

CITY OF FOUNTAIN VALLEY

SUMMERSTONE VILLAS

TRAFFIC IMPACT ANALYSIS

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City of Fountain Valley

Summerstone Villas

Traffic Impact Analysis

This report contains the traffic impact analysis for the Summerstone Villas project. The project site is located on the southeast corner of Newhope Street and Edinger Avenue in the City of Fountain Valley. The project site is proposed to be developed with 12 residential condominium dwelling units.

The traffic report contains documentation of existing traffic conditions, traffic generated by the project, distribution of the project traffic to roads outside the project, and an analysis of future traffic conditions. Each of these topics is contained in a separate section of the report. The first section is "Findings", and subsequent sections expand upon the findings. In this way, information on any particular aspect of the study can be easily located by the reader.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

I. Findings

This section summarizes the existing traffic conditions, project traffic impacts, and the proposed mitigation measures.

A. Existing Traffic Conditions

1. The project site is currently a vacant liquor store and is not generating significant traffic.
2. The study area includes the following intersections:

Newhope Street (NS) at:
Project Access (EW) - #1

Project Access (NS) at:
Edinger Avenue (EW) - #2
3. The study area intersections currently operate at acceptable Levels of Service during the peak hours for Existing traffic conditions (see Table 1).

B. Traffic Impacts

1. The project site is proposed to be developed with 12 residential condominium dwelling units. The project site will have access to Newhope Street and Edinger Avenue.
2. The proposed development is projected to generate approximately 70 daily vehicle trips, 5 vehicles per hour will occur during the morning peak hour and 6 vehicles per hour will occur during the evening peak hour.
3. The Project Access on Newhope Street is proposed to be built offset and south of Suzette River Circle and restricted to right turns in/out only. The intersections will function as two separate intersections and have been analyzed as such throughout this analysis.
4. It is projected that no more than two vehicles will be entering the project site during the peak hours. This equates to approximately one vehicle every 30 minutes. With an assumed time of one minute for a vehicle to enter the project access, open the gate, and proceed through the gate, it is anticipated that for typical operations no more than one vehicle will be stacked at the project accesses. With a storage length of approximately 27 feet at the project access off Edinger Avenue and approximately 70 feet at the project access off Newhope Street, adequate throat length is provided.
5. The study area intersections are projected to operate at acceptable Levels of Service during the peak hours for Existing Plus Cumulative traffic conditions (see Table 3).

6. The study area intersections are projected to operate at acceptable Levels of Service during the peak hours for Existing Plus Project traffic conditions (see Table 5).
7. The study area intersections are projected to operate at acceptable Levels of Service during the peak hours for Existing Plus Cumulative Plus Project traffic conditions (see Table 6).

C. Mitigation Measures

The following measures are recommended to mitigate the impact of the project on traffic circulation:

1. Site-specific circulation and access recommendations are depicted on Figure 27.
2. Construct Newhope Street from Edinger Avenue to the south project boundary at its ultimate half-section width as a Secondary Arterial (80 foot right-of way) including landscaping and parkway improvements in conjunction with development, as necessary.
3. Construct Edinger Avenue from Newhope Street to the east project boundary at its ultimate half-section width as a Primary Arterial (100 foot right-of-way) including landscaping and parkway improvements in conjunction with development, as necessary.
4. Construct a rolled curb porkchop at the project accesses internal to the project site to ensure that the project accesses are right turns in/out only while allowing emergency vehicle access.
5. Sufficient on-site parking shall be provided to meet City of Fountain Valley parking code requirements.
6. Sight distance at the project accesses should be reviewed with respect to California Department of Transportation/City of Fountain Valley standards in conjunction with the preparation of final grading, landscaping, and street improvement plans.
7. On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project.
8. As is the case for any roadway design, the City of Fountain Valley should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

II. Congestion Management Program Methodology

This section discusses the County of Orange Congestion Management Program. The purpose, prescribed methodology, and definition of a significant traffic impact are discussed.

A. County Congestion Management Program

The Congestion Management Program is a result of Proposition 111 which was a statewide initiative approved by the voters in June, 1990. The proposition allowed for a nine cent per gallon State gasoline tax increase over a five year period.

Proposition 111 explicitly stated that the new gas tax revenues were to be used to fix existing traffic problems and was not to be used to promote future development. For a City to get its share of the Proposition 111 gas tax, it has to follow certain procedures specified by the State Legislature. The legislation requires that a traffic impact analysis be prepared for new development. The traffic impact analysis is prepared to monitor and fix traffic problems caused by new development.

The Legislature requires that adjacent jurisdictions use a standard methodology for conducting a traffic impact analysis. To assure that adjacent jurisdictions use a standard methodology in preparing traffic impact analyses, one common procedure is that all Cities within a County, and the County agency itself, adopt and use one standard methodology for conducting traffic impact analyses.

Although each County has developed standards for preparing traffic impact analyses, traffic impact analysis requirements do vary in detail from one County to another, but not in overall intent or concept. The general approach selected by each County for conducting traffic impact analyses has common elements.

The general approach for conducting a traffic impact analysis is that existing weekday peak hour traffic is counted and the percent of roadway capacity currently used is determined. Then the project traffic is added and the percent of roadway capacity used is again determined. If the new project adds traffic to an overcrowded facility, then the new project has to mitigate the traffic impact so that the facility operates at a level which is no worse than before the project traffic was added.

If the project size is below a certain minimum threshold level, then a project does not have to have a traffic impact analysis prepared, once it is shown or agreed that the project is below the minimum threshold. In Orange County a project needs a traffic impact analysis if it generates more than 200 daily trips. If a project is bigger than the minimum threshold size, then a traffic impact analysis is required.

B. Prescribed Methodology for A Traffic Impact Analysis

The traffic impact analysis must include all monitored intersections to which the project adds traffic above a certain minimum amount.

In Orange County, the monitored intersections are all arterial to arterial intersections.

In Orange County, the minimum traffic impact that is required before an intersection has to be analyzed is if the Intersection Capacity Utilization increases by 3 percent of the Level of Service E capacity.

If a project increases the Intersection Capacity Utilization by more than 3 percent, then that intersection has to be analyzed for deficiencies.

If the intersection has to be analyzed for deficiencies, then mitigation is required if the existing traffic plus project traffic causes the Intersection Capacity Utilization to go above 100 percent, and the project adds more than 10 percent to the Intersection Capacity Utilization.

In Orange County, mitigation is required if (1) the intersection operates at worse than an Intersection Capacity Utilization of 100 percent or more; and (2) the Intersection Capacity Utilization increases by 10 percent.

An intersection mitigation measure shall either fix the deficiency, or reduce the Intersection Capacity Utilization so that it is below the level which occurs without the project.

In Orange County, the technique used to calculate Intersection Capacity Utilization is as follows. Lane capacity is 1,700 vehicles per lane per hour of green time for through and turn lanes. A total yellow clearance time of 5 percent is added.

The technique used to assess the capacity needs of an unsignalized intersection is known as the Intersection Delay Method (see Appendix C). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

Project traffic is generated using rates and procedures contained in the Institute of Transportation Engineers, Trip Generation, 8th Edition, 2008. To determine the traffic distribution for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed. The Traffic Impact Analysis has to be prepared by a licensed Traffic Engineer.

This traffic analysis has been prepared in accordance with the Traffic Impact Analysis requirements except as noted. The Traffic Impact Analysis not only examined the Congestion Management Program system of roads and intersections, but also other roads and intersections.

The project generated traffic was added to intersections, and a full intersection analysis was conducted, even when the project added traffic failed to meet the minimum thresholds that require an intersection analysis.

C. Mitigation Measures

If a project is large enough to require that a Traffic Impact Analysis be prepared, and if the project adds traffic to an intersection above a minimum threshold, and if the intersection is operating at above an acceptable level of operation, then the project must mitigate its traffic impact.

Traffic mitigation can be in many forms including adding lanes. Lanes can sometimes be obtained through restriping or elimination of parking, and sometimes require spot roadway widening.

III. Project Description

This section discusses the project's location and proposed development. Figure 1 shows the project location map and Figure 2 illustrates the site plan.

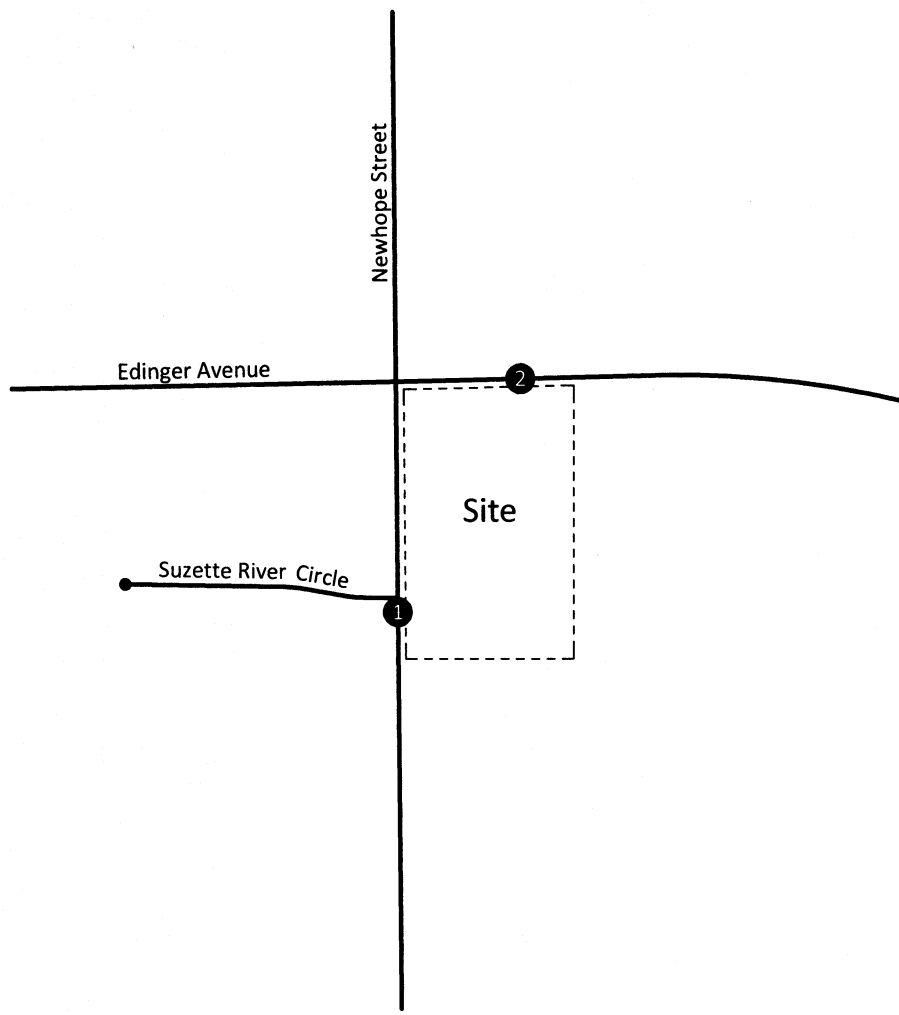
A. Location

The project site is located on the southeast corner of Newhope Street and Edinger Avenue in the City of Fountain Valley.

B. Proposed Development

The project site is proposed to be developed with 12 residential condominium dwelling units. The project site will have access to Newhope Street and Edinger Avenue.

Figure 1
Project Location Map



Legend

① = Study Area Intersection



Figure 2
Site Plan

