

February 13, 2014

Mr. Tom O'Malley
JDM Partners
2400 E. Arizona Biltmore Circle
Building 2, Suite 1270
Phoenix, AZ 85016

■
Suite 300
7740 N. 16th Street
Phoenix, Arizona
85020

TEL 602 944 5500

Re: Wigwam Resort GPA - Parcel B, Litchfield Park, Arizona
Traffic Impact Statement

Dear Mr. O'Malley:

This letter outlines our findings regarding the traffic issues related to the proposed general plan amendment for the currently vacant parcel at the northwest corner of the intersection of Litchfield Road and Wigwam Boulevard. Parcel B is the undeveloped 14.88 acre site, formerly part of the "Rosewood Plaza" project, located in the south half of Section 21, Township 2 North, Range 1 West, GSRBM, and is located at the northwest corner of Wigwam Boulevard and Litchfield Road. This review also included the currently vacant parcels at the northwest corner of the intersection of Litchfield Road and Wigwam Boulevard. The street system that will serve the development is essentially complete and several traffic analysis reports were previously prepared to determine the appropriate improvements needed to provide the desired level of service for the area.

The evaluation of the area transportation system was originally completed in the Traffic Impact Analysis (TIA) report for the *Palm Valley Master Plan* (PVMP) dated June 1998. This document was supplemented by the Village of Litchfield Greens (VLG) TIA dated July 1999. The traffic impact for currently vacant parcels was more specifically reviewed in two reports: the Rosewood Plaza Traffic Impact Study (TIS) dated March 2006 addressing the parcels fronting along Litchfield Road, and the Litchfield Park Condominium Project addressing the adjacent residential parcel.

These various analyses identified land uses for the vacant parcels that formed the basis of the trip generation and associated improvement recommendations. The proposed General Plan Amendment (GPA) will result in the addition of residential land uses to an area currently used as a portion of the golf course. The previous trip generation calculations for the parcels are compared to the calculations prepared for the proposed uses under the GPA.



Parcel B, located on the east side of Litchfield Road at the immediate northwest corner of the intersection of Litchfield Road and Wigwam Boulevard was previously identified as Area 18 in the VLG TIA and subsequently evaluated in the southern portion of the site plan for the Rosewood Plaza TIS. The VLG TIA identified the land use assumptions for Area 18 as 290,000 square feet of retail commercial building area. The land uses for the southern portion of the site plan for the Rosewood Plaza included in the final revision of the Rosewood Plaza TIS are shown in Table 1.

Table 1

| Land Use Description | Independent Variable | No. of Units |
|-------------------------------------|-----------------------------|---------------------|
| Shopping Center | 1,000 Sq. Ft. | 60.5 |
| Apartment | Dwelling Units | 154 |
| Supermarket | 1,000 Sq. Ft. | 35 |
| High-Turnover (Sit-Down) Restaurant | 1,000 Sq. Ft. | 20.8 |

The current GPA for Parcel B anticipates a mix of multi-family along with commercial retail uses as summarized in Table 2.

Table 2

| Land Use Description | Independent Variable | No. of Units |
|-------------------------------------|-----------------------------|---------------------|
| High-Turnover (Sit-Down) Restaurant | 1,000 Sq. Ft. | 15 |
| Supermarket | 1,000 Sq. Ft. | 35 |
| Apartment | Dwelling Units | 150 |

Using trip rates provided in the Institute of Transportation Engineers' Trip Generation, 9th Edition, the number of trips generated for Parcel B under the VLG TIA land use was calculated. Based on these calculations, it was concluded that the site under the previous land use would be expected to generate 13,568 daily trips with 298 trips occurring in the AM peak hour and 1,223 trips occurring in the PM peak hour. These calculations are shown in the attached summary.

Similarly, the number of trips generated for the parcel under the Rosewood Plaza land use assumptions was calculated. Based on these calculations, it was concluded that the site under the most recently reviewed land use assumptions would be expected to generate 12,152 daily trips with 538 trips occurring in the AM peak hour and 1,060 trips occurring in the PM peak hour. These calculations are also shown in the attached summary.

The trip generation calculations for Parcel B under the GPA were also reviewed. Based on these calculations, it was concluded that the site would be expected to generate 6,486 daily trips with 358 trips occurring in the AM peak hour and 573 trips occurring in the PM peak hour.



The calculations show that the potential land use assumptions for Parcel B will generate fewer trips than the land uses anticipated in the original VLG TIA or the more recent Rosewood Plaza TIS. The previous analyses has indicated that there is sufficient capacity on the area street system that, with recommended traffic control provisions, notably the addition of a traffic signal at the intersection of Litchfield Road and Village Parkway, the traffic volumes generated under the previous plans could be accommodated.

With the anticipated reduction in volumes associated with all the potential land use plans, the GPA should result in levels of service that are improved from what would have been expected under the previous plans for the area.

This review is based upon the general land uses presented in the GPA application. Once site plans are prepared, a detailed traffic impact analysis will be prepared to document the specific driveway locations, spacing from signals or other driveways, geometry for driveways, exclusive turn lanes and detailed level of service calculations.

If you have any further questions please feel free to contact me at (602) 944-5500.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.


Charles R. Wright, P.E.

Attachments

K:\PHX_Civil\191825000 - Wigwam\Reports\TrafficB.doc



Trip Generation Planner (ITE 9th Edition) - Summary Report



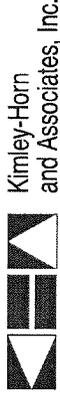
Weekday Trip Generation **Project Name** **Parcel B - GPA**
Trips Based on Average Rates/Equations **Project Number**

| ITE Code | Internal Capture Land Use | Land Use Description | Independent Variable | No. of Units | Avg Rate of Eq | Rates | | | | | | Total Trips | | | | | | Net Trips after Internal Capture | | | | | | Net Trips after Internal Capture & Pass-By | | | | | | | | | | | | | | | | |
|---------------|---------------------------|-------------------------------------|----------------------|--------------|----------------|------------|-------|---------|------|---------|-----|-------------|------|----------|-----|----------|-----|----------------------------------|-----|----------|-----|----------|------|--|-----|----------|------|----------|-----|-------------|-----|----------|-----|----------|-----|-----|-----|-----|-----|-----|
| | | | | | | Daily Rate | | PM Rate | | AM Rate | | Daily Trips | | PM Trips | | AM Trips | | Daily Trips | | PM Trips | | AM Trips | | Daily Trips | | PM Trips | | AM Trips | | Daily Trips | | PM Trips | | AM Trips | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 220 | Select Use | Apartment | Dwelling Unit(s) | 150 | Avg | 6.65 | 0.51 | 0.62 | 988 | 77 | 93 | 15 | 62 | 60 | 33 | 988 | 77 | 93 | 15 | 62 | 60 | 33 | 988 | 77 | 93 | 15 | 62 | 60 | 33 | 988 | 77 | 93 | 15 | 62 | 60 | 33 | | | | |
| 866 | Select Use | Supermarket | 1,000 Sq Ft | 35 | Avg | 102.24 | 3.40 | 9.48 | 3580 | 119 | 332 | 74 | 45 | 169 | 163 | 3580 | 119 | 332 | 74 | 45 | 169 | 163 | 3580 | 119 | 332 | 74 | 45 | 169 | 163 | 3580 | 119 | 332 | 74 | 45 | 169 | 163 | | | | |
| 937 | Select Use | High-Turnover (Sit-Down) Restaurant | 1,000 Sq Ft | 15 | Avg | 127.15 | 10.81 | 9.85 | 1908 | 162 | 146 | 89 | 73 | 89 | 59 | 1908 | 162 | 146 | 89 | 73 | 89 | 59 | 1908 | 162 | 146 | 89 | 73 | 89 | 59 | 1908 | 162 | 146 | 89 | 73 | 89 | 59 | | | | |
| Totals | | | | | | 6486 | 358 | 573 | 178 | 180 | 318 | 255 | 6486 | 358 | 573 | 178 | 180 | 318 | 255 | 6486 | 358 | 573 | 178 | 180 | 318 | 255 | 6486 | 358 | 573 | 178 | 180 | 318 | 255 | 6486 | 358 | 573 | 178 | 180 | 318 | 255 |

Notes:

- (1) AM and/or PM rates correspond to peak hour of generator
- A Trip Generation data from ITE, Trip Generation, 9th Edition
- B AM/PM rates correspond to peak of adjacent street traffic (if data available)
- C Includes weekday rates only
- D Total trips include pass-by trips w/ no internal capture
- E Pass-by rates from ITE, Trip Generation Handbook, 2nd Edition
- F Internal capture rates from ITE, Trip Generation Handbook, 2nd Edition
- G Worksheet is intended as a planning tool. Verify results w/ ITE, Trip Generation 9th Edition

Trip Generation Planner (ITE 9th Edition) - Summary Report



Kimley-Horn
and Associates, Inc.

Weekday Trip Generation
Trips Based on Average Rates/Equations

Project Name
Parcel B - Rosewood

Project Number

| ITE Code | Internal Capture Land Use | Land Use Description | Independent Variable | No. of Units | Avg Rate or Eq | Rates | | | | | | Total Trips | | | | | | Net Trips after Internal Capture | | | | | | Net Trips after Internal Capture & Pass-By | | | | | | | | | | | | |
|---------------|---------------------------|-------------------------------------|----------------------|--------------|----------------|------------|-------|---------|-------|---------|------|-------------|-----|----------|-----|----------|-----|----------------------------------|-----|----------|-----|----------|-------|--|------|----------|-----|----------|-----|-------------|-----|----------|-----|----------|-----|-----|
| | | | | | | Daily Rate | | AM Rate | | PM Rate | | Daily Trips | | AM Trips | | PM Trips | | Daily Trips | | AM Trips | | PM Trips | | Daily Trips | | AM Trips | | PM Trips | | Daily Trips | | AM Trips | | PM Trips | | |
| | | | | | | Rate | Rate | Rate | Rate | Rate | Rate | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | In | Out | | | |
| 720 | Select Use | Apartment | Dwelling Unit(\$) | 154 | Avg | 6.85 | 0.51 | 0.62 | 1026 | 79 | 95 | 16 | 63 | 62 | 33 | 1026 | 79 | 95 | 16 | 63 | 62 | 33 | 1026 | 79 | 95 | 16 | 63 | 62 | 33 | 1026 | 79 | 95 | 16 | 63 | 62 | 33 |
| 820 | Select Use | Shopping Center | 1,000 Sq Ft GLA | 60.5 | Eq | N/A | N/A | N/A | 4900 | 115 | 428 | 71 | 44 | 205 | 223 | 4900 | 115 | 428 | 71 | 44 | 205 | 223 | 4900 | 115 | 428 | 71 | 44 | 205 | 223 | 4900 | 115 | 428 | 71 | 44 | 205 | 223 |
| 860 | Select Use | Supermarket | 1,000 Sq Ft | 35 | Avg | 102.24 | 3.40 | 9.48 | 3560 | 119 | 332 | 74 | 45 | 169 | 163 | 3560 | 119 | 332 | 74 | 45 | 169 | 163 | 3560 | 119 | 332 | 74 | 45 | 169 | 163 | 3560 | 119 | 332 | 74 | 45 | 169 | 163 |
| 932 | Select Use | High-Turnover (Sit-Down) Restaurant | 1,000 Sq Ft | 20.8 | Avg | 127.15 | 10.81 | 9.85 | 2646 | 225 | 205 | 124 | 101 | 123 | 82 | 2646 | 225 | 205 | 124 | 101 | 123 | 82 | 2646 | 225 | 205 | 124 | 101 | 123 | 82 | 2646 | 225 | 205 | 124 | 101 | 123 | 82 |
| Totals | | | | | | | | | 12152 | 538 | 1060 | 285 | 253 | 559 | 501 | 12152 | 538 | 1060 | 285 | 253 | 559 | 501 | 12152 | 538 | 1060 | 285 | 253 | 559 | 501 | 12152 | 538 | 1060 | 285 | 253 | 559 | 501 |

Notes:
(1) AM and/or PM rates correspond to peak hour of generator

- A Trip Generation data from ITE Trip Generation, 9th Edition
- B AM/PM rates correspond to peak of adjacent street traffic (if data available)
- C Includes weekday rates only
- D Total trips include pass-by trips w/ no internal capture
- E Pass-by rates from ITE Trip Generation Handbook, 2nd Edition
- F Internal capture rates from ITE Trip Generation Handbook, 2nd Edition
- G Worksheet is intended as a planning tool. Verify results w/ ITE Trip Generation 9th Edition

