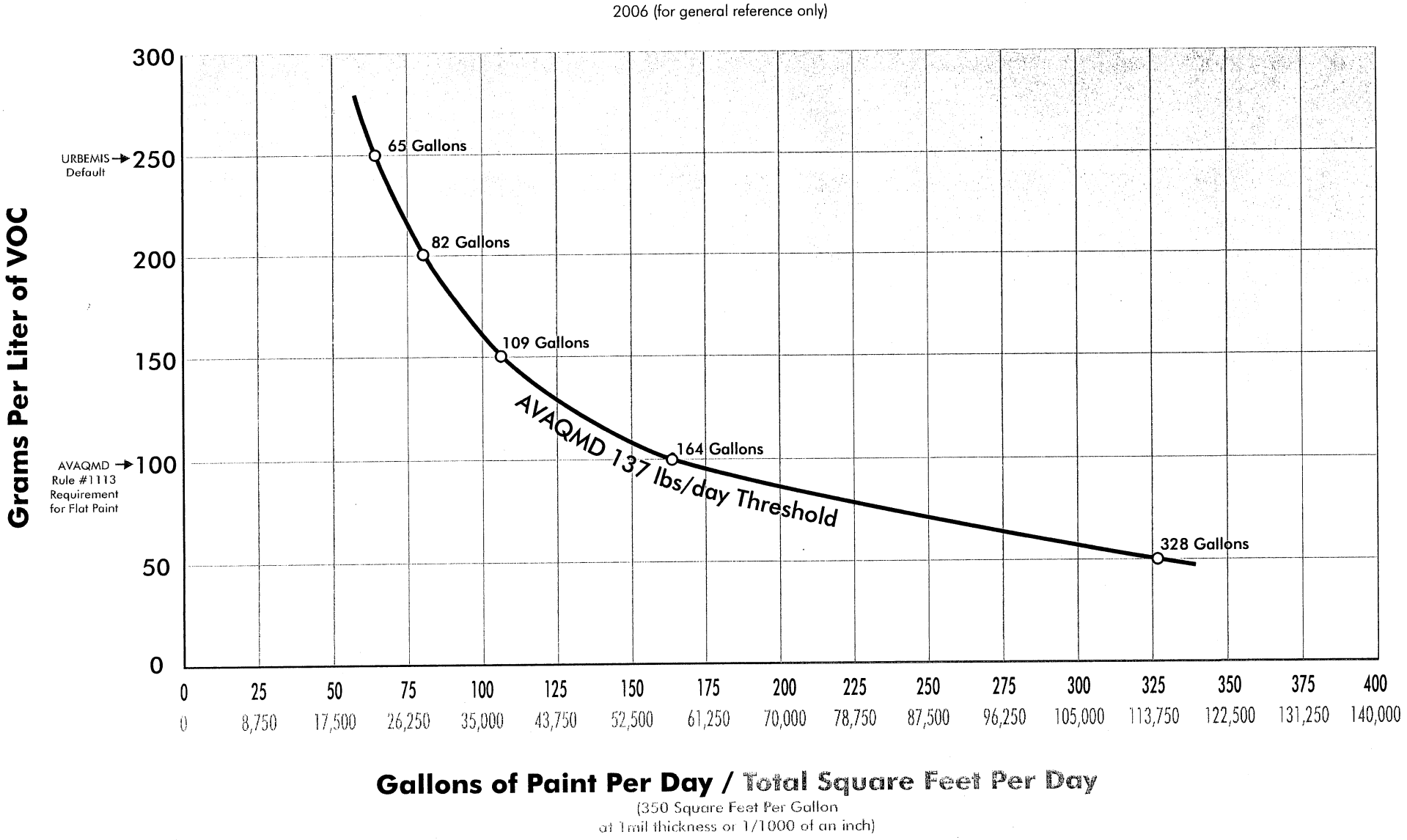
Architectural Coatings

Architectural Coatings are coatings applied to stationary sources and their trimmings, to portable buildings, to pavements, or to curbs. Trimmings are accessories to an architectural structure, including, but not limited to: handrailings, cabinets, bathroom and kitchen fixtures, fences, decks, rain gutters and downspouts, window screens, lamp posts, signs, concrete forms, heating and air conditioning equipment, large fixed stationary tools, and other mechanical equipment.

One of the key ingredients contributing to ozone formation are solvents, which contain volatiles referred to as volatile organic compounds (VOCs). These solvents are commonly found in many architectural and industrial paints and these emissions exceed the combined emissions from a variety of industrial operations. Emissions from the application of architectural and industrial maintenance coatings peak during the summer months. VOC's from solvent and paint emissions contribute to harmful ozone formation. To reduce VOC's from architectural coating, the AVAQMD has set VOC limits for coating in Rule 1113.

Painting will be conducted as each building is completed. The project consists of the development of approximately 530,000 square feet. The architectural coating would occur at the end of the construction schedule per each building. Without mitigation, the proposed project is anticipated to exceed AVAQMD thresholds for VOC's of 137 lbs/day. Therefore, the area of painting per day will be limited by the grams/liter (g/l) of VOC in the paint. If the applicant chooses paint manufactured with specifications indicating 250g/l of VOC, they will be limited to painting approximately 23,700 square feet per day. If the applicant chooses paint manufactured with specifications indicating 100g/l of VOC, they will be limited to painting approximately 57,540 square feet per day. Please refer to Figure 4.2-2 for a complete breakdown of architectural coating limitations based on VOC content per amount of paint.

Screening results of the project verify that short-term construction emissions will not exceed daily construction significant thresholds. Development within the vicinity will be exposed to exhaust and dust from construction vehicles and equipment (construction impacts are short-term and are not anticipated to occur over 15.25 months). Therefore, the following measures, which are typically included in the grading permit, will further minimize the project contribution to local and regional emissions of criteria pollutants and minimize impacts to developments within the vicinity.



Architectural Coating Limitations

Palmdale Marketplace
City of Palmdale, California

Figure 4.2-2

LILBURN CORPORATION

Mitigation Measures

The following mitigation measures are recommended to reduce dust, exhaust emissions from construction equipment, and VOC emissions from architectural coatings.

Mitigation Measure AQ-1

Comply with AVAQMD Rule 402 which requires that air pollutant emissions not be a nuisance off-site and AVAQMD Rule 403 which requires construction activities to implement the following measures to eliminate visible dust beyond property lines:

- *Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance;*
- *Take actions sufficient to prevent project-related trackout onto paved surfaces;*
- *Cover loaded haul vehicles while operating on publicly maintained paved surfaces or load trucks to maintain two feet of freeboard;*
- *Stabilize graded site surfaces upon completion of grading by water or chemical stabilizers when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions;*
- *Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours; and*
- *Reduce non-essential earth-moving activity under high wind conditions (wind gusts greater than 25 mph). For purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.*

Mitigation Measure AQ-2

- *Ensure all equipment is maintained and tuned according to manufacturers specifications.*
- *Schedule production activities to minimize daily equipment operations and idling trucks.*
- *Comply with all existing and future CARB and AVAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel (already required); and (4) use of alternative fuels or equipment.*

Mitigation Measure AQ-3

- *Applicant must comply with VOC limits in architectural coatings as regulated by AVAQMD Rule 1113.*
- *Applicant must limit the area of painting conducted per day based on the VOC content in the paint as estimated in Figure 4.2-2.*

Level of Significance after Mitigation

Implementation of the listed mitigation measures will further minimize the project contribution to local and regional emissions of criteria pollutants and minimize impacts to developments within the vicinity. Construction related impacts to air quality are considered less than significant with mitigation.

Impact AQ-2

Operation of the Palmdale Marketplace would result in increased emissions of criteria pollutants. This is a potentially significant impact.

The primary source of regional emissions generated by the proposed project will be from motor vehicles. Other on-site emissions will be generated from the combustion of natural gas for water and space heating and cooking and evaporative VOC emissions from gasoline dispensing and transferring.

The Palmdale Marketplace is the development of 530,000 square feet of a commercial shopping center consisting of six major retail tenants and other commercial uses. Two of the major retail tenants include a home improvement center and an upscale discounter. Stationary source emissions associated with the operation of the site are primarily from electrical usage and natural gas consumption for space heating and water heating are estimated by the URBEMIS model based on the size and use of the building. In addition, at least one gas station is planned that will emit VOC's from gasoline vapor. On-site mobile emissions would principally be from employee, customer vehicles, and trucks for delivers and shipments.

Project trip generation was based on rates built in the URBEMIS model. Vehicles using the site would include employee, customer vehicles and trucks for delivery and shipments. The URBEMIS model was utilized to estimate the amount of exhaust emissions produced by vehicles using the site based on default trip lengths. The number of vehicles relates to trips/day per 1,000 square feet per use (Commercial Shopping Center). Refer to Appendix A-URBEMIS2002.8.7 Model Results for a breakdown of trips per use.

The emissions totals for criteria pollutants were analyzed for conditions for opening year 2008 weekday and weekend use and year 2020 weekday and weekend use. The weekend use is used to illustrate the worst case scenario. Year 2020 was analyzed to illustrate the changes in emissions vehicles emit with the improvements/regulations enacted per each year by CARB. Table 4.2-11 summarizes the total emissions and lists the CEQA significance determination for opening year 2008 and year 2020. As indicated in Table 4.2-11 opening year 2008 Weekday/Weekend Use,

operational emissions would exceed the AVAQMD thresholds for three of the four criteria air pollutants. For year 2020 Weekday/Weekend Use, operational emissions would exceed the AVAQMD thresholds for two of the four criteria air pollutants.

Table 4.2-11
Operational Emissions (lbs/day)

Year 2008 Weekday Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	12.0	5.1	4.3	<0.01
Mobile Source Emission	95.3	159.3	1,153.7	114.3
Totals (lbs/day)	**107.3**	**164.4**	**1,159.0**	**<114.4**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**Yes**	**Yes**	**Yes**
Year 2008 Weekend Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	12.0	5.1	4.3	<0.01
Mobile Source Emission	125.4	209.6	1,518.4	150.5
Totals (lbs/day)	**137.4**	**214.7**	**1,522.7**	**<150.5**
AVAQMD Threshold	137	137	548	82
Significant	**Yes**	**Yes**	**Yes**	**Yes**
Year 2020 Weekday Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	12.0	5.1	4.3	<0.01
Mobile Source Emission	36.7	55.6	434.3	113.9
Totals (lbs/day)	**48.7**	**60.7**	**438.6**	**<113.9**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**No**	**No**	**Yes**
Year 2020 Weekend Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	12.0	5.1	4.3	<0.01
Mobile Source Emission	48.2	73.2	571.6	149.9
Totals (lbs/day)	**60.2**	**78.3**	**575.9**	150.0
AVAQMD Threshold	137	137	548	82
Significant	**No**	**No**	**Yes**	**Yes**

Source: URBEMIS2002.8.7, Lilburn Corp. 2006

The development of retail services located near a large, growing residential area is a basic goal and policy of the City's General Plan to provide convenient services and to reduce vehicle miles traveled. Currently, only one major commercial center is located in eastern Palmdale and many local residents need to travel cross-town to several retail centers along SR 14. It is likely but difficult to quantify, that the development of the proposed project would actually reduce long-term vehicles miles as more residential units are constructed in eastern Palmdale that would shop and utilize the retail services planned at the Palmdale Marketplace.

Fuel Dispensing and Storage Facilities

The gas station is planned along the eastern portion of the site, adjacent to 47th Street East (SR 138). The site would be within 300 feet of a residentially zoned but vacant property to the east of the planned 155-foot wide street. During permitting of the gas storage and dispensing activities, the AVAQMD should take into account the potential residential site approximately 250 feet east. With implementation of current AVAQMD rules listed, no impacts are expected.

The proposed gas station would be regulated by the AVAQMD under Rules 461, 462, and 463. The applicant is required to comply with these rules through the permitting process with the AVAQMD. By law, the AVAQMD can not issue an air quality permit if the emissions from the project affect the achievement of Federal and State ambient air standards or impact existing air pollutants which meet air quality standards. In so granting a permit to operate to the applicant, the AVAQMD would assure that public health would be protected. The total emissions associated with fuel dispensing based on the sale of 100,000 gallons per month are included in Table 4.2-11 under Area Source Emissions.

Mitigation Measures

Mitigation Measure AQ-4

- *Provide adequate ingress and egress at all entrances to minimize vehicle idling at curbsides and improve traffic flow into and or out of the parking lot.*
- *Provide roadway improvements to improve traffic-flow per the proposed traffic mitigation.*
- *Introduce window glazing, wall insulation, and efficient ventilation methods, in accordance with the Uniform Building Code, to minimize energy use.*

Mitigation Measure AQ-5

- *Comply with Rules 461, 462, and 463 requiring the gas station operator to limit the emissions of volatile organic compounds (VOC) from the evaporation and spillage of gasoline during the transfer, loading and storing of gasoline.*

Rule 461 – Gasoline Transfer and Dispensing. Rule 461 requires specific conditions for the gasoline transfer into and from stationary tanks and delivery systems including vapor recovery, vapor tight openings, and spillage controls. The actual gasoline pumping from the pump into a motor vehicle tank requires a vapor recovery system that is certified by the CARB and recovers 95 percent of displaced gasoline vapors with the vapor recovery systems and nozzles monitored and maintained as required.

Rule 462 – Organic Liquid Loading. Rule 462 limits the emissions of VOC and toxic compounds from the transfer and loading of organic liquids (gasoline and diesel fuel) from bulk facilities. This rule requires a vapor recovery system with a reduction efficiency of

95 percent in compliance with all CARB equipment certification requirements, and continuous monitoring and maintenance of these systems per required standards.

Rule 463 – Storage of Organic Liquids. Rule 463 limits the emissions of VOC and toxic compounds from the storage transfer of organic liquids (gasoline and diesel fuel). This rule requires that fuel storage tanks must be designed and equipped with vapor loss control devices as specified by this rule and the CARB, properly installed, maintained, and in good working order.

Level of Significance after Mitigation

The long-term regional air quality impacts due to the proposed project with the recommended measures sited above will be reduced to an extent. However, CO, NO_x and ROG emissions would continue to exceed the AVAQMD thresholds and would be considered significant.

Could the proposed project produce potentially toxic air emissions?

Proposed emissions are estimated using the latest emission factors from EMFAC 2002, UREBEMIS 2002 v. 8.7, and the South Coast Air Quality Management District's CEQA Handbook. A carbon monoxide "hot spots" analysis was conducted and diesel emissions from delivery trucks are assessed below.

Impact AQ-3

Traffic increases on roadways serving the project could cause CO concentrations to exceed local air quality standards. This is a potentially significant impact.

Carbon monoxide (CO) is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason CO concentrations are usually indicative of the local air quality generated by a roadway network, and are used as an indicator of its impacts on local air quality. Local air quality impacts are assessed by comparing future CO levels with state and federal standards, moreover by comparing future CO concentrations with and without the project. The federal and state standards for CO were presented earlier in Table 4.2-1. CO concentrations have never exceeded thresholds in the area due to relatively low traffic volumes and better dispersion parameters than the Los Angeles Basin including higher mixing heights and strong winds.

Future CO concentrations with the project were forecasted with the CALINE4 computer model. The future peak hour traffic data were obtained from the Traffic Analysis Report for the Proposed Palmdale Marketplace" prepared by Minagar & Associates, Inc., June 6, 2006. Peak p.m. traffic data for 2025 were utilized in the CALINE4 CO modeling to represent the worst-case scenario. The key intersection at 47th Street East and Avenue R with the highest traffic volumes was selected for CALINE4 analysis. The p.m. peak hour traffic is utilized as the traffic data shows that the p.m. peak hour traffic volumes are projected to be higher than the a.m. peak hour volumes.

Eight-hour CO levels were projected using Caltrans methodology and CO protocol (1997). The method essentially uses a persistence factor, which is multiplied times the 1-hour emission projections. For the project, a persistence factor of 0.75 was utilized based on monitoring data from the Lancaster monitoring station. The data and results of the CALINE4 modeling are also provided in Appendix B. The highest modeled concentration for the eight receptors at the intersection is reported below in Table 4.2-8.

The 2007 background CO concentrations were estimated using the highest concentrations as recorded at the Lancaster station, estimated to be 2.1 ppm for the 1-hour averaging time and 1.6 ppm for 8-hour averaging time. The background levels are anticipated to decrease steadily in future years due to improving emission controls. The same background levels were also used for 2025 CO background levels.

The results of the CALINE4 CO modeling are summarized in Table 4.2-12. The CO modeling results are shown for the projected 1-hour and 8-hour average CO concentration levels. Existing concentrations are presented along with project buildout, year 2025 concentrations. The pollutant levels are expressed in parts per million (ppm) for the worst receptor.

Table 4.2-12
Worst Case Modeled Projections of
Carbon Monoxide Concentrations (ppm)

Intersection	Existing	2025 With Project
	1-Hr Average	
47th Street East and Avenue R	2.1	2.3
State Standard	**20**	**20**
Exceed State Standard	**No**	**No**
	8-Hour Average	
47th Street East and Avenue R	1.6	1.7
State Standard	**9**	**9**
Exceed State Standard	**No**	**No**

Source: Lilburn Corporation 2006 using Caline 4 and EMFAC 2002

By 2025, CO concentrations are projected to be well below state standards. This occurs even though traffic volumes are projected to increase in the future. The reductions occur because vehicular pollutant emissions are projected to decrease in the future, as newer cars complying with increasingly stringent emissions regulations, become a greater portion of the overall vehicle fleet in operation as projected by the EMFAC2002 computer model. By 2025, the projected decreases in vehicular emissions more than offset the projected increases in traffic volumes.

The modeling results show that future CO concentrations are not projected to exceed the state standards. Additionally, the project is projected to increase the concentration in the vicinity of this intersection by 0.2 ppm. Concentrations around intersections in the vicinity of the project are also projected to remain below the state standards as their traffic volumes are less than the

selected intersection. Therefore, the project will not result in a significant local air quality impact and no mitigation measures are required.

Mitigation Measure

No mitigation measures are required.

Impact AQ-4

Onsite Diesel Truck Exhaust Emissions could exceed local air quality standards. This is a potentially significant impact.

Diesel fueled delivery trucks transport products from warehouses throughout Southern California to the site. Delivery truck traffic is anticipated to be approximately 50 trips per day (consisting of approximately 30-percent 4 axle trucks, 40-percent 32-axle and 30-percent 2-axle vehicles), 4 days per week to approximately 200 trucks per week. The typical average distance traveled on the site itself is estimated at 1.2 miles per round trip. The estimated truck exhaust emissions for 50 truck trips per day are shown in Table 4.2-13. Truck exhaust emissions were estimated for a speed of 15 MPH for the 1.2-mile distance utilizing EMFAC emission factors for 2002. Diesel exhaust is a toxic air contaminant and is measured as PM_{10}. Pollutants levels including PM_{10} do not exceed CEQA thresholds of significance and therefore diesel exhaust from delivery trucks is not expected to cause any health impacts.

Table 4.2-13
Palmdale Marketplace
Onsite Truck Exhaust Emissions
(Pounds/ Day)

Pollutant	Emission Factor (Pounds/mile)	Proposed Truck Emissions	CEQA Significance Threshold	Significant
ROG	0.001227	**0.1**	137	**No**
CO	0.00552	**0.3**	137	**No**
NO_X	0.035635	**2.1**	548	**No**
PM_{10}	0.000644	**0.04**	82	**No**

Emission Factor Source: SCAQMD, EMFAC 2002 – Delivery Trucks, Year 2007

Mobile pollutant sources are regulated at the state level by CARB, not through the AVAQMD or local counties and cities. Diesel truck exhaust has been the focus of recent studies. The CARB recently approved a comprehensive Diesel Reduction Plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. The goal of the plan is to reduce diesel PM emissions and the associated risk by 75 percent in 2010 and 85 percent or more by 2020. Measures to reduce diesel emissions will include:

- More stringent emission standards for new diesel fueled engines and vehicles;
- Retrofitting existing engines with particulate traps;
- Require low sulfur content in diesel fuel; and

- Evaluate alternatives for diesel-fueled engines and vehicles.

Mitigation Measure

No mitigation measures are required.

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4.3 BIOLOGICAL RESOURCES

4.3.1 Introduction

This section of the EIR describes the type of habitat occurring on-site and evaluates the potential impacts that could occur to biological resources occupying the site proposed for development of the Palmdale Marketplace (herein project site). Information used to prepare this section was summarized from *Biological Resource Assessment and Native Vegetation Preservation Plan for a Commercial Development, Palmdale, California*, prepared by Mark Hagan, Wildlife Biologist on December 29, 2005. An amendment to the Biological Resource Assessment was prepared on May 7, 2006 to address the proposed 800-foot drainage channel to be located along 45th Street East and continuing on Palmdale Boulevard for about 1,300 feet. The drainage channel area encompasses approximately 5 acres.

A line transect survey was conducted on December 22 and 27, 2005 for the project site, and a line transect survey was conducted on May 3, 2006 for the area effected by the proposed drainage channel. Both surveys were performed to document plants and animals that occur on the sites and describe vegetation and habitat. Additionally both studies were conducted to provide an estimated density and distribution of Joshua trees (*Yucca brevifolia*) within the project areas. A copy of the Biological Resource Assessment and amendment are included as Appendix D. The potential impacts to biological resources are discussed in Section 4.3.3.

4.3.2 Environmental Setting

The project site is bounded by vacant land designated for future commercial uses to the north, Avenue R and existing single-family residential and future commercial to the south, 47th Street East and vacant land designated for future commercial and residential to the east, and 45th Street East and existing single-family to the west.

The project site is currently vacant except for a cellular tower located on the south side of the site. The project site is relatively level and includes a number of dirt roads and off-road vehicle tracks. Review of aerial photographs indicates that the southeastern section of the site was historically used for agricultural purposes since before 1953. Most of the site has not been graded and has retained its natural contours. The majority of the site is Joshua tree woodlands and desert scrub plant community with visible Joshua trees. Many Joshua trees were observed lying on the ground and had been cut with a saw.

The project site has been highly disturbed by a fire. Evidence of an old homestead was observed in the southeastern portion of the study area. Scattered litter was observed throughout the study area, with most located along 45th Street East. Soil on the site consisted of sandy loam surface soils.

Vegetation and Habitat

A total of 48 line transects were walked on December 22 and 27, 2005 (herein December 2005 field survey). A total of four line transects were walked on May 3, 2006 (herein May 2006 field

survey). The project site and the area proposed for the drainage channel were characteristic of a Joshua tree woodland and desert scrub plant community (Barbour and Major 1988). A total of 43 plant species were observed during the survey, and a total of 13 plant species were observed during the May 2006 field survey that were not identified in the original report that was prepared for the project site. Most annual vegetation was desiccated at the time the December 2005 field survey was conducted. It is probable that some annual species were not visible during the time the field survey was performed.

Wildlife

Wildlife common to the desert area includes the Coyote (*Canis latrans*), with smaller raptors including the Cooper's hawk (*Accipiter cooperii*), and the burrowing owl (*Athene cuniculari*), both of which nest as well as hunt in the Joshua tree woodlands. The remaining large, wide-ranging carnivores are the raven (*Corvus corax*), and the roadrunner cuckoo (*Geococcyx californianus*).

Smaller mammals generally occurring within desert communities include jack rabbits (*Lepus californicus*), desert cottontails (*Sylvilagus auduboni*), California ground squirrels (*Citellus beecheyi*), wood rats (*Neotoma lepida*), and various smaller mice and kangaroo rats. The kit fox (*Vulpus macrotis*) may also be present.

Birds in the area include the common species such as mockingbirds (*Mimus polyglotus*), scrub jay, (*Aphelocoma coerulescens*), Say's phoebe (*Sayornis saya*), non-native European starlings (*Sturnus vulgaris*), and house sparrows (*Passer domesticus*). Birds more closely tied to southern California deserts include Bewick's wren (*Thyromanes bewickii*), California towhee (*Pipilo erythrophthalmus*), California thrasher (*Toxostoma redivivum*), and California quail (*Callipepla californica*). This is only a partial listing, as at least 25 species of birds have been reported nesting in Joshua trees alone (Schoenherr, 1995).

Site Survey Results

Vegetative Communities

No plant species listed as threatened or endangered under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) was observed on the project site or on the area proposed for the drainage channel. Of the plant communities whose plants are protected by the Desert Native Plant Protection Act or City ordinance, only Joshua trees were present.

A total of 352 Joshua trees were counted during the survey performed on the project site, and a total of 58 Joshua trees were counted during the survey conducted along the proposed drainage channel. Joshua trees occurring next to disturbed areas and roads that showed evidence of recent use were not marked, due to potential damage to root systems and soil compaction caused by vehicles. For parcels containing juniper trees and/or Joshua trees, the City of Palmdale requires preparation of a native vegetation preservation plan.

Both the project site and the area proposed for the drainage channel are characteristic of a Joshua Tree Woodland and desert scrub plant community. Shrubs within both areas include creosote

bush (*Larrea tridentate*), burrobush (*Ambrosia dumosa*), cheesebush (*Hymenoclea salsola*), rabbit brush (*Chrysothamnus nauseosis*) and four-winged saltbush (*Atriplex canescens*). Joshua trees are prominent, with highest densities occurring in the central portion of the project site. Native grass species are Indian rice grass (*Oryzopsis hymenoides*), and desert needle grass (*Stipa comata*).

Invasive plant species on the project site and within the area proposed for the drainage channel include Russian thistle (tumbleweed) (*Salsola trogus*), and annual burweed (*Franseria acanthicarpa*).

Wildlife

The species observed on the project site and within the area proposed for the drainage channel included some native to the California deserts, and some that are present due to the surrounding urban development. All are common species. A complete list of all species on-site is in Appendix D. The native animal life observed, directly or by sign (scat, tracks, etc.), at the site included:

California ground squirrel (*Citellus beecheyi*)
Kangaroo rat (*Dipodomys* sp.)
California quail (*Callipepla californica*)
Desert cottontail (*Sylvilagus auduboni*)
Coyote (*Canis latrans*)

Two species were identified for presence of habitat but no individuals or sign were observed; these included the burrowing owl and Mohave ground squirrel.

The borrowing owl (*Athene cunicularia*) is a resident species in lowland areas of southern California (Garrett & Gunn 1980). It prefers open areas for foraging and burrowing, and is found widely scattered in open desert scrub. This species is scarce in coastal areas, being found mainly in agricultural and grassland habitats. The largest remaining numbers are in the Imperial Valley, where it is common in the agricultural fields.

As a result of urban development, the burrowing owl is declining in desert habitats. The California Department of Fish and Game (CDFG) has designated the burrowing owl as a California Species of Special Concern. These species are so designated because declining population levels, limited ranges and continuing threats have made them vulnerable to extinction (CDFG 2002).

Mohave ground squirrel (*Spermophilus mohavensis*) is a ground dwelling mammal that occupies creosote bush, saltbush scrub and Joshua tree woodland (Ingles 1965). This species is found in the open desert, at oases, along riverbanks, and washes, in dunes and on rocky slopes. Its known habitat extends from San Bernardino north to Kern and Inyo counties. This species is active in spring from February to early July, and aestivates throughout most of the remaining months. Juveniles will remain aboveground well into July and August to build up fat reserves.

The Mohave ground squirrel is not listed by the United States Fish and Wildlife Service (USFWS), but is listed as threatened by the CDFG. The species was listed because of decline and loss of habitat in the Kern County portion of its ranges, as well as the loss of habitat due to development in the Victor Valley and Barstow areas.

During the course of the site surveys, the biologist looked for evidence of Mohave ground squirrel occupancy. Due to the habits of this species, (they are nocturnal and are active only during the spring) no individuals were sighted. The habitat within the project area appeared potentially suitable to support Mohave ground squirrels. One of two approaches is used when projects are located within the Mohave ground squirrel habitat area. The first approach is to assume the animal is present and determine whether it will be directly affected by construction. The second approach is to conduct protocol trapping surveys at the appropriate time of year to determine presence or absence. If the species is present, then a determination of project impacts is made.

No other state or federally listed threatened or endangered species are expected to occur within the proposed project area and within the area proposed for the drainage channel (California Department of Fish and Game 2002, Smith and Berg 1988, U.S. Fish & Wildlife Service 1990).

Drainages and Wetlands

Army Corps of Engineers

The Army Corps of Engineers (Corps) regulates discharges of dredged or fill material into waters of the United States. These watersheds include wetlands and non-wetland bodies of water that meet specific criteria. The lateral limit of Corps jurisdiction extends to the Ordinary High Water Mark (OHWM) and to any wetland areas extending beyond the OHWM; thus, the maximum jurisdictional area is represented by the OHWM or wetland limit, whichever is greater.

Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate (waterway) commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations.

California Department of Fish and Game

The CDFG, through the 1600 et seq. provisions of the State of California Administrative Code, is empowered to issue agreement for any alteration of a river, stream or lake where fish or wildlife resources may adversely be affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. Lateral limits of jurisdiction are not clearly defined, but generally include any riparian resources associated with a stream or lake. CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream or lake as defined by CDFG.

No Corps or CDFG jurisdictional drainages or wetlands occur on the project site or within the area proposed for the drainage channel.

Applicable Policies, Plans, and Regulations

The California Desert Native Plants Act regulates the taking of desert plant species for commercial purposes. It also regulates the permitting process for the taking of desert plant species in general, making it unlawful for "any person to destroy, dig up, mutilate or harvest any living native plant, or the living or dead parts of any native plant, except its fruit, without obtaining written permission from the landowner and a permit . . . ." (State of California 1982, Division 23, Chapter 5, Section 80111). The Joshua tree is also protected by the City of Palmdale.

West Mojave Coordinated Management Plan

The West Mojave Coordinated Management Plan was adopted to provide a balance between development and conservation of habitat. The Plan, initiated by the Bureau of Land Management (BLM) in 1992, conserves habitat for a number of special status plants and animal species, and aids in the survival and recovery of listed species such as the desert tortoise. The Plan covers over nine million acres of federal, state, and private lands within Kern, Los Angeles, and San Bernardino counties and 11 incorporated communities.

The goal of the Plan is to streamline the development permitting process and make costs and processing time predictable. The Plan allows for the payment of a mitigation fee as compensation for loss of listed species habitat resulting from development. The fees are used for the purchase and management of replacement habitat in Core Reserve areas. Applicants are issued a 10(a) Permit from USFWS and a 2081 authorization from the California Department of Fish and Game. The local jurisdictions collect the mitigation fee from the developers to pay for implementation of the Plan.

The BLM issued a Record of Decision amending its California Desert Conservation Area Plan in March 2006 for public BLM lands. The cities and counties within the Plan area have yet to fully adopt the Plan for private lands.

4.3.3 Impacts and Mitigation Measures

Thresholds of Significance

The project would have a significant effect on biological resources if it would:

- Substantially affect a rare or endangered species of animal or plant or the habitat of the species;
- Interfere substantially with the movement of any resident or migratory fish or wildlife species;

- Substantially diminish habitat for fish, wildlife or plants;
- Impact a wetland habitat (such as marsh, riparian and vernal pools);
- Impact any locally designated natural community (designated by local governments for protection); or
- Interfere substantially with the existing conservation or preservation plans.

Impacts Determined to Have No Impact

Would the project result in an impact to a wetland habitat (such as marsh, riparian and vernal pools)?

The project site and area along the proposed drainage channel alignment does not include any ephemeral channels or any riparian vegetation. No impacts to a wetland habitat would occur with implementation of the project. Predominate vegetation on both the project site and proposed drainage channel alignment is Joshua tree woodland and desert scrub, which are adapted to desert conditions.

Would the project interfere with an existing conservation or preservation plan?

The proposed project would not interfere with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, because no such plan such as the West Mojave Plan has been adopted for the project area. The proposed site is an in-fill project within the urban area of the City and is not within an area designated for preservation by the proposed West Mojave Plan.

Impacts Determined to be Less Than Significant

Would the project Interfere With the Movement of Any Resident or Migratory Fish or Wildlife Species?

Land to the west and south include existing single-family development, while land to the north is vacant and designated General Commercial (C3) and land to the east is vacant and designated Single-Family Residential (SFR-3) and General Commercial (C-3). Adequate habitat is available for wildlife movement north and east of the project area. In the immediate area man-made barriers to wildlife movement include single-family development to the west and south, and additional deterrents include active roads (i.e. Avenue R, 45th Street, and SR 138 [47th Street East to the east and Palmdale Boulevard (SR 138) to the north]). Given the existing fragmentation of the immediate area, proposed development would not significantly impact wildlife movement in the area.

Impacts Determined to be Potentially Significant

Would the project affect a rare or endangered species of animal or plant or the habitat of the species? Would the project substantially diminish habitat for fish, wildlife or plants?

Impact BIO-1

The project site and the area proposed for the drainage channel are located within the geographic range of the Mohave ground squirrel (*Spermophilus mohavensis*), which is considered threatened by the CDFG. The California ground squirrel (found on-site) provides potential burrow sites for the burrowing owl, a species of special concern. The habitat within the study areas appeared potentially suitable to support either species. This is a potentially significant impact.

No desert tortoise or their sign were observed during the field surveys. The results of the surveys conducted are that no recent evidence of desert tortoise was found on or near the project site or proposed drainage channel alignment and there would be no incidental take (direct mortality or injury) of tortoises that enter property from occupied habitat in the region. This finding coupled with the previous finding that urban development has cut-off wildlife corridors in the area makes potential impacts to desert tortoise less than significant.

No burrowing owls or their signs were observed during the field surveys. Burrowing owls are considered a species of special concern by the CDFG. The California ground squirrel burrows provide potential burrows sites for burrowing owls. A burrowing owl survey should be accomplished within 30 days prior to construction activities to ensure burrows owls are not present during construction activities. If burrowing owls are discovered the CDFG should be consulted prior to construction.

During the course of the site surveys, the biologist looked for evidence of Mohave ground squirrel occupancy. Due to the habits of this species, (they are nocturnal and are active only during the spring) no individuals were sighted. The habitat within both the project area and area proposed for the drainage channel appeared potentially suitable to support Mohave ground squirrels. One of two approaches is used when projects are located within the Mohave ground squirrel habitat area. The first approach is to assume the animal is present and determine whether it will be directly affected by construction. The second approach is to conduct protocol trapping surveys at the appropriate time of year to determine presence or absence. If the species is present, then a determination of project impacts is made. CDFG has developed a set of protocols to evaluate potential effects of a proposed project on Mohave ground squirrel habitat.

Based on results of the biological surveys and an onsite consultation with CDFG, the CDFG determined that a 2081 permit will be required. Measures to minimize and mitigate impacts to the Mohave ground squirrel will be part of the 2081 conditions. Typical measures include conditions to limit onsite and offsite impacts and offsite habitat compensation.

No other state or federally listed threatened or endangered spaces are expected to occur within the project area or the area proposed for the drainage channel (California Department of Fish and Game 2002, Smith and Berg 1988, U.S. Fish and Wildlife Service 1990).

Mitigation Measure BIO-1

A burrowing owl survey shall be conducted 30 days prior to construction activities to ensure burrowing owls are not present. If burrowing owls are discovered the CDFG shall be consulted to determine appropriate measures necessary to ensure potential impacts are minimized.

Mitigation Measure BIO-2

In consultation with CDFG, the Mohave ground squirrel is assumed to be present onsite and a 2081 permit is required. Specific measures will be determined in consultation with CDFG as part of a 2081 permit application and may include measures to limit direct impacts and purchase of suitable off-site habitat for the species as compensation.

Level of Significance After Mitigation

Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce potential significant impacts to a less than significant level.

Would the project impact any locally designated natural community (designated by local governments for protection)?

Impact BIO-2

The project site supports a Joshua Tree Woodland and Joshua trees would be removed and transplanted during site development. Joshua trees are a protected species; this is a potentially significant impact.

No plant species listed as threatened or endangered under the Federal Endangered Species Act (FESA) or California Endangered Species Act (CESA) was observed on the project site and within the area proposed for the drainage channel. Of the plant communities whose plants are protected by the Desert Native Plant Protection Act and the City ordinance, only Joshua trees were present.

The project site and area proposed for the drainage channel are characteristic of a Joshua Tree Woodland and desert scrub plant community. A total of 352 Joshua trees were counted during the survey performed on the project site, and a total of 58 Joshua trees were counted during the survey conducted along the proposed drainage channel alignment. Joshua trees occurring next to disturbed areas and roads that showed evidence of recent use were not marked, due to potential damage to root systems and soil compaction caused by vehicles. For parcels containing juniper trees and/or Joshua trees, the City of Palmdale requires preparation of Native Vegetation Preservation Plan under Title 14, Chapter 14.04 of the Palmdale Municipal Code.

Elements of the native vegetation plan prepared for the project are discussed herein.

Joshua trees in the 5 to 12-foot height range, appearing undamaged, were marked for transplanting by the project biologist. These Joshua trees were considered to have the best chance for transplanting success. The smaller trees can be moved by hand, or possibly with a skip loader or tree spade. If the smaller trees are moved using shovels, great care should be taken to not damage root systems and keep dirt around the root ball. Otherwise, success of the transplanting will be jeopardized.

Joshua trees should be transplanted to areas not prone to future disturbance. Joshua trees can be transplanted in landscaped easements, any other potential buffer area, or in any street landscaping. A minimum of 100 Joshua trees (two per acre) should be transplanted in order to satisfy the City Ordinance requirements. A total of 78 Joshua trees appearing to have the most potential for survival after transplanting were temporarily marked with orange flagging tape. If 100 Joshua trees cannot be transplanted in landscape easements, other buffer areas, or street landscaping, then the following steps will be taken in sequential order.

1. Joshua trees will be made available to the City of Palmdale.
2. Joshua trees will be offered to other development projects.
3. Joshua trees will be made available to the public.
4. Joshua trees will be "banked" at an approved location.
5. An in lieu fee will be paid.

A two-year maintenance program will be established in accordance with the guidelines of the ordinance. Joshua trees should be planted at least ten feet (3 meters) apart and well watered immediately. Joshua trees transplanted during fall, winter, or early spring should be adequately watered once a week for two months following transplanting. Joshua trees transplanted during late spring or summer should be adequately watered until the end of hot weather. If sufficient rainfall or low evaporation rates occur and the soil remains moist, watering schedules should be reduced in frequency. Joshua trees should be planted in a sandy, well-drained soil. Construction activities should not occur within 25 feet (8 meters) of transplanted Joshua trees.

One year following Joshua tree transplanting, a written report should be submitted to the City of Palmdale Planning Department. This report should provide the number of Joshua trees transplanted, the date(s) of transplanting, dates Joshua trees are watered, and the number of Joshua trees surviving after one year. The City should be able to provide a list of persons that can assist in transplanting Joshua trees.

The project's conceptual landscape design (refer to Figure 3-6) includes the transplanting of the 78 onsite salvageable Joshua trees and adds 22 additional Joshua trees in order to comply with the City Ordinance. The landscape plan also incorporates the use of native plants to the maximum extent feasible.

Mitigation Measure BIO-3

The project applicant shall submit a Native Vegetation Preservation Plan, comply with all preservation and relocation efforts set forth in the plan and in the City's Municipal Code, Title 14, Chapter 14.04 and receive a permit, only after all other strategies have been implemented, prior to the removal of Joshua trees.

Level of Significance After Mitigation

Implementation of the conceptual landscape plan prepared for the Palmdale Marketplace incorporating the requirements of the Title 14, Chapter 14.04 of the Palmdale Municipal Code City of Palmdale's (number of trees transplanted, transplantation locations and procedures for transplantation, etc.), the impact to Joshua trees will be mitigated to a less than significant level.

Would the project interfere substantially with the movement of any resident or migratory fish or wildlife species?

Impact BIO-3

The project would result in the reduction of vegetation on-site that may be used as nesting sites. This is a potentially significant impact.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Joshua trees and other ornamental trees provide nesting sites for birds. If possible, construction activities should occur outside the nesting season (spring) for birds.

Mitigation Measure BIO-4

To avoid incidental killing of birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code, scheduling initial grading and brush removal of any previously undisturbed habitat shall occur outside the breeding season. No vegetation removal should occur between early spring (15 March) and mid summer (15 July). If construction activities occur during the nesting season, a survey shall be conducted within one week prior to removal of the trees. If active bird nests are found, impacts shall be avoided unless proper permits are obtained.

Level of Significance After Mitigation

Implementation of Mitigation Measure BIO-4 would reduce potentially significant impacts to a less than significant level.

4.4 CULTURAL RESOURCES

4.4.1 Introduction

This section of the EIR addresses historic and pre-historic resources that together comprise Cultural Resources. Information for this section is summarized from *Phase I Cultural Resource Investigation for 50-Acres Northwest of the Intersection of 47th Street East and East Avenue R Palmdale Marketplace,* and *Addendum to "Phase I Cultural Resource Investigation for 50-Acres Northwest of the Intersection of 47th Street East and East Avenue R Palmdale Marketplace",* prepared by RT Factfinders, December 2005 and April 2006 respectively. The Cultural Resources Survey Reports are on file with the City. The Phase 1 covered the entire 46.65-acre project site. The Addendum to Phase 1 covers the drainage channel planned in conjunction with the commercial development of the 49.25-acre property.

4.4.2 Environmental Setting

Cultural Resources

Cultural resources generally consist of sites of archeological significance that are prehistoric or historic, and a few historic structures. Prehistoric archaeological resources may date from prior to 8,000 years ago to around 1770, the time of historic contact between indigenous people and Europeans. Historic archaeological resources include refuse deposits such as can and bottle dumps, filled-in privy pits and cisterns, melted adobe walls and foundations, collapsed structures and associated features, and roads and trails. They may date back from the earliest Spanish mission to the beginning of the last century, roughly the period between 1770 and 1900.

The 50-acre subject property is a gently sloping alluvial area. A large portion of the property has not been previously graded and retains natural contours. Grading, leveling and agriculture has occurred in the southeastern portion of the property. There is a minor amount of recent trash and debris on the property. There is a small recent period structure on the south central boundary and a cellular tower located adjacent to Avenue R on the southern portion of the property. There are a number of dirt roads and off-road vehicle tracks criss-crossing the property. Most of the property has native vegetation, which is Joshua tree woodland. Adjacent property to the north is undeveloped. Development of single-family homes has occurred to the south, west and east.

The proposed L-shaped drainage channel right-of-way is on a gently sloping alluvial area. Soil in the right-of-way is predominantly coarse grained sand with high gravel content. There are no notable physiographic features or sources of water in the area. A large portion of the surface of the right-of-way has been previously cleared and disturbed, but generally retains natural contours. There is a scatter of recent trash and debris within the right-of-way, particularly along 45th Street East, a portion of it a dirt road. Except for graded areas immediately adjacent to Palmdale Boulevard, the right-of-way has native vegetation, which is Joshua tree woodland.

Surrounding land uses include vacant land designated for future commercial uses to the north; Avenue R, existing single family residential and future commercial under construction to the

south; 47th Street East and vacant land designated for future commercial and single-family residential to the east; and 45th Street East and existing single family to the west.

Background search of the study area was performed by reviewing the literature and previous studies of nearby areas, reviewing historic period maps, and early land records. The Bureau of Land Management General Land Office Records (GLO) were also reviewed.

Previous Studies Conducted in the Project Area

There have been a number of previous surveys in the vicinity of the subject property (Norwood 1989a, b, 2004a, b, c, 2005a, b). Some of these have resulted in finding historic period homesite locations or refuse deposits typically dating between 1900s through 1950s. Brown (1986) performed a 160-acre survey just west of the subject property with negative results. Prehistoric sites have not been recorded nearby.

Results of the Field Survey

A field reconnaissance of the project site was completed on December 17, 2005 by RT Factfinders. The property was examined by a series of linear transects oriented east to west beginning at the southeast property corner. Spacing between transects did not exceed 15 meter intervals. A field survey of the proposed drainage channel property was completed on April 15, 2006 by RT Factfinders. The property was examined by walking a single transect along the right-of-way. Spacing between transects did not exceed 10 meter intervals.

Soil surface visibility was excellent in most areas due to dry conditions and sparse vegetation cover. Dense vegetation substantially reduced visibility in disturbed areas, particularly in the southeast portion of the subject property. Light conditions for the survey were good, with bright overcast skies. In accordance with State Historic Preservation Office Guidelines, any sites or artifacts greater than 50 years of age were noted and considered as potential cultural resources. There were no inhibiting factors that would have prevented the discovery and identification of surface evidence of prehistoric or historic period artifacts and features. As a result of the survey, no prehistoric sites were found on the subject property. Five historic period sites were identified on the 50-acre property and a single possible historic period artifact - a horseshoe, was found in the graded margin of Palmdale Boulevard on the proposed drainage channel property. The five historic sites are described below. A listing of specific artifacts observed and a detailed description of the five historic sites can be reviewed in the Cultural Resources Survey Reports kept on file with the City.

Site 446-1: This site consists of a homesite. According to Campbell (2005c), the house was listed as "potentially historic" by a local historical society. During the survey, construction debris, a cement pipe irrigation system, various plumbing features, fence lines with cement posts, an intact water well and a number of irrigation valves were noted. There may be buried deposits or features. Vegetation at the house site location was too dense to assess what artifacts or other features may be present. Occupation at this location may have originally occurred in the 1920s and lasted until recently. The entire area of concern for this historic site may be associated with approximately 180 acres.

Site 446-2: This site consists of a refuse deposit. It may also have been the location of a small structure. The site contains predominantly household refuse and some nails and window glass. The site encompasses an area of about 35 meters east/west and 17 meters north/south. Artifact types observed indicate that the site represents a very early time period, circa 1890-1910. The site does not appear to have been looted recently and there may be buried features or deposits.

Site 446-3: The site is a household refuse deposit containing mostly cans, bottle parts and glassware. The site is approximately 5 meters in diameter with a concentration about 3 meters in diameter. The site does not appear to have been looted and there may be a minor buried deposits. A fragment of glassware in the site carries the capstan Glass Company maker's mark which dates between 1918 and 1938. The site probably dates to the 1940s. It may be related to the occupation at Site 446-1.

Site 446-4: The site is a household refuse deposit containing mostly cans, bottle parts, ceramics and glassware. The concentration at the site is approximately 4 meters in diameter but the site includes an indistinct scatter of approximately 27 meters east/west and 10 meters north/south. The site does not appear to have been looted and there may be some subsurface deposition. The site probably dates to the late 1930s period.

Site 446-5: The site consists of a small cement slab, an open water well and several associated refuse deposits encompassing an area at least 54 meters east/west and 94 meters north/south. The site may represent a small residence. There is a wide variety of artifacts present indicating the presence of a household occupation in the late 1940s-1950s period. The site does not appear to have been looted. The site falls within the impact zone required for a disked fire break assuming development of the subject property.

Applicable Plans, Policies, and Regulations

City of Palmdale

Palmdale intends to generate interest and awareness of Palmdale's historic resources and to focus appropriate attention on the protection of these resources. Relevant goals and policies of the Environmental Resources Element of the City of Palmdale General Plan include:

- GOAL ER7: Protect historical and culturally significant resources which contribute to the community's sense of history. Promote the identification and preservation of historic structures, historic sites, archeological sites, and paleontological resources in the City.
- Policy ER7.1.1: Identify and recognize historic landmarks from Palmdale's past.
- Policy ER7.1.3: Require that new development protect significant historic, paleontological and archaeological resources, or provide for other appropriate mitigation.
- Policy ER 7.1.5: When human remains, suspected to be of Native American origin are discovered, cooperate with the Native American Heritage Commission and any local Native American groups to determine the most appropriate disposition of the human remains and any associated grave goods.

- Policy ER7.1.6: Cooperate with private and public entities whose goals are to protect and preserve historic landmarks and important cultural resources.

Design Review Policies

- Policy CD1.3.1: Promote use of design elements which reflect the various periods of history and settlement in Palmdale.
- Policy CD1.3.2: Historic architectural themes and elements appropriate to Palmdale should be incorporated into buildings, building components and public spaces, where appropriate.

4.4.3 Impacts and Mitigation Measures

Thresholds of Significance

Significant impacts related to cultural resources would result from development of the proposed project if the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15604.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15604.5;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Disturb a unique paleontological resource or site or unique geological feature.

Impacts Determined to Have No Impact

Would the project disturb a unique paleontological resource or site or unique geological feature?

A Phase I Cultural Resource Investigation was completed by RT Factfinders for the proposed project. No paleontological resources were discovered and any impacts on these resources are considered to be less than significant.

Impacts Determined to be Potentially Significant

Would the project cause a substantial adverse change in the significance of a historical or an archaeological resource?

Impact CR-1

Excavation during development may result in the disturbance of historic or archaeological resources. This is a potentially significant impact.

The findings of the field study failed to indicate the presence of any previously recorded prehistoric sites. As an isolated artifact, the horseshoe is not considered to be a significant cultural resource. However, five historic sites that were identified on the 49.25-acre subject property could be impacted from the proposed development.

Site 446-1 has been disturbed due to clean up of structures. The following mitigation measure is required for this site:

Mitigation Measure CR-1 (for Site 446-1)

A chain of title search shall be performed to determine ownership. The site area shall be monitored during grading at the site location. Any buried deposits or features that are uncovered shall be evaluated. Any artifacts recovered shall be cataloged, identified and curated with an appropriate permanent repository. A monitoring report shall be prepared and submitted to the City.

Site 446-2 is the oldest on the project site and may have been a residential location. The following mitigation measure is required for this site:

Mitigation Measure CR-2 (for Site 446-2)

The site shall be mapped in detail and a surface collection of diagnostic artifacts be made. A metal detector scan shall be performed to assess the distribution and concentration of buried materials. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City.

Sites 446-3 and 446-4 are refuse deposits and may have been associated with the occupation at Site 446-1. The following mitigation measure is required for these sites:

Mitigation Measure CR-3 (for Sites 446-3 and 446-4)

The site shall be mapped in detail and a surface collection of diagnostic artifacts shall be made. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City.

Site 446-5 is a small residence location and associated refuse deposits dating to the late 1940s-1950s. The following mitigation measure is required for this site:

Mitigation Measure CR-4 (for Site 446-5)

The site shall be mapped in detail and a surface collection of diagnostic artifacts shall be made. Features shall be cleared, measured and photographed. A minimum of 1x1 meter

square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City.

While very unlikely, buried deposits could exist on the areas not previously identified. The following mitigation measure is required:

Mitigation Measure CR-5

In the event unanticipated cultural materials (arrowheads, grinding stones, etc.) or features (old foundations, cellars, privy pits, etc.) could be encountered, work shall stop at the discovery site and a professional cultural resource consultant shall be hired to evaluate the find.

Level of Significance after Mitigation

Application of the above mitigation will reduce the potential impacts to historic resources to less than significant.

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

Impact CR-2

Excavation during development may result in the disturbance of previously unidentified human remains. This is a potentially significant impact.

The project site has been disturbed through previous sand and gravel operations. No human remains have been recovered to this date. However, there is always a possibility that excavation during development may result in the disturbance of previously unidentified human remains. Therefore, the following mitigation measure is required:

Mitigation Measure CR-6

In the event any bones of possible human origin are uncovered, during excavation or other construction, the Los Angeles County Coroner shall be notified and permitted to investigate the find prior to any further disturbance of the location of discovery.

Level of Significance after Mitigation

Application of the above mitigation will reduce the potential impacts to unidentified human remains to less than significant.

Mitigation Measure CR-7

In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.

Level of Significance after Mitigation

Application of the above mitigation will reduce the potential impacts to unidentified human remains to less than significant.

Mitigation Measure CR-8

If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist shall contact the "Tribe". If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).

Level of Significance after Mitigation

Application of the above mitigation will reduce the potential impacts to unidentified human remains to less than significant.

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4.5 HYDROLOGY AND DRAINAGE

4.5.1 Introduction

This section of the EIR describes the existing project site conditions related to hydrology and drainage (specifically storm water runoff and water supply). The project's potential impacts in these areas are discussed and mitigation measures are provided for impacts determined to be significant. Information used in the preparation of this section includes correspondence, Preliminary Drainage Study prepared by Development Resource Consultants, Inc.; correspondence received regarding the proposed project's NOP; and the City of Palmdale General Plan Public Services Element. The Preliminary Drainage Study is included in this EIR as Appendix D.

4.5.2 Environmental Setting

Water Supply

~~Groundwater is the primary source of water in the Palmdale Planning Area, with supplemental water supplied from the State Water Project (California Aqueduct).~~Surface water (imported State Water Project water and local surface water from Littlerock Reservoir) accounts for approximately 60 percent of the water supply for Palmdale Water District. Groundwater accounts for approximately 40 percent of the water supply for Palmdale Water District. Three groundwater sub-units are located within the Palmdale Planning Area. Groundwater movement is generally in a northwesterly direction, from the foothills of the San Gabriel Mountains towards the pumping depression in Lancaster. The location of the three sub-units of the principal (upper) aquifer and the approximate elevation of groundwater surfaces in the spring of 1984 are shown in Figure 4.5-1. Table 4.5-1 shows approximate depth to groundwater for 10 different locations in the Planning Area, as derived from Figure 4.5-1.

Table 4.5-1
Depth to Groundwater

Point on Figure 4.5-1	Groundwater Elevation (Feet above sea level)	Ground Elevation (Feet above sea level)	Depth to Groundwater (Feet below ground surface)
1	2150	2585	435
2	2150	2530	380
3	2175	2575	400
4	2175	2516	341
5	2175	2500	326
6	2200	2520	320
7	2200	2540	340
8	2400	2585	185
9	2500	2627	127
10	2600	2719	119

Source: Palmdale General Plan Adopted January 25, 1993

The California State Water Project conveys water from the Feather River and the Lake Oroville Reservoir in Northern California to areas in Southern California that do not have adequate local sources. Water is conveyed via closed and open aqueducts throughout the state. The California Aqueduct traverses the Planning Area from the northwest to the southeast.

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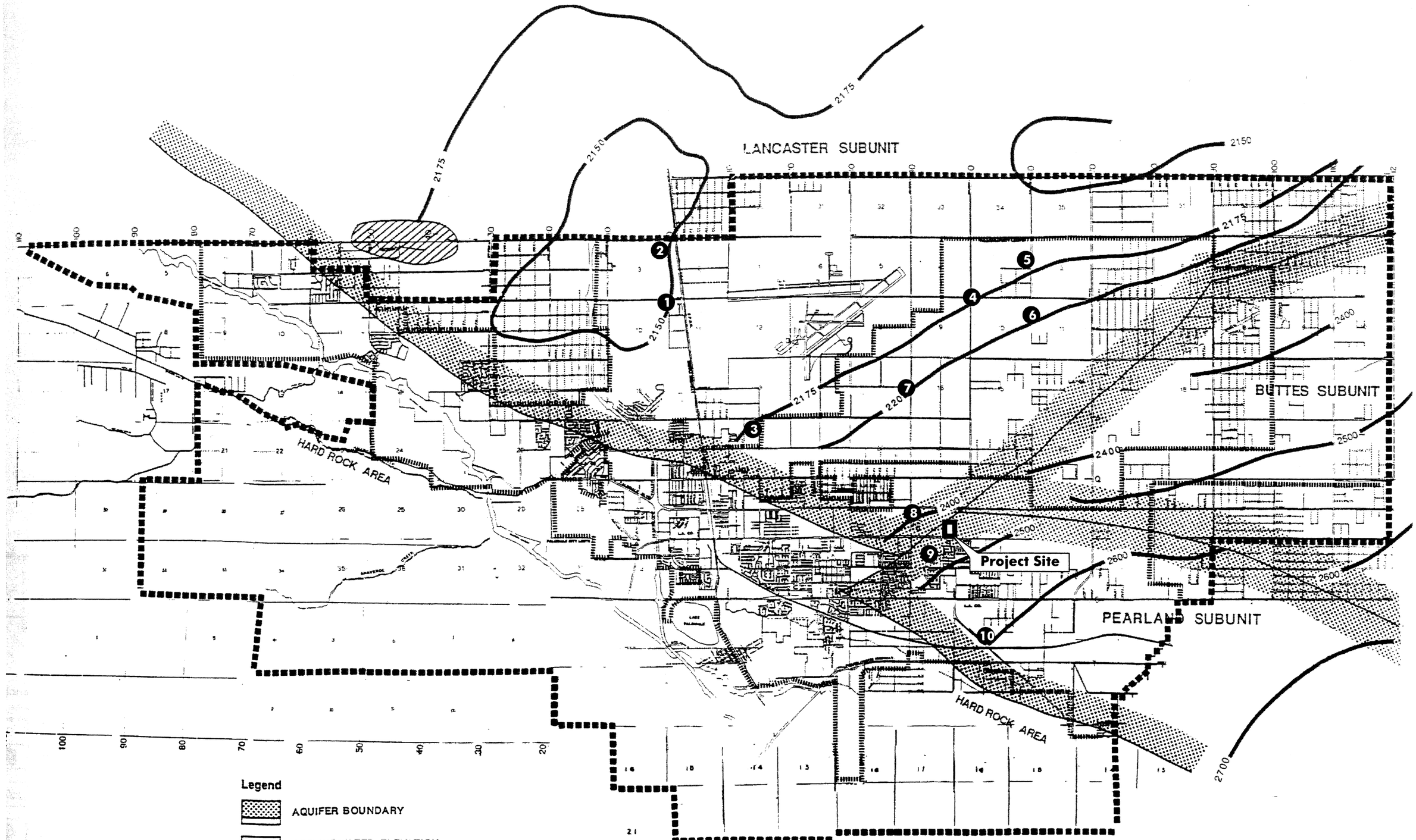

City of Plamdale General Plan, Jan. 25, 1993

LILBURN CORPORATION

Aquifers and Groundwater Surface (spring 1984)

Palmdale Marketplace
City of Palmdale, California

Figure 4.5-1

The Antelope Valley East Kern (AVEK) Water Agency purchases water from the State Department of Water Resources and provides treated water on a wholesale basis to most local water districts in Palmdale. AVEK serves portions of Kern County, Los Angeles County, and Ventura County. The AVEK service area and transmission lines are shown on Figure 4.5-2. The agency has a maximum entitlement of 138,400 acre-feet per year from the California Water Project. Since its completion, the state project has provided less than half of AVEK's total entitlement each year. This level of delivery is due to a lack of available water supply, and the lack of capacity in local treatment facilities.

The California Department of Health requires full treatment of raw water received from the State Water Project. The proposed project is located in the Palmdale Water District (see Figure 4.5-3).

Flood Control and Drainage

The project site consists of vacant land, with a current drainage pattern where water overland flows off-site to the northwest of the site. There are currently no existing on-site improvements or storm water treatment devices. (See Figure 4.5-4)

The proposed project would consist of numerous retail buildings, drive aisles, and landscaping. On-site runoff will be directed to an on-site above ground detention basin, through stormdrains and overland flow, where storm water is detained to pre-development discharge levels for the 10, 25, and 50-Year storms. The detention facility outlets to a proposed Regional Storm Drain facility by means of an earth ditch/swale. An overland flow release path to the public right of way has been designed into the grading scheme to assure that no storm water will flood any of the buildings. (See Figure 4.5-5 and Figure 4.5-6)

The hydrology calculations are based on the Los Angeles County Department of Public Works Hydrology Manual and Hydrology Method issued in June 2002. The Time of Concentration software prepared and issued by LACDPW is used to develop the time of concentration and storm water runoff flows. LACDPW MORA software was then used to create hydrographs of the proposed condition for 10-Year, 25-Year, and 50-Year storm events. The hydrographs generated using LACDPW methodology was inserted into Hydrograph Hydroflow software for detention analysis. A soil type of 134 and an isohyet of 2.8 was used for these calculations per LACDPW Hydrology Manual.

The existing site generates 3 cubic feet per second (cfs), 3 cfs, and 4 cfs for the 10-Year, 25-Year, and 50-Year storm event respectively. The proposed site generates 20cfs, 25cfs, and 30cfs for the same rainfall events. Discharge from the proposed detention basin shall be 85 percent of the pre-development flows in accordance with City standards.

Using catch basins, inlets, and storm drain pipes, all on-site flow will be directed towards an on-site above ground detention facility/pond. The detention pond outflows to a proposed 96" City of Palmdale regional storm water pipe. The pond outflow will be limited by an 8-inch orifice plate that will restrict the storm water flow to 85 percent pre-developed levels. In the event of a storm event greater than the 50-Year storm event or if the orifice becomes clogged, the pond has an unrestricted release line that flows directly into the 96-inch public line.

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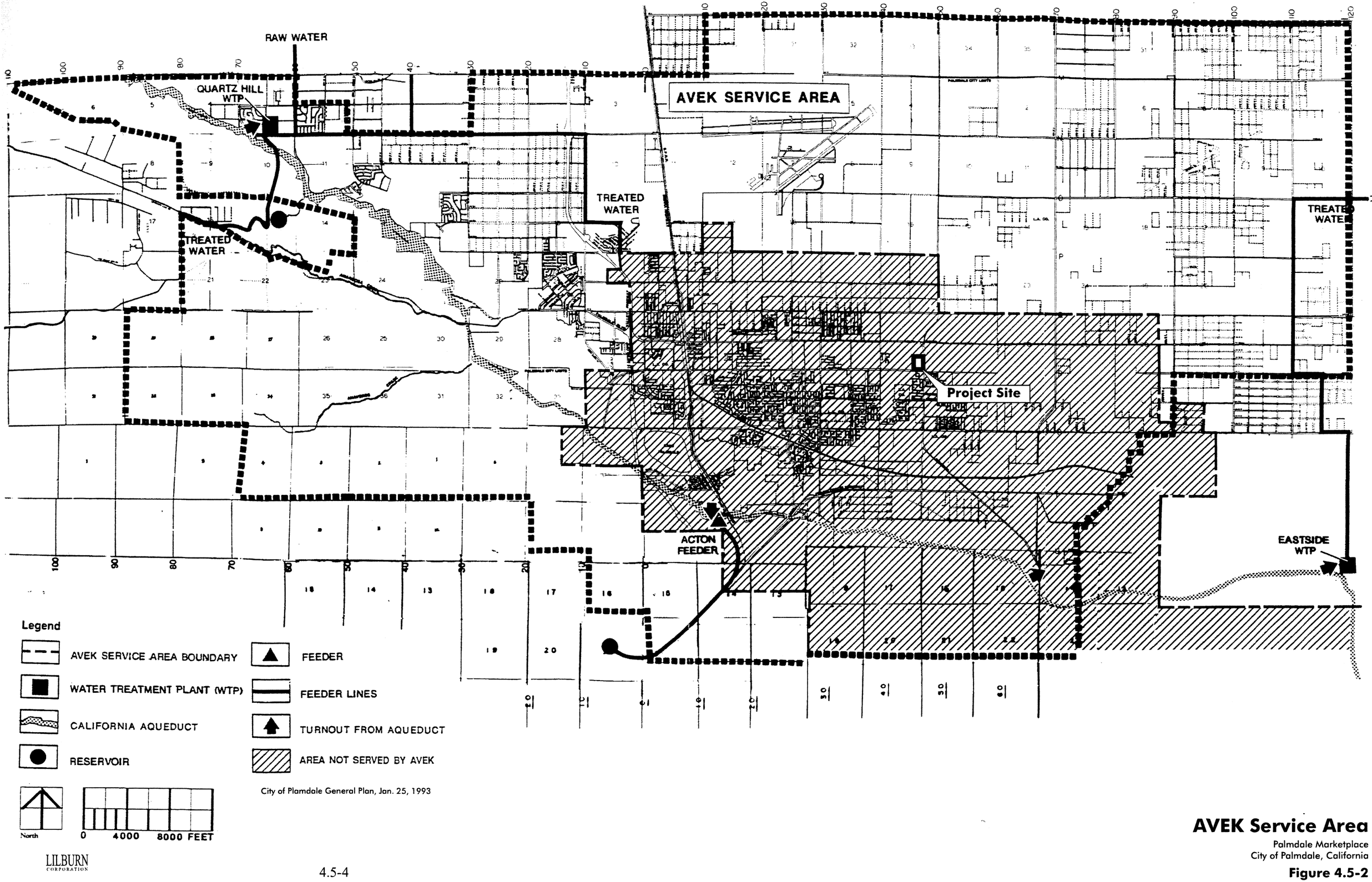


City of Plamdale General Plan, Jan. 25, 1993

LILBURN CORPORATION

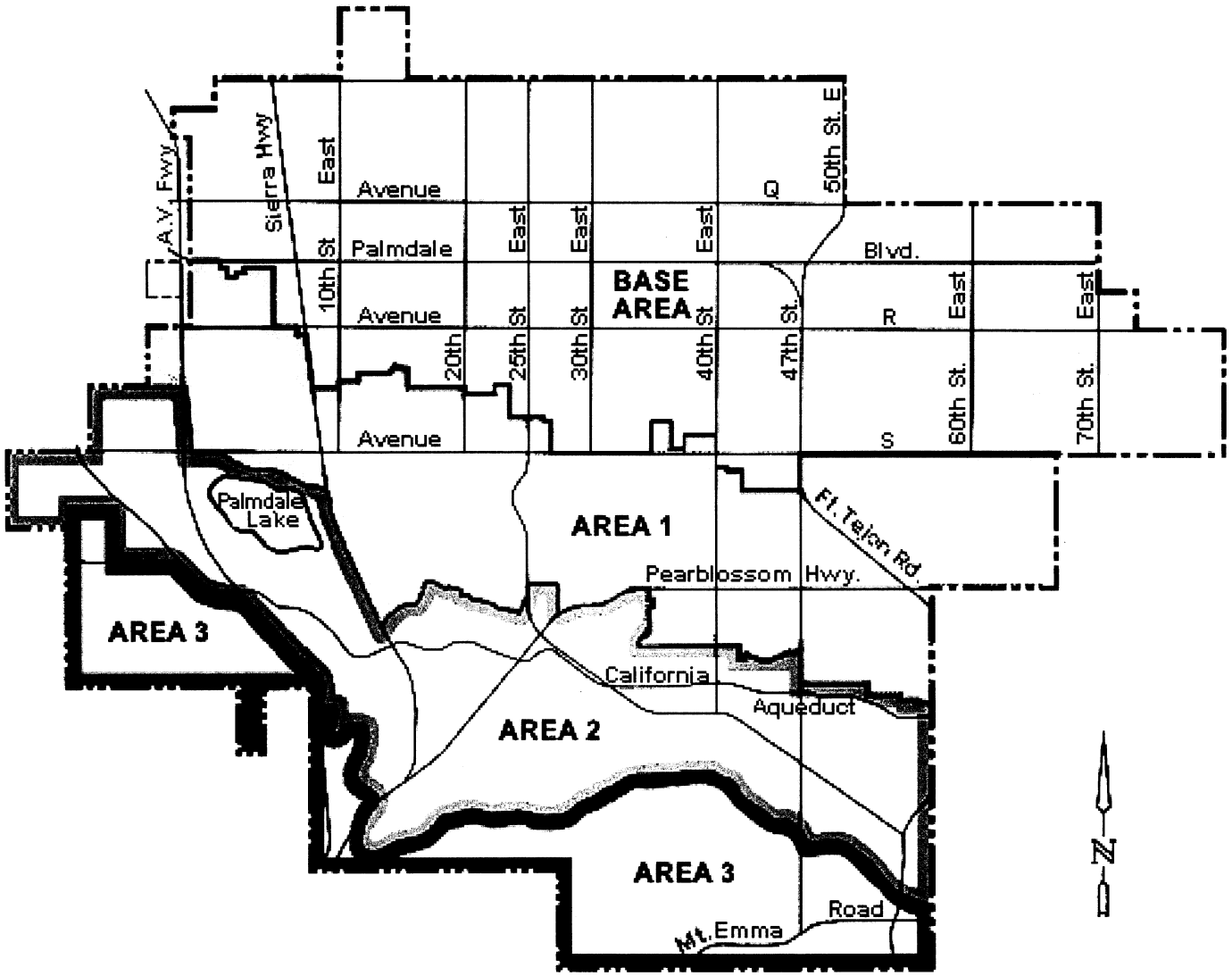
AVEK Service Area

Palmdale Marketplace
City of Palmdale, California

Figure 4.5-2

ZONE	ELEV. UNITS
BASE AREA	2800 / 2850
AREA 1	2950 / 3000
AREA 2	3200 / 3250
AREA 3	3400 above

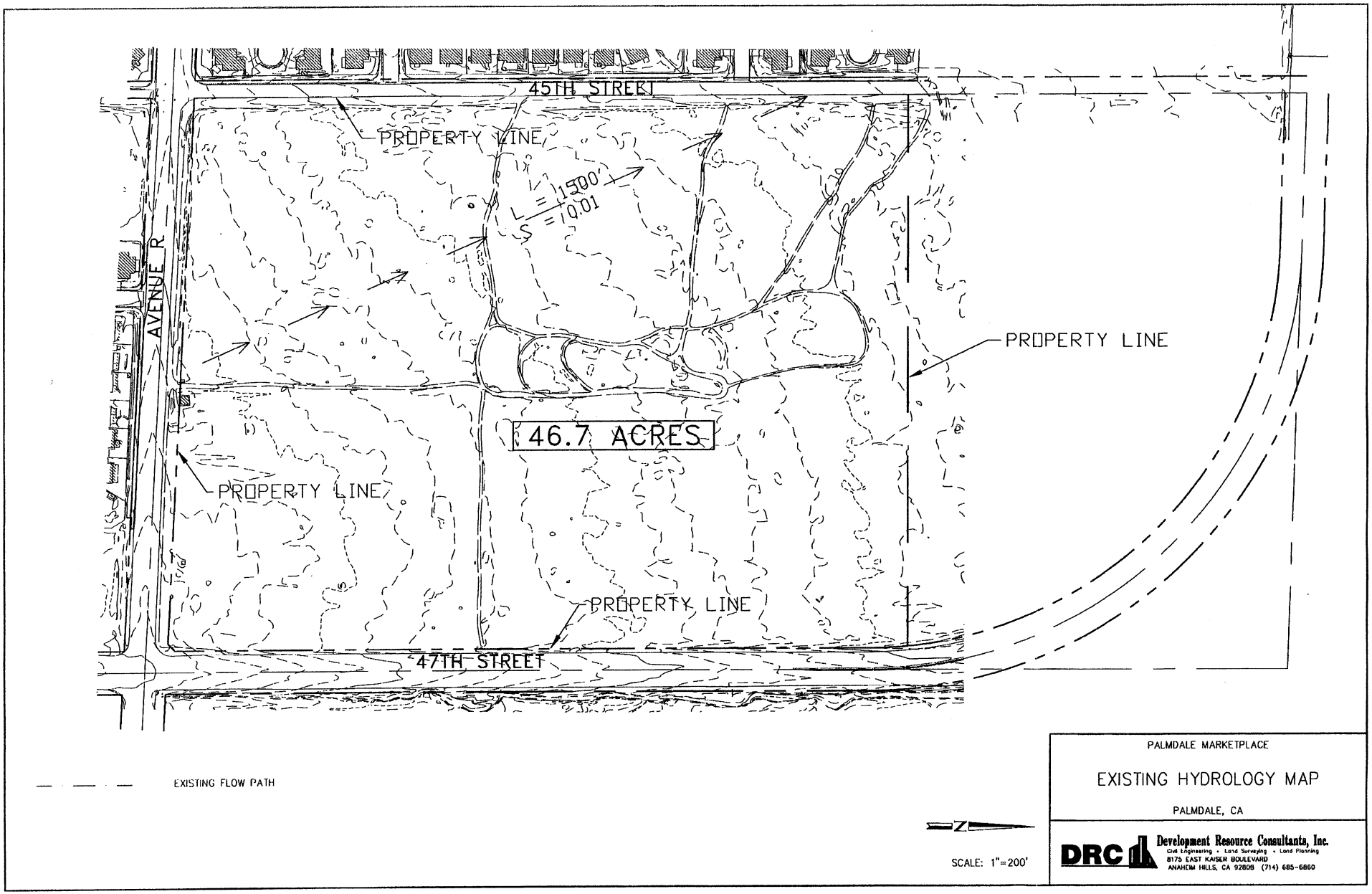
Source: City of Palmdale Water District, 2006.



Service Areas of Water Companies

Palmdale Marketplace
City of Palmdale, California

Figure 4.5-3



Existing Hydrology

Palmdale Marketplace
City of Palmdale, California

Figure 4.5-4

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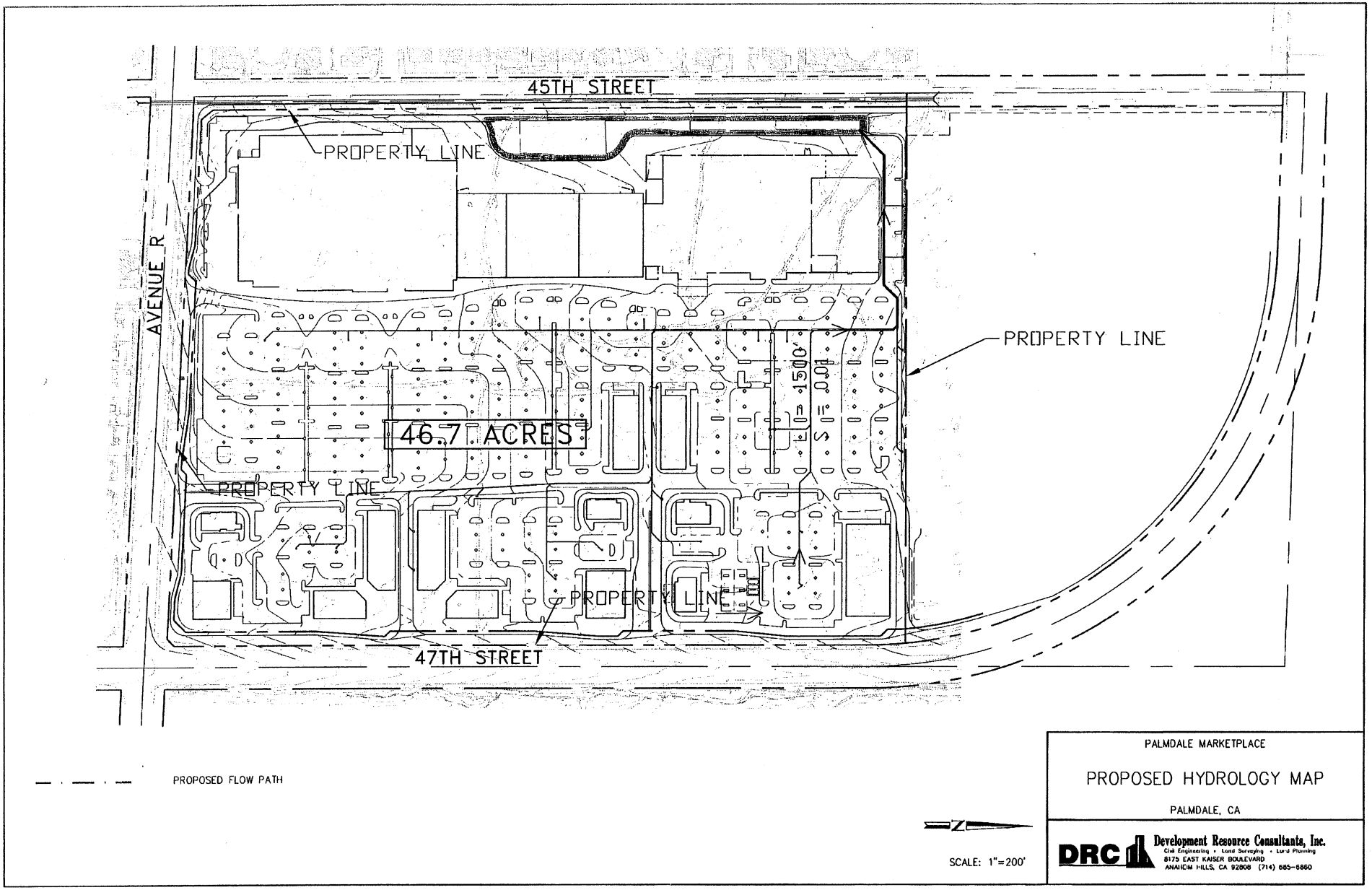

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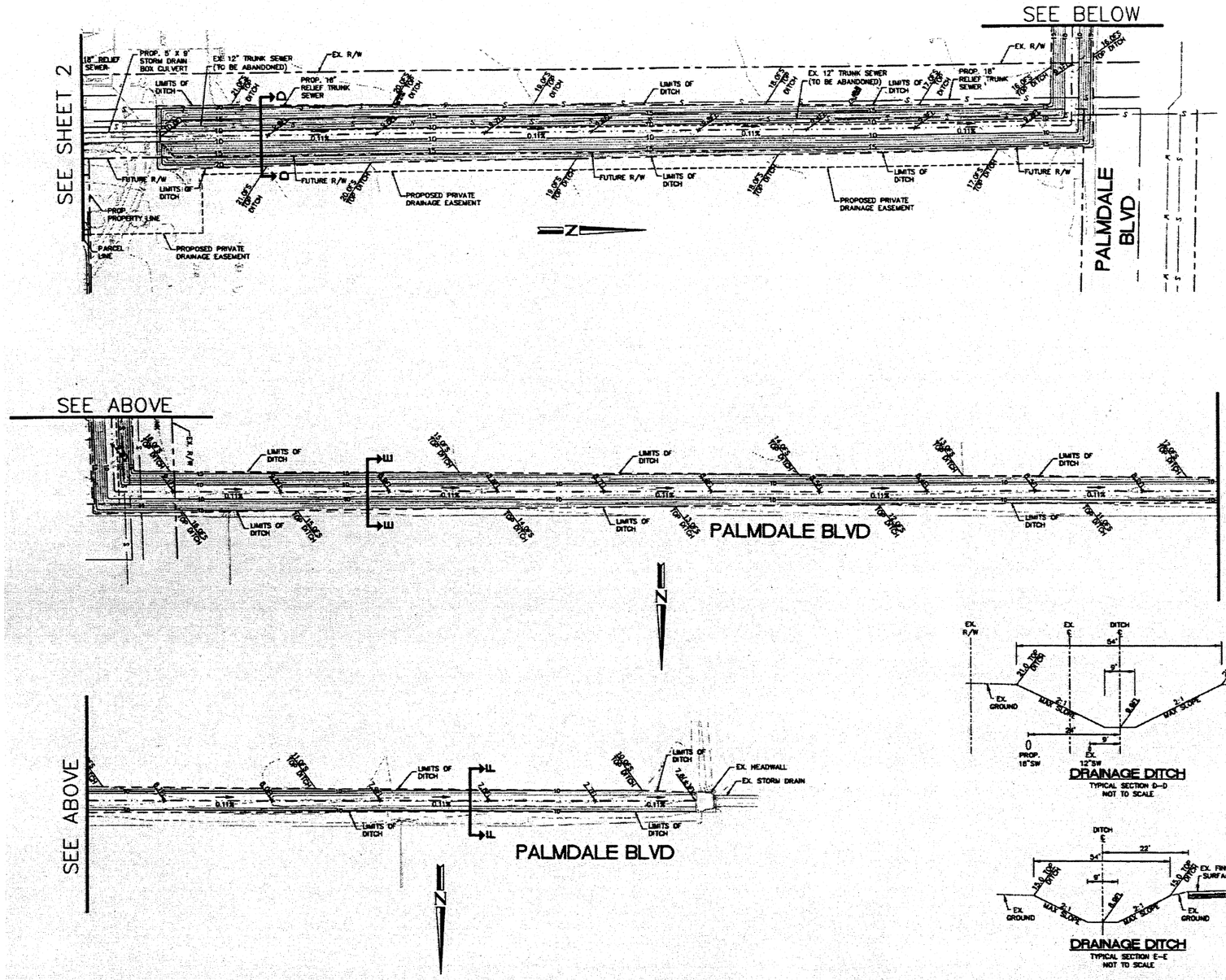
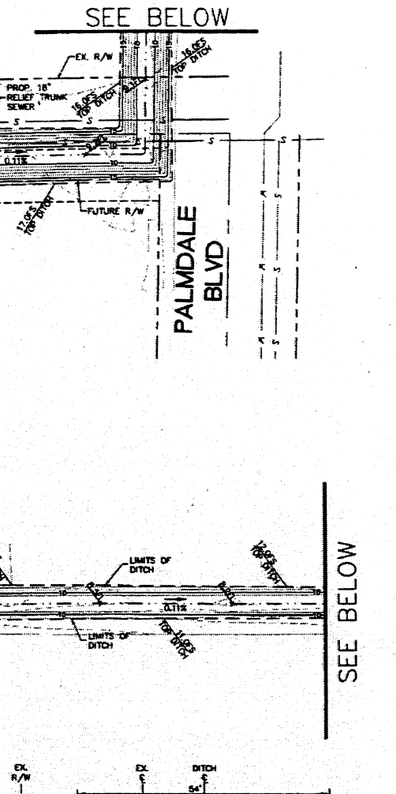
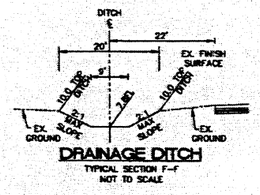
Proposed Hydrology

Palmdale Marketplace
City of Palmdale, California

Figure 4.5-5

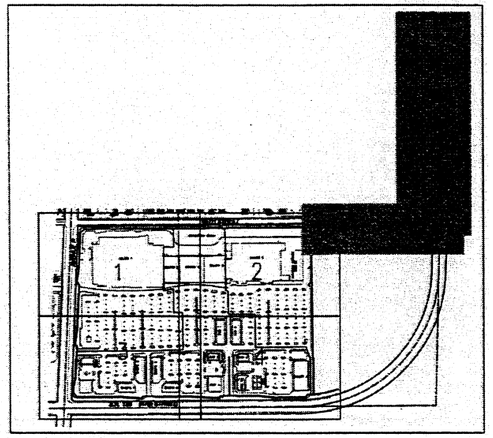






GRADING NOTES

1. CONSTRUCT 6" CURB ONLY
2. CONSTRUCT 6" CURB AND GUTTER
3. CONSTRUCT 3" RIBBON GUTTER
4. CONSTRUCT DOUBLE CURB CHANNEL
5. INSTALL 1' WIDE CONCRETE CURB STREET
6. INSTALL GRATED INLET
7. CONSTRUCT CURB OPENING CATCH BASIN
8. CONSTRUCT CURB OPENING CATCH BASIN W/ GRATING
9. CONSTRUCT STORM DRAIN PIPE
10. CONSTRUCT RETAINING / SCREEN WALL



KEY MAP
1"=400'

GRAPHIC SCALE: 1"=40'

Source: DRC, 06/06.

Drainage Ditch

Palmdale Marketplace
City of Palmdale, California

Figure 4.5-6

All on-site storm water will be treated for pollutants before it is discharged into the city stormwater system. The entire site is designed to drain to the detention basin, which will act as a bio-swale filter. The rest of the site will be treated by an inline stormwater filtration device located in the private storm drain system prior to discharging into the detention basin.

Water Quality

Government regulations deal with the provision of safe drinking water, as well as an adequate supply. Water quality within the Palmdale Planning Area is regulated by the Lahontan Region of the State Water Quality Control Board. Presently, groundwater in the area generally meets federal and state standards. A few wells in the rural communities adjacent to Palmdale have been found to contain high amounts of nitrates due to septic tank leakage in the area. The city has required connection to a public water system for new commercial development.

Applicable Policies, Plans and Regulations

The State of California is authorized to administer various aspects of the National Pollution Discharge Elimination System (NPDES) permit under Section 401 of the Clean Water Act. The General Construction Permit treats any construction activity over one acre as an industrial activity, requiring a permit under the State's General NPDES permit. These permits are administered by the SWRCB through the Regional Water Quality Control Board (RWQCB), Santa Ana Region.

Construction activities covered under the State's General Construction permit include removal of vegetation, grading, excavating, or any other activity that causes the disturbance of one acre or more. Prior to commencement of construction of a project, a discharger must submit a Notice of Intent (NOI) to obtain coverage under the General Permit.

The General permit requires all dischargers where construction activities would disturb one acre or more to comply with the following:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that would specify Best Management Practices (BMPs) that would prevent construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off-site into receiving waters.

- Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation.

- Perform inspections of all BMPs.

Gas Station Regulations

The automotive fueling station would include the installation of one or more underground gasoline storage tanks. Underground storage tanks require permits from and monitoring and reporting to a number of agencies including but not limited to:

- Antelope Valley Air Quality Management District;
- Los Angeles County Fire Department;
- City of Palmdale Building and Safety Department;
- City of Palmdale Engineering Department;
- Regional Water Quality Control Board and;
- Environmental Protection Agency.

These permits and plans must all be issued/approved by the respective agencies prior to Certificate of Occupancy or sooner. In addition, all new automobile fueling stations must be constructed to the following standards:

- All tanks, piping and vent/vapor piping must be double walled and contain leak detection capability;
- All piping and venting must be sloped back to the storage tank sumps to prevent discharge;
- Each pump island must have a containment pan underneath them to prevent spilled fuel from escaping;
- All secondary containment systems are required to be tested;
- Best Available Containment Technology is a minimum requirement of the State Water Board (as fueling stations age, they must be periodically updated to meet current requirements); and
- All equipment associated with underground storage tanks must be tested and approved by a third party laboratory and meet all state and local requirements.

4.5.3 Impacts and Mitigation Measures

Thresholds of Significance

The proposed project would have a significant effect on hydrology or water quality if it would:

- Violate any water quality standards or waste discharge requirements;

- 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);

- Substantially alter the existing drainage pattern of the project 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;

- Substantially alter the existing drainage pattern of the project 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;

- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;

- Otherwise substantially degrade water quality;

- 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;

- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;

- 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; or

- Inundation by seiche, tsunami, or mudflow.

Impacts Determined to have No Impact

Does the project site contain a blue-line stream, spring, seep, or wetland?

Will the project include changes in the course or volume of water in a local stream or wetland which require Department of Fish and Game or Army Corps of Engineers permits?

Will the project result in the loss of, or changes to, significant stands of riparian vegetation?

According to the biological report completed by wildlife biologist Mark Hagan and on-site visits, no streams, springs, seeps, or wetlands exist on the proposed project site nor will any riparian vegetation be negatively impacted.

Could the project result in a significant increase in runoff of storm or nuisance water toward the California Aqueduct?

Will the project be significantly affected by storm or nuisance water runoff flowing through California Aqueduct culverts or pools?

The proposed project is located more than 3 miles to the north of the California Aqueduct and is not expected to significantly affect the aqueduct due to runoff or nuisance water. The proposed project site will not be negatively impacted from storm or nuisance runoff flows through aqueduct culverts or pools. No impacts are anticipated.

Is the project located above Lake Palmdale where urban runoff could significantly impact the lake?

Is the project located in an inundation area below Lake Palmdale dams, or Littlerock Dam?

The proposed project is located greater than 5 miles northeast of Lake Palmdale and over 7 miles north of Littlerock Dam. The proposed project will have no impact due to runoff on Lake Palmdale or Littlerock Reservoir and according to the City of Palmdale's General Plan it is not within an inundation area below Lake Palmdale or Littlerock Reservoir Dams. No impacts are anticipated.

Impacts Determined to be Less Than Significant

Is the site in an area of flood hazard as shown on the FIRM Map, or as identified by the Engineering or Public Works Departments?

Will any aspect of the project result in discharge of materials into surface waters, or in any alteration of surface water quality, including but not limited to, temperature, dissolved oxygen, or turbidity?

Will the project result in the significant alteration of the direction or rate of flow of groundwater?

Could the project result in a change in the quantity or quality of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?

Could the project result in a substantial reduction in the amount of water otherwise available for public water supplies?

According to the City of Palmdale General Plan, the proposed project is located within a flood hazard zone that indicates areas of 500-year flood. The project will comply with all regulations regarding storm water runoff, nuisance flows, and drainage. To further control any potential impacts regarding water runoff from the site or nuisance flows, a 1.5-acre detention basin has been designed along the western portion of the project site. A drainage channel will be constructed along the west site if the site. The drainage channel will extend to the north of the site for approximately 800 feet to the south side of Palmdale Boulevard. The channel will then extend to the west approximately 1.300 feet to an underground culvert.
Coordination with the City's Master Plan of Drainage and the expansion of adjacent flood control facilities will serve to prevent impacts related to increased quantities of storm flows or

surface water runoff. The project proponent will be required to prepare a Water Quality Management Plan (WQMP) consistent with applicable requirements of the Drainage Area Management Plan (DAMP). Adoption and implementation of a long-term WQMP reflects the project's consistency with the DAMP.

Existing National Pollutant Discharge Elimination System (NPDES) permit and Regional Water Quality Control Board (RWQCB) requirements supporting federal water quality standards and criteria established under the Clean Water Act (CWA) apply to the project site. Requirements and procedures established under these regulations typically act to mitigate potential water quality impacts of new development, including facilities that may be implemented pursuant to the proposed project.

The proposed project will comply with all federal, state, and regional water quality and storm water standards in order to mitigate any potential water quality impacts of the new development. To further control any potential impacts regarding water runoff from the site or nuisance flows, a 1.5-acre detention basin will be constructed to the west of the project site. Any potential impacts to water quality are considered less than significant and with a likelihood of a groundwater depth between 100 and 150 feet, the project will not alter direction or rate of flow of groundwater supplies.

Kleinfelder found no evidence of perched or seasonal groundwater within any borings or test pits excavated to a maximum depth of 32.5 feet below ground surface (bgs). Given the nature of the use of the proposed project and the depth of the groundwater at the site, the project should not negatively affect existing groundwater nor substantially reduce the amount of water available for public needs. Any potential impacts are considered to be less than significant.

The project does not propose elements or aspects that will result in consumption of significant volumes of water. Direct additions or withdrawals of groundwater are not proposed by the project. Further, construction proposed by the project will not involve massive substructures at depths that would significantly impair or alter the direction or rate of flow of groundwater. While the proposal will result in substantial overcovering of the specific project site, given the significant remaining permeable acreage in the project vicinity, the net effect on local or regional groundwater recharge capabilities is considered less than significant.

Impacts Determined to have Potentially Significant Impacts

Would the project result in a significant increase in peak runoff that could increase flood hazard off-site?

Would development of the project impede the implementation of the City's Master Plan of Drainage or Drainage Management Plan?

Impact HWQ-1

Construction activities associated with the project would alter the drainage pattern of the site, increasing on-site flow by changing the impermeable surfaces on-site.

Development of the site would also alter the patterns of flows from the existing drainages entering the site from the south. This is a potentially significant impact.

The existing site is composed of approximately 49.25 acres. The site is undeveloped and consists of open space with sparse vegetation and a uniform slope in a northwesterly direction. Development of the site would add approximately 47 acres of impermeable surface that would require a storm water drainage and collection system. The City of Palmdale is responsible for storm water management and collection in the area of the project site. Prior to permit issuance, hydrology studies must be approved by the city.

Mitigation Measure HWQ-1

Prior to issuance of grading permits, the applicant shall submit a detailed storm water drainage plan that includes design drawings for the drainage facilities that would capture, hold and/or convey storm water through the site. Discharge from the proposed detention basin shall be 85 percent of the pre-development flows per the City of Palmdale standards. The plans shall be subject to approval of the City of Palmdale Public Works Department.

Level of Significance After Mitigation

The storm water management system shall be designed to reduce the post-development peak discharge by the use of on-site detention, control structures and diversion to the City's existing storm water collection system. Implementation of Mitigation Measure HWQ-1 would ensure that potential impacts from increased storm water flows are less than significant.

Mitigation Measure HWQ-2

If soils suspected of being contaminated by a toxic substance are discovered during grading or other construction related activities, work in the immediate areas shall cease. Suspected soils shall be tested by a qualified soils engineer and/or laboratory to determine level of contamination.

If tested soils are found to be toxic or hazardous DTSC will be notified and a remediation plan submitted for DTSC review.

Level of Significance After Mitigation

Implementation of Mitigation Measure HWQ-2 would ensure that potential impacts from soil contamination are less than significant.

Mitigation Measure HWQ-3

A Water Quality Management Plan shall be submitted to Palmdale Water District for review prior to the issuance of building permits.

Level of Significance After Mitigation

Implementation of Mitigation Measure HWQ-3 would ensure that potential impacts on water quality are less than significant.

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4.6 NOISE

4.6.1 Introduction

This section of the EIR addresses the existing acoustical environment on and adjacent to the project site and evaluates off-site noise impacts related to project implementation. A noise analysis for the proposed project was prepared by Colia Acoustical Consultants, March 2006, and supplemented with an additional analysis by Mestre Greve Associates, August 2006 to specifically address potential impacts related to project construction as well as effects on the existing residential neighborhoods adjacent to the site. The Noise Analysis is included in this EIR as Appendix E.

4.6.2 Environmental Setting

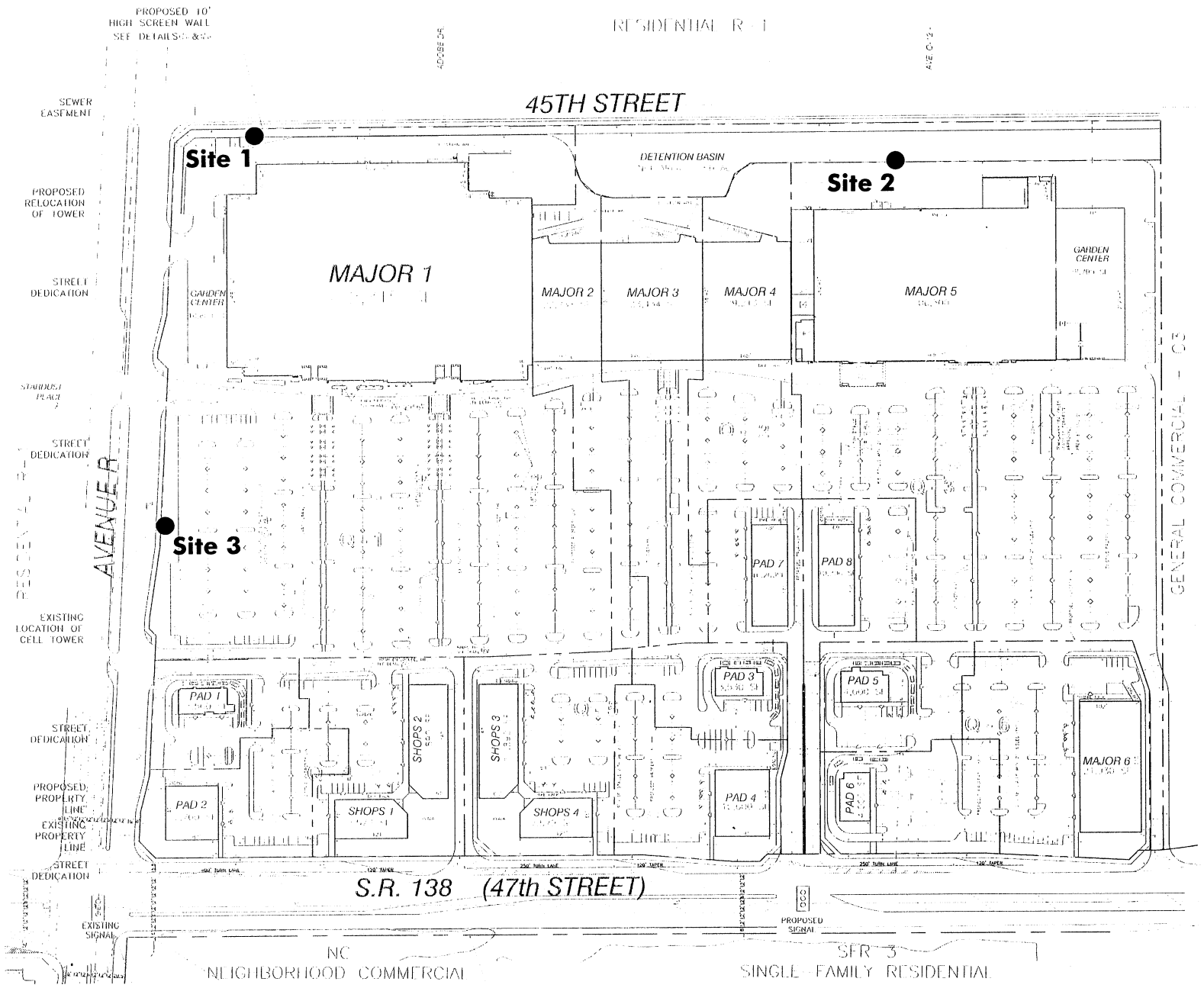
The proposed project is for the development of a maximum of 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres located north of Avenue R, west of 47th Street East and east of 45th Street East. The Applicant proposes to construct six (6) major retail structures that may include a home improvement center and an upscale discount retailer, four shops and eight general commercial land uses. Figure 4.6-1 shows the approximate location where noise measurements were taken to determine the existing noise baseline.

Background Information on Noise

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud).

Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear. Community noise levels are measured in terms of the "A-weighted decibel," abbreviated dBA. Figure 4.6-2 provides examples of various noises and their typical A-weighted noise level.

Sound levels decrease as a function of distance from the source as a result of wave divergence, atmospheric absorption and ground attenuation. As the sound wave form travels away from the source, the sound energy is dispersed over a greater area, thereby dispersing the sound power of the wave. Atmospheric absorption also influences the levels that are received by the observer. The greater the distance traveled, the greater the influence and the resultant fluctuations. The degree of absorption is a function of the frequency of the sound as well as the humidity and temperature of the air. Turbulence and gradients of wind, temperature and humidity also play a significant role in determining the degree of attenuation. Intervening topography can also have a substantial effect on the effective perceived noise levels.



Noise Measurement Site

Palmdale Marketplace
City of Palmdale, California

Figure [illegible] 1

GreenbergFarrow
15101 Red Hill Avenue, Suite 200
Tustin, CA 92780
t: 714 259 0500 f: 714 259 5480

PROJECT INFORMATION

SITE PLANNER: VS/CD
SITE DEV. COORDINATOR: CODA

PALMDALE, CA
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER: 200

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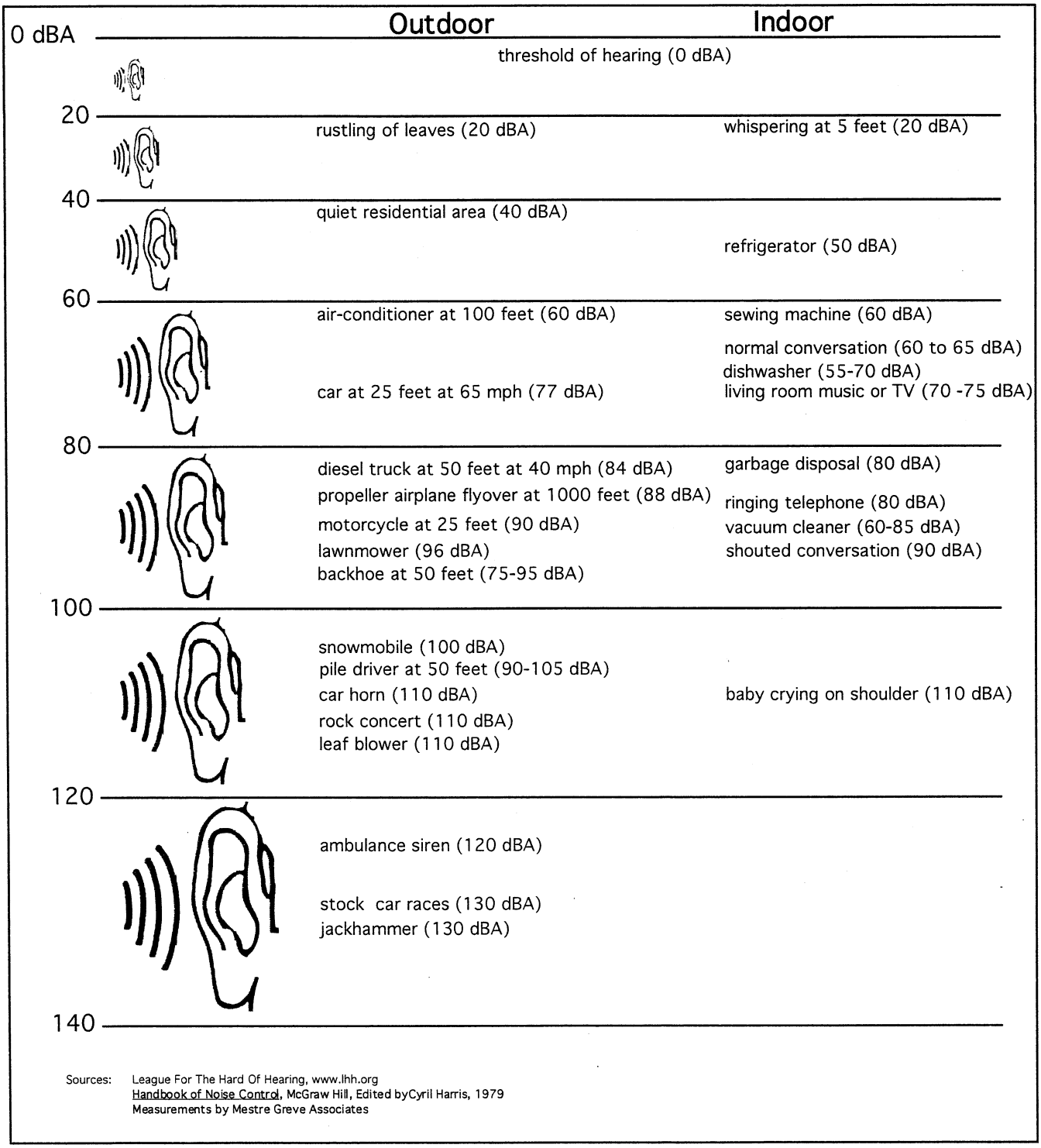

Source: Mestre Greve Associates, 2004.

Typical Noise Levels

Palmdale Marketplace
City of Palmdale, California

Figure 4.6-2

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Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. This criteria is based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

Hearing Loss is not a concern in community noise situations of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud to cause hearing loss.

Speech Interference is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

Sleep Interference is a major noise concern for traffic noise. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

Physiological Responses are those measurable effects of noise on people that are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are sign of harm.

Annoyance is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

Methodology

The description, analysis and reporting of community noise levels around communities is made difficult by the complexity of human response to noise and the various noise metrics that have been developed to describe noise impacts. Each of these metrics attempts to quantify noise levels with respect to community response. Most of the metrics use the A-Weighted noise level to quantify noise impacts on humans. A-Weighting is a frequency weighting that accounts for human sensitivity to different frequencies.

Noise metrics can be divided into two categories: single event and cumulative. Single-event metrics describe the noise levels from an individual event such as an aircraft fly-over or perhaps a heavy equipment pass-by. Cumulative metrics average the total noise over a specific time period, which is typically 1 or 24-hours for community noise problems. For this type of analysis, cumulative noise metrics will be used.

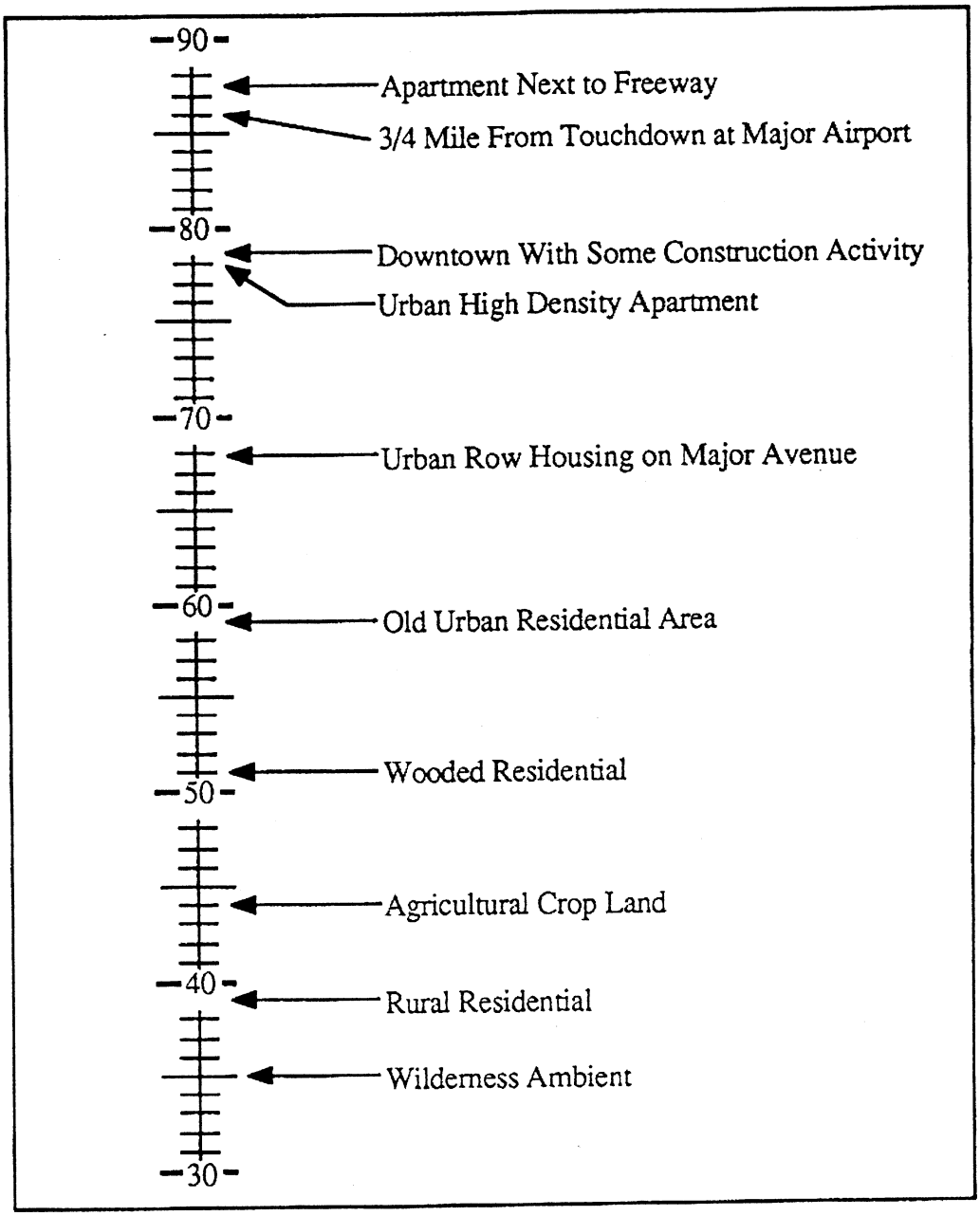
Several rating scales have been developed for measurement of community noise. These account for, the parameters of noise that have been shown to contribute to the effects of noise on man, the variety of noises found in the environment, the variations in noise levels that occur as a person moves through the environment, and the variations associated with the time of day. They are designed to account for the known health effects of noise on people described previously. Based on these effects, the observation has been made that the potential for a noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. Two of the predominate noise scales are the: Equivalent Noise Level (LEQ) and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 1 hour. This 1 hour noise level can also be referred to as the Hourly Noise Level (HNL). It is the energy sum of all the events and background noise levels that occur during that time period.

CNEL, Community Noise Equivalent Level, is the predominant rating scale now in use in California for land use compatibility assessment. The CNEL scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. The evening time period (7 p.m. to 10 p.m.) penalizes noises by 5 dBA, while nighttime (10 p.m. to 7 a.m.) noises are penalized by 10 dBA. These time periods and penalties were selected to reflect people's increased sensitivity to noise during these time periods. A CNEL noise level may be reported as a "CNEL of 60 dBA," "60 dBA CNEL," or simply "60 CNEL." Typical noise levels in terms of the CNEL scale for different types of communities are presented in Figure 4.6-3.

Ldn, the day-night scale is similar to the CNEL scale except that evening noises are not penalized. It is a measure of the overall noise experienced during an entire day. The time-weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. In the Ldn scale, those noise levels that occur during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where home and sleep is the most probable activity.

L(%) is a statistical method of describing noise which accounts for variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level exceeded for a percentage of time in a given measurement period. For example since 5 minutes is 25 percent of 20 minutes, L(25) is the noise level that is equal to or exceeded for five minutes in a twenty minute measurement period. It is L(%) that is used for most noise ordinance standards. For example most daytime city, state and county noise ordinances use an ordinance standard of 55 dBA for 30 minutes per hour or an L(50) level of 55 dBA. In other words the noise ordinance states that no noise level should exceed 55 dBA for more that fifty percent of a given period.



Typical Noise Levels
Palmdale Marketplace
City of Palmdale, California
Figure 4.6-3

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Applicable Plans, Policies and Regulations

The Noise Element of the General Plan contains the City's primary policies and requirements in regards to noise. The Noise Element of the General Plan presents limits on noise levels from transportation noise sources, quarry operations, vehicles on public roadways, railroads and aircraft. These limits are imposed on new developments. The City's Municipal Code also contains requirements that have applicability to this project. The City of Palmdale Noise Element and applicable Municipal Code sections are presented below.

Noise Element

The City of Palmdale specifies outdoor and indoor noise limits for various land uses. The noise limits specified in the City's Noise Element (adopted January 1993) are in terms of the Community Noise Equivalent Level (CNEL) or Leq(h) where h refers to the numbers of hours of operation. The City's noise compatibility criteria by land use are presented in Table 4.6-1 and are consistent with both Federal and State standards and guidelines. These standards include maximum permissible noise levels for noise sources not operating on a public right-of-way. Of particular note is the requirement that quarry operations cannot exceed 65 Leq(h) "at the interface with residentially designated land." This would require any excavation or grading operations maintain a noise level of 65 dBA Leq or less as measured at the residential edge over the course of their daily operation.

Table 4.6-1
City of Palmdale Noise Guidelines

Land Use	Maximum Acceptable Exterior Noise Levels	Maximum Acceptable Interior Noise Levels	Scale
Residential	65	45	dB(A) CNEL
Commercial	A noise level which does not jeopardize health, safety and welfare of visitors.	55	Leq(h)
Institutional	A noise level which does not jeopardize health, safety and welfare of visitors.	45	Leq(h)
Industrial	A noise level which does not jeopardize health, safety and welfare of visitors.	65	Leq(h)

Source: City of Palmdale, *Palmdale General Plan,* January 25, 1993.

Also of relevance in the Noise Element is Policy N1.1.3, which reads as follows:

> When proposed stationary noise sources could exceed an exterior noise level of 65 dBA CNEL at present, or could impact future noise sensitive land uses, require preparation of an acoustical analysis and mitigation measures to reduce noise levels to no more than 65 dBA CNEL exterior and 45 dBA CNEL interior; if the noise level cannot be reduced to these thresholds through mitigation, the new noise source should not be permitted.

Essentially this policy restricts the noise levels at residential areas generated by new stationary sources. The sources cannot exceed 65 CNEL in outdoor residential areas, and 45 CNEL in indoor residential areas.

Municipal Code

Chapter 9.18 of the current City of Palmdale Municipal Code, "Disturbing, Excessive, Loud, or Offensive Noise," is what is commonly referred to as a 'nuisance' type ordinance. The ordinance does not contain any specific limits, but rather states that "It shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary, or unusual noise..." These types of ordinances are limited in their use since there are no specific limits by which to determine if a noise source is excessive or not.

Other Palmdale ordinances, which may be a factor in noise control, include Chapter 8.28 "Building Construction Hours of Operation and Noise Control" of the City of Palmdale Municipal Code. The chapter, specifically Section 8.28.030 prohibit earths excavating and similar activities on Sunday and any other time between 8 p.m. and 6:30 a.m.

Ambient Noise Measurements

Ambient noise measurements were performed to document the ambient noise levels in the vicinity of the project site. Ambient noise measurements were made at three locations around the project site (refer to Figure 4.6-1 for the location of the measurement sites).

The noise measurements were conducted between 10:00 AM to 11:30 AM in January 2006. The measurement survey utilized a Brüel & Kjær 2230 Precision Integrated Sound Level Meter (SLM), an automated digital noise data acquisition system for short-term (15-min) readings. This instrument automatically calculates both the Equivalent Noise Level (LEQ) and Percent Noise Level (L%) for any specific time period. The noise monitor was equipped with a Brüel & Kjær microphone.

The measurement results are presented in terms of the equivalent noise levels (Leq), maximum noise levels, minimum noise levels and Community Noise Equivalent Level (CNEL). Refer to Table 4.6-2.

Table 4.6-2
Existing Noise Measurements

Site	Time	Leq	Lmax	Lmin	CNEL	Micr. Height
1	10:20 AM	57.0	71.0	39.1	60.0	5
2	10:40 AM	50.0	65.2	38.6	53.0	5
3	11:00 AM	66.0	84.3	43.5	68.8	5

Source: Colia Acoustical Consultants, March 2006.

Site 1, is located approximately at the northeast corner of Avenue R and 45th Street East. There is a single-family residential track located on northwest corner of this intersection, and the noise measurements were taken adjacent to the residences. This area is dominated by traffic noise from Avenue R.

Sites 2, is located west of 45th Street East and north of Avenue R. Residences are located adjacent to the site. Noise at this site during the measurements was distant community noise.

Site 3 is located north of Avenue R and east of 45th Street East. Residences are located south of Avenue R adjacent to the site. A neighborhood commercial center is under construction on the southwest corner of Avenue R and 47th Street East. This area is dominated by traffic noise from Avenue R.

4.6.3 Impacts and Mitigation Measures

Thresholds of Significance

The proposed project would have a significant effect on the ambient noise environment:

- If the project is residential or noise sensitive, will it expose people to severe noise levels because it is located:
  - Adjacent to the Freeway
  - Within 200 feet of the railroad
  - Adjacent to an existing or future arterial street
- If the proposed project where within the Plant 42 over-flight area, or the 65 CNEL boundary
- If the project would generate a noise level exceeding 65 CNEL at the project boundary after construction that could significantly impact an adjoining land use

Impact Analysis

Impacts Determined to Have No Impact

If the project is residential or noise sensitive, will it expose people to severe noise levels because it is located:

- **Adjacent to the Freeway?**
- **Within 200 feet of the railroad?**
- **Adjacent to an existing or future arterial street?**

The proposed project is not a residential development. Therefore, this impact is not applicable.

Is the proposed project within the Plant 42 over-flight area, or the 65 CNEL boundary?

The project site is not within the United States Air Force Plant 42 or the Palmdale Airport's over-flight areas, CNEL boundaries, or airport environs. The project as proposed will not expose individuals in the project area to excessive aircraft-related noise levels.

Impacts Determined to be Potentially Significant

Will the project generate a noise level exceeding 65 CNEL at the project boundary after construction that could significantly impact an adjoining land use?

Impact NOI-1

The residents within the vicinity of the proposed project may be subject to noise levels in excess of the City Noise Standards during operation of the commercial retail center. This is a potentially significant impact.

The potential noise impact from the project is anticipated to come from the potential operation of the trash compactor and truck docks located on the west side of the development.

Trash compactor noise impacts were based on acoustical data measured from other compactors. The Single Event Level (SEL) is 83.9 dBA at 45 feet with a 6 dB drop-off rate per doubling of distance away from the source. Residences are located west of the compactors across 45th Street East and would be potentially impacted.

Truck Noise

The proposed Major Retail No.1 is anticipated to be a large retail/grocery store and Major No. 5 is anticipated to be a home improvement center. Deliveries may occur 24 hours a day, or defined by the Conditions of Approval, however, the majority of deliveries would occur during normal business hours between 8:00 a.m. and 10:00 p.m. Approximately 20 to 30 deliveries are anticipated as a worst case analysis to occur between the hours 10:00 pm to 6:00 am. Other stores are likely to have one delivery per day.

The maximum noise level (L_{max}) projected by a truck at 7 miles per hour (MPH) is approximately 84.4 dBA. The worst case Leq for a moving refrigerated truck is 80.3 dBA at 20 feet and 79.2 dBA at idle. The worst case scenario is delivery truck that arrives during the early morning and the driver keeps the motor running and refrigeration equipment on for the entire hour and then departs. The Leq for that full hour is approximately 80.4 dBA.

The calculated CNEL to the residential areas is based on the distance from the residential property line and the dock wells and the potential of a 50-foot long truck positioned in the docks. The truck noise unshielded impact ranges between 72.4 to 73.3 dBA CNEL at the residence.

A barrier calculation was run along the west and south property lines and it was determined that a 10-foot high block wall would be required for the adjacent residential areas to the west to meet the City noise standards. An 8-foot high block wall is required in the southwest corner. The requirement for an 8-foot wall between the two driveways on the south west side of the site was eliminated due to re-evaluation of the number of deliveries and recalculation of noise impacts. The calculations take into account distance, relative elevations of noise source and receivers and angles of view.

The calculations show the noise standards can be achieved by 9-foot screen walls on the west side of the docks where trucks would be located. The length of the wall must be 5 feet longer than the longest proposed truck. In cases where the dock ramps are sloped downward the screen walls can also be adjusted in a like manner to 0.5 feet above truck stack height. The walls can be concrete block or slumpstone or any other solid material suitable to the outside design with a surface weight of 4.0 pound per square foot.

The worst case noise levels were calculated for both the compactor and truck noise levels with mitigation, and the shielded noise levels for both cases were summed and found to be less than 65 CNEL. These noise levels meet the exterior noise standard for the City of Palmdale. The barrier screen wall locations are shown in Figure 4.6-4.

Mechanical Equipment

The roof top mechanical equipment is a potential noise impact. Major Retail No. 1 potentially has units totaling 300 to 400 tons spaced across the entire area of the roof top. However, there may be three 20 ton units operating to the west property line. The bel ratings are 8.6 dB and 86 dB on the A-weighted scale at one foot or approximately 90.8 dBA for three. There may be also four 5 ton units along the west side. The bel ratings are 8.4 and 84 dB on the A-weighted scale. The sum of four units is 90 dBA. The sum of the 20 and 5 ton units is 93.4 dBA at one foot. The nearest residence is 154 feet away. At that distance using point source drop-off rates the combined impact becomes 51.2 dBA (64.2 CNEL). A 3-5 foot parapet wall will provide 6.1 dB of attenuation to upper levels so the shielded impact is 58.1 dB CNEL which meets the noise standard of 65 dBA CNEL at daytime/nighttime periods.

Drive-Through

There are potentially four fast food/drive through restaurants identified on the site plan. The distance from the drive-through to the existing residential homes to the south is 160 feet.

The menu board speakers have been measured in past studies to be 75 dBA at 3 feet. When projected to the south the noise drop-off is calculated to be 51.0 dBA. This value is significantly less than current and future traffic on Avenue R of 68.8 CNEL. This is not a significant impact.

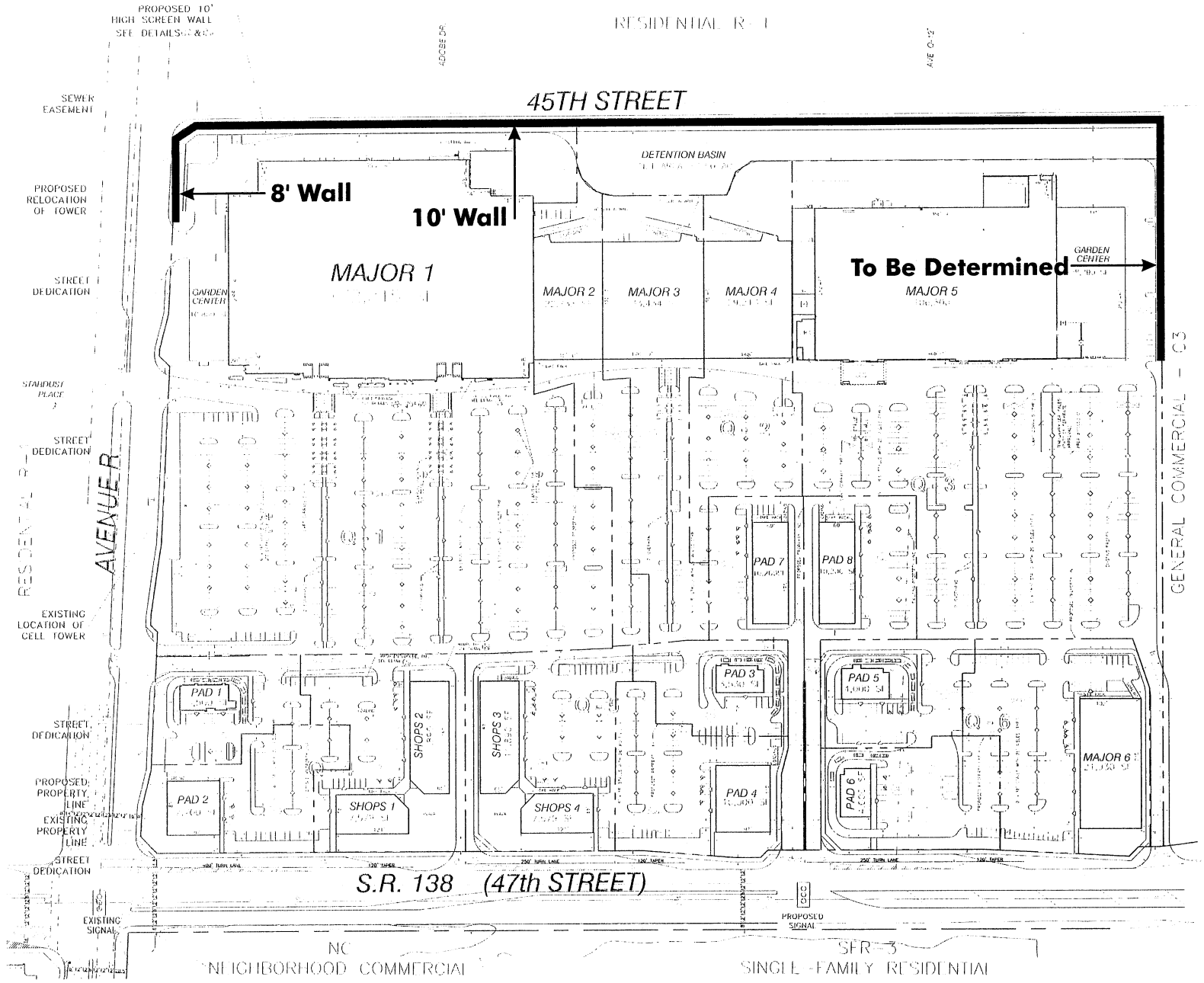
Mitigation Measures

As truck and compactor noise levels may exceed the 65 CNEL criteria of the City Noise Standards at the south and west project lines, the following mitigation measures are required.

Mitigation Measure NOI-1

- *The screen dock walls should be 9 feet high relative to the dock elevation as described above.*

- *The wall heights at the property lines shall range from 8 to 10 feet (relative to subject property elevations).*



GreenbergFarrow
15101 Red Hill Avenue, Suite 200
Tustin, CA 92780
t: 714 259 0500 f: 714 259 5480

PROJECT INFORMATION

SITE PLANNER: AS/CD
SITE DEV. COORDINATOR: CODA

PALMDALE, CA
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER 200

4.6-12

Location of Barrier Wall

Palmdale Marketplace
City of Palmdale, California

Figure 4.6-4

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- *Use of speed bumps in the truck access areas is prohibited.*
- *Signs shall be used to control truck and other vehicle speed. Signs shall be used to limit use of horns and yelling at loading docks. No paging or radio systems shall be utilized at the south and west property lines.*
- *All doors along the north, south, and west property lines shall be closed when not in use.*
- *Wall materials shall be constructed of a decorative masonry or concrete block, or any other material with a surface weight of 4 pounds per square foot. No gaps or openings are permitted. All gaps are to be sealed.*
- *Post signs to turn off truck engine when not in use or necessary.*

Level of Significance After Mitigation

Implementation of Mitigation Measures for Impact NOI-1 would reduce potential significant impacts to a less than significant level.

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4.7 TRAFFIC AND CIRCULATION

4.7.1 Introduction

This section of the EIR summarizes the results of a Traffic Analysis Report entitled *Revised Traffic Analysis Report for the Proposed Palmdale Marketplace, Palmdale, California,* prepared by Minagar & Associates, Inc., July 14, 2006. Included in this section is a description of the existing circulation system that would provide access to and from the project site; identification of standards of significance; impact analysis; and recommendation of mitigation measures to reduce any potentially significant impacts to less than significant levels. The Traffic Analysis Report is included in Appendix F.

4.7.2 Environmental Setting

The proposed project is for the development of approximately 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres. The proposed project is located north of Avenue R, west of 47th Street East (SR 138) and east of 45th Street East. The applicant proposes to construct six (6) major retail structures that may include a home improvement center and an upscale discount retailer, four shops and eight general commercial land uses.

Existing Street System

Regional Access

The Antelope Valley Freeway (SR 14) provides regional access to the project site from the west. Pearblossom Highway (SR 138) provides regional access to the project site from the east. State Route-14 links the cities of Palmdale and Lancaster with the greater metropolitan areas of Los Angeles County and SR 138 provides commerce with San Bernardino County to the east.

Local Access

A number of streets provide local access. These are:

47th Street East is classified as a regional arterial serving north- and southbound traffic beginning at 50th Street East and ending at Avenue S. It is a portion of SR 138 (Pearblossom Highway) with two through lanes on both directions of travel. The two signalized intersections at Avenue R and Avenue R-8 are currently operating with one left turn and two through lanes for north- and southbound approaches. Avenue R-8 and 47th Street has two through lanes at both east- and westbound approaches, and Avenue R and 47th Street East has one left and one through lanes at the eastbound approach and one left, two through and one right turn lanes at the westbound approach. The signalized intersection of 47th Street East and Avenue S has two left turn lanes and two through lanes for each of the east and west bound approaches. The northbound approach has an additional right turn lane. The north and southbound approaches have two left turn lanes and two through lanes and a right turn lane. Each of the four corners of the target intersection has two street lights with traffic signals attached. The southwest corner of this intersection is currently under construction for the Tom's Restaurant project.

SUPPLEMENTED

State Route 138 is classified as a regional arterial across the city, and merges with 47th Street East from Fort Tejon Road to Palmdale Boulevard, traverses along Palmdale Boulevard, then merges onto SR 14. The intersection at 47th Street East and Palmdale Boulevard is a signalized "T" intersection with two left turn lanes detoured from southbound 47th Street East merging back onto 47th Street East (see Figure 4.7-1). The intersection of SR 138 (Palmdale Blvd.) and 40th Street East is signalized. This intersection has one left turn lane for each of the four approaches. The east- and westbound approaches have two through lanes. The north- and southbound approaches each has one through lane, and an additional right turn lane for the northbound approach.

Palmdale Boulevard is classified as a major arterial serving east- and westbound traffic across the City. Palmdale Boulevard westbound merges with SR 138 right after the intersection with 47th/50th Street East, where it changes from a one lane per approach to a two lanes per approach arterial. The intersection at 47th/50th Street East is now operating as an unsignalized all-way stop intersection with one through lane at each of the four approaches. The merging traffic from Palmdale Boulevard onto SR 138 is also controlled by a stop sign.

Avenue R is classified as a major arterial serving east- and westbound traffic. The intersection of Avenue R and 40th Street East is a signalized intersection with one left turn lane on each of the four approaches. The east-, west-, and southbound approaches each has a right turn lane and a through lane. The northbound approach has two through lanes. The intersection of Avenue R and 55th Street East is now operating as an unsignalized two-way stop intersection for the north- and southbound approaches. Each of the four approaches has one left turn lane and one through lane, with an additional right turn lane for the northbound approach.

Avenue R-8 is classified as a secondary arterial serving east- and westbound traffic. The intersection of Avenue R-8 and 55th Street East is now operating as an unsignalized four-way stop intersection with one left turn lane and two through lanes at each of the four approaches.

Existing Volumes

The analysis of traffic conditions takes place during peak hour periods. These periods are when changes to the utilization of the transportation infrastructure are most significant. The same peak AM and PM were utilized in order to maintain uniformity of existing traffic conditions. The traffic counts for all the intersections were collected by Minagar and Associates, Inc. during the month of January 2006 between 6:30-9:30 AM and 3:00-6:00 PM. To be consistent, one hour peak volume duration was used in all the intersection performance analyses.

The existing intersection performance is measured by its Level of Service (LOS). The LOS indicates the operational condition of an intersection during a given time period. LOS is measured on a scale of "A" to "F", with "A" representing excellent operating conditions and "F" representing extremely congested conditions (see Table 4.7-1).

SUPERSEDED

Table 4.7-1
Level of Service Description

Level of Service	Traffic Description
A	Excellent, Light Traffic
B	Good, Light to Moderate Traffic
C	Moderate Traffic, Insignificant Delay
D	Heavy Traffic, Significant Delay
E	Severe Congestion and Delay
F	Failed, Indicates Levels Cannot be Handled

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

The City of Palmdale and Caltrans intersection LOS calculations have been calculated using the Highway Capacity Manual (HCM) 2000 which encompasses the computation of intersection delays and SYNCHRO. SYNCHRO involves the computation of "volume-to-capacity" (V/C) ratios and intersection delays for each critical movement.

Table 4.7-2 shows the relations between LOS and the performance measures for unsignalized intersections.

Table 4.7-2
Level of Service for Unsignalized Intersection Traffic Control

Unsignalized Intersections	
Level of Service	**Average Control Delay (Second/Vehicle)**
A	0 - 10
B	10 - 15
C	15 - 25
D	25 - 35
E	35 - 50
F	50 -

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

Table 4.7-3 displays the relationship between LOS and the performance measures for signalized intersection. A LOS "C" is considered as adequate, and a LOS "D" is considered acceptable for a short time during peak hours.

SUBMITTED

Table 4.7-3
Level of Service for Intersection Traffic Controls

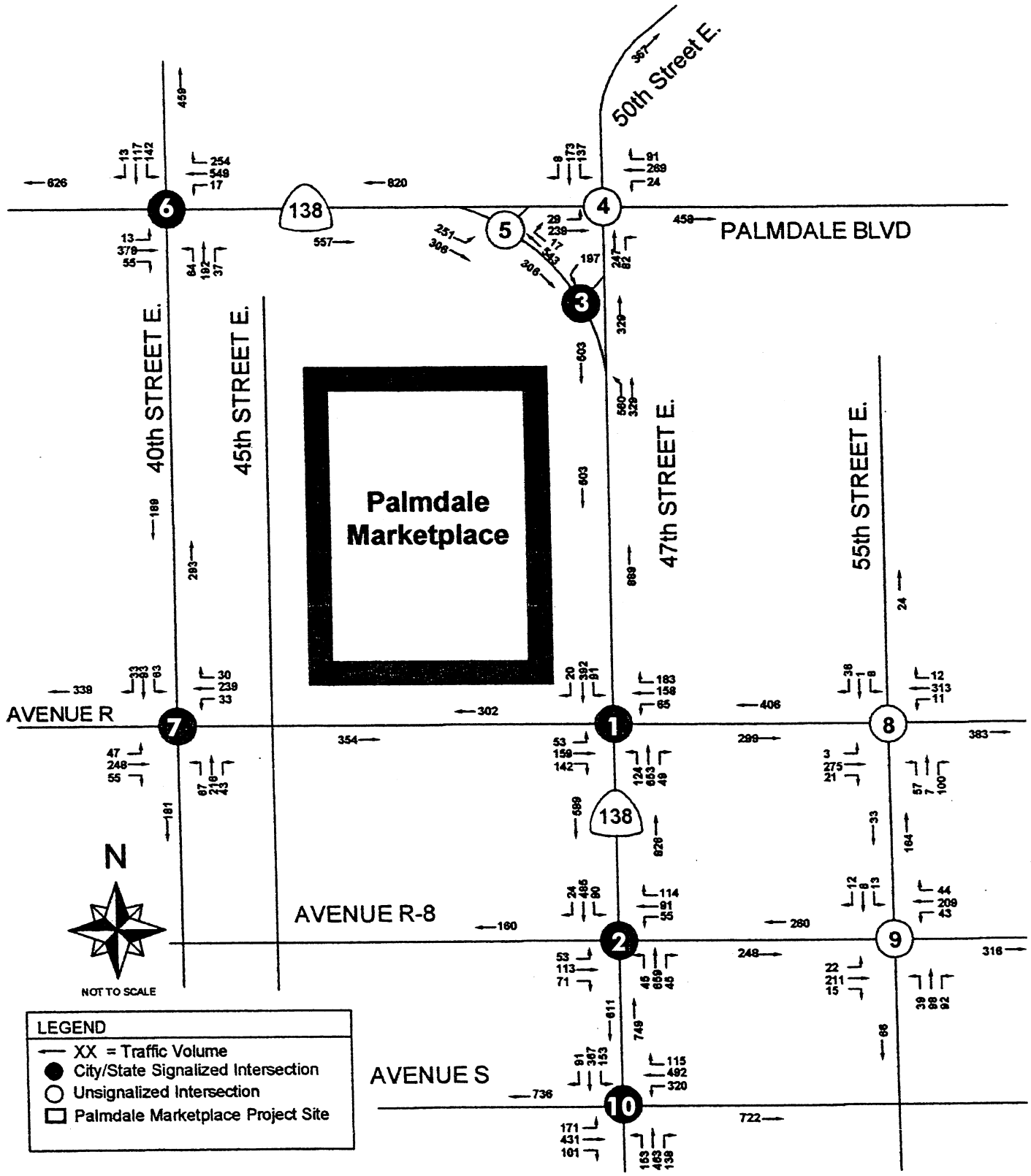
Signalized Intersection		
Level of Service	**Traffic Flow Characteristics**	**Average Control Delay (Seconds/Vehicle)**
A	Extremely favorable progression with very low control delay. Most vehicles arrive during the green phase and do not stop.	0 - 10
B	Good Progression and short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay	10 - 15
C	Satisfactory operation with fair progression and longer cycle lengths. Individual cycle failures may begin to appear. A significant number of vehicles stop but many pass through without stopping.	15 - 25
D	Tolerable delay where congestion becomes more noticeable and many vehicles stop. The proportion of vehicles not stopping declines. Individual cycle failures are noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios.	25 - 35
E	Unstable flow with poor progression, frequent cycle failures, long cycle lengths and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay by many agencies.	35 - 50
F	Oversaturation with arrival flow rates exceeding the capacity of the intersection and many individual cycle failures. Poor progression and long cycle lengths as well as high V/C ratios occur at LOS F. Considered unacceptable to most drivers.	50 -

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

The existing AM and PM peak hour traffic volume are shown on Figures 4.7-1 and 4.7-2 respectively. The results of intersection capacity assessments for the existing traffic volumes are shown on Table 4.7-4.

Based on the existing peak hour traffic volumes of the intersections, all the intersections are operating at LOS "C" or better, except for the unsignalized intersection of Palmdale Boulevard and 47th/50th Street East that is operating at LOS "E" during the AM peak hour and LOS "F" during the PM peak hour.

SUPERSEDED



Source: Minagar & Assoc., Inc., 06/06.

2006 Existing Traffic Volumes AM Peak Hour

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-1

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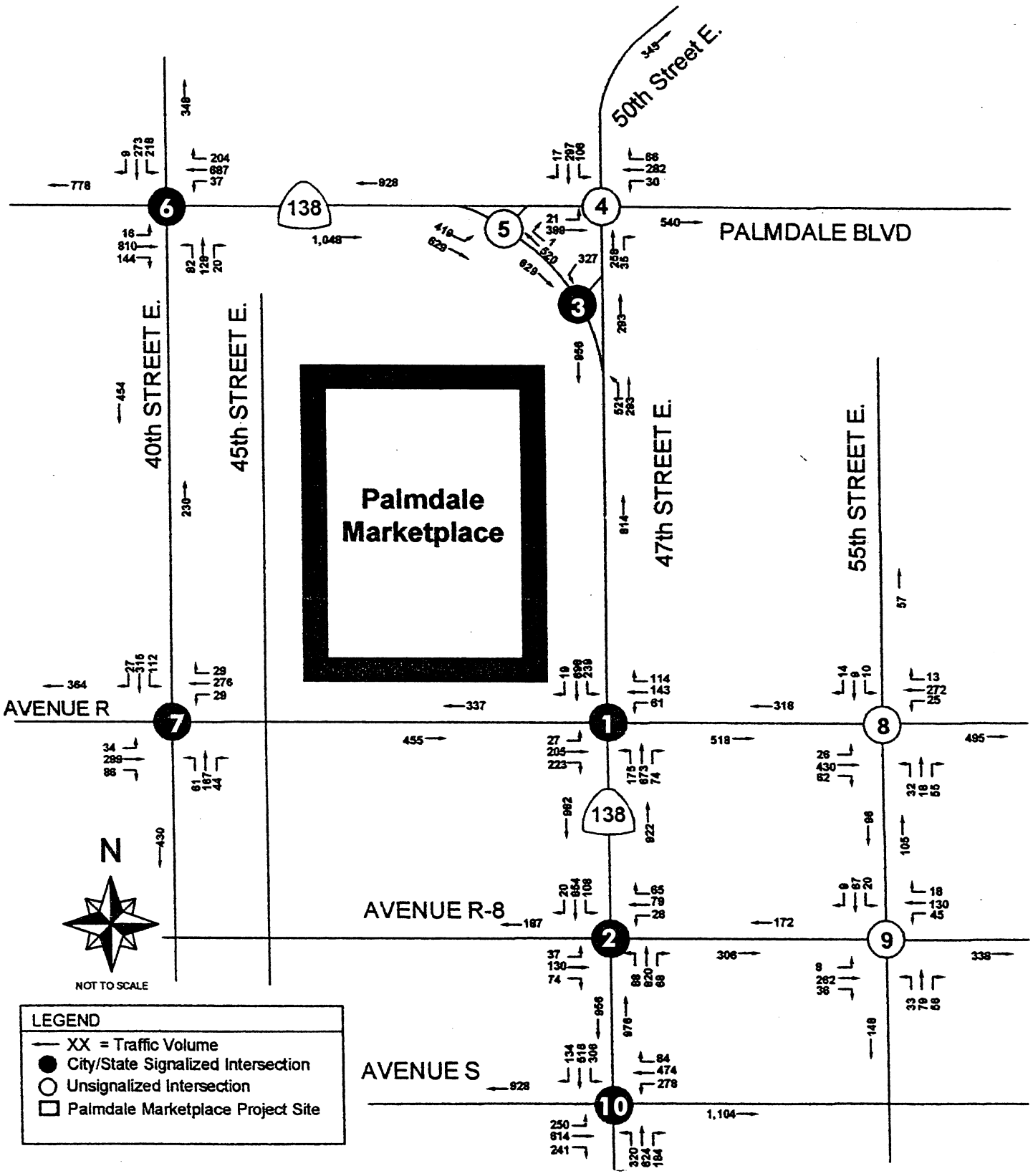


Source: Minagar & Assoc., Inc., 06/06.

2006 Existing Traffic Volumes PM Peak Hour

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-2

LILBURN CORPORATION

Table 4.7-4
Existing Level of Service Analysis (Year 2006)

Intersection	Year 2006					
	AM			PM		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th Street East @ Avenue R	A	0.48	9.9	A	0.64	9.8
2. 47th Street East @ Avenue R-8	A	0.31	8.0	A	0.37	9.5
3. 47th Street East @ SR-138	B	0.44	17.0	C	0.61	21.9
4. Palmdale Blvd. @ 47th/50th Street East[1]	E	N/A	N/A	F	N/A	N/A
5. Palmdale Blvd. @ SR-138[1]	A	N/A	N/A	A	N/A	N/A
6. Palmdale Blvd. @ 40th Street East	B	0.50	14.8	B	0.62	18.0
7. Avenue R @ 40th Street East	C	0.47	23.4	C	0.59	24.4
8. Avenue R @ 55th Street East[1]	A	N/A	N/A	A	N/A	N/A
9. Avenue R-8 @ 55th Street East[1]	A	N/A	N/A	A	N/A	N/A
10. Avenue S @ 47th Street East	C	0.58	26.3	C	0.82	32.7

[1]Unsignalized Intersections
N/A: Not Applicable
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

PRELIMEN

Project Traffic Generation

The proposed project is located on the northwest corner of 47th Street East and Avenue R. The Palmdale Marketplace project will include new structures occupying a total space of approximately 530,000 square feet. The proposed land uses for the Palmdale Marketplace project include different types of land utilization which is generalized as a shopping center. The building areas are shown on Table 4.7-5.

Table 4.7-5
Square Footage Tabulation of Marketplace Project

Building	Land Use	Total Area (S.F.)
All Buildings	Shopping Center	530,000

The *ITE Trip Generation Manual, 7th Edition* was utilized in order to estimate the number of trips that begin or end at the individual project sites. The manual is used to estimate the probable traffic generation rates for a range of land uses based upon studies and surveys of existing developments in comparable settings.

Based on the ITE trip generation rates, percent of arrival and departure during AM, PM, Weekday and Weekends were all estimated. These trip generation numbers are adjusted with a 25 percent reduction rate due to pass-by trips based upon the available national data for the similar facilities and setting and per the approval of the City of Palmdale. A 25 percent reduction rate is conservative as the ITE Trip Generation Handbook, June 2004, Chapter 5, Table, 5.6, Pages 42-46; the national average pass-by trip percentage is 34 percent.

After reduction, the project will generate a total of 19,816 vehicles during Saturday, 9,374 vehicles during Sunday, 15,058 vehicle trips on a weekday, and 320 vehicles per hour (VPH) and 1,411 VPH during the AM and PM peak hours respectively for the buildout year 2007.

Project Trip Distribution and Assignment

Trip distribution is the process which identifies the routes and directions the project traffic will utilize to and from the project site. Existing trip distribution patterns were all considered in order to assign the generated trips to the surrounding roadway systems. The trip distribution for the project is shown on Figure 4.7-3 for the buildout year 2007 scenarios. The percentages of trip distribution were derived from the existing trends and future computer demand forecasting of the City of Palmdale. Trip demand was approved by the City of Palmdale. Project traffic volumes are determined by applying the trip distribution percentage to the estimated trip generation. Figures 4.7-4 and 4.7-5 depict the individual project traffic volumes for the AM and PM peak periods for the buildout year 2007 scenarios.

Parking

The City of Palmdale parking requirements per Zoning Ordinance, Chapter 8, Article 87, Off-Street Parking were utilized in analyzing the required parking spaces needed for the proposed project. According to the project's site plan, there will be a total of 2,431 parking spaces provided by the Palmdale Marketplace project. The parking demands for the project are tabulated on Table 4.7-6.

Table 4.7-6
Parking Demand Based on City of Palmdale Parking Requirements

Project	Bldg. Area (S.F.)	Total Parking Demand	Standard & Compact Parking Provided	Handicapped Parking Provided	Total Parking Provided
Palmdale Marketplace	530,000	2,112[1]	2,339	92	2,431

1 – Per City of Palmdale Zoning Ordinance, Chapter 8, Article 87, Off-Street Parking
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

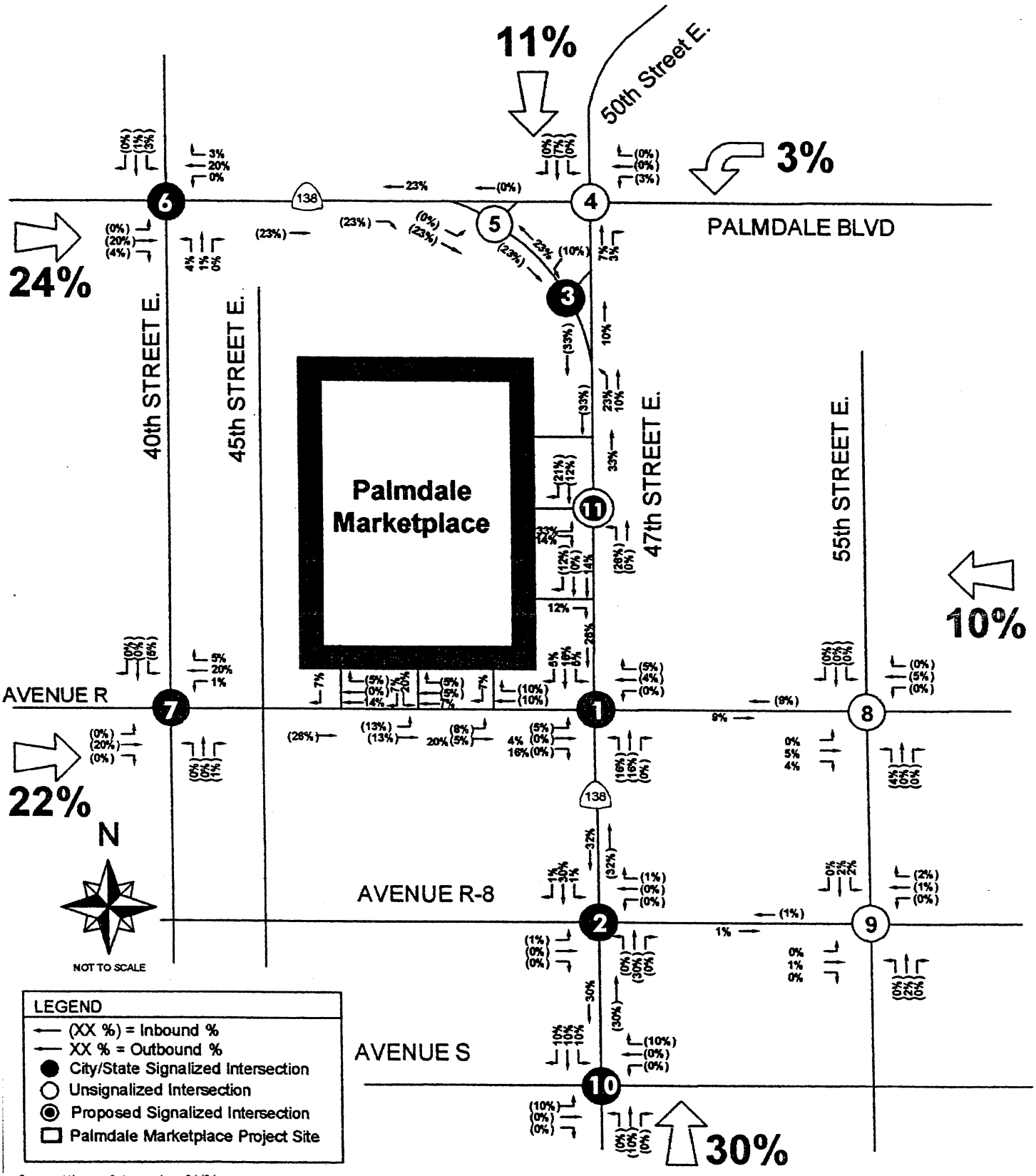
4.7.3 Impacts and Mitigation Measures

Thresholds of Significance

The proposed project would result in a significant impact to transportation/circulation if the following occurs:

- Will the traffic generated by this project cause a reduction of Level of Service at an intersection or on a street segment to LOS "E" or lower?
- Does circulation within the project prevent the safe and orderly flow of people and vehicles, including emergency vehicles?

SUPPLEMENTAL



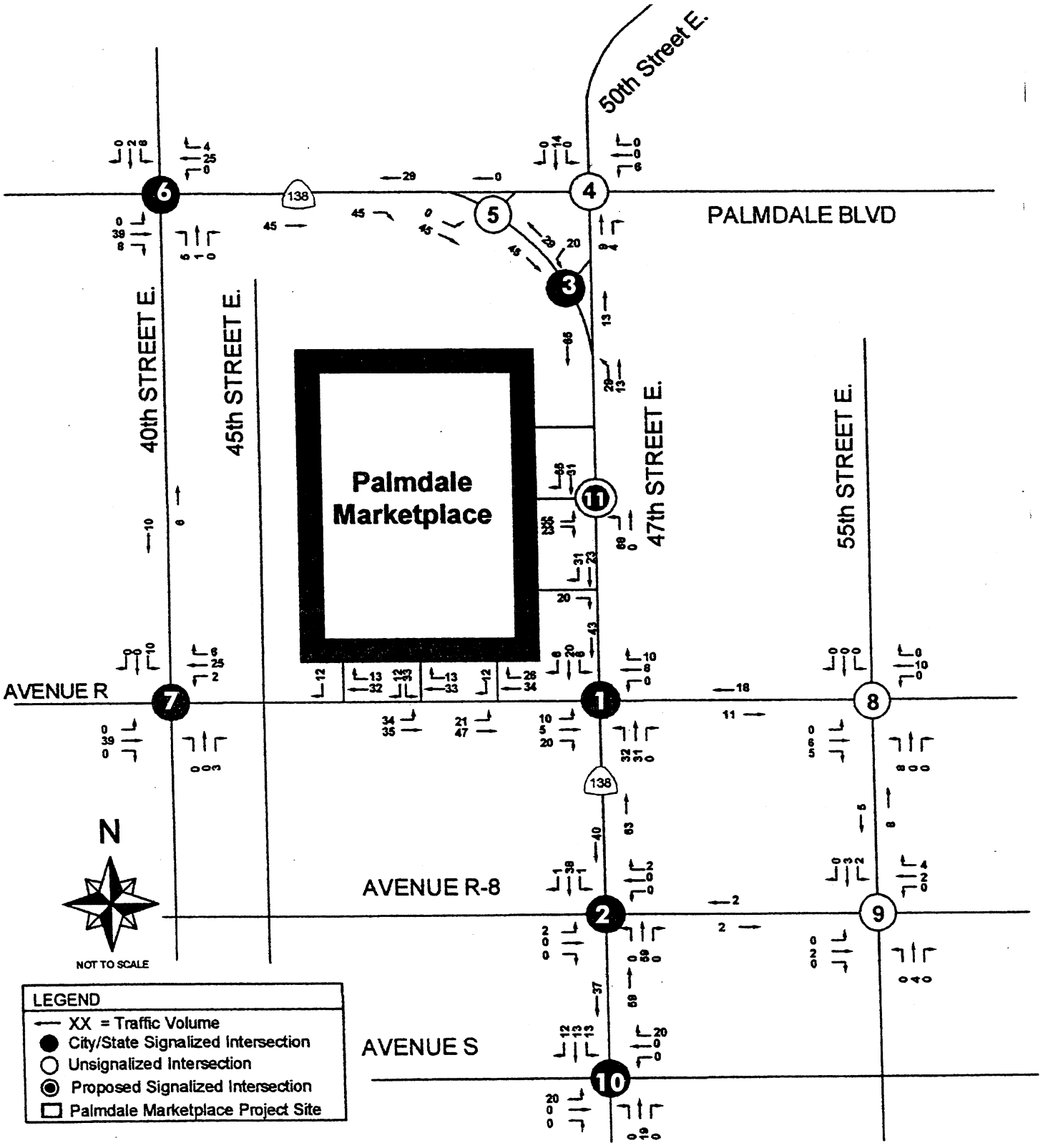
Source: Minagar & Assoc., Inc., 06/06.

Project Trip Distribution Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-3

LILBURN CORPORATION



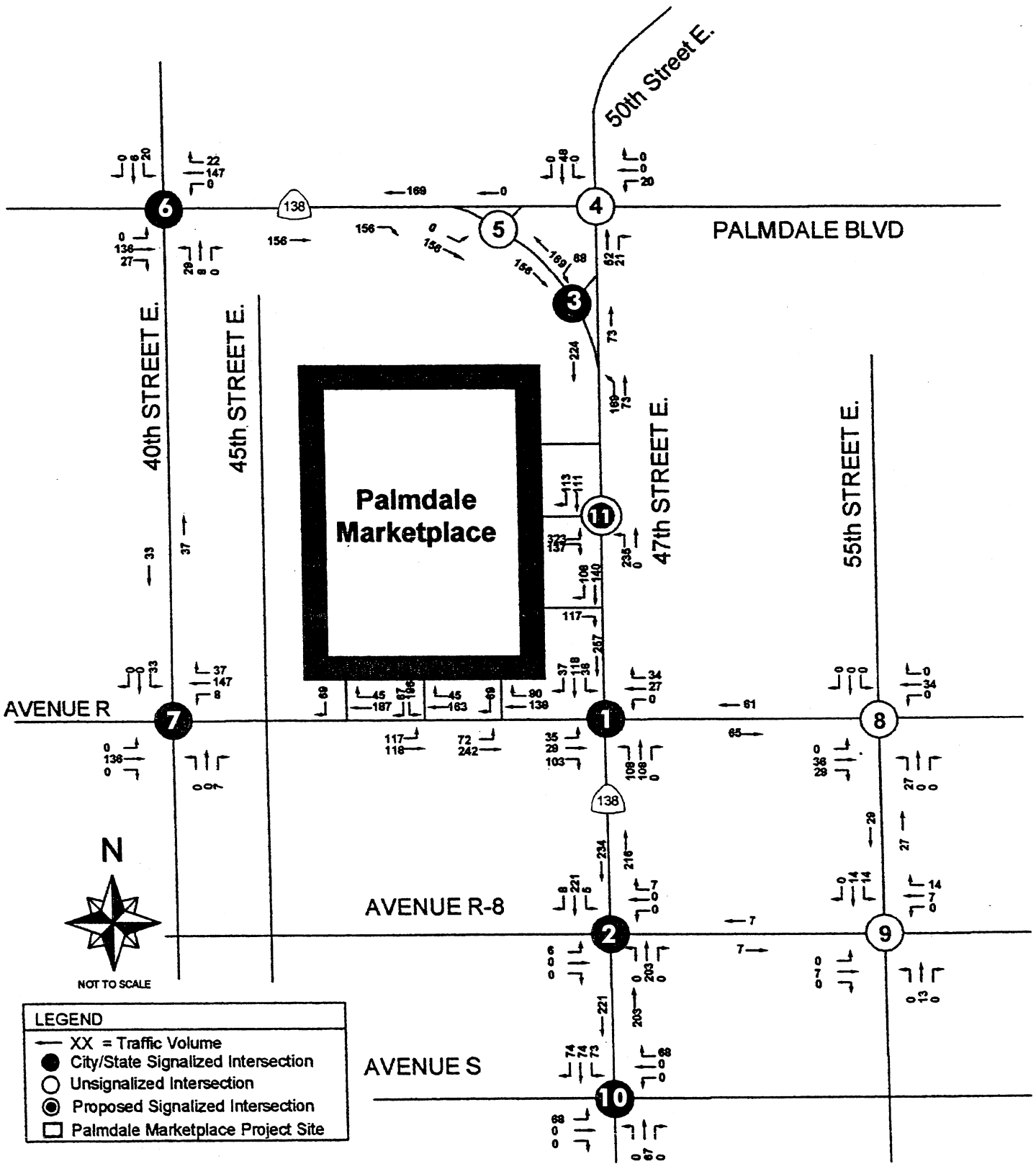
Source: Minagar & Assoc., Inc., 06/06.

Traffic Volumes AM Peak Hour Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-4

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 06/06.

Traffic Volumes PM Peak Hour Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-5

LILBURN CORPORATION

- Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?
- Could the project result in a significant alteration to rail or air traffic?
- Will the project create a significant shortage of parking?

As requested by the City of Palmdale and the California Department of Transportation (Caltrans), the proposed project was examined for compatibility with the City's long range plans as well as the State's future plans within the study area.

Impacts Determined to have No Impact

Could the project result in a significant alteration to rail or air traffic?

The proposed project is not anticipated to alter rail or air traffic. The Palmdale Airport is located approximately 1½ miles north of the site and the Union Pacific Railroad is located approximately seven miles west of the site. No impact is anticipated.

Impacts Determined to be Less Than Significant

Will the project create a significant shortage of parking?

Palmdale Marketplace, when constructed, will provide approximately 2,431 parking spaces. 2,112 parking spaces are required per the City of Palmdale Zoning Ordinance, Chapter 8, Article 87, Off-Street Parking. Table 4.7-7 shows the parking spaces provided for each use. Therefore, impacts to parking are not anticipated based on the project's design

Does circulation within the project prevent the safe and orderly flow of people and vehicles, including emergency vehicles?

The proposed project is not anticipated to create hazards due to design features (e.g., sharp curves, etc.) as the developer will be required to comply with Conditions of Approval set by the City of Palmdale.

Impact Analysis

Impact TC-1

The proposed project would increase vehicle trips, and affect the level of service along arterial roadways and intersections. This would be a significant impact to existing road segments and intersections in the region.

SUPPLEMENTED

Table 4.7-7
Parking Spaces for the Marketplace Project

User		Ratio Required	Spaces Required	Spaces Provided	Ratio Provided
Q1	Major 1	4/1000	691	825	4.8
	GC	1/1000	11	11	1.02
Q2	Major 2	4/1000	91	90	3.96
	Major 3	4/1000	133	126	3.77
	Major 4	4/1000	117	97	3.32
	PAD 7	4/1000	41	42	4.12
Q3	Major 5	4/1000	460	567	4.2
	GC	1/1000			
	H.P.E.	4/1000			
	PAD 8	4/1000	41	60	5.88
Q4	PAD 1	10/1000	35	38	10.13
	PAD 2	10/1000	77	77	10
	Shops 1	4/1000	3.59	69	3.59
	Shops 2	4/1000			
Q5	PAD 3	10/1000	35	35	9.92
	PAD 4	10/1000	100	94	10
	Shops 3	4/1000	78	76	4.31
	Shops 4	4/1000			
Q6	PAD 5	5/1000	20	41	10
	PAD 6	4/1000	16	39	9.75
	Major	4/1000	88	144	6.61
Total			**2,112**	**2,431**	**4.69**

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

SUPPLEMENTED

Future Traffic Conditions

Growth Factor

Future traffic volumes for years 2015 and 2025 were based on discussions with the City of Palmdale Traffic Division and data from the following Caltrans report:

Traffic Analysis Report, 07-LA-138 KP 76.0/78.8 (PM 47.8/49.0) 07-185-23960K prepared by the Feasibility Studies Branch of the Office of Environmental Engineering & Feasibility Studies (OEEFS). Collection of technical data and analysis was in collaboration with the City of Palmdale, Caltrans' Offices of Traffic Investigations & Regional Planning using the Los Angeles Regional Transportation System (LARTS) model. The aforementioned Traffic Analysis Report was prepared as a technical supplement to the Project Study Report.

Based on traffic forecast data projected by Caltrans and existing traffic volumes, an average growth factor of 3.8 percent was used for the years 2006 to 2025 in this traffic analysis. The Caltrans growth factor was approved by the City of Palmdale. The existing traffic volumes were

compounded annually to obtain traffic volumes for the existing and buildout year 2007, as well as the future years 2015 and 2025 as requested by the City and Caltrans.

Related Projects

The southwest and southeast corners of the intersection of 47th Street East and Avenue R have also been proposed for development. Tom's Restaurant and Rite Aid #5844-05 include the following land uses and sizes (see Table 4.7-8):

Table 4.7-8
Square Footage Tabulation of Tom's Restaurant #27 Project
And Rite Aid #5844-05 Project

Project	Land Use	Total Area (S.F.)
Tom's Restaurant #27	Fast Food Restaurant with Drive Through Retail Shops	38,495
Rite Aid #5844-05	Drug Store with Drive Through, Retail Shops, Fast Food Restaurant with Drive Through	35,372
Total		**73,867**

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

Based on the sizes and land uses set forth above, the total trip generation for both projects is anticipated to generate 478 VPH in the AM peak hour and 585 VPH in the PM peak hour. The trip assignment of the two projects is shown on Figure 4.7-6 for the AM peak hour and Figure 4.7-7 for the PM Peak hour.

As both projects are anticipated to be built-out by year 2007, they have been incorporated into the cumulative background traffic prior to the Palmdale Marketplace project scenarios. The total AM and PM peak hours background traffic expected for buildout year 2007, including the traffic volumes generated by Tom's Restaurant Project and Rite Aid Project, are shown in Figure 4.7-8 and Figure 4.7-9.

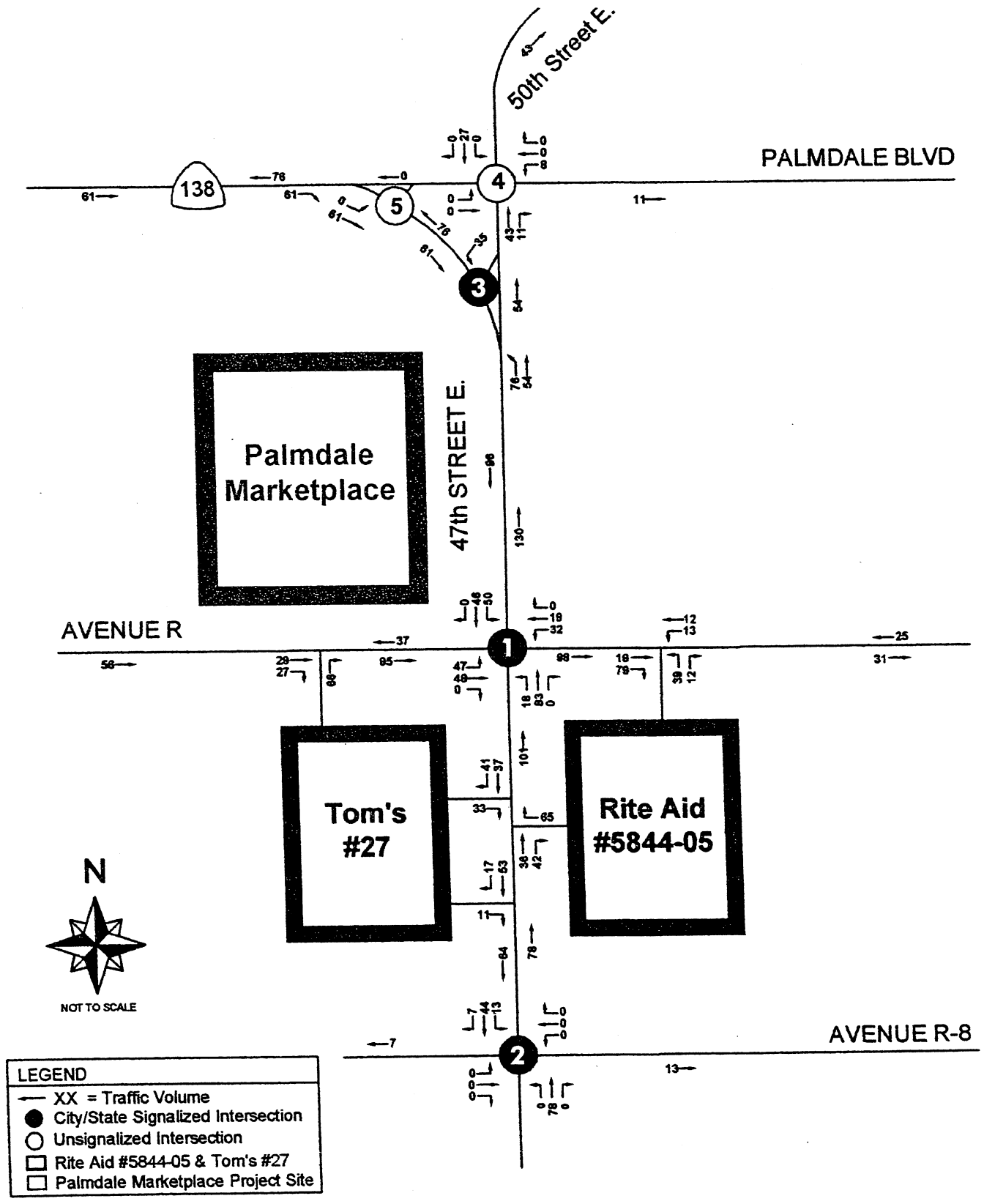
The mitigation measures required during the approval process for these projects (i.e., to bring the LOS to an acceptable level) for the aforementioned two projects' impacts include geometry improvements and adding lanes to Avenue R and 47th Street East.

Cumulative Traffic and Palmdale Marketplace Project Traffic (Prior to Issuance of First Certificate of Occupancy within the Project)

The combination of background traffic volumes, including cumulative projects, the existing volumes, and the Palmdale Marketplace project volumes, resulted in the cumulative traffic volumes for the buildout year 2007.

The total volumes for the AM and PM peak periods for buildout year 2007 are shown on Figures 4.7-10 and 4.7-11 respectively.

SUPPLEMENTED



Source: Minagar & Assoc., Inc., 06/06.

Traffic Volumes AM Peak Hour Buildout Year 2007
Rite Aid #5844-05 and Tom's #27 Developments

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-6

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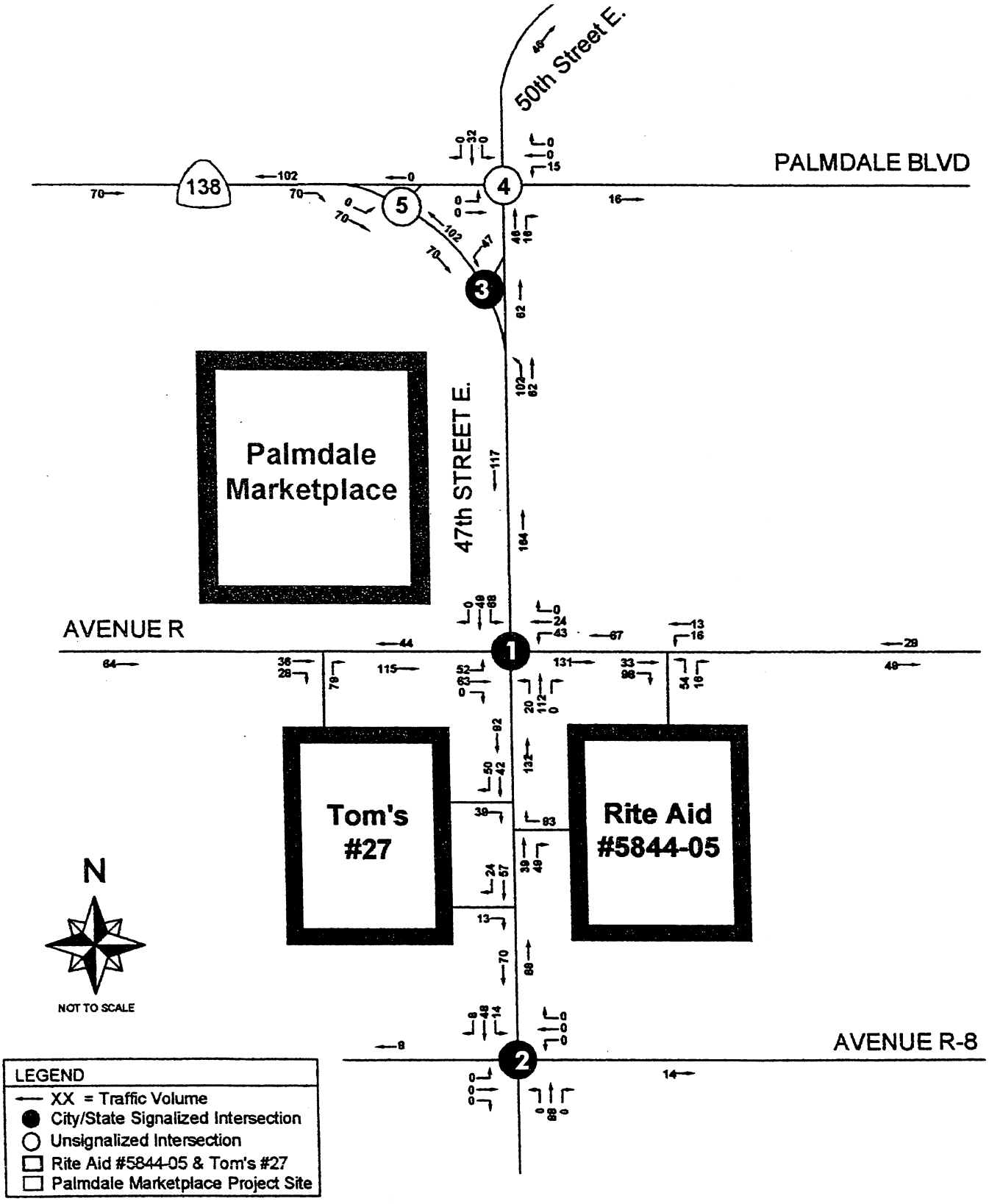


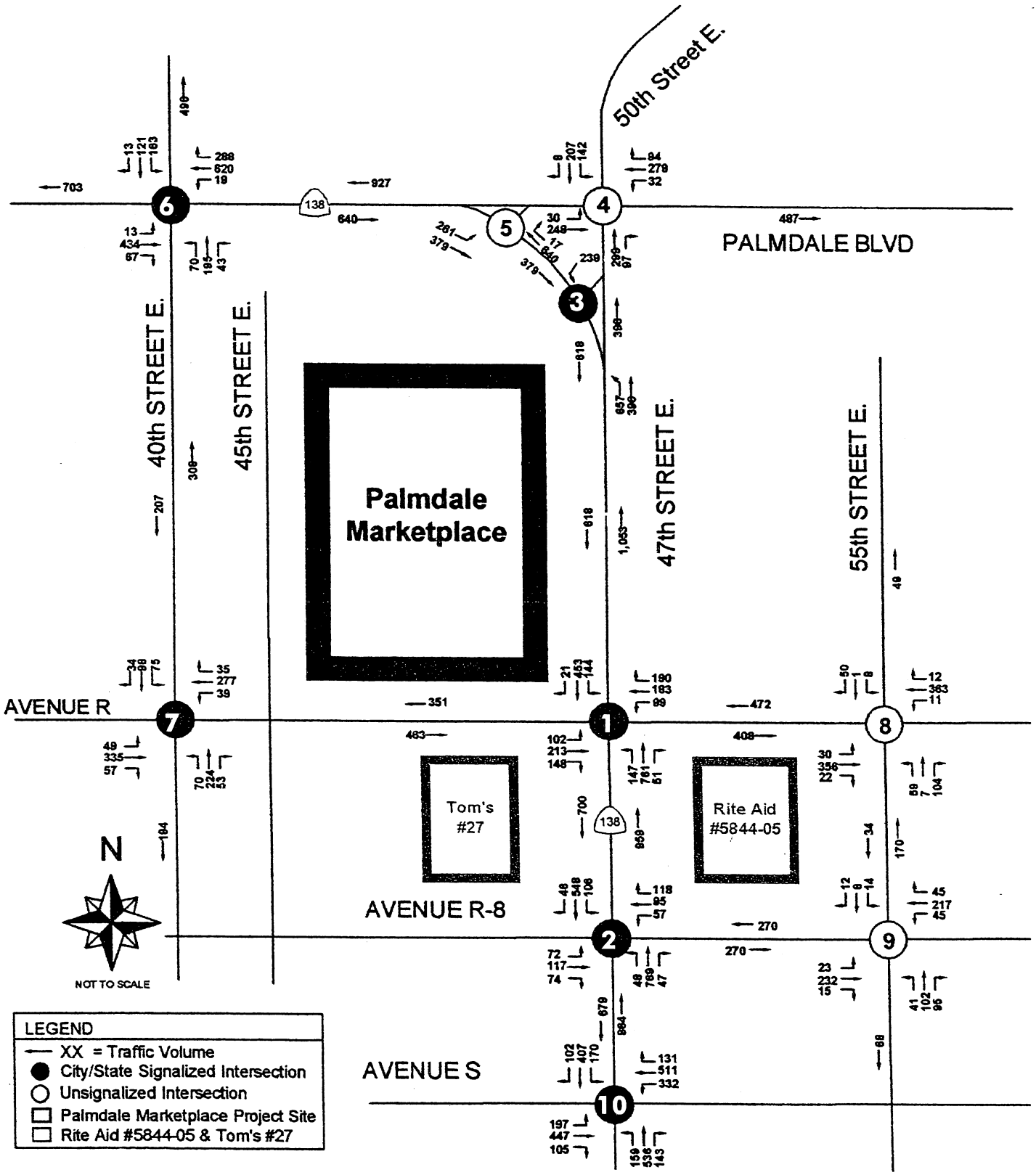
Source: Minagar & Assoc., Inc., 06/06.

Traffic Volumes PM Peak Hour Buildout Year 2007
Rite Aid #5844-05 and Tom's #27 Developments

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-7

LILBURN CORPORATION



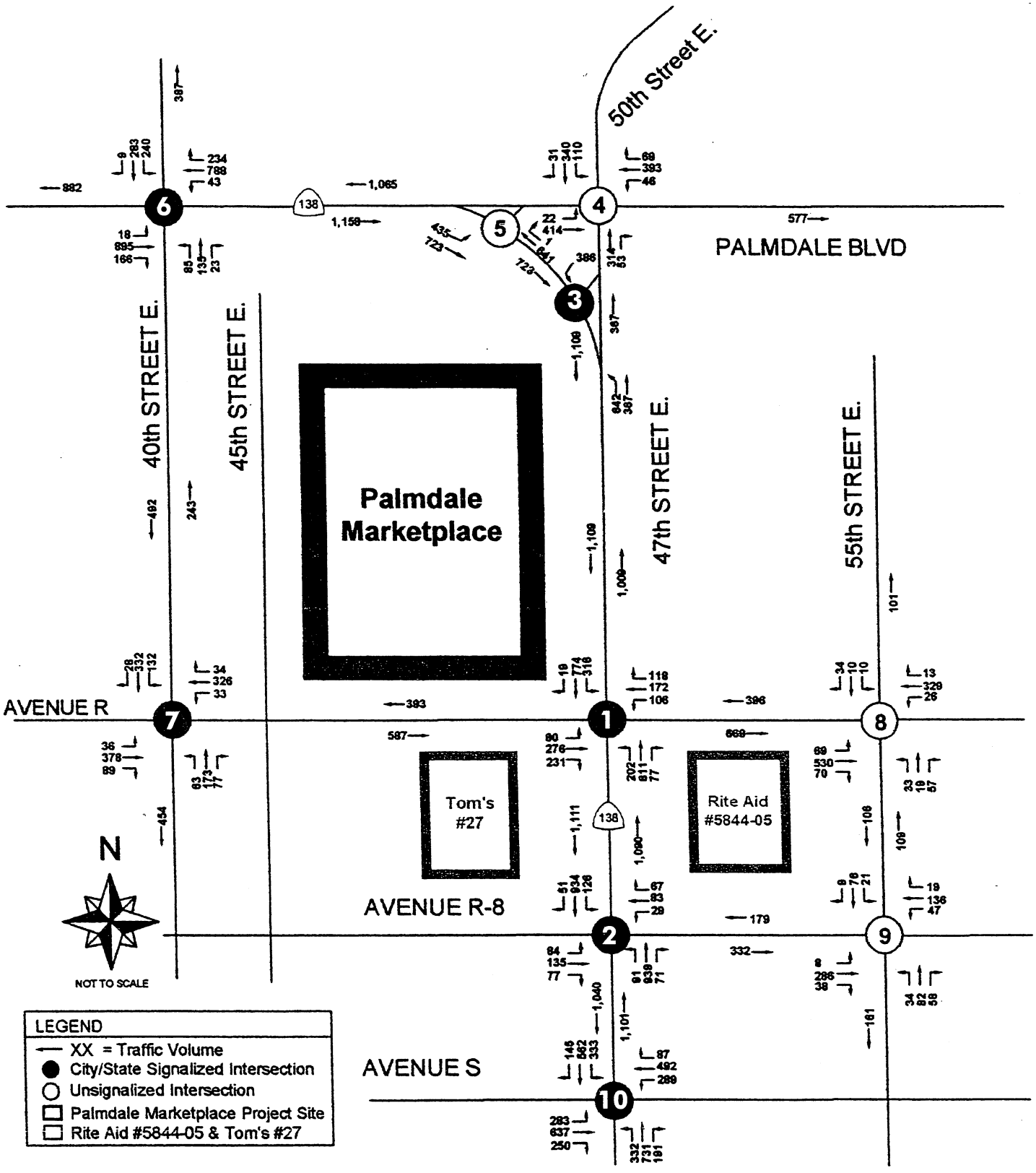
Source: Minagar & Assoc., Inc., 06/06.

Projected AM Traffic Volume Without Project Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-8

LILBURN CORPORATION



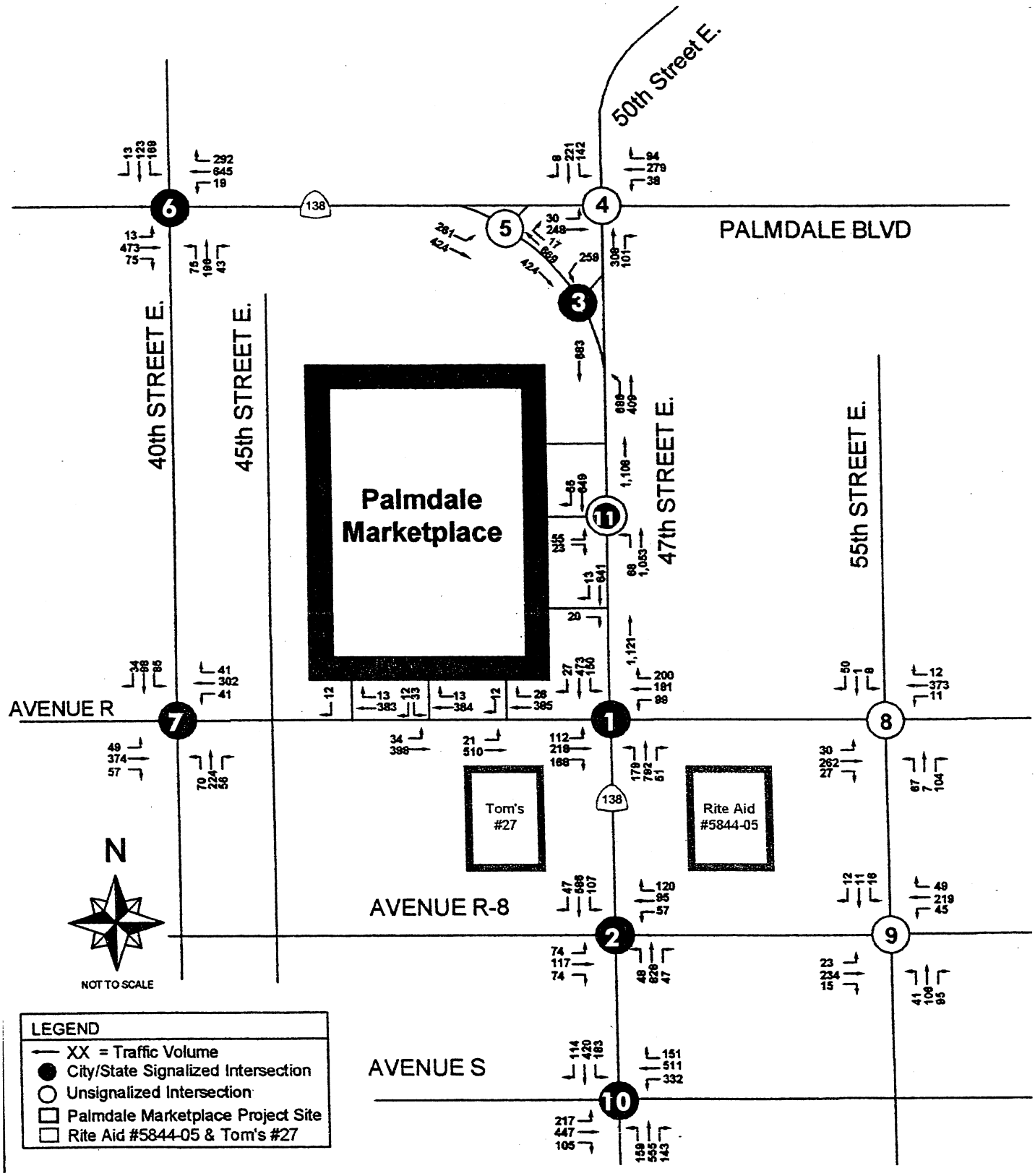
Source: Minagar & Assoc., Inc., 06/06.

Projected PM Traffic Volume Without Project Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-9

LILBURN CORPORATION



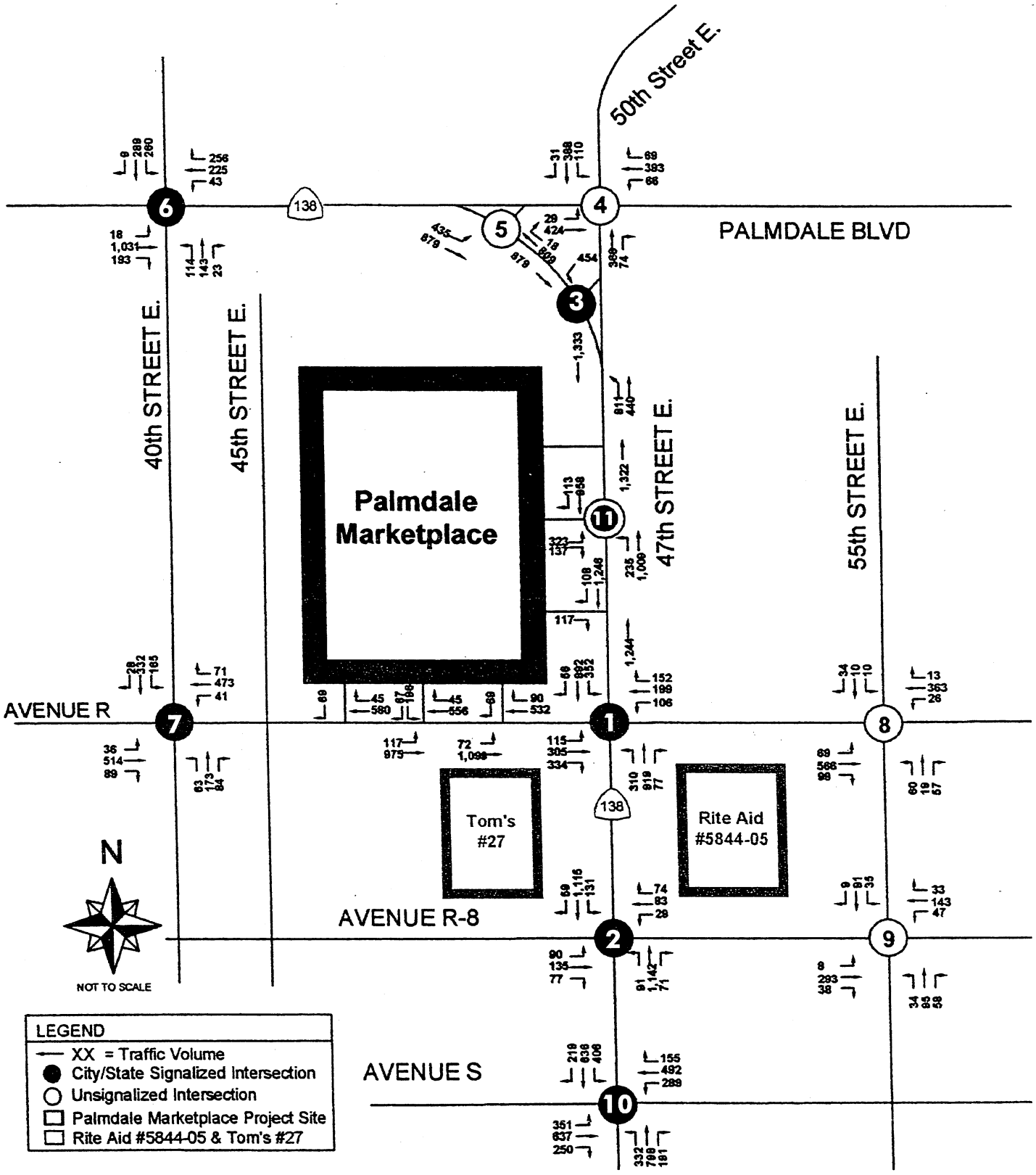
Source: Minagar & Assoc., Inc., 06/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes AM Peak Hour 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-10

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 06/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes PM Peak Hour 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-11

LILBURN CORPORATION

The intersection capacity assessments for cumulative traffic for year 2007 buildout are shown on Table 4.7-9.

Table 4.7-9
Level of Service – Cumulative Total Traffic with Project Traffic[1]
(Buildout Year 2007)

Intersection	Year 2007											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St. E. @ Ave. R	B	0.62	10.1	**A**	**0.41**	**8.1**	C	1.17	34.7	**B**	**0.69**	**12.5**
2. 47th St. E. @ Ave R-8	A	0.39	8.6	A	0.39	8.6	B	0.65	10.8	B	0.65	10.8
3. 47th St. E. @ SR-138	B	0.57	19.2	B	0.57	19.2	C	0.84	29.1	C	0.84	29.1
4. Palmdale Blvd. @ 47/50th St. E. *	F	N/A	N/A	**B**	**0.76**	**12.8**	F	N/A	N/A	**C**	**0.93**	**25.8**
5. Palmdale Blvd. @ SR-138 *	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
6. Palmdale Blvd. @ 40th St. E.	B	0.53	15.9	B	0.53	15.9	C	0.73	22.0	C	0.73	22.0
7. Ave. R @ 40th St. E.	C	0.64	27.9	C	0.64	27.9	C	0.80	34.8	C	0.80	34.8
8. Ave. R @ 55th St. E. *	A	N/A	N/A	A	N/A	N/A	B	N/A	N/A	B	N/A	N/A
9. Ave. R-8 @ 55th St. E. *	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Ave. S @ 47th St. E.	C	0.66	28.5	**	**	**	D	0.90	40.6	**	**	**
11. New Marketplace Dr. @ SR 138 / 47th St. E.	A	0.39	5.3	A	0.39	5.3	B	0.50	11.1	B	0.50	11.1

*Unsignalized Intersection
** No feasible mitigation measure available due to R/W constraints.
N/A: Not Available
In bold with applied mitigation
[1]Analyses for signalized intersections were done in SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

With no mitigation, the intersection of Palmdale Boulevard and 47/50th Street East will be operating at LOS "F" for both the AM and PM peak hours. The intersection of Avenue S and 47th Street East will be operating at LOS "C" for AM peak hour and LOS "D" for PM peak hour. The remaining intersections will be operating at LOS "C" or better in both AM and PM peak hour periods for year 2007 buildout.

All intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigation at the above intersections except for Avenue S and 47th Street East (SR 138) during the PM peak hours. Due to existing right-of-way (R/W) constraints at this intersection, no feasible mitigation measure is available. (Note that R/W constraints are defined as R/W needed for mitigation but which is already developed.) If Caltrans does not pursue the roundabout, then the intersection of Palmdale Boulevard and 47th Street East/50th Street East should be signalized.

To evaluate any potential traffic impact of the proposed Palmdale Marketplace during the interim target year of 2008 (before the proposed Caltrans roundabout is constructed), LOS and capacity assessments were conducted for three intersections at Avenue R and 47th Street East, the new Palmdale Marketplace driveway at 47th Street East, and 47th Street East and SR 138. The approximate distance of 800 feet between the existing signalized intersection of SR 138 and 47th Street East and the proposed new Marketplace Driveway traffic signal at SR 138/47th Street

DRAFT

East does not create any traffic queue during the interim year of 2008 with proper signal synchronization. The LOS results show that the intersections shall operate at satisfactory LOS' with the exception of SR 138 at 47th Street East, which will operate at LOS "D" during the PM peak hour for the short interim. This intersection is included in the Caltrans proposed roundabout.

Mitigation Measures for Palmdale Marketplace
To be Constructed Prior to Issuance of First Certificate of Occupancy

Mitigation Measures TC-1 and TC-2

Avenue R and 47th Street East (SR 138)

- *Add one exclusive EBL*
- *Add one exclusive SBR*
- *Modify the Traffic Signal*
- *Add one exclusive SBT**
- *Add one exclusive SBL**
- *Add two exclusive WBT (subject to R/W availability)**
- *Add one exclusive WBL (subject to R/W availability)**
- *Add one exclusive WBR (subject to R/W availability)**
- *Add one exclusive NBT (subject to R/W availability)**
- *Add one exclusive NBR (subject to R/W availability)**
- *Modify the Traffic Signal**

Level of Significance After Mitigation

Avenue S and 47th Street East (SR 138) would operate at a LOS "D" during the PM peak hours. Due to existing right-of-way constraints at this intersection, no feasible mitigation measure is available and this impact would be considered an unavoidable, significant impact.

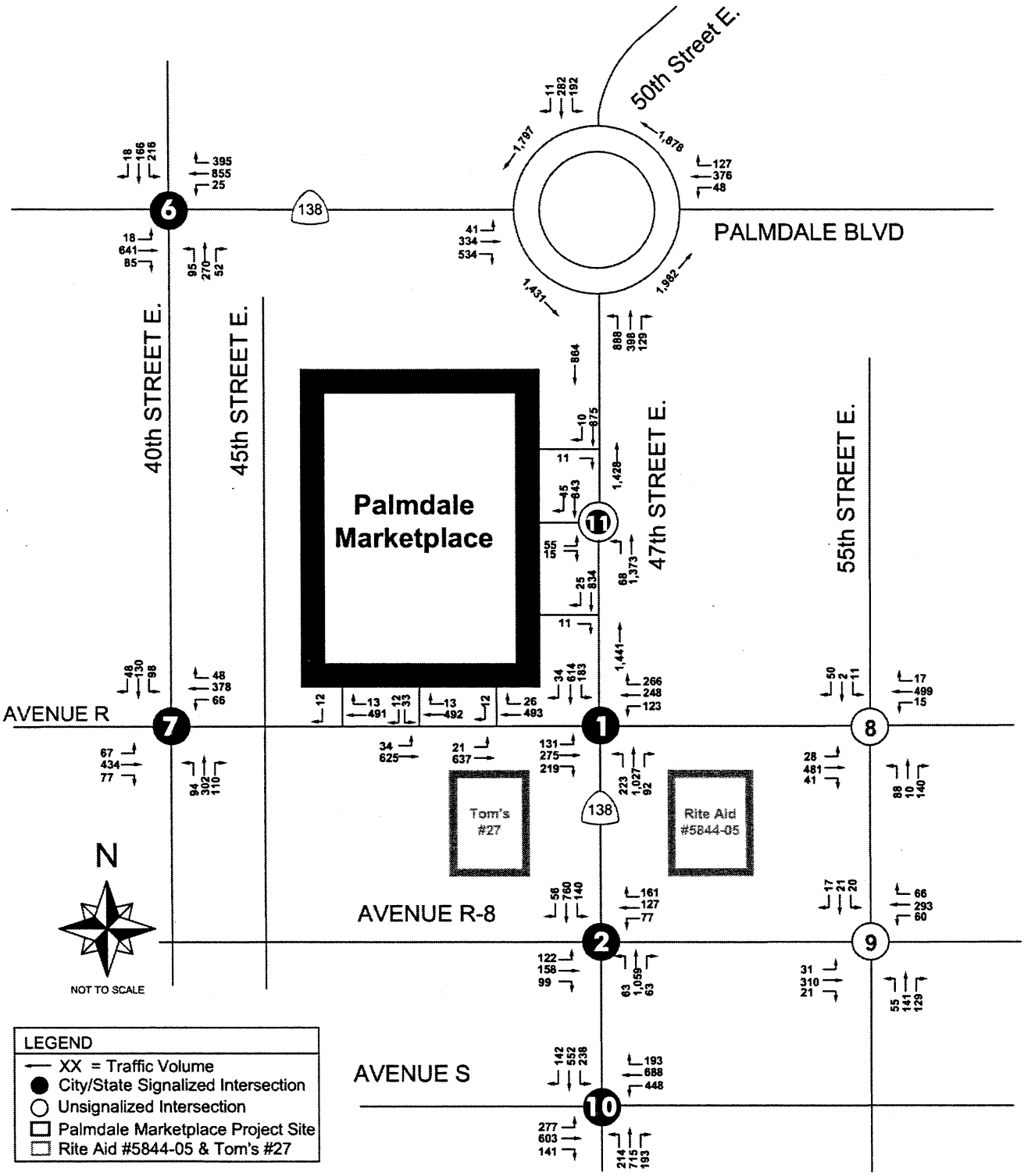
Cumulative Traffic and Marketplace Project

Future traffic volumes for the year 2015 were derived from the existing traffic volumes for the year 2006 then increased by using a 3.8 percent growth factor (project volumes were added). Figures 4.7-12 and 4.7-13 show the Cumulative Total Traffic with Project Traffic during the future year 2015 during the AM and PM peak periods, respectively.

Caltrans has proposed a roundabout to replace the existing three intersections, 47th/50th Street East at Palmdale Boulevard, Palmdale Boulevard at SR-138, and 47th Street East at SR 138 by the year 2008. For future year 2015 the proposed roundabout alternative was used for the traffic analysis. The analysis of the roundabout was prepared by using the methodology per Chapter 4 of "FHWA's Roundabouts: An Informational Guide".

SUPERSEDED

* Mitigation required by the Traffic Impact Analysis (Appendix F) as being necessary in 2015 has been accelerated to be required prior to issuance of the first Certificate of Occupancy.



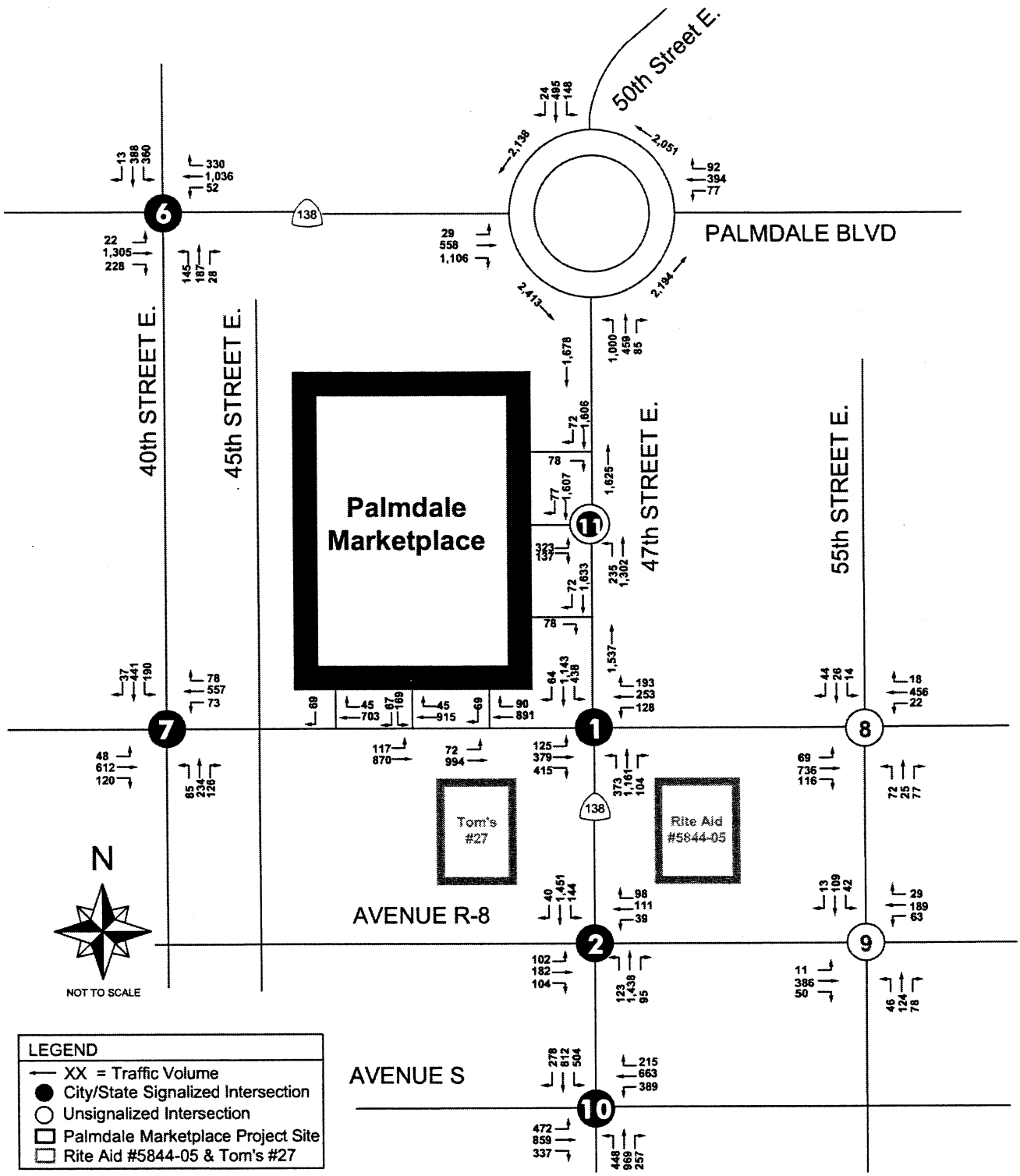
Source: Minagar & Assoc., Inc., 06/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes AM Peak Hour 2015

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-12

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 06/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes PM Peak Hour 2015

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-13

LILBURN CORPORATION

Intersection capacity assessments for Cumulative Total Traffic with Project Traffic during the future year 2015 with the Caltrans roundabout are shown on Table 4.7-10.

Table 4.7-10
Level of Service – Cumulative Total Traffic with Project Traffic[1]
(Future Year 2015 with Roundabout)

Intersection	Year 2015											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St. E. @ Ave. R	A	0.50	9.7	A	0.50	9.7	C	1.03	23.8	C	1.03	23.8
2. 47th St. E. @ Ave R-8	B	0.69	10.1	B	0.69	10.1	B	1.02	18.8	B	1.02	18.8
3. 47th St. E. @ SR-138 *	A	0.61	8.4	A	0.61	8.4	B	0.87	19.7	B	0.87	19.7
6. Palmdale Blvd. @ 40th St. E.	B	0.73	18.8	**B**	**0.64**	**15.4**	D	1.03	36.5	**C**	**0.85**	**25.3**
7. Ave. R @ 40th St. E.	D	0.74	35.7	**C**	**0.44**	**22.1**	D	0.89	50.5	**C**	**0.72**	**26.3**
8. Ave. R @ 55th St. E.	A	N/A	N/A	A	N/A	N/A	C	N/A	N/A	C	N/A	N/A
9. Ave. R-8 @ 55th St. E.	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Ave. S @ 47th St. E.	D	0.86	36.5	**	**	**	E	1.06	79.8	**	**	**
11. New Marketplace Dr. @ SR 138 / 47th St. E.	A	0.36	4.8	A	0.36	4.8	B	0.66	12.5	B	0.66	12.5

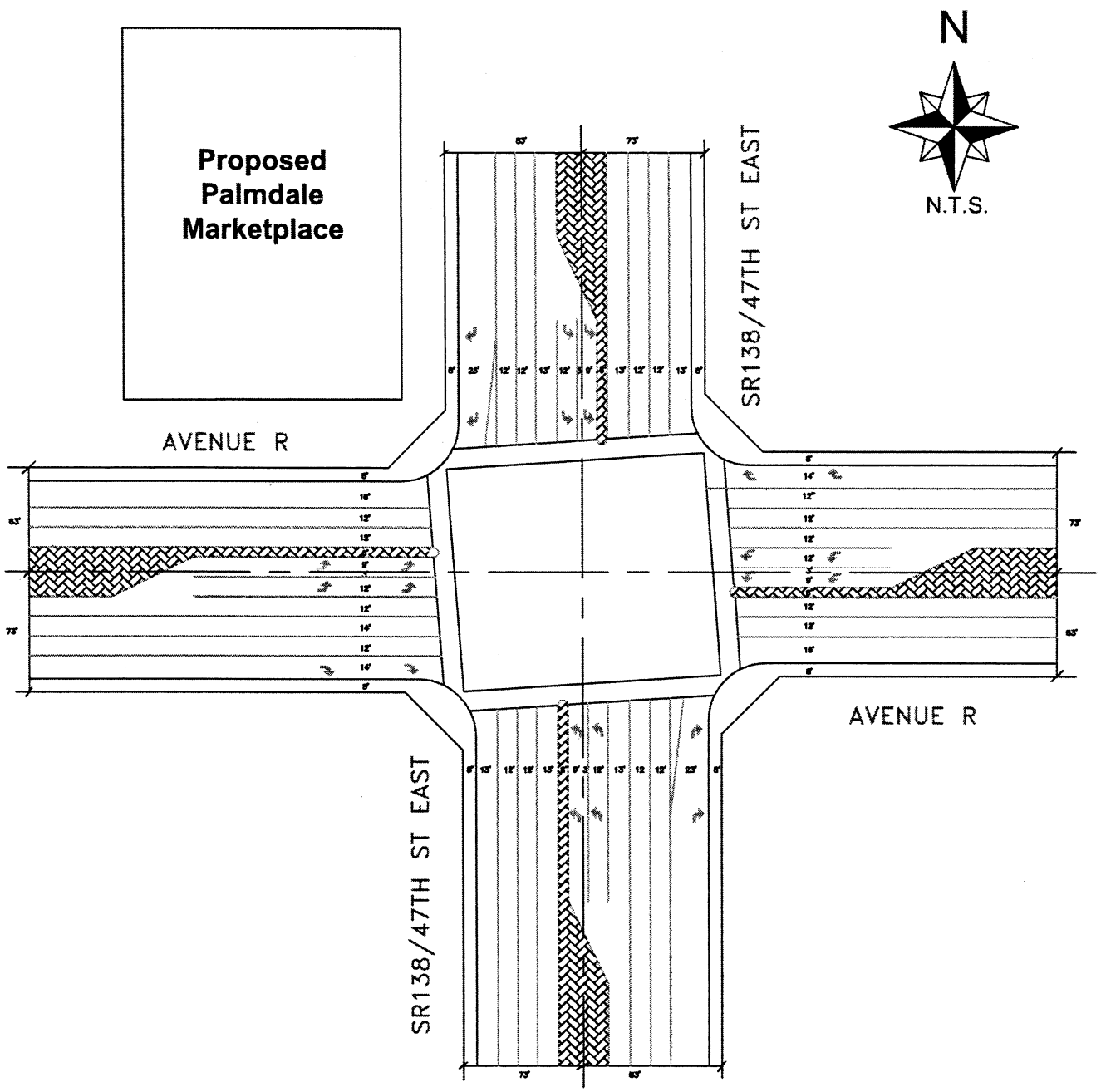
* With Proposed Caltrans Roundabout
** No feasible mitigation measure available due to R/W constraints.
+ With Geometry Improvement
N/A: Not Available
In bold with applied mitigation
[1]Capacity and LOS analyses for the signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

The assessments for year 2015 concluded that most of the intersections will be operating at acceptable LOS "C" or better. However, without mitigation, the intersections at Palmdale Boulevard and 40th Street East will operate at LOS "D" during the PM peak hour, Avenue R and 40th Street East at LOS "D" during the AM and PM peak hours, and Avenue S and 47th Street East at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour.

Geometry configuration for the intersection at 47th Street East and Avenue R is proposed by the City of Palmdale for future year 2015. The ultimate proposed geometry was used in the traffic analysis study for the future years 2015 and 2025, and is shown on Figure 4.7-14.

Most intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigations for all three projects except for the intersection at Avenue S and 47th Street East (SR 138). Due to the existing R/W constraints, no feasible mitigation measure is available for Avenue S and 47th Street E. Intersection improvements recommended for Avenue R and 47th Street East, Palmdale Boulevard and 40th Street E, and Avenue R and 40th Street East are subject to R/W availability.

SUPPLEMENTAL



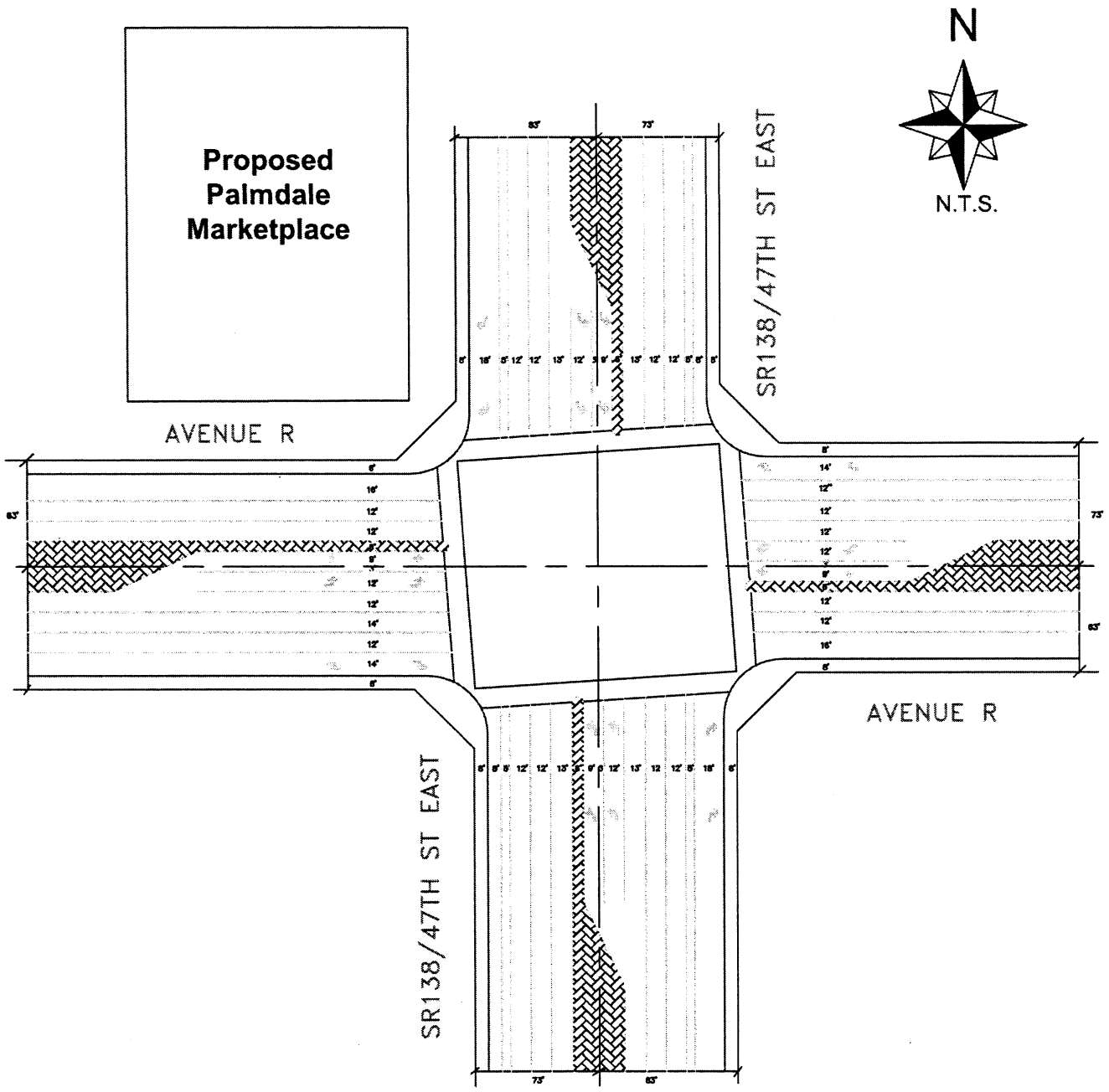
Source: Minagar & Assoc., Inc., 06/06.

City's Proposed Ultimate Geometry 47th Street E. and Avenue R Future Years 2015 and 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-14A

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 06/06.

City's Proposed Ultimate Geometry 47th Street E. and Avenue R Future Years 2015 and 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-14B

LILBURN CORPORATION

Mitigation Measure for Palmdale Marketplace

Mitigation Measure TC-2*

Off-Site Mitigation through payment of Traffic Impact Fees in effect at the time building permits are issued.

Level of Significance After Mitigation

Avenue S and 47th Street East (SR 138) would operate at a LOS "D" during the AM and Los "E" for the PM peak hours. Due to existing right-of-way constraints at this intersection, no feasible mitigation measure is available and this impact would be considered an unavoidable, significant impact. In addition, the proposed improvements to the other intersections are subject to right-of-way being available.

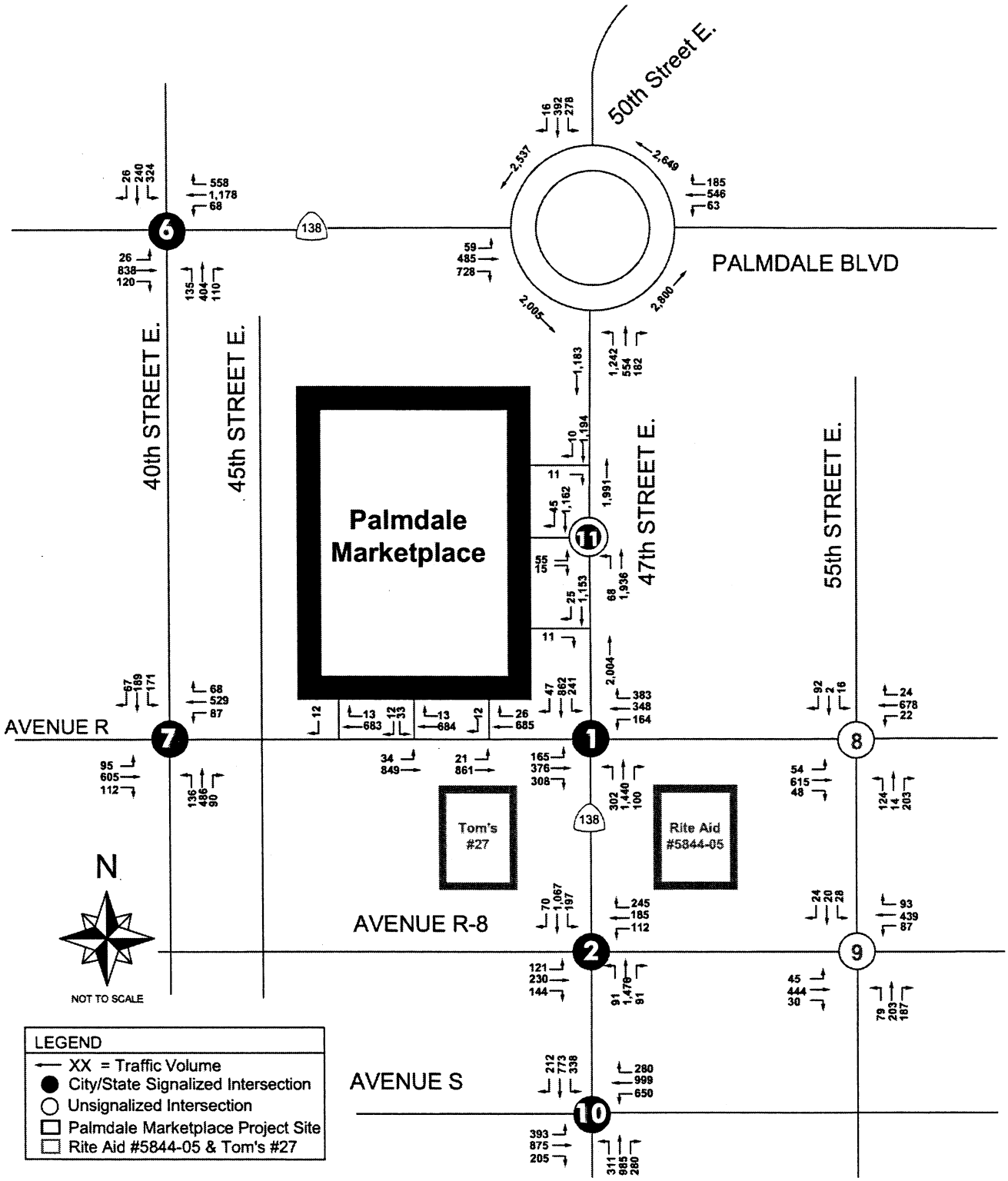
Future traffic for the year 2025 was derived by combining the existing traffic volumes for year 2006 by using the average growth factor of 3.8 percent for the years 2006 to 2025. Figures 4.7-15 and 4.7-16 show the Cumulative Total Traffic with Project Traffic for the AM and PM peak periods respectively. Using the same lane geometry as for year 2015, capacity assessments were also conducted. The results of intersection capacity assessments for Cumulative Total Traffic with Project Traffic during future year 2025 are shown on Table 4.7-11.

Without mitigation, the following intersections will be operating at an unacceptable LOS "D" or worse during the AM and PM peak hours for year 2025: 47th Street East and Avenue R, 47th Street East and Avenue R-8, Palmdale Boulevard and 40th Street East, Avenue R and 40th Street East, Avenue R and 55th Street East, and Avenue S and 47th Street East. The proposed Caltrans roundabout is revealed to have a LOS "F" during AM and PM peak hours.

With mitigations, all the intersections will operate at a satisfactory LOS' during both the AM and PM peak hours except for the roundabout. The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes. Avenue S and 47th Street East (SR 138) has no feasible mitigation measure available due to existing R/W constraints. The intersection of Avenue R and 47th Street East (SR 138) will experience LOS "D" during a short peak hour, which is determined to be acceptable.

SUBMITTED

* Mitigation required by the Traffic Impact Analysis (Appendix F) as being necessary in 2015 has been accelerated to be required prior to issuance of building permits.



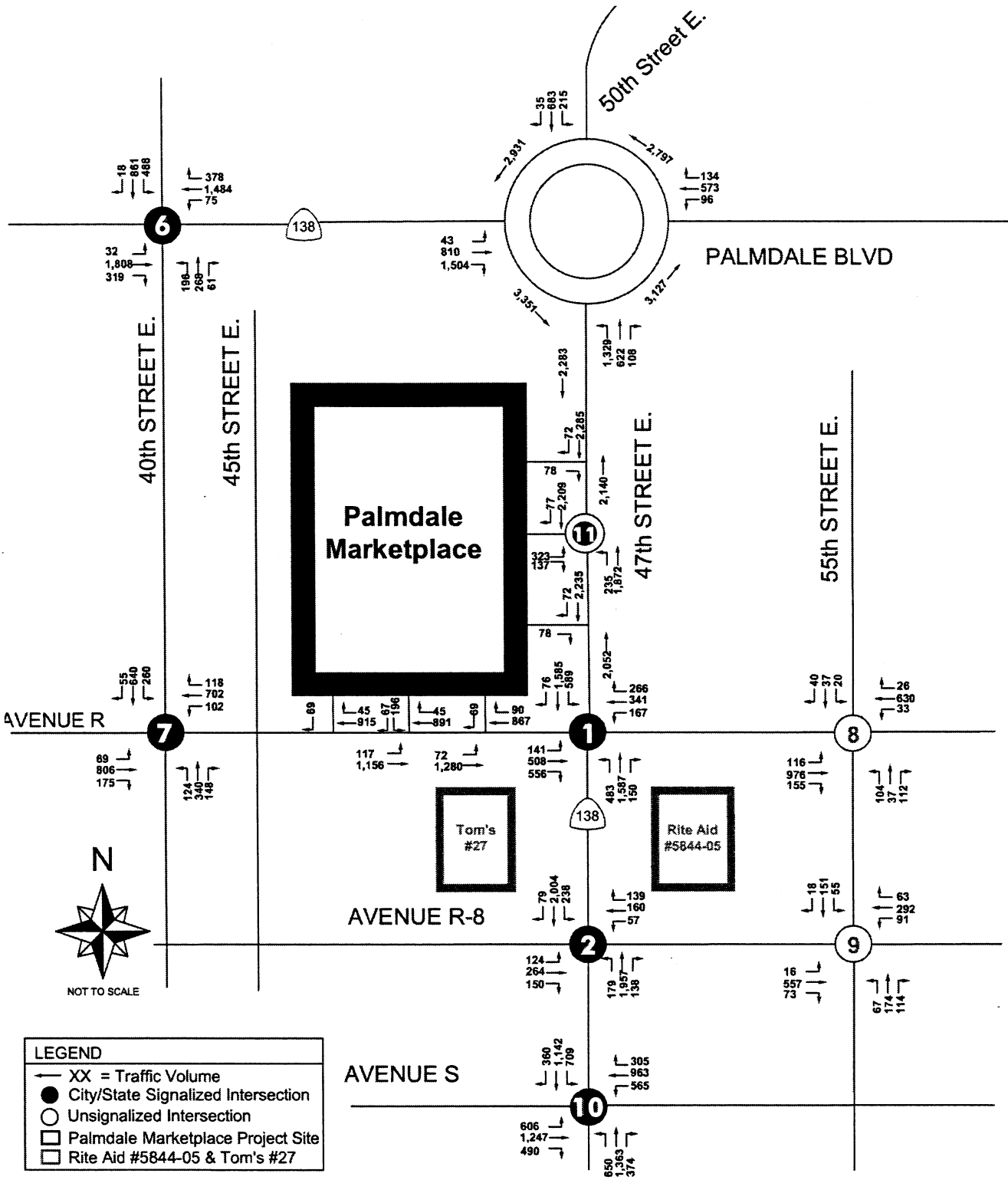
Source: Minagar & Assoc., Inc., 06/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes AM Peak Hours 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-15

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 06/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes PM Peak Hours 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-16

LILBURN CORPORATION

Table 4.7-11
Level of Service – Cumulative Total Traffic with Project Traffic[1]
(Future Year 2025 with Roundabout)

Intersection	Year 2025											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St. E. @ Ave. R+	B	0.76	9.9	**A**	**0.76**	**9.9**	E	1.33	60.1	**D**	**0.79**	**35.5**
2. 47th St. E. @ Ave R-8	C	0.91	21.6	**D**	**1.37**	**43.1**	D	1.56	50.9	**D**	**1.02**	**47.4**
3. 47th St. E. @ SR-138 *	F	0.99	89.3	***	***	***	F	1.42	219.6	***	***	***
6. Palmdale Blvd. @ 40th St. E.	E	1.03	59.7	**B**	**0.71**	**16.9**	F	1.71	275.4	**C**	**0.91**	**27.1**
7. Ave. R @ 40th St. E.	E	0.99	73.0	**C**	**0.71**	**30.7**	F	1.13	113.6	**C**	**0.77**	**32.3**
8. Ave. R @ 55th St. E.	C	N/A	N/A	**B**	**0.62**	**13.2**	E	N/A	N/A	**C**	**0.86**	**20.4**
9. Ave. R-8 @ 55th St. E.	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Ave. S @ 47th St. E.	F	1.06	87.7	**	**	**	F	1.49	234.1	**	**	**
11. New Marketplace Dr. @ SR 138 / 47th St. E.	A	0.50	5.0	A	0.50	5.0	B	0.79	14.6	B	0.79	14.6

* With Proposed Caltrans Roundabout
** No feasible mitigation measure available due to R/W constraints.
*** Caltrans conceptual reconfiguration and approval of the roundabout capacity modification is required (from 2 to 3 lanes)
+With Geometry Improvement
N/A: Not Available
In bold with applied mitigation
[1]Analyses for signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

Mitigation Measures

Mitigation Measure TC-3 for Palmdale Marketplace*

Off-Site Mitigation through payment of Traffic Impact Fees in effect at the time building permits are issued.

Level of Significance After Mitigation (2025)

With phased mitigations implemented as listed above, all the intersections will operate at satisfactory LOS during both the AM and PM peak hours except for the roundabout and Avenue S and 47th Street East (SR 138). The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes. Avenue S and 47th Street East (SR 138) has no feasible mitigation measure available due to existing right-of-way constraints. The intersections of Avenue R and 47th Street East (SR 138), and Avenue R-8 and 47th Street East will experience LOS "D" during a short peak hour by 2025, which is determined to be acceptable. In addition, the proposed improvements to the other intersections are subject to R/W being available.

*Mitigation required by the Traffic Impact Analysis as being necessary in 2015 has been accelerated to be required prior to issuance of building permits.

PRELIMEN

Due to the uncertainty of the future improvements for the roundabout and the right-of-way constraints at Avenue S and 47th Street East (SR 138) which limit future intersection improvements, traffic impacts are considered unavoidable and significant.

Volume to Capacity Impact Analysis

The Los Angeles County MTA's CMP characterizes a significant project impact as occurring when the proposed project increases traffic demand by 2 percent or more of capacity, causing the existing system to operate at an unsatisfactory LOS. Thus, impact analyses for all the intersections were performed by comparing the volume to capacity (V/C) ratios between project to no project(s) volumes for years 2007, 2015, and 2025. The Palmdale Boulevard at 47th/50th Street East intersection V/C ratio was not available, therefore not analyzed. According to Caltrans, a roundabout is proposed to replace the existing unsignalized intersection at 47th/50th Street East and Palmdale Boulevard by year 2008.

For year 2007 for all three projects after applied mitigation, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East and Avenue R-8, 47th Street East and SR 138, Palmdale Boulevard at 40th Street East, and Avenue R and 40th Street East. Table 4.7-12 shows the intersections that will exceed the threshold. However, these four intersections will be mitigated to operate at acceptable LOS and impacts will be less than significant.

Table 4.7-12
Level of Service and V/C "Before" and "After" For Buildout Year 2007

Buildout – Opening Year 2007	LOS						V/C Exceeding 0.02*	
	Without Project		With Project Without Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St. E. @ Ave. R	B	C	B	C	A	B	-	-
2. 47th St. E. @ Ave R-8	A	A	A	B	A	B	0.04	0.16
3. 47th St. E. @ SR-138	B	C	B	C	B	C	0.04	0.14
4. Palmdale Blvd. @ 47/50th St. E.	F	F	F	F	B	C	N/A	N/A
5. Palmdale Blvd. @ SR-138	A	A	A	A	A	A	N/A	N/A
6. Palmdale Blvd. @ 40th St. E.	B	B	B	C	B	C	0.02	0.06
7. Ave. R @ 40th St. E.	C	C	C	C	C	C	0.03	0.16
8. Ave. R @ 55th St. E.	A	A	A	B	A	B	N/A	N/A
9. Ave. R-8 @ 55th St. E.	A	A	A	A	A	A	N/A	N/A
10. Ave. S @ 47th St. E.	C	D	C	D	**	**	**	**
11. New Marketplace Dr. @ SR 138 / 47th St. E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
*Comparison Between Without Project and With Project With Mitigation
** No feasible mitigation measure available due to R/W constraints.
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

For year 2015 for all three projects with applied mitigation, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East and Avenue R, and 47th Street East and Avenue R-8. Table 4.7-13 shows the intersections that will exceed the threshold. However, these intersections will be mitigated to operate at acceptable LOS' and impacts will be less than significant.

For year 2025 for all three projects after applied mitigation, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East and Avenue R, and 47th Street East and Avenue R-8. The results are shown on Table 4.7-14. However, these intersections will be mitigated to operate at acceptable LOS' and impacts will be less than significant.

Analysis of 47th Street East at Avenue R Intersection

The traffic generated by the proposed project at the intersection of 47th Street East and Avenue R will generate 148 and 635 VPH trips or 5.56 percent and 16.64 percent of the total volumes at the intersection during the AM and PM peak hours respectively (see Table 4.7-15).

Table 4.7-13
Level of Service and V/C "Before" and "After" For The Future Year 2015

Buildout – Year 2015	LOS						V/C Exceeding 0.02*	
	Without Project		With Project Without Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St. E. @ Ave. R	A	B	A	C	A	C	0.04	0.23
2. 47th St. E. @ Ave R-8	A	B	B	B	B	B	0.11	0.20
3. 47th St. E. @ SR-138	A	B	A	B	A	B	N/A	N/A
6. Palmdale Blvd. @ 40th St. E.	B	C	B	D	B	C	-	-
7. Ave. R @ 40th St. E.	C	D	D	D	C	C	-	-
8. Ave. R @ 55th St. E.	A	C	A	C	A	C	N/A	N/A
9. Ave. R-8 @ 55th St. E.	A	A	A	A	A	A	N/A	N/A
10. Ave. S @ 47th St. E.	D	E	D	E	**	**	**	**
11. New Marketplace Dr. @ SR 138 / 47th St. E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
*Comparison Between Without Project and With Project With Mitigation
** No feasible mitigation measure available due to R/W constraints.
Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

PRESENTED

Table 4.7-14
Level of Service and V/C "Before" and "After" For The Future Year 2025

Buildout – Opening Year 2007	LOS						V/C Exceeding 0.02*	
	Without Project		With Project Without Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St. E. @ Ave. R	A	D	A	E	A	D	0.02	-
2. 47th St. E. @ Ave R-8	C	D	C	D	D	D	0.47	-
3. 47th St. E. @ SR-138**	F	F	F	F	**	**	N/A	N/A
6. Palmdale Blvd. @ 40th St. E.	E	F	E	F	B	C	-	-
7. Ave. R @ 40th St. E.	E	F	E	F	C	C	-	-
8. Ave. R @ 55th St. E.	B	D	C	E	B	C	N/A	N/A
9. Ave. R-8 @ 55th St. E.	A	A	A	A	A	A	N/A	N/A
10. Ave. S @ 47th St. E.	F	F	F	F	***	***	***	***
11. New Marketplace Dr. @ SR 138 / 47th St. E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
*Comparison Between Without Project and With Project With Mitigation
**Caltrans conceptual reconfiguration and approval of the roundabout from 2 to 3 lanes is required
*** No feasible mitigation measure available due to R/W constraints.

Table 4.7-15
Project Traffic Impact at the Intersection of 47th Street East and Avenue R Buildout Year 2007

	Project	Peak Period	Volumes Generated (In & Out) in VPH	Intersection Total Volumes in VPH	Percentage
Year 2007 (Buildout)	Marketplace	AM	148	2,660	5.56%
		PM	635	3,817	16.64%

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

Geometry improvements to the intersection at 47th Street East and Avenue R for years 2007 and 2015 were proposed based on the traffic assessments conducted. These proposed geometry improvements are shown on Exhibit E-2 in the Appendix F.

The proposed intersection layout for 47th Street East and Avenue R for year 2007 will include double left turn, two through and one right turn lanes at the east-, north- and southbound approaches. For the westbound approach, there will be one left turn, one through and one shared-through right turn lanes. Protected left turn signal phases are recommended for the north- and southbound approaches which have met the Caltrans protected left turn phases warrant assessment. With the proposed geometry, the intersection will operate at LOS "A" and "B" in both the 2007 AM and PM peak periods of operations respectively.

The proposed intersection layout for the year 2015 will include double left turn lanes, three through and one right turn lanes for the west- and eastbound approaches and double left turn,

COPY

four through and one right turn lanes for the south- and northbound approaches. Protected left turn phases are recommended for all the approaches. Northbound and southbound left turn phases have satisfied the warrant assessments for the provision of protected left turn phases. East- and westbound protected left turn phases are recommended due to the fact that two left turn lanes are needed for the westbound approach. With the proposed geometry, the intersection will operate at LOS "A" and "B" during the 2015 AM and PM peak periods respectively.

Analysis of 47th/50th Street East and Palmdale Boulevard Intersection

For the unsignalized intersection of Palmdale Boulevard and 47th/50th Street East, according to the Caltrans D-7 Traffic Analysis Report, 07-LA-138 KP 76.9/78.8 (PM 47.8/49/0) 07-185-23960K, two improvement alternatives were proposed for the intersection, which include a roundabout alternative and a signalized alternative, to improve the unsatisfactory performance of the intersection. The proposed roundabout will be constructed at the Palmdale Boulevard, SR 138 at 47th/50th Street East intersection to replace the existing three intersections by the year 2008. Based upon the information provided by Caltrans District 7, the roundabout is proposed to have two lanes and with one entering lane from each of the four approaches.

The roundabout option was analyzed as a default for year 2015 and 2025 analyses. For year 2015, the performance of the roundabout will be at "B" and "C" during the AM and PM peak hours of operation. Existing and year 2007, the area has an LOS of "F" without the roundabout. However for year 2025, the proposed Caltrans roundabout will operate at LOS "F" with and without the project. The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes.

Impact TC-2

Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?

Access Points Assessments

The proposed project design is planning to have three new driveways along 47th Street East (SR 138) and three along Avenue R. The first and third driveways along 47th Street East will be restricted to unsignalized right-turns in and right-turns out. The main driveway (second driveway along 47th Street East) is proposed to install a traffic signal for left-turns in, left-turns out, right-turns in, and right-turns out. The first driveway along Avenue R, closest to the intersection of 47th Street East and Avenue R, will be restricted to unsignalized right-turns in, right-turns out, and left-turns in subject to approval of the City Traffic Engineer. The northern most driveway along 47th Street East is anticipated to be constructed when the roundabout is constructed. The second driveway along Avenue R will have full access from all directions. The third driveway along Avenue R will have unsignalized right-turns in and right-turns out only.

SUPPLEMENTAL

Left and Right Turn Lanes Queue Length Assessments

Left turn lane queue requirements and left and right turn lane assessments for the intersection of 47th Street East and Avenue R and 47th Street East and Avenue R-8 were performed for buildout year 2007, and future years 2015 and 2025 using the Highway Capacity Manual (HCM) requirements. The queue length assessment results are shown in Appendix F and are included in the intersection design shown on Figure 4.7-14.

Left Turn Phase Traffic Signal Warrant Assessment

Per the request of Caltrans, the 47th Street East and Avenue R, and 47th Street East and Avenue R-8, intersections have protected left turn phases in all directions. The two locations are currently operating with permissive left turn phases at all approaches. Therefore, a comprehensive left turn phase traffic signal warrant assessment was conducted for each approach of the two intersections for four separate target years.

Based on the Caltrans Traffic Manual, "protected left turn phase should be considered if there are 50 or more left turning vehicles per hour in one direction with the product of the turning and conflicting through traffic during the peak hour of 100,000 or more." A complete set of left turn phase traffic signal warrant assessments was conducted for the two signalized locations based on the criteria mentioned above.

Detailed calculations for the protected left turn phase warrant assessments are shown in Appendix F.

Table 4.7-16 shows that the north- and southbound left turn phases at the intersection of 47th Street East and Avenue R meet the protected left turn phase warrant check under existing conditions. However, the east- and westbound left turns will not meet the warrant check. These findings have been included in the intersection plans.

Table 4.7-16
Protected Left Turn Phase Signal Warrant Assessments for 47th Street East and Avenue R

Approach	Existing	Buildout Year 2007	Future Year 2015	Future Year 2025
NBL	Yes	Yes	Yes	Yes
SBL	Yes	Yes	Yes	Yes
EBL	No	No	No	No
WBL	No	No	No	No

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

Table 4.7-17 shows that only the southbound left turn phases meet the warrant check at the intersection of 47th Street East and Avenue R-8 during the existing year. In year 2015, both the north- and southbound left turn movements meet the warrant assessments, thus protected left turn phases for the approaches are recommended.

SUPERSEDED

Table 4.7-17
Protected Left Turn Phase Signal Warrant Assessments
for 47th Street East and Avenue R-8

Approach	Existing	Buildout Year 2007	Future Year 2015	Future Year 2025
NBL	No	Yes	Yes	Yes
SBL	No	Yes	Yes	Yes
EBL	No	No	No	No
WBL	No	No	No	No

Source: Minagar & Associates, Inc., July 14, 2006 Traffic Analysis Report

Mitigation Measure

Mitigation Measure TC-4

The new intersection of Palmdale Marketplace Driveway and SR 138/47th Street East shall be signalized by the developer. It is warranted for signalization prior to the issuance of the first certificate of occupancy for the project

Level of Significance After Mitigation (Circulation)

The overall project design of the driveways and implementation of Mitigation Measure TC-4 will ensure that access and circulation within the vicinity will meet appropriate standards for safe movement of vehicles. Circulation impacts will be less than significant.

Traffic Impact Summary

With the mitigation measures listed above, all the intersections will operate at satisfactory LOS' during both the AM and PM peak hours except for the roundabout and Avenue S and 47th Street East (SR 138). The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes. Avenue S and 47th Street East (SR 138) has no feasible mitigation measure available due to existing R/W constraints. The intersections of Avenue R and 47th Street East (SR 138), and Avenue R-8 and 47th Street East will experience LOS "D" during a short peak hour by 2025, which is determined to be acceptable. In addition, the proposed improvements to the other intersections are subject to R/W being available.

Due to the uncertainty of the future improvements for the roundabout and the R/W constraints at Avenue S and 47th Street East (SR 138) which limit future intersection improvements, traffic impacts are considered unavoidable and significant.

Some mitigation measures identified within the entitled *Revised Traffic Analysis Report for the Proposed Palmdale Marketplace, Palmdale, California,* prepared by Minagar & Associates, Inc., July 14, 2006, to be implemented in 2015, have been accelerated for implementation prior to issuance of the first Certificate of Occupancy. Other Traffic and Circulation mitigation measures will be mitigated as necessary when warranted and funded in advance through payment by the project proponent via development fees. Fees for all project related traffic impacts will be collected by the City prior to issuance of related Certificates of Occupancy thus allowing mitigation of potential impacts to occur when necessary instead of at potentially unrelated target dates.

SUPERSEDED

4.7 TRAFFIC AND CIRCULATION

4.7.1 Introduction

This section of the EIR summarizes the results of a Traffic Analysis Report entitled *Third Revised Traffic Analysis Report for the Proposed Palmdale Marketplace, Palmdale, California,* prepared by Minagar & Associates, Inc., October 2, 2006. Included in this section is a description of the existing circulation system that would provide access to and from the project site; identification of standards of significance; impact analysis; and recommendation of mitigation measures to reduce any potentially significant impacts to less than significant levels. The Traffic Analysis Report is included in Appendix F.

4.7.2 Environmental Setting

The proposed project is for the development of approximately 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres. The proposed project is located north of Avenue R, west of 47th Street East (State Route 138) and east of 45th Street East. The applicant proposes to construct six (6) major retail structures that may include a home improvement center and an upscale discount retailer, four shops and eight general commercial land uses.

Existing Street System

Regional Access

The Antelope Valley Freeway (State Route 14) provides regional access to the project site from the west. Pearblossom Highway (State Route 138) provides regional access to the project site from the east. State Route-14 links the cities of Palmdale and Lancaster with the greater metropolitan areas of Los Angeles County and State Route 138 provides commerce with San Bernardino County to the east.

Local Access

A number of streets provide local access. These are:

47th Street East is classified as a divided major facility serving north- and southbound traffic beginning at 50th Street East and ending at Avenue S. It is a portion of the State Route 138 (Pearblossom Highway) with two through lanes on both directions of travel. The two signalized intersections at Avenue R and Avenue R-8 are currently operating with one left turn and two through lanes for north- and southbound approaches. The intersection at Avenue R-8 has two through lanes at both east- and westbound approaches, and 47th Street East at Avenue R has one left and one through lanes at the westbound approach and one left, two through and one right turn lanes at the eastbound approach. The signalized intersection of 47th Street East at Avenue S has two left turn lanes and two through lanes for each of the east-, west-, north- and southbound approaches. The northbound and southbound approaches have two left turn lanes and an additional right turn lane. All four corners of the intersection of 47th Street East at Avenue R are currently vacant with no pedestrian walkway on the street sides. Each of the four corners of the

target intersection has two street lights with traffic signals attached. Pedestrian crossings are available at all four approaches of the target intersection. There are two existing telephone poles at the NWC and NEC. There is an existing controller cabinet at the NEC of the target intersection. The SWC of this intersection is currently under construction for the Tom's Restaurant project.

State Route 138 is classified as a major facility across the city, and merges with 47th Street East from Fort Tejon Road to Palmdale Boulevard, traverses along Palmdale Boulevard, then merges onto SR 14. The intersection at 47th Street East and Palmdale Boulevard is a signalized "T" intersection with two left turn lanes detoured from southbound 47th Street East merging back onto 47th Street East (see Figure 4.7-1). The intersection of SR 138 (Palmdale Blvd.) and 40th Street East is signalized. This intersection has one left turn lane for each of the four approaches. The east- and westbound approaches have two through lanes. The north- and southbound approaches each has one through lane, and an additional right turn lane for the northbound approach.

Palmdale Boulevard is classified as a major facility serving east- and westbound traffic across the City. Palmdale Boulevard westbound merges with SR 138 right after the intersection with 47th/50th Street East, where it changes from a one lane per approach to a two lanes per approach arterial. The intersection at 47th/50th Street East is now operating as an unsignalized all-way stop intersection with one through lane at each of the four approaches. The merging traffic from Palmdale Boulevard onto SR 138 is also controlled by a stop sign.

Avenue R is classified as a major facility serving east- and westbound traffic. The intersection of Avenue R and 40th Street East is a signalized intersection with one left turn lane on each of the four approaches. The east-, west-, and southbound approaches each has a right turn lane and a through lane. The northbound approach has two through lanes. The intersection of Avenue R and 55th Street East is now operating as an unsignalized two-way stop intersection for the north- and southbound approaches. Each of the four approaches has one left turn lane and one through lane, with an additional right turn lane for the northbound approach.

Avenue R-8 is classified as a major arterial serving east- and westbound traffic. The intersection of Avenue R-8 and 55th Street East is now operating as an unsignalized four-way stop intersection with one left turn lane and two through lanes at each of the four approaches.

Existing Volumes

The analysis of traffic conditions takes place during peak hour periods. These periods are when changes to the utilization of the transportation infrastructure are most significant. The same peak AM and PM were utilized in order to maintain uniformity of existing traffic conditions. The traffic counts for all the intersections were collected by Minagar and Associates, Inc. during the month of January 2006 between 6:30-9:30 AM and 3:00-6:00 PM. To be consistent, one hour peak volume duration was used in all the intersection performance analyses.

The existing intersection performance is measured by its Level of Service (LOS). The LOS indicates the operational condition of an intersection during a given time period. LOS is

measured on a scale of "A" to "F", with "A" representing excellent operating conditions and "F" representing extremely congested conditions (see Table 4.7-1).

Table 4.7-1
Level of Service Description

Level of Service	Traffic Description
A	Excellent, Light Traffic
B	Good, Light to Moderate Traffic
C	Moderate Traffic, Insignificant Delay
D	Heavy Traffic, Significant Delay
E	Severe Congestion and Delay
F	Failed, Indicates Levels Cannot be Handled

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

The City of Palmdale and Caltrans intersection LOS calculations have been calculated using the Highway Capacity Manual (HCM) 2000 which encompasses the computation of intersection delays and SYNCHRO. SYNCHRO involves the computation of "volume-to-capacity" (V/C) ratios and intersection delays for each critical movement.

Table 4.7-2 shows the relations between LOS and the performance measures for unsignalized intersections.

Table 4.7-2
Level of Service for Unsignalized Intersection Traffic Control

Unsignalized Intersections	
Level of Service	**Average Control Delay (Second/Vehicle)**
A	0 - 10
B	10 - 15
C	15 - 25
D	25 - 35
E	35 - 50
F	50 -

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Table 4.7-3 displays the relationship between LOS and the performance measures for signalized intersection. A LOS "C" is considered as adequate, and a LOS "D" is considered acceptable for a short time during peak hours.

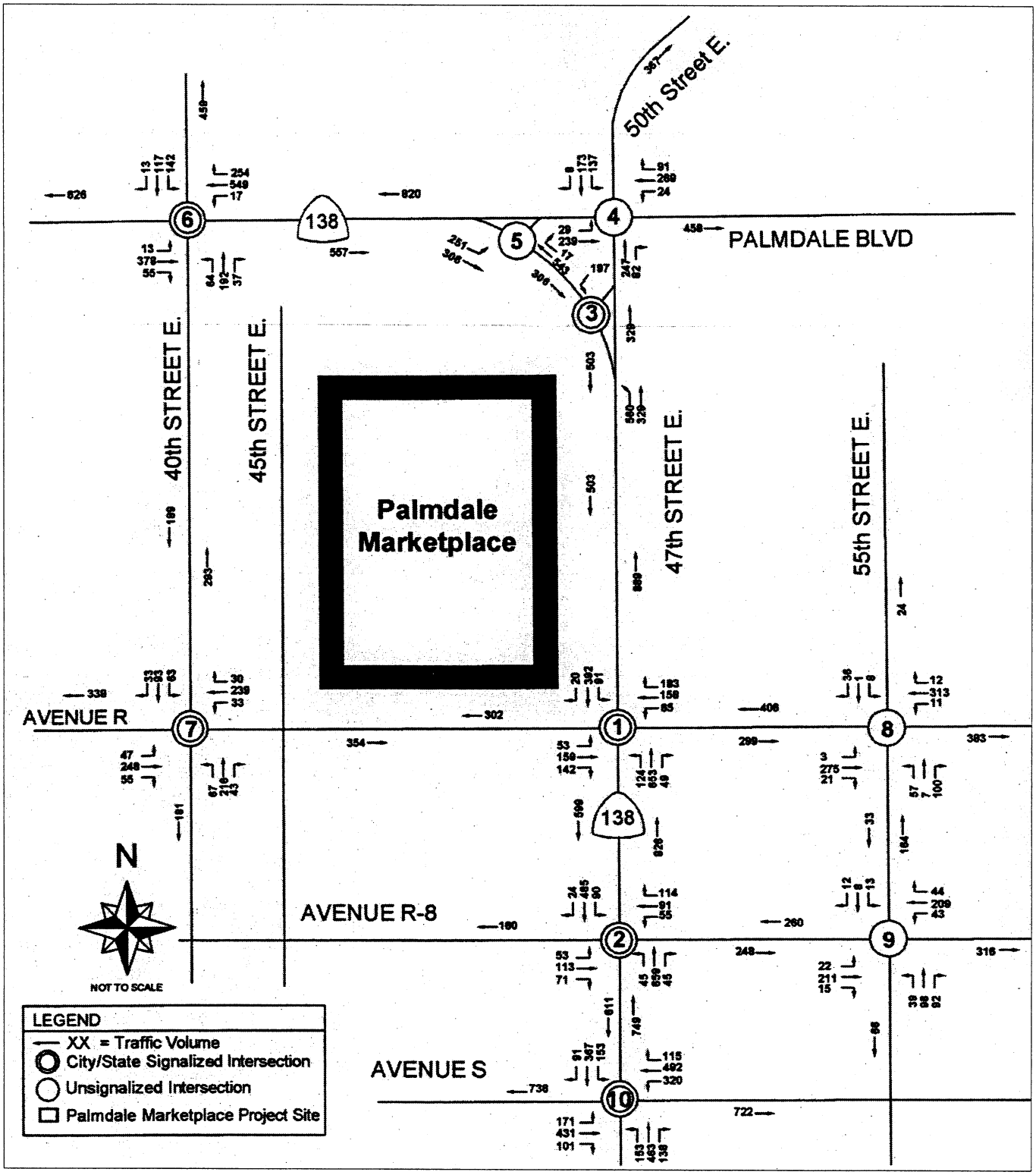
Table 4.7-3
Level of Service for Intersection Traffic Controls

Signalized Intersection		
Level of Service	**Traffic Flow Characteristics**	**Average Control Delay (Seconds/Vehicle)**
A	Extremely favorable progression with very low control delay. Most vehicles arrive during the green phase and do not stop.	0 - 10
B	Good Progression and short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay	10 - 15
C	Satisfactory operation with fair progression and longer cycle lengths. Individual cycle failures may begin to appear. A significant number of vehicles stop but many pass through without stopping.	15 - 25
D	Tolerable delay where congestion becomes more noticeable and many vehicles stop. The proportion of vehicles not stopping declines. Individual cycle failures are noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios.	25 - 35
E	Unstable flow with poor progression, frequent cycle failures, long cycle lengths and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay by many agencies.	35 - 50
F	Oversaturation with arrival flow rates exceeding the capacity of the intersection and many individual cycle failures. Poor progression and long cycle lengths as well as high V/C ratios occur at LOS F. Considered unacceptable to most drivers.	50 -

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

The existing AM and PM peak hour traffic volume are shown on Figures 4.7-1 and 4.7-2 respectively. The results of intersection capacity assessments for the existing traffic volumes are shown on Table 4.7-4.

Based on the existing peak hour traffic volumes of the intersections, all the intersections are operating at LOS "C" or better, except for the unsignalized intersection of Palmdale Boulevard and $47^{th}/50^{th}$ Street East that is operating at LOS "E" during the AM peak hour and LOS "F" during the PM peak hour.



Source: Minagar & Assoc., Inc., 10/06.

2006 Existing Traffic Volumes AM Peak Hour

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-1

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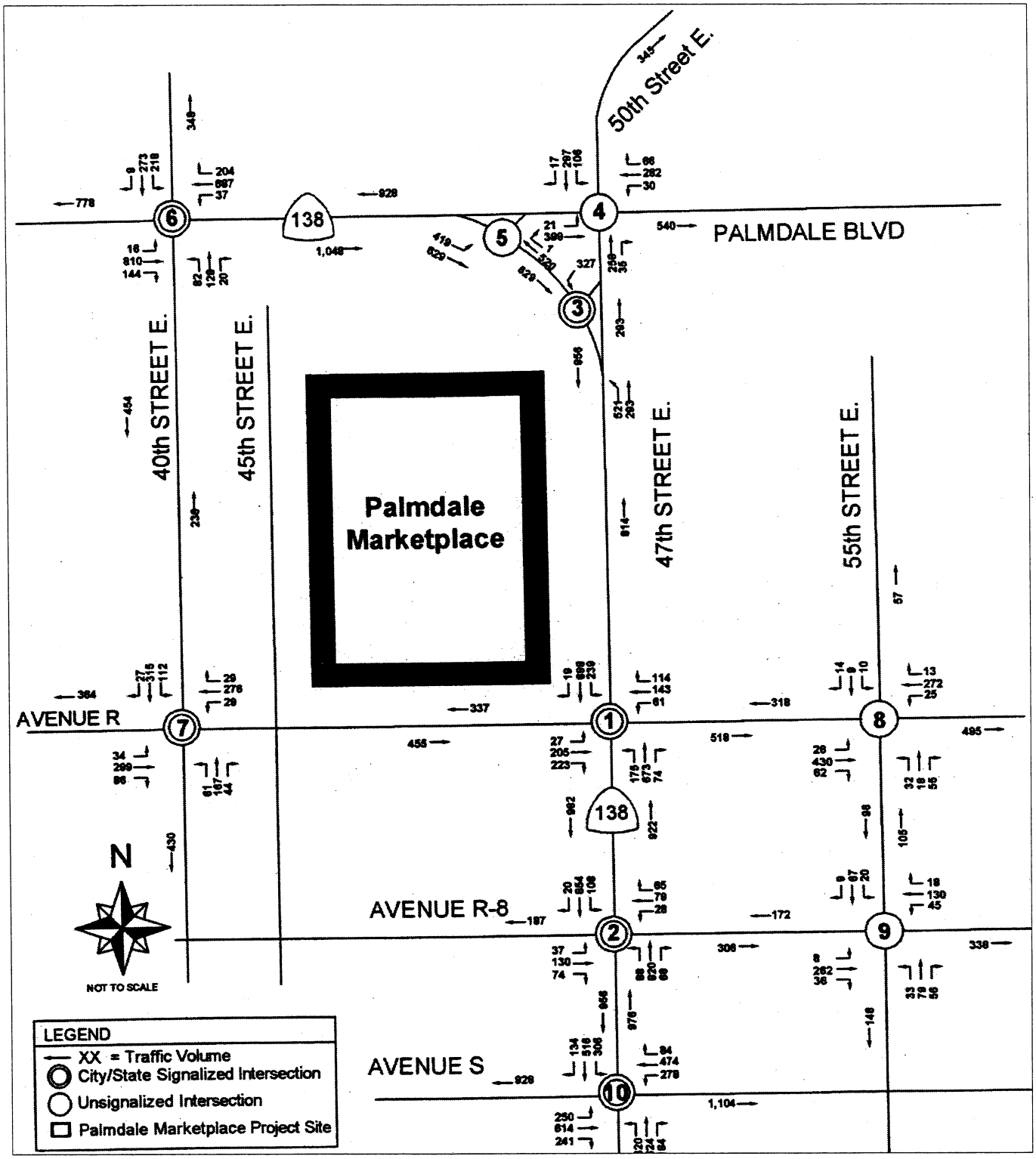

Source: Minagar & Assoc., Inc., 10/06.

2006 Existing Traffic Volumes PM Peak Hour

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-2

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Table 4.7-4
Existing Level of Service Analysis (Year 2006)

Intersection	Year 2006					
	AM			PM		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th Street East @ Avenue R	A	0.48	9.9	A	0.64	9.8
2. 47th Street East @ Avenue R-8	A	0.31	8.0	A	0.37	9.5
3. 47th Street East @ SR-138	B	0.44	17.0	C	0.61	21.9
4. Palmdale Blvd. @ 47th/50th Street East[1]	E	N/A	N/A	F	N/A	N/A
5. Palmdale Blvd. @ SR-138[1]	A	N/A	N/A	A	N/A	N/A
6. Palmdale Blvd. @ 40th Street East	B	0.50	14.8	B	0.62	18.0
7. Avenue R @ 40th Street East	C	0.47	23.4	C	0.59	24.4
8. Avenue R @ 55th Street East[1]	A	N/A	N/A	A	N/A	N/A
9. Avenue R-8 @ 55th Street East[1]	A	N/A	N/A	A	N/A	N/A
10. Avenue S @ 47th Street East	C	0.58	26.3	C	0.82	32.7

[1]Unsignalized Intersections
N/A: Not Applicable
Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Project Traffic Generation

The proposed project is located on the northwest corner of 47th Street East and Avenue R. The Palmdale Marketplace project will include new structures occupying a total space of approximately 530,000 square feet. The proposed land uses for the Palmdale Marketplace project include different types of land utilization which is generalized as a shopping center. The building areas are shown on Table 4.7-5.

Table 4.7-5
Square Footage Tabulation of Marketplace Project

Building	Land Use	Total Area (S.F.)
All Buildings	Shopping Center	530,000

The *ITE Trip Generation Manual, 7th Edition* was utilized in order to estimate the number of trips that begin or end at the individual project sites. The manual is used to estimate the probable traffic generation rates for a range of land uses based upon studies and surveys of existing developments in comparable settings.

Based on the ITE trip generation rates, percent of arrival and departure during AM, PM, Weekday and Weekends were all estimated. These trip generation numbers are adjusted with a 25 percent reduction rate due to pass-by trips based upon the available national data for the similar facilities and setting and per the approval of the City of Palmdale. A 25 percent reduction rate is conservative as the ITE Trip Generation Handbook, June 2004, Chapter 5, Table, 5.6, Pages 42-46; the national average pass-by trip percentage is 34 percent.

After reduction, the project will generate a total of 19,816 vehicles during Saturday, 9,374 vehicles during Sunday, 15,058 vehicle trips on a weekday, and 320 vehicles per hour (VPH) and 1,411 VPH during the AM and PM peak hours respectively for the buildout year 2007.

Project Trip Distribution and Assignment

Trip distribution is the process which identifies the routes and directions the project traffic will utilize to and from the project site. Existing trip distribution patterns were all considered in order to assign the generated trips to the surrounding roadway systems. The trip distribution for the project is shown on Figure 4.7-3 for the buildout year 2007 scenarios. The percentages of trip distribution were derived from the existing trends and future computer demand forecasting of the City of Palmdale. Trip demand was approved by the City of Palmdale. Project traffic volumes are determined by applying the trip distribution percentage to the estimated trip generation. Figures 4.7-4 and 4.7-5 depict the individual project traffic volumes for the AM and PM peak periods for the buildout year 2007 scenarios.

Parking

The City of Palmdale parking requirements per Zoning Ordinance, Chapter 8, Article 87, Off-Street Parking were utilized in analyzing the required parking spaces needed for the proposed project. According to the project's site plan, there will be a total of 2,431 parking spaces provided by the Palmdale Marketplace project. The parking demands for the project are tabulated on Table 4.7-6.

Table 4.7-6
Parking Demand Based on City of Palmdale Parking Requirements

Project	Bldg. Area (S.F.)	Total Parking Demand	Standard & Compact Parking Provided	Handicapped Parking Provided	Total Parking Provided
Palmdale Marketplace	530,000	2,112[1]	2,339	92	2,431

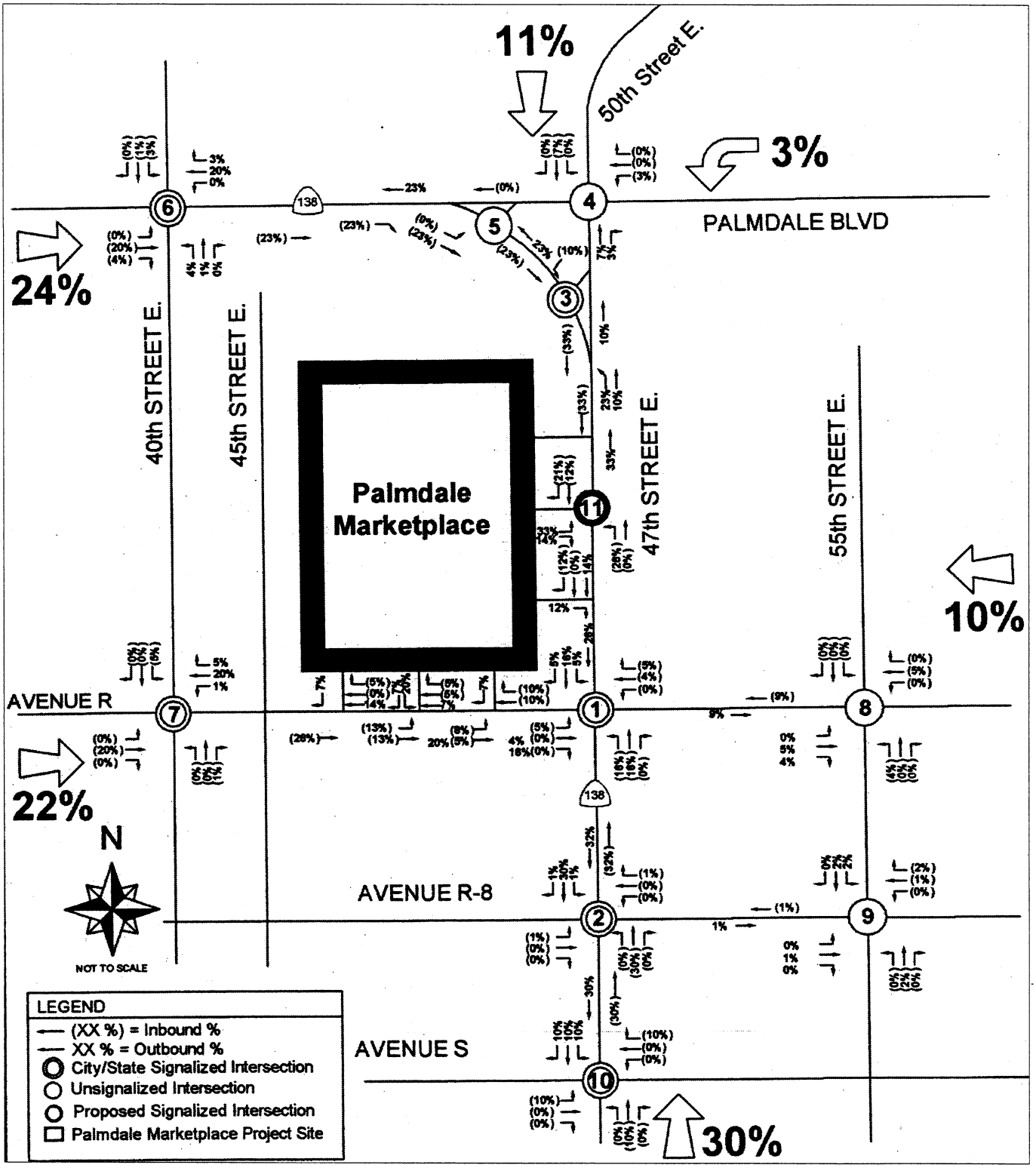
1 – Per City of Palmdale Zoning Ordinance, Chapter 8, Article 87, Off-Street Parking
Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

4.7.3 Impacts and Mitigation Measures

Thresholds of Significance

The proposed project would result in a significant impact to transportation/circulation if the following occurs:

- Will the traffic generated by this project cause a reduction of Level of Service at an intersection or on a street segment to LOS "E" or lower?
- Does circulation within the project prevent the safe and orderly flow of people and vehicles, including emergency vehicles?



Source: Minagar & Assoc., Inc., 10/06.

Project Trip Distribution Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-3

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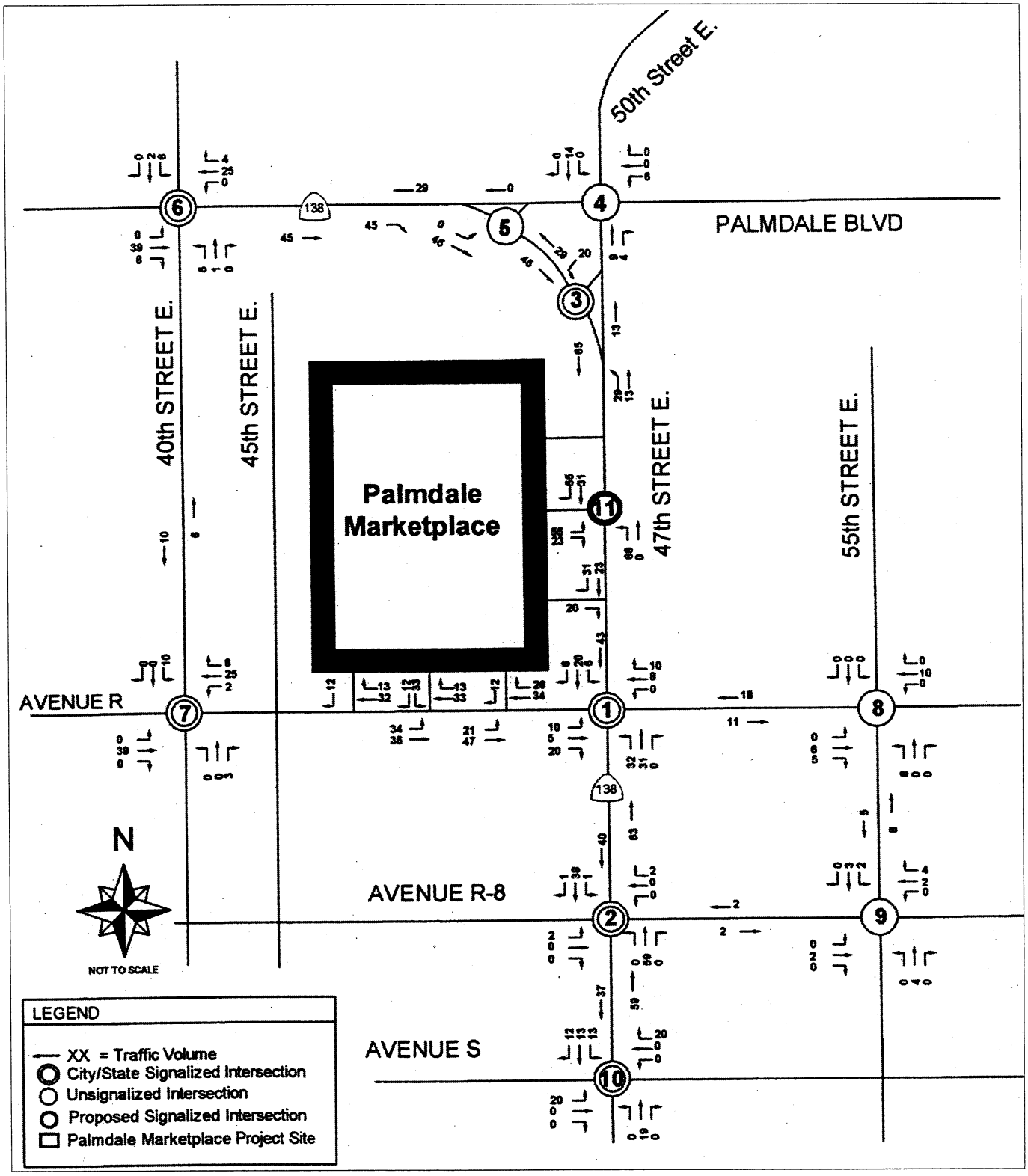

Source: Minagar & Assoc., Inc., 10/06.

Traffic Volumes AM Peak Hour Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-4

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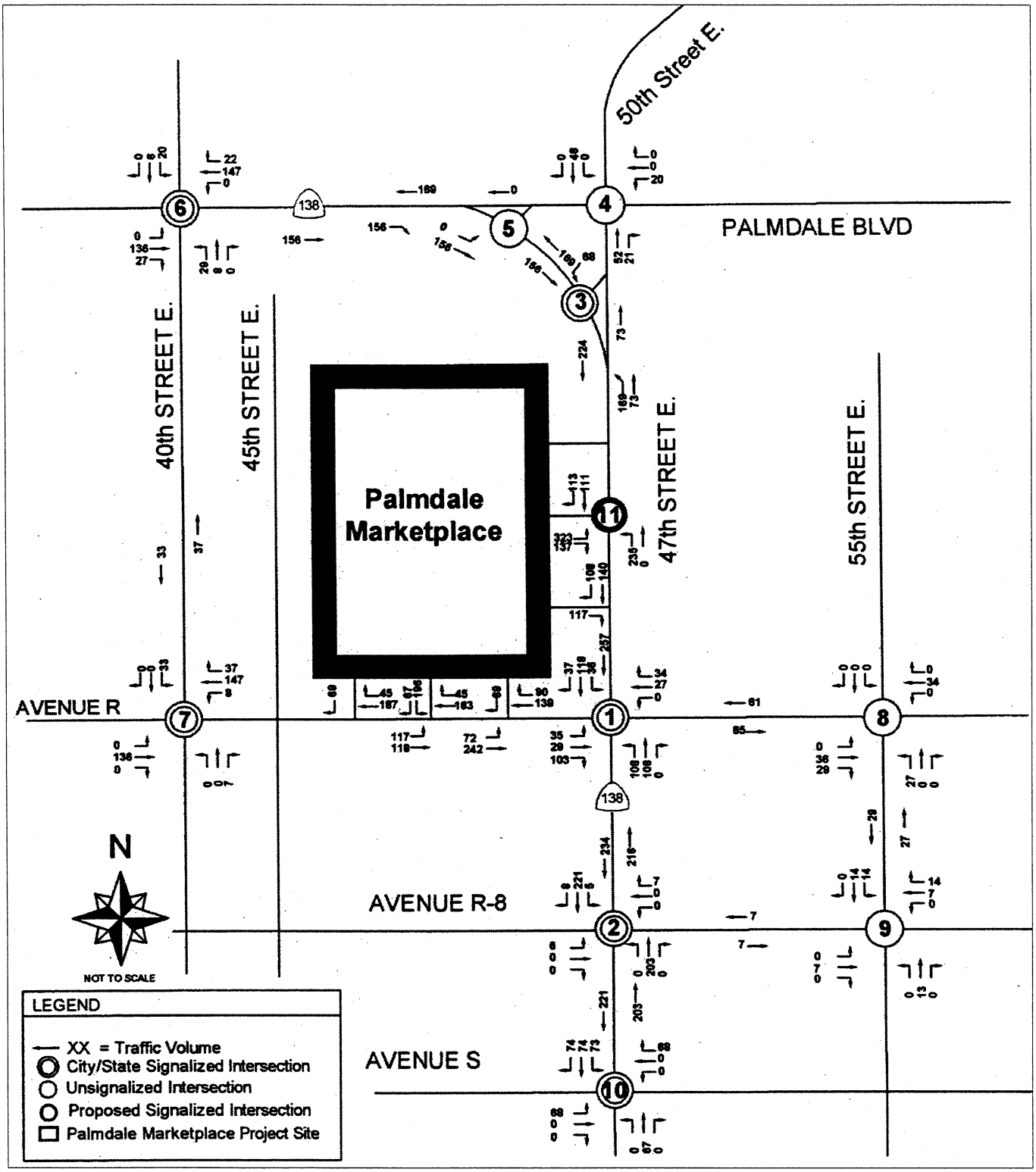

Source: Minagar & Assoc., Inc., 10/06.

Traffic Volumes PM Peak Hour Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-5

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- Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?
- Could the project result in a significant alteration to rail or air traffic?
- Will the project create a significant shortage of parking?

As requested by the City of Palmdale and the California Department of Transportation (Caltrans), the proposed project was examined for compatibility with the City's long range plans as well as the State's future plans within the study area.

Impacts Determined to have No Impact

Could the project result in a significant alteration to rail or air traffic?

The proposed project is not anticipated to alter rail or air traffic. The Palmdale Airport is located approximately 1½ miles north of the site and the Union Pacific Railroad is located approximately seven miles west of the site. No impact is anticipated.

Impacts Determined to be Less Than Significant

Will the project create a significant shortage of parking?

Palmdale Marketplace, when constructed, will provide approximately 2,431 parking spaces. 2,112 parking spaces are required per the City of Palmdale Zoning Ordinance, Chapter 8, Article 87, Off-Street Parking. Table 4.7-7 shows the parking spaces provided for each use. Therefore, impacts to parking are not anticipated based on the project's design

Does circulation within the project prevent the safe and orderly flow of people and vehicles, including emergency vehicles?

The proposed project is not anticipated to create hazards due to design features (e.g., sharp curves, etc.) as the developer will be required to comply with Conditions of Approval set by the City of Palmdale.

Impact Analysis

Impact TC-1

The proposed project would increase vehicle trips, and affect the level of service along arterial roadways and intersections. This would be a significant impact to existing road segments and intersections in the region.

Table 4.7-7
Parking Spaces for the Marketplace Project

User		Ratio Required	Spaces Required	Spaces Provided	Ratio Provided
Q1	Major 1	4/1000	691	825	4.8
	GC	1/1000	11	11	1.02
Q2	Major 2	4/1000	91	90	3.96
	Major 3	4/1000	133	126	3.77
	Major 4	4/1000	117	97	3.32
	PAD 7	4/1000	41	42	4.12
Q3	Major 5	4/1000	460	548	3.92
	GC	1/1000			
	H.P.E.	4/1000			
	PAD 8	4/1000	41	60	5.88
Q4	PAD 1	10/1000	35	38	10.13
	PAD 2	10/1000	77	77	10
	Shops 1	4/1000	3.59	69	3.59
	Shops 2	4/1000			
Q5	PAD 3	10/1000	35	35	9.92
	PAD 4	10/1000	100	94	10
	Shops 3	4/1000	78	76	4.31
	Shops 4	4/1000			
Q6	PAD 5	5/1000	20	41	10
	PAD 6	4/1000	16	39	9.75
	Major	4/1000	88	144	6.61
Total			**2,112**	**2,426**	**4.64**

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Future Traffic Conditions (Opening Year)

Growth Factor

Future traffic volumes for years 2015 and 2025 were based on discussions with the City of Palmdale Traffic Division and data from the following Caltrans report:

Traffic Analysis Report, 07-LA-138 KP 76.0/78.8 (PM 47.8/49.0) 07-185-23960K prepared by the Feasibility Studies Branch of the Office of Environmental Engineering & Feasibility Studies (OEEFS). Collection of technical data and analysis was in collaboration with the City of Palmdale, Caltrans' Offices of Traffic Investigations & Regional Planning using the Los Angeles Regional Transportation System (LARTS) model. The aforementioned Traffic Analysis Report was prepared as a technical supplement to the Project Study Report.

Based on traffic forecast data projected by Caltrans and existing traffic volumes, an average growth factor of 3.8 percent was used for the years 2006 to 2025 in this traffic analysis. The Caltrans growth factor was approved by the City of Palmdale. The existing traffic volumes were

compounded annually to obtain traffic volumes for the existing and buildout year 2007, as well as the future years 2015 and 2025 as requested by the City and Caltrans.

Related Projects

The southwest and southeast corners of the intersection of 47th Street East and Avenue R have also been proposed for development. Tom's Restaurant and Rite Aid #5844-05 and Vallarta Supermarket will include the following land uses and sizes (see Table 4.7-8):

Table 4.7-8
Square Footage Tabulation of Tom's Restaurant #27 Project
And Rite Aid #5844-05 Project Vallarta Supermarket

Project	Land Use	Total Area (S.F.)
Tom's Restaurant #27	Fast Food Restaurant with Drive Through Retail Shops	38,495
Rite Aid #5844-05	Drug Store with Drive Through, Retail Shops, Fast Food Restaurant with Drive Through	35,372
Vallarta Supermarket	Supermarket, Retail Shops, Drive Through Restaurant, Retail Pad	74,600
Total		**148,467**

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Based on the sizes and land uses set forth above, the total trip generation for both projects is anticipated to generate 856 VPH in the AM peak hour and 463 VPH in the PM peak hour. The trip assignment of the two projects is shown on Figure 4.7-6 for the AM peak hour and Figure 4.7-7 for the PM Peak hour.

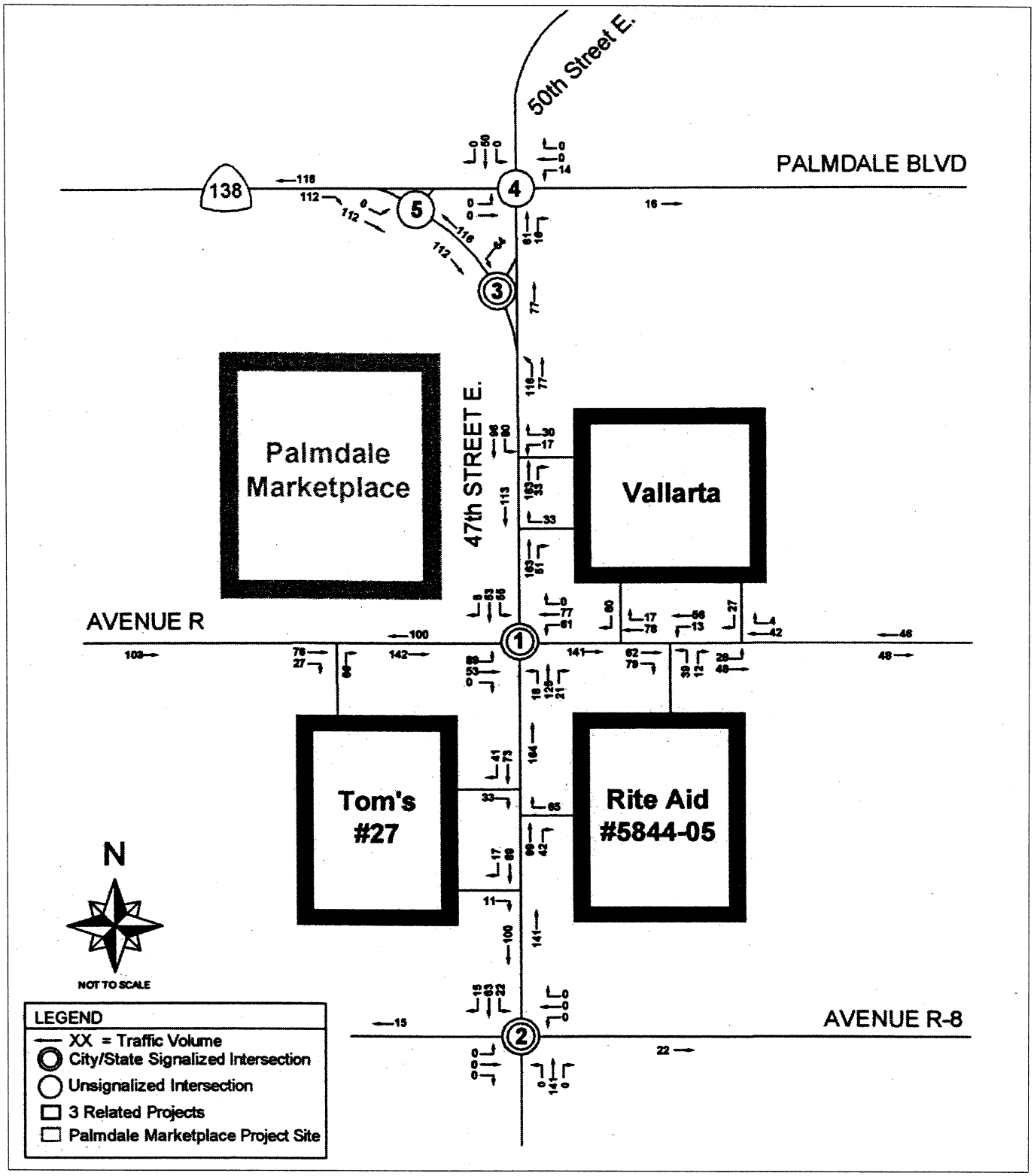
The three projects are anticipated to be built-out by year 2007. They have been incorporated into the cumulative background traffic prior to the Palmdale Marketplace project scenarios. The total AM and PM peak hours background traffic expected for buildout year 2007, including the traffic volumes generated by Tom's Restaurant Project, Rite Aid Project, and Vallarta Supermarket Project are shown in Figure 4.7-8 and Figure 4.7-9.

The mitigation measures required during the approval process for these projects (i.e., to bring the LOS to an acceptable level) include geometry improvements and adding lanes to Avenue R at 47th Street East and 40th Street East.

Cumulative Traffic and Palmdale Marketplace Project Traffic (Prior to Issuance of First Certificate of Occupancy within the Project)

The combination of background traffic volumes, including cumulative projects, the existing volumes, and the Palmdale Marketplace project volumes, resulted in the cumulative traffic volumes for the buildout year 2007.

The total volumes for the AM and PM peak periods for buildout year 2007 are shown on Figures 4.7-10 and 4.7-11 respectively.



Source: Minagar & Assoc., Inc., 10/06.

Traffic Volumes AM Peak Hour Buildout Year 2007 Rite Aid #5844-05 and Tom's #27, and Vallarta Supermarket Developments

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-6

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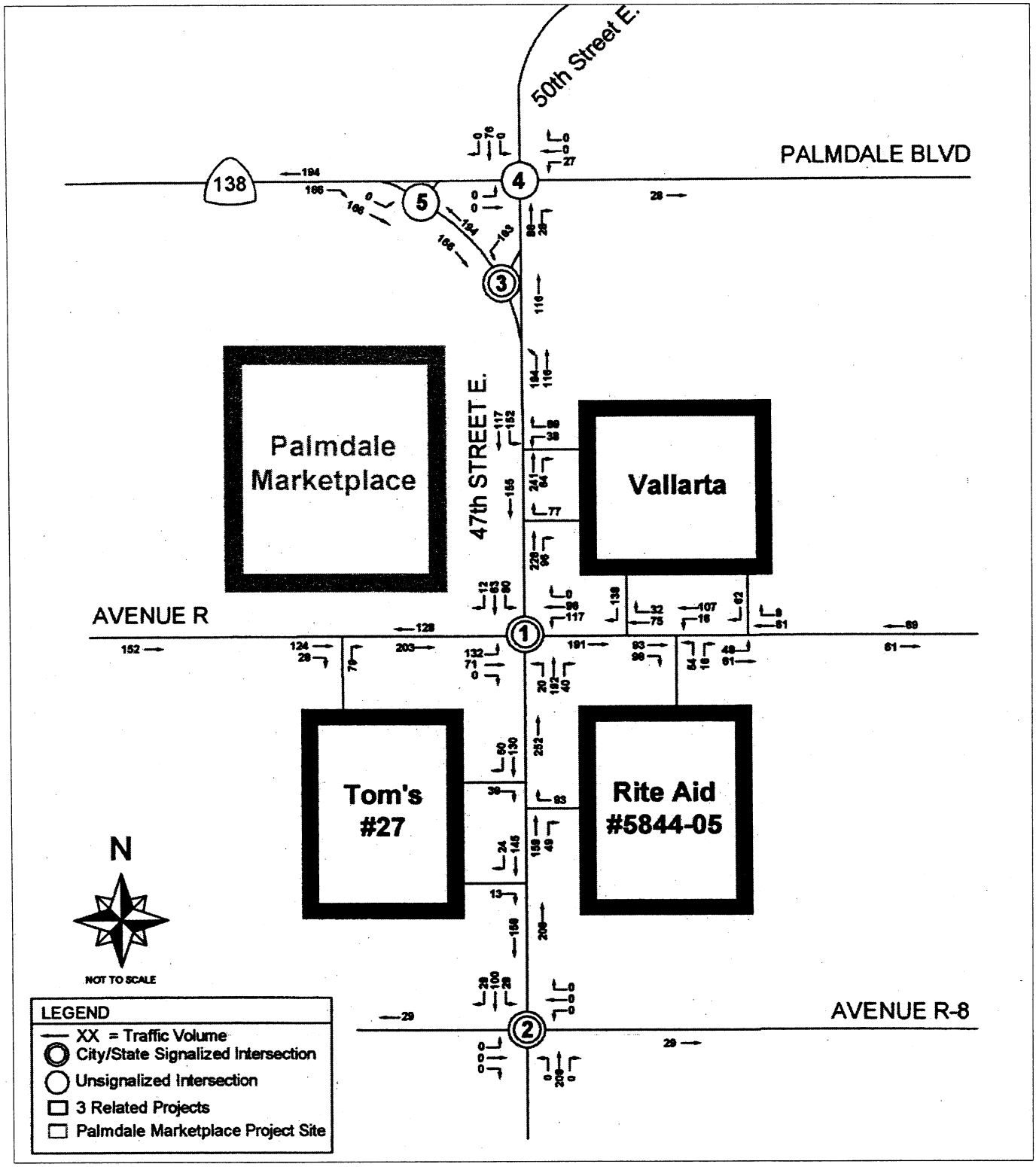

Source: Minagar & Assoc., Inc., 10/06.

Traffic Volumes PM Peak Hour Buildout Year 2007 Rite Aid #5844-05 and Tom's #27, and Vallarta Supermarket Developments

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-7

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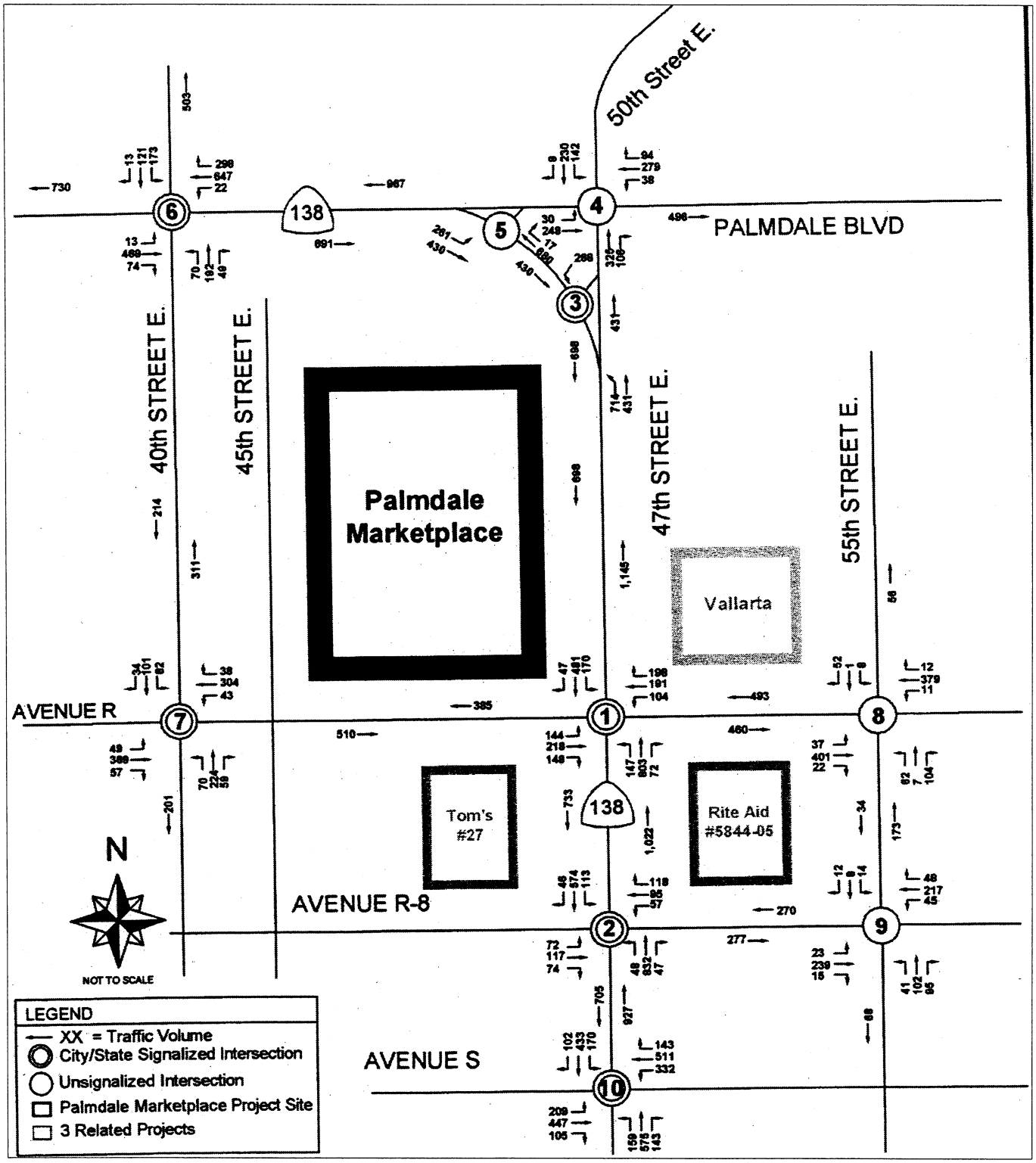


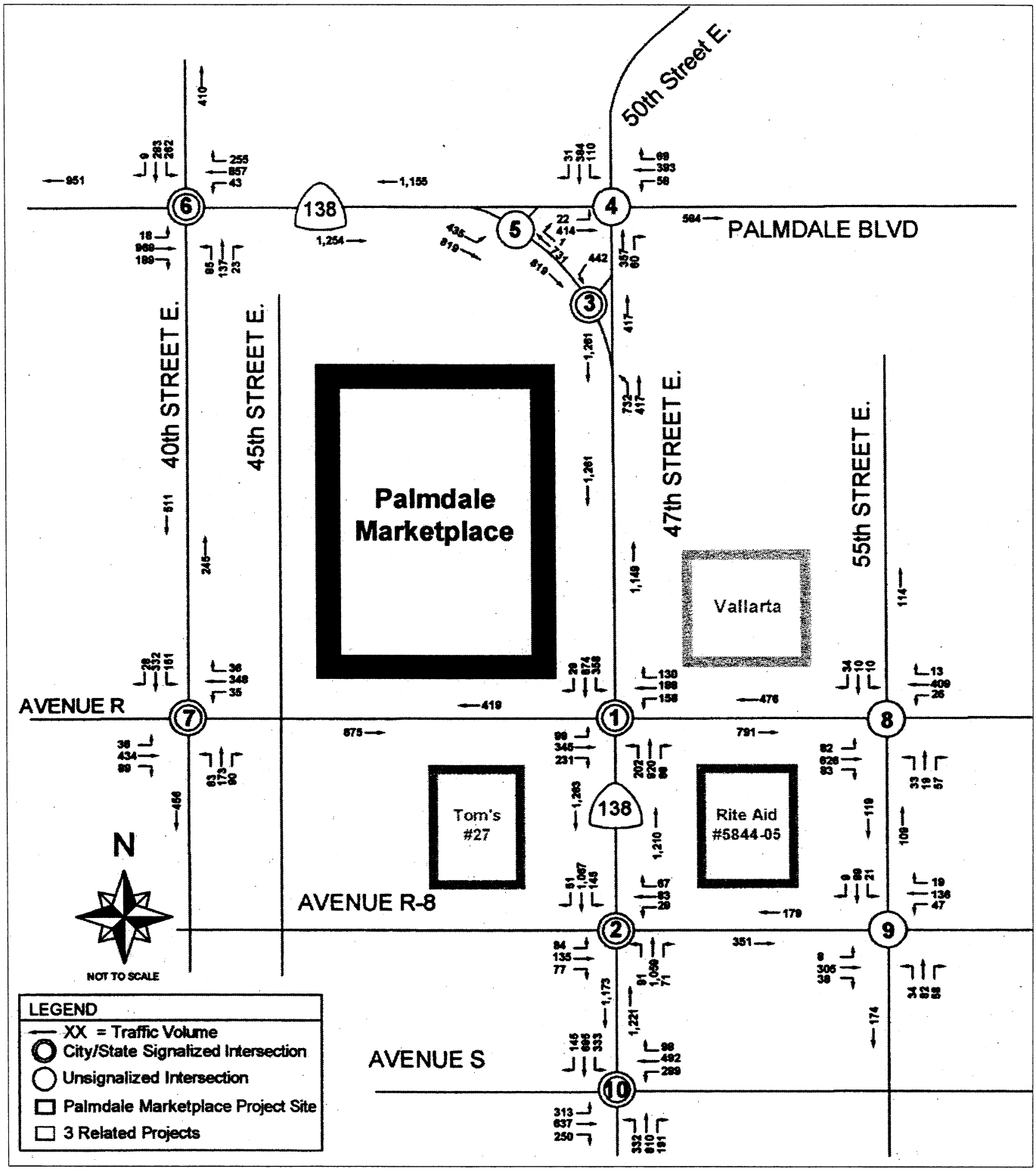
Source: Minagar & Assoc., Inc., 10/06.

Projected AM Traffic Volume Without Project Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-8

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 10/06.

Projected PM Traffic Volume Without Project Buildout Year 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-9

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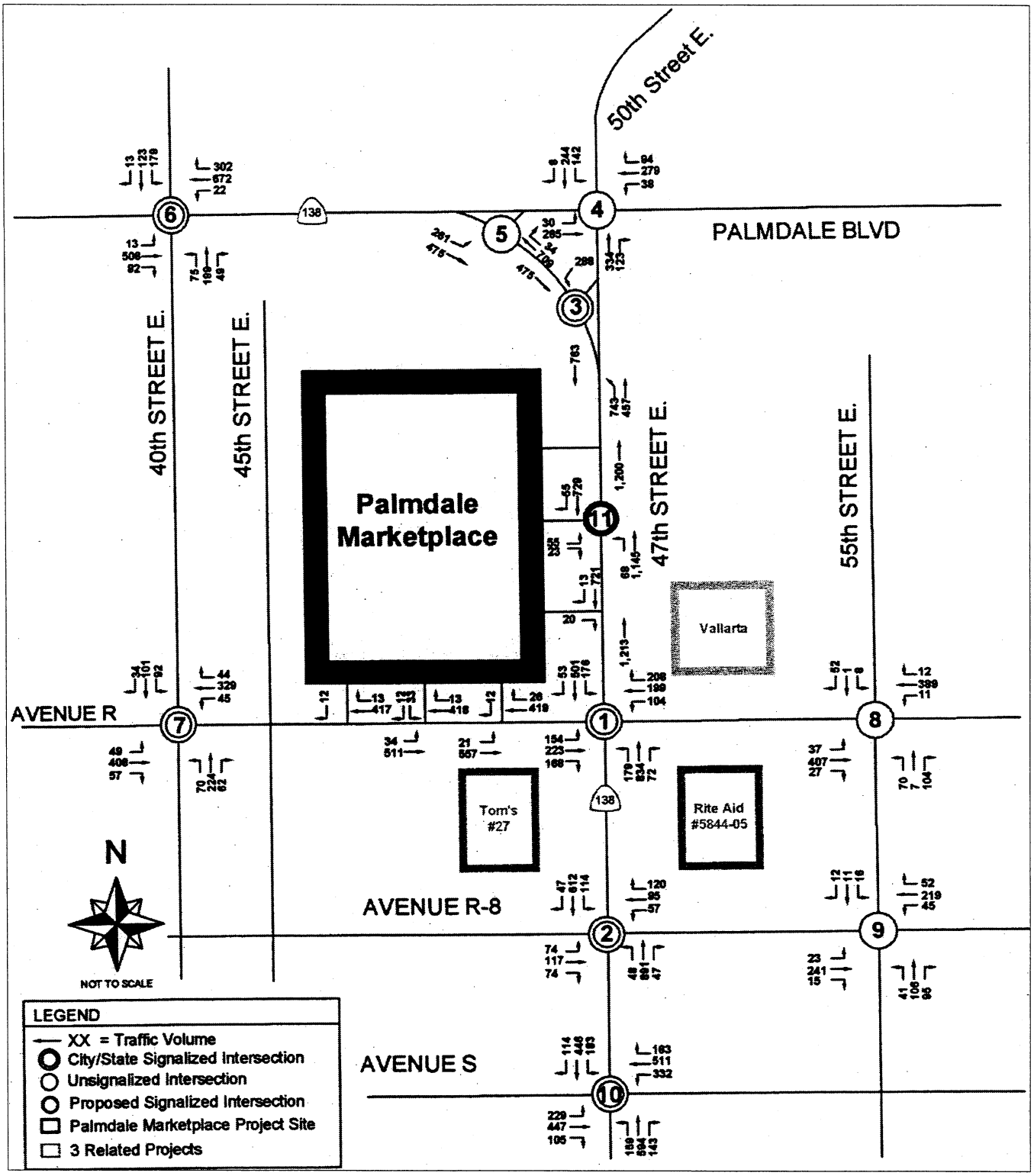


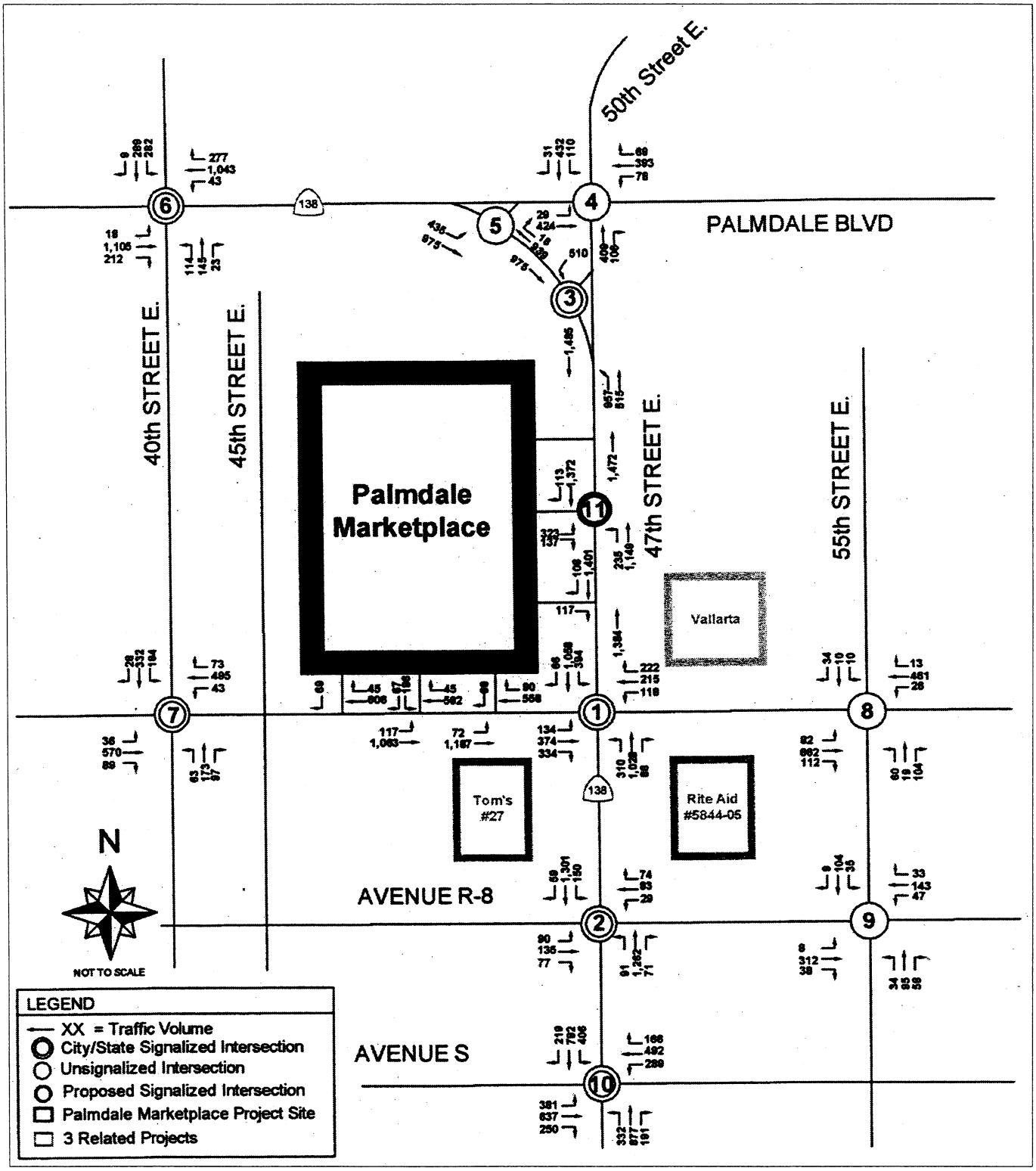
Source: Minagar & Assoc., Inc., 10/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes AM Peak Hour 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-10

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 10/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes PM Peak Hour 2007

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-11

LILBURN CORPORATION

The intersection capacity assessments for cumulative traffic for year 2007 buildout are shown on Table 4.7-9.

Table 4.7-9
Level of Service – Cumulative Total Traffic with Project Traffic[1]
(Buildout Year 2007)

Intersection	Year 2007											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St E. @ Avenue R	B	0.76	11.8	**A**	**0.47**	**9.8**	E	1.53	66.1	**B**	**0.82**	**12.9**
2. 47th St E. @ Avenue R-8	A	0.42	9.5	A	0.42	9.5	A	0.74	9.0	A	0.74	9.0
3. 47th St E. @ SR-138	C	0.60	20.2	C	0.60	20.2	D	0.91	39.3	***	***	***
4. Palmdale Blvd. @ 47/50th St E. *#	F	N/A	N/A	***	***	***	F	N/A	N/A	***	***	***
5. Palmdale Blvd. @ SR-138 *	A	N/A	N/A	***	***	***	B	N/A	N/A	***	***	***
6. Palmdale Blvd. @ 40th St E.	B	0.55	16.5	B	0.55	16.5	C	0.78	22.5	C	0.78	22.5
7. Avenue R @ 40th St E.	C	0.63	27.7	**C**	**0.56**	**25.0**	D	0.90	49.9	**C**	**0.72**	**30.2**
8. Avenue R @ 55th St E.*	A	N/A	N/A	A	N/A	N/A	C	N/A	N/A	C	N/A	N/A
9. Avenue R-8 @ 55th St E.*	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Avenue S @ 47th St E.	C	0.68	28.7	**	**	**	D	0.84	43.0	**	**	**
11. New Marketplace Dr @ SR 138/ 47th St E.	A	0.42	5.3	A	0.42	5.3	B	0.59	12.0	B	0.59	12.0

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

[1]Capacity and LOS analyses for the signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.

- If no roundabout is constructed by Caltrans at SR 138 in the future and only a traffic signal is installed to improve mobility as a substitution without geometry improvement

* Unsignalized Intersection

N/A: Not Available

B	**0.86**	**18.1**

In bold with applied mitigation

** No feasible mitigation measure

*** This intersection is planned by Caltrans to be converted to a roundabout in 2008

With no mitigation, the intersection of Palmdale Boulevard and 47/50th Street East will be operating at LOS "F" for both the AM and PM peak hours. The intersections of Avenue R at 40th Street East and Avenue R at 47th Street East will be operating at LOS "C" for AM peak hour and LOS "D" for PM peak hour. The remaining intersections will be operating at LOS "C" or better in both AM and PM peak hour periods for year 2007 buildout.

All intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigation at the above intersections except for Avenue S at 47th Street East. Due to existing right-of-way (ROW) constraints at this intersection, no feasible mitigation measure is available. (Note that ROW constraints are defined as RW needed for mitigation but which is already developed. ROW availability is ROW required for improvements that is not developed.) If Caltrans does not pursue the roundabout, then the intersection of Palmdale Boulevard and 47th Street East/50th Street East should be signalized.

To evaluate any potential traffic impact of the proposed Palmdale Marketplace during the interim target year of 2008 (before the proposed Caltrans roundabout is constructed), LOS and capacity

assessments were conducted for three intersections at Avenue R and 47th Street East, the new Palmdale Marketplace driveway at 47th Street East, and 47th Street East and SR 138. The approximate distance of 1,100 feet between the existing signalized intersection of SR 138 and 47th Street East and the proposed new Marketplace Driveway traffic signal at SR 138/47th Street East does not create any traffic queue during the interim year of 2008 with proper signal synchronization. The LOS results show that the intersections shall operate at satisfactory LOS' with the exception of SR 138 at 47th Street East, which will operate at LOS "D" during the PM peak hour for the short interim. This intersection is included in the Caltrans proposed roundabout.

The following mitigation measures are to be completed/impact fees collected Prior to Issuance of First Certificate of Occupancy.

Mitigation Measures for Palmdale Marketplace

Mitigation Measures TC-1

1. *Avenue R at 47th Street East (State Route 138)*
   - *Add one exclusive EBL*
   - *Add one exclusive SBR*
   - *Modify the Traffic Signal*

2. *Avenue S at 47th Street East (State Route 138)*
   - *No feasible mitigation measure*

Mitigation Measures TC-2*

1. *Avenue R at 47th Street East (State Route 138)*
   - *Add one exclusive SBT*
   - *Add one exclusive SBL*
   - *Add two exclusive WBT (subject to ROW availability)*
   - *Add one exclusive WBL (subject to ROW availability)*
   - *Add one exclusive WBR (subject to ROW availability)*
   - *Add one exclusive NBL (subject to ROW availability)*
   - *Add one exclusive NBT (subject to ROW availability)*
   - *Add one exclusive NBR (subject to ROW availability)*
   - *Add one exclusive EBT*
   - *Modify the Traffic Signal*

2. *Avenue S at 47th Street East (State Route 138)*
   - *No feasible mitigation measure*

* Mitigation Measure TC-2 required by the Traffic Impact Analysis (Appendix F) as being necessary in 2015 has been accelerated to be required prior to issuance of building permits per City of Palmdale.

3. *Avenue R at 40th Street East (subject to ROW availability)*
   - *Add one EBT*

4. *Palmdale Blvd. at 40th Street East (subject to ROW availability)*
   - *Add one exclusive EBR*
   - *Add one exclusive WBR*
   - *Add one exclusive SBL*
   - *Add one exclusive SBR*

Level of Significance After Mitigation

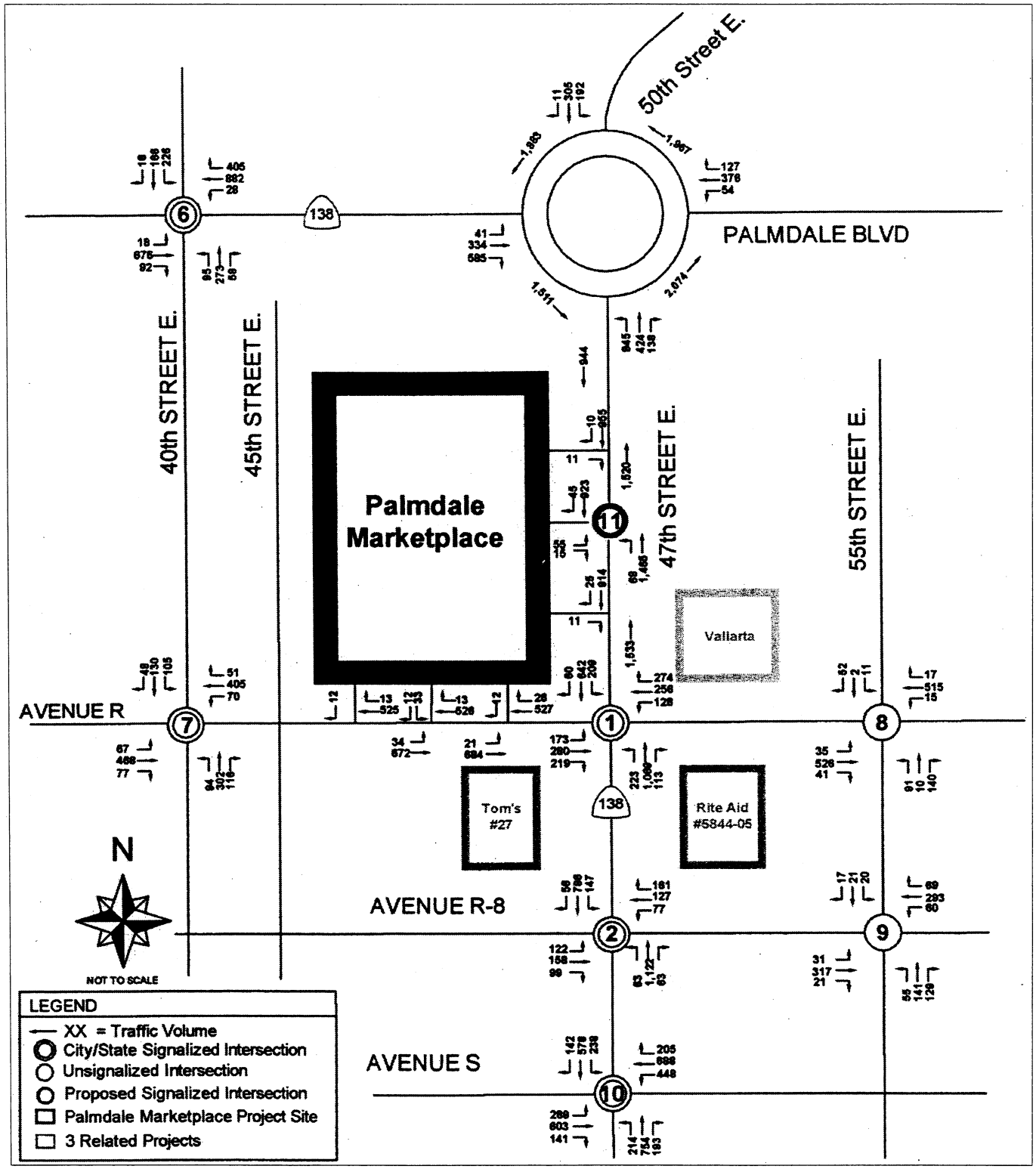
Avenue S and 47th Street East (SR 138) would operate at a LOS "D" during the PM peak hours. Due to existing ROW constraints at this intersection, no feasible mitigation measure is available and this impact would be considered an unavoidable, significant impact. In addition, the proposed improvements to the other intersections are subject to ROW being available. Due to uncertainty of ROW being available at intersections located above, impacts at these intersections may also be potentially significant.

Cumulative Traffic and Marketplace Project (Year 2015)

Future traffic volumes for the year 2015 were derived from the existing traffic volumes for the year 2006 then increased by using a 3.8 percent growth factor (project volumes were added). Figures 4.7-12 and 4.7-13 show the Cumulative Total Traffic with Project Traffic during the future year 2015 during the AM and PM peak periods, respectively.

Caltrans has proposed a roundabout to replace the existing three intersections, 47th/50th Street East at Palmdale Boulevard, Palmdale Boulevard at SR-138, and 47th Street East at SR 138 by the year 2008. For future year 2015 the proposed roundabout alternative was used for the traffic analysis. The analysis of the roundabout was prepared by using the methodology per Chapter 4 of "FHWA's Roundabouts: An Informational Guide".

Intersection capacity assessments for Cumulative Total Traffic with Project Traffic during the future year 2015 with the Caltrans roundabout are shown on Table 4.7-10.



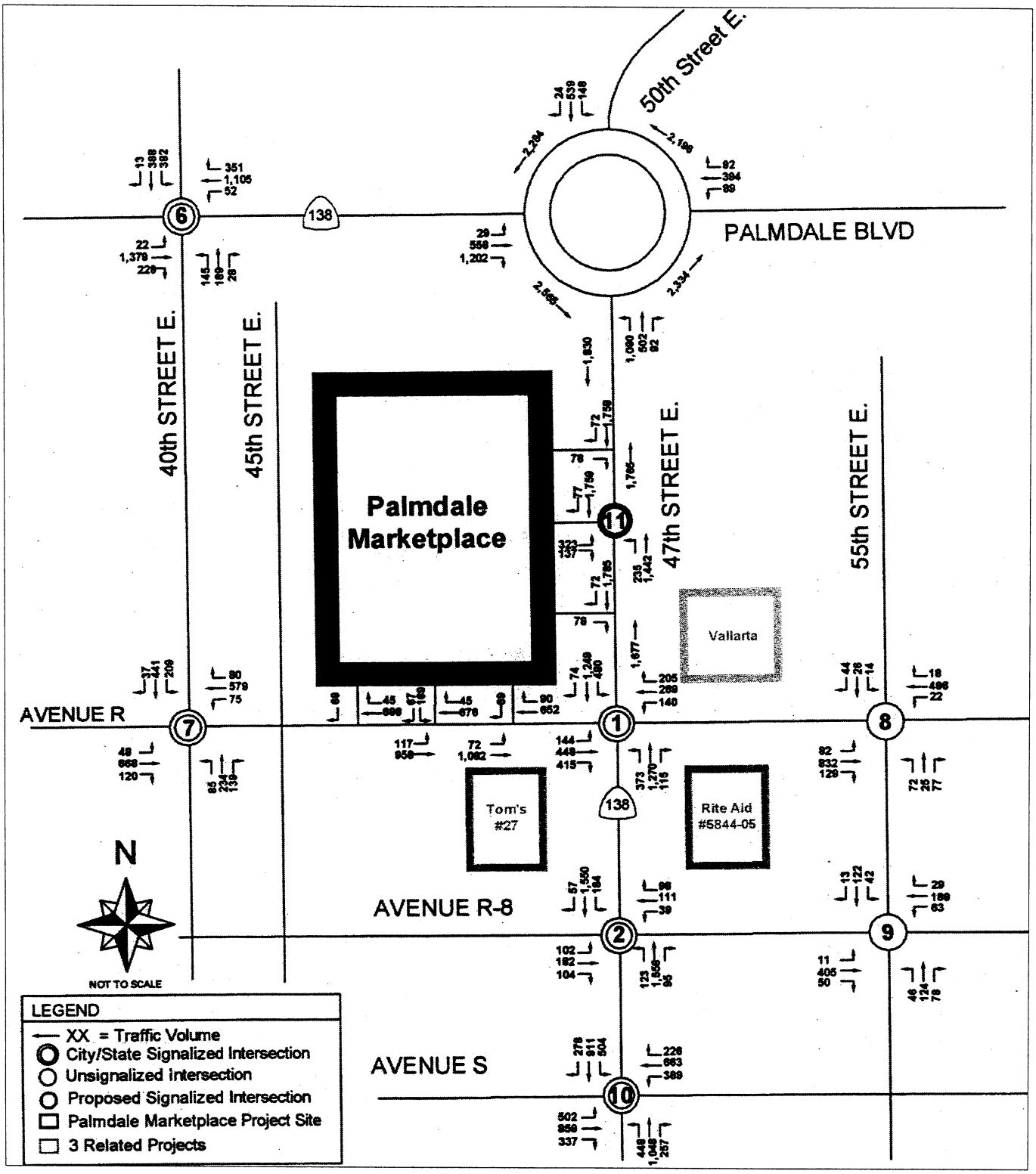
Source: Minagar & Assoc., Inc., 10/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes AM Peak Hour 2015

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-12

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 10/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes PM Peak Hour 2015

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-13

LILBURN CORPORATION

Table 4.7-10
Level of Service – Cumulative Total Traffic with Project Traffic[1]
(Future Year 2015 with Roundabout)

Intersection	Year 2015											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St E. @ Avenue R+	B	0.56	10.3	B	0.56	10.3	C	1.21	31.9	C	1.21	31.9
2. 47th St E. @ Avenue R-8	B	0.74	12.6	B	0.74	12.6	C	1.15	20.9	C	1.15	20.9
3. 47th St E. @ SR-138*	A	0.65	9.8	A	0.65	9.8	C	0.95	32.2	C	0.95	32.2
6. Palmdale Blvd. @ 40th St E.	B	0.75	19.8	**B**	**0.66**	**15.8**	D	1.03	38.9	**C**	**0.87**	**27.1**
7. Avenue R @ 40th St E.	C	0.68	26.6	C	0.71	32.7	D	0.86	37.4	D	0.86	37.4
8. Avenue R @ 55th St E.	A	N/A	N/A	A	N/A	N/A	D	N/A	N/A	D	N/A	N/A
9. Avenue R-8 @ 55th St E.	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Avenue S @ 47th St E.	D	0.88	37.3	**	**	**	F	1.06	88.9	**	**	**
11. New Marketplace Drive @ SR 138/47th St E.	A	0.38	4.8	A	0.38	4.8	B	0.71	12.7	B	0.71	12.7

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report
[1]Capacity and LOS analyses for the signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.
* With Proposed Caltrans Roundabout
+ With Geometry Improvement

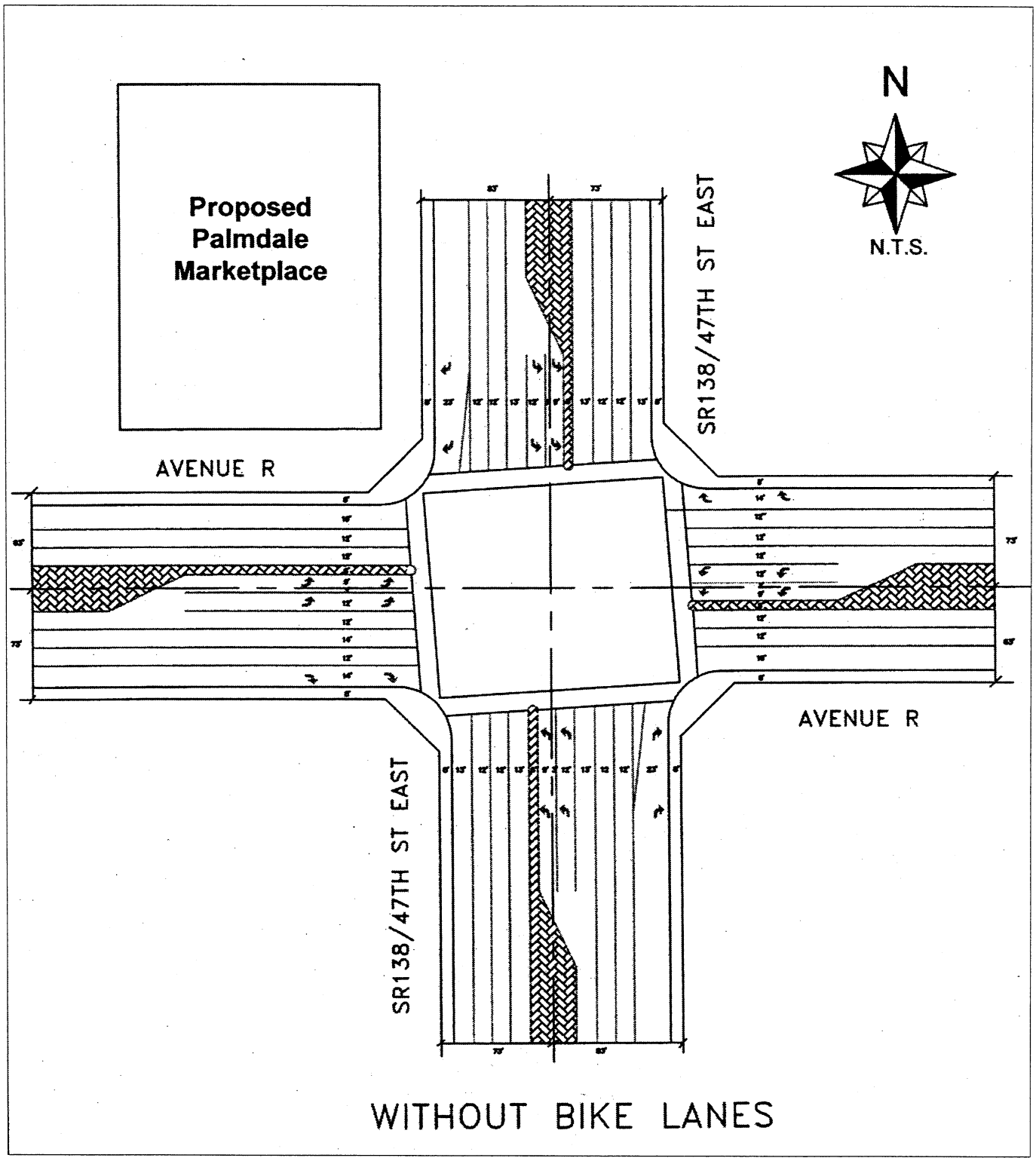
B	**0.86**	**18.1**

In bold with applied mitigation
** No feasible mitigation measure

The assessments for year 2015 concluded that most of the intersections will be operating at acceptable LOS "C" or better. However, without mitigation, the intersections at Palmdale Boulevard and 40th Street East will operate at LOS "D" during the PM peak hour, Avenue R at 40th Street East at LOS "D" during the PM peak hours, and Avenue S at 47th Street East at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour.

Geometry configuration for the intersection at 47th Street East and Avenue R is proposed by the City of Palmdale for future year 2015. The ultimate proposed geometry was used in the traffic analysis study for the future years 2015 and 2025, and is shown on Figure 4.7-14.

All intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigation at the above intersections except for Avenue S at 47th Street East. Mitigation Measure TC-2 required as being necessary in 2015 has been accelerated to be required prior to issuance of building permits by the City of Palmdale and is included under Buildout Year 2007. Due to existing right-of-way (ROW) constraints at this intersection, no feasible mitigation measure is available.



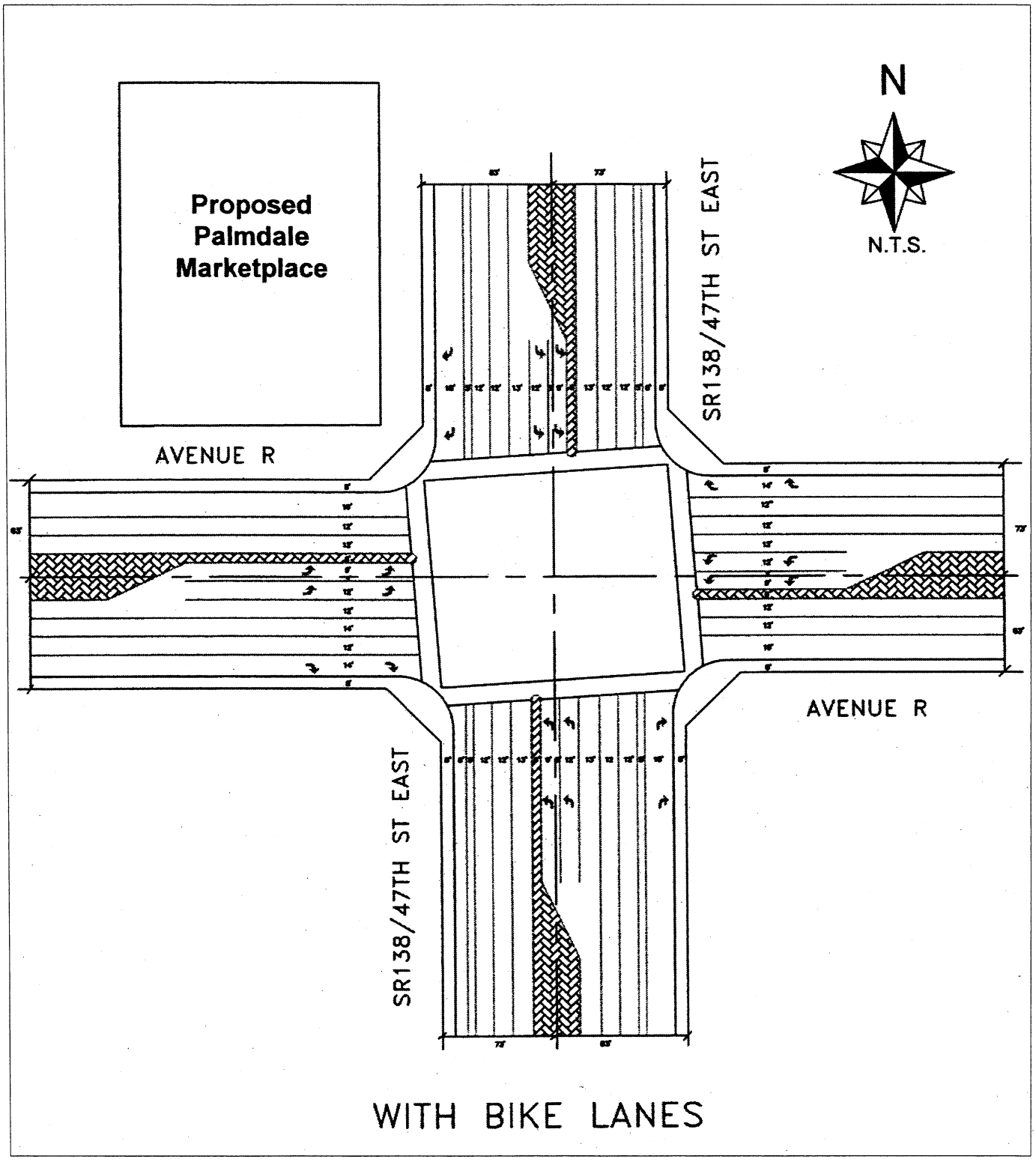
Source: Minagar & Assoc., Inc., 10/06.

City's Proposed Ultimate Geometry 47th Street E. and Avenue R Future Years 2015 and 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-14A

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 10/06.

City's Proposed Ultimate Geometry 47th Street E. and Avenue R Future Years 2015 and 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-14B

LILBURN CORPORATION

Mitigation Measure for Palmdale Marketplace

Mitigation Measure TC-3*

Off-Site Mitigation through payment of Traffic Impact Fees by the applicant in effect at the time building permits are issued.

Level of Significance After Mitigation

Avenue S and 47th Street East (SR 138) would operate at a LOS "D" during the AM and Los "E" for the PM peak hours. Due to existing ROW constraints at this intersection, no feasible mitigation measure is available and this impact would be considered an unavoidable, significant impact. In addition, the proposed improvements to the other intersections are subject to ROW being available. Due to uncertainty of ROW being available at intersections located above, impacts at these intersections may also be potentially significant.

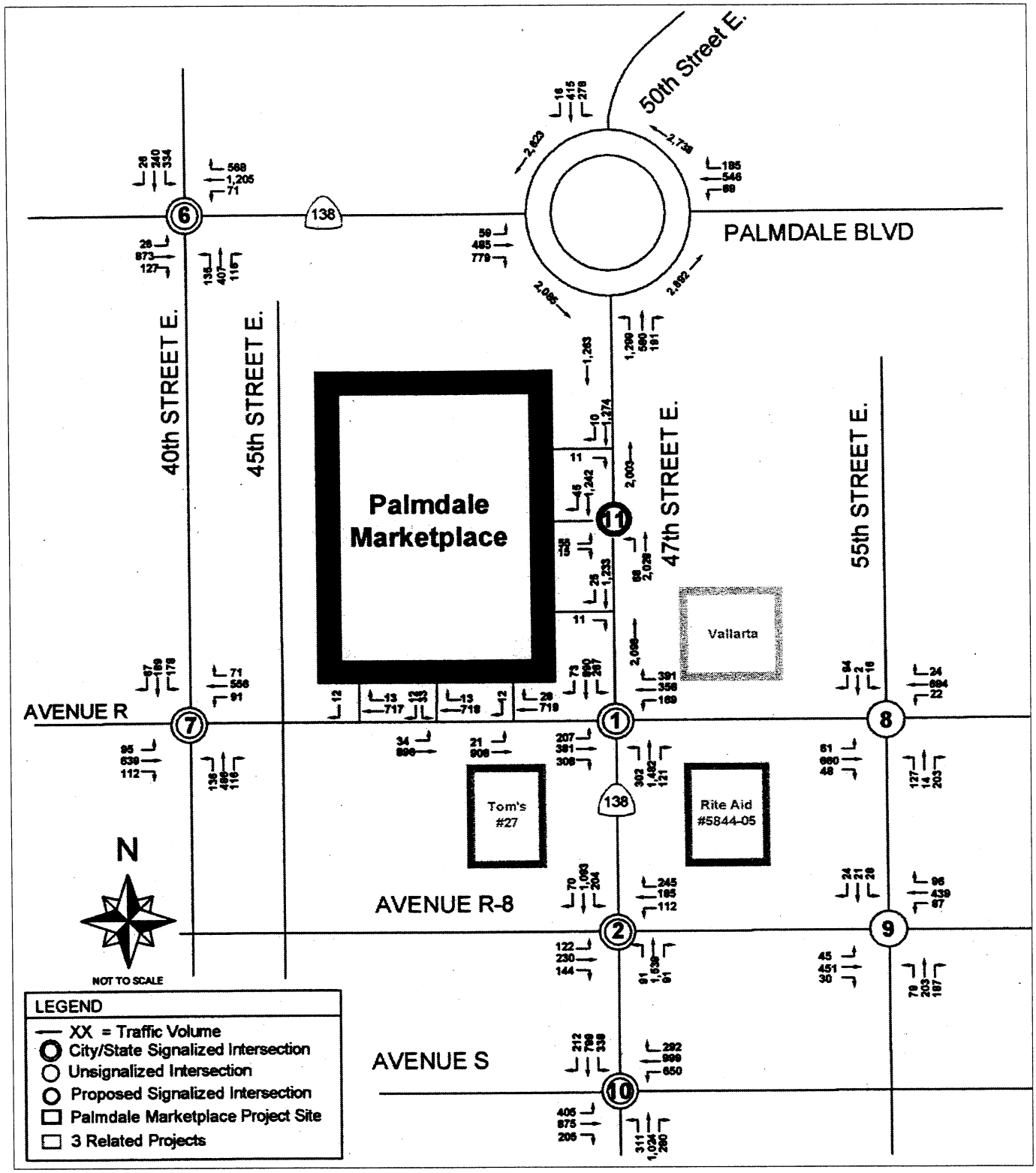
Future Traffic and Market Plan Project Traffic (Year 2025)

Future traffic for the year 2025 was derived by combining the existing traffic volumes for year 2006 by using the average growth factor of 3.8 percent for the years 2006 to 2025. Figures 4.7-15 and 4.7-16 show the Cumulative Total Traffic with Project Traffic for the AM and PM peak periods respectively. Using the same lane geometry as for year 2015, capacity assessments were also conducted. The results of intersection capacity assessments for Cumulative Total Traffic with Project Traffic during future year 2025 are shown on Table 4.7-11.

Without mitigation, the following intersections will be operating at an unacceptable LOS "D" or worse during the AM and PM peak hours for year 2025: 47th Street East and Avenue R, 47th Street East and Avenue R-8, Palmdale Boulevard and 40th Street East, Avenue R and 40th Street East, Avenue R and 55th Street East, and Avenue S and 47th Street East. The proposed Caltrans roundabout is revealed to have a LOS "F" during AM and PM peak hours.

With mitigations, all the intersections will operate at a satisfactory LOS' during both the AM and PM peak hours except for the roundabout. The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes. Avenue S and 47th Street East (SR 138) has no feasible mitigation measure available due to existing ROW constraints. The intersection of Avenue R and 47th Street East (SR 138) will experience LOS "D" during a short peak hour, which is determined to be acceptable.

* Mitigation required by the Traffic Impact Analysis (Appendix F) as being necessary in 2015 has been accelerated to be required prior to issuance of building permits per City of Palmdale.



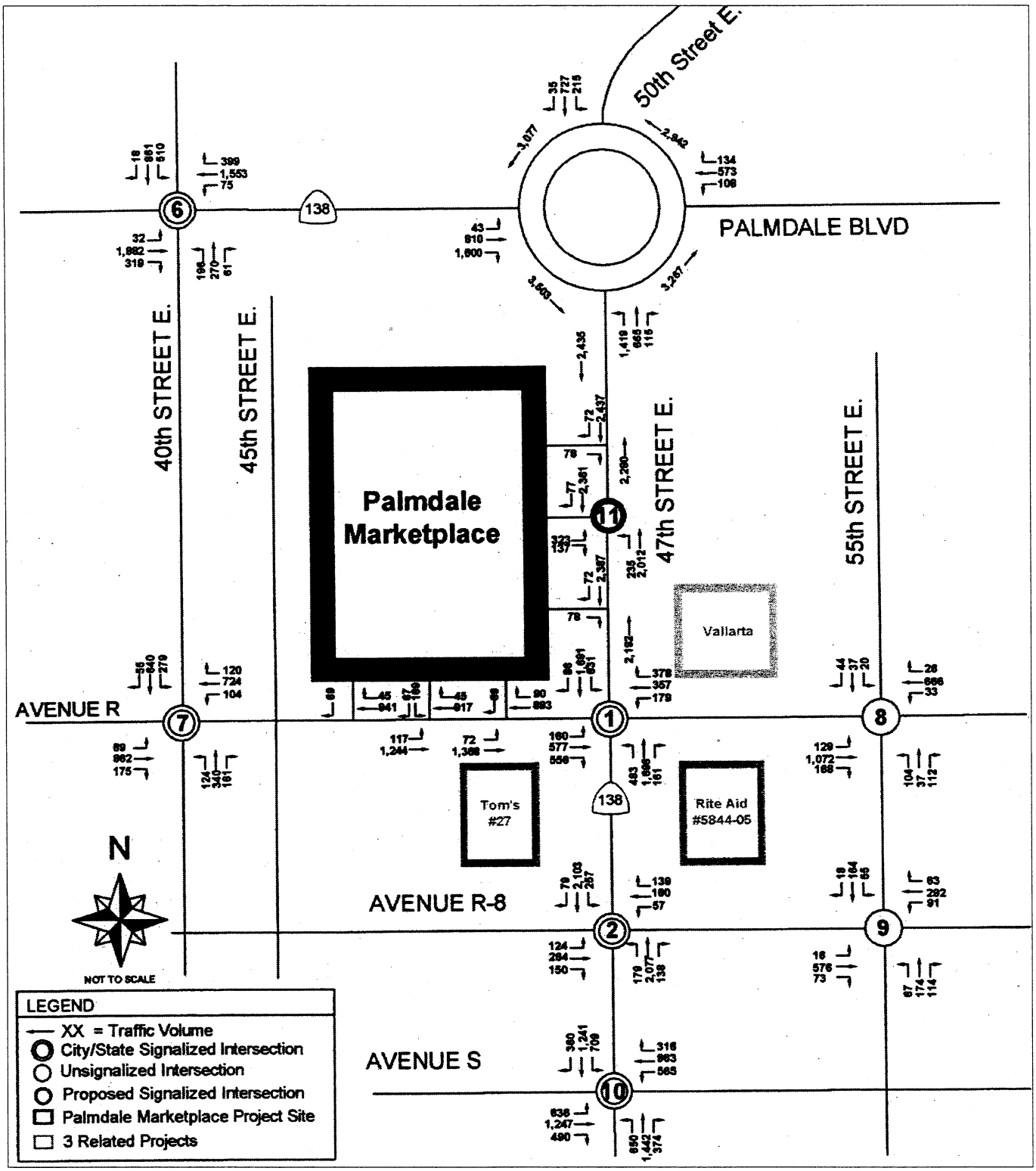
Source: Minagar & Assoc., Inc., 10/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes AM Peak Hours 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-15

LILBURN CORPORATION



Source: Minagar & Assoc., Inc., 10/06.

Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes PM Peak Hours 2025

Palmdale Marketplace
City of Palmdale, California

Figure 4.7-16

LILBURN CORPORATION

Table 4.7-11
Level of Service – Cumulative Total Traffic with Project Traffic[1]
(Future Year 2025 with Roundabout)

Intersection	Year 2025											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St E. @ Avenue R+	B	0.82	10.5	**A**	**0.76**	**9.9**	E	1.39	65.3	**D**	**0.91**	**39.8**
2. 47th St E. @ Avenue R-8	C	1.10	25.4	**	**	**	E	1.86	59.7	**	**	**
3. 47th St E. @ SR-138*	F	1.04	110.0	***	***	***	F	1.53	276.8	***	***	***
6. Palmdale Blvd. @ 40th St E.	E	1.08	63.3	**C**	**0.92**	**26.3**	F	1.75	297.5	**C**	**0.96**	**32.0**
7. Avenue R @ 40th St E.	D	0.95	47.8	**C**	**0.72**	**32.2**	E	1.08	64.3	**C**	**0.80**	**34.3**
8. Avenue R @ 55th St E.	C	N/A	N/A	**B**	**0.63**	**13.8**	F	N/A	N/A	**C**	**0.93**	**27.1**
9. Avenue R-8 @ 55th St E.	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Avenue S @ 47th St E.	F	1.07	91.4	**	**	**	F	1.52	246.4	**	**	**
11. New Marketplace Drive @ SR 138/ 47th St E.	A	0.53	4.8	A	0.53	4.8	B	0.82	15.6	B	0.82	15.6

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report
[1]Analyses for signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.
* With Proposed Caltrans Roundabout
*** Caltrans conceptual reconfiguration & approval of the roundabout capacity modification is required (from 2 to 3 lanes)

B	**0.86**	**18.1**

In bold with applied mitigation
** No Feasible mitigation measure
+ With Geometry Improvement

Mitigation Measures

Mitigation Measure TC-4 for Palmdale Marketplace

For the future 2025 buildout year, the following mitigation measures are recommended to be implemented if the other three proposed projects are not constructed:

1. *Avenue R at 47th Street East (State Route 138)*
   - *The same as 2015*

2. *Avenue S at 47th Street East (State Route 138)*
   - *No feasible mitigation measure*

3. *Avenue R at 40th Street East (subject to ROW availability)*
   - *Add one exclusive EBT*

4. *Palmdale Blvd. at 40th Street East (subject to ROW availability)*
   - *Add one exclusive EBT*
   - *Add one exclusive WBT*
   - *Add one exclusive SBT*
   - *Add one exclusive NBL*

5. *Avenue R-8 at 47th Street East*
   - *Modify signal for protected NB & SB left turns*

6. *Avenue R at 40th Street East*
   - *Signalize the intersection*

Level of Significance After Mitigation (2025)

With phased mitigations implemented as listed above, all the intersections will operate at satisfactory LOS' during both the AM and PM peak hours except for the roundabout and Avenue S and 47th Street East (SR 138). The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes. Avenue S and 47th Street East (SR 138) has no feasible mitigation measure available due to existing right-of-way constraints. The intersections of Avenue R and 47th Street East (SR 138), and Avenue R-8 and 47th Street East will experience LOS "D" during a short peak hour by 2025, which is determined to be acceptable. In addition, the proposed improvements to the other intersections are subject to R/W being available.

Due to the uncertainty of the future improvements for the roundabout and the ROW constraints and availability listed herein, traffic impacts are considered unavoidable and significant.

Volume to Capacity Impact Analysis

The Los Angeles County MTA's CMP characterizes a significant project impact as occurring when the proposed project increases traffic demand by 2 percent or more of capacity, causing the existing system to operate at an unsatisfactory LOS. Thus, impact analyses for all the intersections were performed by comparing the volume to capacity (V/C) ratios between project to no project(s) volumes for years 2007, 2015, and 2025. The Palmdale Boulevard at 47th/50th Street East intersection V/C ratio was not available, therefore not analyzed. According to Caltrans, a roundabout is proposed to replace the existing unsignalized intersection at 47th/50th Street East and Palmdale Boulevard by year 2008.

For year 2007 for all four projects after applied mitigation, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East and Avenue R-8, 47th Street East and State Route 138, Palmdale Boulevard at 40th Street East, and Avenue R and 40th Street East. Table 4.7-12 shows the intersections that will exceed the threshold. However, these four intersections will be mitigated to operate at acceptable LOS' and impacts will be less than significant.

Table 4.7-12
Level of Service and V/C "Before" and "After" For Buildout Year 2007

Buildout – Opening Year 2007	LOS						V/C Exceeding 0.02*	
	Without Project		With Project Without Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St. E. @ Avenue R	B	C	B	C	A	B	-	-
2. 47th St. E. @ Avenue R-8	A	A	A	B	A	B	0.04	0.16
3. 47th St. E. @ SR-138	B	C	B	C	B	C	0.04	0.14
4. Palmdale Blvd. @ 47/50th St. E.	F	F	F	F	B	C	N/A	N/A
5. Palmdale Blvd. @ SR-138	A	A	A	A	A	A	N/A	N/A
6. Palmdale Blvd. @ 40th St. E.	B	B	B	C	B	C	0.02	0.06
7. Avenue R @ 40th St. E.	C	C	C	C	C	C	0.03	0.16
8. Avenue R @ 55th St. E.	A	A	A	B	A	B	N/A	N/A
9. Avenue R-8 @ 55th St. E.	A	A	A	A	A	A	N/A	N/A
10. Avenue S @ 47th St. E.	C	D	C	D	**	**	**	**
11. New Marketplace Dr. @ SR 138 / 47th St. E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
*Comparison Between Without Project and With Project With Mitigation
** No feasible mitigation measure available due to R/W constraints.
Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

For year 2015 for all four projects with applied mitigation, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East and Avenue R, and 47th Street East and Avenue R-8. Table 4.7-13 shows the intersections that will exceed the threshold. However, these intersections will be mitigated to operate at acceptable LOS' and impacts will be less than significant.

For year 2025 for all four projects after applied mitigation, there will be no intersection that has a V/C ratio exceeding the significance threshold level of 0.02.

Analysis of 47th Street East at Avenue R Intersection

The traffic generated by the proposed project at the intersection of 47th Street East and Avenue R will generate 148 and 635 VPH trips or 5.15 percent and 15.04 percent of the total volumes at the intersection during the AM and PM peak hours respectively (see Table 4.7-15).

Table 4.7-13
Level of Service and V/C "Before" and "After" For The Future Year 2015

Buildout – Year 2015	LOS						V/C Exceeding 0.02*	
	Without Project		With Project W/O Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St E. @ Avenue R	B	B	B	C	B	C	0.04	0.28
2. 47th St E. @ Avenue R-8	B	B	B	C	B	C	0.11	0.16
3. 47th St E. @ SR-138**	A	B	A	C	A	C	N/A	N/A
6. Palmdale Blvd. @ 40th St E.	B	C	B	D	B	C	-	-
7. Avenue R @ 40th St E.	C	D	C	D	C	D	-	-
8. Avenue R @ 55th St E.	A	C	A	D	A	D	N/A	N/A
9. Avenue R-8 @ 55th St E.	A	A	A	A	A	A	N/A	N/A
10. Avenue S @ 47th St E.	D	E	D	F	**	**	**	**
11. New Marketplace Dr @ SR 138 / 47th St E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
* Comparison Between Without Project and With Project With Mitigation
** No feasible mitigation measure
Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Table 4.7-14
Level of Service and V/C "Before" and "After" For The Future Year 2025

Buildout –Year 2025	LOS						V/C Exceeding 0.02*	
	Without Project		With Project W/O Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St E. @ Avenue R	B	D	B	E	A	D	-	-
2. 47th St E. @ Avenue R-8	C	D	C	E	***	***	***	***
3. 47th St E. @ SR-138**	F	F	F	F	***	***	***	***
6. Palmdale Blvd. @ 40th St E.	E	F	E	F	C	C	-	-
7. Avenue R @ 40th St E.	E	E	D	E	C	C	-	-
8. Avenue R @ 55th St E.	B	E	C	F	B	C	N/A	N/A
9. Avenue R-8 @ 55th St E.	A	A	A	A	A	A	N/A	N/A
10. Avenue S @ 47th St E.	F	F	F	F	***	***	***	***
11. New Marketplace Dr @ SR 138 / 47th St E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
* Comparison Between Without Project and With Project With Mitigation
** Caltrans conceptual reconfiguration & approval of the roundabout from 2 to 3 lanes is required
*** With no feasible mitigation measure
Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Table 4.7-15
Project Traffic Impact at the Intersection of 47th Street East and Avenue R
Buildout Year 2007

	Project	Peak Period	Volumes Generated (In & Out) in VPH	Intersection Total Volumes in VPH	Percentage
Year 2007 (Buildout)	Marketplace	AM	148	2,871	5.15%
		PM	635	4,223	15.04%

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Geometry improvements to the intersection at 47th Street East and Avenue R for years 2007 and 2015 were proposed based on the traffic assessments conducted. These proposed geometry improvements are shown on Exhibit E-2 in the Appendix F.

The proposed intersection layout for the 47th Street East at Avenue R for the 2007 buildout year with Palmdale Marketplace project only, will include double left turn, two through and one right turn lanes at the eastbound approach; one left turn, two through and one right turn lanes at the southbound approach; one left turn and one shared-through right turn lanes at the westbound approach; and one left turn, one through and one shared-through right turn lanes at the northbound approach. The proposed intersection layout for the same intersection for the 2007 buildout year with Palmdale Marketplace and the other three projects (i.e., Rite-Aid, Tom's Restaurant, and Vallarta Supermarket) will include double left turn, three through lanes, and one right turn lane at the eastbound approach; double left turn lanes, three through lanes and one right turn lane at the southbound approach; one left turn lane, one through lane and one shared through-right turn lane at the westbound approach; double left turn lanes, two through lanes and one right turn lane at the northbound approach.

The proposed intersection layout for the 47th Street East at Avenue R for future year 2015 will include double left turn lanes, three through and one right turn lanes at all approaches. Protected left turn phases are recommended for all the approaches. Northbound and southbound left turn phases have satisfied the warrant assessments for the provision of protected left turn phases. East- and westbound protected left turn phases are recommended due to the fact that two left turn lanes are needed for the westbound approach. With the proposed geometry, the intersection will operate at LOS "B" and "C" during the 2015 AM and PM peak periods respectively.

Analysis of 47th/50th Street East and Palmdale Boulevard Intersection

For the unsignalized intersection of Palmdale Boulevard and 47th/50th Street East, according to the Caltrans D-7 Traffic Analysis Report, 07-LA-138 KP 76.9/78.8 (PM 47.8/49/0) 07-185-23960K, two improvement alternatives were proposed for the intersection, which include a roundabout alternative and a signalized alternative, to improve the unsatisfactory performance of the intersection. The proposed roundabout will be constructed at the Palmdale Boulevard, SR 138 at 47th/50th Street East intersection to replace the existing three intersections by the year 2008. Based upon the information provided by Caltrans District 7, the roundabout is proposed to have two lanes and with one entering lane from each of the four approaches.

The roundabout option was analyzed as a default for year 2015 and 2025 analyses. For year 2015, the performance of the roundabout will be at "A" and "C" during the AM and PM peak hours of operation. Existing and year 2007, the area has an LOS of "F" without the roundabout. However for year 2025, the proposed Caltrans roundabout will operate at LOS "F" with and without the project. The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes.

Impact TC-2

Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?

Access Points Assessments

The proposed project design is planning to have three new driveways along 47th Street East (SR 138) and three along Avenue R. The first and third driveways along 47th Street East will be restricted to unsignalized right-turns in and right-turns out. The main driveway (second driveway along 47th Street East) is proposed to install a traffic signal for left-turns in, left-turns out, right-turns in, and right-turns out. The first driveway along Avenue R, closest to the intersection of 47th Street East and Avenue R, will be restricted to unsignalized right-turns in, right-turns out, and left-turns in subject to approval of the City Traffic Engineer. The northern most driveway along 47th Street East is anticipated to be constructed when the roundabout is constructed. The second driveway along Avenue R will have full access from all directions. The third driveway along Avenue R will have unsignalized right-turns in and right-turns out only.

Left and Right Turn Lanes Queue Length Assessments

Left turn lane queue requirements and left and right turn lane assessments for the intersection of 47th Street East and Avenue R and 47th Street East and Avenue R-8 were performed for buildout year 2007, and future years 2015 and 2025 using the Highway Capacity Manual (HCM) requirements. The queue length assessment results are shown in Appendix F and are included in the intersection design shown on Figure 4.7-14.

Left Turn Phase Traffic Signal Warrant Assessment

Per the request of Caltrans, the 47th Street East and Avenue R, and 47th Street East and Avenue R-8, intersections have protected left turn phases in all directions. The two locations are currently operating with permissive left turn phases at all approaches. Therefore, a comprehensive left turn phase traffic signal warrant assessment was conducted for each approach of the two intersections for four separate target years.

Based on the Caltrans Traffic Manual, "protected left turn phase should be considered if there are 50 or more left turning vehicles per hour in one direction with the product of the turning and conflicting through traffic during the peak hour of 100,000 or more." A complete set of left turn phase traffic signal warrant assessments was conducted for the two signalized locations based on the criteria mentioned above.

Detailed calculations for the protected left turn phase warrant assessments are shown in Appendix F.

Table 4.7-16 shows that the north- and southbound left turn phases at the intersection of 47th Street East and Avenue R meet the protected left turn phase warrant check under existing conditions. However, the eastbound left turn will not meet the warrant check. These findings have been included in the intersection plans.

Table 4.7-16
Protected Left Turn Phase Signal Warrant Assessments
for 47th Street East and Avenue R

Approach	Existing	Buildout Year 2007	Future Year 2015	Future Year 2025
EBL	No	No	No	No
WBL	No	No	No	Yes
NBL	Yes	Yes	Yes	Yes
SBL	Yes	Yes	Yes	Yes

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Table 4.7-17 shows that none of the approaches meet the warrant check at the intersection of 47th Street East and Avenue R-8 during the existing year. However, during the buildout year 2007, the northbound left and southbound left turn movements meet protected left turn phase warrant assessments. In the year 2015, both the north- and southbound left turn movements meet the warrant assessments, thus protected left turn phases for the approaches are recommended.

Table 4.7-17
Protected Left Turn Phase Signal Warrant Assessments
for 47th Street East and Avenue R-8

Approach	Existing	Buildout Year 2007	Future Year 2015	Future Year 2025
EBL	No	No	No	No
WBL	No	No	No	No
NBL	No	Yes	Yes	Yes
SBL	No	Yes	Yes	Yes

Source: Minagar & Associates, Inc., October 2, 2006 Traffic Analysis Report

Mitigation Measure

Mitigation Measure TC-5

The new intersection of Palmdale Marketplace Driveway and State Route 138/47th Street East shall be signalized by the developer. It is warranted for signalization prior to the issuance of the first certificate of occupancy for the project

Level of Significance After Mitigation

The overall project design (circulation) of the driveways and implementation of Mitigation Measure TC-5 will ensure that access and circulation within the vicinity will meet appropriate standards for safe movement of vehicles. Circulation impacts will be less than significant.

Traffic Impact Summary

With the mitigation measures listed above, all the intersections will operate at satisfactory LOS' during both the AM and PM peak hours except for the roundabout and Avenue S and 47th Street East (State Route 138). The roundabout will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes. Avenue S and 47th Street East (State Route 138) has no feasible mitigation measure available due to existing R/W constraints. The intersections of Avenue R and 47th Street East (State Route 138), will experience LOS "D" during a short PM peak hour by 2025, which is determined to be acceptable. In addition, the proposed improvements to the other intersections are subject to R/W being available.

Due to the uncertainty of the future improvements for the roundabout and the R/W constraints at Avenue S and 47th Street East (State Route 138) which limit future intersection improvements, traffic impacts are considered unavoidable and significant.

Some mitigation measures identified within the entitled *Third Revised Traffic Analysis Report for the Proposed Palmdale Marketplace, Palmdale, California,* prepared by Minagar & Associates, Inc., October 2, 2006, to be implemented in 2015, have been accelerated for implementation prior to issuance of the first Certificate of Occupancy. Other Traffic and Circulation mitigation measures will be mitigated as necessary when warranted and funded in advance through payment by the project proponent via development fees. Fees for all project related traffic impacts will be collected by the City prior to issuance of related Certificates of Occupancy thus allowing mitigation of potential impacts to occur when necessary instead of at potentially unrelated target dates.

5.0 OTHER CEQA REQUIRED ANALYSIS

5.1 INTRODUCTION

This section includes consideration and discussion of other project-related impacts that must be evaluated in the Draft EIR as described in CEQA Guidelines section 15126.2 and section 15130. These include the following:

- Cumulative Impacts must be discussed when project-related impacts are or can be mitigated to less than significant, but, when combined other reasonably foreseeable projects, can be cumulatively considerable.

- Growth Inducing Impacts must be discussed with regard to the way in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding area.

- Significant Irreversible Environmental Changes Which Would be Involved if the Proposed Project is Implemented must be discussed when the project includes future commitments to non-renewable resources either during construction or operation. Irretrievable commitments of non-renewable resources must be evaluated to assure that the consumption can be justified. Irreversible changes may also result from environmental accidents associated with project operations.

5.2 CUMULATIVE IMPACT ANALYSIS

5.2.1 Purpose

This section discusses the potential cumulative impacts to the environment that may result from the implementation of the proposed Palmdale Marketplace when considered with other planned or reasonably foreseeable projects. CEQA Guidelines, Section 15130, provides the following guidance concerning the format and content of the cumulative impacts analysis:

(a) (1)...a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts.

(2) When the combined cumulative impact associated with the project's incremental effect and the effect of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR.

When discussing cumulative impacts:

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided

by the standards of practicability and reasonableness. The following elements are necessary to an adequate discussion of cumulative impacts:

(1) Either:

A. A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or

B. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified which described or evaluated regional or area-wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

A list of related projects was compiled by the City within a two-mile radius of the Palmdale Marketplace site. This radius encompasses lands within the City of Palmdale. No projects were identified within Los Angeles County jurisdiction. A list of cumulative projects is identified in Figure 7-1 and Table 7-1. The combined cumulative projects include nearly 2,000 residential lots and close to 495,053 square feet of commercial space not including the proposed project of 530,00 square feet of retail.

5.2.2 Standards of Significance

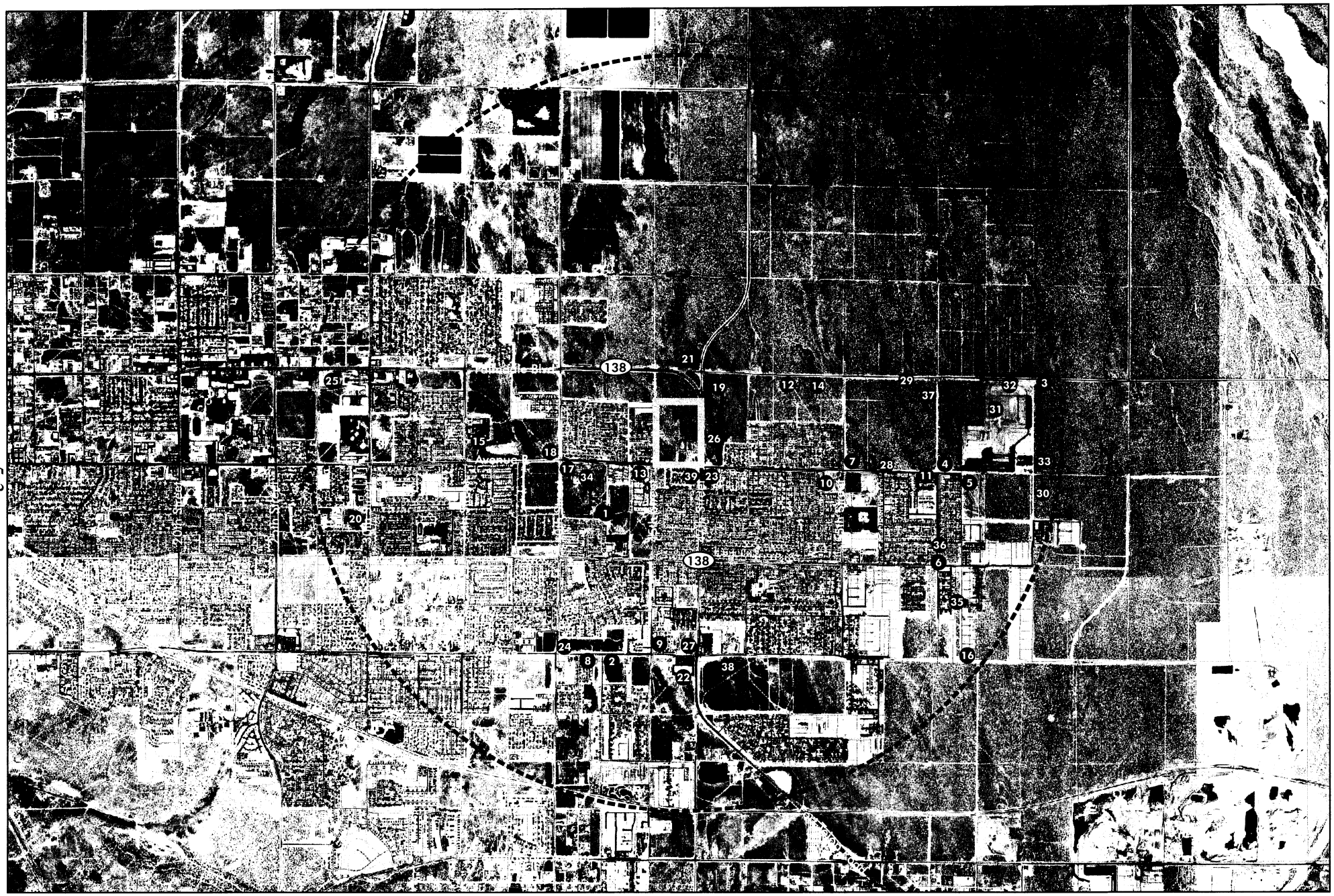
CEQA Guidelines Section 15355 defines cumulative impacts as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The Guidelines further state:

a. The individual effects may be changes resulting from a single project or a number of separate projects.

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

Cumulative impacts were identified for the following issues:

- Air Quality;
- Biological Resources; and
- Traffic.



Cumulative Projects

Palmdale Marketplace
City of Palmdale, California

Figure 5-1

Table 5-1
Cumulative Projects Within a Two-Mile Radius of the Proposed Project

(No.) Case No.	Development	Location	Acres	Units/ Square Feet
Residential Projects				
(1) TTM 060148	Royal Investors Group 10100 Santa Monica Blvd. Los Angeles, CA 90067 310-553-2552	1,300 feet south of Avenue R and east of 42nd Street East APN:023-006-028, 029, 040, and 041	29.6	115 lots
(2) TTM 63284	Haig Engineering and Const. 2500 E. Foothill Blvd. Suite 101 Pasadena, CA 626-795-5232	Avenue S and 670 feet west of 45th Street East	2.5	8 lots
(3) TTM 63364a	Royal Investors Group 10100 Santa Monica Blvd. Los Angeles, CA 90067 310-553-2552	Southeast corner of Palmdale Blvd. and 65th Street East	30	98 lots
(4) TTM 061731	Royal Investors Group 10100 Santa Monica Blvd. Los Angeles, CA 90067 310-553-2552	North side of Avenue R and east side of 60th Street East	10	38 lots
(5) TTM 063285	Haig Engineering and Const. 2500 E. Foothill Blvd. Suite 101 Pasadena, CA 626-795-5232	Located on Avenue R, 337 feet East of Rockie Lane.	4.62	19 lots
(6) TPM 64841	Rudolph Malanga 5954 Dovetail Drive Agora Hills, CA 91325 818-597-1308	SEC of Avenue R-8 and 60th Street East	1.25	4 lots
(7) TTM 061816	Gary Butcher 2371 Torrance Boulevard Torrance, CA 90501 310-328-7306	Northeast corner of 55th Street East and Avenue R	7	23 lots
(8) TTM 63379 See ZC 06-01, SPR 1-06-1	Bay Development Group 28005 N Smyth Drive Suite 129 Valencia, CA 97355 661-295-4607	Located at the southwest corner of Avenue S and 42nd Street East	5	26 lots
(9) TTM 63284	Haig Engineering and Constr. 2500 E. Foothill Blvd. Ste 101 Pasadena, CA 91107 626-795-5232	West side of 45th Street East, approximately 330 feet north of Avenue S	2.5	8 lots
(10) TTM 47510	Russell Malanga RJ Investments 5821 Ridgebrook Dr. Agoura Hills, CA 91301 818-597-0193	South side of Avenue R between 53rd and 55th Street East	2.4	8 lots
(11) TTM 063412	Henrick Nazarian Hall & Foreman Inc. 20950 Warner Center Ln. Ste. A Woodland Hills, CA 91367 818-251-1200	Northeast corner of Avenue R and 60th Street East	10.3	34 lots

(No.) Case No.	Development	Location	Acres	Units/ Square Feet
(12) TTM 061045	Richland Pinehurste, Inc. 4100 Newport Place #800 Newport Beach, CA 92660 949-261-7010	52nd Street East and Palmdale Boulevard	20	64 lots
(13) TTM 062038	George Pavlidis 4303 Trenton Avenue Palmdale, CA 93552 661-406-2005	Southwest corner of Avenue R and 45th Street East	5.15	15 lots
(14) TTM 53067 TE (Time Extension)	CCL Engineering 43434 Sahuayo St. Lancaster, CA 93535 661-949-9500	South side of Palmdale Boulevard and west of 55th Street East	19.55	67 lots
(15) TTM 54209	CCL Engineering 43434 Sahuayo St. Lancaster, CA 93535 661-949-9500	Northeast corner of Avenue R and 35th Street East	27	95 lots
(16) TTM 062068	Development LLC 3470 Wilshire Blvd. Los Angeles, CA 90010 213-365-0005	Adjacent to the northeast corner of Avenue S and Rockie Lane	15	54 lots
(17) TTM 060511	AV Land, LLC 41530 Nonpariel Palmdale, CA 93551 661-722-3600	Southeast corner of Avenue R and 40th Street East	8.53	32 lots
(18) TTM 060926	CCL Engineering 43434 Sahuayo St. Lancaster, CA 93535 661-949-9500	Northwest corner of Avenue R and 40th Street East	8.69	29 lots
(19) TTM 060954	Global Investments & Development, LLC 3470 Wilshire Blvd., #1020 Los Angeles, CA 90010 213-365-0005	Southwest corner of Palmdale Boulevard and 50th Street East	20	80 lots
(20) TTM 061488	Bay Development Group, LLC 377 W. Fallbrook Ave., #201 Fresno, CA 93711 559-447-9800	Northwest corner of Avenue R-6 and 30th Street East	5	11 lots
	Sub-Total Residential		**234.09**	**828 lots**
Commercial/Public Projects				
(21) CUP 04-09	Boulevard East Storage, LLC (661/222-9367)	Palmdale Boulevard, east of 47th Street East (3023-001-075)	10	70,300 square feet of storage
(22) CUP 05-25	Royal Investors Group, LLC (310/553-2552)	West side of 47th Street East and south of Avenue S (3052-001-019, 020, 065, 066, 067)	15.29	163,000 square feet of comm.
(23) CUP 05-30	Halferty Development Company (626/405-0956)	Southeast corner of Avenue R and 47th Street East (3023-043-063)	4.13	35,372 square feet of comm.
(24) CUP 06-05 / TPM 065044	40th & S Partners, LLC 949/474-0440	Northeast corner of Avenue S and 40th Street East	5	44,500 square feet of comm.
(25) SPR 2-06-1	Mohammad Chaudry	330 feet west of 30th Street East, south of Palmdale Boulevard	.97	13,500 square feet of comm.

(No.) Case No.	Development	Location	Acres	Units/ Square Feet
(26) CUP 04-04	Adolph Ziemba AIA & Associates (818/841-2585)	Northeast Corner of Avenue R and 47th Street East (3023-004-033)	8.52	76,725 square feet of comm.
(27) CUP 05-19	Astani Development Inc. (310/273-2999)	4607 E. Avenue S (3023-008-023)	8	66,165 square feet of comm.
(28) SPR 4-05-2	L. A. County Fire Department (323/881-6121)	South side of Avenue R, west of 57th Street East (3023-021-904)	.95	fire station (No. 93) totaling 8,500 square feet
	Sub-Total Commercial/Public		**52.86 ac**	**478,062 SF**
Projects Currently Under Construction				
Residential				
(29) TTM 061610	Global Investments & Development, LLC 3470 Wilshire Blvd., #1020 Los Angeles, CA 90010 213-365-0005	South of Palmdale Boulevard and 950 feet west of 60th Street East	10	35 lots
(30) TTM 060028	Richland Communities 3 Imperial Promenade, #150 Santa Ana, CA 90707 714-708-4740	Southeast corner of Avenue R and 65th Street East	97.5	381 lots
(31) TTM 46757 (Phases 2, 4, and 5)	KB Homes 27240 Turnberry Lane, #100 Valencia, CA 91355 661-219-6901	West side of 65th Street East between Palmdale Boulevard and Avenue R	58	246 lots
(32) TT 46757 (46757-01, 46757-03, 46757-07) Phase 1, 3. 7 Recorded	KB Homes 27240 Turnberry Lane #100 Valencia, CA 91355 661-219-6901	Southwest corner of Palmdale Boulevard and 65th Street East	34	142 lots
(33) TT 49147 Major Modification	Pulte Homes Corp. 27220 Turnberry Ln., #190 Valencia, CA 91305 661-295-6000	North side of Avenue R between 65th Street East and 70th Street East	90	178 lots
(34) TTM 53221 TE (Time Extension)	PM Homes, LLC 1000 Dove St., #100 Newport Beach, CA 92660 949-660-8988	Between 40th and 42nd Streets East, 600 feet south of Avenue R	23.6	87 lots
(35) TTM 060128	Royal Investors Group 10100 Santa Monica Blvd. Los Angeles, CA 90067 310-553-2257	West side of Rockie Lane between Avenue R-8 and Avenue S (APN 3024-010-005)	10	39 lots
(36) TTM 060162	PM Homes, LLC 1000 Dove St., #100 Newport Beach, CA 92660 949-660-8988	Between 60th Street East and Rockie Lane and 280 feet north of Avenue R-8	5	16 lots
(37) TTM 060745	Frontier Homes 42225 10th Street West, #D Lancaster, CA 93534	South side of Palmdale Boulevard, east of 58th Street East	10	35 lots
	Sub-Total Residential		**338.1 ac**	**1,159 lots**
Commercial/Public				
(38) CUP 99-8 GPA 99-2A TPM 25755 ZC 99-3	Rothbart Development (310/277-6288)	Southeast corner of Avenue S and 47th Street East (3051-015-056)	33	368,947 square foot retail shopping center

(No.) Case No.	Development	Location	Acres	Units/ Square Feet
(39) CUP 03-02	Nikiforos Valaskantjis (949/661-5629)	Southwest corner of Avenue R and 47th Street East (3023-040-019, 020)	2.44	16,936 square feet retail/rest.
	Sub-Total Commercial/Public		**35.44**	**385,883**
	Total Residential		**572.19**	**1,987**
	Total Commercial/Public		**88.3**	**863,945**
Proposed Project	**Palmdale Marketplace**	**NW corner of Ave. R and 47th St. East**	**49.25**	**530,000 SF**
Grand Total			**709.74**	**1,393,945**

NA= not applicable
TT= Tentative Tract
TTM=Tentative Tract Map
CUP=Conditional Use Permit
Source: Planning Department City of Palmdale, June 2006

Cumulative Impacts Considered to be Less than Significant

Land Use and Aesthetics. The combined cumulative projects, nearly 2,000 residential lots and close to 495,053 square feet of commercial space, would continue to transform the City of Palmdale from a rural community in the Antelope Valley into a suburban metropolis. This transformation is occurring throughout the City as well as in the City of Lancaster. The City of Palmdale has planned for this growth and can accommodate these various projects through adherence to its General Plan and Zoning Ordinance to ensure that land uses are compatible or that they can provide buffers between uses in order to reduce potential land use conflicts. Aesthetically, the City has established design standards for various land uses in order to ensure orderly and consistent development that as a whole represents a pleasant place to live and work.

The development of the proposed project would create a commercial center on a current vacant parcel zoned for General Commercial that would meet the growing demand for retail services. The surrounding areas to the west and south are residential in character. Properties to the north and east are vacant. Although this would change the visual character of the area, development of the project site would not substantially degrade the visual character or quality of the project site and its surrounding area. The site is located on a heavily traveled state highway which would be unsuitable for residential development.

In order to reduce potential visual impacts to the surrounding area, certain architectural designs were taken into consideration such as parapets, textured building materials, and towers to lessen the monotony of the rectangular stores. All of the stores within the shopping center would be designed with continuity as the goal. A landscaping plan would be submitted to the City for approval prior to development activity. Landscaping would be done along the perimeter of the site and within the parking areas to aesthetically enhance the site and to soften potential visual impacts to residential areas to the west and south.

In summary, the proposed project in conjunction with other related projects will continue the transformation of the Antelope Valley from a high desert environment into a suburban environment. This impact is considered to be adverse but less than significant as the majority of the projects listed in Table 5-1 are consistent with the General Plan and Zoning Ordinance and are a part of the City's long-range development strategy.

Cultural Resources. The results of the Phase I Cultural Resource Investigation indicated the presence of historic residential remnants and scattered household refuse deposits. A Phase II Cultural Resource survey is required prior to site disturbance to uncover, record, and curate any historic artifacts. This mitigation will reduce potential impacts to cultural resources to less than significant.

All projects are required to be surveyed for onsite archaeological and historic resources prior to development. If potentially significant resources are uncovered, then appropriate mitigation would be required to preserve, record or avoid the resource. Therefore, no cumulative impacts to cultural resources would occur.

Geology and Soils. The City of Palmdale and the project area are located in a seismically active region. The dominant seismic feature affecting the City of Palmdale is the San Andreas Fault, which traverses the southernmost portion of the City. The Uniform Building Code addresses requirements for construction to withstand earthquakes and associated groundshaking, settlement, etc. Design of structures to meet seismic safety standards would result in impacts remaining less than significant for each project as it is developed. Therefore, no cumulative impacts would occur.

Hydrology and Water Quality. Cumulative projects would result in an increase in impervious surfaces and increase runoff from these sites into the local and regional storm drain systems. In addition, urban pollutants associated with parking lots, roads, and landscaping, combine with stormwater that ultimately ends up in major watercourses flowing through Palmdale. Stormwater requirements administered by the Lahontan Regional Water Quality Control Board (RWQCB) require individual projects to employ Best Management Practices (BMPs) to control urban runoff from each site during construction. The RWQCB is also responsible for reviewing each project's Water Quality Management Plan (WQMP) for long-term operation and issuing the Waste Discharge Requirements for each project. In addition, individual business owners may also be required to submit Water Quality Management Plans and be issued Waste Discharge Requirements by the RWQCB on an individual basis within larger development projects. Employing BMPs that reduce the potential for storm water discharges to affect water quality have been proven successful when implemented at construction projects. Therefore, this impact would not be cumulatively significant.

With regard to water supply, the Palmdale Water District has three sources of water supply, the California Aqueduct, the Littlerock Dam, and water wells. Water supply is addressed for each individual project and the water supply appears adequate for the planned growth of the City. Cumulative impacts from the listed projects are less than significant.

Noise. Noise associated with the proposed project is related to delivery trucks, which are mitigated on site by sound barrier walls. Each cumulative project is assessed on potential noise production or if it would be impacted by existing noise sources, and must comply with the City's noise standards.

Long-term noise from the cumulative projects would be mostly associated with new vehicle trips. Over time area roadways may experience substantial noise increases due to area-wide growth in general. The General Plan has designated areas along heavily traveled streets for commercial and other less noise sensitive uses that can tolerate increased noise from traffic. Site-specific areas where noise may affect residential would require additional noise mitigation to be determined on a site by site basis. Therefore, increases in ambient noise in the area would not be cumulatively significant.

Potentially Significant Cumulative Impacts

The proposed Palmdale Marketplace project, in conjunction with other related projects identified in Table 5-1 may result in significant cumulative impacts to Air Quality associated with increased vehicle trips, Biological Resources associated with the loss of wildlife habitat and desert vegetation, and traffic due to increased vehicle trips.

Air Quality. Cumulative projects would generate emissions of criteria pollutants based on the size and type of projects and are estimated in Table 5-2. Individually, many of these projects would not exceed the CEQA threshold of significance due to their small size or lack of emission sources. The AVAQMD also regulates all dust sources and stationary sources of air pollutants including gas stations and CARB regulates vehicle and truck emissions.

The proposed project creates vehicle trips and related emissions that exceed the CEQA thresholds. However, the commercial services provided by the proposed project would likely reduce the overall vehicle miles by providing a local commercial center for the existing and future residences in eastern Palmdale. Cumulatively, the vehicle and truck trips associated with residential growth, commercial centers, and other facilities in conjunction with the proposed project, would contribute to a significant cumulative impact to air quality.

Table 5-2
Cumulative Operational Emissions (Pounds per Day)

Source	Emissions (lb/day)			
	ROG	**NO_X**	**CO**	**PM_{10}**
Area Source Emissions	559.99	39.86	875.13	128.18
Mobile Source Emissions	482.13	843.51	5,893.03	603.93
Total	**1,042.12**	**883.38**	**6,768.16**	**732.11**
SCAQMD Threshold	137	. 137	548	82
Significant	**YES**	**YES**	**YES**	**YES**

Source: URBEMIS2002 Computer Model; Output in Appendix F

Biological Resources. The proposed project may affect special status species of wildlife and /or their habitat such as the Mojave ground squirrel and burrowing owls as well as displace desert vegetation including Joshua trees. These impacts are mitigated for the project with the implementation of the recommended mitigation measures. Other cumulative projects, while mitigating for most biological impacts individually, would incrementally increase the disturbance of currently undeveloped lands with similar desert habitats. The overall continuing loss of wildlife and vegetative habitat is considered to be a significant cumulative impact.

The West Mojave Plan has been developed to preserve and enhance sensitive wildlife and their habitat and sensitive desert vegetation communities. Implementation of this Plan should reduce region-wide biological impacts.

Traffic and Circulation. The traffic analysis prepared for the proposed project included an analysis of future conditions in 2007, 2015, and 2025 with and without the project as well as expected growth in the area at a rate of 3.8 percent to take into account the listed cumulative projects and future City build out. Mitigation measures in the form of street improvements, internal parking and roadway design, and signals are listed to reduce all but one intersection to acceptable levels of service (Avenue S and 47th Street East due to lack of right-of–way for improvements). The City of Palmdale requires the payment of traffic impact fees based on the square footage of retail development for off-site improvements.

Despite the improvements to streets as planned in the General Plan and determined for each specific project, and the payment of impact fees to pay for these improvements, the incremental impacts from the proposed project in conjunction with the listed cumulative projects and overall growth, would likely contribute to significant cumulative impacts to traffic.

5.3 GROWTH INDUCING IMPACTS

CEQA Guidelines Section 15126.2(d) requires an evaluation of growth inducing impacts that may result from a proposed project. Growth inducing impacts can occur when a proposed project places additional stress on a community by directly inducing economic or population growth that would lead to construction of new development projects in the same area as the project. A project would also be considered growth inducing if it removes obstacles to growth such as building a road to an undeveloped area, constructing a wastewater treatment plant or extending a sewer line that would provide additional capacity and thus allow new development in the area.

The Palmdale Marketplace site is located in the easterly portion of the City of Palmdale that currently has residential development with very little commercial land uses. The residential development would benefit from an increase in available retail shopping opportunities. The City as a whole may benefit by a reduction in traffic trips that are generated specifically for shopping opportunities. Therefore, the project is not growth inducing and meets the City's General Plan designation and policies.

5.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WOULD BE CAUSED BY THE PROPOSED PROJECT SHOULD IT BE IMPLEMENTED

CEQA Guidelines Section 15126.2(c) states significant irreversible environmental changes to nonrenewable resources which would be caused by the proposed project should it be implemented must be addressed. No significant irreversible environmental changes to nonrenewable resources are expected. Development of the Palmdale Marketplace will be in accordance with all applicable building and development code requirements for energy savings such as insulation of buildings and energy-efficient lighting (as feasible), heating and cooling systems installed with timers, and other energy saving devices. Landscaping with drought tolerant plants and water conservation devices would also be designed into the project.

The proposed Palmdale Marketplace contains a number of development standards to reduce dependence on non-renewable resources and encourage alternative ways to heat and cool the buildings and to conserve water.

Potential Urban Decay

It is not anticipated to contribute to urban decay, as the proposed project will not result in the loss of existing commercial business or building vacancy. The project will be an amenity for local residents within an approximate 5-mile radius of the project site. Development of the site would provide a conveniently located Neighborhood Retail Center that will utilize, and enhance the existing road network, alleviating traffic on major thoroughfares such as SR 14 and Palmdale Boulevard, and will reduce overall trips from residences to more distant shopping areas. Currently, the area is under-served with respect to commercial development. There are approximately 2,000 residential units either proposed or under construction that would benefit with the development of the proposed project. The project is anticipated to broaden the community's economic base by attracting new commercial uses to the project area, and attract shoppers from surrounding areas. The project site is also consistent with the City of Palmdale General Plan. Properties along SR 138 are recognized as prime commercial areas to support surrounding residential uses. Development of the retail center would enhance the economic base of the local and regional revenues through business, property, and sales tax revenues. Therefore, urban decay as a result of the development of the proposed project is not anticipated.

6.0 ALTERNATIVES

6.1 INTRODUCTION

This chapter evaluates alternatives to the proposed project that would reduce or eliminate the significant environmental impacts that would occur with the development of the Proposed Project.

CEQA Guidelines Section 15126.6 describes the consideration and discussion of alternatives to a proposed project. The Guidelines state that an EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly obtain most of the basic objectives of the project but avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives. An EIR does not need to consider every conceivable alternative to the project, but must consider a range of reasonable alternatives that would facilitate informed decision making and public participation.

The range of alternatives is governed by the "rule of reason", thus the EIR need only evaluate those alternatives necessary to permit a reasoned choice. Alternatives should be limited to only those that would avoid or substantially lessen any significant effects of the project. Also, an EIR should not consider alternatives with effects that cannot be reasonably ascertained and whose implementation is remote and speculative.

The EIR has focused on direct and indirect effects on the environment that would result from implementation of the proposed project. Direct environmental impacts of the project are expected related to air quality, biological resources, cultural resources, animal life, plant life, hydrology and water quality, noise, and traffic and circulation. All direct impacts can be mitigated to a level that is considered less than significant with the exception of those associated with traffic and circulation and air quality.

The project alternatives evaluated in this section are the following:

- No-Project/No-Development Alternative
- Location Alternative
- Reduced Scale Alternative
- Residential Development Alternative

The Environmentally Superior Alternative will be selected from among these alternatives and the proposed project. An alternative that is environmentally superior would result in the fewest or least significant environmental impacts and still be able to achieve the objectives of the planning effort. Based on the evaluation of the four alternatives in this section, implementation of the No-Project/No Development Alternative would result in fewer impacts than the proposed project but will not meet project objectives. The Location Alternative and the Reduced Scale Alternative would incrementally reduce air emissions and traffic volumes from expected vehicle trips but would not reduce either of these impacts to less than significant. In addition, the use of an Alternative Location would not preclude the future development of the proposed site consistent with the existing commercial zoning.

The analysis of alternatives includes the assumption that all applicable mitigation measures associated with the project will be implemented with the appropriate alternatives. However, applicable mitigation measures may be scaled to reduce or avoid the potential impacts of the alternative under consideration and may not precisely match those identified for the proposed project. Table 6-1 is a summary of the level of Alternative project impacts compared to the proposed project.

Table 6-1
Impact Comparison of Proposed and Alternative Projects

Environmental Issues	Proposed Project	No-Project/ No-Development Alternative	Location Alternative	Reduced Scale Alternative	Residential Alternative
Aesthetics and Visual Quality	----------	Less Impact	Similar Impact	Similar Impact	Less Impact
Air Quality	----------	Less Impact	Less Impact	Less Impact	Greater Impact[1]
Biological Resources	----------	Less Impact	Similar Impact	Similar Impact	Similar Impact
Cultural Resources	----------	Less Impact	Similar Impact	Similar Impact	Similar Impact
Hydrology and Water Quality	----------	Less Impact	Similar Impact	Similar Impact	Less Impact
Noise	----------	Less Impact	Greater Impact	Similar Impact	Greater Impact[1]
Traffic and Circulation	----------	Less Impact	Less Impact	Less Impact	Less Impact
Overall Impact	----------	**Less Impact**	**Similar Impact**	**Less Impact**	**Less Impact**

1 – Greater impacts for air quality and noise are from the potential effects that adjacent SR 138 traffic would have on the residences.
Source: Lilburn Corporation 2006

6.1.1 Project Description

The project is located in the eastern portion of the City of Palmdale (refer to Figure 3-1). The proposed project is the development of a maximum of 530,000 square feet (SF) of general commercial land uses on approximately 49.25 acres of land located on the northwest corner of 47th Street East (SR 138) and Avenue R (refer to Figure 3-2). The Project Applicant proposes to construct six (6) major retail structures encompassing approximately 426,263 SF. The proposed major retail structures may include a home improvement center and an upscale discount retailer, both with garden centers. In addition, the retail center will have four (4) shops and eight (8) general commercial land uses totaling approximately 38,938 SF and 53,130 SF, respectively (refer to Table 3-1). The land uses may include two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with an automated car wash. One or more establishments selling alcoholic beverages may also be developed. A 10-foot high screen wall is proposed along the west property line. In addition, a detention basin will be constructed along the west boundary of the site behind Major buildings 2, 3, and 4 and off-site road and drainage improvements will be constructed. The project also consists of a lot line adjustment and a parcel map to create

17 lots. Table 3-1 lists the proposed building areas based on the Conceptual Site Plan (refer to Figure 3-3)[1].

6.1.2 Project Objectives

CEQA Guidelines Section 15124(b) requires that the project description include a statement of objectives sought by the proposed project. The intent is to aid the lead agency and decision makers in evaluating the project alternatives and in making findings or statements of overriding consideration, if necessary. The primary project objectives are:

- Increase local employment opportunities: The proposed commercial retail center will create approximately 1,048 new jobs. In addition to hundreds of permanent employees that would work for the retailers on site, the indirect expansion in employment benefiting the macro-economy, as well as the employment created during construction would be a major benefit to the City and the area.

- Increase local shopping availability: This portion of the City of Palmdale has residential development that would benefit from additional locally available retail shopping that would provide a range of retail shopping and services.

- Provide an attractively designed, economically viable Neighborhood Retail Center that will be an amenity for local residents within an approximate 5-mile radius of the project site.

- Provide a conveniently located Community Retail Center that will utilize, and enhance the existing road network, alleviating traffic on major thoroughfares such as SR 138 (Palmdale Boulevard) and reducing trips from resident's homes to more distant shopping areas.

- Broaden the community's economic base by attracting new commercial uses to the project area, which would attract shoppers from surrounding areas outside the City as well as City residents.

- Encourage expansion of local commercial opportunities.

- Develop a project that is both a financial asset to the city and that self-mitigates environmental impacts to the extent feasible.

- Enhance the economic base of the local and regional revenues through business, property, and sales tax revenues.

[1] Final square footage would depend on the actual tenant mix. For environmental evaluation 530,000 square feet is used to presume a worst-case scenario.

6.2 ALTERNATIVES CONSIDERED AND REJECTED

CEQA Guidelines 15126.6(c) requires that an EIR identify any alternatives that were considered and rejected as infeasible, and briefly explain the reasons for rejection.

Buildout Under the Existing Zoning Alternative: Under this alternative, the project site would be developed as a commercial retail center. It was assumed the building out of the site consistent with the zone would yield similar impacts. This alternative was rejected because a development of similar size would have similar environmental impacts. In addition to that, an analysis of a reduced project (less intensive development) is discussed below.

6.3 ALTERNATIVES CONSIDERED FOR EVALUATION

Four alternatives were evaluated as alternatives to the proposed project. These are:

- No-Project/No-Development Alternative: The No Project/No Development Alternative would allow the continued existence of the Proposed Project site in its current vacant condition. While this alternative would not meet the project objectives, CEQA requires the alternative to be analyzed. This alternative is similar to the discussion of existing conditions for each issue addressed in Chapter 4.0, Environmental Impact Evaluation (e.g., aesthetics, air quality, biological resources, etc.).

- Location Alternative: There are a number of sites in the general vicinity that may be developed into a commercial shopping center. This alternative evaluates a property located at the northwest corner of Palmdale Avenue and 40th Street East. The alternative site is approximately 39.25 acres in size and is vacant. The alternate site is zoned C-3 as is the project site. Properties to the west and north of the alternate site are residentially developed and properties to the east and south of the alternate site are vacant. The Location Alternative would reduce the total structures built from approximately 530,000 SF to approximately 424,000 SF (the alternate site is approximately 20 percent smaller than the project site thereby also reducing the size of the project). It should be noted that the proposed project would still be available for development consistent with its commercial zoning.

- Reduced Scale Alternative: The Reduced Scale Alternative would allow for the development of a similar project by eliminating one or more uses, or by reducing the size of one or more of the proposed uses. Reducing the size of one or more of the Major tenant buildings could reduce the economic feasibility of the project since by definition the discount store and home improvement store must be of a certain size to accommodate their inventory and be financially feasible. Therefore, reducing other uses on site would be more palilable.

- Residential Development Alternative: The Residential Alternative would require that the General Plan Land Use and Zoning designations for the site be changed to residential. This alternative would provide for the construction of approximately 490 to 780 dwelling

units on the 49-acre site. While this alternative would not meet the project objectives, CEQA requires the alternative to be analyzed.

6.4 EVALUATION OF ALTERNATIVES

6.4.1 No-Project/No-Development Alternative

Under this alternative, the proposed project would not be developed. The existing approximately 49 acres would remain vacant and unchanged.

Aesthetics and Visual Quality

The project currently consists of vacant land surrounded by residential uses and vacant land. The No-Project/No-Development Alternative would not have an impact on aesthetics and visual quality in the sense that no changes in the characteristics of the property would occur.

Air Quality

Under this Alternative, structures and parking lots would not be constructed; therefore, construction related air quality impacts would not be created. Operation emissions from onsite activities and from new vehicle trips would not occur, therefore, the No-Project/No-Development Alternative would have no impacts to air quality.

Biological Resources

The No-Project/No-Development Alternative would not result in development of the project site. Therefore, existing biological resources onsite and in the immediate vicinity of the site would not be adversely impacted.

Cultural Resources

The Cultural Resource Assessment recorded five historic period sites that would be affected by property development. A Phase II site evaluation program is recommended to formally assess the significance of the sites and would record and categorize any significant artifacts. The No-Project/No-Development Alternative would not result in development of the site and the onsite sites would not be impacted.

Hydrology and Water Quality

This Alternative would not result in construction or an increase in impervious surfaces and the potential increase in urban pollutants such as oil and grease. Stormwater runoff would remain unchanged, and no new sources of urban pollutants would be generated.

Noise

The No-Project/No-Development Alternative would not result in a new source of noise, as conditions would remain unchanged.

Traffic and Circulation

Under this alternative, new land uses are not proposed and therefore, additional vehicle trips would not be generated as conditions would remain unchanged.

Conclusions

Although the No-Project/No-Development Alternative would be environmentally superior as no development and related adverse impacts would occur, this alternative would not meet any of the project objectives listed above.

6.4.2 Location Alternative

This alternative evaluates a property located at the northwest corner of Palmdale Boulevard and 40th Street East. The alternative site is approximately 39.25 acres in size and is vacant. The alternate site is designated as Community Commercial in the General Plan and is zoned C-3 as is the Project site. Properties to the west and north of the alternate site are residentially developed and properties to the east and south of the alternate site are vacant.

Aesthetics and Visual Quality

The Location Alternative would reduce the total structures built from approximately 530,000 SF to 424,000 SF (the alternate site is approximately 20 percent smaller than the project site thereby reducing the size of the project). Under this alternative, Aesthetics and Visual Quality would be similar to those addressed in the Proposed Project, as properties to the west and north of the alternative location are developed with residential uses. Properties to the east and south are separated from the site by major streets.

Air Quality

The construction emissions associated with this Alternative would be slightly less than the proposed project. Both projects estimated construction emissions are expected to be less than significant. Similarly, the total vehicle trips and related emissions generated by the Alternative Location would be approximately 20 percent less than the proposed project based on the smaller building areas. For year 2008, the vehicle emissions for both projects for CO and PM_{10} would still exceed thresholds. Under this alternative, air quality would be the same or slightly less than those identified for the Proposed Project but would still be considered a significant impact and a significant cumulative impact.

Biological Resources

Biological resources are expected to be similar to the proposed project. Biological impacts would be slightly less due to the reduced disturbance area. Mitigation measures would be the same as those addressed within the Proposed Project. Cumulative biological impacts would be similar.

Cultural Resources

A Cultural Resource Assessment has not been prepared for the alternate site, however, a Phase I site evaluation would identify any prehistoric or historic archaeological sites. A Phase II site evaluation program would formally assess the significance of any such sites if any. The development of the alternate site would be required to adequately address any sites identified. Under this alternative, the cultural resources are expected to be similar to those addressed within the Proposed Project and would likely be mitigated to a less than significant impact.

Hydrology and Water Quality

Construction of the Proposed Project would result in changes to existing drainage patterns in the project area. Additionally, the Proposed Project would generate urban runoff, which would affect water quality in the area and require treatment of stormwater. Under this alternative, impacts to hydrology and water quality would be similar to those addressed within the Proposed Project, as the entire site would be disturbed.

Noise

Under this alternative, impacts to sensitive receptors may be slightly higher compared to the Proposed Project as single-family homes abut the west and north boundary of the alternate site. Noise impacts from delivery trucks, trash trucks and loading activities will potentially be significant. Development at either site would require similar mitigation measures in order to reduce project noise levels within acceptable limits of City standards. Therefore, impacts at both sites would be less than significant with mitigation.

Traffic and Circulation

The Location Alternative would have no real change to the traffic based on its different site. The decrease in the total amount of commercial square footage by approximately 106,000 SF or 20 percent as compared to the proposed project site would produce less-intense total traffic impacts than the Proposed Project. However, even considering the reduction in vehicle trips, intersection impacts would still be expected and street and intersection improvements would be required. It is assumed impacts to the intersection of Avenue S and 47th Street East would remain significant since the unavoidable impact is due to lack of right-of-way. Cumulative traffic impacts would still be considered significant.

Conclusions

The Location Alternative will meet most of the project goals and the overall environmental impacts may be slightly less due to a 20 percent decrease in commercial footage, not due to a different location. However, this alternative does not reduce any potential significant impacts or cumulative impacts from the proposed project to less than significant. This alternative would not entirely meet the project's objectives of increasing local shopping availability, local employment opportunities, and provide a beneficial use to the fullest extent possible under the City's General Plan designation and zoning for the site.

6.4.3 Reduced Scale Alternative

The Reduced Scale Alternative involves eliminating Shops 1-4 from the proposed project that would decrease the total commercial/retail square footage by approximately 38,938 SF or about 10 percent. It should be noted that in the near term, this variation would result in a decreased level of development on-site. However, in the future, the portions of the project site could be developed for uses consistent with the current land use designations. Site-specific environmental review would be required at that time.

Aesthetics and Visual Quality

The Reduced Scale Alternative would reduce the number of structures located on the eastern portion of the site (adjacent to 47th Street East). The decrease in parking and building pads would result in a slight decrease in the amount of light emitted from the project from both parking lot lighting and lighting generated from the buildings. However, due to the location of existing residential development (west and south of the site), this alternative would have a similar overall aesthetic effect.

Air Quality

The Reduce Scale Alternative would involve a decrease in the total amount of commercial square footage by approximately 10 percent on the project site. This would in turn result in a lower total trip volume to the site and slight decrease in the total air emissions from vehicle trips generated to and from the commercial center. Under this alternative, air emissions would be slightly less than those identified for the Proposed Project but would still be considered a significant impact and a significant cumulative impact.

Biological Resources

The Reduced Scale Alternative would result in development of the project site and the disruption of existing habitats on the Proposed Project site. Although this Alternative involves eliminating the Shops buildings, the expectation is that the same site area would be impacted because the remainder area would be either landscaped or would undergo other improvements. Therefore, the Reduced Scale Alternative would have similar impacts to biological resources compared to the Proposed Project.

Cultural Resources

Although this Alternative involves eliminating the shops buildings, the expectation is that the same site area would be impacted because the remainder area would be either landscaped or would undergo other improvements. Under this alternative, the impact to cultural resources would be similar to those addressed within the Proposed Project, as the entire site would be disturbed.

Hydrology and Water Quality

Under this alternative, impacts associated with stormwater runoff and water quality will be the same as the proposed project with similar mitigation to control runoff and to protect water quality.

Noise

The noise impacts from deliveries to the Major Buildings along the west side would be similar to that of the proposed project. Therefore, the overall noise impacts and mitigation would be similar to the Proposed Project.

Traffic and Circulation

The Reduce Scale Alternative would involve a decrease in the total amount of commercial square footage and related vehicle trips by approximately 10 percent as compared to the project site. Therefore, this Alternative would have slightly less-intense total traffic impacts than the Proposed Project.

However, even considering the reduction in vehicle trips, intersection impacts would still be expected and street and intersections improvements would be required. It is assumed impacts to the intersection of Avenue S and 47th Street East would remain significant since the unavoidable impact is due to lack of right-of-way. Cumulative traffic impacts would still be considered significant.

Conclusions

Although the Reduced Scale Alternative would comply with the existing General Plan and Zoning Ordinance, this alternative would not entirely meet the projects objectives of increasing local shopping availability, local employment opportunities, and provide a beneficial use to the full extent allowed under current zoning. This alternative does not reduce any potential significant impacts or cumulative impacts from the proposed project to less than significant.

6.4.4 Residential Alternative

Under this alternative, the retail shopping center would not be developed and a multi-family residential development would be planned. The development of residential uses would require that the General Plan Land Use and Zoning designations for the site be changed from CC

(Community Commercial) and C-3 (General Commercial) to MFR (Multi-family Residential 10.1 – 16 du/ac) and R-3 (Multiple Residential). This alternative would provide for the construction of approximately 490 to 780 dwelling units on the 49-acre site. For this alternative it is assumed that 650 dwelling units would be developed, providing a density within the middle of the range provided for within the R-3 zone. This alternative would not meet the project objectives; however, an alternative use for the site is required under CEQA.

Aesthetics and Visual Quality

Under this alternative, impacts to Aesthetics and Visual Quality would be less than those addressed within the Proposed Project. The residential structures will have a maximum height of 45 feet (three stories). Light and glare issues will be greatly reduced due to screening from adjacent properties by streets (distance), walls, trees and residential structures. Existing residential properties are not expected to be negatively impacted.

Air Quality

Construction emissions would be reduced compared to those addressed within the Proposed Project due to less intense site preparation and building. As indicated in Table 6-2, operational emissions would be reduced but would still exceed AVAQMD thresholds for three of four criteria air pollutants due to vehicle miles traveled to and from work, stores, and schools. Air quality impacts would be slightly less than those identified for the Proposed Project but would still be considered a significant impact and a significant cumulative impact.

The residences situated along SR 138 would potentially be affected by the emissions from the high volume of vehicles, which are expected to increase substantially over time.

Table 6-2
Residential Alternative
URBEMIS2002 Operational Emissions Summary
(Pounds per Week Day)

Source	ROG	NO_x	CO	PM_{10}
Area Sources	423.52	20.91	678.28	100.61
Mobile Sources	39.53	65.90	473.00	44.37
Totals	**463.05**	**86.81**	**1,151.27**	**144.97**
AVAQMD Threshold	137	137	548	82
Significance	**YES**	**NO**	**YES**	**YES**

Source: URBEMIS 2002.8.7, Lilburn Corp. 2006

Biological Resources

As the entire site would be disturbed, biological resources would be similar to those addressed within the Proposed Project.

Cultural Resources

As the entire site would be disturbed, cultural resources would be similar to those addressed within the Proposed Project.

Hydrology and Water Quality

Under this alternative, impacts to hydrology and water quality would be less than those addressed within the Proposed Project, as there will be more landscaped areas onsite. The proposed project will be approximately 90 percent hardscape (i.e. buildings, driveways and parking areas) and approximately 10 percent soft-scape (i.e. landscaping). The Residential Alternative will provide approximately 80 percent hardscape (i.e. buildings, driveways and parking areas) and approximately 30 percent softscape (i.e. landscaping). A reduction in stormwater run-off is expected with the Residential Alternative. Impacts for this alternative and the proposed project would both be less than significant.

Noise

This alternative would not create any noise to affect adjacent land uses as does the proposed project. Developing residential along a heavily traveled state highway that will increase with overall regional growth may cause significant highway noise impacts to the residences along SR 138. Mitigation in the form of block wall sound barriers would be required along SR 138 and Avenue R.

Traffic and Circulation

Under this alternative, traffic impacts would be significantly reduced compared to those addressed within the Proposed Project. Table 6-3 depicts weekday trip generation for this alternative of about 4,368 ADT as compared to approximately 15,000 ADT for the proposed project.

However, even considering the reduction in vehicle trips, a reduced level of intersection impacts would still be expected and street and intersections improvements would be required. Cumulative traffic impacts would still be considered significant.

Table 6-3
Residential Alternative
Vehicle Trip Generation
in Average Daily Trips (ADT)*

Building	Land Use	Code	Area (UNITS)	Percent In	Percent Out	Total ADT	In	Out
All Buildings	Multi-family Residential	220	650	50	50	4,368	2,184	2,184

Source: ITE Trip Generation Manual, 7th Edition

Conclusions

The Residential Alternative reduces overall environmental impacts but is not consistent with the City's General Plan Land Use and Zoning designations for the site. It would also expose residences to higher levels of air emissions and noise from vehicular traffic. The site is designated for commercial uses due to its location along a major highway and to provide needed retail shopping to the eastern half of the City. This alternative would not meet the projects objectives of increasing local shopping availability, local employment opportunities, and provide a beneficial use for the underutilized vacant site. The adoption of this alternative would reduce the potential employment growth by approximately 1,039 jobs.

7.0 REFERENCES

7.1 LIST OF PREPARERS

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7.2 Persons and Organizations Consulted

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Fred Minagar, MS, PE, Principle

Palmdale Marketplace Application

Hopkins Real Estate Group

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Development Resource Consultants, Inc.

Metropointe Engineers

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8.0 MITIGATION MONITORING AND REPORTING PROGRAM

8.1 INTRODUCTION

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared to implement the mitigation measures identified in the Palmdale Marketplace EIR. CEQA Section 21081.6 requires adoption of a monitoring or reporting program when mitigation measures have been identified that would reduce or avoid significant environmental effects. Because some of the measures identified in the EIR would be implemented through monitoring of an activity such as grading or excavation and other measures must be implemented through a reporting mechanism such as preparing and/or updating an Emergency/Contingency Plan, this MMRP has been developed as a Mitigation Monitoring and Reporting Program.

CEQA requires adoption of a MMRP for those measures or conditions placed on a project to mitigate or avoid adverse effects on the environment. The law states that the MMRP shall be designed to ensure compliance during project implementation. When implemented environmental effects associated with the expansion project through implementation of the CUP and Reclamation Plan, will be reduced or eliminated.

The MMRP has been prepared as a matrix containing the following elements:

- Measures that would mitigate significant impacts on the environment are recorded with the action and the procedure necessary to ensure compliance.
- A procedure of compliance and verification has been outlined for each measure. This procedure designates who will take action, what action will be taken and when, and to whom and when compliance will be reported.
- The MMRP has been designed to provide focused, yet flexible guidelines. As monitoring progresses, changes to compliance procedures may be necessary based upon recommendations by those responsible for the program.

8.2 PROGRAM MANAGEMENT

The MMRP will be in place through all phases of the project. The project planner, assigned by the Planning Director, shall coordinate enforcement of the MMRP and oversee it to ensure that proper action is taken on each mitigation measure. Each City department shall ensure compliance of the conditions (mitigation) that relate to that department.

For impacts related to construction of the project, the project planner or responsible City department has the authority to stop the work of construction contractors if compliance with any aspects of the MMRP is not occurring after written notification has been issued. The project planner or responsible City department also has the authority to deny expansion into new mining areas until compliance with a mitigation measure occurs.

If any impacts require long-term monitoring, Palmdale Marketplace shall provide the City with a plan for monitoring the mitigation activities at the project site and reporting the monitoring results to the City.

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
AESTHETICS			
AVQ-1: The development of the proposed project would establish retail buildings and parking lots in a currently vacant area. This would introduce new sources of glare and nighttime light to the area.	**AVQ-1:** Prior to issuance of Building Permits, the Applicant shall submit a photometric lighting plan to City of Palmdale staff showing the exact locations and heights of light fixtures and the proposed orientation of the fixtures. If required, shields will be utilized to direct light and glare away from the homes to the west and south.		Planning Department
AIR QUALITY			
AQ-1: Construction activities for the development of the proposed Palmdale Marketplace may violate pollutant level thresholds established by the AVAQMD.	**AQ-1:** Comply with AVAQMD Rule 402 which requires that air pollutant emissions not be a nuisance off-site and AVAQMD Rule 403 which requires construction activities to implement the following measures to eliminate visible dust beyond property lines: • Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance; • Take actions sufficient to prevent project-related trackout onto paved surfaces; • Cover loaded haul vehicles while operating on publicly maintained paved surfaces or load trucks to maintain two feet of freeboard; • Stabilize graded site surfaces upon completion of grading by water or chemical stabilizers when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions;	On an on-going basis throughout the construction phase of the project.	AVAQMD

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
AIR QUALITY (Continued)			
	• Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours; and • Reduce non-essential earth-moving activity under high wind conditions (wind gusts greater than 25 mph). For purposes of this Rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance. **AQ-2** • Ensure all equipment is maintained and tuned according to manufacturers specifications. • Schedule production activities to minimize daily equipment operations and idling trucks. • Comply with all existing and future CARB and AVAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel (already required); and (4) use of alternative fuels or equipment. **AQ-3** • Applicant must comply with VOC limits in architectural coatings as regulated by AVAQMD Rule 1113. • Applicant must limit the area of painting conducted per day based on the VOC content in the paint as estimated in Figure 4.2-2	On an on-going basis throughout the construction phase of the project. On an on-going basis throughout the construction phase of the project.	AVAQMD AVAQMD

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
AIR QUALITY (Continued)			
AQ-2: Operation of the Palmdale Marketplace would result in increased emissions of criteria pollutants.	**AQ-4** • Provide adequate ingress and egress at all entrances to minimize vehicle idling at curbsides and improve traffic flow into and or out of the parking lot. • Provide roadway improvements to improve traffic-flow per the proposed traffic mitigation. • Introduce window glazing, wall insulation, and efficient ventilation methods, in accordance with the Uniform Building Code, to minimize energy use. **AQ-5** • Comply with Rules 461, 462, and 463 requiring the gas station operator to limit the emissions of volatile organic compounds (VOC) from the evaporation and spillage of gasoline during the transfer, loading and storing of gasoline. **Rule 461 – Gasoline Transfer and Dispensing.** Rule 461 requires specific conditions for the gasoline transfer into and from stationary tanks and delivery systems including vapor recovery, vapor tight openings, and spillage controls. The actual gasoline pumping from the pump into a motor vehicle tank requires a vapor recovery system that is certified by the CARB and recovers 95% of displaced gasoline vapors with the vapor recovery systems and nozzles monitored and maintained as required.	Submittal of plans prior to construction. Annual permit review	Planning Department AVAQMD

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
AIR QUALITY (Continued)			
	Rule 462 – Organic Liquid Loading. Rule 462 limits the emissions of VOC and toxic compounds from the transfer and loading of organic liquids (gasoline and diesel fuel) from bulk facilities. This rule requires a vapor recovery system with a reduction efficiency of 95 percent in compliance with all CARB equipment certification requirements, and continuous monitoring and maintenance of these systems per required standards. **Rule 463 – Storage of Organic Liquids**. Rule 463 limits the emissions of VOC and toxic compounds from the storage transfer of organic liquids (gasoline and diesel fuel). This rule requires that fuel storage tanks must be designed and equipped with vapor loss control devices as specified by this rule and the CARB, properly installed, maintained, and in good working order.		
BIOLOGICAL RESOURCES			
BIO-1: The project site and the area proposed for the drainage channel are located within the geographic range of the Mohave ground squirrel (Spermophilus mohavensis), which is considered threatened by the CDFG. The California ground squirrel (found on-site) provides potential burrow sites for the burrowing owl, a species of special concern. The habitat within the study areas appeared potentially suitable to support either species.	**BIO-1:** A burrowing owl survey shall be conducted 30 days prior to construction activities to ensure burrowing owls are not present. If burrowing owls are discovered the CDFG shall be consulted to determine appropriate measures necessary to ensure potential impacts are minimized. **BIO-2:** In consultation with CDFG, the Mohave ground squirrel is assumed to be present onsite and a 2081 permit is required. Specific measures will be determined in consultation with CDFG as part of a 2081 permit application and may include measures to limit direct impacts and purchase of suitable off-site habitat for the species as compensation.	Thirty days prior to construction, conduct burrowing owl survey. Prior to construction, complete with any measures listed in 2081 permit.	Planning Department CDFG, and Planning Department

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
BIOLOGICAL RESOURCES (Continued)			
BIO-2: The project site supports a Joshua Tree Woodland and Joshua trees would be removed and transplanted during site development. Joshua trees are a protected species; this is a potentially significant impact.	**BIO-3:** The project applicant shall submit a Native Vegetation Preservation Plan, comply with all preservation and relocation efforts set forth in the plan and in the City's Municipal Code, Title 14, Chapter 14.04 and receive a permit, only after all other strategies have been implemented, prior to the removal of Joshua trees.	Prior to removing any Joshua trees, submit a Native Vegetation Preservation Plan.	Planning Department
BIO-3: The project would result in the reduction of vegetation on-site that may be used as nesting sites.	**BIO-4:** To avoid incidental killing of birds protected under the Migratory Bird Treaty Act and the California Fish and Game Code, scheduling initial grading and brush removal of any previously undisturbed habitat shall occur outside the breeding season. No vegetation removal should occur between early spring (15 March) and mid summer (15 July). If construction activities occur during the nesting season, a survey shall be conducted within one week prior to removal of the trees. If active bird nests are found, impacts shall be avoided unless proper permits are obtained.	Grading and vegetation removal shall occur outside breeding season.	Planning Department
CULTURAL RESOURCES			
CR-1: Excavation during development may result in the disturbance of historic or archaeological resources.	**CR-1 (for Site 446-1):** A chain of title search shall be performed to determine ownership. The site area shall be monitored during grading at the site location. Any buried deposits or features that are uncovered shall be evaluated. Any artifacts recovered shall be cataloged, identified and curated with an appropriate permanent repository. A monitoring report shall be prepared and submitted to the City.	Prior to grading, submit a chain of title search. Monitor site during grading activities.	Cultural Resource Consultant, Planning Department

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
CULTURAL RESOURCES (Continued)			
	CR-2 (for Site 446-2): The site shall be mapped in detail and a surface collection of diagnostic artifacts be made. A metal detector scan shall be performed to assess the distribution and concentration of buried materials. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City.	Prior to grading or other earth-moving activities, submit a Phase II Cultural Assessment Report detailing any findings.	Cultural Resource Consultant, Planning Department
	CR-3 (for Sites 446-3 and 446-4): The site shall be mapped in detail and a surface collection of diagnostic artifacts shall be made. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City.	Prior to grading or other earth-moving activities, submit a Phase II Cultural Assessment Report detailing any findings.	Cultural Resource Consultant, Planning Department
	CR-4 (for Site 446-5): The site shall be mapped in detail and a surface collection of diagnostic artifacts shall be made. Features shall be cleared, measured and photographed. A minimum of 1x1 meter square units shall be excavated. These shall be placed judgmentally in areas of highest artifact concentration. Any artifacts recovered shall be cleaned, cataloged, identified and curated with an appropriate permanent repository. A standard phase II cultural assessment report shall be prepared and submitted to the City.	Prior to grading or other earth-moving activities, submit a Phase II Cultural Assessment Report detailing any findings.	Cultural Resource Consultant, Planning Department

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
CULTURAL RESOURCES (Continued)			
	CR-5: In the event unanticipated cultural materials (arrowheads, grinding stones, etc.) or features (old foundations, cellars, privy pits, etc.) could be encountered, work shall stop at the discovery site and a professional cultural resource consultant shall be hired to evaluate the find.	Stop work in the event cultural materials are discovered.	Cultural Resource Consultant, Planning Department
CR-2: Excavation during development may result in the disturbance of previously unidentified human remains.	**CR-6:** In the event any bones of possible human origin are uncovered, during excavation or other construction, the Los Angeles County Coroner shall be notified and permitted to investigate the find prior to any further disturbance of the location of discovery.	During site excavation or other construction activities	Los Angeles County Coroner
	CR-7: In the event that Native American cultural resources are discovered during project development/construction, all work in the immediate vicinity of the find shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the overall project may continue during this assessment period.	Cease work in the event Native American cultural resources are discovered.	Cultural Resource Consultant, Planning Department
	CR-8: If significant Native American cultural resources are discovered, for which a Treatment Plan must be prepared, the developer or his archaeologist shall contact the "Tribe". If requested by the Tribe, the developer or the project archaeologist shall, in good faith, consult on the discovery and its disposition (e.g. avoidance, preservation, return of artifacts to tribe, etc.).	Contact "Tribe" in the event a Treatment Plan is required.	Developer/Project Archaeologist; Planning Department

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
HYDROLOGY AND WATER QUALITY			
HWQ-1: Construction activities associated with the project would alter the drainage pattern of the site, increasing on-site flow by changing the impermeable surfaces on-site. Development of the site would also alter the patterns of flows from the existing drainages entering the site from the south.	**HWQ-1:** Prior to issuance of grading permits, the applicant shall submit a detailed storm water drainage plan that includes design drawings for the drainage facilities that would capture, hold and/or convey storm water through the site. Discharge from the proposed detention basin shall be 85 percent of the pre-development flows per the City of Palmdale standards. The plans shall be subject to approval of the City of Palmdale Public Works Department.	Prior to issuance of grading permits, submit a storm water drainage plan.	Public Works Department
	HWQ-2: If soils suspected of being contaminated with a toxic substance are discovered during grading or other construction related activities, work in the immediate areas shall cease. Suspected soils shall be tested by a qualified soils engineer and/or laboratory to determine level of contamination.	To be implemented during grading or other construction activities.	Public Works Department
	HWQ-3: A Water Quality Management Plan shall be submitted to Palmdale Water District for review prior to the issuance of building permits.	Prior to issuance of grading permits, submit a water quality management plan.	Public Works Department
NOISE			
NOI-1: The residents within the vicinity of the proposed project may be subject to noise levels in excess of the City Noise Standards during operation of the commercial retail center.	**NOI-1** • The screen dock walls should be 9 feet high relative to the dock elevation as described above. • The wall heights at the property lines shall range from 8 to 10 feet (relative to subject property elevations). • Use of speed bumps in the truck access areas is prohibited.	To be noted within the final site plans and practiced during the construction and post-construction phases of the project.	Planning Department

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
NOISE (Continued)			
	• Signs shall be used to control truck and other vehicle speed. Signs shall be used to limit use of horns and yelling at loading docks. No paging or radio systems shall be utilized at the south and west property lines. • All doors along the north, south, and west property lines shall be closed when not in use. • Wall materials shall be constructed of a decorative masonry or concrete block, or any other material with a surface weight of 4 pounds per square foot. No gaps or openings are permitted. All gaps are to be sealed. • Post signs to turn off truck engine when not in use or necessary.		
TRAFFIC			
TC-1: The proposed project would increase vehicle trips, and affect the level of service along arterial roadways and intersections. This would be a significant impact to existing road segments and intersections in the region.	**TC-1:** Prior to Issuance of First Certificate of Occupancy for the project (Build Out 2007) 1. Ave. R at 47th St. E./SR 138 Add one exclusive EBL Add one exclusive SBR Modify the Traffic Signal 2. Ave. S at 47th St. E./SR 138 No feasible mitigation measure	Prior to issuance of the first Certificate of Occupancy within the project	City Traffic Engineer

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
TRAFFIC (Continued)			
	TC-2: 1. Avenue R at 47th Street East/SR 138 ~~Add one exclusive EBL~~ Add one exclusive SBT ~~Add one exclusive SBT~~ Add one exclusive SBL Add one exclusive WBT (subject to ROW availability) Add one exclusive WBL (subject to ROW availability) Add one exclusive WBR (subject to ROW availability) Add one exclusive NBL (subject to ROW availability) Add one exclusive NBT (subject to ROW availability) Add one exclusive NBR (subject to ROW availability) Add one exclusive EBT Modify the Traffic Signal 2. Ave. S at 47th St. E./SR 138 No feasible mitigation measure 3. Ave. R at 40th E. (subject to ROW availability) Add one EBT 4. Palmdale Blvd. at 40th St. E. (subject to ROW availability) Add one exclusive EBR Add one exclusive WBR Add one exclusive SBL Add one exclusive SBR	Prior to issuance of the first Certificate of Occupancy within the project	City Traffic Engineer

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
TRAFFIC (Continued)			
	TC-3: ~~Payment of Traffic Impact Fees in effect at the time building permits are issued.~~ Off-Site Mitigation through payment of Traffic Impact Fees by the applicant in effect at the time building permits are issued.	At the time of permit issuance.	City Traffic Engineer
	TC-4: ~~Payment of Traffic Impact Fees in effect at the time building permits are issued.~~ For the future 2025 buildout year, the following mitigation measures are recommended to be implemented if the other three proposed projects were not constructed: 1. Ave. R at 47th St. E./SR 138 The same as 2015 2. Ave. S at 47th St. E./SR 138 No feasible mitigation measure 3. Ave. R at 40th E. (subject to ROW availability) Add one exclusive EBT 4. Palmdale Blvd. at 40th St. E. (subject to ROW availability) Add one exclusive EBT Add one exclusive WBT Add one exclusive SBT Add one exclusive NBL 5. Ave. R-8 at 47th St. E. Modify signal for protected NB & SB left turns 6. Ave R at 40th St. E. Signalize the intersection	At the time of permit issuance.	City Traffic Engineer

TABLE 8-1
MITIGATION MONITORING PROGRAM

IDENTIFIED IMPACTS	MITIGATION MEASURES	COMPLIANCE/MONITORING PROCEDURE	RESPONSIBLE PARTY
TRAFFIC (Continued)			
TC-2: Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?	**TC-54:** The new intersection of Palmdale Marketplace Driveway and SR 138/47th Street East shall be signalized by the developer. It is warranted for signalization prior to the issuance of the first Certificate of Occupancy within the project.	To be completed prior to the issuance of first Certificate of Occupancy within the project.	City Traffic Engineer

9.0 PUBLIC COMMENTS AND LEAD AGENCY RESPONSES

The public comment period for the Draft EIR began August 24, 2006 and ended October 4, 2006. A total of seven comment letters were received. These are listed in Table 9-1 and are identified by a number. Individual comments within each letter are identified with a unique numeric indicator. For example the comment letter from the Palmdale Water District, is Letter 5. The letter contains nine comments identified as comments 5-1 through 5-9.

Table 9-1
Comment Letters Received on the Draft Environmental Impact Report

Letter	Name	Date on Letter
1	Governor's Office of Planning and Research, State Clearinghouse and Planning Unit	October 5, 2006
2	State of California, Public Utilities Commission	September 28, 2006
3	California Department of Transportation	October 12, 2006
4	California Department of Toxic Substance Control	October 10, 2006
5	Palmdale Water District	October 4, 2006
6	Antelope Valley Mosquito & Vector Control District	September 21, 2006
7	County of Los Angeles, Fire Department	September 5, 2006

Letter 1

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold Schwarzenegger
Governor

Sean Walsh
Director

October 5, 2006

Susan Koleda
City of Palmdale
38250 N. Sierra Highway
Palmdale, CA 93550

RECEIVED
OCT 16 2006
PLANNING DEPARTMENT

Subject: Palmdale Marketplace
SCH#: 2006041114

Dear Susan Koleda:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on October 4, 2006, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2006041114
Project Title Palmdale Marketplace
Lead Agency Palmdale, City of

Type EIR Draft EIR

Description The project proposes to construct six major retail structures encompassing a maximum of 530,000 sf of building space mainly along the west side of the site. Of the proposed major retail structures, one may include a home improvement center and another an upscale discount retailer, both with garden centers. In addition, the retail center will have four shops and eight pads of approximately 39,000 sf and 53,380 sf of building space, respectively. The pads may include two drive-through restaurants, one drive-through bank, and one gas station with a drive-through.

Lead Agency Contact

Name Susan Koleda
Agency City of Palmdale
Phone (661) 267-5200 **Fax**
email
Address 38250 N. Sierra Highway
City Palmdale **State** CA **Zip** 93550

Project Location

County Los Angeles
City Palmdale
Region
Cross Streets Northwest corner of Avenue R and 47th Street East (State Highway 138)
Parcel No. 3023-004-007,-016,-017
Township 6N **Range** 11W **Section** 28 **Base** SBBM

Proximity to:

Highways 138
Airports
Railways
Waterways
Schools Manzanita MS
Land Use Vacant
Z: General Commercial (C-3)
GP: Community Commercial

Project Issues Aesthetic/Visual; Air Quality; Biological Resources; Cumulative Effects; Landuse; Noise; Traffic/Circulation; Water Quality; Water Supply

Reviewing Agencies Resources Agency; Regional Water Quality Control Bd., Region 6 (Victorville); Department of Parks and Recreation; Native American Heritage Commission; Department of Fish and Game, Region 5; Department of Water Resources; California Highway Patrol; Caltrans, District 7; Department of Toxic Substances Control

Date Received 08/21/2006 **Start of Review** 08/21/2006 **End of Review** 10/04/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter No. 1
Governor's Office of Planning and Research State Clearinghouse, October 5, 2006

This letter conveyed that no state agencies submitted comments on the Draft EIR by the close of the public review period and acknowledges that the public review period started on August 24, 2006 and ended on October 4, 2006. Correspondence is noted for the record.

Letter 2

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

ARNOLD SCHWARZENEGGER, *Governor*

September 28, 2006

Susan Koleda, Associate Planner
City of Palmdale-Planning Department
38250 Sierra Highway
Palmdale, CA 93550

RECEIVED
OCT 0 2 2006
PLANNING DEPARTMENT

Dear Ms. Koleda:

Re: SCH# 2006041114; Environmental Impact Report for the proposed Palmdale Marketplace

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the Union Pacific Railroad Company right-of-way be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way. **2-1**

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way. **2-2**

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the City.

Please advise us on the status of the project. If you have any questions in this matter, please contact me at (213) 576-7078 or at rxm@cpuc.ca.gov.

Sincerely,

Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

C: Freddy Cheung, UP

Letter No. 2
State of California, Public Utilities Commission, September 28, 2006

Comment 2-1: Comment indicates that as the state agency responsible for rail safety in California, they recommend that any development projects adjacent to or near the Union Pacific Railroad Company right-of-way be planned with safety of rail corridor in mind.

Response: There are no railroad tracks within 200 feet of the site (see Initial Study page 27). Section 4.7 addresses anticipated traffic impacts and mitigation measures.

Comment 2-2: Comment indicates safety factors to consider.

Response: There are no railroad tracks within 200 feet of the site (see Initial Study page 27). Section 4.7 addresses anticipated traffic impacts and mitigation measures.

Letter 3

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-3747
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

IGR/CEQA No. 060856AL, DEIR
Referenced to IGR/CEQA No. 060458AL and
IGR/CEQA No. 060318AL
Palmdale Marketplace
Vic. LA-138/PM 48.96
SCH #: 2006041114

RECEIVED
OCT 16 2006
PLANNING DEPARTMENT

October 12, 2006

Ms. Susan Koleda
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

Dear Ms. Koleda:

Per our phone conversation on September 28, 2006, the City of Palmdale has extended our comment compliance date to October 13, 2006. This is also to follow our letter dated May 8, 2006, and we have the following comments after we receive the Palmdale Marketplace Draft Environmental Impact Report prepared in August 2006.

1. Please provide a formal response letter regarding our previous comments submitted to Ms. Susan Koleda of the City of Palmdale in our letter dated May 2, 2006. These comments were related to the earlier Traffic Analysis Report date February 6, 2006. (See attachment) **3-1**

2. The geometric description of Avenue R and the SR-138 (47th Street East) intersection and as stated under "Existing Conditions (Year 2006)" of the Traffic Analysis Report is incorrect; the geometry is reversed. Please revise accordingly. **3-2**

3. The existing traffic volumes shown in Figure 3 and 4 do not match the actual traffic counts gathered on 1/11/06 and 5/18/06. Figure 3 and 4 volumes appear to be 18% to 20% lower than the actual counts. Please explain these discrepancies and revise the numbers accordingly. **3-3**

4. Incorporate the anticipated traffic volumes of the development at the northeast quadrant of the aforementioned intersection into the relevant sections of the Traffic Analysis Report. **3-4**

5. Include the following mitigation measures in the Traffic Analysis Report:

- Relocation of any existing fixed objects located at the northeast quadrant of the aforementioned intersection.
- Mitigate any and all drainage issues at the northeast quadrant.
- Provide pedestrian facility including any ADA requirements at the northeast quadrant, in accordance with Caltrans standards.
- Provide left-turn phasing for SR-138 at the Avenue R-8 intersection for the Build-out year of 2007, not in the future year of 2025.

3-5

6. We request the consultant to update and revise the EIR in section 4.7, page 4.7-1 with the most current Traffic Analysis Report for the Palmdale Market Place. We also request the consultant to add the above mitigation measures on page 2-21 in Table 2-2, and under "mitigation Measures for Palmdale Marketplace" in page 4.7-22 of this EIR.

3-6

If you have any questions, please feel free to contact me at (213) 897-3747 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 060856AL.

Sincerely,

for Cheryl Powell

CHERYL J. POWELL
IGR/CEQA Branch Chief

cc:

Scott Morgan, State Clearinghouse

Bill Padilla, City Traffic Engineer
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

Letter No. 3
California Department of Transportation (Caltrans), October 12, 2006

Comment 3-1: This comment requests a formal response to the comment letter dated May 2, 2006.

Response: The traffic issues sited within the May 2, 2006 comment letter were addressed in the July 14, 2006 Traffic Impact Analysis (TIA) and were incorporated within the Traffic and Circulation Section, Section 4.7 of the Palmdale Draft Environmental Impact Report (EIR). Subsequently the TIA was revised in October 2, 2006 to incorporate additional comments. Refer to the revised Section 4.7 included within this Final EIR.

Comment 3-2: This comment requests to revise the geometric description of Avenue R and SR-138 (47th Street East) intersection.

Response: The geometric description has been revised and is included on page 4.7-1 of Section 4.7 of the FEIR.

Comment 3-3: This comment notes that's the existing traffic volumes shown in Figure 3 and 4 do not match actual traffic counts gathered on 1/11/06 and 5/18/06. Explain and revise accordingly.

Response: Per Caltrans specific direction, these traffic volumes were balanced to establish a solid base year and thereafter, the projected and additional ambient traffic volumes were added accordingly as appropriate. The original/actual/raw traffic volumes are included in Appendix A of the revised TIA.

Comment 3-4: This comment requests to incorporate the anticipated traffic volumes of the development at the northeast quadrant of the Avenue R and SR-138 (47th Street East) intersection.

Response: The anticipated traffic volumes of the development at the northeast quadrant of Avenue R and SR-138 were based on development size and land use as was approved by the City of Palmdale Planning Commission in 2004. These traffic volumes have been included in the revised TIA dated October 02, 2006.

Comment 3-5: This comment requests the inclusion of additional mitigation measures to the TIA.

Response: Requested revisions addressing the relocation of any existing fixed objects located at the northeast quadrant, and all drainage issues at the northeast quadrant, and measures to provide pedestrian facility including any ADA requirements at the northeast quadrant have been addressed in the civil engineering plans.

In response to provide a left-turn phasing for SR-138 at the Avenue R-8 intersection for the Buildout year of 2007 not in the future year of 2025, comprehensive left-turn phase signal warrant assessment has been conducted for the intersection and the results are shown on Table 4.7-16, page 4.7-38 of Section 4.7 of the FEIR.

Comment 3-6: This comment request that section 4.7, page 4.7-1 be updated and revised to include most current mitigation measures. Also request that the added mitigation measures be added in Table 2-2 and under mitigation Measures for Palmdale Marketplace in page 4.7-22.

Responses: The Traffic and Circulation Section of the EIR, Section 4.7 has been revised to reflect the amended TIA dated October 2, 2006. Refer to the FEIR for a copy of this updated section.

Letter 4

Department of Toxic Substances Control

Maureen F. Gorsen, Director
1011 North Grandview Avenue
Glendale, California 91201

Linda S. Adams
Secretary for
Environmental Protection

Arnold Schwarzenegger
Governor

October 10, 2006

RECEIVED
OCT 16 2006
PLANNING DEPARTMENT

Ms. Susan Koleda
Associate Planner
City of Palmdale Planning Department
38250 Sierra Highway
Palmdale, California 93550

NOTICE OF COMPLETION OF DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED PALMDALE MARKET PLACE, SCH NO. 2006041114

Dear Ms. Koleda:

The Department of Toxic Substances Control (DTSC) has received your Notice of Completion of draft Environmental Impact Report (DEIR) for the project mentioned above.

Based on the review of the document, DTSC comments are as follows:

If during implementation of the project, soil contamination is suspected, construction in the area should stop, and appropriate health and safety procedures should be implemented. If it is determined that contaminated soils exists, the DEIR should identify how any required investigation and/or remediation will be conducted, and which government agency will provide regulatory oversight. 4-1

DTSC provides guidance for Preliminary Endangerment Assessment preparation and cleanup oversight through the Voluntary Cleanup Program (VCP). For additional information on the VCP please visit DTSC's web site at www.dtsc.ca.gov. If you would like to meet and discuss this matter further, please contact Mr. Alberto Valmidiano, Project Manager, at (818) 551-2870 or me at (818) 551-2857.

Sincerely,

Michel Iskarous
Acting Unit Chief
Southern California Cleanup Operations Branch – Glendale Office

cc: See next page

cc: Governor's Office of Planning and Research
State Clearinghouse
P. O. Box 3044
Sacramento, California 95812-3044

Mr. Guenther W. Moskat, Chief
Planning and Environmental Analysis Section
CEQA Tracking Center
Department of Toxic Substances Control
P. O. Box 806
Sacramento, California 95812-0806

Letter No. 4
California Department of Toxic Substance Control, October 10, 2006

Comment 4-1: States that if soil contamination is suspected, construction in the area should stop. If it is determined that contaminated soils exist, the DEIR should identify any required investigation and/or remediation to be conducted, and which agency is responsible for oversight.

Response: There are no known contaminates on site. However, mitigation measure HWQ-2 has been added to Section 4.5.3, Page 4.5-13 as follows (~~deleted text~~, new text):

Mitigation Measure HWQ-2

If soils suspected of being contaminated with a toxic substance are discovered during grading or other construction related activities, work in the immediate areas shall cease. Suspected soils shall be tested by a qualified soils engineer and/or laboratory to determine level of contamination.

If tested soils are found to be toxic or hazardous, DTSC will be notified and a remediation plan submitted for DTSC review.

Level of Significance After Mitigation

Implementation of Mitigation Measure HWQ-2 would ensure that potential impacts from soil contamination are less than significant.

Letter 5

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • Telephone (661) 947-4111
Fax (661) 947-8604
www.palmdalewater.org

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LAGERLOF, SENECAL, BRADLEY, GOSNEY & KRUSE LLP
Attorneys

October 4, 2006

City of Palmdale Planning Department
ATTN: Ms. Susan Koleda, Associate Planner
38250 Sierra Highway
Palmdale, CA 93550

RE: COMMENTS ON DRAFT EIR – PROPOSED PALMDALE MARKETPLACE

Dear Ms. Koleda:

Thank you for the opportunity to comment on the content of the Draft EIR for the proposed Palmdale Marketplace Project. The District's comments are as follows:

Section 1.3.1 (Page 1-9) – The District did not provide Fire Flow Test results as a comment to the Notice of Preparation. The test results were provided to the developer per the developer's request. 5-1

Section 2.1.2 (Page 2-2) & Section 3.4 (Page 3-8) – The Project Description states that the project may include one (1) gas station. The District is concerned about the impact of fuel storage related to groundwater, and more discussion on the plans to protect the groundwater needs to be included. 5-2

Section 4.5.2 (Page 4.5-1) – The current breakdown of water supply for Palmdale Water District is approximately 60% surface water (imported State Water Project water and local surface water from Littlerock Reservoir) and 40% groundwater. The size of this project requires a Water Supply Assessment to be prepared in accordance with Senate Bill 610. Palmdale Water District staff is currently preparing a Water Supply Assessment for this project which will be completed by late October. 5-3

Figure 4.5-1 (Page 4.5-2) – The EIR should include more current information related to aquifers and groundwater surface information (the EIR currently includes data from 1984). 5-4

Section 4.5.2 (Page 4.5-3) – This project is entirely within Palmdale Water District boundaries and not within the boundaries of Antelope Valley – East Kern (AVEK) Water Agency. All references to AVEK should be removed from the document. 5-5

Figure 4.5-3 (Page 4.5-5) – The boundaries of the Palmdale Water District on this figure are not accurate. 5-6

Section 4.5.2 (Page 4.5-9) – The District is concerned about the effect of the detention basin and runoff from the project on water quality. 5-7

Section 4.5.3 (Page 4.5-12) – The District would like to review the Water Quality Management Plan prior to its adoption. 5-8

Section 5.2.2 (Page 5-9) – Water supply is being addressed in the Water Supply Assessment currently being prepared by District staff. The 2005 Urban Water Management Plan for the Palmdale Water District (December 2005) forecasted future demands for the District using land use projections. We were unable, however, to find any reference to projected water demand in this draft EIR. 5-9

Please feel free to contact me at (661) 947-4111, x146 if you have any questions.

Very truly yours,

CURTIS D. PAXTON,
Assistant General Manager

CDP/dd

cc: Dennis D. LaMoreaux, PWD General Manager
Matthew R. Knudson, PWD Engineering Supervisor

Letter No. 5
Palmdale Water District, October 4, 2006

Comment 5-1: Fire Flow Test results were provided to the developer per developers request.

Response: Section 1.3.1, Page 1-9 was revised to reflect that Fire Flow Test results were issued in response to the developer's request as follows (~~deleted text~~, new text):

The District, in response to the developer's request for Fire Flow Test results, ~~S~~submitted Fire Flow Test results for the south side of Avenue R between 45th Street East and 47th Street East and at the southeast corner of Palmdale Boulevard and 50th Street East. Data indicates that observed flows were 1,034 GPM and 1,163 GPM respectively.

Comment 5-2: The District has concerns about the impact of fuel storage related to ground water. Request more discussion on ground water protection.

Response: The project will be required to comply with applicable Federal, State and local regulations regarding the establishment, operation and maintenance of gas station facilities. Section 4.5.2, Page 4.5-11 of the Final EIR was revised to include the following discussion on fuel storage regulations (~~deleted text~~, new text):

Gas Station Regulations

The automotive fueling station would include the installation of one or more underground gasoline storage tanks. Underground storage tanks require permits from and monitoring and reporting to a number of agencies including but not limited to:

- Antelope Valley Air Quality Management District;
- Los Angeles County Fire Department;
- City of Palmdale Building and Safety Department;
- City of Palmdale Engineering Department;
- Regional Water Quality Control Board; and
- Environmental Protection Agency.

These permits and plans must all be issued/approved by the respective agencies prior to Certificate of Occupancy or sooner. In addition, all new automobile fueling stations must be constructed to the following standards:

- All tanks, piping and vent/vapor piping must be double walled and contain leak detection capability;
- All piping and venting must be sloped back to the storage tank sumps to prevent discharge;

- Each pump island must have a containment pan underneath them to prevent spilled fuel from escaping;
- All secondary containment systems are required to be tested;
- Best Available Containment Technology is a minimum requirement of the State Water Board (as fueling stations age, they must be periodically updated to meet current requirements); and
- All equipment associated with underground storage tanks must be tested and approved by a third party laboratory and meet all state and local requirements.

Comment 5-3: Provides updated information on water supply for Palmdale Water District and requires a Water Supply Assessment pursuant to Senate Bill 610.

Response: Section 4.5.2 has been revised to reflect the updated information as follows (~~deleted text~~, new text):

~~Groundwater is the primary source of water in the Palmdale Planning Area, with supplemental water supplied from the State Water Project (California Aqueduct).~~ Surface water (imported State Water Project water and local surface water from Littlerock Reservoir) accounts for approximately 60 % of the water supply for Palmdale Water District. Groundwater accounts for approximately 40% of the water supply for Palmdale Water District. Three groundwater sub-units are located within the Palmdale Planning Area. Groundwater movement is generally in a northwesterly direction, from the foothills of the San Gabriel Mountains towards the pumping depression in Lancaster. The location of the three sub-units of the principal (upper) aquifer and the approximate elevation of groundwater surfaces in the spring of 1984 are shown in Figure 4.5-1. Table 4.5-1 shows approximate depth to groundwater for 10 different locations in the Planning Area, as derived from Figure 4.5-1.

Section 10910 of the California Water Code states that when it is determined that an EIR is required for a project, the water provider (Palmdale Water District) must determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan, and if so, include this information within the Water Supply Assessment. The Water Supply Assessment, being prepared in compliance with this Section, is anticipated to be provided by November 2006.

Comment 5-4: Indicated that more current information regarding aquifers and groundwater surface information is needed.

Response: The data provided is consistent with the City of Palmdale 2004 General Plan update.

Comment 5-5: Indicated that the project is entirely within Palmdale Water District boundaries. All references to AVEK should be eliminated.

Response: AVEK is a broader agency surrounding the Palmdale Water District service area. The information contained in the EIR is provided to give the reader a broader perspective than only discussing boundaries of Palmdale Water District service area.

Comment 5-6: Palmdale Water District boundaries depicted on Figure 4.5-3 are incorrect.

Response: Figure 4.5-3 has been revised to show correct boundaries of Palmdale Water District and is included in the Final EIR.

Comment 5-7: Concerns with the effect the detention basin and project run-off will have on water quality.

Response: As discussed in Section 4.5.2, Pages 4.5-10 and 4.5-12, the project must comply with all National Pollutant Discharge Elimination System (NPDES), SWPPP and Water Quality Management Plan (WQMP) requirements. The project's coordination with the City's Master Plan of Drainage and the expansion of adjacent flood control facilities will serve to prevent impacts related to increased quantities of storm flows or surface water runoff. The project proponent will be required to prepare a WQMP consistent with applicable requirements of the Drainage Area Management Plan (DAMP). Adoption and implementation of a long-term WQMP reflects the project's consistency with the DAMP.

Existing NPDES permit and Regional Water Quality Control Board (RWQCB) requirements supporting federal water quality standards and criteria established under the Clean Water Act (CWA) apply to the project site. Requirements and procedures established under these regulations typically act to mitigate potential water quality impacts of new development, including facilities that may be implemented pursuant to the proposed project.

Comment 5-8: The District wants to review the Water Quality Management Plan prior to its adoption.

Response: Mitigation measure HWQ-3 has been added to Section 4.5.3, Page 4.5-13 as follows (~~deleted text~~, new text):

Mitigation Measure HWQ-3

A Water Quality Management Plan shall be submitted to Palmdale Water District for review prior to the issuance of building permits.

Level of Significance After Mitigation

Implementation of Mitigation Measure HWQ-3 would ensure that potential impacts on water quality are less than significant.

Comment 5-9: Indicated that water demand forecast information is contained within the 2005 Urban Water Management Plan for the Palmdale Water District and the EIR did not address the projected water demand.

Response: Projected water demand was provided to Palmdale Water District in a June 2006 formal request for a water supply assessment. Projected demand is approximately 56 acre-feet per year to provide water to the project.

Letter 6

Antelope Valley Mosquito & Vector Control District

P.O. Box 1192
Lancaster, CA 93584-1192
(661) 942-2917
Fax (661) 940-6367

City of Palmdale
Planning Department
Attn.: Susan Koleda, Associate Planner
38250 N. Sierra Highway
Palmdale, CA 93550

September 21, 2006

RECEIVED
SEP 25 2006
PLANNING DEPARTMENT

Re: Palmdale Marketplace DEIR

Dear Ms. Koleda:

The Antelope Valley Mosquito & Vector Control District is a special district charged with protecting public health within most of the City limits of Palmdale and Lancaster. Our main objective is to keep mosquito populations at a minimum. We take this responsibility very seriously. As such, we have reviewed the DEIR for the above named project and ask consideration of the following points:

The immature stages of mosquitoes live in water, therefore Section 4.5 Hydrology and Drainage is most important to us. The DEIR states that the stormwater runoff will be directed to an aboveground detention basin through stormdrains and overland flows. Any overflow would be released by means of an earth ditch/swale to a public right-of-way. All stages of this water conveyance can potentially increase risk to public health by creating mosquito habitat.

The U.S. Environmental Protection Agency (EPA) under the Clean Water Act (CWA) requires that municipalities comply with National Pollution Discharge Elimination System (NPDES) permit requirements to develop stormwater management plans (Standard Urban Stormwater Mitigation Plans) and implement appropriate Best Management Practices (BMPs) to capture and treat stormwater runoff from new or redevelopment sites.

Temporary and/or permanent or structural BMP units (swales, wet basins, vaults, sumps, and the like) that may be utilized for this project may hold water longer than 72 hours, allowing for the reproduction of mosquitoes and increasing the risk to public health from mosquito- and other vector-borne diseases such as West Nile virus (please see attached documentation).

Board of Trustees
L.A. County
Joyce Axley
Barbara Little
Arnie Rodio
Lancaster
Greg Hanes
Palmdale
R. Dennis Persons

District Manager
Cei D. Kratz

Office Location
42624 6th Street East
Lancaster, CA 93535
Email: avmos2@earthlink.net

Ongoing studies by several Vector Control Districts in collaboration with the California Department of Health Services found that "vault type" stormwater capture devices often breed tremendous numbers of mosquitoes nearly year-round. In addition, underground vault spaces provide safe harborage for adult resting and over-wintering mosquitoes.

Undoubtedly, BMPs that do NOT hold standing water or those designed to drain completely within 72 hours are the best solutions. In addition, maintenance is critical. Customary annual or even bi-annual pumping of vault-type units is wholly inadequate to prevent mosquito reproduction. Mosquito reproduction in stormwater BMPs constitutes a public health nuisance under California Health and Safety Code § 2060 and the property owner will be held liable for the creation/maintenance of a public health nuisance.

Based on design, and dry season flow levels, these units individually have the potential to breed large numbers of disease-transmitting mosquitoes. The *cumulative impact* of multiple BMP units placed to limit and treat stormwater runoff across the project site may be substantial and must be carefully considered. This is one of the most seriously overlooked and unintended consequences of Clean Water Act compliance.

In summary these are the points that we would like to bring to your attention and ask for your consideration:

- Temporary and/or permanent or structural BMP units (swales, wet basins, vaults, sumps, and the like) that may be utilized for this project may hold water longer than 72 hours, allowing for the reproduction of mosquitoes and increasing the risk to public health from mosquito and other vector-borne agents such as West Nile virus (please see attached documentation). **6-1**
- "Vault-type" stormwater capture devices often breed tremendous numbers of mosquitoes nearly year-round. In addition, underground vault spaces provide safe harborage for adult resting and over-wintering mosquitoes. **6-2**
- Filtration devices in stormdrain systems and detention basins can easily get clogged by debris and sediment, which leads to stagnant water and mosquitoes. A permanent maintenance plan needs to be implemented. **6-3**
- Mosquito reproduction in stormwater BMPs constitutes a public health nuisance and will require mosquito abatement. Mosquito reproduction at these sites may result in an abatement notice issued by our Board of Trustees under the California Health and Safety Code §2060 resulting in potential fines up to $1,000 per day plus the cost of abatement until corrected. **6-4**
- The cumulative impact of multiple BMP units placed to limit and treat stormwater runoff across the project site may be substantial and must be carefully considered. This is one of the most seriously overlooked and unintended consequences of Clean Water Act compliance. **6-5**

It is crucial that the developer, owner and the City of Palmdale put a plan in place for all of these systems be properly maintained in order to reduce mosquito breeding and to give the Mosquito Control Technicians access for surveillance and treatment of the water.

Please feel free to contact me for any further information.

Best regards,

Karen S. Mellor
Entomologist / Operations Supervisor
Antelope Valley Mosquito & Vector Control District

3 Enclosures: Metzger, M. E., 2004. Managing Mosquitoes in Stormwater Treatment Devices.
Karr M. D., 2004. Mosquitoes Call Stormdrains "Home".
Stormwater Management and Vector Breeding Habitats. CDC

Other references: The Impact of New BMP Construction on Local Public Health Agencies
http://www.forester.net/sw_0203_stormwater.html

The Dark Side of Stormwater Runoff Management: Disease Vectors Associated with Structural BMPs
http://www.forester.net/sw_0203_dark.html

Letter No. 6
Antelope Valley Mosquito & Vector Control District, September 21, 2006

Comment 6-1: Indicated concerns that BMP units may provide the environment for the reproduction of mosquitoes.

Response: The project will be conditioned to comply with Federal, State, and local requirements for the design, installation and maintenance of storm water drainage facilities. The proprietary stormwater treatment devices proposed for the project (CDS) will incorporate weep holes in the sump chambers which enable the units to dry within 72 hours. Refer to Section 4.5.2, Page 4.5-10 for NPDES discussion.

Comment 6-2: Has concerns with Vault-type storm water capture devices.

Response: The project will be conditioned to comply with Federal, State, and local requirements for the design, installation and maintenance of storm water drainage facilities. Also see response 6-1.

Comment 6-3: Indicated that a permanent maintenance plan should be implemented.

Response: A maintenance plan that complies with Federal, State, and local requirements will be implemented. The system will adhere to the manufacturer's recommended maintenance schedule or City of Palmdale maintenance requirements whichever is more stringent. The Storm Water Management Plan (SWMP) specifies a minimum three times per year maintenance including vacuum/pumping out debris. Refer to Section 4.5.2, Page 4.5-9 of Draft EIR for NPDES discussion.

Comment 6-4: Indicated that a Mosquito Abatement Notice, if issued, could result in fines up to $1,000 per day plus cost of abatement until corrected.

Response: The project will comply with applicable regulations and implement a maintenance plan. Refer to Section 4.5.2, Page 4.5-10 for NPDES discussion.

Comment 6-5: Indicated that there is a need to carefully consider the placement of multiple BMP units across the project.

Response: The project will be conditioned to comply with Federal, State, and local requirements for the design, installation and maintenance of storm water drainage facilities. Refer to Section 4.5.2, Page 4.5-10 for NPDES discussion.

Letter 7

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

(323) 890-4330

P. MICHAEL FREEMAN
FIRE CHIEF
FORESTER & FIRE WARDEN

September 5, 2006

RECEIVED
SEP 18 2006
PLANNING DEPT.

Susan Koleda, Assistant Planner II
City of Palmdale Planning Department
38250 Sierra Highway
Palmdale, CA 93550

Dear Ms. Koleda:

NOTICE OF PREPARATION, PALMDALE MARKETPLACE, CUP 06-03
TPM 066322, "CITY OF PALMDALE" – (FFER #20060155)

The Notice of Preparation has been reviewed by the Planning Division, Land Development Unit, and Forestry Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION – FIRE PROTECTION AND EMERGENCY MEDICAL SERVICE AVAILABILITY:

The distances to fire stations appearing in the Initial Study are somewhat inaccurate. Future Fire Station 93 will be approximately 1.25 miles from the project. Station 131 is 3.0 miles distant. This station and Station 37, whose distance is given correctly, each have a 3-person engine company and a 2-person paramedic squad. 7-1

PROJECT IMPACT ON SERVICES:

The Initial Study states: "The change of the property from vacant open space to that of retail purposes will not cause the need for significant additional fire protection services." Any development of vacant land will increase the service demand on the available resources. Although this development would be in reasonable proximity to a planned fire station, the addition of over half a million square feet of retail space with the attendant traffic and transient 7-2

occupancy would increase service demand on the existing and planned fire protection resources in the general area. The Initial Study is correct in identifying the developer fee program as a mitigation measure. **7-2 Con't.**

LAND DEVELOPMENT UNIT -- GENERAL REQUIREMENTS:

1. The proposed development may necessitate multiple ingress/egress access for the circulation of traffic, and emergency response issues.
2. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.
3. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional fire and life safety requirements during this time.
4. Every building constructed shall be accessible to Fire Department apparatus by way of access roadways, with an all-weather surface of not less than the prescribed width. The roadway shall be extended to within 150 feet of all portions of the exterior walls when measured by an unobstructed route around the exterior of the building. **7-3**
5. Fire Department requirements for access, fire flows and hydrants are addressed during the building permit stage.
6. Fire sprinkler systems are required in some residential and most commercial occupancies. For those occupancies not requiring fire sprinkler systems, it is strongly suggested that fire sprinkler systems be installed. This will reduce potential fire and life losses. Systems are now technically and economically feasible for residential use.

COMMERCIAL:

7. The development may require fire flows up to 5,000 gallons per minute at 20 pounds per square inch residual pressure for up to a five-hour duration. Final fire flows will be based on the size of the buildings, their relationship to other structures, property lines, and types of construction used.
8. Fire hydrant spacing shall be 300 feet and shall meet the following requirements: **7-4**
   a. No portion of lot frontage shall be more than 200 feet via vehicular access from a public fire hydrant.
   b. No portion of a building shall exceed 400 feet via vehicular access from a properly spaced public fire hydrant.
   c. Additional hydrants will be required if hydrant spacing exceeds specified distances.

d. When cul-de-sac depth exceeds 200 feet on a commercial street, hydrants shall be required at the corner and mid-block. **7-4 Con't.**

e. A cul-de-sac shall not be more than 500 feet in length, when serving land zoned for commercial use.

9. Turning radii shall not be less than 32 feet. This measurement shall be determined at the centerline of the road. A Fire Department approved turning area shall be provided for all driveways exceeding 150 feet in length and at the end of all cul-de-sacs.

10. All on-site driveways/roadways shall provide a minimum unobstructed width of 28 feet, clear-to-sky. The on-site driveway is to be within 150 feet of all portions of the exterior walls of the first story of any building. The centerline of the access driveway shall be located parallel to, and within 30 feet of an exterior wall on one side of the proposed structure.

11. Driveway width for non-residential developments shall be increased when any of the following conditions will exist:

a. Provide 34 feet in width, when parallel parking is allowed on one side of the access roadway/driveway. Preference is that such parking is not adjacent to the structure.

b. Provide 42 feet in width, when parallel parking is allowed on each side of the access roadway/driveway.

c. Any access way less than 34 feet in width shall be labeled "Fire Lane" on the final recording map, and final building plans.

d. For streets or driveways with parking restrictions: The entrance to the street/driveway and intermittent spacing distances of 150 feet shall be posted with Fire Department approved signs stating "NO PARKING - FIRE LANE" in three-inch high letters. Driveway labeling is necessary to ensure access for Fire Department use.

12. All proposals for traffic calming measures (speed humps/bumps/cushions, traffic circles, roundabouts, etc.) shall be submitted to the Fire Department for review, prior to implementation.

MISCELLANEOUS:

13. The County of Los Angeles Fire Department, Land Development Unit's comments are only general requirements. Specific fire and life safety requirements will be addressed at the building and fire plan check phase. There may be additional requirements during this time. **7-5**

14. Should any questions arise regarding subdivision, water systems, or access, please contact the County of Los Angeles Fire Department, Land Development Unit's EIR Specialist at (323) 890-4243. **7-5 Con't.**

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones or Fire Zone 4, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed. **7-6**

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

DAVID R. LEININGER, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

DRL:lc

Letter No. 7
County of Los Angeles, Fire Department, September 5, 2006

Comment 7-1: Comments from the Planning Division regarding Fire Protection and Emergency Medical Service Availability. Indicated distance existing and future fire stations are from the site.

Response: Section 2.6.2, Page 2-8 of the Draft EIR was modified to include the corrected information in the Final EIR.

Comment 7-2: Indicated that any development of vacant land will increase the service demand on the available resources.

Response: Although the project will increase demand for fire service, incrementally it is not considered significant. Section 2.6.2, Page 2-8 has been modified to clarify the fire demand issue.

Comment 7-3: Land Development Unit comments outlining general requirements.

Response: The project will be conditioned to comply with all County of Los Angeles Fire Department requirements. The listed conditions will be addressed as part of the conditional use permit process and is not generally part of the CEQA process.

Comment 7-4: Land Development Unit comments regarding commercial development requirements.

Response: The project will be conditioned to comply with all County of Los Angeles Fire Department requirements. The listed conditions will be addressed as part of the conditional use permit process and is not generally part of the CEQA process.

Comment 7-5: Land Development Unit comments regarding miscellaneous requirements.

Response: The project will be conditioned to comply with all County of Los Angeles Fire Department requirements. The listed conditions will be addressed as part of the conditional use permit process and is not generally part of the CEQA process.

Comment 7-6: Comments from the Forestry Division regarding other environmental concerns.

Response: The project will be conditioned to comply with all County of Los Angeles Fire Department requirements. The listed conditions will be addressed as part of the conditional use permit process and is not generally part of the CEQA process.

APPENDIX A
NOTICE OF AVAILABILITY, NOTICE OF PREPARATION, INITIAL STUDY AND PUBLIC COMMENTS

CITY OF PALMDALE
OFFICE OF THE
PLANNING DEPARTMENT

M E M O R A N D U M

TO: Distribution List

FROM: City of Palmdale Planning Department

SUBJECT: **NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE PROPOSED PALMDALE MARKETPLACE**

DATE: April 18, 2006

The City of Palmdale will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the proposed Palmdale Marketplace. Hopkins Real Estate Group proposes to develop a retail commercial center of approximately 523,080 square feet (SF) of building area on a gross area of 49.25 acres of vacant land on the northwest corner of Avenue R and 47th Street East (State Highway 138) in the City of Palmdale, California as shown in Figure 1. The applicant has submitted applications to the City for a Conditional Use Permit and a Tentative Parcel Map for the development of the project.

The Project proposes to construct six (6) major retail structures encompassing approximately 419,600 SF of building space mainly along the west side of the site. Of the proposed major retail structures, one may include a home improvement center and another an upscale discount retailer, both with garden centers. In addition, the retail center will have four (4) shops and eight (8) pads of approximately 39,000 SF and 53,380 SF of building space, respectively (see Site Plan, Figure 2). The pads may include two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with an automated car wash. One or more alcoholic beverage establishments may also be developed.

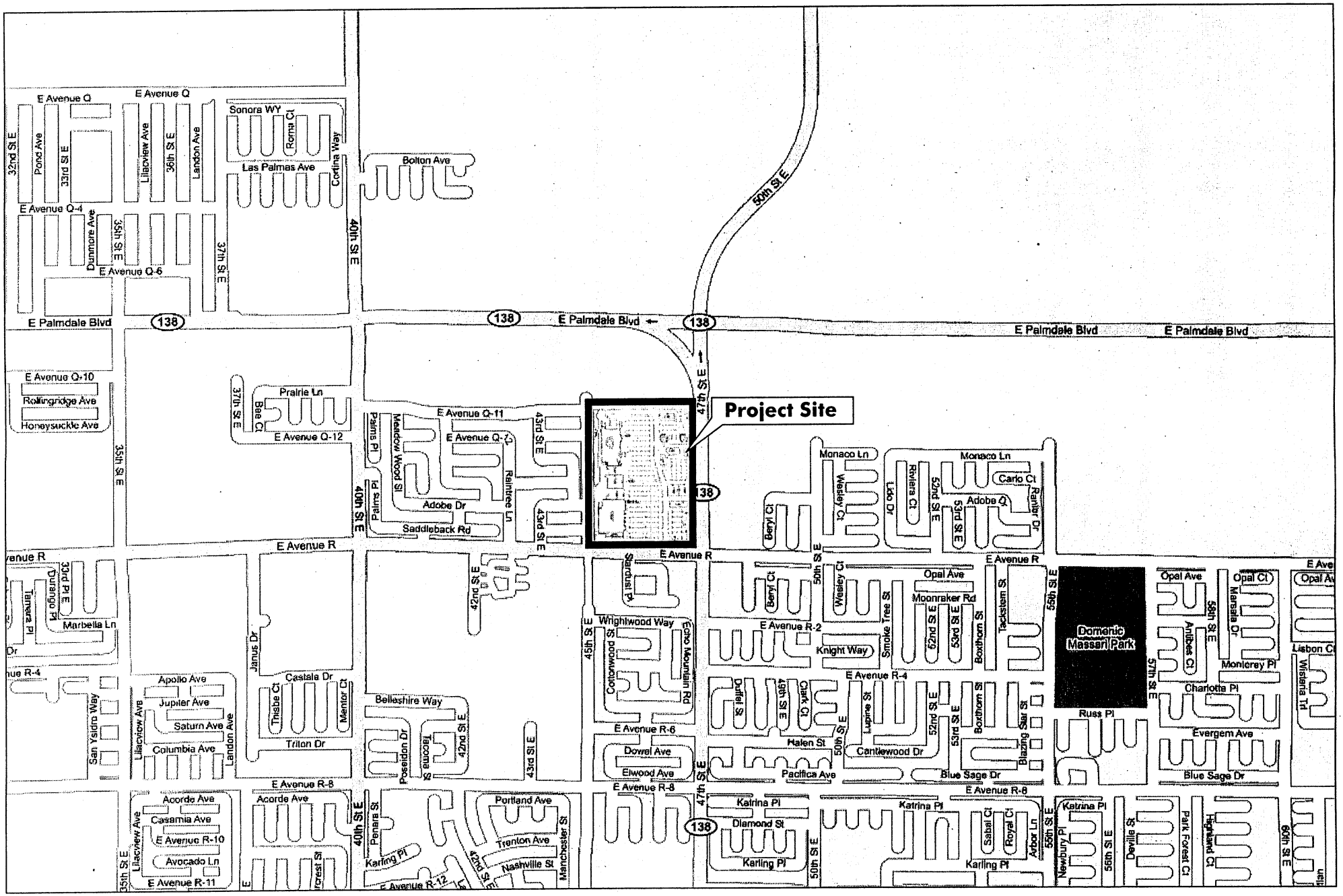
This memorandum is a request for environmental information that your agency believes should be addressed in the EIR. We need to know the views of your agency as to the scope and content of the environmental information, which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR when considering your permit or other approval for the project. The project description, location, and potential environmental effects are contained in the attached Initial Study.

Due to time limits, as defined by the California Environmental Quality Act (CEQA), your response should be sent at the earliest possible date, but no later than thirty (30) days after receipt of this notice. Additionally, a public scoping meeting will be held on Wednesday, April 26, 2006, at 10 A.M. at the City of Palmdale Development Services Conference Room, 38250 Sierra Highway, Palmdale, CA 93550. Comments and questions should be directed to the following address:

City of Palmdale Planning Department
Attention: Susan Koleda, Assistant Planner II
38250 Sierra Highway
Palmdale, CA 93550
661/267-5293

Project Title: Palmdale Marketplace
Project Applicant: Hopkins Real Estate Group

Attachment: Initial Study/Environmental Checklist; Vicinity and Site Map



Project Vicinity

Palmdale Marketplace
City of Palmdale, California

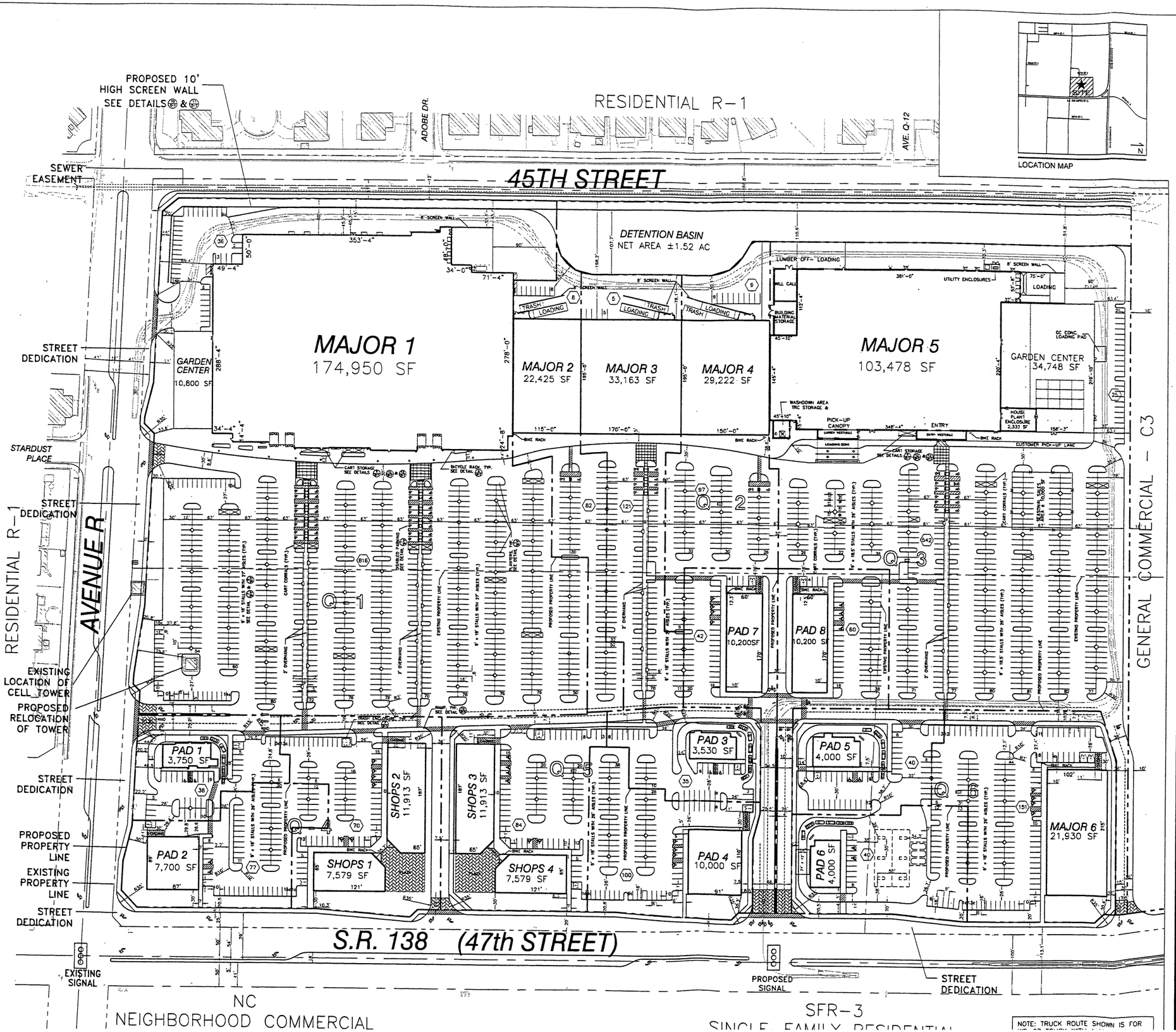
Figure 1

N

0 2000

Feet

LILBURN CORPORATION



GreenbergFarrow

15101 Red Hill Avenue, Suite 200
Tustin, CA 92780
t: 714 259 0500 f: 714 259 5480

PROJECT INFORMATION

SITE AREA

GROSS AREA	±49.25 ACRES
STREET DEDICATIONS	± 2.60 ACRES
DETENTION BASIN	±1.52 ACRES
TOTAL NET AREA	±45.13 ACRES
MAJOR 1 NET AREA	±13.73 ACRES
MAJOR 5 NET AREA	±11.19 ACRES
TOTAL SITE COVERAGE	±26.61%(11,591 SF/AC)

BUILDING AREA

	USER	BLDG AREA	PARCEL AREA
Q1-	MAJOR 1	174,950 SF	13.73 AC
	GARDEN CENTER	10,800 SF	
Q2-	MAJOR 2	22,425 SF	1.49 AC
	MAJOR 3	33,163 SF	2.20 AC
	MAJOR 4	29,222 SF	2.06 AC
	PAD 7	10,200 SF	1.14 AC
Q3-	MAJOR 5	103,478 SF	10.27 AC
	OPEN GC	32,415 SF	
	H.P.E	2,333 SF	
	TOTAL G.C	34,748 SF	
	PAD 8	10,200 SF	1.27 AC
Q4-	PAD 1	3,750 SF	0.90 AC
	PAD 2	7,700 SF	1.21 AC
	SHOPS 1	7,579 SF	1.86 AC
	SHOPS 2	11,913 SF	
Q5-	PAD 3	3,530 SF	0.84 AC
	PAD 4	10,000 SF	1.43 AC
	SHOPS 3	7,579 SF	1.96 AC
	SHOPS 4	11,913 SF	
Q6-	PAD 5	4,000 SF	1.00 AC
	PAD 6	4,000 SF	1.22 AC
	MAJOR 6	21,930 SF	2.26 AC
	DETENTION BASIN (INCLUDING SETBACK)		1.81 AC
	TOTAL:	523,080 SF	±46.65 AC

PARKING SUMMARY

	USER	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D	RATIO PROV'D
Q1-	MAJOR 1	4/1000	700	841	4.81
	GC	1/1000	11	11	1.02
Q2-	MAJOR 2	4/1000	90	90	4.01
	MAJOR 3	4/1000	133	196	3.80
	MAJOR 4	4/1000	117	106	3.63
	PAD 7	4/1000	41	42	4.12
Q3-	MAJOR 5	4/1000	414	524	5.06
	GC	1/1000	33	33	1.02
	H.P.E	4/1000	9	10	4.29
	PAD 8	4/1000	41	60	5.88
Q4-	PAD 1	10/1000	38	38	10.13
	PAD 2	10/1000	77	77	10.0
	SHOPS 1	4/1000	78	70	3.59
	SHOPS 2	4/1000			
Q5-	PAD 3	10/1000	35	35	9.92
	PAD 4	10/1000	100	100	10.0
	SHOPS 3	4/1000	78	84	4.31
	SHOPS 4	4/1000			
Q6-	PAD 5	5/1000	20	40	10.0
	PAD 6	4/1000	16	40	10.0
	MAJOR 6	4/1000	88	151	6.89
	TOTAL		2,119	2,478	4.74
	COMPACT STALLS PROVIDED			134 STALLS	(5.41%)

ZONING CLASSIFICATION

JURISDICTION	CITY OF PALMDALE
EXISTING ZONING	C3-GENERAL COMMERCIAL
REQUIRED ZONING	C3-GENERAL COMMERCIAL

PROJECT NOTES

1. THIS CONCEPTUAL SITE PLAN IS FOR PLANNING PURPOSES ONLY; SITE SPECIFIC INFORMATION SUCH AS EXISTING CONDITIONS, ZONING, PARKING LANDSCAPE REQUIREMENTS MUST BE VERIFIED.
2. THIS SITE PLAN IS BASED ON A PLAN PREPARED BY DRC INC., .RECEIVED VIA EMAIL ON 02/22/06.
3. ALL CURB CUTS AND TRAFFIC SIGNALS SHOWN, EXISTING AND PROPOSED, MUST BE VERIFIED.

DRAWING ISSUE/REVISION RECORD

DATE	NARRATIVE	INITIALS
03/06/06	UPDATED SITE INFORMATION	CD

SITE PLANNER	CL/CD
SITE DEV. COORDINATOR	F. CODA
CLIENT	HOPKINS REAL ESTATE GROUP
CLIENT REPRESENTATIVE	ED BACH

HOPKINS REAL ESTATE GROUP

PALMDALE, CA
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER 20050894.2

SCALE: 1"=60'-0"
0 30 60 120 180 240

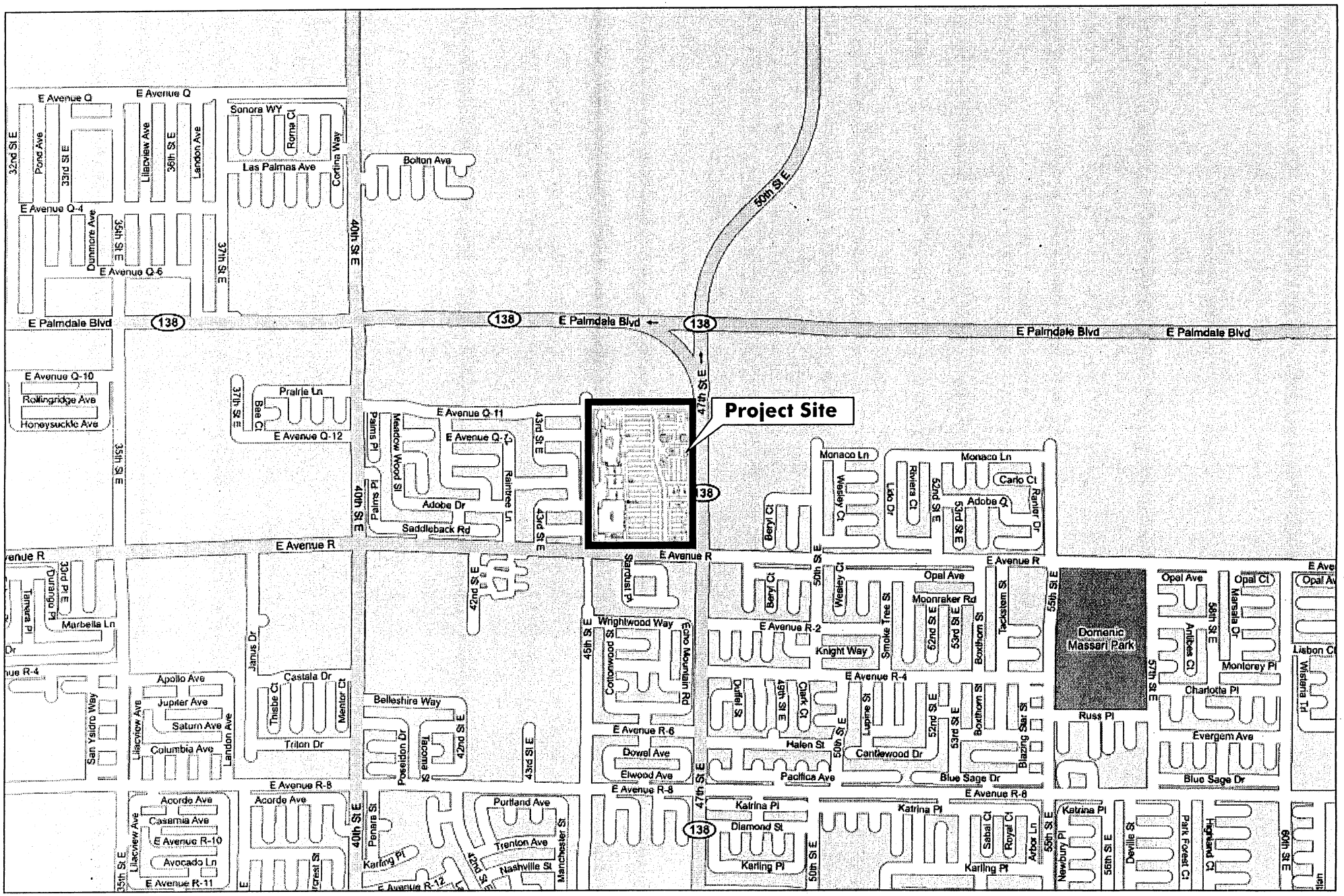
CITY OF PALMDALE

PLANNING DEPARTMENT

INITIAL STUDY

QUESTIONNAIRE

APPLICATION NO:	Conditional Use Permit (CUP) 06-03 Tentative Parcel Map (TPM) 066322
NAME OF APPLICANT:	Hopkins Real Estate Group
LOCATION OF PROJECT:	The project is located at the northwest corner of the intersection of Avenue R and 47th Street East (State Highway 138) in the City of Palmdale. The project is bounded by Avenue R on the south, 45th Street East on the west, vacant land on the north, and 47th Street East (State Highway 138) on the east.
APNs:	3023004007; 3023004016; and 3023004017
EXISTING GENERAL PLAN LAND USE DESIGNATION:	CC (Community Commercial)
PROPOSED GENERAL PLAN LAND USE DESIGNATION:	NA
EXISTING ZONING:	C-3 (General Commercial)
PROPOSED ZONING:	NA
PRESENT LAND USE:	Vacant Land
LOCATION MAP:	Thomas Bros.; Los Angeles Co. Page 4287; Grid A-1. *See Figure 1 – Vicinity Map & Figure 2 – Site Plan



Project Vicinity

Palmdale Marketplace
City of Palmdale, California

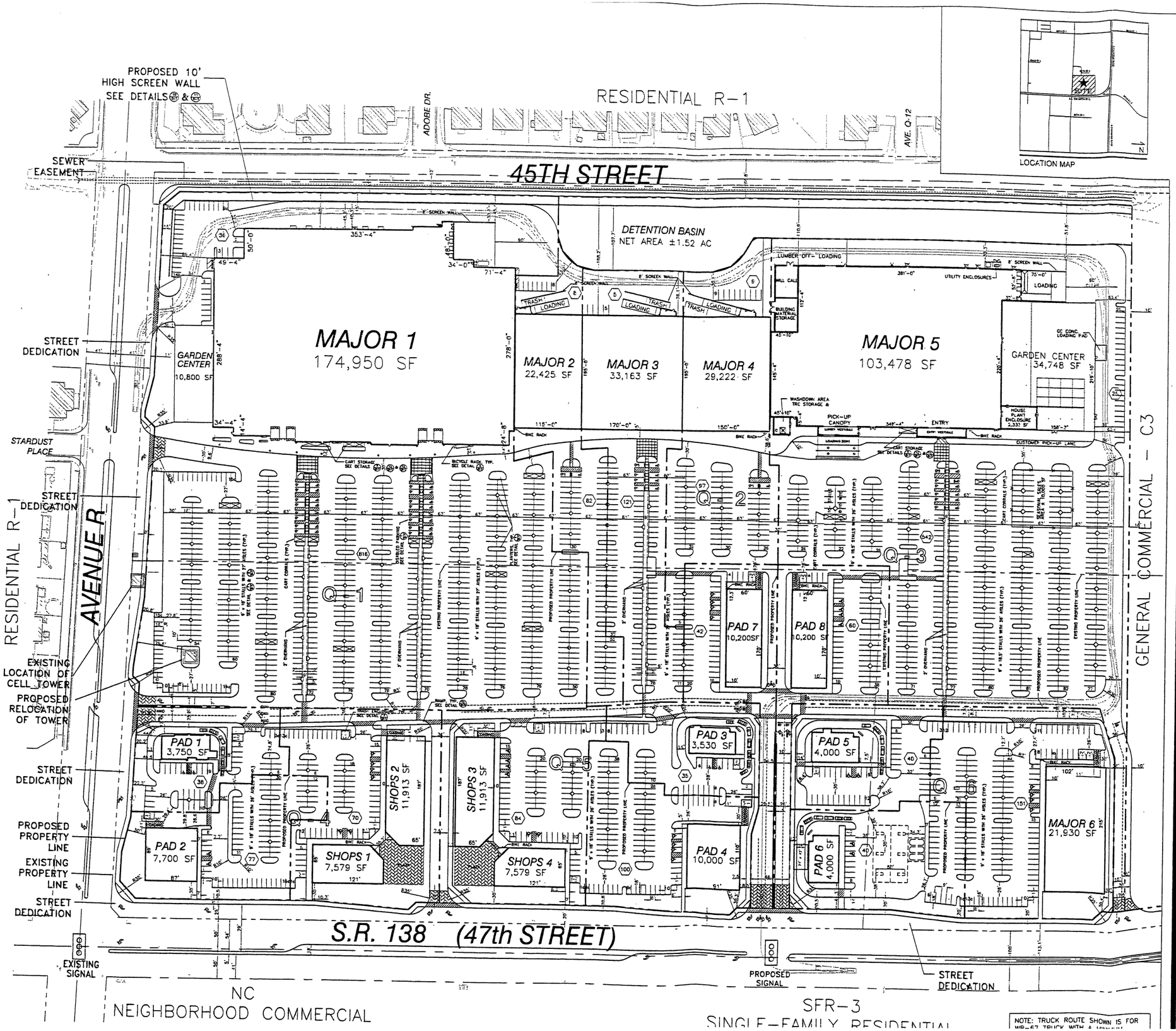
Figure 1

N

0 2000

Feet

LILBURN CORPORATION



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1. THIS CONCEPTUAL SITE PLAN IS FOR PLANNING PURPOSES ONLY: SITE SPECIFIC INFORMATION SUCH AS EXISTING CONDITIONS, ZONING, PARKING LANDSCAPE REQUIREMENTS MUST BE VERIFIED.
2. THIS SITE PLAN IS BASED ON A PLAN PREPARED BY DRC INC., RECEIVED VIA EMAIL ON 02/22/06.
3. ALL CURB CUTS AND TRAFFIC SIGNALS SHOWN, EXISTING AND PROPOSED, MUST BE VERIFIED.

DRAWING ISSUE/REVISION RECORD

DATE	NARRATIVE	INITIALS
03/06/06	UPDATED SITE INFORMATION	CD

SITE PLANNER SITE DEV. COORDINATOR	CL/CD F. CODA
CLIENT CLIENT REPRESENTATIVE	HOPKINS REAL ESTATE GROUP ED BACH

HOPKINS REAL ESTATE GROUP

PALMDALE, CA.
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER 20050894.2

SCALE: 1"=60'-0"
0 30 60 120 180 240

USE: C3-1

I. APPLICABILITY OF THE INITIAL STUDY

A. Is the proposed action a "project" as defined by CEQA?
☒ Yes ☐ No

1. If the project qualifies for one of the Categorical Exemptions listed in Section 6.C. of the City's CEQA Guidelines, is there a reasonable possibility that the activity will have a significant effect due to special circumstances? ☐ Yes ☐ No ☒ N/A

II. INITIAL STUDY REVIEW

A. Does the project require a 30-day State Clearinghouse review?
☒ Yes ☐ No

III. PROJECT ASSESSMENT

A. Project Description: Development of a retail commercial center of approximately 523,080 square feet (SF) of building area on a gross area of 49.25 acres (net area – 45.13 acres) of vacant land on the northwest corner of Avenue R and 47th Street East in the City of Palmdale, California.

The Project proposes to construct six (6) major retail structures encompassing approximately 419,600 SF of building space mainly along the west side of the site. Of the proposed major retail structures, one may include a home improvement center and another an upscale discount retailer, both with garden centers. In addition, the retail center will have four (4) shops and eight (8) pads of approximately 39,000 SF and 53,380 SF of building space, respectively (see Site Plan, Figure 2). The pads may include two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with an automated car wash. One or more alcoholic beverage establishments may also be developed. Table 1 lists the proposed building areas. In addition, the existing cellular tower will be relocated on-site in accordance with City requirements and off-site road and drainage improvements will be constructed.

Table 1 Palmdale Marketplace Shopping Center Proposed Land Uses and Square Feet of Building Area	
Land Use	**Building Area (Sq. Ft.)**
Major 1	174,950 GC – 10,800
Major 2	84,810
Major 3	
Major 4	
Major 5	103,478 GC – 34,748
Major 6	21,930
Shops 1	7,579
Shops 2	11,913
Shops 3	7,579
Shops 4	11,913
Pad 1	3,750
Pad 2	7,700
Pad 3	3,530
Pad 4	10,000
Pad 5	4,000
Pad 6	4,000
Pad 7	10,200
Pad 8	10,200
TOTALS	523,080

Note: All building areas are preliminary and subject to change with final design.
Source: Hopkins Real Estate Group, April 2006

Related On-Site Improvements

Parking

Parking improvements, along with site and tenant identification signage and landscaping are also included in the project proposal. Parking provided by the project includes approximately 2,384 standard parking spaces and 94 oversized spaces for the disabled, with a resulting ratio of 4.74 parking spaces per 1,000 square feet of building area. This is greater than the 2,074 parking spaces required by City ordinance. The sizes and spacing of all parking spaces will be provided consistent with the City of Palmdale Zoning Ordinance, Article 87, Section 87.05.

Lighting

Commercial lighting for the project will be provided for safety, identification and aesthetic purposes. Typical applications will include building lighting, area/parking lot lights, and illuminated signage. Proposed lighting for the project will be consistent with the City of Palmdale Zoning Ordinance, Article 86, Sections 86.03 and all signage will be consistent with Article 88, Signs.

Property Definition and Perimeter Treatment

The project site is defined by existing roads including 45th Street East on the west, Avenue R on the south, and 47th Street East (State Highway 138) on the east. The area to the north of the project is vacant land bounded on the north by Palmdale Boulevard (State Highway 138).

Perimeter landscape and hardscape elements proposed by the project will further define the project site, and enhance views of the project area, particularly as seen from abutting 45th Street East. A solid sound wall will be constructed to the west of the project in order to provide a privacy barrier between the project site and the existing residential neighborhood. The neighborhood to the west will be further separated from the project site by required setbacks, landscaping, and an approximately 1.5-acre detention basin. All perimeter treatments will be provided consistent with the City of Palmdale Zoning Ordinance, Article 86, Section 86.04.

Landscaping

As noted above, perimeter landscaping is proposed along the project site's 45th Street East and throughout the interior of the project site. All landscaping required of the project will be implemented consistent with the City of Palmdale Zoning Ordinance, Article 86, Sections 86.01, and the requirements of Municipal Code, Chapter 14.04, which regulates the protection of native desert vegetation.

Site Preparation

Kleinfelder, Inc. prepared a *Geotechnical Feasibility Study* to determine the preliminary geotechnical design of the proposed project. This technical report is available for review at the City of Palmdale Planning Department. All site preparation and earthwork operations shall be performed in accordance with applicable codes, safety regulations, and other required local, site, and federal specifications. A design-level geotechnical study will be performed to develop final recommendations prior to construction.

During construction, the existing cellular tower in the southern portion of the site will be relocated in a location meeting City requirements.

Off-Site Improvements

Primary ingress and egress to the site will be provided by a proposed signal and driveway on 47th Street East as well as two additional driveways on 47th Street East and three driveways on Avenue R. There will be no driveways along 45th Street East adjacent to residences. Additional improvements to Avenue R and 47th Street East may include half street improvements, turn lanes, and signal improvements to the intersection of Avenue R and 47th Street East. Details of the road improvements are included in the Traffic Analysis Report and will be in accordance with the City of Palmdale Public Works Department, Traffic Engineering Division and Caltrans.

Utilities, including electricity, natural gas, water, sewer, drainage, and telecommunications will be extended to the project site from existing easement corridors and lines. Water will be purveyed to the project by the Palmdale Water District, and sewer services will be provided by the Los Angeles County Sanitation Department, District 14. Storm runoff will be routed to an onsite detention basin. Off-site drainage channels are

planned to be constructed north and west for a distance of approximately 2,100 feet and will connect with an existing culvert.

Discretionary Actions
The following discretionary actions will need to be approved by the Palmdale Planning Commission in order to realize the proposed project:

- Certification of the EIR;
- A Conditional Use Permit (CUP) which addresses the establishment of the proposed development,
- Approval of the site plan and architectural design of the project,
- Approval of the Tentative Parcel Map, which addresses the subdivision of the site into 17 parcels.

B. Description of the Project Site:

The project site is currently vacant except for a cellular tower located on the south side of the site. The property appears level with no significant scenic or visual resources. A number of dirt roads and off-road vehicle tracks cross the property. The southeastern section of the property has been graded and historically used for agricultural purposes since before 1953 based on aerial photographs. Most of the property has not been graded and has retained its natural contours. The majority of the property is Joshua tree woodlands and desert scrub plant community with visible Joshua trees. Soil on the site is alluvial fan deposits consisting of unconsolidated sand and gravels.

C. Surrounding Land Uses:

North: Vacant land designated for future commercial uses
East: Vacant land across 47th Street East designated for future commercial and residential uses
South: Existing Single-Family Residential and future commercial across Avenue R
West: Existing Single-Family Residential across 45th Street East

D. Is the proposed project consistent with:

	Yes	No	N/A
City of Palmdale General Plan	☒	☐	☐
Applicable Specific Plan	☐	☐	☒
City of Palmdale Zoning Ordinance	☒	☐	☐
Air Quality Management Plan	☒	☐	☐
Congestion Management Plan	☒	☐	☐
Regional Comprehensive Plan	☒	☐	☐

E. Have any of the following studies been submitted?

- ☒ Geology Report
- ☒ Hydrology Report
- ☒ Soils Report
- ☒ Traffic Study
- ☒ Noise Study
- ☒ Biological Study
- ☒ Native Vegetation Preservation Plan
- ☐ Solid Waste Generation Report
- ☐ Public Services/ Infrastructure Report
- ☒ Historical Report
- ☒ Archaeological Report
- ☒ Paleontological Study
- ☐ Line of Sight Exhibits
- ☐ Visual Analysis
- ☐ Slope Map
- ☐ Fiscal Impact Analysis
- ☐ Air Quality Report
- ☐ Hazardous Materials/ Waste

Technical studies prepared for this project are available for review at the City of Palmdale Planning Department and will be included as appendices to the EIR to be prepared.

IV. DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

This initial study was prepared by:

Martin Derus
Lilburn Corporation

04-18-06
Date

Asoka Herath
Assistant Director of Planning

4.18.06
Date

Laurie Lile
Director of Planning

V. EARLIER ANALYSIS

Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or (mitigated) negative declaration. In this case, a discussion should identify the following:

A. City of Palmdale General Plan FEIR. (SCH No. 87120908) Prepared for the City of Palmdale by Michael Brandman Associates, and certified by the Palmdale City Council (Resolution No. 93-10) on January 25, 1993. This document was prepared to analyze the potential impacts from full buildout of the City's General Plan, including the provision of roadways, infrastructure and development of urban uses. The General Plan EIR anticipated that significant impacts to air quality, loss of open space, seismic related risks, biological resources, jobs/housing balance, traffic impacts and cumulative impacts to groundwater resources would occur with implementation of the City's General Plan. All other impacts were found to be mitigatable to a level of insignificance through the mitigation measures imposed within the General Plan. A copy of this EIR is available for review at the City of Palmdale Planning Department.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

VI. EVALUATION OF ENVIRONMENTAL IMPACTS

A. Earth:

Based on the geotechnical or soils study for the project, review by the City's Engineering Department, and/or the General Plan Update:

1. Soils

a. Are there any areas of potential differential settlement on the project site which could significantly impact development of the proposed project?

❑ ❑ ☒ ❑

b. Is the site in an area of high shrink/swell (hydrocompaction) potential which could significantly impact development of the proposed project?

❑ ❑ ☒ ❑

c. Is the site in an area of potential subsidence?

❑ ❑ ☒ ❑

d. Will the project result in a significant increase in wind or water erosion of soils, either on- or off-site?

❑ ❑ ☒ ❑

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Could the project result in siltation deposition, or erosion, which may modify a stream channel, or adversely affect downstream flood control facilities?	☐	☐	☒	☐

During construction of the proposed project, the potential for erosion and/or runoff may temporarily increase. However, the applicant will comply with best management practices and all storm water measures as required by law prior to and during construction through preparation of, and compliance with, a Storm Water Pollution Prevention Plan (SWPPP) administered by the Lahontan Regional Water Quality Control Board. In this regard, the project proponent is required to file and comply with a City-approved SWPPP prior to initiation of construction activities. The applicant must also comply with dust control measures as regulated by the Antelope Valley Air Quality Management District.

The project's development should not be substantially impacted by unstable geologic conditions and is not located in an area known for subsidence, hydrocompaction, landsliding, lateral spreading, liquefaction, or other issues related to differential settlement. The project applicant will comply with appropriate geologic/soils engineering codes and guidelines, safety regulations, the feasibility and final geotechnical report from Kleinfelder, and appropriate Uniform Building Code (UBC) requirements for the proposed project.

Compliance with existing regulations should reduce any potential impacts to below significance.

2. Earthquakes

Based on the Alquist-Priolo Earthquake Fault Zoning Map (as amended 1994) and California Division of Mines and Geology

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

Special Publication 42 (1997), or the geotechnical report for the project site:

a. Is the site in a fault rupture hazard zone? ❑ Yes ☒ No

If yes:

i. Is there an active or potentially active fault on the project site? ❑ Yes ❑ No

ii. Does the project include a school, emergency or public facility, day care center, nursing home, or high rise building? ❑ Yes ❑ No

b. Is the site in a zone subject to seismic ground shaking, ground failure, or liquefaction?

❑ ❑ ☒ ❑

Based on information presented in the Geotechnical Feasibility Study prepared for the project site by Kleinfelder and the City of Palmdale's General Plan, the project site is not located within a designated Alquist-Priolo Earthquake Fault Zone, Special Studies Zone, or a State of California designated Earthquake Fault Rupture Hazard Zone for active surface faulting.

Liquefaction occurs when saturated, loose gravels, sands, and silty soils are subjected to strong shaking resulting from earthquake motion. The site is not located within any mapped Seismic Hazard Zone for liquefaction potential. In addition, due to a lack of groundwater located at the site within the upper 50 feet of the soil, the liquefaction hazard is considered to be a less than significant impact.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

The most significant fault in relation to the proposed project is the San Andreas-Mojave Fault located roughly three miles from the proposed site. There are no known active or potentially active faults that pass directly through or project towards the site. Given the proximity to the San Andreas-Mojave Fault, the proposed project can be expected to be subject to potential strong seismic shaking during its design life.

Building officials and engineers have long recognized the impacts of earthquakes and ground shaking on structures. Appropriate measures which reduce the effects of earthquakes are identified in the Uniform Building Code (UBC), including specific provisions for seismic design of structures. The City of Palmdale has adopted the UBC for design and implementation of all structures within the City, including the proposed project. Short of a catastrophic event, design of structures in accordance with the UBC and current professional engineering practices, is sufficient to reduce the effects of seismic ground shaking below the level of significance.

3. Slopes

Based on the U.S.G.S. Topographic Map, the slope map submitted for the project, the geotechnical report for the project, and/or a site inspection:

a. Does the project site contain slopes of 10% or greater?

❑	❑	❑	☒

b. Is any significant modification of major landforms proposed?

❑	❑	❑	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

c. Is the project in an area of landslide risk, or are landslides present on the project site?

❑ ❑ ❑ ☒

d. Will project grading create slopes, on- or off-site, that could be subject to landslides, mudslides, or erosion?

❑ ❑ ❑ ☒

The proposed project location is relatively level in nature with no major sloping or landforms present. Grading of the project site will not increase the risk of landslide, mudslides, or erosion on or around the project site. The project design is not anticipated to create any significant slopes that would be subject to additional risk for landslides, mudslides, or erosion.

According to the Geotechnical Feasibility Study completed by Kleinfelder, the site is not within a Seismic Hazard Zone for Earthquake-Induced Landslides. There are no expected impacts.

4. Quarry Zone

Based on a site inspection, the City's General Plan Land Use Map, and/or the Significant Gravel Resource Area Maps of the State Department of Mines and Geology:

a. Would development of the project impede the extraction of significant mineral resource deposits?

❑ ❑ ❑ ☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

According to the City of Palmdale General Plan and the maps provided from the State Department of Mines and Geology, the proposed project will not impact a significant mineral resource deposit.

B. Air:

Based on the criteria in the South Coast Air Quality Management Handbook for the Preparation of EIRs (1993 with updates), the Air Quality Study prepared for the proposed project, the Antelope Valley Air Quality Management Plan, and EIR (1991), and/or the land use proposed:

1. Emissions

a. Will the project result in significant air emissions or deterioration of ambient air quality either from stationary or mobile sources?

☒ ☐ ☐ ☐

b. Could the proposed project produce potentially toxic air emissions?

☐ ☐ ☒ ☐

c. Will the project potentially result in the creation of objectionable odors?

☐ ☐ ☐ ☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

d. Could the project result in the alteration of air movement, moisture or temperature, or any change in climate either locally or regionally?

❑ ❑ ❑ ☒

An Air Quality Impact Analysis will be prepared for the project to assess potential project-related air quality impacts generated by construction activities, the gas station, and by mobile sources after the site is constructed, specifically vehicles used by customers, employees, and store deliveries. The potential air quality impacts and proposed mitigation shall be evaluated in an EIR.

C. Water:

1. Natural Streams, Springs, and Wetlands

Based on the type of project, the U.S.G.S. Topographics Maps, the exhibits and studies submitted for the project, and/or a site inspection:

a. Does the project site contain a blue-line stream, spring, seep, or wetland?

❑ ❑ ❑ ☒

b. Will the project include changes in the course or volume of water in a local stream or wetland which require Department of Fish and Game or Army Corps of Engineers permits?

❑ ❑ ❑ ☒

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

c. Will the project result in the loss of, or changes to, significant stands of riparian vegetation?

❑ ❑ ❑ ☒

According to the biological report completed by wildlife biologist Mark Hagan and on-site visits, no streams, springs, seeps, or wetlands exist on the proposed project site nor will any riparian *(of, and, or pertaining to the banks of a natural course of water)* vegetation be negatively impacted.

2. Other Surface Waters

Based on a site inspection, and review of the Map of Aqueduct Facilities (Dept. of Water Resources, East Branch Hydrology Palmdale Area), and/or the General Plan:

If the project is adjacent to or near the California Aqueduct:

a. Could the project result in a significant increase in runoff of storm or nuisance water toward the aqueduct?

❑ ❑ ❑ ☒

b. Will the project be significantly affected by storm or nuisance water runoff flowing through aqueduct culverts or pools?

❑ ❑ ❑ ☒

The proposed project is located more than 3 miles to the north of the California Aqueduct and is not expected to significantly affect the aqueduct due to runoff or nuisance water. The proposed project site will not be negatively impacted from storm or nuisance runoff flows through aqueduct culverts or pools. No impacts are anticipated.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

Based on a review of the General Plan and/or a site inspection:

c. Is the project located above Lake Palmdale where urban runoff could significantly impact the lake?

❑ ❑ ❑ ☒

d. Is the project located in an inundation area below Lake Palmdale dams, or Littlerock Dam?

❑ ❑ ❑ ☒

The proposed project is located greater than 5 miles northeast of Lake Palmdale and over 7 miles north of Littlerock Dam. The proposed project will have no impact due to runoff on Lake Palmdale or Littlerock Reservoir and according to the City of Palmdale's General Plan it is not within an inundation area below Lake Palmdale or Littlerock Reservoir Dams. No impacts are anticipated.

Based on review of the FIRM Map, the Master Plan of Drainage and/or review by the Department of Public Works/Engineering:

e. Is the site in an area of flood hazard as shown on the FIRM Map, or as identified by the Engineering or Public Works Departments?

❑ ❑ ☒ ❑

f. Will the project result in a significant increase in peak runoff that could increase flood hazard off-site?

❑ ☒ ❑ ❑

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

g. Would development of the project impede the implementation of the City's Master Plan of Drainage or Drainage Management Plan?

❑	☒	❑	❑

According to the City of Palmdale General Plan, the proposed project is located within a flood hazard zone that indicates areas of 500-year flood. The project will comply with all regulations regarding storm water runoff, nuisance flows, and drainage. To further control any potential impacts regarding water runoff from the site or nuisance flows, a 1.5-acre detention basin is designed for the western portion of the project site. Drainage channels will be constructed north approximately 800 feet within the vacant right-of-way 45th Street East to Palmdale Avenue, and then approximately 1,300 feet west on the south side of Palmdale Avenue to an underground culvert.

Coordination with the City's Master Plan of Drainage and the expansion of adjacent flood control facilities will serve to prevent impacts related to increased quantities of storm flows or surface water runoff. The project proponent will be required to prepare a Water Quality Management Plan (WQMP) consistent with applicable requirements of the Drainage Area Management Plan (DAMP). Adoption and implementation of a long-term WQMP reflects the project's consistency with the DAMP.

These potential flood and storm water impacts and any proposed mitigation shall be evaluated in an EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
h. Will any aspect of the project result in discharge of materials into surface waters, or in any alteration of surface water quality, including but not limited to, temperature, dissolved oxygen, or turbidity?	☐	☐	☒	☐
i. Will the project result in the significant alteration of the direction or rate of flow of groundwater?	☐	☐	☐	☒

Based on the type of project, project submittals and exhibits, and/or a site inspection:

j. Could the project result in a change in the quantity or quality of groundwater, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	☐	☐	☐	☒
k. Could the project result in a substantial reduction in the amount of water otherwise available for public water supplies?	☐	☐	☒	☐

Existing National Pollutant Discharge Elimination System (NPDES) permit and Regional Water Quality Control Board (RWQCB) requirements supporting federal water quality standards and criteria established under the Clean Water Act (CWA) apply to the project site. Requirements and

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

procedures established under these regulations typically act to mitigate potential water quality impacts of new development, including facilities that may be implemented pursuant to the proposed project.

The proposed project will comply with all federal, state, and regional water quality and storm water standards in order to mitigate any potential water quality impacts of the new development. To further control any potential impacts regarding water runoff from the site or nuisance flows, a 1.5-acre detention basin will be constructed to the west of the project site. Any potential impacts to water quality are considered less than significant and with a likelihood of a groundwater depth between 100 and 150 feet, the project will not alter direction or rate of flow of groundwater supplies.

Kleinfelder found no evidence of perched or seasonal groundwater within any borings or test pits excavated to a maximum depth of 32.5 feet below ground surface (bgs). Given the nature of the use of the proposed project and the depth of the groundwater at the site, the project should not negatively affect existing groundwater nor substantially reduce the amount of water available for public needs. Any potential impacts are considered to be less than significant.

The project does not propose elements or aspects that will result in consumption of significant volumes of water. Direct additions or withdrawals of groundwater are not proposed by the project. Further, construction proposed by the project will not involve massive substructures at depths that would significantly impair or alter the direction or rate of flow of groundwater. While the proposal will result in substantial overcovering of the specific project site, given the significant remaining permeable acreage in the project vicinity, the net effect on local or regional groundwater recharge capabilities is considered less-than-significant. An assessment on the water supply impacts of the project will be included in the EIR.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

D. Plant Life:

Based on a site inspection, the biological report, and/or the Native Vegetation Preservation Plan submitted for the project:

1. Is there a significant stand of desert vegetation on the site, which will be adversely impacted by the project?

❑	☒	❑	❑

2. Will the project result in a reduction of the numbers of any unique, rare, or endangered species of plants?

❑	☒	❑	❑

3. Will the project result in the introduction of invasive, non-native species of plants into an area; or will the project create a barrier to the normal replenishment of existing native plant species?

❑	❑	☒	❑

4. Will the project result in a significant reduction in acreage of native vegetation?

❑	☒	❑	❑

A complete biological report and assessment including a survey of Joshua trees (*Yucca brevifolia*) was completed by wildlife biologist Mark Hagan for the proposed site. The site is characteristic of a Joshua tree woodland and desert scrub community. The site has been disturbed by fire, off-road vehicle trails, urban activities from near-by homes, previous house(s), and historical agricultural uses.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

Forty-three plant species were recorded but no listed or sensitive plant species occur onsite except for Joshua tree, considered a sensitive resource and protected by Municipal Code Chapter 14.04 requires development of a Native Desert Vegetation Preservation Plan (preservation plan) and receipt of a permit prior to removal of this species.

Potential impacts to desert vegetation and proposed mitigation shall be evaluated in an EIR.

E. Animal Life:

Based on the biology report submitted for the project and/or a site inspection: Will the proposal result in:

1. Will the project result in a significant loss of biological diversity?

☐	☐	☒	☐

2. Will the project result in the reduction of the numbers of any unique, rare, or endangered species of animals?

☐	☒	☐	☐

3. Is the project located in a Significant Ecological Area where the introduction of animals associated with urbanization could adversely affect native species; or where the project will result in a barrier to the migration or movement of animals?

☐	☐	☐	☒

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

4. Will the project cause significant deterioration of, or loss of, existing fish or wildlife habitat?

❑ ☒ ❑ ❑

According to the biological report, a total of 25 wildlife species, or their sign, were observed during the survey. No threatened desert tortoise (*Gopherus agassizii)* or sign were observed during the survey. No burrowing owls (*Athene cunicularia)* (California Department of Fish and Game species of special concern) or sign were observed during the survey. Three inactive bird nests were observed in Joshua trees and Antelope ground squirrel (*Ammospermophilus leucurus)* burrows were observed within the western and southern portions of the study area.

The proposed project area is located within the geographic range of the Mohave ground squirrel (*Spermophilus Mohavensis)* and the habitat present in the area appeared suitable to support the squirrel. The CDFG may require a Section 2081 permit prior to development.

Potential impacts to listed or sensitive wildlife and proposed mitigation shall be evaluated in an EIR.

F. Noise:

1. If the project is residential or noise sensitive, will it expose people to severe noise levels because it is located:

   a. adjacent to the Freeway?

❑ ❑ ❑ ☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b. within 200 feet of the railroad?	❑	❑	❑	☒
c. adjacent to an existing or future arterial street?	❑	❑	❑	☒

The proposed shopping center is not considered noise sensitive and the above impact statements are not applicable

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Is the proposed project within the Plant 42 over-flight area, or the 65 CNEL boundary?	❑	❑	❑	☒

The proposed project site is not within the United States Air Force Plant 42 or the Palmdale Airport's over-flight areas, CNEL boundaries, or airport environs. The project as proposed will not expose individuals in the project area to excessive aircraft-related noise levels.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Will the project generate a noise level exceeding 65 CNEL at the project boundary after construction that could significantly impact an adjoining land use?	❑	☒	❑	❑

A noise analysis will be conducted to assess potential noise impacts from traffic, onsite truck deliveries, trash compacters, and mechanical

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

equipment to adjacent residential areas for daytime and nighttime hours. Based on the determination of estimated future noise levels, mitigation measures will be recommended. These potential noise impacts and proposed mitigation shall be evaluated in an EIR.

G. Light or Glare:

Based on the type of project, and/or project submittals and exhibits:

1. Will the project produce significant new sources of light or glare that would disturb neighboring uses or significantly change the light environment visible from other areas of the City?

❑ ❑ ☒ ❑

The proposed project will comply with the lighting restrictions pursuant to the City of Palmdale's Zoning Ordinance (Section 86.03) as appropriate for the allowed retail use. For all proposed lighting, the City will assure compliance with applicable lighting ordinance performance criteria and design standards that require shielding to eliminate or reduce potential light/glare impacts below thresholds of significance. Specifically, appropriate shielding of lighting will be provided to prevent light and glare impacts on neighboring residences. Any impacts due to lighting or glare will not significantly impact the environment or considerably disturb neighboring uses.

H. Land Use:

1. Will the project result in a substantial alteration of the present or planned land use of an area?

❑ ❑ ☒ ❑

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2. Are adjoining or planned land uses greatly different from that of the proposed project so that a potentially substantial interface problem would be created?	☐	☐	☒	☐
3. If the project is located within the Plant 42 AICUZ zone, does it conflict with the joint land use policies established for those zones?	☐	☐	☐	☒

The City of Palmdale's General Plan provides a General Plan Land Use Designation of Community Commercial (CC) and a Zoning Designation under the City's Zoning Ordinance of General Commercial (C-3). The retail use for the proposed project is consistent with the underlying Zoning and General Plan Designations and is similar to other retail centers in the area that service the local residential communities. According to the General Plan, given the high growth in residential uses in the City of Palmdale, there is a growing need for Community commercial centers within these newly developed areas, which will potentially facilitate a reduction in traffic and drive time.

The proposed commercial and retail use for this undeveloped land along 47th Avenue is consistent with the proposed land use, zoning, and retail facilities the City of Palmdale is supporting in this region and will help reduce the driving distance for the surrounding residential communities. Any potential impacts are expected to be less than significant.

In regards to Plant 42, no conflict with the joint land use policies exists.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

I. Natural Resources:

1. Will the project result in a significant increase in the rate of use of any natural resources?

❑ ❑ ☒ ❑

2. Will the project result in the substantial depletion of any non-renewable natural resources?

❑ ❑ ❑ ☒

The proposed project is not expected to significantly increase the rate of use of natural resources nor will it substantially deplete any non-renewable natural resources. Any impacts are anticipated to be less than significant.

J. Risk of Upset:

1. Will the project result in a risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals, or radiation) in the event of an accident or upset condition?

❑ ❑ ☒ ❑

The majority of the retail/commercial uses proposed by the project have a negligible potential to create a significant hazard to the public or the environment due to the use of hazardous materials. The operation of a self-serve gas station on-site will result in the transportation and distribution of potentially hazardous petroleum fuel and related products. However, in association with this use, the transport, storage, use, and handling of all hazardous or potentially hazardous materials are extensively regulated at the federal, State and local levels. Consistency

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

with these regulations is realized through mandated compliance with applicable laws and regulations. Potential impacts associated with hazardous or potentially hazardous materials are considered less-than-significant.

2. Will the project result in possible interference with any emergency response plan or emergency evacuation plan?

❑ ❑ ☒ ❑

Upon review of the General Plan and the City of Palmdale's evacuation routes and emergency facilities, the proposed project will not significantly impact the City's emergency response or evacuation plans. While both the Palmdale Boulevard and 47th Street East are identified in the General Plan as evacuation routes, the proposed project will not significantly hinder traffic or evacuation opportunities for individuals located in the region. Any impacts proposed are anticipated to be less than significant.

3. Is the site included on any known State Hazardous Waste Site list?

❑ ❑ ❑ ☒

The site is not included on any known State Hazardous Waste Site lists.

4. Is the project within or adjacent to a high fire hazard area as shown in the General Plan, identified by the Los Angeles County Fire Department or based on a site inspection?

❑ ❑ ❑ ☒

The project is not located within or adjacent to a high fire hazard area.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

K. Population:

Based on the type of project:

1. Will the project significantly alter the location, distribution, density, or growth rate of the human population of an area?

❑ ❑ ☒ ❑

While the proposed project will increase the daily population to the proposed site versus its current status, the project is not anticipated to greatly increase the density of the surrounding residential population. The proposed use is strictly retail in nature with no residential units added to the site. Any impacts are anticipated to be less than significant.

L. Housing:

Based on the type of project?

1. Will the project create a significant demand for additional housing?

❑ ❑ ☒ ❑

2. Will the project result in displacement of people from existing housing on the site?

❑ ❑ ❑ ☒

The proposed project will not eliminate nor create additional residential or housing units. While the project will increase the number of construction and long-term employment opportunities in the localized area, it is expected that the existing populace in the general area will meet the employment needs without a significant demand for additional housing.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

The potential need for additional housing to meet the increase in employment is not anticipated to be a significant impact.

M. Transportation/Circulation:

Based on review of the type of project, project exhibits, a site inspection, and/or review of the Institute of Transportation Engineers, Trip Generation or the applicant's traffic study:

1. What is the estimated number of average daily vehicle trips, and a.m. and p.m. peak hour trips, generated by the proposed project?

   14,720 ADT: 313 a.m. peak; 1,379 p.m. peak [based on draft Traffic Study]

2. Will the traffic generated by this project cause a reduction of Level of Service at an intersection or on a street segment?

☒	☐	☐	☐

The proposed project will generate a substantial number of vehicle trips particularly during the p.m. peak hours. The potential impacts to the surrounding intersections for opening year (2007), for 2015, and for 2025 will be assessed in a traffic analysis report for conditions without and with the project, and without and with mitigation measures. Typical mitigation measures will be in the form of intersection improvements to meet the City of Palmdale's Level of Service requirements and traffic mitigation fees. In addition, 47th Street East on the east side of the project, is also State Highway 138 and any improvements for this street must be approved by Caltrans.

Potential traffic impacts and any proposed mitigation shall be evaluated in an EIR.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

3. Does circulation within the project prevent the safe and orderly flow of people and vehicles, including emergency vehicles?

❑ ☒ ❑ ❑

The project does not propose elements or aspects that would result in safety hazards or obstruct or restrict emergency access to or through the area. In conjunction with the review and approval of building permits, City staff will review all plans to assure compliance with all applicable safety and emergency access requirements.

4. Will the project create or experience access problems as designed, or create any obstruction to the safe flow of traffic?

❑ ☒ ❑ ❑

Per M.2. above, the project will generate a substantial number of vehicle trips that could significantly impact local intersections. Potential traffic impacts and any proposed mitigation shall be evaluated in an EIR.

5. Could the project result in a significant alteration to rail or air traffic?

❑ ❑ ❑ ☒

No impacts to rail or air service are expected.

6. Will the project create a significant shortage of parking?

❑ ❑ ☒ ❑

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

The City of Palmdale requires one parking space for every 250 SF of gross floor area for retail uses and one space for every 100 SF of gross floor area for restaurant uses. The proposed project will utilize a ratio of 4.74 parking spaces per 1000 SF for a total of 2,478 parking spaces that meets the City's parking requirements. The potential impact is less than significant.

N. Public Services:

1. Fire Protection

What is the roadway distance and location of the nearest fire station:
Fire Station 131 is 2.5 miles southwest of site; Fire Station 37 is 4.0 miles west of the site. The proposed station on Avenue R at 57th Street East is approximately 1.6 miles from the site.

a. Will the project result in a need for significant additional fire protection services?

❑	❑	☒	❑

The City of Palmdale contracts with the Los Angeles County Fire Department for fire and safety services. There are two fire stations located within 4 miles of the proposed project site and a proposed station approximately 1.6 miles from the site. The change of the property from vacant open space to that of retail purposes will not cause the need for significant additional fire protection services. The Fire Department has adequate resources to service the City of Palmdale and services will be expanded to meet new demands.

The City of Palmdale has worked with the Los Angeles County Fire Department in identifying and securing sites for new fire facilities and has adopted a Fire Facilities Impact Fee Ordinance. Compliance with the

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

ordinance assists in mitigating impacts to fire protection services resulting from incremental growth in the City.

Further, fire suppression systems in the larger retail buildings, on-site fire protection systems, building construction methods and safety equipment required by the Los Angeles County Fire Department for fuel dispensing and fuel storage facilities, and restaurant exhaust hoods will reduce the potential impacts on fire protection services. Based on the preceding discussion, potential impacts to fire protection services are considered less-than-significant.

2. Police Protection

Are there any aspects of the project that would create a significant impact to police protection?

❑ ❑ ☒ ❑

The Los Angeles County Sheriff's Department has a Palmdale Station at 1020 E. Palmdale Blvd. that services the City of Palmdale and is scheduled to be relocated to 38600 N. Sierra Highway in July 2006. Given the retail nature of the proposed use, the project will increase the number of individuals currently utilizing the site. However, it is not expected that the proposed use will create a significant need for, or an impact on, police protection. Through revenues generated from the site's development, the proposed project will help offset any potential impacts. Any impacts are anticipated to be less than significant.

3. Schools

a. In what elementary and high school attendance area is the project?
Palmdale School District; Antelope Valley Union High School District

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

b. Approximately how many students will the project generate? (Not Applicable)

c. Would the students generated by the project significantly contribute to the affected schools exceeding their designed capacity?

❑ ❑ ❑ ☒

The project site is located within the Palmdale School District (elementary educational facilities and services); and the Antelope Valley Union High School District (secondary educational facilities and services). The project as proposed is entirely retail/commercial in nature and will not significantly contribute to the capacity of the local school districts for either elementary or secondary educational facilities. Further, potential impacts to school districts are offset through payment of school impact fees. School impact fees will be assessed at the rate in affect at the time of approval per square foot of commercial construction, to be allocated between the appropriate school districts. No impacts are anticipated.

4. Parks and Recreation

Will the proposed project result in an impact on the quality or quantity of existing parks or recreational facilities, including trails or bicycle paths?

❑ ❑ ❑ ☒

The project as proposed is entirely retail/commercial in nature and will not significantly contribute to an increase in residential needs and thus is not expected to have an impact on existing parks, recreational facilities, trails, or bicycle paths.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

5. Public Facilities

Will the proposed project have a significant impact on maintenance of public facilities, including roads, drainage facilities, slopes, open space and trails?

☐	☐	☒	☐

Any impacts on the maintenance of public facilities are considered to be less than significant.

6. Library Services

Will the project result in a significant impact to library services due to increased population?

☐	☐	☐	☒

The project as proposed is entirely retail/commercial in nature and will not significantly contribute to an increase in residential needs and thus is not expected to have an impact on existing library services.

7. Other Governmental Services

Will the project have a significant impact on a government service or agency not listed above?

☐	☐	☒	☐

Additional government services or agencies that may be affected by the proposed project include the City's Planning, Building and Safety and Engineering Departments. No significant impacts are anticipated

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
O. Energy:				
1. Will the project result in the use of substantial amounts of fuel or energy?	❑	❑	☒	❑
2. Will the project result in a substantial increase in demands upon existing sources of energy, or require the development of new sources of energy?	❑	❑	☒	❑

Implementation of the proposed project will result in increased fuel and/or energy consumption. This increase could be considered substantial due to the large commercial nature of the project. However, energy requirements have been evaluated by the City's General Plan EIR and potential impacts were found to be less-than-significant due to the availability of such resources. The project shall comply with Uniform Building code Title 24 energy conservation requirements. Standard construction practices and economic incentives discourage use of energy and non-renewable resources in a wasteful and inefficient manner. As such, the project's potential to use substantial amounts of fuel or energy or substantially increase demands upon existing sources of energy is considered less-than-significant.

P. Utilities:

Will the proposal result in a need for new systems, or substantial alterations to the following utilities:

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Power or natural gas?	☐	☐	☒	☐
2. Communications systems?	☐	☐	☐	☒
3. Water?	☐	☐	☒	☐
4. Sanitary sewer?	☐	☐	☒	☐
5. Solid waste disposal?	☐	☐	☒	☐

The proposed project site is located within a developed region of the City of Palmdale and the site's development is not anticipated to create undue burdens on the existing infrastructure or utilities. The providers in the area should be able to supply all necessary utilities in order to meet the applicant's demands and connections to the site for power, sewer, water, and communications. Detailed information concerning the connections to the various utilities is found in the Application.

The Los Angeles County Division of Sanitation, District 14 and 20, currently oversee the City of Palmdale and can provide appropriate sewer services with adequate existing capacity. According to the City of Palmdale General Plan, sewer and wastewater treatment facilities are being expanded to handle the City of Palmdale's growth. A sewer area

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

study prepared by the applicant shows that sewage flows would be conveyed to the proposed 18" Relief Trunk Sewer that is to run parallel and replace the existing 12" trunk sewer within 45th Street East. Final plans will be approved by the City.

The General Plan states that Los Angeles County has recently approved the expansion of the Antelope Valley Landfill and an application to expand beyond the previous approval is pending with the City. The project applicant will comply with any City of Palmdale regulations in regards to construction debris and recycling requirements. Any solid waste impacts to the landfill are anticipated to be less than significant for the proposed project.

Q. Human Health:

Based on the type of project:

1. Will the project create any health hazard or potential health hazard (excluding mental health)?

☐	☐	☒	☐

2. Will the project result in the exposure of people to potential health hazards?

☐	☐	☒	☐

The intended use of the project is for retail/commercial purposes and should not create any health hazards nor expose people to potential health hazards. Construction and maintenance of the proposed project will follow best management practices and will comply with all safety requirements that may be applicable to the project. Any potential hazards are considered to be less than significant.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

The operation of a self-serve gas station on-site will result in the transportation and distribution of potentially hazardous petroleum fuel and related products. However, in association with this use, the transport, storage, use, and handling of all hazardous or potentially hazardous materials are extensively regulated at the federal, State and local levels. Consistency with these regulations is realized through mandated compliance with applicable laws and regulations. Potential impacts associated with health hazards are considered less-than-significant.

The existing cellular tower is planned to be relocated during construction to the southwest corner of the site. This location will be assessed in the EIR.

R. Aesthetics:

1. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?

❑	❑	☒	❑

The proposed project will not obstruct any scenic vistas or views to the public. The applicant will comply with all required design guidelines and will not create an aesthetically offensive site open to the public view. Through design guidelines, landscaping, and required input from the City of Palmdale Planning Department, it is anticipated that any aesthetic impacts will be less than significant.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

S. Cultural Resources:

1. Will the proposal result in the alteration or destruction of a prehistoric or historic archaeological site, or historic structure(s)?

☒ ☐ ☐ ☐

Site inspection performed by:
Richard Norwood, Archaeologist with RTFactfinders.

2. Will the proposal result in potential adverse impacts on paleontological resources?

☐ ☐ ☒ ☐

A Phase I Cultural Resource Investigation was completed by RT Factfinders for the proposed project. No paleontological or prehistoric resources were discovered and any impacts on these resources are considered to be less than significant.

Five historic period sites were identified including one home site, a water well, and refuse deposits. The EIR will discuss the findings of this report and assess potential impacts and recommended mitigation measures.

T. Public Controversy:

1. Is the project or action environmentally controversial in nature or can it reasonably be expected to become controversial upon disclosure to the public?

☐ ☐ ☒ ☐

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

The project as proposed is not anticipated to be controversial in nature upon disclosure to the public. The project will comply with all required design guidelines, landscaping, safety, circulation, and zoning requirements and will primarily service the surrounding residential community. The proposed project will increase sales tax proceeds to the City of Palmdale and will not be environmentally controversial in nature. Public controversy is not expected to be significant.

VII. 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?

☒ ❑ ❑ ❑

Potential significant impacts related to air quality, flooding and drainage, plant and animal life, noise, cultural resources, and traffic generation were identified in this Initial Study. The proposed project will generate additional traffic, which may cause significant impacts to air quality and surrounding intersections and roads. The proposed development will impact Joshua trees, which are considered a sensitive resource and protected by the Municipal Code and habitat, which may still be suitable for the Mohave Ground Squirrel. Cultural resources have been identified on the project site.

Therefore, these potential impacts and mitigation measures must be evaluated in an EIR.

Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact

B. Does the project have impacts, which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)

☒ ☐ ☐ ☐

The project as proposed may have impacts which are individually limited but may be cumulatively significant. The EIR shall address potential cumulative impacts and propose mitigation measures as applicable.

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

☒ ☐ ☐ ☐

The project may have environmental effects, which could cause substantial adverse effects on human beings either directly or indirectly. Potential impacts will be evaluated in the EIR.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Arnold
Schwarzenegger
Governor

Sean Walsh
Director

Notice of Preparation

April 20, 2006

RECEIVED
APR 27 2006
PLANNING DEPARTMENT

To: Reviewing Agencies

Re: Palmdale Marketplace
SCH# 2006041114

Attached for your review and comment is the Notice of Preparation (NOP) for the Palmdale Marketplace draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Susan Koleda
City of Palmdale
38250 N. Sierra Highway
Palmdale, CA 93550

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2006041114
Project Title Palmdale Marketplace
Lead Agency Palmdale, City of

Type **NOP** Notice of Preparation

Description The applicant proposes to develop a retail commercial project of approximately 523,000 sq. ft. The project would consist of six (6) major retail structures composed of approximately 419,000 sq. ft. +\- and may include a home improvement center and an upscale discount retailer both with garden centers. The retail center will also include 4 shops and 8 pads for retail/commercial development which may include drive-through restaurants, a drive-through bank, and a gas station with an automatic car wash. One or more alcoholic beverage establishments may be developed. Off-site road improvements and drainage facilities are planned.

Lead Agency Contact

Name Susan Koleda
Agency City of Palmdale
Phone (661) 267-5200 **Fax**
email
Address 38250 N. Sierra Highway
City Palmdale **State** CA **Zip** 93550

Project Location

County Los Angeles
City Palmdale
Region
Cross Streets Northwest corner of Avenue R and 47th Street East (State Highway 138)
Parcel No. 3023-004-007,-016,-017
Township 6N **Range** 11W **Section** 28 **Base** SBBM

Proximity to:

Highways 138
Airports
Railways
Waterways Shadow Hills, Manzanita
Schools Wildflower, Mesa, Cimarron,Chaparrel
Land Use Vacant except for cell tower/General Commercial (C-3)/Community Commercial (CC)

Project Issues Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Drainage/Absorption; Flood Plain/Flooding; Geologic/Seismic; Noise; Public Services; Soil Erosion/Compaction/Grading; Traffic/Circulation; Vegetation; Wildlife; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Department of Health Services; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Department of Toxic Substances Control; Regional Water Quality Control Bd., Region 6 (Victorville)

Date Received 04/20/2006 **Start of Review** 04/20/2006 **End of Review** 05/19/2006

Note: Blanks in data fields result from insufficient information provided by lead agency.

OP Distribution List

County: Los Angeles SCH# [redacted]

sources Agency

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  Conservancy

sh and Game

- [ ] **Depart. of Fish & Game**
  Scott Flint
  Environmental Services Division
- [ ] **Fish & Game Region 1**
  Donald Koch
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  Banky Curtis
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  Robert Floerke
- [ ] **Fish & Game Region 4**
  Mike Mulligan
- [x] **Fish & Game Region 5**
  Don Chadwick
  Habitat Conservation Program
- [ ] **Fish & Game Region 6**
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] **Fish & Game Region 6 I/M**
  Tammy Allen
  Inyo/Mono, Habitat Conservation Program
- [ ] **Dept. of Fish & Game M**
  George Isaac
  Marine Region

Other Departments

- [ ] **Food & Agriculture**
  Steve Shaffer
  Dept. of Food and Agriculture
- [ ] **Depart. of General Services**
  Public School Construction
- [ ] **Dept. of General Services**
  Robert Sleppy
  Environmental Services Section
- [ ] **Dept. of Health Services**
  Veronica Rameriz
  Dept. of Health/Drinking Water

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  Debby Eddy
- [ ] **Office of Emergency Services**
  Dennis Castrillo
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- [ ] **Native American Heritage Comm.**
  Debbie Treadway
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  Ken Lewis
- [ ] **State Lands Commission**
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- [ ] **Tahoe Regional Planning Agency (TRPA)**
  Cherry Jacques

Business, Trans & Housing

- [ ] **Caltrans - Division of Aeronautics**
  Sandy Hesnard
- [ ] **Caltrans - Planning**
  Terri Pencovic
- [ ] **California Highway Patrol**
  John Olejnik
  Office of Special Projects
- [ ] **Housing & Community Development**
  Lisa Nichols
  Housing Policy Division

Dept. of Transportation

- [ ] **Caltrans, District 1**
  Rex Jackman
- [ ] **Caltrans, District 2**
  Marcelino Gonzalez
- [ ] **Caltrans, District 3**
  Katherine Eastham
- [ ] **Caltrans, District 4**
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  David Murray
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  Tom Dumas
- [ ] **Caltrans, District 11**
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  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
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  Steven Herrera
  Division of Water Rights
- [ ] **Dept. of Toxic Substances Control**
  CEQA Tracking Center
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Regional Water Quality Control Board (RWQCB)

- [ ] **RWQCB 1**
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  North Coast Region (1)
- [ ] **RWQCB 2**
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] **RWQCB 3**
  Central Coast Region (3)
- [ ] **RWQCB 4**
  Jonathan Bishop
  Los Angeles Region (4)
- [ ] **RWQCB 5S**
  Central Valley Region (5)
  - [ ] **RWQCB 5F**
    Central Valley Region (5)
    Fresno Branch Office
  - [ ] **RWQCB 5R**
    Central Valley Region (5)
    Redding Branch Office
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  Lahontan Region (6)
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    Lahontan Region (6)
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- [ ] **RWQCB 8**
  Santa Ana Region (8)
- [ ] **RWQCB 9**
  San Diego Region (9)

- [ ] **Other** _____

Last Updated on 08/10/05

MAILING LIST
NOTICE OF PREPARATION OF A DRAFT
ENVIRONMENTAL IMPACT REPORT (EIR) FOR THE CITY OF PALMDALE

SCOTT MORGAN
STATE CLEARINGHOUSE
PO BOX 3044
SACRAMENTO, CA 95812-3044

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CAL/EPA HEADQUARTERS
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SACRAMENTO CA 95814-2828

DISTRICT ENGINEER
DHS OFFICE OF DRINKING
WATER
464 W 4TH STREET STE 437
SAN BERNARDINO CA 92401

NANCEE M. MURRAY
SENIOR STAFF COUNSEL
CALIF DEPT of FISH &GAME
1416 NINTH ST, 12TH FL
SACRAMENTO CA 95814-2090

Antelope Valley
Air Quality Management District

43301 Division St., Suite 206
Lancaster CA 93535

(661) 723-8070
Fax (661) 723-3450

Charles L. Fryxell, Air Pollution Control Officer

In reply, please refer to AV0406/061

April 27, 2006

RECEIVED
MAY 0 2 2006
PLANNING DEPARTMENT

City of Palmdale
Planning Department
38250 Sierra Highway
Palmdale, CA 93550
Attn: Susan Koleda, Assistant Planner II

Re: Notice of Preparation of an Environmental Impact Report (EIR) for the Proposed Palmdale Marketplace

Dear Ms. Koleda:

The Antelope Valley Air Quality Management District (AVAQMD) has reviewed the Notice of Preparation of an Environmental Impact Report (EIR) for the Proposed Palmdale Marketplace. The AVAQMD recommends particular distances from sensitive receptors are established for specific businesses that could be located within this development that have shown an association with adverse health effects.

In April 2005, the California Air Resource Board (CARB) published a document "Air Quality and Land Use Handbook: A Community Health Perspective." The handbook makes general recommendations on siting new sensitive land uses such as homes and schools near air pollution sources. The proposed Palmdale Marketplace will be a prime location for the establishment of a large gasoline station and/or dry cleaning facility. The CARB handbook recommends avoiding siting residences, schools, daycare centers, playgrounds, or medical facilities (i.e., sensitive receptors) within 300 feet of any dry cleaning operation or large gasoline station.

If a gasoline station or dry cleaner is located within the proposed center, the AVAQMD, may require the installation of additional air emission control equipment or impose restricted throughput in order to demonstrate the nearby sensitive receptors are protected from local exposure to known air pollutants.

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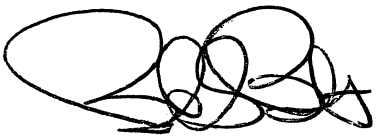
Clean Cities
Antelope Valley

Thank you for the opportunity to provide comment. If you have any questions regarding this letter, please contact me at (661) 723-8070.

Sincerely,



Bret S. Banks
Operations Manager

/bsb

State of California – The Resources Agency ARNOLD SCHWARZENEGGER, *Governor*

DEPARTMENT OF FISH AND GAME
http://www.dfg.ca.gov
South Coast Region
4949 Viewridge Avenue
San Diego, CA 92123
(858) 467-4201

RECEIVED
MAY 15 2006
PLANNING DEPARTMENT

May 8, 2006

Mrs. Susan Koleda
City of Palmdale Planning Department
38250 Sierra Highway
Palmdale, CA 93550

Notice of Preparation of a Draft Environmental Impact Report for Palmdale Marketplace SCH # 2006041114, Los Angeles County

Dear Mrs. Koleda:

The Department of Fish and Game (Department) has reviewed the above-referenced Notice of Preparation (NOP), relative to impacts to biological resources. The proposed project consists of the development of a retail commercial center on approximately 45.13 acres of vacant land located on the northwest corner of Avenue R and 47th Street East in the City of Palmdale.

To enable Department staff to adequately review and comment on the proposed project we recommend the following information, where applicable, be included in the Draft Environmental Impact Report:

1. A complete, recent assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, and locally unique species and sensitive habitats.

   a. A thorough recent assessment of rare plants and rare natural communities, following the Department's Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities.

   b. A complete, recent assessment of sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Recent, focused, species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and U.S. Fish and Wildlife Service. A phase III Department protocol survey for burrowing owl is recommended for the project site because the site supports appropriate burrow habitat and sparse vegetation for burrowing owl.

   c. Rare, threatened, and endangered species to be addressed should include all those

which meet the California Environmental Quality Act (CEQA) definition (see CEQA Guidelines, Section 15380).

d. The Department's Wildlife Habitat Data Analysis Branch in Sacramento should be contacted at (916) 322-2493 to obtain current information on any previously reported sensitive species and habitats, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code. Also, any Significant Ecological Areas (SEAs) or Environmentally Sensitive Habitats (ESHs) or any areas that are considered sensitive by the local jurisdiction that are located in or adjacent to the project area must be addressed.

2. A thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts. This discussion should focus on maximizing avoidance, and minimizing impacts.

a. CEQA Guidelines, Section 15125(a), direct that knowledge of the regional setting is critical to an assessment of environmental impacts and that special emphasis should be placed on resources that are rare or unique to the region.

b. Project impacts should also be analyzed relative to their effects on off-site habitats and populations. Specifically, this should include nearby public lands, open space, adjacent natural habitats, and riparian ecosystems. Impacts to and maintenance of wildlife corridor/movement areas, including access to undisturbed habitat in adjacent areas, should be fully evaluated and provided. The analysis should also include a discussion of the potential for impacts resulting from such effects as increased vehicle traffic and outdoor artificial lighting.

c. A cumulative effects analysis should be developed as described under CEQA Guidelines, Section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

d. Impacts to migratory wildlife affected by the project should be fully evaluated including proposals to removal/disturb native and ornamental landscaping and other nesting habitat for native birds. Impact evaluation may also include such elements as migratory butterfly roost sites and neo-tropical bird and waterfowl stop-over and staging sites. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (50 C.F.R. Section 10.13). Sections 3503, 3503.5 and 3513 of the California Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA.

e. Impacts to all habitats from City or County required Fuel Modification Zones (FMZ). Areas slated as mitigation for loss of habitat shall not occur within the FMZ.

f. Proposed project activities (including disturbances to vegetation) should take place outside of the breeding bird season (February 1- September 1) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). If project activities cannot avoid the breeding bird season, nest surveys should be conducted and active nests should be avoided and provided with a minimum buffer as determined by a biological monitor (the Department recommends a minimum 500-foot buffer for all active raptor nests).

3. A range of alternatives should be analyzed to ensure that alternatives to the proposed project are fully considered and evaluated. A range of alternatives which avoid or otherwise minimize impacts to sensitive biological resources including wetlands/riparian habitats, alluvial scrub, coastal sage scrub, Joshua tree woodlands, etc. should be included. Specific alternative locations should also be evaluated in areas with lower resource sensitivity where appropriate.

   a. Mitigation measures for project impacts to sensitive plants, animals, and habitats should emphasize evaluation and selection of alternatives which avoid or otherwise minimize project impacts. Compensation for unavoidable impacts through acquisition and protection of high quality habitat elsewhere should be addressed with offsite mitigation locations clearly identified.

   b. The Department considers Rare Natural Communities as threatened habitats having both regional and local significance. Thus, these communities should be fully avoided and otherwise protected from project-related impacts.

   c. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Department studies have shown that these efforts are experimental in nature and largely unsuccessful.

4. The Department has concluded that the site support habitat for the State threatened mohave ground squirrel. A California Endangered Species Act (CESA) Permit must be obtained, if the project has the potential to result in "take" of species of plants or animals listed under CESA, either during construction or over the life of the project. CESA Permits are issued to conserve, protect, enhance, and restore State-listed threatened or endangered species and their habitats. Early consultation is encouraged, as significant modification to the proposed project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, require that the Department issue a separate CEQA document for the issuance of a CESA permit unless the project CEQA document addresses all project impacts to listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of a CESA permit. For these reasons, the following information is requested:

   a. Biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Permit.

   b. A Department-approved Mitigation Agreement and Mitigation Plan are required for plants listed as rare under the Native Plant Protection Act.

5. The Department opposes the elimination of watercourses (including concrete channels) and/or the canalization of natural and manmade drainages or conversion to subsurface drains. All wetlands and watercourses, whether intermittent, ephemeral, or perennial, must be retained and provided with substantial setbacks which preserve the riparian and aquatic habitat values and maintain their value to on-site and off-site wildlife populations. The Department recommends a minimum natural buffer of 100 feet from the outside edge of the riparian zone on each side of a drainage.

   a. The Department requires a Streambed Alteration Agreement (SAA), pursuant to

Section 1600 et seq. of the Fish and Game Code, with the applicant prior to any direct or indirect impact to a lake or stream bed, bank or channel or associated riparian resources. The Department's issuance of a SAA may be a project that is subject to CEQA. To facilitate our issuance of the Agreement when CEQA applies, the Department as a responsible agency under CEQA may consider the local jurisdiction's (lead agency) document for the project. To minimize additional requirements by the Department under CEQA the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the Agreement. Early consultation is recommended, since modification of the proposed project may be required to avoid or reduce impacts to fish and wildlife resources.

Thank you for this opportunity to provide comment. Please contact Mr. Scott Harris, Wildlife Biologist, at (626) 797-3170 if you should have any questions and for further coordination on the proposed project.

Sincerely,

Scott Harris for

Morgan Wehtje
Environmental Scientist IV

Attachments

cc: Ms. Morgan Wehtje, Camarillo
Mr. Scott Harris, Pasadena
HCP-Chron
Department of Fish and Game

State Clearinghouse, Sacramento

SPH:sph

Palmdale Market Place/2006 NOP

State of California—Health and Human Services Agency
Department of Health Services

California Department of Health Services
SANDRA SHEWRY
Director

ARNOLD SCHWARZENEGGER
Governor

RECEIVED
MAY 16 2006
PLANNING DEPARTMENT

May 8, 2006

Ms. Susan Koleda
City of Palmdale
38250 N. Sierra Highway
Palmdale, CA 93550

Dear Ms. Koleda:

SCH# 2006041114: NOTICE OF PREPARATION (NOP) FOR THE PALMDALE MARKETPLACE DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)

Thank you for the opportunity to review and comment on the subject document. The California Department of Health Services, Drinking Water Field Operations-Southern California Branch (Department) focused its review on drinking water issues and related issues. The following are the Department's comments:

1. The NOP states that the project involves the development of retail/commercial areas which may consist of six major retail structures, restaurants, a bank, and a gas station with an automatic car wash. Off-site road improvements and drainage facilities are also planned. Any construction and developments must comply with the Department's Policy on *Criteria for the Separation of Water Mains and Non-Potable Pipelines*.

2. Any construction and developments under the subject project, notifications and/or draft building permits should be sent to the County of Los Angeles Department of Health Services, Bureau of Environmental Protection to ensure compliance with the cross-connection requirements/inspections and the separation criteria.

3. All Potential Contaminating Activities (PCAs) that may impact domestic production well(s) within or nearby the subject area described in the NOP shall be reviewed and restricted.

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www.consumerenergycenter.org/flex/index.html

If you have any questions, please contact Mr. Ric M. Roda, P.E., at (213) 580-3124.

Sincerely,

Joseph E. Crisologo, P.E., R.E.A.
District Engineer
Hollywood District
Drinking Water Field Operations

cc: Mr. Scott Morgan
State Clearinghouse
P. O. Box 3044
Sacramento, CA 95812-3044

Mr. Dennis D. LaMoreaux
General Manager
Palmdale Water District
2029 East Avenue Q
Palmdale, CA 93550

Mr. Carlos Borja, Interim Director
Los Angeles County
Department of Health Services
Bureau of Environmental Protection
5050 Commerce Drive
Baldwin Park, CA 91706-1423

SDWSRF-Environmental Coordinator
Drinking Water Program
Technical Program Branch
1616 Capitol Avenue, MS 7416, P.O. Box 997413
Sacramento, CA 95899-7413

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-3747
FAX: (213) 897-1337

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IGR/CEQA No. 060468AL, NOP
Referenced to IGR/CEQA No. 060318AL
Palmdale Marketplace
Vic. LA-138/PM 48.96
SCH #: 2006041114

RECEIVED
MAY 23 2006
PLANNING DEPARTMENT

May 8, 2006

Ms. Susan Koleda
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

Dear Ms. Koleda:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project consists of an approximately 500,000 square foot retail commercial center, to be constructed in the City of Palmdale, at the intersection of 47th Street East (SR-138) and Avenue R.

We have received the traffic study, dated March 6, 2006 and have mailed you our comment letter dated May 2, 2006 under IGR/CEQA No. 060318. The applicant and the City engineer, Bill Padilla, are currently working with our Permits Office and Traffic Investigations for any feasible mitigation measures. Our attached letter of May 2, 2006 (Attachment A) is also incorporated as part of our response for this Notice of Preparation.

If you have any questions, please feel free to contact me at (213) 897-3747 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 060468AL.

Sincerely,

CHERYL J. POWELL
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
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PHONE: (213) 897-3747
FAX: (213) 897-1337

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IGR/CEQA No. 060318AL, Traffic Study
Referenced to IGR/CEQA No. 060117AL
Palmdale Marketplace
Vic. LA-138/PM 48.96

May 2, 2006

RECEIVED
MAY 0 8 2006
PLANNING DEPARTMENT

Ms. Susan Koleda
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

Dear Ms. Koleda:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project consists of an approximately 500,000 square foot retail commercial center, to be constructed in the City of Palmdale, at the intersection of 47th Street East (SR-138) and Avenue R.

We have reviewed the project's Traffic Study dated March 6, 2006.

A. Please find the Department's comments regarding the Traffic Study as shown below:

1) "Existing Conditions (Year 2006), 47th Street East and Avenue R," Pages 7 and 8:
   - We recommend that a comprehensive description of the intersection of 47th Street East and Avenue R be added. The description should mention the existing condition of each quadrant.

2) With regard to Figure 3 - 2006 Existing Traffic Volumes AM Peak Hour and Figure 4 - 2006 Existing Traffic Volumes PM Peak Hour:
   - The traffic volumes along State Route (SR) 138 between intersections, do not equal the volume output of each of the intersections.

Example: The mainline volumes of Southbound (SB) SR-138 between Intersections #3 and
#1 = 218 vehicles as shown on the AM Peak Hour (Figure 3). However, the S/B thru and turning volumes approaching intersection #1 (Avenue R) = 607 which is the sum of all the movements. What is the basis of the 218 vehicles?

There needs to be a correlation between the volumes of corresponding intersections. Figures 12 and 13 correlate the volumes of each intersection.

- What is the basis for the 337 traffic volumes between intersections #5 and #3 for PM Peak Hour (Figure 4)?
- Our evaluation indicates a right turn pocket is needed for Westbound Avenue R.

3) Figure 5:
- Please describe how the determination was made regarding the percentage of trip distribution.

4) Page 13, "Proposed Project:"
- A description of the types of businesses (Land Use and Total Area) that will be in the shopping center needs to be provided.

5) Table 7, Page 15:
- How were the Vehicles Per Hour (vph) data calculated in Table 7? The volumes appear somewhat low based on our preliminary calculations using the Trip Generation Manual. Example: The vph for a code #820 AM PK HR is between 400-500 vph rather than the 313 vph indicated in the Table. Our vph calculation for weekday is approximately 19,600 vehicles rather than the 14,700 indicated in the Table.

6) Figures 8, 9, 10, 11, 12, 12A, 13, and 13Aa:
- We request that the volumes used be consistent with the volumes shown in the previous Rite Aid studies. Those studies did not include the Palmdale Marketplace project.

7) Cumulative Traffic and Marketplace Project Traffic (Buildout Year 2007) in Page 26:
- We recommend that a mitigation measure be added to address the problem of relocating an existing fixed object (power pole) at the northeast quadrant of the intersection of Ave. R and SR-138 under item #1.
- We recommend that a mitigation measure be added to improve existing drainage and provide pedestrian facility for the northeast quadrant under the same item #1.
- We also request consideration of a third mitigation that would provide left turn phasing for SR-138 at its intersection with Ave. R-8, as was agreed to in our recent meeting.

8) Cumulative Traffic and Marketplace Project Traffic (Future Year 2015 and 2025), Pages 30-32:
- The growth rate factor used in the study to project future volumes is 3.8%. The projected volumes seem somewhat low. Please verify and re-calculate.
- It should be noted that the study, data, and projection factors used for the roundabout were uniquely for the roundabout. Proposed developments at the Avenue R intersection were not included or factored in.

9) Access Points Assessments, Page 40:
- The most northerly access driveway may have sight distance issues because the curve may still exist after the Marketplace development is built. We recommend that this proposed driveway be deleted.

10) Conclusions and Recommendations Pages 49-51:
- Add the aforementioned mitigations for the northeast quadrant.
- Add the aforementioned mitigation for Ave. R-8.

11) Appendices B & C:
- The Existing (2006) HCS printout for the intersection of SR-138 and Avenue R indicates that the WBT and WBR are separate lanes; however, they are a shared lane. In

addition, SBR does not have a separate lane. Please revise these depictions of existing roadway geometry

- Similar revisions are needed for the depictions of the intersection at SR-138 and Avenue R-8.

12) Appendix F:

- Use the Traffic Signal Warrants Worksheet (Average Traffic Estimate Form) included in the MUTCD California Supplement.

B. Comments regarding the project meeting held on 3/13/06. The following were agreed to:

1) The developers in conjunction with the City will provide a schematic plan showing fixed object, drainage, pedestrian facility, and geometric mitigations pertaining to the northeast quadrant of the SR-138 and Ave. R intersection. (The schematic plan was provided to Caltrans on May 1, 2006.)

2) The schematic plan will include the R/W lines, Rt. and Lt. pockets, access driveways (including basic striping), sidewalks and curb ramps.

3) As discussed in the meeting, all proposed roadway geometry must be full standard.

Caltrans requests that the City require the applicant to pay equitable share responsibility traffic impact fees at the time of permit issuance. Please reference the Department's Traffic Impact Study Guide on the Internet at

http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf

You may apply the formula on page 2 of Appendix B (Methodology for Calculating Equitable Mitigation Measures) to set aside this Transportation Impact Fee for future State Highway improvement projects. The City may need to adjust its fee for this purpose.

We would like to remind you that any work to be performed within the State Right-of-way will need an Encroachment Permit from the California Department of Transportation.

Storm water run-off is a sensitive issue for Los Angeles and Ventura counties. Please be mindful that projects need to be designed to discharge clean run-off water.

Any transportation of heavy construction equipment and/or materials which requires the use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. We recommend that large size truck trips be limited to off-peak commute periods. In addition, a truck/traffic construction management plan is needed for this project. Thank you for the opportunity to have reviewed this project.

If you have any questions, please feel free to contact me at (213) 897-3747 or Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 060318AL.

Sincerely,

Cheryl J. Powell

CHERYL J. POWELL
IGR/CEQA Branch Chief

CC:
Bill Padilla, City Traffic Engineer
City of Palmdale
38250 Sierra Highway
Palmdale, CA 93550

California Regional Water Quality Control Board
Lahontan Region

Dan Skopec
Acting Secretary

Victorville Office
14440 Civic Drive, Suite 200, Victorville, California 92392
Phone (760) 241-6583 • FAX (760) 241-7308
http://www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger
Governor

May 19, 2006

File: Los Angeles County

Ms. Susan Koleda, Assistant Planner II
City of Palmdale – Planning Department
38250 Sierra Highway
Palmdale, CA 93550
FAX (661) 267-5233

RECEIVED
MAY 30 2006
PLANNING DEPARTMENT

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT (EIR) (SCH#2006041114) FOR THE PROPOSED DEVELOPMENT OF A RETAIL COMMERCIAL PROJECT OF APPROXIMATELY 523,080 SQUARE FEET KNOWN AS THE PALMDALE MARKETPLACE, LOCATED ON THE NORTHWEST CORNER OF AVENUE R AND 47TH STREET EAST (STATE HIGHWAY 138), IN THE CITY OF PALMDALE, APN 3023-004-007, 016, 017

California Regional Water Quality Control Board staff (Board staff) has reviewed the Notice of Preparation (NOP) dated April 18, 2006 for the above-referenced Project proposed by the City of Palmdale.

Project Description

The City of Palmdale is proposing a project to construct and operate the proposed Palmdale Marketplace (the Project), which provides for construction of six (6) major retail structures, two (2) drive-through restaurants, one (1) drive-through bank, and one (1) gas station with an automated car wash. One or more alcoholic beverage establishments may also be developed.

The NOP states that there is potential for impacts to hydrology and water quality, and to utilities and service systems. The NOP states that all the potential environmental impacts will be analyzed, examined, and quantified further in the Environmental Impact Report (EIR).

The NOP does not state when development will ultimately occur.

General Comments

The mitigation measures addressed in the EIR should be very specific in nature and should have adequate detail. All mitigation measures required for the project should be specifically described in the EIR. It is not sufficient to state that mitigation will be accomplished through permits acquired and that appropriate governmental agencies will be notified. Additionally, please be sure that the EIR completely evaluates the potential cumulative impacts of the project considering other existing and potential projects.

Item VI. C. Water, pages 18-23

The EIR needs to provide information on how changes that may occur as part of the proposed land uses will impact hydrology and water quality with regard to changes in groundwater recharge, due to creation of impervious surface and alteration of existing drainage patterns. Impacts that should be evaluated include changes in surface water flow that could cause erosion or siltation on- or off-site or result in flooding on- or off-site, or provide substantial additional sources of polluted runoff, or otherwise substantially degrade surface or ground water quantity or quality.

The Regional Board has adopted a Water Quality Control Plan for the Lahontan Region (Basin Plan), which contains prohibitions, water quality standards, and policies for implementation of standards. The Basin Plan is available on line at the Regional Board's Internet site at http//www.swrcb.ca.gov/rwqcb6/. Please cite and discuss applicable portions of the Basin Plan in the EIR. The City of Palmdale will need to comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan.

The site plan for this project does not specifically identify features for the post-construction period that will manage stormwater to preserve water quality and reduce impacts. The foremost method of reducing impacts to watersheds from urban development is "Low Impact Development" (LID), the goals of which are maintaining a landscape functionally equivalent to predevelopment hydrologic conditions and minimal generation of nonpoint source pollutants. LID results in less surface runoff and less pollution routed receiving waters. Principles of LID include:

- Maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge,
- Reducing the impervious cover created by development and the associated transportation network, and
- Managing runoff as close to the source as possible.

We understand that LID development practices that would maintain aquatic values could also reduce local infrastructure requirements and could benefit energy conservation, air quality, open space, and habitat. Many planning tools exist to implement the above principles, and a number of recent reports and manuals provide specific guidance regarding LID.

Please consider using vegetated areas for stormwater management and infiltration on-site, which may enhance the aesthetics of the property. These principles can be incorporated into the proposed project design. We request natural drainage patterns be maintained to the extent feasible. Minimum-disturbance activities (such as preservation of vegetation and grade) are preferable to more structural (hard scape) control measures because they protect and preserve the natural drainage system. Natural drainage, including the use of vegetated buffer zones, is the most effective means of filtering sediment and pollution and regulating the volume of runoff from land surfaces to

adjacent streams, including washes. In addition, preservation and minimum-disturbance activities may be more cost effective than revegetation practices or structural controls, especially long-term.

Please consider avoiding drainage channels, or developing broad crossings if necessary, to minimize any unavoidable impacts. Please identify short-term (construction) vs. long-term (post-construction) implementation of Best Management Practices (BMPs), and provide appropriate mitigation and monitoring of mitigation measures.

Item VI. P. Utilities – pages 39-41

The EIR needs to evaluate and provide information on utilities and service systems with regard to wastewater treatment requirements, construction of new water or wastewater treatment facilities or expansion of existing facilities, construction of new stormwater drainage facilities, and a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's expected demand in addition to the provider's existing commitments.

Thank you for the opportunity to comment on your project. If you should have any questions regarding our above or attached comments, please contact me at (760) 241-7366 or Cindi Mitton at (760) 241-7413.

Sincerely,

Judith Keir

Judith Keir
Environmental Scientist

cc: Attached Mailing List

JMK/2006-04-1114-NOP-Palmdale Marketplace DEIR.doc

PALMDALE WATER DISTRICT

2029 East Avenue Q • Palmdale, California 93550 • Telephone (661) 947-4111
Fax (661) 947-8604
www.palmdalewater.org

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LAGERLOF, SENECAL, BRADLEY, GOSNEY & KRUSE LLP
Attorneys

ACWA

May 22, 2006

DEVELOPMENT RESOURCE CONSULTANTS, INC.
ATTN: Brandon Willnecker
8175 E. Kaiser Blvd.
Anaheim Hills, CA 92808

RE: FIRE FLOW TEST RESULTS FOR S/S OF AVENUE R BETWEEN 45TH AND 47TH ST EAST

To Whom It May Concern:

By providing the following information, the Palmdale Water District does not guarantee that the related pressures and flows are fixed and unchanging. Same vary at any time as a result of normal operations of the system. This public water system information does not account for losses through backflow prevention devices required or incorporated in the private water system served by connection to the public water system in the vicinity of the test location. The Palmdale Water District shall have no liability for loss or damage to persons or property resulting from inadequate pressures of flows.

Location: S/S OF AVENUE R BETWEEN 45TH AND 47TH ST EAST
Date: 05/22/06 **Time:** 9:15 A.M. **Temperature:** 60°
Main Line Size: 12" **Outlet Size:** 2 ½"

Static Pressure: 60 PSI
Residual Pressure: 58 PSI
Observed Flow: 1034 GPM

Use of this information for the determination of Fire Flow Availability is not authorized by the Palmdale Water District. Please feel free to contact me if you have any questions.

Sincerely,

Danielle Doll

DANIELLE DOLL, Engineering Aide
DCD/dcd

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

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818 West Seventh Street
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Los Angeles, California
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Officers: President: Yvonne B. Burke, Los Angeles County • First Vice President: Gary Ovitt, San Bernardino County • Second Vice President: Richard Dixon, Lake Forest • Immediate Past President: Toni Young, Port Hueneme

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Orange County: Chris Norby, Orange County • Christine Barnes, La Palma • John Beauman, Brea • Lou Bone, Tustin • Art Brown, Buena Park • Richard Chavez, Anaheim • Debbie Cook, Huntington Beach • Leslie Daigle, Newport Beach • Richard Dixon, Lake Forest • Paul Glaab, Laguna Niguel • Marilynn Poe, Los Alamitos

Riverside County: Jeff Stone, Riverside County • Thomas Buckley, Lake Elsinore • Bonnie Flickinger, Moreno Valley • Ron Loveridge, Riverside • Greg Pettis, Cathedral City • Ron Roberts, Temecula

San Bernardino County: Gary Ovitt, San Bernardino County • Lawrence Dale, Barstow • Paul Eaton, Montclair • Lee Ann Garcia, Grand Terrace • Tim Jasper, Town of Apple Valley • Larry McCallon, Highland • Deborah Robertson, Rialto • Alan Wapner, Ontario

Ventura County: Judy Mikels, Ventura County • Glen Becerra, Simi Valley • Carl Morehouse, San Buenaventura • Toni Young, Port Hueneme

Orange County Transportation Authority: Lou Correa, County of Orange

Riverside County Transportation Commission: Robin Lowe, Hemet

Ventura County Transportation Commission: Keith Millhouse, Moorpark

RECEIVED
MAY 22 2006
PLANNING DEPARTMENT

16 May 2006

Ms. Susan Koleda
City of Palmdale Planning Department
38250 Sierra Highway
Palmdale, CA 93550

RE: **SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the Palmdale Marketplace Project**
SCAG No. I 20060277

Dear Ms. Koleda:

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the above-mentioned project to the Southern California Association of Governments (SCAG) for review and comment. SCAG's responsibility as the region's clearinghouse per Executive Order 12372 includes the implementation of California Environmental Quality Act (CEQA) §15125 [d]. This legislation requires the review of local plans, projects and programs for consistency with regional plans. SCAG bases review of such projects on its adopted regional plans:

Destination 2030: 2004 Regional Transportation Plan (RTP)
Regional Comprehensive Plan and Guide (RCPG) – 1996 Version
Compass Growth Vision

CEQA requires that EIRs discuss any inconsistencies between the proposed plan and the applicable general plans and regional plans (Section 15125 [d]). Please state separately how the proposed plan will or will not support each regional plan. Please cite specific policies in the regional plans that the proposed project supports. If there are inconsistencies, an explanation and rationalization for such inconsistencies should be provided. Visit www.scag.ca.gov for downloadable versions of these documents.

Please provide a minimum of 45 days for SCAG to review the EIR when this document is available. If you have any questions regarding these comments, please contact me at (213) 236-1851. Thank you.

Sincerely,

Brian Wallace
Associate Regional Planner
Intergovernmental Review

DOCS # 122033

STATE OF CALIFORNIA
PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

ARNOLD SCHWARZENEGGER, *Governor*

May 23, 2006

RECEIVED
MAY 30 2006
PLANNING DEPARTMENT

Susan Koleda
City of Palmdale
38250 N. Sierra Highway
Palmdale, CA 93550

Dear Ms. Koleda:

Re: SCH# 2006041114; Palmdale Marketplace

As the state agency responsible for rail safety within California, we recommend that any development projects planned adjacent to or near the Union Pacific Railroad Company right-of-way be planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade highway-rail crossings. This includes considering pedestrian circulation patterns/destinations with respect to railroad right-of-way.

Safety factors to consider include, but are not limited to, the planning for grade separations for major thoroughfares, improvements to existing at-grade highway-rail crossings due to increase in traffic volumes and appropriate fencing to limit the access of trespassers onto the railroad right-of-way.

The above-mentioned safety improvements should be considered when approval is sought for the new development. Working with Commission staff early in the conceptual design phase will help improve the safety to motorists and pedestrians in the City.

Please advise us on the status of the project. If you have any questions in this matter, please contact me at (213) 576-7078 or at rxm@cpuc.ca.gov.

Sincerely,

Rosa Muñoz, PE
Utilities Engineer
Rail Crossings Engineering Section
Consumer Protection & Safety Division

C: Richard Gonzales, UP

APPENDIX B
AIR QUALITY ASSESSMENT

AIR QUALITY ASSESSMENT
FOR THE
PALMDALE MARKETPLACE

Prepared For:

Hopkins Real Estate Group
17461 Derian Avenue, Suite 106
Irvine, CA 92614

Prepared By:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, California 92408

JUNE 2006

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AIR QUALITY ASSESSMENT
FOR THE
PALMDALE MARKETPLACE

1.0 INTRODUCTION

The proposed project is the development of approximately 49 acres into approximately 530,000 square feet shopping center. The site is located on the northwest corner of "R" Avenue and 47th Street East in the City of Palmdale, California. Refer to Figures 1 and 2, Regional Location Map and Vicinity Map, respectively.

The proposed project includes six major retail tenants and other commercial uses. Two of the major retail tenants include a home improvement center and an upscale discount store. Refer to Figures 3 Site Plan.

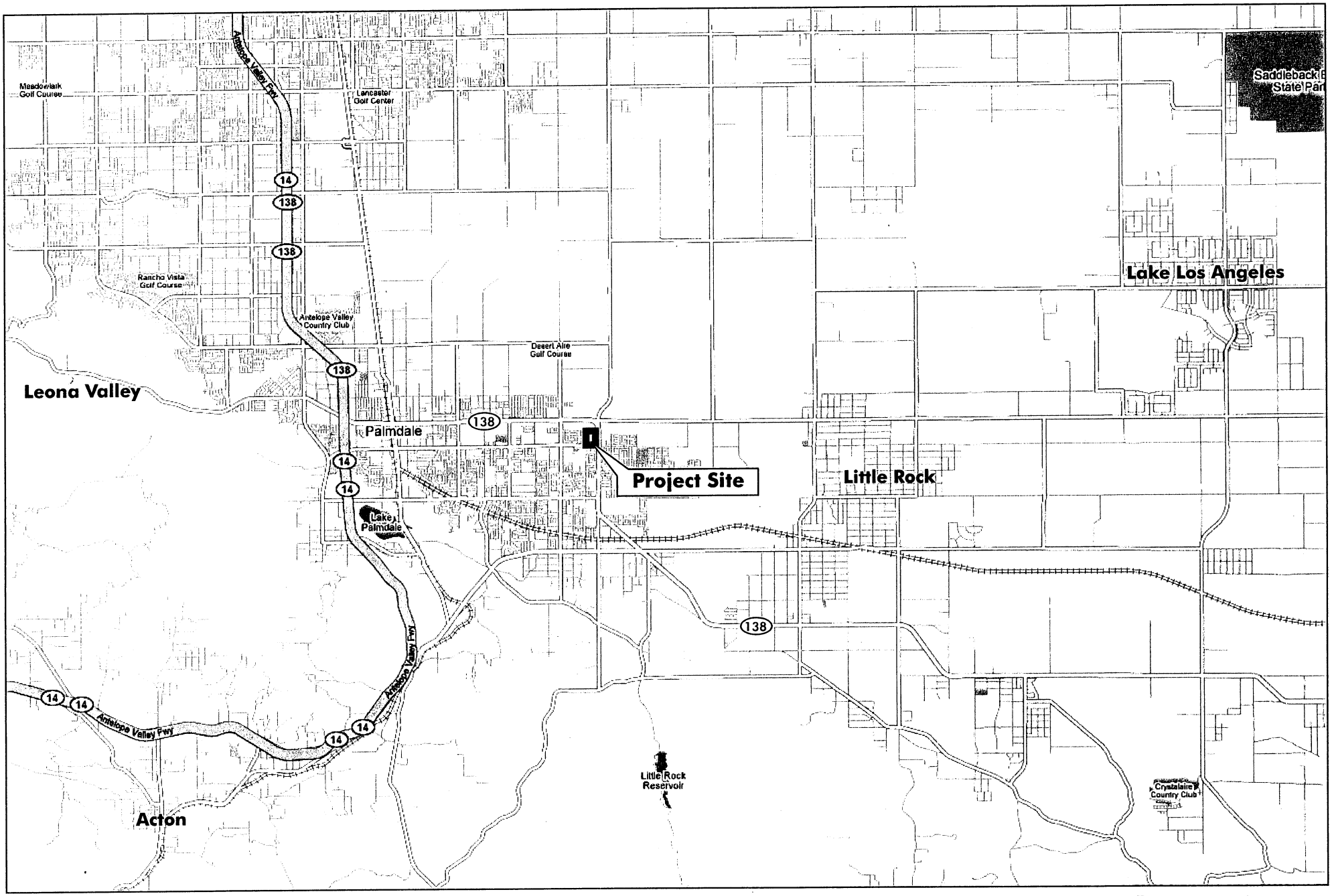
This air quality assessment discusses the existing air quality in the Antelope Valley region, the potential construction and operational air quality impacts associated with the planned project, and any recommended mitigation measures for reducing potential impacts. Background material, including air quality emissions data output, is included in the Appendix.

2.0 GENERAL SETTING

The project site is currently vacant. Surrounding land uses consist of vacant property north and east and single-family residences south and west. Neighborhood commercial is currently being developed to the southeast.

The project site is located in the Antelope Valley within the western portion of the Mojave Desert Air Basin (MDAB) under the jurisdiction of the Antelope Valley Air Quality Management District (AVAQMD). The site is located in the City of Palmdale within the High Desert region of Los Angeles County, approximately 60 freeway miles north of downtown Los Angeles. Palmdale is one of two incorporated cities among several unincorporated communities within the Antelope Valley. The City of Palmdale is bordered by the City of Lancaster to the north as well as the unincorporated community of Quartz Hill, unincorporated communities of Lake Los Angeles and Littlerock border the City to the east, unincorporated community of Acton to the south, and the unincorporated community of Leona Valley to the west.

The Antelope Valley, approximately 3,000 square miles in size, is located in the westernmost portion of the Mojave Desert. The valley is separated on the northwest from the San Joaquin Valley by the Tehachapi Mountains. On the south and southwest, it is separated from the Los Angeles Basin by the San Gabriel Mountains. The north and east boundaries of the Antelope Valley are distinguished by isolated buttes.



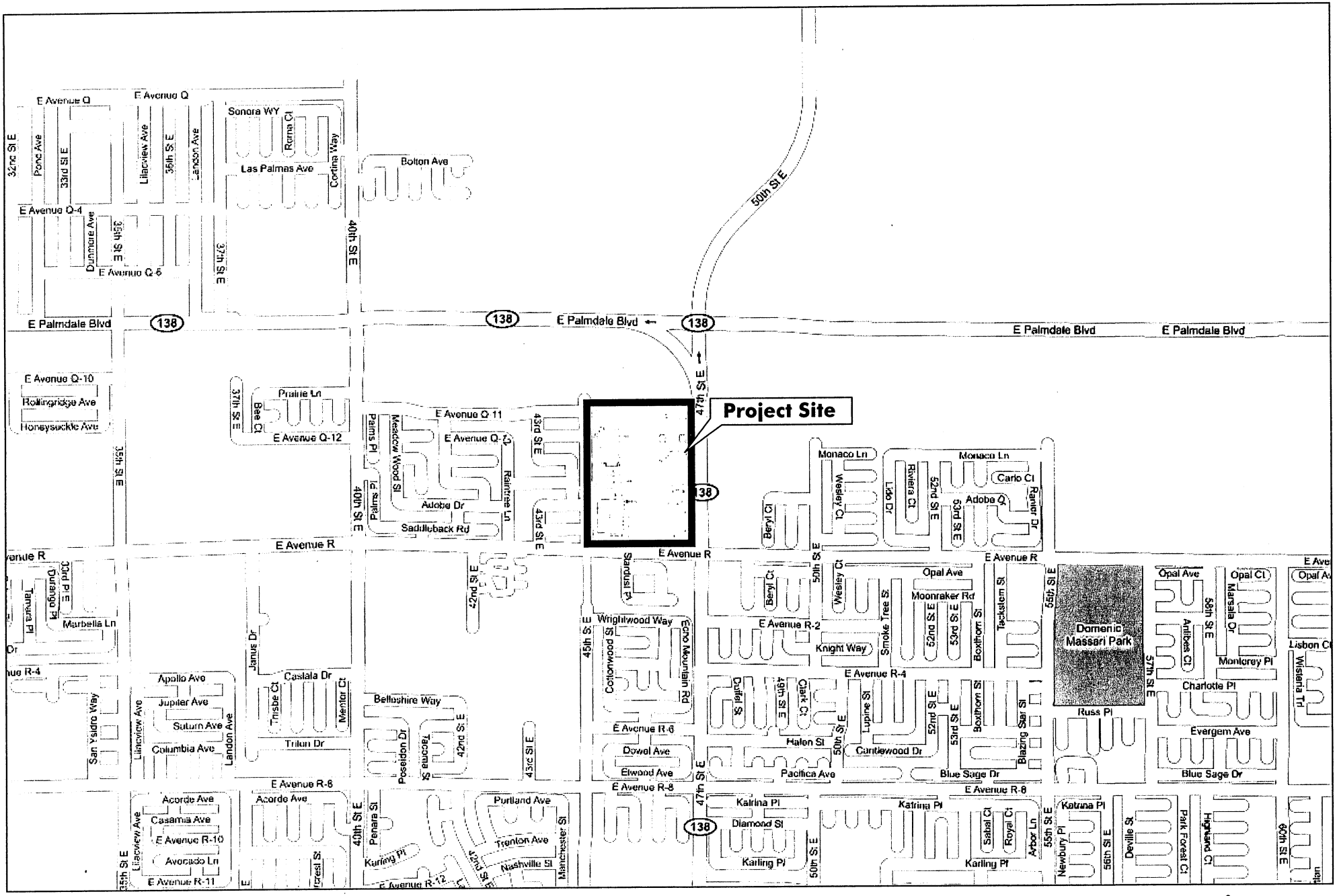
Regional Setting

Palmdale Marketplace
City of Palmdale, California

Figure 1

0 2.5 Miles

LILBURN CORPORATION



Project Vicinity

Palmdale Marketplace
City of Palmdale, California

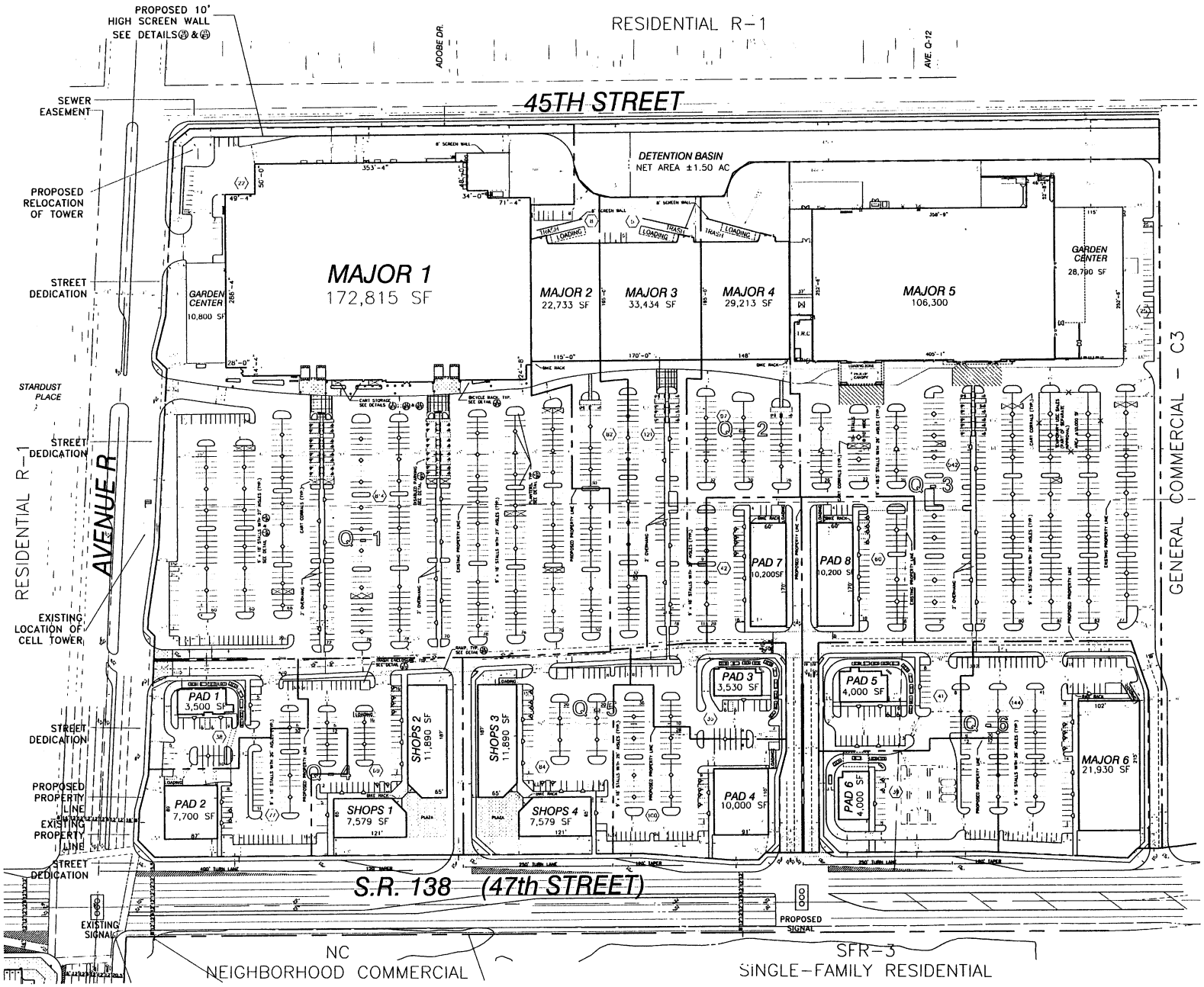
Figure 2

N

0 2000

Feet

LILBURN CORPORATION



Conceptual Site Plan

Palmdale Marketplace
City of Palmdale, California

Figure 2

GreenbergFarrow
15101 Red Hill Avenue, Suite 200
Tustin, CA 92780
t: 714 259 0500 f: 714 259 5480

PROJECT INFORMATION

SITE PLANNER — AS/CD
SITE DEV. COORDINATOR — F. CODA

PALMDALE, CA
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER 200

LILBURN CORPORATION

The MDAB consists of an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevada's in the north by the Tehachapi Pass (3,800 ft. elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 ft).

2.1 CLIMATE AND WEATHER OVERVIEW

The High Desert is classified as an arid desert climate. In the Mojave Desert, this is modified by the San Gabriel and San Bernardino mountains forming barriers to precipitation. The rain shadow causes the aridity of the High Desert climate, while leaving the summers hot and the winters generally mild.

For most of summer, the region is under the northern edge of the Pacific Subtropical Ridge that limits cloud formation and allows strong daytime heating. This is a zone with no dominant winds, which allows more local effects such as the sea breeze passing through the Cajon Pass to control the local weather. The high pressure systems also contribute to the presence of persistent inversion layers that trap pollutants by preventing their dispersion through vertical mixing. In late summer, the ridge can move far enough north to allow humid air from the Gulf of California, and even as far east as the Gulf of Mexico, into the High Desert. When this happens, thunderstorms may form, causing isolated flash floods and high wind gusts.

Average high temperatures in summer are in the mid 90s to 100° Fahrenheit (F). Average low temperatures are in the mid 60s to 70s. During winter, the Polar Front Jet stream steers pressure systems from west to east across the region. Mild rains result from systems steered in from the southwest and northwest. Winter storm systems are often followed by periods of clear skies and strong westerly or northerly winds. Average high temperatures in winter are in the mid 50s and average low temperatures are in the mid 30s.

Three weather factors have significant impacts on air quality; wind, precipitation and inversion layers.

Wind

Although the High Desert is 80 miles from the ocean, the sea breeze can be a dominant weather feature. The sea breeze is caused by differential heating of land and water. Land heats faster than the ocean, and because hot air rises, air warmed over land during the day rises, and cooler denser air from the ocean moves in to replace it. Normally limited to within a few miles of a coastline, the extreme differences in temperature between the desert and the Pacific Ocean make the sea

breeze a regional phenomenon in southern California. The combination of extreme temperature differences and physical restraint on the air movements means there is a consistent source for strong wind blowing through the Valley and across the High Desert. The sea breeze is a primary transportation medium, bringing pollutants out of the coastal valleys and into the desert.

Precipitation

The High Desert receives precipitation from winter cold fronts and moist southerly air masses during the late summer. Precipitation at Palmdale averages less than five inches a year. Summer thunderstorms bring highly variable amounts of localized rain. The rain from these storms falling into the dry air often evaporates before reaching the surface. However, if the storm lasts long enough, the area beneath the storm may get several inches of rain over a short time leading to flash floods and rapid erosion in washes and gullies.

Inversions

Inversions are layers in the atmosphere where the temperature increases with height instead of decreasing as is normal. Inversions trap pollutants by limiting the vertical mixing which normally disperses pollutants into the upper atmosphere. There are two types of inversion affecting the High Desert. The first is the regional inversions caused by subsiding air within the high-pressure systems that dominate the summer weather. These subsidence inversions can occur at varying altitudes, with corresponding variable effects on the pollution levels. Lower the inversion level, the greater the concentration of pollutants between it and the ground. The second type is the radiation inversion that forms when the ground cools rapidly after sunset, cooling the air immediately above it at the same time. Radiation inversions can cause significant concentrations of pollutants because they are generally only a few hundred feet above the ground and are strongest during early morning commuting time. Especially in the desert, rapid heating of the ground usually disperses radiation inversions within an hour of sunrise.

2.2 APPLICABLE POLICIES, PLANS AND REGULATIONS

Air Quality in the MDAB

The project site is in the Antelope Valley within the western portion of the MDAB, and jurisdictionally, is the responsibility of the AVAQMD and the California Air Resources Board (CARB). The AVAQMD sets and enforces regulations for stationary sources in the basin and develops and implements Transportation Control Measures. The CARB is charged with controlling motor vehicle emissions. CARB establishes legal emission rates for new vehicles and is responsible for the state's vehicle inspection program. Other important agencies involved in the air quality management for the basin include the U.S. Environmental Protection Agency (EPA) and the Southern California Association of Governments (SCAG). The EPA implements the provisions of the federal Clean Air Act. This Act establishes ambient air quality standards that are applicable nationwide. In areas that are not achieving the standards, the Clean Air Act requires that plans be developed and implemented to meet the standards. The EPA oversees the efforts in the MDAB and ensures that appropriate plans are being developed and implemented.

Air quality is determined primarily by the types and amounts of contaminants emitted into the atmosphere, the size and topography of the local air basin, and the pollutant-dispersing properties of local weather patterns. Air quality problems result when airborne pollutants are produced in such volume that they are not dispersed by local meteorological conditions. Dispersion of pollutants in the MDAB is influenced by periodic temperature inversions, persistent meteorological conditions and the local topography. As pollutants become more concentrated in the atmosphere, photochemical reactions occur, producing ozone and other oxidants.

Another major factor that influences the MDAB's ambient air quality is its location downwind from the South Coast Air Basin (SCAB) with substantial pollution sources. Due to the meteorological and topographical factors of the region, air pollutants from the SCAB are transported into the region contributing significantly to the ozone violations that occur. With the overall reduction in pollutant levels in the SCAB, the result has been a substantial decline in ozone violations in the MDAB.

The City of Palmdale is sheltered from import of inter-basin pollution by mountain barriers extending on the north and south. Air quality is generally good; however, the City receives windborne air pollutants from the greater Los Angeles area via canyons, such as the Newhall Pass and Soledad Canyon, which lie to the south of the City.

Air emissions associated with implementation of the proposed expansion is subject to federal, state, and local rules and regulations implemented through provisions of the federal Clean Air Act, California Clean Air Act, and the rules and regulations of the AVAQMD. Under the provisions of the federal and California Clean Air Acts, air quality management districts with air basins not in attainment of the air quality standards are required to prepare an Air Quality Management Plan (AQMP). An AQMP establishes an area-specific program to control existing and proposed sources of air emissions so that the air quality standards may be attained by an applicable target date. The following is an overview of these rules and regulations.

Federal Clean Air Act

The federal Clean Air Act was established in an effort to assure that acceptable levels of air quality are maintained in all areas of the United States. These levels are based upon health-related exposure limits and are referred to as National Ambient Air Quality Standards (NAAQS). The NAAQS establish maximum allowable concentrations of specific pollutants in the atmosphere and characterize the amount of exposure deemed safe for the public. The NAAQS are established for the following criteria pollutants:

Carbon Monoxide (CO)
Sulfur dioxide (SO_2)
Particulate matter less than 10 microns, aerodynamic diameter (PM_{10})
Particulate matter less than 2.5 microns, aerodynamic diameter ($PM_{2.5}$)
Ozone (O_3)
Lead (Pb)

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	0.12 ppm (235 µg/m^3)	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (130 µg/m^3)*		0.08 ppm (157 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		50 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No Separate State Standard		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15 µg/m^3		
Carbon monoxide (CO)	8 Hour	9.0 ppm (10mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		---	---	---
Nitrogen dioxide (NO_2)	1 Hour	0.25 ppm (470 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	---		---		
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	---	Ultraviolet Fluorescence	0.030 ppm (80 µg/m^3)	---	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	---	
	3 Hour	---		---	0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		---	--	---
Lead[8]	30 Day Average	1.5 µg/m^3	Atomic Absorption	---	Same as primary Standard	---
	Calendar Quarter	---		1.5 µg/m^3		High Volume Sampler and Atomic Absorption
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per kilometer – visibility of ten miles or more (0.07 – 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape		**No Federal Standards**		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[8]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

(1) California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter – PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

(2) National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

(3) Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

(4) Any equivalent procedure which can be shown to the satisfaction of CARB to provide equivalent results at or near the level of the air quality standard, may be used.

(5) National Primary Standards: The levels of air quality necessary to protect public health from any known or anticipated adverse effects of a pollutant.

(6) National Secondary Standards: The levels of air quality necessary to protect public welfare from any known or anticipated adverse effect of a pollutant.

(7) Reference method as described by EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by EPA.

(8) The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Primary and secondary NAAQS have been established and are shown in Table 1. The table also lists California air quality standards. Primary federal standards reflect levels of air quality deemed necessary by the federal EPA to provide an adequate margin of safety to protect public health. Areas that meet the standards are designated attainment and if found to be in violation of primary standards are designated as nonattainment areas. Secondary standards reflect levels of air quality necessary to protect public welfare from known or anticipated adverse effects of a pollutant. NAAQS have been set for a number of criteria pollutants. Following is a brief description, their health effects and whether the MDAB is in attainment for these pollutants:

Ozone (O_3) is a toxic gas that irritates the lungs and damages materials and vegetation. Data summarized in Table 2 indicate that levels of ozone frequently exceed state standards in the project area and occasionally federal standards in the past five years. The MDAB is designated as a non-attainment basin for ozone and an Air Quality Attainment Plan was prepared by the South Coast Air Quality Management District (SCAQMD) for the area in 1994. The AVAQMD has prepared a Draft 2004 Ozone Attainment Plan (State and Federal). The District has until 2007 to achieve attainment of the ozone standards.

Table 2
Hourly Ozone Levels
Number of Days Hourly Ozone Standards Exceeded
At 43301 Division Street, Lancaster

Year	Number of Days Standard Exceeded	
Ozone	State Standard ≥ 0.09 ppm/hour	Federal Standard ≥ 0.12 ppm/hour
2005	42	1
2004	37	0
2003	50	4
2002	46	5
2001	0	0

Source: California Air Resources Board, California Air Quality Data Summaries 2001 to 2005.

Particulate matter (PM_{10}) consists of extremely small, suspended particles or droplets 10 microns or smaller in diameter that can lodge in lungs contributing to respiratory problems. PM_{10} arises from such sources as road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. PM_{10} scatters light and significantly reduces visibility. PM_{10} poses a health hazard, alone or in combination with other pollutants. As shown in Table 3, PM_{10} levels do not exceed the state ambient air quality standards and do not exceed federal standards in the project area. However, based on past years, the MDAB is classified as being in nonattainment for State standards.

Fine Particulate Matter ($PM_{2.5}$) consists of extremely small-suspended particles 2.5 microns or less in diameter and arises primarily from combustion sources not from fugitive dust sources. Standards were established in 1997 and methods to assess this pollutant are undergoing further research. The AVAQMD currently monitors $PM_{2.5}$ in the urban areas of the MDAB. Levels of $PM_{2.5}$ are collected at 43301 Division Street in the City of Lancaster. As shown in Table 4, $PM_{2.5}$

levels do not exceed federal standards in the project area. There are no State air quality standards for $PM_{2.5}$.

Table 3
Number of Days Daily PM_{10} Levels Exceeded
At 43301 Division Street, Lancaster

Year	Number of Days Standard Exceeded	
PM_{10}	State Standard > 50 µg/m³/24hours	Federal Standard > 150 µg/m³/24hours
2005	0	0
2004	0	0
2003	1	0
2002	-	0
2001	-	0

Note: PM_{10} measurements are recorded once every six days or 60 times annually. The number of days exceeded is calculated based on those measurements, that is, the number of recorded days that exceed the standard is multiplied by 6.
Source: California Air Resources Board, California Air Quality Data Summaries 2001 to 2005.
- Information was unavailable

Table 4
Daily $PM_{2.5}$ Levels Exceeded at
At 43301 Division Street, Lancaster

$PM_{2.5}$	State Standard None	Federal Standard > 65 µg/m³/24hours
2005	N/A	0
2004	N/A	0
2003	N/A	0
2002	N/A	0
2001	N/A	0

Source: California Air Resources Board, California Air Quality Data Summaries 2001 to 2005.

Carbon monoxide (CO) is a gas produced almost entirely from automobiles that interferes with the transfer of oxygen to the brain. Peak levels of CO occur in winter and are highest where there is heavy traffic. CO data from the Victorville Air Monitoring Station indicate that CO levels are not a concern in the project area. NAAQS thresholds have not been exceeded in the last five years.

Nitrogen dioxide (NO_2) is a gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries and other industrial operations). Federal ambient air quality standards for NO_2 have not been violated since 1991.

Sulfur dioxide (SO_2) is a gas produced when fossil fuels are burned. SO_2 is the main pollutant contributing to the formation of acid rain. This pollutant does not exceed air quality standards in the area.

Lead (Pb) is a heavy metal used in industry and for years was a component in gasoline. Since the elimination of lead as a gasoline additive lead in the atmosphere in southern California has been virtually eliminated.

California Clean Air Act Under the federal Clean Air Act, state and local authorities have primary responsibility for assuring that their respective regions are in attainment of, or have a verifiable plan to attain, the NAAQS. The federal Clean Air Act also provides state and local agencies authority to promulgate more stringent ambient air quality standards, which is the case in California. The California Ambient Air Quality Standards (CAAQS) for the above criteria pollutants and the following pollutants are also included in Table 1:

Nitrogen dioxide (NO_2)
Hydrogen sulfide (H_2S)
Sulfates
Visibility-reducing particles

Hydrogen sulfide (H_2S). This pollutant is not commonly found in the ambient atmosphere but can originate from natural sources such as volcanoes, sulfur hot springs, or in the case of the Mojave Desert, related to the mineral brine associated with the dry lakebed at Trona, approximately 85 miles northeast of the project site. The State ambient air quality standard for H_2S is not health-based but rather an aesthetic one, because the compound smells like rotten eggs. However, due to the distance from the source, this is not an issue for the AVAQMD. Furthermore, the proposed project will not contribute additional H_2S to the atmosphere. The AVAQMD is one of three districts in California classified for non-attainment of H_2S.

Sulfates are produced by the reaction in the air of sulfur dioxide (SO_2), which is a component of acid rain. Sources for sulfur dioxide include coal burning power plants and diesel engines. California does not have any coal burning power plants and all diesel fuels sold in the State are now lower in sulfur; sulfates are not an issue in the area. The proposed project would not contribute to additional sulfates in the atmosphere.

Visibility-reducing particles are common in the MDAB due to the vast open desert area, especially during windy conditions. Particles reduce visibility, obscuring the desert scenery, including views of the mountains.

Reactive Organic Gases (ROG) In addition to these pollutants ROG is also considered in the air quality analysis of projects in the State. Ozone is a secondary pollutant that is the result of chemical reactions between other pollutants, most importantly reactive hydrocarbons (also referred to as ROG), and NO_2, which occurs only in the presence of bright sunlight. The result is the formation of smog. There are no federal or State air quality standards for hydrocarbons or ROG as there are for other pollutants.

2.3 AIR QUALITY ATTAINMENT PLANS

The AVAQMD has local regulatory review and primary permitting and enforcement authority over potential stationary sources of air pollution within the Antelope Valley portion of Los Angeles

County, including all cities and towns. The EPA and CARB serve as technical review and advisory agencies, providing technical advice and guidance when necessary.

Air Quality Attainment Plans

The EPA designated the Southeast Desert Modified Air Quality Management Area (Southeast Desert Modified AQMA) as nonattainment for ozone NAAQS pursuant to the provisions of the federal Clean Air Act (FCAA). The Antelope Valley is included in the Southeast Desert Modified AQMA. The CARB has also designated the Antelope Valley non-attainment for ozone CAAQS pursuant to the provisions of the California Clean Air Act (CCAA). SCAQMD adopted attainment plans for the Antelope Valley when the region was under its jurisdiction. The most recent such plan that was approved by EPA is the 2003 version of the SCAQMD AQMP.

The AVAQMD now has jurisdiction over the Antelope Valley and has reviewed and updated all elements of the 2004 Ozone Attainment Plan (State and Federal). The Attainment Plan must demonstrate that the AVAQMD will meet the NAAQS for ozone and show significant progress towards attainment of the CAAQS for ozone by 2007.

The Antelope Valley is downwind of the Los Angeles basin, and to a lesser extent, is downwind of the San Joaquin Valley. Prevailing winds transport ozone and ozone precursors from both regions into and through the Antelope Valley during the summer ozone season. These transport couplings have been officially recognized by CARB (Ozone Transport: 2001 Review," April 2001, CARB identifies the South Coast Air Basin as having an overwhelming and significant impact on the MDAB, which includes the Antelope Valley, and the San Joaquin Valley as having an overwhelming impact on the MDAB). Local Antelope Valley emissions contribute to exceedances of both the NAAQS and CAAQS for ozone, but the Antelope Valley would be in attainment of both standards without the influence of transported air pollution from upwind regions.

Nonattainment Designations and Classification Status

The USEPA and the CARB have designated portions of the District as nonattainment for a variety of pollutants, and some of those designations have an associated classification. Table 5 lists these designations and classifications.

The AVAQMD has adopted attainment plans for a variety of nonattainment pollutants. Table 6 lists the attainment plans applicable to the project area.

AVAQMD regulates emissions from stationary sources through the permitting process and requires permits to Construct/Operate for all stationary equipment with the potential to release air contaminants. For this project, the AVAQMD would require individual permits for any type of dry cleaning services or fueling stations. The AVAQMD cannot issue an air quality permit to operate to projects that may create a significant air quality impact or interfere with the AQMP and progress toward attainment of the federal air quality standards. The goal of the permit regulations is to achieve no net increase of emissions from new permitted sources. New sources must apply reasonably available control measures and may require emission offsets.

Table 5
State and Federal Air Quality
Designations and Classifications

Ambient Air Quality Standard	AVAQMD
One-hour Ozone (Federal)	Nonattainment; classified Severe-17
Eight-hour Ozone (Federal)	Unclassified
Ozone (State)	Nonattainment; classified Extreme due to historical SCAB designation
PM_{10} (Federal)	Unclassified
New PM_{10} (Federal)	Unclassified
$PM_{2.5}$ (Federal)	Unclassified
PM_{10} (State)	Nonattainment
Carbon Monoxide (State and Federal)	Attainment
Nitrogen Dioxide (State and Federal)	Attainment
Sulfur Dioxide (State and Federal)	Attainment
Lead (State and Federal)	Attainment
Particulate Sulfate (State)	Unclassified
Hydrogen Sulfide (State)	Unclassified
Visibility Reducing Particles (State)	Unclassified

Source: http://www.avaqmd.ca.gov/forms/av-ceqa.pdf

Table 6
AVAQMD Attainment Plans

Name of Plan	Date of Adoption	Applicable Area	Pollutant(s) Targeted	Attainment Date
1994 Air Quality Management Plan	Sept-94	Entire District	NO_x and VOC	2007
AVAQMD 2004 Ozone Attainment Plan (State and Federal)	20-Apr-04	Entire District	NO_x and VOC	2007

Source: AVAQMD website and CEQA and Federal Conformity Guidelines, May 2002.

3.0 AIR QUALITY IMPACTS AND EVALUATIONS

Standards of Significance

Significant impacts to air quality may result if the proposed project would:

- conflict with implementation of any applicable air quality plans of the AVAQMD;
- violate any air quality standard or contributes to an existing air quality violation;
- result in a cumulatively considerable net increase in ozone and PM_{10} which the Antelope Valley region is in nonattainment;

- permit development that involves the burning of hazardous, medical, or municipal waste as waste-to-energy facilities;
- cause sensitive receptors to be exposed to substantial pollutant concentrations; or
- create objectionable odors affecting a substantial number of people.

The proposed project does not include the burning of any hazardous, medical or municipal waste, and no odors are emitted from the site.

The proposed project is not anticipated to result in the alteration of air movement, moisture or temperature, or any change in climate either locally or regionally.

Impact Analysis

To determine if a potential project may significantly impact the ambient air quality, the AVAQMD utilizes the following net daily emissions (Table 7) increase as CEQA thresholds of significance. If the potential emissions exceed these thresholds, then the project may have a significant air quality impact and requires additional analysis.

Table 7
AVAQMD CEQA Significant Emissions Thresholds

Criteria Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_2)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO_2)	25	137
Particulate Matter (PM_{10})	15	82

Source: AVAQMD CEQA and Federal Conformity Guidelines, May 2002

The impact of the project on air quality is based on estimating the air pollutant emissions potentially caused by the expansion activities and comparing them to the existing emissions and the significant emissions thresholds and standards above. This assessment depends on the project description, the estimated production rates, onsite equipment and vehicles, and the number of trucks utilizing the site per day.

In addition, the location of adjacent or nearby sensitive receptors is important to determine the potential exposure of people to potential emissions. The surrounding area is generally vacant desert land with no sensitive receptors located within ¼ mile of the site.

Project emissions were estimated using the latest emission factors from the AVAQMD/SCAQMD CEQA Handbook and the URBEMIS2002 v 8.7 Air Quality Model.

3.1 PROJECT DESCRIPTION

The proposed project is the development of the Palmdale Marketplace which consists of the development of approximately 530,000 square feet of retail, discount store, hardware store, and commercial shops (refer to Figure 3 for a Site Plan).

3.2 CONSTRUCTION AIR QUALITY EVALUATION

Construction grading and building emissions are considered short-term, temporary emissions and are estimated in Tables 8 and 9, respectively. The following construction assumptions were assumed: Site Grading - approximately 4.0-month duration; Building Construction - approximately 11.25-month duration from years 2006 to 2007; and Sub-Phase Asphalt - approximately 0.7 month duration. (Refer to Appendix A, URBEMIS2002.8.7 emissions model worksheets). Once construction is complete, emissions will be generated by energy utilized for on-site building and exhaust from space heating and cooling, and customers and employee traffic.

The emissions calculations for the construction phase include fugitive dust from grading and exhaust emissions from on-site equipment and worker travel. Construction emissions are calculated based on emissions per 1,000 square feet of the project's building area. The fugitive dust emissions are based on approximately 46.65 net acres being graded over a 4.0 month period.

The proposed project was screened using the URBEMIS emissions model as recommended by the AVAQMD. The criteria pollutants screened for included reactive organic gases (ROG), nitrous oxides (NO_x), carbon monoxide (CO), and particulates (PM_{10}). Two of these, ROG and NO_x, are ozone precursors. Construction emissions are screened and quantified to document the effectiveness of control measures. The proposed retail center is assumed to be constructed in one phase to assess a worst case. Grading and building emissions (during years 2006, and 2007) are estimated and compared to AVAQMD significance thresholds for daily construction emissions in Tables 8, 9, 10, and 11 respectively.

Table 8
Site Grading Emissions
(Pounds per Day)

SOURCE	ROG	NO_x	CO	PM_{10}
Fugitive Dust	-	-	---	12.5
Off-Road Diesel	15.7	114.4	120.1	5.1
On-Road Diesel	-	-	-	-
Worker Trips	0.1	0.1	2.5	0.0
Totals (lbs/day)	**15.8**	**114.5**	**122.6**	**17.6**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**No**	**No**	**No**

Source: URBEMIS2002.8.7, Lilburn Corp. 2006
* Includes required dust control measures per Rule 403.

Table 9
URBEMIS2002 Building Phase
Emissions Summary (Pounds Per Day)

Year 2006				
Source	**ROG**	**NO_X**	**CO**	**PM_{10}**
Bldg Const	16.3	124.3	5.6	5.6
Worker Trips	1.1	0.6	13.0	0.1
Arch Coating*	---	---	---	---
Asphalt*	---	---	---	---
Total	**17.4**	**124.9**	**18.6**	**5.7**
AVAQMD Threshold	137	137	548	82
Significance	**No**	**No**	**No**	**No**

Source: URBEMIS 2002

* : Architecture coating and asphalt emissions are calculated once the construction phase is complete as each phase is independent of each other.

Table 10
URBEMIS2002 Building Phase
Emissions Summary (Pounds Per Day)

Year 2007				
Source	**ROG**	**NO_X**	**CO**	**PM_{10}**
Bldg Const	16.3	119.0	124.0	5.1
Worker Trips	1.0	0.6	12.2	0.1
Arch Coating*	---	---	---	---
Asphalt*	---	---	---	---
Total	**17.3**	**119.6**	**136.2**	**5.2**
AVAQMD Threshold	137	137	548	82
Significance	**No**	**No**	**No**	**No**

Source: URBEMIS 2002

* : Architecture coating and asphalt emissions are calculated once the construction phase is complete as each phase is independent of each other.

Paving would be the last phase of development and is anticipated to take approximately 0.7-month (refer to Table 11).

Table 11
URBEMIS2002 Asphalt Paving
Emissions Summary (Pounds Per Day)

Source	**ROG**	**NO_X**	**CO**	**PM_{10}**
Asphalt Off-Gas	1.0	---	---	---
Asphalt Off-Road Diesel	9.5	59.2	79.6	2.2
Asphalt On-Road Diesel	0.1	1.7	0.4	<0.1
Asphalt Worker Trips	<0.1	<0.1	0.5	0.0
Total	**<10.7**	**<61.0**	**80.4**	**<2.3**
AVAQMD Threshold	137	137	548	82
Significance	**No**	**No**	**No**	**No**

Source: URBEMIS 2002

Architectural Coatings

Architectural Coatings are coatings applied to stationary sources and their trimmings, to portable buildings, to pavements, or to curbs. Trimmings are accessories to an architectural structure, including, but not limited to: handrailings, cabinets, bathroom and kitchen fixtures, fences, decks, rain gutters and downspouts, window screens, lamp posts, signs, concrete forms, heating and air conditioning equipment, large fixed stationary tools, and other mechanical equipment.

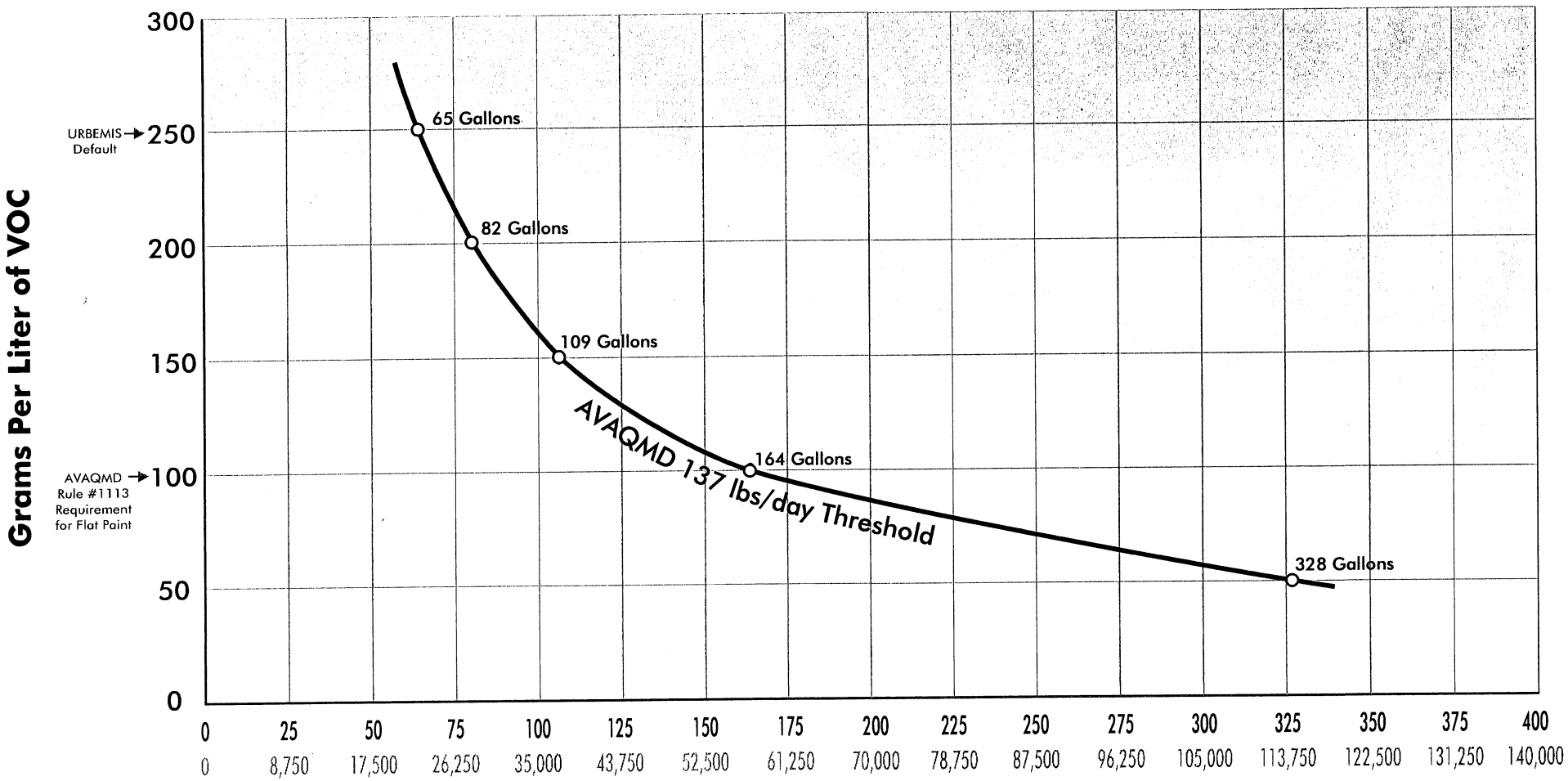
One of the key ingredients contributing to ozone formation are solvents, which contain volatiles referred to as volatile organic compounds (VOCs). These solvents are commonly found in many architectural and industrial paints. AQMD has studied the cumulative VOC emissions from architectural painting operations and has found that these emissions exceed the combined emissions from a variety of industrial operations. Emissions from the application of architectural and industrial maintenance coatings peak during the summer months. VOC's from solvent and paint emissions contribute to harmful ozone formation. To reduce VOC's from architectural coating, the AVAQMD has set VOC limits for coating in, Rule 1113.

Painting will be conducted as each building is completed. The project consists of the development of approximately 530,000 square feet. The architectural coating would occur at the end of the construction schedule per each building. Without mitigation, the proposed project is anticipated to exceed AVAQMD thresholds for VOC's of 137 lbs/day. Therefore, the area of painting per day will be limited by the grams/liter (g/l) of VOC in the paint. If the applicant chooses paint manufactured with specifications indicating 250g/l of VOC, they will be limited to painting approximately 23,701 square feet per day. If the applicant chooses paint manufactured with specifications indicating 100g/l of VOC, they will be limited to painting approximately 57,540 square feet per day. Please refer to Figure 4 for a complete breakdown of architectural coating limitations based on VOC content per amount of paint.

Screening results of the project verify that short-term construction emissions will not exceed daily construction significant thresholds. Development within the vicinity will be exposed to exhaust and dust from construction vehicles and equipment (construction impacts are short-term and are not anticipated to occur over 15.25 months). Therefore, the following measures, which are typically included in the grading permit, will minimize the project contribution to local and regional emissions of criteria pollutants and minimize impacts to developments within the vicinity.

- Comply with AVAQMD Rule 402 which requires that air pollutant emissions not be a nuisance off-site and AVAQMD Rule 403 which requires construction activities to implement the following measures to eliminate visible dust beyond property lines:
    - Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance;
    - Take actions sufficient to prevent project-related Trackout onto paved surfaces;

2006 (for general reference only)



Architectural Coating Limitations

Palmdale Marketplace
City of Palmdale, California

[redacted]gur[redacted]

LILBURN CORPORATION

- Cover loaded haul vehicles while operating on Publicly Maintained paved surfaces;
- Stabilize graded site surfaces upon completion of grading by water or chemical stabilizers when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions;
- Cleanup project-related Trackout or spills on Publicly Maintained paved surfaces within twenty-four hours; and
- Reduce non-essential Earth-Moving Activity under High Wind conditions (wind gusts greater than 25 mph). For purposes of this Rule, a reduction in Earth-Moving Activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance.
- Ensure all equipment is maintained and tuned according to manufacturers specifications.
- Schedule production activities to minimize daily equipment operations and idling trucks.
- Comply with all existing and future CARB and AVAQMD regulations related to diesel-fueled trucks and equipment, which may include among others: (1) meeting more stringent emission standards; (2) retrofitting existing engines with particulate traps; (3) use of low sulfur fuel (already required); and (4) use of alternative fuels or equipment.

3.3 OPERATIONS AIR QUALITY EVALUATION

The Palmdale Marketplace is the development of 530,000 square feet of a commercial shopping center consisting of six major retail tenants and other commercial uses. Two of the major retail tenants include a home improvement center and an upscale discounter. Stationary source emissions associated with the operation of the site are primarily from electrical usage and natural gas consumption for space heating and water heating are estimated by the URBEMIS model based on the size and use of the building. In addition, at least one gas station is planned that will emit VOC's from gasoline vapor. On-site mobile emissions would principally be from employee, customer vehicles, and trucks for delivers and shipments.

Project trip generation was based on rates built in the URBEMIS model. Vehicles using the site would include employee, customer vehicles and trucks for delivery and shipments. The URBEMIS model was utilized to estimate the amount of exhaust emissions produced by vehicles using the site based on default trip lengths. The number of vehicles relates to trips/day per 1,000 square feet per use (Commercial Shopping Center). Refer to Appendix A-URBEMIS2002.8.7 Model Results for a breakdown of trips per use.

The emissions totals for criteria pollutants were analyzed for conditions for opening year 2008 weekday and weekend use and year 2020 weekday and weekend use. The weekend use is used to illustrate the worst case scenario. Year 2020 was analyzed to illustrate the changes in emissions vehicles emit with the improvements/regulations enacted per each year by CARB. Table 12 summarizes the total emissions and lists the CEQA significance determination for opening year

2008 and year 2020. As indicated in Table 12 opening year 2008 Weekday Use, operational emissions would exceed the AVAQMD thresholds for three of the four criteria air pollutants.

In January 25, 1993 the City of Palmdale adopted a comprehensive General Plan which established and analyzed zones for various types of use, development, future development, and traffic patterns. The proposed project as well as all development within the City have been previously analyzed and mitigated per the General Plan through the implementation of roadway, transportation, land use, and energy conservation (building design mitigation measures). The project proponent will be required to follow the mitigation measures outlined within the adopted General Plan EIR applicable to the project.

Table 12
Operational Emissions (lbs/day)

Year 2008 Weekday Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	7.8	5.1	4.3	<0.01
Mobile Source Emission	95.3	159.3	1,153.7	114.3
Totals (lbs/day)	**103.1**	**164.4**	**1,158.0**	**114.4**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**Yes**	**Yes**	**No**
Year 2008 Weekend Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	7.8	5.1	4.3	<0.01
Mobile Source Emission	125.4	209.6	1,518.4	150.5
Totals (lbs/day)	**133.2**	**214.7**	**1,522.7**	**<150.5**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**Yes**	**Yes**	**Yes**
Year 2020 Weekday Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	7.8	5.1	4.3	<0.01
Mobile Source Emission	36.7	55.6	434.3	113.9
Totals (lbs/day)	**44.5**	**60.7**	**438.6**	**<114.0**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**No**	**No**	**Yes**
Year 2020 Weekend Use				
SOURCE	**ROG**	**NO_X**	**CO**	**PM_{10}**
Area Source Emission	7.8	5.1	4.3	<0.01
Mobile Source Emission	48.3	73.2	571.6	149.9
Totals (lbs/day)	**56.1**	**78.3**	**575.9**	**<150.0**
AVAQMD Threshold	137	137	548	82
Significant	**No**	**No**	**Yes**	**Yes**

Source: URBEMIS2002.8.7, Lilburn Corp. 2006

FUEL DISPENSING AND STORAGE FACILITIES

The proposed project includes a gas station dispensing gasoline and a truck fueling station dispensing diesel fuel. These facilities are regulated by the AVAQMD under Rules 461, 462, and

463. The applicant is required to comply with these rules through the permitting process with the AVAQMD. By law, the AVAQMD can not issue an air quality permit if the emissions from the project affect the achievement of Federal and State ambient air standards or impact existing air pollutants which meet air quality standards. In so granting a permit to operate to the applicant, the AVAQMD would assure that public health would be protected.

Rule 461 – Gasoline Transfer and Dispensing. Rule 461 limits the emissions of volatile organic compounds (VOC), a subset of the ROC discussed previously, from the transfer and marketing of gasoline, and in conjunction with Rules 462 and 463, from the storage, transfer, and dispensing of gasoline, and the transport of fuels between these facilities and the transfer of fuel into motor vehicles. Rule 461 requires specific conditions for the gasoline transfer into and from stationary tanks and delivery systems including vapor recovery, vapor tight openings, and spillage controls. The actual gasoline pumping from the pump into a motor vehicle tank requires a vapor recovery system that is certified by the CARB and recovers 95% of displaced gasoline vapors with the vapor recovery systems and nozzles monitored and maintained as required.

Rule 462 – Organic Liquid Loading. Rule 462 limits the emissions of VOC and toxic compounds from the transfer and loading of organic liquids (gasoline and diesel fuel) from bulk facilities. This rule requires a vapor recovery system with a reduction efficiency of 95% in compliance with all CARB equipment certification requirements, and continuous monitoring and maintenance of these systems per required standards.

Rule 463 – Storage of Organic Liquids. Rule 463 limits the emissions of VOC and toxic compounds from the storage transfer of organic liquids (gasoline and diesel fuel). This rule requires that fuel storage tanks must be designed and equipped with vapor loss control devices as specified by this rule and the CARB, properly installed, maintained, and in good working order.

3.4 CARBON MONOXIDE HOTSPOT ANALYSIS

Carbon monoxide (CO) is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason CO concentrations are usually indicative of the local air quality generated by a roadway network, and are used as an indicator of its impacts on local air quality. Local air quality impacts are assessed by comparing future CO levels with state and federal standards, moreover by comparing future CO concentrations with and without the project. The federal and state standards for CO were presented earlier in Table 1. CO concentrations have never exceeded thresholds in the area due to relatively low traffic volumes and better dispersion parameters than the Los Angeles Basin including higher mixing heights and strong winds.

Future CO concentrations with the project were forecasted with the CALINE4 computer model. The future peak hour traffic data were obtained from the Traffic Analysis Report for the Proposed Palmdale Marketplace" prepared by Minagar & Associates, Inc., June 6, 2006. Peak p.m. traffic data for 2025 were utilized in the CALINE4 CO modeling to represent the worst-case scenario. The key intersection at 47th Street East and Avenue R with the highest traffic volumes was selected for CALINE4 analysis. The p.m. peak hour traffic is utilized in the

CALINE4 computer modeling as the traffic data shows that the p.m. peak hour traffic volumes are projected to be higher than the a.m. peak hour volumes.

Eight-hour CO levels were projected using Caltrans methodology described in their "Air Quality Technical Analysis Notes." The method essentially uses a persistence factor, which is multiplied times the 1-hour emission projections. For the project, a persistence factor of 0.75 was utilized based on monitoring data from the Lancaster monitoring station. The data and results of the CALINE4 modeling are also provided in Appendix B. The highest modeled concentration for the eight receptors at the intersection is reported below in Table 13.

The 2007 background CO concentrations were estimated using the highest concentrations as recorded at the Lancaster station, estimated to be 2.1 ppm for the 1-hour averaging time and 1.6 ppm for 8-hour averaging time. The background levels are anticipated to decrease steadily in future years due to improving emission controls. The same background levels were also used for 2025 CO background levels.

The results of the CALINE4 CO modeling are summarized in Table 13. The CO modeling results are shown for the projected 1-hour and 8-hour average CO concentration levels. Existing concentrations are presented along with project buildout, year 2025 concentrations. The pollutant levels are expressed in parts per million (ppm) for the worst receptor.

By 2025, CO concentrations are projected to be well below state standards. This occurs even though traffic volumes are projected to increase in the future. The reductions occur because vehicular pollutant emissions are projected to decrease in the future, as newer cars, complying with increasingly stringent emissions regulations, become a greater portion of the overall vehicle fleet in operation as projected by the EMFAC2002 computer model published by CARB. By 2025, the projected decreases in vehicular emissions more than offset the projected increases in traffic volumes.

Table 13
Worst Case Modeled Projections of
Carbon Monoxide Concentrations (ppm)

Intersection	Existing	2025 With Project
	1-Hr Average	
47th Street East and Avenue R	2.1	2.3
State Standard	**20**	**20**
Exceed State Standard	**No**	**No**
	8-Hour Average	
47th Street East and Avenue R	1.6	1.7
State Standard	**9**	**9**
No. of Exceedances	**0**	**0**

Source: Lilburn Corporation 2006 using Caline 4 and EMFAC 2002

The modeling results show that future CO concentrations are not projected to exceed the state standards. Additionally, the project is projected to increase the concentration in the vicinity of this intersection by 0.2 ppm. Concentrations around intersections in the vicinity of the project are also projected to remain below the state standards as their traffic volumes are less than the selected intersection. Therefore, the project will not result in a significant local air quality impact and no mitigation measures are required.

3.5 PROJECT CUMULATIVE IMPACT

As, noted, the Antelope Valley within the western portion of the MDAB. The basin is currently in violation of federal and State air quality standards for ozone and PM_{10}. Any new project within the basin, even if it does not have a significant impact by itself, will contribute emissions to the air basin regionally. Combined with the emissions of existing sources and other projected development, the total emissions may contribute to the exceedance of air quality standards in the region. Neither CEQA nor the AVAQMD have any methods to quantify the contributions of any one project to the violation of air quality standards. Each individual project of this size will have a nearly negligible effect on the basin's overall emissions and air quality.

The 2004 Ozone Attainment Plan prepared by the AVAQMD is a comprehensive multiyear plan to reduce ozone sources in order to demonstrate attainment with federal standards for ozone by 2007. The attainment plan lists existing and proposed new AVAQMD control measures and existing and proposed federal and State control measures. In addition, the South Coast Association of Government (SCAG) prepares regional transportation plans that also demonstrate conformity with NAAQS in order to receive federal highway funds.

These two plans take into account the anticipated growth expected by the counties and cities as described in each counties' and cities' general plans. The project site is located in an established area. It conforms with the City's land use designations as Community Commercial (CC) and the proposed use is consistent with that designation. Therefore, the 2004 Ozone Attainment Plan and the SCAG's Regional Transportation Plan have taken into account the use of the site as mixed commercial use and incorporated related air emissions and traffic into their control plans.

In summary, the cumulative impacts to air quality are considered less than significant as the project emissions have been incorporated into the regional air and transportation plans and impacts mitigated by control measures in those plans.

4.0 REPORT SUMMARY

Construction emissions from the proposed project will exceed the CEQA thresholds of significance. However, construction emissions are temporary, short-term (less than 15.25 months) effects. Potential dust emissions are reduced by implementation of standard dust control measures as listed in Section 3.2.

The operational emissions which include vehicle emissions on and offsite from the proposed project and gasoline vapors would exceed AVAQMD thresholds of significance and may impact

local air quality. The planned gas station must comply with Rules 461, 462, and 463 of the AVAQMP.

Development of the project will provide the community with an additional shopping center. Currently, the nearest shopping center is located over ten miles from the site. The project conforms with the City's General Plan land use designations as Community Commercial (CC) and the proposed use is consistent with that designation. The proposed development for this area and land use was previously analyzed in the General Plan EIR and the project will be required to implement applicable mitigation measures from the EIR to reduce air quality impacts. With implementation of the General Plan EIR measures and mitigation measures above, the impacts would be lowered however, not below the threshold of significant. Cumulatively, the AQMP and the SCAG's Regional Transportation Plan have taken into account the use of the site as a commercial use and incorporated related air emissions and traffic into their control plans. As the proposed mitigation measures would not lower project impacts to below the threshold of significant a statement of overriding considerations is recommended.

REFERENCES

California Air Resources Board, California Air Quality Data Summaries 2001 to 2005.

Mojave Desert Air Quality Management Control District, Rules and Regulations, with updates.

SCAQMD, "CEQA Air Quality Handbook," 1993 with updates.

URBEMIS 2002 v8.7 Air Quality Model

Caline4 and EMFAC 2002 Model

APPENDIX A
URBEMIS2002
MODELING RESULTS

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2008 Weekday.u
oject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

NSTRUCTION EMISSION ESTIMATES

* 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

* 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.92	5.13	5.08	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	91.60	110.50	1,181.06	0.75	114.34

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	99.52	115.63	1,186.14	0.75	114.35

URBEMIS 2002 For Windows 8.7.0

ile Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2008 Weekday
roject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

ONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	95.34	159.26	1,153.74	0.65	114.34

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	103.14	164.38	1,158.04	0.65	114.35

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2008 Weekday.u
oject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

nstruction Start Month and Year: July, 2006
nstruction Duration: 15.25
al Land Use Area to be Developed: 46.65 acres
aximum Acreage Disturbed Per Day: 1.25 acres
ingle Family Units: 0 Multi-Family Units: 0
ail/Office/Institutional/Industrial Square Footage: 530000

STRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
* 2006***							
se 1 - Demolition Emissions							
gitive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
n-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
itive Dust	-	-	-	-	12.50	-	12.50
-Road Diesel	15.72	114.42	120.84	-	5.13	5.13	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
orker Trips	0.14	0.12	2.50	0.00	0.00	0.00	0.00
Maximum lbs/day	15.86	114.54	123.34	0.00	17.63	5.13	12.50
se 3 - Building Construction							
g Const Off-Road Diesel	16.29	124.29	120.34	-	5.56	5.56	0.00
ldg Const Worker Trips	1.08	0.61	12.95	0.00	0.09	0.01	0.08
rch Coatings Off-Gas	0.00	-	-	-	-	-	-
h Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
halt Off-Gas	0.00	-	-	-	-	-	-
sphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
sphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
sphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	17.37	124.90	133.29	0.00	5.65	5.57	0.08
Max lbs/day all phases	17.37	124.90	133.29	0.00	18.07	5.57	12.50
* 2007***							
se 1 - Demolition Emissions							
ugitive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
n-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
itive Dust	-	-	-	-	0.00	-	0.00
-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
se 3 - Building Construction							
Bldg Const Off-Road Diesel	16.29	118.98	124.02	-	5.07	5.07	0.00
Bldg Const Worker Trips	1.00	0.58	12.18	0.00	0.09	0.01	0.08
Arch Coatings Off-Gas	636.69	-	-	-	-	-	-
h Coatings Worker Trips	0.92	0.44	11.48	0.00	0.09	0.01	0.08
halt Off-Gas	1.04	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.11	1.65	0.39	0.00	0.04	0.04	0.00
halt Worker Trips	0.04	0.02	0.54	0.00	0.00	0.00	0.00
aximum lbs/day	665.51	180.74	227.52	0.00	7.48	7.31	0.17
Max lbs/day all phases	665.51	180.74	227.52	0.00	7.48	7.31	0.17

ıase 1 - Demolition Assumptions: Phase Turned OFF

ıase 2 - Site Grading Assumptions
:art Month/Year for Phase 2: Jul '06
ıase 2 Duration: 4.0 months
ı-Road Truck Travel (VMT): 0
Ef-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	6.8
1	Rubber Tired Dozers	352	0.590	6.8
1	Rubber Tired Loaders	165	0.465	6.8
2	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

ıase 3 - Building Construction Assumptions
tart Month/Year for Phase 3: Nov '06
hase 3 Duration: 11.25 months
Start Month/Year for SubPhase Building: Nov '06
SubPhase Building Duration: 11.25 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Concrete/Industrial saws	84	0.730	8.0
5	Other Equipment	190	0.620	6.8
4	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Aug '07
SubPhase Architectural Coatings Duration: 1.4 months
Start Month/Year for SubPhase Asphalt: Sep '07
SubPhase Asphalt Duration: 0.7 months
Acres to be Paved: 6.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

REA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
atural Gas	0.37	5.12	4.30	0	0.01
earth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
rchitectural Coatings	7.43	-	-	-	-
OTALS(lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
egnl shop. center	95.34	159.26	1,153.74	0.65	114.34
OTAL EMISSIONS (lbs/day)	95.34	159.26	1,153.74	0.65	114.34

oes not include correction for passby trips.
oes not include double counting adjustment for internal trips.

PERATIONAL (Vehicle) EMISSION ESTIMATES

nalysis Year: 2008 Temperature (F): 50 Season: Winter

MFAC Version: EMFAC2002 (9/2002)

ummary of Land Uses:

nit Type	Acreage	Trip Rate	No. Units	Total Trips
egnl shop. center		28.41 trips/1000 sq. ft.	530.00	15,057.30
		Sum of Total Trips		15,057.30
		Total Vehicle Miles Traveled		75,286.50

ehicle Assumptions:

leet Mix:

ehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
ight Auto	55.00	1.60	98.00	0.40
ight Truck < 3,750 lbs	15.00	2.70	95.30	2.00
ight Truck 3,751- 5,750	16.20	1.20	97.50	1.30
ed Truck 5,751- 8,500	7.20	1.40	95.80	2.80
ite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
ite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
ed-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
eavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
ine Haul > 60,000 lbs	0.00	0.00	0.00	100.00
rban Bus	0.20	0.00	50.00	50.00
otorcycle	1.70	76.50	23.50	0.00
chool Bus	0.10	0.00	0.00	100.00
otor Home	1.20	8.30	83.30	8.40

ravel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
rban Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
ural Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
rip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
of Trips - Residential	20.0	37.0	43.0			
of Trips - Commercial (by land use)						
egnl shop. center				2.0	1.0	97.0

anges made to the default values for Land Use Trip Percentages

anges made to the default values for Construction

e user has overridden the Default Phase Lengths
se 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

hanges made to the default values for Area

nges made to the default values for Operations

he operational emission year changed from 2005 to 2008.
home based work selection item changed from 8 to 7.
home based work urban trip length changed from 11.5 to 5.
home based work rural trip length changed from 11.5 to 5.
he home based shopping selection item changed from 9 to 8.
he home based shopping urban trip length changed from 4.87 to 5.
home based shopping rural trip length changed from 4.87 to 5.
home based other selection item changed from 9 to 8.
he home based other urban trip length changed from 6.02 to 5.
he home based other rural trip length changed from 6.02 to 5.
he commercial based commute selection item changed from 9 to 8.
commercial based commute urban trip length changed from 10.3 to 5.
commercial based commute rural trip length changed from 10.3 to 5.
he commercial based non-work selection item changed from 9 to 8.
he commercial based non-work urban trip length changed from 5.5 to 5.
commercial based non-work rural trip length changed from 5.5 to 5.
commercial based customer selection item changed from 9 to 8.
commercial based customer urban trip length changed from 5.5 to 5.
he commercial based customer rural trip length changed from 5.5 to 5.

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2008 Weekend.u
oject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

ONSTRUCTION EMISSION ESTIMATES

* 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

* 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.92	5.13	5.08	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	117.88	145.43	1,554.37	0.99	150.48

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	125.81	150.56	1,559.46	0.99	150.49

URBEMIS 2002 For Windows 8.7.0

ile Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2008 Weekend
roject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

ONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	125.39	209.60	1,518.42	0.86	150.48

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	133.19	214.72	1,522.72	0.86	150.49

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2008 Weekend.u
ject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

nstruction Start Month and Year: July, 2006
struction Duration: 15.25
al Land Use Area to be Developed: 46.65 acres
aximum Acreage Disturbed Per Day: 1.25 acres
ingle Family Units: 0 Multi-Family Units: 0
tail/Office/Institutional/Industrial Square Footage: 530000

STRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
* 2006***							
se 1 - Demolition Emissions							
itive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
n-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
gitive Dust	-	-	-	-	12.50	-	12.50
-Road Diesel	15.72	114.42	120.84	-	5.13	5.13	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
orker Trips	0.14	0.12	2.50	0.00	0.00	0.00	0.00
Maximum lbs/day	15.86	114.54	123.34	0.00	17.63	5.13	12.50
se 3 - Building Construction							
g Const Off-Road Diesel	16.29	124.29	120.34	-	5.56	5.56	0.00
ldg Const Worker Trips	1.08	0.61	12.95	0.00	0.09	0.01	0.08
rch Coatings Off-Gas	0.00	-	-	-	-	-	-
h Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
halt Off-Gas	0.00	-	-	-	-	-	-
halt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
sphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
sphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	17.37	124.90	133.29	0.00	5.65	5.57	0.08
ax lbs/day all phases	17.37	124.90	133.29	0.00	18.07	5.57	12.50
* 2007***							
se 1 - Demolition Emissions							
ugitive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
n-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
itive Dust	-	-	-	-	0.00	-	0.00
-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
orker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
se 3 - Building Construction							
g Const Off-Road Diesel	16.29	118.98	124.02	-	5.07	5.07	0.00
ldg Const Worker Trips	1.00	0.58	12.18	0.00	0.09	0.01	0.08
rch Coatings Off-Gas	636.69	-	-	-	-	-	-
h Coatings Worker Trips	0.92	0.44	11.48	0.00	0.09	0.01	0.08
halt Off-Gas	1.04	-	-	-	-	-	-
sphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
sphalt On-Road Diesel	0.11	1.65	0.39	0.00	0.04	0.04	0.00
halt Worker Trips	0.04	0.02	0.54	0.00	0.00	0.00	0.00
aximum lbs/day	665.51	180.74	227.52	0.00	7.48	7.31	0.17
Max lbs/day all phases	665.51	180.74	227.52	0.00	7.48	7.31	0.17

hase 1 - Demolition Assumptions: Phase Turned OFF

hase 2 - Site Grading Assumptions
tart Month/Year for Phase 2: Jul '06
hase 2 Duration: 4.0 months
n-Road Truck Travel (VMT): 0
ff-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	6.8
1	Rubber Tired Dozers	352	0.590	6.8
1	Rubber Tired Loaders	165	0.465	6.8
2	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

hase 3 - Building Construction Assumptions
tart Month/Year for Phase 3: Nov '06
hase 3 Duration: 11.25 months
Start Month/Year for SubPhase Building: Nov '06
SubPhase Building Duration: 11.25 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Concrete/Industrial saws	84	0.730	8.0
5	Other Equipment	190	0.620	6.8
4	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Aug '07
SubPhase Architectural Coatings Duration: 1.4 months
Start Month/Year for SubPhase Asphalt: Sep '07
SubPhase Asphalt Duration: 0.7 months
Acres to be Paved: 6.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

REA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
tural Gas	0.37	5.12	4.30	0	0.01
earth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
chitectural Coatings	7.43	-	-	-	-
TALS(lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
egnl shop. center	125.39	209.60	1,518.42	0.86	150.48
OTAL EMISSIONS (lbs/day)	125.39	209.60	1,518.42	0.86	150.48

oes not include correction for passby trips.
oes not include double counting adjustment for internal trips.

PERATIONAL (Vehicle) EMISSION ESTIMATES

nalysis Year: 2008 Temperature (F): 50 Season: Winter

MFAC Version: EMFAC2002 (9/2002)

ummary of Land Uses:

nit Type	Acreage	Trip Rate	No. Units	Total Trips
egnl shop. center		37.39 trips/1000 sq. ft.	530.00	19,816.70
		Sum of Total Trips		19,816.70
		Total Vehicle Miles Traveled		99,083.50

ehicle Assumptions:

leet Mix:

ehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
ight Auto	55.00	1.60	98.00	0.40
ight Truck < 3,750 lbs	15.00	2.70	95.30	2.00
ight Truck 3,751- 5,750	16.20	1.20	97.50	1.30
led Truck 5,751- 8,500	7.20	1.40	95.80	2.80
ite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
ite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
led-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
leavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
ine Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Jrban Bus	0.20	0.00	50.00	50.00
lotorcycle	1.70	76.50	23.50	0.00
School Bus	0.10	0.00	0.00	100.00
lotor Home	1.20	8.30	83.30	8.40

ravel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Jrban Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
Rural Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

ıanges made to the default values for Land Use Trip Percentages

anges made to the default values for Construction

ıe user has overridden the Default Phase Lengths
se 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

ıanges made to the default values for Area

nges made to the default values for Operations

ıe operational emission year changed from 2005 to 2008.
home based work selection item changed from 8 to 7.
home based work urban trip length changed from 11.5 to 5.
home based work rural trip length changed from 11.5 to 5.
he home based shopping selection item changed from 9 to 8.
he home based shopping urban trip length changed from 4.87 to 5.
home based shopping rural trip length changed from 4.87 to 5.
home based other selection item changed from 9 to 8.
he home based other urban trip length changed from 6.02 to 5.
he home based other rural trip length changed from 6.02 to 5.
e commercial based commute selection item changed from 9 to 8.
commercial based commute urban trip length changed from 10.3 to 5.
commercial based commute rural trip length changed from 10.3 to 5.
he commercial based non-work selection item changed from 9 to 8.
he commercial based non-work urban trip length changed from 5.5 to 5.
commercial based non-work rural trip length changed from 5.5 to 5.
commercial based customer selection item changed from 9 to 8.
commercial based customer urban trip length changed from 5.5 to 5.
he commercial based customer rural trip length changed from 5.5 to 5.

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2020 Weekday.u
oject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

ONSTRUCTION EMISSION ESTIMATES

* 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

* 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.92	5.13	5.08	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	37.96	38.78	451.30	0.74	113.91

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	45.88	43.90	456.39	0.74	113.92

URBEMIS 2002 For Windows 8.7.0

'ile Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2020 Weekday
'roject Name: Palmdale Retail Center
'roject Location: South Coast Air Basin (Los Angeles area)
)n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

:ONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

\REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

)PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	36.72	55.59	434.30	0.64	113.91

3UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	44.52	60.72	438.61	0.64	113.92

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2020 Weekday.u
oject Name: Palmdale Retail Center
oject Location: South Coast Air Basin (Los Angeles area)
l-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

nstruction Start Month and Year: July, 2006
struction Duration: 15.25
al Land Use Area to be Developed: 46.65 acres
aximum Acreage Disturbed Per Day: 1.25 acres
ingle Family Units: 0 Multi-Family Units: 0
ail/Office/Institutional/Industrial Square Footage: 530000

STRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
* 2006***							
se 1 - Demolition Emissions							
gitive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
gitive Dust	-	-	-	-	12.50	-	12.50
-Road Diesel	15.72	114.42	120.84	-	5.13	5.13	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
orker Trips	0.14	0.12	2.50	0.00	0.00	0.00	0.00
Maximum lbs/day	15.86	114.54	123.34	0.00	17.63	5.13	12.50
se 3 - Building Construction							
g Const Off-Road Diesel	16.29	124.29	120.34	-	5.56	5.56	0.00
ldg Const Worker Trips	1.08	0.61	12.95	0.00	0.09	0.01	0.08
rch Coatings Off-Gas	0.00	-	-	-	-	-	-
h Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
halt Off-Gas	0.00	-	-	-	-	-	-
phalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
sphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
sphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	17.37	124.90	133.29	0.00	5.65	5.57	0.08
Max lbs/day all phases	17.37	124.90	133.29	0.00	18.07	5.57	12.50
* 2007***							
se 1 - Demolition Emissions							
ugitive Dust	-	-	-	-	0.00	-	0.00
off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
itive Dust	-	-	-	-	0.00	-	0.00
-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
se 3 - Building Construction							
Bldg Const Off-Road Diesel	16.29	118.98	124.02	-	5.07	5.07	0.00
Bldg Const Worker Trips	1.00	0.58	12.18	0.00	0.09	0.01	0.08
Arch Coatings Off-Gas	636.69	-	-	-	-	-	-
h Coatings Worker Trips	0.92	0.44	11.48	0.00	0.09	0.01	0.08
halt Off-Gas	1.04	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.11	1.65	0.39	0.00	0.04	0.04	0.00
phalt Worker Trips	0.04	0.02	0.54	0.00	0.00	0.00	0.00
aximum lbs/day	665.51	180.74	227.52	0.00	7.48	7.31	0.17
Max lbs/day all phases	665.51	180.74	227.52	0.00	7.48	7.31	0.17

hase 1 - Demolition Assumptions: Phase Turned OFF

hase 2 - Site Grading Assumptions
tart Month/Year for Phase 2: Jul '06
hase 2 Duration: 4.0 months
n-Road Truck Travel (VMT): 0
ff-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	6.8
1	Rubber Tired Dozers	352	0.590	6.8
1	Rubber Tired Loaders	165	0.465	6.8
2	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

hase 3 - Building Construction Assumptions
tart Month/Year for Phase 3: Nov '06
hase 3 Duration: 11.25 months
Start Month/Year for SubPhase Building: Nov '06
SubPhase Building Duration: 11.25 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Concrete/Industrial saws	84	0.730	8.0
5	Other Equipment	190	0.620	6.8
4	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Aug '07
SubPhase Architectural Coatings Duration: 1.4 months
Start Month/Year for SubPhase Asphalt: Sep '07
SubPhase Asphalt Duration: 0.7 months
Acres to be Paved: 6.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

REA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
tural Gas	0.37	5.12	4.30	0	0.01
earth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
onsumer Prdcts	0.00	-	-	-	-
chitectural Coatings	7.43	-	-	-	-
TALS(lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
egnl shop. center	36.72	55.59	434.30	0.64	113.91
OTAL EMISSIONS (lbs/day)	36.72	55.59	434.30	0.64	113.91

oes not include correction for passby trips.
oes not include double counting adjustment for internal trips.

PERATIONAL (Vehicle) EMISSION ESTIMATES

nalysis Year: 2020 Temperature (F): 50 Season: Winter

MFAC Version: EMFAC2002 (9/2002)

ummary of Land Uses:

nit Type	Acreage	Trip Rate	No. Units	Total Trips
egnl shop. center		28.41 trips/1000 sq. ft.	530.00	15,057.30
		Sum of Total Trips		15,057.30
		Total Vehicle Miles Traveled		75,286.50

ehicle Assumptions:

leet Mix:

ehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
ight Auto	54.40	0.40	99.40	0.20
ight Truck < 3,750 lbs	15.30	0.70	98.00	1.30
ight Truck 3,751- 5,750	16.40	0.60	98.80	0.60
led Truck 5,751- 8,500	7.30	0.00	98.60	1.40
ite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
ite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
led-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
leavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
ine Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Jrban Bus	0.20	0.00	50.00	50.00
lotorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
lotor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Jrban Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
Rural Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Regnl shop. center				2.0	1.0	97.0

anges made to the default values for Land Use Trip Percentages

nges made to the default values for Construction

he user has overridden the Default Phase Lengths
se 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

hanges made to the default values for Area

nges made to the default values for Operations

he operational emission year changed from 2005 to 2020.
home based work selection item changed from 8 to 7.
home based work urban trip length changed from 11.5 to 5.
home based work rural trip length changed from 11.5 to 5.
he home based shopping selection item changed from 9 to 8.
he home based shopping urban trip length changed from 4.87 to 5.
home based shopping rural trip length changed from 4.87 to 5.
home based other selection item changed from 9 to 8.
he home based other urban trip length changed from 6.02 to 5.
he home based other rural trip length changed from 6.02 to 5.
he commercial based commute selection item changed from 9 to 8.
commercial based commute urban trip length changed from 10.3 to 5.
commercial based commute rural trip length changed from 10.3 to 5.
he commercial based non-work selection item changed from 9 to 8.
he commercial based non-work urban trip length changed from 5.5 to 5.
he commercial based non-work rural trip length changed from 5.5 to 5.
commercial based customer selection item changed from 9 to 8.
commercial based customer urban trip length changed from 5.5 to 5.
he commercial based customer rural trip length changed from 5.5 to 5.

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2020 Weekend.u
oject Name: Palmdale Retail Center
oject Location: South Coast Air Basin (Los Angeles area)
-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

STRUCTION EMISSION ESTIMATES

* 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

* 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.92	5.13	5.08	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	48.48	51.03	593.95	0.98	149.92

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TALS (lbs/day,unmitigated)	56.41	56.16	599.04	0.98	149.93

URBEMIS 2002 For Windows 8.7.0

ile Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2020 Weekend
roject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

ONSTRUCTION EMISSION ESTIMATES

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	17.37	124.90	133.29	0.00	18.07	5.57	12.50
TOTALS (lbs/day, mitigated)	17.37	124.90	133.29	0.00	13.82	5.57	8.25

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17
TOTALS (lbs/day, mitigated)	665.51	180.74	227.52	0.00	7.48	7.31	0.17

REA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

PERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	48.23	73.17	571.58	0.84	149.92

UM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	56.03	78.29	575.88	0.84	149.93

URBEMIS 2002 For Windows 8.7.0

e Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\Palmdale Retail Center 2020 Weekend.u
ject Name: Palmdale Retail Center
roject Location: South Coast Air Basin (Los Angeles area)
n-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

onstruction Start Month and Year: July, 2006
struction Duration: 15.25
al Land Use Area to be Developed: 46.65 acres
aximum Acreage Disturbed Per Day: 1.25 acres
ingle Family Units: 0 Multi-Family Units: 0
ail/Office/Institutional/Industrial Square Footage: 530000

STRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
* 2006***							
se 1 - Demolition Emissions							
gitive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
n-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
gitive Dust	-	-	-	-	12.50	-	12.50
-Road Diesel	15.72	114.42	120.84	-	5.13	5.13	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
orker Trips	0.14	0.12	2.50	0.00	0.00	0.00	0.00
Maximum lbs/day	15.86	114.54	123.34	0.00	17.63	5.13	12.50
se 3 - Building Construction							
g Const Off-Road Diesel	16.29	124.29	120.34	-	5.56	5.56	0.00
ldg Const Worker Trips	1.08	0.61	12.95	0.00	0.09	0.01	0.08
rch Coatings Off-Gas	0.00	-	-	-	-	-	-
h Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
halt Off-Gas	0.00	-	-	-	-	-	-
phalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
sphalt On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
sphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	17.37	124.90	133.29	0.00	5.65	5.57	0.08
Max lbs/day all phases	17.37	124.90	133.29	0.00	18.07	5.57	12.50
* 2007***							
se 1 - Demolition Emissions							
ugitive Dust	-	-	-	-	0.00	-	0.00
ff-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
aximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hase 2 - Site Grading Emissions							
itive Dust	-	-	-	-	0.00	-	0.00
-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
orker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
se 3 - Building Construction							
dg Const Off-Road Diesel	16.29	118.98	124.02	-	5.07	5.07	0.00
ldg Const Worker Trips	1.00	0.58	12.18	0.00	0.09	0.01	0.08
rch Coatings Off-Gas	636.69	-	-	-	-	-	-
h Coatings Worker Trips	0.92	0.44	11.48	0.00	0.09	0.01	0.08
halt Off-Gas	1.04	-	-	-	-	-	-
sphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
sphalt On-Road Diesel	0.11	1.65	0.39	0.00	0.04	0.04	0.00
phalt Worker Trips	0.04	0.02	0.54	0.00	0.00	0.00	0.00
aximum lbs/day	665.51	180.74	227.52	0.00	7.48	7.31	0.17
Max lbs/day all phases	665.51	180.74	227.52	0.00	7.48	7.31	0.17

hase 1 - Demolition Assumptions: Phase Turned OFF

hase 2 - Site Grading Assumptions
tart Month/Year for Phase 2: Jul '06
hase 2 Duration: 4.0 months
n-Road Truck Travel (VMT): 0
ff-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	6.8
1	Rubber Tired Dozers	352	0.590	6.8
1	Rubber Tired Loaders	165	0.465	6.8
2	Scrapers	313	0.660	8.0
1	Tractor/Loaders/Backhoes	79	0.465	8.0

hase 3 - Building Construction Assumptions
tart Month/Year for Phase 3: Nov '06
hase 3 Duration: 11.25 months
Start Month/Year for SubPhase Building: Nov '06
SubPhase Building Duration: 11.25 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Concrete/Industrial saws	84	0.730	8.0
5	Other Equipment	190	0.620	6.8
4	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Aug '07
SubPhase Architectural Coatings Duration: 1.4 months
Start Month/Year for SubPhase Asphalt: Sep '07
SubPhase Asphalt Duration: 0.7 months
Acres to be Paved: 6.1
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

REA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10
tural Gas	0.37	5.12	4.30	0	0.01
arth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
chitectural Coatings	7.43	-	-	-	-
TALS(lbs/day,unmitigated)	7.80	5.12	4.30	0.00	0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
ɜgnl shop. center	48.23	73.17	571.58	0.84	149.92
ɔTAL EMISSIONS (lbs/day)	48.23	73.17	571.58	0.84	149.92

ɔes not include correction for passby trips.
ɔes not include double counting adjustment for internal trips.

PERATIONAL (Vehicle) EMISSION ESTIMATES

nalysis Year: 2020 Temperature (F): 50 Season: Winter

MFAC Version: EMFAC2002 (9/2002)

ummary of Land Uses:

nit Type	Acreage	Trip Rate	No. Units	Total Trips
egnl shop. center		37.39 trips/1000 sq. ft.	530.00	19,816.70
		Sum of Total Trips		19,816.70
		Total Vehicle Miles Traveled		99,083.50

ehicle Assumptions:

leet Mix:

ehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
ight Auto	54.40	0.40	99.40	0.20
ight Truck < 3,750 lbs	15.30	0.70	98.00	1.30
ight Truck 3,751- 5,750	16.40	0.60	98.80	0.60
ed Truck 5,751- 8,500	7.30	0.00	98.60	1.40
ite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
ite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
ed-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
eavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
ine Haul > 60,000 lbs	0.00	0.00	0.00	100.00
rban Bus	0.20	0.00	50.00	50.00
otorcycle	1.60	50.00	50.00	0.00
chool Bus	0.10	0.00	0.00	100.00
otor Home	1.50	0.00	93.30	6.70

ravel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
rban Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
ural Trip Length (miles)	5.0	5.0	5.0	5.0	5.0	5.0
rip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
; of Trips - Residential	20.0	37.0	43.0			
; of Trips - Commercial (by land use)						
egnl shop. center				2.0	1.0	97.0

anges made to the default values for Land Use Trip Percentages

nges made to the default values for Construction

e user has overridden the Default Phase Lengths
se 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

hanges made to the default values for Area

nges made to the default values for Operations

he operational emission year changed from 2005 to 2020.
home based work selection item changed from 8 to 7.
home based work urban trip length changed from 11.5 to 5.
home based work rural trip length changed from 11.5 to 5.
he home based shopping selection item changed from 9 to 8.
he home based shopping urban trip length changed from 4.87 to 5.
home based shopping rural trip length changed from 4.87 to 5.
home based other selection item changed from 9 to 8.
he home based other urban trip length changed from 6.02 to 5.
he home based other rural trip length changed from 6.02 to 5.
he commercial based commute selection item changed from 9 to 8.
commercial based commute urban trip length changed from 10.3 to 5.
commercial based commute rural trip length changed from 10.3 to 5.
he commercial based non-work selection item changed from 9 to 8.
he commercial based non-work urban trip length changed from 5.5 to 5.
commercial based non-work rural trip length changed from 5.5 to 5.
commercial based customer selection item changed from 9 to 8.
commercial based customer urban trip length changed from 5.5 to 5.
he commercial based customer rural trip length changed from 5.5 to 5.

APPENDIX B
CALINE4/EMFAC 2002
MODELING RESULTS

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	1.6 PPM		
SIGTH=	10. DEGREES	TEMP=	5.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A -SB 1	*	-11	300	-11	150	* AG	2307	2.2	.0	43.0
B. Link B-SB 2	*	-11	150	-11	0	* AG	1671	2.2	.0	43.0
C. Link C-SB3	*	-11	0	-11	-150	* AG	2318	2.2	.0	43.0
D. Link D-SB 4	*	-11	-150	-11	-300	* AG	2318	2.2	.0	43.0
E. Link E-NB1	*	11	-300	11	-150	* AG	2220	2.2	.0	43.0
F. Link F-NB2	*	11	-150	11	0	* AG	1737	2.2	.0	43.0
G. Link G-NB 3	*	11	0	11	150	* AG	1994	2.2	.0	43.0
H. Link H-NB 4	*	11	150	11	300	* AG	2062	2.2	.0	43.0
I. Link I-SB LT	*	-3	50	0	0	* AG	589	2.2	.0	43.0
J. Link J-NB LT	*	0	0	3	-50	* AG	493	2.2	.0	43.0
K. Link K-EB 1	*	-300	-9	-150	-9	* AG	1280	2.2	.0	37.0
L. Link L-EB 2	*	-150	-9	0	-9	* AG	1064	2.2	.0	37.0
M. Link M-EB 3	*	0	-9	150	-9	* AG	1245	2.2	.0	37.0
N. Link N-EB 4	*	150	-9	300	-9	* AG	1245	2.2	.0	37.0
O. Link O-WB 1	*	300	9	150	9	* AG	774	2.2	.0	37.0
P. Link P-WB 2	*	150	9	0	9	* AG	607	2.2	.0	37.0
Q. Link Q-WB 3	*	0	9	-150	9	* AG	910	2.2	.0	37.0
R. Link R-WB 4	*	-150	9	-300	9	* AG	867	2.2	.0	37.0
S. Link S-EB LT	*	-3	-50	0	0	* AG	141	2.2	.0	37.0
T. Link T-WB LT	*	0	0	50	3	* AG	167	2.2	.0	37.0

□□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 2

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-25	12	1.8
2. Recpt 2	-14	12	1.8
3. Recpt 3	-14	25	1.8
4. Recpt 4	14	25	1.8
5. Recpt 5	14	12	1.8
6. Recpt 6	25	12	1.8
7. Recpt 7	25	-12	1.8
8. Recpt 8	14	-12	1.8
9. Recpt 9	14	-25	1.8
10. Recpt 10	-14	-25	1.8
11. Recpt 11	-14	-12	1.8
12. Recpt 12	-25	-12	1.8
13. Recpt 13	-150	12	1.8
14. Recpt 14	-14	150	1.8
15. Recpt 15	-300	12	1.8
16. Recpt 16	-14	300	1.8

□□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	170.	2.1	.0	.0	.2	.0	.0	.0	.0	.0
2. Recpt 2	174.	2.2	.0	.0	.2	.0	.0	.1	.0	.0
3. Recpt 3	174.	2.2	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	187.	2.2	.0	.0	.1	.0	.0	.1	.0	.0
5. Recpt 5	187.	2.2	.0	.0	.1	.0	.0	.2	.0	.0
6. Recpt 6	190.	2.1	.0	.0	.0	.0	.0	.2	.0	.0
7. Recpt 7	350.	2.1	.0	.0	.0	.0	.0	.0	.2	.0
8. Recpt 8	354.	2.1	.0	.1	.0	.0	.0	.0	.2	.0
9. Recpt 9	353.	2.2	.0	.0	.0	.0	.0	.0	.2	.0
10. Recpt 10	7.	2.2	.0	.1	.0	.0	.0	.0	.1	.0
11. Recpt 11	7.	2.1	.0	.2	.0	.0	.0	.0	.1	.0
12. Recpt 12	85.	2.1	.0	.0	.1	.0	.0	.0	.0	.0

13. Recpt 13	96.	2.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
14. Recpt 14	175.	2.1	.0	.2	.0	.0	.0	.0	.0	.1	.0
15. Recpt 15	95.	2.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. Recpt 16	176.	2.2	.2	.0	.0	.0	.0	.0	.0	.0	.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. Recpt 5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. Recpt 6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. Recpt 7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. Recpt 8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. Recpt 9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. Recpt 10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. Recpt 11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. Recpt 12	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
13. Recpt 13	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
14. Recpt 14	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. Recpt 15	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
16. Recpt 16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

C4$-Palmdale CO Results

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	0. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	1.6 PPM		
SIGTH=	10. DEGREES	TEMP=	5.0 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	*	LINK COORDINATES (M) X1	Y1	X2	Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Link A -SB 1	*	-11	300	-11	150	* AG	2307	2.2	.0	43.0
B. Link B-SB 2	*	-11	150	-11	0	* AG	1671	2.2	.0	43.0
C. Link C-SB3	*	-11	0	-11	-150	* AG	2318	2.2	.0	43.0
D. Link D-SB 4	*	-11	-150	-11	-300	* AG	2318	2.2	.0	43.0
E. Link E-NB1	*	11	-300	11	-150	* AG	2220	2.2	.0	43.0
F. Link F-NB2	*	11	-150	11	0	* AG	1737	2.2	.0	43.0
G. Link G-NB 3	*	11	0	11	150	* AG	1994	2.2	.0	43.0
H. Link H-NB 4	*	11	150	11	300	* AG	2062	2.2	.0	43.0
I. Link I-SB LT	*	-3	50	0	0	* AG	589	2.2	.0	43.0
J. Link J-NB LT	*	0	0	3	-50	* AG	493	2.2	.0	43.0
K. Link K-EB 1	*	-300	-9	-150	-9	* AG	1280	2.2	.0	37.0
L. Link L-EB 2	*	-150	-9	0	-9	* AG	1064	2.2	.0	37.0
M. Link M-EB 3	*	0	-9	150	-9	* AG	1245	2.2	.0	37.0
N. Link N-EB 4	*	150	-9	300	-9	* AG	1245	2.2	.0	37.0
O. Link O-WB 1	*	300	9	150	9	* AG	774	2.2	.0	37.0
P. Link P-WB 2	*	150	9	0	9	* AG	607	2.2	.0	37.0
Q. Link Q-WB 3	*	0	9	-150	9	* AG	910	2.2	.0	37.0
R. Link R-WB 4	*	-150	9	-300	9	* AG	867	2.2	.0	37.0
S. Link S-EB LT	*	-3	-50	0	0	* AG	141	2.2	.0	37.0
T. Link T-WB LT	*	0	0	50	3	* AG	167	2.2	.0	37.0

□□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)

C4$-Palmdale CO Results
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	-25	12	1.8
2. Recpt 2	-14	12	1.8
3. Recpt 3	-14	25	1.8
4. Recpt 4	14	25	1.8
5. Recpt 5	14	12	1.8
6. Recpt 6	25	12	1.8
7. Recpt 7	25	-12	1.8
8. Recpt 8	14	-12	1.8
9. Recpt 9	14	-25	1.8
10. Recpt 10	-14	-25	1.8
11. Recpt 11	-14	-12	1.8
12. Recpt 12	-25	-12	1.8
13. Recpt 13	-150	12	1.8
14. Recpt 14	-14	150	1.8
15. Recpt 15	-300	12	1.8
16. Recpt 16	-14	300	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 3

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Recpt 1	170.	2.1	.0	.0	.2	.0	.0	.0	.0	.0
2. Recpt 2	174.	2.2	.0	.0	.2	.0	.0	.1	.0	.0
3. Recpt 3	174.	2.2	.0	.0	.2	.0	.0	.0	.0	.0
4. Recpt 4	187.	2.2	.0	.0	.1	.0	.0	.1	.0	.0
5. Recpt 5	187.	2.2	.0	.0	.1	.0	.0	.2	.0	.0
6. Recpt 6	190.	2.1	.0	.0	.0	.0	.0	.2	.0	.0
7. Recpt 7	350.	2.1	.0	.0	.0	.0	.0	.0	.2	.0
8. Recpt 8	354.	2.1	.0	.1	.0	.0	.0	.0	.2	.0
9. Recpt 9	353.	2.2	.0	.0	.0	.0	.0	.0	.2	.0
10. Recpt 10	7.	2.2	.0	.1	.0	.0	.0	.0	.1	.0
11. Recpt 11	7.	2.1	.0	.2	.0	.0	.0	.0	.1	.0
12. Recpt 12	85.	2.1	.0	.0	.1	.0	.0	.0	.0	.0
13. Recpt 13	96.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
14. Recpt 14	175.	2.1	.0	.2	.0	.0	.0	.0	.1	.0
15. Recpt 15	95.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
16. Recpt 16	176.	2.2	.2	.0	.0	.0	.0	.0	.0	.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 4

JOB: Palmdale Marketplace
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. Recpt 5	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. Recpt 6	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. Recpt 7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. Recpt 8	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. Recpt 9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. Recpt 10	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. Recpt 11	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. Recpt 12	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
13. Recpt 13	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
14. Recpt 14	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. Recpt 15	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
16. Recpt 16	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Title : Mojave Desert Air Basin Avg 2025 Winter Defau lt Title
Version : Emfac2002 V2.2 Apr 23 2003
Run Date : 06/15/06 18:28:56
Scen Year: 2025 -- Model Years: 1980 to 2025
Season : Winter
Area : Mojave Desert AB
********** ********* ********* *** **********
Year:2025 -- Model Years 1980 to 2025 Inclusive -- Winter
Emfac2002 Emission Factors: V2.2 Apr 23 2003

Mojave Desert A Basin Average Ba sin Average

Table 1: Running Exhaust Emission s (grams/ mil e)

Pollutant Name: Total Organic Gases Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.116	0.195	0.281	0.694	4.723	5.554	0.227
10	0.077	0.130	0.191	0.526	3.134	4.23	0.157
15	0.053	0.091	0.136	0.411	2.168	3.389	0.114
20	0.039	0.067	0.102	0.330	1.563	2.854	0.088
25	0.030	0.052	0.080	0.273	1.175	2.526	0.07
30	0.024	0.042	0.065	0.231	0.920	2.348	0.059
35	0.020	0.036	0.056	0.201	0.751	2.292	0.053

Pollutant Name: Carbon Monoxide Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1.356	2.247	2.776	6.058	22.230	28.596	2.211
10	1.225	2.006	2.395	4.130	14.672	24.138	1.902
15	1.113	1.806	2.106	2.956	10.243	21.212	1.672
20	1.015	1.636	1.881	2.221	7.562	19.371	1.495
25	0.930	1.492	1.699	1.751	5.903	18.375	1.355
30	0.855	1.369	1.551	1.450	4.873	18.125	1.244
35	0.790	1.263	1.428	1.259	4.252	18.633	1.157

Pollutant Name: Oxides of Nitrogen Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.168	0.346	0.574	2.528	8.117	1.566	0.389
10	0.145	0.297	0.493	2.127	6.721	1.499	0.333
15	0.128	0.259	0.434	1.855	5.864	1.455	0.293

20	0.116	0.232	0.392	1.676	5.354	1.43	0.265
25	0.106	0.212	0.363	1.565	5.078	1.42	0.245
30	0.099	0.197	0.344	1.511	4.977	1.424	0.232
35	0.094	0.187	0.333	1.505	5.019	1.441	0.225

Pollutant Name: Carbon Dioxide Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	944.425	1188.531	1711.564	2104.238	2438.806	265.895	1144.019
10	713.665	898.245	1260.152	1888.324	1972.472	221.704	874.544
15	559.728	704.599	970.731	1760.820	1697.086	190.447	696.511
20	455.634	573.653	781.102	1683.184	1529.407	168.502	577.02
25	384.956	484.743	655.509	1634.935	1425.197	153.564	496.358
30	337.568	425.131	572.925	1604.875	1360.275	144.209	442.522
35	307.232	386.969	520.876	1586.787	1321.208	139.642	408.188

Pollutant Name: Sulfur Dioxide Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.009	0.011	0.016	0.020	0.024	0.003	0.011
10	0.007	0.009	0.012	0.018	0.019	0.003	0.008
15	0.005	0.007	0.009	0.017	0.016	0.002	0.007
20	0.004	0.006	0.008	0.016	0.015	0.002	0.006
25	0.004	0.005	0.006	0.016	0.014	0.002	0.005
30	0.003	0.004	0.006	0.015	0.013	0.002	0.004
35	0.003	0.004	0.005	0.015	0.013	0.002	0.004

Pollutant Name: PM10 Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.071	0.116	0.144	0.211	0.239	0.031	0.1
10	0.046	0.076	0.094	0.164	0.170	0.024	0.066
15	0.031	0.052	0.065	0.131	0.125	0.02	0.046
20	0.023	0.037	0.047	0.107	0.096	0.017	0.034
25	0.017	0.028	0.036	0.090	0.076	0.015	0.026
30	0.014	0.023	0.029	0.077	0.063	0.014	0.021
35	0.012	0.019	0.024	0.067	0.054	0.014	0.018

Pollutant Name: PM10 - Tire Wear Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.008	0.008	0.009	0.024	0.010	0.004	0.009
10	0.008	0.008	0.009	0.024	0.010	0.004	0.009
15	0.008	0.008	0.009	0.024	0.010	0.004	0.009
20	0.008	0.008	0.009	0.024	0.010	0.004	0.009
25	0.008	0.008	0.009	0.024	0.010	0.004	0.009
30	0.008	0.008	0.009	0.024	0.010	0.004	0.009
35	0.008	0.008	0.009	0.024	0.010	0.004	0.009

Pollutant Name: PM10 - Break Wear Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.013	0.013	0.013	0.013	0.013	0.013	0.013
10	0.013	0.013	0.013	0.013	0.013	0.013	0.013
15	0.013	0.013	0.013	0.013	0.013	0.013	0.013
20	0.013	0.013	0.013	0.013	0.013	0.013	0.013
25	0.013	0.013	0.013	0.013	0.013	0.013	0.013
30	0.013	0.013	0.013	0.013	0.013	0.013	0.013
35	0.013	0.013	0.013	0.013	0.013	0.013	0.013

Pollutant Name: Gasoline - mi/gal Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.355	7.419	5.070	3.505	3.392	25.864	8.317
10	12.375	9.813	6.830	5.269	5.100	31.27	11
15	15.773	12.507	8.858	7.496	7.258	36.539	14.02
20	19.371	15.359	11.051	10.093	9.780	41.294	17.218
25	22.922	18.174	13.256	12.864	12.475	45.145	20.375
30	26.136	20.721	15.280	15.518	15.063	47.732	23.23
35	28.716	22.767	16.918	17.718	17.216	48.767	25.517

Pollutant Name: Diesel - mi/gal Temperatu re: 40F Relative Hu midity: 20%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	28.677	29.060	19.816	5.290	4.297	0	7.71
10	28.677	29.060	19.816	5.290	4.297	0	7.71

APPENDIX C
BIOLOGICAL ASSESSMENT

Biological Resource Assessment and Native Vegetation Preservation Plan for a Commercial Development Palmdale, California

December 29, 2005

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Biological Resource Assessment and Native Vegetation Preservation Plan for a Commercial Development, Palmdale, California

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Abstract

Development of a commercial complex has been proposed. The approximately 50 acre (20 ha) study area was located north of Avenue R and east of 45th Street East, T6N, R11W, a portion of the SE1/4 of Section 28, S.B.B.M. A line transect survey was conducted on 22 and 27 December 2005 to inventory biological resources. This study was also conducted to provide an estimated density and distribution of Joshua trees (*Yucca brevifolia*) occurring within the proposed project area. The proposed project area was characteristic of a Joshua tree woodland and desert scrub plant community. A total of forty-three plant species and twenty-five wildlife species or their sign were observed during the line transect survey. A total of 352 Joshua trees were counted during the line transect survey. A total of 78 Joshua trees that appeared the most suitable for transplanting were temporarily marked with orange flagging tape. No desert tortoises (*Gopherus agassizii*) or their sign were observed during the field survey. No burrowing owls (*Athene cunicularia*) or sign were observed during the field survey. However, a burrowing owl survey should be accomplished within 30 days prior to construction activities to ensure burrowing owls are not present during construction activities. If burrowing owls are discovered the CDFG should be consulted prior to construction. If at all possible, construction activities should occur outside the nesting season (spring) for birds. If construction activity will occur during the nesting season, a survey should be conducted within one week prior to the removal of trees. If active bird nests are found, impacts should be avoided unless the proper permits are obtained. The proposed project site was located within the geographic range of the Mohave ground squirrel (*Spermophilus mohavensis*). Compensation and mitigation for potential impacts to Mohave ground squirrels, if required, will be determined through the Section 2081 permit process. No other state or federally listed species are expected to occur within the proposed project area. This project is not expected to result in a significant adverse impact to biological resources.

Development of a commercial complex has been proposed (Figure 1). Development would include installation of paved access roads and utilities (natural gas, water, sewer, electric, telephone). The entire project area would be graded prior to construction activities. The proposed project area includes APN 3023-004-017, and portions of APN 3023-004-016, and APN 3023-004-007 (Figure 2).

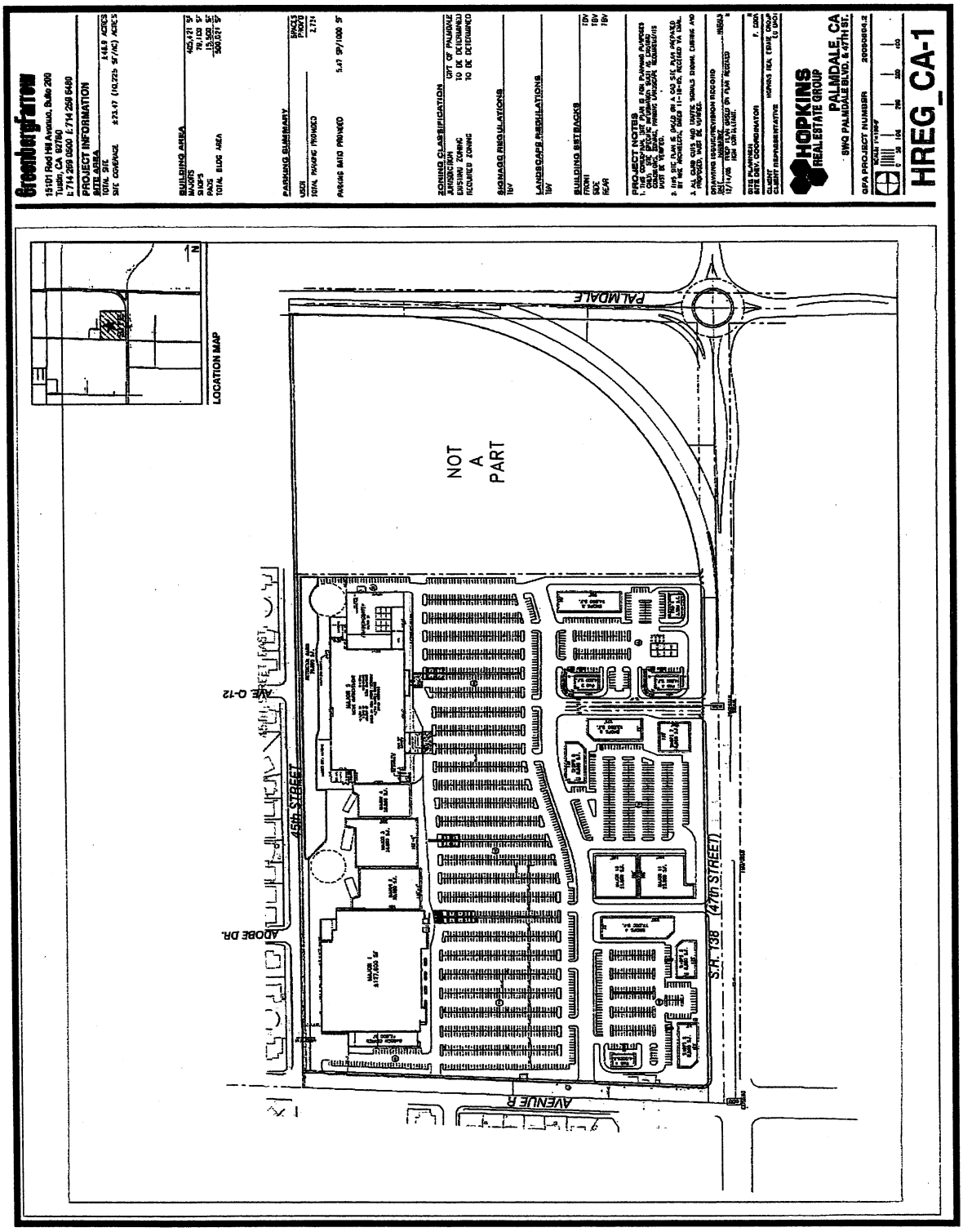
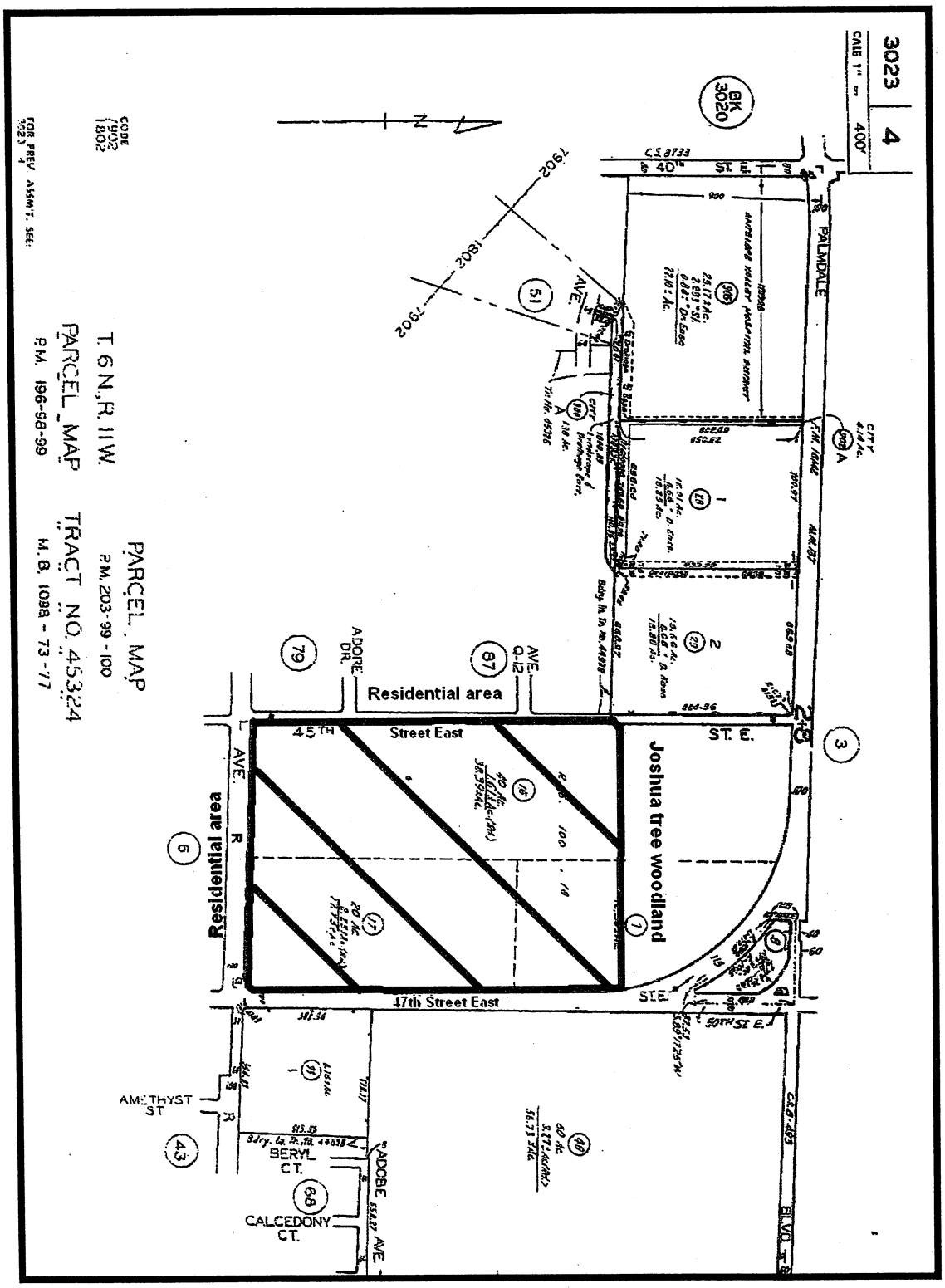


Figure 1. Site development plan for commercial buildings.



Figue 2. Location of proposed project area as depicted on APN map.

An environmental analysis should be conducted prior to any development project. An assessment of biological resources is an integral part of environmental analyses (Gilbert and Dodds 1987). The purpose of this study was to provide an assessment of biological resources potentially occurring within, or utilizing the proposed project area. Specific focus was on the presence/absence of rare, threatened and endangered species of plants and wildlife. For parcels containing juniper trees (*Juniperus californica*) and/or Joshua trees (*Yucca brevifolia*), the City of Palmdale requires preparation of a native vegetation preservation plan. This study was conducted to provide an estimated density and distribution of Joshua trees occurring within the proposed project area. An assessment of health and estimated size class were used to determine the suitability of Joshua trees for transplanting.

Study Area

The approximately 50 acre (20 ha) study area was located north of Avenue R and east of 45th Street East, T6N, R11W, a portion of the SE1/4 of Section 28, S.B.B.M. (Figure 3). The eastern boundary of the study area was formed by 47th Street East. Avenue R formed the southern boundary of the study area. The western boundary of the study area was formed by 45th Street East. An existing residential area occurred south of Avenue R. An existing residential area was located west of 45th Street East. Undeveloped desert habitat occurred adjacent to the northern boundary of the study area.

Methods

A line transect survey was conducted to inventory plant and wildlife species occurring within the proposed project area (Cooperrider et al. 1986, Davis 1990). Line transects were walked to count, assess the health, and determine the size class of Joshua trees. Line transects were walked in an east-west orientation. Line transects were approximately 1,320 feet (426 m) long and spaced about 33 feet (10 m) apart (U.S. Fish & Wildlife Service 1990).

All observations of plant and animal species were recorded in field notes. Field guides were used to aid in the identification of plant and animal species (Arnett and Jacques 1981, Borror and White 1970, Burt and Grossenheider 1976, Gould 1981, Jaeger 1969, Knobel 1980, Robbins et al. 1983, Stark 2000). Observations of wildlife species were aided with the use of 10x50 binoculars. Observations of animal tracks, scat, and burrows were also utilized to determine the presence of wildlife species inhabiting the proposed project area (Cooperrider et al. 1986, Halfpenny 1986, Murie 1974).

Joshua trees that grew in clumps and appeared to be growing from the same root ball were counted as a single tree. The height of the highest tree in the clump was recorded. Joshua trees, which appeared suitable for transplanting by machine, were temporarily marked with orange flagging tape. Joshua tree locations were recorded on a tentative tract map.

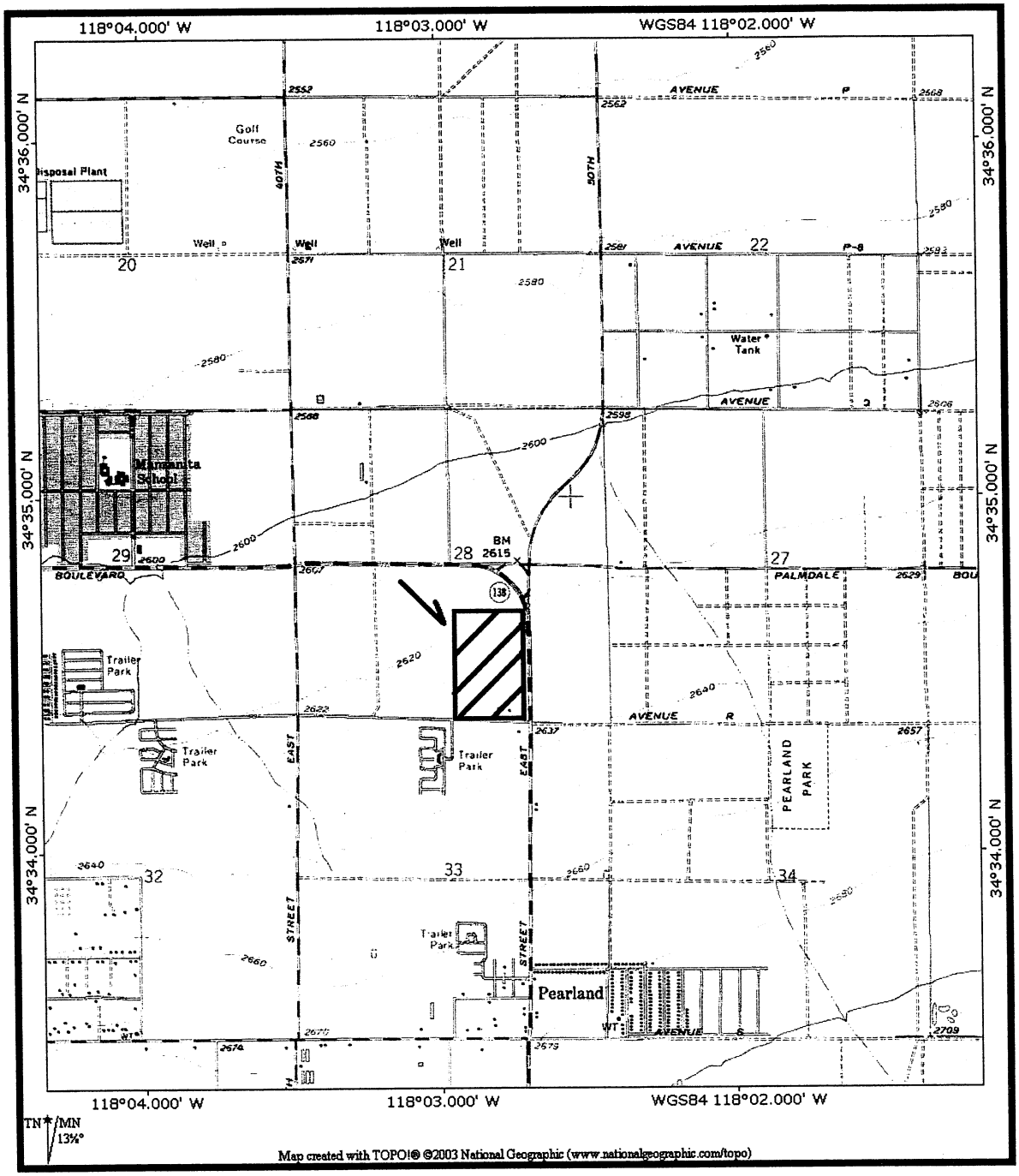


Figure 3. Approximate location of study area as depicted on excerpt from USGS Quadrangle, Palmdale, California, 7.5' 1974.

Results

A total of forty-eight line transects were walked on 22 and 27 December 2005. Weather conditions on 22 December 2005 consisted of moderate temperatures (estimated 65 degrees F), 50% cloud cover, and no wind to a slight breeze. Weather conditions on 27 December 2005 consisted of cool temperatures (estimated 45 degrees F), 70% cloud cover, and no wind. A sandy loam surface soil texture was characteristic throughout the study area.

The proposed project area was characteristic of a Joshua tree woodland and desert scrub plant community (Barbour and Major 1988). A total of forty-three plant species were observed during the line transect survey (Table 1).

A total of twenty-five wildlife species, or their sign were observed during the line transect survey (Table 2). No desert tortoises (*Gopherus agassizii*) or sign were observed during the field survey. No burrowing owls (*Athene cunicularia*) or sign were observed during the field survey. Three bird nests were observed in Joshua trees. All bird nests were inactive at the time the survey was conducted. California ground squirrel (*Citellus beecheyi*) burrows were observed within the western and southern portions of the study area.

A total of 352 Joshua trees were counted during the line transect survey (Table 3). A total of 78 Joshua trees appearing to have the most potential for survival after transplanting were temporarily marked with orange flagging tape (Table 3). Joshua tree densities were highest in the central portion of the study area. Joshua trees occurring next to disturbed areas and roads that showed evidence of recent use were not marked, due to potential damage to root systems and soil compaction caused by vehicles.

The study area has been highly disturbed by a fire. Many Joshua trees were observed laying on the ground and had been cut into pieces with a saw. Evidence of an old homestead was observed in the southeastern portion of the study area. Two small portions of asbestos containing concrete (transite) pipes were observed in the homestead area. Scattered litter was observed throughout the study area, but most trash was seen along 45th Street East. A dirt road was observed within the southeastern portion of the study area. A network of off road vehicle trails was observed within the study area. Some old off road vehicle tracks were observed within the study area. Small excavations were observed within the study area. These excavations were likely made by children to create a fort and foxholes.

Discussion

Most annual vegetation was desiccated at the time the field survey was conducted. It is probable that some annual species were not visible during the time the field survey

Table 1. List of plant species that were observed during the line transect survey of a proposed commercial development, Palmdale, California.

Common Name	Scientific Name
Cypress tree	*Cupress* sp.
Alder	*Alnus* sp.
Black willow	*Salix gooddingii*
Pyracantha	*Pyracantha* sp.
Joshua tree	*Yucca brevifolia*
Creosote bush	*Larrea tridentata*
Four-wing saltbush	*Atriplex canescens*
Mormon tea	*Ephedra nevadensis*
Cheesebush	*Hymenoclea salsola*
Rabbit brush	*Chrysothamnus nauseosis*
Peachthorn	*Lycium cooperi*
Anderson thorn	*Lycium andersonii*
Cotton thorn	*Tetradymia spinosa*
Felt thorn	*Tetradymia stenolepis*
Winter fat	*Eurotia lanata*
Cooper Goldenbush	*Haplopappus copperi*
Paper bag bush	*Salazaria mexicana*
Basin sagebrush	*Artemisia tridentata*
Burrobush	*Ambrosia dumosa*
Silver cholla	*Opuntia echinocarpa*
Spotted buckwheat	*Eriogonum maculatum*
Bird's nest buckwheat	*Eriogonum nidularium*
Angle-stem buckwheat	*Eriogonum angulosum*
Flattop buckwheat	*Eriogonum plumatella*
Blue mantle	*Eriastrum diffusum*
Turkey mullein	*Eremocarpus setigerus*
Lacy phacelia	*Phacelia cryptantha*
Autumn vinegar-weed	*Lessingia germanorum*
Common sunflower	*Helianthus annuus*
Fiddleneck	*Amsinckia tessellata*
Desert straw	*Stephanomeria pauciflora*
Dune primrose	*Oenothera deltoides*
Desert needlegrass	*Stipa comata*
Indian ricegrass	*Oryzopsis hymenoides*
Horseweed	*Canyza honariensis*
Herb willow	*Epilobium* sp.
Russian thistle	*Salsola iberica*
Annual burweed	*Franseria acanthicarpa*
Red stemmed filaree	*Erodium cicutarium*

Table 1 continued. List of plant species that were observed during the line transect survey of a proposed commercial development, Palmdale, California.

Common Name	Scientific Name
Schismus	*Shismus* sp.
Red brome	*Bromus rubens*
Cheatgrass	*Bromus tectorum*
Tumble mustard	*Sisymbrium altisissiimum*

Table 2. List of wildlife species, or their sign, that were observed during the line transect survey of a proposed commercial development, Palmdale, California.

Common Name	Scientific Name
Desert cottontail	*Sylvilagus auduboni*
Black-tailed jackrabbit	*Lepus californicus*
California ground squirrel	*Citellus beecheyi*
Rodents	Order: Rodentia
Kangaroo rat	*Dipodomys* sp.
Coyote	*Canis latrans*
Kit fox	*Vulpes macrotis*
Domestic dog	*Canis familiaris*
California quail	*Callipepla californica*
Cooper's hawk	*Accipiter cooperii*
Mourning dove	*Zenaida macroura*
Black-chinned hummingbird	*Archilochus alexandri*
Northern mockingbird	*Mimus polyglottos*
Common raven	*Corvus corax*
Say's phoebe	*Sayornis saya*
Cactus wren	*Campylorhynchus brunneicapillus*
European starling	*Sturnus vulgaris*
House finch	*Carpodacus mexicanus*
White crowned sparrow	*Zonotrichia leucophrys*
Harvester ants	Order: Hymenoptera
Butterfly (brown with yellow edges)	Order: Lepidoptera
Butterfly (orange and black)	Order: Lepidoptera
Ladybird beetle	*Hippodamia convergens*
Stink bug	Order: Hemiptera
Grasshopper	Order: Orthoptera

Table 3. Number of Joshua trees by size class occurring within the study area, a proposed commercial development, Palmdale, California.

Size Class of Joshua trees (in feet)	Total Number of Joshua trees (50 Acres)
1-3	163
4-6	36
7-9	34
10-12	59
>12	60
Total	352
# Marked	78

was performed. Although not observed, several wildlife species would be expected to occur within the proposed project area (Table 4).

Human impacts are expected to increase as urban development continues to occur near and adjacent to the study area. Habitat in the general area will continue to become degraded and fragmented. Burrowing animals within the proposed project area are not expected to survive construction activities. More mobile species, such as lagomorphs (rabbits and hares), coyotes (*Canis latrans*), and birds are expected to survive, but they will have less cover and foraging habitat available. Joshua tree woodlands provide many roosting and nesting sites for birds. Some wildlife species such as the yucca moth, cactus wren (*Campylorhynchus brunneicapillus*), and desert night lizard (*Xantusia vigilis*) are found in association with Joshua tree woodland habitat. Destruction of Joshua tree woodland habitat should be avoided during the breeding season (spring) of birds, if at all possible.

Many species of birds and their active nests are protected under the Migratory Bird Treaty Act. Joshua trees and other ornamental trees provide nesting sites for birds. If at all possible, construction activities should occur outside the nesting season (spring) for birds. If construction activity will occur during the nesting season, a survey should be conducted within one week prior to removal of the trees. If active bird nests are found, impacts should be avoided unless the proper permits are obtained.

Burrowing owls are considered a species of special concern by the California Department of Fish and Game (CDFG). The California ground squirrel burrows provide potential burrow sites for burrowing owls. A burrowing owl survey should be accomplished within 30 days prior to construction activities to ensure burrowing owls are not present during construction activities. If burrowing owls are discovered the CDFG should be consulted prior to construction.

The proposed project area was located within the geographic range of the Mohave ground squirrel (*Spermophilus mohavensis*). The habitat within the study area appeared potentially suitable to support Mohave ground squirrels. The CDFG may require a Section 2081 permit, prior to development of this project. Compensation and mitigation for potential impacts to Mohave ground squirrels, if required, will be determined through the Section 2081 permit process. No other state or federally listed threatened or endangered species are expected to occur within the proposed project area (California Department of Fish and Game 2002, Smith and Berg 1988, U.S. Fish & Wildlife Service 1990).

For parcels containing juniper trees and/or Joshua trees, the City of Palmdale requires preparation of a native vegetation preservation plan. Elements of a native vegetation plan have been incorporated into this report.

Table 4. List of wildlife species that may occur within the study area, a proposed commercial development, Palmdale, California.

Common Name	Scientific Name
Antelope ground squirrel	*Ammospermophilus leucurus*
Deer mouse	*Peromyscus maniculatus*
Merriam kangaroo rat	*Dipodomys merriami*
Pocket gopher	*Thomomys bottae*
Domestic cat	*Felis* sp.
American kestrel	*Falco sparverius*
Red-tailed hawk	*Buteo jamaicensis*
Rock dove	*Columba livia*
Common flicker	*Colaptes auratus*
Ladder-backed woodpecker	*Picoides scalaris*
Western meadowlark	*Sturnella neglecta*
Horned lark	*Eremophila alpestris*
House sparrow	*Passer domesticus*
Sage sparrow	*Amphispiza belli*
Side blotched lizard	*Uta stansburiana*
Western whiptail	*Cnemidophorus tigris*
Desert spiny lizard	*Sceloporus magister*
Desert night lizard	*Xantusia vigilis*
Gopher snake	*Pituophis melanoleucus*
Yucca moth	Order: Lepidoptera
Darkling beetle	*Coelocnemis californicus*
Bees	Order: Hymenoptera
Fly	Order: Diptera
Spider	Order: Araneida

Joshua trees in the 5-12 foot size range, appearing undamaged, were marked for transplanting. These Joshua trees were considered to have the best chance for transplanting success. The smaller trees can be moved by hand, or possibly with a skip loader or bulldozer. If the smaller trees are moved using shovels, great care should be taken to not damage root systems and keep dirt around the root ball. Otherwise, success of the transplants will be jeopardized.

Joshua trees should be transplanted to areas not prone to future disturbance. Joshua trees can be transplanted in landscape easements, any other potential buffer areas, or in any street landscaping. A minimum of 100 Joshua trees (2/acre) should be transplanted in order to satisfy Palmdale City Ordinance requirements. Seventy-eight Joshua trees were found to be the most suitable for transplanting. If 100 Joshua trees cannot be transplanted in landscape easements, other buffer areas, or street landscaping, then the following steps will be taken in sequential order.

1. Joshua trees will be made available to the City of Palmdale.
2. Joshua trees will be offered to other development projects.
3. Joshua trees will be made available to the public.
4. Joshua trees will be "banked" at an approved location.
5. An in lieu fee will be paid.

A two year maintenance program will be established in accordance with the guidelines of the Palmdale City Ordinance. Joshua trees should be planted at least ten feet (3 m) apart and well watered immediately. Joshua trees transplanted during fall, winter, or early spring should be adequately watered once a week for two months following transplanting. Joshua trees transplanted during late spring or summer should be adequately watered until the end of hot weather. If sufficient rainfall or low evaporation rates occur and the soil remains moist these watering schedules should be reduced in frequency. Joshua trees should be planted in a sandy, well drained soil. Construction activity should not occur within twenty-five feet (8 m) of transplanted Joshua trees.

The Palmdale City Planning Department will require Joshua trees to be permanently marked when transplanted to another location. The goal of marking Joshua trees is to allow the Palmdale City Planning Department to track survival of Joshua trees and have them replaced as necessary by the project proponent. Permanent marking could include metal tags, markers such as stakes in the ground, or other means. The method of permanent marking utilized should not harm the Joshua trees. The permanent marking should include information that designates the date the Joshua tree was transplanted, project site the Joshua tree came from, and point of contact name, address, and phone number. Prior to transplanting Joshua trees, the method of marking and information provided should be submitted to the Palmdale Planning Department for approval.

One year following Joshua tree transplanting a written report should be submitted to the Palmdale City Planning Department. This report should provide the number of Joshua trees transplanted, the date(s) of transplanting, dates Joshua trees are watered, and the number of Joshua trees surviving after one year. The Palmdale City Planning Department should be able to provide a list of persons that can assist in transplanting Joshua trees.

Landscape design should incorporate the use of native plants to the maximum extent feasible. Native plants that have food and cover value to wildlife should be used in landscape design (Adams and Dove 1989). Diversity of native plants should be maximized in landscape design (Adams and Dove 1989). This project is not expected to result in a significant adverse impact to biological resources.

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Mark Hagan
44715 17th Street East
Lancaster, CA 93535
(661) 723-0086
(661) 433-9956 (cell)

May 7, 2006

Lilburn Corporation
Attn: Mr. Marty Derus
1905 Business Center Drive
San Bernardino, CA 92408

Re: Amendment to Biological Resource Assessment and Native Vegetation Preservation Plan for a Commercial Development, Palmdale, California

Dear Mr. Derus:

This letter provides an amendment to the report "Biological Resource Assessment and Native Vegetation Preservation Plan for a Commercial Development, Palmdale, California." This amendment provides additional information for the development of a drainage channel. The proposed drainage channel would be located for 800 feet (258 m) along 45th Street East and then about 1,300 feet (419 m) along Palmdale Boulevard. The proposed drainage channel project area encompassed approximately 5 acres (2 ha). The proposed drainage channel is located in T6N, R11W, along the west edge of the SE1/4 and along the north edge of the NE1/4 of the SW1/4 of Section 28, S.B.B.M.

A line transect survey was conducted to inventory plant and wildlife species occurring and to count, assess the health, and determine the size class of Joshua trees (*Yucca brevifolia*). Line transects were approximately 2,100 feet (677 m) long and spaced about 25 feet (8 m) apart. Joshua trees that grew in clumps and appeared to be growing from the same root ball were counted as a single tree. The height of the highest tree in the clump was recorded. Joshua trees, which appeared suitable for transplanting by machine, were temporarily marked with orange flagging tape. Joshua tree locations were recorded on a site map.

A total of four line transects were walked on 3 May 2006. Weather conditions consisted of moderate temperatures (estimated 65 degrees F), 60% hazy cloud cover, and a moderate wind. A sandy loam surface soil texture was characteristic throughout the study area. The proposed project area was characteristic of a Joshua tree woodland and desert scrub plant community. A total of thirteen plant species were observed during the line transect survey that were not in the original biological report (Table 1). No wildlife species, or their sign were observed during the line transect survey that were not in the original biological report. No desert tortoises (*Gopherus agassizii*) or sign were observed

during the field survey. No burrowing owls (*Athene cunicularia*) or sign were observed during the field survey. Two bird nests were observed in silver cholla (*Opuntia echinocarpa*). One of these appeared to be an active cactus wren (*Campylorhynchus brunneicapillus*) nest. No California ground squirrel (*Citellus beecheyi*) burrows were observed within the proposed drainage corridor.

A total of 58 Joshua trees were counted during the line transect survey (Figure 1, Table 2). A total of 2 Joshua trees appearing to have the most potential for survival after transplanting were temporarily marked with orange flagging tape (Figure 1, Table 2). Joshua trees occurring next to disturbed areas and roads that showed evidence of recent use were not marked, due to potential damage to root systems and soil compaction caused by vehicles. Scattered litter was observed throughout the study area. Installation of sewer and water lines was underway along 45th Street East. Some off road vehicle tracks were observed adjacent to the graded corridor for the sewer and water lines.

Most annual vegetation was in flower at the time the field survey was conducted. However, it is probable that some annual species were not visible during the time the field survey of the proposed drainage channel was conducted. The mitigations listed in the biological report are also valid for the proposed drainage channel. Specifically, mitigations for migratory birds and Mohave ground squirrels (*Spermophilus mohavensis*) would apply for the proposed drainage channel. No mitigation measures for burrowing owls (*Athene cunicularia*) are recommended for the proposed drainage channel. Joshua trees should be transplanted in accordance with the native vegetation preservation plan that was part of the original biological report.

Please let me know if you have any questions regarding this amendment to the biological report and native vegetation preservation plan.

Sincerely,

Mark Hagan
Wildlife Biologist

Table 1. List of plant species observed within the drainage corridor and that were not listed in the original biological report.

Common Name	Scientific Name
Hop sage	*Grayia spinosa*
Desert dandelion	*Malacothrix glabrata*
Goldfields	*Lasthenia californica*
Sun cups	*Camiissonia campestris*
Slender keel fruit	*Tropidocarpum gracile*
Rattlesnake weed	*Euphorbia albomarginata*
Comb-bur	*Pectocarya* sp.
Yellow pepper grass	*Lepidium flavum*
Wallace's woolly sunflower	*Eriophyllum wallacei*
Pringle's woolly sunflower	*Eriophyllum pringlei*
Forget-me-not	*Cryptantha* sp.
Mustard sp.	Brassicaceae
Squirrel-tail grass	*Hordeum jubatum*

Table 2. Number of Joshua trees by size class occurring within the proposed drainage corridor and that were not listed in the original biological report.

Size Class of Joshua trees (in feet)	Total Number of Joshua trees (5 Acres)
1-3	37
4-6	2
7-9	3
10-12	4
>12	12
Total	58
# Marked	2

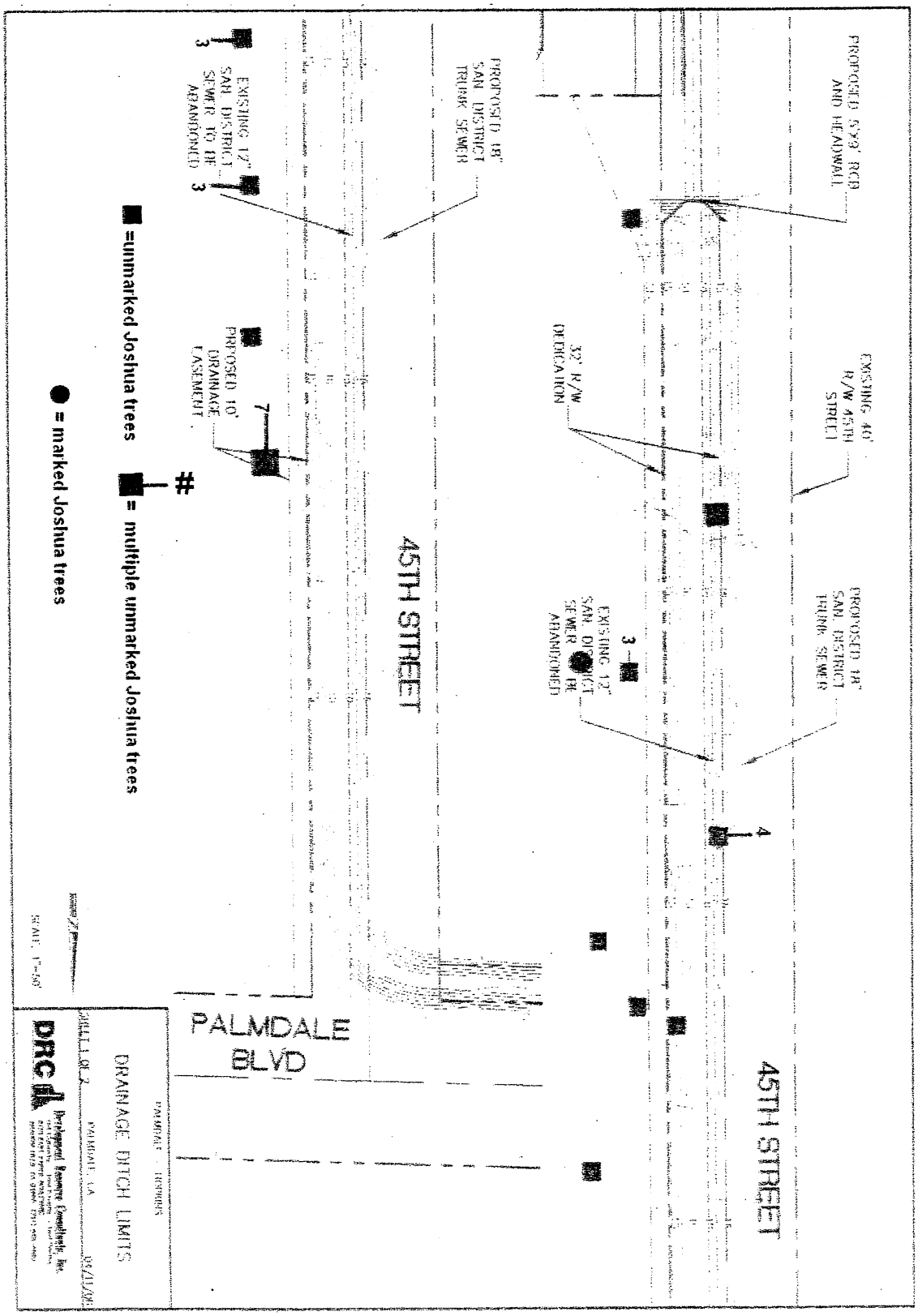

Figure 1a. Approximate location of Joshua trees for drainage channel development.

Figure 1b. Approximate location of Joshua trees for drainage channel development.

APPENDIX D
PRELIMINARY DRAINAGE STUDY

PRELIMINARY DRAINAGE STUDY / SUSMP

FOR

PALMDALE MARKETPLACE

NWC AVENUE R AND 47TH STREET

PALMDALE, CALIFORNIA

Prepared for

HOPKINS REAL ESTATE GROUP
17461 Derian Ave., Suite 106
Irvine, CA 92614
Ed Bach, Development Manager
(949) 270-2426

Prepared By:

DEVELOPMENT RESOURCE CONSULTANTS, INC.
8175 E. Kaiser Blvd.
Anaheim, CA 92808
(714) 685-6860
Brandon Willnecker P.E., Project Manager

Project No. 05-225

March 2, 2006

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- SUSUMP Compliance

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SECTION 6.0 **PROPOSED HYDROLOGY MAP**

SECTION 1.0

NARRATIVE

Introduction
Project Description
Hydrology Methodology
Detention Analysis
SUSMP Compliance

Introduction

The project is located on approximately 47 acres of vacant land located at the Northwest corner of Avenue R and 47th Street, in the City of Palmdale, California. The site is bounded on the North by an vacant property, to the west by 45th Street, to the South by Avenue R and to the East by 47th Street (S.R. 138). The property is proposed to be developed into a retail center, consisting of retail, commercial, and restaurant uses.

Project Description

Existing Site Conditions: The project site consists of barren land that overland flows off-site at the north west end of the site. There are currently no existing on-site improvements or storm water treatment devices. See Existing Hydrology Map in section 5.

Proposed Site Development: The proposed site consists of numerous retail buildings, drive isles, and landscaping. On-site runoff is directed to an on-site above ground detention basin, through stormdrains and overland flow, where storm water is detained to pre-development discharge levels for the 10, 25, and 50-Year storms. The detention facility outlets to a proposed Regional Storm Drain facility to be constructed under 45th Street. The discharge is then carried to a downstream county facility by means of an earth ditch / swale. An overland flow release path to the public right of way has been designed into the grading scheme to assure that no storm water will flood any of the buildings. See section 6 for Proposed Hydrology Map.

Hydrology Methodology

The hydrology calculations are based on the Los Angeles County department of Public Works Hydrology Manual and Hydrology Method issued in June 2002. The Time of Concentration software prepared and issued by LACDPW is used to develop the time of concentration and storm water runoff flows. LACDPW MORA software was then used to create hydrographs of the proposed condition for 10-Year, 25-Year, and 50-Year storm events. See section 3 for runoff calculations and proposed site hydrographs. The hydrographs generated using LACDPW methodology was inserted into Hydrograph Hydroflow software for detention analysis. A soil type of 134 and an isohyet of 2.8 was used for these calculations per LACDPW Hydrology Manual. See Section 2 for LA County Maps.

Detention Analysis

The existing site generates 3cfs, 3cfs, and 4cfs for the 10-Year, 25-Year, and 50-Year storm event respectively. The proposed site generates 20cfs, 25cfs, and 30cfs for the same rainfall events. Detention of the proposed runoff is required to only discharge the existing pre-developed runoff levels.

Using catch basins, inlets, and storm drain pipes, all on-site flow is directed towards an on-site above ground detention facility / pond. The detention pond outflows to a proposed 96" city of Palmdale regional storm water pipe. The pond outflow will be limited by an 8" orifice plate that will restrict the storm water flow to pre-developed levels. See section 4 for detention calculations. In the event of a storm event larger than the 50-Year storm event, or if the orifice

becomes clogged, the pond has an unrestricted release line that flows directly into the 96" public line.

SUSUMP COMPLIANCE

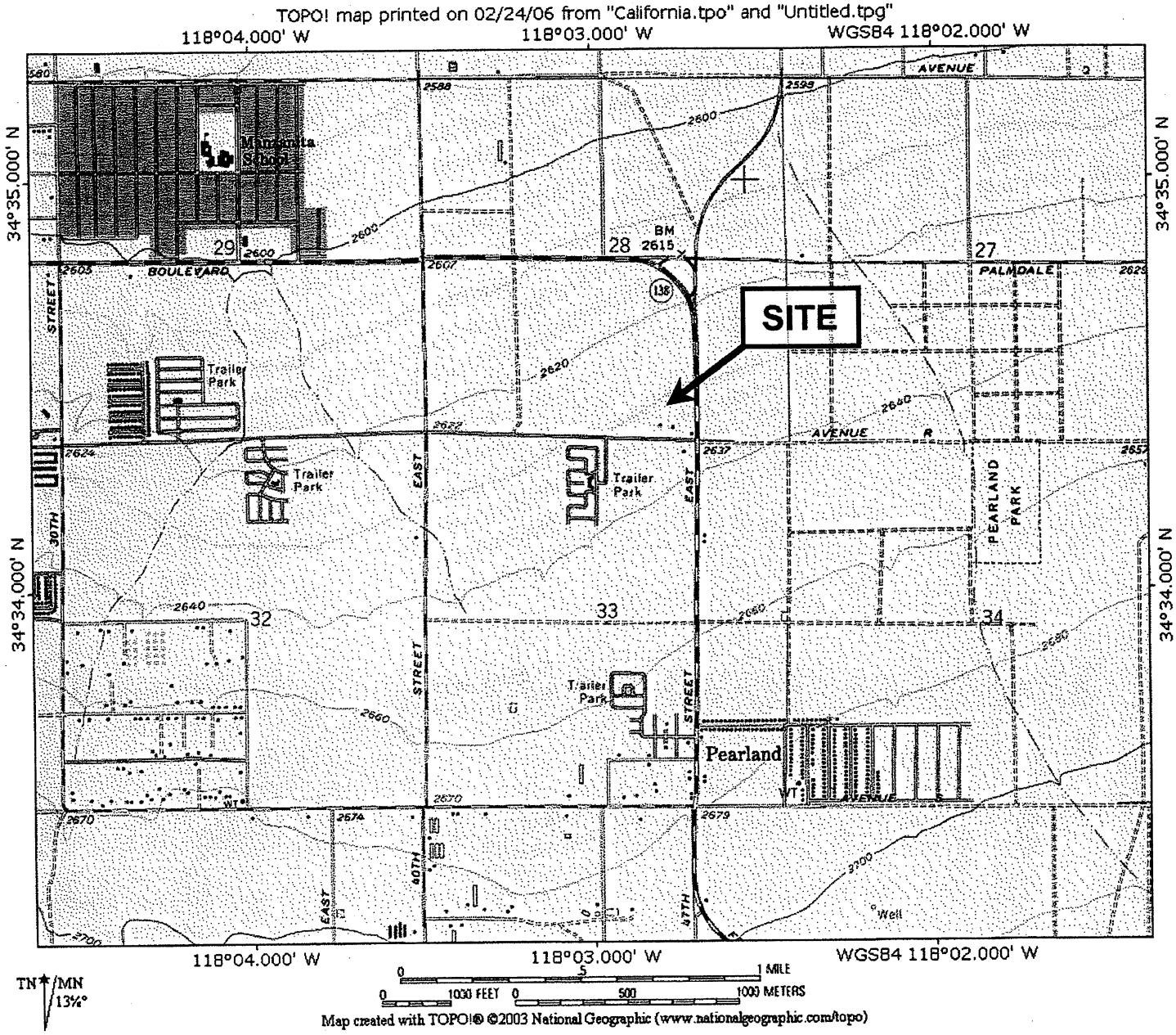
All on-site storm water will be treated for pollutants before it is discharged into the city drainage facility. The area behind the major buildings will be discharged into the detention pond, which will act as a bio-swale filter. The rest of the site will be treated by an inline stormwater filtration device located in the private storm drain system prior to discharging into the detention basin.

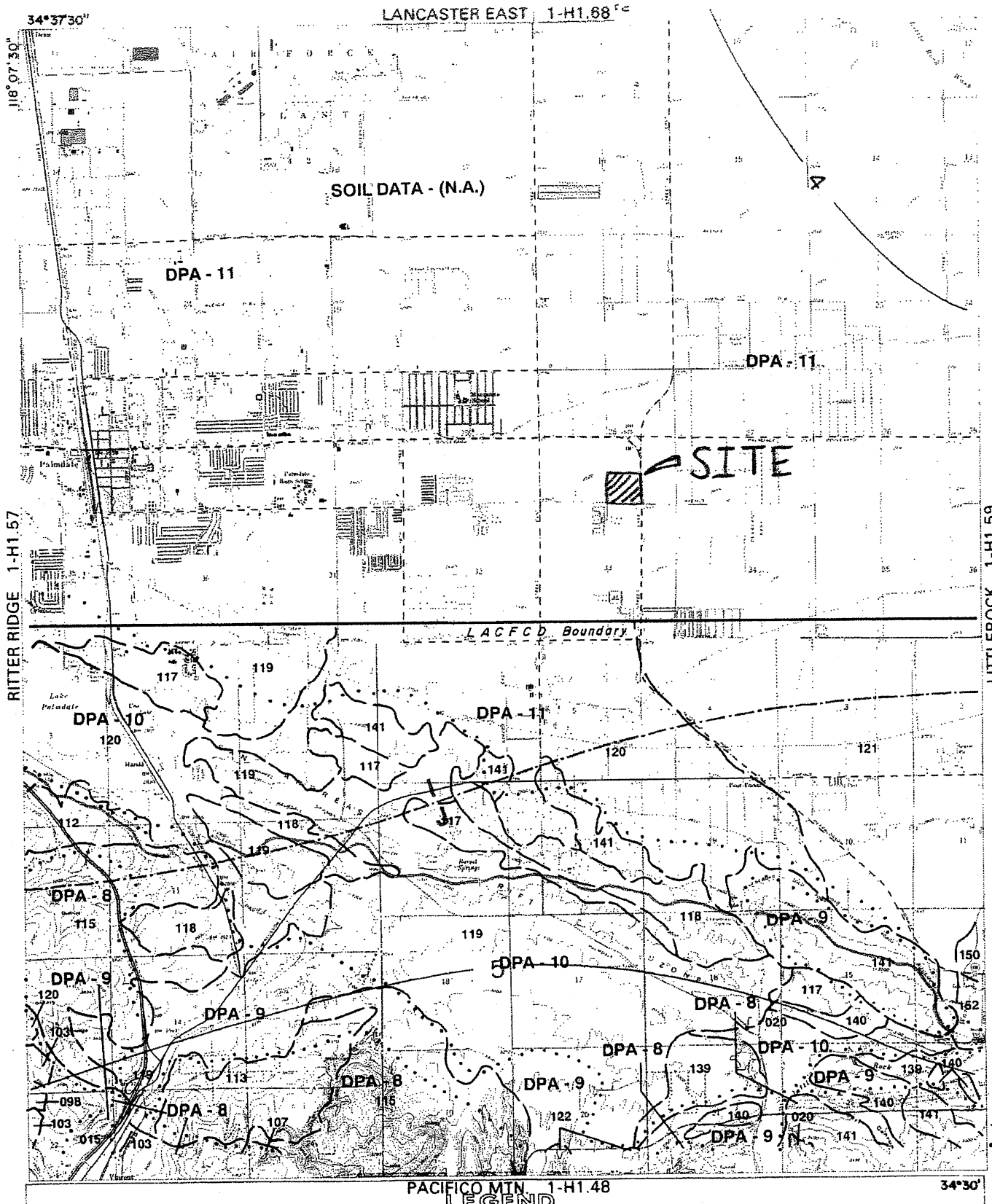
SECTION 2.0

SITE INFORMATION

VICINITY MAP

The project site is located in the City of Palmdale, County of Los Angeles, State of California. The site is situated at the southwest corner of Palmdale Avenue and 47th Street and is bounded by Palmdale Avenue on the north, 47th Street on the east, Avenue R on the south, and 45th Street on the west.





LEGEND

——— SOIL CLASSIFICATION AREA

..... DEBRIS POTENTIAL AREA

-·-·-·- RAINFALL ZONE

—12— 50-YEAR ISOHYET (MAX. 24-HOUR AMOUNT)

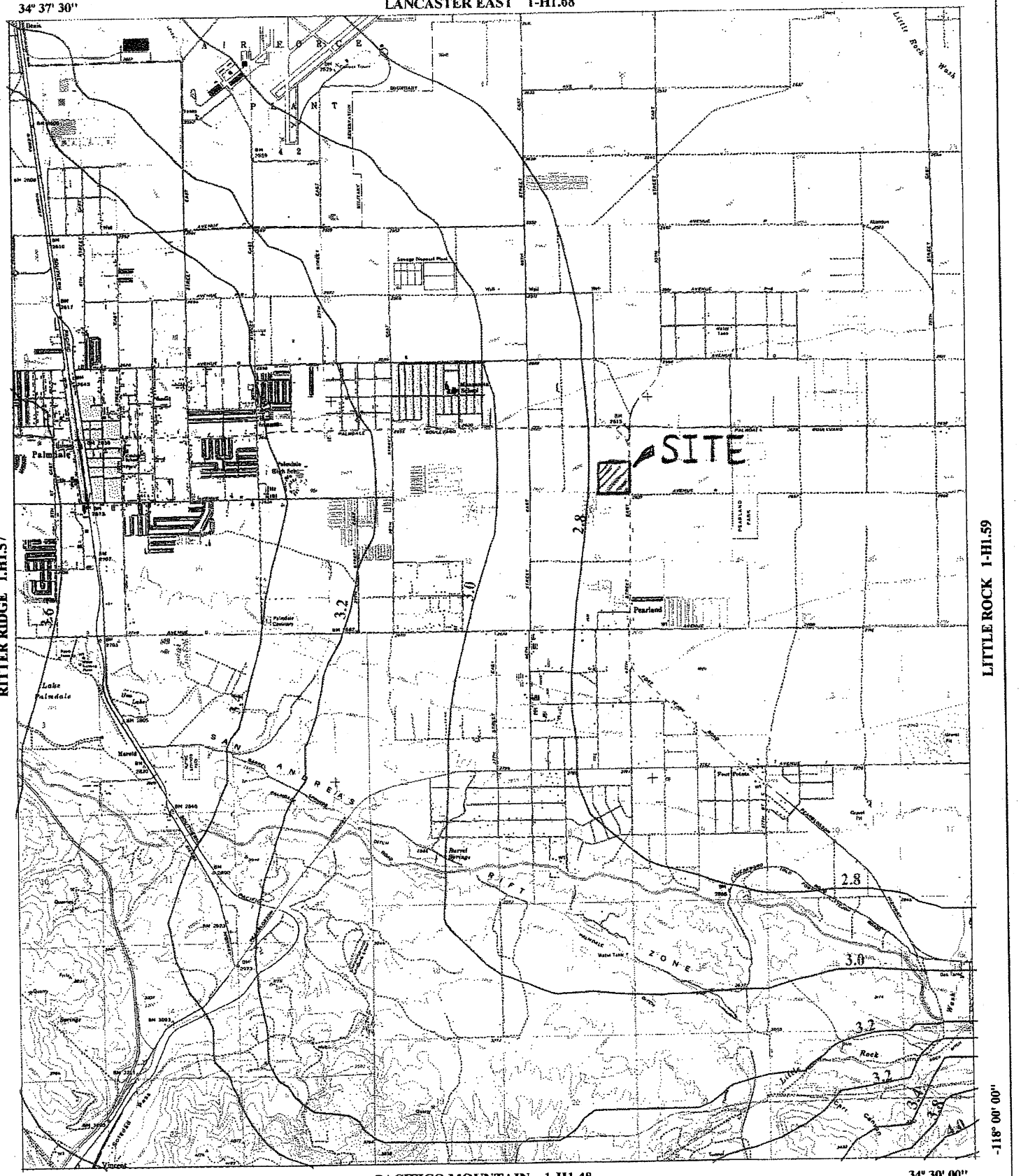
L A C D P W

N

0 FEET 5000

PALMDALE 1974

hydrologic map



1 0 1 2 Miles

N
W E
S

7.2 INCHES OF RAINFALL

25-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.878
10-YEAR 24-HOUR ISOHYET REDUCTION FACTOR: 0.714

PALMDALE

50-YEAR 24-HOUR ISOHYET

1-H1.58

LOS ANGELES COUNTY PUBLIC WORKS
Public Service That Works

SECTION 3.0

RUNOFF CALCULATIONS
HYDROGRAPH OUTPUT

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
05-225	Site	46.7	0.9	10	134	1500	0.01	2	30	0.51	0.1	0.82	20

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
05-225	Site	46.7	0.9	25	134	1500	0.01	2.46	27	0.66	0.1	0.82	25

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
05-225	Site	46.7	0.9	50	134	1500	0.01	2.8	25	0.78	0.1	0.82	30

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
05-225	Site	46.7	0.01	10	134	1500	0.01	2	30	0.51	0.1	0.11	3

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
05-225	Site	46.7	0.01	25	134	1500	0.01	2.46	30	0.63	0.1	0.11	3

Project	Subarea	Area (acres)	%imp	Frequency	Soil Type	Length (ft)	Slope (ft/ft)	Isohyet (in.)	Tc-calculated (min.)	Intensity (in./hr)	Cu	Cd	Flowrate (cfs)
05-225	Site	46.7	0.01	50	134	1500	0.01	2.8	30	0.72	0.1	0.11	4

PROG FO601A

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

MODIFIED RATIONAL METHOD HYDROLOGY

HYDROGRAPH FOR PROPOSED RUNOFF 10 YEAR STORM

HYDROGRAPH AT 5225 2A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	2.	200	2.	300	2.	400	2.
500	2.	600	3.	700	3.	800	3.	900	4.
1000	4.	1050	5.	1100	7.	1110	7.	1120	8.
1130	9.	1131	9.	1132	9.	1133	9.	1134	10.
1135	10.	1136	10.	1137	10.	1138	10.	1139	10.
1140	10.	1141	11.	1142	11.	1143	11.	1144	11.
1145	12.	1146	12.	1147	12.	1148	12.	1149	13.
1150	13.	1151	14.	1152	14.	1153	15.	1154	17.
1155	18.	1156	19.	1157	20.	1158	21.	1159	21.
1160	21.	1161	22.	1162	22.	1163	22.	1164	22.
1165	22.	1166	22.	1167	22.	1168	21.	1169	21.
1170	21.	1171	21.	1172	21.	1173	20.	1174	20.
1175	20.	1176	19.	1177	19.	1178	19.	1179	18.
1180	18.	1181	17.	1182	16.	1183	15.	1184	14.
1185	13.	1186	12.	1187	11.	1188	10.	1189	9.
1190	9.	1191	8.	1192	8.	1193	7.	1194	7.
1195	7.	1196	7.	1197	7.	1198	6.	1199	6.
1200	6.	1201	6.	1202	6.	1203	6.	1204	6.
1205	6.	1206	5.	1207	5.	1208	5.	1209	5.
1210	5.	1211	5.	1212	5.	1213	5.	1214	5.
1215	5.	1216	5.	1217	5.	1218	5.	1219	5.
1220	4.	1221	4.	1222	4.	1223	4.	1224	4.
1225	4.	1226	4.	1227	4.	1228	4.	1229	4.
1230	4.	1231	4.	1232	4.	1233	4.	1234	4.
1235	4.	1236	4.	1237	4.	1238	4.	1239	4.
1240	4.	1241	4.	1242	4.	1243	4.	1244	4.
1245	4.	1246	4.	1247	4.	1248	4.	1249	4.
1250	4.	1251	4.	1252	3.	1253	3.	1254	3.
1255	3.	1256	3.	1257	3.	1258	3.	1259	3.
1260	3.	1261	3.	1262	3.	1263	3.	1264	3.
1265	3.	1266	3.	1267	3.	1268	3.	1269	3.
1270	3.	1271	3.	1272	3.	1273	3.	1274	3.
1275	3.	1276	3.	1277	3.	1278	3.	1279	3.
1280	3.	1281	3.	1282	3.	1283	3.	1284	3.
1285	3.	1286	3.	1287	3.	1288	3.	1289	3.
1290	3.	1291	3.	1292	3.	1293	3.	1294	3.
1295	3.	1296	3.	1297	3.	1298	3.	1299	3.
1300	3.	1310	3.	1320	3.	1330	3.	1340	2.
1350	2.	1360	2.	1370	2.	1380	2.	1390	2.
1400	2.	1420	2.	1440	2.	1460	2.	1500	2.

Total Runoff = 6.983 Acre-Ft.
Peak Q = 22 CFS
Time to Peak Q = 1161 Minutes

PROG FO601A

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

MODIFIED RATIONAL METHOD HYDROLOGY

HYDROGRAPH FOR PROPOSED RUNOFF 25 YEAR STORM

HYDROGRAPH AT 5225 2A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	2.	200	2.	300	3.	400	3.
500	3.	600	3.	700	3.	800	4.	900	4.
1000	5.	1050	6.	1100	8.	1110	9.	1120	10.
1130	11.	1131	11.	1132	11.	1133	12.	1134	12.
1135	12.	1136	12.	1137	12.	1138	12.	1139	13.
1140	13.	1141	13.	1142	13.	1143	14.	1144	14.
1145	14.	1146	15.	1147	15.	1148	15.	1149	16.
1150	16.	1151	17.	1152	18.	1153	19.	1154	21.
1155	23.	1156	24.	1157	25.	1158	26.	1159	27.
1160	27.	1161	27.	1162	27.	1163	27.	1164	27.
1165	27.	1166	27.	1167	27.	1168	27.	1169	26.
1170	26.	1171	26.	1172	25.	1173	25.	1174	24.
1175	24.	1176	23.	1177	23.	1178	22.	1179	21.
1180	19.	1181	18.	1182	16.	1183	14.	1184	13.
1185	12.	1186	11.	1187	10.	1188	10.	1189	9.
1190	9.	1191	9.	1192	8.	1193	8.	1194	8.
1195	8.	1196	8.	1197	7.	1198	7.	1199	7.
1200	7.	1201	7.	1202	7.	1203	7.	1204	6.
1205	6.	1206	6.	1207	6.	1208	6.	1209	6.
1210	6.	1211	6.	1212	6.	1213	6.	1214	6.
1215	6.	1216	6.	1217	5.	1218	5.	1219	5.
1220	5.	1221	5.	1222	5.	1223	5.	1224	5.
1225	5.	1226	5.	1227	5.	1228	5.	1229	5.
1230	5.	1231	5.	1232	5.	1233	5.	1234	5.
1235	5.	1236	5.	1237	5.	1238	5.	1239	4.
1240	4.	1241	4.	1242	4.	1243	4.	1244	4.
1245	4.	1246	4.	1247	4.	1248	4.	1249	4.
1250	4.	1251	4.	1252	4.	1253	4.	1254	4.
1255	4.	1256	4.	1257	4.	1258	4.	1259	4.
1260	4.	1261	4.	1262	4.	1263	4.	1264	4.
1265	4.	1266	4.	1267	4.	1268	4.	1269	4.
1270	4.	1271	4.	1272	4.	1273	4.	1274	4.
1275	4.	1276	4.	1277	4.	1278	4.	1279	4.
1280	4.	1281	4.	1282	4.	1283	4.	1284	4.
1285	4.	1286	4.	1287	4.	1288	3.	1289	3.
1290	3.	1291	3.	1292	3.	1293	3.	1294	3.
1295	3.	1296	3.	1297	3.	1298	3.	1299	3.
1300	3.	1310	3.	1320	3.	1330	3.	1340	3.
1350	3.	1360	3.	1370	3.	1380	3.	1390	3.
1400	3.	1420	2.	1440	2.	1460	2.	1500	2.

Total Runoff = 8.277 Acre-Ft.
Peak Q = 27 CFS
Time to Peak Q = 1159 Minutes

PROG FO601A

LOS ANGELES COUNTY FLOOD CONTROL DISTRICT

MODIFIED RATIONAL METHOD HYDROLOGY

HYDROGRAPH FOR PROPOSED RUNOFF 50 YEAR STORM

HYDROGRAPH AT 5225 2A STORM DAY 4 REDUCTION FACTOR = 1.000

TIME	Q	TIME	Q	TIME	Q	TIME	Q	TIME	Q
0	0.	100	3.	200	3.	300	3.	400	3.
500	3.	600	4.	700	4.	800	4.	900	5.
1000	6.	1050	7.	1100	9.	1110	10.	1120	11.
1130	13.	1131	13.	1132	13.	1133	14.	1134	14.
1135	14.	1136	14.	1137	14.	1138	15.	1139	15.
1140	15.	1141	15.	1142	16.	1143	16.	1144	16.
1145	17.	1146	17.	1147	18.	1148	18.	1149	19.
1150	20.	1151	20.	1152	22.	1153	24.	1154	26.
1155	28.	1156	30.	1157	31.	1158	32.	1159	33.
1160	33.	1161	33.	1162	33.	1163	33.	1164	33.
1165	33.	1166	33.	1167	32.	1168	32.	1169	31.
1170	31.	1171	30.	1172	30.	1173	29.	1174	28.
1175	28.	1176	26.	1177	25.	1178	23.	1179	21.
1180	19.	1181	17.	1182	15.	1183	14.	1184	13.
1185	12.	1186	12.	1187	11.	1188	11.	1189	10.
1190	10.	1191	10.	1192	9.	1193	9.	1194	9.
1195	9.	1196	8.	1197	8.	1198	8.	1199	8.
1200	8.	1201	8.	1202	8.	1203	7.	1204	7.
1205	7.	1206	7.	1207	7.	1208	7.	1209	7.
1210	7.	1211	7.	1212	7.	1213	7.	1214	7.
1215	6.	1216	6.	1217	6.	1218	6.	1219	6.
1220	6.	1221	6.	1222	6.	1223	6.	1224	6.
1225	6.	1226	6.	1227	6.	1228	6.	1229	6.
1230	6.	1231	6.	1232	5.	1233	5.	1234	5.
1235	5.	1236	5.	1237	5.	1238	5.	1239	5.
1240	5.	1241	5.	1242	5.	1243	5.	1244	5.
1245	5.	1246	5.	1247	5.	1248	5.	1249	5.
1250	5.	1251	5.	1252	5.	1253	5.	1254	5.
1255	5.	1256	5.	1257	5.	1258	5.	1259	5.
1260	5.	1261	5.	1262	5.	1263	5.	1264	4.
1265	4.	1266	4.	1267	4.	1268	4.	1269	4.
1270	4.	1271	4.	1272	4.	1273	4.	1274	4.
1275	4.	1276	4.	1277	4.	1278	4.	1279	4.
1280	4.	1281	4.	1282	4.	1283	4.	1284	4.
1285	4.	1286	4.	1287	4.	1288	4.	1289	4.
1290	4.	1291	4.	1292	4.	1293	4.	1294	4.
1295	4.	1296	4.	1297	4.	1298	4.	1299	4.
1300	4.	1310	4.	1320	4.	1330	4.	1340	3.
1350	3.	1360	3.	1370	3.	1380	3.	1390	3.
1400	3.	1420	3.	1440	3.	1460	3.	1500	3.

Total Runoff = 9.753 Acre-Ft.
Peak Q = 33 CFS
Time to Peak Q = 1159 Minutes

SECTION 4.0

DETENTION ANALYSIS

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Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Manual	22.00	1	1161	334,200	---	-----	-----	Proposed Condition
2	Reservoir	3.80	1	1261	334,190	1	23.44	106,725	Above Ground Storage

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

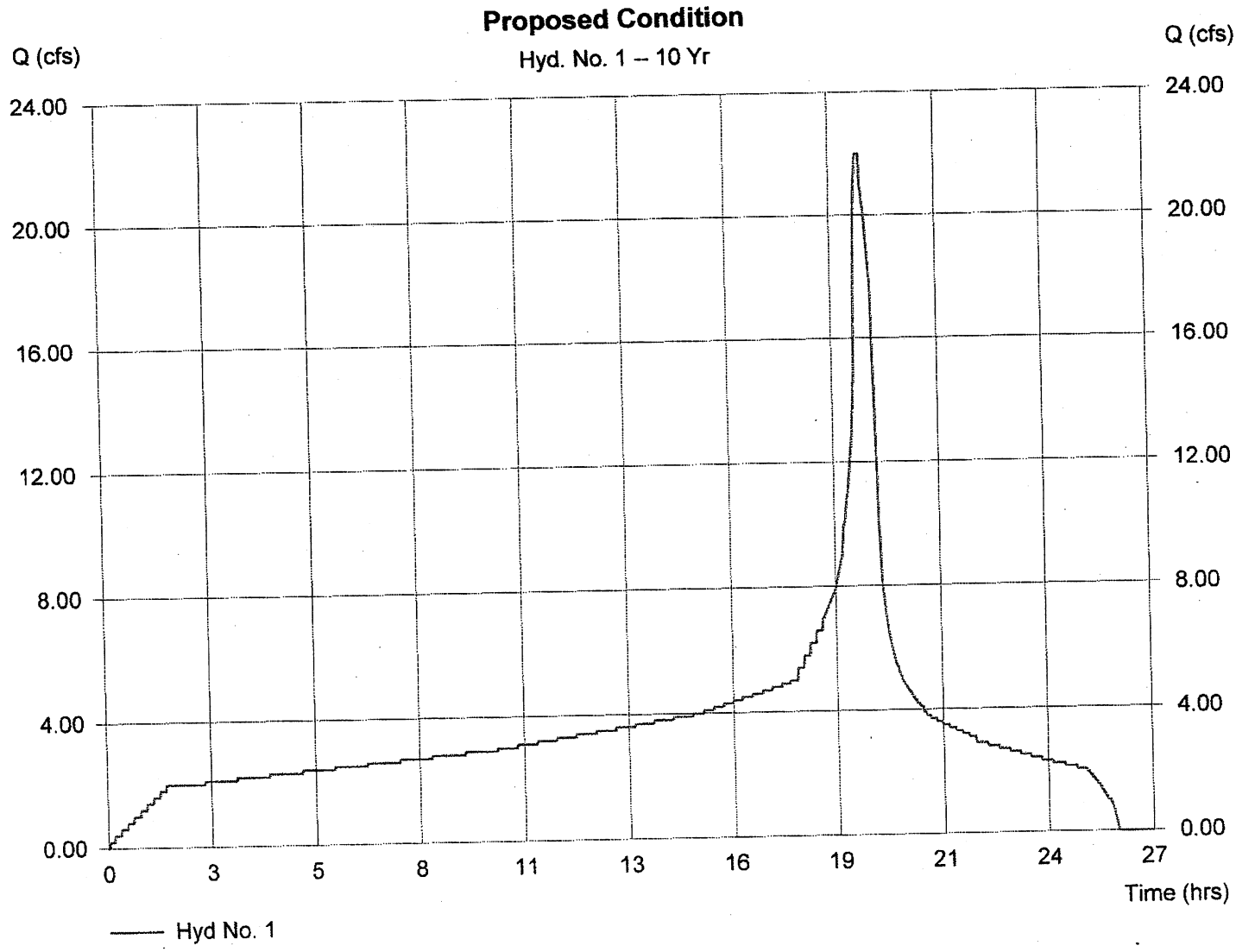
Hyd. No. 1

Proposed Condition

Hydrograph type = Manual
Storm frequency = 10 yrs

Peak discharge = 22.00 cfs
Time interval = 1 min

Hydrograph Volume = 334,200 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

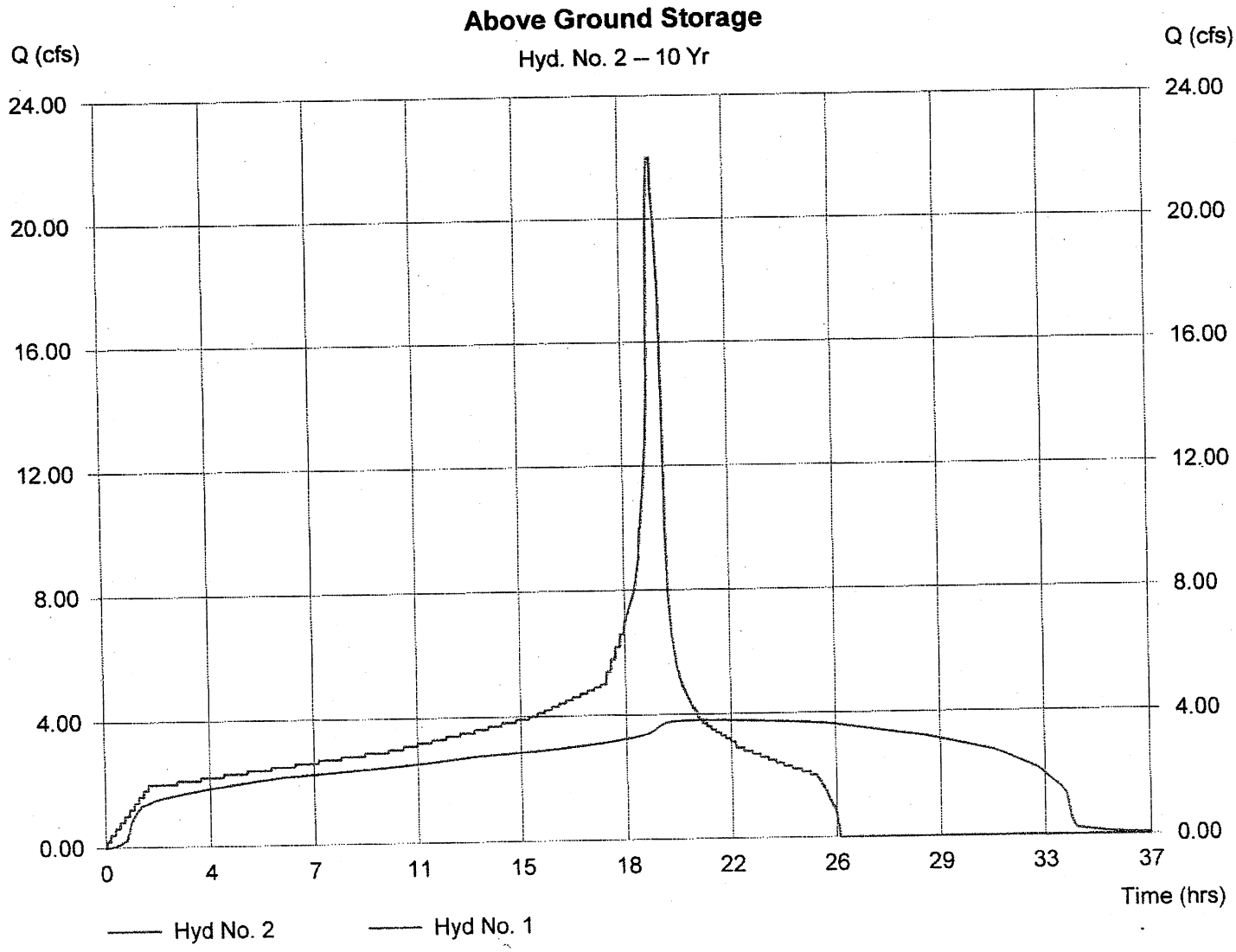
Hyd. No. 2

Above Ground Storage

Hydrograph type	= Reservoir	Peak discharge	= 3.80 cfs
Storm frequency	= 10 yrs	Time interval	= 1 min
Inflow hyd. No.	= 1	Max. Elevation	= 23.44 ft
Reservoir name	= Above Ground Storage	Max. Storage	= 106,725 cuft

Storage Indication method used.

Hydrograph Volume = 334,190 cuft



Pond Report

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

Pond No. 1 - Above Ground Storage

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	18.00	25	0	0
1.00	19.00	3,935	1,980	1,980
2.00	20.00	9,200	6,568	8,548
3.00	21.00	17,050	13,125	21,673
4.00	22.00	35,250	26,150	47,823
5.00	23.00	42,825	39,038	86,860
6.00	24.00	46,565	44,695	131,555
7.00	25.00	50,350	48,458	180,013
8.00	26.00	55,000	52,675	232,688

Culvert / Orifice Structures

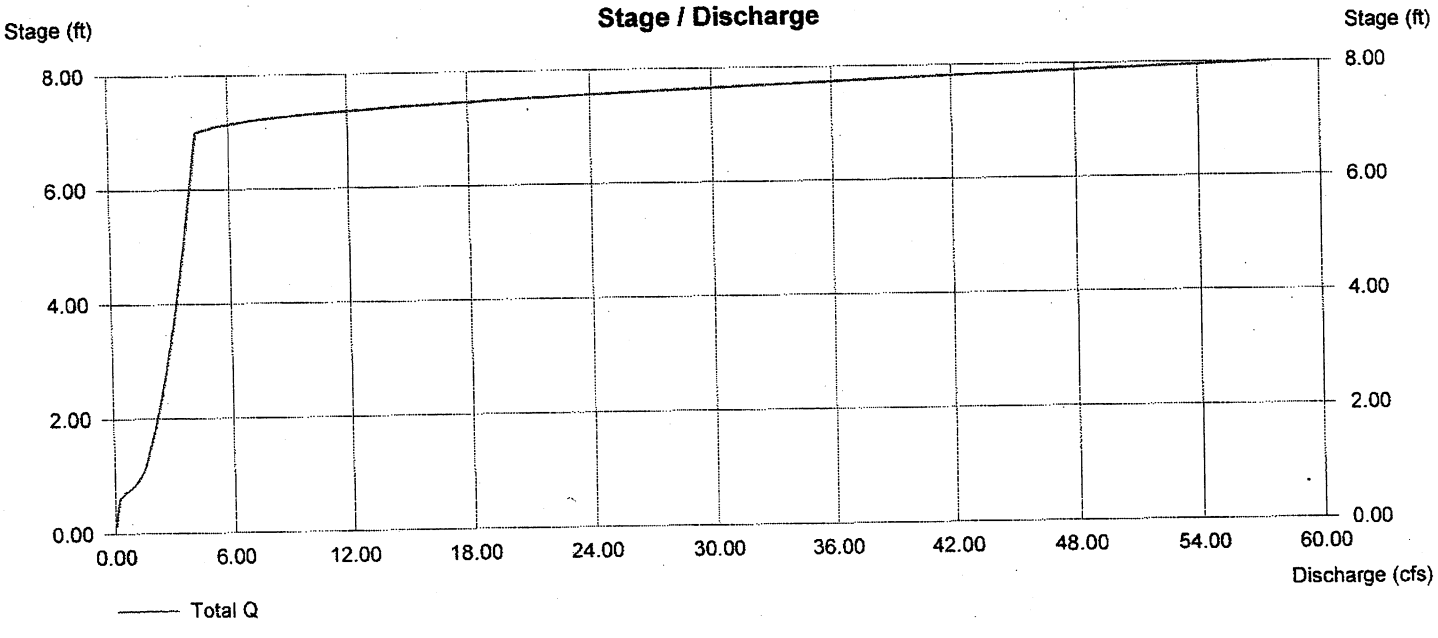
	[A]	[B]	[C]	[D]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 18.00	0.00	0.00	0.00
Length (ft)	= 1.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.42	10.00	0.00	0.00
Crest El. (ft)	= 25.00	25.25	0.00	0.00
Weir Coeff.	= 3.33	3.33	0.00	0.00
Weir Type	= Rect	Rect	---	---
Multi-Stage	= No	No	No	No

Exfiltration = 0.000 in/hr (Contour) **Tailwater Elev.** = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.



Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Manual	27.00	1	1159	376,602	---	-----	-----	Proposed Condition
2	Reservoir	4.04	1	1236	376,592	1	24.12	137,468	Above Ground Storage

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

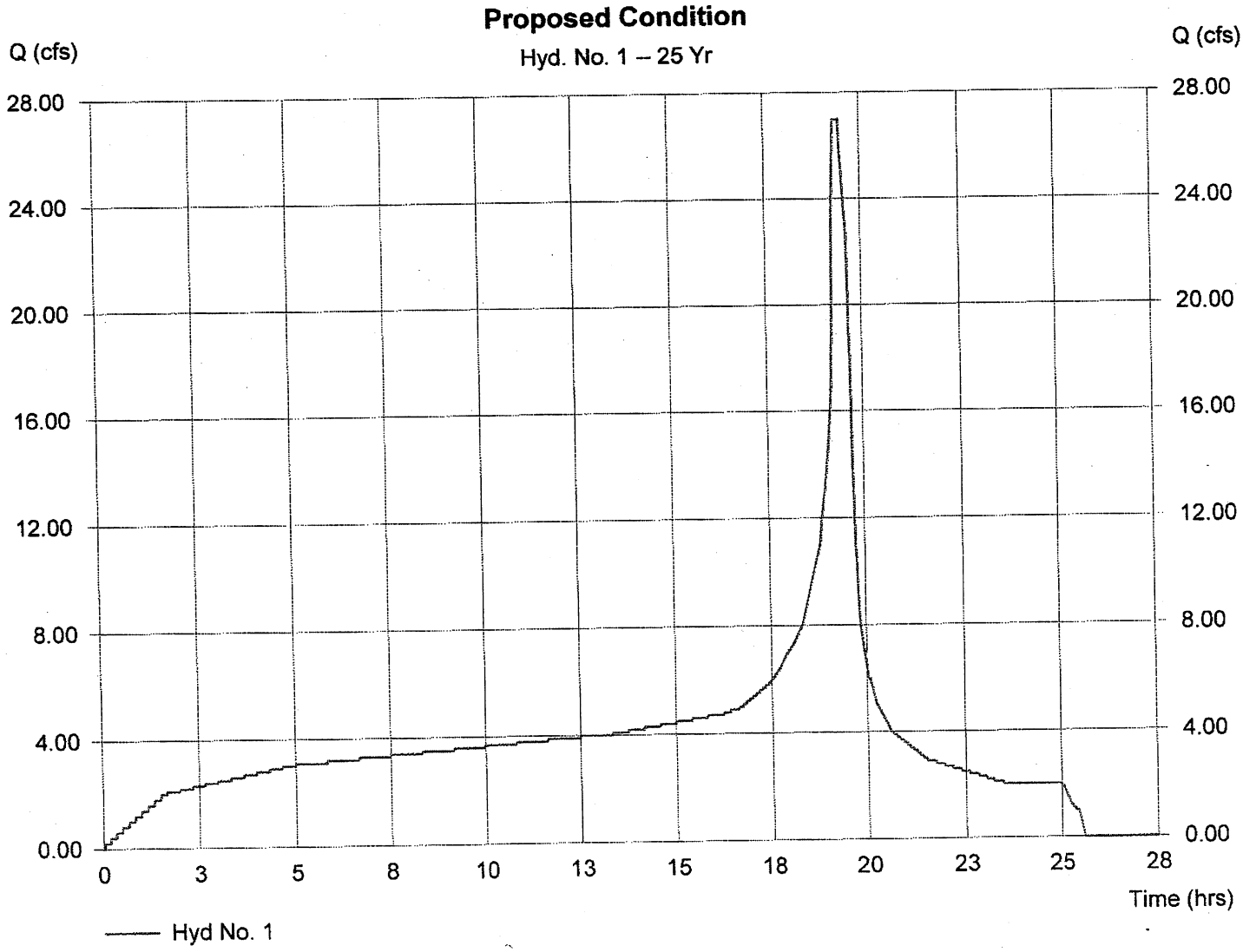
Hyd. No. 1

Proposed Condition

Hydrograph type = Manual
Storm frequency = 25 yrs

Peak discharge = 27.00 cfs
Time interval = 1 min

Hydrograph Volume = 376,602 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

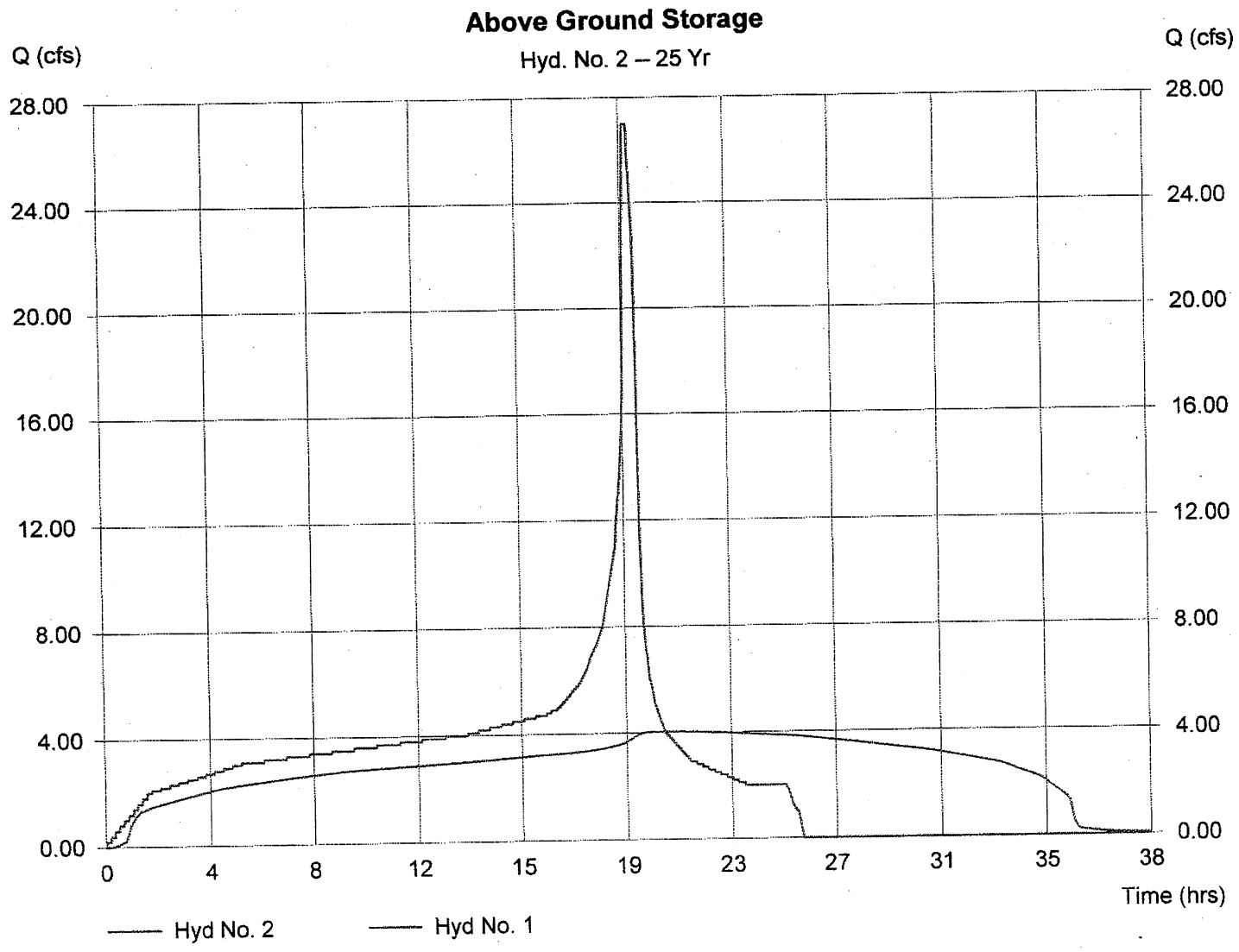
Hyd. No. 2

Above Ground Storage

Hydrograph type	= Reservoir	Peak discharge	= 4.04 cfs
Storm frequency	= 25 yrs	Time interval	= 1 min
Inflow hyd. No.	= 1	Max. Elevation	= 24.12 ft
Reservoir name	= Above Ground Storage	Max. Storage	= 137,468 cuft

Storage Indication method used.

Hydrograph Volume = 376,592 cuft



Pond Report

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

Pond No. 1 - Above Ground Storage

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	18.00	25	0	0
1.00	19.00	3,935	1,980	1,980
2.00	20.00	9,200	6,568	8,548
3.00	21.00	17,050	13,125	21,673
4.00	22.00	35,250	26,150	47,823
5.00	23.00	42,825	39,038	86,860
6.00	24.00	46,565	44,695	131,555
7.00	25.00	50,350	48,458	180,013
8.00	26.00	55,000	52,675	232,688

Culvert / Orifice Structures

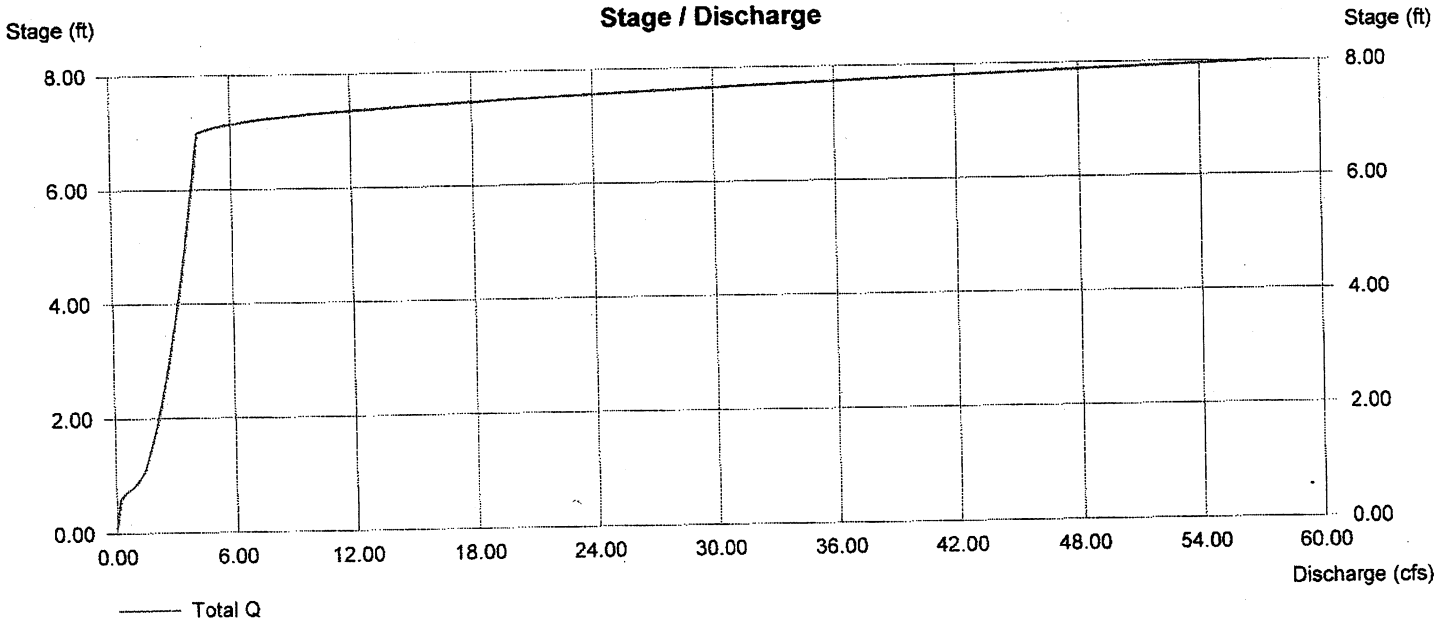
	[A]	[B]	[C]	[D]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 18.00	0.00	0.00	0.00
Length (ft)	= 1.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.42	10.00	0.00	0.00
Crest El. (ft)	= 25.00	25.25	0.00	0.00
Weir Coeff.	= 3.33	3.33	0.00	0.00
Weir Type	= Rect	Rect	---	---
Multi-Stage	= No	No	No	No

Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.



Hydrograph Summary Report

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to peak (min)	Volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Maximum storage (cuft)	Hydrograph description
1	Manual	33.00	1	1159	459,516	---	-----	-----	Proposed Condition
2	Reservoir	4.33	1	1316	459,483	1	24.97	178,732	Above Ground Storage

Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

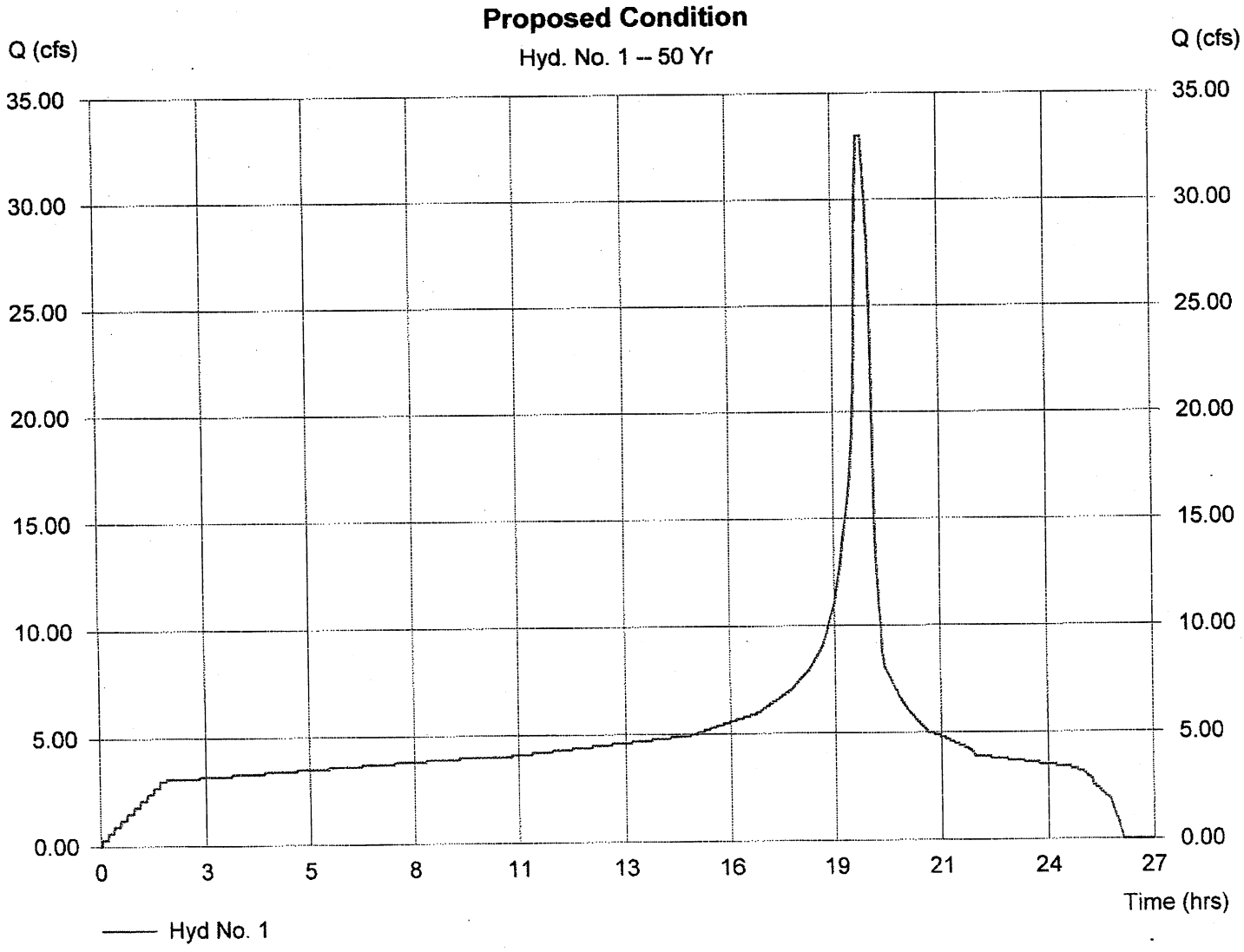
Hyd. No. 1

Proposed Condition

Hydrograph type = Manual
Storm frequency = 50 yrs

Peak discharge = 33.00 cfs
Time interval = 1 min

Hydrograph Volume = 459,516 cuft



Hydrograph Plot

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

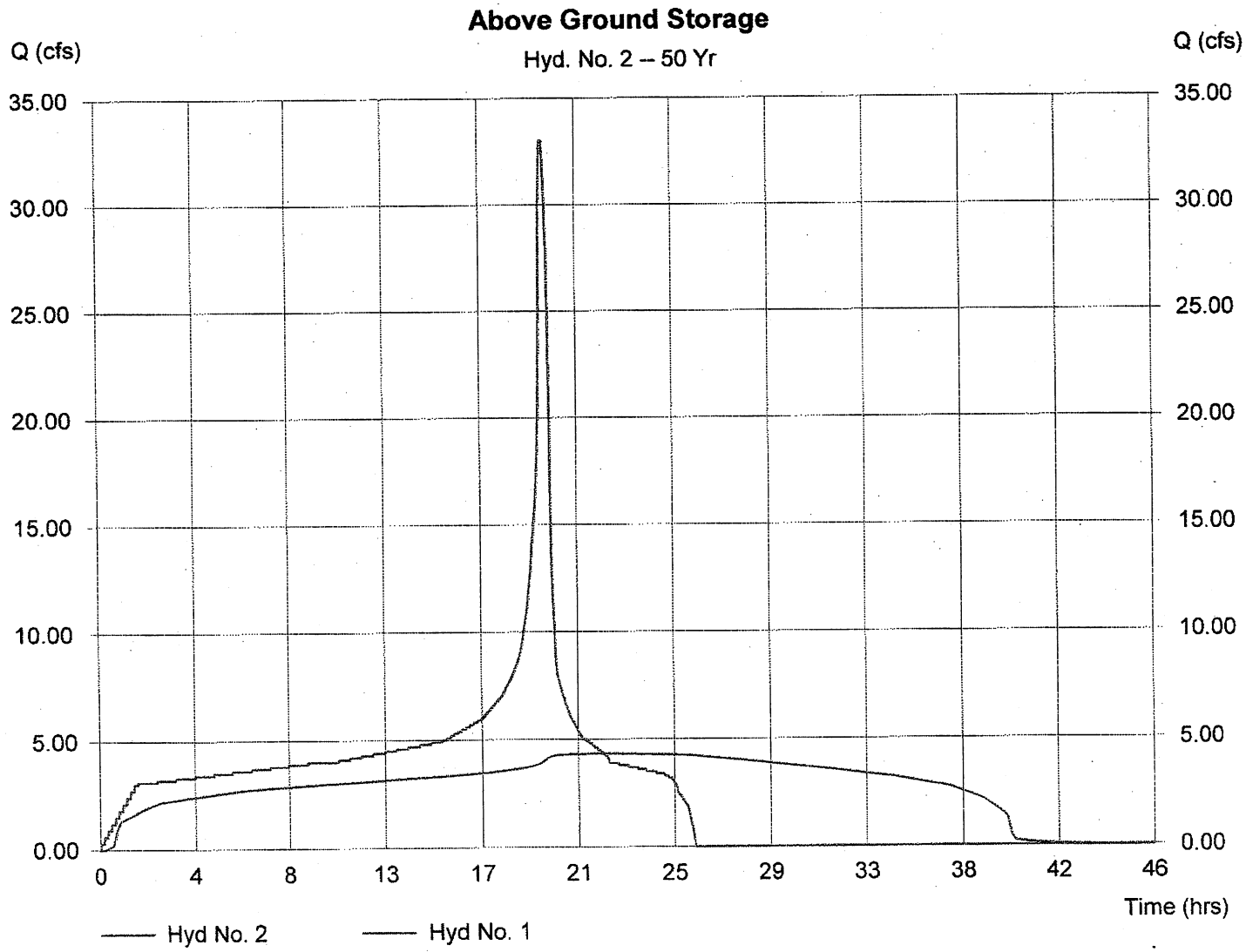
Hyd. No. 2

Above Ground Storage

Hydrograph type	= Reservoir	Peak discharge	= 4.33 cfs
Storm frequency	= 50 yrs	Time interval	= 1 min
Inflow hyd. No.	= 1	Max. Elevation	= 24.97 ft
Reservoir name	= Above Ground Storage	Max. Storage	= 178,732 cuft

Storage Indication method used.

Hydrograph Volume = 459,483 cuft



Pond Report

Hydraflow Hydrographs by Intelisolve

Tuesday, Feb 28 2006, 7:27 AM

Pond No. 1 - Above Ground Storage

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	18.00	25	0	0
1.00	19.00	3,935	1,980	1,980
2.00	20.00	9,200	6,568	8,548
3.00	21.00	17,050	13,125	21,673
4.00	22.00	35,250	26,150	47,823
5.00	23.00	42,825	39,038	86,860
6.00	24.00	46,565	44,695	131,555
7.00	25.00	50,350	48,458	180,013
8.00	26.00	55,000	52,675	232,688

Culvert / Orifice Structures

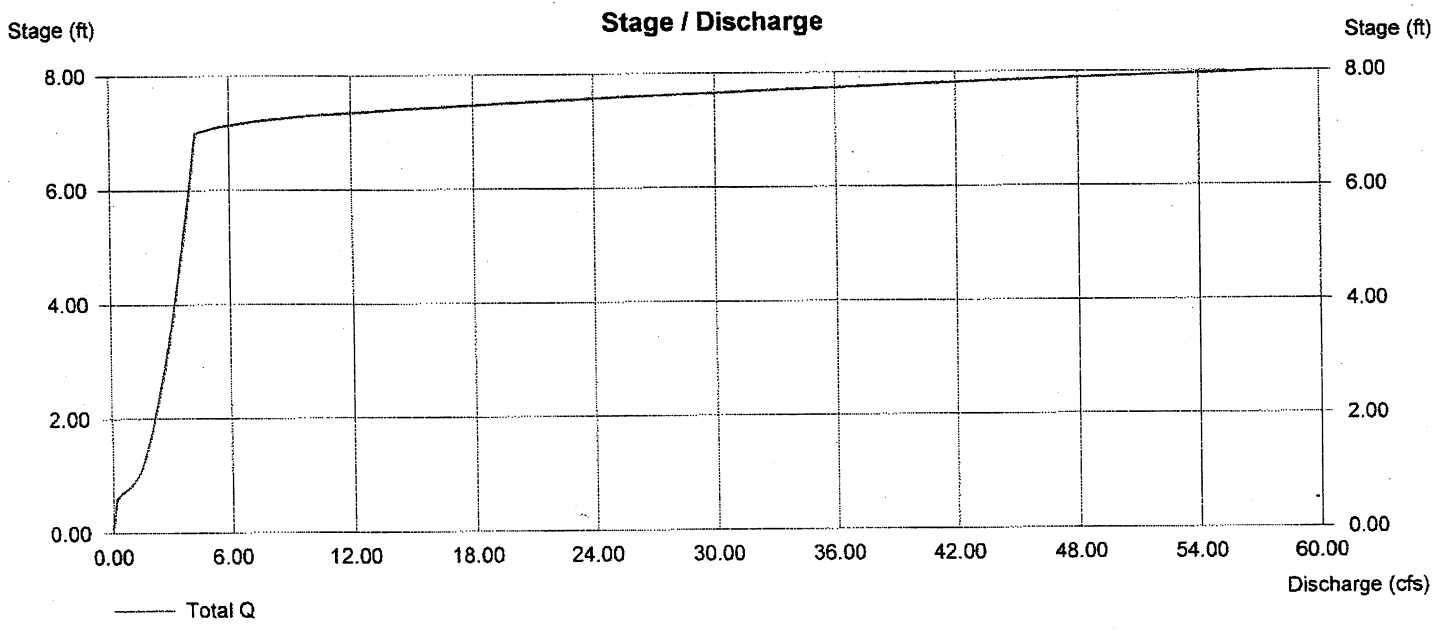
	[A]	[B]	[C]	[D]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 18.00	0.00	0.00	0.00
Length (ft)	= 1.00	0.00	0.00	0.00
Slope (%)	= 1.00	0.00	0.00	0.00
N-Value	= .013	.013	.013	.013
Orif. Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 9.42	10.00	0.00	0.00
Crest El. (ft)	= 25.00	25.25	0.00	0.00
Weir Coeff.	= 3.33	3.33	0.00	0.00
Weir Type	= Rect	Rect	---	---
Multi-Stage	= No	No	No	No

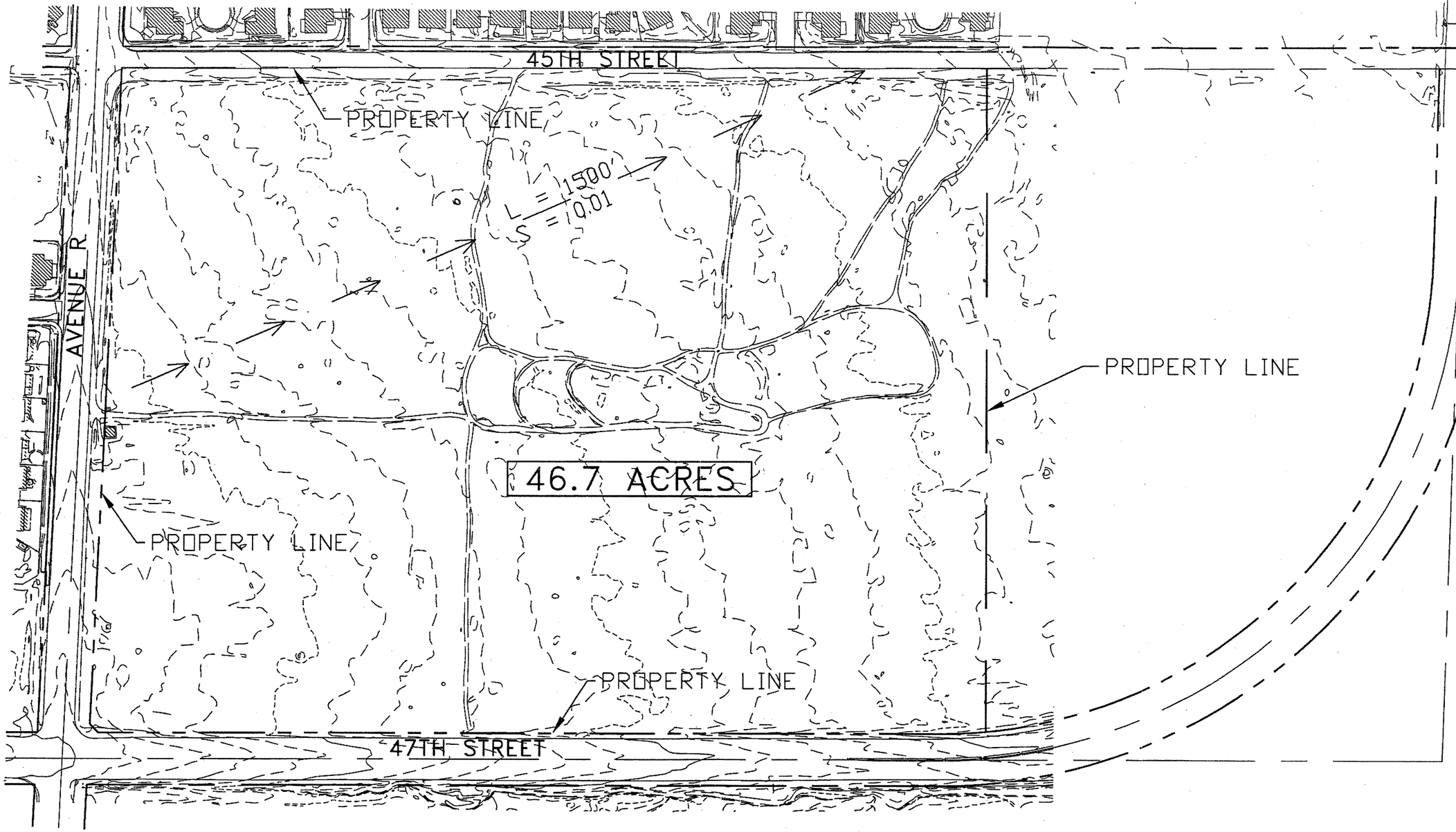
Exfiltration = 0.000 in/hr (Contour) Tailwater Elev. = 0.00 ft

Note: Culvert/Orifice outflows have been analyzed under inlet and outlet control. Weir riser checked for orifice conditions.



SECTION 5.0

EXISTING HYDROLOGY MAP



EXISTING FLOW PATH

SCALE: 1"=200'

PALMDALE MARKETPLACE

EXISTING HYDROLOGY MAP

PALMDALE, CA

DRC Development Resource Consultants, Inc.
Civil Engineering • Land Surveying • Land Planning
8175 EAST KAISER BOULEVARD
ANAHEIM HILLS, CA 92808 (714) 685-6860

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SECTION 6.0

PROPOSED HYDROLOGY MAP

45TH STREET

PROPERTY LINE

AVENUE R

46.7 ACRES

L = 1500'
S = 0.01

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

47TH STREET

PROPOSED FLOW PATH

SCALE: 1"=200'

PALMDALE MARKETPLACE

PROPOSED HYDROLOGY MAP

PALMDALE, CA

DRC Development Resource Consultants, Inc.
Civil Engineering • Land Surveying • Land Planning
8175 EAST KAISER BOULEVARD
ANAHEIM HILLS, CA 92808 (714) 685-6860

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APPENDIX E
NOISE ASSESSMENT

COLIA ACOUSTICAL CONSULTANTS
177 Riverside, #F
Newport Beach, CA 92663
Certified Acoustical Consultants
Phone 714 960-7511
Fax 714 960-6775
Email: RColia@socal.rr.com

R6-006

March 3, 2006

UPDATED ACOUSTICAL ANALYSIS OF THE PALMDALE MARKETPLACE AT SOUTHWEST CORNER OF PALMDALE AVENUE AND 47TH STREET IN THE CITY OF PALMDALE

Prepared For:

LILBURN CORPORATION
1905 Business Center Drive
San Bernardino, CA 92408

Prepared By:

RICHARD COLIA
Acoustical Consultant
MEMBER INCE

UPDATED ACOUSTICAL ANALYSIS OF THE PALMDALE MARKETPLACE AT SOUTHWEST CORNER OF PALMDALE AVENUE AND 47TH STREET IN THE CITY OF PALMDALE

INTRODUCTION

At the request of Lilburn Corporation, Colia Acoustical Consultants have performed an acoustical evaluation of the proposed Palmdale Marketplace at the southwest corner of Palmdale Avenue and 47th Street in the City of Palmdale (See Figure 1). The unique feature of this project is location of two major anchor stores: a Home Depot and a Target store at the west project side, with several truck dock wells at the west project side. The principal source of noise to the site will be from vehicular traffic on Palmdale Avenue and 47th Street (State Route SR 138) with lesser contributions from the existing streets 45th Street to the west and Avenue R to the south. The potential noise impact from the project would be generated by the trash compactor and truck docks on the proposed west building side, mechanical equipment and construction activities.

The noise criteria of the City of Palmdale states that the exterior noise levels generated by the facility may not exceed 65 decibels (dBA, on the A-weighted scale) Community Noise Equivalent Level (CNEL) at the adjacent property lines at current and future sensitive residential properties.

The purpose of this report is to evaluate the exterior noise levels generated by the potential noise sources on the project site, and present mitigation measures, where necessary, to reduce the noise impacts to acceptable levels.

ANALYSIS

Roadway Exterior Noise Impact

The current noise impact to the project site was determined by on-site noise measurements. The current noise measurements were made on January 16, 2006. The measurement microphone was positioned at three locations on the project site (See Figure 2). Measurements were made at the microphone height of 5.5 feet above existing grade. The measurement microphone of a Bruel and Kjaer 2230 Precision Integrating Sound Level Meter (SLM) was located along 45th Street at the southwest project side (Site 1), at the northwest side, along 45th Street (Site 2) and along Avenue R at the south project side (Site 3).

The SLM can provide continuous Equivalent Sound Level (Leq) measurements which are read directly from the display on the meter. At the end of each fifteen minute measurement period an Leq was taken from the SLM for the representative sample period. Table 1 on the following page shows the results of the measurements.

TABLE 1

Measurement Results, January 16, 2006

Site	*Measurement Hour*	*Measured Leq, dBA*	*Measured Lmax*	*Measured Lmin*	*Calculated CNEL, dBA*	*Microphone Height, ft.*
1	10:20 AM	57.0	71.0	39.1	60.0	5
2	10:40 AM	50.0	65.2	38.6	53.0	5
3	11:00 AM	66.0	84.3	43.5	68.8	5

The CNEL calculations are shown in Tables 2, 3 and 4. The principal source of traffic noise was derived from 45th Street and Avenue R.

Existing noise level measurements were taken in January of 2006 during busy traffic periods (between 10:00 A.M. and 11:30 A.M.). One measurement was taken at the southwest corner of the site, one at the northwest and the other was taken at the south side of the site. Existing background noise levels currently exceed the City of Palmdale noise standard, primarily due to noise from the adjacent arterial roadways. Although noise levels during these mid-day hours may not be as high as traffic noise during the peak PM period, they are nonetheless useful in conducting analyses of the noise impact of the project. These analyses fully take into account fluctuations in daily activity as well as the accompanying noise from such activity.

Project Generated Noise

The potential noise impact from the project is expected to come from the potential operation of the trash compactor and truck docks on the west elevations of the new retail building locations.

The potential compactor noise impact was based upon acoustical data measured at other trash compactors. The Single Event Level (SEL) is 83.9 dBA at 45 feet with a 6 dB drop-off rate per doubling of distance away from the source.

To the west of the proposed buildings there are existing residences that potentially would be affected by the compactor noise impact. This residential zoned area is west of the retail store sites. For identification purposes the residential areas to the west and south are marked as 1 and 2 and 3 in Figure 3. The unshielded Leq value is calculated from the following equation on the next page:

$$Leq = 10 \text{ Log } ((10^{83.9/10} \times 31 \times 3 + 10^{83.9/10} \times 4 \times 10) / 3600$$

$$= 69.6 \text{ dBA Leq at 45 feet} = \mathbf{70.1 \text{ CNEL}}$$

Truck Noise

The potential truck noise impact was also determined from data of truck noise levels. The proposed Major Retail #1 is a Target store and the proposed Major 5 is a Home Depot with truck service schedules that are 24 hours a day for deliveries and varies upon individual schedules. Twenty to thirty deliveries typically occur at night from 10 PM to 6 AM for each major store. Other minor stores have one delivery per day.

The maximum noise level (Lmax) projected by a truck at 7 miles per hour (MPH) is 84.4 dBA. The worst case Leq for a moving refrigerated truck is 80.3 dBA at 20 feet and 79.2 dBA at idle. The worst case scenario is a truck that arrives in an early morning hour, docks and leaves the motor running and refrigeration equipment on for the entire hour and then departs. The Leq for that full hour is 80.4 dBA.

The calculated CNEL to each of the residential areas is shown in Table 5 based on the distance from the near residential property line and the nearest new dock wells and the potential of a 50-foot long truck positioned in the docks. The truck noise unshielded impact ranges from 72.4 to 73.7 dBA CNEL at the closest residential areas.

Mechanical Equipment

The roof top mechanical equipment is a potential noise source. For example Major Retail #1 potentially has units totaling 300 to 400 tons spaced across the entire area of the roof top. However, there may be three 20 ton units closest to the west property line. The bel ratings are 8.6 dB and 86 dB on the A-weighted scale at one foot and the sum for three is 90.8 dBA. There may be also four 5 ton units along the west side. The bel ratings are 8.4 and 84 dB on the A-weighting scale. The sum of four units is 90 dBA. The sum of the 20 and 5 ton units is 93.4 dBA at one foot. The nearest residence is 145 feet away. At that distance using point source drop-off rates the combined impact becomes 51.2 dBA (64.2 CNEL). A 3-5 foot parapet wall will provide 6.1 dB of attenuation to upper levels so the **shielded impact is 58.1 dB CNEL** which meets the noise standard of 65 dBA CNEL at daytime/nighttime periods. Thus, a parapet wall as high as the mechanical equipment is noted on the west side of Retail buildings 1-5.

Drive-Through

There are at least 4 fast food/drive-through areas indicated on the site plan as Pads 1, 3, 5 and 6. The distance from the drive-through to the nearest existing residential areas to the south is 160 feet.

The menu board speaker has been measured in past studies to be 75 dBA at 3 feet. When projected to the south the noise drop-off is calculated to be 51.0 dBA. This value is significantly less than current and future traffic on Avenue R of 68.8 CNEL (Table 2).

Thus, this impact is not significant.

Noise Criteria

Table N-3 from the City of Palmdale General Plan Noise Element indicates that residential zones are limited to 65 CNEL in exterior areas. This value will be used in the worst case scenario as the noise limit standard.

The above value was used to determine the mitigation measures for the project for daytime and nighttime periods.

MITIGATION MEASURES

Because the potential project noise levels at the closest west project line do exceed the allowable criteria of 65 CNEL, **acoustical shielding will be required**.

A barrier calculation was run along the west and south property lines to determine the barrier requirements to meet the City noise standards. The calculations take into account distance, relative elevations of noise source and receivers and angles of view.

The results are shown in Table 6. The calculations show the noise standards can be achieved by **9**-foot screen walls on the west side of the docks where the trucks would be located. In cases where the dock ramps are sloped downward the screen walls can also be adjusted in a like manner to 0.5 feet above truck stack height. The walls can be concrete block or slumpstone or any other solid material with a surface weight of 4.0 pound per square foot.

The worst case noise levels were calculated with for both the compactor and truck noise levels, and the shielded noise levels for both cases were summed and found to be less than 65 CNEL. These noise levels meet the exterior noise standard for the City of Palmdale. The barrier screen wall locations are shown in Figure 4. The length of the wall must be 5 feet longer than the longest proposed truck.

The property line top-of-barrier requirements are summarized below. The walls must be solid top to bottom with no opening or decorative cut-outs.

Recommendations: Because the truck and compactor noise levels do not meet the 65 CNEL criteria of the City Noise Standards at the south and west project lines, the following mitigation measures area required.

1) The screen dock walls should be 9 feet high relative to the dock elevation as described above.

2) The wall heights at the property lines range from 8 to 10 feet (relative to subject property elevations) with nighttime deliveries.

Area	*Wall Ht.*	*TOB Elevation*	*Shielded CNEL*
1	10	---	64.9
2	10	---	64.9
3	8	---	65.0

3. Do not use speed bumps in the truck access areas.

4. Use signs to control truck and other vehicle speed. Use signs to limit use of horns and yelling at loading docks. No paging or radio systems at the south and west property lines.

5. To reduce noise reflections off buildings, specify a rough surface facade on the west and south elevations.

6. Doors and roll-up doors are to be closed when not in use.

7. Wall materials can be standard masonry or concrete block, or any other material with a surface weight of 4 pounds per square foot. No gaps or openings are permitted. All gaps are to be sealed.

8 Post signs to turn off truck engine when not in use or necessary.

9. Ensure trash compactors are shielded by property line walls.

10. Use parapet walls to screen mechanical equipment on west rooftop sides.

With the recommendations described in this report the City of Palmdale exterior noise standards will be satisfied.

TABLE 2

A-Weighted Leq Noise Level Data Collected During A Representative Sample Period On January 16, 2006, Together With Calculated Hourly Leq Values And Resulting CNEL Value.

Site 1

One Hour Period	Hourly Leq Data, (dBA)		Hourly Leq Weighting Factor	Adjusted Hourly Leq
0700	60.0		0.0	60.0
0800	58.1		0.0	58.1
0900	57.1		0.0	57.1
1000	57.0	MEAS	0.0	57.0
1100	57.2		0.0	57.2
1200	57.3		0.0	57.3
1300	57.4		0.0	57.4
1400	57.6		0.0	57.6
1500	58.8		0.0	58.8
1600	60.2		0.0	60.2
1700	60.0		0.0	60.0
1800	58.2		0.0	58.2
1900	56.9		5.0	61.9
2000	55.8		5.0	60.8
2100	55.1		5.0	60.1
2200	54.1		10.0	64.1
2300	53.5		10.0	63.5
0000	51.9		10.0	61.9
0100	49.5		10.0	59.5
0200	49.5		10.0	59.5
0300	48.2		10.0	58.2
0400	46.5		10.0	56.5
0500	47.5		10.0	57.5
0600	51.3		10.0	61.3

24 Adjusted Leq Values/ 24 = 60.0 CNEL

TABLE 3

A-Weighted Leq Noise Level Data Collected During A Representative Sample Period On January 16, 2006, Together With Calculated Hourly Leq Values And Resulting CNEL Value.

Site 2

One Hour Period	Hourly Leq Data, (dBA)		Hourly Leq Weighting Factor	Adjusted Hourly Leq
0700	53.0		0.0	53.0
0800	51.1		0.0	51.1
0900	50.1		0.0	50.1
1000	50.0	MEAS	0.0	50.0
1100	50.2		0.0	50.2
1200	50.3		0.0	50.3
1300	50.4		0.0	50.4
1400	50.6		0.0	50.6
1500	51.8		0.0	51.8
1600	53.2		0.0	53.2
1700	53.0		0.0	53.0
1800	51.2		0.0	51.2
1900	49.9		5.0	54.9
2000	48.8		5.0	53.8
2100	48.1		5.0	53.1
2200	47.1		10.0	57.1
2300	46.5		10.0	56.5
0000	44.9		10.0	54.9
0100	42.5		10.0	52.5
0200	42.5		10.0	52.5
0300	41.2		10.0	51.2
0400	39.5		10.0	49.5
0500	40.5		10.0	50.5
0600	44.3		10.0	54.3

24 Adjusted Leq Values/ 24 = 53.0 CNEL

TABLE 4

A-Weighted Leq Noise Level Data Collected During A Representative Sample Period On January 16, 2006, Together With Calculated Hourly Leq Values And Resulting CNEL Value.

Site 3

One Hour Period	Hourly Leq Data, (dBA)		Hourly Leq Weighting Factor	Adjusted Hourly Leq
0700	68.8		0.0	68.8
0800	66.9		0.0	66.9
0900	65.9		0.0	65.9
1000	65.8		0.0	65.8
1100	66.0	MEAS	0.0	66.0
1200	66.1		0.0	66.1
1300	66.2		0.0	66.2
1400	66.4		0.0	66.4
1500	67.6		0.0	67.6
1600	69.1		0.0	69.1
1700	68.8		0.0	68.8
1800	67.1		0.0	67.1
1900	65.7		5.0	70.7
2000	64.6		5.0	69.6
2100	63.9		5.0	68.9
2200	62.9		10.0	72.9
2300	62.3		10.0	72.3
0000	60.7		10.0	70.7
0100	58.3		10.0	68.3
0200	58.3		10.0	68.3
0300	57.1		10.0	67.1
0400	55.3		10.0	65.3
0500	56.3		10.0	66.3
0600	60.1		10.0	70.1

24 Adjusted Leq Values/ 24 = 68.8 CNEL

TABLE 5

Projected Noise Levels

Residence Area	Distance to Truck Dock	Truck Noise Level, dBA
1	128'	72.9
2	128'	72.9
3	156'	70.0

TABLE 6

SOUND BARRIER CALCULATION WORKSHEET

AREA	SORC ELEV	PAD ELEV	DSLE	SORC ELEV	OBS. ELEV	OBS-BARR DIST	BLOS ELEV	TOB ELEV	ATTN (dB)	ULEV	SLEV	TOTAL	WALL HT.
1	0.0	0.0	128.0	8.0	5.0	115.0	7.7	10.0	8.0	72.9	64.9		10.0
2	0.0	0.0	128.0	8.0	5.0	115.0	7.7	10.0	8.0	72.9	64.9		10.0
3	0.0	0.0	156.0	8.0	5.0	146.0	7.8	8.0	5.0	70.0	65.0		8.0

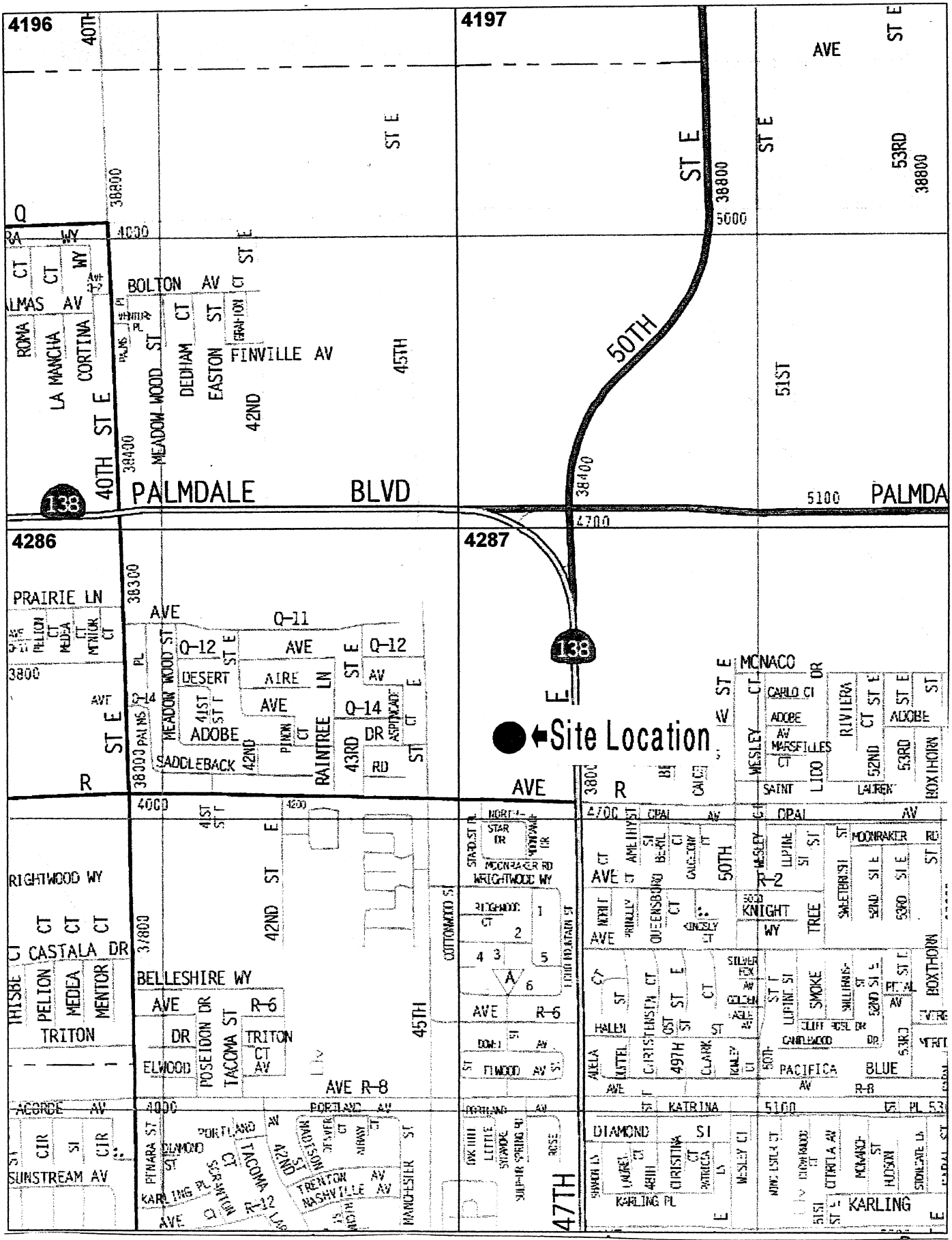


FIGURE 1: Site Location Map

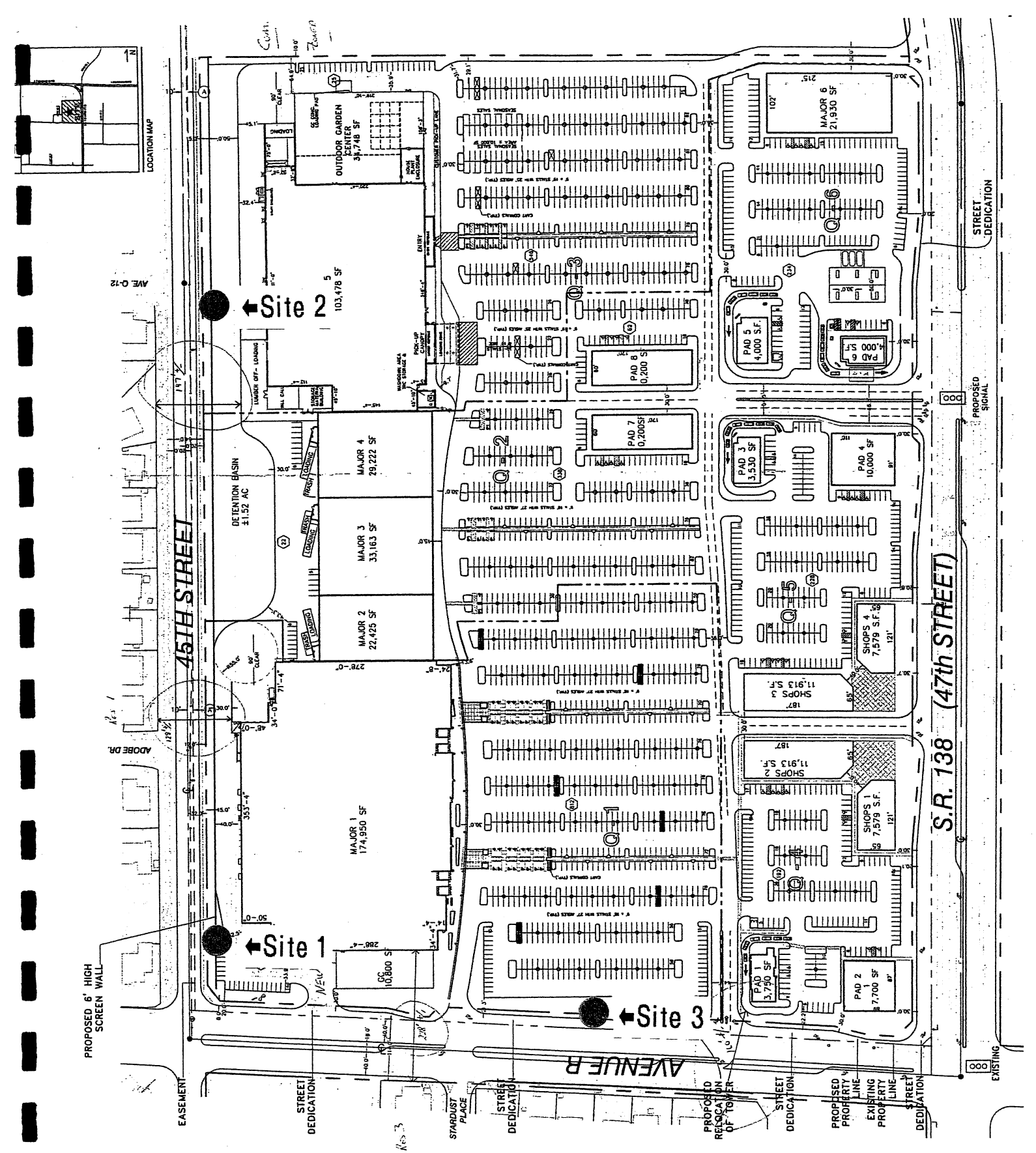


FIGURE 2: Site Measurement Locations

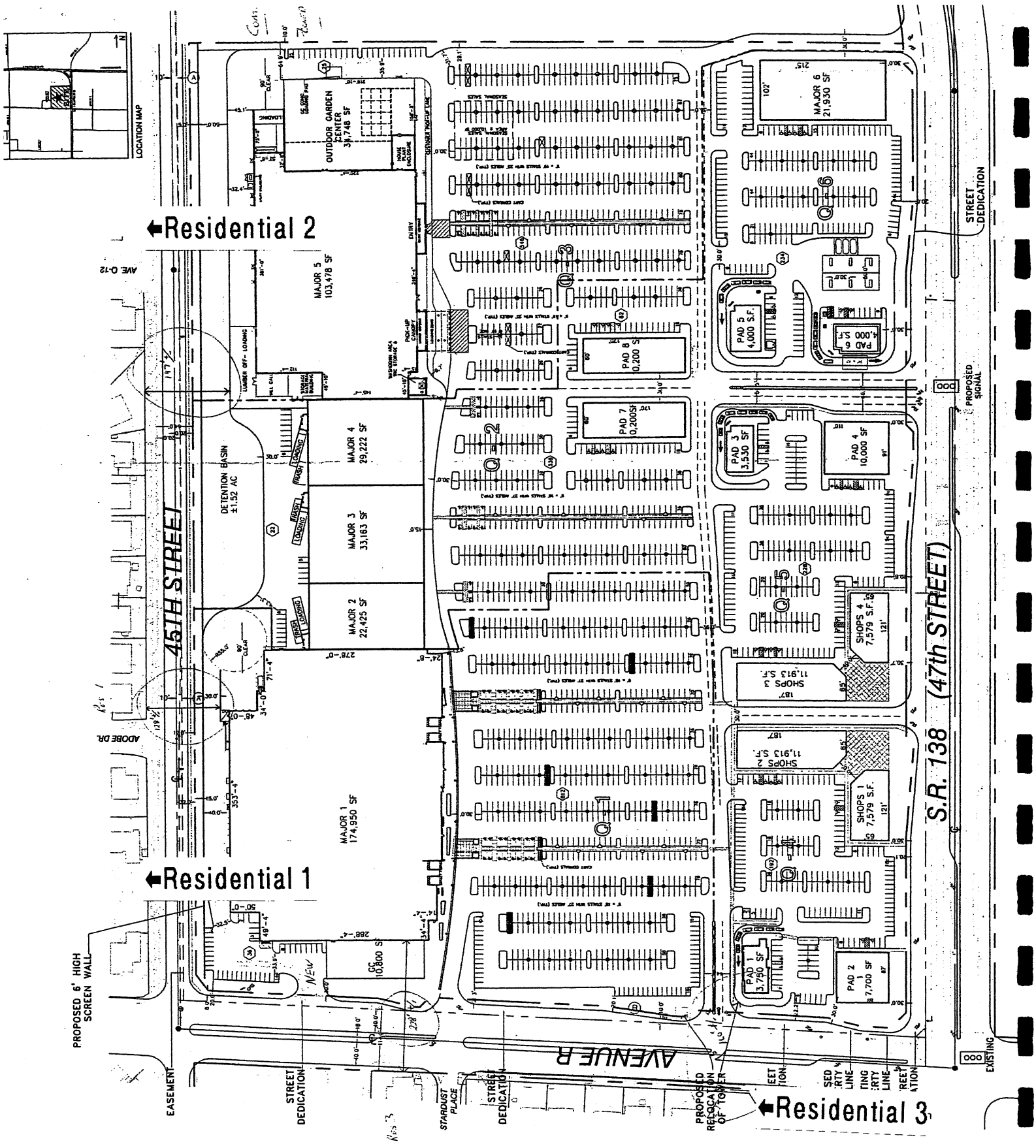


FIGURE 3: Designated Residential Areas

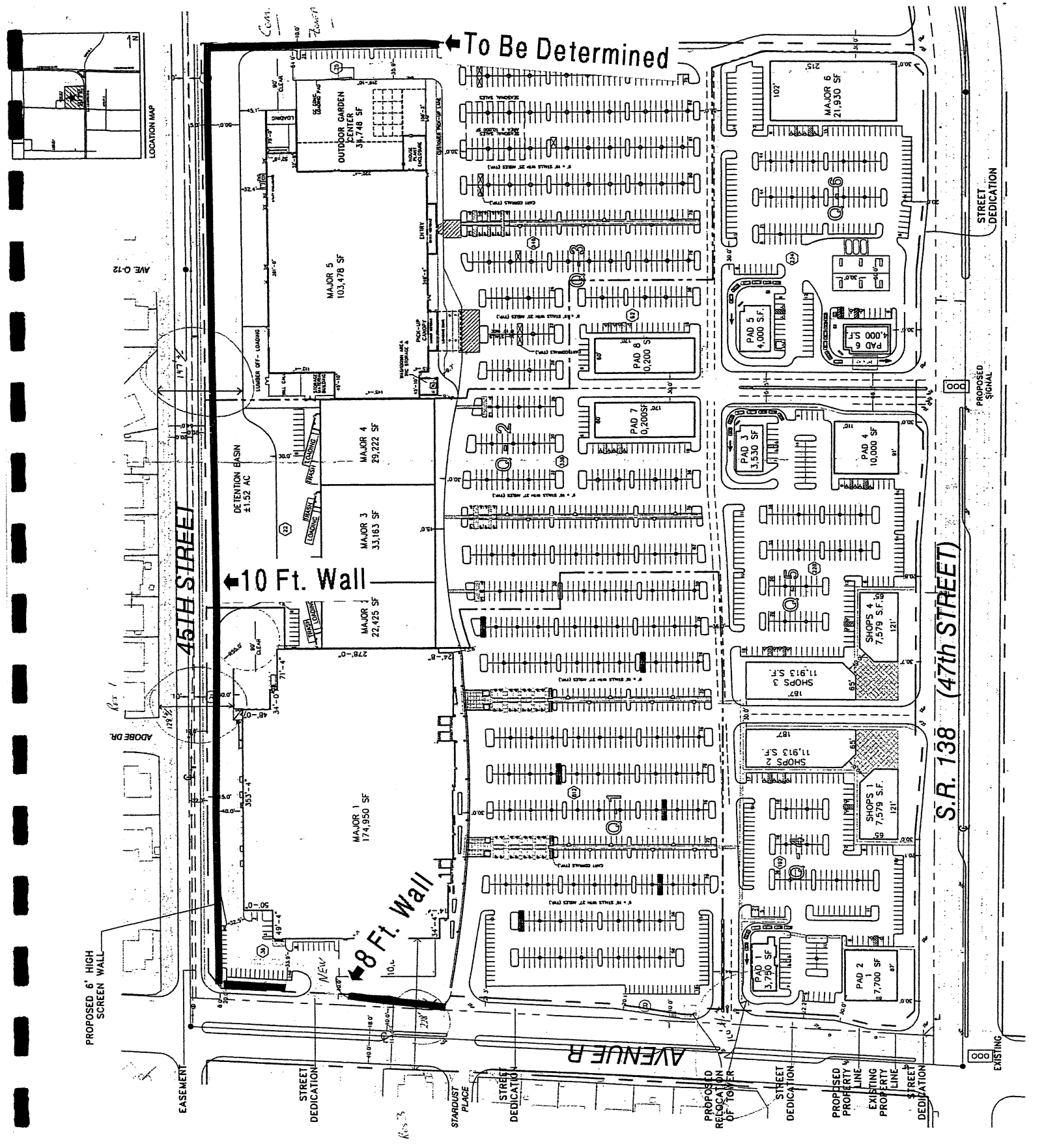
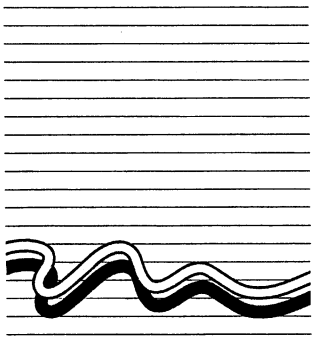


FIGURE: Location of Recommended 8 and 10 Foot Barrier Walls

SUPPLEMENTAL NOISE ASSESSMENT



Mestre Greve Associates

August 8, 2006

Mr. Mike Perry
Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408

Subject: Palmdale Market Place – Soundwall Along Avenue R (Report 06-213)

Dear Mike:

Per your request I have looked at the issue of the soundwall along Avenue R for the Palmdale Marketplace. The report by Colia Acoustical Consultants ("Updated Acoustical Analysis of the Palmdale Marketplace at Southwest Corner of Palmdale Avenue and 47th Street in the City of Palmdale," March 3, 2006) recommends an 8 foot wall along a portion of Avenue R. The wall is intended to protect residents on the other side of Avenue R from delivery truck noise.

We believe that Colia Acoustical Consultants substantially overestimated the noise generated by truck deliveries and that no wall is needed along Avenue R. The Colia assessment overestimates the number of delivery trucks, and most significantly, overestimates the number of delivery trucks at night. Additionally, it appears that the Colia assessment assumes that the loading dock area is much closer to the residences that it will actually be. These discrepancies are discussed in more detail below.

Review of Key Assumptions in Colia Assessment

Number of Trucks. The Colia assessment states "Twenty to thirty deliveries typically occur at night from 10 PM to 6 AM for each major store." Since there are two major stores proposed, the Colia assessment used between 40 and 60 nighttime deliveries. In calculating the CNEL noise levels, nighttime activities are penalized by a factor of 10. Therefore, the 40 to 60 nighttime deliveries equate to 400 to 600 daytime deliveries in the noise calculation. This is inconsistent with our experience on past projects with this type of store, and so we requested more detailed information. The information we received (discussed in more detail in the following section) indicates that only 2 nighttime deliveries should be expected. This

discrepancy alone would reduce CNEL noise levels by about 15 dB from the Colia assessment.

Location of Truck Loading. Table 5 of the Colia report shows that a distance of 156 feet from the residences that lie south of Avenue R to the "truck dock" was used. According to the site plan for the proposed project, 156 feet is about the distance from the nearest residence to the Garden Center associated with Major 1. It appears that the Colia assessment assumed that all of the trucks would park at this location as they unloaded with their engines continuing to idle and refrigeration units continuing to run. This is a false assumption. The loading docks for Major 1 are located on the northwest corner of the building with a screening wall. This location is about 600 feet from the residences and the building lies between the residences south of Avenue R and the loading docks. Loading docks for the other stores are even further from these residences. There will be deliveries directly to the Garden Center, but these will be the small trucks (not truck and trailers) and will occur at the rate of 2 deliveries per week. This false assumption regarding the location of the truck loading also has a large effect on the noise levels projected.

In summary, the Colia assessment assumes 40 to 60 nighttime deliveries with loading docks only 156 feet from the residences. In reality, there will be approximately 2 nighttime deliveries with the loading docks 600 feet from the residences and shielded from the residences by a major building.

Truck Deliveries

The most current truck data was provided to me by Mike Perry of Lilburn Corporation (August 3, 2006). A home improvement center (i.e., Major 5) has 20 to 30 truck deliveries per day. Deliveries for a home improvement center occur randomly throughout a 24 hour period. It was assumed, based on our past experience, that 1/3 of the home improvement center trucks would be tractor-trailers while the rest would be medium trucks. The large discount retailer (i.e., Major 1) only accepts local carriers and vendors and only between 8 a.m. and noon on Monday through Friday. These trucks are the smaller trucks. Tractor-trailer trucks (i.e., heavy duty trucks) come from the discount retailer distribution centers and arrive at the stores between 4 p.m. and 10 p.m. seven days a week. A large discount retailer will have 7 to 8 of these tractor-trailer deliveries per week or approximately 1 per day. Additionally, the discount retailer will have 4 grocery deliveries per week (equivalent to 0.5 truck per day). Dairy deliveries occur during the 5 to 6 a.m. period. Only two medium truck deliveries are made to the garden center per week (equivalent to 0.3 trucks per day).

From this data a matrix of truck deliveries was developed for the three time periods used in the CNEL calculation. Trucks were divided into medium and heavy trucks. The matrix is presented below as Table 1.

Table 1
Truck Traffic Distribution

	Day	Evening	Night
Medium Trucks	22	7.5	8.5
Heavy Trucks	5	2.25	4.75

Projected Noise Levels

The truck mix was used in the projection of the noise levels at the nearest residences across the Avenue R from the project site. Since there is no loading dock noise at the south end of the project near Avenue R, the only noise is the truck drive-by noise. It was assumed that all of the trucks would either enter or exit the site at the southern end. The noise of the trucks driving within the Palmdale Marketplace was calculated. The residences are approximately 176 feet from the drive lane that turns and goes behind the retail spaces. Using this data we projected a noise level of 45.7 CNEL at the residences. This is well below the City's 65 CNEL standard and does not assume any sound barrier. Therefore, no soundwall will be needed along Avenue R and there will not be any significant impact to the residences along Avenue R.

If you have any questions or comments, please do not hesitate to call.

Sincerely,
Mestre Greve Associates

Fred Greve, P.E.
Principal

APPENDIX F
TRAFFIC IMPACT ANALYSIS

REVISED TRAFFIC ANALYSIS REPORT
for
Proposed Palmdale Marketplace
NWC of 47th Street E & Avenue "R"
In the City of Palmdale, California

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Introduction

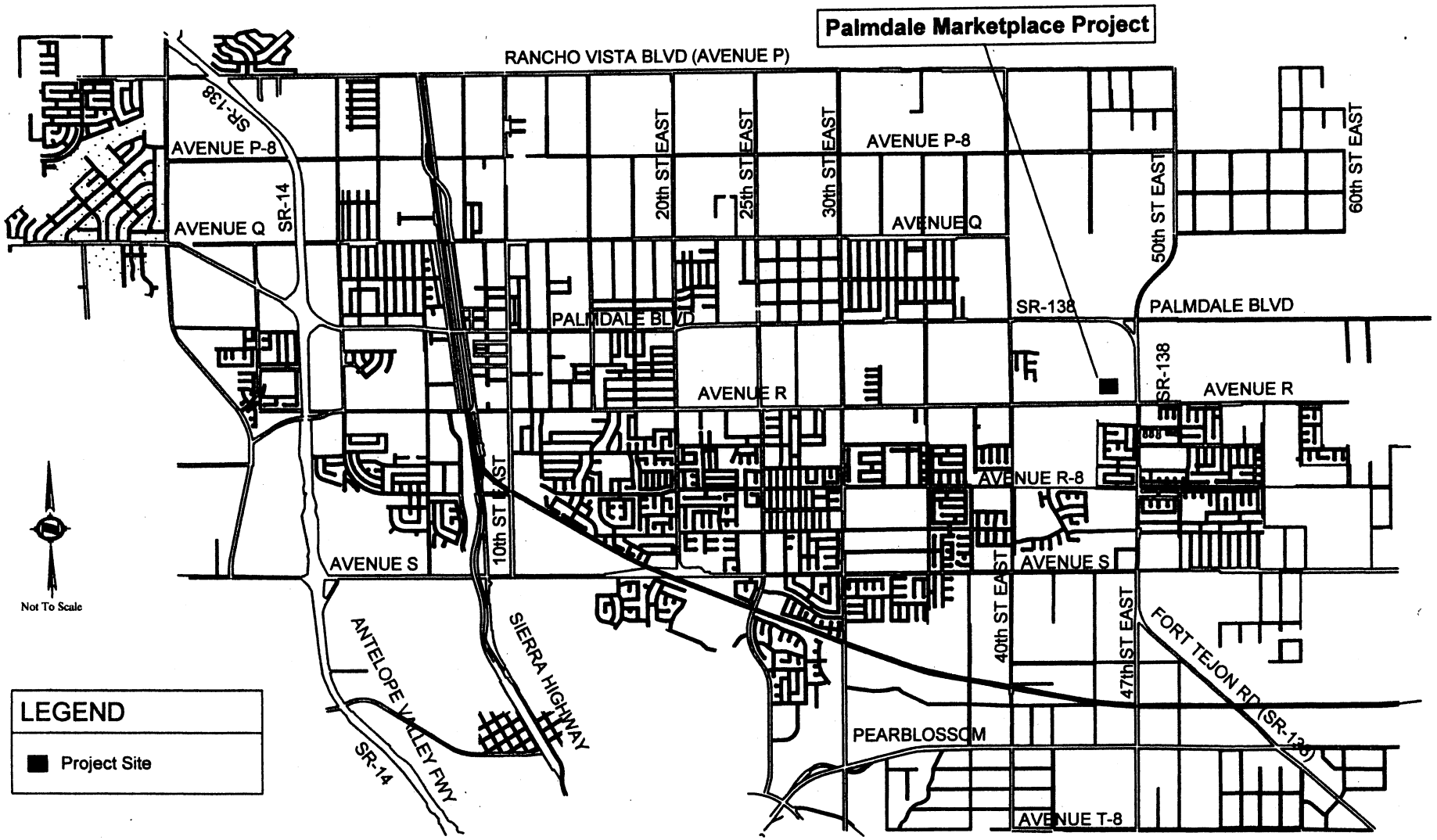
Hopkins Real Estate Group has proposed to construct a new Marketplace retail development at the 47th Street East (SR-138) and Avenue R intersection as shown on the vicinity map, Figure 1. This report summarizes the findings of a traffic analysis conducted for the City of Palmdale and California Department of Transportation, "Caltrans" District 7 according to the City's and Caltrans' requirements to determine the potential impact of the proposed development on the immediate roadway system.

The study included analysis of the intersections of 47th Street East at Avenue R, 47th Street East at Avenue R-8, 47th Street East at SR-138, Palmdale Boulevard at 47th/50th Street East, Palmdale Boulevard at SR-138, Palmdale Boulevard at 40th Street East, Avenue R at 40th Street East, Avenue R at 55th Street East, Avenue R-8 at 55th Street East, Avenue S at 47th Street East, as well as all the proposed adjacent driveways and roadways that serve as access points to the project site.

The site plan for the proposed Palmdale Marketplace is shown on Figure 2. The build-out of the entire project is expected to occur in the year 2007.

The traffic volume analysis was conducted to evaluate the new traffic volumes generated by the proposed Palmdale Marketplace project, and the two related development projects (Tom's Restaurant #27, and Rite Aid #5844-05) for the following target years:

- Existing Traffic (Year 2006)
- Cumulative Traffic & Palmdale Marketplace Traffic (Buildout Year 2007)
- Cumulative Traffic & Palmdale Marketplace Traffic (Interim Before Caltrans Roundabout Year 2008)
- Cumulative Traffic & Palmdale Marketplace Traffic (Future Year 2015)
- Cumulative Traffic & Palmdale Marketplace Traffic (Future Year 2025)



MINAGAR & ASSOCIATES, INC.

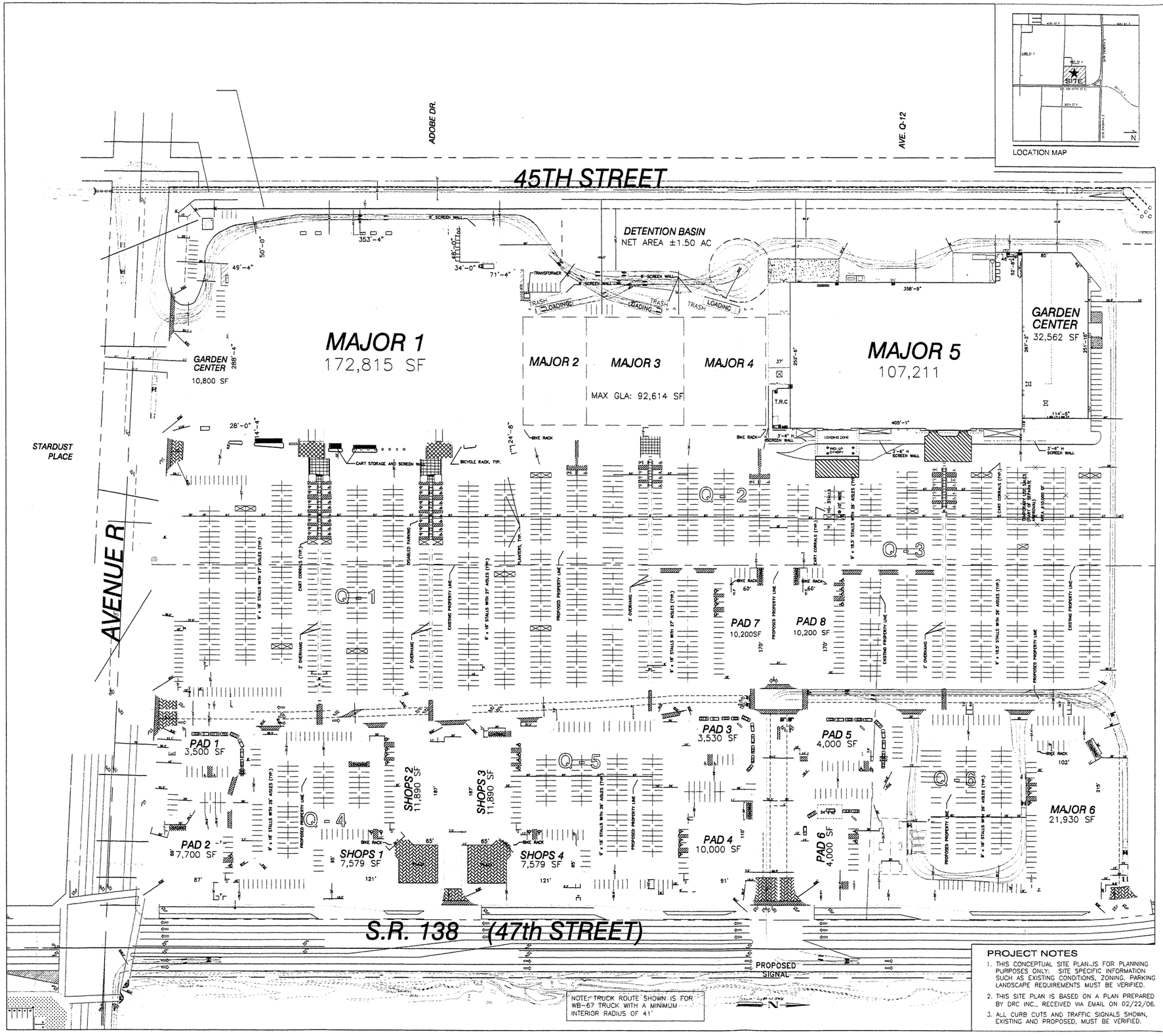
ITS-TRAFFIC ENGINEERING-TRANSPORTATION PLANNING-CIVIL

18662 MacArthur Blvd., Airport Business Center, Suite 435

IRVINE, CA 92612

Figure 1
Vicinity Map

City of Palmdale
Proposed Palmdale Marketplace
NWC of 47th St. E. & Ave. R
Revised Traffic Analysis



LOCATION MAP

PROJECT NOTES

1. THIS CONCEPTUAL SITE PLAN IS FOR PLANNING PURPOSES ONLY: SITE SPECIFIC INFORMATION SUCH AS EXISTING CONDITIONS, ZONING, PARKING LANDSCAPE REQUIREMENTS MUST BE VERIFIED.
2. THIS SITE PLAN IS BASED ON A PLAN PREPARED BY DRC INC., RECEIVED VIA EMAIL ON 02/22/06.
3. ALL CURB CUTS AND TRAFFIC SIGNALS SHOWN, EXISTING AND PROPOSED, MUST BE VERIFIED.

GreenbergFarrow
1920 Main Street, Suite 1150
Irvine, CA 92614
t: 949 296 0450 f: 949 296 0479

PROJECT INFORMATION

SITE AREA

GROSS AREA	±49.25 ACRES
STREET DEDICATIONS	± 2.55 ACRES
DETENTION BASIN	±1.50 ACRES
TOTAL NET AREA	±45.20 ACRES
MAJOR 1 NET AREA	±14.10 ACRES
MAJOR 5 NET AREA	±10.30 ACRES
TOTAL SITE COVERAGE	±26.92%(11,726 SF/AC)

BUILDING AREA

	USER	USE	BLDG AREA	PARCEL AREA
Q1-	MAJOR 1	RETAIL	172,815 SF	14.10 AC
	& GARDEN CENTER		10,800 SF	
Q2-	MAJOR 2	RETAIL		1.49 AC
	MAJOR 3	RETAIL	92,614 SF	2.20 AC
	MAJOR 4	RETAIL		2.10 AC
	PAD 7	RETAIL	10,200 SF	1.14 AC
Q3-	MAJOR 5	RETAIL	107,211 SF	
	OPEN GC		30,229 SF	
	H.P.E		2,333 SF	10.30 AC
	TOTAL HD		139,773 SF	
	PAD 8	RETAIL	10,200 SF	1.26 AC
Q4-	PAD 1	FAST FOOD	3,500 SF	0.76 AC
	PAD 2	SIT-DOWN REST.	7,700 SF	1.21 AC
	SHOPS 1	RETAIL	7,579 SF	1.74 AC
	SHOPS 2	RETAIL	11,890 SF	
Q5-	PAD 3	FAST FOOD	3,530 SF	0.84 AC
	PAD 4	SIT-DOWN REST.	10,000 SF	1.44 AC
	SHOPS 3	RETAIL	7,579 SF	1.87 AC
	SHOPS 4	RETAIL	11,890 SF	
Q6-	PAD 5	BANK	4,000 SF	0.99 AC
	PAD 6	GAS STATION	4,000 SF	1.22 AC
	MAJOR 6	RETAIL	21,930 SF	2.23 AC
	DETENTION BASIN (INCLUDING SETBACK)			1.81 AC
	TOTAL:		530,000 SF	±46.70 AC

PARKING SUMMARY

	USER	RATIO REQ'D	SPACES REQ'D	SPACES PROV'D	RATIO PROV'D
Q1-	MAJOR 1	4/1000	691	825	4.77
	GC	1/1000	11	11	1.02
	COMPACT STALLS			(67)	8%
Q2-	MAJOR 2	4/1000	91	90	3.96
	MAJOR 3	4/1000	134	126	3.77
	MAJOR 4	4/1000	117	97	3.32
	PAD 7	4/1000	41	42	4.12
Q3-	MAJOR 5	4/1000	429		
	GC	1/1000	30	468	548 3.92
	H.P.E	4/1000	9		
	PAD 8	4/1000	41	60	5.88
Q4-	PAD 1	10/1000	35	38	10.86
	PAD 2	10/1000	77	77	10.0
	SHOPS 1	4/1000			
	SHOPS 2	4/1000	78	69	3.56
Q5-	PAD 3	10/1000	35	35	9.92
	PAD 4	10/1000	100	100	10.0
	SHOPS 3	4/1000			
	SHOPS 4	4/1000	78	84	4.31
Q6-	PAD 5	5/1000	20	41	10.25
	PAD 6	4/1000	16	39	9.75
	MAJOR 6	4/1000	88	144	6.57
	TOTAL		2,121	2,426	4.64
	COMPACT STALLS PROVIDED			140 STALLS	(5.77%)

ZONING CLASSIFICATION

JURISDICTION	CITY OF PALMDALE
EXISTING ZONING	C3-GENERAL COMMERCIAL
REQUIRED ZONING	C3-GENERAL COMMERCIAL

DRAWING ISSUE/REVISION RECORD

DATE	NARRATIVE	INITIALS
07/13/06	PREPARE HREG_CA-1w-t FOR TRAFFIC	CD

SITE PLANNER	AS/CD
SITE DEV. COORDINATOR	F. CODA
CLIENT	HOPKINS REAL ESTATE GROUP
CLIENT REPRESENTATIVE	ED BACH

HOPKINS REAL ESTATE GROUP

PALMDALE, CA
NWC 47TH ST (S.R. 138) & AVENUE R

GFA PROJECT NUMBER 20060263.2

SCALE: 1"=60'-0"

0 30 60 120 180 240

HREG_CA-1w-t

Figure 2

Existing Conditions (Year 2006)

As shown on the vicinity map, Figure 1, the development project is located at the northwest corner of the 47th Street East at Avenue R intersection which is currently controlled by a traffic signal with permissive left turn phases. The intersections of 47th Street East at Avenue R-8, 47th Street East at SR-138, Palmdale Blvd. at 40th Street East, Avenue R at 40th Street East, and 47th Street East at Avenue S are also under traffic signal control. The four unsignalized intersections in the analysis are Palmdale Blvd. at 47th/50th Street East, Palmdale Blvd. at SR-138, Avenue R at 55th Street East, and Avenue R-8 at 55th Street East.

47th Street East is classified as a regional arterial serving north- and southbound traffic beginning at 50th Street East and ending at Avenue S. It is a portion of the State Route 138 (Pearblossom Highway) with two through lanes on both directions of travel. The two signalized intersections at Avenue R and Avenue R-8 are currently operating with one left turn and two through lanes for north- and southbound approaches. The intersection at Avenue R-8 has two through lanes at both east- and westbound approaches, and 47th Street East at Avenue R has one left and one through lanes at the eastbound approach and one left, two through and one right turn lanes at the westbound approach. The signalized intersection of 47th Street East at Avenue S has two left turn lanes and two through lanes for each of the east-, west-, and northbound approaches. The northbound approach has two left turn lanes and an additional right turn lane. The southbound approach has two left turn lanes and three through lanes. All four corners of the intersection of 47th Street East at Avenue R are currently vacant with no pedestrian walkway on the street sides. Each of the four corners of the target intersection has two street lights with traffic signals attached. Pedestrian crossings are available at all four approaches of the target intersection. There are two existing telephone poles at the NWC and NEC. There is an existing controller cabinet at the NEC of the target intersection. The SWC of this intersection is currently under construction for the Tom's Restaurant project. The photo exhibits of the intersection of 47th Street East at Avenue R are included in Appendix G.

State Route 138 is classified as a regional arterial across the city, and merges with 47th Street East from Fort Tejon Road to Palmdale Boulevard, and then traverses along Palmdale Boulevard, then merges onto State Route 14. The intersection at 47th Street East is a signalized "T" intersection with two left turn lanes detoured from southbound 47th Street East merging back onto 47th Street East. The intersection of State Route 138 at 40th Street East is signalized. This intersection has one left turn lane for each of the four approaches. The east- and westbound approaches have two through lanes. The north- and southbound approaches each has one through lane, and an additional right turn lane for the northbound approach.

Palmdale Boulevard is classified as a major arterial serving east- and westbound traffic across the City. Palmdale Boulevard westbound merges with State Route 138 right after the intersection with 47th/50th Street East, where it changes from a one lane per approach

to a two lanes per approach arterial. The intersection at 47th/50th Street East is now operating as an unsignalized all–way stop intersection with one through lane at each of the four approaches. The merging traffic from Palmdale Boulevard onto State Route 138 is also controlled by a stop sign.

Avenue R is classified as a major arterial serving east- and westbound traffic beginning at 3,000 feet east of 47th Street East and ending at Tierra Subida Avenue. Avenue R has two lanes starting east of 30th Street East. The intersection of Avenue R at 40th Street East is a signalized intersection with one left turn lane on each of the four approaches. The east-, west-, and southbound approaches each has a right turn lane and a through lane. The northbound approach has two through lanes. The intersection of Avenue R at 55th Street East is now operating as an unsignalized two-way stop intersection for the north- and southbound approaches. Each of the four approaches has one left turn lane and one through lane, with an additional right turn lane for the northbound approach.

Avenue R-8 is classified as a secondary arterial serving east- and westbound traffic. The intersection of Avenue R-8 at 55th Street East is now operating as an unsignalized four-way stop intersection with one left turn lane and two through lanes at each of the four approaches.

The detailed intersection configurations are presented in Appendix D.

Existing Traffic Volumes

It is essential that the analysis of traffic conditions takes place during peak hour periods. These periods are when changes to the utilization of the transportation infrastructure are most significant. The same peak AM and PM were utilized in order to maintain uniformity of existing traffic conditions. The traffic counts for all the intersections were collected by Minagar and Associates, Inc. during the month of January 2006 between 6:30-9:30 AM and 3-6 PM. To be consistent, one hour peak volume duration was used in all the intersection performance analyses. Per Caltrans direction, all the existing traffic volumes were balanced. In order to validate the Turning Measurement Counts (TMC) taken in January 2006, new traffic counts were collected in May 2006 at the intersections of 47th Street East at Avenue R, 47th Street East at Avenue R-8, and Palmdale Boulevard at 47th Street East/50th Street East. The comparison between May 2006 and January 2006 Traffic Counts clearly reviews that the total intersection volumes never exceeded fluctuated more than +/- 8.5%, therefore, the counts taken in January 2006 are validated. The Traffic Counts Comparison tables and the new Traffic Counts taken in May 2006 are shown in Appendix H.

The existing intersection performance is measured by its Level of Service (LOS). The LOS indicates the operational condition of an intersection during a given time period. LOS is measured on a scale of "A" to "F", with "A" representing excellent operating conditions and "F" representing extremely congested conditions. A brief description of the LOS can be found in Table 1.

Table 1) Level of Service Description

Level of Service	Traffic Description
A	Excellent, Light Traffic
B	Good, Light to Moderate Traffic
C	Moderate Traffic, Insignificant Delay
D	Heavy Traffic, Significant Delay
E	Severe Congestion and Delay
F	Failed, Indicates Levels Cannot be Handled

As directed by the City of Palmdale and Caltrans, intersection LOS calculations must be conducted using the Highway Capacity Manual (HCM) 2000 which involves the computation of intersection delays and SYNCHRO which involves the computation of "volume-to-capacity" (V/C) ratios and intersection delays for each critical movement.

Table 2 shows the relations between level of service and the performance measures for unsignalized intersections.

Table 2) Level of Service for Unsignalized Intersection Traffic Control

Unsignalized Intersection	
Level of Service	**Average Control Delay (Second/Vehicle)**
A	0 – 10
B	10 – 15
C	15 – 25
D	25 – 35
E	35 – 50
F	50 –

Table 3 displays the relationship between level of service and the performance measures for signalized intersection.

Table 3) Level of Service for Intersection Traffic Controls

Level of Service	Signalized Intersection Traffic Flow Characteristics	Signalized Intersection Average Control Delay (Seconds/Vehicle)
A	Extremely favorable progression with very low control delay. Most vehicles arrive during the green phase and do not stop.	0 – 10
B	Good progression and short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay.	10 – 15
C	Satisfactory operation with fair progression and longer cycle lengths. Individual cycle failures may begin to appear. A significant number of vehicles stop but many pass through without stopping.	15 – 25
D	Tolerable delay where congestion becomes more noticeable and many vehicles stop. The proportion of vehicles not stopping declines. Individual cycle failures are noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios.	25 – 35
E	Unstable flow with poor progression, frequent cycle failures, long cycle lengths and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered the limit of acceptable delay by many agencies.	35 – 50
F	Oversaturation with arrival flow rates exceeding the capacity of the intersection and many individual cycle failures. Poor progression and long cycle lengths as well as high V/C ratios occur at LOS F. Considered unacceptable to most drivers.	50 –

For the purpose of this study, an LOS "C" is considered as adequate, and an LOS "D" is considered acceptable for a short time during peak periods.

The existing AM and PM peak hour traffic volumes are shown on Figures 3 and 4 respectively.

The results of intersection capacity assessments for the existing traffic volumes are shown on Table 4. Analyses of signalized intersections were conducted in SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.

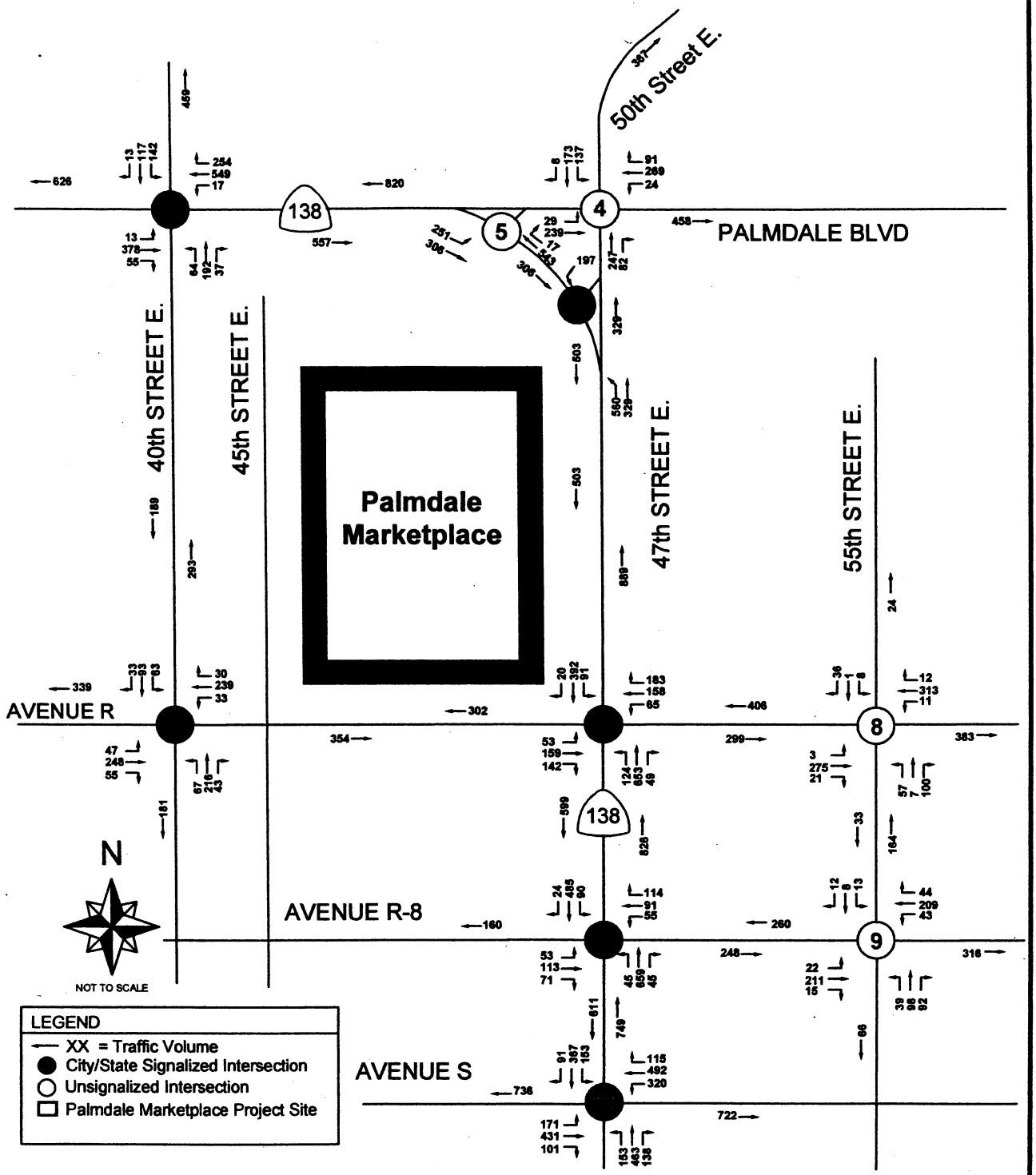
Based on the existing peak hour traffic volumes of the intersections, it is revealed that all the intersections are operating at LOS "C" or better, except for the unsignalized intersection of Palmdale Boulevard and 47th/50th Street East which is operating at LOS "E" during the AM peak hour and LOS "F" during the PM peak hour.

The LOS' for the existing conditions for all of the analyzed intersections are summarized on Table 4.

Table 4) Existing Level of Service Analysis (Year 2006)

Intersection	Year 2006					
	AM			PM		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th Street East @ Avenue R	A	0.48	9.9	A	0.64	9.8
2. 47th Street East @ Avenue R-8	A	0.31	8.0	A	0.37	9.5
3. 47th Street East @ SR-138	B	0.44	17.0	C	0.61	21.9
4. Palmdale Blvd. @ 47th/50th Street East*	E	N/A	N/A	F	N/A	N/A
5. Palmdale Blvd. @ SR-138*	A	N/A	N/A	A	N/A	N/A
6. Palmdale Blvd. @ 40th Street East	B	0.50	14.8	B	0.62	18.0
7. Avenue R @ 40th Street East	C	0.47	23.4	C	0.59	24.4
8. Avenue R @ 55th Street East*	A	N/A	N/A	A	N/A	N/A
9. Avenue R-8 @ 55th Street East*	A	N/A	N/A	A	N/A	N/A
10. Avenue S @ 47th Street East	C	0.58	26.3	C	0.82	32.7

* Unsignalized Intersections
N/A: Not Applicable



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Proposed Palmdale Marketplace
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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Figure 3
2006 Existing Traffic Volumes
AM Peak Hour

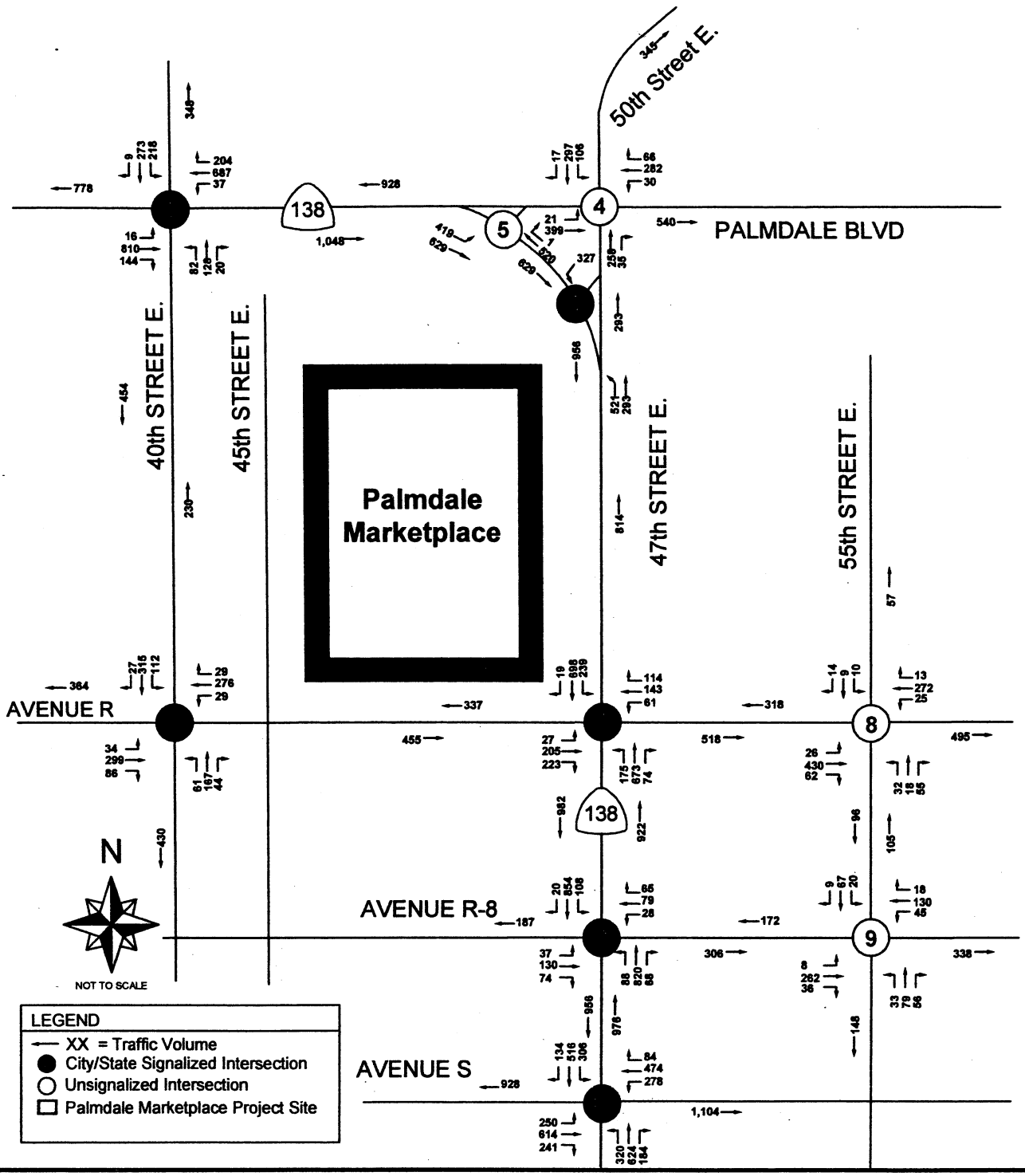

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Figure 4
2006 Existing Traffic Volumes
PM Peak Hour

Proposed Project

The proposed development is located on the northwest corner of 47th Street East and Avenue R. The Marketplace project will include new building structures occupying a total space of 530,000 S.F. The building areas are shown on Table 5.

Table 5) Square Footage Tabulation of Marketplace Project

Building	Land Use	Total Area (S.F.)
All Buildings	Shopping Center	530,000

As requested by the City and Caltrans, the proposed development was examined, checking its compatibility with the City's long range plans as well as the State's future plans within the study area.

Parking:

The City of Palmdale parking requirements were utilized in analyzing the required parking spaces need for the proposed project. According to the project's site plan, there will be a total of 2,431 parking spaces provided by the Palmdale Marketplace project. The parking demands for the project are tabulated on Table 6.

Table 6) Parking Demand Based on City of Palmdale Parking Requirements

Project	Bldg. Area (S.F.)	Total Parking Demand	Standard & Compact Parking Provided	Handicapped Parking Provided	Total Parking Provided
Palmdale Marketplace	530,000	2,112	2,339	92	2,431

Trip Generation

The proposed land uses for the Palmdale Marketplace project include different types of land utilization which is generalized as a shopping center.

The latest *ITE Trip Generation Manual, 7th Edition* was utilized in order to estimate the number of trips that begin or end at the individual project sites. The manual is widely used in Southern California and estimates the probable traffic generation rates for a range of land uses based upon studies and surveys of existing developments in comparable settings.

Based on the ITE trip generation rates, percent of arrival and departure during AM, PM, Weekday and Weekends were all estimated. These trip generation numbers are adjusted with a 25% reduction rate due to pass-by trips based upon the available national data for the similar facilities and setting and per the approval of the City of Palmdale. It should be noted that the aforementioned figure of 25% is conservative. According to the ITE Trip Generation Handbook, June 2004, Chapter 5, Table, 5.6, Pages 42-46, the national average pass-by trip percentage is 34%.

Per Caltrans' direction, the 25% reduction rate on the vehicular trip generation was applied to the traffic volumes on the roadways not at the driveways adjacent to the proposed project site.

After reduction, the project will generate a total of 19,816 vehicles during Saturday, 9,374 vehicles during Sunday, 15,058 vehicles during the weekday, and 320 VPH and 1,411 VPH during the AM and PM peak hours respectively for the buildout year 2007. The non-adjusted and adjusted trip generation numbers are shown in Table 7.

Table 7) Proposed Marketplace Project (Northwest Corner) Trip Generation

AM Peak Hour								
Building	Land Use	Code	Size	In	Out	Total	In	Out
All Buildings	Shopping Center	#820	530,000	61%	39%	426	260	166
						320*	195*	125*

PM Peak Hour								
Building	Land Use	Code	Size	In	Out	Total	In	Out
All Buildings	Shopping Center	#820	530,000	48%	52%	1,882	903	979
						1,411*	677*	734*

Weekday								
Building	Land Use	Code	Size	In	Out	Total	In	Out
All Buildings	Shopping Center	#820	530,000	50%	50%	20,078	10,039	10,039
						15,058*	7,529*	7,529*

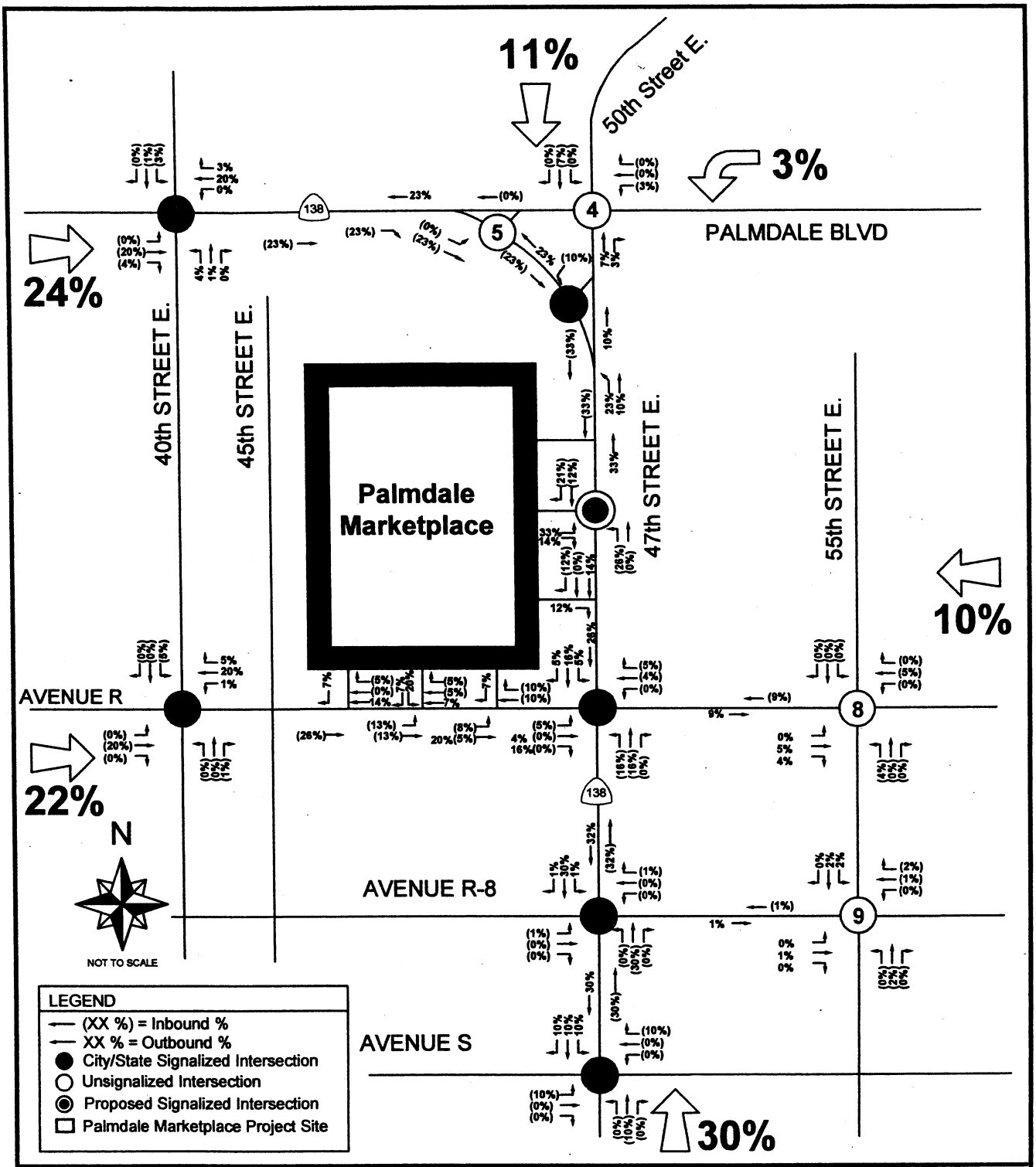
Saturday								
Building	Land Use	Code	Size	In	Out	Total	In	Out
All Buildings	Shopping Center	#820	530,000	50%	50%	26,421	13,211	13,211
						19,816*	9,908*	9,908*

Sunday								
Building	Land Use	Code	Size	In	Out	Total	In	Out
All Buildings	Shopping Center	#820	530,000	50%	50%	12,498	6,249	6,249
						9,374*	4,687*	4,687*

* Adjusted Trip Generation Figures reflect an approved 25% pass-by trips reduction

Trip Distribution

The next step in the transportation demand forecasting process after the estimation of trip generation is trip distribution. This process identifies the routes and directions the project traffic will utilize to go to and from the project site. Existing trip distribution patterns, such as the most direct routes as well as proximity to the project site, were all considered in order to assign the generated trips to the surrounding roadway systems. The trip distribution for the project is shown on Figures 5 for the buildout year 2007 scenarios. The percentages of trip distribution as shown on Figure 5 were derived from the existing trends and future computer demand forecasting of the City of Palmdale. The percentages were approved by the City of Palmdale. Project traffic volumes are determined by applying the trip distribution percentage to the estimated trip generation. Figures 6 and 7 depict the individual project traffic volumes for the AM and PM peak periods for the buildout year 2007 scenarios.



City of Palmdale
Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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Figure 5
Palmdale Marketplace
Project Trip Distribution
Buildout Year 2007

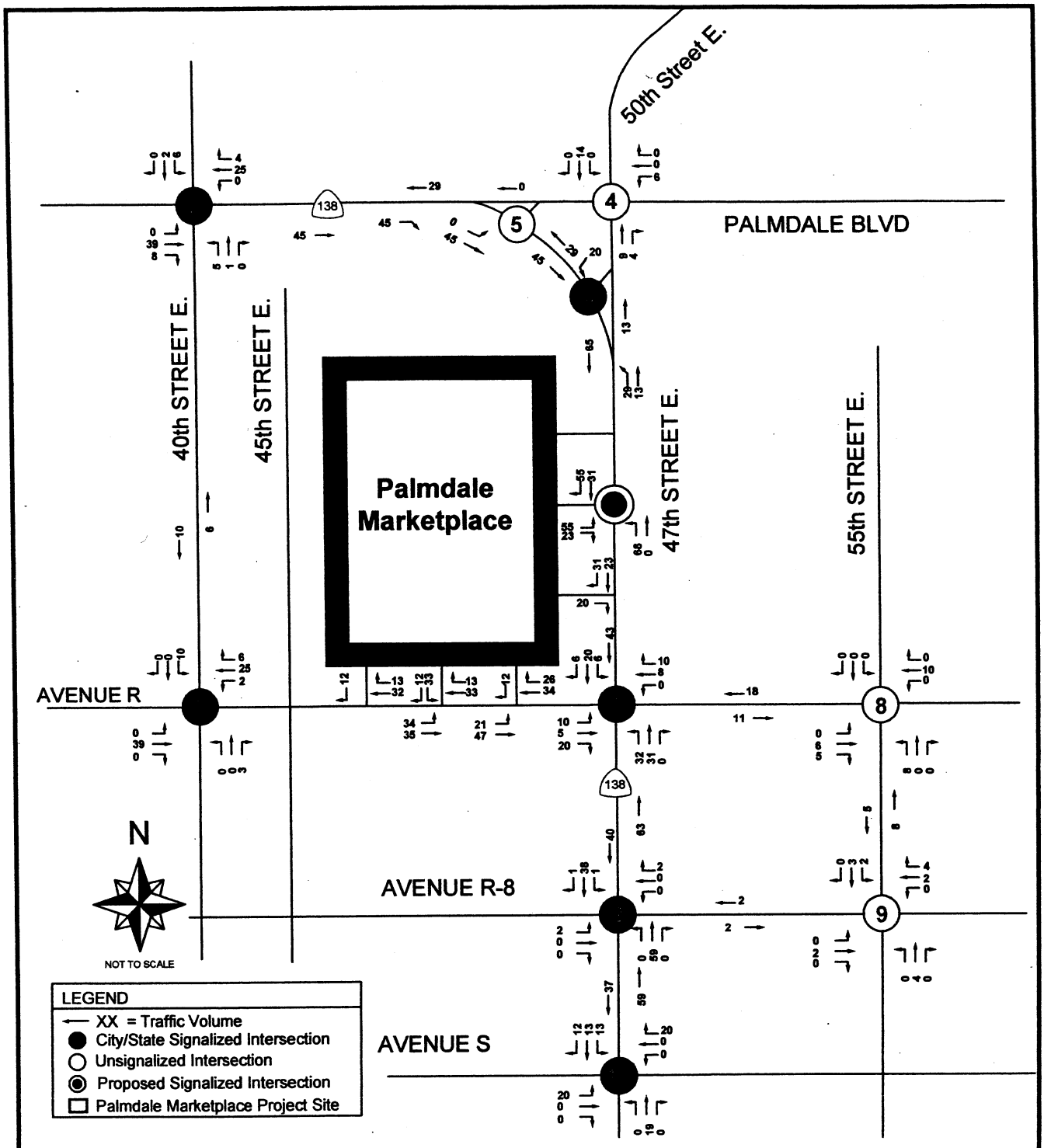

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Figure 6
Palmdale Marketplace Project
Traffic Volumes
AM Peak Hour - Buildout Year 2007

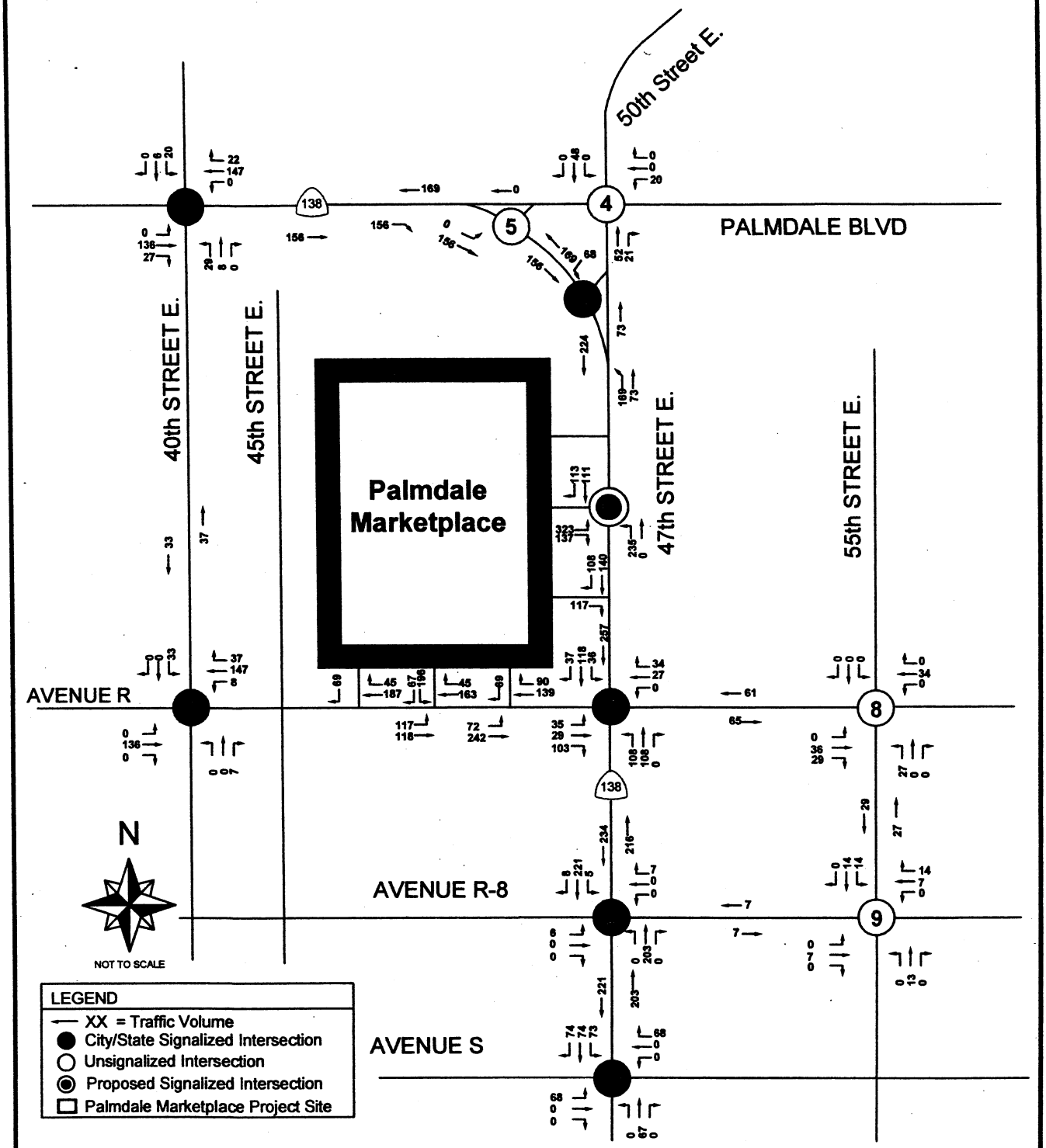

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Figure 7
Palmdale Marketplace Project
Traffic Volumes
PM Peak Hour-Buildout Year 2007

Future Traffic Conditions

Growth Factor

In order to project the existing traffic volumes to the future target years of 2015 & 2025, subsequent to discussions with the Traffic Division of the City of Palmdale, per their concurrence, the data from the following Caltrans report was utilized:

Traffic Analysis Report, 07-LA-138 KP 76.0/78.8 (PM 47.8/49.0) 07-185-23960K prepared by the Feasibility Studies Branch of the Office of Environmental Engineering & Feasibility Studies (OEEFS). Collection of technical data and analysis was in collaboration with the City of Palmdale, Caltrans' Offices of Traffic Investigations & Regional Planning using the Los Angeles Regional Transportation System (LARTS) model. The aforementioned Traffic Analysis Report was prepared as a technical supplement to the Project Study Report.

Based on traffic forecast data projected by Caltrans and existing traffic volumes, an average growth factor of 3.8% was used for the years 2006 to 2025 in this traffic analysis. Utilization of the aforementioned Caltrans growth factor was approved by the City of Palmdale. The existing traffic volumes were compounded annually to obtain traffic volumes for the existing and buildout year 2007, as well as the future years 2015 and 2025 as requested by the City of Palmdale and Caltrans.

Related Projects

The southwest and southeast corners of the intersection of 47th Street E. at Avenue R have also been proposed for development. Tom's Restaurant and Rite Aid #5844-05 include the following land uses and sizes.

Table 8) Square Footage Tabulation of Tom's Restaurant #27 Project & Rite Aid #5844-05 Project

Project	Land Use	Total Area (S.F.)
Tom's Restaurant #27	Fast Food Restaurant with Drive Through Retail Shops	38,495
Rite Aid #5844-05	Drug Store with Drive Through, Retail Shops, Fast Food Restaurant with Drive Through	35,372
Total:		**73,867**

Based on the sizes and land uses set forth above, the total trip generation for both projects is expected to generate 478 VPH in the AM peak hour, with 252 vehicles coming in to the development and 226 vehicles coming out. For the PM peak hour, the project is expected to generate 585 VPH, with 291 vehicles coming in and 294 vehicles leaving the development.

The trip assignment of the two projects is shown on Figure 8 for the AM peak hour and Figure 9 for the PM Peak Hour.

As both of the projects are expected to be built-out by 2007, it has been incorporated into the cumulative background traffic prior to the Palmdale Marketplace project scenarios. The total AM and PM peak hours background traffic expected for buildout year 2007, including the traffic volumes generated by Tom's Restaurant Project and Rite Aid Project, are shown in Figure 10 and Figure 11.

The mitigation measures (i.e., to bring the LOS to an acceptable level) for the aforementioned two projects' impacts include geometry improvements, adding lanes to the existing intersections as follows:

Opening Year 2007 (For Tom's Restaurant & Rite Aid)

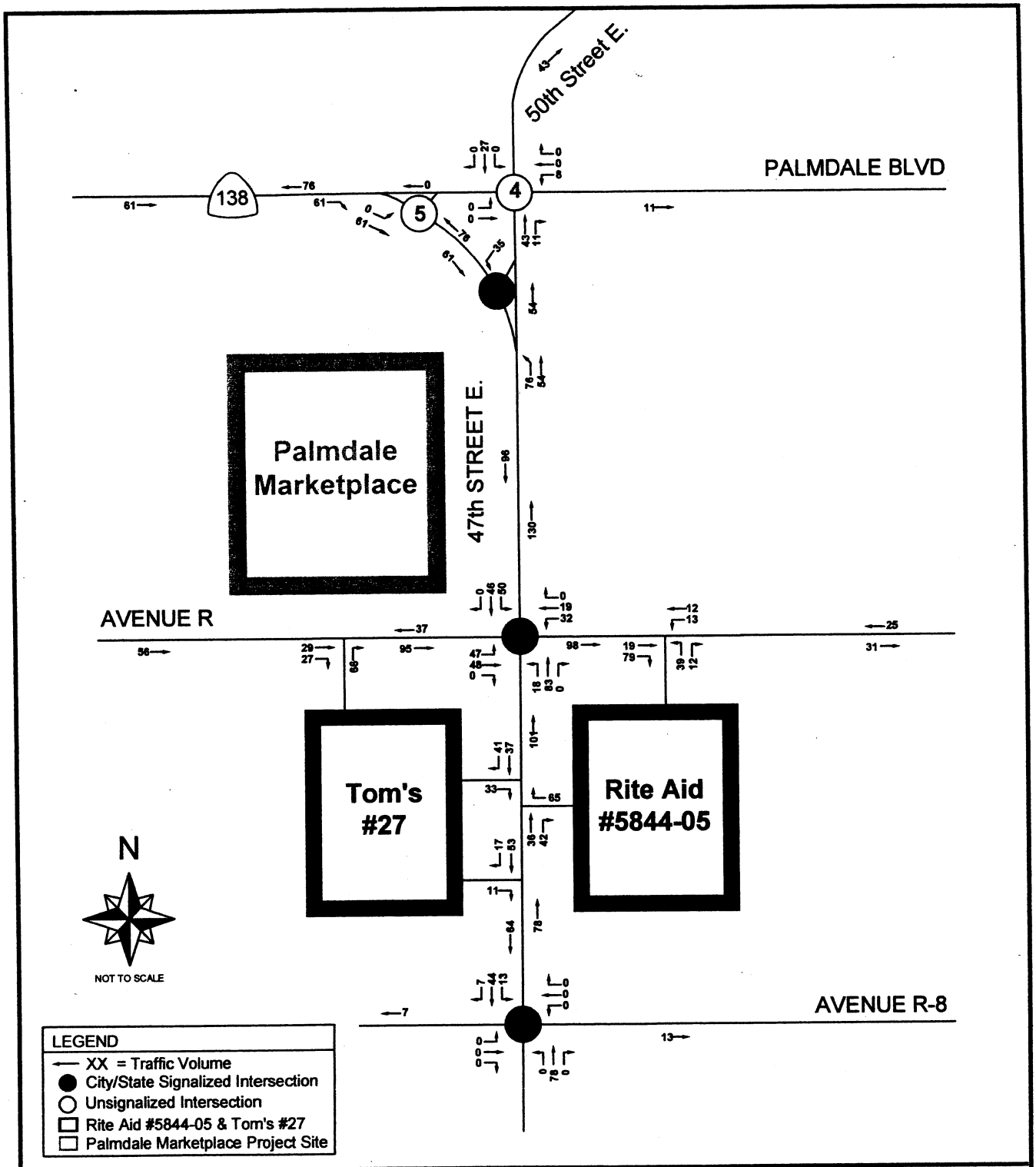
1. Ave. R at 47th St. E.
   - Add one exclusive WBR
   - Add one exclusive WBT
   - Add one exclusive NBR
   - Traffic Signal Modification

Ultimate Target Years 2015 & 2025 (For Tom's Restaurant & Rite Aid)

1. Ave. R at 47th St. E. (in addition to the improvement for the opening year 2007)
   - Add two exclusive WBT
   - Add one exclusive WBL
   - Add one exclusive NBL
   - Add one exclusive SBL
   - Add one exclusive SBR

   It should be noted that the above ultimate geometry improvements are a part of the City's overall roadway improvements along Ave. R and 47th St. E.

2. It is assumed that the proposed SR 138 Caltrans roundabout at Palmdale Blvd./47th St.E./50th St. E. to be constructed after 2008 before 2015, therefore, replacing the existing three intersections.



City of Palmdale
Proposed Rite Aid #5844-05 & Tom's #27 Developments
At 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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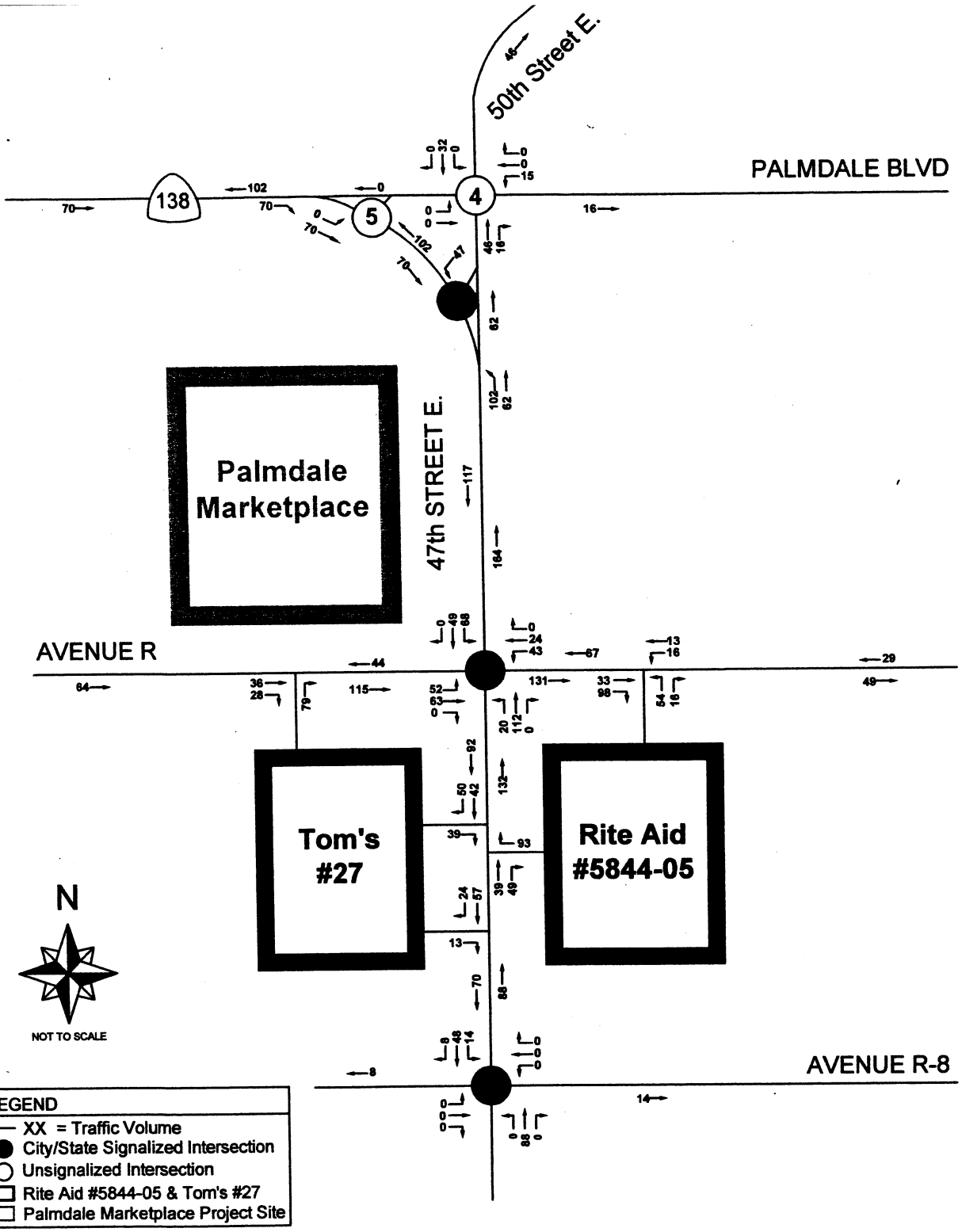
Figure 8
Rite Aid #5844-05 Plus Tom's #27
Traffic Volumes
AM Peak Hour - Buildout 2007



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At 47th St. East & Ave. R Intersection
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Figure 9
Rite Aid #5844-05 Plus Tom's #27
Traffic Volumes
PM Peak Hour - Buildout 2007

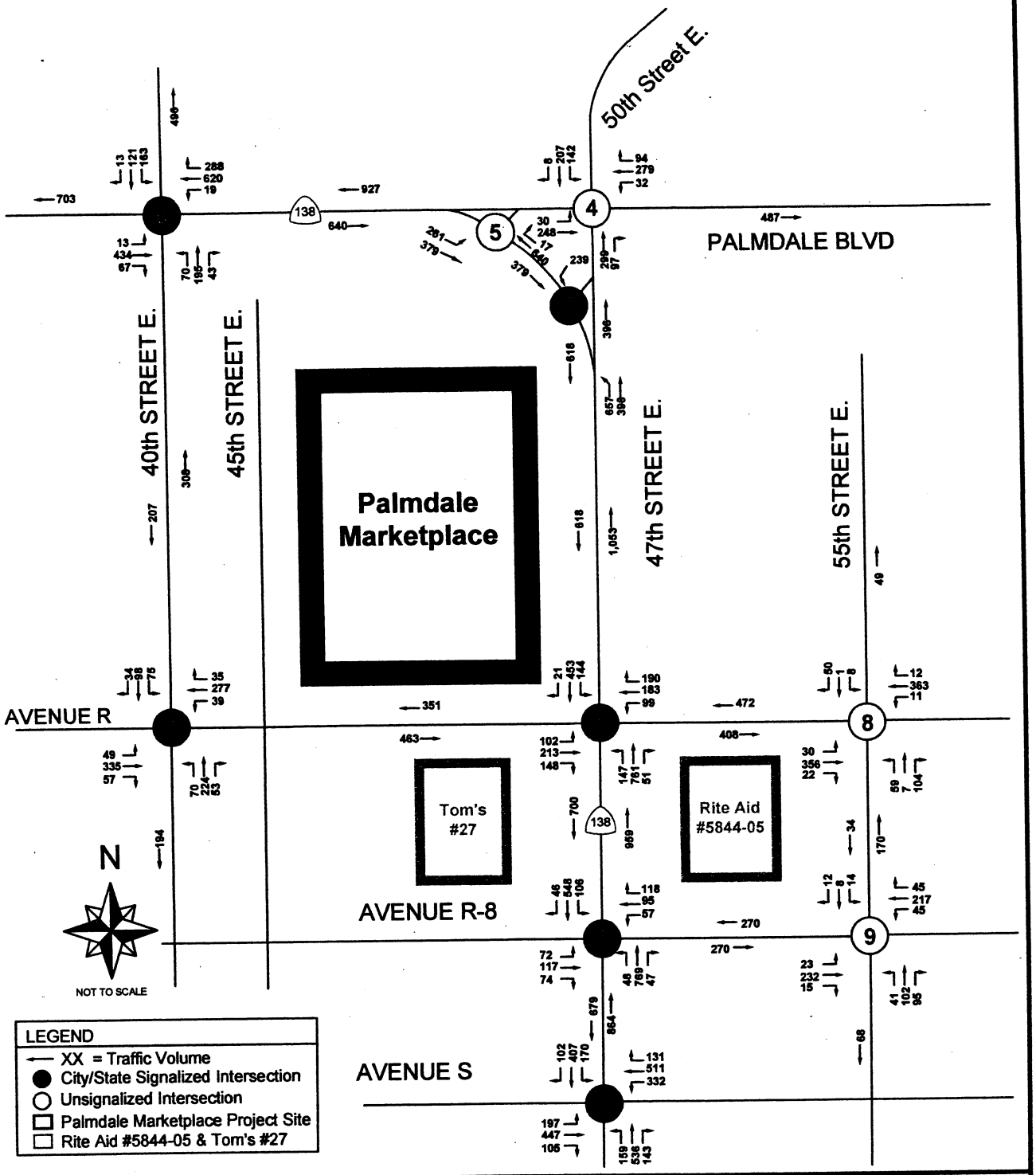

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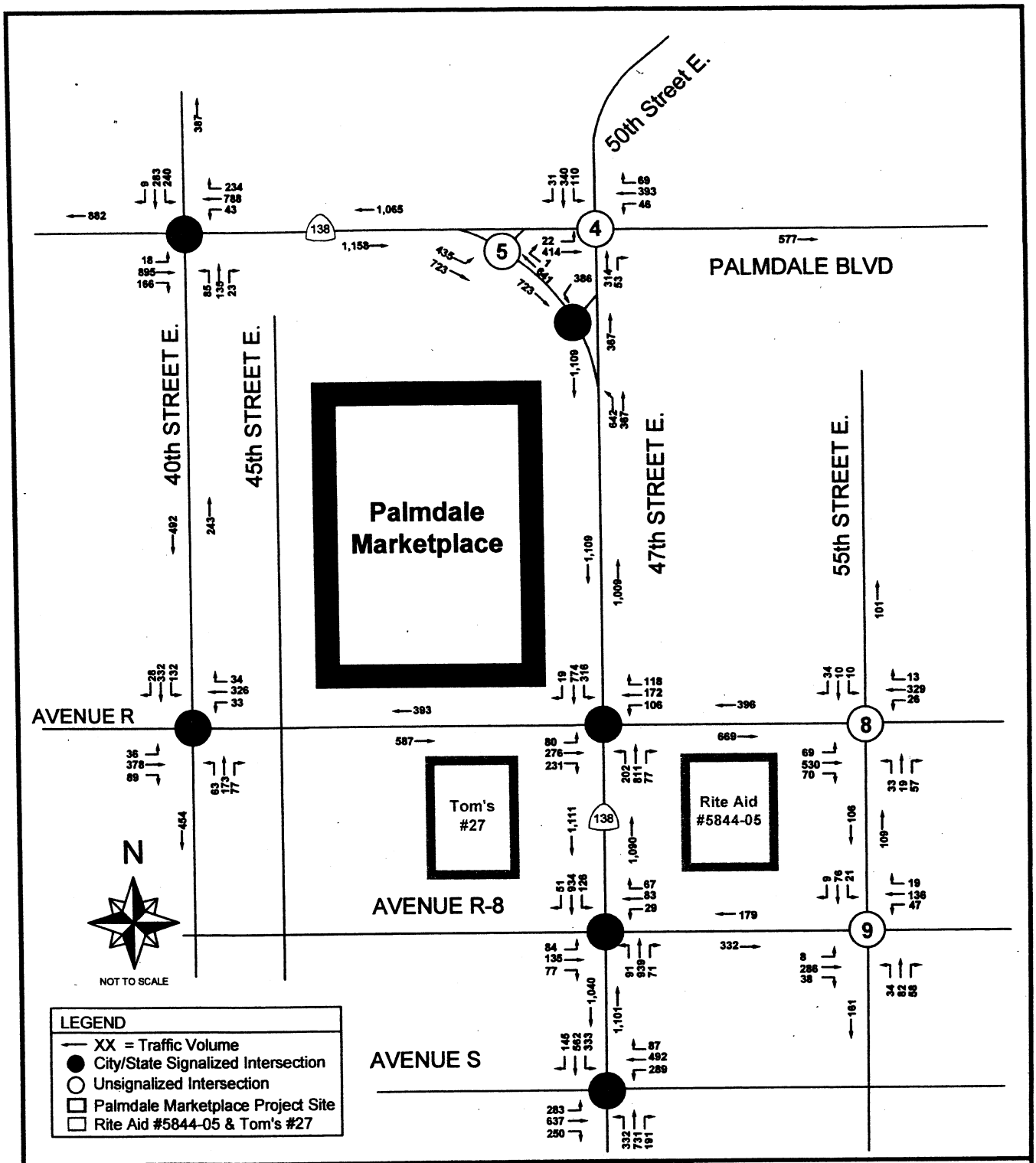
Figure 10
Projected AM Traffic Volume
Without Project
Buildout Year 2007



City of Palmdale
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NWC of 47th St. East & Ave. R Intersection
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Figure 11
Projected PM Traffic Volume
Without Project
Buildout Year 2007

Cumulative Traffic and Marketplace Project Traffic (Buildout Year 2007 for all 3 Projects)

Combination of background traffic, including Tom's Restaurant, Rite Aid #5844-05, the compounded existing traffic volumes, and the Marketplace project traffic volumes resulted in the cumulative total traffic with project traffic volumes for the buildout year 2007.

The total volumes for the AM and PM peak periods in the buildout year 2007 are shown on Figures 12 and 13 respectively.

For the 2007 buildout year, the following proposed new geometry for the intersection of 47th Street East and Avenue R is suggested to be implemented if the other two proposed projects were not constructed:

Opening Year 2007 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - Add one exclusive EBL
   - Add one exclusive SBR
   - Modify the Traffic Signal
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure

The proposed geometry layout of the intersection is shown in Appendix E.

The results of intersection capacity assessments for cumulative traffic with all the projects' traffic during the 2007 buildout year are shown on Table 9. Analyses for signalized intersections were done in SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software. The results of level of service without any proposed mitigation measures for all the projects are listed below.

The intersection of 47th Street East at Avenue R will be operating at LOS "B" for AM peak hour and LOS "C" for PM peak hour. The intersection of Palmdale Boulevard at 47/50th Street East will be operating at LOS "F" for both the AM and PM peak hours. The intersection of 47th Street East at Avenue S will be operating at LOS "C" for AM peak hour and LOS" D" for PM peak hour. The rest of the intersections will be operating at LOS "C" or better in both AM and PM peak hour periods in the 2007 buildout year.

It should be noted that all the 11 intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigations for all the projects at the above intersections. If Caltrans would not pursue the roundabout for the Palmdale Blvd./SR 138/50th/47th St. E., then the intersection of Palmdale Blvd. at 47th St. E./50th St. E. should be signalized. Due to existing right-of-way constraint at the intersection of Ave. S./SR 138/47th St., E., no feasible mitigation measure is proposed.

In order to evaluate any potential traffic impact of the proposed Palmdale Marketplace during **the interim target year of 2008**, before the proposed Caltrans roundabout is constructed, a level of service and capacity assessments were conducted for the three critical intersections of Ave. R/47th St. E., New Palmdale Marketplace Driveway at 47th St. E. and 47th St. E. at SR 138 (Location 3.) No interim additional new geometry would be required. The approximate distance of 1,100' between the existing signalized

intersection of SR 138 at 47th. St. E. (Location 3) and the proposed new Marketplace Driveway traffic signal at SR 138/47th St. E. does not create any traffic queue during the interim year of 2008 with proper signal synchronization. The LOS results clearly show that all of the aforementioned intersections shall operate at satisfactory LOS' of "A", "B" & "C", with the only minor exception of SR 138 at 47th ST. E. which during the short interim, it will operate at LOS "D" during the PM peak hour. It should be noted that this intersection shall be replaced as a part of the Caltrans proposed roundabout. The computer printouts are shown in the Appendix C.

Table 9) Level of Service - Cumulative Total Traffic with Project Traffic (Buildout Year 2007 for all 3 Projects)

Intersection	Year 2007											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St E. @ Av R	B	0.62	10.1	**A**	**0.41**	**8.1**	C	1.17	34.7	**B**	**0.69**	**12.5**
2. 47th St E. @ Av R-8	A	0.39	8.6	A	0.39	8.6	B	0.65	10.8	B	0.65	10.8
3. 47th St E. @ SR-138	B	0.57	19.2	B	0.57	19.2	C	0.84	29.1	C	0.84	29.1
4. Palmdale Blvd. @ 47/50th St E. *#	F	N/A	N/A	**B**	**0.76**	**12.8**	F	N/A	N/A	**C**	**0.93**	**25.8**
5. Palmdale Blvd. @ SR-138 *	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
6. Palmdale Blvd. @ 40th St E.	B	0.53	15.9	B	0.53	15.9	C	0.73	22.0	C	0.73	22.0
7. Av R @ 40th St E.	C	0.64	27.9	C	0.64	27.9	C	0.80	34.8	C	0.80	34.8
8. Av R @ 55th St E.*	A	N/A	N/A	A	N/A	N/A	B	N/A	N/A	B	N/A	N/A
9. Av R-8 @ 55th St E.*	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Av S @ 47th St E.	C	0.66	28.5	C	0.66	28.5	D	0.90	40.6	**	**	**
11. New Marketplace Dr @ SR 138/ 47th St E.	A	0.39	5.3	A	0.39	5.3	B	0.50	11.1	B	0.50	11.1

* Unsignalized Intersection

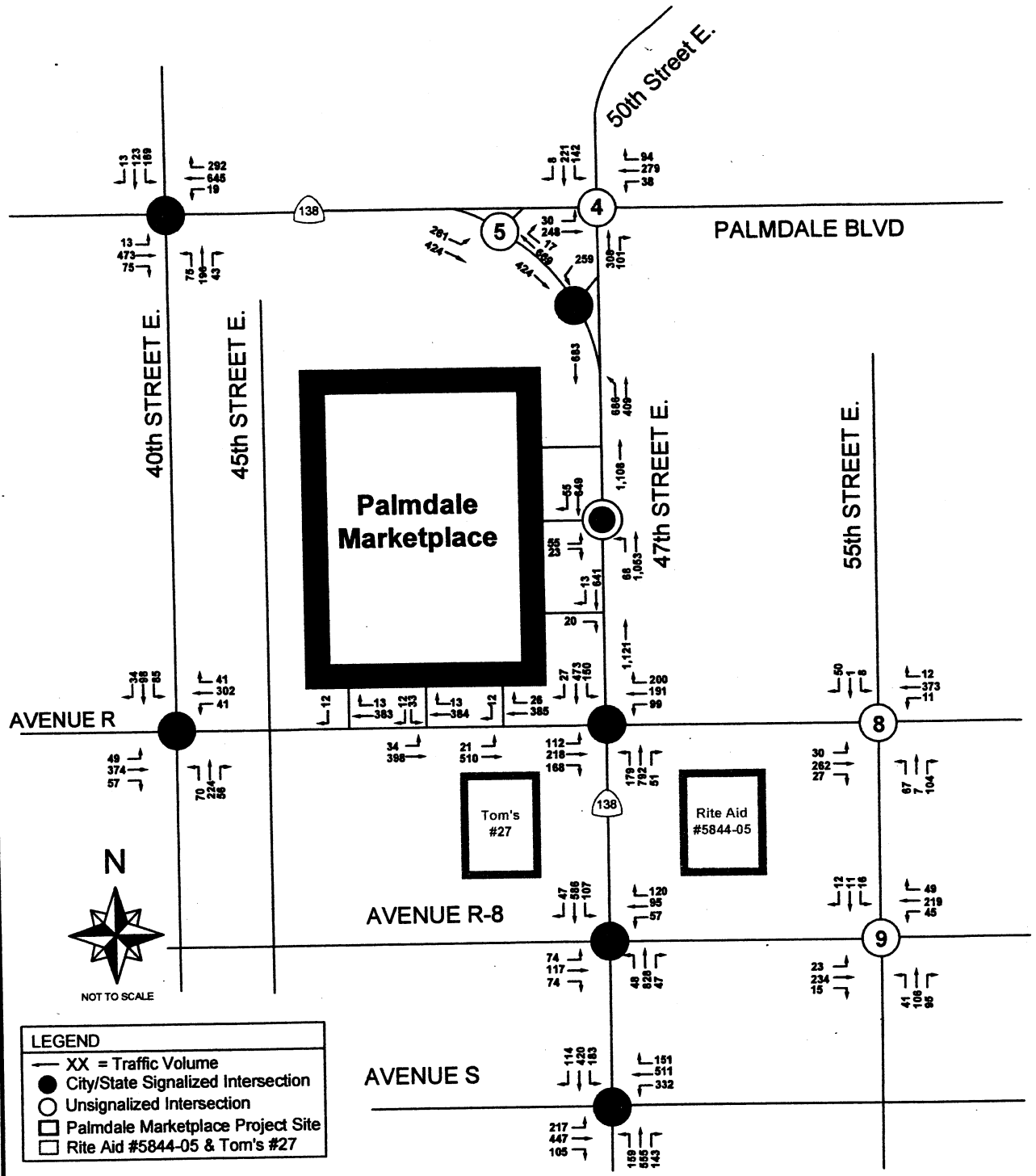
If no roundabout is constructed by Caltrans at SR 138 in the future and only a traffic signal is installed to improve mobility as a substitution without geometry improvement

N/A: Not Available

B	**0.86**	**18.1**

In bold with applied mitigation

** No feasible mitigation measure



City of Palmdale
Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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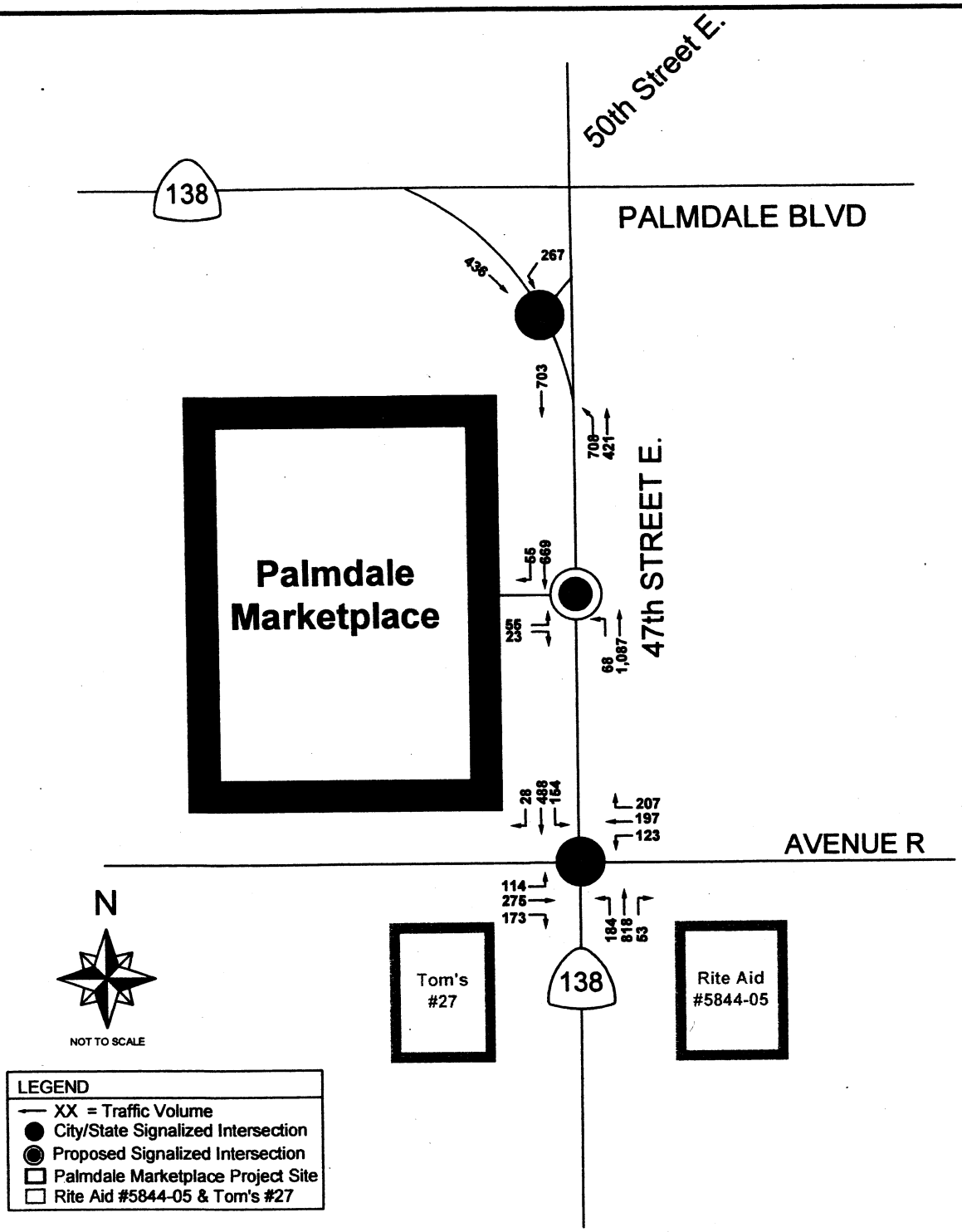
Figure 12
Cumulative Traffic Plus Palmdale Marketplace
Traffic Volumes
AM Peak Hours-2007



City of Palmdale
Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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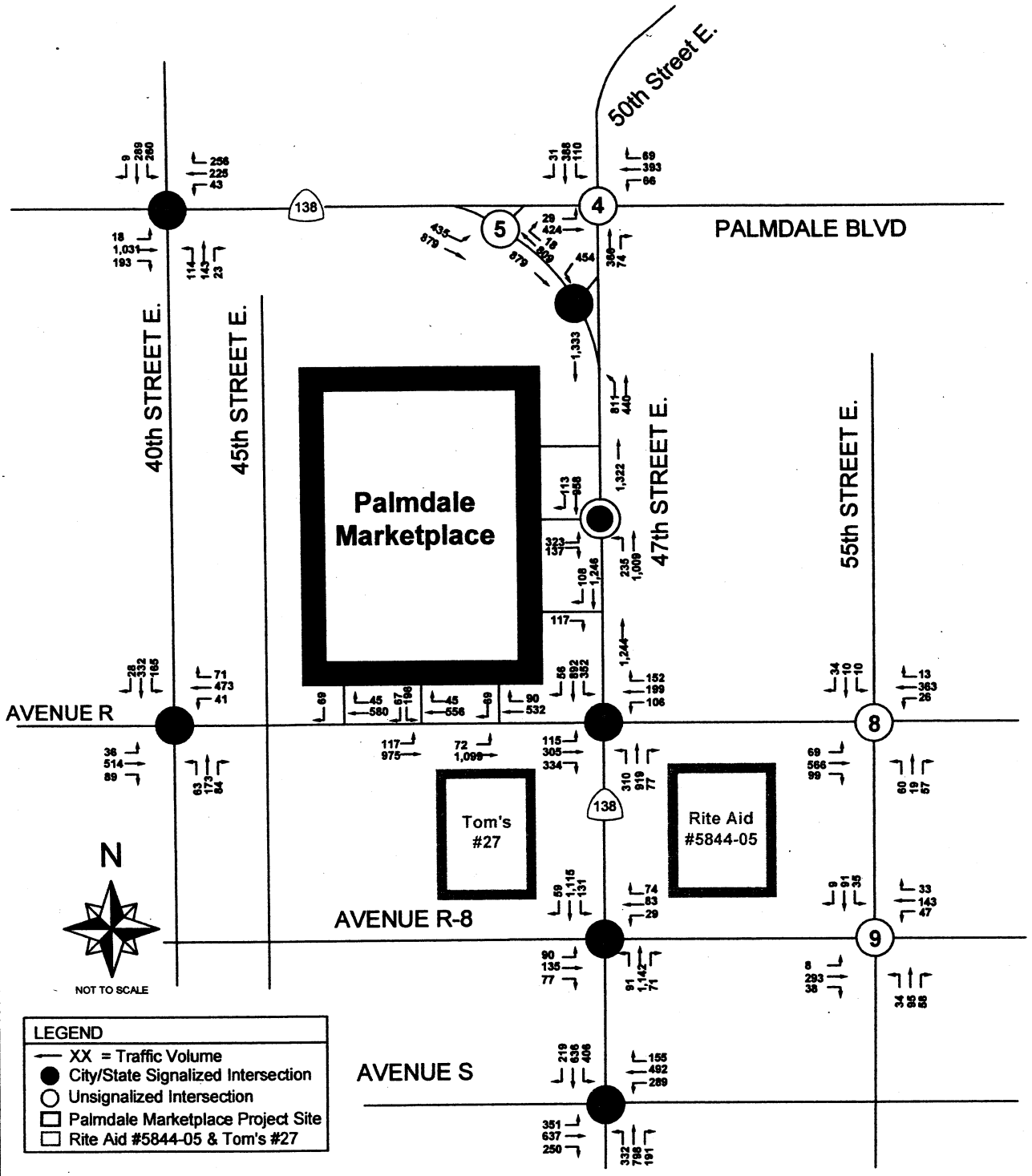
Figure 12 A
Cumulative Traffic Plus Palmdale Marketplace
Traffic Volumes
AM Peak Hours
Interim 2008



City of Palmdale
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NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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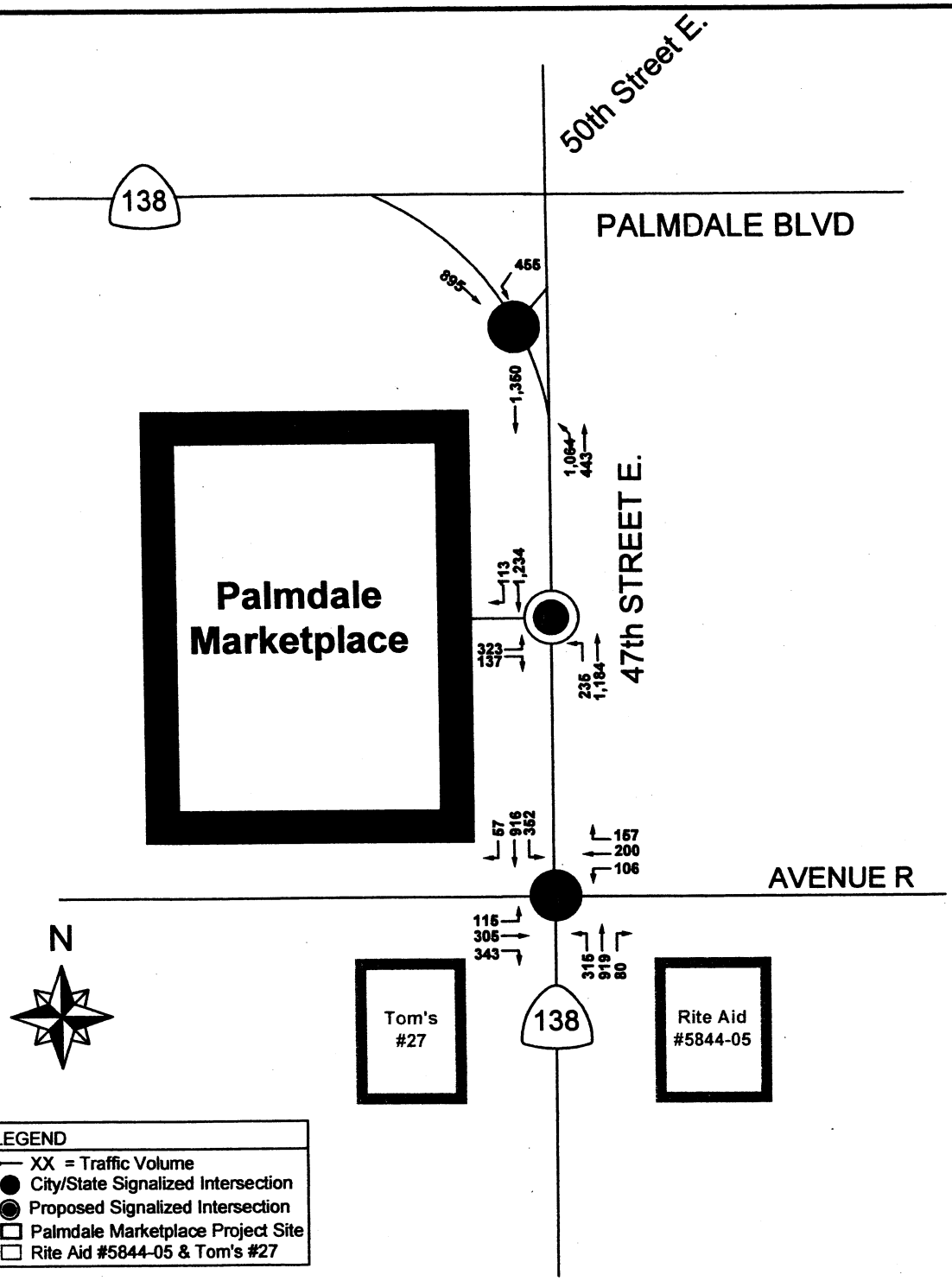
Figure 13
Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes
PM Peak Hours-2007



City of Palmdale
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NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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Figure 13 A
Cumulative Traffic Plus Palmdale Marketplace
Traffic Volumes
PM Peak Hours
Interim 2008

Cumulative Traffic and Marketplace Project Traffic (Future Year 2015 for all 3 Projects)

In order to derive the future traffic for the year 2015, the existing traffic volumes for the year 2006 were increased by using the same average growth factor of 3.8% to which the project volumes were added. Figure 14 and Figure 15 show the Cumulative Total Traffic with Project Traffic during the future year 2015 for the AM and PM peak periods respectively.

The results of intersection capacity assessments for Cumulative Total Traffic with Project Traffic during the future year 2015 are shown on Table 10. Capacity and LOS analyses for the signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.

The capacity assessments for the year 2015 with the proposed development reveal that most of the intersections will be operating at acceptable levels of services "C" or better with the minor exception of the three intersections of Palmdale Blvd. at 40th St. E. which will operate at LOS 'D" during the PM peak hour, Ave. R at 40th St. E. at LOS "D" during the AM and PM peak hours, and Ave. S at 47th St. E. at LOS "D" during the AM peak hour and LOS "E" during the PM peak hour. It should be noted that due to the existing right-of-way constraints, no feasible mitigation measure is proposed for the intersection of Ave. S at SR 138 St. E.

New geometry configuration for the intersection of 47th Street East at Avenue R is proposed by the City for the future year 2015. The ultimate proposed geometry was used in the traffic analysis study for the future years 2015 and 2025, and are shown on Figures 16A and 16B without bike lanes and with bike lanes respectively. Figures 17 and 18 show the City's proposed ultimate right-of-way configurations for 47th Street E. and Avenue R, respectively.

Caltrans has proposed a roundabout to replace the existing three intersections, 47th/50th Street East at Palmdale Boulevard, Palmdale Boulevard at SR-138, and 47th Street East at SR-138 by the year 2008, for the future year 2015 traffic analysis, the proposed roundabout alternative in place of the three intersections was used. The analysis of the roundabout was done through using the methodology per Chapter 4 of "FHWA's Roundabouts: An Informational Guide".

It should be noted that all the 11 intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigations measures for all 3 projects at the above intersections except the intersections of Ave. S. at SR 138/47th St. E. which due to the existing right-of-way constraints, no feasible mitigation measure is proposed, and Palmdale Blvd. at 40th St. E which is subject to right-of-way availability.

For the future 2015 buildout year, the following proposed new geometry/mitigation measures are suggested to be implemented if the other two proposed projects were not constructed:

Future Year 2015 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - Add one exclusive SBT
   - Add one exclusive SBL
   - Add two exclusive WBT (subject to ROW availability)
   - Add one exclusive WBL (subject to ROW availability)
   - Add one exclusive WBR (subject to ROW availability)
   - Add one exclusive NBT (subject to ROW availability)
   - Add one exclusive NBL (subject to ROW availability)
   - Add one exclusive NBR (subject to ROW availability)
   - Modify the Traffic Signal
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure
3. Ave. R at 40th E. (subject to ROW availability)
   - Add one EBT
4. Palmdale Blvd. at 40th St. E. (subject to ROW availability)
   - Add one exclusive EBR
   - Add one exclusive WBR
   - Add one Exclusive SBL
   - Add one exclusive SBR

Table 10) Level of Service - Cumulative Total Traffic with Project Traffic (Future Year 2015 for all 3 Projects)

Intersection	Year 2015											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St E. @ Av R+	A	0.51	9.7	A	0.51	9.7	C	1.03	23.8	C	1.03	23.8
2. 47th St E. @ Av R-8	B	0.69	10.1	B	0.69	10.1	B	1.02	18.8	B	1.02	18.8
3. 47th St E. @ SR-138*	A	0.61	8.4	A	0.61	8.4	B	0.87	19.7	B	0.87	19.7
6. Palmdale Blvd. @ 40th St E.	B	0.73	18.8	**B**	**0.64**	**15.4**	D	1.03	36.5	**C**	**0.85**	**25.3**
7. Av R @ 40th St E.	D	0.74	35.7	**C**	**0.44**	**22.1**	D	0.89	50.5	**C**	**0.72**	**26.3**
8. Av R @ 55th St E.	A	N/A	N/A	A	N/A	N/A	C	N/A	N/A	C	N/A	N/A
9. Av R-8 @ 55th St E.	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Av S @ 47th St E.	D	0.86	36.5	**	**	**	E	1.06	79.8	**	**	**
11. New Marketplace Dr @ SR 138/ 47th St E.	A	0.36	4.8	A	0.36	4.8	B	0.66	12.5	B	0.66	12.5

* With Proposed Caltrans Roundabout

\+ With Geometry Improvement

B	**0.86**	**18.1**

In bold with applied mitigation

** No feasible mitigation measure

Cumulative Traffic and Marketplace Projects Traffic (Future Year 2025 for all 3 Projects)

The future traffic for the year 2025 was derived by combining the existing traffic volumes for the year 2006, which were increased by using the average growth factor of 3.8% for the years 2006 to 2025, and the project volumes. Figure 19 and Figure 20 show the Cumulative Total Traffic with Project Traffic for the AM and PM peak periods respectively. Using the same lane geometry as for the future year 2015, capacity assessments were also conducted. The results of intersection capacity assessments for Cumulative Total Traffic with Project Traffic during the future year 2025 are shown on Table 11. Analyses for signalized intersections were conducted using SYNCHRO computer software and those for unsignalized intersections were conducted using HCS2000 software.

In the future year 2025, the following intersections with the same proposed new geometry for year 2015 will be operating at an unacceptable LOS "D" or worse during the AM & PM peak hours: 47th St. E. at Ave. R, LOS "E" during the PM only, 47th St. E at Ave. R-8, LOS "D" during the PM only, Palmdale Blvd. at 40th St. E, LOS "E" during the AM and LOS "F" during the PM, Ave. R at 40th St. E, LOS "E" during the AM and LOS "F" during the PM, Ave. R at 55th St. E, LOS "E" during the PM, and Ave. S at 47th St. E. LOS "F" during both the AM & PM peak hours. The proposed Caltrans roundabout is revealed to have a LOS "F" during the AM and PM peak hours respectively.

It should be noted that all the intersections will operate at satisfactory LOS' during both AM and PM peak hours with the following mitigation measures at the above intersections except the roundabout which will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes, Ave. S at 47th St. E./SR 138 which no feasible mitigation measure is proposed due to existing right-of-way constraints. The intersection of Ave. R at 47th St. E./SR 138 will experience LOS "D" only during a short peak hour.

For the future 2025 buildout year, the following proposed new geometry/mitigation measures are suggested to be implemented if the other two proposed projects were not constructed:

<u>Future Year 2025 (For Palmdale Marketplace)</u>

1. Ave. R at 47th St. E./SR 138
   - The same as 2015
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure
3. Ave. R at 40th E. (subject to ROW availability)
   - Add one exclusive EBT
4. Palmdale Blvd. at 40th St. E. (subject to ROW availability)
   - Add one exclusive EBT
   - Add one exclusive WBT
   - Add one exclusive SBT
   - Add one exclusive NBL
5. Ave. R-8 at 47th St. E.
   - Modify signal for protected NB & SB left turns
6. Ave R at 40th St. E.
   - Signalize the intersection

Table 11) Level of Service - Cumulative Total Traffic with Project Traffic (Future Year 2025 for all 3 Projects)

Intersection	Year 2025											
	AM (No Mitigation)			AM (With Mitigation)			PM (No Mitigation)			PM (With Mitigation)		
	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)
1. 47th St E. @ Av R+	A	0.76	9.9	**A**	**0.76**	**9.9**	E	1.33	60.1	**D**	**0.79**	**35.5**
2. 47th St E. @ Av R-8	C	0.91	21.6	**D**	**1.37**	**43.1**	D	1.56	50.9	**D**	**1.02**	**47.4**
3. 47th St E. @ SR-138*	F	0.99	89.3	***	***	***	F	1.42	219.6	***	***	***
6. Palmdale Blvd. @ 40th St E.	E	1.03	59.7	**B**	**0.71**	**16.9**	F	1.71	275.4	**C**	**0.91**	**27.1**
7. Av R @ 40th St E.	E	0.99	73.0	**C**	**0.71**	**30.7**	F	1.13	113.6	**C**	**0.77**	**32.3**
8. Av R @ 55th St E.	C	N/A	N/A	**B**	**0.62**	**13.2**	E	N/A	N/A	**C**	**0.86**	**20.4**
9. Av R-8 @ 55th St E.	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A	A	N/A	N/A
10. Av S @ 47th St E.	F	1.06	87.7	**	**	**	F	1.49	234.1	**	**	**
11. New Marketplace Dr @ SR 138/ 47th St E.	A	0.50	5.0	A	0.50	5.0	B	0.79	14.6	B	0.79	14.6

* With Proposed Caltrans Roundabout

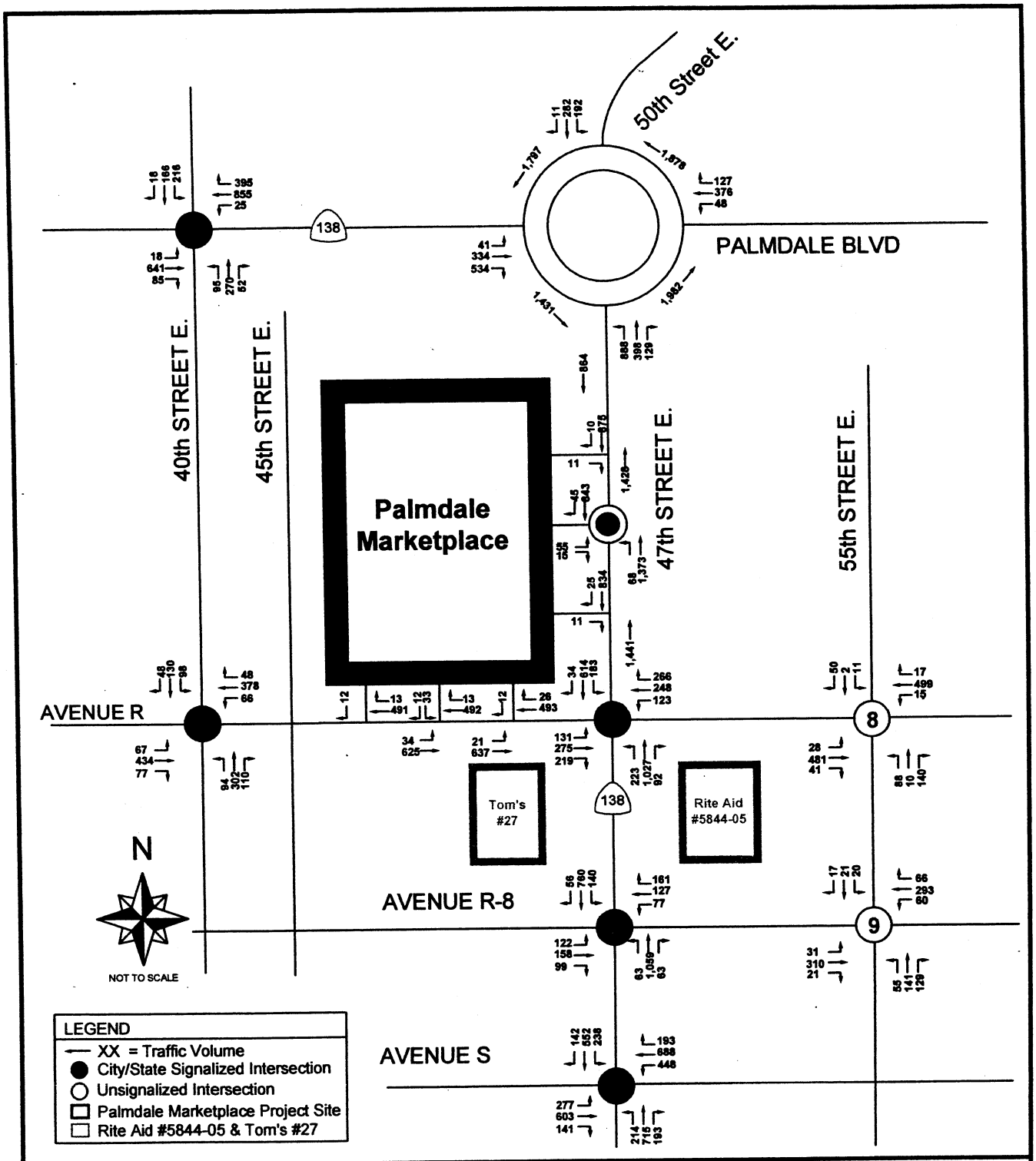
*** Caltrans conceptual reconfiguration & approval of the roundabout capacity modification is required (from 2 to 3 lanes)

B	**0.86**	**18.1**

In bold with applied mitigation

** No Feasible mitigation measure

+ With Geometry Improvement



City of Palmdale
Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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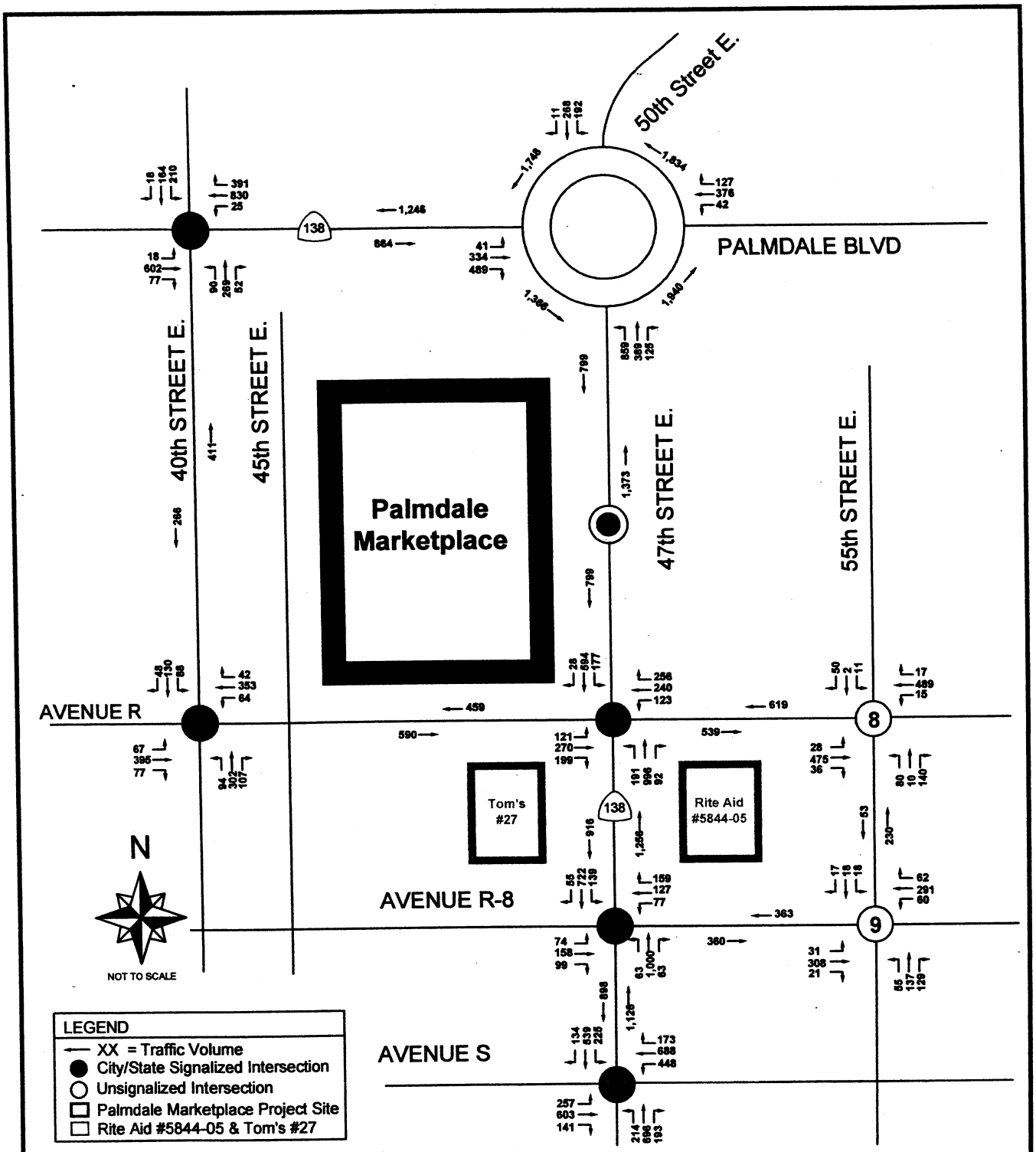
Figure 14
Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes
AM Peak Hour-2015



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Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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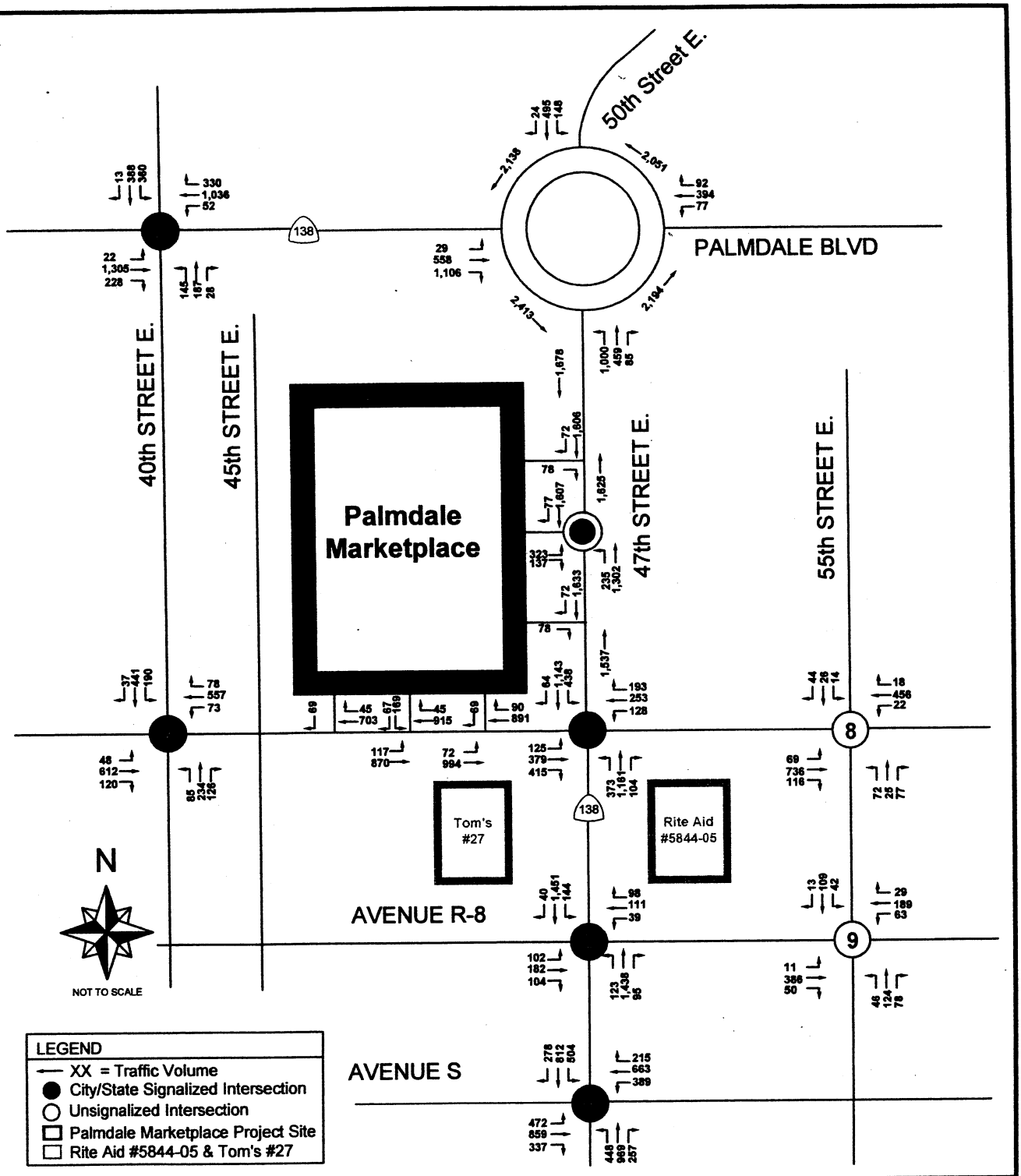
Figure 14 A
Cumulative Traffic
Without Palmdale Marketplace
Traffic Volumes
AM Peak Hour-2015



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Proposed Palmdale Marketplace
NWC of 47th St. East & Ave. R Intersection
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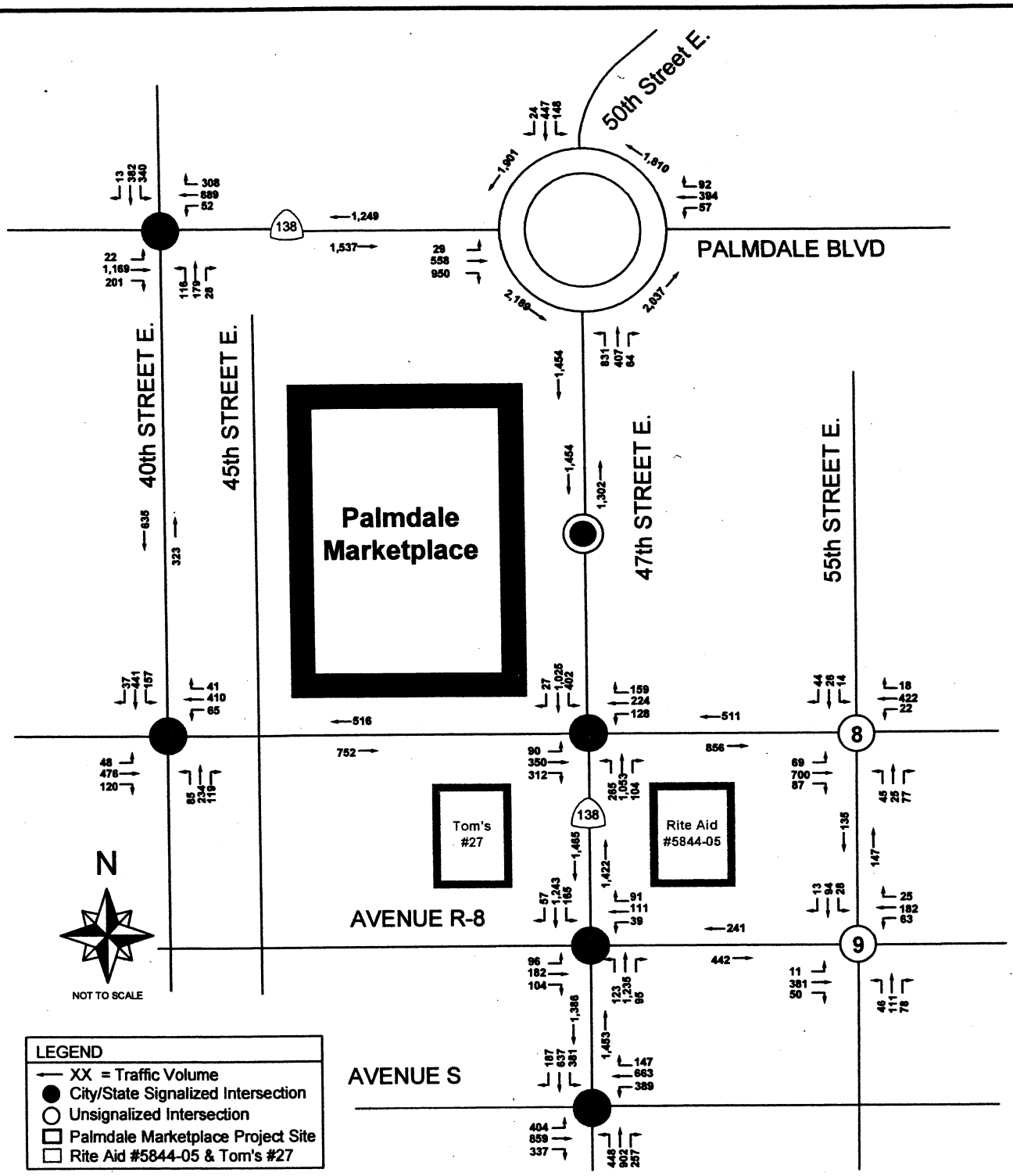
Figure 15
Cumulative Traffic Plus Palmdale Marketplace
Traffic Volumes
PM Peak Hour-2015



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Proposed Palmdale Marketplace
NWC of 47th St. East & Ave. R Intersection
Revised Traffic Analysis

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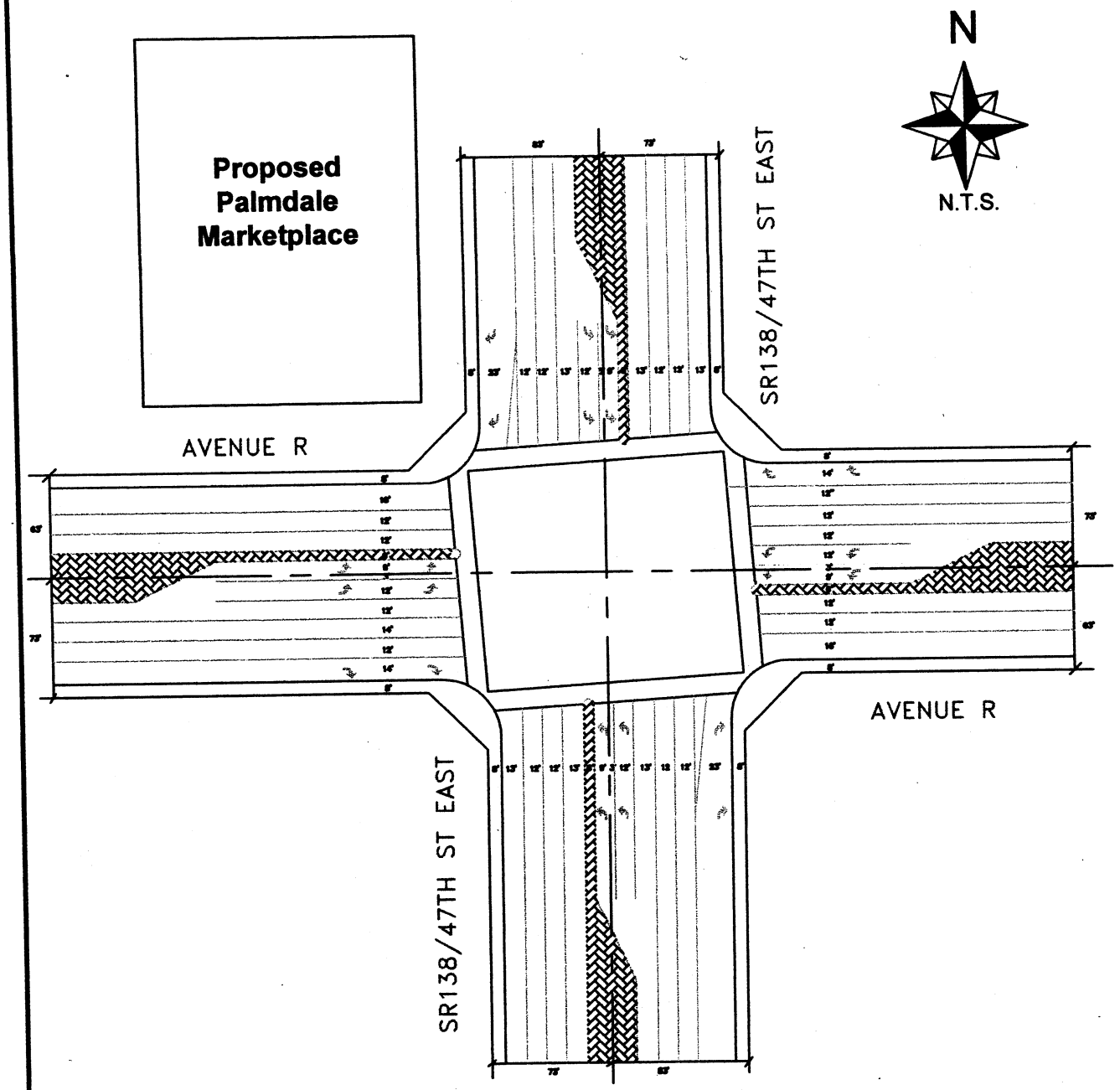
Figure 15 A
Cumulative Traffic
Without Palmdale Marketplace
Traffic Volumes
PM Peak Hour-2015



City of Palmdale
Proposed Palmdale Marketplace
NWC of 47th Street E. & Ave. R
Revised Traffic Analysis

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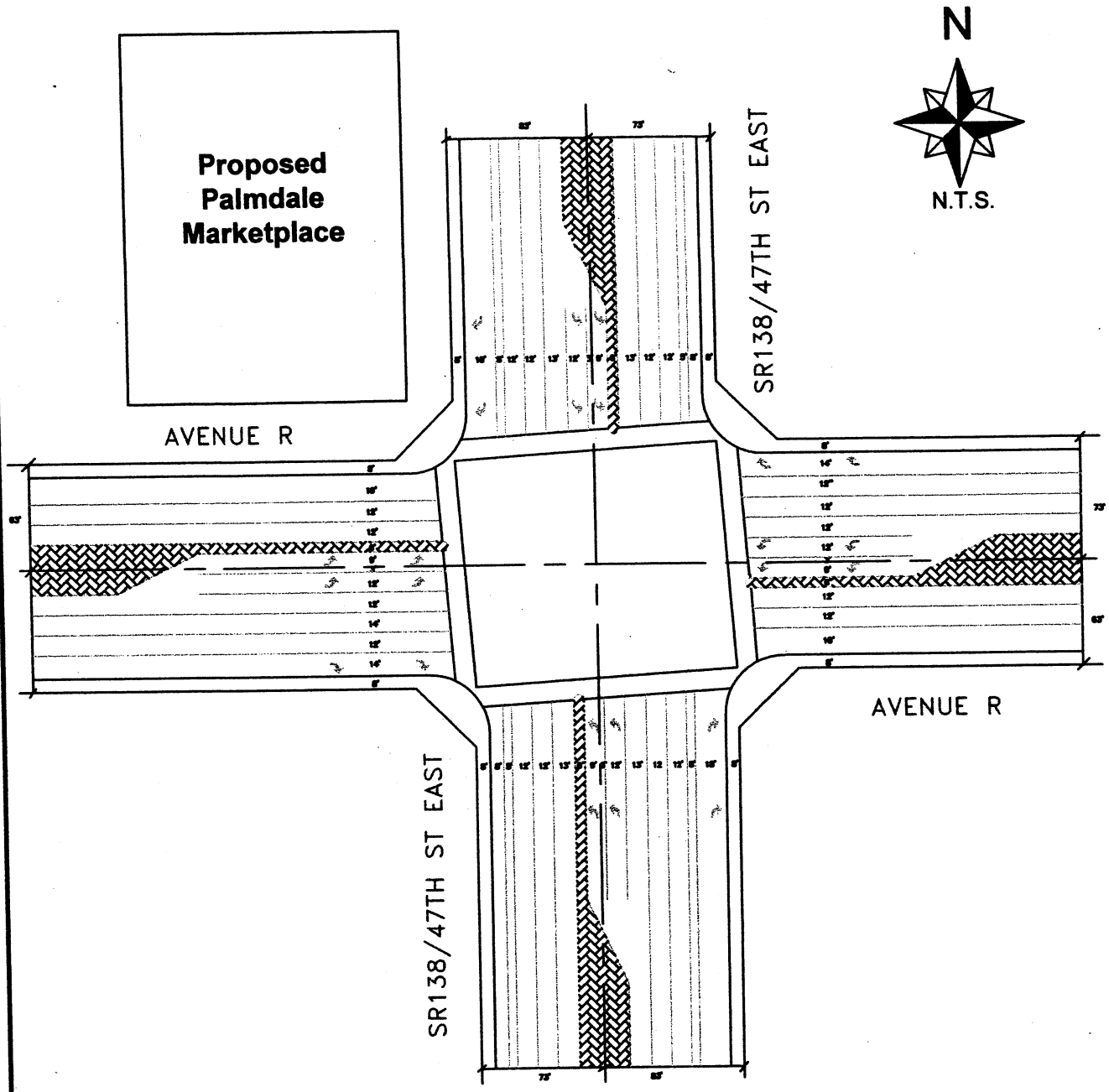
Figure 16 A
47th St. E. & Ave. R
Proposed Intersection Layout
Years 2015 & 2025



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Proposed Palmdale Marketplace
NWC of 47th Street E. & Ave. R
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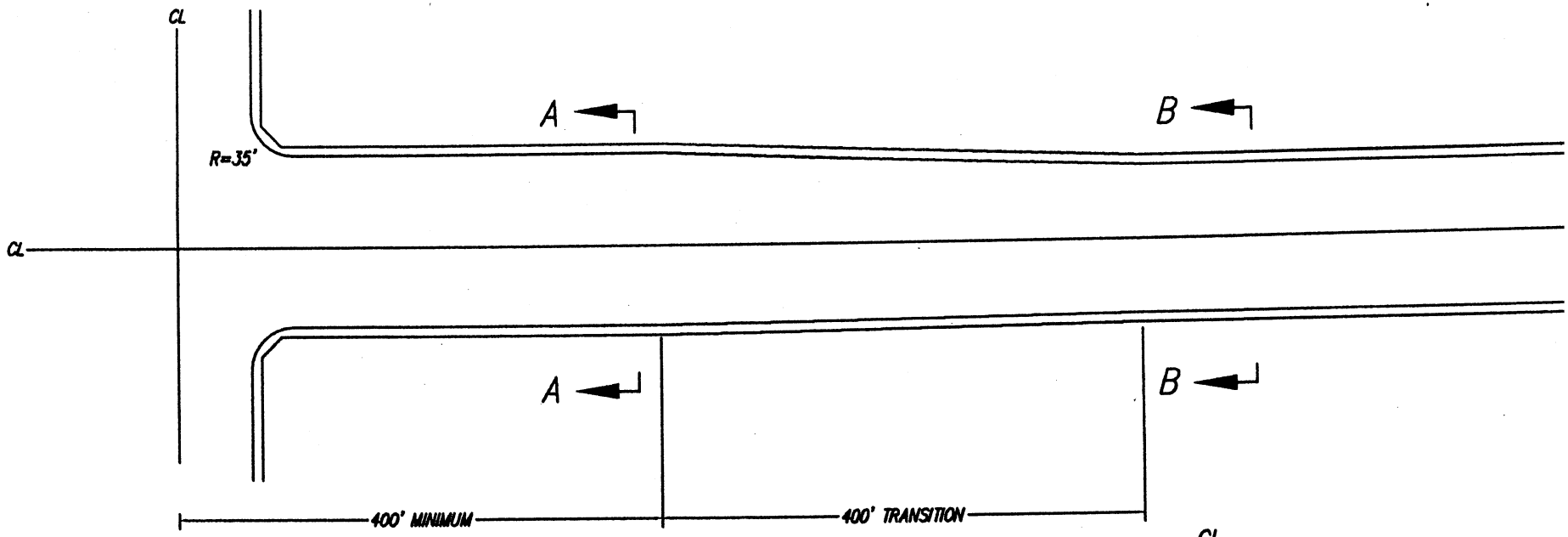
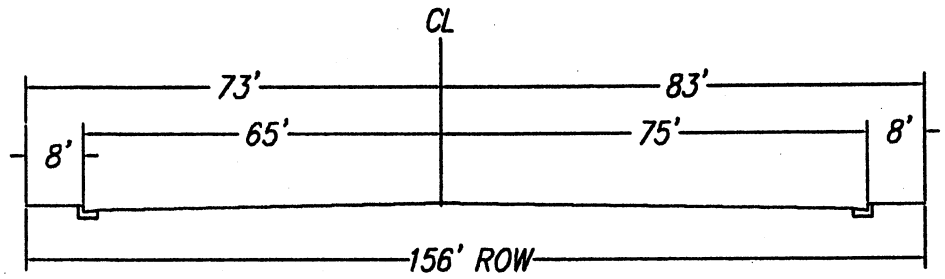
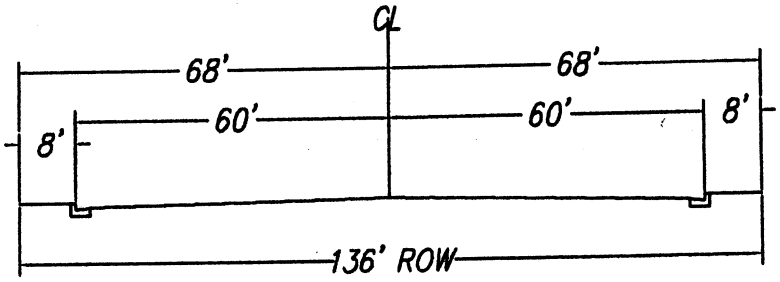
Figure 16 B
47th St. E. & Ave. R
Proposed Intersection Layout
Years 2015 & 2025





SECTION A–A



SECTION B–B

NOTES:

1. STANDARD PROVIDED TO ILLUSTRATE RIGHT-OF-WAY AND CURBLINE DIMENSIONS.

CITY OF PALMDALE

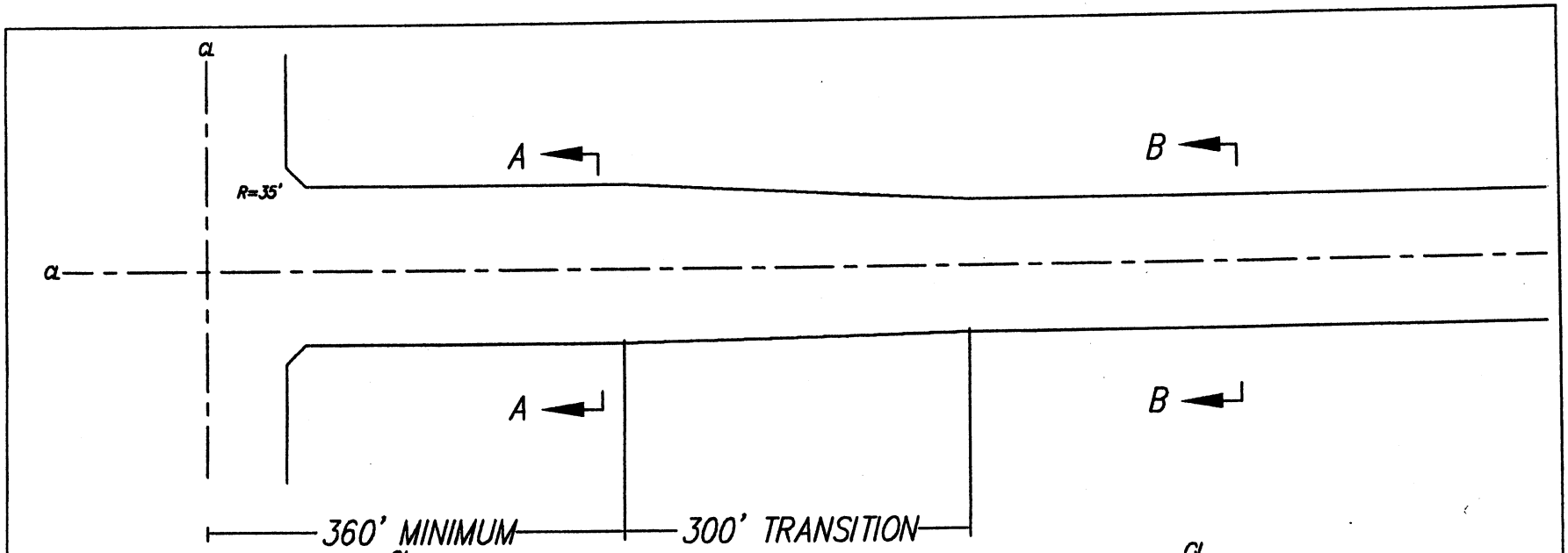
8 – LANE ARTERIAL EXPANDED INTERSECTION WITH BIKELANES

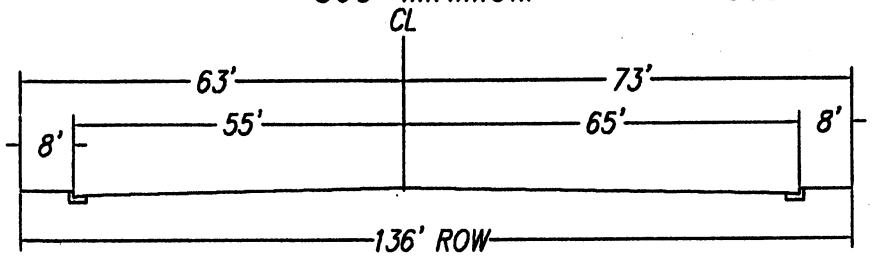
Std. No

T–

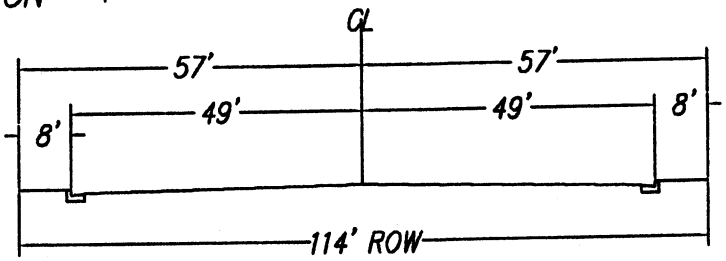
Approved: _____ City Engineer _____ Date

Figure 17





SECTION A–A



SECTION B–B

NOTES:

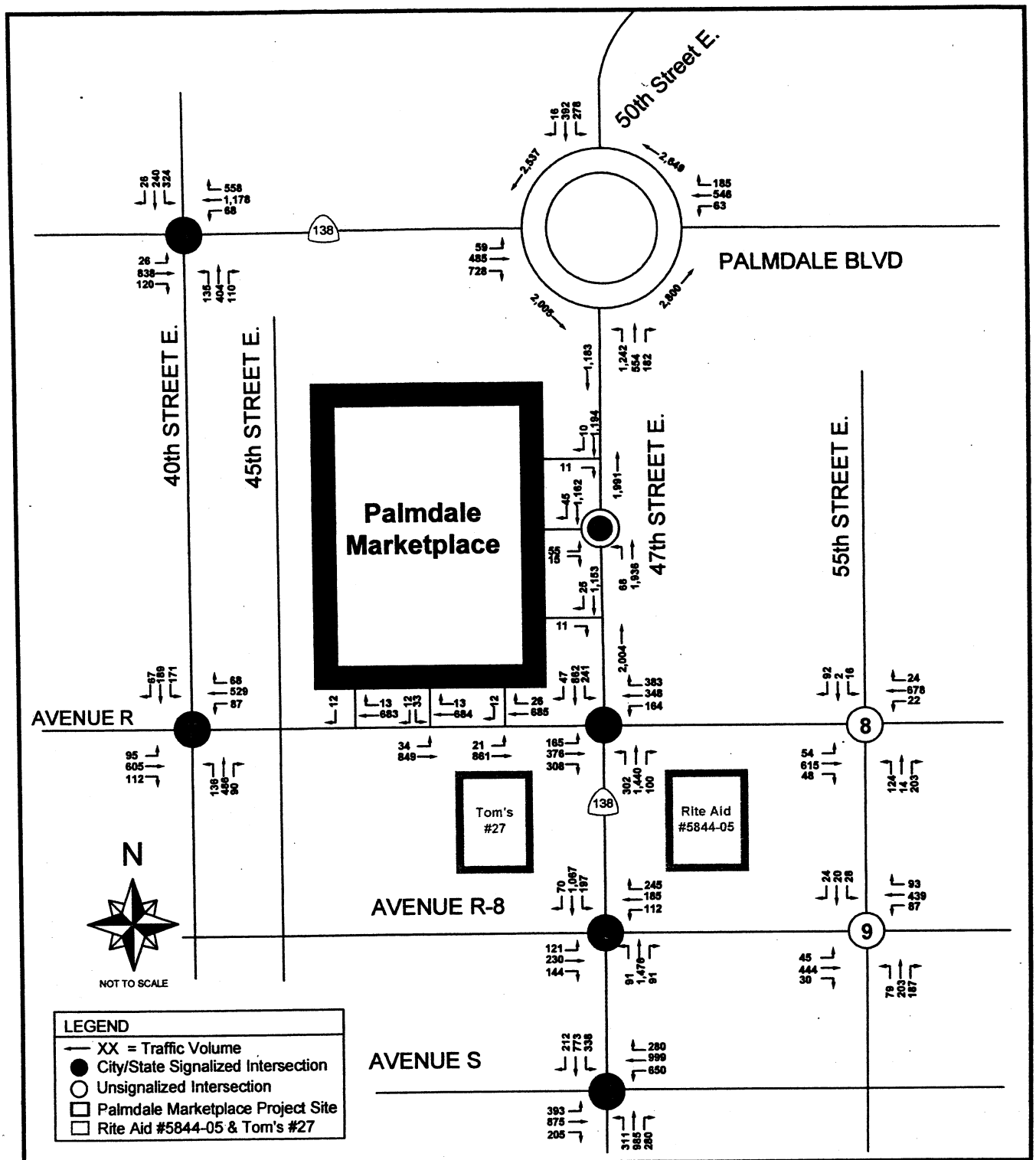
1. STANDARD PROVIDED TO ILLUSTRATE RIGHT-OF-WAY AND CURBLINE DIMENSIONS.

CITY OF PALMDALE

6 – LANE ARTERIAL EXPANDED INTERSECTION WITH BIKELANES

Std. No. T-1

Approved: _____ City Engineer _____ Date



City of Palmdale
Proposed Paldmdale Marketplace Project
NWC of 47th St. East & Ave. R
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Figure 19
Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes
AM Peak Hours-2025

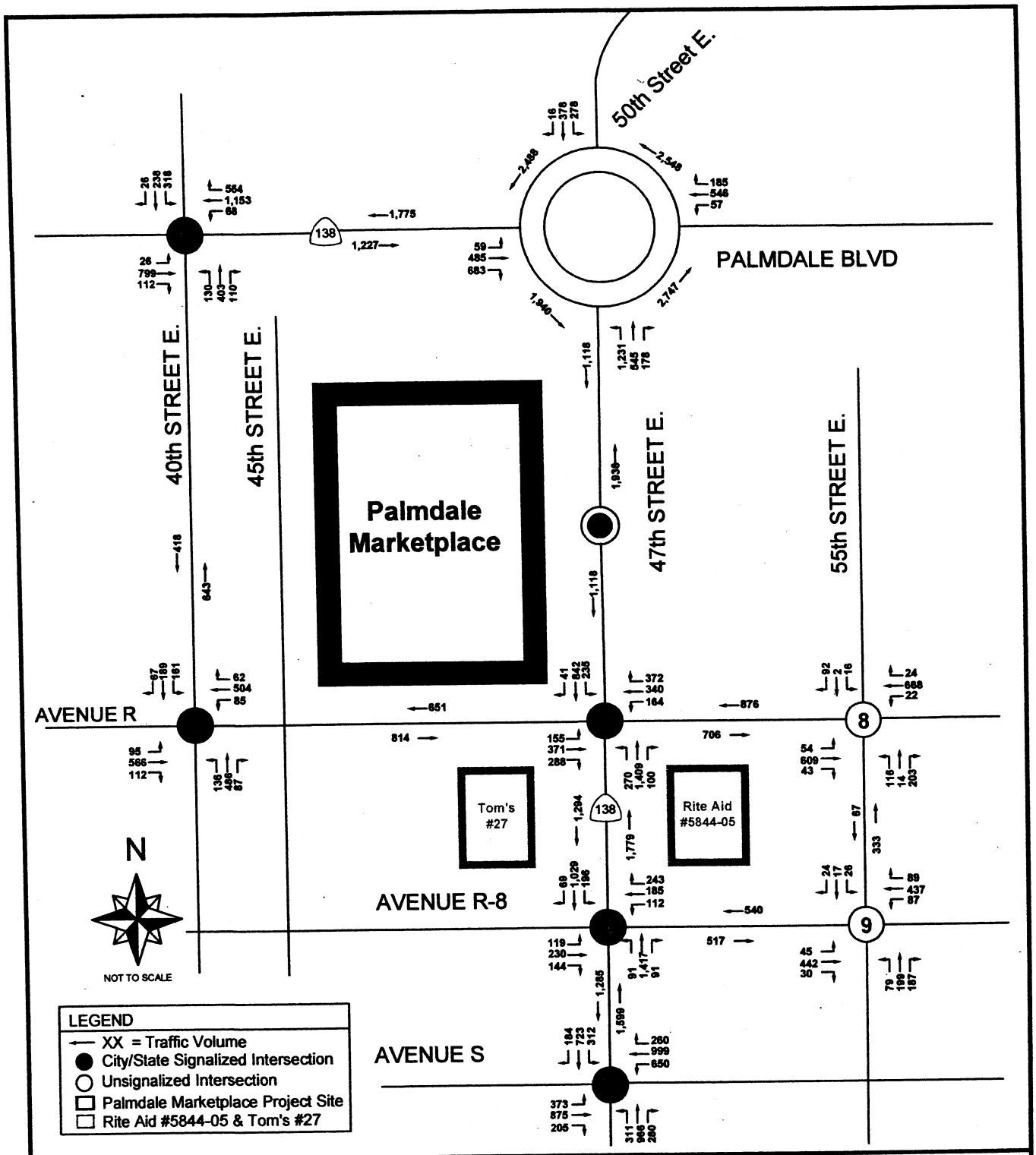

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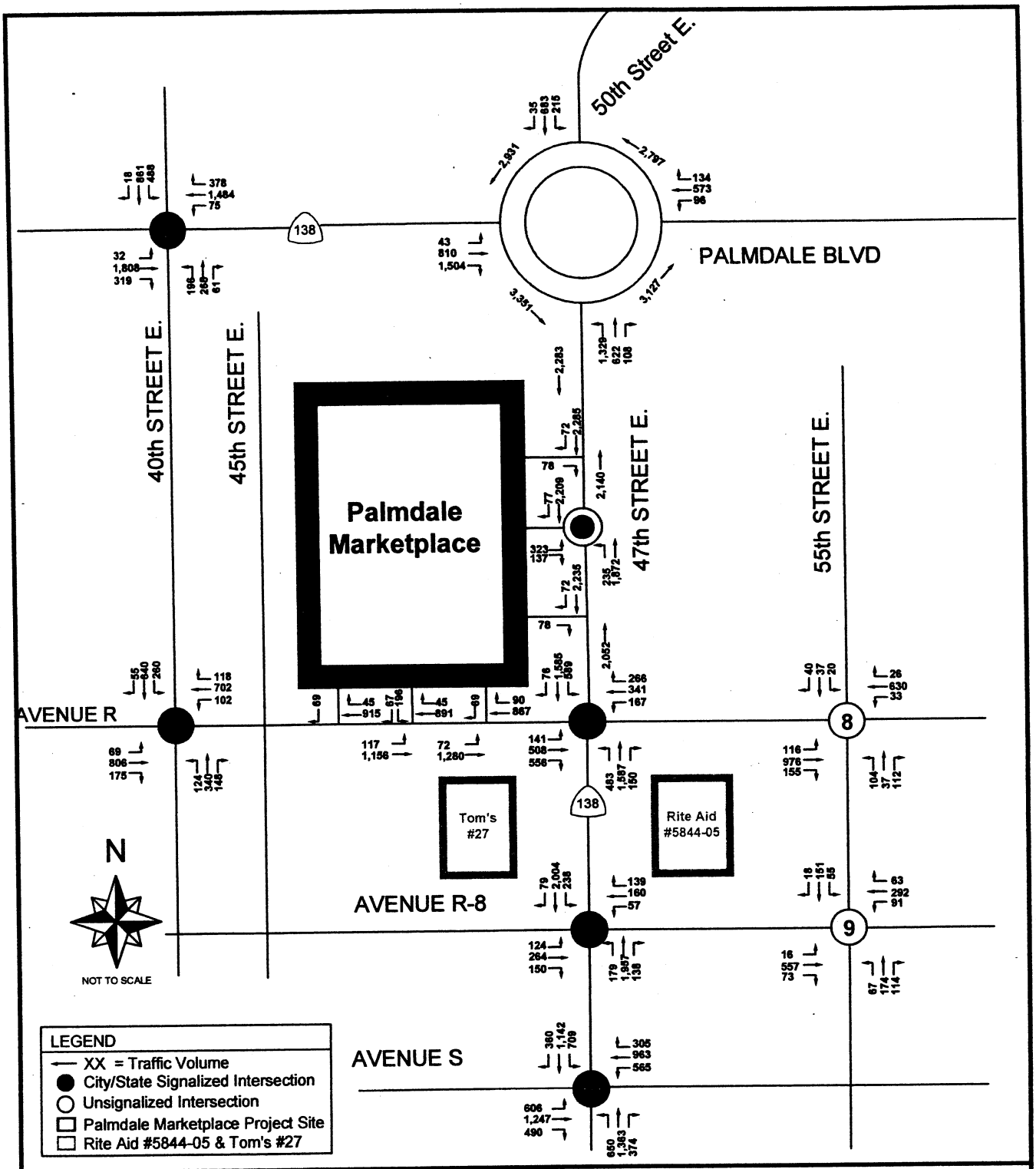
Figure 19 A
Cumulative Traffic
Without Palmdale Marketplace
Traffic Volumes
AM Peak Hours-2025



City of Palmdale
Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R
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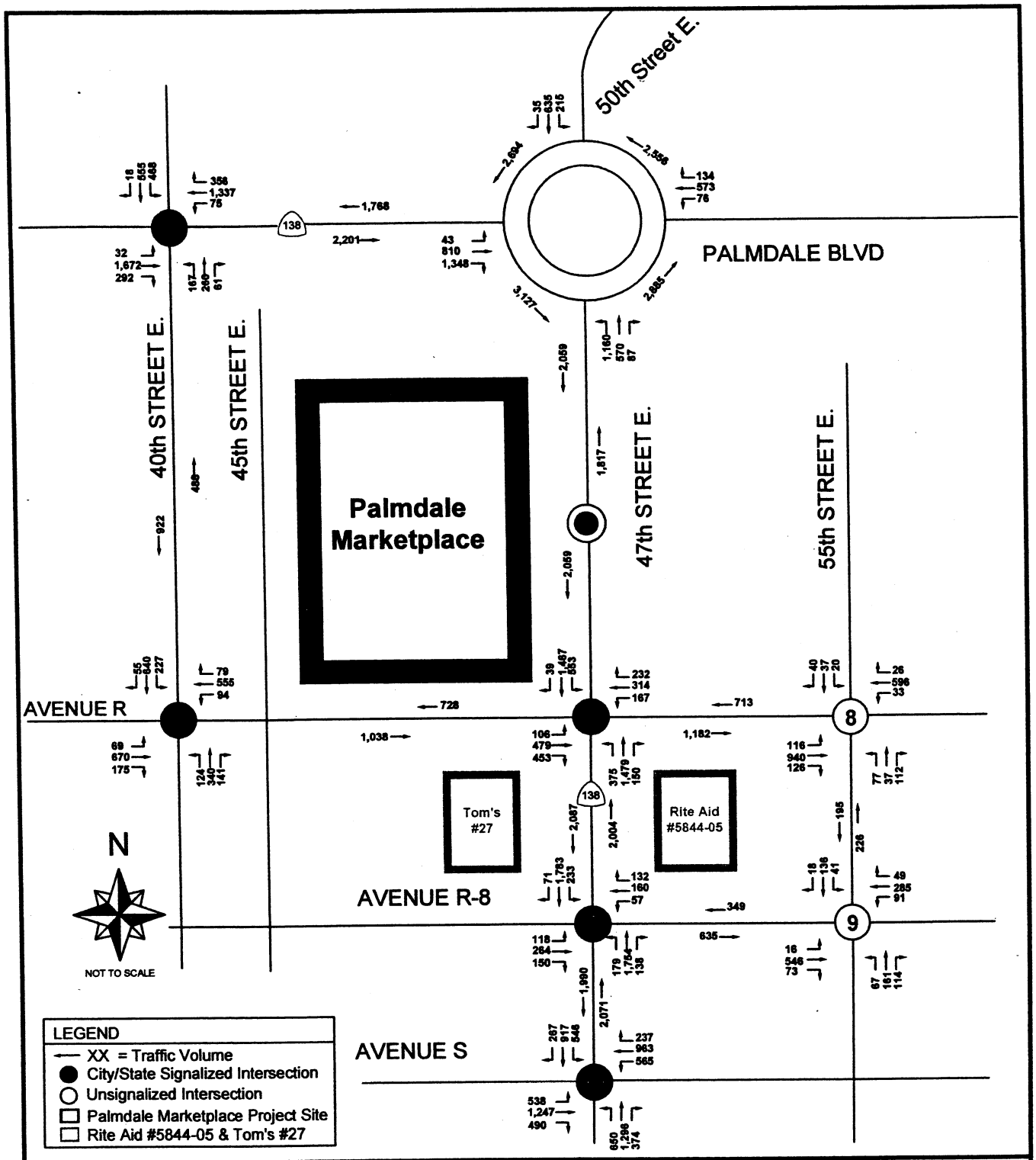
Figure 20
Cumulative Traffic Plus Palmdale Marketplace Traffic Volumes
PM Peak Hours-2025



City of Palmdale
Proposed Palmdale Marketplace Project
NWC of 47th St. East & Ave. R
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Figure 20 A
Cumulative Traffic
Without Palmdale Marketplace
Traffic Volumes
PM Peak Hours-2025

Access Points/Left Turn Lanes Queue Length Assessments

Access Points Assessments:

The Marketplace is proposing to have three new driveways along 47th Street East and three along Avenue R. The first and third driveways along 47th Street East will be unsignalized and restricted to right-turns in and right-turns out only. The main driveway (second driveway along 47th Street East) is proposed to be signalized with left-turns in, left-turns out, right-turns in, and right-turns out. The first driveway along Avenue R, closest to the intersection of 47th Street East at Avenue R, will be restricted to unsignalized right-turns in, right-turns out, and left-turns in only. The second driveway along Ave. R, will be unsignalized with full access from all directions. The third driveway along Avenue R will have unsignalized with right-turns in and right-turns out only.

Left and Right Turn Lanes Queue Length Assessments:

The left turn lanes queue length requirements and number of left and right turn lanes assessments for the intersection of 47th Street East and Avenue R and 47th Street East and Avenue R-8 were performed for buildout year 2007, and future years 2015 and 2025 using the Highway Capacity Manual (HCM) requirements. The queue length assessment results are tabulated on Tables 12 and 13.

Table 12) Left Turn Lane Queue Length Requirements for the Intersection of 47th St. E. & Ave. R

Approach	Buildout Year 2007	Future Year 2015	Future Year 2025
NBL	275'	300'	350'
SBL	300'	300'	300'
EBL	125'	150'	170'
WBL	160'	200'	225'

Table 13) Left Turn Lane Queue Length Requirements for the Intersection of Palmdale Marketplace Driveway & 47th Street East

Approach	Buildout Year 2007	Future Year 2015	Future Year 2025
NBL	210'	210'	210'
SBR	65'	65'	65'
EBL	250'	250'	250'

For the 2007 buildout year, for all the projects, double left turn lanes are required for the eastbound, northbound and southbound approaches with all the 3 proposed developments at the intersections of 47th Street East at Avenue R. However, exclusive right turn lanes are recommended for the eastbound, northbound and southbound approaches of the intersection of 47th Street East and Avenue R but due to right-of-way constraints, the westbound approach needs to be a shared-through right.

For the 2015 target year, for all the projects, for the intersection of 47th Street East at Avenue R the following additional geometry improvements for the turn lanes are recommended: provision of one exclusive right turn lane and one additional left turn lane for the westbound approach (subject to right of way availability). No double left turn lanes are required for the intersection of 47th Street East at Avenue R-8, however, this intersection should have protected left turn phases on northbound and southbound approaches.

No additional improvements would be required beyond 2015 for the aforementioned intersections.

Left Turn Phase Traffic Signal Warrant Assessment

Per the request of City of Palmdale, the two signalized intersections, 47th Street East at Avenue R, and 47th Street East at Avenue R-8, should have protected left turn phases in all directions. The two locations are currently operating with permissive left turn phases at all approaches. In order to assess the validity and justification of the aforementioned action, a comprehensive left turn phase traffic signal warrant assessment was conducted for each approach of the two intersections for four separate target years.

Based on the Caltrans Traffic Manual, "protected left turn phase should be considered if there are 50 or more left turning vehicles per hour in one direction with the product of the turning and conflicting through traffic during the peak hour of 100,000 or more." A complete set of left turn phase traffic signal warrant assessments was conducted for the two signalized locations based on the criteria mentioned above.

Detailed calculations for the protected left turn phase warrant assessments are shown in Appendix F.

Table 14) Protected Left Turn Phase Signal Warrant Assessments for 47th Street East and Ave R

Approach	Existing	Buildout Year 2007	Future Year 2015	Future Year 2025
EBL	No	No	No	No
WBL	No	No	No	No
NBL	Yes	Yes	Yes	Yes
SBL	Yes	Yes	Yes	Yes

Table 15) Protected Left Turn Phase Signal Warrant Assessments for 47th Street East and Ave R-8

Approach	Existing	Buildout Year 2007	Future Year 2015	Future Year 2025
EBL	No	No	No	No
WBL	No	No	No	No
NBL	No	Yes	Yes	Yes
SBL	No	Yes	Yes	Yes

Table 14 reveals that the north- and southbound left turn phases at the intersection of 47th Street East and Avenue R meet the protected left turn phase warrant check under existing conditions. However, during the buildout year 2007, the northbound left and southbound left turn movements meet protected left turn phase warrant assessments. The eastbound

and westbound left turns will not meet the warrant check even under the future year 2025 with cumulative projects.

Table 15 reveals that none of the approaches meet the warrant check at the intersection of 47th Street East and Avenue R-8 during the existing year. However, during the buildout year 2007, the northbound left and southbound left turn movements meet protected left turn phase warrant assessments. In the year 2015, both the north- and southbound left turn movements meet the warrant assessments, thus protected left turn phases for the approaches are suggested.

Parking Analysis

The Marketplace opening in the year 2007 will be providing 2,426 parking spaces for all the buildings which require 2,121 parking spaces.

Table 16 provides the tabulation for parking spaces provided for each project.

Table 16) Parking Spaces for the Marketplace Project

User		Ratio Required	Spaces Required	Spaces Provided	Ratio Provided
Q1	Major 1	4/1000	691	825	4.8
	GC	1/1000	11	11	1.02
Q2	Major 2	4/1000	91	90	3.96
	Major 3	4/1000	133	126	3.77
	Major 4	4/1000	117	97	3.32
	PAD 7	4/1000	41	42	4.12
Q3	Major 5	4/1000	468	548	3.92
	GC	1/1000			
	H.P.E	4/1000			
	PAD 8	4/1000	41	60	5.88
Q4	PAD 1	10/1000	35	38	10.13
	PAD 2	10/1000	77	77	10
	Shops 1	4/1000	78	69	3.59
	Shops 2	4/1000			
Q5	PAD 3	10/1000	35	35	9.92
	PAD 4	10/1000	100	94	10
	Shops 3	4/1000	78	76	4.31
	Shops 4	4/1000			
Q6	PAD 5	5/1000	20	41	10
	PAD 6	4/1000	16	39	9.75
	Major 6	4/1000	88	144	6.61
Total			2,121	2,426	4.64

Impact Analysis & Mitigation Measures

The Los Angeles County MTA's CMP characterizes a significant project impact as occurring when the proposed project increases traffic demand by 2% or more of capacity, causing the existing system to operate at an unsatisfactory level of service. Thus, impact analyses for all the intersections were performed by comparing the volume to capacity ratios between with and without project(s) volumes for the buildout year 2007, except for the Palmdale Boulevard at $47^{th}/50^{th}$ Street East intersection, as V/C ratio was not

available. According to Caltrans, a roundabout is planned to replace the existing unsignalized intersection of 47th/50th Street East at Palmdale Blvd. by the year 2008.

In the 2007 buildout year, for all the 3 projects, after applied mitigation measures, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th St. E at Ave. R-8, 47th St. E at SR-138, Palmdale Blvd. at 40th St. E, and Ave. R at 40th St. E. Table 17 shows the locations which will exceed the significance V/C threshold of 0.02 for the target year 2007.

In the year 2015, for all the 3 projects, after applied mitigation measures, the following intersections will have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East at Avenue R and 47th Street East at Avenue R-8. The results are shown on Table 18.

In the year 2025, for all the 3 projects, after applied mitigation measures, the following intersections have a V/C ratio exceeding the significance threshold level of 0.02: 47th Street East at Avenue R and 47th Street East at Avenue R-8. The results are shown on Table 19.

Table 17) LOS & V/C "Before" & "After" for Buildout Year 2007

Buildout – Opening Year 2007	LOS						V/C Exceeding 0.02*	
	Without Project		With Project W/O Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St E. @ Av R	B	C	B	C	A	B	-	-
2. 47th St E. @ Av R-8	A	A	A	B	A	B	0.04	0.16
3. 47th St E. @ SR-138	B	C	B	C	B	C	0.04	0.14
4. Palmdale Blvd. @ 47/50th St E.	F	F	F	F	B	C	N/A	N/A
5. Palmdale Blvd. @ SR-138	A	A	A	A	A	A	N/A	N/A
6. Palmdale Blvd. @ 40th St E.	B	B	B	C	B	C	0.02	0.06
7. Av R @ 40th St E.	C	C	C	C	C	C	0.03	0.16
8. Av R @ 55th St E.	A	A	A	B	A	B	N/A	N/A
9. Av R-8 @ 55th St E.	A	A	A	A	A	A	N/A	N/A
10. Av S @ 47th St E.	C	D	C	D	**	**	**	**
11. New Marketplace Dr @ SR 138 / 47th St E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
* Comparison Between Without Project and With Project With Mitigation
** No feasible mitigation measure

Tables 18 and 19 show the intersections which will have V/C ratios exceeding the 0.02 threshold level in Future Years 2015 and 2025.

Table 18) LOS & V/C "Before" & "After" for the Future Year 2015

Buildout – Year 2015	LOS						V/C Exceeding 0.02*	
	Without Project		With Project W/O Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St E. @ Av R	A	B	A	C	A	C	0.04	0.23
2. 47th St E. @ Av R-8	A	B	B	B	B	B	0.11	0.20
3. 47th St E. @ SR-138**	A	B	A	B	A	B	N/A	N/A
6. Palmdale Blvd. @ 40th St E.	B	C	B	D	B	C	-	-
7. Av R @ 40th St E.	C	D	D	D	C	C	-	-
8. Av R @ 55th St E.	A	C	A	C	A	C	N/A	N/A
9. Av R-8 @ 55th St E.	A	A	A	A	A	A	N/A	N/A
10. Av S @ 47th St E.	D	E	D	E	**	**	**	**
11. New Marketplace Dr @ SR 138 / 47th St E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
* Comparison Between Without Project and With Project With Mitigation
** No feasible mitigation measure

Table 19) LOS & V/C "Before" & "After" for the Future Year 2025

Buildout –Year 2025	LOS						V/C Exceeding 0.02*	
	Without Project		With Project W/O Mitigation		With Project With Mitigation			
	AM	PM	AM	PM	AM	PM	AM	PM
1. 47th St E. @ Av R	A	D	A	E	A	D	0.02	-
2. 47th St E. @ Av R-8	C	D	C	D	D	D	0.47	-
3. 47th St E. @ SR-138**	F	F	F	F	***	***	N/A	N/A
6. Palmdale Blvd. @ 40th St E.	E	F	E	F	B	C	-	-
7. Av R @ 40th St E.	E	F	E	F	C	C	-	-
8. Av R @ 55th St E.	B	D	C	E	B	C	N/A	N/A
9. Av R-8 @ 55th St E.	A	A	A	A	A	A	N/A	N/A
10. Av S @ 47th St E.	F	F	F	F	***	***	***	***
11. New Marketplace Dr @ SR 138 / 47th St E.	N/A	N/A	A	B	A	B	N/A	N/A

N/A: Not Applicable
* Comparison Between Without Project and With Project With Mitigation
** Caltrans conceptual reconfiguration & approval of the roundabout from 2 to 3 lanes is required
*** With no feasible mitigation measure

Geometry improvements for the intersection of 47th Street East at Avenue R for the target years 2007 and 2015 were proposed based on the traffic assessments conducted. These proposed geometry improvements are shown on exhibit E-2 in the Appendix E.

The proposed intersection layout for the 47th Street East at Avenue R for the 2007 buildout year with Palmdale Marketplace project only, will include double left turn, two through and one right turn lanes at the eastbound approach; one left turn, two through and one right turn lanes at the southbound approach; one left turn and one shared-through right turn lanes at the westbound approach; and one left turn, one through and one shared-through right turn lanes at the northbound approach. The proposed intersection layout for the same intersection for the 2007 buildout year with Palmdale Marketplace and the other two projects (i.e., Rite-Aid and Tom's Restaurant) will include double left turn, three through lanes, and one right turn lane at the eastbound approach; double left turn lanes, three through lanes and one right turn lane at the southbound approach; one left turn lane, one through lane and one shared through-right turn lane at the westbound approach; double left turn lanes, two through lanes and one right turn lane at the northbound approach. In addition, protected left turn signal phases are recommended for the north- and southbound approaches which have met the Caltrans protected left turn phases warrant assessment. With the aforementioned proposed geometry, the intersection will operate at LOS "A" & "B" in both the AM and PM peak periods of operations respectively.

The proposed intersection layout for the future year 2015 will include double left turn lanes, three through and one right turn lanes at all approaches. Protected left turn phases are recommended for all the approaches. Northbound and southbound left turn phases have satisfied the warrant assessments for the provision of protected left turn phases. East- and westbound protected left turn phases are recommended due to the facts that two left turn lanes are needed for the westbound approach. With the proposed geometry, the intersection will operate at LOS "A" & "C" during both the AM and PM peak periods respectively.

For the unsignalized intersection of Palmdale Boulevard at 47th/50th Street East, according to the Caltrans D-7 Traffic Analysis Report, 07-LA-138 KP 76.9/78.8 (PM 47.8/49.0) 07-185-23960K, two improvement alternatives were proposed for the intersection, which include a roundabout alternative and a signalized alternative, to improve the unsatisfactory performance of the intersection.

The proposed roundabout will be constructed at the Palmdale Boulevard, SR-138 at 47th/59th Street East intersection to replace the existing three intersections by the year 2008. Based upon the information provided by Caltrans District 7, the roundabout is proposed to have two lanes and with one entering lane from each of the four approaches.

The roundabout option was analyzed as the default for all 2015 and 2025 analyses in this report. For the year 2015, the performance of the roundabout will be at "B" and "C" during the AM & PM peak hours of operation during the existing and the year 2007, the existing area has an LOS of "F" without the roundabout. However for the ultimate target

year of 2025, the proposed Caltrans roundabout will operate at LOS "F" with and without the proposed Palmdale marketplace project. Consultation with Caltrans should be conducted with regard to conceptual reconfiguration and approval of the roundabout from 2 inner lanes to 3 possible inner lanes.

For the opening year 2007, the following proposed new geometry/mitigation measures are suggested to be implemented if the other two proposed projects were not constructed:

Opening Year 2007 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - Add one exclusive EBL
   - Add one exclusive SBR
   - Modify the Traffic Signal
2. Ave. S at 47th St. E./SR 138

No feasible mitigation measure

For the year 2015 cumulative with the proposed project it should be noted that all the 11 intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigations at the corresponding intersections, except at the intersection of Ave. S./SR 138/47th St. E. due to the existing right-of-way constraints, no feasible mitigation measure is proposed. It is also assumed that Caltrans would be constructing the roundabout for at the Palmdale Blvd./SR 138/50th/47th St. E. location.

For the future 2015 buildout year, the following proposed new geometries are suggested by the City of Palmdale to be implemented to upgrade the intersection to the ultimate standard plans if the other two proposed projects were not constructed:

Future Year 2015 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - Add one exclusive SBT
   - Add one exclusive SBL
   - Add two exclusive WBT (subject to ROW availability)
   - Add one exclusive WBL (subject to ROW availability)
   - Add one exclusive WBR (subject to ROW availability)
   - Add one exclusive NBL (subject to ROW availability)
   - Add one exclusive NBT (subject to ROW availability)
   - Add one exclusive NBR (subject to ROW availability)
   - Add one exclusive EBT
   - Modify the Traffic Signal
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure
3. Ave. R at 40th E. (subject to ROW availability)
   - Add one EBT
4. Palmdale Blvd. at 40th St. E. (subject to ROW availability)
   - Add one exclusive EBR

- Add one exclusive WBR
- Add one Exclusive SBL
- Add one exclusive SBR

For the year 2025 cumulative with the proposed project all the intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigations at the above intersections except the roundabout which will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes and the intersection of Ave. S at SR 138 due to the existing right-of-way constraints, no feasible mitigation measure is proposed. The intersection of Ave. R at 47th St. E. will operate at LOS "E" only during a short PM peak hour and the intersection of Ave. R-8 at 47th St. E will operate at LOS "D" during the short AM & PM peak hours.

For the future 2025 buildout year, the following additional proposed new geometry/mitigation measures are suggested to be implemented if the other two proposed projects were not constructed:

Future Year 2025 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - The same as 2015
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure
3. Ave. R at 40th E. (subject to ROW availability)
   - Add one exclusive EBT
4. Palmdale Blvd. at 40th St. E. (subject to ROW availability)
   - Add one exclusive EBT
   - Add one exclusive WBT
   - Add one exclusive SBT
   - Add one exclusive NBL
5. Ave. R-8 at 47th St. E.
   - Modify signal for protected NB & SB left turns
6. Ave R at 40th St. E.
   - Signalize the intersection

Palmdale Marketplace Project Impact Assessment

The potential impact on the intersection of 47th Street East at Avenue R due to the additional traffic volumes generated by the Marketplace project was assessed. The traffic generated by the project which causes an impact or occupies the intersection was extracted, and the percentage of that amount of traffic to the total traffic volumes at the intersection (sum of the projected volumes and the target project volumes at the intersection) was calculated. The generated traffic volume impact shares at the intersection of 47th Street East at Avenue R for the project are tabulated on Table 20.

The Palmdale Marketplace project will generate 148 and 635 VPH trips at the intersection of 47th Street East at Avenue R which correspond to 5.56% and 16.64% to the total volumes at the intersection during the AM and PM peak hours respectively.

The new intersection of Palmdale Marketplace Driveway at SR 138/47th Street E. shall be signalized by the developer. It is warranted for signalization in the year 2007, opening year. The warrant assessment is included in the Appendix F.

Table 20) Project Traffic Impact at the Intersection of 47th Street E. & Avenue R Buildout Year 2007

	Project	Peak Period	Volumes Generated (In & Out) in VPH	Intersection Total Volumes in VPH	Percentage
Year 2007 (Buildout)	Marketplace	AM	148	2,660	5.56%
		PM	635	3,817	16.64%

Conclusions & Recommendations

The proposed development, Palmdale Marketplace by Hopkins Real Estate Group, at the 47th Street East and Avenue R intersection will comprise new building structures with different types of land utilization which can be generalized as a shopping center.

The estimated trip generation for the ultimate buildout year of 2007 reveals that the Palmdale Marketplace project will generate a total of 195 vehicular trips in and 125 vehicular trips out for the AM peak period, and 677 vehicular trips in and 734 vehicular trips out during the PM peak period.

An analysis of parking demand based on the information given on the site plans for each of the projects was conducted. It has been determined that the Palmdale Marketplace development will require a total of 2,121 parking spaces, and 2,426 parking stalls will be provided.

It should be noted that ten of the eleven intersections analyzed are currently operating at an LOS equal to or better than the City of Palmdale's and Caltrans D-7acceptable level of service threshold LOS "C" during both the AM and PM peak hours. The only failing one is the intersection of Palmdale Boulevard at 47/50th Street East, which is operating at LOS "E" for the AM and LOS "F" for the PM peak hours.

In the buildout year of 2007, nine out of eleven intersections analyzed will be operating at or above the Caltrans acceptable level of service threshold, LOS "C" during the AM and PM peak hours. Except for the intersection of Palmdale Boulevard at 47/50th Street East, which will be operating at LOS "F" for both the AM and PM peak hours; and the intersection of 47th Street East at Avenue S, which will be operating at LOS "C" for AM peak hour and LOS" D" for PM peak hour. With mitigation improvements for all 3 projects, the intersection of Ave. R at SR 138/47th St. E, will operate at the satisfactory LOS of "B". The existing unsignalized intersection of Palmdale Blvd. at 47th/50th St. E. will be converted to a roundabout which will improve the LOS from "F" to "B" and "C" during the AM & PM peak hours in the year 2015 respectively. At the intersection of Ave. S at SR 138/47th St. E., due to the existing right-of-way constraints, no mitigation measure is proposed

In the buildout year 2007, the following four signalized intersections: 47th St. E at Ave. R-8, 47th St. E at SR-138, Palmdale Blvd. at 40th St. E, and Ave. R at 40th St. E. will have increases in V/C ratios exceeding the threshold of 0.02 during at least one peak hour period throughout the day.

The Palmdale Marketplace project will generate 148 and 635 vehicular trips that will impact the intersection of 47th Street East at Avenue R during the AM and PM peak hours respectively in the year 2007. These volumes correspond to 5.56% and 16.64% of the total traffic volumes at the intersection respectively.

The new intersection of Palmdale Marketplace Driveway at SR 138/47th Street E. shall be signalized by the developer. It is warranted for signalization in the year 2007, opening year. The aforementioned intersection is planned to be constructed approximately 1,100' south of the existing signalized intersection of 47th St. E. at SR 138 and 1,395' south of 47th St. E./50th St. E./Palmdale Blvd. No significant queuing is projected for the intersection.

For the 2007 buildout year, the following proposed new geometry for the intersection of 47th Street East and Avenue R is suggested to be implemented if the other two proposed projects were not constructed:

Opening Year 2007 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - Add one exclusive EBL
   - Add one exclusive SBR
   - Modify the Traffic Signal
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure

For the future 2015 buildout year, the following proposed new geometries are suggested by the City of Palmdale to be implemented to upgrade the intersection to the ultimate standard plans if the other two proposed projects were not constructed:

Future Year 2015 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - Add one exclusive SBT
   - Add one exclusive SBL
   - Add two exclusive WBT (subject to ROW availability)
   - Add one exclusive WBL (subject to ROW availability)
   - Add one exclusive WBR (subject to ROW availability)
   - Add one exclusive NBL (subject to ROW availability)
   - Add one exclusive NBT (subject to ROW availability)
   - Add one exclusive NBR (subject to ROW availability)
   - Add one exclusive EBT
   - Modify the Traffic Signal
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure
3. Ave. R at 40th E. (subject to ROW availability)
   - Add one EBT
4. Palmdale Blvd. at 40th St. E. (subject to ROW availability)
   - Add one exclusive EBR
   - Add one exclusive WBR
   - Add one Exclusive SBL
   - Add one exclusive SBR

For the year 2025 cumulative with the proposed project all the intersections will operate at satisfactory LOS' during both AM and PM peak hours with mitigations at the above intersections except the roundabout which will require Caltrans' conceptual reconfiguration and approval from 2 to 3 lanes and the intersection of Ave. S at SR 138 due to the existing right-of-way constraints, no feasible mitigation measure is proposed. The intersection of Ave. R at 47th St. E. will operate at LOS "E" only during a short PM peak hour and the intersection of Ave. R-8 at 47th St. E will operate at LOS "D" during the short AM & PM peak hours.

For the future 2025 buildout year, the following additional proposed new geometry/mitigation measures are suggested to be implemented if the other two proposed projects were not constructed:

Future Year 2025 (For Palmdale Marketplace)

1. Ave. R at 47th St. E./SR 138
   - The same as 2015
2. Ave. S at 47th St. E./SR 138
   - No feasible mitigation measure
3. Ave. R at 40th E. (subject to ROW availability)
   - Add one exclusive EBT
4. Palmdale Blvd. at 40th St. E. (subject to ROW availability)
   - Add one exclusive EBT
   - Add one exclusive WBT
   - Add one exclusive SBT
   - Add one exclusive NBL
5. Ave. R-8 at 47th St. E.
   - Modify signal for protected NB & SB left turns
6. Ave R at 40th St. E.
   - Signalize the intersection

The proposed Palmdale Marketplace will have some significant impacts at a number of intersections; however after the implementation of the aforementioned mitigation measures, this project will have no adverse significant impact on traffic except at the intersection of Ave. S at SR 138 which no feasible mitigation measure is proposed. The aforementioned mitigation measures are subject to right of way availability.