Appendix A

**Summary of Previous Studies** 

# Spokane International Airport Airport Drive Couplet at Spotted Road Intersection Study Summary of Previous Studies

Several studies have been performed that have included the Airport Drive Couplet/Spotted Road intersections. These studies have been performed either in anticipation of potential impacts of development, as a result of accident history, or were simply considered as part of a larger study or planning effort. It is appropriate to consider the findings, thought processes and recommendations of these studies, and as such, a brief summary of pertinent aspects of these studies will be discussed below.

## Spokane International Airport Technology Park Transportation Impact Analysis

In 2004 the Transpo Group completed a Transportation Impact Analysis (TIA) to evaluate the three intersections of Spotted Road at Inbound Airport Drive, Outbound Airport Drive and US 2 upon build-out of Phase II of the 53 acre Technology Park situated between US 2 and Airport Drive east of Spotted Road. (Phase I, west of Spotted Road, was approved for development in 1997.) The study identified that the 2003 Level of Service at the two intersections of Spotted Road at Airport Drive were LOS "B" for both the AM and the PM peak hours while the intersection of Spotted Road at US 2 functioned at LOS "D" and "F" during the AM and PM peak hours.

The study year for Stage 1 of Phase II, including a 30,000 sq. ft. Entrepreneurial Center was 2005. Included in the traffic forecasts was a 1% per year background growth rate as well as seven pipeline projects:

- Airway Business Center Expansion
- Cross Pointe Rezone
- Pacific Northwest Technology Park
- Russell Heights Residential Development
- SIA Technology Park Phase I Development
- Yokes Supermarket
- Jolt Industrial Park

These pipeline projects combined were anticipated to add 1,309 westbound trips on US 2 during the AM peak hour and 1,436 PM peak hour at the Spotted Road intersection. At Airport Drive Inbound/Spotted Road the increase in traffic was 458 trips during the AM and 156 during the PM peak hour while at the Outbound Airport Drive traffic would increase 146 in the AM and 441 in the PM peak. The Technology Park was to add 35 AM trips and 34 PM trips. The resulting 2005 LOS was projected to be "F" during AM and PM peak hours at US2/Spotted Road, "C" at Inbound Airport Drive and "B" and "E" during the AM and PM peak hours respectively at Outbound Airport Drive.

Build-out of Phase II was studied for 2018. The study recognized that the build-out scenario timeframe for the pipeline projects would more closely approximate anticipated conditions in 2018, but that the forecasts still presented a growth scenario that exceeds historical trends. The 1% percent per year

background growth rate in addition to the pipeline projects and the 746 AM trips and 704 PM peak hour trips of the full Phase II Technology Park in place was anticipated to result in 2018 LOS of "F" during AM and PM peak hours at US2/Spotted Road, "F" at Inbound Airport Drive during both peak hours and "D" and "F" during the AM and PM peak hours respectively at Outbound Airport Drive. In order to achieve acceptable LOS at the three study intersections a traffic signal warrant analysis was performed and it was determined that Warrants 1 - 3 (8-hour, 4-hour and peak hour) of the Manual of Uniform Traffic Control Devices (MUTCD) would be met by year 2018, based on the assumptions of the TIA.

Due to perceived high accident rates, this study also evaluated available collision histories from 1998 – 2002. During those 5 years there had been 12 collisions at the intersection of US/Spotted Road, with 3 of those being fatalities. The Inbound Airport Drive/Spotted Road intersection had 10 collisions and the Outbound Airport Drive/Spotted Road intersection had 25 collisions. Accident Severity Rate calculations were performed that considers fatalities and injury collisions along with the traffic volumes and rates for the 3 intersections were 0.59 at US 2, 1.91 at Inbound Airport Drive and 4.4 at Outbound Airport Drive. The Outbound Airport Drive intersection was identified as a "High Accident Location" because the rate was above the Washington Department of Transportation upper critical limit for intersections in the same category.

#### SIA Spotted Road and Airport Drive Safety Improvements Project

This study was completed in 2006 by WH Pacific and was prompted by the collision rate and identification of Outbound Airport Drive/Spotted Road intersection as a High Accident Location in the 2004 Technology Park Study. This study relied heavily on the traffic analysis and collision summary of the previous study and focused on Short and Long-range improvements to address safety issues. A geotechnical report was also prepared to assist in evaluation of alternatives and preparation of cost estimates. An initial list and figures of 26 alternatives was developed that were combined into 5 categories for a pre-screening analysis.

- Do Nothing/Limited Changes Alternatives
- U-turn Route Alternatives
- Roundabout Alternatives
- Signalization Alternatives
- Grade Separation Alternatives

Design issue considerations were also discussed in the report and are briefly described below.

- Couplet Considerations: combining the inbound and outbound Airport Drive couplet in the vicinity of Spotted Road allows for a more efficient and standardized application of improvement options and would provide value to the airport by providing additional land for development.
- ✓ Airport Access Road Considerations: The Federal Aviation Administration's Ground Access Planning Guide was consulted for geometric design alternatives, which states that "...burgeoning traffic demands through a critical at-grade intersection may warrant consideration of a gradeseparated interchange". The Guide also states that "Access highways to large airports should

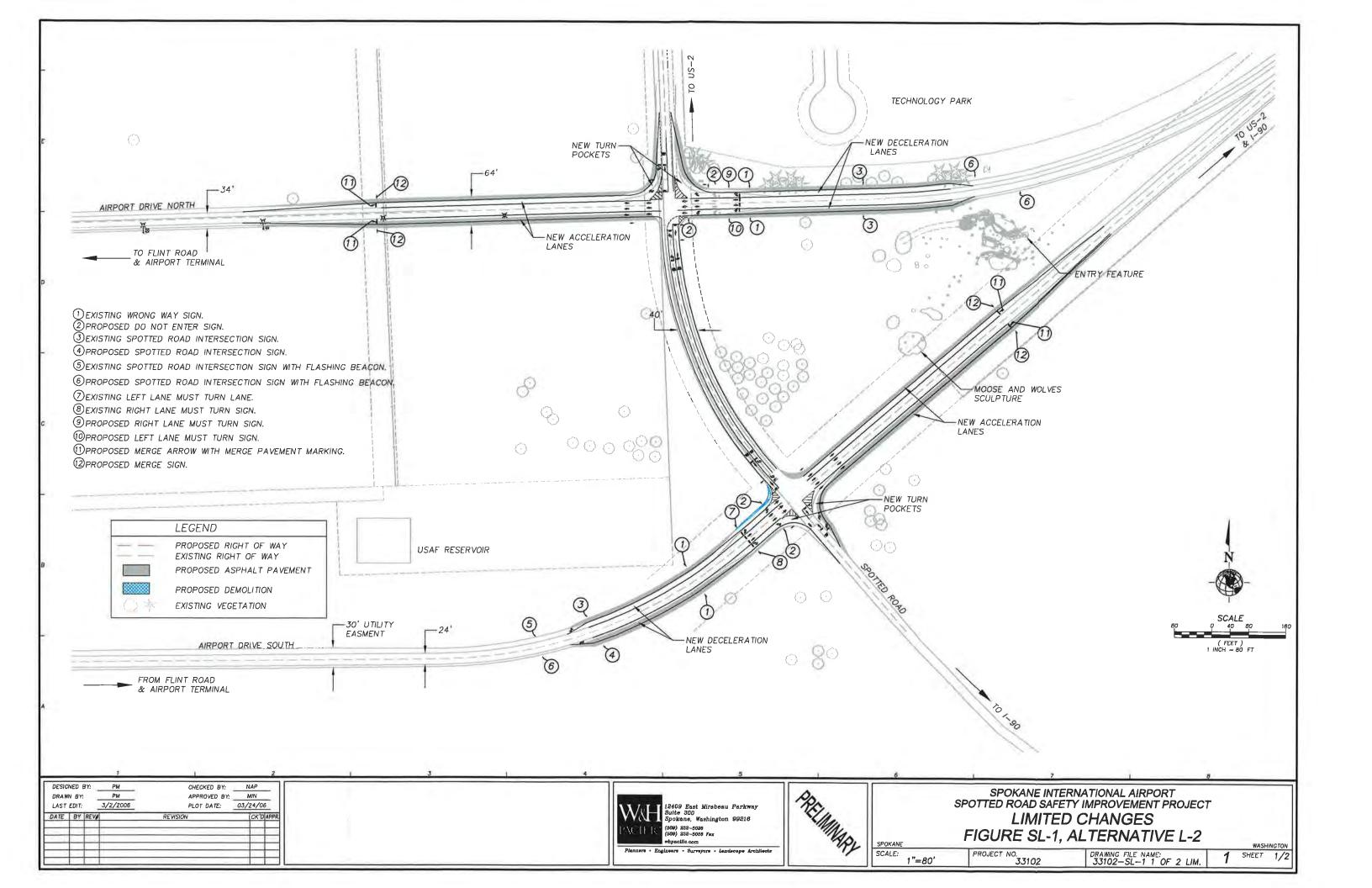
have full control of access with no crossings at grade", and that "most airports that serve more than 2.5 million annual originating passengers are served by fully controlled access facilities." According to the then most recent SIA Master Plan Update, it was projected that there would be more than 2.5 million enplanements in the year 2010, increasing to 3.3 million by 2020. Therefore it was indicated that the Spotted Road and Airport Drive at-grade intersections should be mitigated and a highway grade separation should be constructed."

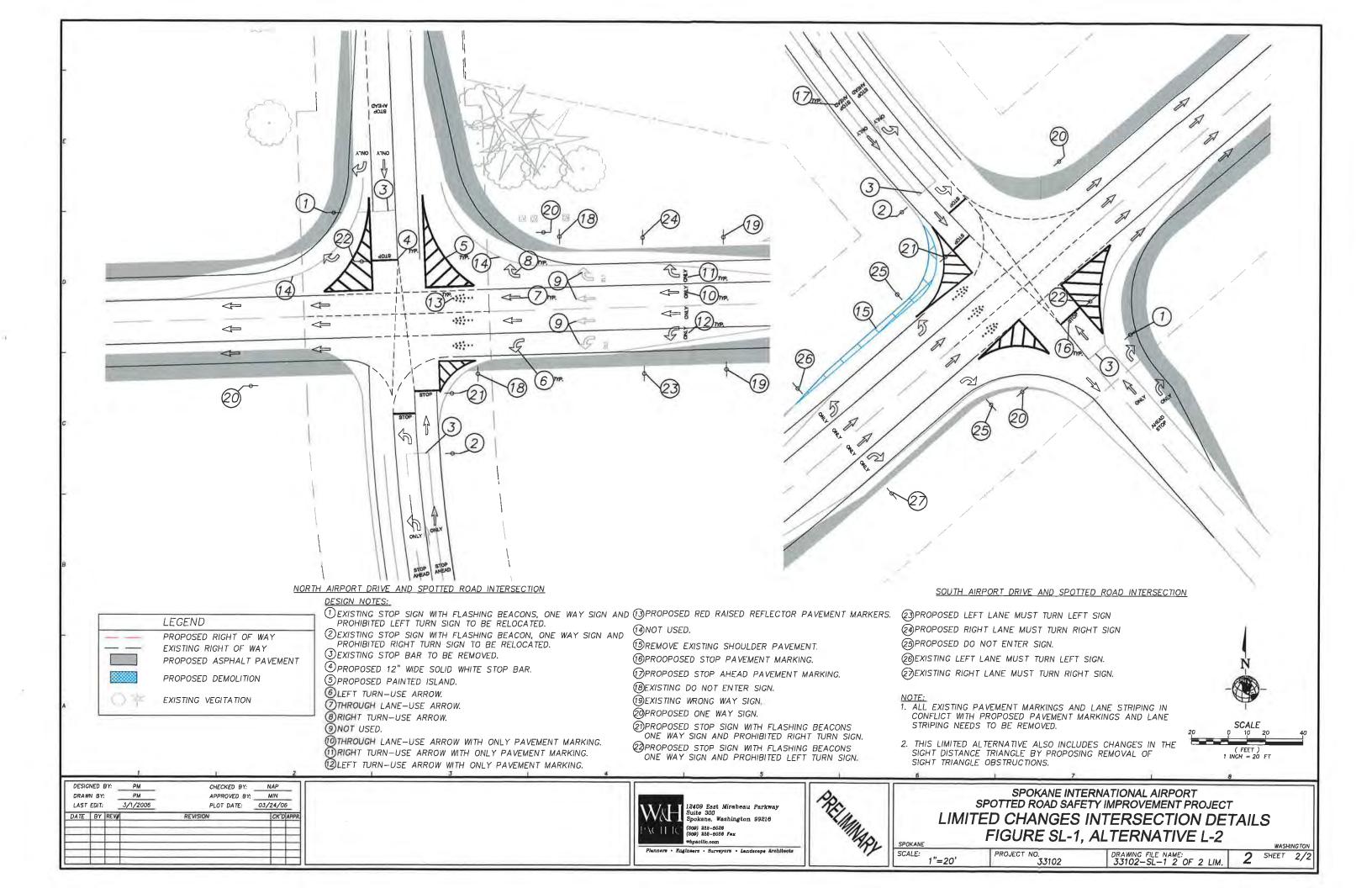
- Intersection Safety Considerations: A brief discussion of the conflicting crossing and turning movement that occur within a limited area of at-grade intersections, and that by separating the grades of intersecting roadways crashes caused by these conflicting movement can be reduced.
- ✓ Right-of-Way Considerations: Spotted Road currently has 80' ROW except at the intersections with Airport Drive where it becomes 100'
- Posted Speed Limit Considerations: A reduction in the current speed limit on Airport Drive was considered, but it was felt that because of roadway geometrics drivers would often exceed the speed limit and the desired safety level would not be achieved.
- A Sight Distance Analysis: This analysis was performed for the minimum WSDOT setback and for the stop bar locations for cars and trucks. It was determined that multiple evergreen trees obstructing views at the stop bar locations at Inbound Airport Drive and northbound and southbound Spotted Road. Other minor sight triangle obstructions exist for trucks at all intersection locations.

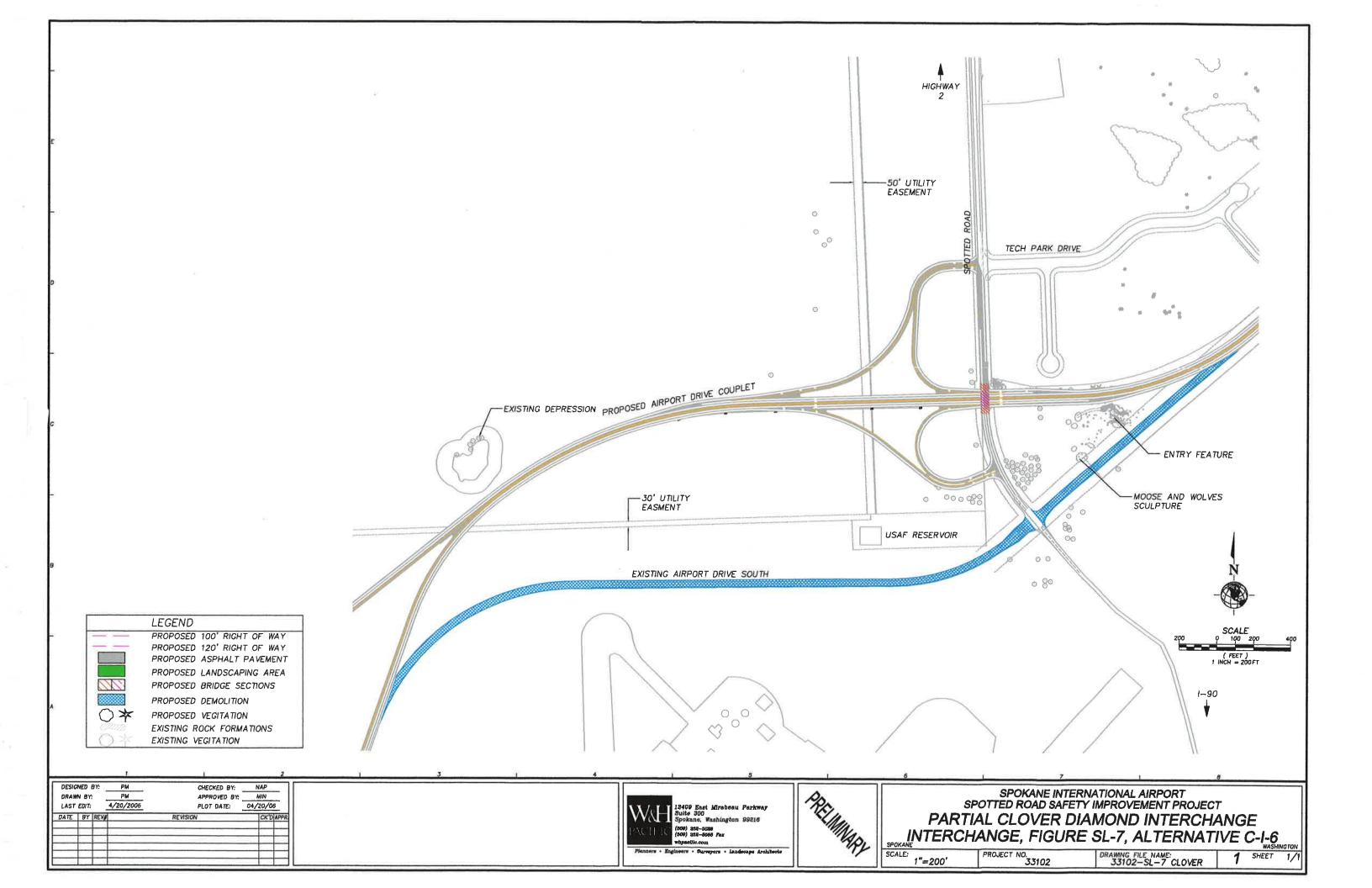
A selection matrix was prepared that ranked the alternatives for safety, mobility, development benefits, and cost. The alternatives are summarized in the table on the following page. Figures of the Short-term and Long-term recommendations are included as well.

# Summary of Short Listed Alternatives Identified in 2006 Spotted Road and Airport Drive Safety Improvements Project

Alternative	Description	Summary of Analysis
Do Nothing/Limited Changes Alternative	Adds channelization, signage, painted traffic islands, turn lanes, acceleration and deceleration lanes to the current intersection.	This alternative was the recommendation for the short-term solution.
U-turn Route Alternative	Proposes the removal of Spotted Road between the Airport Drive Couplet and adds a u-turn located between the entry feature and the beginning of the couplet and a u-turn route located just west of the Geiger Reservoir.	Provides limited improvement to the safety while decreasing the function of Spotted Road at or near Airport Drive. This decrease in function is a concern given that Spotted Road is a freight mobility corridor along with the planned development along Spotted Road. Given these considerations as well as a cost greater than the Limited Changes Alternative, it was recommended that the U-Turn Alternative be dismissed as a preferred alternative.
Roundabout Alternative	Combines the Couplet and proposes a modern roundabout at a new combined Airport Drive intersection with Spotted Road.	The Roundabout Alternative would provide an increase in safety but would impede the traffic flow on Airport Drive, which is contrary to the roadway's intended function and FAA guidance. It was recommended that this alternative be dismissed as a preferred alternative.
Signalization Alternative	Combines the couplet and proposes a traffic signal at the new combined Airport Drive intersection with Spotted Road. This alternative also adds signage, raised traffic islands, turn lanes, acceleration and deceleration lanes.	The Traffic Signal Alternative would provide an increase in safety but would impede the traffic flow on Airport Drive, which is contrary to the roadway's intended function and FAA guidance. It was recommended that this alternative be dismissed as a preferred alternative.
Grade Separation Alternatives	Combines the couplet and proposes the following structures at the new combined intersection of Airport Drive and Spotted Rd: o Single Point Urban Interchange o Urban Diamond Interchange o Partial Clover Diamond Interchange	Grade separation alternatives provide the greatest efficiency, safety an dlong term solution. Based upon overall costs and impact upon surrounding properties, the Partial Clover Diamond Interchange was chosen over the Single Point Urban Interchange and the Urban Diamond Interchange.





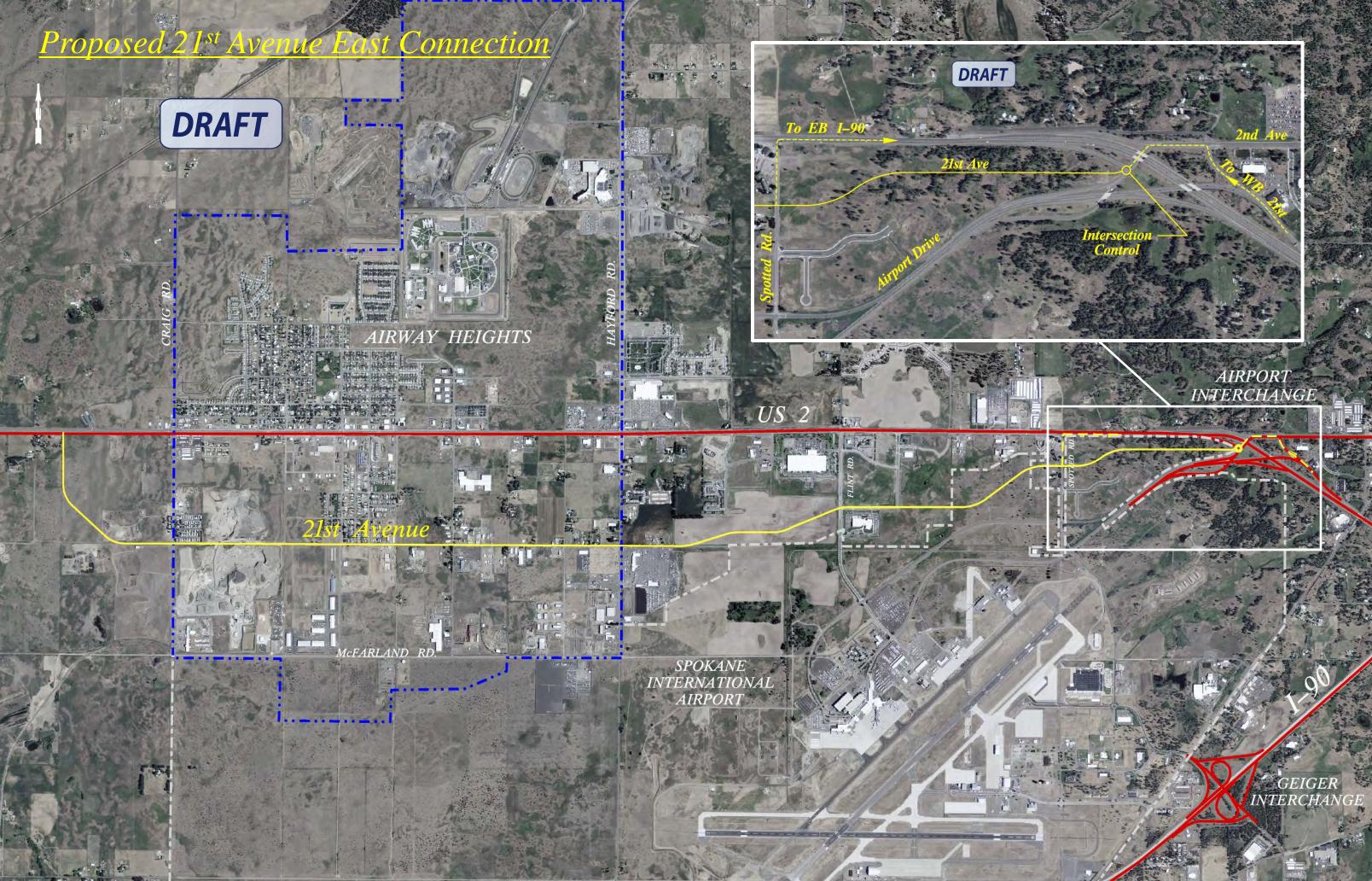


#### West Plains – Spokane International Airport Transportation Study

In 2011 The Spokane Regional Transportation Council (SRTC) completed a 2-year process of preparing a multi-modal transportation study of the area north and west of I-90 westward to include SIA, Airway heights and Fairchild Airforce Base and developing areas. The study was performed to address long-term transportation needs of the West Plains area and to facilitate coordination and cooperation at the local, regional and statewide levels. Several agencies participated in the study, including: SRTC, WSDOT, SIA, City of Spokane, City of Airway Heights, Spokane County, Spokane Transit Authority.

Forecasted development in the study area was significant and a considerable amount of effort was performed to review proposed development which combined would far exceed historic rates. A primary factor of the review was likelihood of development which considered official actions taken such as platting, permitting, TIA's, EIS's, property purchases and groundbreaking which increase the likelihood of actual development. This review was used to update the SRTC regional model demographics and test the benefits of several alternatives that were developed.

The study acknowledged that safety improvements would be needed as well as transit and nonmotorized improvements. The public noted the lack of north-south and east-west arterial roadways in the study area. Nine alternatives were developed to address long-range solutions to congestion in the study area. Some of the 9 alternatives, although they would not provide benefits to the entire study area, were recognized to provide benefits to a specific area, such as Geiger Interchange Improvements or the Medical Lake Interchange Improvements. Other alternatives proposed widening of existing facilities or new facilities. The most effective alternative to reducing congestion was a new minor arterial connecting to and paralleling US 2 along the 21<sup>st</sup> Avenue alignment from west of the City of Airway Heights to the vicinity of the Airport Drive/US 2 interchange. The alignment of this roadway would cross Spotted Road between Inbound Airport Drive and US 2. Both a 3-lane roadway and a 5-lane roadway were evaluated The study indicated that although the capacity provided by a 5-lane roadway was more than what is needed for the next twenty years, reserving right-of way for a 5 lane facility should be discussed amongst local transportation decision-makers. A graphic prepared by WSDOT is included on the following page.



#### **Spokane International Airport Master Plan**

The Spokane International Airport recently completed a Master Plan for the Airport. The Master Plan identifies that in 2010 passenger Enplanements were nearly 1.6 million and by 2025 would rise to more than 2.6 million. The forecasted growth rate for enplanements was a 3.42% compounded annual growth rate.

The SIA Master Plan recognizes the safety issues at the Spotted Road intersections at Inbound and Outbound Airport Drive as well as at US 2. It mentions that one safety improvement being considered was the prohibition of northbound left turns from Spotted Road to westbound US 2. This would affect traffic patterns and volumes at the Spotted Road intersections at Airport Drive. The Master Plan also states that one safety improvement being considered is an overpass of Spotted Road at Airport Drive to eliminate the intersections. It was recommended that both directions of Airport Drive be co-located so that an interchange could be built with a single bridge structure instead of two.

The SIA Master Plan discusses Land Use Compatibility and the Runway Protection Zones (RPZ) and their importance for both aircraft and people and development on the ground. Areas within the Runway Protection Zones (RPZ), are to be kept as clear as possible.

#### Horizon 2040 Transportation Plan

The Spokane Metropolitan Transportation Plan (MTP), Horizon2040, prepared by the Spokane Regional Transportation Council was adopted in 2013 A Long-Range Regional Transportation Plan is required to be prepared by each Metropolitan Transportation Planning Organization in the United States and updated every 5 years. A process is undertaken to identify both needs based transportation improvements as well as fiscally constrained improvements or those improvements that can be reasonably expected to be afforded within the available financial resources of the planning area.

The proposed 21<sup>st</sup> Avenue Minor Arterial identified in the West Plains Spokane International Airport Study is identified as a needed transportation improvement, however this project is not included in the fiscally constrained MTP.

# Appendix B

# **Runway Protection Zone Technical Memorandum**

# **Technical Memorandum**

To: SIA Traffic Study Technical Advisory Committee

# Mead Hunt

From: Mitchell Hooper, AICP Mead & Hunt, Inc. mitchell.hooper@meadhunt.com (360) 771-1764

Date: August 15, 2014

Subject: Spokane International Airport (GEG) Spokane, Washington Runway Protection Zone (RPZ) Technical Memorandum Phase I

# Introduction

This memorandum is written to document and summarize existing Federal Aviation Administration (FAA) regulations pertaining to land uses within Runway Protection Zones (RPZ) and how roadway alternatives can be developed to avoid triggering an RPZ memorandum at the Spokane International Airport (GEG). Phase II, if necessary, includes the technical memorandum if the proposed road alignment requires an RPZ memorandum. It is organized into two main sections.

- Section 1 FAA Guidance: Summarizes the Interim Guidance on Land Uses Within a Runway Protection Zone.
- Section 2 Triggering Events: Reviews events that trigger a technical memorandum.

# Section 1 – FAA Guidance

The following text is from the September 27, 2012 FAA Memorandum *Interim Guidance on Land Uses within a Runway Protection Zone*:

The Federal Aviation Administration (FAA) Office of Airports (ARP) has identified the need to clarify our policy on land uses within the Runway Protection Zone (RPZ). This memorandum presents interim policy guidance on compatible land uses within RPZs to address recurrent questions about what constitutes a compatible land use and how to evaluate proposed land uses that would reside in an RPZ. While Advisory Circular (AC) 150/5300-13 Change 17(Airport Design) notes that "it is desirable to clear all objects from the RPZ," it also acknowledges that "some uses are permitted" with conditions and other "land uses are prohibited."

RPZ land use compatibility also is often complicated by ownership considerations. Airport owner control over the RPZ land is emphasized to achieve the desired protection of people and property on the ground. Although the FAA recognizes that in certain situations the airport sponsor may not fully control land within the RPZ, the FAA expects airport sponsors to take all possible measures to protect against and remove or mitigate incompatible land uses.

ARP is developing a new guidance document for the Regional Office (RO) and Airport District Office (ADO) staff that clarifies our policy regarding land uses in the RPZ. This new guidance document will outline a comprehensive review process for existing and proposed land uses within an RPZ and is slated for publication in 2013. We also intend to incorporate RPZ land use considerations into the ongoing update to the Land Use Compatibility Advisory Circular (AC) which is slated for publication in 2014.

There are four instances when a review of land uses within the RPZ must happen:

- An airfield project such as a runway extension or runway shift
- A change in the critical design aircraft that increases the RPZ dimensions
- New or revised instrument approach procedures that increase the RPZ dimensions
- A local development proposal, either new or reconfigured, within the RPZ

Each of these four cases require a review of the following land uses within the RPZ or those included in the new RPZ boundary:

- Buildings and structures
  - Examples include, but are not limited to: residences, schools, churches, hospitals or other medical care facilities, commercial/industrial buildings, etc.
- Recreational land use
  - Examples include, but are not limited to: golf courses, sports fields, amusement parks, other places of public assembly, etc.
- Transportation facilities; including:
  - Rail facilities: light or heavy, passenger, or freight
  - Public roads or highways
  - Vehicular parking facilities
- Fuel storage facilities, above and below ground
- Hazardous material storage, above and below ground
- Wastewater treatment facilities
- Above-ground utility infrastructure (i.e. electrical substations), including any type of solar panel installations.

# Section 2 – Triggering Events

The first three triggering events (runway extension or shift, new critical design aircraft, and revised instrument procedure) are not anticipated in relation to this study however they will be covered briefly in this memorandum. The first event is an airport project which changes the physical location of the RPZ; a runway extension or shift are examples as both of these project types change the RPZ location in relation to existing features beyond the runway ends. Trigger number two, a change in the critical design aircraft (the type of aircraft that the dimensions of airport safety surfaces like the RPZ are based on) also changes the RPZ size. Per FAA AC 5300-13A Change 1, *Airport* Design, Section 310, *Runway Protection Zone*, larger aircraft and aircraft capable of operating under lower visibility minimums can increase the size of the RPZ which requires a review of the land uses within the expanded RPZ. The third trigger is a change to the instrument approach procedures. Similar to a change in critical aircraft, instrument procedures with lower visibility minimums will increase the size of the RPZ.

The fourth trigger point, a local development proposal in the RPZ (either new or reconfigured), is expected to be the potential trigger at Spokane International Airport for this project. This is based on the fact that all of the land within the RPZs is owned by the airport, with the exception of transportation right-of ways in three of the four RPZs. The RPZs at GEG are shown in **Exhibit 1**.

There are roadways and right-of-ways within three of the four RPZs at GEG, the only one being completely clear is the Runway 7 RPZ. The Runway 3 RPZ includes a right-of-way for W Electric Avenue which transects the RPZ from southeast to southwest, cutting across the approach lighting system as it traverses the RPZ. This path also crosses through the "central" portion of the RPZ (that area of the RPZ created when the Runway Object Free Area is extended horizontally to the limits of the RPZ).

The Runway 21 RPZ is transected by S. Spotted Road and W. Airport Drive. S. Spotted Road cuts through the middle of the RPZ, including the central portion of the RPZ, and travels north/south across the approach lighting system. W. Airport Drive, one of two primary airport terminal access roads, enters the northern corner of the Runway 21 RPZ.

Geiger Road travels north-northeast/south-southwest through the southeast corner of the Runway 25 RPZ. Only a very small portion of the right-of-way enters the central portion of the RPZ. Interstate 90 is just to the east of the Runway 25 RPZ running parallel to Geiger Road. Interstate 90 does not enter the Runway 25 RPZ.

Modification of these roads and right-of-ways which causes the new alignment to enter the RPZ or changes the realigns the road within the RPZ will trigger a review of the land uses in the RPZ. During the alternatives analysis for any potential action, consideration should be given to options that could avoid requiring a land use review. This can be accomplished through the following actions.

The first strategy is to avoid introducing new incompatible land uses into the RPZ. By not introducing incompatible land uses into the RPZ, there is no requirement to review the land uses. Introduction of incompatible land use is unlikely within the RPZs at GEG because the Airport owns RPZ property outside of the road right-of-ways.

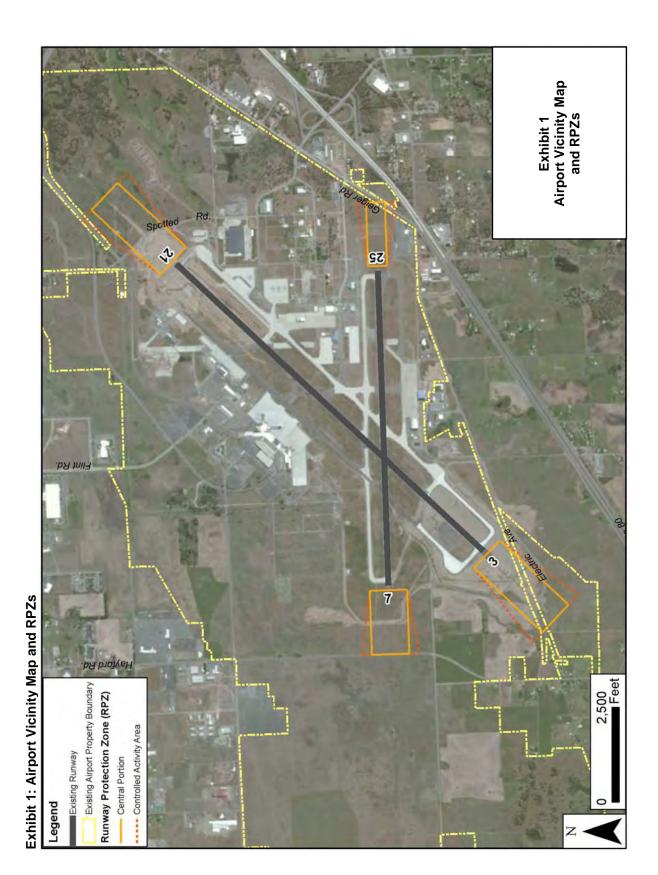
The second strategy is to minimize the impact of the incompatible land use in the RPZ. This can be accomplished by moving the roadway or incompatible land use to the controlled activity area of the RPZ rather than the central portion of the RPZ, moving the roadway or incompatible land use further from the runway end, or re-routing and re-siting the roadway or incompatible land use. If a roadway or incompatible land use must be introduced, there are numerous methods to minimize the impact of the roadway or incompatible land use and its effect on the RPZ and airport operations.

Finally, mitigate the risk to people and property; using alternative design options that might include tunneling, depressing the road level, or protecting the road through the RPZ. Additional alternatives might include operational actions including automated traffic controlling features such as stoplights at the limits of the RPZ. In the event an incompatible land use is required, mitigation of the risk must be considered.

While it is easy to identify instances when physical change within the RPZ will require a review of land uses, there are secondary effects by nearby changes that may not be as easily identifiable that might drive a review. For instance, near Runway 21, at the intersection of S Spotted Avenue and W Airport Drive, it could be possible to realign those roads and the intersections that are outside of the RPZ without affecting any of the roadway within the RPZ. However, if these changes were to increase the amount of traffic through the RPZ, or increase the dwell time of vehicles (the time vehicles are physically within the RPZ) within the RPZ, this increased risk may require a review of the land uses within the RPZ. This type of scenario can only be followed once the design and road alignments are complete.

Mead & Hunt

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Appendix C

**Traffic Counts** 

#### Site Code: AIRPORT ROAD WEST Station ID: WEST OF SPOTTED

WESTBO	JND												Latitud	ie: 0' 0.000	JU South
Start	<u></u>	Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	0	17	7	0	4	0	0	0	1	0	0	0	0	0	29
01:00	0	3	2	0	2	0	0	0	0	0	0	0	0	0	7
02:00	0	5	2	0	1	0	0	0	0	0	0	0	0	0	8
03:00	4	101	28	0	4	0	0	2	0	0	0	0	0	0	139
04:00	1	269	72	2	18	0	0	6	0	0	0	0	1	4	373
05:00	1	270	80	0	32	0	0	5	0	0	0	0	0	3	391
06:00	1	183	45	1	33	0	0	4	2	0	0	0	0	4	273
07:00	2	226	60	2	21	2	0	2	2	0	0	0	0	0	317
08:00	0	207	59	2	18	0	0	5	3	0	0	0	0	4	298
09:00	1	215	69	2	21	1	0	2	0	0	0	0	0	5	316
10:00	1	272	51	4	25	0	0	5	3	0	0	0	0	4	365
11:00	0	288	71	4	22	1	0	3	0	0	0	0	0	0	389
12 PM	1	405	98	1	24	0	0	3	1	0	0	0	0	4	537
13:00	2	296	74	2	25	0	0	3	0	0	1	0	0	2	405
14:00	1	337	85	2	23	0	0	5	0	0	0	0	0	3	456
15:00	1	259	56	1	19	0	0	8	1	0	0	0	0	1	346
16:00	0	222	59	2	19	0	0	4	0	0	0	0	0	1	307
17:00	0	189	55	3	26	0	0	1	0	0	0	0	0	3	277
18:00	0	145	31	1	15	1	0	1	1	0	0	0	0	1	196
19:00	1	70	31	1	9	1	0	0	2	0	0	0	0	0	115
20:00	0	54	9	1	1	0	0	1	0	0	0	0	0	0	66
21:00	0	104	12	1	11	0	0	0	0	0	0	0	0	1	129
22:00	0	167	46	1	14	0	0	1	0	0	0	0	0	2	231
23:00	0	137	26	0	8	1	0	0	0	0	0	0	0	1	173
Total	17	4441	1128	33	395	7	0	61	16	0		0	1	43	6143
Percent	0.3%	72.3%	18.4%	0.5%	6.4%	0.1%	0.0%	1.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.7%	
AM Peak	03:00	11:00	05:00	10:00	06:00	07:00		04:00	08:00				04:00	09:00	05:00
Vol.	4	288	80	4	33	2		6	3				1	5	391
PM Peak	13:00	12:00	12:00	17:00	17:00	18:00		15:00	19:00		13:00			12:00	12:00
Vol.	2	405	98	3	26	1		8	2		1			4	537

#### Site Code: AIRPORT ROAD WEST Station ID: EAST OF SPOTTED

WESTBO	UND														
Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	0	13	6	0	2	0	0	0	1	0	0	0	0	1	23
01:00	0	3	1	0	2	0	0	0	0	0	0	0	0	0	6
02:00	0	4	0	0	2	0	0	0	0	0	0	0	0	1	7
03:00	3	88	28	0	11	0	0	3	0	0	0	0	0	1	134
04:00	1	233	96	2	28	0	0	2	1	0	0	0	0	1	364
05:00	1	242	87	0	39	0	0	3	0	1	0	0	0	1	374
06:00	1	167	51	2	36	1	0	2	2	0	0	0	0	1	263
07:00	3	198	66	3	31	0	0	2	3	1	0	0	0	3	310
08:00	0	182	65	3	21	0	0	3	2	0	0	0	1	5	282
09:00	1	192	64	3	22	1	0	3	0	0	0	0	0	5	291
10:00	0	230	51	4	23	0	0	3	2	1	0	0	0	1	315
11:00	0	243	85	3	22	0	0	3	0	0	0	0	0	4	360
12 PM	1	333	92	3	32	1	0	7	2	0	0	0	0	6	477
13:00	0	238	83	3	26	1	0	3	0	0	0	0	0	2	356
14:00	0	283	78	2	31	0	0	11	0	0	0	0	0	4	409
15:00	0	231	67	2	24	0	0	3	1	ı 1	0	0	0	0	329
16:00	0	194	77	1	19	0	0	2	0	0	0	0	0	1	294
17:00	0	179	57	2	24	1	0	2	Ő	Ő	0	0	0	0	265
18:00	0	123	42	1	19	1	0	0	2	0	0	0	0	0	188
19:00	0	69	31	1	10	0	0	0	3	0	0	0	0	0	114
20:00	0	52	13	1	2	0	0	0	0	0	0	0	0	0	68
21:00	0	89	19	1	7	0	0	0	0	0	0	0	0	0	116
22:00	0	153	43	1	19	0	0	0	0	0	0	0	0	0	216
23:00	1	111	37	0	10	0	0	0	0	0	0	0	0	2	161
Total	12	3850	1239	38	462	6	0	52	19	4	0	0	1	39	5722
Percent	0.2%	67.3%	21.7%	0.7%	8.1%	0.1%	0.0%	0.9%	0.3%	0.1%	0.0%	0.0%	0.0%	0.7%	
AM Peak	03:00	11:00	04:00	10:00	05:00	06:00		03:00	07:00	05:00			08:00	08:00	05:00
Vol.	3	243	96	4	39	1		3	3	1			1	5	374
PM	12:00	12:00	12:00	12:00	12:00	12:00		14:00	19:00	15:00			· ·	12:00	12:00
Peak Vol.	1	333	92	3	32	1		11	3	1				6	477

#### Site Code: AIRPORT ROAD EAST Station ID: WEST OF SPOTTED

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
05/08/14	1	118	25	0	10	0	0	0	0	0	0	0	0	0	154
01:00	0	21	3	0	1	0	0	0	0	0	0	0	0	0	25
02:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
03:00	0	8	0	1	1	0	0	1	0	0	0	0	0	0	11
04:00	0	71	19	1	15	2	0	1	0	0	0	0	0	0	109
05:00	0	130	31	1	24	0	0	4	2	0	0	0	0	0	192
06:00	0	70	18	0	22	0	0	3	2	0	0	0	0	0	115
07:00	0	136	34	0	21	0	0	3	3	0	0	0	1	1	199
08:00	0	165	35	0	19	0	0	1	1	0	0	0	0	0	221
09:00	1	197	39	3	19	0	0	4	1	0	0	0	0	7	271
10:00	0	244	35	2	19	1	0	3	0	0	0	0	0	0	304
11:00	1	297	46	3	26	2	0	2	1	0	0	0	0	4	382
12 PM	2	370	51	2	20	1	0	5	2	0	0	0	0	1	454
13:00	3	451	89	1	26	0	0	3	0	0	0	1	0	4	578
14:00	2	279	64	1	25	0	0	1	0	0	0	0	0	1	373
15:00	2	315	61	1	25	1	0	1	2	0	0	0	0	3	411
16:00	2	305	79	1	30	1	0	3	0	0	0	0	0	3	424
17:00	0	229	36	4	27	0	0	3	0	0	0	0	0	2	301
18:00	0	285	59	1	20	1	0	2	1	0	1	0	0	5	375
19:00	0	198	40	1	17	0	0	1	1	0	0	0	0	3	261
20:00	0	116	20	0	7	0	0	1	1	0	0	0	0	3	148
21:00	0	104	24	1	10	0	0	0	0	0	0	0	0	5	144
22:00	0	246	44	0	17	0	0	2	0	0	0	0	0	5	314
23:00	0	223	39	0	11	0	0	2	0	0	0	0	0	4	279
Total	14	4581	892	24	412	9	0	46	17	0	1	1	1	51	6049
Percent	0.2%	75.7%	14.7%	0.4%	6.8%	0.1%	0.0%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.8%	
AM Peak	00:00	11:00	11:00	09:00	11:00	04:00		05:00	07:00				07:00	09:00	11:00
Vol.	1	297	46	3	26	2		4	3				1	7	382
PM Peak	13:00	13:00	13:00	17:00	16:00	12:00		12:00	12:00		18:00	13:00		18:00	13:00
Vol.	3	451	89	4	30	1		5	2		1	1		5	578

#### Site Code: AIRPORT ROAD EAST Station ID: EAST OF SPOTTED

Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	0	86	28	0	9	0	0	1	0	0	0	0	0	0	124
01:00	0	18	6	0	1	0	0	0	0	0	0	0	0	0	25
02:00	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	8	1	1	1	0	0	1	0	0	0	0	0	0	12
04:00	0	56	38	1	12	1	0	1	0	0	0	0	0	0	109
05:00	0	108	38	1	20	0	0	3	2	0	0	0	0	0	172
06:00	0	61	29	1	17	0	0	1	2	0	0	0	0	0	111
07:00	0	120	42	3	19	0	0	5	2	0	0	0	0	0	191
08:00	0	129	49	2	17	0	0	2	0	1	0	0	1	1	202
09:00	3	156	68	3	13	0	0	1	1	0	0	0	0	5	250
10:00	1	175	56	1	26	1	0	2	0	0	0	0	0	5	267
11:00	0	237	87	4	27	2	0	3	2	1	0	0	1	1	365
12 PM	0	310	93	3	27	0	0	2	1	0	0	0	0	5	441
13:00	1	344	115	4	36	0	0	4	0	0	0	1	0	7	512
14:00	4	234	76	3	25	0	0	2	0	0	0	0	0	5	349
15:00	0	252	80	2	38	1	1	1	2	0	0	0	0	3	380
16:00	1	232	97	2	45	2	0	5	2	0	0	0	0	6	433
				5			-				-				
17:00 18:00	0	197 247	57 72	5 2	30 32	0	0	3	0	0	0	0	0	4	296 362
19:00	1	159	54	2	21	1	0	2	2	0	0	0	0	3 1	240
20:00	0	103	29	1	21	0	0	2	1	0	0	0	0	0	143
21:00	0	96	29	0	13	0	0	1	0	0	0	0	0	0	139
22:00	0	195	69	1	20	0	0	3	0	0	0	0	0	3	291
23:00	0	199	56	0	14	0	0	0	0	0	0	0	0	1	270
Total	11	3768	1271	42	470	8	1	48	16	2	0	1	2	50	5690
Percent	0.2%	66.2%	22.3%	0.7%	8.3%	0.1%	0.0%	0.8%	0.3%	0.0%	0.0%	0.0%	0.0%	0.9%	
AM Peak	09:00	11:00	11:00	11:00	11:00	11:00		07:00	05:00	08:00			08:00	09:00	11:00
Vol.	3	237	87	4	27	2		5	2	1			1	5	365
PM Peak	14:00	13:00	13:00	17:00	16:00	16:00	15:00	16:00	15:00			13:00		13:00	13:00
Vol.	4	344	115	5	45	2	1	5	2			1		7	512

#### Site Code: SPOTTED RD Station ID: NORTH OF AIRPORT RD

SOUTHBO	OUND												Latitud	le: 0' 0.000	JU South
Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	0	5	1	0	2	1	0	0	0	0	0	0	0	0	9
01:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	4
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	0	6	3	0	3	0	0	0	0	0	0	0	0	0	12
05:00	0	11	9	0	4	0	0	0	0	0	0	0	0	0	24
06:00	0	14	6	0	3	0	0	0	0	0	0	0	0	0	23
07:00	1	29	9	2	3	1	0	1	1	0	0	0	2	0	49
08:00	1	27	12	1	9	0	1	1	1	0	0	0	0	0	53
09:00	0	25	9	0	9	0	0	0	0	0	0	0	1	3	47
10:00	1	34	6	1	5	1	1	2	0	0	0	0	0	0	51
11:00	0	38	20	0	9	0	0	1	0	0	0	0	2	2	72
12 PM	0	54	19	0	5	1	0	1	0	0	0	0	2	0	82
13:00	1	63	16	2	13	0	0	1	1	0	0	0	2	0	99
14:00	1	59	18	0	10	1	0	1	2	0	0	0	2	2	96
15:00	0	48	16	1	7	1	0	0	0	0	0	0	1	3	77
16:00	2	47	22	1	5	0	0	1	0	0	0	0	0	1	79
17:00	0	39	14	1	2	0	0	0	0	0	0	0	0	2	58
18:00	0	32	6	2	2	0	0	0	0	0	0	0	0	0	42
19:00	Ő	38	6	0	1	Õ	0	0	Ő	0	0	Õ	0	0	45
20:00	0	30	5	0	0	1	0	0	0	0	0	0	0	0	36
21:00	0	17	6	0	3	0	0	0	0	0	0	0	0	0	26
22:00	0	17	3	0	1	0	0	0	0	0	0	0	0	0	21
23:00	0	10	2	0	3	1	0	0	0	0	0	0	0	0	16
Total	7	653	210	11	99	8	2	9	5	0	0	0	12	13	1029
Percent	0.7%	63.5%	20.4%	1.1%	9.6%	0.8%	0.2%	0.9%	0.5%	0.0%	0.0%	0.0%	1.2%	1.3%	
AM Peak	07:00	11:00	11:00	07:00	08:00	00:00	08:00	10:00	07:00				07:00	09:00	11:00
Vol.	1	38	20	2	9	1	1	2	1				2	3	72
PM Peak	16:00	13:00	16:00	13:00	13:00	12:00		12:00	14:00				12:00	15:00	13:00
Vol.	2	63	22	2	13	1		1	2				2	3	99

#### Site Code: SPOTTED RD Station ID: NORTH OF AIRPORT RD

		Cars &													
			2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	<b>-</b>
	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	0	5	1	0	2	0	0	0	0	0	0	0	0	0	8
01:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
04:00	0	13	2	3	4	0	0	0	1	0	0	0	0	0	23
05:00	0	14	6	0	5	0	0	0	0	0	0	0	0	0	25
06:00	0	15	9	0	4	1	0	0	0	0	0	0	0	0	29
07:00	0	18	13	1	6	0	0	0		0	0	0	0	1	40
08:00	0	32	7	1	2	0	0	0	0	2	0	0	0	0	44
09:00	0	29	12	1	9	0	0	0	1	2	0	0	0	5	59
10:00	0	41	17	1	4	2	0	1	0	1	0	0	0	1	68
11:00	2	35	14	0	6	1	1	0	0	1	0	0	0	3	63
12 PM	0	62	21	0	10	0	0	1	1	2	0	0	0	1	98
13:00	0	54	20	1	10	0	0	1	0	3	0	0	0	0	89
14:00	0	41	16	0	9	0	0	0	0	0	0	0	0	1	67
15:00	0	42	16	1	6	2	0	1	0	0	0	0	0	1	69
16:00	1	38	25	0	9	0	0	0	0	0	0	0	0	1	74
17:00	0	37	14	1	5	0	0	1	0	2	0	0	0	2	62
18:00	0	33	9	0	3	0	0		0	0	0	0	0	0	45
19:00	0	35	12	0	4	1	0	0	0	0	0	0	0	0	52
20:00	0	18	2	0	0	2	0	0	0	0	0	0	0	0	22
21:00	0	16	4	0	0	0	0	0	0	0	0	0	0	0	20
22:00	0	18	3	0	1	0	0	0	0	0	0	0	0	0	22
23:00	0	12	0	0	3	0	0	0	0	0	0	0	0	0	15
Total	3	610	223	10	102	9	1	5	5	13	0	0	0	16	997
Percent	0.3%	61.2%	22.4%	1.0%	10.2%	0.9%	0.1%	0.5%	0.5%	1.3%	0.0%	0.0%	0.0%	1.6%	
AM Peak	11:00	10:00	10:00	04:00	09:00	10:00	11:00	10:00	03:00	08:00				09:00	10:00
Vol.	2	41	17	3	9	2	1	1	1	2				5	68
PM Peak	16:00	12:00	16:00	13:00	12:00	15:00		12:00	12:00	13:00				17:00	12:00
Vol.	1	62	25	1	10	2		1	1	3				2	98

#### Site Code: SPOTTED RD Station ID: AIRPORT-AIRPORT

Start Time	Bikes	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classe	Total
05/08/14	1	5	1	0	1	1	0	0	0	0	0	0	0	0	9
01:00	0	2	2	0	0	0	0	0	0	0	0	Õ	0	0	4
02:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00	2	7	3	0	0	0	0	0	0	0	0	0	0	1	13
05:00	0	19	12	0	2	0	0	0	0	0	0	0	0	1	34
06:00	0	24	6	0	3	0	0	1	0	0	0	0	0	2	36
07:00	3	34	15	2	6	0	1	1	2	1	0	0	1	4	70
08:00	1	33	14	1	7	0	1	1	0	0	0	0	0	3	61
09:00	2	30	8	0	8	0	1	0	0	0	0	0	0	1	50
10:00	1	23	7	1	3	1	1	1	0	1	0	0	0	1	40
11:00	2	40	24	0	8	0	1	1	0	0	0	0	2	1	79
12 PM	1	44	17	0	7	1	2	. 1	0	0	0	0	1		74
13:00	1	53	20	2	13	0	0	3	1	0	0	0	2	9	104
14:00	3	52	25	2	9	1	1	1	2	0	0	0	2	5	104
								1		1					
15:00 16:00	2 2	48 51	20 23	1	8 9	0	0	1	0		0	0	1	4	86 89
17:00	2	53	23 14	2	2	1	0	1	0	0	0	0	0	0	73
18:00	0	31	9	2	4	1	0	0	0	0	0	0	0	2	49
19:00	0	41	11	0	- 1	0	0	0	1	0	0	0	0	0	54
20:00	1	28	9	0	0	1	0	0	0	0	0	0	0	3	42
21:00	0	21	7	0	2	0	0	0	0	0	0	0	0	0	30
22:00	0	16	2	0	1	0	0	0	0	0	0	0	0	0	19
23:00	1	10	1	0	2	1	0	0	0	0	0	0	0	2	17
Total	24	673	250	12	96	9	8	12	6	3	0	0	8	40	1141
Percent	2.1%	59.0%	21.9%	1.1%	8.4%	0.8%	0.7%	1.1%	0.5%	0.3%	0.0%	0.0%	0.7%	3.5%	
AM Peak	07:00	11:00	11:00	07:00	09:00	00:00	07:00	06:00	07:00	07:00			11:00	07:00	11:00
Vol.	3	40	24	2	8	1	1	1	2	1			2	4	79
PM Peak	14:00	13:00	14:00	13:00	13:00	12:00	12:00	13:00	14:00	15:00			13:00	13:00	13:00
Vol.	3	53	25	2	13	1	2	3	2	1			2	9	104

#### Site Code: SPOTTED RD Station ID: AIRPORT-AIRPORT

Latitude: 0' 0.0000 South

NORTHBO															
Start	Dilion	Cars &	2 Axle	Duran	2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	Tatal
Time	Bikes	Trailer	Long	Buses	<u>6 Tire</u>	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14 01:00	0	9 2	0	0	3	0	0	0	0	0	0	0	0	0	12 3
01:00	0	2	0	0	1	0	0	0	0	0	0	0	0	1	2
02:00	1	6	2	0	0	0	0		1	0	0	0	0	1	11
	-	-			-			0			-	-			
04:00	0	29 31	3	3	6 7	0	0	0	1	0	0	0	0	1	43
05:00 06:00	0	31	10 10	0	7	0	0	0	0	0	0	0	0	0	48 52
08.00	0	33	10	1	8	0	0	0	1	0	0	0	0	2	52
07:00	0	47	14	1	4	0	0	1	0	2	0	0	0	0	67
		47 51	12	1	13				1					3	87
09:00	0	-				0	0	0		2	0	0	0		
10:00	0	75	20	1	9	2	0	1	0	1	0	0	0	2	111
11:00	2	69	10	2	7	2	0	1	0	1	0	0	1	2	97
12 PM	1	102	22	0	10	0	0	1	1	3	0	0	0	3	143
13:00	0	99	20	1	15	0	0	2	0	1	0	0	0	5	143
14:00	3	81	16	1	9	0	0	0	1	0	0	0	0	3	114
15:00	1	63	17	2	9	3	0	1	0	0	0	0	0	3	99
16:00	1	54	26	2	11	0	0	1	0	0	0	0	0	2	97
17:00	0	54	17	2	12	0	0	1	0	2	0	0	0	1	89
18:00	1	45	9	1	2	0	0	0	0	0	0	0	0	1	59
19:00	0	43	12	1	3	1	0	0	1	0	0	0	0	2	63
20:00	0	21	3	0	0	2	0	0	0	0	0	0	0	0	26
21:00	0	28	5	0	3	0	0	0	0	0	0	0	0	1	37
22:00	0	25	5	0	4	0	0	0	0	0	0	0	0	0	34
23:00	0	18	4	0	4	0	0	0	0	0	0	0	0	0	26
Total Percent	10 0.7%	1018 66.9%	254 16.7%	19 1.2%	147 9.7%	11 0.7%	0.0%	9 0.6%	8 0.5%	12 0.8%	0.0%	0.0%	0.1%	33 2.2%	1522
Percent	0.7%	00.9%	10.7%	1.270	9.1%	0.7%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.1%	2.270	
AM Peak	11:00	10:00	10:00	04:00	09:00	10:00		08:00	03:00	08:00			11:00	09:00	10:00
Vol.	2	75	20	3	13	2		1	1	2			1	3	111
PM Peak	14:00	12:00	16:00	15:00	13:00	15:00		13:00	12:00	12:00				13:00	12:00
Vol.	3	102	26	2	15	3		2	1	3				5	143

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#### Site Code: SPOTTED RD Station ID: SOUTH OF AIRPORT RD

Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	1	10	6	0	2	1	0	0	0	0	0	0	0	0	20
01:00	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
02:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	11	7	0	2	0	0	0	0	0	0	0	0	0	20
05:00	0	27	19	0	6	0	0	0	0	0	0	0	0	1	53
06:00	0	29	13	0	6	0	0	0	0	0	0	0	0	0	48
07:00	1	35	16	2	7	0	1	1	1	1	0	0	0	8	73
08:00	1	42	17	1	6	1	0	2	0	0	0	0	1	0	71
09:00	0	38	17	0	13	0	0	0	0	0	0	0	0	6	74
10:00	1	44	9	3	6	1	0	1	0	0	0	0	1	5	71
11:00	1	45	18	1	13	0	0	1	0	0	0	0	3	3	85
12 PM	2	53	23	0	5	2	1	2	0	0	0	0	1	3	92
13:00	1	69	31	2	12	0	1	3	0	0	0	0	0	9	128
14:00	2	72	32	0	13	1	1	1	2	0	0	0	1	1	126
15:00	1	63	25	1	9	0	0	1	0	ı 1	0	0	1	0	102
16:00	2	50	30	2	7	1	0	3	0	0	0	0	0	3	98
17:00	1	60	16	1	0	0	1	0	Ő	Ő	0	0	Ő	0	79
18:00	0	48	12	3	3	0	0	0	0	0	0	0	0	0	66
19:00	0	52	10	0	1	0	0	0	Ő	Ő	0	0	1	0	64
20:00	0	44	9	0	0	1	0	0	0	0	0	0	0	2	56
21:00	0	21	8	1	3	0	0	0	0	0	0	0	0	0	33
22:00	0	26	7	0	4	0	0	0	0	0	0	0	0	0	37
23:00	0	12	2	0	1	1	0	0	0	0	0	0	0	1	17
Total	14	864	329	17	119	9	5	15	3	2	0	0	9	42	1428
Percent	1.0%	60.5%	23.0%	1.2%	8.3%	0.6%	0.4%	1.1%	0.2%	0.1%	0.0%	0.0%	0.6%	2.9%	
AM Peak	00:00	11:00	05:00	10:00	09:00	00:00	07:00	08:00	07:00	07:00			11:00	07:00	11:00
Vol.	1	45	19	3	13	1	1	2	1	1			3	8	85
PM Peak	12:00	14:00	14:00	18:00	14:00	12:00	12:00	13:00	14:00	15:00			12:00	13:00	13:00
Vol.	2	72	32	3	13	2	1	3	2	1			1	9	128

#### Site Code: SPOTTED RD Station ID: SOUTH OF AIRPORT RD

Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Tota
5/08/14	0	8	0	0	2	0	0	0	0	0	0	0	0	0	1
01:00	0	2	2	0	0	0	0	0	0	0	0	0	0	0	
02:00	0	2	1	0	1	0	0	0	0	0	0	0	0	0	
03:00	2	8	2	0	0	1	0	0	0	0	0	0	0	0	1
04:00	1	35	3	3	3	1	0	0	0	0	0	0	0	1	4
05:00	0	36	8	0	4	0	0	0	0	0	0	0	0	1	49
06:00	0	33	12	0	5	1	0	0	1	0	0	0	0	1	5
07:00	0	30	14	1	9	0	0	0	0	0	0	0	0	2	5
08:00	3	42	15	1	2	1	0	0	1	2	0	0	0	1	6
09:00	1	44	20	0	9	1	0	0	1	2	0	0	0	3	8
10:00	2	64	25	1	9	4	1	0	0	0	0	0	0	2	108
11:00	2	48	11	1	8	2	0	1	3	1	0	0	0	6	8
12 PM	1	88	28	0	7	0	0	0	0	3	0	0	0	3	13
13:00	2	73	18	1	10	1	0	3	0	1	0	0	0	13	12
14:00	4	82	23	1	6		0	0	0	0	0	0	0	1	11
15:00	0	62	19	2	10	2	1	1	0	0	0	0	0	5	10
16:00	2	58	28	2	10	2	0	1	0	0	1	0	0	2	10
17:00	0	50	20	2	9	0	0	1	0	2	0	0	0	2	9
18:00	0	49	11	1	9 5	0	0	0	0	0	0	0	0	2	6
19:00	1	37	13	1	2	3	0	0	0	0	0	0	0	0	5
20:00	0	23	5	0	2	2	0	0	0	0	0	0	0	0	3
21:00	0	26	5	0	3	0	0	0	0	0	0	0	0	0	3
22:00	0	20	7	0	3	0	0	0	0	0	0	0	0	0	3
23:00	0	10	4	0	2	0	0	0	0	0	0	0	0	Ő	1
Total	21	937	296	16	119	21	2	7	6	11	1	0	0	44	148
Percent	1.4%	63.3%	20.0%	1.1%	8.0%	1.4%	0.1%	0.5%	0.4%	0.7%	0.1%	0.0%	0.0%	3.0%	
AM Peak	08:00	10:00	10:00	04:00	07:00	10:00	10:00	11:00	11:00	08:00				11:00	10:0
Vol.	3	64	25	3	9	4	1	1	3	2				6	10
PM Peak	14:00	12:00	12:00	15:00	13:00	19:00	15:00	13:00		12:00	16:00			13:00	12:0
Vol.	4	88	28	2	10	3	1	3		3	1			13	13

#### Site Code: US-2 EASTBOUND Station ID: RUSSELL-SPOTTED

Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Tota
05/08/14	0	72	57	0	15	0	0	3	2	0	0	0	0	10	159
01:00	1	63	31	1	11	0	0	0	1	0	0	0	0	3	111
02:00	0	36	32	1	4	0	0	3	0	0	0	0	0	2	78
03:00	1	43	31	1	6	0	0	2	0	0	0	0	0	3	87
04:00	1	59	34	1	14	0	0	2	6	0	0	0	0	3	120
05:00	0	97	62	4	33	0	0	10	5	0	0	0	1	11	223
06:00	3	213	127	7	82	5	1	20	7	3	0	0	4	19	491
07:00	5	327	215	16	108	2	3	44	4	6	0	0	3	65	798
08:00	2	236	243	13	93	8	2	36	13	3	0	1	6	67	723
09:00	2	223	202	14	105	0	1	31	6	3	1	0	3	62	653
10:00	3	190	226	22	115	2	4	39	4	4	0	0	4	99	712
11:00	2	187	242	24	103	2	2	25	7	0	1	0	3	162	760
12 PM	6	218	252	23	149	3	2	30	4	8	0	0	3	193	891
13:00	5	210	282	21	124	6	2	49	4	3	1	0	3	179	889
14:00	5	273	408	24	157	3	1	63	7	4	0	2	1	245	1193
15:00	11	251	315	30	186	4	0	67	8	7	1	0	1	334	1215
16:00	8	369	464	25	210	2	0	78	5	2	6	3	0	315	1487
17:00	8	320	429	17	164	1	0	47	4	2	0	0	0	165	1157
18:00	4	218	311	6	112	2	0	30	4	1	1	0	0	96	785
19:00	0	188	246	5	70	2	0	23	2	0	0	1	0	72	609
20:00	0	201	210	1	69	0	0	11	2	0	0	0	0	24	518
21:00	1	146	168	1	42	0	0	12	3	0	0	0	0	26	399
22:00	2	128	159	5	28	0	0	2	0	0	0	0	0	16	340
23:00	3	132	129	4	30	0	0	8	2	0	0	1	0	9	318
Total	73	4400	4875	266	2030	42	18	635	100	46	11	8	32	2180	14716
Percent	0.5%	29.9%	33.1%	1.8%	13.8%	0.3%	0.1%	4.3%	0.7%	0.3%	0.1%	0.1%	0.2%	14.8%	
AM Peak	07:00	07:00	08:00	11:00	10:00	08:00	10:00	07:00	08:00	07:00	09:00	08:00	08:00	11:00	07:00
Vol.	5	327	243	24	115	8	4	44	13	6	1	1	6	162	798
PM Peak	15:00	16:00	16:00	15:00	16:00	13:00	12:00	16:00	15:00	12:00	16:00	16:00	12:00	15:00	16:00
Vol.	11	369	464	30	210	6	2	78	8	8	6	3	3	334	148

#### Site Code: US-2 WESTBOUND Station ID: RUSSELL-SPOTTED

Start		Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axl	5 Axle	>6 Axl	<6 Axl	6 Axle	>6 Axl	Not	
Time	Bikes	Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classe	Total
05/08/14	0	90	15	0	5	0	0	2	2	1	0	0	0	3	118
01:00	1	55	8	0	1	0	0	2	2	0	0	0	0	3	72
02:00	0	36	7	1	0	0	0	0	1	0	0	0	0	1	46
03:00	1	44	8	0	2	1	0	0	2	0	0	1	0	2	61
04:00	1	104	38	1	9	0	0	5	1	0	0	0	0	5	164
05:00	8	425	125	7	48	1	1	12	0	0	0	0	0	34	661
06:00	7	553	181	10	72	5	0	29	4	0	1	2	2	47	913
07:00	5	720	188	10	95	7	0	32	7	1	0	1	3	65	1134
08:00	5	576	199	11	77	9	1	28	6	1	2	1	3	60	979
09:00	4	390	157	13	78	10	0	30	5	1	2	0	4	59	753
10:00	3	476	158	14	57	11	1	16	6	3	1	0	2	66	814
11:00	2	490	175	11	59	10	1	23	5	2	0	1	3	75	857
12 PM	2	566	164	16	61	3	0	24	6	2	1	1	5	80	931
13:00	5	509	132	16	57	8	0	28	6	4	1	1	1	124	892
14:00	3	571	182	11	45	2	1	22	4	4	1	0	1	119	966
15:00	3	597	145	9	53	3	1	25	3	4	3	0	2	115	961
16:00	3	671	202	9 16	52	3	0	19	-	1	3	1	2	149	1124
									4		1				
17:00 18:00	5 4	794 527	196 118	7 5	46 26	6 0	0	15 15	0	4	1	0	2	151 83	1227 783
19:00	4	385	93	4	30	1	0	12	2	0	2	0	1	59	587
20:00	0	353	93	4	29	0	0	7	1	1	0	0	1	24	509
21:00	1	327	77	1	17	3	0	4	2	1	1	0	0	13	447
22:00	0	200	48	1	9	1	0	1	3	0	0	0	0	7	270
23:00	2	155	32	0	5	1	0	2	2	0	0	0	0	2	201
Total	65	9614	2741	164	933	85	6	353	75	28	17	9	33	1347	15470
Percent	0.4%	62.1%	17.7%	1.1%	6.0%	0.5%	0.0%	2.3%	0.5%	0.2%	0.1%	0.1%	0.2%	8.7%	
AM Peak	05:00	07:00	08:00	10:00	07:00	10:00	05:00	07:00	07:00	10:00	08:00	06:00	09:00	11:00	07:00
Vol.	8	720	199	14	95	11	1	32	7	3	2	2	4	75	1134
PM Peak	13:00	17:00	16:00	12:00	12:00	13:00	14:00	13:00	12:00	13:00	15:00	12:00	12:00	17:00	17:00
Vol.	5	794	202	16	61	8	1	28	6	4	3	1	5	151	1227

#### Site Code: AIRPORT ROAD WEST Station ID: WEST OF SPOTTED

WESTBOUN	ID														Lan	uue. 0 0.0	000 3000
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	1	3	9	12	3	1	0	0	0	0	0	0	0	0	29	42-51	15
01:00	1	1	2	2	1	0	0	0	0	0	0	0	0	0	7	44-53	2
02:00	1	1	0	4	1	1	0	0	0	0	0	0	0	0	8	45-54	3
03:00	3	4	10	57	49	16	0	0	0	0	0	0	0	0	139	46-55	87
04:00	9	19	71	182	74	17	1	0	0	0	0	0	0	0	373	44-53	223
05:00	10	16	45	149	137	29	3	1	1	0	0	0	0	0	391	46-55	230
06:00	10	15	27	110	84	23	3	1	0	0	0	0	0	0	273	46-55	149
07:00	7	24	40	140	94	9	2	1	0	0	0	0	0	0	317	45-54	184
08:00	13	16	50	124	90	4	1	0	0	0	0	0	0	0	298	45-54	166
09:00	18	23	46	140	78	9	1	1	0	0	0	0	0	0	316	44-53	162
10:00	24	41	63	143	82	12	0	0	0	0	0	0	0	0	365	44-53	161
11:00	19	28	81	176	72	12	0	1	0	0	0	0	0	0	389	43-52	204
12 PM	20	41	110	237	110	16	2	1	0	0	0	0	0	0	537	43-52	285
13:00	23	41	72	173	91	5	0	0	0	0	0	0	0	0	405	44-53	196
14:00	18	30	81	204	102	17	3	1	0	0	0	0	0	0	456	44-53	246
15:00	9	27	61	147	87	12	3	0	0	0	0	0	0	0	346	44-53	188
16:00	11	21	56	122	83	13	1	0	0	0	0	0	0	0	307	45-54	161
17:00	14	19	48	110	67	16	3	0	0	0	0	0	0	0	277	44-53	136
18:00	6	8	48	77	48	7	2	0	0	0	0	0	0	0	196	43-52	109
19:00	6	13	28	37	25	6	0	0	0	0	0	0	0	0	115	44-53	48
20:00	3	11	12	27	13	0	0	0	0	0	0	0	0	0	66	43-52	29
21:00	14	21	34	40	18	2	0	0	0	0	0	0	0	0	129	41-50	45
22:00	11	30	69	84	35	2	0	0	0	0	0	0	0	0	231	42-51	107
23:00	7	19	58	57	30	2	0	0	0	0	0	0	0	0	173	41-50	84
Total	258	472	1121	2554	1474	231	25	7	1	0	0	0	0	0	6143		
Percent	4.2%	7.7%	18.2%	41.6%	24.0%	3.8%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	10:00	11:00	04:00	05:00	05:00	05:00	05:00	05:00						05:00		
Vol.	24	41	81	182	137	29	3	1	1						391		
PM Peak	13:00	12:00	12:00	12:00	12:00	14:00	14:00	12:00							12:00		
Vol.	23	41	110	237	110	17	3	1							537		

#### Site Code: AIRPORT ROAD WEST Station ID: EAST OF SPOTTED

WESTBOUN	ID														Lan	uue. 0 0.0	000 3000
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	3	1	3	9	7	0	0	0	0	0	0	0	0	0	23	46-55	10
01:00	0	0	2	2	2	0	0	0	0	0	0	0	0	0	6	44-53	4
02:00	1	0	1	0	3	2	0	0	0	0	0	0	0	0	7	51-60	3
03:00	1	0	5	18	76	26	8	0	0	0	0	0	0	0	134	49-58	97
04:00	2	6	40	131	137	42	5	1	0	0	0	0	0	0	364	46-55	236
05:00	1	1	19	100	180	58	12	1	2	0	0	0	0	0	374	48-57	260
06:00	0	2	14	84	105	45	10	1	2	0	0	0	0	0	263	47-56	174
07:00	2	4	22	109	139	31	2	1	0	0	0	0	0	0	310	47-56	216
08:00	5	6	13	102	135	20	1	0	0	0	0	0	0	0	282	47-56	196
09:00	7	2	39	110	113	16	4	0	0	0	0	0	0	0	291	46-55	188
10:00	0	7	49	113	123	22	1	0	0	0	0	0	0	0	315	46-55	209
11:00	5	7	60	152	115	19	1	1	0	0	0	0	0	0	360	45-54	233
12 PM	8	8	64	217	147	27	5	1	0	0	0	0	0	0	477	45-54	314
13:00	1	6	56	150	123	17	2	1	0	0	0	0	0	0	356	45-54	244
14:00	3	1	46	186	143	23	6	0	1	0	0	0	0	0	409	45-54	292
15:00	1	9	48	131	115	23	2	0	0	0	0	0	0	0	329	45-54	215
16:00	1	4	37	124	98	26	4	0	0	0	0	0	0	0	294	45-54	198
17:00	1	4	32	96	99	27	6	0	0	0	0	0	0	0	265	46-55	173
18:00	0	3	26	72	72	11	4	0	0	0	0	0	0	0	188	46-55	128
19:00	2	4	18	51	28	8	3	0	0	0	0	0	0	0	114	44-53	68
20:00	1	3	12	27	23	2	0	0	0	0	0	0	0	0	68	45-54	42
21:00	1	9	29	38	35	3	1	0	0	0	0	0	0	0	116	44-53	62
22:00	2	14	49	76	66	7	2	0	0	0	0	0	0	0	216	45-54	120
23:00	4	14	31	54	46	12	0	0	0	0	0	0	0	0	161	45-54	79
Total	52	115	715	2152	2130	467	79	7	5	0	0	0	0	0	5722		
Percent	0.9%	2.0%	12.5%	37.6%	37.2%	8.2%	1.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	10:00	11:00	11:00	05:00	05:00	05:00	04:00	05:00						05:00		
Vol.	7	7	60	152	180	58	12	1	2						374		
PM Peak	12:00	22:00	12:00	12:00	12:00	12:00	14:00	12:00	14:00						12:00		
Vol.	8	14	64	217	147	27	6	1	1						477		

#### Site Code: AIRPORT ROAD EAST Station ID: WEST OF SPOTTED

Latitude: 0' 0.0000 South

EASTBOUN	D														Lan	uuo. 0 0.0	
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	0	5	34	83	29	1	2	0	0	0	0	0	0	0	154	43-52	110
01:00	0	0	5	8	10	2	0	0	0	0	0	0	0	0	25	45-54	17
02:00	0	1	3	0	0	0	0	0	0	0	0	0	0	0	4	36-45	3
03:00	0	1	4	4	1	1	0	0	0	0	0	0	0	0	11	42-51	6
04:00	0	4	23	56	23	2	1	0	0	0	0	0	0	0	109	43-52	75
05:00	1	10	38	114	28	1	0	0	0	0	0	0	0	0	192	43-52	135
06:00	1	6	30	54	20	4	0	0	0	0	0	0	0	0	115	43-52	73
07:00	2	3	43	97	47	6	1	0	0	0	0	0	0	0	199	44-53	136
08:00	1	11	58	121	26	4	0	0	0	0	0	0	0	0	221	42-51	154
09:00	8	9	68	143	38	5	0	0	0	0	0	0	0	0	271	43-52	176
10:00	2	10	93	151	42	6	0	0	0	0	0	0	0	0	304	42-51	212
11:00	5	13	87	199	68	9	1	0	0	0	0	0	0	0	382	43-52	256
12 PM	1	9	99	248	85	11	1	0	0	0	0	0	0	0	454	43-52	330
13:00	6	15	140	304	99	12	2	0	0	0	0	0	0	0	578	43-52	400
14:00	3	6	54	222	80	6	2	0	0	0	0	0	0	0	373	44-53	279
15:00	4	8	66	224	102	6	1	0	0	0	0	0	0	0	411	44-53	295
16:00	3	14	94	212	95	6	0	0	0	0	0	0	0	0	424	43-52	287
17:00	3	7	61	150	67	11	1	0	1	0	0	0	0	0	301	44-53	202
18:00	4	4	55	197	101	13	1	0	0	0	0	0	0	0	375	45-54	267
19:00	4	4	56	127	59	9	2	0	0	0	0	0	0	0	261	44-53	173
20:00	5	2	23	72	40	5	1	0	0	0	0	0	0	0	148	45-54	94
21:00	5	2	23	70	41	1	2	0	0	0	0	0	0	0	144	44-53	93
22:00	5	8	75	160	59	7	0	0	0	0	0	0	0	0	314	43-52	211
23:00	13	15	66	137	45	3	0	0	0	0	0	0	0	0	279	43-52	161
Total	76	167	1298	3153	1205	131	18	0	1	0	0	0	0	0	6049		
Percent	1.3%	2.8%	21.5%	52.1%	19.9%	2.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	10:00	11:00	11:00	11:00	00:00								11:00		
Vol.	8	13	93	199	68	9	2								382		
PM Peak	23:00	13:00	13:00	13:00	15:00	18:00	13:00		17:00						13:00		
Vol.	13	15	140	304	102	13	2		1						578		

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#### Site Code: AIRPORT ROAD EAST Station ID: EAST OF SPOTTED

EASTBOUND	)														Lan	440.0 0.0	000 3000
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	1	5	7	45	50	12	4	0	0	0	0	0	0	0	124	46-55	79
01:00	0	1	1	5	12	4	1	1	0	0	0	0	0	0	25	48-57	16
02:00	0	0	2	4	0	0	0	0	0	0	0	0	0	0	6	43-52	5
03:00	0	1	3	6	0	2	0	0	0	0	0	0	0	0	12	42-51	7
04:00	1	2	10	37	41	16	2	0	0	0	0	0	0	0	109	47-56	68
05:00	1	5	14	56	79	15	2	0	0	0	0	0	0	0	172	47-56	116
06:00	3	4	10	32	48	9	3	2	0	0	0	0	0	0	111	47-56	65
07:00	0	2	13	56	78	36	5	1	0	0	0	0	0	0	191	47-56	125
08:00	3	5	20	72	82	16	3	1	0	0	0	0	0	0	202	46-55	130
09:00	8	4	30	78	102	25	2	1	0	0	0	0	0	0	250	46-55	148
10:00	6	2	23	84	122	28	2	0	0	0	0	0	0	0	267	47-56	176
11:00	3	11	29	115	157	45	5	0	0	0	0	0	0	0	365	47-56	234
12 PM	5	5	37	126	201	58	8	1	0	0	0	0	0	0	441	47-56	290
13:00	13	9	74	196	159	52	7	1	0	1	0	0	0	0	512	45-54	300
14:00	5	6	32	121	141	37	7	0	0	0	0	0	0	0	349	46-55	224
15:00	7	2	27	110	177	53	4	0	0	0	0	0	0	0	380	47-56	252
16:00	11	14	35	123	202	42	5	1	0	0	0	0	0	0	433	47-56	267
17:00	6	9	30	82	123	41	4	1	0	0	0	0	0	0	296	47-56	174
18:00	4	6	27	93	164	53	14	1	0	0	0	0	0	0	362	47-56	229
19:00	1	1	20	77	101	35	4	1	0	0	0	0	0	0	240	47-56	162
20:00	0	4	13	47	60	17	2	0	0	0	0	0	0	0	143	46-55	94
21:00	1	2	14	35	63	18	5	1	0	0	0	0	0	0	139	47-56	88
22:00	3	7	25	116	107	30	3	0	0	0	0	0	0	0	291	46-55	190
23:00	1	9	40	107	88	24	1	0	0	0	0	0	0	0	270	45-54	170
Total	83	116	536	1823	2357	668	93	13	0	1	0	0	0	0	5690		
Percent	1.5%	2.0%	9.4%	32.0%	41.4%	11.7%	1.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	11:00	09:00	11:00	11:00	11:00	07:00	06:00							11:00		
Vol.	8	11	30	115	157	45	5	2							365		
PM Peak	13:00	16:00	13:00	13:00	16:00	12:00	18:00	12:00		13:00					13:00		
Vol.	13	14	74	196	202	58	14	1		1					512		

Site Code: SPOTTED RD Station ID: NORTH OF AIRPORT RD

Latitude: 0' 0.0000 South

SOUTHBOUND Start Time 05/08/14	1 35 5	36 40	41	46	= 4												
05/08/14		40		40	51	56	61	66	71	76	81	86	91	96		Pace	Number
	5	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
04.00		2	2	0	0	0	0	0	0	0	0	0	0	0	9	17-26	3
01:00	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	10-19	2
02:00	3	2	0	0	0	0	0	0	0	0	0	0	0	0	5	11-20	2
03:00	1	1	1	0	0	0	0	0	0	0	0	0	0	0	3	7-16	1
04:00	9	2	1	0	0	0	0	0	0	0	0	0	0	0	12	12-21	5
05:00	11	8	4	1	0	0	0	0	0	0	0	0	0	0	24	21-30	7
06:00	14	7	1	1	0	0	0	0	0	0	0	0	0	0	23	17-26	8
07:00	29	10	8	2	0	0	0	0	0	0	0	0	0	0	49	14-23	18
08:00	31	17	3	2	0	0	0	0	0	0	0	0	0	0	53	17-26	18
09:00	31	10	6	0	0	0	0	0	0	0	0	0	0	0	47	14-23	18
10:00	31	17	2	0	1	0	0	0	0	0	0	0	0	0	51	14-23	18
11:00	48	18	6	0	0	0	0	0	0	0	0	0	0	0	72	14-23	27
12 PM	61	17	4	0	0	0	0	0	0	0	0	0	0	0	82	15-24	32
13:00	71	22	6	0	0	0	0	0	0	0	0	0	0	0	99	15-24	38
14:00	62	28	6	0	0	0	0	0	0	0	0	0	0	0	96	14-23	35
15:00	41	26	9	1	0	0	0	0	0	0	0	0	0	0	77	18-27	25
16:00	46	21	12	0	0	0	0	0	0	0	0	0	0	0	79	15-24	28
17:00	30	26	2	0	0	0	0	0	0	0	0	0	0	0	58	16-25	19
18:00	23	13	6	0	0	0	0	0	0	0	0	0	0	0	42	17-26	14
19:00	20	12	10	3	0	0	0	0	0	0	0	0	0	0	45	16-25	14
20:00	23	9	4	0	0	0	0	0	0	0	0	0	0	0	36	16-25	13
21:00	15	8	2	0	1	0	0	0	0	0	0	0	0	0	26	13-22	9
22:00	14	6	1	0	0	0	0	0	0	0	0	0	0	0	21	13-22	8
23:00	13	3	0	0	0	0	0	0	0	0	0	0	0	0	16	18-27	6
Total	635	285	97	10	2	0	0	0	0	0	0	0	0	0	1029		
	61.7%	27.7%	9.4%	1.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
	11:00	11:00	07:00	07:00	10:00										11:00		
Vol.	48	18	8	2	1										72		
	13:00	14:00	16:00	19:00	21:00										13:00		
Vol.	71	28	12	3	1										99		

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Site Code: SPOTTED RD Station ID: NORTH OF AIRPORT RD

Latitude: 0' 0.0000 South

NORTHBOU	JND														Lan	uuc. 0 0.0	
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	3	3	2	0	0	0	0	0	0	0	0	0	0	0	8	34-43	2
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2	36-45	1
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	87-96	*
04:00	13	5	5	0	0	0	0	0	0	0	0	0	0	0	23	16-25	8
05:00	12	8	4	1	0	0	0	0	0	0	0	0	0	0	25	13-22	8
06:00	13	13	2	1	0	0	0	0	0	0	0	0	0	0	29	15-24	9
07:00	12	19	8	1	0	0	0	0	0	0	0	0	0	0	40	29-38	14
08:00	14	23	3	4	0	0	0	0	0	0	0	0	0	0	44	29-38	16
09:00	39	16	4	0	0	0	0	0	0	0	0	0	0	0	59	14-23	22
10:00	30	27	9	2	0	0	0	0	0	0	0	0	0	0	68	16-25	21
11:00	30	25	6	2	0	0	0	0	0	0	0	0	0	0	63	16-25	20
12 PM	40	40	15	3	0	0	0	0	0	0	0	0	0	0	98	29-38	29
13:00	36	38	14	0	1	0	0	0	0	0	0	0	0	0	89	29-38	27
14:00	35	23	8	0	0	1	0	0	0	0	0	0	0	0	67	14-23	22
15:00	31	25	12	1	0	0	0	0	0	0	0	0	0	0	69	18-27	21
16:00	30	32	10	1	1	0	0	0	0	0	0	0	0	0	74	27-36	23
17:00	27	28	5	2	0	0	0	0	0	0	0	0	0	0	62	29-38	19
18:00	16	17	9	3	0	0	0	0	0	0	0	0	0	0	45	30-39	13
19:00	21	25	5	1	0	0	0	0	0	0	0	0	0	0	52	27-36	17
20:00	11	10	1	0	0	0	0	0	0	0	0	0	0	0	22	13-22	7
21:00	10	7	2	1	0	0	0	0	0	0	0	0	0	0	20	21-30	6
22:00	9	11	1	1	0	0	0	0	0	0	0	0	0	0	22	30-39	7
23:00	8	6	1	0	0	0	0	0	0	0	0	0	0	0	15	12-21	5
Total	441	402	127	24	2	1	0	0	0	0	0	0	0	0	997		
Percent	44.2%	40.3%	12.7%	2.4%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	09:00	10:00	10:00	08:00											10:00		
Vol.	39	27	9	4											68		
PM Peak	12:00	12:00	12:00	12:00	13:00	14:00									12:00		
Vol.	40	40	15	3	1	1									98		

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Site Code: SPOTTED RD Station ID: AIRPORT-AIRPORT

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	9	0	0	0	0	0	0	0	0	0	0	0	0	0	9	15-24	4
01:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	9-18	2
02:00	4	1	0	0	0	0	0	0	0	0	0	0	0	0	5	15-24	2
03:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20-29	1
04:00	12	1	0	0	0	0	0	0	0	0	0	0	0	0	13	12-21	6
05:00	32	2	0	0	0	0	0	0	0	0	0	0	0	0	34	14-23	15
06:00	34	1	1	0	0	0	0	0	0	0	0	0	0	0	36	14-23	16
07:00	67	2	1	0	0	0	0	0	0	0	0	0	0	0	70	15-24	31
08:00	60	1	0	0	0	0	0	0	0	0	0	0	0	0	61	13-22	28
09:00	48	2	0	0	0	0	0	0	0	0	0	0	0	0	50	15-24	22
10:00	39	1	0	0	0	0	0	0	0	0	0	0	0	0	40	14-23	18
11:00	76	3	0	0	0	0	0	0	0	0	0	0	0	0	79	15-24	35
12 PM	73	1	0	0	0	0	0	0	0	0	0	0	0	0	74	14-23	34
13:00	101	1	2	0	0	0	0	0	0	0	0	0	0	0	104	14-23	47
14:00	97	3	0	0	0	0	0	0	0	0	0	0	0	0	100	13-22	45
15:00	82	4	0	0	0	0	0	0	0	0	0	0	0	0	86	15-24	38
16:00	84	5	0	0	0	0	0	0	0	0	0	0	0	0	89	15-24	39
17:00	72	1	0	0	0	0	0	0	0	0	0	0	0	0	73	14-23	33
18:00	49	0	0	0	0	0	0	0	0	0	0	0	0	0	49	15-24	22
19:00	51	3	0	0	0	0	0	0	0	0	0	0	0	0	54	13-22	24
20:00	42	0	0	0	0	0	0	0	0	0	0	0	0	0	42	15-24	19
21:00	29	1	0	0	0	0	0	0	0	0	0	0	0	0	30	16-25	13
22:00	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19	12-21	ç
23:00	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17	12-21	8
Total	1104	33	4	0	0	0	0	0	0	0	0	0	0	0	1141		
Percent	96.8%	2.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	44.00		
AM Peak	11:00	11:00	06:00												11:00		
Vol.	76	3	1												79		
PM Peak	13:00	16:00	13:00												13:00		
Vol.	101	5	2												104		

Site Code: SPOTTED RD Station ID: AIRPORT-AIRPORT

NORTHBOUN	ND														Eatt	440.0 0.0	000 3000
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	17-26	5
01:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20-29	1
02:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5-14	1
03:00	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11	14-23	5
04:00	43	0	0	0	0	0	0	0	0	0	0	0	0	0	43	13-22	20
05:00	44	4	0	0	0	0	0	0	0	0	0	0	0	0	48	13-22	21
06:00	51	0	1	0	0	0	0	0	0	0	0	0	0	0	52	13-22	24
07:00	56	2	1	0	0	0	0	0	0	0	0	0	0	0	59	15-24	26
08:00	60	7	0	0	0	0	0	0	0	0	0	0	0	0	67	13-22	29
09:00	86	1	0	0	0	0	0	0	0	0	0	0	0	0	87	14-23	40
10:00	107	4	0	0	0	0	0	0	0	0	0	0	0	0	111	13-22	50
11:00	96	1	0	0	0	0	0	0	0	0	0	0	0	0	97	14-23	44
12 PM	137	6	0	0	0	0	0	0	0	0	0	0	0	0	143	13-22	64
13:00	137	6	0	0	0	0	0	0	0	0	0	0	0	0	143	13-22	64
14:00	112	1	1	0	0	0	0	0	0	0	0	0	0	0	114	13-22	52
15:00	95	4	0	0	0	0	0	0	0	0	0	0	0	0	99	14-23	44
16:00	94	3	0	0	0	0	0	0	0	0	0	0	0	0	97	14-23	44
17:00	88	1	0	0	0	0	0	0	0	0	0	0	0	0	89	15-24	40
18:00	54	5	0	0	0	0	0	0	0	0	0	0	0	0	59	13-22	26
19:00	62	1	0	0	0	0	0	0	0	0	0	0	0	0	63	14-23	29
20:00	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	12-21	12
21:00	36	1	0	0	0	0	0	0	0	0	0	0	0	0	37	13-22	17
22:00	33	1	0	0	0	0	0	0	0	0	0	0	0	0	34	15-24	15
23:00	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	12-21	12
Total	1471	48	3	0	0	0	0	0	0	0	0	0	0	0	1522		
Percent	96.6%	3.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	08:00	06:00												10:00		
Vol.	107	7	1												111		
PM Peak	12:00	12:00	14:00												12:00		
Vol.	137	6	1												143		

Site Code: SPOTTED RD Station ID: SOUTH OF AIRPORT RD

Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Numbe
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	18	2	0	0	0	0	0	0	0	0	0	0	0	0	20	13-22	ę
01:00	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	18-27	2
02:00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	10-19	3
03:00	3	1	0	0	0	0	0	0	0	0	0	0	0	0	4	13-22	2
04:00	20	0	0	0	0	0	0	0	0	0	0	0	0	0	20	15-24	ç
05:00	53	0	0	0	0	0	0	0	0	0	0	0	0	0	53	15-24	24
06:00	45	3	0	0	0	0	0	0	0	0	0	0	0	0	48	15-24	21
07:00	70	3	0	0	0	0	0	0	0	0	0	0	0	0	73	14-23	33
08:00	71	0	0	0	0	0	0	0	0	0	0	0	0	0	71	15-24	32
09:00	74	0	0	0	0	0	0	0	0	0	0	0	0	0	74	13-22	34
10:00	71	0	0	0	0	0	0	0	0	0	0	0	0	0	71	15-24	32
11:00	85	0	0	0	0	0	0	0	0	0	0	0	0	0	85	13-22	39
12 PM	91	1	0	0	0	0	0	0	0	0	0	0	0	0	92	13-22	42
13:00	125	1	2	0	0	0	0	0	0	0	0	0	0	0	128	14-23	58
14:00	123	3	0	0	0	0	0	0	0	0	0	0	0	0	126	13-22	57
15:00	101	1	0	0	0	0	0	0	0	0	0	0	0	0	102	15-24	46
16:00	98	0	0	0	0	0	0	0	0	0	0	0	0	0	98	13-22	45
17:00	79	0	0	0	0	0	0	0	0	0	0	0	0	0	79	14-23	36
18:00	65	1	0	0	0	0	0	0	0	0	0	0	0	0	66	13-22	30
19:00	62	2	0	0	0	0	0	0	0	0	0	0	0	0	64	13-22	29
20:00	56	0	0	0	0	0	0	0	0	0	0	0	0	0	56	13-22	26
21:00	33	0	0	0	0	0	0	0	0	0	0	0	0	0	33	14-23	15
22:00	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	12-21	17
23:00	17	0	0	0	0	0	0	0	0	0	0	0	0	0	17	12-21	8
Total	1408	18	2	0	0	0	0	0	0	0	0	0	0	0	1428		
Percent	98.6%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	44.00		
AM Peak	11:00	06:00													11:00		
Vol.	85	3	40.00												85		
PM Peak	13:00	14:00	13:00												13:00		
Vol.	125	3	2												128		

Site Code: SPOTTED RD Station ID: SOUTH OF AIRPORT RD

Latitude: 0' 0.0000 South

NORTHBOU	IND															uue. 0 0.0	
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	13-22	5
01:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	9-18	2
02:00	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	9-18	2
03:00	13	0	0	0	0	0	0	0	0	0	0	0	0	0	13	11-20	6
04:00	47	0	0	0	0	0	0	0	0	0	0	0	0	0	47	14-23	22
05:00	49	0	0	0	0	0	0	0	0	0	0	0	0	0	49	15-24	22
06:00	53	0	0	0	0	0	0	0	0	0	0	0	0	0	53	15-24	24
07:00	55	1	0	0	0	0	0	0	0	0	0	0	0	0	56	15-24	25
08:00	68	0	0	0	0	0	0	0	0	0	0	0	0	0	68	14-23	31
09:00	81	0	0	0	0	0	0	0	0	0	0	0	0	0	81	14-23	37
10:00	108	0	0	0	0	0	0	0	0	0	0	0	0	0	108	14-23	49
11:00	83	0	0	0	0	0	0	0	0	0	0	0	0	0	83	13-22	38
12 PM	130	0	0	0	0	0	0	0	0	0	0	0	0	0	130	14-23	59
13:00	121	1	0	0	0	0	0	0	0	0	0	0	0	0	122	14-23	56
14:00	118	0	0	0	0	0	0	0	0	0	0	0	0	0	118	13-22	54
15:00	102	0	0	0	0	0	0	0	0	0	0	0	0	0	102	13-22	47
16:00	105	0	0	0	0	0	0	0	0	0	0	0	0	0	105	14-23	48
17:00	93	0	0	0	0	0	0	0	0	0	0	0	0	0	93	14-23	43
18:00	68	0	0	0	0	0	0	0	0	0	0	0	0	0	68	14-23	31
19:00	57	0	0	0	0	0	0	0	0	0	0	0	0	0	57	14-23	26
20:00	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	13-22	14
21:00	34	0	0	0	0	0	0	0	0	0	0	0	0	0	34	13-22	16
22:00	30	0	0	0	0	0	0	0	0	0	0	0	0	0	30	13-22	14
23:00	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16-25	7
Total	1479	2	0	0	0	0	0	0	0	0	0	0	0	0	1481		
Percent	99.9%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	10:00	07:00													10:00		
Vol.	108	1													108		
PM Peak	12:00	13:00													12:00		
Vol.	130	1													130		

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#### Site Code: US-2 EASTBOUND Station ID: RUSSELL-SPOTTED

Latitude: 0' 0.0000 South

EASTBOUN	D														Lan	000.00.0	
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	9	0	0	5	22	61	49	10	2	1	0	0	0	0	159	55-64	88
01:00	3	1	2	5	19	38	31	8	4	0	0	0	0	0	111	55-64	60
02:00	2	1	0	5	21	23	24	1	1	0	0	0	0	0	78	54-63	42
03:00	2	0	1	3	12	34	26	6	2	0	1	0	0	0	87	55-64	52
04:00	2	0	0	3	14	46	34	19	2	0	0	0	0	0	120	56-65	71
05:00	9	0	3	5	17	63	87	31	6	1	0	1	0	0	223	57-66	125
06:00	16	0	0	6	32	156	209	64	7	1	0	0	0	0	491	57-66	308
07:00	55	1	3	9	52	231	333	95	17	2	0	0	0	0	798	57-66	435
08:00	66	1	1	14	58	212	275	90	5	1	0	0	0	0	723	57-66	357
09:00	58	0	4	13	110	219	186	58	5	0	0	0	0	0	653	55-64	305
10:00	96	0	3	32	98	227	201	50	5	0	0	0	0	0	712	55-64	288
11:00	158	0	3	13	109	190	223	54	9	1	0	0	0	0	760	56-65	242
12 PM	188	0	5	19	110	249	210	93	16	1	0	0	0	0	891	55-64	270
13:00	175	2	1	41	149	233	205	67	14	1	0	0	1	0	889	55-64	269
14:00	238	1	6	43	166	329	305	95	8	2	0	0	0	0	1193	55-64	379
15:00	329	1	5	34	158	286	276	110	14	1	1	0	0	0	1215	14-23	325
16:00	306	0	4	19	127	371	444	181	33	2	0	0	0	0	1487	57-66	480
17:00	162	0	0	9	59	289	347	223	61	7	0	0	0	0	1157	58-67	438
18:00	94	2	3	9	54	198	278	123	22	2	0	0	0	0	785	57-66	335
19:00	70	0	4	8	70	180	165	92	18	2	0	0	0	0	609	56-65	244
20:00	23	1	3	7	70	134	186	78	15	1	0	0	0	0	518	57-66	268
21:00	26	1	3	22	45	119	129	45	9	0	0	0	0	0	399	56-65	193
22:00	16	0	3	8	34	101	121	48	7	2	0	0	0	0	340	57-66	182
23:00	9	0	3	10	49	103	95	45	3	1	0	0	0	0	318	56-65	172
Total	2112	12	60	342	1655	4092	4439	1686	285	29	2	1	1	0	14716		
Percent	14.4%	0.1%	0.4%	2.3%	11.2%	27.8%	30.2%	11.5%	1.9%	0.2%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	01:00	09:00	10:00	09:00	07:00	07:00	07:00	07:00	07:00	03:00	05:00			07:00		
Vol.	158	1	4	32	110	231	333	95	17	2	1	1			798		
PM Peak	15:00	13:00	14:00	14:00	14:00	16:00	16:00	17:00	17:00	17:00	15:00		13:00		16:00		
Vol.	329	2	6	43	166	371	444	223	61	7	1		1		1487		

Page 3

#### Site Code: US-2 WESTBOUND Station ID: RUSSELL-SPOTTED

WESTBOUN	D														Lan	000.00.0	
Start	1	36	41	46	51	56	61	66	71	76	81	86	91	96		Pace	Number
Time	35	40	45	50	55	60	65	70	75	80	85	90	95	999	Total	Speed	in Pace
05/08/14	5	0	6	22	44	31	8	2	0	0	0	0	0	0	118	49-58	64
01:00	4	0	4	11	34	14	5	0	0	0	0	0	0	0	72	49-58	40
02:00	1	1	3	8	22	11	0	0	0	0	0	0	0	0	46	49-58	29
03:00	2	1	2	11	23	17	4	1	0	0	0	0	0	0	61	49-58	34
04:00	3	0	1	13	61	63	21	2	0	0	0	0	0	0	164	51-60	108
05:00	33	1	2	7	186	314	101	14	3	0	0	0	0	0	661	52-61	409
06:00	41	3	3	18	240	443	144	18	3	0	0	0	0	0	913	53-62	570
07:00	58	2	2	52	355	515	143	7	0	0	0	0	0	0	1134	52-61	699
08:00	53	2	12	79	405	344	78	6	0	0	0	0	0	0	979	51-60	587
09:00	54	0	10	92	296	236	61	4	0	0	0	0	0	0	753	50-59	406
10:00	60	1	3	103	343	245	55	4	0	0	0	0	0	0	814	50-59	449
11:00	71	0	9	123	336	264	48	6	0	0	0	0	0	0	857	50-59	450
12 PM	75	1	12	117	397	276	48	5	0	0	0	0	0	0	931	50-59	506
13:00	124	0	15	89	336	274	49	5	0	0	0	0	0	0	892	50-59	399
14:00	115	1	16	97	381	291	59	5	0	1	0	0	0	0	966	50-59	459
15:00	116	5	10	80	368	330	51	1	0	0	0	0	0	0	961	51-60	468
16:00	146	1	16	115	389	353	95	8	1	0	0	0	0	0	1124	51-60	497
17:00	146	0	15	104	381	477	97	6	0	1	0	0	0	0	1227	51-60	584
18:00	81	3	4	102	299	238	53	3	0	0	0	0	0	0	783	50-59	382
19:00	58	2	7	51	236	202	27	4	0	0	0	0	0	0	587	51-60	308
20:00	25	1	14	61	217	168	22	1	0	0	0	0	0	0	509	50-59	308
21:00	13	3	13	58	188	157	13	2	0	0	0	0	0	0	447	50-59	288
22:00	7	0	8	40	128	74	13	0	0	0	0	0	0	0	270	50-59	176
23:00	2	0	2	17	98	68	14	0	0	0	0	0	0	0	201	50-59	146
Total	1293	28	189	1470	5763	5405	1209	104	7	2	0	0	0	0	15470		
Percent	8.4%	0.2%	1.2%	9.5%	37.3%	34.9%	7.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak	11:00	06:00	08:00	11:00	08:00	07:00	06:00	06:00	05:00						07:00		
Vol.	71	3	12	123	405	515	144	18	3						1134		
PM Peak	16:00	15:00	14:00	12:00	12:00	17:00	17:00	16:00	16:00	14:00					17:00		
Vol.	146	5	16	117	397	477	97	8	1	1					1227		

422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

> File Name : Airport Road Westbound and Spotted Site Code : 0000000 Start Date : 5/15/2014 Page No : 1

								Gr	oups Pr	inted- Unsh	птеа - Ва	NK I									
		SPOT	TED				AIRPO	ORT WB				SPOT	TED				AIRPO	ORT WB			
		So	outhboun	d			W	Vestboun	d			N	orthbour	nd			E	astboun	d	_	
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	5	24	0	0	29	0	136	3	0	139	0	18	5	0	23	0	0	0	0	0	191
12:15 PM	12	18	0	0	30	0	134	1	0	135	0	24	11	0	35	0	0	0	0	0	200
12:30 PM	9	17	0	0	26	0	110	2	0	112	0	18	12	0	30	0	0	0	0	0	168
12:45 PM	10	20	0	0	30	1	99	1	0	101	0	19	8	0	27	0	0	0	0	0	158
Total	36	79	0	0	115	1	479	7	0	487	0	79	36	0	115	0	0	0	0	0	717
1					1																1
01:00 PM	7	14	0	0	21	0	69	3	0	72	0	19	10	0	29	0	0	0	0	0	122
01:15 PM	4	28	0	0	32	0	76	8	0	84	0	14	14	0	28	0	0	0	0	0	144
01:30 PM	2	23	0	0	25	1	82	4	0	87	0	22	8	0	30	0	0	0	0	0	142
01:45 PM	4	14	0	0	18	1	92	3	0	96	0	15	13	0	28	0	0	0	0	0	142
Total	17	79	0	0	96	2	319	18	0	339	0	70	45	0	115	0	0	0	0	0	550
	52	150	0	0	011	2	700	25	0	000	0	1.40	0.1	0	220	0	0	0	0	0	10/7
Grand Total	53	158	0	0	211	3	798	25	0	826	0	149	81	0	230	0	0	0	0	0	1267
Apprch %	25.1	74.9	0	0		0.4	96.6	3	0		0	64.8	35.2	0		0	0	0	0		
Total %	4.2	12.5	0	0	16.7	0.2	63	2	0	65.2	0	11.8	6.4	0	18.2	0	0	0	0	0	
Unshifted	53	158	0	0	211	3	798	25	0	826	0	149	81	0	230	0	0	0	0	0	1267
% Unshifted	100	100	0	0	100	100	100	100	0	100	0	100	100	0	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Printed, Unshifted - Bank 1

422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

> File Name : Airport Road Westbound and Spotted Site Code : 00000000 Start Date : 5/15/2014 Page No : 1

									-	ntea- Unsn	nicu - Da										1
		SPOT	TED				AIRPO	RT WB				SPOT	TED				AIRPO	RT WB			
		So	outhboun	d			W	estboun	d			N	orthbour	nd			E	astboun	1		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	1	21	0	0	22	0	75	4	0	79	0	24	8	0	32	0	0	0	0	0	133
04:15 PM	8	14	0	0	22	1	66	8	0	75	0	13	9	0	22	0	0	0	0	0	119
04:30 PM	3	20	0	0	23	3	45	6	0	54	0	22	14	0	36	0	0	0	0	0	113
04:45 PM	4	18	0	0	22	1	56	6	0	63	0	23	10	0	33	0	0	0	0	0	118
Total	16	73	0	0	89	5	242	24	0	271	0	82	41	0	123	0	0	0	0	0	483
Grand Total	16	73	0	0	89	5	242	24	0	271	0	82	41	0	123	0	0	0	0	0	483
Apprch %	18	82	0	0		1.8	89.3	8.9	0		0	66.7	33.3	0		0	0	0	0		
Total %	3.3	15.1	0	0	18.4	1	50.1	5	0	56.1	0	17	8.5	0	25.5	0	0	0	0	0	
Unshifted	16	73	0	0	89	5	242	24	0	271	0	82	41	0	123	0	0	0	0	0	483
% Unshifted	100	100	0	0	100	100	100	100	0	100	0	100	100	0	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Printed, Unshifted - Bank 1

422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

> File Name : Airport Road Eastbound and Spotted Site Code : 0000000 Start Date : 5/15/2014 Page No : 1

								Gr	oups P	rinted- Uns	shifted -	Bank 1									
		SPOT	TED				AIRPC	ORT EB				SPOT	TED				AIRPO	ORT EB			
		So	outhbou	nd			W	/estbou	nd			N	orthbou	nd			E	astbou	nd		I
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	0	23	2	1	26	0	0	0	0	0	3	22	0	0	25	9	96	2	0	107	158
12:15 PM	0	20	0	0	20	0	0	0	0	0	5	28	0	0	33	4	114	7	0	125	178
12:30 PM	0	10	4	0	14	0	0	0	0	0	4	22	0	0	26	10	112	6	0	128	168
12:45 PM	0	21	3	0	24	0	0	0	0	0	2	22	0	0	24	4	97	4	0	105	153
Total	0	74	9	1	84	0	0	0	0	0	14	94	0	0	108	27	419	19	0	465	657
01:00 PM	0	16	1	0	17	0	0	0	0	0	2	21	0	0	23	11	111	9	0	131	171
01:15 PM	0	32	3	0	35	0	0	Ō	0	Ō	2	24	0	0	26	8	124	4	0	136	197
01:30 PM	0	25	2	0	27	0	0	0	0	Ō	4	22	0	0	26	11	138	8	0	157	210
01:45 PM	Ō	17	0	Ō	17	Ō	0	Ō	Ō	Ō	3	22	Ō	Ō	25	8	121	8	0	137	179
Total	0	90	6	0	96	0	0	0	0	0	11	89	0	0	100	38	494	29	0	561	757
Grand Total	0	164	15	1	180	0	0	0	0	0	25	183	0	0	208	65	913	48	0	1026	1414
Apprch %	0	91.1	8.3	0.6	100	0	0	0	0	0	12	88	0	0	200	6.3	89	40	0	1020	1414
Total %	0	11.6	1.1	0.0	12.7	0	0	0	0	0	1.8	12.9	0	0	14.7	4.6	64.6	3.4	0	72.6	I.
Unshifted	0	164	15	0.1	180	0	0	0	0	0	25	183	0	0	208	65	913	48	0	1026	1414
% Unshifted	0	104	100	100	100	0	0	0	0	0	100	100	0	0	100	100	100	100	0	1020	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
/0 Dalik I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	. 0

Groups Brintod- Unshifted - Bank 1

422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

> File Name : Airport Road Eastbound and Spotted Site Code : 0000000 Start Date : 5/15/2014 Page No : 1

									oups Fi	inted- Uns	sinteu -										
		SPOT					-	ORT EB				SPOT						ORT EB			
		Sc	outhbou	nd			W	estbou	nd			N	orthbou	nd			E	astbou	nd		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	21	3	1	25	0	0	0	0	0	5	24	0	0	29	10	136	7	0	153	207
04:15 PM	0	18	4	0	22	0	0	0	0	0	11	20	0	0	31	2	161	4	0	167	220
04:30 PM	0	21	7	0	28	0	0	0	0	0	4	29	0	0	33	9	111	9	0	129	190
04:45 PM	0	19	6	0	25	0	0	0	0	0	7	22	0	0	29	3	93	11	0	107	161
Total	0	79	20	1	100	0	0	0	0	0	27	95	0	0	122	24	501	31	0	556	778
Grand Total	0	79	20	1	100	0	0	0	0	0	27	95	0	0	122	24	501	31	0	556	778
Apprch %	0	79	20	1		0	0	0	0		22.1	77.9	0	0		4.3	90.1	5.6	0		
Total %	0	10.2	2.6	0.1	12.9	0	0	0	0	0	3.5	12.2	0	0	15.7	3.1	64.4	4	0	71.5	
Unshifted	0	79	20	1	100	0	0	0	0	0	27	95	0	0	122	24	501	31	0	556	778
% Unshifted	0	100	100	100	100	0	0	0	0	0	100	100	0	0	100	100	100	100	0	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Brintod- Unshifted - Bank 1

# 422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

File Name : Spotted and US-2 Site Code : 00000000 Start Date : 5/13/2014 Page No : 1

		SPOT	FED outhbou	ind			US 2	estbou	nd			SPOT	TED orthbou	Ind			US 2 F	2 astbou	nd				
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
11:45 AM	0	0	0	0	0	0	0	3	0	3	3	0	15	0	18	18	1	0	0	19	0	40	40
Total	0	0	0	0	0	0	0	3	0	3	3	0	15	0	18	18	1	0	0	19	0	40	40
12:00 PM	0	0	0	0	0	0	0	5	0	5	3	0	15	0	18	23	0	0	0	23	0	46	46
12:15 PM	0	0	0	0	0	0	0	6	0	6	1	0	28	0	29	26	0	0	0	26	0	61	61
12:30 PM	0	0	0	0	0	0	0	5	0	5	4	0	17	0	21	27	0	0	0	27	0	53	53
12:45 PM	0	0	0	0	0	0	0	9	0	9	8	0	14	0	22	28	0	0	0	28	0	59	59
Total	0	0	0	0	0	0	0	25	0	25	16	0	74	0	90	104	0	0	0	104	0	219	219
01:00 PM	0	0	0	0	0	0	0	5	0	5	7	0	21	0	28	22	0	0	0	22	0	55	55
01:15 PM	0	0	0	0	0	0	0	1	0	1	6	0	16	0	22	22	0	0	0	22	0	45	45
01:30 PM	0	0	0	0	0	0	0	2	0	2	3	0	18	0	21	24	0	0	0	24	0	47	47
01:45 PM	0	0	0	0	0	0	0	6	0	6	6	0	17	0	23	11	0	0	0	11	0	40	40
Total	0	0	0	0	0	0	0	14	0	14	22	0	72	0	94	79	0	0	0	79	0	187	187
Grand Total	0	0	0	0	0	0	0	42	0	42	41	0	161	0	202	201	1	0	0	202	0	446	446
Apprch %	0	0	0	0		0	0	100	0		20.3	0	79.7	0		99.5	0.5	0					
Total %	0	0	0	0	0	0	0	9.4	0	9.4	9.2	0	36.1	0	45.3	45.1	0.2	0		45.3	0	100	
Unshifted	0	0	0	0	0	0	0	42	0	42	41	0	161	0	202	201	1	0		202	0	0	446
% Unshifted	0	0	0	0	0	0	0	100	0	100	100	0	100	0	100	100	100	0	0	100	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Printed- Unshifted - Bank 1

# 422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

File Name : Spotted and US-2 Site Code : 00000000 Start Date : 5/13/2014 Page No : 1

									oups P	rinted- Uns	snifted -										1
		SPOT	TED				US	2				SPOT	TED				US	2			
		Sc	outhbou	nd			W	estbou	nd			No	orthbou	nd			E	astbou	nd		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	4	0	4	3	0	11	0	14	21	1	0	0	22	40
04:15 PM	0	0	0	0	0	0	0	2	0	2	4	0	14	0	18	25	0	0	0	25	45
04:30 PM	0	0	0	0	0	0	0	5	0	5	1	0	22	0	23	21	0	0	0	21	49
04:45 PM	0	0	0	0	0	0	0	2	0	2	6	0	7	0	13	18	0	0	0	18	33
Total	0	0	0	0	0	0	0	13	0	13	14	0	54	0	68	85	1	0	0	86	167
Grand Total	0	0	0	0	0	0	0	13	0	13	14	0	54	0	68	85	1	0	0	86	167
Apprch %	0	0	0	0		0	0	100	0		20.6	0	79.4	0		98.8	1.2	0	0		
Total %	0	0	0	0	0	0	0	7.8	0	7.8	8.4	0	32.3	0	40.7	50.9	0.6	0	0	51.5	
Unshifted	0	0	0	0	0	0	0	13	0	13	14	0	54	0	68	85	1	0	0	86	167
% Unshifted	0	0	0	0	0	0	0	100	0	100	100	0	100	0	100	100	100	0	0	100	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Printed- Unshifted - Bank 1

422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

> File Name : Airport Road Westbound and Flint Site Code : 0000000 Start Date : 5/13/2014 Page No : 1

										rinted- Uns	sniftea -	Bank 1									
			FLINT				AIR	PORT R	OAD				FLINT				AIRI	PORT R	OAD		
		Sc	outhbou	nd			W	/estbou	nd			N	orthbou	Ind			E	astbour	nd		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
11:45 AM	6	6	0	0	12	0	135	20	0	155	0	9	2	0	11	0	0	0	0	0	178
Total	6	6	0	0	12	0	135	20	0	155	0	9	2	0	11	0	0	0	0	0	178
12:00 PM	10	5	0	0	15	3	96	34	0	133	0	7	12	0	19	0	0	0	0	0	167
12:15 PM	6	5	0	0	11	2	122	29	0	153	0	5	6	0	11	0	0	0	0	0	175
12:30 PM	8	2	0	1	11	2	96	21	0	119	0	10	15	0	25	0	0	0	0	0	155
12:45 PM	6	6	0	0	12	5	71	17	1	94	0	7	6	0	13	0	0	0	0	0	119
Total	30	18	0	1	49	12	385	101	1	499	0	29	39	0	68	0	0	0	0	0	616
01:00 PM	8	4	0	0	12	9	52	18	0	79	0	17	5	0	22	0	0	0	0	0	113
01:15 PM	5	10	0	0	15	0	54	17	0	71	0	12	5	0	17	0	0	0	0	0	103
01:30 PM	4	7	0	0	11	9	48	18	0	75	0	9	5	0	14	0	0	0	0	0	100
01:45 PM	5	6	0	0	11	15	45	33	0	93	0	8	6	0	14	0	0	0	0	0	118
Total	22	27	0	0	49	33	199	86	0	318	0	46	21	0	67	0	0	0	0	0	434
Grand Total	58	51	0	1	110	45	719	207	1	972	0	84	62	0	146	0	0	0	0	0	1228
Apprch %	52.7	46.4	0	0.9		4.6	74	21.3	0.1		0	57.5	42.5	0		0	0	0	0		
Total %	4.7	4.2	0	0.1	9	3.7	58.6	16.9	0.1	79.2	0	6.8	5	0	11.9	0	0	0	0	0	
Unshifted	58	51	0	1	110	45	719	207	1	972	0	84	62	0	146	0	0	0	0	0	1228
% Unshifted	100	100	0	100	100	100	100	100	100	100	0	100	100	0	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups Printed- Unshifted - Bank 1

422 W Riverside Suite 304 Spokane WA 99201 (509)458-3727

> File Name : Airport Road Westbound and Flint Site Code : 0000000 Start Date : 5/13/2014 Page No : 1

								Gr	oups Pri	inted- Unsh	ifted - Ba	nk 1									_
		FLINT	<b>ROAD</b>				AIRPO	RT ROA	D			FLINT	ROAD				AIRPO	RT ROA	D		
		So	outhboun	d			W	Vestboun	d			N	orthbour	nd			E	astboun	d		
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	6	0	0	12	0	62	22	0	84	0	5	9	0	14	0	0	0	0	0	110
04:15 PM	3	4	0	0	7	3	48	29	0	80	0	7	5	0	12	0	0	0	0	0	99
04:30 PM	3	13	0	0	16	5	57	20	0	82	0	9	10	0	19	0	0	0	0	0	117
04:45 PM	4	7	0	0	11	3	53	22	0	78	0	7	4	0	11	0	0	0	0	0	100
Total	16	30	0	0	46	11	220	93	0	324	0	28	28	0	56	0	0	0	0	0	426
Grand Total	16	30	0	0	46	11	220	93	0	324	0	28	28	0	56	0	0	0	0	0	426
Apprch %	34.8	65.2	0	0		3.4	67.9	28.7	0		0	50	50	0		0	0	0	0		
Total %	3.8	7	0	0	10.8	2.6	51.6	21.8	0	76.1	0	6.6	6.6	0	13.1	0	0	0	0	0	
Unshifted	16	30	0	0	46	11	220	93	0	324	0	28	28	0	56	0	0	0	0	0	426
% Unshifted	100	100	0	0	100	100	100	100	0	100	0	100	100	0	100	0	0	0	0	0	100
Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bank 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C

Appendix D

Level of Service Worksheets

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General Information	1		Site In	formati	on		-	
Analyst	Montgom	arv	Intersec	tion	-//	US 2/Spot	fed	
Agency/Co.	JUB ENG		Jurisdic			WSDOT		
Date Performed	8/27/2014	1	Analysis	s Year	_	2014		
Analysis Time Period	Mid-day F	Peak					-	
Project Description Air	port Drive Coup	plet at Spotted Ro	ad Intersect	tion Study	1			
East/West Street: US 2				outh Stree		d Road		
ntersection Orientation:	East-West		Study P	eriod (hrs	): 0.25			
Vehicle Volumes an	d Adjustme	nts						-
Major Street		Eastbound				Westbour	nd	
Movement	1	2	3	11 1 1	4	5	77	6
	L.	Ť	R		- L	T	- X I.C.	R
Volume (veh/h)		795	105	120	25	890	1.1	2
Peak-Hour Factor, PHF	1.00	0.92	0.92	110	88.0	0.88	-1	1.00
Hourly Flow Rate, HFR (veh/h)	0	864	114	_	28	1011		0
Percent Heavy Vehicles	0	1 - 1	( - 3 <del>0</del>		4	1. 1.		Υ.
Median Type			Two W	ay Left T	um Lane			
RT Channelized		11.2	0					
Lanes	0	2	1		1	2		0
Configuration		Т	R		L	T		
Upstream Signal		0	_			0		
Minor Street		Northbound			Southbound		nd	
Movement	7	8	9		10			12
	L	Т	R	L		Т	0	R
Volume (veh/h)	80		20			1	1	
Peak-Hour Factor, PHF	0.82	1.00	0.82		1.00	1.00	- 10-0	1.00
Hourly Flow Rate, HFR (veh/h)	97	0	24		0	0		0
Percent Heavy Vehicles	2	0	0	-	0	0		0
Percent Grade (%)	1	0			-	0		_
Flared Approach		N				N		
Storage	4	0				0		
RT Channelized			0					0
Lanes	0	0	0	- 1 P	0	0		0
Configuration	The second	LR						
Delay, Queue Length, a	nd Level of Se	ervice						
Approach	Eastbound	Westbound	N	lorthboun	d	S	outhbound	1
Movement	1	4	7	8	9	10	11	1 12
Lane Configuration		Ĺ		LR	1			1
v (veh/h)		28	121		-	1		-
C (m) (veh/h)		689	284		-	-	1	
		0.04	-	0.43		-		-
V/C	1				-	-		-
95% queue length		0.13		2.03	-	-	-	-
Control Delay (s/veh)		10.4		26.8	-			-
LOS		В		D	1			
Approach Delay (s/veh)	A -		1.00	26.8				
Approach LOS	**		· · · · · · · · · · · · · · · · · · ·	D				

#### Two-Way Stop Control

General Information	1 C C C C C C C C C C C C C C C C C C C		Site In	formatio	on	1.5			
Analyst	Montgome	ery-	Intersec	tion		US 2/Spo	ted		
Agency/Co.	JUB ENG		Jurisdic	tion	-	WSDOT	-		
Date Performed	8/27/2014		Analysis	s Year		2014			
Analysis Time Period	PM Peak					3	_	_	
Project Description Airp	ort Drive Coup	let at Spotted Ro	ad Intersect	ion Study			-		
East/West Street: US 2					et: Spotte	d Road			
ntersection Orientation:	East-West		Study Pe	eriod (hrs	): 0.25				
Vehicle Volumes an	d Adjustme	nts							
Major Street		Eastbound			-	Westbour	nd		
Novement	1	2	3		4	5	1 - 1	6	
	L	T	R		L	Т		R	
/olume (veh/h)		1400	85	2-40-2	15	1110	- 1 L	22.1	
Peak-Hour Factor, PHF	1.00	0.95	0.95	_	0.94	0.94		1.00	
Hourly Flow Rate, HFR (veh/h)	0	1473	89	11	15	1180		0	
Percent Heavy Vehicles	0	( A C	1.14		4	-	- 12	-	
Median Type			Two W	ay Left To	urn Lane	12.00.00	-		
RT Channelized		-	0	200		1		0	
Lanes	0	2	1		1	2		0	
Configuration		Т	R		L	T	100		
Upstream Signal	1	0				0		-	
Minor Street	1	Northbound				Southbou	nd		
Movement	7	8	9		10	11	1	12	
	L	T	R		L	Т		R	
Volume (veh/h)	55	1	15				- 21	- 14	
Peak-Hour Factor, PHF	0.74	1.00	0.74	-	1.00	1.00	-128	1.00	
Hourly Flow Rate, HFR (veh/h)	74	0	20		0	0		0	
Percent Heavy Vehicles	2	0	0		0	0		0	
Percent Grade (%)		0	2	- 9		0	and the second second	-	
Flared Approach	1	N		10		N			
Storage		0	1			0	- 1 - T		
RT Channelized		N.)	0			-	1200	0	
Lanes	0	0	0		0	0		0	
Configuration	1	LR				1			
Delay, Queue Length, a	nd I evel of Se	and the second s	-				-	-	
Approach	Eastbound	Westbound	N	lorthboun	d	5	outhbound	1	
Movement	1	4	7	8	1 9	10	11	1 12	
			- 1	LR		10		1 12	
Lane Configuration		L	-		-	-	-	-	
v (veh/h)		15	-	94		-	-	-	
C (m) (veh/h)		410	156		-			-	
v/c		0.04	1	0.60	-	1	_	-	
95% queue length		0.11		3.21		1		-	
Control Delay (s/veh)		14.1		58.0	1		1253	1	
LOS		В		F			1.1.1.1		
Approach Delay (s/veh)		*		58 0				-	
Approach LOS	-			F	_				

Page 1 of 1

General Information			Site In	format	tion				
Analyst	Montgome	222	Intersed			Unbound/S	notted	-	
Agency/Co.	JUB ENG		Jurisdic			SIA	poneo		
Date Performed	8/27/2014		Analysi			2014	_		
Analysis Time Period	Mid-day P								
Project Description Airp		let at Spotted Ro.	ad Intersec	tion Stu	dy				
East/West Street Inbou					eet: Spotter	Road			
ntersection Orientation:	East-West		Study P	eriod (h	rs): 0.25				
Vehicle Volumes an	d Adjustme	nts						_	
Major Street	1	Eastbound	1000			Westbour	nd		
Movement	1	2	3		4	5		6	
	1 - L	Т	R	216	L	T	_	R	
Volume (veh/h)	1.00	0.05	0.00	-	5	490	_	5	
Peak-Hour Factor, PHF	1.00	0.95	0.95	-	0.88	0.88		0.88	
Hourly Flow Rate, HFR (veh/h)	0	0	0		5	556		5	
Percent Heavy Vehicles	0				4	-	- (1) = 7	-	
Median Type	1.		-	Undivid	led		-		
RT Channelized		1	0					0	
Lanes	0	0	0		1	2	_	1	
Configuration	1				L	T	_	R	
Upstream Signal	1	0				0		-	
Minor Street	Northbound				-	Southbou	nd		
Movement	7	8	9	-	10	11	-	12	
	L	Т	R	-	L	T		R	
Volume (veh/h)	35	85		_	1.00	90	-	35	
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.82	0.82	0.74	-	1.00		-		
(veh/h)	42	103	0	1	0	93		35	
Percent Heavy Vehicles	2	0	0	_	0	0	- 1	0	
Percent Grade (%)		0				0		100	
Flared Approach	0	N		-		N		_	
Storage		0	1		-	0	24 22		
RT Channelized		1	0	31		1	- 1	0	
Lanes	0	1	0		0	1	- 1	0	
Configuration	LT	1				11 11 11 11		TR	
Delay, Queue Length, a	nd Level of Se	rvice				100	-		
Approach	Eastbound	Westbound	1	Vorthbou	und	S	outhboun	d	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		L	LT			· · · · · · · · · · · · · · · · · · ·		TR	
v (veh/h)		5	145				-	128	
C (m) (veh/h)		1610	449	1.127				493	
v/c		0.00	0.32	12	1000		· · · · · · · · · · · · · · · · · · ·	0.26	
95% queue length		0.01	1.38		1		1000	1.03	
Control Delay (s/veh)		7.2	16.8					14	
LOS	-	A	C		7			B	
Approach Delay (s/veh)		-		16.8	-	-	14.8	1 2	
Approach LOS			-	C			B		

#### Two-Way Stop Control

TWO-WAY STOP CONTROL SUMMARY General Information Site Information Inbound/Spotted Montgomery Intersection Analyst Agency/Co. JUB ENGINEERS Jurisdiction SIA 2014 Date Performed 8/27/2014 Analysis Year Analysis Time Period PM Peak Project Description Airport Drive Couplet at Spotted Road Intersection Study North/South Street: Spotted Road East/West Street Inbound Airport Drive Study Period (hrs): 0.25 Intersection Orientation: East-West Vehicle Volumes and Adjustments Westbound Major Street Movement Eastbound 5 6 2 3 4 R L т R L т 25 270 5 Volume (veh/h) 0.95 0.95 0.86 0.86 0.86 Peak-Hour Factor, PHF 1.00 Hourly Flow Rate, HFR 0 0 29 313 5 0 (veh/h) Percent Heavy Vehicles 0 -4 ---Undivided Median Type 0 RT Channelized 0 2 1 anes 0 0 0 1 R 1 Τ Configuration 0 Upstream Signal 0 Northbound Southbound Minor Street 12 Movement 8 9 10 11 7 R L Т R L Т 15 40 85 75 Volume (veh/h) 0.97 0.97 Peak-Hour Factor, PHF 0.74 1.00 0.85 0.85 Hourly Flow Rate, HFR 47 99 0 0 77 15 (veh/h) 0 0 0 Percent Heavy Vehicles 2 0 0 0 0 Percent Grade (%) Ν Ν Flared Approach 0 Storage 0 0 0 **RT** Channelized 0 0 0 Lanes 0 1 1 TR Configuration LT Delay, Queue Length, and Level of Service Southbound Approach Eastbound Westbound Northbound 7 8 9 10 11 12 Movement 4 TR LT ane Configuration L 92 v (veh/h) 29 146 589 1610 566 C (m) (veh/h) 0.16 0.02 0.26 ilc. 0.06 1.02 0.55 95% queue length 12.2 13.6 Control Delay (s/veh) 7.3 В OS Α В 12.2 Approach Delay (s/veh) --136 Approach LOS в в -HCS+TM Version 5.6 Generated: 8/28/2014 8:49 AM Copyright @ 2010 University of Florida, All Rights Reserved

#### file:///C:/Temp/2/u2kC6C9.tmp

Page 1 of 1

General Information	N Contraction		Site Inf	ormati	on			
Analyst	Montgome	any.	Intersect	ion		Outbound	/Spotted	_
Agency/Co.	JUB ENG		Jurisdict			SIA	-	-
Date Performed	8/27/2014		Analysis	Year		2014		
Analysis Time Period	Mid-day P	eak						
Project Description Airp	out Drive Coup	let at Spotted Ro	ad Intersecti	on Study	1			
ast/West Street: Outbo	und Airport Dri	Ve	North/So	uth Stree	et: Spotted	Road		-
ntersection Orientation:	East-West		Study Pe	riod (hrs	): 0.25			
Vehicle Volumes an	d Adjustme	nts						
Major Street	1	Eastbound				Westbour	nd	
Movement	1	2	3		4	5		6
	E.	T	R	15-	L	Ť	110	R
/olume (veh/h)	30	495	40	(	A			
Peak-Hour Factor, PHF	0.89	0.89	0.89	-	0.94	0.94	1	.00
Hourly Flow Rate, HFR (veh/h)	33	556	44		0	0		0
Percent Heavy Vehicles	2				4	- 14		÷ -
Median Type			-	Undivide	d			-
RT Channelized			0				-10-	0
Lanes	1	2	1	- 20	0	0	100	0
Configuration	L	T	R	2.1				_
Upstream Signal		0	1	_		0		
Minor Street	1	Northbound				Southbou	nd	
Movement	7	8	9	11.	10	11		12
	1 1	Т	R		_ L	Т		R
Volume (veh/h)	-	90	10	-		5 90		
Peak-Hour Factor, PHF	0.74	0.96	0.96	-	0.69	0.69		1.00
Hourly Flow Rate, HFR (veh/h)	0	93	10		7	130		0
Percent Heavy Vehicles	2	2	2	-	2	2		0
Percent Grade (%)		0				0		_
Flared Approach		N				N	_	
Storage		0				0		_
RT Channelized			0					0
Lanes	0	1	0		0	1	1912	0
Configuration		1	TR	1	LT			
Delay, Queue Length, a	nd Level of Se	irvice				-		
Approach	Eastbound	Westbound	N	orthbour	d	S	outhbound	
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	1	12777		TR	LT		1
v (veh/h)	33	N			103	137	S	
C (m) (veh/h)	1623				414	375		-
v/c	0.02				0.25	0.37		
95% queue length	0.02		-	-	0.97	1.64	A	-
					16.6	20.0	-	1
Control Delay (s/veh)	7.3				10.0 C	20.0 C	-	-
LOS	A		1.00	10.5	U	C	00.0	- I
Approach Delay (s/veh)		-	-	16.6		-	20.0	_
Approach LOS	100 Here 1	-		С			С	_

#### Two-Way Stop Control

<b>General Information</b>			Site Infor	mation		
Analyst	Montgome	nv.	Intersection		Outbound/S	Spotted
Agency/Co.	JUB ENG		Jurisdiction		SIA	
Date Performed	8/27/2014		Analysis Ye	ar	2014	
Analysis Time Period	PM Peak				1.	
Project Description Airp	ort Drive Coup	let at Spotted Roa	ad Intersection	Study		
ast/West Street: Outbo			North/South		Road	
ntersection Orientation:	East-West		Study Perior	d (hrs): 0.25		
Vehicle Volumes an	d Adjustme	nts				
Major Street	T	Eastbound		T	Westbound	1
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
/olume (veh/h)	30	500	25	in the second	1	1000
Peak-Hour Factor, PHF	0.83	0.83	0.83	0.94	0.94	1.00
lourly Flow Rate, HFR veh/h)	36	602	30	0	0	0
Percent Heavy Vehicles	2	-	1	4	-	-
Median Type			Und	livided		
RT Channelized			0			0
anes	1	2	1	0	0	0
Configuration	1 1	T	R			
Upstream Signal		0			0	
Minor Street		Northbound			Southboun	d
Movement	7	8	9	10	11	12
	L	Т	R	L	Т	R
Volume (veh/h)	1	95	25	20	80	
Peak-Hour Factor, PHF	0.74	0.92	0.92	0.89	0.89	1.00
Hourly Flow Rate, HFR (veh/h)	0	103	27	22	89	0
Percent Heavy Vehicles	2	2	2	2	2	0
Percent Grade (%)	S	0			0	
Flared Approach		N	1		N	- 612
Storage		0		-	0	
RT Channelized			0	1	1	0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		1
Delay, Queue Length, a	nd I avai of Se	rvice				
Approach	Eastbound	Westbound	Nort	bound	l Sr	uthbound
Movement	1	4	7	8 9	10	11 12
		4		TR	LT	
Lane Configuration	L		14 i		_	
v (veh/h)	36			130	111	
C (m) (veh/h)	1623		d	411	362	
v/c	0.02		+	0.32	0.31	
95% queue length	0.07		(	1.34	1.27	S
Control Delay (s/veh)	7.3			17.8	19.3	1.1.1
LOS	А			С	C	
Approach Delay (s/veh)	÷	-	1	7.8		19.3
Approach LOS	-			с		C

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<b>General Information</b>			Site Inf	formati	on				
Analyst	Montaome	arv.	Intersec	tion		Unbound/Fi	int	_	
Agency/Co.	JUB ENG		Jurisdict	tion		SIA		_	
Date Performed	8/27/2014		Analysis	s Year		2014			
Analysis Time Period	Mid-day P	eak			_			_	
Project Description Air	ort Drive Coup	let at Spotted Roa	ad Intersect	tion Study	Y				
ast/West Street: Inbour	nd Airport Drive	0			et: Flint R	bad			
ntersection Orientation:	East-West		Study Pe	eriod (hrs	s): 0.25				
/ehicle Volumes an	d Adjustme	nts	_						
Major Street	1	Eastbound				Westboun	d		
Novement	1	2	3	2112	4	5	100	6	
	L.	T	R	1.0	L	T	-	R	
/olume (veh/h)				-	105	450	-	5	
Peak-Hour Factor, PHF	1.00	0.95	0.95	-	0.90	0.90		0.90	
fourly Flow Rate, HFR veh/h)	0	0	0	- 1	116	500	- 1	5	
Percent Heavy Vehicles	0		· · ·		4	-		-	
Median Type			-	Undivide	d	-	-	0	
RT Channelized	1		0			-			
Lanes	0	0	0	100	1	2	-	1	
Configuration			2-1-		L	T	R		
Upstream Signal		0	1			0	_		
Minor Street		Northbound		1	Southb		hd		
Movement	7	8	9		10 11		-	12	
	L	Т	R	-	L	T		R 30	
Volume (veh/h)	35	30	1000	1			20		
Peak-Hour Factor, PHF	0.66	0.66	0.74		1.00	0.82	-	0.82	
Hourly Flow Rate, HFR (veh/h)	53	45	0	1	0	24		36	
Percent Heavy Vehicles	2	0	0		0	0	_	0	
Percent Grade (%)	1	0	_			0	-		
Flared Approach		N		100		N			
Storage	-	0	-	-		0	-		
RT Channelized			0					0	
Lanes	0	1	0	5	0	1	THE -	0	
Configuration	LT					1	- 01-	TR	
Delay, Queue Length, a	nd Level of Se	ervice		1					
Approach	Eastbound	Westbound	N	orthbour	nd	S	outhbound	1	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	(	L	LT					TR	
v (veh/h)		116	98		1			60	
C (m) (veh/h)		1610	367	S				504	
v/c		0.07	0.27					0.12	
		0.23	1.06				-	0.40	
95% queue length				-	-	-		13.1	
Control Delay (s/veh)		7.4	18.3	-	-	-		13 I B	
LOS	Mark Street	A	C		1	-		B	
Approach Delay (s/veh)		-	-	18.3		-	13.1		
Approach LOS		CE 28		С		-	В		

#### Two-Way Stop Control

General Information			Site In	forma	tion		-		
Analyst	Montgome	TV	Intersec	ction		Inbound/FI	int		
Agency/Co.	JUB ENG		Uurisdic	tion		SIA			
Date Performed	8/27/2014		Analysi			2014	100		
Analysis Time Period	PM Peak					-			
	ort Drive Coun	let at Spotted Ro	ad Intersec	tion Stu	dv.				
East/West Street Inbour					eet: Flint Re	oad			
ntersection Orientation:	East-West		Study P	eriod (h	rs): 0.25	1.2			
Vehicle Volumes an	d Adjustme	nte							
Major Street	I	Eastbound		1		Westboun	ď		
Vovement	1	2	3	-	4	1 5	<u> </u>	6	
novement	L	T	R	-	Ĺ	T	-	R	
/olume (veh/h)	-	1.000			10	220	- 1	10	
Peak-Hour Factor, PHF	1.00	0.95	0.95	-	0.96	0.96	0	.96	
Hourly Flow Rate, HFR	1		-		10	229		10	
veh/h)	0	0	0			229		10	
Percent Heavy Vehicles	0		- A		4	-		-	
Median Type			_	Undivi	ded	-	-		
RT Channelized	-	1	0	-			-	0	
Lanes	0	0	0		1	2	1	1	
Configuration			-		L	T	1.0	R	
Upstream Signal		0	-		_	0	-		
Minor Street		Northbound				Southbour	nd		
Movement	7	8	9	-	10	11		12	
	L	Ť	R		L	Т	1.1	R	
Volume (veh/h)	30	30				30		15	
Peak-Hour Factor, PHF	0.74	0.74	0.74		1.00	0.72		0.72	
Hourly Flow Rate, HFR (veh/h)	40	40	0		0	41	-	20	
Percent Heavy Vehicles	2	0	0	-	0	0		0	
Percent Grade (%)	1	0				0			
Flared Approach	0	N	1		1.1.1	N			
Storage		0				0			
RT Channelized		-	0			-		0	
Lanes	0	1	0	-	0	1		0	
Configuration	LT	-	-				- 14 102	TR	
Delay, Queue Length, a	-	rvice	-	-				-	
Approach	Eastbound	Westbound	- N	Northbo	und	S	outhbound	1	
Movement	1	4	7	8	9	10	11	1 12	
	1	4 L	LT			10		TR	
Lane Configuration			80	-	-	-		61	
v (veh/h)		10		-	-	-			
C (m) (veh/h)		1610	695	-	-	-	-	726	
v/c		0.01	0.12		1		-	0.08	
95% queue length		0.02	0.39		-	1	1.2	0.27	
Control Delay (s/veh)		7.2	10.9		and the second			10.4	
LOS	1	A	В	1			-	B	
Approach Delay (s/veh)	-	+		10.9			10.4		
Approach LOS	-		-	B		-	B		

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Same and Information			Citolo	forma	tion			
Seneral Information					tion	1		_
Analyst	Montgome		Intersec		_	Inbound/S	potted	-
Agency/Co.	JUB ENG 9/22/2014		Jurisdic			SIA 2019		-
Date Performed Analysis Time Period	Mid-day P		Milatys	biedi		2013		
		ean let at Spotted Ro	ad Internet	tion Chi	du.	_		
Project Description Ain ast/West Street: Inbou					eet: Spotte	d Road		
ntersection Orientation:					rs): 0.25	0 /10/00		
		n fa	Teres I		Celli antes			
Vehicle Volumes an	u Aujusune	Eastbound		T		Westbour	hr	
Major Street Movement	1 1	2	3	-	4	5		6
Novement	i i	T	R		L	T		R
/olume (veh/h)	-	10000			5	545		5
Peak-Hour Factor, PHF	1.00	0.95	0.95		0.88	0.88	-1.	0.88
Hourly Flow Rate, HFR	0	0	0		5	619		5
Percent Heavy Vehicles	0	-			4	-0		Ξ.
Median Type			1	Undivid	led			
RT Channelized			0					0
anes	0	0	0		1	2		1
Configuration	150000	1			L	T		R
Upstream Signal		0	1			0		_
Minor Street	1.7.	Northbound			Southbound		nd	
Movement	7	8	9		10			12
	L	Т	R		L		T	
Volume (veh/h)	40	95	-	1			105 4	
Peak-Hour Factor, PHF	0.82	0.82	0.74	-	1.00	0,96	0,9	
Hourly Flow Rate, HFR (veh/h)	48	115	0	_	0	109	1.1	41
Percent Heavy Vehicles	2	0	0		0	0		0
Percent Grade (%)		0				0		-
Flared Approach		N	-	-		N	_	
Storage		0	-	-		0	-	
RT Channelized			0	-				0
Lanes	0	1	0		0	1	100	0
Configuration	LT							TR
Delay, Queue Length, a	nd Level of Se	ervice						
Approach	Eastbound	Westbound	1	Northbou	Ind	S	outhbound	1
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	LT	3				TR
v (veh/h)		5	163			1000		150
C (m) (veh/h)		1610	408					458
v/c		0.00	0.40					0.33
95% queue length		0.01	1.88	0.000				1.4
Control Delay (s/veh)		7.2	19.6		-			16.
LOS	-	A	C	-	1	1		C
TRUE.		A	0	19.6	-	-	16.6	
Approach Delay (s/veh)				19.0 C	_	-	76.0 C	_

#### Two-Way Stop Control

TWO-WAY STOP CONTROL SUMMARY General Information Site Information Outbound/Spotted Montgomery Intersection Analyst Agency/Co. JUB ENGINEERS Jurisdiction SIA Date Performed 9/22/2014 Analysis Year 2019 Analysis Time Period Mid-day Peak Project Description Airport Drive Couplet at Spotled Road Intersection Study North/South Street: Spotted Road East/West Street: Outbound Airport Drive Study Period (hrs): 0.25 Intersection Orientation: East-West Vehicle Volumes and Adjustments Eastbound Westbound Major Street 4 5 6 2 3 **Novement** 1 R L т R Ł 45 Volume (veh/h) 35 550 0.89 0.94 0.94 1.00 0.89 Peak-Hour Factor, PHF 0.89 Hourly Flow Rate, HFR 50 0 0 0 39 617 (veh/h) 2 4 × ÷ --Percent Heavy Vehicles Undivided Median Type 0 0 RT Channelized 0 2 1 0 0 Lanes 1 R Configuration Τ L 0 Upstream Signal 0 Northbound Southbound Minor Street 12 Movement 7 8 9 10 11 R Т R L Т L 100 10 5 105 Volume (veh/h) 1.00 Peak-Hour Factor, PHF 0.96 0.69 0.69 0.74 0.96 Houry Flow Rate, HFR 0 104 10 7 152 0 (veh/h) 2 2 2 0 Percent Heavy Vehicles 2 2 0 0 Percent Grade (%) Ν Flared Approach Ν 0 0 Storage 0 0 RT Channelized 0 0 0 0 1 1 Lanes TR LT Configuration Delay, Queue Length, and Level of Service Southbound Eastbound Westbound Northbound Approach 7 8 9 10 11 12 Movement 1 4 TR LT ane Configuration L 39 114 159 v (veh/h) 336 374 1623 C (m) (veh/h) 0.47 0.02 0.30 1.27 2.43 95% queue length 0.07 18.8 25.0 Control Delay (s/veh) 73 LOS C С Α 25.0 Approach Delay (s/veh) --18.8 С С Approach LOS -Generated: 9/22/2014 10:13 AM HCS+TM Version 5.6

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General Information			Site Info	ormatio	n			
Analyst	Montaome	erv	Intersect	ion		inbound/S	potted	
Agency/Co.	JUB ENG		Jurisdicti			SIA	-	-
Date Performed	9/22/2014		Analysis	Year		2024		
Analysis Time Period	Mid-day F	Peak				-		
Project Description Ain	port Drive Coup	let at Spotted Ro	ad Intersection	on Study		2.4		-
East/West Street: Inhou			North/Sou	uth Street	t Spotter	Road		
ntersection Orientation:	East-West		Study Pe	riod (hrs)	0.25			
Vehicle Volumes an	d Adjustme	nts		1000		2.0		
Major Street		Eastbound			_	Westbour	nd	
Movement	1	2	3	100	4	5	1.1	6
	L	T	R		L	T		R
/olume (veh/h)	1				5	610		5
Peak-Hour Factor, PHF	1.00	0.95	0.95	-	0.88	0.88	-	0,88
lourly Flow Rate, HFR veh/h)	0	0	0	1	5	693	3	5
Percent Heavy Vehicles	0	-	1.180	-	4		- 2	140
Median Type			-	Individed		-	-	_
RT Channelized			0	_		-		0
Lanes	0	0	0		1	2		1
Configuration	-	-		_	L	T	-	R
Upstream Signal		0		-	_	0		
Minor Street	1	Northbound		-			outhbound	
Vovement	7	8	9	-	10	11		
	L	Т	R	_	L	T		R
Volume (veh/h)	45	105		_		125		
Peak-Hour Factor, PHF	0.82	0.82	0.74	_	1.00	0.96	-	0.96
Hourly Flow Rate, HFR (veh/h)	54	128	0		0	130	_	52
Percent Heavy Vehicles	2	0	0	_	0	0		0
Percent Grade (%)	1	0		_		0	-	
Flared Approach	1	N				N	-	_
Storage		0		-		0	-	_
RT Channelized			0			-		0
Lanes	0	1	0		0	1		0
Configuration	LT							TR
Delay, Queue Length, a	and Level of Se	ervice						
Approach	Eastbound	Westbound	No	orthbound		S	outhbound	1
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	LT			i		TR
v (veh/h)		5	182		-			182
C (m) (veh/h)		1610	361					421
v/c		0.00	0.50					
95% queue length	12	0.00	2.72	-		1		
Control Delay (s/veh)		7.2	24.7	-	2	-		2.13
					-	-	-	19 s
LOS		A	C	047			10.0	
Approach Delay (s/veh)	· · · · · ·	.+		24.7		-	19.9	
Approach LOS	~	1447		С		-	С	_

#### Two-Way Stop Control

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<b>General Information</b>	1		Site Infor	mation			
Analyst	Montgome	erv .	Intersection		Outbound/	Spotted	
Agency/Co.	JUB ENG		Jurisdiction		SIA		
Date Performed	9/22/2014		Analysis Ye	ar	2024		
Analysis Time Period	Mid-day P	eak					_
Project Description Airg	ort Drive Coup	let at Spotted Roa	d Intersection	Study			
East/West Street: Outbo				Street: Spotted	Road		
ntersection Orientation:	East-West		Study Perior	d (hrs): 0.25			
Vehicle Volumes an	d Adiustme	nts	· · · · · · · · · · · · · · · · · · ·				
Major Street	1	Eastbound		2000	Westboun	d	
Movement	1	2	3	4	5		6
	L	T	R	L	Т		R
Volume (veh/h)	35	615	50			1	
Peak-Hour Factor, PHF	0.89	0.89	0.89	0.94	0.94	-	1.00
Hourly Flow Rate, HFR (veh/h)	39	691	56	0	0	1	0
Percent Heavy Vehicles	2		-	4	10		÷
Median Type			Und	divided			
RT Channelized			0				0
Lanes	1	2	1	0	0	-	0
Configuration	L	T	R		-		
Upstream Signal		0			0		
Minor Street		Northbound			Southbound		
Movement	7	8	9	10	11		12
	L	Т	R	L	Т		R
Volume (veh/h)		110	10	5	125		
Peak-Hour Factor, PHF	0.74	0.96	0.96	0.69	0.69		1.00
Hourly Flow Rate, HFR (veh/h)	0	114	10	7	181		0
Percent Heavy Vehicles	2	2	2	2	2		0
Percent Grade (%)		0			0		-
Flared Approach		N	1.00		N		
Storage		0			0	2010	
RT Channelized			0		/		0
Lanes	0	1	0	0	1		0
Configuration			TR	LT		-	-
Delay, Queue Length, a	nd Lovel of Sa	nuico	1			_	
	Eastbound	Westbound	North	nbound	I Se	outhbound	1
Approach	-	4	7	8 9	10	11	I 12
Movement	1	4			LT		12
Lane Configuration	L			TR	-	_	-
v (veh/h)	39			124	188		-
C (m) (veh/h)	1623	-		339	303		-
v/c	0.02			0.37	0.62		-
95% queue length	0 07	J1		1_63	3.87		1
Control Delay (s/veh)	7.3	8	- 1 A	21.6	34.5		
LOS	А	1		C	D	1000	1.1
Approach Delay (s/veh)	-	+	2	16		34.5	
Approach LOS			1	C	15	D	

9/22/2014

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General Information	1 m		Site Inf	ormatic	n			
Analyst	Montgom	env	Intersec			Inbound/S	notterf	-
Agency/Co.	JUB ENG		Jurisdict			SIA	Contro	
Date Performed	9/22/2014		Analysis	Year		2034		-
Analysis Time Period	Mid-day P	Peak				1		
Project Description Ain	port Drive Cour	olet at Spotted Ro	ad Intersect	ion Study				-
East/West Street: Inbou	nd Airport Drive	9	North/So	outh Stree	t: Spotte	d Road		
ntersection Orientation:	East-West		Study Pe	eriod (hrs)	: 0.25		-	_
Vehicle Volumes an	d Adjustme	nts				100	-	
Major Street		Eastbound				Westbour	d	
Movement	1 1	2	3		4	5		6
	L	1	R		L	T	-	R
Volume (veh/h)	-		-	_	10	760	-	10
Peak-Hour Factor, PHF	1.00	0.95	0.95	-	0.88	0.88		0.88
Hourly Flow Rate, HFR (veh/h)	0	0	0		11	863		11
Percent Heavy Vehicles	0	- · · · · · · · · · · · · · · · · · · ·	-		4	1 - P		*
Median Type				Undivideo	1	-	-	
RT Channelized		-	0	-			-	0
Lanes	0	0	0	_	1	2	1	1
Configuration		-		_	L	T	100	R
Upstream Signal	1	0		_		0	_	_
Minor Street	-	Northbound	-	_		Southbou	nd	
Movement	7	8	9	-	10	11	-	12
	L	Т	R	-	L	Т		R
Volume (veh/h)	50	125	0.74		1.00	170	-	65 0.96
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.82	0.82	0.74	-	1.00	0.90	-	0.90
(veh/h)	60	152	0		0	177		67
Percent Heavy Vehicles	2	0	0		0	0		0
Percent Grade (%)		0		100		0		
Flared Approach		N	1		_	N		_
Storage	1	0	12			0		-
RT Channelized	12.22		0			1		0
Lanes	0	1	0		0	1		0
Configuration	LT	1		-11		-		TR
Delay, Queue Length, a	nd Level of Se	ervice						-
Approach	Eastbound	Westbound	N	orthbound	ł	S	outhbound	ł
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	LT			· · · · · ·		TR
v (veh/h)		11	212					244
C (m) (veh/h)		1610	252		1			334
v/c		0.01	0.84		1	0.000		0.73
95% queue length		0.02	6.76	-	1	1 P		5.4
Control Delay (s/veh)	-	7.3	65.3					40
LOS		A	F	-				E
Approach Delay (s/veh)		-		65.3	-		40.1	
Approach LOS		-		F			E	

#### Two-Way Stop Control

General Information			Site In	formati	ion		1.00	
Analyst	Montgom	ery.	Interse	ction		Inbound	Spotted	
Agency/Co.	JUB ENG		Jurisdi			SIA		_
Date Performed	9/22/2014		Analys	is Year		2034 miti	galed	
Analysis Time Period	Mid-day P	eak						
Project Description Air	oort Drive Cour	let at Spotted Ro	ad Interse	ction Stud	V	-		
East/West Street: Inbou					et: Spotter	d Road		
Intersection Orientation:	East-West			Period (hrs				
Vehicle Volumes an	d Adjustme	nts						
Major Street	T	Eastbound				Westbou	nd	
Movement	1	2	3		4	5		6
	L	T	R	10.1	Ľ.	T		R
Volume (veh/h)	0	1			10	760		10
Peak-Hour Factor, PHF	1.00	0.95	0.95		0.88	0.88		0.88
Hourly Flow Rate, HFR (veh/h)	0	0	0		11	863		11
Percent Heavy Vehicles	0		-		4	- 44	2.5	1
Median Type				Undivide	d			
RT Channelized	1		0					0
Lanes	0	0	0		1	2		1
Configuration		1			L	T		R
Upstream Signal		0	-			0		
Minor Street		Northbound				Southbou	und	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	50	125				170		65
Peak-Hour Factor, PHF	0.82	0.82	0.74		1.00	0.96		0.96
Hourly Flow Rate, HFR (veh/h)	60	152	0		0	177		67
Percent Heavy Vehicles	2	0	0	-	0	0	1.1	0
Percent Grade (%)		0				0		
Flared Approach		N		100	_	N		
Storage		0				0		
RT Channelized			0					0
Lanes	1 1	1	0		0	1	-	1
Configuration	L	T				T		R
Delay, Queue Length, a	nd Level of Se	rvice	-	-		-		
Approach	Eastbound	Westbound		Northbour	nd	1 8	Southbound	1
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	i	T	1	1	T	R
v (veh/h)		11	60	152	-	1	177	67
			201	280	-	+	284	628
C (m) (veh/h)		1610		_	-	-		
v/c		0.01	0.30	0.54	-	-	0.62	0.11
95% queue length		0.02	1.20	3.00		-	3.85	0.36
Control Delay (s/veh)		7.3	30.4	32.1			36.5	11.4
LOS		A	D	D			E	В
Approach Delay (s/veh)		÷ .		31.6	_		29.6	
Approach LOS	100	_		D			D	-

Page 1 of 1

General Information			Site Info	ormatio	n				
Analyst	Montgome	erv	Intersecti	on		Outbound	Spotted		
Agency/Co.	JUB ENG		Jurisdictio	n		SIA			
Date Performed	9/22/2014		Analysis	Year	-	2034			
Analysis Time Period	Mid-day F	the second s	1	_	_	1	_		
Project Description Airpo	ort Drive Coup	olet at Spotted Rol	ad Intersectio	on Study			_	-	
East/West Street: Outbou		ve			Spotted	Road	_	-	
ntersection Orientation:	East-West		Study Per	riod (hrs):	0.25		_	_	
Vehicle Volumes and	Adjustme	nts		-					
Major Street		Eastbound	-	1		Westbour	hd	_	
Novement	1	2	3	-	4	5	-	6 R	
	L	T	R	-	L	T		ĸ	
Volume (veh/h)	45	765	60 0.89	-	0.94	0.94	-	1.00	
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.89			-			-		
Hourly Flow Rate, HFR.	50	859	67		0	0		0	
Percent Heavy Vehicles	2	E F	1		4	-	1.1	-	
Median Type				Individed					
RT Channelized	1	19 F	0	CAL.				0	
Lanes	1	2	1	1	0	0		0	
Configuration	L	T	R			10.5			
Upstream Signal		0	-	100		0			
Minor Street		Northbound		201		Southbou	nd	-	
Movement	7	8	9		10	11		12	
	L	T	R		L	Т		R	
Volume (veh/h)		130	15		10	170			
Peak-Hour Factor, PHF	0.74	0.96	0.96		0.69	0.69		1.00	
Hourly Flow Rate, HFR (veh/h)	0	135	15		14	246		0	
Percent Heavy Vehicles	2	2	2		2	2		0	
Percent Grade (%)		0		110-1		0		_	
Flared Approach		N	5	-		N	- H.		
Storage	1	0	-			0	- 0		
RT Channelized	1		0			1	27403	0	
Lanes	0	1	0		0	1		0	
Configuration		347.00	TR		LT		120-		
Delay, Queue Length, ar	nd Level of Si	ervice						-	
Approach	Eastbound	Westbound	No	orthbound		S	outhbound	1	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	L		1		TR	LT	2		
v (veh/h)	50				150	260	1		
C (m) (veh/h)	1623	12.000		1	265	228	1		
v/c	0.03	1		1	0.57	1.14	1.000		
95% queue length	0.10			1	3 20	12.07	1	1	
Control Delay (s/veh)	7.3	1		-	34.9	147.8	1	1	
LOS	7.5 A	-			D	F	-	1	
	- A			34.9			147.8	-	
Approach Delay (s/veh)				54.9 D		-	F	-	
Approach LOS			-	D			-	_	

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HCS+TM Version 5.6 Generated: 9/22/2014 10:16 AM

Two-Way Stop Control

General Information			Site Inf	formatio	n				
Analyst	Montgome	ny.	Intersec		-	Outbound	Spotted		
Agency/Co.	JUB ENGI		Jurisdict			S/A	-	_	
Date Performed	9/22/2014	The bart it to	Anatysis			2034 mitic	aled		
Analysis Time Period	Mid-day P	eak							
		let at Spotted Roa	ad Intersect	ion Study					
East/West Street Outbou			North/So	outh Street	treet: Spotted Road				
	East-West		Study Pe	eriod (hrs):	0.25			-	
Vehicle Volumes and	d Adjustme	nts							
Major Street	I	Eastbound		1		Westbou	nd		
Movement	1	2	3		4	5		6	
no tomont	L	Ť	R		L	Т		R	
/olume (veh/h)	45	765	60			1	1		
Peak-Hour Factor, PHF	0.89	0.89	0.89		0.94	0.94	1	.00	
Hourly Flow Rate, HFR (veh/h)	50	859	67		0	0		0	
Percent Heavy Vehicles	2		-		4	-			
Median Type				Undivided				-	
RT Channelized	10.0	1	0			1		0	
Lanes	1	2	1		0	0		0	
Configuration	L	T	R				-	-	
Upstream Signal		0		_		0		_	
Minor Street	1	Northbound				Southbou	Ind	-	
Movement	7	8	9		10	11		12	
	L	Т	R	- Can - C	L	Т		R	
Volume (veh/h)		130	15		10	170			
Peak-Hour Factor, PHF	0.74	0.96	0.96	10.10	0.69	0.69	- 1. St	.00	
Hourly Flow Rate, HFR (veh/h)	0	135	15		14	246		0	
Percent Heavy Vehicles	2	2	2		2	2		0	
Percent Grade (%)		0		- A.E.		0	1.		
Flared Approach	1.000	N	1			N			
Storage	-	0		- 31 41-3		0			
RT Channelized	-		0	111				0	
Lanes	0	1	1	-	1	1	1.4	0	
Configuration	-	T	R	-	L	T			
	ad I avai of Co				-	-		-	
Delay, Queue Length, a	Eastbound	Westbound	h	orthbound	1	1 9	Southbound		
Approach			7	8	9	10	1 11	12	
Movement	1	4	/	o T	R	L	T	12	
Lane Configuration	L		-			-		-	
v (veh/h)	50			135	15	14	246	-	
C (m) (veh/h)	1623	2		249	625	227	228	-	
v/c	0.03			0.54	0.02	0.06	1.08	_	
95% queue length	0.10		1	2.94	0.07	0.20	10.80		
Control Delay (s/veh)	7.3			35.4	10.9	21.9	127.9		
los	A		1	E	В	C	F		
Approach Delay (s/veh)	-	-		32.9			122.2		
Approach LOS				D		-	F	-	

Appendix E

**Summary of Public Involvement** 



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#### **KEY STAKEHOLDERS INTERVIEWS COMPREHENSIVE SUMMARY**

Bryant Kuechle conducted in-person key stakeholder interviews, Aug. 19-20. The following summarizes their specific comments and concerns:

#### Eric Jones, Service Center Manager

#### UPS

- Traffic driving inbound to airport is going Interstate speed
- Vehicles waiting at Spotted misjudge speed of Airport traffic
- Primary UPS entry is off of Spotted
- Recommends grade separation
- Tractor trailer trucks need six seconds lead time before proceeding through intersection. Sight distance and speed of Airport traffic does not allow for this.
- Spotted is also used for local delivery traffic as short-cut between I-90 and US 2. This is used by residential/local traffic as well

### Kelly Williquette, Public Works Director

#### Jerry Richards, Streets Lead

#### Airway Heights

- 21<sup>st</sup> Ave. Extension
  - Airway Heights jurisdiction east to Hazelwood, then become city of Spokane
  - One version had the extension extending past Flint then turning north to US 2 before Spotted
  - Goal is to push Airway Heights traffic off of highway
- Favor the "Avoid RPZ" alternative and eliminate current Spotted intersection (dangerous)
- Consider signal at Airport/Spotted
- New signal at Flint/US 2 will move most west US 2 traffic to/from Airport to Flint, take some pressure off Spotted
- WSDOT will likely recommend a roundabout
- Hayford/US 2 intersection is LOS F (37k per day)

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#### Steve Turcott, Lieutenant

Washington State Patrol

- Determined through meeting with WSP and phone calls w/ County and City that Airport police is primary law enforcement in the study area
- WSP use to patrol prior to annexation and will help on collisions
- Most recent Spotted/Airport upgrades have helped
- Most accident history is from driver behavior. Fatality was an elderly person that pulled off Spotted and didn't look
- Consider "Avoid RPZ" alternative regardless of what is done with 21<sup>st</sup>, it still makes sense for the Spotted intersection
- Likes the idea of looking at intersection in the context of larger plans

#### Peter Troyer, Chief

**SIA Police** 

- Speed monitors, speed awareness devices and ticketing all working to keep speeds down
- 50 mph at intersection with Spotted a concern
- Consider grade separation, traffic signal not likely
- Not in favor of roundabouts, difficult to determine in accidents who should have yielded and travelers unfamiliar in rental cars will get confused not likely in a roundabout where you drive it every day and are used to it.

#### Miles Vierck, General Manger

Best Western Plus Peppertree Airport Inn

- Shuttle drivers use Spotted to drive guests to airport, casino, Wal-Mart, etc.
- They have often seen vehicles driving the wrong way on Airport. They are advised to look both ways at inbound and outbound intersections.
- They have witnessed near misses with people walking on Spotted to/from bus stops on Airport. There are no pedestrian facilities and difficult to see at night.
- Spotted/US 2 intersection is also dangerous, hard to turn left
- Flint/US 2 signal will help. They will divert all US-2 traffic to that intersection after signal is up.
- There is inadequate signage for Spotted on Airport. Guests often miss it when looking for hotel.

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#### Danette Taylor, Manager

USPS, Flightline Blvd.

- Caution all drivers at this intersection. Speeds are unpredictable.
- Consider lower speed limit on Airport and stoplight
- Spotted/US 2 is more dangerous. They are changing their delivery route in that area.

#### Nick Scharff, Fire Chief

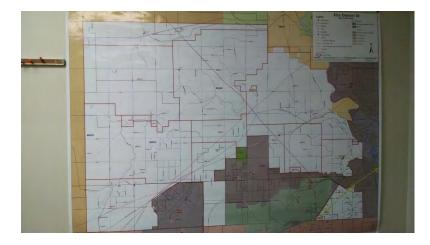
#### Robert Ladd, Deputy Chief

Fire District 10

- Main station in Airway Heights is only staffed station. They have an island of coverage on the other side of the airport (see image below). They have a volunteer station there but often trucks come from Airway Heights station and use Spotted to access incidents.
- Area around airport use to be in their district until it was annexed by City. The new City station on Spotted Road is rarely staffed, lowest use in the system. The truck station there is often downtown or south hill because the need is not there. Therefore District 10 still responds to calls in the area and often the Airport Fire is the first on the scene.
- Airport fire must keep a presence at the runway but can respond to calls in the surrounding area.
- Most accidents are on Outbound T-Bones at Spotted that send cars into the center area.
- Have responded to calls where Spotted traffic blew through the Stop sign.
- Curves on airport make it difficult to for Spotted traffic to judge the speed of inbound and outbound traffic.
- For trucks, the sigh distance does not allow them to get up to speed safely
- There has been a number wrong-way inbound and outbound accidents when Spotted traffic didn't yield to the wrong direction
- A number of accidents at US 2/Sunset where Airport peels off limited sight distance
- Many accidents are by people coming to the airport on US 2 that miss the exit, take their first left (Spotted) and in the confusion get T-Boned at either US 2 or Airport
- Flint and Inbound Airport also has a number of accidents
- Consider roundabout at Spotted Road it would slow everyone down.
- Signal is not a good solution, it would slow Airport traffic too much

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### Steve Hopkins, Operations Scheduling Analyst

#### Mike Hynes, Transit Planner

### Spokane Transit Authority

- Non-improved stops west of Spotted/Inbound Airport and east of Spotted/Outbound airport.
- Bus route goes inbound, stops at terminal (end of the line) then returns on outbound.
- They have been approach recently by airport about shelters at these stops, which would be a strange set-up because there are no pedestrian facilities leading to these stops.
- Stops are for shift works south that walk south on Spotted, and residents/workers that walk north on Spotted to US 2. People who use these stops work all hours. There are stops at 10:45 pm and 6:20 am. It is difficult to see them at the stops and walking to/from the stops on Spotted.
- There is a stop at US 2/Spotted that will move to US 2/Flint after the signal is installed. This may increase the use of the Spotted/Inbound stop for people that walk to the low income housing unit at US 2/Spotted
- People that are walking south on Spotted will get off at Inbound stop because it is quicker to walk through the intersection than wait on the bus through the terminal. Dangerous for these pedestrians that are crossing inbound and outbound spotted
- Greatest need is pedestrian facilities, crossings and lighting at the stop and paths for these riders (joint project)
- Also need turn-outs on Airport for buses. Currently buses stop on the road. Speed of traffic makes a rear-end accident likely.
- 2-lane Roundabout would make pedestrian crossing difficult, it would offset crossings further away down Airport
- Consider closing spotted north of Airport, and traffic use Flint instead. Make the center section of Spotted a "return to airport" U-turn.

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#### Teresa Toriana, Ship Center Manager

#### FedEx

- More concerns with Flint Road than Spotted Road. Tractor Trailer drivers when approaching the terminal, when you turn left on Flint. Right now cars are allowed to come too far forward. They should be back 10 more feet because it makes it a narrow turn for a tractor trailer to get in there. Sometimes people go past the white line. Her drivers will stop and motion them. Where it drops down to 35 mph. Left turn from flint to terminal, allows driver at intersection to come way to far forward for a tractor trailer to execute a turn.
- People still get confused car rental area from Flint to Terminal. They don't realize it is one-way coming from the terminal. It has gotten better, use to be an accident every other week.
- Nature of people when they come to an airport people get overwhelmed and make poor decisions. They are thinking of too much, trying to read every sign. From her standpoint everything works well at Aviation/Spotted.



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### PUBLIC INFORMATION MEETING COMPREHENSIVE SUMMARY



15 People attended the meeting:

- Joe Tororelli, Spokane Good Roads
- Mike Frucci, WSDOT
- Rochard Rush, City of Spokane Legislative Assistant
- Len Urgeleit, Park n Jet
- Steve Hopkins, STA
- Al Stover, Cheney Free Press
- Don and Sharon Blums
- Carlie Archer, Aircraft Solutions
- Barbara Olson, Cheney School District
- Juan Contreras, Parking Express
- Max Kuney, SIA Board
- Larry Krauter, SIA CEO
- Melode Hall
- Ric Hall

8 people submitted comment forms (transcription below). Of those that specified a preferred alternative, three favored Alternative D (roundabout), one favored D or C and one expressed dissention for Alternative A. There were numerous concerns about pedestrian access and safe crossings with regard to a potential roundabout, access to transit facilities, ADA compliance, grade separation from roads/bridges and connectivity to the "West Plains Trail" connecting the airport to the Centennial Trail, Airway Heights and Fairchild AFB. The representative from STA also requested consideration for bus acceleration and deceleration areas to serve stops.

On the reverse of the comment form, respondents were asked to rank the alternative evaluation criteria, 1-10, one being the most important.



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#### Transcribed Notes

Richard Rush, City of Spokane 808 W Spokane Falls Blvd Spokane, WA 99201 509-625-6718 rrush@spokanecity.org

1. Prefer the alternative that facilitates pedestrian and bicycle traffic connectivity. Discussions are ongoing between regional jurisdictions and the airport regarding establishment of a "West Plains Trail" connecting the airport to the Centennial Trail, the City of Airway Heights and Fairchild AFB.

The portion of the trail connecting to the airport is expected to follow the existing gravel path between the incoming and outgoing lanes of Airport Drive. It is imperative that pedestrian and bicycle access via a 12' wide trail, consistent with regional trail design that will be eligible for federal and state grant funding, be preserved during this project to permit future establishment of this trail.

To be the best trail facility that will attract the maximum number of users/travelers/recreationalists, the trail should be grade-separated from existing and proposed roadways and bridges. This grade-separation will promote a sense of safety and dedication to the area's regional trail system which will maximize its attractiveness and use. Current bike/pedestrian projects on the Spokane Regional Transportation Council priority funding list demonstrate the value of planning for trail facilities as projects are built rather than attempting to retrofit trail projects subsequent to construction of vehicular facilities.

The alternative chosen for traffic improvements should reflect this multi-model vision for the airport and region.

2. No ranking

Melode Hall 1807 S Geiger Blvd Spokane, WA 99224 509-328-3942 MelodeHall@comcast.net

1. I like option C or D. Less turns, easy flow of traffic. Seems easy to understand.

# Spokane International Airport Traffic Study, Project #13-07 Airport Drive Couplet at Spotted Road Intersection Study

## **Public Involvement Summary**

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- 2. Ranking
  - a. 1 cost
  - b. 2 consistent and familiar traffic control devices for most drivers
  - c. 3 connectivity for Spotted Road

#### **Ric Hall**

1807 S Geiger Blvd Spokane, WA 99224 509-328-3942

- 1. Figure D = roundabout; they work slow down and control
- 2. Ranking
  - a. 1 cost
  - b. 2 connectivity for 21<sup>st</sup> Avenue
  - c. 3 connectivity for Spotted Road
  - d. 4 ability to construct improvements in phases
  - e. 5 consistent and familiar traffic control devices for most drivers

Steven Hopkins, Spokane Transit Authority 1229 W Boone Ave Spokane,WA 99201 509-325-6077 <u>shopkins@spokanetransit.com</u>

1. Alternative A is not preferred due to the challenges for transit to serve a limited-access environment.

If an alternative using a roundabout is selected, please consider pedestrian access and crossing movements in the design.

Transit buses need sufficient acceleration/deceleration areas to serve stops – this should be considered.

ADA – accessible stops/sidewalks would need to be incorporated in the design of any improvements.

- 2. Ranking
  - a. 1 safety
  - b. 2 criteria: pedestrian access to transit facilities
  - c. 3 connectivity for Spotted Road

# Spokane International Airport Traffic Study, Project #13-07 Airport Drive Couplet at Spotted Road Intersection Study

## Public Involvement Summary

Bryant Kuechle | Senior Project Manager | The Langdon Group 208-739-3048 | bk@langdongroupinc.com

- d. 4 airport drive outbound mobility
- e. 5 airport drive inbound mobility
- f. 6 consistent and familiar traffic control devices for most drivers
- g. 7 cost
- h. 8 public and agency support
- i. 9 reduced congestion
- j. 10 ability to construct improvements in phases
- k. 11 connectivity for 21<sup>st</sup> Avenue

Len Urgeleit, Diamond Park N Jet 5062 W Sunset Hwy Spokane, WA 99224 len.urgeleit@diamondparking.com

- Roundabout seems best since it slows traffic without stopping it. Raised bridges seem like overkill since Spotted Rd. is not a high volume road. Avoiding stoplights on the one ways would be best since it slows and stops traffic when it is not always necessary. The speed limit currently at 50 mph is excessive with Spotted Rd. being a dangerous intersection. Maybe decrease speed limit to 35 mph.
- 2. Ranking
  - a. 1 safety
  - b. 2- reduced congestion
  - c. 3 consistent and familiar traffic control devices for most drivers
  - d. 4 airport drive inbound mobility
  - e. 5 airport drive outbound mobility
  - f. 5 (two 5s) cost
  - g. 6 ability to construct improvements in phases
  - h. 7 connectivity for Spotted Road
  - i. 8 connectivity for 21<sup>st</sup> Avenue
  - j. 8 (two 8s, no 9)- public and agency support



Public Involvement Summary Bryant Kuechle | Senior Project Manager | The Langdon Group 208-739-3048 | bk@langdongroupinc.com

Spokane International Airport Traffic Study, Project #13-07 Airport Drive Couplet at Spotted Road Intersection Study



Mike Frucci 2714 N Mayfair Spokane, WA 99207 509-324-6020 frucciM@wsdot.wa.gov

1. Figure D looks like a very practical design.

The volumes on airport drive are easily handled by a roundabout.

Roundabouts are proven to have a significant impact on crash frequency and severity.

Figure D basically eliminates two intersections and provides for movement in all directions at the roundabout.

I encourage you to contact and work with WSDOT on the roundabout design both because it interfaces with a state route and because we have very good experience in roundabout design.

2. No ranking

#### Joe Tortorelli

No other contact information provided

- Alternative D solves the immediate problem and would be sufficient for many years. It also slows traffic coming
  off Hwy 2 earlier. Depending on additional development in the area with more employees and freight traffic
  congestion is not a problem. Do a building fill rate study and project growth.
- 2. Ranking
  - k. 1 ability to construct improvements in phases
  - l. 2 cost
  - m. 3 public and agency support
  - n. 4 airport drive inbound mobility
  - o. 5 airport drive outbound mobility
  - p. 6 connectivity for Spotted Road
  - q. 7 connectivity for 21<sup>st</sup> Avenue
  - r. 8 consistent and familiar traffic control devices for most drivers
  - s. 9 safety
  - t. 10 reduced congestion
  - u. Criteria the intersection is not failing, based on projected traffic when will it fail or become a critical safety issues
  - v. Criteria Spotted Road relocation is very critical due to FAA and HAS concerns

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**Barbara Olson** 717 S Russell Rd Spokane, WA 99224 509-624-0095

1. I live on Russell Road and am concerned about the intersection of said road and highways. Over twenty years or so, the hill east of Russell Road was straightened (the road was altered) so cars come over the hill faster even than before. Also, the turn lane at Russell Rd was narrowed.

In the intervening years, more development west of us means more traffic every year. We are only a mile-long road not much in comparison to longer more-heavily roads, but Russell Road is important to its residents and many people north, west and east of it. The traffic on Highway has proved too much for many residents, so they use backwoods and side roads an inconvenience and a nuisance.

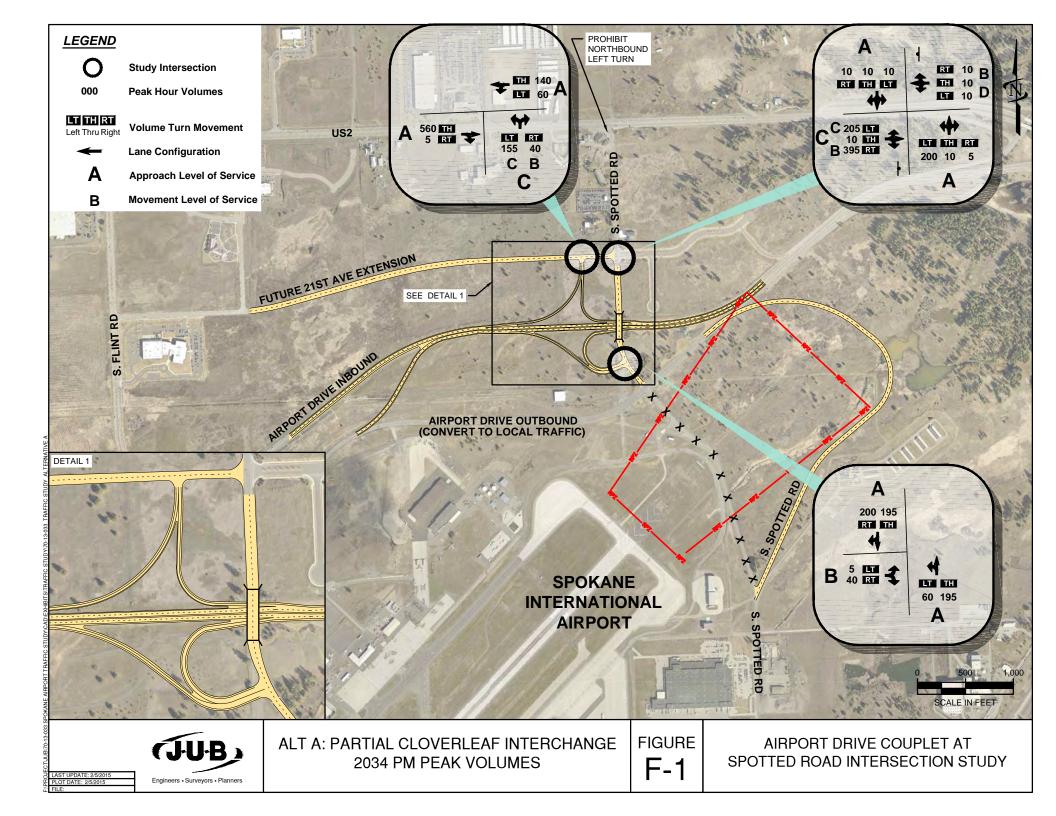
Please acknowledge Russell Road's Highway 2 intersection as worthy of a close look.

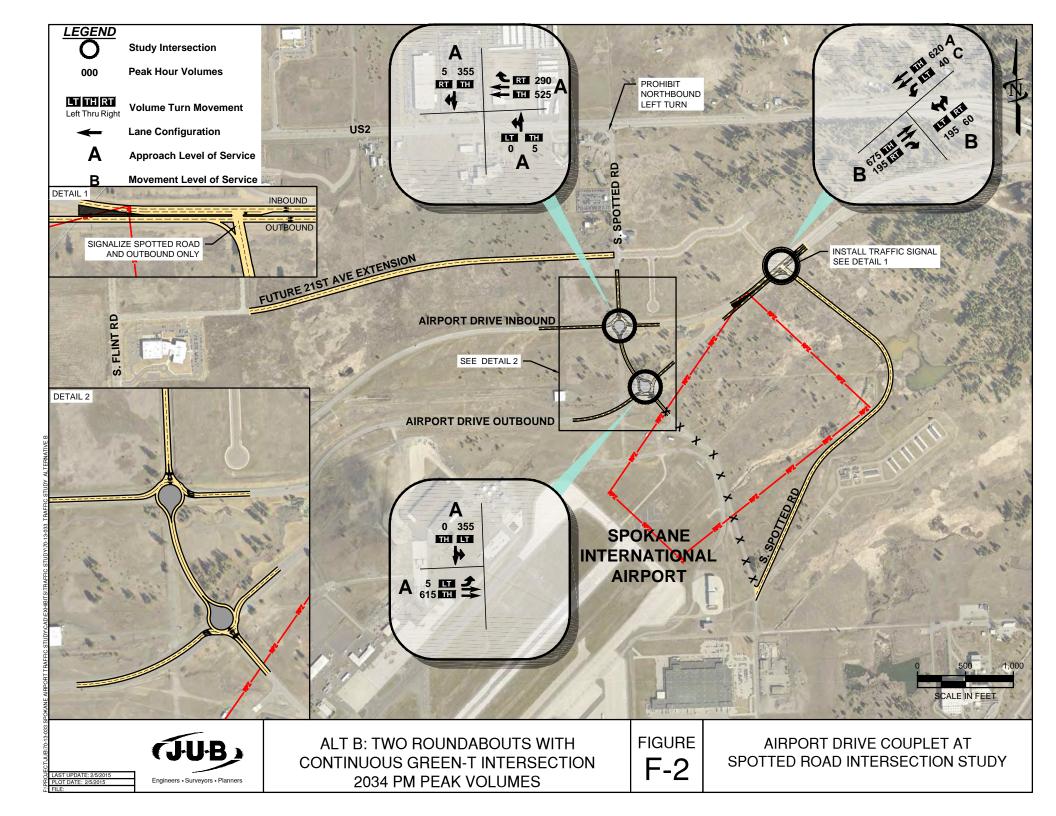
2. No ranking

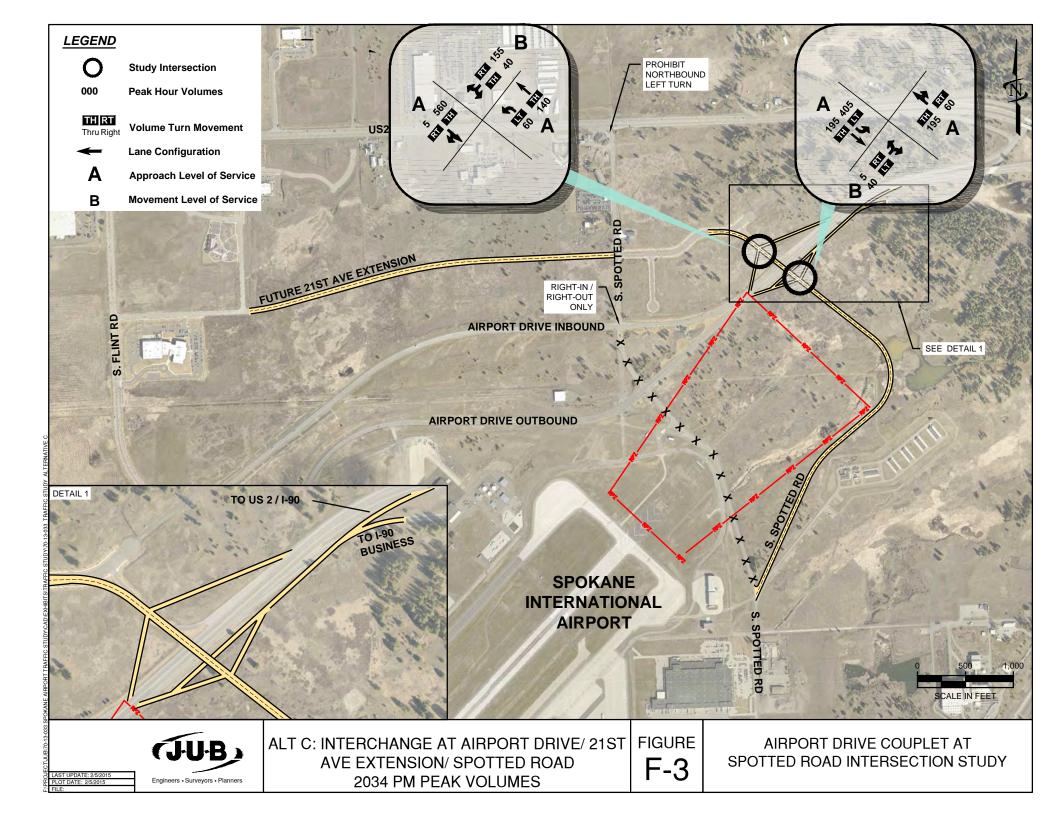
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E TORTORELL GOO ROMAS SPOINTE COO ROMS PO BOX HAD JOHLEY 59936 LEEFELICEL WISDOT	Name (Please print or write clearly)	Title/Representing	Employer (if you work at, in or near the airport)	Address (City, State, and ZIP)	Phone	Email	
le Fizice WSDOT	1-		GOOD	PO BOX 14009	20992		
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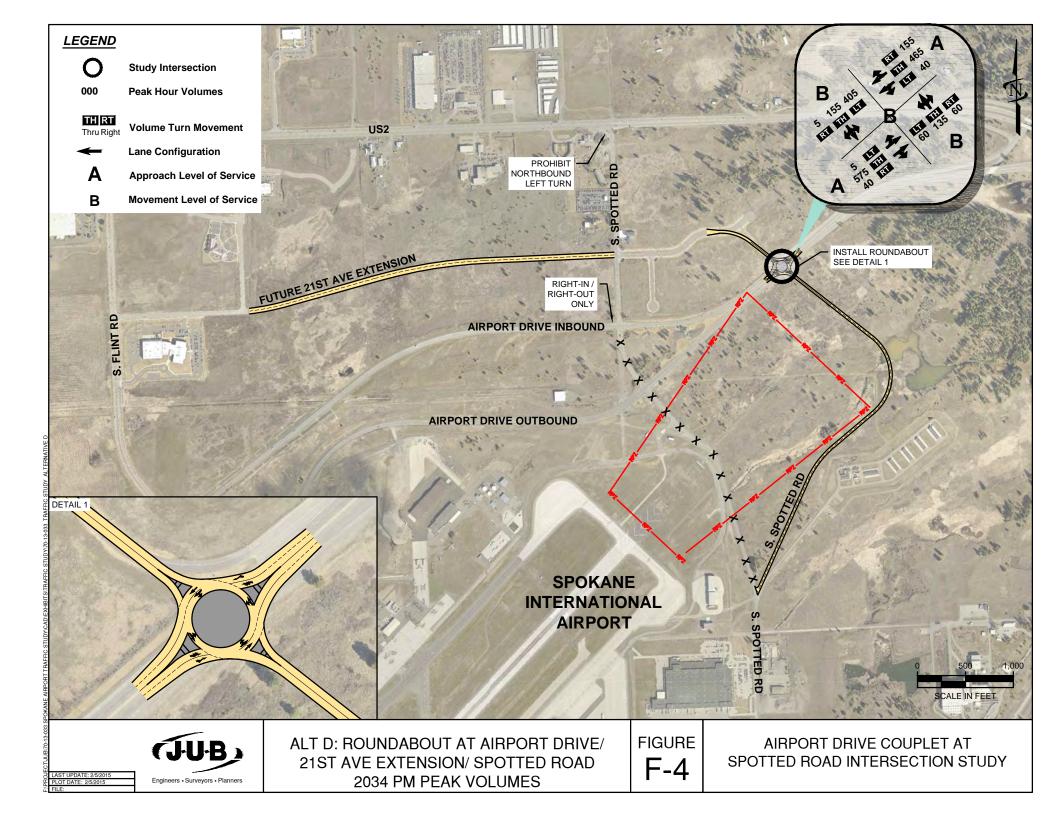
Appendix F

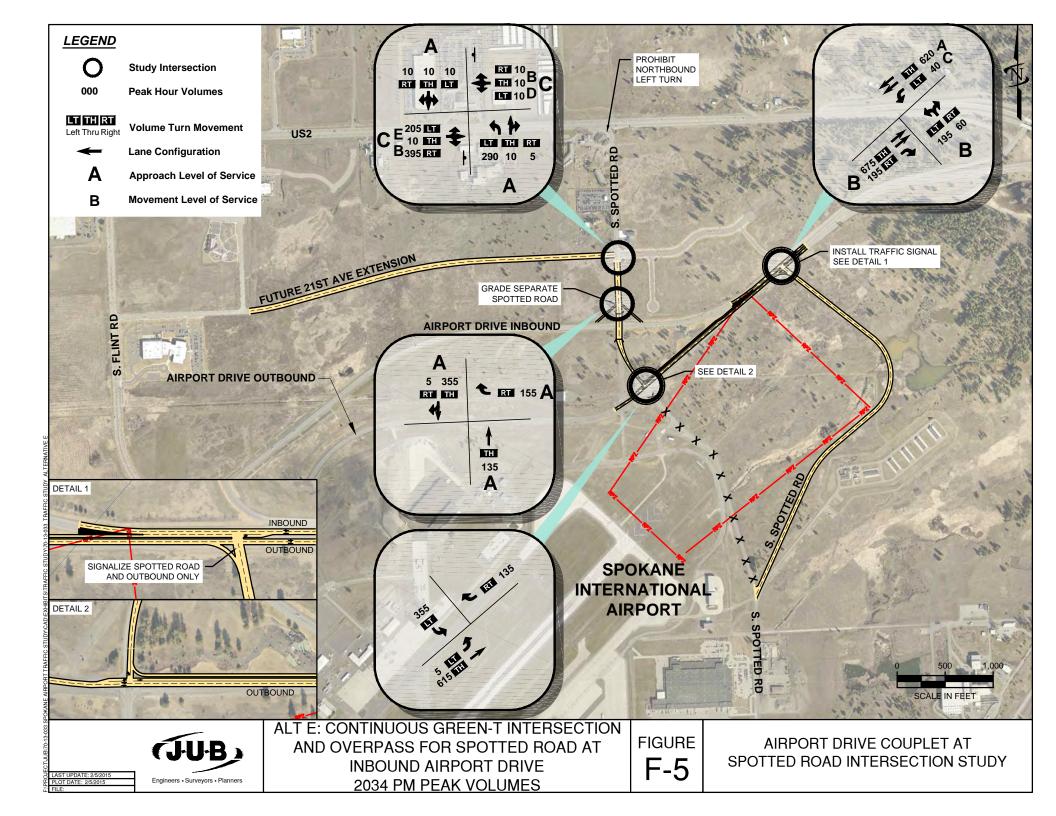
# **Traffic Volumes for Each Alternative**











Appendix G

# **Detailed Safety Evaluation for Each Alternative**

#### **Crash Severity Factor**

1

#### **Unsignalized Intersection**

	Number of		Factor	
Conflict	Conflicts	50 MPH	35 MPH	20 MPH
"T" Crossing (Perpendicular) one high speed	4	10	8	
Left turn crossing, one high speed	8	8	5	
Both left turns	4	5	4	
Merge	12	4	3	

### Traffic Signal

	Number of		Factor	
Conflict	Conflicts	50 MPH	35 MPH	20 MPH
"T" Crossing (Perpendicular) one high speed	4	7	5	
Left turn crossing, one high speed	8	5	4	
Both left turns	4	4	3	
Merge	12	3	2	

#### Roundabout

	Number of		Factor	
Conflict	Conflicts	50 MPH	35 MPH	20 MPH
"T" Crossing (Perpendicular) one high speed	4			
Left turn crossing, one high speed	8			
Both left turns	4			
Merge	12			1

	Possible Mo	ovements
Conflict Type	Movements	Conflict Type
left turn/cross	NBL/EBT	left turn/cross
left turn/cross	NBL/EBL	left turn/cross
left turn/merge	NBL/SBR	left turn/merge
left turn/cross	NBL/SBT	left turn/cross
left turn/merge	NBL/WBT	left turn/merge
left turn/cross	NBL/WBL	left turn/cross
cross	NBT/EBT	cross
left turn/merge	NBT/EBL	left turn/merge
left turn/cross	NBT/SBL	left turn/cross
right turn/merge	NBT/WBR	right turn/merge
cross	NBT/WBT	cross
left turn/cross	NBT/WBL	left turn/cross
right turn/merge	NBR/EBT	right turn/merge
right turn/merge	NBR/SBL	right turn/merge
left turn/cross	SBL/WBT	left turn/cross
left turn/cross	SBL/WBL	left turn/cross
left turn/merge	SBL/NBR	left turn/merge
cross	SBL/NBT	left turn/cross
left turn/merge	SBL/EBT	left turn/merge
left turn/cross	SBL/EBL	left turn/cross
cross	SBT/WBT	cross
left turn/merge	SBT/WBL	left turn/merge
cross	SBT/NBT	cross
winder to une las energe		

right turn/merge SBT/EBR SBT/EBT . SBT/EBL left turn/cross right turn/merge SBR/WBT right turn/merge SBR/NBL

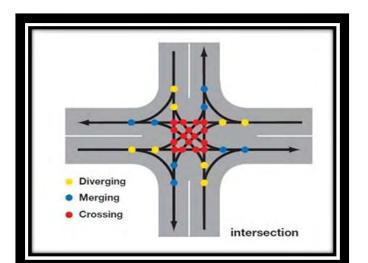
iere turny cross	
left turn/merge	EBL/NBT
left turn/cross	EBL/NBL
cross	EBT/SBT
left turn/merge	EBT/SBL
left turn/cross	EBT/WBL
right turn/merge	EBT/NBR
cross	EBT/NBT
left turn/cross	EBT/NBL
right turn/merge	EBR/SBT
right turn/merge	EBR/WBL
left turn/cross	WBL/NBT
left turn/cross	WBL/NBL
left turn/merge	WBL/EBR
left turn/cross	WBL/EBT
left turn/merge	WBL/SBT
left turn/cross	WBL/SBL
cross	WBT/NBT
left turn/merge	WBT/NBL
cross	WBT/EBL
right turn/merge	WBT/SBR
cross	WBT/SBT
left turn/cross	WBT/SBL
right turn/merge	WBR/NBT
right turn/merge	WBR/EBL

Movements

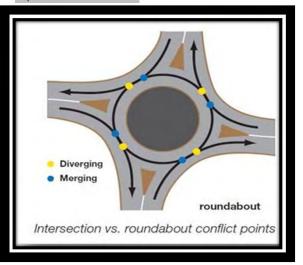
EBL/SBT

EBL/SBL

EBL/WBR . EBL/WBT



#### Repeated Combinations



#### Possible Movements

#### **No-Build Alternative**

			Traffic	Traffic	Volume	Crash Severity	Final
Movement 1	Movement 2	Type of Conflict	Volume 1		Product	Factor	Product
Intersection:		Inbound/Spotted	Road				Controlled
NBL	EBT	left turn/cross	50		0	8	-
NBL	EBL	left turn/cross	50		0	5	-
NBL	SBR	left turn/merge	50	65	3250	4	13,000
NBL	SBT	left turn/cross	50	170	8500	8	68,000
NBL	WBT	left turn/merge	50	760	38000	4	152,000
NBL	WBL	left turn/cross	50	10	500	5	2,500
NBT	EBT	Cross	125		0	10	-
NBT NBT	EBL SBL	left turn/merge left turn/cross	125 125		0 0	4 8	-
NBT	WBR	right turn/merge	125	10	1250	4	- 5,000
NBT	WBT	cross	125	760	95000	10	950,000
NBT	WBL	left turn/cross	125	10	1250	8	10,000
NBR	EBT	right turn/merge			0	4	
NBR	SBL	right turn/merge			0	4	-
SBL	WBT	left turn/cross		760	0	8	-
SBL	WBL	left turn/cross		10	0	5	-
SBL	EBT	left turn/merge			0	4	-
SBL	EBL	left turn/cross			0	5	-
SBT	WBT	cross	170	760	129200	10	1,292,000
SBT	WBL	left turn/merge	170	10	1700	4	6,800
SBT	EBR	right turn/merge	170		0	4	-
SBT	EBT	cross	170		0	10	-
SBT	EBL	left turn/cross	170		0	8	-
SBR	WBT	right turn/merge	65	760	49400	4	197,600
EBL	WBR	left turn/merge		10	0	4	-
EBL EBT	WBT WBL	left turn/cross left turn/cross		760 10	0 0	8 8	-
EBR	WBL	right turn/merge		10	0	4	-
		inglit turn/inerge		10	0	4	-
		right turn/merge		10	0	1	-
EBR/WBL		right turn/merge		10	0	1 Total	- 2,696,900
EBR/WBL				10		Total	
EBR/WBL		Outbound/Spott	ed Road		50	Total MPH, Stop	
EBR/WBL Intersection: NBL/EBT		Outbound/Spott left turn/cross	ed Road	765	<b>50</b> 0	Total MPH, Stop 8	
EBR/WBL Intersection: NBL/EBT NBL/EBL		Outbound/Spott left turn/cross left turn/cross	ed Road		<b>50</b> 0 0	Total MPH, Stop 8 5	
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR		Outbound/Spott left turn/cross left turn/cross left turn/merge	ed Road	765 45	<b>50</b> 0 0 0	Total MPH, Stop 8 5 4	
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/cross	ed Road	765	<b>50</b> 0 0 0	Total MPH, Stop 8 5 4 8	
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge	ed Road	765 45	<b>50</b> 0 0 0 0	Total MPH, Stop 8 5 4 8 8 4	
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBL/WBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross		765 45 170	<b>50</b> 0 0 0 0 0	Total MPH, Stop 8 5 4 8 4 4 5	Controlled - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBL/WBL NBT/EBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross cross	ed Road 130 130	765 45	<b>50</b> 0 0 0 0	Total MPH, Stop 8 5 4 8 8 4	Controlled - - - - - - - - - 994,500
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBL/WBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross	130	765 45 170 765	50 0 0 0 0 99450	Total MPH, Stop 8 5 4 8 4 4 5 10	Controlled - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBT NBL/SBT NBL/WBT NBL/WBL NBT/EBT NBT/EBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge	130 130	765 45 170 765 45	50 0 0 0 0 99450 5850	Total MPH, Stop 8 5 4 8 4 5 5 10 4	Controlled - - - - - - - - - - 994,500 23,400
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBL/WBL NBL/WBL NBT/EBL NBT/EBL NBT/SBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/merge left turn/cross	130 130 130	765 45 170 765 45	50 0 0 0 99450 5850 1300	Total MPH, Stop 8 5 4 8 4 5 5 10 4 8	Controlled - - - - - - - - - - 994,500 23,400
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/WBT NBL/WBT NBL/WBL NBT/EBL NBT/EBL NBT/SBL NBT/WBR		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge	130 130 130 130	765 45 170 765 45	50 0 0 0 0 99450 5850 1300 0	Total MPH, Stop 8 5 4 8 4 5 5 10 4 8 4 8 4	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/WBT NBL/WBT NBL/WBL NBT/EBL NBT/EBL NBT/WBR NBT/WBR		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/cross left turn/cross cross left turn/merge left turn/cross right turn/merge cross	130 130 130 130 130	765 45 170 765 45	50 0 0 0 0 99450 5850 1300 0 0	Total MPH, Stop 8 5 4 8 5 10 4 8 4 8 4 5 10 4 8 4 10 10 10 10 10 10 10 10 10 10 10 10 10	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/WBT NBL/WBT NBL/WBL NBT/EBL NBT/EBL NBT/WBR NBT/WBT NBT/WBL		Outbound/Spott left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/cross right turn/merge cross left turn/cross right turn/merge right turn/merge	130 130 130 130 130 130	765 45 170 765 45 10	50 0 0 0 99450 5850 1300 0 0 0	Total MPH, Stop 8 5 4 8 4 6 10 4 8 4 10 8 4 10 8 4 4 10 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Controlled - - - 994,500 23,400 10,400 - - -
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EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBT/WBL NBT/EBL NBT/WBR NBT/WBR NBT/WBT NBT/WBL NBR/EBT NBR/SBL SBL/WBT SBL/WBL		Outbound/Spott left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross	130 130 130 130 130 130 130 15 15 15 10 10	765 45 170 765 45 10 765 10	50 0 0 0 0 99450 1300 0 0 11475 150 0 0	Total  MPH, Stop  8 5 4 8 4 5 10 4 8 4 10 8 4 10 8 4 4 10 8 4 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Controlled - - - 994,500 23,400 10,400 - - - 45,900 600 - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/WBT NBL/WBT NBT/WBT NBT/EBL NBT/WBR NBT/WBR NBT/WBR NBT/WBL NBR/EBT NBR/SBL SBL/WBT SBL/WBL SBL/WBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross	130 130 130 130 130 130 130 15 15 10 10 10	765 45 170 765 45 10 765 10 765	50 0 0 0 0 99450 5850 1300 0 0 0 11475 150 0 0 0 11475	Total  MPH, Stop  8 5 4 8 4 5 10 4 8 4 10 8 4 10 8 4 4 5 5 1 10 8 5 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Controlled - - - - 994,500 23,400 10,400 - - - - 45,900 600 - - 30,600
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EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/WBT NBL/WBT NBT/WBL NBT/EBL NBT/WBR NBT/WBR NBT/WBT NBT/WBL SBL/WBT SBL/WBL SBL/WBT SBL/EBL SBT/WBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross left turn/merge	130 130 130 130 130 15 15 15 10 10 10 10 10 170	765 45 170 765 45 10 765 10 765 45	50 0 0 0 0 99450 5850 1300 0 11475 150 0 0 7650 450 0 0 0	Total  MPH, Stop	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBL/WBT NBT/EBL NBT/EBL NBT/WBT NBT/WBT NBT/WBT NBT/WBL SBL/WBT SBL/WBT SBL/EBL SBT/WBT SBT/WBL SBT/WBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge	130 130 130 130 130 15 15 10 10 10 10 10 170 170	765 45 170 765 45 10 765 45 10 765 45	50 0 0 0 0 99450 5850 1300 0 11475 150 0 11475 150 0 7650 450 0 0 0 0	Total  MPH, Stop	Controlled - - - - 994,500 23,400 10,400 - - - 45,900 600 - - 30,600 2,250 - - - 40,800
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBL/WBT NBT/WBL NBT/EBL NBT/WBR NBT/WBT NBT/WBL NBR/EBT NBR/SBL SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBT/WBL SBT/WBL SBT/WBL SBT/WBL SBT/WBL SBT/EBR SBT/WBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge right turn/merge right turn/merge right turn/merge	130 130 130 130 130 130 15 15 15 10 10 10 10 10 170 170 170 170	765 45 170 765 45 10 765 10 765 45 60 765	50 0 0 0 0 99450 5850 1300 0 0 11475 150 0 0 11475 150 0 0 0 7650 450 0 0 0 10200 130050	Total  MPH, Stop	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBT/WBT NBT/WBL NBT/EBL NBT/WBT NBT/WBL NBR/EBT NBR/SBL SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBT/WBL SBT/WBL SBT/WBL SBT/EBR SBT/EBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge right turn/merge right turn/merge right turn/merge cross left turn/merge	130 130 130 130 130 15 15 10 10 10 10 10 170 170	765 45 170 765 45 10 765 45 10 765 45	50 0 0 0 0 99450 5850 1300 0 0 11475 150 0 11475 150 0 0 7650 0 0 0 10200 130050 7650	Total  MPH, Stop	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBT/WBL NBT/EBT NBT/WBR NBT/WBR NBT/WBR NBT/WBR SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBT/WBL SBT/EBL SBT/WBL SBT/EBR SBT/EBL SBT/WBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge right turn/merge cross left turn/merge cross left turn/merge cross left turn/merge	130 130 130 130 130 130 15 15 15 10 10 10 10 170 170 170 170 170	765 45 170 765 45 10 765 10 765 45 60 765	50 0 0 0 0 0 99450 5850 1300 0 0 11475 150 0 0 7650 0 0 0 10200 130050 7650 0 0	Total  MPH, Stop	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBT NBL/WBT NBL/WBT NBT/WBL NBT/WBT NBT/WBL NBT/WBT NBT/WBL NBR/EBT NBR/SBL SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBL/WBT SBL/BL SBT/WBL SBT/EBL SBT/WBL SBT/EBR SBT/EBT SBT/EBL SBR/WBT EBL/WBR		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge left turn/merge right turn/merge right turn/merge right turn/merge left turn/cross left turn/merge right turn/merge left turn/merge left turn/merge left turn/merge left turn/merge	130 130 130 130 130 130 130 15 15 10 10 10 170 170 170 170 170 170	765 45 170 765 45 10 765 10 765 45 60 765	50 0 0 0 0 0 99450 1300 0 0 11475 150 0 11475 150 0 0 7650 450 0 0 0 10200 130050 7650 0 0	Total  MPH, Stop  8  5  4  8  4  5  10  4  8  4  10  4  8  4  10  8  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  10	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBT/WBL NBT/EBL NBT/WBR NBT/WBR NBT/WBR NBT/WBR NBT/WBR SBL/WBT SBL/WBT SBL/WBT SBL/EBL SBT/WBL SBT/WBL SBT/EBL SBT/WBL SBT/EBL SBT/WBT SBT/EBL SBR/WBT EBL/WBR EBL/WBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge right turn/merge left turn/merge left turn/merge right turn/merge left turn/merge	130 130 130 130 130 130 130 15 15 10 10 10 170 170 170 170 170 170 170	765 45 170 765 45 10 765 10 765 45 60 765	50 0 0 0 0 99450 1300 0 0 11475 150 0 0 11475 150 0 0 0 11475 150 0 0 0 0 11475 150 0 0 0 0 11475 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  MPH, Stop  8  5  4  8  4  8  4  5  10  4  8  4  10  4  8  5  4  10  4  10  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  8  8  8  8  8  8  8  8  8  8  8  8	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBT/EBL NBT/EBL NBT/WBL NBT/WBL NBT/WBL NBT/WBL SBL/WBT SBL/WBL SBL/WBT SBL/WBL SBL/EBT SBL/EBL SBT/WBL SBT/WBT SBT/WBL SBT/EBL SBT/WBT SBT/EBL SBT/WBT EBL/WBT EBL/WBT EBL/WBT EBL/WBT EBL/WBL		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross	130 130 130 130 130 130 130 15 15 10 10 10 170 170 170 170 170 170	765 45 170 765 45 10 765 10 765 45 60 765	50 0 0 0 0 0 99450 1300 0 0 11475 150 0 11475 150 0 0 7650 450 0 0 0 10200 130050 7650 0 0	Total  MPH, Stop  8  5  4  8  4  5  10  4  8  4  10  4  8  4  10  8  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  4  10  10	Controlled - - - - - - - - - - - - - - - - - - -
EBR/WBL Intersection: NBL/EBT NBL/EBL NBL/SBR NBL/SBT NBL/WBT NBT/WBL NBT/EBL NBT/WBR NBT/WBR NBT/WBR NBT/WBR NBT/WBR SBL/WBT SBL/WBT SBL/WBT SBL/EBL SBT/WBL SBT/WBL SBT/EBL SBT/WBL SBT/EBL SBT/WBT SBT/EBL SBR/WBT EBL/WBR EBL/WBT		Outbound/Spott left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge right turn/merge left turn/merge left turn/merge right turn/merge left turn/merge	130 130 130 130 130 130 130 15 15 15 10 10 10 10 170 170 170 170 170 170 2765	765 45 170 765 45 10 765 10 765 45 60 765	50 0 0 0 0 0 99450 5850 1300 0 0 0 11475 150 0 0 11475 150 0 0 0 11475 150 0 0 0 0 0 11475 150 0 0 0 0 11475 150 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Total  MPH, Stop  8  5  4  8  4  5  10  4  8  4  10  4  8  5  4  10  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  4  10  8  8  8  8  8  8  8  8  8  8  8  8  8	Controlled - - - - - - - - - - - - - - - - - - -

### Alternative A

# Partial Clover Interchange on Spotted

			Traffic	Traffic	Volume	Severity	Final
Movement 1	Movement 2	Type of Conflict	Volume 1	Volume 2	Product	Factor	Product
Intersection:	Outbound Ra	mps/Spotted Rd			35	MPH, Stop	Controlled
NBL	EBT	left turn/cross			0	5	-
NBL	EBL	left turn/cross	60	5	300	4	1,200
NBL	SBR	left turn/merge	60	200	12000	3	36,000
NBL	SBT	left turn/cross	60	195	11700	5	58,500
NBL	WBT	left turn/merge			0	3	-
NBL	WBL	left turn/cross			0	4	-
NBT	EBT	cross			0	8	-
NBT	EBL	left turn/merge	195	5	975	3	2,925
NBT	SBL	left turn/cross			0	5	-
NBT	WBR	right turn/merge			0	3	-
NBT	WBT	cross			0	8	-
NBT	WBL	left turn/cross			0	5	-
NBR	EBT	right turn/merge			0	3	-
NBR	SBL	right turn/merge			0	3	-
SBL	WBT	left turn/cross			0	5	-
SBL	WBL	left turn/cross			0	4	-
SBL	EBT	left turn/merge			0	3	-
SBL	EBL	left turn/cross			0	4	-
SBT	WBT	cross			0	8	-
SBT	WBL	left turn/merge	105	40	0	3	-
SBT	EBR	right turn/merge	195	40	7800	3	23,400
SBT	EBT	Cross	105	-	0	5	-
SBT SBR	EBL WBT	left turn/cross	195	5	975 0	3	4,875
EBL		right turn/merge			0	3	-
EBL	WBR WBT	left turn/merge left turn/cross			0	5	-
EBT	WBL	left turn/cross			0	5	-
EBR	WBL	right turn/merge			0	3	-
		ingine curry menge			0	5	
LDIX						TOTAL	126,900
		1st Ave			35		
	Spotted Rd/2	2 <b>1st Ave</b> left turn/cross	200	10	<b>35</b> 2000	TOTAL MPH, Stop 5	Controlle
Intersection:	Spotted Rd/2		200 200	10 205		MPH, Stop	<b>Controlle</b> 10,000
Intersection:	Spotted Rd/2 EBT	left turn/cross			2000	MPH, Stop 5	<b>Controlle</b> 10,000 164,000
Intersection: NBL NBL	<b>Spotted Rd/2</b> EBT EBL	left turn/cross left turn/cross	200	205	2000 41000	MPH, Stop 5 4	<b>Controlle</b> 10,000 164,000 6,000
<b>Intersection:</b> NBL NBL NBL	<b>Spotted Rd/2</b> EBT EBL SBR	left turn/cross left turn/cross left turn/merge	200 200	205 10	2000 41000 2000	MPH, Stop 5 4 3	<b>Controlle</b> 10,000 164,000 6,000 10,000
Intersection: NBL NBL NBL NBL	Spotted Rd/2 EBT EBL SBR SBT	left turn/cross left turn/cross left turn/merge left turn/cross	200 200 200	205 10 10	2000 41000 2000 2000	<b>MPH, Stop</b> 5 4 3 5	<b>Controlle</b> 10,000 164,000 6,000 10,000 4,000
Intersection: NBL NBL NBL NBL NBL	Spotted Rd/2 EBT EBL SBR SBT WBT	left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge	200 200 200 200	205 10 10 10	2000 41000 2000 2000 2000	MPH, Stop 5 4 3 5 2	<b>Controlle</b> 10,000 164,000 6,000 10,000 4,000 8,000
Intersection: NBL NBL NBL NBL NBL NBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL	left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross	200 200 200 200 200	205 10 10 10 10	2000 41000 2000 2000 2000 2000	<b>MPH, Stop</b> 5 4 3 <b>5</b> 2 4	Controlled 10,000 164,000 10,000 4,000 8,000 8,000
Intersection: NBL NBL NBL NBL NBL NBL NBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT	left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross cross	200 200 200 200 200 10	205 10 10 10 10 10	2000 41000 2000 2000 2000 2000 100	MPH, Stop 5 4 3 5 2 4 4 8	Controlled 10,000 164,000 10,000 4,000 8,000 8,000 6,150
Intersection: NBL NBL NBL NBL NBL NBL NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL	left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross cross left turn/merge	200 200 200 200 200 10 10	205 10 10 10 10 10 205	2000 41000 2000 2000 2000 2000 100 2050	MPH, Stop 5 4 3 5 2 4 8 3	Controller 10,000 164,000 6,000 10,000 4,000 8,000 8,000 6,150 5,000
Intersection: NBL NBL NBL NBL NBL NBL NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/merge left turn/cross	200 200 200 200 200 10 10 10	205 10 10 10 10 10 205 10	2000 41000 2000 2000 2000 2000 100 2050 100	MPH, Stop 5 4 3 5 2 4 8 3 3 5 3 3 8	
Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge	200 200 200 200 10 10 10 10	205 10 10 10 10 205 10 10	2000 41000 2000 2000 2000 100 2050 100 100	MPH, Stop 5 4 3 5 2 4 8 3 3 5 3	Controllee 10,000 164,000 6,000 10,000 4,000 8,000 8,000 6,150 5,00 3,00
Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBR WBT WBL EBT	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/merge left turn/merge cross	200 200 200 200 10 10 10 10 10	205 10 10 10 10 205 10 10 10	2000 41000 2000 2000 2000 100 2050 100 100 100	MPH, Stop 5 4 3 5 2 4 8 3 3 5 3 3 8	Controlled 10,000 164,000 6,000 4,000 8,000 6,150 500 300 800 500 150
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross	200 200 200 200 10 10 10 10 10 10 5 5	205 10 10 10 10 205 10 10 10 10 10	2000 41000 2000 2000 2000 100 2050 100 100 100 100	MPH, Stop 5 4 3 5 2 4 8 3 5 3 8 5 3 3 3 3 3 3	Controlled 10,000 164,000 6,000 10,000 4,000 8,000 8,000 6,150 5,00 3,000 8,000 5,000 8,000 5,000 8,0000 8,0000 8,0000 8,0000 8,0000 8,0000 8,
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBR WBT WBL EBT	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge	200 200 200 200 10 10 10 10 10 10 5	205 10 10 10 10 205 10 10 10 10 10 10	2000 41000 2000 2000 2000 100 2050 100 100 100 100 50	MPH, Stop 5 4 3 5 2 4 8 3 5 3 3 5 3 8 8 5 3 3	Controlled 10,000 164,000 6,000 4,000 8,000 6,150 500 300 800 500 150
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge right turn/merge	200 200 200 200 10 10 10 10 10 10 5 5	205 10 10 10 205 10 10 10 10 10 10 10	2000 41000 2000 2000 2000 100 100 100 100 100	MPH, Stop 5 4 3 5 2 4 8 3 5 3 8 5 3 3 3 3 3 3	Controlle 10,000 164,000 4,000 4,000 8,000 6,150 500 300 800 500 150 500
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT	left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross	200 200 200 200 10 10 10 10 10 10 5 5 10 10 10	205 10 10 10 10 205 10 10 10 10 10 10 10 10 10 10	2000 41000 2000 2000 2000 100 2050 100 100 100 50 50 100 100 100 100	MPH, Stop 5 4 3 5 2 4 8 3 5 3 5 3 3 5 4 3 3 5 4 3 3 5 4 3 3 5 4 3 3 5 4 3 5 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5	Controlled 10,000 164,000 4,000 4,000 8,000 6,150 500 300 800 500 150 150 500 4,000 300 300 300 300 300 300 300
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT EBT EBL	left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/merge cross left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross	200 200 200 200 10 10 10 10 10 5 5 10 10 10 10 10	205 10 10 10 205 10 10 10 10 10 10 10 10 10 10 10 205	2000 41000 2000 2000 2000 100 2050 100 100 100 50 50 100 100 100 100 2050	MPH, Stop 5 4 3 2 4 8 3 5 3 8 6 5 3 3 5 4 3 4 4	Controlle 10,000 164,000 4,000 8,000 6,150 500 300 500 150 500 4,000 8,000
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBR SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBT WBL EBT SBL WBT WBL EBT EBL WBT	left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross cross	200 200 200 10 10 10 10 10 10 5 5 10 10 10 10 10 10 10	205 10 10 10 10 205 10 10 10 10 10 10 10 10 10 205 10	2000 41000 2000 2000 2000 100 2050 100 100 100 100 50 50 100 100 100 2050 100	MPH, Stop 5 4 3 5 2 4 8 3 3 5 3 3 5 3 3 5 3 3 5 4 3 3 5 4 3 3 3 5 4 4 3 3 4 8 8	Controlle 10,000 164,000 4,000 4,000 8,000 6,150 500 300 500 150 500 400 8,200
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT SBL WBT WBL EBT EBL WBT WBL	left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross	200 200 200 200 10 10 10 10 10 10 5 5 10 10 10 10 10 10 10	205 10 10 10 205 10 10 10 10 10 10 10 10 10 205 10 10 10	2000 41000 2000 2000 2000 2000 100 100 100 100	MPH, Stop 5 4 3 5 2 4 8 3 5 3 3 5 3 3 5 3 3 5 4 3 3 5 4 3 3 3 5 4 3 3 3 5 4 3 3 3 3	Controller 10,000 164,000 4,000 8,000 8,000 6,150 500 300 800 500 150 150 500 4,000 800 800 800 800 800 800 800
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT SBL WBT WBL EBT EBL WBT WBL EBT EBL WBT	left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge right turn/merge right turn/merge	200 200 200 200 10 10 10 10 10 10 5 5 10 10 10 10 10 10 10 10	205 10 10 10 205 10 10 10 10 10 10 10 10 10 205 10 10 200	2000 41000 2000 2000 2000 2050 100 100 100 100 50 50 50 100 100 2050 100 2050	MPH, Stop 5 4 3 5 2 4 8 3 3 5 3 3 5 3 3 5 3 3 5 4 3 3 5 4 3 3 3 5 5 4 4 3 3 3 5 5 4 4 3 3 3 5 5 3 3 5 5 3 5 5 5 5	Controlle 10,000 164,000 4,000 4,000 8,000 8,000 6,150 500 300 500 150 500 4,000 8,000 8,000 8,000 8,000 8,000 8,000 1,000
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL EBT	left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge right turn/merge cross	200 200 200 200 10 10 10 10 10 10 5 5 10 10 10 10 10 10 10 10 10 10	205 10 10 10 205 10 10 10 10 10 10 10 10 205 10 10 200 10	2000 41000 2000 2000 2000 100 2050 100 100 100 100 100 100 2050 100 100 2050 100 100 2050 100	<ul> <li>MPH, Stop</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>8</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>8</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>3</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>8</li> <li>8</li> </ul>	Controlle 10,000 164,000 4,000 8,000 800 6,150 500 300 800 500 150 500 300 8,20
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT EBL WBT WBL EBT EBL WBT	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge right turn/merge scross left turn/merge right turn/merge cross left turn/merge	200 200 200 200 10 10 10 10 10 10 5 5 10 10 10 10 10 10 10 10 10 10	205 10 10 10 205 10 10 10 10 10 10 10 10 205 10 10 200 10 205	2000 41000 2000 2000 2000 2050 100 100 100 100 100 100 100 2050 100 100 2050	<ul> <li>MPH, Stop</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>8</li> <li>3</li> <li>3</li> <li>8</li> <li>5</li> <li>5</li> </ul>	Controlle 10,000 164,000 4,000 8,000 6,150 500 300 800 500 150 500 300 8,200 8,200 8,200 8,200 8,200 8,200 8,000 1,50 5,500 1,5
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT EBL WBT WBL EBT EBL WBT EBR EBR EBL WBT	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge left turn/merge left turn/merge right turn/merge right turn/merge cross left turn/merge right turn/merge	200 200 200 10 10 10 10 10 10 10 10 10 10 10 10 1	205 10 10 10 205 10 10 10 10 10 10 10 10 205 10 10 200 10 205 10	2000 41000 2000 2000 2000 2050 100 100 100 100 100 100 2050 100 100 2050 100 2050 100	<ul> <li>MPH, Stop</li> <li>3</li> <li>5</li> <li>2</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>8</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>8</li> <li>6</li> <li>5</li> <li>3</li> </ul>	Controlle 10,000 164,000 4,000 8,000 6,150 500 300 800 500 150 500 400 8,200 8,200 8,200 8,200 8,000 10,250 300 8,000 10,250 300 8,000 10,000
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL WBR WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBR EBR EBR EBR EBR EBT EBL WBT	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross left turn/cross cross left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge left turn/merge right turn/merge left turn/merge right turn/merge left turn/merge	200 200 200 10 10 10 10 10 10 10 10 10 10 10 10 1	205 10 10 10 205 10 10 10 10 10 10 10 10 205 10 10 200 10 205	2000 41000 2000 2000 2000 100 2050 100 100 100 100 100 100 2050 100 2050 100 2050 100 2050 100	<ul> <li>MPH, Stop</li> <li>3</li> <li>5</li> <li>2</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>3</li> </ul>	Controlle 10,000 164,000 4,000 4,000 8,000 6,150 300 800 500 150 150 500 400 300 8,200 8,200 8,200 8,200 8,200 8,000 10,250 300 6,150 300 8,000 10,0
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBT SBL SBL SBL SBL SBL SBL SBL SBT SBT SBT SBT SBT SBT SBT SBT SBT SBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBR EBR EBR EBR EBR EBL WBT WBR WBT	left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge left turn/merge	200 200 200 10 10 10 10 10 10 10 10 10 10 10 10 1	205 10 10 10 205 10 10 10 10 10 10 10 10 10 205 10 10 205 10 10 205 10 10 205	2000 41000 2000 2000 2000 100 2050 100 100 100 100 100 100 2050 100 2050 100 2050 100 2050 100	<ul> <li>MPH, Stop</li> <li>4</li> <li>3</li> <li>5</li> <li>2</li> <li>4</li> <li>8</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>3</li> <li>5</li> <li>4</li> <li>5</li> <li>3</li> <li>3</li> <li>5</li> </ul>	Controlle 10,000 164,000 4,000 4,000 8,000 6,150 300 800 500 150 150 500 400 300 8,200 8,200 8,200 8,200 6,000 8,000 10,250 300 10,250 10,250 10,250
Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBT SBT SBT SBT SBT SBT	Spotted Rd/2 EBT EBL SBR SBT WBT WBL EBT EBL WBR WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBR EBR EBR EBR EBR EBT EBL WBT	left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross left turn/cross cross left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge left turn/merge right turn/merge left turn/merge right turn/merge left turn/merge	200 200 200 10 10 10 10 10 10 10 10 10 10 10 10 1	205 10 10 10 205 10 10 10 10 10 10 10 10 10 205 10 10 200 10 205 10 10 205 10	2000 41000 2000 2000 2000 100 2050 100 100 100 100 100 100 2050 100 2050 100 2050 100 2050 100	<ul> <li>MPH, Stop</li> <li>3</li> <li>5</li> <li>2</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>4</li> <li>3</li> <li>5</li> <li>3</li> <li>3</li> </ul>	Controlle 10,000 164,000 4,000 4,000 8,000 6,150 300 800 500 150 150 500 400 300 8,200 8,200 8,200 8,200 8,200 8,000 10,250 300 6,150 300 8,000 10,0

262,100

#### Alternative A Partial Clover Interchange on Spotted

Intersectio	on: Inbound	Ramps/21st Ave			35	MPH, Stop	Controlled
NBL	EBT	left turn/cross	155	560	86800	5	434,000
NBL	EBL	left turn/cross	155		0	4	-
NBL	SBR	left turn/merge	155		0	3	-
NBL	SBT	left turn/cross	155		0	5	-
NBL	WBT	left turn/merge	155	140	21700	3	65,100
NBL	WBL	left turn/cross	155	60	9300	4	37,200
NBT	EBT	cross		560	0	8	-
NBT	EBL	left turn/merge			0	3	-
NBT	SBL	left turn/cross			0	5	-
NBT	WBR	right turn/merge			0	3	-
NBT	WBT	cross		140	0	8	-
NBT	WBL	left turn/cross		60	0	5	-
NBR	EBT	right turn/merge	40	560	22400	3	67,200
NBR	SBL	right turn/merge	40		0	3	-
SBL	WBT	left turn/cross		140	0	5	-
SBL	WBL	left turn/cross		60	0	4	-
SBL	EBT	left turn/merge		560	0	3	-
SBL	EBL	left turn/cross			0	4	-
SBT	WBT	cross		140	0	8	-
SBT	WBL	left turn/merge		60	0	3	-
SBT	EBR	right turn/merge		5	0	3	-
SBT	EBT	cross		560	0	8	-
SBT	EBL	left turn/cross			0	5	-
SBR	WBT	right turn/merge		140	0	3	-
EBL	WBR	left turn/merge			0	3	-
EBL	WBT	left turn/cross		140	0	5	-
EBT	WBL	left turn/cross	560	60	33600	5	168,000
EBR	WBL	right turn/merge	5	60	300	3	900
						TOTAL	772,400
			TOTAL	CONFLICT	VALUE		1,161,400

# Alternative B

# Two Roundabouts Existing Locations

			Troffic	Traffic	Volumo	Crash	Final
Movement 1	Movement 2	Type of Conflict	Traffic Volume 1	Traffic	Volume Product	Severity	Final
	Movement 2 Inbound/Spotte	<i>/</i> 1	volume 1	volume z	Product	Factor 20 MPH, R	Product
NBL	EBT	right turn/merge			0	20 MIFH, K	-
NBL	EBL	right turn/merge			0	1	-
NBL	SBR	right turn/merge		5	0	1	-
NBL	SBT+SBL	right turn/merge		355	0	1	-
NBL	WBT+WBR	right turn/merge		815	0	1	-
NBL	WBL	right turn/merge			0	1	-
NBT	EBT	right turn/merge	5		0	1	-
NBT	EBL	right turn/merge	5		0	1	-
NBT	SBL	right turn/merge	5		0	1	-
NBT	WBR	right turn/merge	5	290	1450	1	1,450
NBT	WBT	right turn/merge	5	525	2625	1	2,625
NBT	WBL	right turn/merge	5		0	1	-
NBR	EBT+EBL	right turn/merge			0	1	-
NBR	SBL	right turn/merge			0	1	-
SBL	WBT	right turn/merge		525	0	1	-
SBL	WBL	right turn/merge			0	1	-
SBL	EBT+EBR	right turn/merge			0	1	-
SBL	EBL	right turn/merge			0	1	-
SBT	WBT	right turn/merge	355	525	186375	1	186,375
SBT	WBL	right turn/merge	355		0	1	-
SBT	EBR	right turn/merge	355		0	1	-
SBT	EBT	right turn/merge	355		0	1	-
SBT	EBL	right turn/merge	355		0	1	-
SBR	WBT+WBL	right turn/merge	5	525	2625	1	2,625
EBL	WBR	right turn/merge		290	0	1	-
EBL	WBT+WBL	right turn/merge		525	0 0	1	-
CDT.							
EBT	WBL	right turn/merge					-
EBT EBR	WBL WBL	right turn/merge right turn/merge			0	1	-
					0		- - 193,075
EBR	WBL	right turn/merge			0	1 TOTAL	- 193,075
EBR		right turn/merge		615	0	1 TOTAL	- 193,075
EBR Intersection:	WBL Outbound/Spot	right turn/merge		615 5	0	1 TOTAL <b>20 MPH, R</b>	- 193,075
EBR Intersection: NBL	WBL Outbound/Spot EBT	right turn/merge tted Rd right turn/merge			0	1 TOTAL <b>20 MPH, R</b> 1	۔ 193,075 oundabout
EBR Intersection: NBL NBL	WBL Outbound/Spot EBT EBL	right turn/merge tted Rd right turn/merge right turn/merge			0 0 0	1 TOTAL <b>20 MPH, R</b> 1 1	۔ 193,075 oundabout
EBR Intersection: NBL NBL NBL	WBL Outbound/Spot EBT EBL SBR	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge		5	0 0 0 0	1 TOTAL 20 MPH, R 1 1 1	۔ 193,075 oundabout
EBR Intersection: NBL NBL NBL NBL	WBL Outbound/Spot EBT EBL SBR SBT+SBL	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge right turn/merge		5	0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1	- 193,075 oundabout - - - -
EBR Intersection: NBL NBL NBL NBL NBL	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge		5	0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1	- 193,075 oundabout - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBL	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge		5 355	0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBL NBL NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge		5 355 615	0 0 0 0 0 0 0 0 0 0	1 20 MPH, R 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBL NBL NBT NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge		5 355 615 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBL NBT NBT NBT	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL	right turn/merge tted Rd right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge		5 355 615 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL	right turn/merge tted Rd right turn/merge right turn/merge		5 355 615 5 355	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL	right turn/merge tted Rd right turn/merge right turn/merge		5 355 615 5 355 620	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL	right turn/merge tted Rd right turn/merge right turn/merge		5 355 615 5 355	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL Outbound/Spor EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT	right turn/merge tted Rd right turn/merge right turn/merge	355	5 355 615 5 355 620	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBL SBL WBT WBL	right turn/merge tted Rd right turn/merge right turn/merge	355	5 355 615 5 355 620 355	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBL SBL WBT WBL EBT+EBR	right turn/merge tted Rd right turn/merge right turn/merge	355 355	5 355 615 5 355 620 355 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBT	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL	right turn/merge tted Rd right turn/merge right turn/merge	355	5 355 615 5 355 620 355	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT	right turn/merge tted Rd right turn/merge right turn/merge	355 355	5 355 615 5 355 620 355 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL	WBL Outbound/Spot EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL	right turn/merge tted Rd right turn/merge right turn/merge	355 355	5 355 615 5 355 620 355 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBR	right turn/merge tted Rd right turn/merge right turn/merge	355 355	5 355 615 5 355 620 355 615 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBR EBR EBR EBR	right turn/merge tted Rd right turn/merge right turn/merge	355 355	5 355 615 5 355 620 355 615 5 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL	right turn/merge tted Rd right turn/merge right turn/merge	355 355	5 355 615 5 355 620 355 615 5	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBR EBL WBT+WBL	right turn/merge tted Rd right turn/merge right turn/merge	355 355 355	5 355 615 5 355 620 355 615 5 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 oundabout - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBR EBR EBL WBT+WBL WBR	right turn/merge tted Rd right turn/merge right turn/merge	355 355 355 355	5 355 615 5 355 620 355 615 5 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBR EBR EBR EBL WBT+WBL WBT+WBL WBR WBT+WBL	right turn/merge tted Rd right turn/merge right turn/merge	355 355 355 5 5 5	5 355 615 5 355 620 355 615 5 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -
EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR SBT+SBL WBT+WBR WBL EBT EBL SBL WBR WBT WBL EBT+EBL SBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBT+EBR EBL WBT WBL EBR EBR EBL WBT+WBL WBR	right turn/merge tted Rd right turn/merge right turn/merge	355 355 355 355	5 355 615 5 355 620 355 615 5 615	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 TOTAL 20 MPH, R 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 193,075 - - - - - - - - - - - - - - - - - - -

#### Alternative B Two Roundabouts Existing Locations

Intersection:	Airport Driv	e/New Spotted Road			50 N	1PH, Tr	affic Signal
NBL	EBT	left turn/cross	195	675	131625	5	658,125
NBL	EBL	left turn/cross	195		0	4	-
NBL	SBR	left turn/merge	195		0	3	-
NBL	SBT	left turn/cross	195		0	5	-
NBL-NBL to Spo	otte WBT	left turn/merge	60	620	37200	3	111,600
NBL	WBL	left turn/cross	195	40	7800	4	31,200
NBT	EBT	cross		675	0	7	-
NBT	EBL	left turn/merge			0	3	-
NBT	SBL	left turn/cross			0	5	-
NBT	WBR	right turn/merge			0	3	-
NBT	WBT	cross		620	0	7	-
NBT	WBL	left turn/cross		40	0	5	-
NBR	EBT	right turn/merge	60	675	40500	3	121,500
NBR	SBL	right turn/merge	60		0	3	-
SBL	WBT	left turn/cross		620	0	5	-
SBL	WBL	left turn/cross		40	0	4	-
SBL	EBT	left turn/merge		675	0	3	-
SBL	EBL	left turn/cross			0	4	-
SBT	WBT	cross		620	0	7	-
SBT	WBL	left turn/merge		40	0	3	-
SBT	EBR	right turn/merge		195	0	3	-
SBT	EBT	cross		620	0	7	-
SBT	EBL	left turn/cross			0	5	-
SBR	WBT	right turn/merge		620	0	3	-
EBL	WBR	left turn/merge			0	3	-
EBL	WBT	left turn/cross		620	0	5	-
EBT	WBL	left turn/cross	675	40	27000	5	135,000
EBR	WBL	right turn/merge	195	40	7800	3	23,400
					тот	4L	1,080,825
			то	TAL CON	FLICT VALUE		1,494,000

#### Alternative C

Diamond Interchange Connecting Spotted/21st

			Traffic	Traffic	Volume	Crash Severity	Final
Movement 1	Movement 2	Type of Conflict	Volume 1		Product	Factor	Product
Intersection:	Airport Drive	westbound ramps	/21st Avenu	ie	3	35 MPH Stop	o Controlled
NBL	EBT	left turn/cross	60		0	5	-
NBL	EBL	left turn/cross	60		0	4	-
NBL	SBR	left turn/merge	60	5	300	3	900
NBL	SBT	left turn/cross	60	560	33600	5	168,000
NBL	WBT	left turn/merge	60		0	3	-
NBL	WBL	left turn/cross	60	40	2400	4	9,600
NBT	EBT	cross	140		0	8	-
NBT	EBL	left turn/merge	140		0	3	-
NBT	SBL	left turn/cross	140		0	5	-
NBT	WBR	right turn/merge	140	155	21700	3	65,100
NBT	WBT	cross	140	40	0	8	-
NBT	WBL	left turn/cross	140	40	5600	5	28,000
NBR NBR	EBT SBL	right turn/merge right turn/merge			0 0	3 3	-
SBL	WBT	left turn/cross			0	5	-
SBL	WBL	left turn/cross		40	0	4	-
SBL	EBT	left turn/merge		40	0	3	-
SBL	EBL	left turn/cross			0	4	
SBT	WBT	cross	560		0	8	-
SBT	WBL	left turn/merge	560	40	22400	3	67,200
SBT	EBR	right turn/merge	560	155	86800	3	260,400
SBT	EBT	cross	560	100	0	8	-
SBT	EBL	left turn/cross	560		0	5	-
SBR	WBT	right turn/merge	5		0	3	-
EBL	WBR	left turn/merge		155	0	3	-
EBL	WBT	left turn/cross			0	5	-
EBT	WBL	left turn/cross		40	0	5	-
	WBL WBL	left turn/cross right turn/merge		40 40	0 0	5 3	-
EBT		,			0		- - 599,200
EBT EBR	WBL	right turn/merge	Spotted Rd		0	3 TOTAL	
EBT EBR Intersection:	WBL Airport Drive	right turn/merge	Spotted Rd		0	3 TOTAL <b>35 MPH Sto</b> l	- 599,200 • Controlled
EBT EBR	WBL	right turn/merge eastbound ramps / left turn/cross	Spotted Rd		0 3 0	3 TOTAL <b>35 MPH Stop</b> 5	
EBT EBR Intersection: NBL	WBL Airport Drive	right turn/merge eastbound ramps / left turn/cross left turn/cross	Spotted Rd	40	0	3 TOTAL 35 MPH Stop 5 4	
EBT EBR Intersection: NBL NBL	WBL Airport Drive EBT EBL	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge	Spotted Rd	40	0 9 0 0	3 TOTAL 35 MPH Stop 5 4 3	
EBT EBR Intersection: NBL NBL NBL	WBL Airport Drive EBT EBL SBR	right turn/merge eastbound ramps / left turn/cross left turn/cross	Spotted Rd	40 5	0 0 0 0	3 TOTAL 35 MPH Stop 5 4	
EBT EBR Intersection: NBL NBL NBL NBL	WBL Airport Drive EBT EBL SBR SBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/cross	Spotted Rd	40 5	0 0 0 0	3 TOTAL 35 MPH Stop 5 4 3 3 5	
EBT EBR Intersection: NBL NBL NBL NBL	WBL Airport Drive EBT EBL SBR SBT WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge	Spotted Rd	40 5		3 TOTAL 35 MPH Stop 5 4 3 5 2	
EBT EBR NBL NBL NBL NBL NBL NBL	WBL Airport Drive EBT EBL SBR SBT WBT WBL	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/cross		40 5		3 TOTAL 35 MPH Stop 5 4 3 5 2 2 4	
EBT EBR Intersection: NBL NBL NBL NBL NBL NBL NBL NBL	WBL Airport Drive of EBT EBL SBT WBT WBL EBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross cross	195	40 5 195		3 TOTAL 35 MPH Stop 5 4 3 3 5 2 4 8	2 Controlled - - - - - - - - - - -
EBT EBR Intersection: NBL NBL NBL NBL NBL NBL NBL NBL NBL NBT	WBL Airport Drive of EBT EBL SBT WBT WBL EBT EBL	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross cross left turn/merge	195 195	40 5 195 5	0 0 0 0 0 0 0 975	3 TOTAL 5 5 4 3 5 2 2 4 8 3 3	2 Controlled - - - - - - 2,925
EBT EBR NBL NBL NBL NBL NBL NBL NBL NBL NBL NBL	WBL EBT EBL SBR SBT WBT WBL EBT EBL SBL	right turn/merge eastbound ramps / left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/merge left turn/cross	195 195 195	40 5 195 5	0 0 0 0 0 0 0 975 78975	3 TOTAL 5 5 4 3 5 2 4 8 3 3 5 5	2 Controlled - - - - - - 2,925
EBT EBR NBL NBL NBL NBL NBL NBL NBL NBL NBL NBL	WBL EBT EBL SBR WBT WBL EBT EBL SBL WBR	right turn/merge eastbound ramps / left turn/cross left turn/merge left turn/merge left turn/cross left turn/cross cross left turn/merge left turn/merge left turn/merge left turn/merge	195 195 195 195	40 5 195 5	0 0 0 0 0 975 78975 0	3 TOTAL 35 MPH Stor 5 4 3 5 2 4 8 3 3 5 3	2 Controlled - - - - - - 2,925
EBT EBR NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT	WBL Airport Drive of EBT EBL SBR WBT WBL EBT EBL SBL WBR WBT	right turn/merge eastbound ramps / left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross	195 195 195 195 195 195	40 5 195 5	0 0 0 0 0 0 975 78975 0 0	3 TOTAL 5 4 3 5 4 3 5 2 4 8 3 5 3 3 8	2 Controlled - - - - - - 2,925
EBT EBR NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT	WBL Airport Drive of EBT EBL SBR WBT WBL EBT EBL SBL WBR WBT WBL	right turn/merge eastbound ramps / left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/cross right turn/merge left turn/merge left turn/merge left turn/merge left turn/merge cross left turn/cross	195 195 195 195 195 195	40 5 195 5	0 0 0 0 0 0 975 78975 0 0 0	3 TOTAL 5 4 3 5 2 4 8 3 5 3 3 8 5 5	2 Controlled - - - - - - 2,925
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBT NBR SBL	WBL EBT EBL SBR SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge right turn/merge left turn/cross	195 195 195 195 195 195 60 60 405	40 5 195 5 405	0 0 0 0 0 0 0 975 78975 0 0 0 0 0 0 0 0	3 TOTAL 5 5 4 3 5 2 4 4 3 5 2 4 4 8 3 3 5 3 8 8 5 3 3 3 5	2 Controlled - - - - 2,925 394,875 - - - - - - -
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT NBR SBL SBL	WBL EBT EBL SBT WBT WBL EBT EBL SBL WBR WBR WBT WBL EBT SBL WBT SBL WBT WBL	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/merge left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross	195 195 195 195 195 195 60 60 405 405	40 5 195 5 405	0 0 0 0 0 0 0 975 78975 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stop 5 4 3 5 2 4 8 3 3 5 3 8 5 3 8 5 3 3 3 5 3 3 5 4	2 Controlled - - - - 2,925 394,875 - - - - - - -
EBT EBR Intersection: NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL	WBL EBT EBL SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT SBL WBT WBL EBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross cross left turn/cross right turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross	195 195 195 195 195 195 60 60 405 405 405	40 5 195 5 405 405	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stop 3 4 3 5 2 4 8 3 3 5 3 8 5 3 3 8 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 3 5 5 3 3 3 5	2,925 394,875 - 72,900 - 72,900 - - - - - - - - - - - - - - - - - -
EBT EBR Intersection: NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL	WBL EBT EBL SBR WBT WBL EBL SBL WBR WBT WBL EBT SBL WBT SBL WBT SBL WBT SBL WBT SBL WBT SBL WBT SBL WBT SBL WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross cross left turn/cross right turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross	195 195 195 195 195 195 60 60 405 405 405	40 5 195 5 405	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 5 5 4 3 5 2 4 8 3 5 3 8 5 3 8 5 3 3 5 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	2 Controlled - - - - 2,925 394,875 - - - - - - - - - - - - - - - - - - -
EBT EBR Intersection: NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR WBT WBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT SBL WBT WBL EBT SBL WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge right turn/merge left turn/cross left turn/cross	195 195 195 195 195 195 195 60 60 60 405 405 405 405 195	40 5 195 5 405 405	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 5 5 4 3 5 2 4 8 3 3 5 3 8 5 3 8 5 3 3 3 5 4 3 3 3 5 4 3 3 3 5 4 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 5 3 3 3 3 5 5 4 8 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2,925 394,875 - 72,900 - 72,900 - - - - - - - - - - - - - - - - - -
EBT EBR NBL NBL NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross left turn/cross left turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 405 405 195	40 5 195 5 405 405	0 0 0 0 0 0 0 0 975 78975 0 0 0 0 24300 0 0 24300 0 0 0 2025 0 0 0 0	3 TOTAL 35 MPH Stor 5 4 3 5 2 4 8 3 3 5 3 8 5 3 3 5 4 3 3 5 4 3 3 3 5 4 3 3 3 5 4 3 3 3 5 3 3 3 3	controlled 
EBT EBR NBL NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT	right turn/merge eastbound ramps / left turn/cross left turn/merge left turn/merge left turn/cross left turn/cross left turn/cross right turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/merge right turn/merge right turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 405 405 195	40 5 195 5 405 405	0 0 0 0 0 0 0 975 78975 0 0 0 0 24300 0 0 24300 0 0 24300 0 0 0 24300 0 0 0 24300 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stor 5 4 3 5 2 4 8 3 3 5 3 3 8 5 3 3 3 5 4 3 3 4 3 4 8 3 3 3 3 3 3 3 3 3 3 3 3 3	2,925 394,875 - 72,900 - 72,900 - - - - - - - - - - - - - - - - - -
EBT EBR NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR WBT WBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT SBL WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBR EBR EBT	right turn/merge eastbound ramps / left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge cross left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 405 195 195	40 5 195 405 405 5 40	0 0 0 0 0 0 0 975 78975 0 0 0 0 24300 0 24300 0 0 24300 0 0 2025 0 0 0 0 0 2025 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stor 4 3 5 2 4 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 4 3 3 4 3 3 4 3	controlled 
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBR WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT SBL WBT WBL EBT SBL WBT WBL EBL WBT WBL EBL WBT WBL EBL BL WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross cross left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross cross left turn/merge right turn/merge cross left turn/cross	195 195 195 195 195 195 195 60 60 405 405 405 405 405 195	40 5 195 5 405 405	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stor 4 3 5 2 4 8 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	controlled - - - - 2,925 394,875 - - - 72,900 - - - 8,100 - - - - - - - - - - - - - - - - - -
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL Airport Drive of EBT EBL SBT WBT WBL EBT EBL WBT WBL EBT SBL WBT WBL EBT EBL WBT WBT WBL EBT EBL WBT WBT WBT EBL WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross cross left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/merge left turn/merge left turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge right turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 195 195 195 195	40 5 195 405 405 5 40	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stop 5 4 3 5 2 4 8 3 3 5 3 8 5 3 3 5 4 3 3 5 4 3 3 5 4 3 3 4 8 5 3 3 8 5 3 3 8 5 3 3 8 5 3 3 8 5 5 3 8 5 5 3 8 5 5 3 8 5 5 5 8 5 5 5 5	controlled 
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL WBT WBL EBT EBL WBT WBT WBR	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge right turn/merge left turn/merge right turn/merge right turn/merge left turn/cross left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/merge left turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 195 195 195 195 195	40 5 195 405 405 5 40	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stop 5 4 3 5 2 4 8 3 3 5 3 3 5 3 3 5 3 3 5 4 3 3 5 4 4 3 3 4 8 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 5 5 3 3 5 5 3 3 5 5 5 5 5 5 5 6 6 6 7 5 7 6 7 7 7 7 7 7	controlled 
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBR EBR EBL WBT WBR WBT	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross left turn/cross cross left turn/merge left turn/cross right turn/merge right turn/merge left turn/cross left turn/cross left turn/cross left turn/merge left turn/cross left turn/merge left turn/merge right turn/merge right turn/merge left turn/merge right turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 195 195 195 195	40 5 195 405 405 5 40	0 0 0 0 0 0 0 0 975 78975 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 5 5 4 3 5 4 3 5 4 8 3 3 5 3 8 5 4 3 3 5 4 4 3 3 5 4 4 3 3 5 4 8 5 3 3 3 5 5 4 8 5 3 3 3 5 5 3 3 5 5 3 8 5 5 3 3 5 5 5 5	controlled 
EBT EBR Intersection: NBL NBL NBL NBL NBL NBT NBT NBT NBT NBT NBT NBT NBT SBL SBL SBL SBL SBL SBL SBL SBL SBL SBL	WBL EBT EBL SBT WBT WBL EBT EBL SBL WBR WBT WBL EBT SBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL WBT WBL EBT EBL WBT WBT WBR	right turn/merge eastbound ramps / left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross left turn/cross left turn/cross left turn/cross left turn/merge left turn/merge left turn/merge right turn/merge right turn/merge left turn/merge right turn/merge right turn/merge left turn/cross left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/cross right turn/merge left turn/merge left turn/merge	195 195 195 195 195 195 195 60 60 405 405 405 195 195 195 195 195	40 5 195 405 405 5 40	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 TOTAL 35 MPH Stop 5 4 3 5 2 4 8 3 3 5 3 3 5 3 3 5 3 3 5 4 3 3 5 4 4 3 3 4 8 5 3 3 3 5 3 3 3 5 3 3 3 5 3 3 3 5 5 3 3 3 5 5 3 3 3 5 5 3 3 5 5 3 3 5 5 3 3 5 5 5 5 5 5 5 6 6 6 7 5 7 6 7 7 7 7 7 7	controlled 

TOTAL CONFLICT VALUE 1,106,275

#### Alternative D

#### One Roundabout Connecting Spotted/21st

	Movement 2 Airport Drive	Type of Conflict	Traffic	Traffic	Volume	Severity	Final
		Type of Conflict				20.0.09	1
Intersection:	Airport Drive		Volume 1	Volume 2	Product	Factor	Product
		e/21st Ave/Spotte	d Rd			20 MPH, R	oundabout
NBL	EBT	right turn/merge	60	575	34500	1	34,500
NBL	EBL	right turn/merge	60	5	300	1	300
NBL	SBR	right turn/merge	60	5	300	1	300
NBL	SBT+SBL	right turn/merge	60	610	36600	1	36,600
NBL	WBT+WBR	right turn/merge	60	620	37200	1	37,200
NBL	WBL	right turn/merge	60	40	2400	1	2,400
NBT	EBT	right turn/merge	135	575	77625	1	77,625
NBT	EBL	right turn/merge	135	5	675	1	675
NBT	SBL	right turn/merge	135	405	54675	1	54,675
NBT	WBR	right turn/merge	135	155	20925	1	20,925
NBT	WBT	right turn/merge	135	465	62775	1	62,775
NBT	WBL	right turn/merge	135	40	5400	1	5,400
NBR	EBT+EBL	right turn/merge	60	580	34800	1	34,800
NBR	SBL	right turn/merge	60	405	24300	1	24,300
SBL	WBT	right turn/merge	405	465	188325	1	188,325
SBL	WBL	right turn/merge	405	40	16200	1	16,200
SBL	EBT+EBR	right turn/merge	405	615	249075	1	249,075
SBL	EBL	right turn/merge	405	5	2025	1	2,025
SBT	WBT	right turn/merge	155	465	72075	1	72,075
SBT	WBL	right turn/merge	155	40	6200	1	6,200
SBT	EBR	right turn/merge	155	40	6200	1	6,200
SBT	EBT	right turn/merge	155	575	89125	1	89,125
SBT	EBL	right turn/merge	155	5	775	1	775
SBR	WBT+WBL	right turn/merge	5	505	2525	1	2,525
EBL	WBR	right turn/merge	5	155	775	1	775
EBL	WBT+WBL	right turn/merge	5	505	2525	1	2,525
EBT	WBL	right turn/merge	575	40	23000	1	23,000
EBR	WBL	right turn/merge	40	40	1600	1	1,600
						TOTAL	1,052,900
			ΤΟΤΑΙ	CONFLICT	VALUE		1,052,900

# Airport Drive Couplet at Spotted Road Intersection Study -- Safety Analysis Alternative E -- Continuous Green-T Intersection Inbound

						Crash	
			Traffic	Traffic	Volume	Severity	
Movement 1	Movement 2	Type of Conflict	Volume 1	Volume 2	Product	Factor	Final Product
Intersection:	21st Ave/Spot	ted Rd			3	5 MPH, Sto	op Controlled
NBL	EBT	left turn/cross	290	10	2900	5	14,500
NBL	EBL	left turn/cross	290	205	59450	4	237,800
NBL	SBR	left turn/merge	290	10	2900	3	8,700
NBL	SBT	left turn/cross	290	10	2900	5	14,500
NBL	WBT	left turn/merge	290	10	2900	3	8,700
NBL	WBL	left turn/cross	290	10	2900	4	11,600
NBT	EBT	cross	10	10	100	8	800
NBT	EBL	left turn/merge	10	10	100	3	300
NBT	SBL	left turn/cross	10	10	100	5	500
NBT	WBR	right turn/merge	10	10	100	3	300
NBT	WBT	cross	10	10	100	8	800
NBT	WBL	left turn/cross	10	10	100	5	500
NBR	EBT	right turn/merge	5	10	50	3	150
NBR	SBL	right turn/merge	5	10	50	3	150
SBL	WBT	left turn/cross	10	10	100	5	500
SBL	WBL	left turn/cross	10	10	100	4	400
SBL	EBT	left turn/merge	10	10	100	3	300
SBL	EBL	left turn/cross	10	205	2050	4	8,200
SBT	WBT	cross	10	10	100	8	800
SBT	WBL	left turn/merge	10	10	100	3	300
SBT	EBR	right turn/merge	10	360	3600	3	10,800
SBT	EBT	cross	10	10	100	8	800
SBT	EBL	left turn/cross	10	205	2050	5	10,250
SBR	WBT	right turn/merge	10	10	100	3	300
EBL	WBR	left turn/merge	205	10	2050	3	6,150
EBL	WBT	left turn/cross	205	10	2050	5	10,250
EBT	WBL	left turn/cross	10	10	100	5	500
EBR	WBL	right turn/merge	360	10	3600	3	10,800
						Total	359,650

						Crash	
			Traffic	Traffic	Volume	Severity	
Movement 1	Movement 2	Type of Conflict	Volume 1	Volume 2	Product	Factor	Final Product
Intersection:	Inbound Ramp	s/Spotted Rd			3	5 MPH, Ste	op Controlled
NBL	EBT	left turn/cross			0	5	-
NBL	EBL	left turn/cross			0	4	-
NBL	SBR	left turn/merge	0	5	0	3	-
NBL	SBT	left turn/cross		355	0	5	-
NBL	WBT	left turn/merge			0	3	-
NBL	WBL	left turn/cross			0	4	-
NBT	EBT	cross	135		0	8	-
NBT	EBL	left turn/merge	135		0	3	-
NBT	SBL	left turn/cross	135		0	5	-
NBT	WBR	right turn/merge	135	155	20925	3	62,775
NBT	WBT	cross	135		0	8	-
NBT	WBL	left turn/cross	135		0	5	-
NBR	EBT	right turn/merge			0	3	-
NBR	SBL	right turn/merge			0	3	-
SBL	WBT	left turn/cross			0	5	-
SBL	WBL	left turn/cross			0	4	-
SBL	EBT	left turn/merge			0	3	-
SBL	EBL	left turn/cross			0	4	-
SBT	WBT	cross	355		0	8	-
SBT	WBL	left turn/merge	355		0	3	
SBT	EBR	right turn/merge	355		0	3	-
SBT	EBT	cross	355		0	8	-
SBT	EBL	left turn/cross	355		0	5	-
SBR	WBT	right turn/merge	5		0	3	
EBL	WBR	left turn/merge		155	0	3	-
EBL	WBT	left turn/cross			0	5	-
EBT	WBL	left turn/cross			0	5	-
EBR	WBL	right turn/merge			0	3	-
						Total	62,775

# Airport Drive Couplet at Spotted Road Intersection Study -- Safety Analysis Alternative E -- Continuous Green-T Intersection Inbound

			T	T		Crash	
Movement 1	Movement 2	Turne of Conflict	Traffic Volume 1	Traffic Volume 2	Volume Product	Severity Factor	Final Product
	Outbound/Spo	Type of Conflict	volume 1	volume z			op Controlled
	· ·			C1F			op controlled
NBL NBL	EBT EBL	left turn/cross left turn/cross		615 5	0 0	5	-
				5	0	3	-
NBL	SBR	left turn/merge					-
NBL	SBT	left turn/cross			0	5	-
NBL	WBT	left turn/merge			0	3	-
NBL	WBL	left turn/cross			0	4	-
NBT	EBT	cross		615	0	8	-
NBT	EBL	left turn/merge		5	0	3	-
NBT	SBL	left turn/cross		355	0	5	-
NBT	WBR	right turn/merge		135	0	3	-
NBT	WBT	cross			0	8	-
NBT	WBL	left turn/cross			0	5	-
NBR	EBT	right turn/merge		615	0	3	-
NBR	SBL	right turn/merge		355	0	3	-
SBL	WBT	left turn/cross	355		0	5	-
SBL	WBL	left turn/cross	355		0	4	-
SBL	EBT	left turn/merge	355	615	218325	3	654,975
SBL	EBL	left turn/cross	355	5	1775	4	7,100
SBT	WBT	cross			0	8	-
SBT	WBL	left turn/merge			0	3	-
SBT	EBR	right turn/merge			0	3	-
SBT	EBT	cross		615	0	8	-
SBT	EBL	left turn/cross		5	0	5	-
SBR	WBT	right turn/merge			0	3	-
EBL	WBR	left turn/merge	5	135	675	3	2,025
EBL	WBT	left turn/cross	5		0	5	-
EBT	WBL	left turn/cross	615		0	5	-
EBR	WBL	right turn/merge			0	3	-
						Total	664,100
					0		-
						Crash	
			Traffic	Traffic	Volume	Severity	
Manual 4							

		manne	manne	volume	Sevenity	
Movement 2	Type of Conflict	Volume 1	Volume 2	Product	Factor	Final Product
Airport Drive/	New Spotted Road			3!	5 MPH, St	op Controlled
EBT	left turn/cross	195	675	131625	5	658,125
EBL	left turn/cross	195		0	4	-
SBR	left turn/merge	195		0	3	-
SBT	left turn/cross	195		0	5	-
t WBT	left turn/merge	60	620	37200	3	111,600
WBL	left turn/cross	195	40	7800	4	31,200
EBT	cross		675	0	7	-
EBL	left turn/merge			0	3	-
SBL	left turn/cross			0	5	-
WBR	right turn/merge			0	3	-
WBT	cross		620	0	7	-
WBL	left turn/cross		40	0	5	-
EBT	right turn/merge	60	675	40500	3	121,500
SBL	right turn/merge	60		0	3	-
WBT	left turn/cross		620	0	5	-
WBL	left turn/cross		40	0	4	-
EBT	left turn/merge		675	0	3	-
EBL	left turn/cross			0	4	-
WBT	cross		620	0	7	-
WBL	left turn/merge		40	0	3	-
EBR	right turn/merge		195	0	3	-
EBT	cross		620	0	7	-
EBL	left turn/cross			0	5	-
WBT	right turn/merge		620	0	3	-
WBR	left turn/merge			0	3	-
WBT	left turn/cross		620	0	5	-
WBL	left turn/cross	675	40	27000	5	135,000
WBL	right turn/merge	195	40	7800	3	23,400
					Total	1,080,825
		TOTA	CONFLICT	VALUE		2,167,350
	Airport Drive/ EBT EBL SBR SBT t WBT WBL EBT EBL WBT WBL EBT EBL WBT WBL EBR EBR EBR EBR EBR EBL WBT WBL EBR EBR EBT EBL WBT WBL	Airport Drive/New Spotted RoadEBTleft turn/crossEBLleft turn/crossSBRleft turn/crossSBRleft turn/mergeSBTleft turn/mergeWBLleft turn/crossEBLleft turn/crossEBLleft turn/crossEBLleft turn/crossEBLleft turn/crossBBRright turn/mergeSBLleft turn/crossWBRright turn/mergeWBLleft turn/crossEBTright turn/mergeSBLright turn/mergeSBLleft turn/crossEBTleft turn/crossWBTleft turn/crossEBTleft turn/mergeEBLleft turn/crossWBTright turn/mergeWBTleft turn/crossWBTleft turn/crossWBTleft turn/crossWBTleft turn/crossWBLleft turn/crossWBLleft turn/crossWBTleft turn/crossWBTleft turn/crossWBLleft turn/crossWBLleft turn/crossWBLleft turn/crossWBLleft turn/crossWBLleft turn/cross<	Movement 2Type of ConflictVolume 1Airport Drive/New Spotted RoadEBTleft turn/cross195EBLleft turn/cross195SBRleft turn/cross195SBRleft turn/merge195SBTleft turn/merge60WBLleft turn/cross195t WBTleft turn/merge60WBLleft turn/cross195EBTcross195EBTcross8BBLleft turn/merge60WBRright turn/merge60SBLleft turn/cross60SBLleft turn/cross60SBLright turn/merge60SBLright turn/merge60SBLright turn/cross60BBTleft turn/cross8WBTleft turn/cross8WBTleft turn/merge60WBTleft turn/merge60BBLleft turn/merge60BBLleft turn/merge60WBTleft turn/cross8WBTleft turn/cross8WBTcross8WBTleft turn/merge8EBLleft turn/merge8EBLleft turn/merge8WBTright turn/merge8WBTleft turn/cross675WBLleft turn/cross675WBLleft turn/merge195	Movement 2Type of ConflictVolume 1Volume 2Airport Drive/New Spotted RoadEBTleft turn/cross195675EBLleft turn/cross195587SBRleft turn/merge195587VBTleft turn/cross19540EBTcross675675EBLleft turn/cross19540EBTcross675675EBLleft turn/cross9540EBTcross620620WBRright turn/merge60675SBLleft turn/cross40EBTright turn/merge60675SBLright turn/cross40EBTright turn/cross620WBTleft turn/cross40EBTleft turn/cross40EBTleft turn/merge60WBTleft turn/cross40EBTleft turn/merge40EBTright turn/merge40EBRright turn/merge40EBRright turn/merge620WBTleft turn/cross620WBTleft turn/cross620WBTleft turn/cross620WBTleft turn/merge40EBRright turn/merge620WBTleft turn/cross620WBTleft turn/cross620WBTleft turn/cross620WBTleft turn/merge620WBTleft turn/mer	Movement 2         Type of Conflict         Volume 1         Volume 2         Product           Airport Drive/New Spotted Road         33           EBT         left turn/cross         195         675         131625           EBL         left turn/cross         195         0         5           SBR         left turn/cross         195         0         5           SBR         left turn/merge         195         0         5           SBT         left turn/cross         195         0         7200           WBL         left turn/cross         195         40         7800           EBT         cross         675         0         6           BBL         left turn/merge         0         5         0           BBL         left turn/merge         0         0         0           BBL         left turn/merge         60         675         0           WBR         right turn/merge         60         675         40500           BBL         left turn/cross         40         0         0           BBT         left turn/cross         620         0         0           WBL         left turn/cross         62	Movement 2         Type of Conflict         Volume 1         Volume 2         Product         Factor           Airport Drive/New Spotted Road         35 MPH, Sta           EBT         left turn/cross         195         675         131625         5           EBL         left turn/cross         195         0         4           SBR         left turn/cross         195         0         3           SBT         left turn/cross         195         0         3           WBI         left turn/cross         195         40         7800         4           EBT         cross         675         0         7         6           BL         left turn/cross         195         40         7800         4           EBT         cross         675         0         7         6           SBL         left turn/cross         675         0         3         6           WBR         right turn/merge         60         675         40500         3           BET         right turn/cross         40         0         4         6           BBT         left turn/cross         620         0         3         6

Appendix H

# Alternatives Analysis Level of Service Worksheets

#### Two-Way Stop Control

Page 1 of 1

<b>General Information</b>	í		Site In	formation	on				
Analyst	Montgome	erv	Intersec	tion		Alt A Inbou	ind ramps	/21st	
Agency/Co.	JUB Engi		Jurisdic	tion			1000		
Date Performed	11/19/201		Analysis	s Year		2035			
Analysis Time Period	PM Peak.	Hour	1			3	-	_	
Project Description Airp	port Drive Coup	iel at Spotted Roa	ad Intersect	tion Study					
East/West Street 21st A	venue		North/South Street: Inbound Ramps						
ntersection Orientation:	East-West		Study Period (hrs): 0.25						
Vehicle Volumes an	d Adjustme	nts							
lajor Street		Eastbound		310		Westboun	d		
Novement	1	2	3		4	5		6	
	L	T	R		L	T	_	R	
/olume (veh/h)	0.00	560			60	140 0.90	-	1.00	
Peak-Hour Factor, PHF	0.90	0.90	0.90	-	0.90	-			
Hourly Flow Rate, HFR (veh/h)	0	622	5		66	155		0	
Percent Heavy Vehicles	2	1.44	- 0			-	_	-	
Median Type			Two Way Left Turn Lane				-		
RT Channelized			0	-			-	0	
anes	0	1	0		0	1	-	0	
Configuration	1.	-	TR		LT		-		
Upstream Signal		0			-	0			
Minor Street		Northbound	_			Southbour	nd	_	
Movement	7	8	9		10	11	-	12	
	L	Т	R	- L.	L	T		R	
Volume (veh/h)	155	-	40		1.00		-		
Peak-Hour Factor, PHF	0.90	0.90	0,90	0.90 1.00		0.90	-	0.90	
Hourly Flow Rate, HFR (veh/h)	172	0	44	_	0	0	-	0	
Percent Heavy Vehicles	2	0	0	_	0	0		0	
Percent Grade (%)		0				0		_	
Flared Approach		N			-	N		-	
Storage		0		-		0			
RT Channelized			0				110	0	
Lanes	0	0	0	11	0	0		0	
Configuration	-	LR			_				
Delay, Queue Length, a	nd Level of Se	rvice							
Approach	Eastbound	Westbound	N	lorthboun	d	Se	outhbound	ł	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		LT	-	LR	+	1	1		
v (veh/h)		66		216	1000	1 1	S	1	
C (m) (veh/h)		965	1	417			1		
v/c		0.07		0.52	7	-		1	
95% queue length	-	0.22	-	2.89	1	1 2 3 1 1	-		
Control Delay (s/veh)		9.0	V	22.5	-	1		1	
LOS		9.0 A	2	22.5 C	-	1		-	
		A		22.5		1		-	
Approach Delay (s/veh)		-	22			4		-	

#### Two-Way Stop Control

TWO-WAY STOP CONTROL SUMMARY Site Information **General Information** Alt A Outbound Montgomery Analyst ntersection ramps/Spotted JUB Engineers Agency/Co. Jurisdiction Date Performed 11/19/2014 2035 Analysis Year Analysis Time Period PM Peak Hour Project Description Airport Drive Couplet at Spotted Road Intersection Study East/West Street: Airport Drive North/South Street: Spotted Road Intersection Orientation: North-South Study Period (hrs): 0.25 Vehicle Volumes and Adjustments Northbound Southbound Major Street Movement 2 3 4 5 6 1 R T R Т L T 60 195 195 200 Volume (veh/h) Peak-Hour Factor, PHF 0.90 0.90 1.00 1.00 0.90 0.90 Hourly Flow Rate, HFR 66 216 0 0 216 222 (veh/h) 0 -2 Percent Heavy Vehicles ---Two Way Left Turn Lane Median Type 0 **RT** Channelized 0 0 1 0 0 1 0 Lanes Configuration LT TR Upstream Signa 0 D Minor Street Eastbound Westbound Movement 8 9 10 11 12 7 R Т R 1 Т L Volume (veh/h) 5 40 1.00 1.00 1.00 Peak-Hour Factor, PHF 0,90 1.00 0.90 Hourly Flow Rate, HFR 0 44 0 0 0 5 (veh/h) 2 Percent Heavy Vehicles 2 0 0 0 0 Percent Grade (%) 0 0 N Ν Flared Approach 0 0 Storage 0 0 **RT** Channelized 0 0 0 0 anes 0 0 Configuration LR Delay, Queue Length, and Level of Service Westbound Eastbound Northbound Southbound Approach Movement 1 4 7 8 9 10 11 12 ane Configuration LT LR 49 66 (veh/h) C (m) (veh/h) 1122 684 0.07 0.06 vic 0.23 95% queue length 0.19 Control Delay (s/veh) 8.4 10.7 LOS Α В Approach Delay (s/veh) -10.7 -Approach LOS В HCS+TM Version 5.6

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#### Two-Way Stop Control

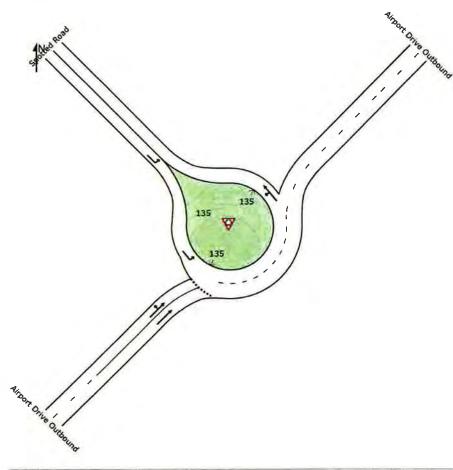
Page 1 of 1

General Information			Site In	forma	tion						
	Montgome		Intersec			Alt A Spot	Hod/21ot	_			
Analyst Agency/Co.	JUB Enair		Jurisdic			MIL A Spor	100/2150	_			
Date Performed	11/19/201		Analysis			2035					
Analysis Time Period	PM Peak			5 Tear		1.000					
		let at Spotted Ro	ad Intersec	tion St	inte	-		_			
East/West Street: 21st /		iel al Spolled Ho				Rd		_			
ntersection Orientation:	North-South		North/South Street: Spotted Rd Study Period (hrs): 0.25								
	d Adjustmo	nto	the state of the s		-	-		_			
Vehicle Volumes an	IO AUJUSUIIE	Northbound		- 1		Southbou	nd	-			
Major Street Movement	1 1	2	3	3 4			T	6			
vovement		T	R	-		5 T	-	R			
Volume (veh/h)	200	10	5	-	10	10	-	10			
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90			
Hourly Flow Rate, HFR (veh/h)	222	11	5		11	11		11			
Percent Heavy Vehicles	2	1 - A	1		0	**		+			
Median Type			Two Way Left Turn Lane								
RT Channelized	1 K-		0	1		1	- 11	0			
anes	1	1	0		1	1 1		0			
Configuration	L		TR		L		1	TR			
Upstream Signal		0				0					
Minor Street	1	Eastbound				Westbou	nd				
Movement	7	8	9		10	1 11	1.1	12			
C. C. OF C. BLUE	L	T	R		L	T	100	R			
Volume (veh/h)	205	10	395		10	10	211	10			
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90			
Hourly Flow Rate, HFR (veh/h)	227	11	438		11	11		11			
Percent Heavy Vehicles	2	0	2		0	0	Mar In	0			
Percent Grade (%)	1	0		-		0					
Flared Approach		N			1.	N	11				
Storage	1	0				0	-010-1				
RT Channelized	P		0			1		0			
Lanes	1	1	0		1	1	2.7	0			
Configuration	Ĺ	1	TR		L		1	TR			
Delay, Queue Length, a	and Level of Se	INICA	-	-		-					
Approach	Northbound	Southbound	V	Vestbo	und	T	Eastbound	-			
Movement	1	4	7	8	9	10	11	12			
Lane Configuration	L	L	L		TR	L		TR			
v (veh/h)	222	11	11	1	22	227		449			
	1593	1615	188	-	588	422		102			
C (m) (veh/h)				-			-	0.44			
v/c	0.14	0.01	0.06	-	0.04	0.54	-	-			
95% queue length	0.48	0.02	0.18		0.12	3.10	-	2.27			
Control Delay (s/veh)	7.6	7.2	25.3		11.4	23.0	-	11.2			
LOS	A	A	D	0	В	C		B			
Approach Delay (s/veh)		1		16.0			15.2				
Approach LOS	4	-		С			С				

# SITE LAYOUT

V Site: 2035 Outbound/Spotted Rd Mid-Day - Dual Airport Drive Outbound and Spotted Road 2035 Mid-Day

Roundabout



#### **MOVEMENT SUMMARY**

V Site: 2035 Outbound/Spotted Rd Mid-Day - Dual

Airport Drive Outbound and Spotted Road 2035 Mid-Day

Roundabout

Mov	CD	Demand		Deg	Average	Level of	95% Buck		Prop	Effective	Average
ID	Mov	folal vetuti	HV	Satri vic	Delay sec	Service	Vehicies veh	Distance	Queved	Stop Rate per veh	Speed
NorthW	lest: Spotter	i Road		0						10000	
SBL	12	514	7.0	0.402	7.1	LOSA	0.0	0.0	0.00	0,57	31.1
Approa	ch	514	7.0	0.402	7.1	LOSA	0,0	0.0	0.00	0.57	31.1
SouthV	Vest: Airport	Drive Outbou	Ind								
WBL	L2	6	1_0	0,341	12.5	LOS B	2.1	53 3	0.67	0,65	33,1
WBT	T1	691	1.0	0.341	5.0	LOS A	2.2	56.3	0.66	0,61	33.4
Арргоа	ch	697	1.0	0.341	5.0	LOS A	2.2	56.3	0.66	0.61	33,4
All Veh	icles	1211	3.5	0.402	5.9	LOS A	22	56.3	0.38	0.59	32.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundaboul LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010),

Roundabout Capacity Model: SIDRA Standard

SIDRA Standard Delay Model is used Control Delay includes Geometric Delay

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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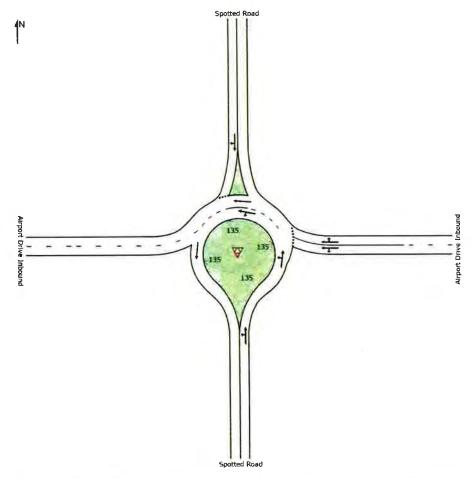
SIDRA INTERSECTION 6

ALT B

#### SITE LAYOUT

#### 🕅 Site: 2035 Inbound/Spotted Rd Mid-Day - Dual

Airport Drive Inbound and Spotted Road 2035 Mid-Day Roundabout



#### MOVEMENT SUMMARY

V Site: 2035 Inbound/Spotted Rd Mid-Day - Dual

Airport Drive Inbound and Spotted Road 2035 Mid-Day Roundabout

Moven	nent Perfo	rmance - Ve	hicles								
Mov ID	OD Mov	Demand Total vehili	Flows HV	Dog Satri	Average Delay	Level of Service	95% Back o Vehicles veh	ol Querio Distanor 1	Prop. Queued	Effective Stop Rate	Average Speed
South:	Spotted Ros							_		20 9997 3	(Lales
NBL	L2	1	3.0	0.004	7.1	LOS A	0.0	0,0	0.00	0,19	34.9
NBT	T1	5	3.0	0.004	0.3	LOSA	0.0	0.0	0.00	0,19	34.0
Approa	ch	6	3.0	0.004	1.7	LOS A	0.0	0.0	0.00	0.19	34,2
East: A	inport Drive	Inbound									
WBL	L2	1	2.0	0.281	8.8	LOS A	1.8	44.6	0,06	0.22	35.9
WBT	T1	597	2.0	0.281	2.0	LOS A	1.8	44.6	0,06	0.25	35.3
WBR	R2	330	2.0	0.281	2.7	LOS A	1.7	44.2	0.05	0.31	33.8
Approa	ich	927	2.0	0.281	2.3	LOS A	1.8	44.6	0.06	0 27	34.6
North:	Spotted Roa	ad									
SBT	T1	370	7.0	0.503	7.0	LOS A	3.0	79.6	0.68	0.81	31.5
SBR	R2	5	7.0	0.503	7.6	LOSA	3.0	79.6	0.68	0.81	31.9
Approa	ich	375	7.0	0.503	7.1	LOS A	3.0	79.6	0,68	0.81	31.0
All Veh	icles	1308	3.4	0.503	3.6	LOS A	3.0	79,6	0.23	0.42	34.0

Level of Service (LOS) Method: Delay & v/c (HCM 2010),

Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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# ALT B YE

2035 High Tee.syn Lanes, Volumes, Timings 11/24/2014 8: Airport Drive Outbound/Airport Drive & Spotted Road & Airport Drive Inbound 29 1 - 6 \* \* 1 - 1 EDI COD NUA NUR NEI NET NER SWL SWT SWR

Lane Group	EBL	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations			14			11	*	٦		14	
Volume (vph)	0	0	195	60	0	675	195	40	0	620	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (It)	0	0	0	0	0		100	0		0	
Storage Lanes	ō	0	1	0	0		1	1		2	
Taper Length (ft)	25		25		25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1 00	0 95	1 00	1.00	1 00	0.88	
Fr		1.00	0.958				0.850			0.850	
Fit Protected			0 963					0.950			
Satd, Flow (prot)	0	0	1736	0	0	3539	1583	1770	0	2787	
Fit Permitted	.0		0 963				Lefe:	0.950			
	0	0	1736	0	0	3539	1583	1770	0	2787	
Satd. Flow (perm)	0		1100	Yes	Yes		Yes	1000200		Yes	
Right Turn on Red			109	169	100		212			674	
Setd. Flow (RTOR)	30		35			50			50	-	
Link Speed (mph)	1000		607			1470			663		
Link Distance (ft)	643					20.0			9.0		
Travel Time (s)	14.6		11.8		0.92		0.92	0.92	0.92	0.92	
Peak Hour Factor	0.92	0.92	0.92	0.92		0.92			0.82	674	
Adj. Flow (vph)	0	0	212	65	0	734	212	43	0	0/4	
Shared Lane Traffic (%)						-				674	
Lane Group Flow (vph)	0	0	277	0	0	734	212	43	0		
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0	- and the	12			12			12		
Link Offset(ft)	0		0			0			0		
Crosswalk Width(ft)	16		16			16			16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15	9	15		9	15		9	
Number of Detectors			1			2	1	1		1	
Detector Template			Left			Thru	Right	Left		Right	
Leading Detector (ft)			20			100	20	20		20	
Trailing Detector (ft)			0			0	0	0		0	
Detector 1 Position(ft)			0			0	0	0		0	
Detector 1 Size(ft)			20			6	20	20		20	
			CI+Ex			CI+Ex	CI+Ex	CI+Ex		CI+Ex	
Detector 1 Type			GITLA								
Detector 1 Channel			0.0			0.0	0.0	0.0		0.0	
Detector 1 Extend (s)			0.0			0.0	0.0	0.0		0.0	
Detector 1 Queue (s)						0.0	0.0	0.0		0.0	
Detector 1 Delay (s)			0.0			94	0.0				
Detector 2 Position(ft)						6					
Datector 2 Size(ft)						CI+Ex					
Detector 2 Type						CITEX					
Detactor 2 Channel											
Detector 2 Extend (s)			-			0.0	Daves	Prot		Free	
Turn Type			Prot			NA	Perm			Fiee	
Protected Phases			2			4		3		Free	
Permitted Phases			-				4			1169	
Detector Phase			2			4	4	3	-		

Spotted Road 7/8/2014 2035 High Tee J-U-B

Synchro 8 Report Page 1

ب_	-	*	1	1	1	-	4	*	*	
Lane Group EB	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR	1023
Switch Phase										
Minimum Initial (s)		4.0			4.0	4.0	4.0			
Minimum Split (s)		20.0			20.0	20.0	8.0			
Total Split (s)		20.0			22.0	22.0	8.0			
Total Split (%)		40.0%			44.0%	44.0%	16.0%			
Maximum Green (s)		16.0			18.0	18.0	4.0			
Yellow Time (s)		3.5			3.5	3.5	3.5			
All-Red Time (s)		0.5			05	05	05			
Lost Time Adjust (s)		0.0			0.0	0.0	0.0			
Total Lost Time (s)		4.0			40	4.0	40			
Lead/Lag		2.4			Lag	Lag	Lead			
Lead-Lag Optimize?					Yes	Yes	Yes			
Vehicle Extension (s)		3.0			3.0	3.0	3.0			
Recall Mode		Max			C-Max	C-Max	None			
Walk Time (s)		5.0			5.0	5.0				
Flash Dont Walk (s)		11.0			11.0	11.0				
Pedestrian Calls (#/hr)		0			0	0				
Act Effct Green (s)		16.0			22.8	22.8	4.0		50 0	
Actuated g/C Ratio		0.32			0.46	0.46	0.08		1.00	
v/c Ratio		0.44			0.45	0.25	0.30		0.24	
Control Delay		10.7			11.5	3.1	27.7		0.2	
Queue Delay		0.0			0.0	0.0	0.0		0.0	
Total Delay		10.7			11.5	3.1	27.7		0.2	
LOS		В			В	A	C		A	
Approach Delay		10.7			9.6					
Approach LOS		В			A					
Intersection Summary	Const.		12-3	1000	2	200	123	200	25-2	12.00
Area Type: Other										
Cycle Length: 50										
Actuated Cycle Length: 50										
Offset: 28 (56%), Referenced to ph	lase 4:NET,	Start of G	Green							
Natural Cycle: 50										
Control Type: Actuated-Coordinate	d									
Maximum v/c Ratio: 0 45				e						
Intersection Signal Delay: 6.9					on LOS: A					
Intersection Capacity Utilization 46	.5%		R	U Leve	of Servic	AB				
Analysis Period (min) 15										
Splits and Phases: 8. Airport Dri	ve Outbourn	Airport D	Drive & St	otted R	oad & Ain	port Drive	Inbound	1		
		T	1			14 (R)				

Spotted Road 7/8/2014 2035 High Tee J-U-B

Synchro 8 Report Page 2

	*	*	-	- <u>C</u>	1	
Lone Group In The	NW.	NET	NER	SIM	SWR	
Lane Group Flow (vph)	277	734	212	43	674	
v/c Ratio	0.44	0.45	0.25	0.30	0.24	
Control Delay	10.7	11.5	3.1	27.7	0.2	and the second se
Queue Delay	0.0	0.0	0.0	0.0	0.0	Ser Contraction in Frank (Albert Contraction of
Total Delay	10.7	11.5	3.1	27.7	0.2	
Queue Length Soth (ft)	36	61	0	12	0	near to do the present the rest of
Queue Length 95th (ft)	86	133	33	36	0	
Internal Link Dist (ft)	527	.1390	(EN/A)		1.1	
Turn Bay Length (ft)			100			and the second se
Base Capacity (vph)	629	1614	836	141	2787	and the set of the set of the set
Starvation Cap Reductn	0	0	0	0	0	and the second sec
Spillback Cap Reductn	0	0	0	0	0	the and the second second and the
Storage Cap Reductn	0	0	0	0	0	and the second states of the s
Reduced v/c Ratio	0.44	0.45	0.25	0.30	0.24	A BARRIE CARLES IN THE IS A

mineraction Summary

1 A 11

Spotted Road 7/8/2014 2035 High Tee J-U-B

Synchro 8 Report Page 3

## Two-Way Stop Control

Page 1 of 1

<b>General Information</b>			Site In	format	ion					
Analyst	Montgomer	v	Interse			Alt C Airpoi	1 Dr In/2	Is		
Agency/Co.	JUB Engine		Jurisdie							
Date Performed	11/19/2014		Analys			2035		_		
Analysis Time Period	PM Peak H	our				1				
Project Description Airpo	ort Drive Couple	at at Spotted Roa	ad Intersed	tion Stud	ly					
East/West Street: Airport			North/South Street: 21st Avenue							
ntersection Orientation:	North-South		Study Period (hrs): 0.25							
Vehicle Volumes and	Adjustmen	ts						-		
Major Street		Northbound				Southbound				
Movement	1	2	3		4	5	-	6		
	L	T	R	-	L	T	-	R		
/clume (veh/h)	60	140	0.00	-	0.90	560	-	5 0.90		
Peak-Hour Factor, PHF	0.90	0.90	0.90	-			-			
Hourly Flow Rate, HFR (veh/h)	66	155	0	100	0	622	-	5		
Percent Heavy Vehicles	2	1-	-		0	-	-	8		
Median Type	6		Two V	Vay Left 1	rum Lane					
RT Channelized	3	12 i	0				-	0		
Lanes	1	1	0		0	1	1	0		
Configuration	L	T						TR		
Upstream Signal	1	0	0	_		0	_			
Minor Street		Eastbound				Westboun	ď			
Movement	7	8	9	-	10	11	-	12		
	L	Т	R	-	L	Т	-	R		
Volume (veh/h)				-	40	0.00	_	155		
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90	_	0.90		
Hourly Flow Rate, HFR (veh/h)	0	0	0		44 0		_	172		
Percent Heavy Vehicles	2	0	2	E	0	0		0		
Percent Grade (%)		0				0				
Flared Approach		N			-	N	1			
Storage		0	1			0				
RT Channelized			0					0		
Lanes	0	0	0		0	0		0		
Configuration	-		1		-	LR	12			
Delay, Queue Length, ar	d Level of Ser	vice								
	Northbound	Southbound	E-6	Westbou	nd	E	astbound			
Movement	1	4	7	8	9	10	11	12		
Lane Configuration	L		1000	LR				1		
v (veh/h)	66	And and a second se		216	1			1		
C (m) (veh/h)	955		· · · · ·	701	-			1		
v/c	0.07			0.31	1.		_	1		
95% queue length	0.22			1.31	-					
Control Delay (s/veh)	9.0		1	12.4	-			-		
LOS	9.0 A		-	B	-			1		
			-	12.4	-	1	-	-		
Approach Delay (s/veh)	-		1.	12.4		1				

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HCS+<sup>TM</sup> Version 5.6 Generated: 11/19/2014 4:27 PM

#### Two-Way Stop Control

Page 1 of 1

General Information			Site In	formatio	n			
Analyst	Montgome	erv .	Intersec	tion		All C Airpe	ort Dr Out	potted
Agency/Co.	JUB Engir		Jurisdic					-
Date Performed	11/19/201		Analysis	Year		2035		
Analysis Time Period	PM Peak I	Hour						
Project Description Airp	ort Drive Coup	let at Spotted Roa	d Intersecti	on Study				
East/West Street: Airpor					t: Spotted	I Road		
ntersection Orientation:	North-South		Study Pr	eriod (hrs)	0.25			
Vehicle Volumes an	d Adjustmer	nts						
Major Street	1	Northbound				Southbou	nd	
Movement	1	2	3	1.0	4	5		6
	L	Т	R		L	Т		R
/olume (veh/h)		195	60		405	195	441.5.7	_
Peak-Hour Factor, PHF	0.90	0.90	0.90		0.90	0.90		0.90
Hourly Flow Rate, HFR (veh/h)	0	216	66		450	216		0
Percent Heavy Vehicles	2	<del></del>	1 - H		0	A CAC	1	<del></del>
Median Type			Two W	ay Left Tu	ım Lane		-	-
RT Channelized			0					0
Lanes	0	1	0		1	1		0
Configuration			TR	-	L	r		
Upstream Signal		0		11		0		_
Minor Street		Eastbound				Westbou	nd	2.0
Movement	7	8	9	311	10	11		12
	j L	T	R		L	Т		R
Volume (veh/h)	5	1	40			-	-	
Peak-Hour Factor, PHF	0.90	0.90	0.90	-	0.90	0.90	-	0.90
Hourly Flow Rate, HFR (veh/h)	5	0	44	231	0	0		0
Percent Heavy Vehicles	2	0	2	-	0	0		0
Percent Grade (%)		0				0	_	
Flared Approach	1	N	1			N		-
Storage	1	0				0		
RT Channelized			0			-		0
Lanes	0	0	0	- 173	0	0		0
Configuration	0.11	LR				1		-
Delay, Queue Length, a	nd Level of Se	rvice						
Approach	Northbound	Southbound	1	Vestboun	d	-	Eastbound	
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	1			1	LR	-
v (veh/h)		450					49	-
C (m) (veh/h)		1292		1.			579	1
		0.35		1		1	0.08	-
v/c		1.58	-	-	1	-	0.28	-
95% queue length			-	-	-	-	11.8	-
Control Delay (s/veh)		9.3			-	1		-
LOS		A			-		B	-
Approach Delay (s/veh)		-		-	-	-	11.8	
Approach LOS	-					B		

### **MOVEMENT SUMMARY**

V Site: 2035 Airport Dr./Spotted Rd Mid-Day

Airport Dr. and Spotted Road 2035 Mid-Day Roundabout

Mov	-00	Demaris	Flows	Elc_	Averance	Levelul	96% Back o		Prop	Effective	Average
D		Tota'	$\mathcal{H}_{\mathcal{N}}$	Sam	Delay	Scruge	Vehicles Veh	Distance	Cational	Slop Rate	Spend
SouthE	ast: Spotted			7/12	500		- Yell	1	-	perveta	- mph
NBL	L2	63	4.0	0.507	16.5	LOS B	3.1	80.4	0.83	0.97	34.2
NBT	T1	141	4.0	0.507	93	LOS A	3.1	80.4	0.83	0.97	31.3
NBR	R2	63	4.0	0.507	10_1	LOS B	3.1	80.4	0.83	0.97	33.1
Approac	ch	266	4,0	0.507	11.2	LOS B	3.1	80.4	0,83	0 97	32.4
NorthEa	ist: Airport [	Drive Outbour	nd								
WBL	L2	45	2.0	0,299	13.8	LOS B	2.1	52.6	0.50	0.55	38_6
WBT	T1	528	2.0	0.299	6.0	LOS A	2.2	54,9	0,50	0.54	42.6
WBR	R2	176	2.0	0.299	6.0	LOS A	2.2	54.9	0.49	0.52	36.6
Approa	ch	750	2.0	0 299	6.5	LOS A	2.2	54.9	0,49	0.53	40.8
NorthW	est: 21st Av	enue									
SBL	L2	422	7.0	0.832	20.7	LOS C	9.5	251.3	0.93	1.22	30.6
SBT	T1	161	7.0	0.832	13.5	LOS B	9.5	251,3	0.93	1.22	28.6
SBR	R2	5	7.0	0.832	14.3	LOS B	9.5	251.3	0.93	1.22	29.8
Approa	ch	589	7.0	0.832	18.7	LOS B	9.5	251.3	0.93	1.22	30.0
SouthW	est: Airport	Drive Outbou	ind								
WBL	L2	6	1.0	0.441	17.9	LOS B	3.5	894	0,89	0.87	37.3
WBT	T1	646	1.0	0 441	9.4	LOS A	3.8	95 9	0.90	0.80	40.9
WBR	R2	45	1.0	0.441	8.8	LOS A	3.8	95.9	0.90	0.75	35.0
Approa	ch	697	1_0	0.441	9.5	LOSA	3.8	95.9	0.90	0.80	40.4
All Vehi	des	2301	3.2	0.832	11.1	LOS B	9.5	251.3	0.77	0.84	36.2

ALT D

SIDRA INTERSECTION 6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Signalised Intersections

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard

SIDRA Standard Delay Model is used Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akcelik M3D).

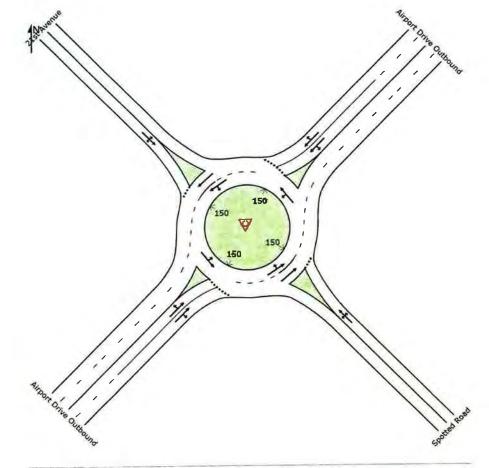
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SIDRA INTERSECTION 6.0.24 4877	www.sidrasolutions.com
Project: \\slcfiles\public\projects\jub\Kennewick Office\70-	13-033 SIA Spotted Road Study\SIDRA\SIA Spotted
Road Study.sip6	
8000863, 6016535, J U B ENGINEERS, INC , PLUS / 1P	0

## SITE LAYOUT

#### V Site: 2035 Airport Dr./Spotted Rd Mid-Day

Airport Dr. and Spotted Road 2035 Mid-Day Roundabout



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SIDRA INTERSECTION 6

Page 1 of 1

General Information			Site Int	formatic	n			
Analyst	Montgome	201	Intersec			Alt Airpor	t Dr In/Sr	otted
Agency/Co.	JUB Engin		Jurisdict		_	and prompton	T OT IT OF	Unite U
Date Performed	11/19/201		Analysis		-	2035		_
Analysis Time Period	PM Peak							
	port Drive Coup	let at Spotted Roa	ad Intersect	ion Study	-			
East/West Street: Airpor				uth Street	t: Spotte	d Rd	-	
ntersection Orientation:	North-South		Study Pe	eriod (hrs)	0.25			_
Vehicle Volumes an	d Adjustme	nts					_	
Major Street	1	Northbound				Southboun	d	
Movement	1	2	3	2	4	5		6
	L	T	R	-	L	T	- 10	R
Volume (veh/h)	0	140		-		355	-	5
Peak-Hour Factor, PHF	0.90	0.90	0.90	-	0.90	0.90		90
Hourly Flow Rate, HFR (veh/h)	0	155	0		0	394	_	5
Percent Heavy Vehicles	2				0	-	_	÷.,
Median Type		-		Undivideo	1	1	-	-
RT Channelized	1	1	0	-			-	0
Lanes	0	1	0	1.0	0	1	-	0
Configuration	LT	12 mar 1		-			-	TR
Upstream Signal	0.0	0	-			0	-	_
Minor Street		Eastbound		1		Westboun	d	12
Movement	7	8	9	_	10	11		
	L	Т	R	_	L	Т	-	R
Volume (veh/h)		-	0.00		0	0.90		155 0.90
Peak-Hour Factor, PHF	0.90	0.90	0.90	-				
Hourly Flow Rate, HFR (veh/h)	0	0	0	-13	0	0	172	
Percent Heavy Vehicles	2	0	2	-	0	0	-	0
Percent Grade (%)	4.1	0	-	-	_	0	-	_
Flared Approach	1	N		-		N		_
Storage		0		-		0	-	
RT Channelized	1		0			1		0
Lanes	0	0	0		0	0	1111	0
Configuration						LR	- Other	_
Delay, Queue Length, a	and Level of Se					-		
Approach	Northbound	Southbound	V	Vestbound			astbound	_
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT	15	1	LR			-	
v (veh/h)	0			172		10	12.24	
C (m) (veh/h)	1160	200		896	2	48		
v/c	0.00			0.19		all and a second		
95% queue length	0.00			0.71		1000	2002	
Control Delay (s/veh)	81			10.0		1		
LOS	A	1	1	A				1
Approach Delay (s/veh)	A		-	10.0	-		-	
Approach LOS	-		A			-		

## Two-Way Stop Control

Page 1 of 1

<b>General Information</b>			Site In	forma	tion					
Analyst	Montgome	inv.	Interse	ction		All Spot	ted/21st			
Agency/Co.	JUB Engin		Jurisdia							
Date Performed	11/19/201		Analysi	s Year		2035				
Analysis Time Period	PM Peak	Hour								
Project Description Airp	ort Drive Coup	let at Spotted Ro.	ad Intersed	tion Stu	idy		_			
ast/West Street: 21st A					reet: Spotter	Rd				
ntersection Orientation:	East-West		Study F	eriod (h	rs): 0.25					
Vehicle Volumes and	d Adjustme	nts		-	-					
Major Street	1	Eastbound				Westbou	nd			
Vovement	1	2	3		4	5		6		
	L	T	R		L	Т		R		
/olume (veh/h)	205	10	360		10	10		10		
Peak-Hour Factor, PHF	0.90	0.90	0.90	1.00	0.90	0.90	0	90		
Hourly Flow Rate, HFR (veh/h)	227	11	400	- 1	11	11		11		
Percent Heavy Vehicles	2	*			0			-		
Median Type			Two V	lay Left	Tum Lane					
RT Channelized			0	-				0		
Lanes	1	1	0		1	1		0		
Configuration	L	And the second second	TR		L		-	TR		
Upstream Signal		0				0				
Minor Street	1	Northbound				Southbou	Southbound			
Movement	7	8	9	1	10	11		12		
	L	T	R		L	Т		R		
Volume (veh/h)	290	10	5		10	10		10		
Peak-Hour Factor, PHF	0.90	0.90	0.90	- P	0.90	0.90	(	0.90		
Hourly Flow Rate, HFR (veh/h)	322	11	5			11		11		
Percent Heavy Vehicles	2	0	0	-	0	0	2 T 12 T	0		
Percent Grade (%)	1.2.1.2.2.	0	1			0				
Flared Approach	11	N	1			N				
Storage	-	0				0	100			
RT Channelized	1		0	-				0		
Lanes	1	1	0	-	1	1		0		
Configuration	L	1	TR		L			TR		
Delay, Queue Length, a		-					-	-		
	Fastbound	Westbound	-	Northbo	und	1 .	Southbound			
Approach					9		11	12		
Movement	1	4	7	8	_	10				
Lane Configuration	L	L	L	C	TR	L	-	TR		
v (veh/h)	227	11	322	-	16	11	2	22		
C (m) (veh/h)	1593	1159	336		383	324	<sup>1</sup>	388		
v/c	0.14	0.01	0.96	1000	0.04	0.03		0.06		
95% queue length	0.50	0.03	10.15		0.13	0.11	100	0.18		
Control Delay (s/veh)	7.6	8.1	75.0	·	14.8	16.5		14.8		
LOS	A	A	F		В	С	1.000	В		
Approach Delay (s/veh)	-	-		72.1			15.4	-		
Approach LOS			F.			C				

#### Two-Way Stop Control

Page 1 of 1

General Information			Site In	format	ion			
			Intersec			All & Spot	tod/21st	
Analyst	Montgome JUB Engin		Uurisdic		-	Hit B Spor	160/2131	-
Agency/Co. Date Performed	11/19/201		Analysis			2035		
Analysis Time Period	PM Peak I		- I and the					
	A DESCRIPTION OF A DESC	let at Spotted Roa	and Intersect	tion Stud	NV NV	-		
East/West Street: 21st A		or of oppingo rice	North/Se	outh Stre	et: Spotted	Rd		
ntersection Orientation:	North-South			eriod (hr				
Vehicle Volumes an	d Adjustme	nts		_				-
Major Street	I	Northbound		1		Southbou	nd	1.1
Movement	1	2	3		4	5	100	6
ine rentrent	L	T	R	-110	L	T	1	R
Volume (veh/h)	290	10	5		10	10		10
Peak-Hour Factor, PHF	0.90	0.90	0.90	11	0.90	0.90		0.90
Hourly Flow Rate, HFR (veh/h)	322	11	5		11	11		11
Percent Heavy Vehicles	2		-		0			-
Median Type	1	-		ay Left 7	fum Lane	-	-	0
RT Channelized	1	1	0	-			- N 1	0
Lanes	1	1	0	-	1	1		0
Configuration	L	11.1.1.1.1.1.1.1	TR	-	L	-	-	TR
Upstream Signal	-	0		_	_	0		
Minor Street	1	Eastbound	1 6	-	10	Westbou	nd	12
Movement	7	8	9		10	13 T	-	R
	L	T	R		10	10	-	10
Volume (veh/h)	205	10	360	-	0.90	0.90	-	0.90
Peak-Hour Factor, PHF Hourly Flow Rate, HFR	0.90		1	-		-	-	
(veh/h)	227	11	400	-	11	11	-	11 0
Percent Heavy Vehicles	2	0	2		U	0		U
Percent Grade (%)	1	0	1	-				
Flared Approach	1	N	1				-	
Storage	1	0	-	-	-	0		-
RT Channelized	-		0	-		-	-	0
Lanes	1	1	0	-	1	1	100	TR
Configuration	L	P. 5	TR		L	-		IR
Delay, Queue Longth, a						1		_
Approach	Northbound	Southbound	-	Nestbou		_	Eastbound	-
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (veh/h)	322	11	11	1	22	227		411
C (m) (veh/h)	1593	1615	132	1	455	300		993
v/c	0.20	0.01	0 08	1	0.05	0.76	1	0.41
95% queue length	0.76	0.02	0.27	5-	0.15	573	-	2.06
Control Delay (s/veh)	7.8	7.2	34.7	6	13.3	46.4	1.0	11.2
LOS	A	A	D	8	В	E		B
Approach Delay (s/veh)		-	10000	20.5		23.7		
Approach LOS	1. CH			C		C		

# ALT B YE

Lanes, Volumes, Timings 2035 High Tee.syn 8: Airport Drive Outbound/Airport Drive & Spotted Road & Airport Drive Inbound 11/24/2014

	1	-	*	ť	3	*	~	4	*	-	
Lane Group	EBL	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR	
Lane Configurations		-	Y			<b>^</b>	7	7	_	17	
Volume (vph)	0	0	195	60	0	675	195	40	0	620	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0	0	0	0	0		100	0		0	
Storage Lanes	0	ő	1	0	0		1	1		2	
Taper Length (ft)	25		25		25		-	25		-	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.88	
Fr.	1.00	1.00	0.968	1.00	1.00	0.00	0.850	1.64		0.850	
Fit Protected			0.963					0 950			
	0	0	1735	0	0	3539	1583	1770	0	2787	
Satd. Flow (prot)	ų	0	0.963	.0	Ŷ	2003	1005	0.950		L. VI	
Fit Permitted	0		1735	0	0	3539	1583	1770	0	2787	
Satd. Flow (perm)	U	0	11.30	Yes		2033	Yes	1110		Yes	
Right Turn on Red			- 100	Tes	Yes					674	
Satd. Flow (RTOR)			109				212		50	0/4	
Link Speed (mph)	30		35			50					
Link Distance (ft)	643		607			1470			663		
Travel Time (s)	14.6		11.8		- Dates	20.0			9.0		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj Flow (vph)	0	0	212	65	0	734	212	43	0	674	
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	0	277	0	0	734	212	43	0	674	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(ft)	0		12			12			12		
Link Offset(ft)	0		0			0			0		
Crosswalk Width(ft)	16		16			16			16		
Two way Left Turn Lane											
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15	9	15	9	15		9	15		9	
Number of Detectors			1			2	Ť	1		1	
Detector Template			Left			Thru	Right	Left		Right	
Leading Detector (ft)			20			100	20	20		20	
Trailing Detector (ft)			0			0	0	0		0	
Detector 1 Position(ft)			õ			0	G	0		0	
Detector 1 Size(ft)			20			6	20	20		20	
Detector 1 Type			CI+Ex			CI+Ex	CI+Ex	CI+Ex		CI+Ex	
Detector 1 Channel			VITLA			OF LA	and sent	Al mit		41-40	
			0.0			0.0	0.0	0.0		0.0	
Detector 1 Extend (s)			0.0			0.0	0.0	0.0		0.0	
Detector 1 Queue (s)			0.0			0.0	0.0	0.0		0.0	
Detector 1 Delay (s)			0,0			94	0.0	4.4		0.0	
Detector 2 Position(ft)						5					
Detector 2 Size(ft)						CI+Ex					
Detector 2 Type						CI+EX					
Detector 2 Channel						0.0					
Detector 2 Extend (s)						0.0	Devis	Duit.		Free	
Turn Type			Prot			NA	Perm	Prot		P166	
Protected Phases			2			4		3		Freis	
Permitted Phases							- 4			Free	
Detector Phase			2			4	4	3			

Spotted Road 7/8/2014 2035 High Tee J-U-B

Synchro 8 Report Page 1

2035 High Tee.syn Lanes, Volumes, Timings 8: Airport Drive Outbound/Airport Drive & Spotted Road & Airport Drive Inbound 11/24/2014 \* ۲ 1 1 -XA NEL NET NER SWL SWT SWR EBR NWL NWR Lane Group FB Switch Phase 4.0 4.0 4.0 4.0 Minimum Initial (s) 20.0 20.0 20.0 8.0 Minimum Split (s) 22.0 22.0 8.0 Total Split (s) 20.0 40.0% 44.0% 44.0% 16.0% Total Split (%) 16.0 18.0 18.0 40 Maximum Green (s) 3.5 3.5 3.5 Yellow Time (s) 3.5 0.5 05 0.5 0.5 All-Red Time (s) 0.0 0.0 0.0 0.0 Lost Time Adjust (s) 4.0 4.0 4.0 Total Lost Time (s) 4.0 Lag Lag Lead Lead/Lag Yes Yes Yes Lead-Lag Optimize? 3.0 3.0 3.0 3.0 Vehicle Extension (s) Max C-Max C-Max None Recall Mode 5.0 5.0 5.0 Walk Time (s) Flash Dont Walk (s) 11.0 11.0 11.0 0 0 0 Pedestrian Calls (#/hr) 16.0 22.8 22.8 4.0 50.0 Act Effct Green (s) 1.00 0.32 0.46 0.46 0.08 Actuated g/C Ratio 0.44 0.45 0.25 0.30 0.24 vic Ratio 10.7 11.5 3.1 27.7 0.2 Control Delay 0.0 0.0 0.0 Queue Delay 0.0 0.0 10.7 11.5 3.1 27.7 0.2 Total Delay B ¢ A в A LOS 10.7 9.6 Approach Delay A В Approach LOS Intersection Summary Area Type: Other Cycla Length: 50 Actuated Cycle Length: 50 Offset: 28 (56%), Referenced to phase 4:NET, Start of Green Natural Cycle 50 Control Type: Actuated-Coordinated Maximum v/c Ratio: 0.45 Intersection LOS: A Intersection Signal Delay, 6.9 ICU Level of Service A Intersection Capacity Utilization 46.5% Analysis Period (min) 15 Splits and Phases: 8: Airport Drive Outbound/Airport Drive & Spotted Road & Airport Drive Inbound A 02 A. 64 (R) 403 22.5 20.5

Spotted Road 7/8/2014 2035 High Tee J-U-B

Synchro 8 Report Page 2

	*	*	4	4	1	
Lane Group	NWL	NET	NER	SWL	SWR	
Lane Group Flow (vph)	277	734	212	43	674	and the second sec
v/c Ratio	0.44	0.45	0.25	0.30	0.24	
Control Delay	10,7	11.5	3.1	27.7	0.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	Surger Annual Strength States and a second state
Total Delay	10.7	11.5	3.1	27.7	0.2	in the second
Queue Length 50th (ft)	36	61	0	12	0	Carlos and the state of the second
Queue Length 95th (ft)	86	133	33	36	0	the second
Internal Link Dist (ft)	527	1390	COL:	S + 1	1000	A BUILD DOE TO BE COMPANY TO AND
Turn Bay Length (ft)			100			
Base Capacity (vph)	629	1614	836	141	2787	Without the special states and
Starvation Cap Reductn	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0.	0	and the second states of the second states of the
Storage Cap Reductn	0	0	0	0	0	A REAL PROPERTY OF A REAL PROPER
Reduced v/c Rabo	0.44	0.45	0.25	0.30	0.24	and the second sec

\*

 $\mathbf{r}$ 

Spotted Road 7/8/2014 2035 High Tee J-U-B

Synchro 8 Report Page 3

Intersection Summary

Appendix I

# **Travel Time Calculations for Each Alternative**

# **TRAVEL TIME CALCULATIONS**

No-Bu	ild			Alt A - Partial Cloverleaf	Intercha	nge		Alt B - Two Roundabouts an
Inbound from US 2 exit to McFarlane Segment	Spee Distance (MPF		avel ne (sec)	Inbound from US 2 exit to McFarlane Segment		Speed Tra (MPH) Tin		Inbound from US 2 exit to McFarlane Segment
US 2 to east of Flint	10807	50	147	US 2 to east of Flint	10807	50	147	US 2 to east of Spotted
east of Flint to McFarlane	3798	35	74	east of Flint to McFarlane	3798	35	74	200 ' east and west of Spotted
	3730	33	, ,		5756	55		200' west of Spotted to e/o Flint
								east of Flint to McFarlane
								delay WBT at roundabout
Length in Miles	5 2.77			Length in Miles	2.77			Length in Mi
Total Seconds			221	Total Seconds			221	Total Secor
Travel Time in Minutes			3:41	Travel Time in Minutes			3:41	Travel Time in Minut
	)		5.41	Have time in Minutes	)		5.41	
Outbound from Flint to US 2				Outbound from Flint to US 2				Outbound from Flint to US 2
Flint to east of Flint	1203	35	23	Flint to east of Flint	1203	35	23	Flint to east of Flint
east of Flint to US 2	10131	50	138	east of Flint to US 2	10356	50	141	east of Flint to 200' w/o Spotted
								200 ' west and east of Spotted
								200 east of Spotted to US 2
								delay EBT at roundabout
								delay at new intersection
Length in Miles	2.15			Length in Miles	2.19			Length in Mi
Total Seconds	5		161	Total Seconds	5		164	Total Secor
Travel Time in Minutes	5		2:41	Travel Time in Minutes	5		2:44	Travel Time in Minut
Spotted Road Northbound from south	of RPZ to Flint			Spotted Road Northbound from south of RP	Z to Flint			Spotted Road Northbound from south of RF
Spotted Rd s/o RPZ to Outbound	2800	35	55	Spotted Rd s/o RPZ to 21st Ave	6488	35	126	Spotted Rd s/o RPZ to Outbound
Spotted Outbound to Inbound	608	30	14	21st Ave from Spotted to Flint	5189	35	101	Inbound from new Int to 200' e/o Spotted
Inbound from Spotted to e/o Flint	3295	50	45	delay NBT at Spotted/Outbound ramps			8	200' east and north of Spotted
Inbound e/o Flint to Flint	1970	35	38	delay NBL at Spotted/21st			8	Spotted north to 21st Ave
Flint from Inbound to 21st	2600	35	51				Ū	21st Ave from Spotted to Flint
delay NBT at Spotted/Outbound	2000	33	33					delay NBL at new intersection
delay NBL at Spotted/Inbound			32					delay at roundabout
			52					delay at Spotted/21st
Length in Miles	2.14			Length in Miles	2.21			Length in Mi
Total Seconds			268	Total Seconds			243	Total Secor
Travel Time			4:28	Travel Time			4:03	Travel Ti
Traver Time	:		4.20	Taver Time	:		4.05	Tavern
21st Avenue Eastbound from Flint to U	US 2			21st Avenue Eastbound from Flint to US 2				21st Avenue Eastbound from Flint to US 2
Flint from 21st to Inbound	2600	35	51	21st Avenue from Flint to Outbound	7249	35	141	21st Avenue from Flint to Spotted
Flint from Inbound to Outbound	1200	50	16	Outbound from Spotted to US 2	6188	50	84	Spotted from 21st to Outbound (less rdbts)
Flint to east of Flint	1203	35	23	delay EBR at 21st/Spotted			11	200' north and east of Spotted
east of Flint to US 2	10356	50	141					Outbound from Spotted to US 2
delay SBT at Flint/Inbound			21					delay EBR at 21st/Spotted
delay SBL at Flint/Outbound			39					delay at Inbound roundabout
								delay at Outbound roundabout
								delay at new intersection
Length in Miles	5 2.91			Length in Miles	2.54			Length in Mi
Total Seconds			291	Total Seconds			236	Total Secor
Travel Time			4:51	Travel Time			3:56	Travel Ti
		L				L		

# Roundabouts and Continuous Green -T

	Continue			
it to McFarlane	<b>.</b>	Speed	Travel	
	Distance	(MPH)	Time (	
d	7312		50	100
Spotted	400		20	14
o e/o Flint	3095		50	42
ane	3798		35	74
about				2
Length in Miles	2.77			
Total Seconds			_	232
Travel Time in Minutes				3:52
o US 2				
0 0 5 2	1203		35	23
a Spottad			50	
o Spotted	3875			53
Spotted	400		20	14
US 2	5856		50	80
about				5
ection				11
Length in Miles	2.15			
Total Seconds				186
Travel Time in Minutes				3:06
ound from south of RPZ t	o Flint			
Outbound	4360		35	85
to 200' e/o Spotted	1787		50	24
Spotted	400		20	14
Ave	485		35	9
to Flint	5189		35	101
tersection	5105		55	101
t				3
st				0
	2 21			0
Length in Miles Total Seconds	2.31			247
			<b></b>	247
Travel Time				4:07
d from Flint to US 2				
t to Spotted	5189		35	101
Outbound (less rdbts)	693		35	14
Spotted	400		20	14
ed to US 2	5856		50	80
potted				7
undabout				7
roundabout				7
ection				, 11
Length in Miles	2.30			
Total Seconds	2.30			241
Travel Time				4:01
i avei illite				4.01

# **TRAVEL TIME CALCULATIONS**

Inbound from US 2 exit to McFarlane

Segment

# Alt C - Interchange at Airport Dr/21st/Spotted

Inbound from US 2 exit to McFarlane

Segment

# Alt D - Roundabout at Airport Dr/21st/Spotted

Speed Travel

50

20

50

35

35

50

50

35

50

35

35

35

50

73

14

69

74 6

236 3:56

23

81

57

170 2:50

85

25

101

220 3:40

101

35

57

14

9

9

Distance (MPH) Time (sec)

2.12

# Inbound from US 2 ex Segment US 2 to east of Flint east of Flint to McFarl

nuous Green -T and	Overpase	s for Spo	otted
kit to McFarlane		Speed	Travel
	Distance	(MPH)	Time (sec)
	10807	50	147
lane	3798	35	74
Length in Miles	2.77		
Total Seconds			221
Travel Time in Minutes			3:41
to US 2	4000		•••
	1203	35	23
tersection	5930		81
S 2	4201	50	57
section			12
Length in Miles	2.15		
Total Seconds			173
Travel Time in Minutes			2:53
ound from south of RPZ t	o Elint		
Outbound	4360	35	85
Spotted	1855	35	36
nd to 21st	1293	35	25
d to Flint	5189	35	101
ntersection			11
ed/21st			8
Longth in Miles	2.40		
Length in Miles Total Seconds			266
Travel Time			4:26
Haver fille			4.20
nd from Flint to US 2			
nt to Spotted	5189	35	101
Outbound	1293	35	25
ed to US 2	6056	50	83
Spotted			11
und			2
section			11
Length in Miles	2.37		

## **Outbound from Flint**

Flint to east of Flint east of Flint to new int new intersection to US delay at new inters

ound from US 2 exit to McFa	arlane		Speed	Travel
ment		Distance	(MPH)	Time (sec)
to east of Flint		10807	50	147
of Flint to McFarlane		3798	35	74
	Length in Miles	2.77		
	Total Seconds			221
Travel	Time in Minutes			3:41
Haver				5.41
bound from Flint to US 2				
to east of Flint		1203	35	23
of Flint to new intersection		5930	50	81
intersection to US 2		4201	50	57
elay at new intersection				12
	Length in Miles	2.15		
	Total Seconds			173
Travel	Time in Minutes			2:53
tted Road Northbound from				
tted Rd s/o RPZ to Outbound	1	4360		85
st from new Int to Spotted		1855	35	36
tted from Outbound to 21st		1293		25
: Ave from Spotted to Flint		5189	35	101
elay NBL at new intersectior	ו			11
elay NBL at Spotted/21st				8
		• • •		
	Length in Miles	2.40		200
	Total Seconds			266
	Travel Time			4:26
Avenue Eastbound from Fl	int to US 2			
Avenue from Flint to Spotte	ed	5189	35	101
tted from 21st to Outbound		1293	35	25
bound from Spotted to US 2		6056	50	83
elay EBR at 21st/Spotted				11
elay SBL at Outbound				2
elay at new intersection				11
,				
	Length in Miles	2.37		
	5			

# Spotted Road Northbo

- Spotted Rd s/o RPZ to West from new Int to Spotted from Outbour 21st Ave from Spotted delay NBL at new in delay NBL at Spotte

# 21st Avenue Eastbour

21st Avenue from Flin Spotted from 21st to 0 Outbound from Spotte delay EBR at 21st/S delay SBL at Outbou delay at new interse

Тс

Segment	Distance (iv	1 <b>F</b> 11) 1111	ie (sec)	Segment	Distance (
US 2 to east of Flint	10807	50	147	US 2 to new intersection	5325
east of Flint to McFarlane	3798	35	74	200' east and West of new intersection	400
				new intersection to e/o Flint	5082
				e/o Flint to McFarlane	3798
				delay at new roundabout	
Length in Miles	2.77			Length in Miles	2.77
Total Seconds			221	Total Seconds	
Travel Time in Minutes			3:41	Travel Time in Minutes	
Outbound from Flint to US 2				Outbound from Flint to US 2	
Flint to east of Flint	1203	35	23	Flint to east of Flint	1203
east of Flint to US 2	10131	50	138	east of Flint to new intersection	5930
				new intersection to US 2	4201
				delay at new roundabout	
Length in Miles	2.15			Length in Miles	2.15
Total Seconds			161	Total Seconds	
Travel Time in Minutes			2:41	Travel Time in Minutes	
Spotted Road Northbound from south of RP	Z to Flint			Spotted Road Northbound from south of RP2	Z to Flint
Spotted Rd s/o RPZ to New Intersection	4360	35	85	Spotted Rd s/o RPZ to New Intersection	4360
New Intersection to existing Spotted	1808	50	25	New Intersection to existing Spotted	1808
21st Ave from Spotted to Flint	5189	35	101	21st Ave from Spotted to Flint delay NBT at roundabout	5189
Length in Miles	2.15			Length in Miles	2.15
Total Seconds			211	Total Seconds	
Travel Time			3:31	Travel Time	
			5.51	i aver i ine	
		<u>.</u>			
				21st Avenue Eastbound from Flint to US 2	
<b>21st Avenue Eastbound from Flint to US 2</b> 21st Avenue from Flint to Spotted	5189	35	101	21st Avenue from Flint to Spotted	5189
<b>21st Avenue Eastbound from Flint to US 2</b> 21st Avenue from Flint to Spotted 21st Avenue frrom Spotted to Airport Dr		35 35	101 35	21st Avenue from Flint to Spotted 21st Avenue frrom Spotted to Airport Dr	5189 1808
<b>21st Avenue Eastbound from Flint to US 2</b> 21st Avenue from Flint to Spotted 21st Avenue frrom Spotted to Airport Dr Airport Drive from 21st/Spotted to US 2	5189			21st Avenue from Flint to Spotted	

Speed Travel

Distance (MPH) Time (sec)

Length in Miles Total Seconds Travel Time 2.12



Length in Miles Total Seconds Travel Time

207
3:27

ength in Miles	2.37	
Total Seconds		233
Travel Time		3:53

Appendix J

# **Planning Level Cost Estimates for Each Alternative**

#### **ALT A - PARTIAL CLOVERLEAF INTERCHANGE**

	Length of Road/Improve		Lane Width	Lane HMA	Lane CSBC		Shld Width	Shld HMA	Shld CSBC	Approx. earthwork	Sideslopes
Component	ment (ft)	# Lanes	(ft)	depth (ft)	depth (ft)	# Shlds	(ft)	Depth (ft)	depth (ft)	depth (ft)	(X:1)
21st Ave Extension	3800	3	12	0.25	0.75	2	4	0.17	0.83	2	4
Spotted Rd Relocation	4300	3	12	0.25	0.75	2	4	0.17	0.83	2	4
2 Lane Bridge (over 6 lanes + 2 gores)	212	2	12			2	8				
Spotted Rd connection to bridge	1050	3	12	0.25	0.75	2	4	0.17	0.83	16	2
Relocate Outbound Lanes	5000	2	12	0.50	1.00	2	6	0.17	1.33	2	4
NW Ramp	1500	1	15	0.33	0.92	2	6	0.17	1.08	2	4
NE Ramp	1300	1	15	0.33	0.92	2	6	0.17	1.08	2	4
SW Ramp	1700	1	15	0.33	0.92	2	6	0.17	1.08	10	4
SE Ramp (Loop)	1100	1	15	0.33	0.92	2	6	0.17	1.08	10	4

Totals

				Pavement									
				Removal	Earthwork	Curb/Gutter			Illumination	Permanent Signing			Construction
Component	Area (Acre)	HMA (TON)	CSBC (TON)	(SY)	(CY)	(LF)	Guardrail (LF)	Drainage (LF)	System (LF)	(LF)	Bridge (SF)	LS Items (\$)	Major Items
21st Ave Extension	5.3	3070	9000		14700	7600	0	3800	3800	3800			\$ 846,300
Spotted Rd Relocation	6.0	3470	10180		16600	8600	0	4300	4300	4300			\$ 956,940
2 Lane Bridge (over 6 lanes + 2 gores)											8480		\$ 1,526,400
Spotted Rd connection to bridge	2.7	850	2490		47300	0	2100		1050	) 1050			\$ 669,820
Relocate Outbound Lanes	6.0	5460	14060		16300	0	0		5000	5000			\$ 1,004,880
NW Ramp	1.5	820	2830		3900	0	0		1500	) 1500			\$ 199,040
NE Ramp	1.3	710	2450		3400	0	0		1300	1300			\$ 172,600
SW Ramp	4.2	930	3210		42200	0	300		1700	) 1700			\$ 626,980
SE Ramp (Loop)	2.8	600	2080		27300	0	300		1100	) 1100			\$ 408,240
Totals	29.80	15910	46300	0	171700	16200	2700	8100	19750	) 19750	8480	0	\$ 6,411,200
Unit Cost	\$ 7,000	\$ 80	\$ 18		\$ 10	\$ 10	\$ 20	\$ 25	\$ 20	\$ 2	\$ 180	\$ 1	
Total Costs	\$ 208,600	\$ 1,272,800	\$ 833,400	\$-	\$ 1,717,000	\$ 162,000	\$ 54,000	\$ 202,500	\$ 395,000	\$ 39,500	\$ 1,526,400	\$-	

		Traffic													Pr	eliminary	Co	nstruction	
	Сс	onstruction	Мо	bilization		Control	Sυ	irveying	Со	onstruction	Co	ontingency	Со	onstruction	En	gineering	Er	ngineering	
Component	Μ	ajor Items		@6%		@ 5%		@1%		Subtotal		@30%		Total		@10%		@15%	TOTAL
21st Ave Extension	\$	846,300	\$	50,778	\$	42,315	\$	8,463	\$	947,856	\$	284,357	\$	1,232,213	\$	123,221	\$	184,832	\$ 1,540,266
Spotted Rd Relocation	\$	956,940	\$	57,416	\$	47,847	\$	9,569	\$	1,071,773	\$	321,532	\$	1,393,305	\$	139,330	\$	208,996	\$ 1,741,631
2 Lane Bridge (over 6 lanes + 2 gores)	\$	1,526,400	\$	91,584	\$	76,320	\$	15,264	\$	1,709,568	\$	512,870	\$	2,222,438	\$	222,244	\$	333,366	\$ 2,778,048
Spotted Rd connection to bridge	\$	669,820	\$	40,189	\$	33,491	\$	6,698	\$	750,198	\$	225,060	\$	975,258	\$	97,526	\$	146,289	\$ 1,219,072
Relocate Outbound Lanes	\$	1,004,880	\$	60,293	\$	50,244	\$	10,049	\$	1,125,466	\$	337,640	\$	1,463,105	\$	146,311	\$	219,466	\$ 1,828,882
NW Ramp	\$	199,040	\$	11,942	\$	9,952	\$	1,990	\$	222,925	\$	66,877	\$	289,802	\$	28,980	\$	43,470	\$ 362,253
NE Ramp	\$	172,600	\$	10,356	\$	8,630	\$	1,726	\$	193,312	\$	57,994	\$	251,306	\$	25,131	\$	37,696	\$ 314,132
SW Ramp	\$	626,980	\$	37,619	\$	31,349	\$	6,270	\$	702,218	\$	210,665	\$	912,883	\$	91,288	\$	136,932	\$ 1,141,104
SE Ramp (Loop)	\$	408,240	\$	24,494	\$	20,412	\$	4,082	\$	457,229	\$	137,169	\$	594,397	\$	59,440	\$	89,160	\$ 742,997
Totals	\$	6,411,200	\$	384,672	\$	320,560	\$	64,112	\$	7,180,544	\$	2,154,163	\$	9,334,707	\$	933,471	\$	1,400,206	\$ 11,668,384

### ALT B - TWO ROUNDABOUTS WITH CONTINUOUS FLOW GREEN-T

	Length of Road/									Approx.	
	Improvement		Lane Width	Lane HMA	Lane CSBC		Shld Width	Shld HMA	Shld CSBC	earthwork depth	Sideslopes
Component	(ft)	# Lanes	(ft)	depth (ft)	depth (ft)	# Shlds	(ft)	Depth (ft)	depth (ft)	(ft)	(X:1)
21st Ave Extension	3800		3 12	2 0.25	0.75	2	2 4	0.17	0.83	2	4
Spotted Rd Relocation	4300		3 12	0.25	0.75	2	2 4	0.17	0.83	2	4
Signal and Lane Modifications											
North Roundabout											
South Roundabout											
North and South Connections to Rndbts	2000		2 12	2 0.50	1.00	2	2 6	0.17	1.33	2	4
Totals											

				Pavement									
				Removal	Earthwork	Curb/Gutter			Illumination	Permanent		Co	onstruction
Component	Area (Acre)	HMA (TON)	CSBC (TON)	(SY)	(CY)	(LF)	Guardrail (LF)	Drainage (LF)	System (LF)	Signing (LF)	Bridge (SF)	LS Items (\$) N	lajor Items
21st Ave Extension	5.3	3070	9000		14700	7600	0	3800	3800	3800		\$	846,300
Spotted Rd Relocation	6.0	3470	10180		16600	8600	0	4300	4300	4300		\$	956,940
Signal and Lane Modifications												500000 \$	500,000
North Roundabout												350000 \$	350,000
South Roundabout												350000 \$	350,000
North and South Connections to Rndbts	2.4	2190	5630		6600	4000	0	2000	2000	2000		\$	493,340
Totals	13.70	8730	24810	0	37900	20200	0	10100	10100	10100	C	<b>1200000</b> \$	3,496,580
Unit Cost	\$ 7,000	\$ 80	\$ 18		\$ 10	\$ 10	\$ 20	\$ 25	\$ 20	\$ 2	\$ 180	\$1	
Total Costs	\$ 95,900	\$ 698,400	\$ 446,580	\$-	\$ 379,000	\$ 202,000	\$-	\$ 252,500	\$ 202,000	\$ 20,200	\$-	\$ 1,200,000	

Component	 onstruction Jajor Items	M	obilization @6%	Co	affic ntrol 05%	rveying @1%	instruction Subtotal	Co	ontingency @30%	Co	onstruction Total	En	eliminary gineering @10%	nstruction ngineering @15%	TOTAL
21st Ave Extension	\$ 846,300	\$	50,778	<u> </u>	42,315	\$ 8,463	\$ 947,856	\$	284,357	\$	1,232,213	\$	123,221	\$ 184,832	\$ 1,540,266
Spotted Rd Relocation	\$ 956,940	\$	57,416	\$ 4	, 47,847	\$ 9,569	\$ 1,071,773	\$	321,532	\$	1,393,305	\$	139,330	\$ 208,996	\$ 1,741,631
Signal and Lane Modifications	\$ 500,000	\$	30,000	\$ 2	25,000	\$ 5,000	\$ 560,000	\$	168,000	\$	728,000	\$	72,800	\$ 109,200	\$ 910,000
North Roundabout	\$ 350,000	\$	21,000	\$ 1	17,500	\$ 3,500	\$ 392,000	\$	117,600	\$	509,600	\$	50,960	\$ 76,440	\$ 637,000
South Roundabout	\$ 350,000	\$	21,000	\$ 1	17,500	\$ 3,500	\$ 392,000	\$	117,600	\$	509,600	\$	50,960	\$ 76,440	\$ 637,000
North and South Connections to Rndbts	\$ 493,340	\$	29,600	\$2	24,667	\$ 4,933	\$ 552,541	\$	165,762	\$	718,303	\$	71,830	\$ 107,745	\$ 897,879
Totals	\$ 3,496,580	\$	209,795	\$ 17	74,829	\$ 34,966	\$ 3,916,170	\$	1,174,851	\$	5,091,020	\$	509,102	\$ 763,653	\$ 6,363,776

# ALT C - INTERCHANGE AT AIRPORT DR/21st AVE/SPOTTED RD

	Length of										
	Road/Improve		Lane Width	Lane HMA	Lane CSBC		Shld Width	Shld HMA	Shld CSBC	Approx. earthwork	Sideslopes
Component	ment (ft)	# Lanes	(ft)	depth (ft)	depth (ft)	# Shlds	(ft)	Depth (ft)	depth (ft)	depth (ft)	(X:1)
21st Ave Extension	3800	3	12	0.25	0.75	2	4	0.17	0.83	2	4
Spotted Rd Relocation	4300	3	12	0.25	0.75	2	4	0.17	0.83	2	4
2 Lane Bridge (over 5 lanes)	185	2	12			2	8				
Spotted Rd connection to bridge	1050	3	12	0.25	0.75	2	4	0.17	0.83	16	2
Collector Distributor/match ramps	3000	1	15	0.33	0.92	2	6	0.17	1.08	4	4
NW Ramp	1200	1	15	0.33	0.92	2	6	0.17	1.08	10	4
NE Ramp	1000	1	15	0.33	0.92	2	6	0.17	1.08	10	4
SW Ramp	600	1	15	0.33	0.92	2	6	0.17	1.08	10	4
SE Ramp	600	1	15	0.33	0.92	2	6	0.17	1.08	10	4
Totals											

				Pavement									
				Removal	Earthwork	Curb/Gutter			Illumination	Permanent Signing			Construction
Component	Area (Acre)	HMA (TON)	CSBC (TON)	(SY)	(CY)	(LF)	Guardrail (LF)	Drainage (LF)	System (LF)	(LF)	Bridge (SF)	LS Items (\$)	Major Items
21st Ave Extension	5.3	3070	9000		14700	7600	0	3800	3800	3800			\$ 846,300
Spotted Rd Relocation	6.0	3470	10180		16600	8600	0	4300	4300	4300			\$ 956,940
2 Lane Bridge (over 5 lanes)						0	0				7400		\$ 1,332,000
Spotted Rd connection to bridge	2.7	850	2490		47300	0	2100		1050	1050			\$ 669,820
Collector Distributor/match ramps	4.1	1640	5650		19200	0	0		3000	3000			\$ 519,600
NW Ramp	3.0	660	2260		29800	0	0		1200	1200			\$ 438,880
NE Ramp	2.5	550	1890		24900	0	0		1000	1000			\$ 366,520
SW Ramp	1.5	330	1130		14900	0	300		600	600			\$ 225,440
SE Ramp	1.5	330	1130		14900	0	300		600	600			\$ 225,440
Totals	26.60	10900	33730	0	182300	16200	2700	8100	15550	15550	7400	0	\$ 5,580,940
Unit Cost	\$ 7,000	\$ 80	\$ 18		\$ 10	\$ 10	\$ 20	\$ 25	\$ 20	\$ 2	\$ 180	\$ 1	
Total Costs	\$ 186,200	\$ 872,000	\$ 607,140	\$-	\$ 1,823,000	\$ 162,000	\$ 54,000	\$ 202,500	\$ 311,000	\$ 31,100	\$ 1,332,000	\$ -	

						Traffic									Pi	reliminary	Со	nstruction	
	Co	onstruction	M	obilization		Control	Si	urveying	С	onstruction	Co	ontingency	С	onstruction	Er	ngineering	Er	ngineering	
Component	N	lajor Items		@6%		@ 5%		@1%		Subtotal		@30%		Total		@10%		@15%	TOTAL
21st Ave Extension	\$	846,300	\$	50,778	\$	42,315	\$	8,463	\$	947,856	\$	284,357	\$	1,232,213	\$	123,221	\$	184,832	\$ 1,540,266
Spotted Rd Relocation	\$	956,940	\$	57,416	\$	47,847	\$	9,569	\$	1,071,773	\$	321,532	\$	1,393,305	\$	139,330	\$	208,996	\$ 1,741,631
2 Lane Bridge (over 5 lanes)	\$	1,332,000	\$	79,920	\$	66,600	\$	13,320	\$	1,491,840	\$	447,552	\$	1,939,392	\$	193,939	\$	290,909	\$ 2,424,240
Spotted Rd connection to bridge	\$	669,820	\$	40,189	\$	33,491	\$	6,698	\$	750,198	\$	225,060	\$	975,258	\$	97,526	\$	146,289	\$ 1,219,072
Collector Distributor/match ramps	\$	519,600	\$	31,176	\$	25,980	\$	5,196	\$	581,952	\$	174,586	\$	756,538	\$	75,654	\$	113,481	\$ 945,672
NW Ramp	\$	438,880	\$	26,333	\$	21,944	\$	4,389	\$	491,546	\$	147,464	\$	639,009	\$	63,901	\$	95,851	\$ 798,762
NE Ramp	\$	366,520	\$	21,991	\$	18,326	\$	3,665	\$	410,502	\$	123,151	\$	533,653	\$	53,365	\$	80,048	\$ 667,066
SW Ramp	\$	225,440	\$	13,526	\$	11,272	\$	2,254	\$	252,493	\$	75,748	\$	328,241	\$	32,824	\$	49,236	\$ 410,301
SE Ramp	\$	225,440	\$	13,526	\$	11,272	\$	2,254	\$	252,493	\$	75,748	\$	328,241	\$	32,824	\$	49,236	\$ 410,301
Totals	\$	5,580,940	\$	334,856	\$	279,047	\$	55,809	\$	6,250,653	\$	1,875,196	\$	8,125,849	\$	812,585	\$	1,218,877	\$ 10,157,311

# ALT D - ROUNDABOUT AT AIRPORT DR/21st/SPOTTED RD

	Length of Road/Improve		Lane Width	Lane HMA	Lane CSBC		Shld Width	Shld HMA	Shld CSBC	Approx. earthwork	Sideslopes
Component	ment (ft)	# Lanes	(ft)	depth (ft)	depth (ft)	# Shlds	(ft)	Depth (ft)	depth (ft)	depth (ft)	(X:1)
21st Ave Extension	3800		3 1	2 0.25	0.75		2 4	0.17	0.83	2	4
Spotted Rd Relocation	4300		3 1	2 0.25	0.75	:	2 4	0.17	0.83	2	4
2-Lane Roundabout											
North Connection to Roundabout	1200		2 1	2 0.33	0.92	:	2 6	0.17	1.08	3	4
Totals											

Unit Cost Total Costs

					Pavement									
					Removal	Earthwork	Curb/Gutter			Illumination	Permanent		(	Construction
Component	Area	(Acre)	HMA (TON)	CSBC (TON)	(SY)	(CY)	(LF)	Guardrail (LF)	Drainage (LF)	System (LF)	Signing (LF)	Bridge (SF)	LS Items (\$)	Major Items
21st Ave Extension		5.3	3070	9000		14700	7600	0	3800	3800	3800		:	\$ 846,300
Spotted Rd Relocation		6.0	3470	10180		16600	8600	0	4300	4300	4300		:	\$ 956,940
2-Lane Roundabout													500000	\$ 500,000
North Connection to Roundabout		1.7	930	2960		6400	2400	0	1200	1200	1200		:	\$ 283,980
Totals		13.00	7470	22140	0	37700	18600	0	9300	9300	9300	0	500000	\$ 2,587,220
	\$	7,000	\$ 80	\$ 18		\$ 10	\$ 10	\$ 20	\$ 25	\$ 20	\$ 2	\$ 180	\$ 1	
	\$	91,000	\$ 597,600	\$ 398,520	\$-	\$ 377,000	\$ 186,000	\$-	\$ 232,500	\$ 186,000	\$ 18,600	\$-	\$ 500,000	

						Traffic									Pr	eliminary	Со	nstruction		
	Co	onstruction	M	1obilization Control Su		Su	Surveying Construction		onstruction	Contingency		Construction		Engineering		Engineering				
Component	N	lajor Items		@6% @ 5%		@ 5%	@1%		Subtotal		@30%		Total		@10%		@15%			TOTAL
21st Ave Extension	\$	846,300	\$	50,778	\$	42,315	\$	8,463	\$	947,856	\$	284,357	\$	1,232,213	\$	123,221	\$	184,832	\$	1,540,266
Spotted Rd Relocation	\$	956,940	\$	57,416	\$	47,847	\$	9,569	\$	1,071,773	\$	321,532	\$	1,393,305	\$	139,330	\$	208,996	\$	1,741,631
2-Lane Roundabout	\$	500,000	\$	30,000	\$	25,000	\$	5,000	\$	560,000	\$	168,000	\$	728,000	\$	72,800	\$	109,200	\$	910,000
North Connection to Roundabout	\$	283,980	\$	17,039	\$	14,199	\$	2,840	\$	318,058	\$	95,417	\$	413,475	\$	41,347	\$	62,021	\$	516,844
Totals	\$	2,587,220	\$	155,233	\$	129,361	\$	25,872	\$	2,897,686	\$	869,306	\$	3,766,992	\$	376,699	\$	565,049	\$	4,708,740

#### ALT E - CONTINUOUS GREEN T INTERSECTION AND SPOTTED RD OVERPASS

	Length of									Approx.	
	Road/Improve		Lane Width	Lane HMA	Lane CSBC		Shld Width	Shld HMA	Shld CSBC	earthwork	Sideslopes
Component	ment (ft)	# Lanes	(ft)	depth (ft)	depth (ft)	# Shlds	(ft)	Depth (ft)	depth (ft)	depth (ft)	(X:1)
21st Ave Extension	3800		3 12	0.25	0.75	2	4	0.17	0.83	2	4
Spotted Rd Relocation	4300		3 12	0.25	0.75	2	4	0.17	0.83	2	4
2 Lane Bridge (over 4 lanes)	158		2 12			2	8				
Spotted Rd connection to bridge	1050		3 12	0.25	0.75	2	4	0.17	0.83	16	2
NW Ramp	1500		1 15	0.33	0.92	2	6	0.17	1.08	10	4
NE Ramp	1300		1 15	0.33	0.92	2	6	0.17	1.08	10	4
Signal and Lane Modifications											
Additional inbound lane from Spotted Rd North	2000		1 12	0.33	0.92	2	4	0.17	1.08	2	4
Spotted/Outbound west I/S improvements											
Totals											

				Pavement									
				Removal	Earthwork	Curb/Gutter			Illumination	Permanent		C	onstruction
Component	Area (Acre)	HMA (TON)	CSBC (TON)	(SY)	(CY)	(LF)	Guardrail (LF)	Drainage (LF)	System (LF)	Signing (LF)	Bridge (SF)	LS Items (\$) N	Aajor Items
21st Ave Extension	5.3	3070	9000		14700	7600	0	3800	3800	3800		\$	846,300
Spotted Rd Relocation	6.0	3470	10180		16600	8600	0	4300	4300	4300		\$	956,940
2 Lane Bridge (over 4 lanes)											6320	\$	1,137,600
Spotted Rd connection to bridge	2.7	850	2490		47300	0	2100		1050	1050		\$	669,820
NW Ramp	3.7	820	2830		37300	0	0		1500	1500		\$	548,440
NE Ramp	3.2	710	2450		32300	0	0		1300	1300		\$	474,900
Signal and Lane Modifications												500000 \$	500,000
Additional inbound lane from Spotted Rd North	1.7	830	2770		4200	0	0		2000	2000		\$	214,160
Spotted/Outbound west I/S improvements												100000 \$	100,000
Totals	22.60	9750	29720	0	152400	16200	2100	8100	13950	13950	6320	<b>600000</b> \$	5,448,160
Unit Cost Total Costs	. ,	\$	\$  18 \$ 534,960	\$ -	\$ 10 \$ 1,524,000	\$ 10 \$ 162,000	\$ 20 \$ 42,000	\$	\$       20 \$    279,000	\$2 \$27,900	\$  180 \$ 1,137,600	\$1 \$600,000	

						Traffic									Pr	eliminary	Сс	onstruction	
	C	Construction		Mobilization		Control		Surveying		Construction		Contingency		Construction		ngineering	Engineering		
Component	N	Major Items		@6%		@ 5%		@1%		Subtotal		@30%	Total		@10%		@15%		TOTAL
21st Ave Extension	\$	846,300	\$	50,778	\$	42,315	\$	8,463	\$	947,856	\$	284,357	\$	1,232,213	\$	123,221	\$	184,832	\$ 1,540,266
Spotted Rd Relocation	\$	956,940	\$	57,416	\$	47,847	\$	9,569	\$	1,071,773	\$	321,532	\$	1,393,305	\$	139,330	\$	208,996	\$ 1,741,631
2 Lane Bridge (over 4 lanes)	\$	1,137,600	\$	68,256	\$	56,880	\$	11,376	\$	1,274,112	\$	382,234	\$	1,656,346	\$	165,635	\$	248,452	\$ 2,070,432
Spotted Rd connection to bridge	\$	669,820	\$	40,189	\$	33,491	\$	6,698	\$	750,198	\$	225,060	\$	975,258	\$	97,526	\$	146,289	\$ 1,219,072
NW Ramp	\$	548,440	\$	32,906	\$	27,422	\$	5,484	\$	614,253	\$	184,276	\$	798,529	\$	79,853	\$	119,779	\$ 998,161
NE Ramp	\$	474,900	\$	28,494	\$	23,745	\$	4,749	\$	531,888	\$	159,566	\$	691,454	\$	69,145	\$	103,718	\$ 864,318
Signal and Lane Modifications	\$	500,000	\$	30,000	\$	25,000	\$	5,000	\$	560,000	\$	168,000	\$	728,000	\$	72,800	\$	109,200	\$ 910,000
Additional inbound lane from Spotted Rd North	\$	214,160	\$	12,850	\$	10,708	\$	2,142	\$	239,859	\$	71,958	\$	311,817	\$	31,182	\$	46,773	\$ 389,771
Spotted/Outbound west I/S improvements	\$	100,000	\$	6,000	\$	5,000	\$	1,000	\$	112,000	\$	33,600	\$	145,600	\$	14,560	\$	21,840	\$ 182,000
Totals	\$	5,448,160	\$	326,890	\$	272,408	\$	54,482	\$	6,101,939	\$	1,830,582	\$	7,932,521	\$	793,252	\$	1,189,878	\$ 9,915,651

