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TECHNICAL MEMORANDUM

St. Juan Diego Catholic Parish Preliminary Estimate of Site-Generated Traffic

Date: August 4, 2005

Project #: 7440

To: Nancy Merryman & Diana Moosman, Robertson Merryman Barnes Architects

From: Judith Gray & Alek Pochowski

cc: Elizabeth Wemple, P.E., Kittelson & Associates, Inc.

The St. Juan Diego Catholic Parish is proposing to construct a new church in the southwest corner of the NW Springville Road/NW 178th Avenue intersection in Washington County, Oregon. The purpose of the memorandum is to provide a preliminary estimate of trip generation for the project to assist in identifying potential transportation issues and county requirements for further traffic analysis. Washington County typically identifies requirements for traffic analysis based, in large part, on the increase in daily trips on the adjacent public street system. This memorandum identifies estimated traffic generated by the church, distribution onto the adjacent roadway system, and the resulting net increase in weekday daily traffic.

PROJECT DESCRIPTION

The St. Juan Diego currently meets at the Portland Community College, Rock Creek Campus north of SW Springville Road. Preliminary plans for the new facility include an 11,000-square-foot parish and community building, with seating capacity for approximately 600 people. There are no plans for significant uses (e.g. day care, schools) of the church during weekdays. Weekday activities will typically be limited to general office and other support activities.

TRIP GENERATION

Estimates of weekday daily and p.m. peak hour vehicle trip ends for the proposed church were developed based on empirical observations at similar facilities. These observations are summarized in the standard reference *Trip Generation, 7th Edition*, published by the Institute of Transportation Engineers (1).

Sunday trip generation was estimated based on manual traffic counts conducted at the SW Springville Road/PCC Campus Access intersection on a recent Sunday morning when the St. Juan parish was meeting on campus (Attachment A). The peak period for vehicles arriving at the church was between 9:00 a.m. and 10:00 a.m. when there were approximately 150 total trips at the driveway (145 inbound, 5 outbound). Attendance data provided by the church indicate that total attendance of 380 people on the same day that the traffic counts were conducted.

If the new church is developed with seating capacity for 600, this could result in a 57-percent increase in attendance under maximum occupancy. This same growth factor was applied to the observed traffic counts to estimate future trip generation. It should be noted that this is a conservative approach, as it assumed full occupancy of the church.

Table 1 Trip Generation Estimate

Day of Week	Size	Source	Daily Trips	Peak Hour*		
				Total	In	Out
Weekday	11,000 s.f.	ITE	100	10	5	5
Sunday	600 seats	Traffic Counts		235	230	5

* Weekday peak hour reflects the typical weekday p.m. peak hour
Sunday peak hour reflects the peak entering period.

TRIP DISTRIBUTION

The trip distribution pattern for the site-generated trips was estimated based on the manual turning movement counts conducted at the PCC access driveway and a review of general traffic and land use patterns in the vicinity. The estimated distribution pattern is shown in Figure 1. The figure also shows the existing weekday daily traffic (obtained from historic counts), the incremental increase from the church, and the percent change in daily traffic. As Figure 1 shows, the increase in weekday daily traffic resulting from the proposed church is expected to be less than one percent on the adjacent public roadways.

CONCLUSION

The estimated increase in weekday daily traffic would not, in and of itself, result in a requirement for a traffic study by Washington County. The County may require analysis for other reasons. For example:

- If you choose to pursue a driveway on SW Springville Road, the county's driveway spacing standards would not be met. A traffic analysis justifying the modification to their spacing standards would be required;
- The county may wish to see evaluation of the driveway operations during the Sunday peak period; or,
- If the county identifies any safety concerns in the area, a traffic analysis may be required.

If we can be of further assistance, please contact us at your convenience.

Reference

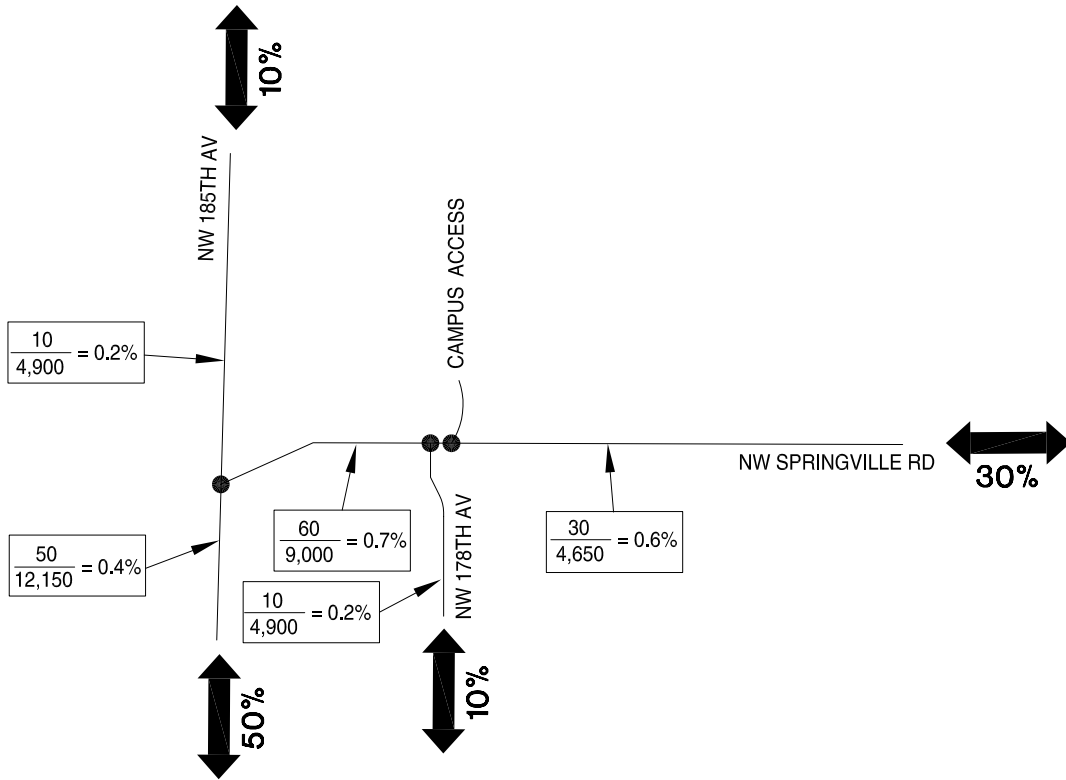
1. Institute of Transportation Engineers, *Trip Generation*, 7th Edition, 2003.

Attachments

- A. Church attendance and parking data
- B. Manual turning movement counts



(NO SCALE)



TRIP DISTRIBUTION PATTERN
XX %

$$\frac{xx}{xx} = \frac{\text{SITE-GENERATED DAILY TRIPS}}{\text{2004 EXISTING DAILY TRIPS}}$$

NOTE: EXISTING 2004 DAILY TRIPS
DERIVED FROM PM PEAK HOUR VOLUMES
(MULTIPLIED BY TEN)

TRIP DISTRIBUTION PATTERN
AND DAILY TRAFFIC VOLUME COMPARISON
WASHINGTON COUNTY, OREGON

FIGURE
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