



The Global Leader

Fort Washington Way Subcorridor Analysis

**Travel Demand Forecasting
Final Report**

Prepared for

**Parsons Brinckerhoff Quade & Douglas, Inc.
Burgess & Niple, Ltd.**

Under contract to

Ohio-Kentucky-Indiana Regional Council of Governments

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Table of Contents

Executive Summary	1
Introduction	2
Alternatives Review	2
CHAPTER 1: Methodology	4
Model Structure	4
Time of Day Highway Assignment	4
CHAPTER 2: Analysis	5
REGIONAL IMPACTS	5
Analysis	6
CBD/DOWNTOWN IMPACTS	8
Turning Movements	8
Weaves	9
Gateways	9
Conclusion	12
Appendix A: Examples of Turning Movement Diagrams	13
Appendix B: Weaving Movement Tables	20

List of Tables

Table 1:	Summary of Final Fort Washington Way Alternatives	3
Table 2:	Regional Impacts -- Estimated Volumes for AM Period	6
Table 3:	Regional Impacts -- Estimated Volumes for PM Period	7
Table 4:	Intersections Analyzed via Peak Hour Turning Movements	8
Table 5:	Gateway AM Period Estimated Volumes Approaching Downtown	10
Table 6:	Gateway PM Period Estimated Volumes Leaving Downtown	11

Executive Summary

This document summarizes the methodology and results of the Travel Demand Forecasting for the Fort Washington Way Subcorridor Analysis. The travel forecasting model is essentially the same Tier I model being used in the I-71 Major Investment Study (MIS). A time of day highway assignment procedure was developed to help with the technical, micro-level analysis. This procedure is being incorporated into the revised, Tier II model for the I-71 MIS.

Analysis of the Fort Washington Way alternatives was divided into two parts. First, peak period estimated volumes were examined for any region-wide effects. Subsequent evaluation showed very small changes at the regional level. Second, several micro-level tests were performed to determine the operational viability of the alternatives as well as to detect travel pattern variations. This level of analysis showed minimal improvement from the No Build alternative for the TSM, Minimum Build, and Rebuild & Relocate alternatives. The Narrow Fort Washington Way option, on the other hand, is very different from the others. The additional freeway access to downtown appears to fulfill its intended consequence: to reduce the traffic through the "trench" by providing access to downtown that was previously unavailable.

Introduction

The Fort Washington Way Subcorridor Project is a subsidiary of the I-71 Major Investment Study. It is important, therefore, to clarify some of the regions under analysis. The *study region* is the eight county area that comprises the Ohio-Kentucky-Indiana Regional Council of Governments. The *subcorridor* is Fort Washington Way, an area of land bounded by Third Street and the Ohio River to the north and south, and contained by I-71/75 and I-471 to the east and west. The subcorridor is part of the *corridor*, the land immediately surrounding I-71 and I-275 from Mason, Ohio to the Cincinnati/Northern Kentucky International Airport.

Alternatives Review

Five alternatives were brought forward for study by the Fort Washington Way Subcommittee, which are summarized in Table 1. Specifically they are: No Build, TSM, Minimum Build, Rebuild & Relocate, and Narrow Fort Washington Way. Other alternatives that had been included in the original scope of the Fort Washington Way study, particularly those which involved removing or drastically curtailing Fort Washington Way, were dropped from consideration by the Subcommittee after the I-71 Oversight Committee dropped them from the I-71 MIS. Other alternatives and modifications were proposed at various points in the study but were dropped from consideration for various reasons and were not subjected to the travel demand analysis described in this report.

The No Build alternative is essentially what it implies; that is, no improvement to the highway geometry and transit system. The TSM alternative involves two improvements. First, Central Parkway is four-laned in each direction by the elimination of side-street parking. Second, the transit system is upgraded to the "base" 2020 plan used in the TSM alternative in the I-71 MIS. This system represents a significant enhancement to the current (1995) transit system. The Minimum Build option includes all TSM improvements as well as some minor ramp adjustments in the "trench". The Rebuild & Relocate alternative also includes the TSM improvements as well as some alterations to the ramp structure. In this alternative, eastbound I-71 is moved and the capacity reduced. The final alternative calls for a new Second Street to be built parallel to Third, with Third Street reversed in direction to create a one-way pair. This design, which also includes TSM improvements, removes any access to or from downtown in the trench. Primary downtown access is provided by new ramps to either end of the Second and Third Street pairs, near Broadway and Central Avenue. Other access improvements to and from the interstate system are made as well.

Table 1: Summary of Final Fort Washington Way Alternatives

<i>Category</i>	<i>No Build</i>	<i>TSM</i>	<i>Minimum Build</i>	<i>Rebuild & Relocate</i>	<i>Narrow Fort Washington Way</i>
Transit Network	1995 base	2020 TSM	2020 TSM	2020 TSM	2020 TSM
Central Parkway	---	Four-lanes in both directions	Four-lanes in both directions	Four-lanes in both directions	Four-lanes in both directions
New off-ramps into CBD	---	---	---	---	At 5th Street (I-71/75 NB), 6th Street (I-71 SB), and Eggleston (I-471 NB)
East Fort Washington Way	---	---	---	Minor design changes; no effect on travel patterns	I-71 SB and US 50 brought into 3rd & Broadway; 3rd Street one-way Westbound
Sycamore Street on-ramp	---	---	---	---	Removed; Traffic to bridge enters I-71 at 3rd and Plum; Traffic to I-75 NB enters at 4th
Main Street off-ramp	---	---	---	---	Removed
Main Street on-ramp	---	---	---	Removed	Removed
Walnut Street off-ramp	---	---	No direct access to Roebling	Removed	Removed
Walnut Street on-ramps	---	---	---	---	Removed
Vine Street off-ramp (I-71 NB)	---	---	No direct access to Roebling	No direct access to Roebling	Removed
Vine Street off-ramp (I-71 SB)	---	---	---	Removed	Removed
Race Street on-ramp	---	---	Removed	Removed	Removed
West Fort Washington Way	---	---	---	---	Traffic may enter new 2nd Street, one-way eastbound, or remain in trench

CHAPTER 1: Methodology

Model Structure

The model used for the Subcorridor Project is the same one used in Phase II of the I-71 Major Investment Study. No changes were made to the model except for those described below. For more information about the model structure, including equations and methodology please refer to the "I-71 Corridor Transportation Study DRAFT Interim Report".

Time of Day Highway Assignment

In an effort to provide more detailed data for analysis, a time-of-day highway assignment procedure is used. In a typical 24-hour assignment such as used in previous OKI models and in the Tier I model for the I-71 MIS, a daily trip table is assigned to the highway network, comprised of links with daily capacities and attributes. With a time-of-day assignment, the daily trip table is split among *four* trip tables, representing the morning, midday, afternoon, and night periods (this will be discussed below), each of which are assigned the corresponding highway network.

A travel survey, conducted by OKI in the fall of 1995 was analyzed to establish travel patterns. The morning peak period was found to be quite well defined over the 2½ hour period from 6:00 AM to 8:30 AM. The PM peak period was found to be less pronounced and more prolonged over a 3½ hour period from 3:00 PM to 6:30 PM. The midday period is then defined as 8:30 AM to 3:00 PM and the night period from 6:30 PM to 6:00 AM the following day.

The four trip tables are created by distributing the daily trip table across each of the four time periods. The 1995 travel survey was used to correctly divide the daily trips. However, the MOR survey is only useful for private auto and public bus trips inside the study region. For taxi and commercial truck, time of day factors were created based on earlier work experience. External-internal (EI) and external-external (EE) trip factors were also established as the result of earlier work.

Three highway networks representing varying conditions by time of day are prepared. Parking, especially in the CBD, varies greatly over the course of the day, as it is usually prohibited in some locations during the AM and PM periods when traffic volumes are typically higher and allowed during the midday and night periods when traffic volumes are typically lower. The ability to park affects the number of lanes available for general purpose traffic, which in turn affects the capacity of the link and having a direct effect on the traffic patterns of the downtown. A lesser number of time-of-day capacity variations occur elsewhere in the network as well.

This time-of-day procedure is currently run as a post-processor; that is, it is executed *after* the full model, calculating daily travel, has completed. As noted above, the time-of-day procedure is currently being incorporated fully into the revised regional model.

CHAPTER 2: Analysis

The analysis for the Fort Washington Way Subcorridor Project looked at two very distinct levels: region wide, looking at effects along the major thoroughfares, and CBD/downtown, studying the weaves, turning movements, and other micro-level analyses.

REGIONAL IMPACTS

Major changes in CBD access and through traffic, such as the modifications proposed for Fort Washington Way, could cause changes to occur at a regional level. For example, people may change their inbound traffic patterns in order to adjust to a recently closed exit or street downtown. It is therefore critical to examine the entire study region to gauge whether the current transportation infrastructure can handle these secondary impacts. These regional concerns were initially quite significant but became less so when the alternatives to eliminate or drastically curtail Fort Washington Way were dropped from the study.

The most common way of examining regional impacts is to examine the estimated volumes, sometimes by time of day, of the major thoroughfares in the study region. For this analysis, the AM and PM period estimated volumes are the direct result of the highway assignment procedure discussed in Chapter 1. For the OKI study region, six major freeways and highways were scrutinized along various points: I-71, I-75, I-471, I-275, Cross County Highway (CCH), and the Norwood Lateral (NL). Table 2 shows AM period estimated volumes for each of the five alternatives. The cutlines in this table are taken according to the predominant travel pattern of the period; that is, toward the CBD. Thus, cutlines in Ohio are taken in the southbound direction and in the north direction in Kentucky (Westbound is considered the principal travel pattern for those cutlines for East-West highways). In the PM period, the predominant travel pattern is away from the CBD (eastbound for East-West highways). These cutline volumes are shown in Table 3.

Table 2: Regional Impacts -- Estimated Volumes for AM Period

<i>Cutline Description</i>		<i>No Build</i>	<i>TSM</i>	<i>Minimum Build</i>	<i>Rebuild & Relocate</i>	<i>Narrow Fort Washington Way</i>
O H I O	I-71 SB at I-71/275	14,500	14,400	14,400	14,400	14,200
	I-71 SB at I-71/CCH	13,200	13,300	13,100	13,000	12,900
	I-71 SB at I-71/NL	15,400	15,300	15,300	15,300	14,800
	I-75 SB at I-75/275	14,900	14,900	14,900	15,000	14,800
	I-75 SB at I-75/CCH	15,700	15,800	15,600	15,900	15,600
	I-75 SB at I-75/NL	12,900	12,900	12,800	12,900	12,700
	I-75 SB at I-75/74	18,100	18,600	17,900	17,900	17,900
	I-275 WB b/w 71&75	13,900	13,800	13,800	13,800	13,800
	Cross County b/w 71&75	4,400	4,500	4,400	4,500	4,300
	Norwood Lateral b/w 71&75	7,000	6,900	7,000	6,900	7,000
K E N T U C K Y	I-71/75 NB at I-71/75/275	14,000	14,000	14,000	14,000	14,000
	I-275 WB b/w 71/75&471	12,200	12,100	12,200	12,200	12,000
	I-275 WB at Combs-Hehl Bridge	13,200	13,300	13,100	13,200	13,000
	I-471 NB at I-471/275	14,500	14,600	14,400	14,400	14,400

Analysis

The varying conditions of the Fort Washington Way alternatives do not make a significant impact in any of the estimated volumes. In both the AM and PM period figures, the variability among the alternatives is small. The Narrow Fort Washington Way alternative does provide some deviation from the other options, at I-75/Cross County Highway and I-75/Norwood Lateral for example, However, it is still relatively modest. These minimal impacts are observed at locations throughout the region both in Ohio and in Kentucky. Therefore, major impacts of the Fort Washington Way alternatives are limited to the CBD and surrounding areas.

Table 3: Regional Impacts -- Estimated Volumes for PM Period

	<i>Cutline Description</i>	<i>No Build</i>	<i>TSM</i>	<i>Minimum Build</i>	<i>Rebuild & Relocate</i>	<i>Narrow Fort Washington Way</i>
O H I O	I-71 NB at I-71/275	19,000	19,100	19,200	19,200	18,900
	I-71 NB at I-71/CCH	17,800	17,600	17,700	17,700	17,100
	I-71 NB at I-71/NL	19,000	18,900	19,000	18,900	17,700
	I-75 NB at I-75/275	21,200	21,000	21,000	21,100	20,800
	I-75 NB at I-75/CCH	21,300	21,200	21,200	21,200	21,000
	I-75 NB at I-75/NL	19,200	19,300	19,200	19,200	18,900
	I-75 NB at I-75/74	26,700	26,600	26,600	26,700	26,600
	I-275 EB b/w 71&75	19,800	19,900	19,700	19,900	19,700
	Cross County b/w 71&75	5,700	5,700	5,600	5,600	5,500
	Norwood Lateral b/w 71&75	10,000	10,100	10,000	10,000	9,900
K E N T U C K Y	I-71/75 SB at I-71/75/275	20,600	20,600	20,600	20,500	20,700
	I-275 EB b/w 71/75&471	15,000	14,900	14,900	14,900	14,700
	I-275 EB at Combs-Hehl Bridge	15,300	15,200	15,100	15,100	15,100
	I-471 SB at I-471/275	18,700	18,500	18,500	18,500	18,600

CBD/DOWNTOWN IMPACTS

Several types of analysis are performed at this level, to assess the operational performance feasibility of the alternatives. As a result of initial analyses, some features of the alternatives such as laneage or weaving configuration were adjusted for the final versions of the alternatives. Changing traffic patterns might also be determined using these analytical tools, forming the basis of an impact analysis.

Turning Movements

Turning movements are used to calculate intersection capacity, which is based upon the amount of delay. This delay is a measure of "driver discomfort and frustration, fuel consumption, and lost travel time."¹ Turning movements are simply the number of vehicles either turning left, right, or continuing through at a particular intersection. Over a dozen intersections in the Cincinnati CBD are scrutinized for operational viability using AM and PM peak hour turning movements. A complete list of these intersections can be found in Table 4. Examples of turning movement diagrams, which serve as the basis for capacity calculations, can be found in Appendix A. A complete set of turning movement diagrams were prepared and delivered to BRW for a complete analysis (reported elsewhere).

Table 4: Intersections Analyzed via Peak Hour Turning Movements

Ninth and Broadway	Seventh and Central
Sixth and Broadway	Fifth and Central
Fourth and Central	Third and Main
Fourth and Broadway	Third and Vine
Third and Roebling (or Walnut)	Third and Broadway
Second and Roebling	Second and Vine
Clay Wade Bailey and Third	Taylor Southgate and Pete Rose Way

Note: Some intersections do not apply to all alternatives

¹National Research Council. Transportation Research Board. Highway Capacity Manual: Special Report 209 (Third Edition). 1994, page 9-6.

Weaves

The second step of micro-level analysis is performing a weave analysis. Weaving, as defined by the 1994 edition of the Highway Capacity Manual, is "the crossing of two or more traffic streams traveling in the same general direction along a significant length of highway, without the aid of traffic control devices."² Weaves are assigned a Level of Service (LOS) classification based on the estimated number of cars weaving, the weaving distance allowed, and the type of the weave. Some examples of estimated weaving volumes can be found in Appendix B. These weaving tables were delivered to BRW for detailed analysis.

Gateways

Gateways are roads or ramps connecting the freeways and highways to the downtown/CBD. In effect, they serve as "entrances" and/or "exits" to the CBD. For instance, volumes for the gateways into the CBD are observed for the AM period, and, conversely, gateways out of the CBD for the PM period. Table 5 displays the volumes for the AM period gateways.

The No Build, TSM, and Minimum Build alternatives bear a striking resemblance to one another; little can be differentiated among them. Two distinctions appear in the Rebuild & Relocate alternative. The Gilbert Avenue off-ramp volumes shows approximately a 500 vehicle increase over the Minimum Build alternative, probably reflecting the removal of the Vine Street off-ramp. Consequently, the East Fort Washington Way volume is about 800 vehicles less than the other three alternatives.

The Narrow Fort Washington Way alternative introduces several features that are not included in any of the other options. This, in turn, causes several effects. The I-71 SB off-ramp at Gilbert Avenue because almost unused because of the addition of an off-ramp at Sixth Street, with has an estimated AM volume of 2,700 vehicles. Two additional ramps into downtown, one at Eggleston from I-471 NB and the other at Fifth Street from I-71 NB, also receive high volumes. All three ramps reduce the amount of traffic in the I-71 trench.

²Nation Research Council. Transportation Research Board. Highway Capacity Manual: Special Report 209 (Third Edition). 1994, page 4-2.

Table 5: Gateway AM Period Estimated Volumes Approaching Downtown

<i>Description</i>	<i>No Build</i>	<i>TSM</i>	<i>Minimum Build</i>	<i>Rebuild & Relocate</i>	<i>Narrow Fort Washington Way</i>
Brent Spence Bridge	16,700	16,600	16,600	16,600	16,900
Clay Wade Bailey Bridge	3,800	3,700	3,900	3,600	3,900
Roebing Bridge	2,300	2,300	2,100	2,400	2,400
Central/Taylor Southgate Bridge	3,900	3,800	3,900	3,900	3,700
Daniel Carter Beard Bridge	16,000	16,000	15,900	15,900	16,000
Fourth Street Bridge (Covington)	4,600	4,600	4,500	4,600	4,600
Twelfth Street Bridge (Covington)	2,600	2,600	2,600	2,500	2,800
Reading Road off-ramp	2,000	2,000	2,000	2,000	1,900
Gilbert Avenue off-ramp	1,000	1,000	800	1,300	100
Sixth Street off-ramp	---	---	---	---	2,700
Eggleston/I-471 off-ramp	---	---	---	---	1,900
Fifth Street SB off-ramp	3,600	3,500	3,500	3,500	3,500
Seventh Street off-ramp	2,400	2,400	2,200	2,300	2,300
Fifth Street NB off-ramp	---	---	---	---	2,700
West Ft. Washington Way	14,400	14,400	14,000	14,100	14,100
East Ft. Washington Way	9,400	9,400	9,400	8,600	7,100

Note: West and East Ft. Washington Way represent the traffic from I-71 and I-75 into the Ft. Washington Way subcorridor.

Just as in the AM period figures, there is little change between the No Build, TSM, Minimum Build, and Rebuild & Relocate alternatives in the PM period estimated volumes (shown in Table 6). The sole exception is the increased volume on the Fifth Street I-71 NB on-ramp in the Minimum Build and Rebuild & Relocate alternatives. The closure of the Race Street I-71 NB on-ramp in these alternatives, among other design changes, are the likely cause of the increase.

Table 6: Gateway PM Period Estimated Volumes Leaving Downtown

<i>Description</i>	<i>No Build</i>	<i>TSM</i>	<i>Minimum Build</i>	<i>Rebuild & Relocate</i>	<i>Narrow Fort Washington Way</i>
Brent Spence Bridge	22,600	22,400	22,500	22,400	23,300
Clay Wade Bailey Bridge	2,600	2,500	2,400	2,600	2,000
Roebing Bridge	2,900	3,000	3,000	3,000	3,300
Central/Taylor Southgate Bridge	5,000	4,900	5,000	5,000	4,500
Daniel Carter Beard Bridge	20,100	20,100	20,100	20,000	20,400
Fourth Street Bridge (Covington)	4,300	4,300	4,200	4,300	4,500
Twelfth Street Bridge (Covington)	4,000	4,000	4,000	4,000	4,000
Reading Road on-ramp	2,500	2,500	2,500	2,500	2,300
Gilbert Avenue on-ramp	2,300	2,200	2,300	2,500	2,300
Fifth Street on-ramp	2,500	2,500	3,000	3,200	3,000
Fourth Street on-ramp	3,400	3,300	3,400	3,700	4,800
Sixth Street on-ramp	3,800	3,800	3,800	3,800	4,400
Ninth Street NB on-ramp	700	700	700	700	1,000
Ninth Street SB on-ramp	1,600	1,500	1,400	1,600	1,400
West Fort Washington Way	18,700	18,500	18,200	17,400	10,200
East Fort Washington Way	10,200	10,100	9,300	8,600	9,000

Note: West and East Ft. Washington Way represent the traffic from I-71 and I-75 out of the Ft. Washington Way subcorridor.

As before, the uniqueness of the Narrow Fort Washington Way alternative is reflected in the estimated volumes. The redesign of the west end of Fort Washington Way, which forces those wanting to enter I-75 or US 50 to take the Fourth Street, Sixth Street, or Ninth Street on-ramps increases the volume on those ramps by an estimated 300-1,100 vehicles in the PM period. The new west end appears to also increase the attractiveness of the Brent Spence Bridge; estimated volumes are about 1,000 vehicles higher than the other alternatives. The Clay Wade Bailey Bridge suffers some of the increased attractiveness of the Brent Spence as its estimated volume decreases by about 500 vehicles.

Conclusion

The Fort Washington Way alternatives do not make a significant impact at a regional level. Only when a downtown-level of analysis is performed do differences appear. The No Build and TSM alternatives are very similar in almost every category. The Minimum Build and Rebuild & Relocate options encompass only minor deviations from the first two alternatives. However, the Narrow Fort Washington Way alternative represents several new and entirely different travel patterns. Three new off-ramps alter the inbound travel patterns, while the redesigned west end of Fort Washington Way greatly affects outbound traffic. The new Second Street and redirectionized Third Street cause a major shift in traffic patterns throughout much of the CBD.

Appendix A: Examples of Turning Movement Diagrams

TSM Turning Movements -- AM Peak Hour

- Sixth at Broadway
- Fifth at Central
- Third at Vine

Narrow Fort Washington Way -- AM Peak Hour

- Sixth at Broadway
- Fifth at Central
- Third at Vine

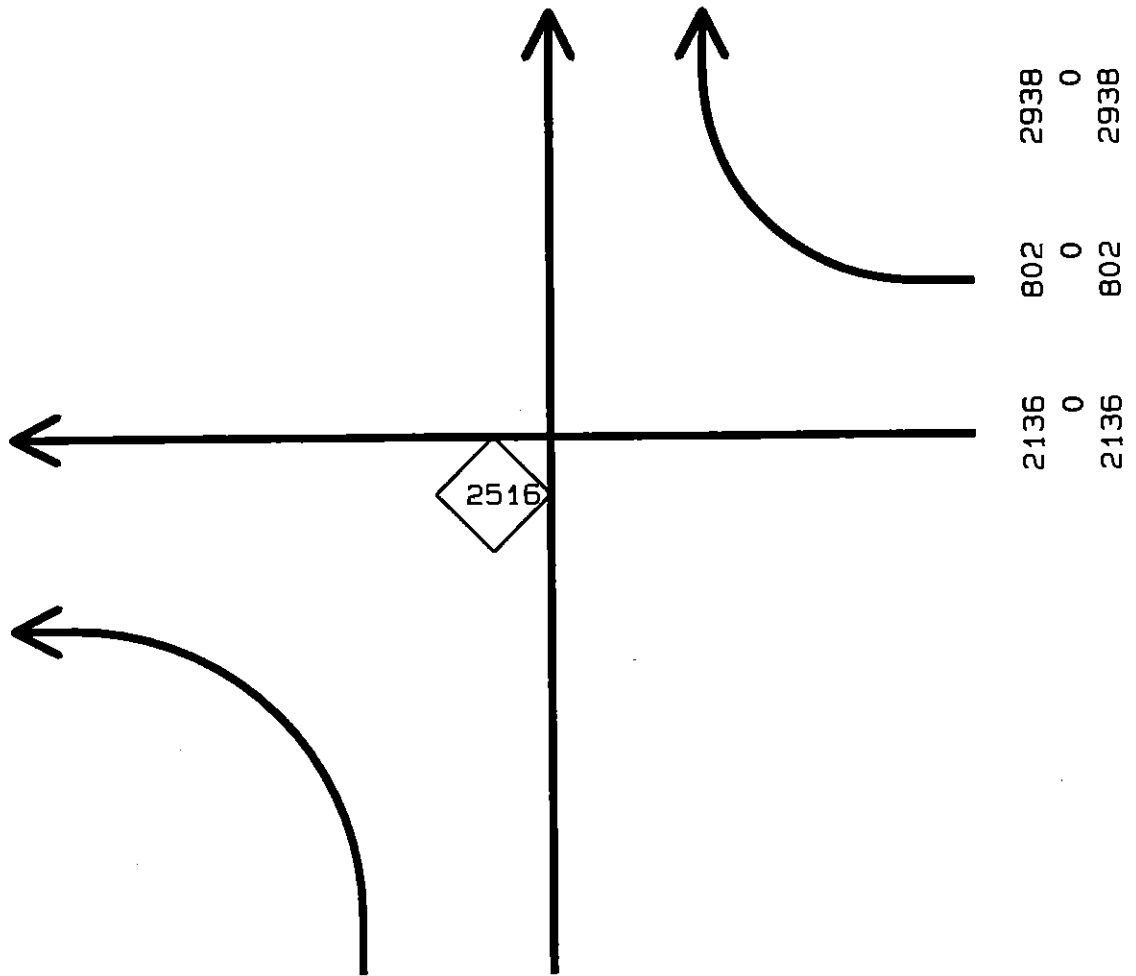
FWW Alt. 1-A (TSM), AM Peak Hour

Sixth at Broadway

"North"

2490

2515



2136 802 2938
 0 0 0
 2136 802 2938

2817

330	1007	1337
0	0	0
330	1007	1337

LOV Volume
 HOV Volume
 Total Volume

2526

Volumes Posted into Intersection, not at Arrow

FWW Alt. 1-A (TSM), AM Peak Hour

Fifth at Central

"North"

2500

82	82
0	0
82	82

3159	0	3159
------	---	------

461	0	461
-----	---	-----

10280

2698	0	2698
------	---	------

2527

2528

510	83	593
0	0	0
510	83	593

LOV Volume
 HOV Volume
 Total Volume

2544

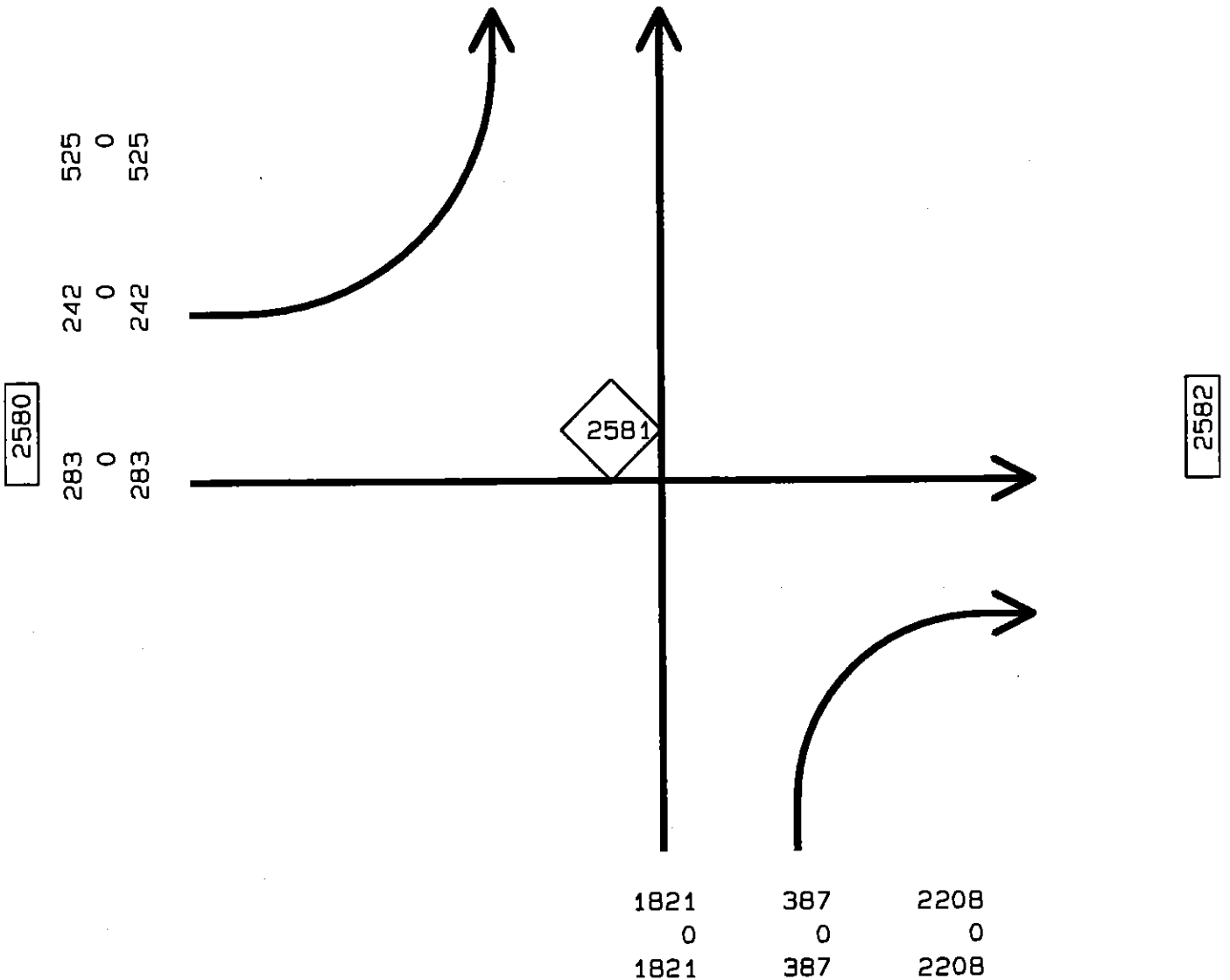
Volumes Posted into Intersection, not at Arrow

FWW Alt. 1-A (TSM), AM Peak Hour

Third at Vine

"North"

2572



LOV Volume
 HOV Volume
 Total Volume

2591

Volumes Posted into Intersection, not at Arrow

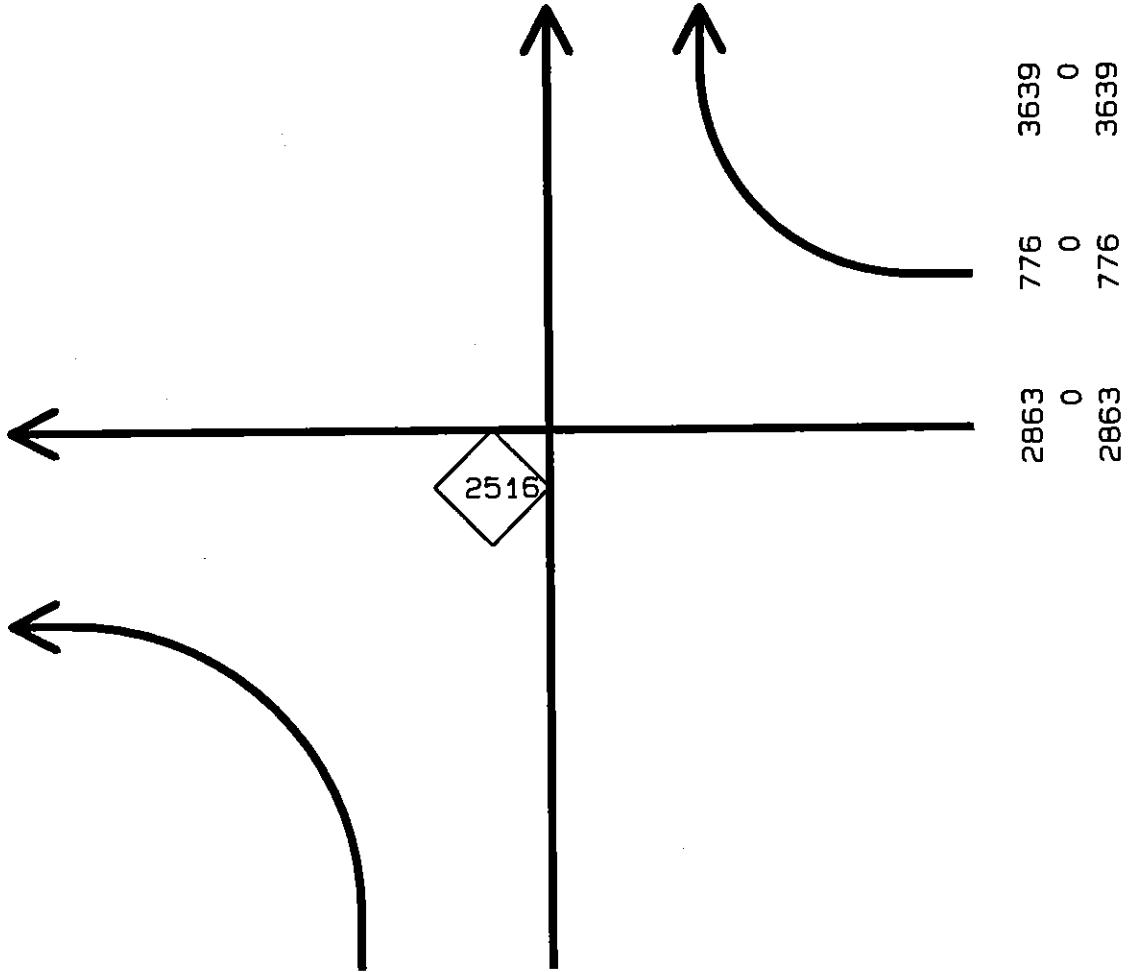
FWW Alt. 5B (Narrow FWW), AM Peak Hour

Sixth at Broadway

"North"

2490

2515



3639	0	3639
776	0	776
2863	0	2863

2817

166	861	1027
0	0	0
166	861	1027

LOV Volume
 HOV Volume
 Total Volume

2526

Volumes Posted into Intersection, not at Arrow

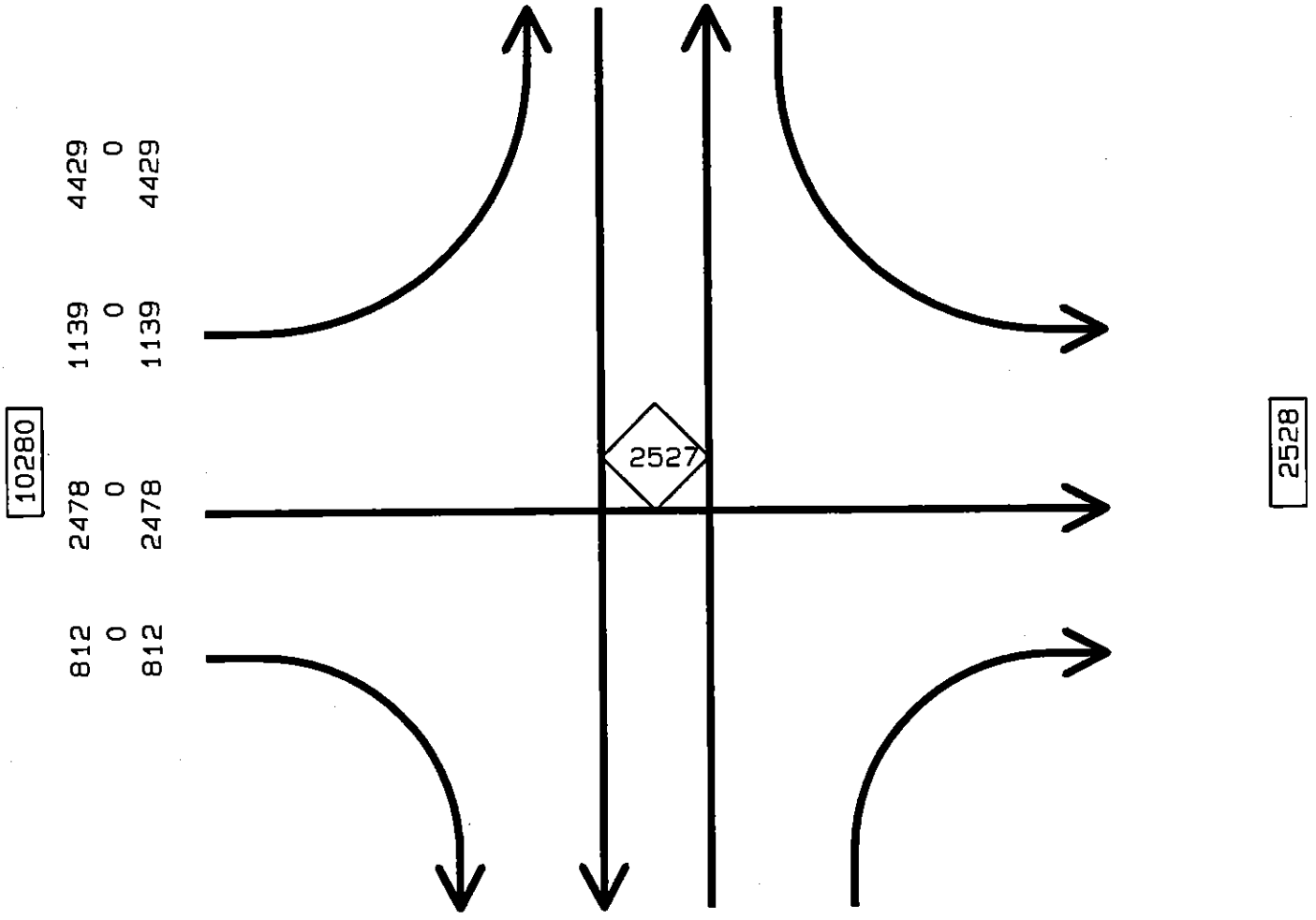
FWW Alt. 5B (Narrow FWW), AM Peak Hour

Fifth at Central

"North"

2500

283	55	338
0	0	0
283	55	338



4429
0
4429

1139
0
1139

2478
0
2478

812
0
812

462	173	635
0	0	0
462	173	635

LOV Volume
HOV Volume
Total Volume

2544

Volumes Posted into Intersection, not at Arrow

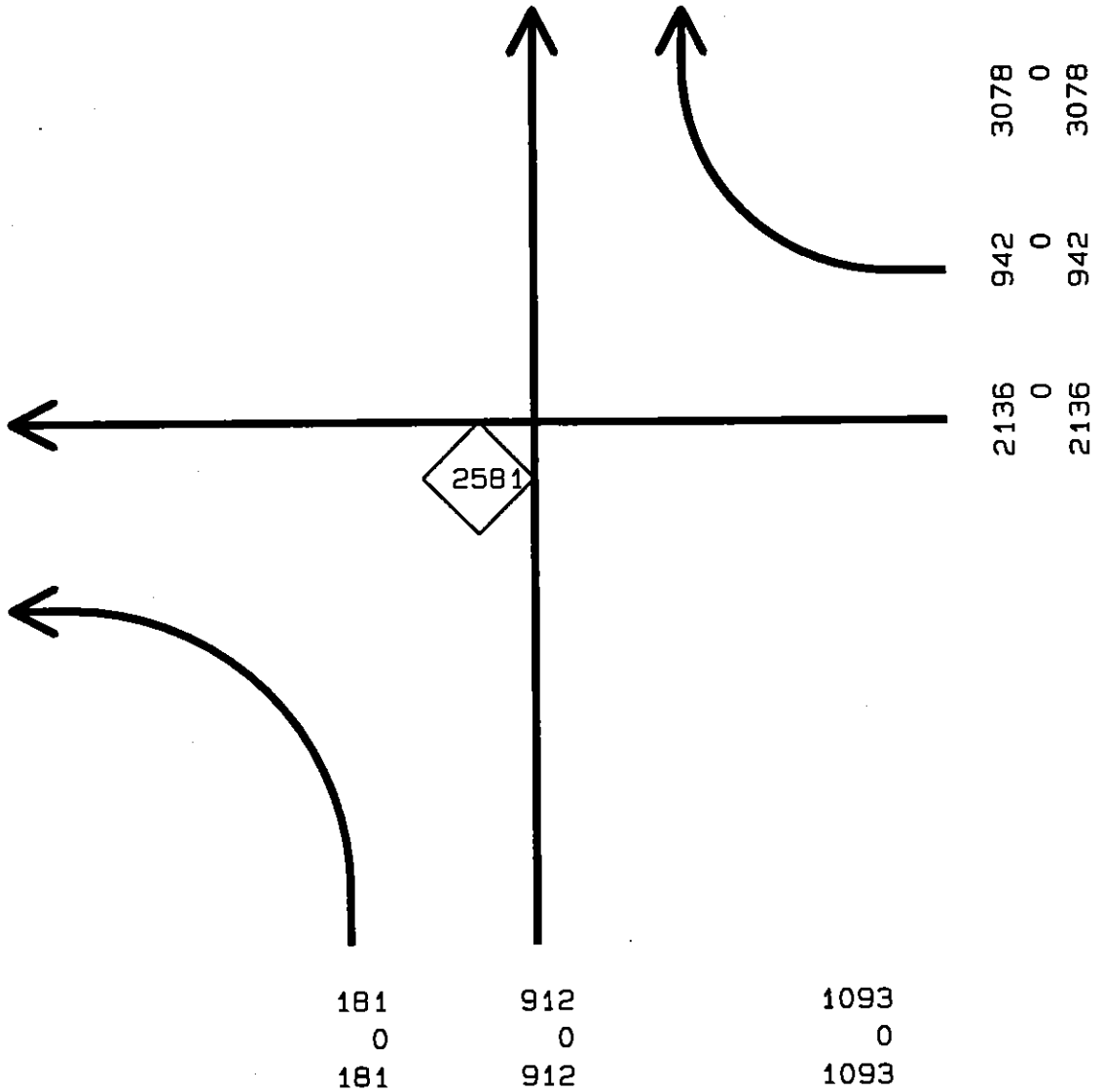
FWW Alt. 5B (Narrow FWW), AM Peak Hour

Third at Vine

"North"

2572

2580



2582

LOV Volume
 HOV Volume
 Total Volume

12517

Volumes Posted into Intersection, not at Arrow

Appendix B: Weaving Movement Tables

Weaving Movements for AM and PM Peak Hour

- TSM
- Narrow Fort Washington Way

Weaving Movements

TSM Alternative

AM Peak Hour

EB FWW From Brent Spence Bridge

	Vine/PRW Exit	Thru I-71	Main St Exit	Total
I-71/75 SB into trench	1,136	1,731	589	3,456
From BSB into trench	1,332	2,354	475	4,162
Total	2,468	4,085	1,064	7,617

NB I-71 to Lytle Tunnel

	I-71 NB	US50	Total
Race St on-ramp	395	342	737
I-71 in trench	2,431	1,655	4,085
Total	2,825	1,997	4,822

US50/I-471S

	US50 Thru	I-471 on-ramp	Total
US50	1,068	1,333	2,401
Pete Rose Way on-ramp	187	137	324
Total	1,255	1,470	2,725

I-71 WB from Lytle Tunnel

	Elm St off-ramp	to I-71/ I-75	Total
US50 to trench	754	1,863	2,617
I-71 to trench	1,123	2,710	3,833
Sycamore on-ramp	25	949	975
Total	1,902	5,523	7,425

I-71 WB to Brent Spence

	to I-75/ US50	to BSB	Total
Walnut on-ramp	285	434	719
Sycamore on-ramp	666	284	949
I-71/US50 into trench	1,882	2,692	4,574
Total	2,832	3,410	6,242

Weaving Movements
TSM Alternative

PM Peak Hour

EB FWW From Brent Spence Bridge

	Vine/PRW Exit	Thru I-71	Main St Exit	Total
I-71/75 SB into trench	1,042	2,111	280	3,432
From BSB into trench	640	2,228	277	3,145
Total	1,682	4,339	557	6,577

NB I-71 to Lytle Tunnel

	I-71 NB	US50	Total
Race St on-ramp	399	488	887
I-71 in trench	2,131	2,208	4,339
Total	2,530	2,696	5,226

US50/I-471S

	US50 Thru	I-471 on-ramp	Total
US50	1,031	2,114	3,145
Pete Rose Way on-ramp	304	332	636
Total	1,335	2,446	3,781

I-781 WB from Lytle Tunnel

	Elm St off-ramp	to I-71/ I-75	Total
US50 to trench	340	1,452	1,791
I-71 to trench	497	2,314	2,811
Sycamore on-ramp	15	1,584	1,598
Total	852	5,349	6,201

I-71 WB to Brent Spence

	to I-75/ US50	to BSB	Total
Walnut on-ramp	491	638	1,130
Sycamore on-ramp	1,059	525	1,584
I-71/US50 into trench	1,513	2,252	3,765
Total	3,064	3,415	6,479

Weaving Movements
Narrow Fort Washington Way

AM Peak Hour

West FWW [EB]

	Trench to I-71	Trench to US 50	Total
I-71/75 to trench	2,051	376	2,427
I-75 to trench	603	1,845	2,449
Total	2,654	2,222	4,876

US50: East FWW

	To US 50	To I-471S	Total
trench to US50	741	1,480	2,222
Second to US50	307	513	820
Total	1,049	1,993	3,042

West FWW [WB]

	Trench to BSB	Trench to I-75N	Total
I-71S to trench	2,347	367	2,715
US 50 to trench	349	718	1,067
Total	2,697	1,085	3,782

PM Peak Hour

West FWW [EB]

	Trench to I-71	Trench to US 50	Total
I-71/75 to trench	1,661	617	2,278
I-75 to trench	446	2,252	2,698
Total	2,107	2,869	4,976

US50: East FWW

	To US 50	To I-471S	Total
trench to US50	764	2,106	2,869
Second to US50	397	712	1,109
Total	1,161	2,818	3,978

West FWW [WB]

	Trench to BSB	Trench to I-75N	Total
I-71S to trench	1,937	427	2,364
US 50 to trench	428	766	1,195
Total	2,365	1,193	3,558