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Trip Generation Analysis



April 10, 2018

Mr. Ronald Fedrick, CEO
Nova Group, Inc.
P.O. Box 4050
Napa, CA 94558

Trip Generation Study for 185 Devlin Road

Dear Mr. Fedrick;

W-Trans has completed a focused traffic study that addresses the potential trip generation associated with the use of the existing warehouse at 185 Devlin Road in the City of Napa for wine storage uses. It is understood that the buildings were assessed a nominal trip fee when constructed, with the remainder of the traffic impact fee to be collected upon occupation of the building. The additional fee is assessed based on the proposed use and its anticipated trip generation.

Project Description

The proposed project is a wine storage warehouse of approximately 400,500 square feet located at 185 Devlin Road. The proposed operation would have 20 full-time employees and an additional 20 part-time employees. The facility could operate seven days a week from 6:00 a.m. to 6:00 p.m.

Trip Generation

Trip generation rates for warehousing uses as published in the *Trip Generation Manual*, 10th Edition, 2017, by the Institute of Transportation Engineers (ITE) were explored to determine the most appropriate rates to apply to the proposed use.

Consideration was given to evaluating the project based on the floor area, as is common for many land uses. However, a review of standard rates for warehousing uses and a comparison of those based on area versus those based on employees indicate that the average ratio between employees and floor space is about 2,900 square feet per employee. For the project site, this would translate to an anticipated work force of about 138 persons based on a total floor area of 400,500 square feet. Given that this project expects to have only about 30 percent of this number of employees, use of the rates based on total floor area appears unreasonable.

Application of the rates with the number of employees as the independent variable would result in 202 trips per day during typical operation with 24 trips during the morning peak hour and 26 trips during the evening peak hour. Given that the operation would require 20 full-time employees and 20 part-time employees, use of the rates based on employees appears reasonable. Given that employees would not all work the same shift, it is anticipated that there would be fewer than one trip per employee during each peak hour, with only a portion of the employees arriving and departing during each of these hours and the remainder arriving and departing outside the peak periods. It is noted that as is the case with standard trip generation rates, all trips generated by the use are included, so while the independent variable is employees, trips associated with trucks making deliveries or picking up case goods, visitors and other non-employees are reflected in the rate and resulting trip estimates.

These results are summarized in Table 1.

Table 1 – Trip Generation Summary

Operation	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Employees	40	5.05	202	0.51	24	18	6	0.66	26	10	16

Conclusions

The proposed project is expected to generate an average of 202 trips daily, with 24 trips projected during the morning peak hour and 26 during the evening peak hour.

We hope this information is adequate to address the potential trip generation associated with the proposed wine storage facility. Please contact us if you have any further questions. Thank you for giving us the opportunity to provide these services.

Sincerely,

Dalene J. Whitlock, PE, PTOE
Principal

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