

DRAFT
ENVIRONMENTAL IMPACT REPORT
for
MOE'S STOP GAS & SERVICE STATION

City File # CP11-049
State Clearinghouse # 2011062068

CITY OF SAN JOSE, CALIFORNIA

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TABLE OF CONTENTS

1.	INTRODUCTION.....	1
	1.1 Authorization and Purpose	1
	1.2 Environmental Process	1
2.	EIR SUMMARY	3
	2.1 Summary of Proposed Project	3
	2.2 Summary of Impacts and Mitigation.....	3
	2.3 Alternatives Evaluated	3
	2.4 Areas of Controversy.....	3
3.	PROJECT DESCRIPTION	5
	3.1 Project Location	5
	3.2 Project Description	5
	3.3 Background	5
	3.4 Project Objectives	5
	3.5 Uses of the EIR	5
4.	ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION	9
	4.1 Transportation	9
5.	CUMULATIVE IMPACTS	19
6.	PROJECT ALTERNATIVES	21
7.	CEQA CONSIDERATIONS	23
8.	REFERENCES	25

LIST OF FIGURES

1.	Location Map	6
2.	Site Plan	7
3.	Site Photos.....	8

LIST OF TABLES

1.	Existing Levels of Service	11
2.	Trip Generation	14
3.	Intersection Level of Service Summary	15

APPENDICES

A	Initial Study
B	Traffic Impact Analysis

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1. INTRODUCTION

1.1. AUTHORIZATION AND PURPOSE

This document is an Environmental Impact Report (EIR) prepared in accordance with the California Environmental Quality Act (CEQA) of 1970 and CEQA Guidelines, as amended. This EIR has been prepared by the City of San Jose (City) as the "Lead Agency," in consultation with the appropriate local, regional and state agencies.

The purpose of the EIR is to inform the public generally of the significant environmental effects of the project, identify possible ways to minimize the significant effects, and describe reasonable alternatives that support the objectives of the project. As defined by the CEQA Guidelines, Section 15382, "significant effect on the environment" means:

"... a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance."

The Moe's Stop project consists of the demolition of an existing single-family detached residence and the expansion of an existing gas and service station, consisting of three additional gas pumps and a canopy for the new fuel pumping facilities. This proposal is considered a "project" as defined by CEQA Guidelines, Section 15378.

An Initial Study/Negative Declaration (ND) was prepared for the project by the City of San Jose in 2009. A neighboring business sued the City on the grounds that the ND did not adequately address traffic. The case went to the California Superior Court for Santa Clara County on March 11, 2011 (case no. 1-10-CV-0176412). The court issued a Writ of Mandate requiring the City to prepare an EIR for the project, specifically to evaluate traffic impacts. This EIR is prepared in accordance with the requirements of the Writ.

1.2. ENVIRONMENTAL PROCESS

A Notice of Preparation of the EIR was circulated to the public and public agencies from June 28, 2011 to July 28, 2011. This Draft EIR will be circulated for agency and public review during a 45-day public review period prior to certification of the document by the lead agency. Comments received by the City on the Draft EIR will be formally addressed by the City in the Final EIR.

The decision-making body must certify that it has reviewed and considered the information in the Final EIR and that the EIR has been completed in conformity with the requirements of CEQA. Although the EIR does not control the lead agency's ultimate decision on the project, the City must consider the information in the EIR and respond to each significant effect identified in the EIR. If significant adverse environmental effects are identified in the EIR, approval of the project must be accompanied by written findings.

State law requires that a public agency adopt a monitoring program for mitigation measures that have been incorporated into the approved project to reduce or avoid significant effects on the environment. The purpose of the monitoring program is to ensure compliance with environmental

mitigation during project implementation and operation. If there are any significant impacts requiring mitigation, a Mitigation Monitoring Program will be included in the Final EIR.

2. EIR SUMMARY

2.1. SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The project is the expansion of an existing gas and service station (Moe's Stop), to include three additional fuel dispensers and a canopy for the new pump facilities.

2.2. SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION

Based on the analysis in this EIR and accompanying Initial Study, the project would not result in any significant environmental impacts.

2.3. ALTERNATIVES EVALUATED

The EIR analyzed only the No Project Alternative. Because the project would not result in significant environmental impacts, the evaluation of additional alternatives was not required.

2.4. AREAS OF CONTROVERSY

During the environmental review process, the community has identified the following as areas of concern and/or controversy: traffic issues raised by an adjacent business owner.

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3. PROJECT DESCRIPTION

3.1. PROJECT LOCATION

The proposed project is located on a ± 0.51 acre site at the southeast corner of N. 33rd Street and McKee Road in San Jose, Santa Clara County, California (refer to Figure 1). The property is located on Assessor Parcel numbers 481-03-016 and 481-03-017. Existing land uses adjacent to the project site consist primarily of commercial uses, with some residential to the south.

3.2. PROJECT DESCRIPTION

The applicant, Moe's Stop, is seeking a Conditional Use Permit to allow the demolition of an existing single-family detached residence and the expansion of an existing gas and service station, to include three additional fuel dispensers and a canopy for the new pumping facilities.¹

3.3. PROJECT BACKGROUND

An Initial Study/Negative Declaration (ND) was prepared for the project by the City of San Jose in 2009. A neighboring business sued the City on the grounds that the ND did not adequately address traffic. The case went to the California Superior Court for Santa Clara County on March 11, 2011 (case no. 1-10-CV-0176412). The court issued a Writ of Mandate requiring the City to prepare an EIR for the project, specifically to evaluate traffic impacts. This EIR is prepared in accordance with the requirements of the Writ.

3.4. PROJECT OBJECTIVES

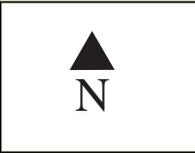
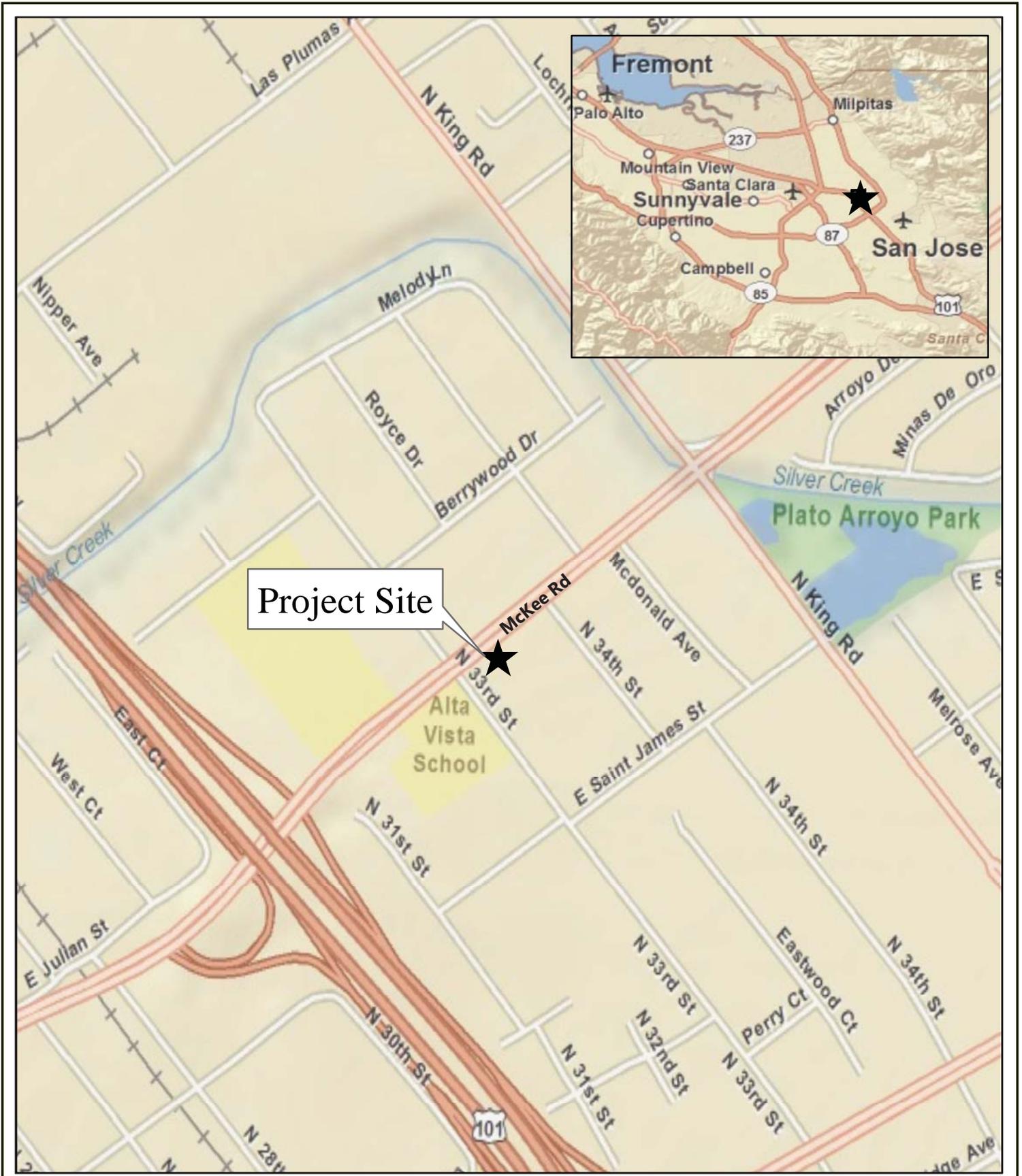
The objectives of the project are as follows:

- Expand the capacity of the station to meet the demand for gas in the area and better serve customers.
- Improve traffic flow by revising the entry/exit points and maintaining more vehicle queues onsite.

3.5. USES OF THE EIR

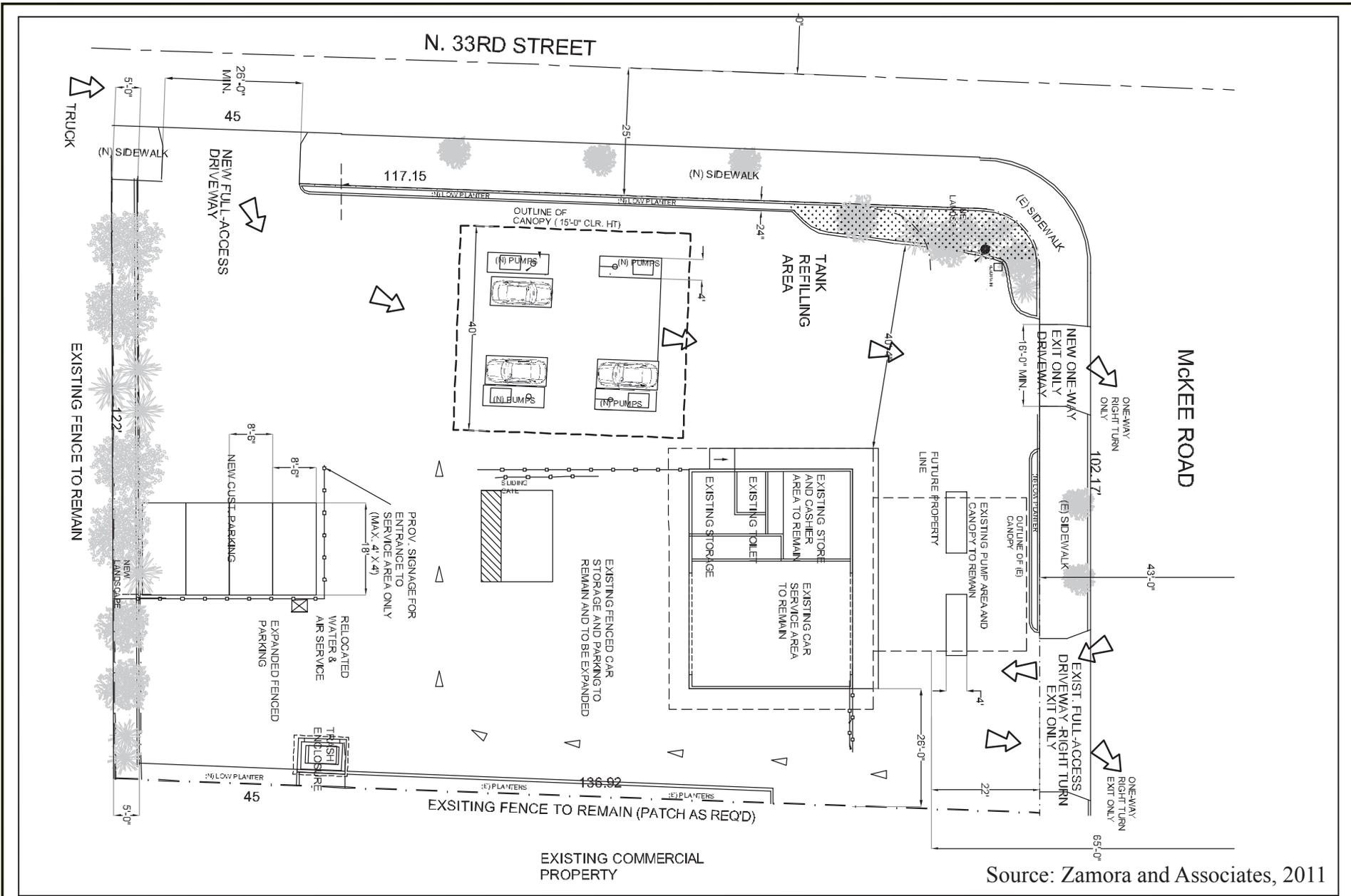
It is the intent of this EIR to provide the City of San Jose, decision makers, and the general public with the relevant environmental information to use in considering the required approval for the project. The City of San Jose will use the EIR for discretionary approvals of entitlements required to develop the project. The EIR will be submitted to the court in accordance with the Writ of Mandate.

¹ Note that the project was partially completed before construction was halted, although the fuel pumps were never operational. This EIR and accompanying IS evaluate baseline conditions as those that existed prior to any construction activities.



Location Map

Figure



Source: Zamora and Associates, 2011



Site Plan

Figure
2



Photo 1. View of site from 33rd Street looking east, showing the partially constructed fueling dispensers with canopy.



Photo 2. View of site from McKee Road looking southwest.

4. ENVIRONMENTAL SETTING, IMPACTS & MITIGATION

4.1. TRANSPORTATION

A traffic impact analysis was prepared for the project by Hexagon Transportation Consultants (August 2011). This report is contained in Appendix B of this EIR. Results of the traffic analysis are presented in the discussion below.

Setting

Methodology

The traffic study was conducted for the purpose of identifying any traffic impacts related to the proposed gas station expansion. The study evaluated the potential traffic impacts of the project at the signalized intersection of McKee Road and N. 33rd Street during the weekday peak periods of traffic. The impacts of the project were evaluated based on the standards and methodologies set forth by the City of San Jose.

According to the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP) guidelines, an analysis of freeway segment levels of service is only required if a project is estimated to add trips to a freeway segment equal to or greater than one percent of the capacity of that segment. The nearest freeway in the vicinity of the project is US 101, which is less than 1,000 feet from the project. In the vicinity of the project, US 101 is eight lanes wide with one High Occupancy Vehicle (HOV) lane and three mixed-flow lanes in each direction of travel. In order to provide a conservative analysis, all of the project-generated trips that were estimated to travel to/from US 101 were added to the mixed-flow lanes. Since the proposed gas station expansion would predominantly serve the local community, the number of project trips added to the freeways in the area is estimated to be well below the one percent threshold (see Appendix B). Thus, a detailed analysis of freeway segment levels of service was not performed.

Traffic conditions at the study intersection of McKee Road and N. 33rd Street were analyzed for the weekday AM and PM peak traffic hours. The AM peak hour is generally between 7:00 and 9:00 AM and the PM peak hour is generally between 4:00 and 6:00 PM. Traffic conditions were evaluated using level of service (LOS) calculations for the peak hours. LOS is a qualitative description of operating conditions ranging from LOS A (free flow conditions with little or no delay) to LOS F (jammed conditions with excessive delays). Traffic conditions were evaluated for the following scenarios:

- Scenario 1: Existing Conditions. Existing AM and PM peak hour traffic volumes were obtained from new 2011 manual turning-movement counts conducted in the month of May at the intersection of McKee Road and N. 33rd Street.
- Scenario 2: Existing Plus Project Conditions. Existing plus project peak hour traffic volumes were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects of the project on the existing roadway network.

- Scenario 3: Background Conditions. Background traffic volumes were estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI).
- Scenario 4: Background Plus Project Conditions. Projected peak hour traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts according to the City of San Jose Level of Service Policy.
- Scenario 5: Cumulative Conditions. Cumulative traffic conditions were represented by project conditions plus traffic generated by pending developments on the future roadway network. This traffic scenario is presented in Section 5. Cumulative Impacts of this EIR.

The City of San Jose level of service methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, the City of San Jose employs the CMP default values for the analysis parameters.

Existing Roadway Network

Regional access to the project site is provided by US 101. Local access to the project site is provided via McKee Road and N. 33rd Street. These facilities are described below.

US 101 is a north-south freeway that extends through and beyond the Bay Area, connecting San Francisco to San Jose. US 101 is eight lanes wide (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the project site. US 101 provides site access via a full interchange at McKee Road.

McKee Road is an east-west roadway that extends from Julian Street, west of US 101 in San Jose to Alum Rock Avenue. McKee Road consists of four travel lanes with two travel lanes in each direction of travel. Access to the gas station is provided via two driveways on McKee Road. Existing signs at both driveways are intended to restrict outbound movements to right-turns only for vehicles exiting onto McKee Road. However, some left turns out of the easternmost driveway do occur.

N. 33rd Street is a north-south two-lane roadway extending from Melody Lane to the north to E. San Antonio Street to the south. Access to the gas station is provided via one full access driveways on N. 33rd Street.

Existing Conditions

The existing lane configuration at the single study intersection of McKee Road and N. 33rd Street was confirmed by observations made in the field. The existing AM and PM peak hour traffic

volumes were obtained from new 2011 manual turning-movement counts. Existing intersection levels of service are shown in Table 1. These were evaluated against City of San Jose standards. The results of the level of service analysis show that, measured against the City of San Jose level of service policy, the study intersection currently operates at an acceptable LOS C during both the AM and PM peak hours of traffic.

Table 1 Existing Levels of Service				
Intersection	Peak Hour	Count Date	Avg Delay	LOS
McKee Road / N. 33 rd Street	AM	5/25/11	28.7	C
	PM	5/25/11	24.9	C
Avg Delay = average vehicle delay LOS = level of service				

Traffic conditions were observed in the field by the traffic consultant to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was 1) to identify any existing traffic problems that may not be directly related to level of service, and 2) to identify any locations where the level of service analysis does not accurately reflect actual existing traffic conditions. No significant operational problems were observed at the study intersection during either the AM or PM peak hours. During the PM peak hour, some short vehicle queues occasionally developed on eastbound McKee Road at the adjacent Stop & Save gas station driveway to approximately 100 feet west of the McKee Road and N. 33rd Street intersection. However, this did not create any operational problems.

Thresholds of Significance

In accordance with CEQA Guidelines, a project impact would be considered significant if the project would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment).
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The significance criteria used to determine significant impacts on signalized intersections are based on City of San Jose Level of Service standards. The City of San Jose LOS Policy is the adopted established threshold for CEQA purposes.

City of San Jose Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San Jose for either peak hour if:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under background plus project conditions, or
2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four or more seconds and the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more. An exception to this rule applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Impacts and Mitigation

It is assumed in this analysis that the transportation network under existing plus project conditions would be the same as the existing transportation network, with the following exceptions:

- McKee Road Access – Access to the existing gas station is provided via two driveways on McKee Road. Both the driveways on McKee Road are restricted to right-turn only movements for vehicles exiting the site. With the expansion of the gas station, the driveway closest to the signalized intersection of McKee Road and N. 33rd Street will be converted to an exit only driveway restricted to right turns onto eastbound McKee Road. The second driveway on McKee Road will be restricted to right turns in and out only.
- N. 33rd Street Access – Currently, access to the existing gas station is provided via one full access driveway on N. 33rd Street. With the expansion of the gas station, the full access

driveway on N. 33rd Street will be relocated to the southern portion of the project site, as far from the signalized intersection of McKee Road and N. 33rd Street as possible.

With expansion of the gas station, the project proposes to make the necessary sidewalk and landscape improvements along its project frontages on McKee Road and N. 33rd Street.

Project Trip Generation

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: 1) trip generation, 2) trip distribution, and 3) trip assignment. The amount of traffic entering and exiting the project site is estimated for the AM and PM peak hours to determine trip generation. For project trip distribution, an estimate is made of the directions to and from which the project trips would travel. For trip assignment, project trips are assigned to specific streets.

Project trip generation is presented in Table 2. As shown in Table 2, the existing Moe's gas station with six fueling positions was observed to generate a total of 143 trips in the AM peak hour and 162 trips during the PM peak hour. The observed inbound and outbound trips for the Moe's gas station are based on traffic counts conducted by Traffic Data Services in November 2009.

The project proposes to add six fueling positions for a total of 12 fueling positions in order to better serve the existing customer demand. The trip rate per fueling position typically decreases for gas stations as more fueling positions are added. This is because of a finite customer base and the logistics of using all pumps simultaneously. Thus, the assumption that traffic would double at Moe's Stop as a result of doubling the number of fueling positions would significantly overestimate the number of new trips generated by the project. In order to develop a more accurate estimate of the number of trips from six additional fueling stations, project-generated traffic was estimated based on observations of an existing gas station as representative of the future project. The Gas & Shop gas station, located on the southwest corner of McKee Road and N. 33rd Street, has 12 fueling positions and gas prices comparable to Moe's Stop. The gas prices for the two adjacent stations don't typically vary by more than one cent per gallon on a daily basis.² Access to the Gas & Shop gas station is provided via one driveway on McKee Road and one driveway on N. 33rd Street. Both driveways were counted by the traffic consultant (Hexagon) on Tuesday, May 24th, 2011.

The Gas & Shop gas station with 12 fueling positions was observed to generate a total of 215 AM peak hour trips and 238 PM peak hour trips. The difference between the trips generated by the existing Moe's gas station with six fueling positions and the Gas & Shop gas station with 12 fueling positions was assumed to equate to the trips that would be generated by the proposed project. Based on this assumption, the project is expected to generate 72 gross trips in the AM peak hour and 76 gross PM peak hour trips at the project driveways.

² Given similar costs per gallon of gas, the Gas & Shop station was chosen since it is most similar to the project.

Not all of these trips are expected to be new trips generated by the project. Many of these trips would consist of pass-by trips, which are vehicle trips that would already be on the adjacent roadways and would stop at the site while passing by. Trip generation for gas stations is typically adjusted to account for pass-by-trips. Justification for applying a pass-by-trip reduction is founded on the observation that such traffic is not actually generated by gas stations, but is already part of the ambient traffic levels. Data contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual show average pass-by trip reductions of 62% in the AM peak hour and 56% in the PM peak hour. Using a conservative approach, a pass-by trip reduction rate of 50% was assumed for both the AM and PM peak hours. Thus, after accounting for pass-by trips, the proposed project is expected to generate a total of 36 net new trips in the AM peak hour with 18 new inbound trips and 17 new outbound trips, and 38 net new trips in the PM peak hour with 21 new inbound trips and 17 new outbound trips on the adjacent streets.

**Table 2
Trip Generation**

Land Use	Size ²	AM Peak Hour ¹				PM Peak Hour ¹			
		Rate ³	In	Out	Total	Rate ³	In	Out	Total
Moe's Stop Observed	6 fuel positions	23.83	72	71	143	27.0	76	86	162
Gas & Shop Observed	12 fuel positions	17.92	109	106	215	19.83	118	120	238
Difference (project trips):			37	35	72		42	34	76
Pass-by Trip Reduction (50%)			-19	-18	-36		-21	-17	-38
Net New Project Trips			18	17	36		21	17	38

¹ The AM peak hour of traffic is generally between 7-9 AM, and the PM peak hour is typically between 4-6 PM. It is during these average weekday commute periods that the most congested traffic conditions occur.
² Fuel pumps typically have one fueling position on each side, capable of serving two vehicles simultaneously.
³ Trip generation rates were developed based on counts conducted at the adjacent Gas & Shop gas station on May 24, 2011. The Gas & Shop station has 12 fueling positions, which represents the future size of Moe's Stop following planned expansion.

Existing Plus Project Conditions

The project trips were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes at the study intersections are presented in Appendix B. The results of the intersection LOS analysis under existing plus project conditions are summarized in Table 3. The results show that the study intersection would operate at an acceptable LOS C under existing plus project conditions during both the AM and PM peak hours of traffic.

**Table 3
Intersection Level of Service Summary**

Intersection Peak Hour	Studied Traffic Scenario													
	Existing		Existing + Project		Background		Background + Project				Cumulative			
	Avg ¹ Delay	LOS ²	Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Incr ³ Crit Delay	Incr ⁴ Crit V/C	Avg Delay	LOS	Incr Crit Delay	Incr Crit V/C
McKee Road / N. 33 rd Street														
AM	28.7	C	29.0	C	26.1	C	26.5	C	0.5	0.007	26.5	C	0.8	0.012
PM	24.9	C	25.3	C	22.7	C	23.2	C	0.5	0.007	23.2	C	0.7	0.020
¹ Avg Delay = average vehicle delay ² LOS = level of service ³ Incr Crit Delay = increase in critical vehicle delay ⁴ Incr Crit V/C = increase in critical volume-to-capacity ratio														

Background Conditions

Background traffic conditions are defined as those conditions just prior to completion of the proposed project. This analysis assumed that the transportation network under background conditions would be the same as the existing transportation network.

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments in the City of San Jose was obtained from the City's Approved Trips Inventory (ATI). There are a total of eight approved developments that contribute trips through the study intersection. Background traffic volumes are shown in Appendix B. Intersection levels of service were evaluated against City of San Jose standards. The results of the intersection LOS analysis under background conditions are summarized in Table 3.

The 2000 *Highway Capacity Manual (HCM)* intersection LOS calculations indicate that the average delay at the intersection of McKee Road and N. 33rd Street would improve slightly during the AM and PM peak hours with the addition of approved project trips. This is because the average vehicle delay calculated by the HCM methodology is a weighted average. The approved projects would primarily add trips to the through movements on McKee Road, which have very low vehicle delays but high corresponding traffic volumes, resulting in a slightly better average delay at the intersection overall.

Background Plus Project Conditions

The transportation network under background plus project conditions was assumed to be the same as the background transportation network, with the following exceptions:

- McKee Road Access – Access to the existing gas station is provided via two driveways on McKee Road. Both the driveways on McKee Road are restricted to right turn only movements for vehicles exiting the site. With the expansion of the gas station, the driveway closest to the signalized intersection of McKee Road and N 33rd Street will be converted to an exit only driveway restricted to right turns onto eastbound McKee Road. The second driveway on McKee Road will be restricted to right turns in and out only.
- N 33rd Street Access – Currently, access to the existing gas station is provided via one full access driveway on N 33rd Street. With the expansion of the gas station, the full access driveway on N 33rd Street will be relocated to the southern portion of the project site, as far from the signalized intersection of McKee Road and N 33rd Street as possible.

With expansion of the gas station, the project proposes to make the necessary sidewalk and landscape improvements along its project frontages on McKee Road and N. 33rd Street.

Based on the project trip generation estimates, the proposed expansion of Moe's Stop gas station is expected to generate an additional 72 AM peak hour trips and 76 PM peak hour trips at the project driveways. After accounting for pass-by trips, the proposed project is expected to generate a total of 36 net new trips in the AM peak hour and 38 net new trips in the PM peak hour. The project trips were added to background traffic volumes to obtain background plus project traffic

volumes. The background plus project traffic volumes at the study intersections are shown in Appendix B.

The results of the intersection level of service analysis under background plus project conditions are summarized in Table 3. The results of the LOS analysis show that, measured against City of San Jose standards, the study intersection would operate at an acceptable LOS C under background plus project conditions during both the AM and PM peak hours. Thus, the proposed project would not result in a significant adverse traffic impact at the study intersection of McKee Road and N. 33rd Street.

Site Access and On-Site Circulation

The traffic analysis included an evaluation of site access and circulation of the proposed project. (This review was based on the August 2011 site plan provided by the applicant.)

Access to the existing Moe's gas station is provided via two driveways on McKee Road and one driveway on N 33rd Street. Existing signs at both driveways on McKee Road are intended to restrict outbound movements to right turns only for vehicles exiting the site. However, some left turns out of the easternmost driveway do occur. With the expansion of the gas station, the driveway nearest the signalized intersection of McKee Road and N. 33rd Street will be converted to an exit only driveway restricted to right turns onto eastbound McKee Road. As proposed, the second (easternmost) driveway on McKee Road will be restricted to right turns in and out only. Based on the site plan it appears that drivers would have the option to drive through the site, exit the N 33rd Street driveway, and turn left from N. 33rd Street onto westbound McKee Road.

With the expansion of the gas station, only one full access driveway is proposed on N. 33rd Street, adjacent to the southern boundary of the project site. This driveway would be located as far as possible from the signalized intersection of McKee Road and N. 33rd Street. No operational problems are expected to occur at this driveway.

On-Site Vehicle Queuing

Based on the proposed site plan, the project would more than double the amount of on-site vehicle storage. With the proposed expansion, it is estimated that the project site would be able to accommodate at least 10 vehicles total waiting in queue to fill up with gas (not including those parked at the pumps). The project also would provide five parking spaces for customers to shop at the convenience store, so those vehicles would not use valuable queuing space.

Since the project would increase the amount of on-site vehicle storage, it is unlikely that there would be any significant queuing issues that could result in a backup onto either McKee Road or N. 33rd Street.

In summary, the project would significantly improve on-site circulation of the project site. Based on the site plan, adequate circulation would be provided onsite for customers and tanker trucks to turn in and out of the gas station.

Pedestrian, Bicycle, and Transit Services

Existing pedestrian, bicycle and transit services were not evaluated in the traffic analysis because the proposed gas station expansion would have no impact on existing transit services or pedestrian/bicycle facilities, since all of the trips generated by the project would be vehicular trips.

The project would have less-than-significant impacts associated with transportation and traffic.

Mitigation

No mitigation is required since the project would not exceed the City's level of service standard at the study intersection under all studies traffic scenarios.

5. CUMULATIVE IMPACTS

5.1. INTRODUCTION

Section 15130 of the CEQA Guidelines requires an EIR to discuss cumulative impacts of a proposed project when the project's incremental effect is cumulatively considerable. Cumulative impacts refer to two or more individual effects that, when combined, are considerable or that compound or increase other environmental impacts. The purpose of the cumulative impact analysis is to identify and summarize the environmental impacts of the proposed project in conjunction with existing, approved, and anticipated development in the project area. Since traffic is the only significant issue of concern for this project, only the cumulative effects related to traffic are evaluated in this analysis.

5.2. TRAFFIC

Cumulative conditions were represented by adding to background plus project traffic volumes the additional traffic generated by all other potential projects in the general study area that have been proposed but have not yet been approved. This traffic scenario is evaluated in order to fulfill CEQA requirements.

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as described under background plus project conditions. For the purpose of the traffic impact analysis, the following pending project was included in the cumulative conditions scenario:

- Vision North San Jose (Phase 2) – The Vision North San Jose project is an update to the North San Jose Area Development Policy. The Policy allows for increases in industrial square footage, high-density housing, and retail amenities in North San Jose. The Policy identifies necessary transportation improvements to support new development, and provides a traffic impact fee program for new development to share the cost of those improvements. The Policy area boundaries generally include the area within San Jose north and west of I-880 and Coyote Creek, east of the Guadalupe River and south of SR 237, as well as an area east of I-880 along Murphy Avenue to Lundy Avenue.

The peak hour cumulative traffic volumes are shown in Appendix B. The intersection level of service results under cumulative conditions are summarized in Table 3. The results of the level of service analysis show that, measured against City of San Jose standards, the study intersection of 33rd Street and McKee Road would operate at an acceptable LOS C under cumulative conditions during both the AM and PM peak hours of traffic. Therefore, the project would not create or contribute to a significant adverse traffic impact at the study intersection under cumulative conditions.

The project would result in less-than-significant cumulative traffic impacts.

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6. PROJECT ALTERNATIVES

6.1. INTRODUCTION

CEQA Guidelines Section 15126.6 requires the consideration of a range of reasonable alternatives to the proposed project that could feasibly attain most of the objectives of the proposed project. The Guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project or reducing them to a less-than-significant level, even if the alternative would not fully attain the project objectives or would be more costly. According to CEQA Guidelines, the range of alternatives required in an EIR is governed by the “rule of reason” that requires an EIR to evaluate only those alternatives necessary to permit a reasoned choice. An EIR need not consider alternatives that have effects that cannot be reasonably ascertained and/or are remote and speculative.

6.2. PROJECT OBJECTIVES AND SIGNIFICANT IMPACTS

The primary objective of the project is to expand the gas station from six to 12 fueling stations and modify access to meet demand and improve vehicular circulation. Based on the rule of reason as set forth in the CEQA Guidelines (Section 15126.6), the only alternatives that should be analyzed in the EIR are those that are capable of eliminating or substantially reducing significant adverse environmental impacts. The results of the analysis in this EIR and accompanying IS indicate that the project would not result in any significant environmental impacts; therefore, no alternative development scenarios are evaluated.

6.3. NO PROJECT

CEQA Section 15126.6(e) requires the discussion of the No Project Alternative “to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.” The No Project scenario in this case consists of retaining the property in its original configuration, with no additional fuel dispensers or access modifications. Under this alternative, no new development would occur on the site.

This alternative would avoid both the adverse and beneficial effects of the project. This alternative would avoid the demolition and other site-disturbance and construction-related impacts associated with installation of the new fuel dispensers and access improvements. The No Project Alternative would avoid the generation of additional traffic to the site, by eliminating the new fuel pumps. However, none of the impacts of the project are considered significant. This alternative would not meet the project’s objectives to expand the gas station and modify access to meet demand and improve vehicular circulation.

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7. CEQA CONSIDERATIONS

7.1. GROWTH-INDUCING IMPACTS

CEQA Section 15126 (d) requires that any growth-inducing aspect of a project be addressed in an EIR. This discussion includes consideration of ways in which the project could directly or indirectly foster economic or population growth or the construction of additional housing in the surrounding area. Projects which could remove obstacles to population growth (such as a major public service expansion) are also considered in this discussion. The project is a minor gas station expansion and would not result in any growth-inducing impacts.

The project would have less-than-significant growth-inducing impacts.

7.2. IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126(f) of the CEQA Guidelines requires that an EIR include a discussion of significant irreversible environmental changes that would result from project implementation. CEQA Section 15126.2(c) identifies irreversible environmental changes as those involving a large commitment of nonrenewable resources or irreversible damage resulting from environmental accidents.

Irreversible changes associated with the project include the use of nonrenewable resources during construction, including concrete, plastic, and petroleum products. During the operational phase of the project, electricity would be used for operating the fuel dispensers. The use of these resources would not be substantial and would not constitute a significant effect.

The project would have less-than-significant irreversible environmental changes.

7.3. SIGNIFICANT, UNAVOIDABLE IMPACTS

Based on the analysis in this EIR and accompanying Initial Study, the proposed project would not result in any significant unavoidable impacts.

The project would not have any significant unavoidable impacts.

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8. REFERENCES

8.1. LEAD AGENCY

City of San Jose Department of Planning, Building and Code Enforcement

Joseph Horwedel, Director

John Davidson, Senior Planner

8.2. REPORT PREPARATION

Denise Duffy & Associates, Inc.

Environmental Consultant

Denise Duffy, Principal

Leianne Humble, Project Manager

Matt Johnson, Graphics

Alison Sprecher, Administration

8.3. PERSONS CONTACTED

William R. Dugan, WellTest, Inc.

Brian Jackson, Hexagon Transportation Consultants, Inc.

8.4. BIBLIOGRAPHY

Hexagon Transportation Consultants, Inc., Moe's Stop Gas Station Expansion Draft
Transportation Impact Analysis, August 2011.

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APPENDICES

APPENDIX A
INITIAL STUDY

INITIAL STUDY
for
MOE'S STOP GAS & SERVICE STATION

City File No. CP11-049
SCH No. 2011062068

CITY OF SAN JOSE

August 2011

Table of Contents

Chapter 1. Project Data	1
Chapter 2. Environmental Evaluation	2
A. Aesthetics.....	2
B. Agricultural and Forest Resources.....	3
C. Air Quality.....	4
D. Biological Resources	6
E. Cultural Resources.....	8
F. Geology	9
G. Greenhouse Gas Emissions.....	10
H. Hazardous Materials	11
I. Hydrology & Water Quality	14
J. Land Use.....	17
K. Mineral Resources	17
L. Noise	18
M. Population & Housing	20
N. Public Services	20
O. Recreation.....	21
P. Transportation.....	21
Q. Utilities & Service Systems	22
R. Mandatory Findings of Significance	23
Chapter 3. References	24

Chapter 1. Project Data

PROJECT FILE NO.: CP09-015

PROJECT DESCRIPTION: Conditional Use Permit to allow the demolition of an existing single-family detached residence and the expansion of an existing gas and service station, consisting of three additional fuel dispensers and a canopy for the new facilities.

PROJECT LOCATION & APN: 280 N. 33rd Street (481-03-016) & 1604 McKee Road (481-03-017)

GENERAL PLAN DESIGNATION: General Commercial

ZONING: CP Commercial Pedestrian

EXISTING LAND USE: Gas station

SURROUNDING LAND USES / GENERAL PLAN / ZONING:

North: Commercial/Neighborhood/Community Commercial/CP Commercial Pedestrian

South: Residential/Medium Low Density Residential (8.0 DU/AC)/R-2 Two Family Residence

East: Commercial/General Commercial/A(PD) Planned Development [commercial]

West: Commercial/General Commercial/A(PD) Planned Development [commercial]

PROJECT APPLICANT'S NAME AND ADDRESS: Amir Shirazi, Moe's Stop, 1604 McKee Road, San Jose, CA 95116

DETERMINATION

On the basis of this Initial Study:

<input type="checkbox"/>	I find the proposed project could not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the project proponent has agreed to revise the project to avoid any significant effect. A MITIGATED NEGATIVE DECLARATION will be prepared.
<input checked="" type="checkbox"/>	I find the proposed project could have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.
<input type="checkbox"/>	I find the proposed project could have a significant effect on the environment, but at least one effect has been (1) adequately analyzed in a previous document pursuant to applicable legal standards, and (2) addressed by mitigation measures based on the previous analysis as described in the attached initial study. An EIR is required that analyzes only the effects that were not adequately addressed in a previous document.
<input type="checkbox"/>	I find that although the proposed project could have a significant effect on the environment, no further environmental analysis is required because all potentially significant effects have been (1) adequately analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (2) avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are included in the project, and further analysis is not required.

8/30/11

Date



Signature

Name of Preparer: Leianne Humble, DD&A

Chapter 2. Environmental Evaluation

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors identified below are discussed within this environmental evaluation.

- | | | |
|--|---|--|
| <input checked="" type="checkbox"/> Aesthetics | <input checked="" type="checkbox"/> Agricultural & Forest Resources | <input checked="" type="checkbox"/> Air Quality |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input checked="" type="checkbox"/> Geology/Soils |
| <input checked="" type="checkbox"/> Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hazards/Hazardous Materials | <input checked="" type="checkbox"/> Hydrology/Water Quality |
| <input checked="" type="checkbox"/> Land Use/Planning | <input checked="" type="checkbox"/> Mineral Resources | <input checked="" type="checkbox"/> Noise |
| <input checked="" type="checkbox"/> Population/Housing | <input checked="" type="checkbox"/> Public Services | <input checked="" type="checkbox"/> Recreation |
| <input checked="" type="checkbox"/> Transportation/Traffic | <input checked="" type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

ENVIRONMENTAL SETTING AND IMPACTS

The following section describes the environmental setting and identifies the environmental impacts anticipated from implementation of the proposed project. The criteria provided in the CEQA environmental checklist was used to identify potentially significant environmental impacts associated with the project. Sources used for the environmental analysis are cited in the checklist and listed in Chapter 3 of this Initial Study.

Please note that the project was partially completed before construction was halted, although the fuel dispensers were never operational. This Initial Study evaluates baseline conditions as those that existed prior to any construction activities.

A. AESTHETICS

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
1. AESTHETICS. Would the project:					
a) Have a substantial adverse effect on a scenic vista?			X		1,2
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			X		1,2
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X		1,2
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X		1,2
e) Increase the amount of shade in public or private open space on adjacent sites?				X	1,2

FINDINGS:

The proposed project would somewhat alter the existing visual character of the site and its surroundings through the demolition of an existing residence and the construction of new gas dispensers with canopy. However, the project site is located on a commercial thoroughfare in a highly urban area. Additionally, the proposed project would not significantly degrade the existing visual character of the site since the project would be required to undergo architectural and site design review by Planning Staff, consistent with the City’s Commercial Design Guidelines, to ensure compatibility with the surrounding neighborhood.

Exterior building and parking lot lighting associated with the new development would likely create a minor increase in the amount of nighttime lighting than the existing gas station on the site; however, it would not adversely affect views in the area due to relatively high existing ambient light levels. The project would be required to conform to the standards of the City’s Outdoor Lighting Policy. Based on the discussion above, the project would have a less-than-significant impact on aesthetics.

MITIGATION MEASURES: None required.

B. AGRICULTURAL AND FOREST RESOURCES

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
2. AGRICULTURAL AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X	1,3,4
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X	1,3,4
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X	1,3,4
d) Result in the loss of forest land or conversion of forest land to non-forest uses?				X	1,3,4
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				X	1,3,4

FINDINGS:

The project site is designated as “urban land” on the Important Farmlands Map for Santa Clara County and does not contain any prime farmland, unique farmland, or farmland of statewide importance. The project site is not zoned for agricultural use and does not contain lands under Williamson Act contract.

The project would not impact forest resources since the site does not contain any forest land as defined in Public Resources Code section 12220(g)), timberland as defined by Public Resources Code section 4526, or property zoned for Timberland Production as defined by Government Code section 51104(g).

The proposed project would not involve changes in the existing environment which, due to their location or nature, could result in conversion of farmland or agricultural land, since none are present on this developed property.

MITIGATION MEASURES: None required.

C. AIR QUALITY

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?			X		1,14
b) Violate any air quality standard or contribute to an existing or projected air quality violation?			X		1,14
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?			X		1,14
d) Expose sensitive receptors to substantial pollutant concentrations?			X		1,14
e) Create objectionable odors affecting a substantial number of people?			X		1,14

FINDINGS:

The City of San Jose uses the threshold of significance established by the Bay Area Air Quality Management District (BAAQMD) to assess air quality impacts. The BAAQMD updated its CEQA Guidelines (June 2010) to include new screening levels and thresholds for evaluating air quality impacts in the Bay Area.

The BAAQMD identifies screening levels based on project size and thresholds of significance for air pollutant emissions. The most applicable land use category from the BAAQMD's screening criteria tables for the proposed project is "convenience store with gas pumps." For operational impacts, the screening size triggering a need for analysis is the addition of 4,000 square feet (for a convenience store with gas pumps). For construction impacts, the screening size is the addition of 277,000 square feet (for a convenience store with gas pumps). Due to the project size, which consists of adding three new fuel dispensers with no expansion to the convenience store, construction and operational emissions would be below the BAAQMD significance thresholds, resulting in a less-than-significant air quality impact. In addition, the proposed project would not increase regional population growth or cause changes in vehicle travel that would affect implementation of the Bay Area 2010 Clean Air Plan.

Operation of the project is not expected to generate any localized emissions that could expose sensitive receptors to unhealthy air pollutant levels. Construction activity would generate dust and equipment exhaust on a temporary basis. The BAAQMD identifies best management practices for all projects to limit air quality impacts during construction. The short-term air quality effects during project construction would be avoided with implementation of Best Management Practices during construction, as required by the BAAQMD.

The project proponent shall implement the following "Basic" Construction Mitigation Measures Recommended for All Proposed Projects, in accordance with BAAQMD requirements:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign shall be posted at the site with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

MITIGATION MEASURES: None required.

D. BIOLOGICAL RESOURCES

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
4. BIOLOGICAL RESOURCES. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X	1,10
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?				X	1,6,10
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X	1,6
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X	1,10
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X	1,11
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan?				X	1,2

FINDINGS:

No rare, threatened, endangered or special status species of flora or fauna are known to inhabit the project site, which is located in a highly urbanized area along a commercial corridor.

The City of San Jose has established regulations for removal of landscape trees at least 56 inches in circumference measured two feet above grade. The proposed project will obtain a permit for the removal of ordinance-sized trees and provide for the replacement of removed trees in conformance with the City of San Jose Tree Ordinance. The site contains 19 landscape trees, ranging from 12 inches to 18 inches in circumference. The proposed development will result in the removal of 15 landscape trees, none of which are ordinance-sized trees.

The project site may provide habitat for wildlife species associated with urban areas. Trees in urban areas provide food and cover for wildlife adapted to this environment, including birds such as house finch, mourning dove, house sparrow, and Brewer's blackbird. No other rare, threatened, or endangered animal species were observed on the project site, nor are any expected to occur since the area is generally developed.

As a part of the development permit approval, the project will conform to the following standards:

- All trees that are to be removed shall be replaced at the following ratios:

Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
12 - 18 inches	3:1	2:1	none	15-gallon container
less than 12 inches	1:1	1:1	none	15-gallon container
x:x = tree replacement to tree loss ratio				
Note: Trees greater than 18" diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.				

- In the event the project site does not have sufficient area to accommodate the required tree mitigation, one or more of the following measures will be implemented, to the satisfaction of the Director of Planning, Building and Code Enforcement, at the development permit stage:
 - The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees.
 - An alternative site(s) will be identified for additional tree planting. Alternative sites may include local parks or schools or installation of trees on adjacent properties for screening purposes to the satisfaction of the Director of the Department of Planning, Building, and Code Enforcement. Contact Jaime Ruiz, PRNS Landscape Maintenance Manager, at (408) 535-3586 or Jaime.Ruiz@sanjoseca.gov for specific park locations in need of trees.
 - A donation of \$300 per mitigation tree to Our City Forest for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. Contact Rhonda Berry, Our City Forest, at (408) 998-7337 x106 to make a donation. A donation receipt for off-site tree planting shall be provided to the Planning Project Manager prior to issuance of a development permit.
- The following tree protection measures will be included in the project in order to protect trees to be retained during construction:

Pre-construction treatments

1. The applicant shall retain a consulting arborist. The construction superintendent shall meet with the consulting arborist before beginning work to discuss work procedures and tree protection.
2. Fence all trees to be retained to completely enclose the TREE PROTECTION ZONE prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by consulting arborist. Fences are to remain until all grading and construction is completed.
3. Prune trees to be preserved to clean the crown and to provide clearance. All pruning shall be completed or supervised by a Certified Arborist and adhere to the Best Management Practices for Pruning of the International Society of Arboriculture.

During construction treatments

1. No grading, construction, demolition or other work shall occur within the TREE PROTECTION ZONE. Any modifications must be approved and monitored by the consulting arborist.
2. Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the consulting arborist.
3. Supplemental irrigation shall be applied as determined by the consulting arborist.
4. If injury should occur to any tree during construction, it shall be evaluated as soon as possible by the consulting arborist so that appropriate treatments can be applied.
5. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the TREE PROTECTION ZONE.
6. Any additional tree pruning needed for clearance during construction must be performed or supervised by an Arborist and not by construction personnel.
7. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings and pavements on expansive soils near trees shall be designed to withstand differential displacement.

MITIGATION MEASURES: None required.

E. CULTURAL RESOURCES

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
5. CULTURAL RESOURCES. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA 15064.5?				X	1,7
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA 15064.5?			X		1,8
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X	1,8
d) Disturb any human remains, including those interred outside of formal cemeteries?			X		1,8

FINDINGS:

The site does not contain any structures greater than 50 years of age that would be considered historically significant, nor does it contain any structures identified in the City’s Historic Resources Inventory.

According to the City’s Archaeological Sensitivity Map, the project site has a low potential for the discovery of archaeological resources and is not considered archaeologically sensitive. The project is not anticipated to impact archaeological resources. However, in the unlikely event that any resources are found during grading, their disturbance would be avoided by implementation of the standard measures below.

As a part of the development permit approval, the project will conform to the following standards:

- Should evidence of prehistoric cultural resources be discovered during construction, work within 50 feet of the find shall be stopped to allow adequate time for evaluation and mitigation by a qualified professional archaeologist. The material shall be evaluated and if significant, a mitigation program including collection and analysis of the materials at a recognized storage facility shall be developed and implemented under the direction of the City’s Environmental Principal Planner.
- As required by County ordinance, this project has incorporated the following guidelines. Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California in the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the land owner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

MITIGATION MEASURES: None required.

F. GEOLOGY AND SOILS

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
6. GEOLOGY AND SOILS. Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a know earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?			X		1,5,24
ii) Strong seismic ground shaking?			X		1,5,24
iii) Seismic-related ground failure, including liquefaction?			X		1,5,24
iv) Landslides?				X	1,5,24
b) Result in substantial soil erosion or the loss of topsoil?			X		1,5,24
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X		1,5,24
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X		1,5,24
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X	1,5,24

FINDINGS:

Due to its location within a seismically active region, the project site would likely be subject to at least one moderate to major earthquake that could affect the project after construction. The site would experience strong ground shaking in the event of a major earthquake on one of the region’s active faults. Because the potential for liquefaction on the site is considered high, liquefaction and differential settlement could occur on the site during an earthquake. The proposed structures on the site would be designed and constructed in conformance with the Uniform Building Code Guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site. Conformance with standard Uniform Building Code Guidelines would minimize potential impacts from seismic shaking on the site. Therefore, this impact is considered less-than-significant. The site is flat and not subject to landslides.

Prior to issuance of a Public Works Clearance, the developer must obtain a grading permit before commencement of excavation and construction. Implementation of standard grading and best management practices would prevent substantial erosion and siltation during development of the site.

The project site is located within the State of California Seismic Hazard Zone. A soil investigation report addressing the potential hazard of liquefaction must be submitted to, reviewed and approved by the City Geologist prior to issuance of a grading permit or Public Works Clearance. A recommended depth of 50 feet should be explored and evaluated in the investigation.

As a part of the development permit approval, the project will conform to the following standards:

- The proposed structures on the site would be designed and constructed in conformance with the Uniform Building Code Guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site.
- A soil investigation report addressing the potential hazard of liquefaction would be submitted to, reviewed and approved by the City Geologist prior to issuance of a grading permit or Public Works Clearance. The investigation should be consistent with the guidelines published by the State of California (CDMG Special Publication 117) and the Southern California Earthquake Center ("SCEC" report).

MITIGATION MEASURES: None required.

G. GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
7. GREENHOUSE GAS EMISSIONS. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?				X	1, 14
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				X	1, 14

FINDINGS:

The BAAQMD identifies screening levels based on project size and thresholds of significance for GHG emissions. The most applicable land use category from the BAAQMD’s screening criteria tables for the proposed project is “convenience store with gas pumps.” The operational GHG screening size for a convenience store with gas pumps is the addition of 1,000 square feet. Given the project’s size, which consists of three additional fuel dispensers with no expansion to the convenience store, the project would not meet the screening levels and thresholds of significance for GHG emissions. The project, therefore, would have a less-than-significant impact on GHG emissions. Likewise, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

MITIGATION MEASURES: None required.

H. HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
7. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X		1
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X		1
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?			X		1
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?			X		1,12
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X		1,2
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?			X		1
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X		1,2
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X		1

FINDINGS:

Development of the proposed project includes the demolition of a single-family residence on the site, which may contain asbestos building materials and/or lead-based paint. Demolition performed in conformance with all applicable federal, state and local laws and regulations will avoid significant exposure of construction workers and/or the public to asbestos and lead-based paint.

The project is not included on the California Department of Toxic Substance Control's Hazardous Waste and Substances Site List (i.e., Cortese List). The project site is identified as an active LUST (Leaking Underground Storage Tank) clean-up site. The following discussion describes the most recent findings and conclusions of the site's status, based on a summary report provided by WellTest, Inc. (June 2011) and the latest groundwater monitoring report (Second Quarter 2011, WellTest, Inc., August 2011).

Evidence of gasoline leakage into soils at the project site was discovered in laboratory analyzed soil samples collected underneath a fuel dispenser during a pipeline upgrade at the site in January 1999. The sampling work was witnessed by a representative of the San Jose Fire Department. Low levels of total petroleum hydrocarbons (TPH) as gasoline and benzene were detected in the soil samples. A fuel-release case (designated as Moe's ARCO) was established by the Santa Clara Valley Water District. The Santa Clara County Department of Environmental Health (SCCDEH) became the lead regulatory agency for the case in 2005.

Two groundwater monitoring wells (MW-1 and MW-2) were installed at the site in December 1999. The wells were completed in the first-encountered water-bearing zone approximately 18 to 20 feet deep beneath the western area of the site, near the underground gasoline storage tanks and 33rd Street. Elevated concentrations of methyl tertiary butyl ether (MTBE) were detected in water samples collected from wells MW-1 and MW-2 during initial quarterly monitoring events. Concentrations of gasoline-range compounds including MTBE within wells MW-1 and MW-2 have significantly declined since the wells were installed.

Two additional wells (MW-3 and MW-4) were installed in May 2009. The lateral extent of the dissolved-phase petroleum plume was defined by trace to non-detectable concentrations of TPHg, benzene, toluene, ethylbenzene, xylenes (BTEX), and MTBE in water samples collected from well MW-3 to the north and from well MW-5 offsite to the east. The offsite well (MW-5) was installed in December 2009 at the Ann Darling School, approximately 120 feet northwest of the project site. Non-detectable to trace levels of MTBE have been reported in laboratory analyzed water samples collected from well MW-5. The western margin of groundwater plume impacted by the fuel-release has been defined by trace to non-detectable concentrations of TPHg, BTEX, and MTBE for water collected from monitoring well MW-8 (within 33rd Street) installed by the owner of the gasoline station at 1590 McKee Road. The direction of groundwater flow beneath the project site and site vicinity has been evaluated to be towards the north-northwest, based on water-level measurements acquired from the site wells and from wells drilled for the fuel-release case at 1590 McKee Road.

The vertical extent of gasoline-impacted soils appears to have been defined for the fuel-release case. Two direct-push method exploratory borings (DP-2B and DP-5B) were drilled in August 2010. Boring DP-2B was drilled approximately five feet from well on-site MW-2, and boring DP-5B was drilled approximately five feet from offsite well MW-5. The borings were drilled to enable the collection and testing of deeper soil samples. Non-detectable to trace concentrations of TPHg, BTEX, and MTBE were reported in the laboratory analyzed soil and water samples from the borings.

The site is as a low-risk groundwater fuel-release case. Free-phase (floating) product has not been documented within wells for the case. The lateral and vertical extent of the soil and groundwater plume

has been delineated. The extent of gasoline-impacted groundwater has been documented to be stable (i.e., shrinking).

All site-related wells were sampled on June 9, 2011. A report summarizing groundwater monitoring work completed for the Second Quarter of 2011 was issued on August 21, 2011 (WellTest, Inc.). The results for the five monitoring wells are summarized below:

- TPHg (gasoline): not detected in the samples
- Benzene: not detected in the samples
- Toluene: not detected in the samples
- Ethylbenzene: not detected in the samples
- Xylenes: not detected in the samples
- MTBE: detected in the MW-2 sample (up to 35 ug/L)

The Second Quarter report concludes that the highest concentrations of petroleum-impacted groundwater appear to be located in the area of well MW-2, and then the plume attenuates to non-detectable levels down-gradient of well MW-5. The stability of the petroleum hydrocarbon plume is, thus, apparent based on the limited down-gradient lateral extent of the plume in relation to the age of the fuel release. The report recommends that the case be considered for regulatory closure by the SCCDEH.

An additional groundwater monitoring event is planned for early October 2011. The narrative summary and budget submitted to the Underground Storage Tank Cleanup Fund in April 2011 for the case requested funding to perform compliance semi-annual groundwater monitoring and sampling of the well network.

The SCCDEH requested that geologic cross-sections be prepared for the case. The sections will be constructed by WellTest, Inc. based on a review of available boring logs, well construction logs, and soil and groundwater laboratory testing data. The sections will serve as a scaled site conceptual model that will depict critical factors that define the site conditions. These factors include the lateral and vertical distribution of encountered soil types, well construction details (including the well screen intervals relative to soil types), locations and concentrations of laboratory analyzed soil samples, the historic vertical range of water levels in wells, the locations of underground storage tanks, and other pertinent information. The sections will serve as a tool to illustrate subsurface data gaps, if present, and will be used in consultation with the SCCDEH to help establish the site-specific standards and additional data the SCCDEH will require in order to obtain regulatory closure for the case.

Based on the discussion above, the conditions on the site would not preclude the approval of the Conditional Use Permit to install additional dispensers at the project site, nor pose a hazard to the environment. The fuel dispensers will be operated and managed in accordance with all state and federal regulations to avoid introducing hazards to the public or environment.

As a part of the development permit approval, the project will conform to the following standards:

- In conformance with State and Local laws, a visual inspection/pre-demolition survey, and possible sampling, will be conducted prior to the demolition of the building to determine the presence of asbestos-containing materials and/or lead-based paint.

All potentially friable asbestos-containing materials shall be removed in accordance with National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines prior to building demolition or renovation that may disturb the materials. All demolition activities will be undertaken in

accordance with Cal/OSHA standards, contained in Title 8 of the California Code of Regulations (CCR), Section 1529, to protect workers from exposure to asbestos. Materials containing more than one percent asbestos are also subject to Bay Area Air Quality Management District (BAAQMD) regulations.

During demolition activities, all building materials containing lead-based paint shall be removed in accordance with Cal/OSHA Lead in Construction Standard, Title 8, California Code of Regulations 1532.1, including employees training, employee air monitoring and dust control. Any debris or soil containing lead-based paint or coatings will be disposed of at landfills that meet acceptance criteria for the waste being disposed.

MITIGATION MEASURES: None required.

I. HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
8. HYDROLOGY AND WATER QUALITY. Would the project:					
a) Violate any water quality standards or waste discharge requirements?			X		1,15
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, 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)?				X	1
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.			X		1
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?				X	1
e) 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?			X		1,17
f) Otherwise substantially degrade water quality?			X		1
g) 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?				X	1,9
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?				X	1,9
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X	1
j) Inundation by seiche, tsunami, or mudflow?			X		1

FINDINGS:

Flooding

Based on the FEMA flood insurance maps for the City of San Jose, the project site is not located within a 100-year floodplain and would, therefore, have no impact on 100-year flows. The project would not expose people to flood hazards associated with the 100-year flood. The site is not subject to seiche or tsunami hazards.

Water Quality

New construction in San Jose is subject to the conditions of the City's National Pollutant Discharge Elimination System (NPDES) Permit, which was reissued by the RWQCB in February 2001. Additional water quality control measures were approved in October 2001 (revised in 2005), when the RWQCB adopted an amendment to the NPDES permit for Santa Clara County. This amendment, which is commonly referred to as C.3 requires all new and redevelopment projects that result in the addition or replacement of impervious surfaces totaling 10,000 square feet or more to 1) include storm water treatment measures; 2) ensure that the treatment measures be designed to treat an optimal volume or flow of storm water runoff from the project site; and 3) ensure that storm water treatment measures are properly installed, operated and maintained.

The City has developed a policy that implements Provision C.3 of the NPDES Permit, requiring new development projects to include specific construction and post-construction measures for improving the water quality of urban runoff to the maximum extent feasible. The City's Post-Construction Urban Runoff Management Policy (6-29) established general guidelines and minimum Best Management Practices (BMPs) for specified land uses, and includes the requirement of regular maintenance to ensure their effectiveness. Later, the City adopted the Post-Construction Hydromodification Management Policy (8-14) to manage development related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation or other impacts to local rivers, streams and creeks. Implementation of these policies will reduce potential water quality impacts to less-than-significant levels.

The project may also be subject to the requirements of the RWQCB's Municipal Regional Stormwater NPDES Permit (MRP), Provision C.3.c, which is effective December 1, 2011 for development permits. This provision indicates that each regulated project treat 100 percent of the design storm runoff from a project's drainage area with low impact development (LID) treatment measures onsite or at a joint stormwater treatment facility.

The proposed project is 0.51 acres in size. The site is currently covered with 16,477 square feet of impervious surface. The proposed project will add 4,513 sq. ft. of impervious surface for a total impervious surface of 20,990 square feet.

The project shall comply with the City of San Jose's Grading Ordinance, including erosion and dust controls during site preparation, and with the City of San Jose's Zoning Ordinance requirement of keeping adjacent streets free of dirt and mud during construction.

Implementation of the measures listed below, consistent with NPDES Permit and City Policy requirements, will reduce potential construction impacts to surface water quality to less-than-significant levels.

As a part of the development permit approval, the project will conform to the following standards:

Construction Measures

- Prior to the commencement of any clearing, grading or excavation, the project shall comply with the State Water Resources Control Board's National Pollutant Discharge Elimination System General Construction Activities Permit, to the satisfaction of the Director of Public Works, as follows:
 1. The applicant shall develop, implement and maintain a Storm Water Pollution Prevention Plan (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities.
 2. The applicant shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).
- The project shall incorporate Best Management Practices (BMPs) into the project to control the discharge of stormwater pollutants including sediments associated with construction activities. Examples of BMPs are contained in the publication *Blueprint for a Clean Bay*, and include preventing spills and leaks, cleaning up spills immediately after they happen, storing materials under cover, and covering and maintaining dumpsters. Prior to the issuance of a grading permit, the applicant may be required to submit an Erosion Control Plan to the City Project Engineer, Department of Public Works, 200 E. Santa Clara Street, San Jose, California 95113. The Erosion Control Plan may include BMPs as specified in ABAG's *Manual of Standards Erosion & Sediment Control Measures* for reducing impacts on the City's storm drainage system from construction activities. For additional information about the Erosion Control Plan, the NPDES Permit requirements or the documents mentioned above, please call the Department of Public Works at (408) 535-8300.
- The project applicant shall comply with the City of San Jose Grading Ordinance, including erosion and dust control during site preparation, and with the City of San Jose Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs will be implemented to prevent stormwater pollution and minimize potential sedimentation during construction:
 1. Restriction of grading to the dry season (April 15 through October 15) or meet City requirements for grading during the rainy season.
 2. Utilize on-site sediment control BMPs to retain sediment on the project site.
 3. Utilize stabilized construction entrances and/or wash racks.
 4. Implement damp street sweeping.
 5. Provide temporary cover of disturbed surfaces to help control erosion during construction.
 6. Provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

Post-Construction

- Prior to the issuance of a Conditional Use Permit, the applicant must provide details of specific Best Management Practices (BMPs), including, but not limited to, bioswales, disconnected downspouts, landscaping to reduce impervious surface area, and inlets stenciled "No Dumping – Flows to Bay" to the satisfaction of the Director of Planning, Building and Code Enforcement.
- The project shall comply with Provision C.3 of NPDES permit Number CAS0299718, which provides enhanced performance standards for the management of stormwater of new development.

- The project shall comply with applicable provisions of the following City Policies: 1) Post-Construction Urban Runoff Management Policy (6-29) which establishes guidelines and minimum BMPs for all projects and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for numerically sized (or hydraulically sized) TCMs.

MITIGATION MEASURES: None required.

J. LAND USE

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
9. LAND USE AND PLANNING. Would the project:					
a) Physically divide an established community?				X	1,2
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X	1,2
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?				X	1,2

FINDINGS:

Projects that have the potential to physically divide an established community include new freeways and highways, major arterials streets, and railroad lines. The proposed gas station expansion will not physically divide an established community. In addition, the project is consistent with the site's General Plan Land Use designation. The proposed project will comply with the setbacks required by the City of San Jose's *Zoning Ordinance* in order to avoid possible impacts to surrounding land uses.

MITIGATION MEASURES: None Required.

K. MINERAL RESOURCES

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
10. MINERAL RESOURCES. Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X	1,2,23
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X	1,2,23

FINDINGS:

Extractive resources known to exist in and near the Santa Clara Valley include cement, sand, gravel, crushed rock, clay, and limestone. Santa Clara County has also supplied a significant portion of the nation's mercury over the past century. Pursuant to the mandate of the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated the Communications Hill Area (Sector EE), bounded generally by the Southern Pacific Railroad, Curtner Avenue, State Route 87, and Hillsdale Avenue, as containing mineral deposits that are of regional significance as a source of construction aggregate materials.

Neither the State Geologist nor the State Mining and Geology Board has classified any other areas in San Jose as containing mineral deposits which are either of statewide significance or the significance of which requires further evaluation. Therefore, other than the Communications Hill area cited above, San Jose does not have mineral deposits subject to SMARA.

The project site is outside of the Communications Hill area, and will therefore not result in a significant impact from the loss of availability of a known mineral resource.

MITIGATION MEASURES: None Required.

L. NOISE

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
11. NOISE. Would the project result in					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?			X		1,2,13,18
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X		1
c) Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X		1
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X		1
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X		1
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X	1

FINDINGS:

The San Jose 2020 General Plan states that the City's acceptable exterior noise level is 55 DNL long term and 60 DNL short term. The acceptable interior noise level is 45 DNL. The plan recognizes that the noise levels may not be achieved in the Downtown area, and in the vicinity of major roadways and the Mineta San Jose International Airport.

Noise Impacts from the Project

The project would generate approximately 462 new average daily trips. As traffic would normally have to double to create a significant impact, traffic generated by this project is not expected to substantially increase noise levels in the project area.

Noise from the construction of the proposed project could impact surrounding residential properties (to the south). Noise impacts from construction activities depend on: 1) the noise generated by various pieces of construction equipment; 2) the timing and duration of noise generating activities; 3) the distance between construction noise sources and noise sensitive receptors; and 4) existing ambient noise levels. The demolition of the existing building onsite and the construction of the proposed building would generate noise and would temporarily increase noise levels at nearby sensitive land uses. No pile driving would be required for construction of the proposed project.

Typical hourly average construction noise levels are 75 to 80 dBA measured at a distance of 100 feet from the site during busy construction periods. Concrete crushing equipment would generate noise levels of approximately 80 to 85 dBA at 50 feet. Such noise levels would be intermittently audible to residences within 1,000 feet of the construction site.

Construction activities may also result in annoyances to existing commercial development adjacent to the project site. However, because the duration of construction would be approximately three months, the project would not result in significant short-term construction related noise impacts. Further, standard measures, as listed below, are included in the project to avoid or further reduce noise impacts.

As a part of the development permit approval, the project will conform to the following standards:

- Construction will be limited to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday for any on-site or off-site work within 500 feet of any residential unit. Construction outside of these hours may be approved through a development permit based on a site-specific construction noise mitigation plan and a finding by the Director of Planning, Building and Code Enforcement that the construction noise mitigation plan is adequate to prevent noise disturbance of affected residential uses.
- The contractor will use “new technology” power construction equipment with state-of-the-art noise shielding and muffling devices. All internal combustion engines used on the project site shall be equipped with adequate mufflers and shall be in good mechanical condition to minimize noise created by faulty or poor maintained engines or other components.
- Stationary noise generating equipment will be located as far as possible from sensitive receptors. Staging areas shall be located a minimum of 200 feet from noise sensitive receptors, such as residential uses.
- Post-construction mechanical equipment will conform to the City’s General Plan limitation of 55DNL at residential property lines and 60DNL at commercial property lines.

MITIGATION MEASURES: None required.

M. POPULATION AND HOUSING

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
12. POPULATION AND HOUSING. Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X	1,2
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?			X		1
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?			X		1

FINDINGS:

The proposed project is a commercial use and would not induce substantial population growth. The project also includes the demolition of an existing residence, which does not significantly affect the housing stock in the City of San Jose. Finally, the gas station expansion will not displace a substantial number of people.

MITIGATION MEASURES: None required.

N. PUBLIC SERVICES

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
13. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
a) Fire protection?			X		1,2
b) Police protection?			X		1,2
c) Schools?				X	1,2
d) Parks?				X	1,2
e) Other public facilities?			X		1,2

FINDINGS:

The project site is located in an urbanized area of San Jose, and is well served by existing fire, police, school, park, and other public facilities. The site is served by four fire stations within five minutes response time. No additional fire or police personnel or equipment are necessary to serve the proposed project.

MITIGATION MEASURES: None required.

O. RECREATION

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
14. RECREATION. Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X	1
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?				X	1

FINDINGS:

The proposed project will not increase the number of residents on the site, and therefore is not expected to impact the use of existing parks or recreation centers such that deterioration would occur or be accelerated.

MITIGATION MEASURES: None required.

P. TRANSPORTATION

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
16. TRANSPORTATION/TRAFFIC. Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	X				26
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	X				26
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X	1

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Source(s)
d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?			X		1,26
e) Result in inadequate emergency access?			X		1,26
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?			X		26

FINDINGS:

A traffic impact analysis was prepared for the project by Hexagon Transportation Consultants (August 2011) for the purpose of identifying any traffic impacts related to the proposed gas station expansion. The study evaluated the potential traffic impacts of the project at the signalized intersection of McKee Road and N. 33rd Street during the weekday peak periods of traffic. Please refer to the attached EIR for a discussion of transportation and traffic.

Q. UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
16. UTILITIES AND SERVICE SYSTEMS. Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?			X		1,15
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		1,2,21
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X		1,17
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X		1,22
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X		1,21
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X		1,21
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X		1,21

FINDINGS:

The proposed project would not require construction of new facilities for wastewater treatment, storm drainage, water, or waste disposal because the subject site is located within the City of San Jose Urban Service Area where such facilities exist, and have the capacity to serve the proposed project.

MITIGATION MEASURES: None required.

R. MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact	Checklist Source(s)
17. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:					
a) 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?			X		1
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.	X				1
c) Have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	X				1

FINDINGS:

As discussed in the previous sections, the proposed project would not have a significant effect on the environment for all evaluated areas with the potential exception of transportation/traffic. A traffic impact analysis has been prepared to address the project-specific traffic effects of the proposed gas station expansion, as summarized in the attached EIR.

Chapter 3. References

LEAD AGENCY

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APPENDIX B
TRAFFIC IMPACT ANALYSIS



HEXAGON TRANSPORTATION CONSULTANTS, INC.



Moe's Stop Gas Station Expansion

Draft Transportation Impact Analysis



Prepared for:

Denise Duffy & Associates, Inc.

August 15, 2011



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Document Name: Moes Gas Station TIA_15Aug2011.docx

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Table of Contents

Executive Summary	iii
1. Introduction	1
2. Existing Conditions	7
3. Existing Plus Project Conditions	11
4. Background Conditions	16
5. Background Plus Project Conditions	19
6. Other Transportation Issues	22
7. Cumulative Conditions	25
8. Conclusions	28

Appendices

- Appendix A: New Traffic Counts
- Appendix B: City of San Jose Approved Trips Inventory
- Appendix C: Intersection Level of Service Calculations

List of Tables

Table ES- 1	Intersection Level of Service Summary	v
Table 1	Intersection Level of Service Definitions Based on Average Delay	5
Table 2	Freeway Segment Capacity Evaluation	6
Table 3	Existing Intersection Levels of Service.....	10
Table 4	Project Trip Generation Estimates	12
Table 5	Existing Plus Project Intersection Levels of Service	13
Table 6	Background Intersection Levels of Service	16
Table 7	Intersection Levels of Service Under Background Plus Project Conditions.....	20
Table 8	Intersection Levels of Service Under Cumulative Conditions	27

List of Figures

Figure 1	Site Location	2
Figure 2	Project Site Plan	3
Figure 3	Existing Lane Configurations	8
Figure 4	Existing Traffic Volumes	9
Figure 5	Project Trip Distribution Pattern and Trip Assignment.....	14
Figure 6	Existing Plus Project Traffic Volumes	15
Figure 7	Background Traffic Volumes.....	17
Figure 8	Background Plus Project Traffic Volumes	21
Figure 9	Primary Vehicular On-Site Circulation Pattern.....	24
Figure 10	Cumulative Traffic Volumes	26

Executive Summary

This report presents the results of the traffic impact analysis conducted for the proposed expansion of a gas station named Moe's Stop located on McKee Road in San Jose, California. The gas station currently has 6 fueling positions and is located on the southeast corner of McKee Road and N 33rd Street. The project proposes to add 6 fueling positions for a total of 12 fueling positions. Access to the project site will continue to be provided via McKee Road and N 33rd Street. Access on McKee Road is provided via two driveways. The driveway on McKee Road nearest the intersection of McKee Road and N 33rd Street will be converted to an exit-only driveway restricted to right-turns. The second driveway on McKee Road further east of the intersection will be restricted to right turns in and out only. The existing full access driveway on N 33rd Street will be moved south so that it is about 150 feet from McKee Road.

Project Trip Generation

The project includes adding 6 fueling positions for a total of 12 fueling positions in order to better serve the existing customer demand and to attract more customers. The existing customer demand is not being met due to longer than normal wait times for the pumps, which often are full during the peak commute periods of the day. As a result, some of Moe's Stop's existing customers, as well as potential new customers, are opting to fill up at other nearby gas stations that have more capacity and similar pricing, such as the larger adjacent Gas & Shop gas station. By adding more pumps, Moe's will be able to handle a greater demand to better serve their customers and attract some new customers.

The trip rate per fueling position typically goes down for gas stations as more and more fueling positions are added. This is because of a finite customer base and the logistics of using all pumps simultaneously. Thus, assuming that traffic would double at Moe's Stop as a result of doubling the number of fueling positions would significantly overestimate the number of new trips that would be generated by the project. In order to develop a more accurate estimate of the number of trips that would be generated by 6 additional fueling stations, project-generated traffic was estimated based on observations of an existing gas station that is representative of the future size of Moe's Stop following the expansion. The Gas & Shop gas station, located on the southwest corner of McKee Road and N 33rd Street, has 12 fueling positions and gas prices that are comparable to Moe's Stop. In fact, the gas prices for the two adjacent stations typically do not vary by more than +/- one cent per gallon on a daily basis. Access to the Gas & Shop gas station is provided via one driveway on McKee Road and one driveway on N 33rd Street. Both driveways were counted by Hexagon on Tuesday, May 24th 2011.

The project is expected to generate 72 gross trips in the AM peak hour with 37 trips inbound and 35 trips outbound, and 76 gross PM peak hour trips with 42 trips inbound and 34 trips outbound at the project driveways. Not all of these trips are expected to be new trips generated by the project. Many of these trips would be pass-by trips, which are vehicle trips that would already be on the adjacent roadways but would turn into the site while passing by. Trip generation for gas stations typically are adjusted to account for pass-by-trips. Justification for applying a pass-by-trip reduction is founded on the observation that such traffic is not actually generated by gas stations, but is already part of the ambient traffic levels. Pass-by

trips typically make up more than half of all trips to and from gas stations. In fact, some sources claim that trips to and from gas stations are almost 100% pass-by trips. Data contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* show average pass-by trip reductions of 62% in the AM peak hour and 56% in the PM peak hour. In order to take a conservative approach, a pass-by trip reduction rate of 50% was assumed for both the AM and PM peak hours. Thus, after accounting for pass-by trips, the proposed project is expected to generate a total of 36 net new trips in the AM peak hour with 18 new inbound trips and 17 new outbound trips, and 38 net new trips in the PM peak hour with 21 new inbound trips and 17 new outbound trips on the adjacent streets.

Existing Plus Project Intersection Levels of Service Analysis

The results of the existing plus project intersection level of service analysis show that the study intersection of McKee Road and N 33rd Street would operate at an acceptable LOS C under existing plus project conditions during the AM and PM peak hours.

Background Plus Project Intersection Level of Service Analysis

The results of the background plus project intersection level of service analysis show that the study intersection of McKee Road and N 33rd Street would operate at an acceptable LOS C under background plus project conditions during the AM and PM peak hours. The project would not create a significant adverse traffic impact at the study intersection under background plus project conditions.

Cumulative Intersection Level of Service Analysis

The results of the cumulative conditions intersection level of service analysis show that the study intersection of McKee Road and N 33rd Street would operate at an acceptable LOS C under cumulative conditions during the AM and PM peak hours. The project would not create or contribute to a significant adverse traffic impact at the study intersection under cumulative conditions.

Table ES-1 summarizes the results of the intersection level of service analysis.

Table ES- 1
Intersection Level of Service Summary

Intersection	Peak Hour	Existing		Existing + Project		Background		Background + Project			Cumulative				
		Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C	Avg Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
McKee Road and N 33rd Street	AM	28.7	C	29.9	C	26.1	C	27.5	C	1.5	0.018	27.5	C	1.8	0.022
	PM	24.9	C	26.9	C	22.7	C	24.9	C	2.2	0.025	25.0	C	2.4	0.037

1. Introduction

This report presents the results of the traffic impact analysis conducted for the proposed expansion of a gas station named Moe's Stop located on McKee Road in San Jose, California. The gas station currently has 6 fueling positions and is located on the southeast corner of McKee Road and N 33rd Street. The project proposes to add 6 fueling positions for a total of 12 fueling positions. Access to the project site will continue to be provided via McKee Road and N 33rd Street. Access on McKee Road is provided via two driveways. The driveway on McKee Road nearest the intersection of McKee Road and N 33rd Street will be converted to an exit-only driveway restricted to right-turns. The second driveway on McKee Road further east of the intersection will be restricted to right-turns in and out. The existing full access driveway on N 33rd Street will be moved south so that it is about 150 feet from McKee Road. The project site location and surrounding study area are shown on Figure 1. The project's site plan is shown on Figure 2.

Scope of Study

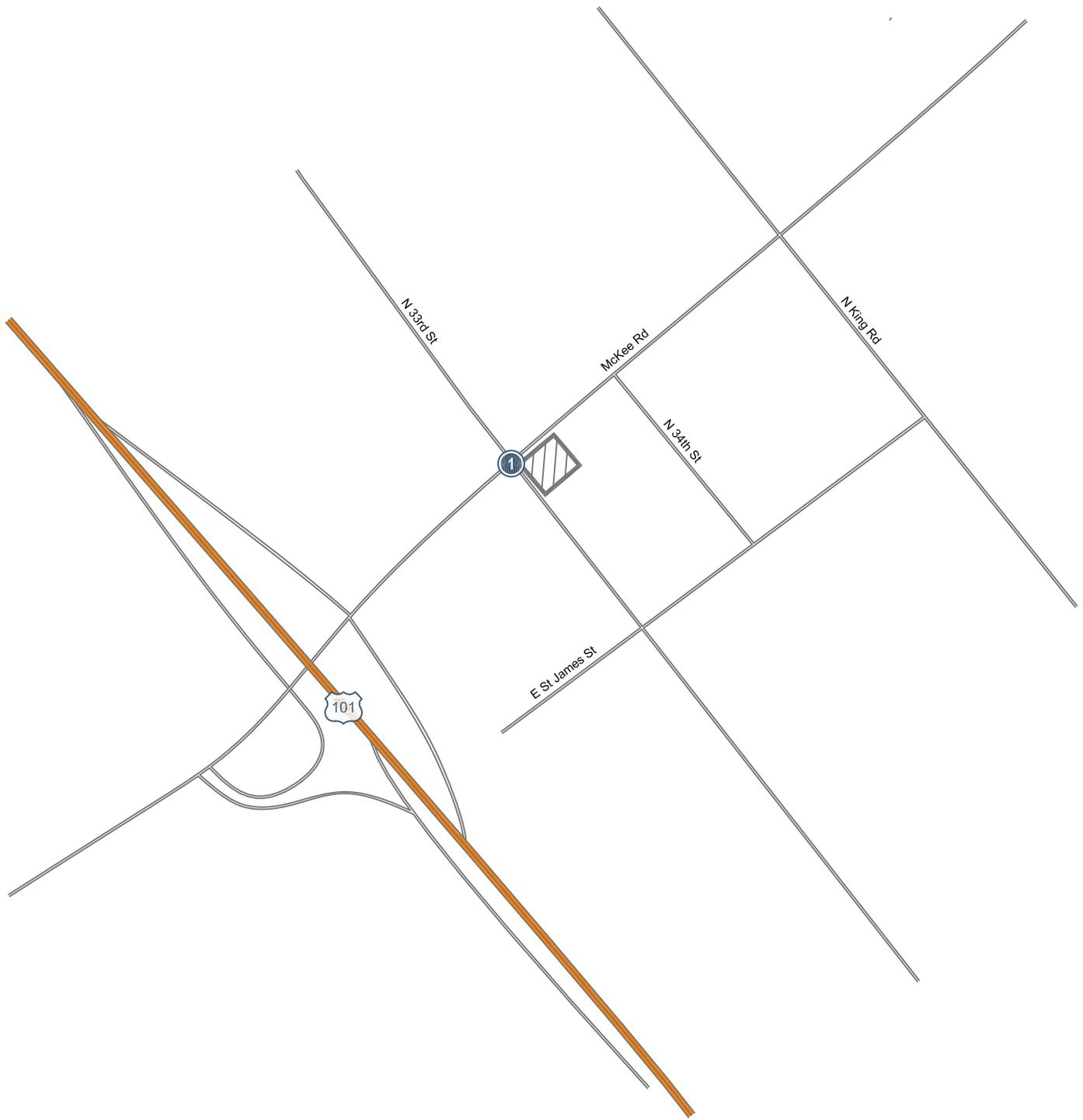
This study was conducted for the purpose of identifying potential traffic impacts related to the proposed gas station expansion project. The study determined the traffic impacts of the project on the signalized intersection of McKee Road and N 33rd Street during the weekday AM and PM peak periods of traffic. The impacts of the project were evaluated following the standards and methodologies set forth by the City of San Jose.

Since the project would not generate more than 100 peak hour vehicle trips, an analysis according to the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP) guidelines was not prepared. Because the gas station would serve predominantly the local community, the number of project trips that would be added to the freeways in the area is expected to be relatively insignificant. Typically, a short-term impact analysis of freeway segment levels of service should be conducted if a project is estimated to add trips to a freeway segment equal to or greater than one percent of the capacity of that segment. Since the number of project trips added to the freeways in the area is estimated to be well below the one percent threshold, a detailed CMP freeway analysis was not necessary. A simple evaluation to substantiate this determination is included in Table 2 in this chapter.

Traffic conditions at the study intersection of McKee Road and N 33rd Street were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour of adjacent street traffic is generally between 7:00 and 9:00 AM and the PM peak hour of adjacent street traffic is typically between 4:00 and 6:00 PM.

Traffic conditions were evaluated for the following scenarios:

- Scenario 1:** *Existing Conditions.* Existing AM and PM peak hour traffic volumes were obtained from new 2011 manual turning-movement counts conducted in the month of May at the intersection of McKee Road and N 33rd Street.



LEGEND

-  = Site Location
-  = Study Intersection

Figure 1
Site Location and Study Intersections

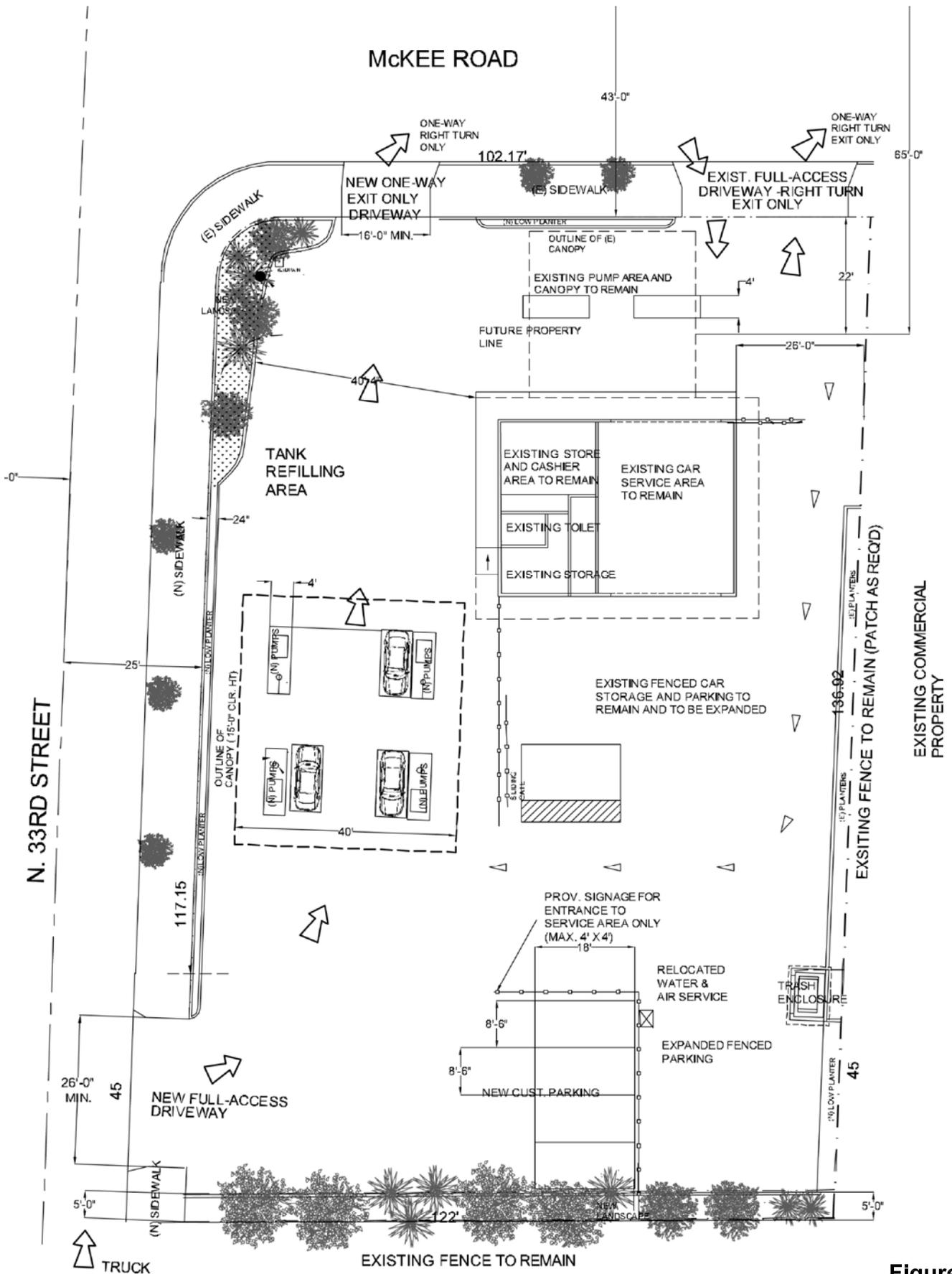


Figure 2
Project Site Plan

- Scenario 2:** *Existing Plus Project Conditions.* Existing plus project peak hour traffic volumes were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 3:** *Background Conditions.* Background traffic volumes were estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI).
- Scenario 4:** *Background Plus Project Conditions.* Projected peak hour traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts according to the City of San Jose Level of Service (LOS) Policy. The City of San Jose LOS Policy is the adopted established threshold for California Environmental Quality Act (CEQA).
- Scenario 5:** *Cumulative Conditions.* Cumulative traffic conditions were represented by project conditions plus traffic generated by pending developments on the future roadway network. This traffic scenario was evaluated in order to fulfill the CEQA requirements.

Methodology

This section describes the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for the analysis were obtained from new traffic counts, the City of San Jose, and field observations. The following data were collected from these sources:

- existing traffic volumes
- approved project trips
- intersection lane configurations
- signal timing and phasing

Analysis Methodologies and Level of Service Standards

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

City of San Jose Intersections

The City of San Jose level of service methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, the City of San Jose methodology employs the CMP default values for the analysis parameters. The City of San Jose level of service standard for signalized intersections is LOS D or better. The correlation between average control delay and level of service is shown in Table 1.

Table 1
Intersection Level of Service Definitions Based on Average Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.

Freeway Segments

According to CMP guidelines, an analysis of freeway segment levels of service is only required if a project is estimated to add trips to a freeway segment equal to or greater than one percent of the capacity of that segment. The nearest freeway in the vicinity of the project is US 101, which is less than 1,000 feet from the project. In the vicinity of the project, US 101 is eight lanes wide with one High Occupancy Vehicle (HOV) lane and three mixed-flow lanes in each direction of travel. In order to provide a conservative analysis, all of the project-generated trips that were estimated to travel to/from US 101 were added to the mixed-flow lanes. Since the proposed gas station expansion would serve predominantly the local community, the number of project trips added to the freeways in the area is estimated to be well below the one percent threshold (see Table 2 below). Thus, a detailed analysis of freeway segment levels of service was not performed.

Table 2
Freeway Segment Capacity Evaluation

Freeway	Segment	Direction	# of Mixed Flow Lanes	Capacity ¹ (vphpl)	1% of Capacity	Peak Hour	Project Trips
US 101	E Santa Clara St to McKee Rd	NB	3	6900	69	AM	6
						PM	6
US 101	McKee Rd to Berryessa Rd	NB	3	6900	69	AM	5
						PM	5
US 101	E Santa Clara St to McKee Rd	SB	3	6900	69	AM	5
						PM	5
US 101	McKee Rd to Berryessa Rd	SB	3	6900	69	AM	6
						PM	6

Notes:
¹ Capacity was based on the ideal capacity cited in the *2000 Highway Capacity Manual*.

Report Organization

The remainder of this report is divided into seven chapters. Chapter 2 describes existing conditions including the existing roadway network. Chapter 3 presents the intersection operations under existing plus project conditions and describes the method used to estimate project traffic. Chapter 4 presents the intersection operations under background conditions. Chapter 5 presents the intersection operations under background plus project conditions. Chapter 6 describes non-level of service operational issues associated with the proposed project's site plan. Chapter 7 presents the intersection operations under cumulative traffic conditions. Chapter 8 presents the conclusions of the traffic impact analysis.

2. Existing Conditions

This chapter describes the existing roadway network in the vicinity of the site and the existing levels of service of the study intersection. Existing pedestrian, bicycle and transit services are not discussed in this traffic report because of the nature of a gas station. The proposed gas station expansion project would have no impact on existing transit services or pedestrian/bicycle facilities, since all of the trips generated by the project would be vehicular trips.

Existing Roadway Network

Regional access to the project site is provided by US 101. Local access to the project site is provided via McKee Road and N 33rd Street. These facilities are described below.

US 101 is a north-south freeway that extends through and beyond the Bay Area, connecting San Francisco to San Jose. US 101 is eight lanes wide (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the project site. US 101 provides site access via a full interchange at McKee Road.

McKee Road is an east-west roadway that extends from Julian Street, west of US 101 in San Jose to Alum Rock Avenue in East Foothills in San Jose. McKee Road consists of four travel lanes with two travel lanes in each direction of travel. Access to the gas station is provided via two driveways on McKee Road. Existing signs at both driveways are intended to restrict outbound movements to right-turns only for vehicles exiting onto McKee Road. However, some left turns out of the easternmost driveway do occur.

N 33rd Street is a north-south two-lane roadway extending from Melody Lane to the north to E San Antonio Street to the south. Access to the gas station is provided via one full access driveways on N 33rd Street.

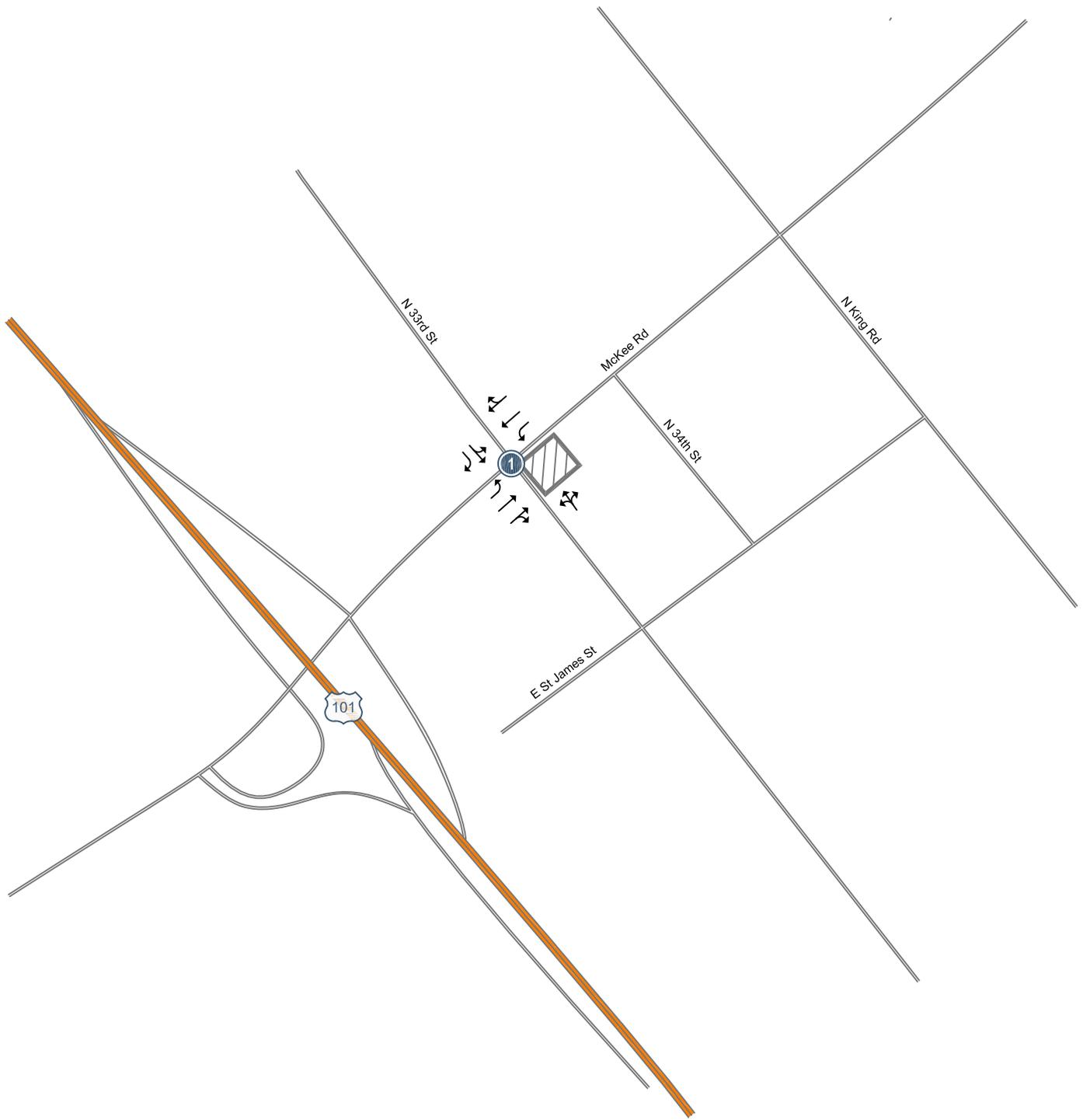
Existing Intersection Lane Configurations

The existing lane configuration at the study intersection was confirmed by observations in the field and is shown on Figure 3.

Existing Traffic Volumes

Existing AM and PM peak hour traffic volumes were obtained from new 2011 manual turning-movement counts. The existing peak hour intersection volumes are shown on Figure 4. Also shown on Figure 4 are the inbound and outbound vehicular volumes at the existing gas station driveways based on traffic counts conducted by Traffic Data Services in November 2009.

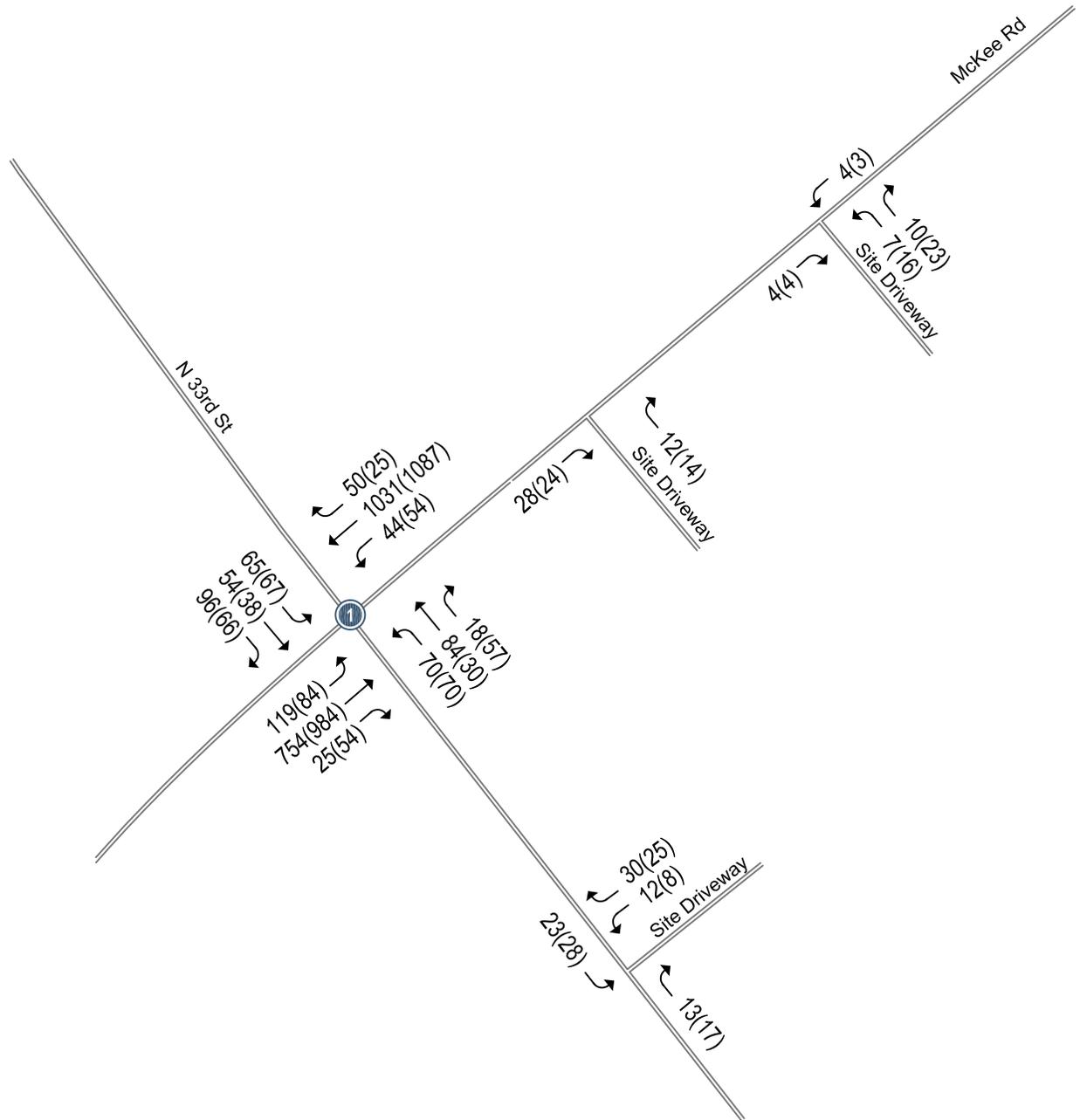
New intersection count data are contained in Appendix A.



LEGEND

-  = Site Location
-  = Study Intersection

Figure 3
Existing Lane Configurations



LEGEND



= Site Location



= Study Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 4
Existing Traffic Volumes



Existing Intersection Levels of Service

Existing intersection levels of service were evaluated against City of San Jose standards. The results of the level of service analysis show that, measured against the City of San Jose level of service policy, the study intersection currently operates at an acceptable LOS C during both the AM and PM peak hours of traffic (see Table 3).

The level of service calculation sheets are included in Appendix C.

Table 3
Existing Intersection Levels of Service

Intersection	Peak Hour	Count Date	Avg Delay	LOS
McKee Road and N 33rd Street	AM	05/25/11	28.7	C
	PM	05/25/11	24.9	C

Observed Existing Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect actual existing traffic conditions.

No significant operational problems were observed at the study intersection during either the AM or PM peak hours. During the PM peak hour, some short vehicle queues occasionally developed on eastbound McKee Road at the Stop & Save gas station driveway, approximately 100 feet west of the McKee Road and N 33rd Street intersection. However, this did not create any operational problems.

3.

Existing Plus Project Conditions

This chapter describes existing plus project traffic conditions, including the method by which project traffic is estimated. Existing plus project traffic conditions would occur if the project was constructed and occupied prior to the other approved projects in the area. Existing plus project conditions does not include any planned and funded roadway improvements that have not yet been constructed.

Transportation Network Under Existing Plus Project Conditions

It is assumed in this analysis that the transportation network under existing plus project conditions would be the same as the existing transportation network, with the following exceptions:

McKee Road Access – Access to the existing gas station is provided via two driveways on McKee Road. Both the driveways on McKee Road are restricted to right-turn only movements for vehicles exiting the site. With the expansion of the gas station, the driveway closest to the signalized intersection of McKee Road and N 33rd Street will be converted to an exit only driveway restricted to right turns onto eastbound McKee Road. The second driveway on McKee Road will be restricted to right turns in and out only.

N 33rd Street Access – Currently, access to the existing gas station is provided via one full access driveway on N 33rd Street. With the expansion of the gas station, the full access driveway on N 33rd Street will be relocated to the southern portion of the project site, as far from the signalized intersection of McKee Road and N 33rd Street as possible.

With expansion of the gas station, the project proposes to make the necessary sidewalk and landscape improvements along its project frontages on McKee Road and N 33rd Street.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets. These procedures are described further in the following sections.

Trip Generation

Table 4 shows that the existing Moe's gas station with 6 fueling positions was observed to generate a total of 143 trips in the AM peak hour and 162 trips during the PM peak hour. The observed inbound and outbound trips for the Moe's gas station are based on traffic counts conducted by Traffic Data Services in November 2009.

The project includes adding 6 fueling positions for a total of 12 fueling positions in order to better serve the existing customer demand and to attract more customers. The existing customer demand is not being met due to longer than normal wait times for the pumps, which often are full during the peak commute periods of the day. As a result, some of Moe's Stop's existing customers, as well as potential new customers, are opting to fill up at other nearby gas stations that have more capacity and similar pricing, such as the larger adjacent Gas & Shop gas station. By adding more pumps, Moe's will be able to handle a greater demand to better serve their customers and attract some new customers.

The trip rate per fueling position typically goes down for gas stations as more and more fueling positions are added. This is because of a finite customer base and the logistics of using all pumps simultaneously. Thus, assuming that traffic would double at Moe's Stop as a result of doubling the number of fueling positions would significantly overestimate the number of new trips that would be generated by the project. In order to develop a more accurate estimate of the number of trips that would be generated by 6 additional fueling stations, project-generated traffic was estimated based on observations of an existing gas station that is representative of the future size of Moe's Stop following the expansion. The Gas & Shop gas station, located on the southwest corner of McKee Road and N 33rd Street, has 12 fueling positions and gas prices that are comparable to Moe's Stop. In fact, the gas prices for the two adjacent stations typically do not vary by more than +/- one cent per gallon on a daily basis. Access to the Gas & Shop gas station is provided via one driveway on McKee Road and one driveway on N 33rd Street. Both driveways were counted by Hexagon on Tuesday, May 24th 2011.

The Gas & Shop gas station with 12 fueling positions was observed to generate a total of 215 AM peak hour trips with 109 trips inbound and 106 trips outbound, and 238 PM peak hour trips with 118 trips inbound and 120 trips outbound. The difference between the trips generated by the existing Moe's gas station with 6 fueling positions and the Gas & Shop gas station with 12 fueling positions equates to the trips that would be generated by the proposed project. Based on this assumption, the project is expected to generate 72 gross trips in the AM peak hour with 37 trips inbound and 35 trips outbound, and 76 gross PM peak hour trips with 42 trips inbound and 34 trips outbound at the project driveways.

Not all of these trips are expected to be new trips generated by the project. Many of these trips would be pass-by trips, which are vehicle trips that would already be on the adjacent roadways but would turn into the site while passing by. Trip generation for gas stations typically are adjusted to account for pass-by-trips. Justification for applying a pass-by-trip reduction is founded on the observation that such traffic is not actually generated by gas stations, but is already part of the ambient traffic levels. Pass-by trips typically make up more than half of all trips to and from gas stations. In fact, some sources claim that trips to and from gas stations are almost 100% pass-by trips. Data contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual* show average pass-by trip reductions of 62% in the AM peak hour and 56% in the PM peak hour. In order to take a conservative approach, a pass-by trip reduction rate of 50% was assumed for both the AM and PM peak hours. Thus, after accounting for pass-by trips, the proposed project is expected to generate a total of 36 net new trips in the AM peak hour with 18 new inbound trips and 17 new outbound trips, and 38 net new trips in the PM peak hour with 21 new inbound trips and 17 new outbound trips on the adjacent streets.

Trip Distribution Pattern and Trip Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The project trip distribution pattern assumes that the proposed neighborhood gas station would continue to serve predominantly the local community.

The peak hour trips generated by the project were assigned to the roadway system and project driveways in accordance with the trip distribution pattern and proposed site access and circulation.

The project trip distribution pattern and trip assignment are shown graphically on Figure 5.

Table 4
Project Trip Generation Estimates

Land Use	Size ²	AM Peak Hour ¹			PM Peak Hour ¹				
		Rate ³	In	Out	Total	Rate ³	In	Out	Total
Moe's Gas Stop Observed	6 fueling positions	23.83	72	71	143	27.00	76	86	162
Gas & Shop Observed	12 fueling positions	17.92	109	106	215	19.83	118	120	238
Difference (project trips):			37	35	72	42	34	76	
pass-by trip reduction (50%):			-19	-18	-36	-21	-17	-38	
Net Project Trips:			18	17	36	21	17	38	

Notes:

¹ The AM peak hour of traffic is generally between 7-9 AM, and the PM peak hour is typically between 4-6 PM.

It is during these commute periods on an average weekday that the most congested traffic conditions occur.

² Fuel pumps typically have one fueling position on each side, capable of serving two vehicles simultaneously.

³ Trip generation rates were developed based on counts conducted at the adjacent Gas & Shop gas station on May 24, 2011. The Gas & Shop station, located on the southwest corner of McKee Rd and N 33rd St, has 12 fueling positions, which represents the future size of Moe's Stop following the planned expansion.

Existing Plus Project Traffic Volumes

The project trips were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes at the study intersections are shown graphically on Figure 6.

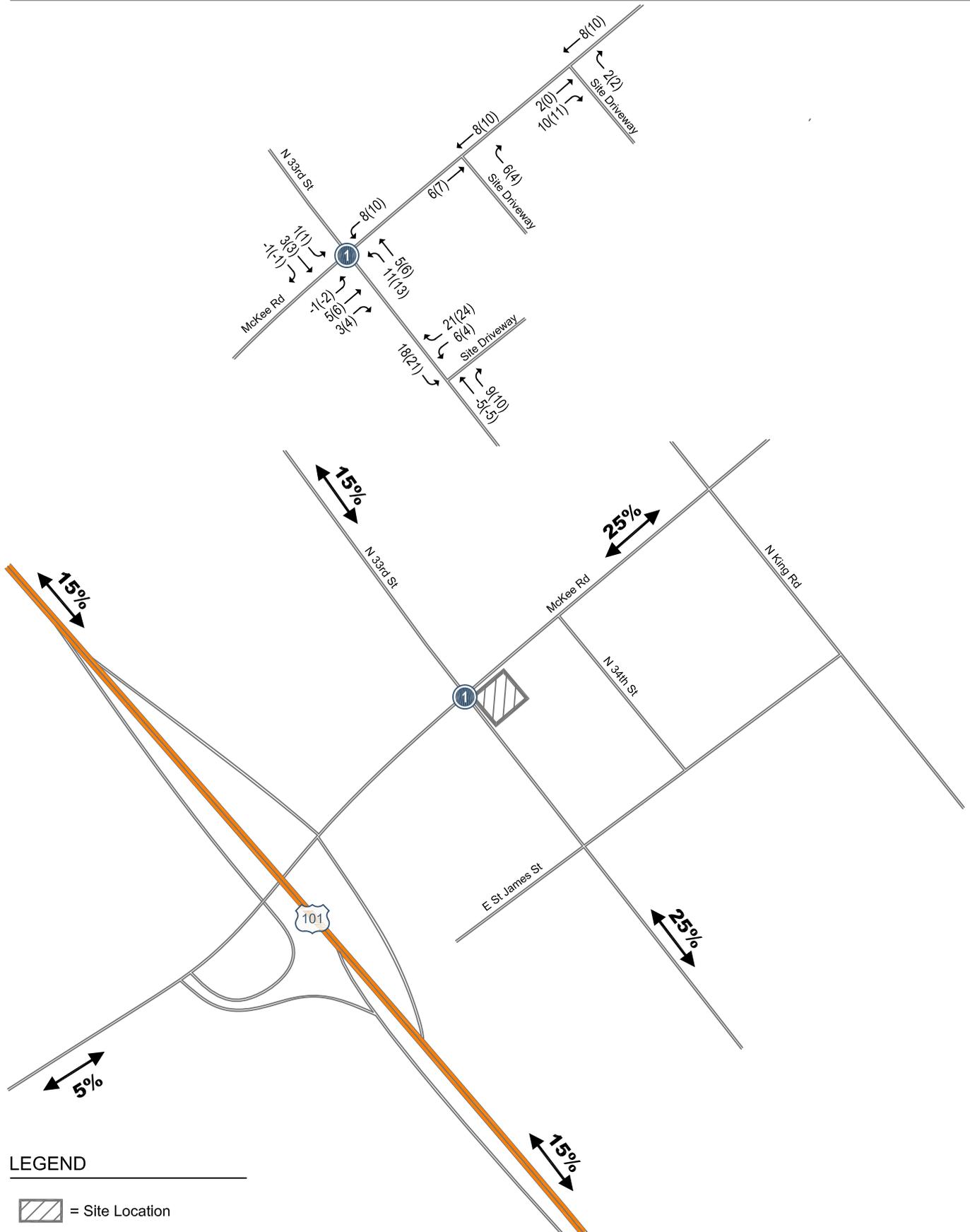
Intersection LOS Under Existing Plus Project Conditions

The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 5. The results show that the study intersection would operate at an acceptable LOS C under existing plus project conditions during both the AM and PM peak hours of traffic.

The level of service calculation sheets are included in Appendix C.

Table 5
Existing Plus Project Intersection Levels of Service

Intersection	Peak Hour	Existing		Existing + Project	
		Avg Delay	LOS	Avg Delay	LOS
McKee Road and N 33rd Street	AM	28.7	C	29.9	C
	PM	24.9	C	26.9	C



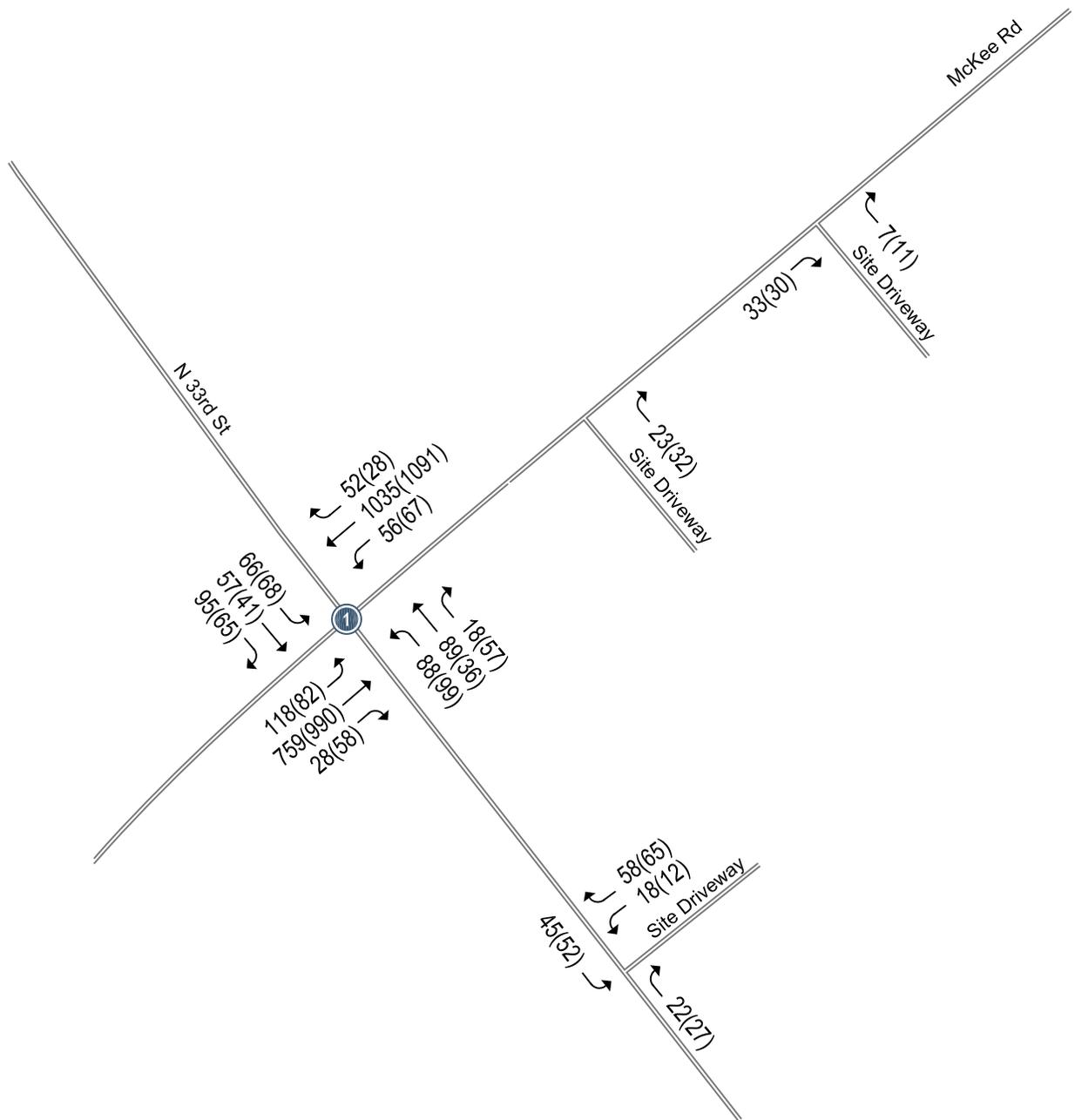
LEGEND

= Site Location

= Study Intersection

XX(X) = AM(PM) Peak Hour Trips (incl. pass-by trips)

Figure 5
Project Trip Distribution and Assignment



LEGEND



= Site Location



= Study Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 6
Existing Plus Project Traffic Volumes

4. Background Conditions

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. It describes the planned transportation system, the procedure used to determine background traffic volumes, and the resulting traffic conditions. This scenario predicts a realistic traffic condition that would occur as approved development gets built and occupied.

Background Transportation Network

It was assumed in this analysis that the transportation network under background conditions would be the same as the existing transportation network.

Background Traffic Volumes

Background peak hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments in the City of San Jose was obtained from the City's Approved Trips Inventory (ATI). There are a total of eight approved developments that contribute trips through the study intersection. Background traffic volumes are shown on Figure 7. The ATI is contained in Appendix B.

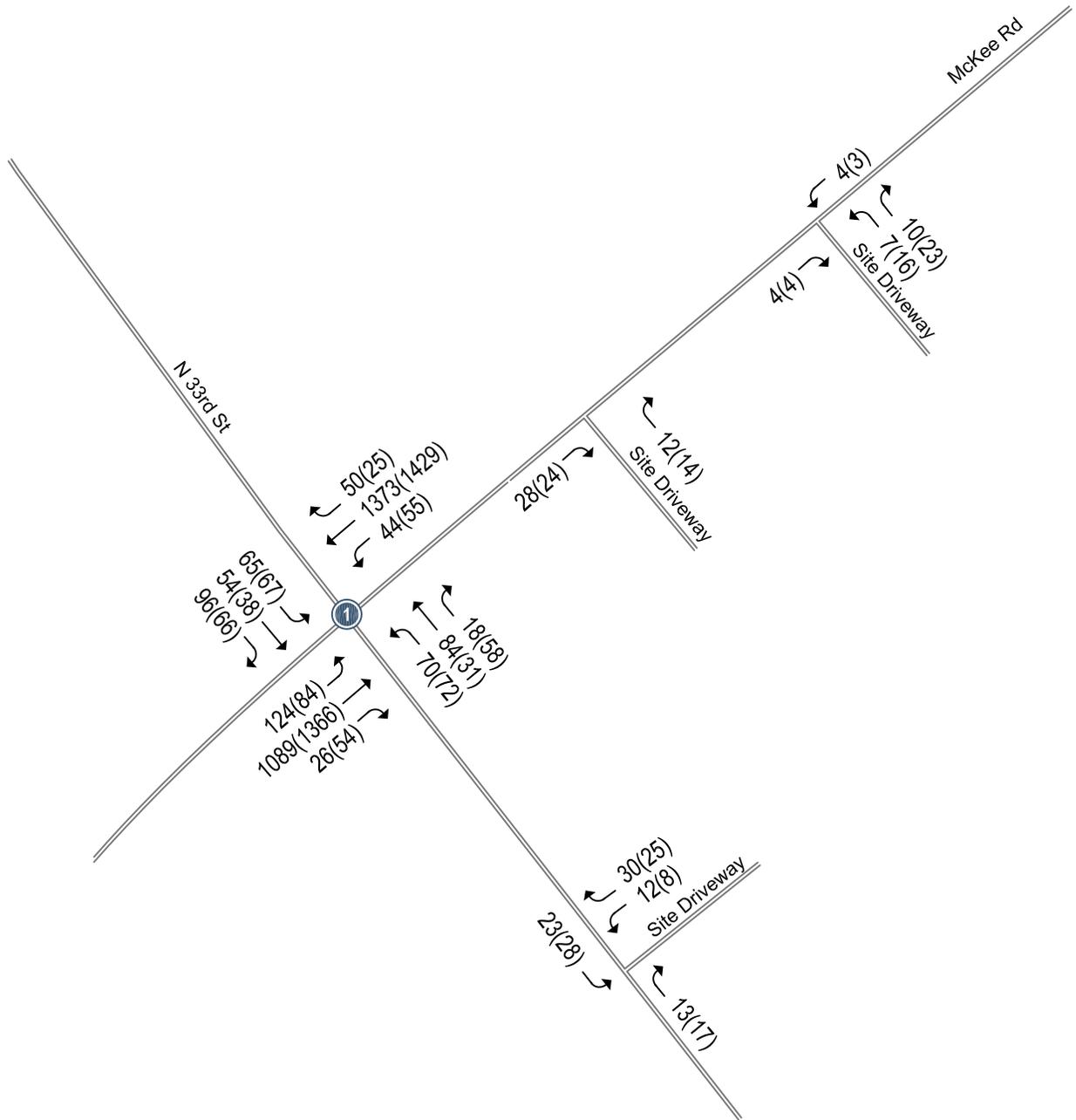
Intersection Levels of Service Under Background Conditions

Intersection levels of service were evaluated against City of San Jose standards. The results of the intersection level of service analysis under background conditions are summarized in Table 6.

Table 6
Background Intersection Levels of Service

Intersection	Peak Hour	Existing		Background	
		Avg Delay	LOS	Avg Delay	LOS
McKee Road and N 33rd Street	AM	28.7	C	26.1	C
	PM	24.9	C	22.7	C

The results of the level of service analysis show that, measured against City of San Jose standards, the study intersection would operate at an acceptable LOS C under background conditions during both the AM and PM peak hours of traffic.



LEGEND



= Site Location



= Study Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 7
Background Traffic Volumes



The 2000 Highway Capacity Manual (HCM) intersection level of service calculations show that the average delay at the intersection of McKee Road and N 33rd Street would actually improve slightly during the AM and PM peak hours with the addition of approved project trips. The reason for this result is that the average vehicle delay calculated by the HCM methodology is a weighted average. The approved projects would primarily add trips to the through movements on McKee Road, which have very low vehicle delays but high corresponding traffic volumes, resulting in a slightly better average delay at the intersection overall.

The intersection level of service calculation sheets are included in Appendix C.

5. Background Plus Project Conditions

This chapter describes near-term traffic conditions that most likely would occur when the project is complete. It includes a description of the City of San Jose significance criteria used to establish what constitutes a project impact, a description of the transportation system under background plus project conditions, the method by which project traffic is estimated, and any impacts caused by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts. This traffic scenario represents a more congested traffic condition than the existing plus project scenario, since it includes traffic generated by approved projects in the area.

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine significant impacts on signalized intersections are based on City of San Jose Level of Service standards. The City of San Jose LOS Policy is the adopted established threshold for CEQA.

City of San Jose Definition of Significant Intersection Impacts

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San Jose if for either peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under background plus project conditions, or
2. The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San Jose standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

Transportation Network Under Background Plus Project Conditions

It is assumed in this analysis that the transportation network under background plus project conditions would be the same as the background transportation network, with the following exceptions:

McKee Road Access – Access to the existing gas station is provided via two driveways on McKee Road. Both the driveways on McKee Road are restricted to right-turn only movements for vehicles exiting the site. With the expansion of the gas station, the driveway closest to the signalized intersection of McKee Road and N 33rd Street will be converted to an exit only driveway restricted to right turns onto eastbound McKee Road. The second driveway on McKee Road will be restricted to right turns in and out only.

N 33rd Street Access – Currently, access to the existing gas station is provided via one full access driveway on N 33rd Street. With the expansion of the gas station, the full access driveway on N 33rd Street will be relocated to the southern portion of the project site, as far from the signalized intersection of McKee Road and N 33rd Street as possible.

With expansion of the gas station, the project proposes to make the necessary sidewalk and landscape improvements along its project frontages on McKee Road and N 33rd Street.

Project Trip Estimates

Based on the project trip generation estimates presented in Chapter 3, the proposed expansion of the Moe's gas station is expected to generate an additional 72 AM peak hour trips (37 trips inbound and 35 trips outbound) and 76 PM peak hour trips (42 trips inbound and 34 trips outbound) at the project driveways. After accounting for pass-by trips, the proposed project is expected to generate a total of 36 net new trips in the AM peak hour with 18 trips inbound and 17 trips outbound, and 38 net new trips in the PM peak hour with 21 trips inbound and 17 trips outbound on the adjacent streets.

Background Plus Project Traffic Volumes

The project-generated trips were assigned to the roadway system in accordance with the trip distribution pattern discussed in Chapter 3. The project trips were added to background traffic volumes to obtain background plus project traffic volumes. The background plus project traffic volumes at the study intersections are shown graphically on Figure 8.

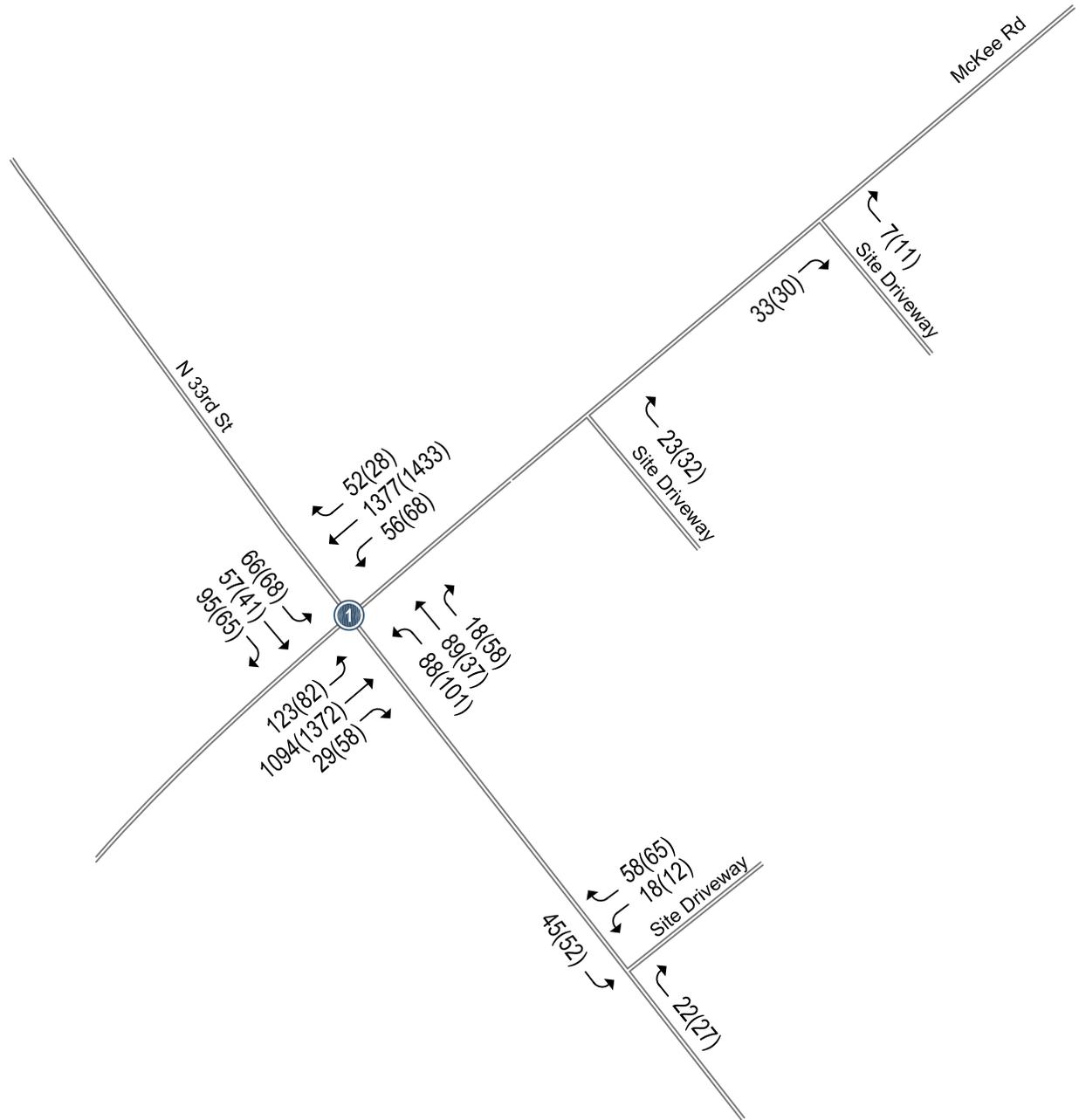
Intersection LOS Under Background Plus Project Conditions

The results of the intersection level of service analysis under background plus project conditions are summarized in Table 7. The results of the level of service analysis show that, measured against City of San Jose standards, the study intersection would operate at an acceptable LOS C under background plus project conditions during both the AM and PM peak hours of traffic. Thus, the proposed project would not result in a significant adverse traffic impact at the study intersection of McKee Road and N 33rd Street.

The intersection level of service calculation sheets are included in Appendix C.

Table 7
Intersection Levels of Service Under Background Plus Project Conditions

Intersection	Peak Hour	Existing		Background		Background + Project			
		Avg Delay	LOS	Avg Delay	LOS	Avg Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
McKee Road and N 33rd Street	AM	28.7	C	26.1	C	27.5	C	1.5	0.018
	PM	24.9	C	22.7	C	24.9	C	2.2	0.025



LEGEND



= Site Location



= Study Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 8
Background Plus Project Traffic Volumes

6. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project, including site access and traffic operations at project driveways under background plus project conditions. Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Site Access and On-Site Circulation

This section describes the site access and circulation of the proposed project. The review is based on a November 2010 project site plan prepared by Zamora and Associates (see Figure 2).

Site Access

Access to the existing Moe's gas station is provided via two driveways on McKee Road and one driveway on N 33rd Street. Existing signs at both driveways on McKee Road are intended to restrict outbound movements to right-turns only for vehicles exiting the site. However, some left turns out of the easternmost driveway do occur. With the expansion of the gas station, the driveway nearest the signalized intersection of McKee Road and N 33rd Street will be converted to an exit only driveway restricted to right turns onto eastbound McKee Road. As proposed, the second (easternmost) driveway on McKee Road will be restricted to right turns in and out only. Based on the site plan it appears that drivers would have the option to drive through the site, exit the N 33rd Street driveway, and turn left from N 33rd Street onto westbound McKee Road.

With the expansion of the gas station, only one full access driveway is proposed on N 33rd Street, adjacent to the southern boundary of the project site. This driveway would be located as far as possible from the signalized intersection of McKee Road and N 33rd Street. No operational problems are expected to occur at this driveway.

The project proposes to make the necessary sidewalk and landscape improvements along its project frontages on McKee Road and N 33rd Street.

On-Site Vehicle Queuing

Based on the proposed site plan, the project would more than double the amount of on-site vehicle storage. With the proposed expansion, it is estimated that the project site would be able to accommodate at least 10 vehicles total waiting in queue to fill up with gas (not including those parked at the pumps). The project also would provide 5 parking spaces (including one handicapped space) for customers who want to shop at the convenience store, so those vehicles would not take up valuable queuing space.

Since the project would dramatically increase the amount of on-site vehicle storage, it is unlikely that there would be any significant queuing issues that could result in a backup onto either McKee Road or N 33rd Street.

On-Site Circulation

The project would significantly improve on-site circulation of Moe's Stop. As previously described, site improvements include converting the McKee Road driveway nearest the signalized intersection of McKee Road and N 33rd Street to an exit only driveway restricted to right turns, as well as positioning the full access driveway on N 33rd Street as far as possible from the signalized intersection of McKee Road and N 33rd Street. According to the site plan, adequate circulation would be provided on site for customers and tanker trucks to turn in and out of the gas station. Figure 9 shows the primary vehicular on-site circulation pattern.

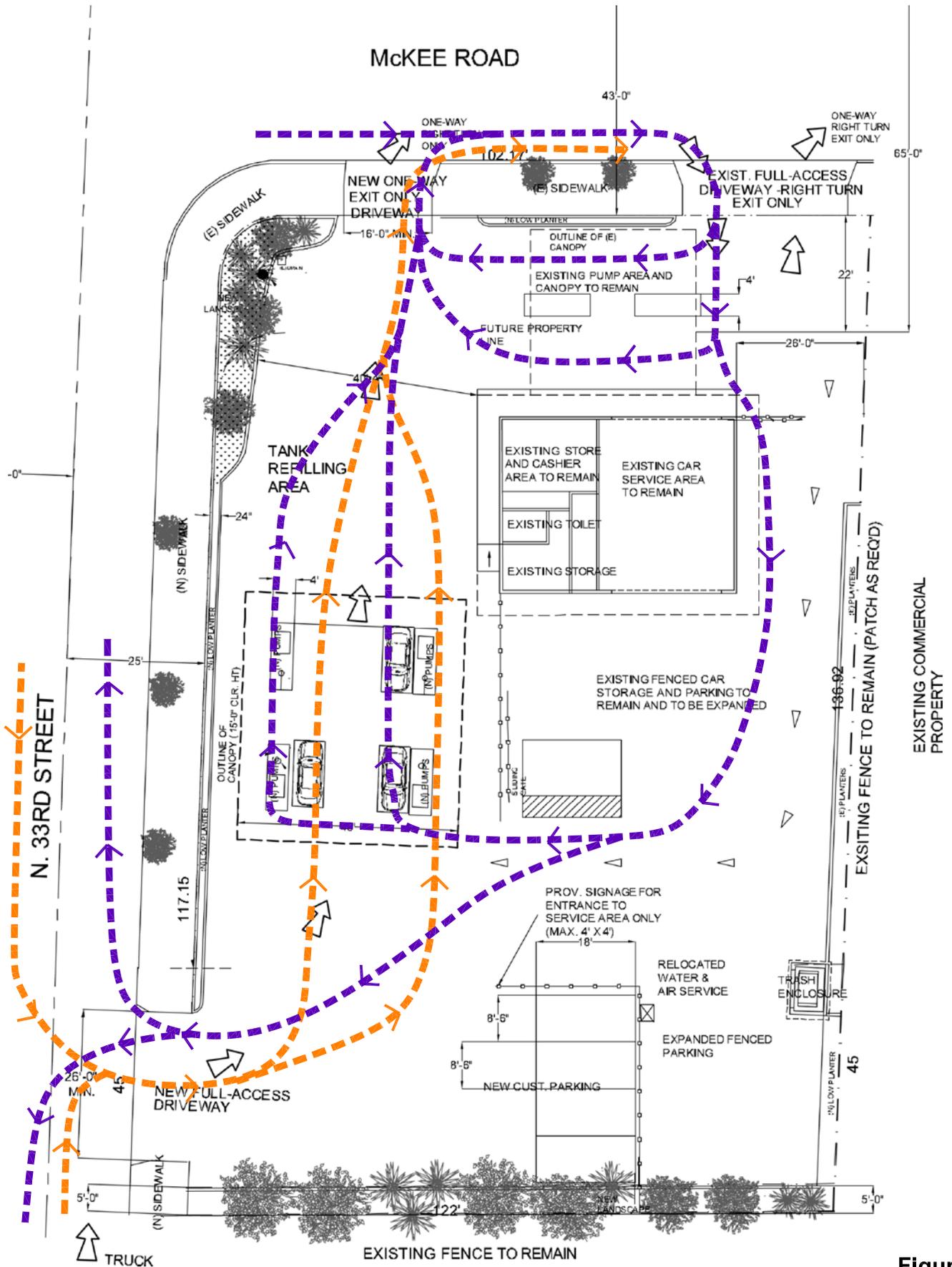


Figure 9
Primary Vehicular On-Site Circulation Pattern

7. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions. Cumulative conditions were represented by adding to background plus project traffic volumes the additional traffic generated by all other potential projects in the general study area that have been proposed but have not yet been approved. This traffic scenario is evaluated in order to fulfill California Environmental Quality Act (CEQA) requirements.

Cumulative Transportation Network

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as described under background plus project conditions.

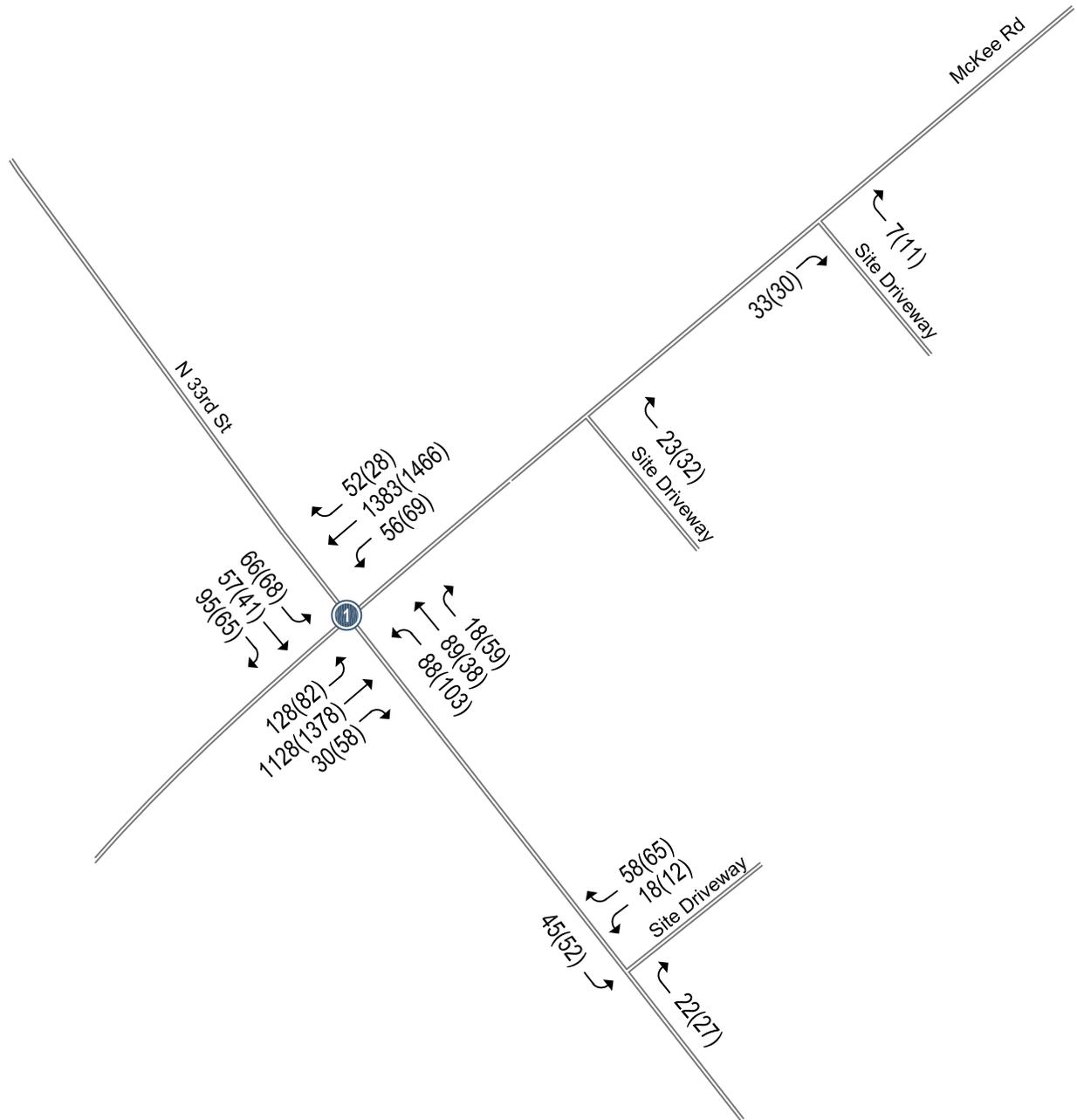
List of Cumulative Projects

For the purpose of this traffic impact analysis, peak hour traffic volumes attributable to the following pending projects were included under the cumulative conditions scenario:

Vision North San Jose (Phase 2) – The Vision North San Jose project represents an update to the North San Jose Area Development Policy. The Policy allows for increases in industrial square footage and provide high-density housing and retail amenities for North San Jose area workers. The Policy also identifies necessary transportation improvements to support new development and creates a traffic impact fee program for new development to share the cost of those improvements. The Policy area boundaries generally include the area within San Jose north and west of I-880 or the Coyote Creek, east of the Guadalupe River and south of SR 237, as well as an area east of I-880 along Murphy Avenue as far as Lundy Avenue.

Cumulative Traffic Volumes

The peak hour cumulative traffic volumes are shown graphically on Figure 10.



LEGEND



= Site Location



= Study Intersection

XX(XX) = AM(PM) Peak Hour Volumes

Figure 10
Cumulative Traffic Volumes

Cumulative Intersection Level of Service Analysis

The intersection level of service results under cumulative conditions are summarized in Table 8. The results of the level of service analysis show that, measured against City of San Jose standards, the study intersection would operate at an acceptable LOS C under cumulative conditions during both the AM and PM peak hours of traffic. Therefore, the project would not create or contribute to a significant adverse traffic impact at the study intersection under cumulative conditions.

The intersection level of service calculation sheets are included in Appendix C.

Table 8
Intersection Levels of Service Under Cumulative Conditions

Intersection	Peak Hour	Background		Cumulative			
		Avg Delay	LOS	Avg Delay	LOS	Incr. In Crit. Delay	Incr. In Crit. V/C
McKee Road and N 33rd Street	AM	26.1	C	27.5	C	1.8	0.022
	PM	22.7	C	25.0	C	2.4	0.037

8. Conclusions

The potential impacts of the project were evaluated in accordance with the standards set forth by the City of San Jose. The study included the analysis of AM and PM peak hour traffic conditions for the signalized intersection of McKee Road and N 33rd Street.

Existing Plus Project Intersection Levels of Service Analysis

The results of the existing plus project intersection level of service analysis show that the study intersection of McKee Road and N 33rd Street would operate at an acceptable LOS C under existing plus project conditions during the AM and PM peak hours.

Background Plus Project Intersection Level of Service Analysis

The results of the background plus project intersection level of service analysis show that the study intersection of McKee Road and N 33rd Street would operate at an acceptable LOS C under background plus project conditions during the AM and PM peak hours. The project would not create a significant adverse traffic impact at the study intersection under background plus project conditions.

Cumulative Intersection Level of Service Analysis

The results of the cumulative conditions intersection level of service analysis show that the study intersection of McKee Road and N 33rd Street would operate at an acceptable LOS C under cumulative conditions during the AM and PM peak hours. The project would not create or contribute to a significant adverse traffic impact at the study intersection under cumulative conditions.

Moe's Gas Station Expansion
Draft Transportation Impact Analysis
Technical Appendices

Appendix A

New Traffic Counts

PM Peak-Hour Volume Count Worksheet

Date: 5/25/11
 Counter: Huy and Trisha
 Intersection Name: 33rd Street and Mckee Road
 Weather: Clear

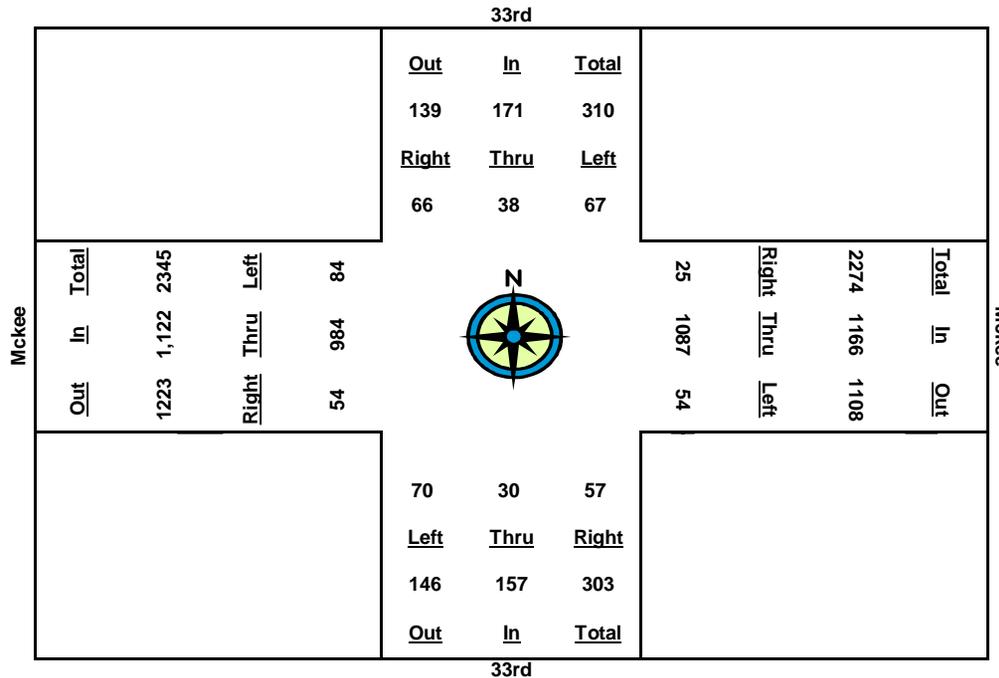
Hexagon Transportation Consultants

111 W. St. John St, Suite 850
 San Jose, California 95113
 Phone 408.971.6100 Fax 408.971.6102

Start Time	33 rd North Approach				Mckee East Approach				33 rd South Approach				Mckee West Approach			
	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15	12	9	26	47	9	257	13	279	11	7	19	37	15	236	19	270
4:30	37	14	34	85	18	499	25	542	20	13	32	65	32	463	38	533
4:45	54	22	50	126	25	759	32	816	26	17	44	87	51	695	51	797
5:00	75	27	63	165	33	1,011	42	1,086	39	26	63	128	66	934	66	1,066
5:15	92	39	81	212	39	1,319	57	1,415	50	30	78	158	75	1,165	88	1,328
5:30	102	52	98	252	47	1,573	69	1,689	68	39	101	208	90	1,433	107	1,630
5:45	120	60	117	297	50	1,846	86	1,982	83	47	114	244	105	1,679	135	1,919
6:00	141	68	130	339	55	2,100	93	2,248	95	50	132	277	116	1,917	162	2,195

Peak Hour	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	Right	Thru	Left	Total	PK Hour
4:00 - 5:00	75	27	63	165	33	1,011	42	1,086	39	26	63	128	66	934	66	1,066	2,445
4:15 - 5:15	80	30	55	165	30	1,062	44	1,136	39	23	59	121	60	929	69	1,058	2,480
4:30 - 5:30	65	38	64	167	29	1,074	44	1,147	48	26	69	143	58	970	69	1,097	2,554
4:45 - 5:45	66	38	67	171	25	1,087	54	1,166	57	30	70	157	54	984	84	1,122	2,616
5:00 - 6:00	66	41	67	174	22	1,089	51	1,162	56	24	69	149	50	983	96	1,129	2,614
Peak Volumes:	66	38	67	171	25	1,087	54	1,166	57	30	70	157	54	984	84	1,122	2,616

Cut and Paste	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
	70	30	57	67	38	66	84	984	54	54	1,087	25



AM Peak-Hour Volume Count Worksheet

Date: 5/24/2011
 Counter: Huy
 Intersection Name: Gas and Shop Driveways Count
 Weather: Clear

Hexagon Transportation Consultants

111 W. St. John St, Suite 850
 San Jose, California 95113
 Phone 408.971.6100 Fax 408.971.6102

	Mckee Rd Driveway		33 rd St Driveway		Combined		
Start Time	In	Out	In	Out	In	Out	
7:00	0	0	0	0	0	0	
7:15	10	18	10	4	20	22	
7:30	30	23	13	21	43	44	
7:45	36	26	18	33	54	59	
8:00	42	28	25	45	67	73	
8:15	57	43	40	60	97	103	
8:30	75	54	53	78	128	132	
8:45	88	66	63	91	151	157	
9:00	101	73	75	106	176	179	
Peak Hour							Hourly Totals
7:00 - 8:00	42	28	25	45	67	73	140
7:15 - 8:15	47	25	30	56	77	81	158
7:30 - 8:30	45	31	40	57	85	88	173
7:45 - 8:45	52	40	45	58	97	98	195
8:00 - 9:00	59	45	50	61	109	106	215
Peak Volumes:	59	45	50	61	109	106	215

PM Peak-Hour Volume Count Worksheet

Date: 5/24/2011
 Counter: Brian
 Intersection Name: Gas and Shop Driveways Count
 Weather: Clear

Hexagon Transportation Consultants

111 W. St. John St, Suite 850
 San Jose, California 95113
 Phone 408.971.6100 Fax 408.971.6102

	Mckee Rd Driveway		33 rd St Driveway		Combined		
Start Time	In	Out	In	Out	In	Out	
4:00	0	0	0	0	0	0	
4:15	6	6	13	15	19	21	
4:30	19	15	20	26	39	41	
4:45	36	25	32	46	68	71	
5:00	57	33	43	64	100	97	
5:15	78	44	50	85	128	129	
5:30	94	56	61	98	155	154	
5:45	108	69	80	117	188	186	
6:00	129	78	89	139	218	217	
Peak Hour							Hourly Totals
4:00 - 5:00	57	33	43	64	100	97	197
4:15 - 5:15	72	38	37	70	109	108	217
4:30 - 5:30	75	41	41	72	116	113	229
4:45 - 5:45	72	44	48	71	120	115	235
5:00 - 6:00	72	45	46	75	118	120	238
Peak Volumes:	72	45	46	75	118	120	238

Appendix B

City of San Jose Approved Trips Inventory

AM APPROVED TRIPS

05/19/2011

Intersection of: MCKEE/THIRTY THIRD

Page No: 1

Traffic Node Number: 3678

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
CP09-015 MOE'S STOP GAS & SERVICE STATION MCKEE RD/THIRTY THIRD ST	0	0	0	0	0	0	0	0	0	0	0	0
H05-002	0	0	0	0	0	0	0	0	0	0	0	0
H90-07-086 RETAIL OFC 13,540SF SANTA CLARA (N/S) W/O KING	0	0	0	0	0	0	0	0	0	0	1	0
NSJ NORTH SAN JOSE	0	0	0	0	0	0	5	34	1	0	6	0
PDA97-01-004 SJ MED CENTR MCKEE RD & JACKSON AV (SW/C)	0	0	0	0	0	0	0	70	0	0	21	0
PDC03-093 SJ REGIONAL MEDICAL CENTER MCKEE RD AND N JACKSON AV	0	0	0	0	0	0	0	38	0	0	26	0
PDC03-108 OFF BERRYESSA FLEA MKT (OFFICE) BOTH SIDES OF BERRYESSA RD WEST OF UNION PACIFIC	0	0	0	0	0	0	0	24	0	0	3	0
PDC03-108 RES BERRYESSA FLEA MKT (RESIDENTIAL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	0	0	0	0	0	0	46	0	0	84	0
PDC03-108 RET BERRYESSA FLEA MKT (RETAIL) BOTH SIDES OF BERRYESSA, WEST OF UNION PACIFIC RR	0	0	0	0	0	0	0	0	0	0	0	0
PDC07-015 RES KING AND DOBBIN NE/C OF KING AND DOBBIN	0	0	0	0	0	0	0	123	0	0	201	0

AM APPROVED TRIPS

05/19/2011

Intersection of: MCKEE/THIRTY THIRD

Page No: 2

Traffic Node Number: 3678

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC07-015 RET KING AND DOBBIN NE/C OF KING AND DOBBIN	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL: 0 0 0 0 0 0 5 335 1 0 342 0

	LEFT	THRU	RIGHT
NORTH	0	0	0
EAST	0	342	0
SOUTH	0	0	0
WEST	5	335	1

PM APPROVED TRIPS

05/19/2011

Intersection of: MCKEE/THIRTY THIRD

Page No: 4

Traffic Node Number: 3678

Permit No. / Description / Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PDC07-015 RES KING AND DOBBIN NE/C OF KING AND DOBBIN	0	0	0	0	0	0	0	227	0	0	106	0
PDC07-015 RET KING AND DOBBIN NE/C OF KING AND DOBBIN	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL: 4 3 1 2 0 0 0 384 1 4 342 0

	LEFT	THRU	RIGHT
NORTH	2	0	0
EAST	4	342	0
SOUTH	4	3	1
WEST	0	384	1

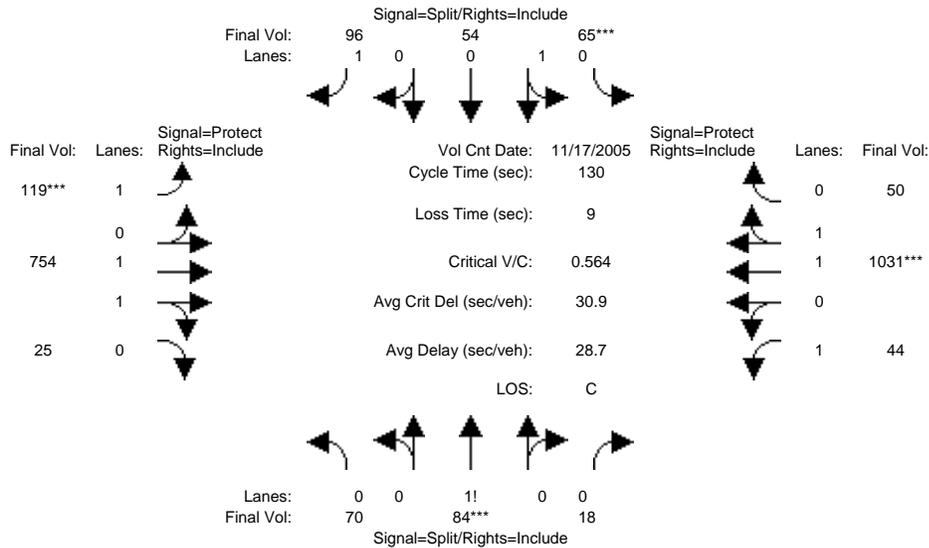
Appendix C

Intersection Level of Service Calculations

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing AM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	>>	Count	Date:	17 Nov 2005	<<	7:30-8:30AM						
Base Vol:	70	84	18	65	54	96	119	754	25	44	1031	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	84	18	65	54	96	119	754	25	44	1031	50
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	84	18	65	54	96	119	754	25	44	1031	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	84	18	65	54	96	119	754	25	44	1031	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	84	18	65	54	96	119	754	25	44	1031	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	70	84	18	65	54	96	119	754	25	44	1031	50

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.41	0.49	0.10	0.55	0.45	1.00	1.00	1.93	0.07	1.00	1.90	0.10
Final Sat.:	712	855	183	983	817	1750	1750	3581	119	1750	3529	171

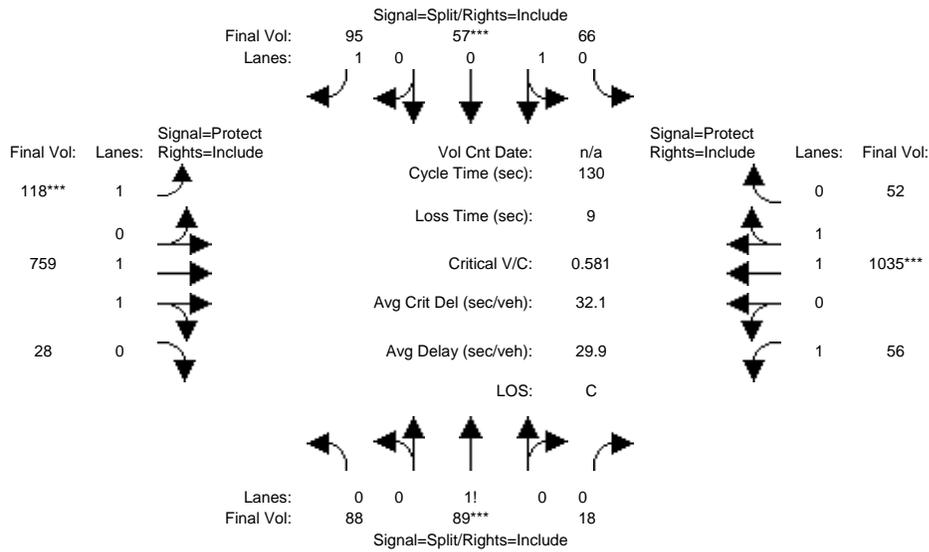
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.07	0.07	0.05	0.07	0.21	0.21	0.03	0.29	0.29
Crit Moves:	****			****			****			****		
Green Time:	22.7	22.7	22.7	15.2	15.2	15.2	15.7	66.2	66.2	16.9	67.4	67.4
Volume/Cap:	0.56	0.56	0.56	0.56	0.56	0.47	0.56	0.41	0.41	0.19	0.56	0.56
Delay/Veh:	51.6	51.6	51.6	57.7	57.7	55.3	57.4	20.0	20.0	50.9	21.7	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.6	51.6	51.6	57.7	57.7	55.3	57.4	20.0	20.0	50.9	21.7	21.7
LOS by Move:	D	D	D	E	E	E	E	C	C	D	C	C
HCM2k95thQ:	14	14	14	11	11	9	9	18	18	4	26	26

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project AM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	88	89	18	66	57	95	118	759	28	56	1035	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	89	18	66	57	95	118	759	28	56	1035	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	88	89	18	66	57	95	118	759	28	56	1035	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	88	89	18	66	57	95	118	759	28	56	1035	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	89	18	66	57	95	118	759	28	56	1035	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	89	18	66	57	95	118	759	28	56	1035	52

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.98	0.95
Lanes:	0.45	0.46	0.09	0.54	0.46	1.00	1.00	1.93	0.07	1.00	1.90	0.10
Final Sat.:	790	799	162	966	834	1750	1750	3568	132	1750	3523	177

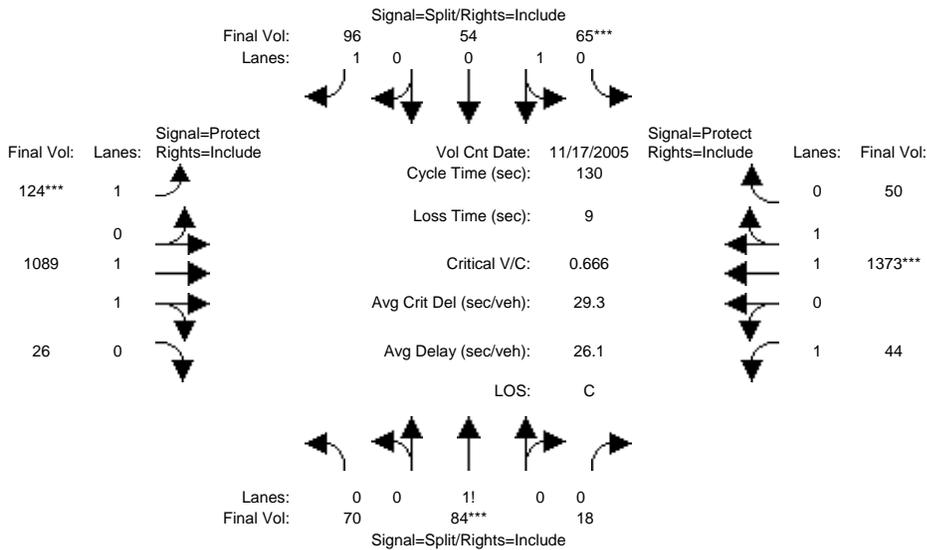
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.07	0.07	0.05	0.07	0.21	0.21	0.03	0.29	0.29
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	24.9	24.9	24.9	15.3	15.3	15.3	15.1	64.5	64.5	16.3	65.7	65.7
Volume/Cap:	0.58	0.58	0.58	0.58	0.58	0.46	0.58	0.43	0.43	0.25	0.58	0.58
Delay/Veh:	50.4	50.4	50.4	58.4	58.4	55.2	58.7	21.1	21.1	52.0	23.0	23.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	50.4	50.4	50.4	58.4	58.4	55.2	58.7	21.1	21.1	52.0	23.0	23.0
LOS by Move:	D	D	D	E	E	E	E	C	C	D	C	C
HCM2k95thQ:	16	16	16	11	11	8	9	18	18	5	27	27

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project AM

Intersection #3678: McKEE/33RD



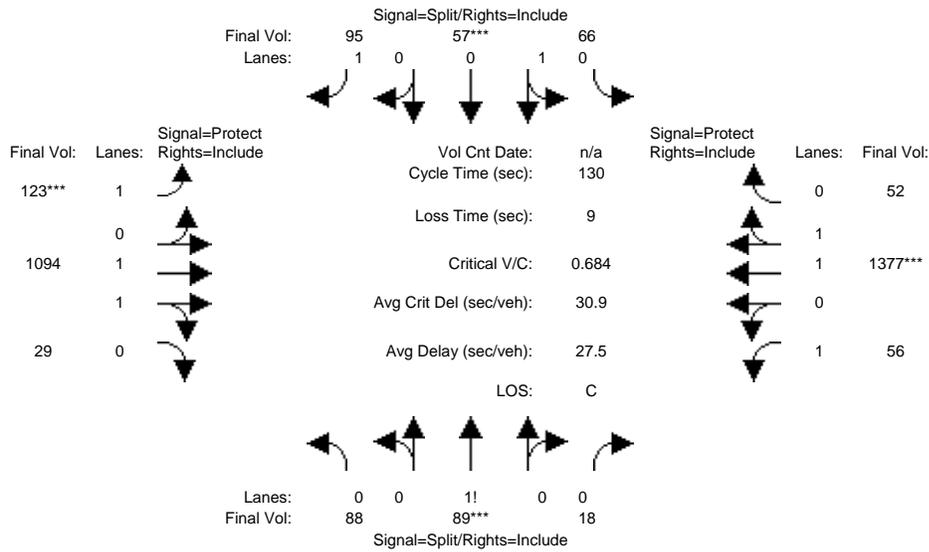
Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 17 Nov 2005 << 7:30-8:30AM												
Base Vol:	70	84	18	65	54	96	124	1089	26	44	1373	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	84	18	65	54	96	124	1089	26	44	1373	50
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	84	18	65	54	96	124	1089	26	44	1373	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	84	18	65	54	96	124	1089	26	44	1373	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	84	18	65	54	96	124	1089	26	44	1373	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	84	18	65	54	96	124	1089	26	44	1373	50
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.41	0.49	0.10	0.55	0.45	1.00	1.00	1.95	0.05	1.00	1.93	0.07
Final Sat.:	712	855	183	983	817	1750	1750	3614	86	1750	3570	130
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.10	0.07	0.07	0.05	0.07	0.30	0.30	0.03	0.38	0.38
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	19.2	19.2	19.2	12.9	12.9	12.9	13.8	75.4	75.4	13.5	75.1	75.1
Volume/Cap:	0.67	0.67	0.67	0.67	0.67	0.55	0.67	0.52	0.52	0.24	0.67	0.67
Delay/Veh:	58.8	58.8	58.8	65.7	65.7	59.6	64.7	16.6	16.6	54.3	19.7	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.8	58.8	58.8	65.7	65.7	59.6	64.7	16.6	16.6	54.3	19.7	19.7
LOS by Move:	E	E	E	E	E	E	E	B	B	D	B	B
HCM2k95thQ:	15	15	15	12	12	9	10	24	24	4	34	34

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project AM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	88	89	18	66	57	95	123	1094	29	56	1377	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	89	18	66	57	95	123	1094	29	56	1377	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	88	89	18	66	57	95	123	1094	29	56	1377	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	88	89	18	66	57	95	123	1094	29	56	1377	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	89	18	66	57	95	123	1094	29	56	1377	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	89	18	66	57	95	123	1094	29	56	1377	52

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.45	0.46	0.09	0.54	0.46	1.00	1.00	1.95	0.05	1.00	1.93	0.07
Final Sat.:	790	799	162	966	834	1750	1750	3604	96	1750	3565	135

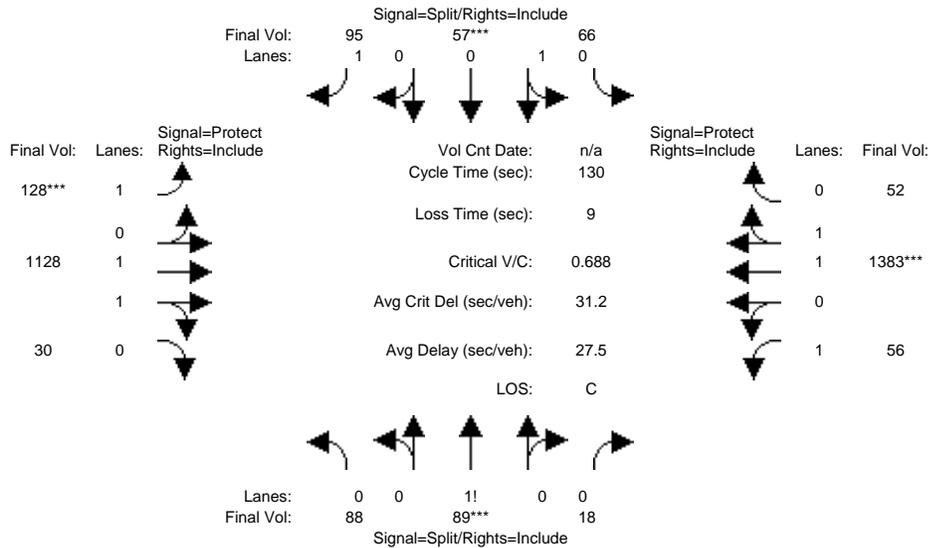
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.07	0.07	0.05	0.07	0.30	0.30	0.03	0.39	0.39
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	21.2	21.2	21.2	13.0	13.0	13.0	13.4	73.7	73.7	13.1	73.4	73.4
Volume/Cap:	0.68	0.68	0.68	0.68	0.68	0.54	0.68	0.54	0.54	0.32	0.68	0.68
Delay/Veh:	57.9	57.9	57.9	66.9	66.9	59.2	66.6	17.8	17.8	55.4	21.0	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.9	57.9	57.9	66.9	66.9	59.2	66.6	17.8	17.8	55.4	21.0	21.0
LOS by Move:	E	E	E	E	E	E	E	B	B	E	C	C
HCM2k95thQ:	17	17	17	12	12	9	10	25	25	5	35	35

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Cumulative + Project AM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	88	89	18	66	57	95	128	1128	30	56	1383	52
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	88	89	18	66	57	95	128	1128	30	56	1383	52
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	88	89	18	66	57	95	128	1128	30	56	1383	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	88	89	18	66	57	95	128	1128	30	56	1383	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	89	18	66	57	95	128	1128	30	56	1383	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	89	18	66	57	95	128	1128	30	56	1383	52

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.45	0.46	0.09	0.54	0.46	1.00	1.00	1.95	0.05	1.00	1.93	0.07
Final Sat.:	790	799	162	966	834	1750	1750	3604	96	1750	3566	134

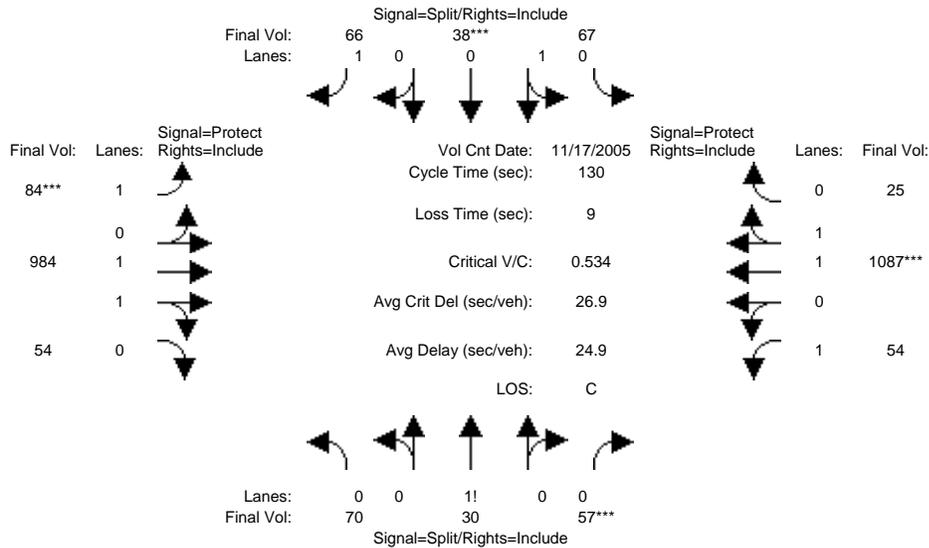
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.07	0.07	0.05	0.07	0.31	0.31	0.03	0.39	0.39
Crit Moves:	****			****			****			****		
Green Time:	21.0	21.0	21.0	12.9	12.9	12.9	13.8	74.3	74.3	12.8	73.2	73.2
Volume/Cap:	0.69	0.69	0.69	0.69	0.69	0.55	0.69	0.55	0.55	0.33	0.69	0.69
Delay/Veh:	58.4	58.4	58.4	67.4	67.4	59.4	66.4	17.7	17.7	55.7	21.2	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.4	58.4	58.4	67.4	67.4	59.4	66.4	17.7	17.7	55.7	21.2	21.2
LOS by Move:	E	E	E	E	E	E	E	B	B	E	C	C
HCM2k95thQ:	17	17	17	12	12	9	11	26	26	5	36	36

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing PM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	>>	Count	Date:	17 Nov 2005	<<	4:45-5:45PM						
Base Vol:	70	30	57	67	38	66	84	984	54	54	1087	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	70	30	57	67	38	66	84	984	54	54	1087	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	30	57	67	38	66	84	984	54	54	1087	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	30	57	67	38	66	84	984	54	54	1087	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	30	57	67	38	66	84	984	54	54	1087	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	70	30	57	67	38	66	84	984	54	54	1087	25

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.98	0.95	0.92	0.97	0.95
Lanes:	0.45	0.19	0.36	0.64	0.36	1.00	1.00	1.89	0.11	1.00	1.95	0.05
Final Sat.:	780	334	635	1149	651	1750	1750	3507	192	1750	3617	83

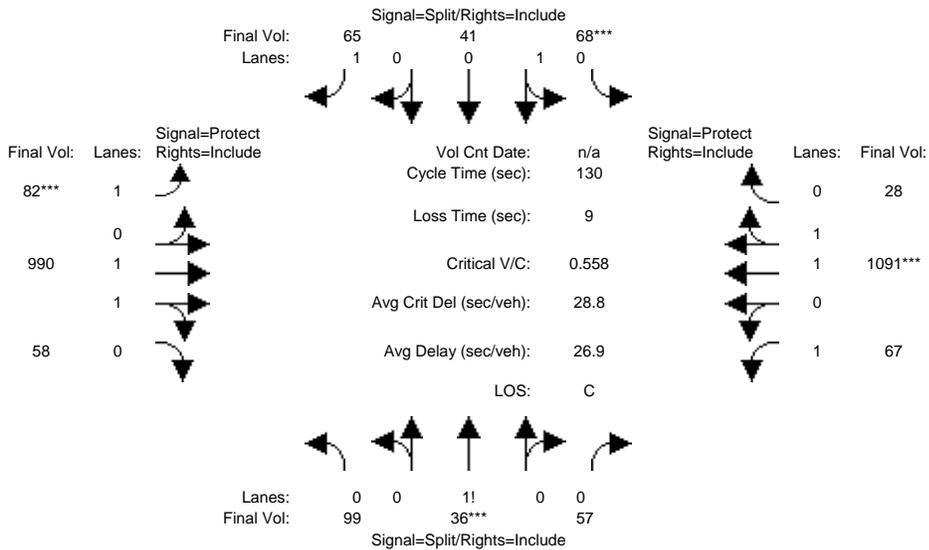
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.09	0.06	0.06	0.04	0.05	0.28	0.28	0.03	0.30	0.30
Crit Moves:			****			****			****			****
Green Time:	21.9	21.9	21.9	14.2	14.2	14.2	11.7	71.3	71.3	13.7	73.2	73.2
Volume/Cap:	0.53	0.53	0.53	0.53	0.53	0.34	0.53	0.51	0.51	0.29	0.53	0.53
Delay/Veh:	51.3	51.3	51.3	57.6	57.6	54.7	60.1	18.7	18.7	54.6	18.0	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.3	51.3	51.3	57.6	57.6	54.7	60.1	18.7	18.7	54.6	18.0	18.0
LOS by Move:	D	D	D	E	E	D	E	B	B	D	B	B
HCM2k95thQ:	13	13	13	9	9	6	7	23	23	5	25	25

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing + Project PM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	99	36	57	68	41	65	82	990	58	67	1091	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	99	36	57	68	41	65	82	990	58	67	1091	28
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	99	36	57	68	41	65	82	990	58	67	1091	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	36	57	68	41	65	82	990	58	67	1091	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	36	57	68	41	65	82	990	58	67	1091	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	36	57	68	41	65	82	990	58	67	1091	28

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.98	0.95	0.92	0.97	0.95
Lanes:	0.51	0.19	0.30	0.62	0.38	1.00	1.00	1.89	0.11	1.00	1.95	0.05
Final Sat.:	902	328	520	1123	677	1750	1750	3495	205	1750	3607	93

Capacity Analysis Module:

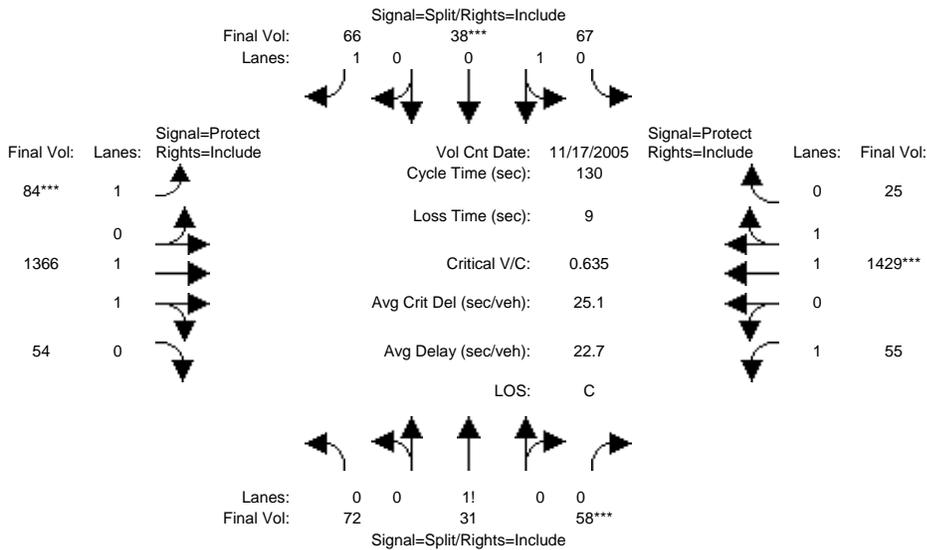
Vol/Sat:	0.11	0.11	0.11	0.06	0.06	0.04	0.05	0.28	0.28	0.04	0.30	0.30
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	25.6	25.6	25.6	14.1	14.1	14.1	10.9	68.4	68.4	13.0	70.4	70.4
Volume/Cap:	0.56	0.56	0.56	0.56	0.56	0.34	0.56	0.54	0.54	0.38	0.56	0.56
Delay/Veh:	49.2	49.2	49.2	58.6	58.6	54.7	62.0	20.7	20.7	56.2	19.9	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	49.2	49.2	49.2	58.6	58.6	54.7	62.0	20.7	20.7	56.2	19.9	19.9
LOS by Move:	D	D	D	E	E	D	E	C	C	E	B	B
HCM2k95thQ:	15	15	15	10	10	6	7	25	25	6	26	26

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background No Project PM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module: >> Count Date: 17 Nov 2005 << 4:45-5:45PM

Base Vol:	72	31	58	67	38	66	84	1366	54	55	1429	25
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	72	31	58	67	38	66	84	1366	54	55	1429	25
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	72	31	58	67	38	66	84	1366	54	55	1429	25
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	72	31	58	67	38	66	84	1366	54	55	1429	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	72	31	58	67	38	66	84	1366	54	55	1429	25
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	72	31	58	67	38	66	84	1366	54	55	1429	25

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.45	0.19	0.36	0.64	0.36	1.00	1.00	1.92	0.08	1.00	1.96	0.04
Final Sat.:	783	337	630	1149	651	1750	1750	3559	141	1750	3636	64

Capacity Analysis Module:

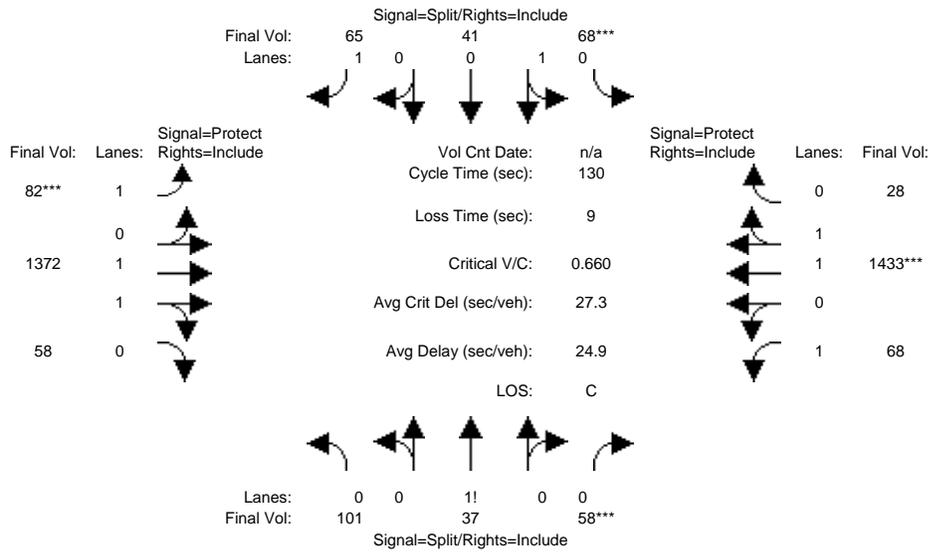
Vol/Sat:	0.09	0.09	0.09	0.06	0.06	0.04	0.05	0.38	0.38	0.03	0.39	0.39
Crit Moves:			****		****		****				****	
Green Time:	18.8	18.8	18.8	11.9	11.9	11.9	9.8	79.1	79.1	11.1	80.4	80.4
Volume/Cap:	0.64	0.64	0.64	0.64	0.64	0.41	0.64	0.63	0.63	0.37	0.64	0.64
Delay/Veh:	57.6	57.6	57.6	64.8	64.8	57.4	68.1	16.7	16.7	57.7	16.2	16.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.6	57.6	57.6	64.8	64.8	57.4	68.1	16.7	16.7	57.7	16.2	16.2
LOS by Move:	E	E	E	E	E	E	E	B	B	E	B	B
HCM2k95thQ:	14	14	14	10	10	6	7	31	31	5	32	32

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background + Project PM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:

Base Vol:	101	37	58	68	41	65	82	1372	58	68	1433	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	101	37	58	68	41	65	82	1372	58	68	1433	28
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	101	37	58	68	41	65	82	1372	58	68	1433	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	101	37	58	68	41	65	82	1372	58	68	1433	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	101	37	58	68	41	65	82	1372	58	68	1433	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	101	37	58	68	41	65	82	1372	58	68	1433	28

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.51	0.19	0.30	0.62	0.38	1.00	1.00	1.92	0.08	1.00	1.96	0.04
Final Sat.:	902	330	518	1123	677	1750	1750	3550	150	1750	3629	71

Capacity Analysis Module:

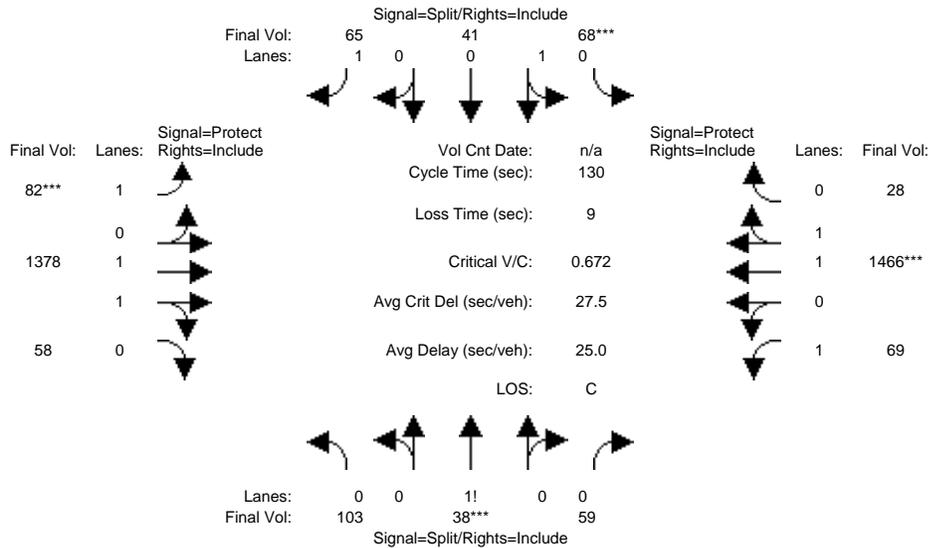
Vol/Sat:	0.11	0.11	0.11	0.06	0.06	0.04	0.05	0.39	0.39	0.04	0.39	0.39
Crit Moves:			****	****			****				****	
Green Time:	22.1	22.1	22.1	11.9	11.9	11.9	9.2	76.4	76.4	10.6	77.8	77.8
Volume/Cap:	0.66	0.66	0.66	0.66	0.66	0.40	0.66	0.66	0.66	0.47	0.66	0.66
Delay/Veh:	55.9	55.9	55.9	66.6	66.6	57.4	71.2	18.8	18.8	59.5	18.1	18.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.9	55.9	55.9	66.6	66.6	57.4	71.2	18.8	18.8	59.5	18.1	18.1
LOS by Move:	E	E	E	E	E	E	E	B	B	E	B	B
HCM2k95thQ:	17	17	17	11	11	6	7	33	33	7	34	34

Note: Queue reported is the number of cars per lane.

Moes's Gas Station Expansion

Level Of Service Computation Report
 2000 HCM Operations (Future Volume Alternative)
 Cumulative + Project PM

Intersection #3678: McKEE/33RD



Approach:	North Bound			South Bound			East Bound			West Bound		
	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:												
Base Vol:	103	38	59	68	41	65	82	1378	58	69	1466	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	103	38	59	68	41	65	82	1378	58	69	1466	28
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	103	38	59	68	41	65	82	1378	58	69	1466	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	103	38	59	68	41	65	82	1378	58	69	1466	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	38	59	68	41	65	82	1378	58	69	1466	28
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	103	38	59	68	41	65	82	1378	58	69	1466	28

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	0.95	0.92	0.92	0.97	0.95	0.92	0.97	0.95
Lanes:	0.52	0.19	0.29	0.62	0.38	1.00	1.00	1.92	0.08	1.00	1.96	0.04
Final Sat.:	901	333	516	1123	677	1750	1750	3550	149	1750	3631	69

Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.11	0.06	0.06	0.04	0.05	0.39	0.39	0.04	0.40	0.40
Crit Moves:	****			****			****			****		
Green Time:	22.1	22.1	22.1	11.7	11.7	11.7	9.1	76.6	76.6	10.6	78.1	78.1
Volume/Cap:	0.67	0.67	0.67	0.67	0.67	0.41	0.67	0.66	0.66	0.48	0.67	0.67
Delay/Veh:	56.4	56.4	56.4	67.8	67.8	57.6	72.7	18.7	18.7	59.6	18.2	18.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.4	56.4	56.4	67.8	67.8	57.6	72.7	18.7	18.7	59.6	18.2	18.2
LOS by Move:	E	E	E	E	E	E	E	B	B	E	B	B
HCM2k95thQ:	17	17	17	11	11	6	7	33	33	7	35	35

Note: Queue reported is the number of cars per lane.