



April 1, 2021

Mr. Eric Anderson  
Republic Services  
Director of Business Development  
Southwest Area  
1855 E. Deer Valley Road  
Phoenix, AZ 85024

Re: WestWing Transfer Station Site Analysis, Maricopa County, Arizona

Dear Mr. Anderson:

This letter outlines our findings regarding the trip generation of the proposed transfer station and hauling facility located on a 10-acre parcel at the southwest corner of the Westwing substation, north of the Loop-303 and east of El Mirage Road in Maricopa County, Arizona. The development is proposed with five (5) transfer bays. Access to the site is proposed from a future collector street extension east, along the Mariposa Grande alignment, from an extension of El Mirage Road north from the existing Loop-303 interchange, to the west side of the Westwing Business park. The development is anticipated to be completed by the fall of 2022. The site location is shown in the attached graphic for reference.

Trip Generation

The projected trip generation characteristics for trucks from the development were prepared from forecasted data provided by the operator of the proposed facility. According to the facility operator, the transfer station is expected to experience substantial annual growth for the first 5 years, and then achieve minimal growth for the years following. It was further estimated that both AM and PM peak hours would generate around 10% of the daily traffic expected entering and exiting the site. The peak trip generation characteristics for the proposed development are summarized in **Table 1**.

**Table 1. Proposed Land Use Trip Generation**

Land Use	Daily Total	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Transfer Station (5 years after opening)	76	4	4	8	4	4	8

As shown in **Table 1**, the site would be expected to generate 76 daily truck trips, with 8 trips occurring in the AM peak hour and 8 trips occurring in the PM peak hour. Onsite employees would account for another four to six trips during the peak periods.

Three potential alternative land use scenarios were evaluated for a comparison of the potential trip generation of the transfer station to other allowable uses on the same size parcel. The comparison assumed a 100,000 square foot building could be accommodated on a similar sized parcel as either Warehousing, Manufacturing or Truck Terminal uses. Trip generation rates published by the *Institute*

of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition were used to determine the trip generation characteristics of the alternative land uses.

**Table 2. Alternative Land Use Trip Generation**

Land Use Description	ITE Code	Quantity	Units	Daily Trips	AM			PM		
					In	Out	Total	In	Out	Total
Truck Terminal	030	100,000	SF		93	104	197	97	90	187
Manufacturing	140	100,000	SF	394	48	14	62	21	46	67
Warehousing	150	100,000	SF	174	13	4	17	5	14	19

The trip generation comparison shows that the proposed transfer station will generate the fewest trips when compared to the three alternative uses that could potentially be developed on a similar sized site. Although truck traffic within the vicinity of the transfer station may increase slightly due to the development, the traffic during the peak hours is anticipated to be minimal with minor impact on the adjacent street network and does not generate sufficient traffic to warrant additional traffic analysis.

**Westwing Transfer Station Access Review**

In addition to the traffic statement, a review of the potential access options for the site was prepared. As mentioned above, the site under consideration for the location of the proposed Westwing Transfer Station is situated on a parcel of land within the Westwing Business Park. The Westwing Business Park plan includes approximately 75 acres of land in the south half of Section 12, Township 4 North, Range 1 West, in Maricopa County, Arizona (APN 503-53-025U). The proposed Westwing Transfer Station parcel is located in the northwest corner of the Westwing Business Park. The area surrounding the Westwing Business Park is within the City of Peoria planning area. Several parcels in the vicinity of the site have been annexed into the City of Peoria municipal boundaries, however the Westwing Business Park parcel, adjacent privately held parcels and the nearby AZ State Land Department parcels remain within Maricopa County jurisdiction.

The Westwing Business Park parcel is located on the north side of the Loop-303 freeway and immediately south of the existing electrical substation. Existing freeway interchanges on the Loop-303 at Happy Valley Road to the north of the site, and El Mirage Road to the west of the site, provide access to the surrounding areas. The Happy Valley Road interchange at the Loop-303 provides access to the northern connection to Vistancia Boulevard and also to the western extension of Happy Valley Road on the north side of the McMicken Dam. The El Mirage Road interchange at the Loop-303 provides access to the southern extension of El Mirage Road between Sun City West and the Agua Fria River channel. The Circulation Element of the City of Peoria General Plan identifies the roadway cross-section (Arterial) and general alignment for the future extension of El Mirage Road improvements, between Jomax Road and the Loop-303. The majority of the ultimate El Mirage Road improvements between Jomax Road and the Loop-303 have not been completed, with the exception of limited half-street improvements adjacent to recently constructed developments. A significant portion of the remaining segments of El Mirage Road improvements between Jomax Road and the Loop-303 are adjacent to, or cross through, AZ State Land Department parcels and Flood Control District of Maricopa County parcels. In addition, the current general plan alignment for El Mirage Road improvements between Jomax Road and the Loop-303 will cross multiple existing electrical transmission line corridors and an irrigation canal, as well as significant drainage features. In addition to the plan for El Mirage Road, the Circulation Element of the City of Peoria General Plan identifies a future collector street segment approximately ¼-mile north of the Loop 303 (the Mariposa Grande alignment), extending

approximately one mile west of El Mirage on the south side of the McMicken Dam. This collector street would ultimately access the Loop-303 from the northern extension of El Mirage Road from the existing freeway interchange.

The proposed off-site access to the Westwing Business Park, and the site for the Westwing Transfer Station, is anticipated to be an easterly extension of the currently proposed collector street system, on the Mariposa Grande alignment, from El Mirage Road to the site. The improvements would include an approximately ¼-mile interim northern extension of El Mirage Road, from the current termination on the north side of the Loop -303 interchange, to the Mariposa Grande alignment. The El Mirage Road interim improvements would be consistent with the ultimate improvements and alignment crossing the AZ State Land Department holdings up to the Mariposa Grande alignment. The Mariposa Grande collector street would extend approximately ½-mile east within Section 11, through the AZ State Land Department holdings and the Flood Control District of Maricopa County parcel, to the western edge of the Westwing Business Park parcel. The recommended off-site roadway improvements (depicted in green in the attached exhibit) would total ¾ of a mile and would be consistent with the existing Arterial Street alignments identified in the Circulation Element of the City of Peoria General Plan. The Mariposa Grande collector street extension improvements would be compatible with the existing collector street alignment included in the circulation plan and would accommodate the required drainage structures through the Flood Control District of Maricopa County parcel. Existing utility corridors would be accommodated for the entire ¾-mile length of off-site improvements. Easements or right of way for the off-site roadway improvements would need to be obtained from AZ State Land Department and the Flood Control District of Maricopa County.

The proposed off-site access improvements allow for the traffic generated by the Westwing Transfer Station to gain access to the site from the Loop-303 without significantly impacting existing arterial streets in the area. Direct access to the El Mirage Road interchange at the Loop-303 will be provided by a new extension of El Mirage Road eliminating the need to utilize existing arterial streets. Similarly, the Mariposa Grande collector street extension would provide direct access to El Mirage Road eliminating potential impact to any other existing streets near the site. The proposed Mariposa Grande collector street extension also provides the foundation for a future collector street system within Section 12 that serves not only the Westwing Transfer Station but also the remaining parcels within the Westwing Business Park and adjacent private properties and AZ State Land Department parcels north of the Loop-303.

The existing improvements at the El Mirage Road interchange at the Loop-303 provide significant surplus capacity for the accommodation of future traffic volumes. The existing pavement on El Mirage Road at the interchange has been constructed to a width to accommodate three lanes in both the northbound and southbound directions, with dual left turn lanes onto the loop-303 and three lane off-ramps at the intersections. Temporary pavement markings have been utilized at the interchange for the current interim condition. The existing interchange improvements also included the infrastructure required to accommodate the addition of traffic signal control.

The most recent traffic counts on El Mirage Road, south of the Loop-303 indicated the total 24-hour volume in both directions was approximately 10,500 vehicles per day. In comparison, 24-hour traffic counts on Happy Valley Road showed approximately 32,000 vehicles per day east of the Loop-303, 23,000 vehicles per day west of the Loop-303 and 14,000 vehicles per day west of 119th Avenue. Based on discussions with ADOT staff, it appears that the current traffic volumes at the El Mirage Road and Loop-303 interchange do not currently meet the volumes to require signalization. The addition of the projected site traffic (less than 100 trips per day) and the addition of the interim northern extension of El Mirage Road, is not anticipated to significantly impact the need for traffic signal control at the El Mirage Road interchange at the Loop-303. Additional future development within the Westwing Business

Park, other AZ State Land Department parcels in the area or the extension of El Mirage Road north to Happy Valley Road or Jomax Road, could result in the need for the addition of signal control at the interchange.

Two potential off-site improvement options to provide access to the site from the north were also reviewed. One option considered was the potential to access the site from a southern extension of El Mirage Road from the existing Happy Valley Road and El Mirage Road intersection, to the northwest of the existing electrical substation (depicted in purple in the attached exhibit). The improvements would include an approximately 1.1-mile interim extension of El Mirage Road from Happy Valley Road to the Mariposa Grande alignment. The Mariposa Grande collector street extension improvements would be the same as previously described. The southern extension of El Mirage Road would be a mile longer than the northern extension from the Loop-303. Under the option to extend El Mirage Road to the south, site traffic would utilize the existing Happy Valley Road segments from El Mirage Road to the Loop-303, which has significantly more existing traffic, and less surplus capacity, than the preferred off-site improvement plan.

The second off-site improvement considered, was the potential to access the site from a southern extension of 119th Avenue from the existing Happy Valley Road and 119th Avenue intersection (depicted in blue in the attached exhibit). The improvements would include an approximately ½-mile extension of 119th Avenue from the end of the existing improvements, south of Happy Valley Road to the southeast corner of the existing electrical substation. An additional ½-mile extension southwest to the Mariposa Grande alignment would be required to access the Westwing Transfer Station parcel. In addition to impacting the more heavily utilized road segments along Happy Valley Road, this option is constrained by the limitation to right-in and right-out turns at the intersection of Happy Valley Road and 119th Avenue necessitated by the limited spacing between 119th Avenue and Vistancia Boulevard.

Both alternative access options from the north require more off-site improvements than the proposed off-site access improvement plan. The ultimate lane configuration of both Happy Valley Road and El Mirage Road will consist of three through lanes in each direction. The potential impact to current traffic utilizing existing area streets is more significant with the two off-site improvement options utilizing Happy Valley Road. The existing traffic volumes near the Loop-303 on Happy Valley are nearly three times the existing traffic volumes near El Mirage Road. The portion of the additional available roadway capacity utilized by the proposed transfer station with El Mirage Road access would be significantly less than at Happy Valley Road. Additionally, access options from the north will require circulation of site traffic adjacent to existing residential development along Happy Valley Road.

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.



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