



Whipple Consulting Engineers, Inc.

October 31, 2025  
W.O. No. 2022-3287

City of Spokane  
808 W Spokane Falls Boulevard  
Spokane, WA 99201

Attn: Inga Note, P.E.,

Re: **Volkman PUD Subdivision**  
**9802, 9702 N Nine Mile Road**  
**Trip Generation & Distribution Letter**

|                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parcel No.<br>26163.0017, 26164.0046<br>26164.0018, 26211.0054<br>26211.0101, 26211.0201<br>26211.0211, 26211.0057<br>26214.0051, 26214.0058<br>26164.0031, 26214.0053 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Dear Inga,

This Trip Generation and Distribution Letter (TGDL) is for the proposed Volkman PUD Subdivision development at 9802 and 9702 N Nine Mile Road. Please see Figure 1, Vicinity Map. This letter will establish the anticipated trip generation and distribution for the development as shown on Figure 2, Preliminary Site Plan. This report will follow the standards for traffic letters as required by Spokane County and Transportation Impact Analyses for Site Development published by the Institute of Transportation Engineers (ITE).

### **PROJECT DESCRIPTION**

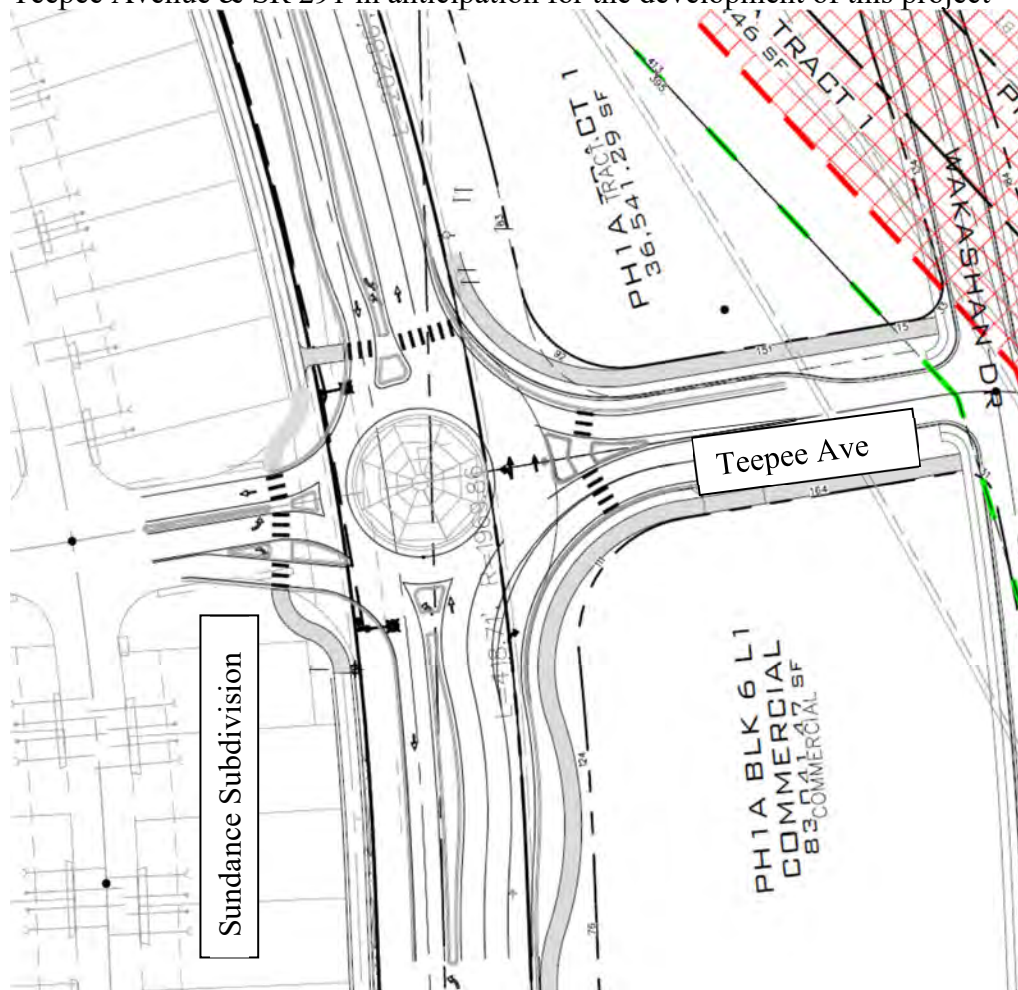
The project proposes to develop 97.78 acres of parcels totaling 136.52 acres +/- into a planned unit development. 38.73 acres +/- of the project includes slopes greater than 30% and are to remain as open space. The Volkman PUD is a mixed use development that includes a variety of different uses and one neighborhood commercial land use. The single family residential under land use code #210 include a "standard" lot which are single family lots that are 1/3<sup>rd</sup> of an acre in size, the cottage lots are 1/4 of an acre, the auto court lots are centered around a central driveway and the compact lot. The duplex lots are included under LUC #215. The townhouse units are included under LUC #220. The multifamily land uses are included under LUC #221. The neighborhood commercial use is anticipated to be a fuel station with a convenience market and eight fueling positions.

| Land use Description          | LUC | Units | Total Units per LUC |
|-------------------------------|-----|-------|---------------------|
| Standard Lots (Single Family) | 210 | 31    | 314                 |
| Cottage Lots                  | 210 | 126   |                     |
| Auto Court                    | 210 | 120   |                     |
| Compact lot                   | 210 | 37    |                     |
| Duplex Lots                   | 215 | 44    | -                   |
| Townhouse                     | 220 | 114   | -                   |
| Multi – Family Apartments     | 221 | 324   | -                   |
| Commercial ( Fuel Station)    | 945 | 8     | -                   |

The project site is currently developed with two single-family residences and outbuildings that are proposed to be removed with the project. The project proposes to be accessed via Teepee Avenue, TomTom Avenue and Johansen Avenue. All three roadways are proposed to be extended east into the project. The project proposes a network of roadways and alleyways that weave through the property and up the hillside. Please see Figure 2 Preliminary site plan.

#### Sundance Subdivision

The Sundance subdivision is located directly to the west of the project. The Sundance subdivision was conditioned to provide sufficient right of way to support a roundabout at the intersection of Teepee Avenue & SR 291 in anticipation for the development of this project



#### VICINITY / SITE PLAN

The site is currently listed on the comprehensive plan and zoned as R1 (Residential Low). The subject property is located on a portion of S 1/2, Section 16, T26N., R42E., W.M. and Section 21, T26N., R42E., W.M. The parcel numbers for the project are 26163.0017, 26164.0046, 26164.0018, 26211.0054, 26211.0101, 26211.0201, 26211.0211, 26211.0057, 26214.0051, 26214.0058, 26164.0031, 26214.0053. The surrounding areas are zoned as low density residential. A vicinity map is included as Figure 1, along with a preliminary plat as Figure 2.

## **TRIP GENERATION AND DISTRIBUTION**

### **Trip Types**

The proposed use is a mixed use development; Institute of Transportation Engineers (ITE) has developed data regarding various trip types that all developments experience. These are found in several places; however, for this analysis the *Trip Generation Manual 11<sup>th</sup> Edition* as well as the *Trip Generation Handbook* were used to develop the criteria for this analysis.

Generally, all existing and proposed developments will be made up of one or more of the following four trip types: new (destination) trips, pass-by trips, diverted trips, and shared (internal trips). In order to better understand the trip types available for land access a description of each specific trip type follows.

**New (Destination) Trips** - These types of trips occur only to access a specific land use such as a new retail development or a new residential subdivision. These types of trips will travel to and from the new site and a single other destination such as home or work. This is the only trip type that will result in a net increase in the total amount of traffic within the study area. The reason primarily is that these trips represent planned trips to a specific destination that never took trips to that part of the city prior to the development being constructed and occupied. This project will develop new trips.

**Pass-by Trips** - These trips represent vehicles which currently use adjacent roadways providing primary access to new land uses or projects and are trips of convenience. These trips, however, have an ultimate destination other than the project in question. They should be viewed as customers who stop in on their way home from work. An example would be on payday, where an individual generally drives by their bank every day without stopping, except on payday. On that day, this driver would drive into the bank, perform the prerequisite banking, and then continue on home. In this example, the trip started from work with a destination of home, however on the way, the driver stopped at the grocery store/latte stand and/or bank directly adjacent to their path. Pass-by trips are most always associated with commercial/retail types of development along major roadways. Therefore, for this project pass-by trips will be considered.

**Diverted (Linked) Trips** - These trips occur when a vehicle takes a different route than normal to access a specific facility. Diverted trips are similar to pass-by trips, but diverted trips occur from roadways which do not provide direct access to the site. Instead, one or more streets must be utilized to get to and from the site. For this project, no diverted trips are anticipated.

**Shared Trips** - These are trips which occur on the site where a vehicle/consumer will stop at more than one place on the site. For example, someone destined for a certain shop at a commercial site may stop at a bank just before or after they visit the shop that they went to the site to visit. This trip type reduces the number of new trips generated on the public road system and is most commonly used for commercial developments. Since the project has only one land use and no cross-access driveways with other land uses, no shared trips were considered.

### Trip Generation Characteristics for the Proposed Project

As noted earlier, trip generation rates for the AM & PM peak hours are determined by the use of the *Trip Generation Manual, 11<sup>th</sup> Edition* published by the Institute of Transportation Engineers (ITE). The purpose of the *Trip Generation Manual* is to compile and quantify empirical data into trip generation rates for specific land uses within the US, UK, and Canada.

For the proposed 312 residential lots (not including the 2 existing residences), Land Use Code (LUC) 210 Single-Family Detached Housing was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 1.

**Table 1-Trip Generation Rates for LUC # 210 – Single-Family Detached Housing**

| No. of Dwelling Units                | AM Peak Hour          |                                                                                                                                                                     |         | PM Peak Hour          |                                                                                                                                                                                                               |         |
|--------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                                      | Vol. per Fitted Curve | Directional Distribution                                                                                                                                            |         | Vol. per Fitted Curve | Directional Distribution                                                                                                                                                                                      |         |
|                                      |                       | 25% In                                                                                                                                                              | 75% Out |                       | 63% In                                                                                                                                                                                                        | 37% Out |
| 312                                  | 210                   | 52                                                                                                                                                                  | 158     | 290                   | 182                                                                                                                                                                                                           | 108     |
| <b>Average Daily Trip Ends (ADT)</b> |                       | Average Rate Equations (Adj. Street):<br>AM: $T = 0.70 * x = 218$<br>PM: $T = 0.94 * x = 293$<br>ADT: $T = 9.43 * x = 2,942$<br>T = Trips/units, x = Dwelling Units |         |                       | Fitted Curve Equations (Adj. Street):<br>AM: $\ln(T) = 0.91\ln(x) + 0.12 = 210$<br>PM: $\ln(T) = 0.94\ln(x) + 0.27 = 290$<br>ADT: $\ln(T) = 0.92\ln(x) + 2.68 = 2,874$<br>T = Trips/units, x = Dwelling Units |         |
| Units                                | ADT                   |                                                                                                                                                                     |         |                       |                                                                                                                                                                                                               |         |
| 312                                  | 2,874                 |                                                                                                                                                                     |         |                       |                                                                                                                                                                                                               |         |

For the proposed 44 residential units, Land Use Code (LUC) 215 Single-Family Attached Housing was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 2.

**Table 2-Trip Generation Rates for LUC # 215 – Single-Family Attached Housing**

| No. of Dwelling Units                | AM Peak Hour          |                                                                                                                                                                 |         | PM Peak Hour          |                                                                                                                                                                                    |         |
|--------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
|                                      | Vol. per Fitted Curve | Directional Distribution                                                                                                                                        |         | Vol. per Fitted Curve | Directional Distribution                                                                                                                                                           |         |
|                                      |                       | 25% In                                                                                                                                                          | 75% Out |                       | 59% In                                                                                                                                                                             | 41% Out |
| 44                                   | 17                    | 4                                                                                                                                                               | 13      | 92                    | 54                                                                                                                                                                                 | 38      |
| <b>Average Daily Trip Ends (ADT)</b> |                       | Average Rate Equations (Adj. Street):<br>AM: $T = 0.48 * x = 21$<br>PM: $T = 0.57 * x = 91$<br>ADT: $T = 7.20 * x = 317$<br>T = Trips/units, x = Dwelling Units |         |                       | Fitted Curve Equations (Adj. Street):<br>AM: $T = 0.52(x) - 5.70 = 17$<br>PM: $T = 0.60(x) - 3.93 = 92$<br>ADT: $T = 7.62(x) - 50.48 = 285$<br>T = Trips/units, x = Dwelling Units |         |
| Units                                | ADT                   |                                                                                                                                                                 |         |                       |                                                                                                                                                                                    |         |
| 44                                   | 285                   |                                                                                                                                                                 |         |                       |                                                                                                                                                                                    |         |

For the proposed 114 townhouse residential units, Land Use Code (LUC) 220 Multifamily Housing (Low Rise) was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 3.

**Table 3-Trip Generation Rates for LUC # 220 – Multifamily Housing (Low Rise)**

| No. of Dwelling Units                | AM Peak Hour          |                                                                                                                        | PM Peak Hour |                                                                                                                                             |
|--------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | Vol. per Fitted Curve | Directional Distribution                                                                                               |              | Vol. per Average Rate                                                                                                                       |
|                                      |                       | 24% In                                                                                                                 | 76% Out      |                                                                                                                                             |
| 114                                  | 46                    | 11                                                                                                                     | 35           | 58                                                                                                                                          |
| <b>Average Daily Trip Ends (ADT)</b> |                       | Average Rate Equations (Adj. Street):                                                                                  |              | Fitted Curve Equations (Adj. Street):                                                                                                       |
| Units                                | ADT                   | AM: $T = 0.40 * x = 46$<br>PM: $T = 0.51 * x = 58$<br>ADT: $T = 6.74 * x = 768$<br>T = Trips/units, x = Dwelling Units |              | AM: $T = 0.31(x) + 22.85 = 58$<br>PM: $T = 0.43(x) + 20.55 = 70$<br>ADT: $T = 6.41(x) + 75.31 = 806$<br>T = Trips/units, x = Dwelling Units |
| 114                                  | 768                   |                                                                                                                        |              |                                                                                                                                             |

For the proposed 324 multifamily residential units, Land Use Code (LUC) 221 Multifamily Housing (Mid Rise) was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in Trip Generation Handbook, The average rate and fitted curve equations and the anticipated number of AM & PM peak hour trips for the proposed land use are shown on Table 4.

**Table 4-Trip Generation Rates for LUC # 221 – Multifamily Housing (Mid Rise)**

| No. of Dwelling Units                | AM Peak Hour          |                                                                                                                            | PM Peak Hour |                                                                                                                                                |
|--------------------------------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | Vol. per Average Rate | Directional Distribution                                                                                                   |              | Vol. per Average Rate                                                                                                                          |
|                                      |                       | 23% In                                                                                                                     | 77% Out      |                                                                                                                                                |
| 324                                  | 120                   | 28                                                                                                                         | 92           | 126                                                                                                                                            |
| <b>Average Daily Trip Ends (ADT)</b> |                       | Average Rate Equations (Adj. Street):                                                                                      |              | Fitted Curve Equations (Adj. Street):                                                                                                          |
| Units                                | ADT                   | AM: $T = 0.37 * x = 120$<br>PM: $T = 0.39 * x = 126$<br>ADT: $T = 4.54 * x = 1,471$<br>T = Trips/units, x = Dwelling Units |              | AM: $T = 0.44(x) - 11.61 = 131$<br>PM: $T = 0.39(x) + 0.34 = 127$<br>ADT: $T = 4.77(x) - 46.46 = 1,499$<br>T = Trips/units, x = Dwelling Units |
| 324                                  | 1,471                 |                                                                                                                            |              |                                                                                                                                                |

For the proposed commercial lot, a convenience store with 8 fueling positions is anticipated , Land Use Code LUC#945 Convenience Store/Gas Station – GFA (2-4k) was used to establish the number of potential trips generated by the proposed land use. Based upon Section 4.4 in the Trip Generation Handbook,. The average rate and the anticipated number of AM & PM peak hour trips for the proposed land use are shown in Table 5.

**Table 5-Trip Generation Rates for LUC #945 Convenience Store/Gas Station – GFA (2-4k)**

| Fueling Positions                    | AM Peak Hour                                                                                                                                                                           |                          |         | PM Peak Hour                                                                                                                                       |                          |         |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|
|                                      | Vol. per Average Rate                                                                                                                                                                  | Directional Distribution |         | Vol. per Average Rate                                                                                                                              | Directional Distribution |         |
|                                      |                                                                                                                                                                                        | 50% In                   | 50% Out |                                                                                                                                                    | 50% In                   | 50% Out |
| 8                                    | 128                                                                                                                                                                                    | 64                       | 64      | 147                                                                                                                                                | 74                       | 73      |
| Pass-by                              | 77                                                                                                                                                                                     | 39                       | 38      | 82                                                                                                                                                 | 41                       | 41      |
| New                                  | 51                                                                                                                                                                                     | 25                       | 26      | 65                                                                                                                                                 | 33                       | 32      |
| <b>Average Daily Trip Ends (ADT)</b> | Average Rate Equations (Adj. Street):<br>AM: $T = 16.06 * x = 128$<br>PM: $T = 18.42 * x = 147$<br>ADT: $T = 265.12 * x = 2,121$<br>T = Trips/units, x = Dwelling Units<br>60% Pass-by |                          |         | Fitted Curve Equations (Adj. Street):<br>AM:<br>PM:<br>ADT: $T = 158.28(x) + 850.23 = 2,116$<br>T = Trips/units, x = Dwelling Units<br>56% Pass-by |                          |         |
| <b>Fueling Positions</b>             |                                                                                                                                                                                        |                          |         |                                                                                                                                                    |                          |         |
| 8                                    |                                                                                                                                                                                        |                          |         |                                                                                                                                                    |                          |         |

Pass-by per LUC 945 ITE trip Gen Appendices AM & PM Tables in Appendix

**Table 6-New Trip Generation Summary**

| Land Use Code (LUC)                     | AM Peak Hour |                          |            | PM Peak Hour |                          |            |
|-----------------------------------------|--------------|--------------------------|------------|--------------|--------------------------|------------|
|                                         | Vol. per LUC | Directional Distribution |            | Vol. per LUC | Directional Distribution |            |
|                                         |              | In                       | Out        |              | In                       | Out        |
| LUC #210 Single Family Detached Housing | 210          | 52                       | 158        | 290          | 182                      | 108        |
| LUC #215 Single Family Attached Housing | 17           | 4                        | 13         | 92           | 54                       | 38         |
| LUC #220 Multifamily Housing (Low Rise) | 46           | 11                       | 35         | 58           | 37                       | 21         |
| LUC #221 Multifamily Housing (Mid Rise) | 120          | 28                       | 92         | 126          | 77                       | 49         |
| LUC #945 Convenience Store/Gas Station  | 51           | 25                       | 26         | 65           | 33                       | 32         |
| <b>Total</b>                            | <b>444</b>   | <b>120</b>               | <b>324</b> | <b>631</b>   | <b>383</b>               | <b>248</b> |
| <b>Average Daily Trip Ends (ADT)</b>    |              |                          |            |              |                          |            |
| Land Use Code (LUC)                     | ADT          |                          |            |              |                          |            |
| LUC #210 Single Family Detached Housing | 2,874        |                          |            |              |                          |            |
| LUC #215 Single Family Attached Housing | 285          |                          |            |              |                          |            |
| LUC #220 Multifamily Housing (Low Rise) | 768          |                          |            |              |                          |            |
| LUC #221 Multifamily Housing (Mid Rise) | 1,471        |                          |            |              |                          |            |
| LUC #945 Convenience Store/Gas Station  | 2,116        |                          |            |              |                          |            |
| <b>Total</b>                            | <b>7,514</b> |                          |            |              |                          |            |

As shown in Table 6, the land uses of the proposed development are anticipated to generate 444 trips in the AM peak hour with 120 trips entering the site and 324 trips exiting the site. In the PM peak hour, the land uses of the proposed project are anticipated to generate 631 trips with 383 trips entering the site and 248 trips exiting the site. The landuses of the proposed development are anticipated to generate 7,514 average daily trips to/from the project.

### **TRANSPORTATION NETWORK**

As shown on the site plan, the site will be accessed via Kendrick and Ridgecrest Avenues. (please see Figure 2 Site Plan) It is anticipated that the residents of the site will generally use the following roadways:

**Teepee Avenue** is a proposed east/west, two-way, 2 lane local access road that extends west from Nine Mile Road through the proposed Sundance development. Teepee Avenue is anticipated to serve residential land uses. The proposed speed limit on Teepee Avenue is 25 MPH.

**TomTom Avenue** is a proposed east/west, two-way, 2 lane local access road that extends east from Nine Mile Road to Makah Drive. TomTom Avenue is proposed to serve residential and neighborhood retail land uses. The anticipated speed limit of TomTom Avenue is 25 MPH

**Johansen Avenue** is an east/west, two-way, 2-lane local access road that extends west from Nine Mile Road to Rosewood Street. Johansen Avenue is proposed to be extended east to Makah Drive. Johansen Avenue currently and is proposed to serve residential land uses. The speed limit on Johansen Avenue is 25 MPH.

**Nine Mile Road (State Route 291)** is generally a north/south, two-way, 2-lane urban principal arterial/urban minor arterial/rural major collector within Spokane County that extends southeast from the western boundary of Spokane County through Seven Mile Road and Rifle Club Road before transitioning into Francis Avenue. Nine Mile Road generally serves residential and rural land uses. The speed limit on Nine Mile Road within the study area is 50 MPH.

## Existing Transit System

The existing bus routes nearest the project site are Route 22 and 23. The nearest bus stops from the project site is 3.00 miles away at Driscoll Boulevard & Rowan Avenue. Please see the attached route map.



**Source: Spokane Transit Authority**

## Existing Pedestrian Networks

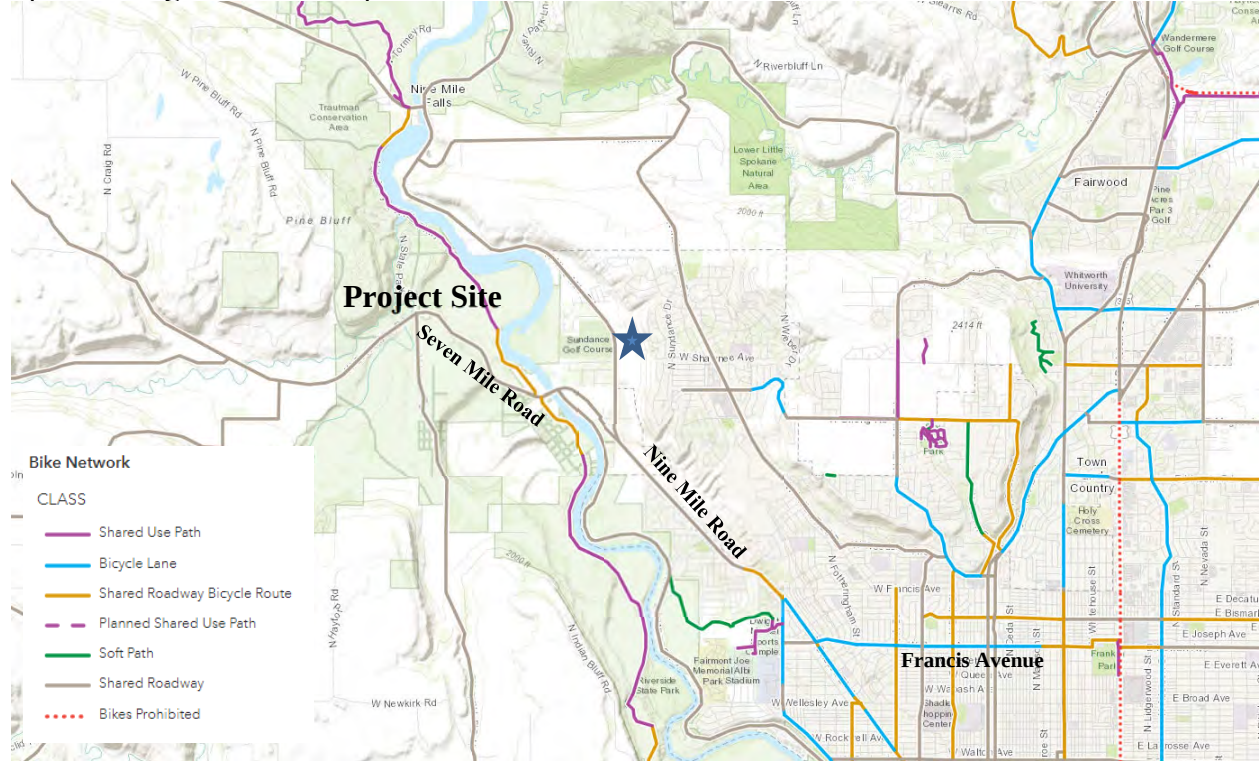
There are no existing sidewalks on Nine Mile Road or the neighborhood within the study area. Please see the attached pedestrian map.



**Source: City of Spokane Bike & Pedestrian Plans**

## Existing Bike Routes

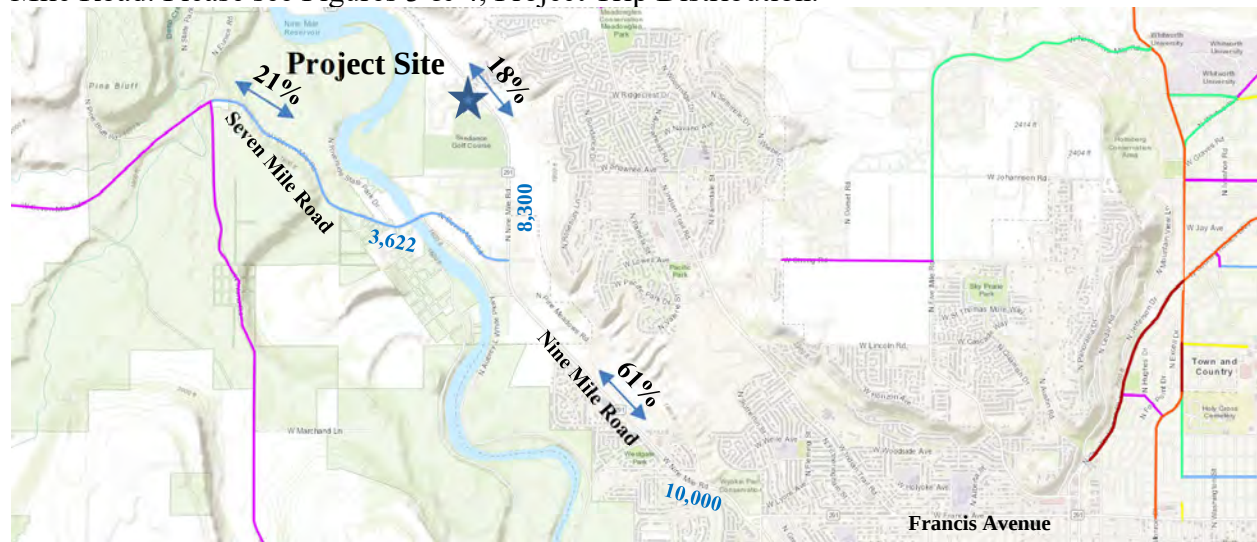
Within the study area, Nine Mile Road is assigned as shared roadway. Please see the attached Spokane Regional Bike Map.



**Source: Spokane Regional Bike Map – Spokane County**

### **TRIP DISTRIBUTION**

Considering many factors such as the surrounding transportation facilities, typical commuting patterns, and existing development in the area, traffic for the proposed development is anticipated as follows: 18% of the trips are anticipated to go to/from the north via Nine Mile Road, 21% of the trips are anticipated to go to/from the southwest via Seven Mile Road and Old Trails Road, and 61% of the trips are anticipated to go to/from the south and southeast via Nine Mile Road. Please see Figures 3 & 4, Project Trip Distribution.



Source: ADT Counts from Spokane County and WSDOT

### **TRAFFIC IMPACT FEE**

The City of Spokane municipal code has established transportation impact fees under Spokane Municipal Code Title 17 Chapter 17D.075. The proposed project is within the Northwest Service Area and as such is subject to the current Impact Fee Schedule. Table 7 calculates the anticipated impact fee for the proposed project.

**Table 7 –Proposed Land Use Impact Fee**

| Land Use                                | LUC | Quantity | Unit of Measure | Fee per unit | Fee                 |
|-----------------------------------------|-----|----------|-----------------|--------------|---------------------|
| LUC #210 Single Family Detached Housing | 210 | 314      | dwelling        | \$878.26     | \$275,773.64        |
| LUC #215 Single Family Attached Housing | 215 | 44       | dwelling        | \$532.56     | \$23,432.64         |
| LUC #220 Multifamily Housing (Low Rise) | 220 | 114      | dwelling        | \$476.50     | \$54,321.00         |
| LUC #221 Multifamily Housing (Mid Rise) | 221 | 324      | dwelling        | \$364.39     | \$118,062.36        |
| LUC #945 Convenience Store/Gas Station  | 945 | 8        | VFP             | \$2,741.16   | \$21,929.28         |
| <b>Total</b>                            |     |          |                 |              | <b>\$493,518.92</b> |

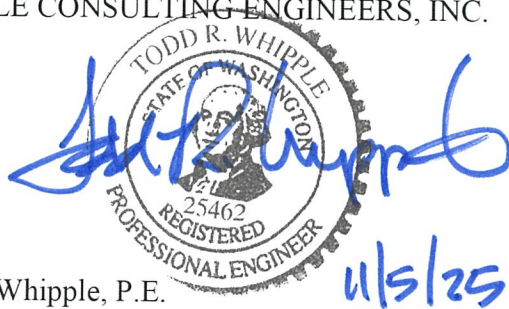
As shown in Table 7, the proposed project under the current fee schedule is anticipated to generate an impact fee of \$493,518.92.

## **CONCLUSIONS AND RECOMMENDATIONS**

It is anticipated that the proposed project will generate 444 new AM peak hour trips and 631 new PM peak hour trips. Based upon the number of anticipated trips, and the distribution of those trips on county and city arterials, we believe that while the proposed project will generate trips on the transportation system, that those trips may have an impact on the transportation system. Therefore, we recommend that the project pay the City of Spokane Traffic Impact Fee as allowed by the current code at the time of building permit, and be scoped for a traffic analysis.

Should you have any questions related to this document please do not hesitate to contact us at (509) 893-2617.

Sincerely,  
WHIPPLE CONSULTING ENGINEERS, INC.



Todd R Whipple, P.E.

TRW/bng

encl. Appendix (Vicinity Map, Preliminary Site Plan, Trip Dist. %)

cc: Sponsor  
File

# **APPENDIX**

1.Vicinity Map

2.Site Plan

3.AM New Trip Distribution by Percentage

4.PM New Trip Distribution by Percentage

5.AM Pass-by Trip Distribution

6.PM Pass-by Trip Distribution

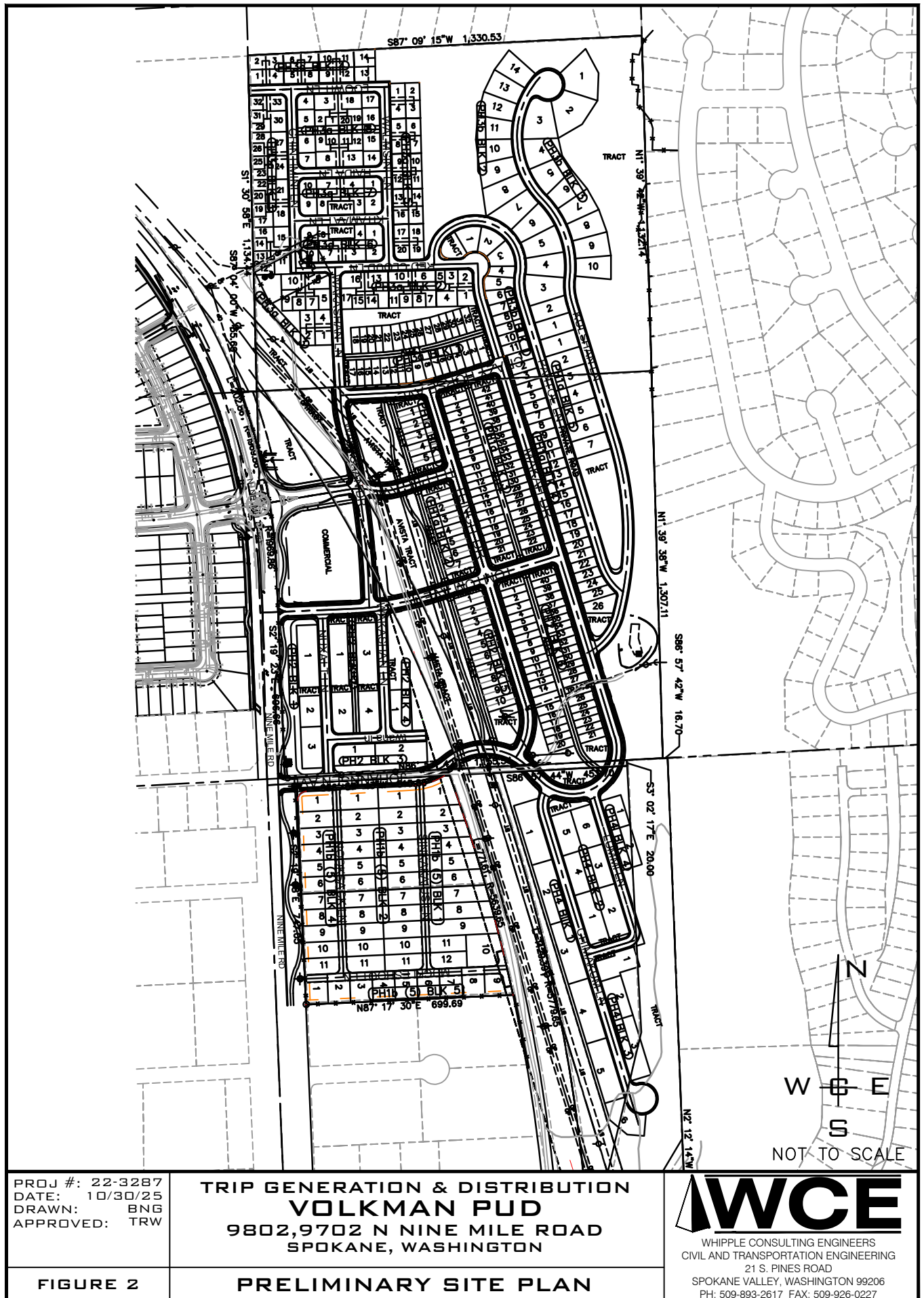
7.ITE TripGen Web Based App



PROJ #: 22-3287  
DATE: 10/30/25  
DRAWN: BNG  
APPROVED: TRW



**WHIPPLE CONSULTING ENGINEERS**  
**CIVIL AND TRANSPORTATION ENGINEERING**  
21 S. PINES ROAD  
SPOKANE VALLEY, WASHINGTON 99206  
PH: 509-893-2617 FAX: 509-926-0227



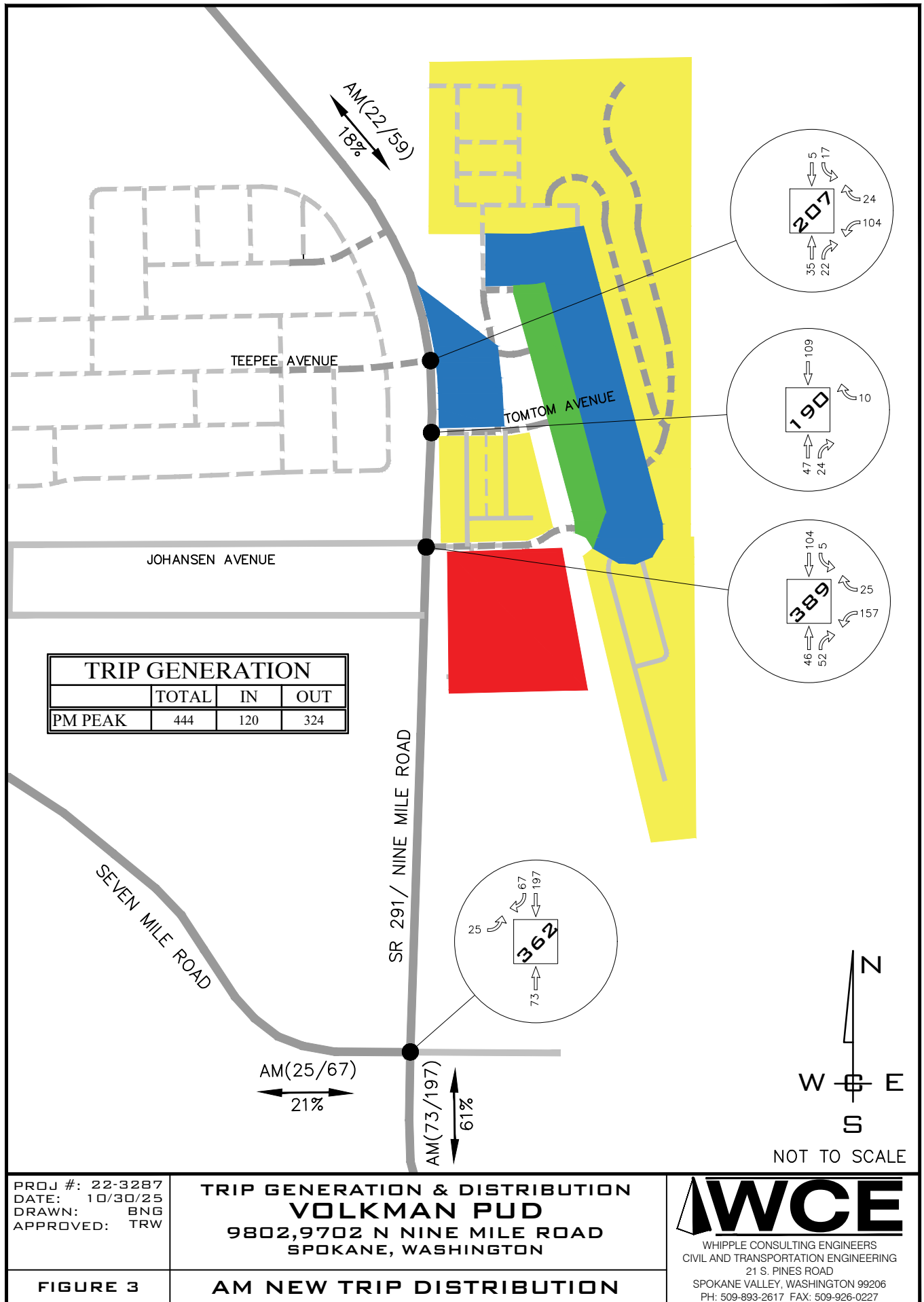
PROJ #: 22-3287  
 DATE: 10/30/25  
 DRAWN: BNG  
 APPROVED: TRW

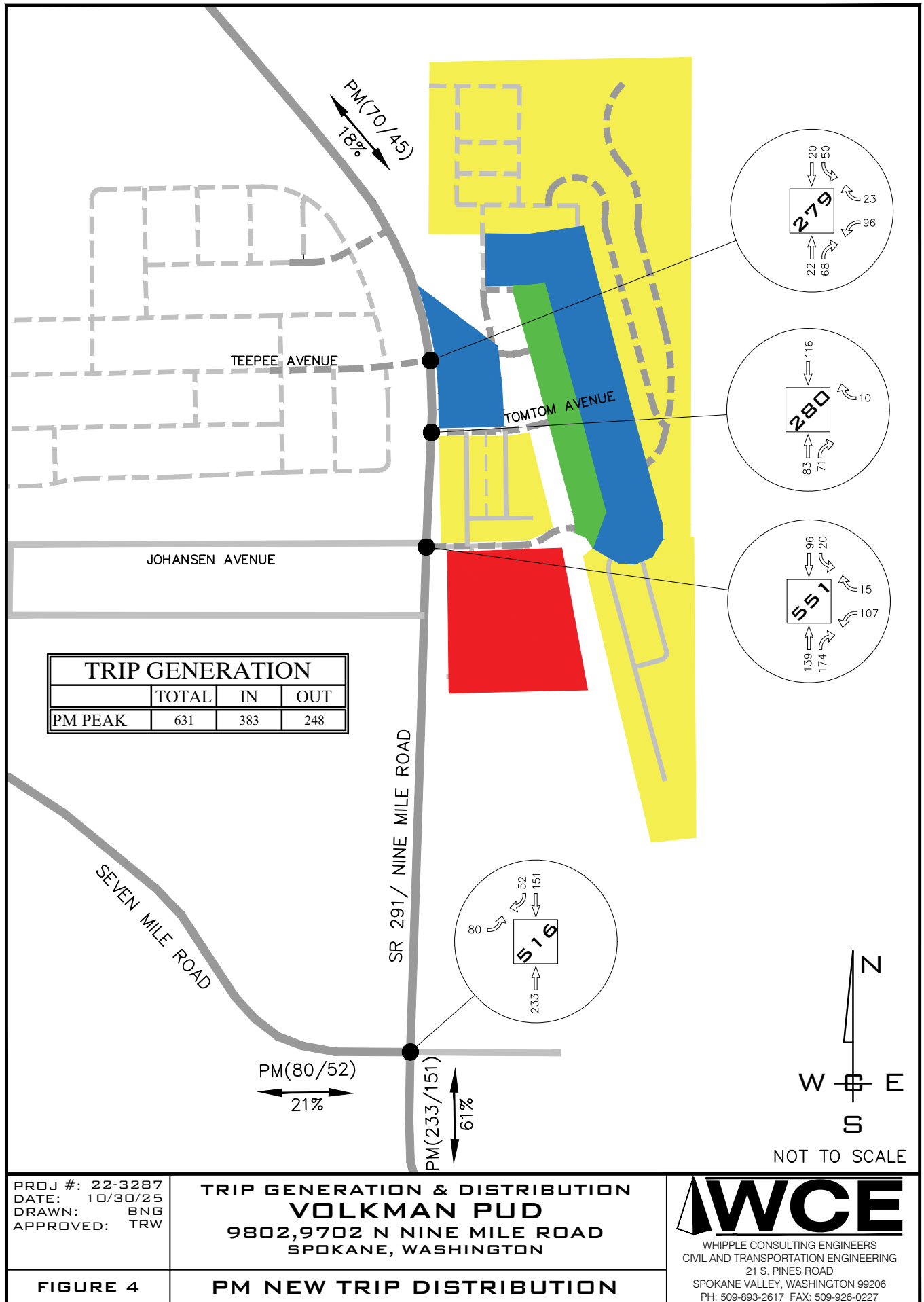
TRIP GENERATION & DISTRIBUTION  
**VOLKMAN PUD**  
 9802,9702 N NINE MILE ROAD  
 SPOKANE, WASHINGTON

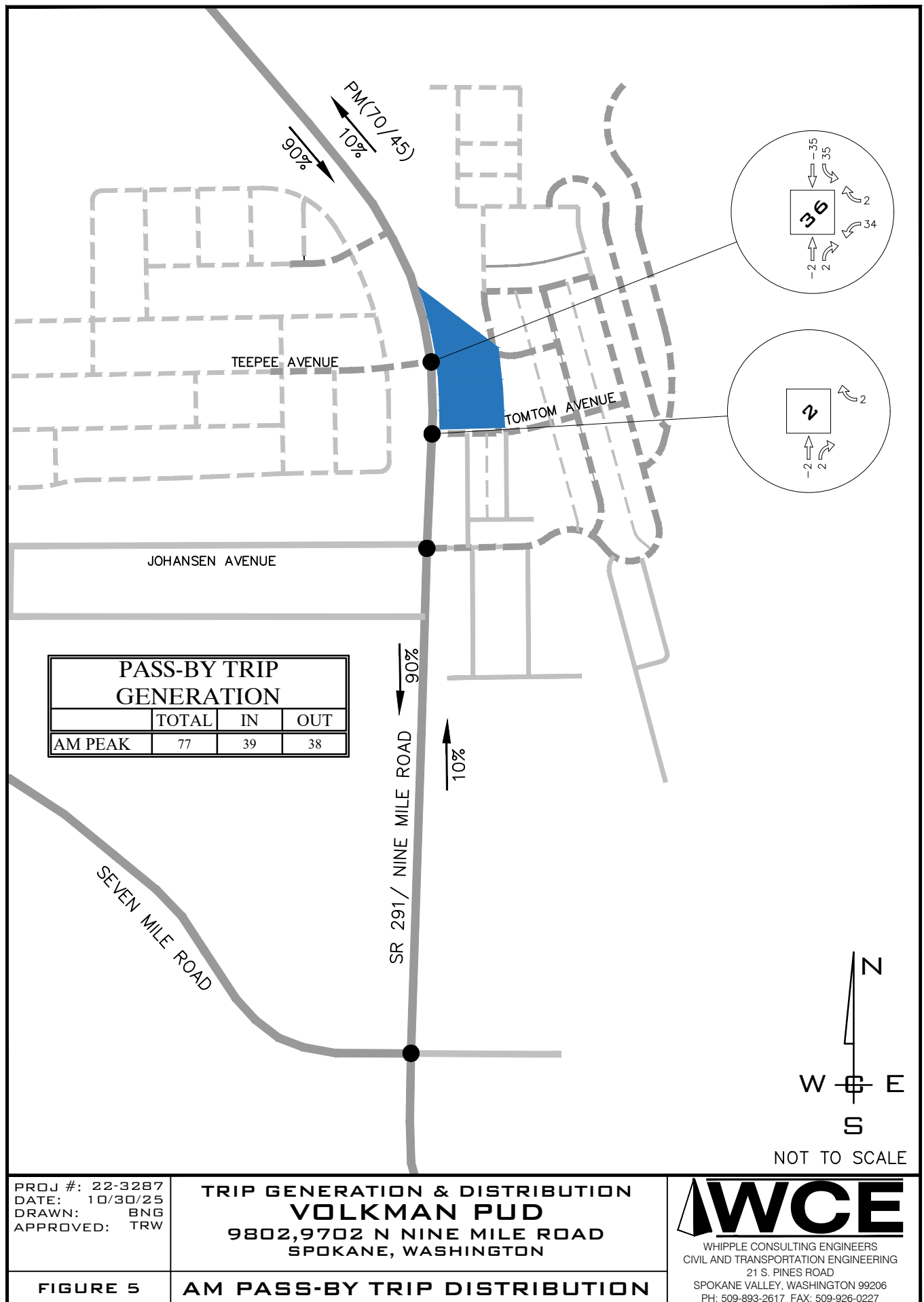
FIGURE 2

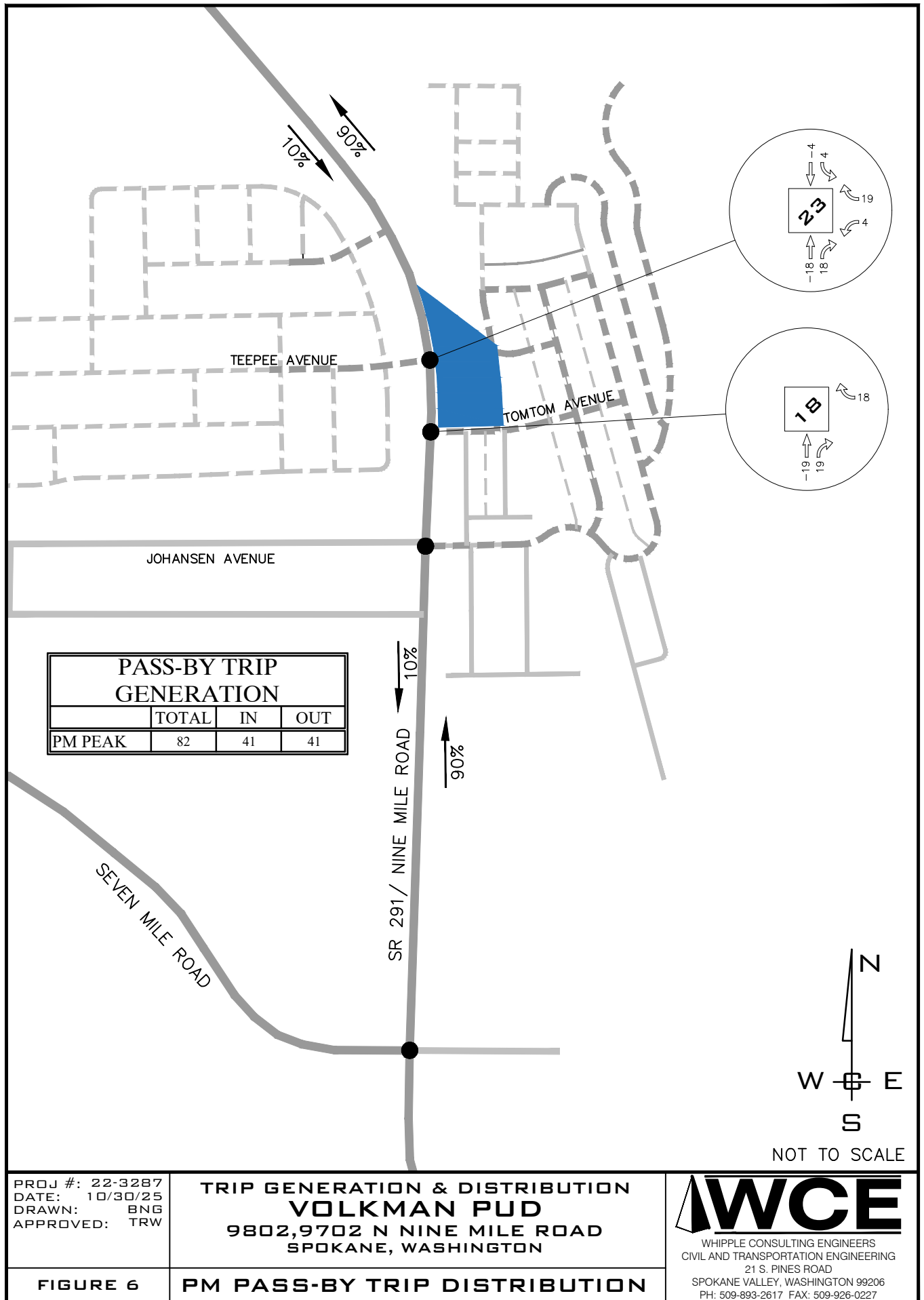
PRELIMINARY SITE PLAN

**WCE**  
 WHIPPLE CONSULTING ENGINEERS  
 CIVIL AND TRANSPORTATION ENGINEERING  
 21 S. PINES ROAD  
 SPOKANE VALLEY, WASHINGTON 99206  
 PH: 509-893-2617 FAX: 509-926-0227

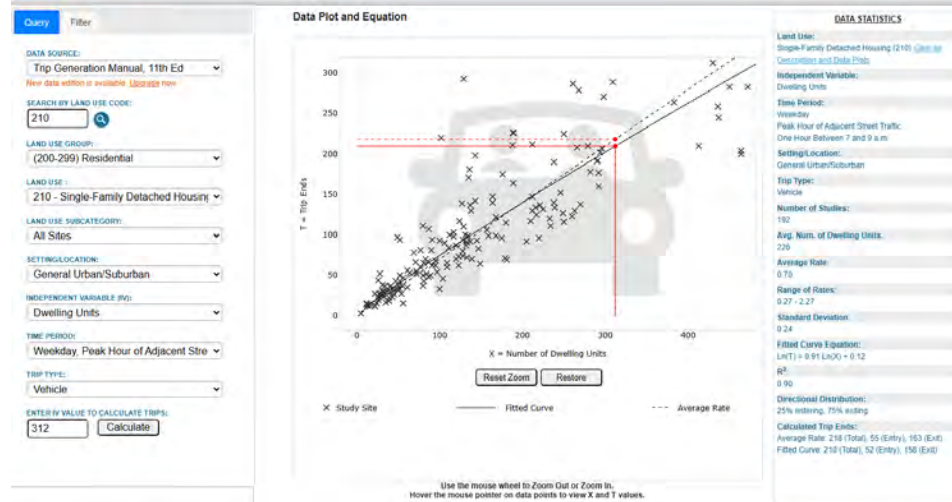




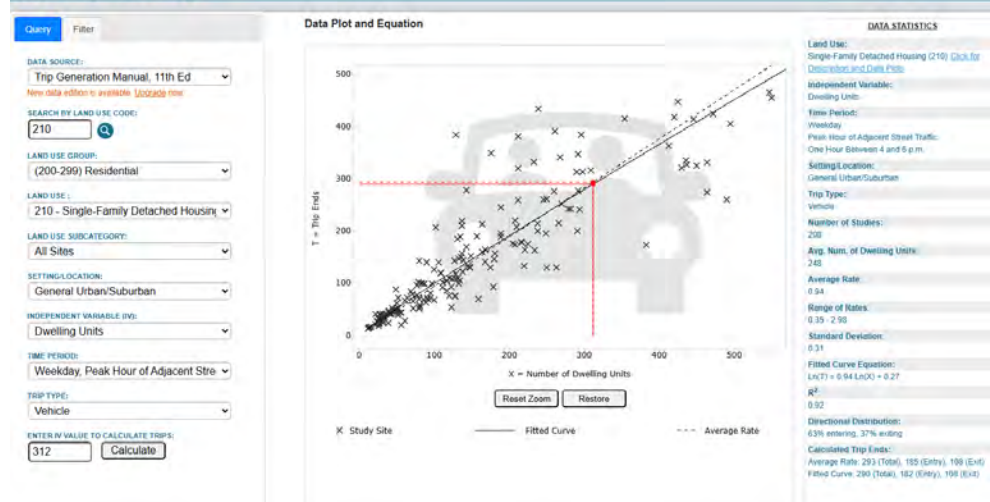




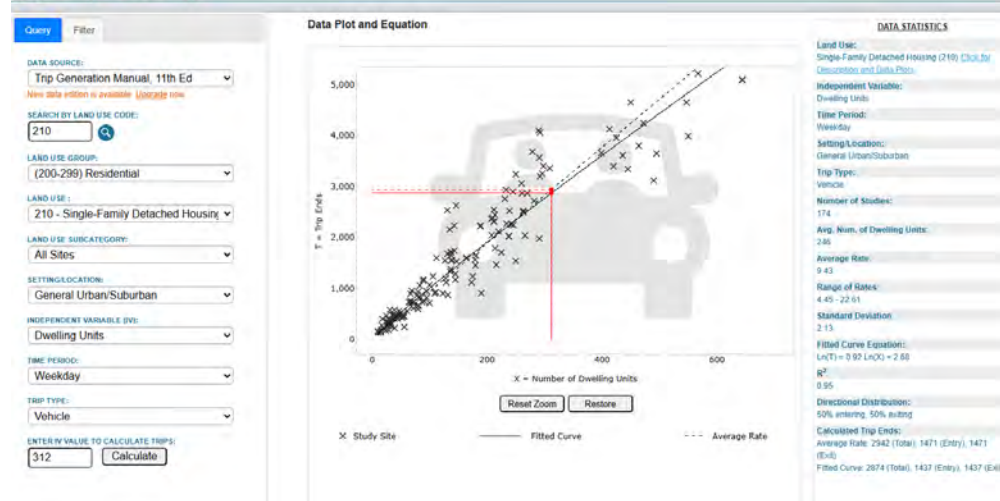
## Graph Look Up



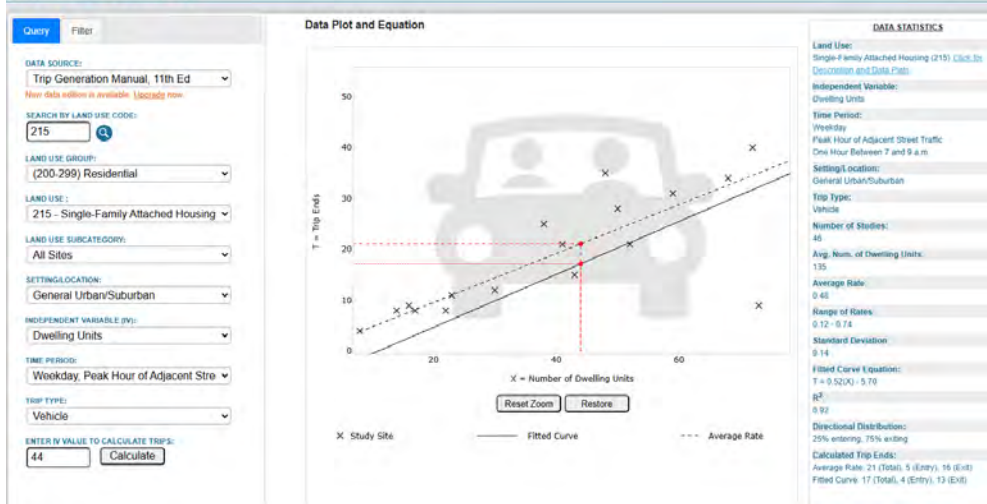
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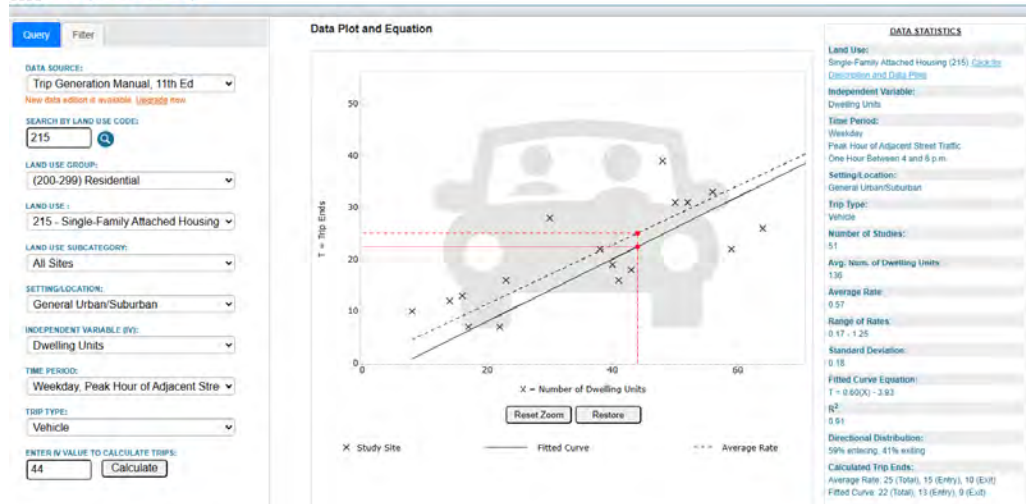
## Graph Look Up



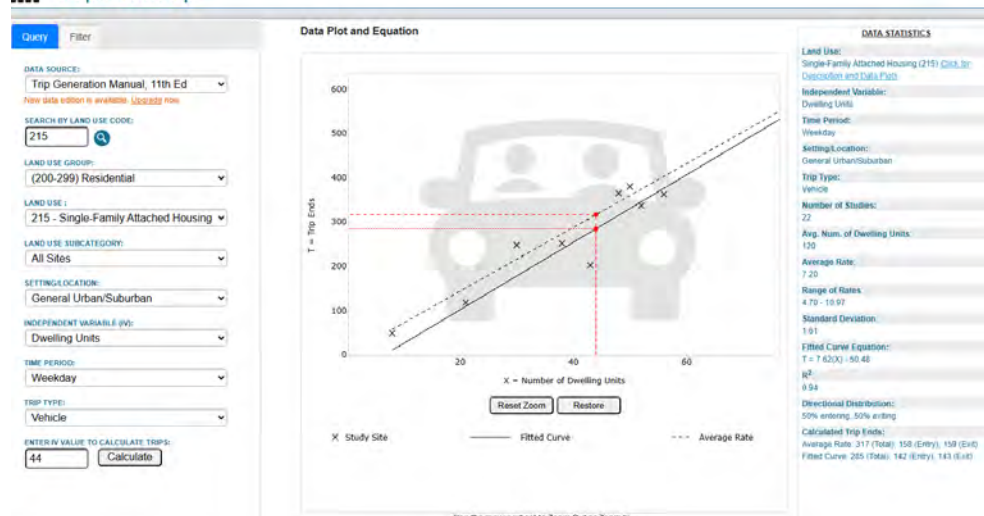
## Graph Look Up



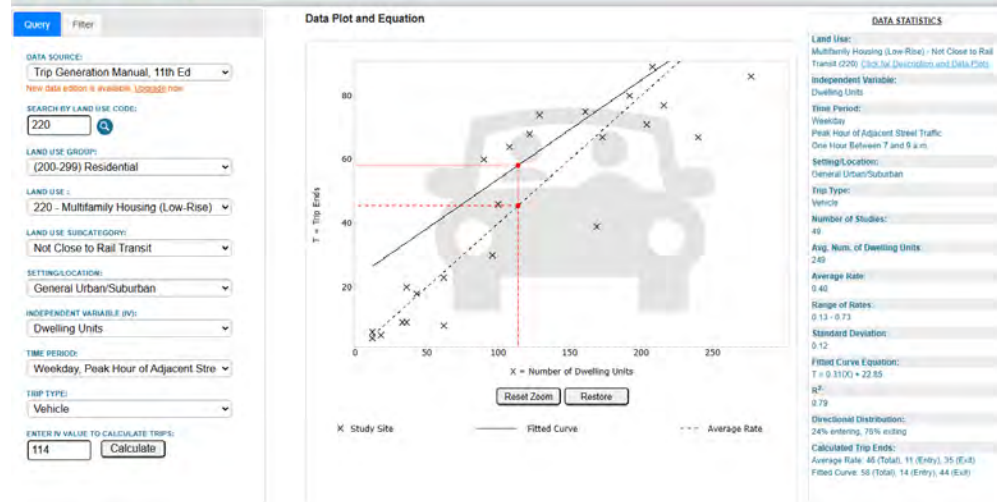
## Graph Look Up



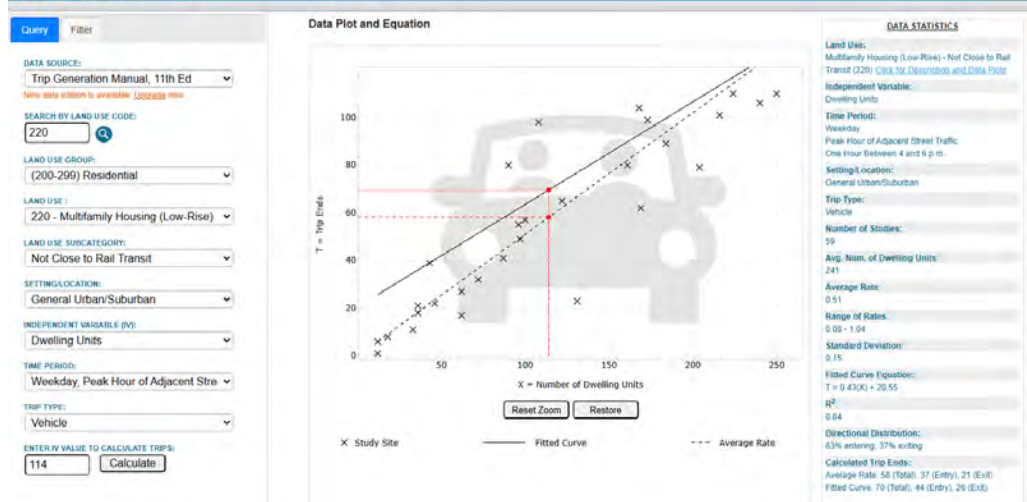
## Graph Look Up



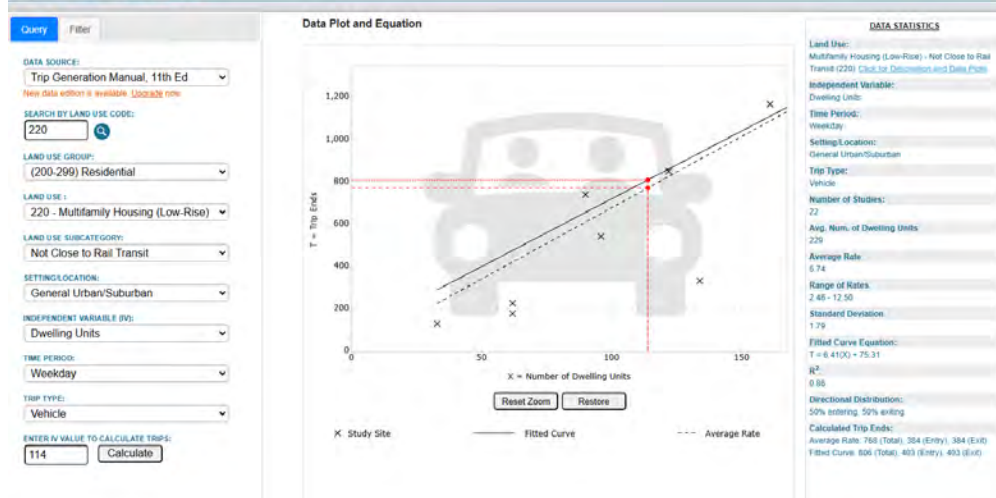
## Graph Look Up



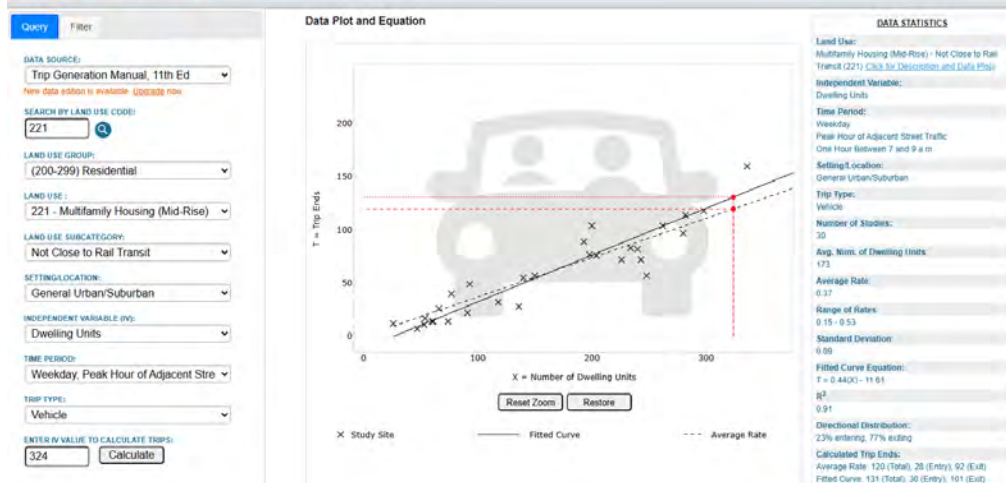
## Graph Look Up



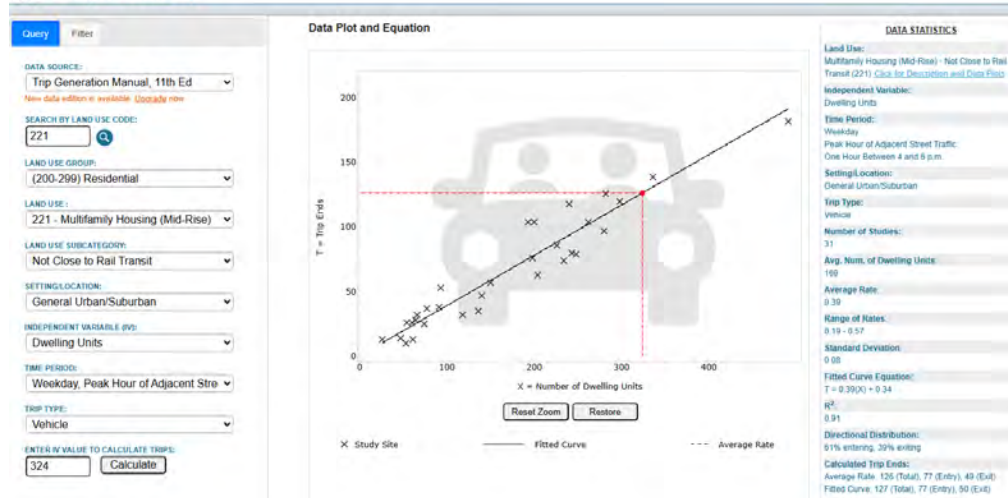
## Graph Look Up



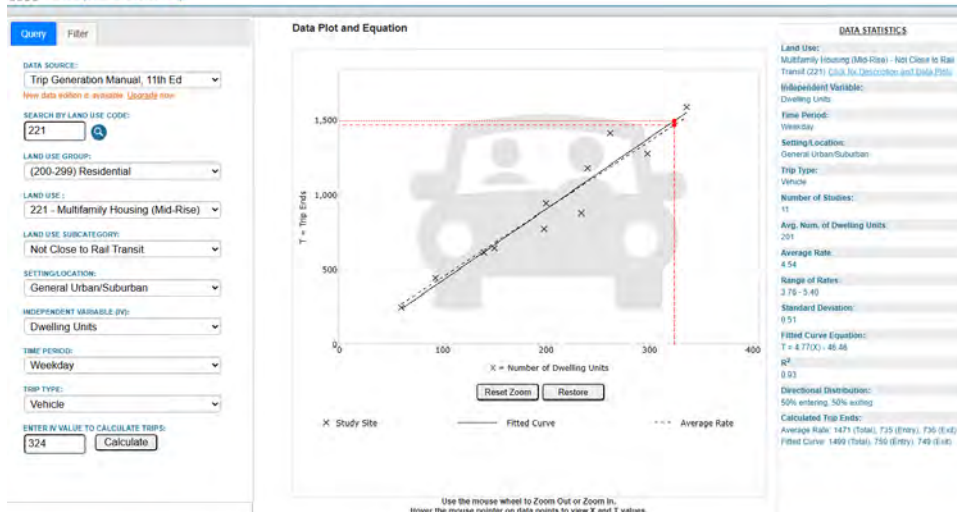
## Graph Look Up



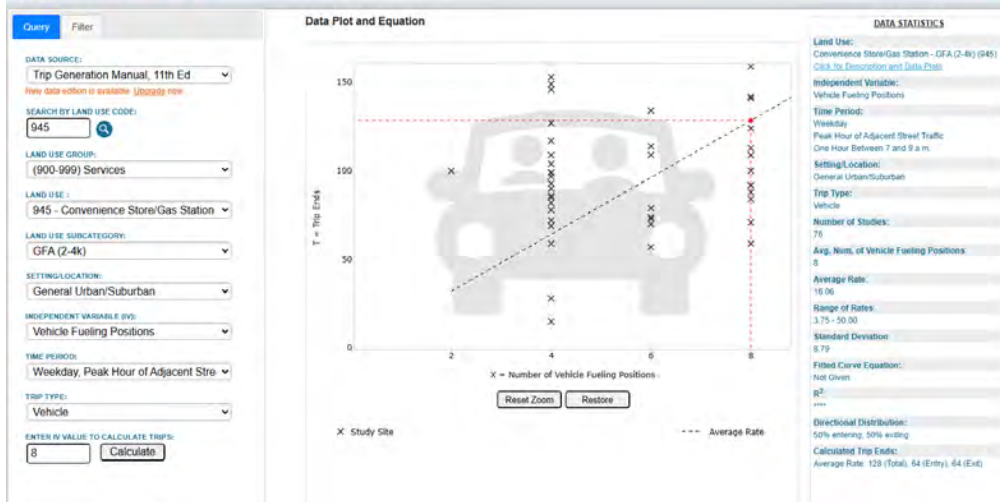
## Graph Look Up



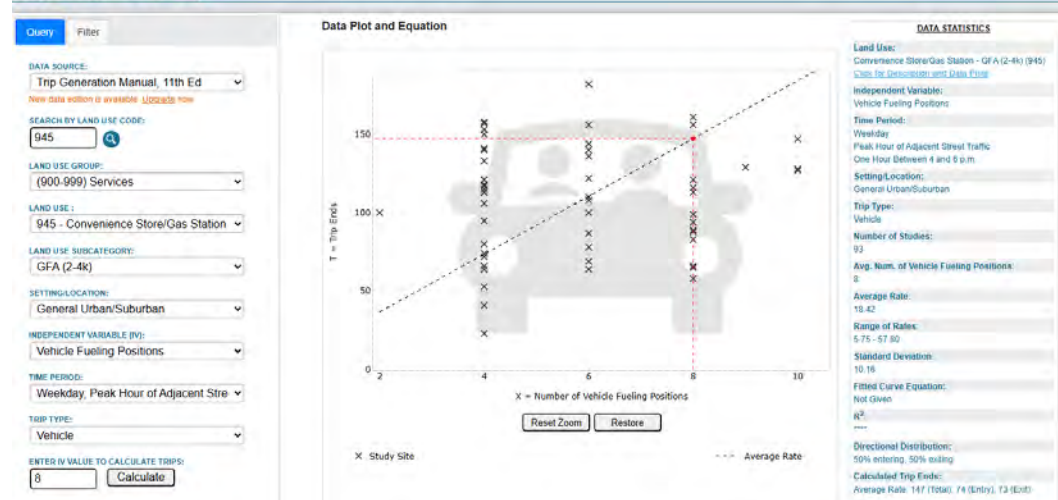
## Graph Look Up



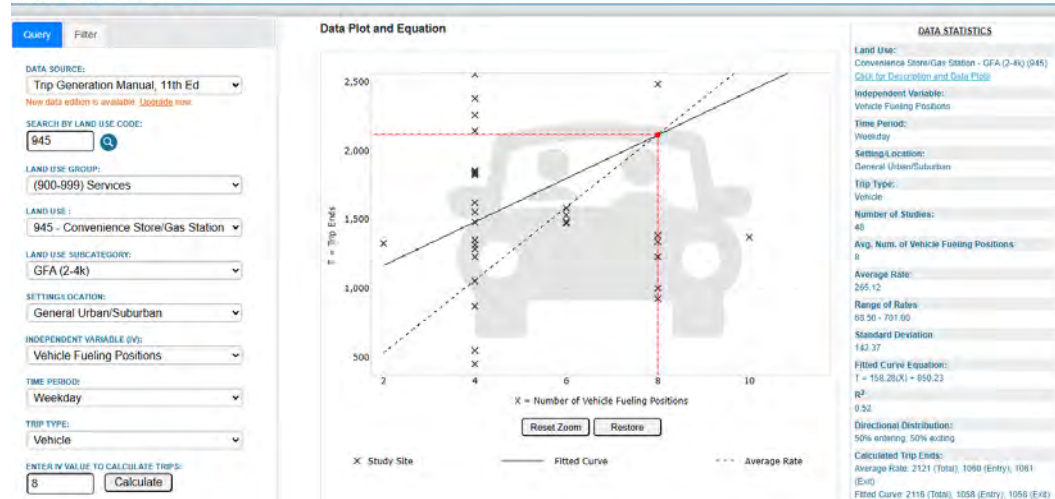
## Graph Look Up



## Graph Look Up



## Graph Look Up



# Vehicle Pass-By Rates by Land Use

Source: ITE Trip Generation Manual, 11th Edition

|                      |                                              |                   |             |              |                  |                                         |              |           |                      |        |
|----------------------|----------------------------------------------|-------------------|-------------|--------------|------------------|-----------------------------------------|--------------|-----------|----------------------|--------|
| Land Use Code        | 945                                          |                   |             |              |                  |                                         |              |           |                      |        |
| Land Use             | Convenience Store/Gas Station                |                   |             |              |                  |                                         |              |           |                      |        |
| Setting              | General Urban/Suburban                       |                   |             |              |                  |                                         |              |           |                      |        |
| Time Period          | Weekday AM Peak Period                       |                   |             |              |                  |                                         |              |           |                      |        |
| # Data Sites         | 16 Sites with between 2 and 8 VFP            |                   |             |              |                  | 28 Sites with between 9 and 20 VFP      |              |           |                      |        |
| Average Pass-By Rate | 60% for Sites with between 2 and 8 VFP       |                   |             |              |                  | 76% for Sites with between 9 and 20 VFP |              |           |                      |        |
|                      | Pass-By Characteristics for Individual Sites |                   |             |              |                  |                                         |              |           |                      |        |
|                      |                                              |                   |             |              |                  |                                         |              |           |                      |        |
|                      |                                              |                   |             |              |                  | Non-Pass-By Trips                       |              |           |                      |        |
| GFA (000)            | VFP                                          | State or Province | Survey Year | # Interviews | Pass-By Trip (%) | Primary (%)                             | Diverted (%) | Total (%) | Adj Street Peak Hour | Source |
| 2                    | 8                                            | Maryland          | 1992        | 46           | 87               | 13                                      | 0            | 13        | 2235                 | 25     |
| 2.1                  | 6                                            | Maryland          | 1992        | 26           | 58               | 23                                      | 19           | 42        | 2080                 | 25     |
| 2.1                  | 6                                            | Maryland          | 1992        | 26           | 58               | 23                                      | 19           | 42        | 2080                 | 25     |
| 2.2                  | 8                                            | Maryland          | 1992        | 31           | 47               | 34                                      | 19           | 53        | 1785                 | 25     |
| 2.2                  | < 8                                          | Indiana           | 1993        | 79           | 56               | 6                                       | 38           | 44        | 635                  | 2      |
| 2.2                  | 8                                            | Maryland          | 1992        | 35           | 78               | 9                                       | 13           | 22        | 7080                 | 25     |
| 2.3                  | 6                                            | Maryland          | 1992        | 37           | 32               | 41                                      | 27           | 68        | 2080                 | 25     |
| 2.3                  | < 8                                          | Kentucky          | 1993        | 58           | 64               | 5                                       | 31           | 36        | 1255                 | 2      |
| 2.3                  | 6                                            | Maryland          | 1992        | 37           | 32               | 41                                      | 27           | 68        | 2080                 | 25     |
| 2.4                  | < 8                                          | Kentucky          | 1993        | —            | 48               | 17                                      | 35           | 52        | 1210                 | 2      |
| 2.6                  | < 8                                          | Kentucky          | 1993        | —            | 72               | 15                                      | 13           | 28        | 940                  | 2      |
| 2.8                  | < 8                                          | Kentucky          | 1993        | —            | 54               | 11                                      | 35           | 46        | 1240                 | 2      |
| 3                    | < 8                                          | Indiana           | 1993        | 62           | 74               | 10                                      | 16           | 26        | 790                  | 2      |
| 3.6                  | < 8                                          | Kentucky          | 1993        | 49           | 67               | 4                                       | 29           | 33        | 1985                 | 2      |
| 3.7                  | < 8                                          | Kentucky          | 1993        | 49           | 66               | 16                                      | 18           | 34        | 990                  | 2      |
| 4.694                | 12                                           | Maryland          | 2000        | —            | 72               | —                                       | —            | 28        | 2440                 | 30     |
| 4.694                | 12                                           | Maryland          | 2000        | —            | 78               | —                                       | —            | 22        | 1561                 | 30     |
| 4.694                | 12                                           | Maryland          | 2000        | —            | 79               | —                                       | —            | 21        | 2764                 | 30     |
| 4.848                | 12                                           | Virginia          | 2000        | —            | 55               | —                                       | —            | 45        | 1398                 | 30     |
| 5.06                 | 12                                           | Pennsylvania      | 2000        | —            | 84               | —                                       | —            | 16        | 3219                 | 30     |
| 5.242                | 12                                           | Virginia          | 2000        | —            | 74               | —                                       | —            | 26        | 1160                 | 30     |
| 5.242                | 12                                           | Virginia          | 2000        | —            | 71               | —                                       | —            | 29        | 548                  | 30     |
| 5.488                | 12                                           | Delaware          | 2000        | —            | 80               | —                                       | —            | 20        | —                    | 30     |
| 5.5                  | 12                                           | Pennsylvania      | 2000        | —            | 85               | —                                       | —            | 15        | 2975                 | 30     |
| 4.2                  | < 8                                          | Kentucky          | 1993        | 47           | 62               | 19                                      | 19           | 38        | 1705                 | 2      |
| 4.694                | 16                                           | Maryland          | 2000        | —            | 90               | —                                       | —            | 10        | 2278                 | 30     |
| 4.694                | 16                                           | Delaware          | 2000        | —            | 74               | —                                       | —            | 26        | 2185                 | 30     |
| 4.694                | 16                                           | Delaware          | 2000        | —            | 58               | —                                       | —            | 42        | 962                  | 30     |
| 4.694                | 16                                           | Delaware          | 2000        | —            | 84               | —                                       | —            | 16        | 2956                 | 30     |
| 4.694                | 16                                           | New Jersey        | 2000        | —            | 79               | —                                       | —            | 21        | 1859                 | 30     |
| 4.694                | 20                                           | Delaware          | 2000        | —            | 84               | —                                       | —            | 16        | 3864                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 68               | —                                       | —            | 32        | 2106                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 85               | —                                       | —            | 15        | 2676                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 75               | —                                       | —            | 25        | 3244                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 71               | —                                       | —            | 29        | 1663                 | 30     |
| 4.993                | 16                                           | Pennsylvania      | 2000        | —            | 75               | —                                       | —            | 25        | 1991                 | 30     |
| 5.094                | 16                                           | New Jersey        | 2000        | —            | 86               | —                                       | —            | 14        | 1260                 | 30     |
| 5.5                  | 16                                           | Pennsylvania      | 2000        | —            | 82               | —                                       | —            | 18        | 1570                 | 30     |
| 5.543                | 16                                           | Pennsylvania      | 2000        | —            | 84               | —                                       | —            | 16        | 1933                 | 30     |
| 5.565                | 16                                           | Pennsylvania      | 2000        | —            | 77               | —                                       | —            | 23        | 2262                 | 30     |
| 5.565                | 16                                           | Pennsylvania      | 2000        | —            | 68               | —                                       | —            | 32        | 2854                 | 30     |
| 5.565                | 16                                           | New Jersey        | 2000        | —            | 58               | —                                       | —            | 42        | 1253                 | 30     |
| 5.565                | 16                                           | New Jersey        | 2000        | —            | 79               | —                                       | —            | 21        | 1928                 | 30     |
| 5.565                | 16                                           | New Jersey        | 2000        | ---          | 84               | ---                                     | ---          | 16        | 1953                 | 30     |

Source: ITE *Trip Generation Manual*, 11th Edition

|                      |                                              |                   |             |              |                  |                                         |              |           |                      |        |
|----------------------|----------------------------------------------|-------------------|-------------|--------------|------------------|-----------------------------------------|--------------|-----------|----------------------|--------|
| Land Use Code        | 945                                          |                   |             |              |                  |                                         |              |           |                      |        |
| Land Use             | Convenience Store/Gas Station                |                   |             |              |                  |                                         |              |           |                      |        |
| Setting              | General Urban/Suburban                       |                   |             |              |                  |                                         |              |           |                      |        |
| Time Period          | Weekday PM Peak Period                       |                   |             |              |                  |                                         |              |           |                      |        |
| # Data Sites         | 12 Sites with between 2 and 8 VFP            |                   |             |              |                  | 28 Sites with between 9 and 20 VFP      |              |           |                      |        |
| Average Pass-By Rate | 56% for Sites with between 2 and 8 VFP       |                   |             |              |                  | 75% for Sites with between 9 and 20 VFP |              |           |                      |        |
|                      | Pass-By Characteristics for Individual Sites |                   |             |              |                  |                                         |              |           |                      |        |
|                      |                                              |                   |             |              |                  |                                         |              |           |                      |        |
|                      |                                              |                   |             |              |                  |                                         |              |           |                      |        |
| GFA (000)            | VFP                                          | State or Province | Survey Year | # Interviews | Pass-By Trip (%) | Non-Pass-By Trips                       |              |           | Adj Street Peak Hour | Source |
|                      |                                              |                   |             |              |                  | Primary (%)                             | Diverted (%) | Total (%) |                      |        |
| 2.1                  | 8                                            | Maryland          | 1992        | 31           | 52               | 13                                      | 35           | 48        | 1785                 | 25     |
| 2.1                  | 6                                            | Maryland          | 1992        | 30           | 53               | 20                                      | 27           | 47        | 1060                 | 25     |
| 2.2                  | < 8                                          | Indiana           | 1993        | 115          | 48               | 16                                      | 36           | 52        | 820                  | 2      |
| 2.3                  | < 8                                          | Kentucky          | 1993        | 67           | 57               | 16                                      | 27           | 43        | 1954                 | 2      |
| 2.3                  | 6                                            | Maryland          | 1992        | 55           | 40               | 11                                      | 49           | 60        | 2760                 | 25     |
| 2.4                  | < 8                                          | Kentucky          | 1993        | —            | 58               | 13                                      | 29           | 42        | 2655                 | 2      |
| 2.6                  | < 8                                          | Kentucky          | 1993        | 68           | 67               | 15                                      | 18           | 33        | 950                  | 2      |
| 2.8                  | < 8                                          | Kentucky          | 1993        | —            | 62               | 11                                      | 27           | 38        | 2875                 | 2      |
| 3                    | < 8                                          | Indiana           | 1993        | 80           | 65               | 15                                      | 20           | 35        | 1165                 | 2      |
| 3.6                  | < 8                                          | Kentucky          | 1993        | 60           | 56               | 17                                      | 27           | 44        | 2505                 | 2      |
| 3.7                  | < 8                                          | Kentucky          | 1993        | 70           | 61               | 16                                      | 23           | 39        | 2175                 | 2      |
| 4.2                  | < 8                                          | Kentucky          | 1993        | 61           | 58               | 26                                      | 16           | 42        | 2300                 | 2      |
| 4.694                | 12                                           | Maryland          | 2000        | —            | 78               | —                                       | —            | 22        | 3549                 | 30     |
| 4.694                | 12                                           | Maryland          | 2000        | —            | 67               | —                                       | —            | 33        | 2272                 | 30     |
| 4.694                | 12                                           | Maryland          | 2000        | —            | 66               | —                                       | —            | 34        | 3514                 | 30     |
| 4.848                | 12                                           | Virginia          | 2000        | —            | 71               | —                                       | —            | 29        | 2350                 | 30     |
| 5.06                 | 12                                           | Pennsylvania      | 2000        | —            | 91               | —                                       | —            | 9         | 4181                 | 30     |
| 5.242                | 12                                           | Virginia          | 2000        | —            | 70               | —                                       | —            | 30        | 2445                 | 30     |
| 5.242                | 12                                           | Virginia          | 2000        | —            | 56               | —                                       | —            | 44        | 950                  | 30     |
| 5.488                | 12                                           | Delaware          | 2000        | —            | 73               | —                                       | —            | 27        | —                    | 30     |
| 5.5                  | 12                                           | Pennsylvania      | 2000        | —            | 84               | —                                       | —            | 16        | 4025                 | 30     |
| 4.694                | 16                                           | Maryland          | 2000        | —            | 89               | —                                       | —            | 11        | 2755                 | 30     |
| 4.694                | 16                                           | Delaware          | 2000        | —            | 73               | —                                       | —            | 27        | 1858                 | 30     |
| 4.694                | 16                                           | Delaware          | 2000        | —            | 59               | —                                       | —            | 41        | 1344                 | 30     |
| 4.694                | 16                                           | Delaware          | 2000        | —            | 72               | —                                       | —            | 28        | 3434                 | 30     |
| 4.694                | 16                                           | New Jersey        | 2000        | —            | 81               | —                                       | —            | 19        | 1734                 | 30     |
| 4.694                | 20                                           | Delaware          | 2000        | —            | 76               | —                                       | —            | 24        | 1616                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 67               | —                                       | —            | 33        | 2,954                | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 78               | —                                       | —            | 22        | 3086                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 83               | —                                       | —            | 17        | 4143                 | 30     |
| 4.848                | 16                                           | Virginia          | 2000        | —            | 73               | —                                       | —            | 27        | 2534                 | 30     |
| 4.993                | 16                                           | Pennsylvania      | 2000        | —            | 72               | —                                       | —            | 28        | 2917                 | 30     |
| 5.094                | 16                                           | New Jersey        | 2000        | —            | 86               | —                                       | —            | 14        | 1730                 | 30     |
| 5.5                  | 16                                           | Pennsylvania      | 2000        | —            | 90               | —                                       | —            | 10        | 2616                 | 30     |
| 5.543                | 16                                           | Pennsylvania      | 2000        | —            | 87               | —                                       | —            | 13        | 2363                 | 30     |
| 5.565                | 16                                           | Pennsylvania      | 2000        | —            | 81               | —                                       | —            | 19        | 2770                 | 30     |
| 5.565                | 16                                           | Pennsylvania      | 2000        | —            | 76               | —                                       | —            | 24        | 3362                 | 30     |
| 5.565                | 16                                           | New Jersey        | 2000        | —            | 61               | —                                       | —            | 39        | 1713                 | 30     |
| 5.565                | 16                                           | New Jersey        | 2000        | —            | 86               | —                                       | —            | 14        | 1721                 | 30     |
| 5.565                | 16                                           | New Jersey        | 2000        | ---          | 81               | ---                                     | ---          | 19        | 2227                 | 30     |
|                      |                                              |                   |             |              |                  |                                         |              |           |                      |        |