

Honorable Mayor and Members  
of the City Council  
City Hall  
Torrance, California

Members of the Council:

**SUBJECT:** **Community Development - Receive and File the Citywide Traffic Analysis**

**RECOMMENDATION**

Recommendation of the Community Development Director that City Council receive and file the Citywide Traffic Analysis.

**BACKGROUND**

The City Council directed staff to conduct a Citywide Traffic Analysis to work in conjunction with the General Plan Update. The Citywide Traffic Analysis was compiled as a comprehensive document that looks at existing and future traffic operations in line with the projections of the General Plan update. The Citywide Traffic Analysis is also an integral part of many other documents, such as the Circulation Element of the updated General Plan, Traffic Operation & Signal Synchronization, budgeting purposes for the City's Capital Improvement Projects, and identifying the regional significance of the City's roadway and using the information to secure outside funding.

The purpose of the Citywide Traffic Analysis is to:

- 1) Document and analyze the **EXISTING OPERATION** of the City of Torrance roadway circulation system;
- 2) Document and analyze the forecasted **NEAR-TERM OPERATION** (5yrs) traffic conditions. This is the analysis of incorporated forecast trip generation of approved projects, located in and in the vicinity of the City, as well as incorporating a growth rate of one percent per year to existing volumes to account for forecast ambient growth;
- 3) Document and analyze the forecasted **LONG-RANGE** traffic conditions. This analysis assumes changes potential in land uses based on the General Plan update, build out of the South Bay area in accordance with Southern California Association of Governments (SCAG) projections, utilizing a growth rate projection from (SCAG), and specific project such as Del Amo Boulevard extension; and
- 4) Create a Citywide Traffic Analysis computer model (**TRAFFIX**) capable of evaluating a variety of traffic scenarios based on proposed developments, projected volume and new traffic operation scenarios.

## **ANALYSIS**

Data collection was the most time consuming component of this document. The following are the traffic counts that were collected:

- 1) Average Daily Traffic (ADT)
  - a. Non-Holiday season ADT - 24 hours counts on 170 roadway segments;
  - b. Holiday season ADT - 24 hours count on 16 segments in the vicinity of the Del Amo Shopping Center;
- 2) Intersection Turning Movement Counts for Level of Service (LOS) were collected at during:
  - a. Non-Holiday season – 166 signalized intersections
    - i. Typical weekday (Tuesday, Wednesday, or Thursday)
      1. a.m. peak hour from 7:00 a.m. to 9:00 a.m.;
      2. mid-day peak hour from 11:00 a.m. to 1:00 p.m.; and
      3. p.m. peak hour from 4:00 p.m. to 6:00 p.m.;
    - ii. Typical weekend-day (Saturday or Sunday)
      1. mid-day peak hour from 11:00 a.m. to 1:00 p.m.;
  - b. Holiday season – 43 signalized intersections
    - i. Typical weekday (Tuesday, Wednesday, or Thursday)
      1. a.m. peak hour from 7:00 a.m. to 9:00 a.m.;
      2. mid-day peak hour from 11:00 a.m. to 1:00 p.m.; and
      3. p.m. peak hour from 4:00 p.m. to 6:00 p.m.;
    - ii. Typical weekend-day (Saturday or Sunday)
      1. mid-day peak hour from 11:00 a.m. to 1:00 p.m.;
- 3) Truck Axle Counts – Axle classification counts were collected at 39 roadway segments to identify the percentage of truck use along major truck routes; and
- 4) Drive-Through Counts – License plate counts were conducted to determine the percentage of traffic passing through the City, which is defined as traffic with no origin or destination within the City of Torrance.

All this data was then input into the Traffix model to establish the base-line traffic data. The results were superimposed onto various maps for graphical representation.

Once the model was completed and all the existing data was collected, the traffic operations for the 166 signalized intersections were evaluated and deficient intersections (LOS E or worse) under the existing, near-term and long-range scenarios were identified. In order to enhance the traffic operation and achieve the acceptable LOS D or better at these intersections, conceptual improvements were recommended.

To better understand the data, analysis and conclusions, the Citywide Traffic Analysis has been divided into six primary components:

- 1) INTRODUCTION - background information on data collection and intersection analysis methodologies;
- 2) EXISTING TRAFFIC - descriptions of existing roadways, and the results of existing intersection operation analysis;
- 3) NEAR-TERM - Near-Term projected traffic-provides the results of the forecast near-term future conditions intersection analysis, which includes forecast trip

generation of approved projects and ambient traffic growth in the vicinity of the City of Torrance;

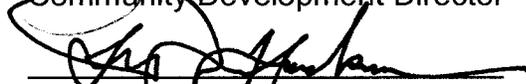
- 4) LONG-TERM - Long-Term projected traffic - provides the results of the forecast long-range future conditions intersection analysis based on (SCAG) long-range traffic projections and future changes in land use within the City of Torrance;
- 5) DEFICIENT INTERSECTION - summarizes the level of service for intersections operating at deficient level of service (LOS E or worse) for existing conditions, forecast near-term future conditions, and forecast long-range future conditions. Additionally, improvements are identified for the deficiently operating intersections for the appropriate time period (near-term future or long-range future) to improve the level of service to acceptable operation (LOS D or better); and
- 6) BACKGROUND DATA.

Lastly, yet most importantly, the Citywide Traffic Analysis provides long term benefits such as:

- 1) An outlook for the existing, near-term, and long range traffic operations;
- 2) Identifies deficiencies along with recommended improvements;
- 3) Provides right-of-way needs necessary to implement recommendations;
- 4) Provides support documents for procuring outside funding, i.e. Metro's Call for Projects;
- 5) Provides support and basic data for the Circulation Element of the general plan and Intelligent Transportation System; and
- 6) The Traffix model enables the City to evaluate the traffic impacts related to new developments, intersection improvements as well as the nexus for right-of-way needs.

CONCUR:

  
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 Jeffery W. Gibson  
 Community Development Director

  
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 LeRoy J. Jackson  
 City Manager

Respectfully submitted,

JEFFERY W. GIBSON  
 COMMUNITY DEVELOPMENT DIRECTOR

By   
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 Ted Semaan, Manager  
 Transportation Planning, Development  
 Engineering & Records Division

Attachments:

- A – August 4, 2008 – Traffic Commission item
- B – Citywide Traffic Analysis (Limited Distribution)



Traffic Commission Meeting  
**August 4, 2008**  
**Agenda Item No. 7b**

TO: Traffic Commission

FROM: Ted Semaan, Manager  
Transportation Planning, Development Engineering & Records  
Division

SUBJECT: Citywide Traffic Analysis Final Report

### **RECOMMENDATION**

The Community Development Director recommends that the Traffic Commission review the Final Report on Citywide Traffic Analysis and direct staff to forward the Analysis to City Council.

### **BACKGROUND**

The City Council directed staff to conduct a Citywide Traffic Analysis to work in conjunction with the General Plan Update. City Council awarded a consulting services agreement to RBF Consulting to conduct the Citywide Traffic Analysis. The Citywide Traffic Analysis is a comprehensive document that looks at existing and future traffic condition operations in the City of Torrance. The Analysis' assessments for existing traffic conditions are based on collected data along major City streets and signalized intersections. Its assessments of future conditions are based on the long range projections from SCAG, as well as the City's updated General Plan.

### **ANALYSIS**

Due to the extent of all the data and analysis contained in the Citywide Traffic Analysis and in order to better comprehend the results, the Analysis has been divided into six primary components:

1. INTRODUCTION – The introduction explains the objectives of the Study as well as the methodology of its analysis;
2. EXISTING TRAFFIC – The Existing Traffic section looks at traffic patterns, collected data, operation and intersection levels-of-service (LOS). The collected data includes 24-hr volume as well as peak-hour turning movement counts;

- a. 24-hr traffic volumes, also known as Average Daily Traffic counts (ADT) were collected during holiday and non-holiday weekdays (Tu-W-Th) and weekends. Peak Hour turning movement counts were collected during the morning, mid-day and afternoon peak-hours those same days. The data was analyzed and superimposed onto various maps, such as Del Amo Fashion Center traffic before and during the holidays;
  - b. Collected data, intersection geometry and other pertinent information were entered into the "Traffix" traffic modeling software to create the base traffic model;
  - c. "Cut-Thru" traffic data was also collected along identified arterial roadways. The results have been summarized in Chapter 1 of the Study; and
  - d. Lastly, truck data (axle counts) was collected along 39 segments of the City's truck routes to provide insight for roadway pavement design.
3. NEAR-TERM PROJECTED TRAFFIC – Near-Term (5-yr) traffic conditions are projected data based on approved upcoming development projects, which are added to the existing collected traffic counts to account for future vehicle trips from the entitled development projects.
  4. LONG-TERM PROJECTED TRAFFIC – Long-Term projected traffic conditions are based on long range traffic projections from SCAG as well as the General Plan Update land use designations;
  5. DEFICIENT INTERSECTIONS – This section lists the intersections that have been identified as deficient (LOS E or F) along with the recommended improvements. The recommended improvements include a conceptual design and associated cost estimate for the identified intersections; and
  6. BACKGROUND DATA which includes intersection volume and geometry exhibits.

With the Commission's consent, the Citywide Traffic Analysis will be forwarded to the City Council as an item.

Respectfully submitted,

JEFFERY W. GIBSON  
Community Development Director

By   
Ted Semaan, Manager  
Transportation Planning,  
Development Engineering &  
Records Division