US 395 Deer Park Vicinity Intersection Control Analysis

Burroughs Rd/Dalton Rd, Short Rd/Main St., Cleveland Rd/H St., Monroe Rd/Crawford St., and Dahl Rd

MP 178.70 to MP 181.06

GLENN ALLEN WAGEMANN
STATE OF WASHINGTON
31397
REGISTERED
PROFESSIONAL ENGINEER

10/24/17

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October 24, 2017

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BACKGROUND AND PROJECT NEED

The October 2012 HQ Capital Program Development & Management statewide list of Intersection Analysis Locations (IAL) included the Burroughs/Dalton and Monroe/Crawford intersections. Funding was subsequently provided to perform a study and recommend a project to submit for construction. Region Program Management, Traffic, Planning, and Design developed a team to complete this study.

Previous study of the Deer Park area (2003 Route Development Plan (RDP)) resulted in a bypass proposal for US 395 that has little to no prospect of funding and is not under consideration at this time. Meanwhile, there have been over 160 intersection-related crashes in the Deer Park area since the completion of the RDP.

Recognizing that current asset needs are greater than the ability to fund them, WSDOT has increased efforts in the area of Least Cost Planning with the planning and development of solutions that meet objectives at the lowest possible cost.

Because of the nature of the corridor where these two intersections are located, this analysis includes discussion of five intersections between MP 178.70 and MP 181.06 in the determination of applicable safety intersection improvements.

The purpose of this analysis is to establish a solution or series of solutions that are cost-effective viable improvements (high user benefit) that improve overall safety performance for the five intersections on US 395 in the Deer Park vicinity. The selected alternative should be one that minimizes driver error and manages or reduces conflict.

EXISTING CONDITIONS

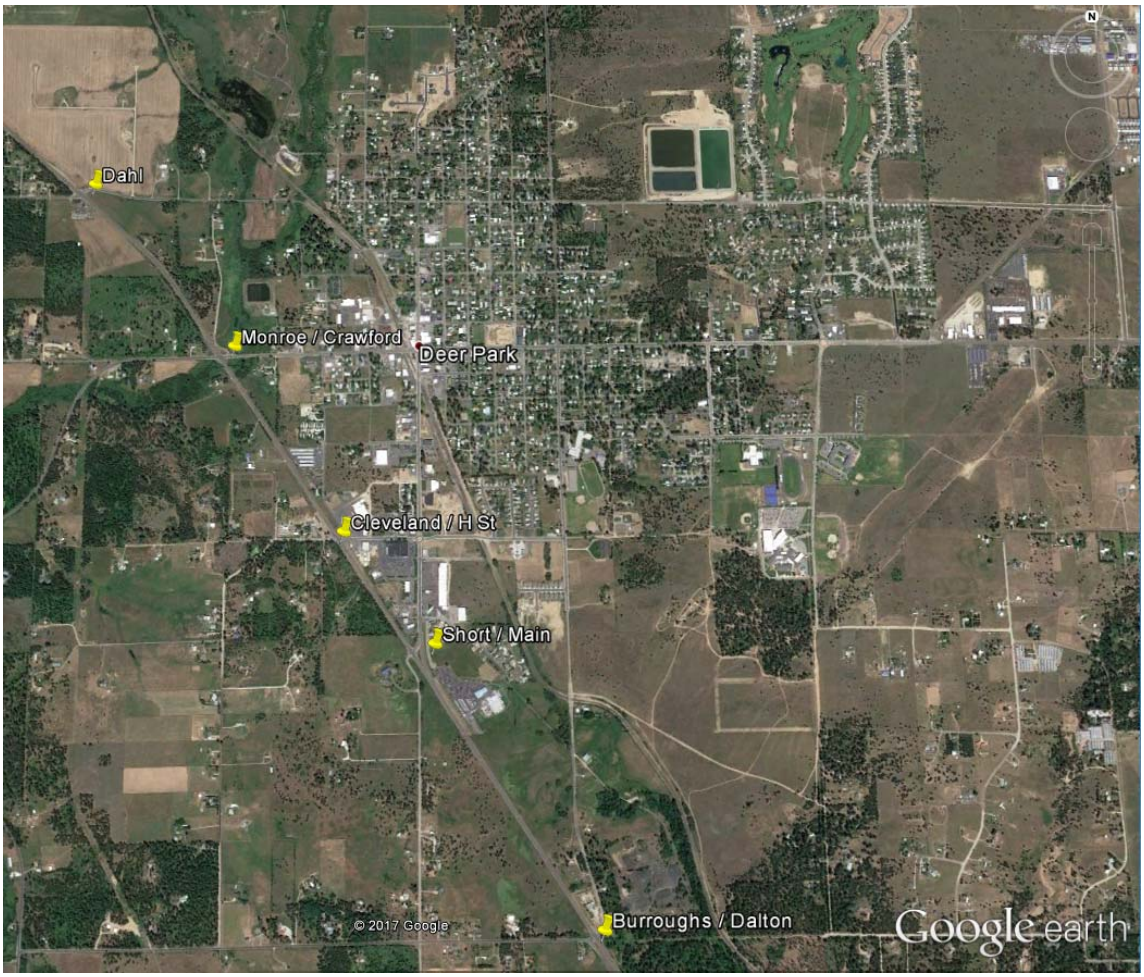
Deer Park has a population currently estimated to be 3,652 according to the USA City Facts website. Commute time for 58.2% of workers is over 25 minutes. The major north-south arterial is Main Street and east-west is Crawford St. The urban growth boundary splits US 395. However, the City does not anticipate developing to the west of US 395. Businesses are located typically along Main Street and Crawford St. A new industrial area is currently being built 2.4 miles east of US 395 on Crawford St.

US 395 in the vicinity of Deer Park is a two lane, undivided, rural-principle arterial, NHS highway with a posted speed of 60 mph. There is a vertical curve just south of Burroughs Rd/Dalton Rd, relatively level terrain until just north of Monroe Rd/Crawford St, where the highway elevation increases with a 3% vertical curve. The 85th percentile speed is 62 mph.

Five at-grade intersections exist within this section:

- Burroughs Rd/Dalton Rd - MP 178.70
- Short Rd/Main St. - MP 179.46
- Cleveland Rd/H St. – MP 179.89
- Monroe Rd/Crawford St. – MP 180.46

- Dahl Rd – MP 181.06



Burroughs Rd/Dalton Rd has an intersection skew slightly less than two degrees from perpendicular. Immediately west of the highway two county roads merge together, Burroughs Rd runs westerly and Dalton Rd southerly parallel to the highway. Dalton Rd also runs to the east of the highway. It is used by drivers to bypass the Deer Park business area. There is left turn channelization in both the northbound and southbound directions.

Short Rd/ Main St – Main Street is the primary south entrance into Deer Park. On the west side, Short Road is a low-volume gravel road with less than 300 ADT. There is left turn channelization in the northbound only direction. A northbound slip ramp onto Main Street also exists.

Cleveland/H St. – To the west, Cleveland is a County gravel road. To the east, H St is a City street connecting to the business area. The intersection to the east of US 395 at H St / Main St is a roundabout. Cleveland Rd/H St has an intersection skew with a northbound right turn lane and a wide southbound right taper. There is left turn channelization in both the northbound and southbound directions.

Monroe Rd is considered by local residents to be an alternate route to Spokane. Crawford St is Deer Park's main east-west street, becoming Deer Park-Milan Rd and connecting to US 2 approximately 7 miles to the east. The intersection has two bridges immediately to the south and east of the intersection for Dragoon Creek. There is left turn channelization in both the northbound and southbound directions.

Dahl Road east of US 395 is a seasonal truck route that drops down into the north side of Deer Park, adjacent to Mix Park and railroad tracks. There is left turn channelization in both the northbound and southbound directions.

For more information on existing conditions, see Appendix B.

Freight

US 395 is a freight and economic development corridor. The Freights and Goods Transportation System tonnage class is T-2 (3,105,500 annual gross tonnage; 811 large trucks per day) according to the 2015 report. The truck percentages in a midday count were 5.7%.

395	Physical Gap to Spokane/Stevens Co. line	167.44	183.69	16.27	T-2	3,105,500	811	5.7%	Spokane

A query of oversized truck permits for the last two years (5/2014-5/2016) along this section of US 395 revealed a variety of truck lengths and widths utilizing this highway as shown below. Note these do not account for the occasional combine, tractors and swathers that access the highway by a truck permit.

Counts for Load Widths		Counts for Trailer Length	
Load Width	**# of Vehicles**	**Trailer Length**	**# of Vehicles**
Up to 11 ft	423	16-40 ft	30 ft
11 ft	405	40-52 ft	141
12 ft	156	53 ft	180
13 ft	50	54 – 74.9 ft	176
14 ft	108	75 - 99 ft	157
15 ft	64	100 – 131 ft	43
16 ft	19		
17 ft	10		
22 ft	2		

Pedestrian / Bicycle

The intersections are in a low pedestrian and bicycle activity area. In the eleven hours of counts there were two pedestrian crossings, one at Dahl and one at Cleveland Rd, and zero bicycle crossings of US 395. These are relative to the 2011 AM and PM traffic counts with one pedestrian and zero bicyclists counted at the intersections. There are no sidewalks, painted crosswalks or local transit bus stops along this stretch of highway. Per a constituent request Cleveland Rd – H St has pedestrian crossing signs on US 395.

Deer Park School District

A survey conducted in February 2016 indicated the morning buses utilized US 395 between 6:45am – 8:30am, mid-day run between 11:10am – 12:50pm, and the afternoon between 3:15pm – 4:35pm. For more information on the school bus usage, see Appendix E.

Transit

There is no local transit service in this area. The Gold Line, with two daily round trips between Spokane and Kettle Falls, provides regional transit service. The Deer Park stop is on Main Street south of H St.

Field Observations

During the eleven hour December 2015 count, side-street queuing exceed five vehicles once at Burroughs/Dalton Rd (WBND) and once at Monroe/Crawford (WBND). A June 2016 PM peak hour stop sign delay study was performed for the westbound movements of Dalton Rd and Crawford Rd. The average westbound left/thru vehicle delay was 57 seconds and 43 seconds respectively.

At all five intersections, it was observed that there is a percentage of drivers on the side streets that do not appear to know who has the right-of-way. Often the left-turning vehicle would make the turn in front of the through vehicle.

Previous Public Contact

WSDOT often receives emails and letters from constituents who share their concerns and provide input. Below is a summary of the correspondence recorded prior to the study.

- 19+ letters, emails and/or phone calls with the public
- Majority requested speed reduction (to better access US 395)
- Southbound Left Turn at Short Rd
- Requests for traffic signals, right turn lanes, crosswalks
- More vegetation management
- Multiple vehicles at stop line as drivers wait to make various turning movements
- Intersection offset/skew
- Impatience when choosing a gap

Intersection Operations

Information from the WSDOT Traffic GeoPortal shows that as of 2015, annual average daily volume on US 395 drops from 13,000 to 10,000 at Short Rd/Main St. Entering AADT on the minor legs of the intersections is generally less than 1,000 to the west of the highway and less than 3,000 to the east. The corridor peak hours were 7:15AM-8:15AM and 4:30PM-5:30PM. No minor leg had a peak hour count exceeding 200 vehicles per leg. For more information on volumes, see Appendix A.

Intersection Level of Service

According to Synchro modeling, existing intersection volume movements currently operate with an LOS C or better in the AM peak hour with the exceptions of Dalton Rd (WBND - LOS E). Intersection volume movements currently operate with an LOS C or better in the PM peak hour with the exceptions of Dalton Rd (WBND - LOS F, EBND - LOS D) and Crawford St (WBND – LOS D).

For more information on the existing level of service, see Appendix C.

Crash history[1]

The crash history from January 1, 2010, through December 31, 2014 indicates there have been 99 recorded crashes on US 395 between Burroughs/Dalton Road and Dahl Road (MP 178.70 – MP 181.06), a distance of approximately 2.4 miles. Of these crashes, 65 were related to the five intersections within this section. The intersection-related crash history is as follows:

Intersection	Total Crashes Per Intersection	Fatal	Injury	Property Damage Only	Entering At Angle
Burroughs/Dalton Rd	18	0	8	10	12
Short Rd	10	0	4	6	6
H St/Cleveland Rd	9	1	5	3	6
Monroe/Crawford Rd	23	0	13	10	14
Dahl Rd	5	1	4	0	4
Total Crashes	**65**				**Total 42 (64%)**

The Crash Analysis Report covers the analysis of crash history, safety performance of the existing condition and alternatives, and the results of Benefit/Cost analysis.

DESIGN YEAR & CONSIDERATIONS

Design Year

As this project has been programmed as a safety project, the design year is for the year of opening, projected at Fall 2018. For informational purposes, US 395 volumes have grown

[1] UNDER 23 UNITED STATES CODE - SECTION 409, THIS DATA CANNOT BE USED IN DISCOVERY OR AS EVIDENCE AT TRIAL IN ANY ACTION FOR DAMAGES AGAINST THE WSDOT OR THE STATE OF WASHINGTON

at a 1% rate since the year 2000. The City of Deer Park resident population has seen a growth rate of 1.49% since 2010.

Design Vehicle

The Minimum Intersection Design Vehicle considered for the alternatives is a WB-40 to the west of US 395 and a WB-67 to the east of US 395. Dalton Rd (east) and Dahl Rd (east) are seasonal truck routes. The City desires large commercial trucks to utilize Main St. and Crawford St.

Environmental Review

The Environmental Office performed a scoping environmental review to be considered in the alternatives evaluation. A summary of the review is as follows:

- The wetlands in the NW corner of Burroughs Rd/Dalton Rd should be outside the project impacts. During construction the high visibility fence and silt fence will need to be installed prior to start.
- Short Rd/Main St west side ditch and culvert was dry during the May review. The NE quadrant has a wetland close to the road at bottom of steep slope. There is standing water both there and in ditch along north side of Main St.

NW corner of Short Rd/Main St

- Cleveland Rd/H St has no wetlands.
- Monroe Rd/Crawford St has low-class wetlands in the NW quadrant. The SW quadrant and SE quadrant have high-class wetlands and are to be avoided.
- Approximately 500 feet north of Short Rd/Main St, there is a 24" pipe crossing that drains the excess water west of the highway to the fields southeast of Deer Park. The outlet travels along the east side of McDonalds and then utilizes the crossing on the east leg of the intersection. In heavy snow/rain seasons, the outlet water rises to within 3' of the roadway edge. During the study, mitigation was identified to revise the ditch that runs along the west side of the highway so that the water flows at a more direct path to the field. This work will be performed by WSDOT Maintenance separately from the project.

Right of Way

WSDOT's right of way is typically 60' from edge of pavement through this section of highway. Burroughs/Dalton has minimal right of way in the northwest corner.

Utilities

The 2015 survey basemap indicated underground power for the illumination at each intersection as well as buried fiber on the west, north and east legs of Burroughs Rd/Dalton Rd intersection. A more complete utility survey will be necessary during the design phase.

COMMUNITY ENGAGEMENT

Study Public Outreach

WSDOT routinely collects and analyzes information on traffic volumes, operating speeds, turning movements, land use, crash history, and driver behaviors. However, this doesn't always tell us the whole story of how a facility is used or how it operates. To help us fully understand how this segment is operating, the effort for this study included seeking input from local agencies, businesses, the general public, and local residents. This collaboration provided additional context as we developed solutions, ensuring that the uses and needs were more completely identified and, where practical, incorporated into the project proposals. The study team formed a Stakeholders group consisting of Washington State Patrol, Spokane County Sheriff, Emergency Service Providers, WSDOT Maintenance, Deer Park School District, City of Deer Park, Deer Park Chamber of Commerce, and Spokane County. For a list of Stakeholder meeting attendance, see Appendix F. The first meeting with this group yielded the following information:

- Education key – e.g. left turning vehicle must yield to through vehicle (RCW)
- Keep access open for the businesses, school bus routes & emergency response
- SBLT at Short Rd ~ people still make illegal movement
- Driver behavior is effecting crash rates
- Understanding that speed limit is set to reflect reasonable behavior
- Current sight obstructions – vegetation, guardrail & signs
- Vehicles park side by side at stop line – causing sight obstruction
- Intersection offset/skew

The study team also was a guest at the Deer Park US 395 Community Meeting held March 1st, chaired by a local concerned citizen. The meeting was organized as a result of a non-intersection crash that occurred shortly after the study commenced. There were approximately 200 people in attendance. Representatives from WSP and Spokane County Sheriff, along with WSDOT answered questions. Burroughs/Dalton & Monroe/Crawford were the top intersections of concern.

We received 60 comment forms from the public the night of the Community Meeting with more coming in the weeks following. The comments/requests can be categorized as follows:

- Reduce the Speed Limit
- Construct Auxiliary Lanes

- Construct a Traffic Signal or Roundabout
- Construct a Grade Separation or Interchange

Additional public outreach during the study included meetings and presentations with the following groups:

- Deer Park Chamber of Commerce
- Deer Park City Council
- Local Business Owners
- Stakeholders (follow up meeting was held in May)
- Stevens & Spokane County Commissioners
- Northeast Washington Regional Transportation Planning Organization

Contextual needs identified through public involvement included:

- Provide for existing turning movements plus the southbound left turn movement to Main St.
- Reduce highway speed in the vicinity of the intersections (top public concern)
- Improve minor leg Level of Service (reduce entering delay)
- Perception that the road ices up more north of Monroe/Crawford due to the trees outside of right of way.
- Maintain convenient access to schools via Dalton Rd.

Throughout the study WSDOT engaged with over 80 citizens by email. Phone conversations were not tallied throughout the study.

The team incorporated public comments in the development and refinement of alternative concepts and project recommendation.

Website

The Region Communications Manager created a website to disseminate study information and presentation materials. See Appendix F for a website example.

ANALYSIS

Several alternatives are available that, according to research, provide varying levels of crash reduction and are within the context of community comment. Alternatives considered included:

- Speed Reduction
- Offset T-Intersections
- Acceleration/Deceleration Lanes
- Right-in Right-out and restricted channelized U-turns
- Right-in Right-out
- Access Restrictions
- Traffic signal
- Roundabout
- Grade Separation

A no-build alternative was an option if political opposition to the preferred alternative indicated so little support that the available funding would be more effectively allocated to another location.

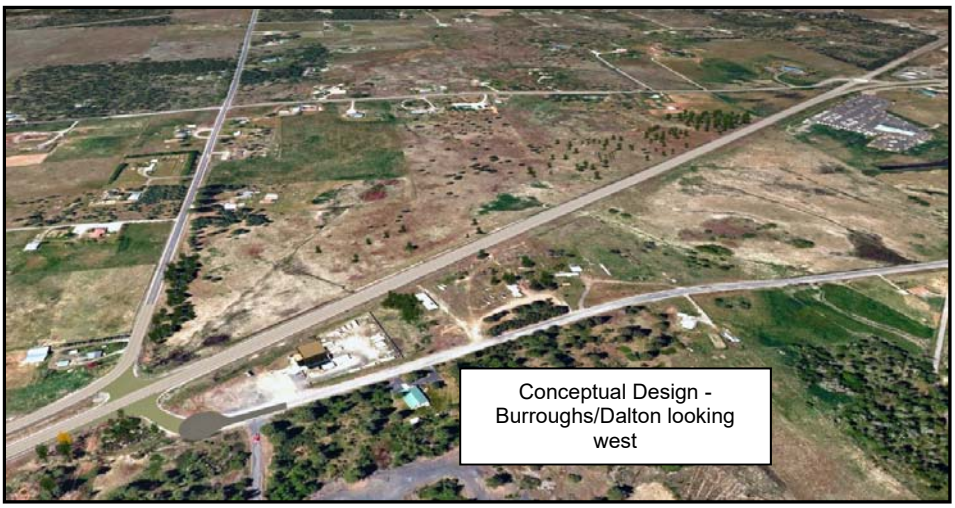
Alternatives were screened for feasibility, safety improvement, and context. They were also evaluated for right-of-way need, environmental impacts, cost, and overall operations. In addition to addressing safety at the intersection, the preferred alternative should not degrade operations or safety at another location. A U-Turn opportunity on US 395 should be a future consideration if turn restrictions are implemented at Cleveland St/H St.

Despite discussion of funding challenges, some public comment still expressed a preference for one or more interchanges. Per Design Manual Chapter 1300, a grade separation or an interchange is only considered if an analysis determines that an at-grade intersection cannot provide adequate performance. The study team found that there are feasible at-grade options that improve crash performance and intersection operations over the existing conditions. The team also found that an interchange or a grade separated crossing is outside of the funding limit established for project proposals, and that multiple intersections would be closed or access restricted in order for it to be cost-effective for crash reduction.

Further discussion of the alternatives analysis and results is contained in the Crash Analysis Report.

RECOMMENDED ALTERNATIVE

The original proposed alternative determined in the Crash Analysis Report was to close access at Burroughs/Dalton and construct single-lane roundabouts at Short/Main and Monroe/Crawford. No changes were proposed at this time at Cleveland/H or Dahl. Additionally, because larger vehicles may take longer to return to speed north of the Monroe/Crawford roundabout, the northbound shoulder will be upgraded to allow shoulder driving during daylight hours.



A roundabout is proposed at Short/Main rather than Burroughs/Dalton in consideration of the capacity and availability of the local system to handle the changes in travel, and the opportunity to address operations an intersection with higher entering volume. From previous experience, we also anticipate that drivers will find US 395 more accessible from Short/Main than from Cleveland/H and change their habits. Thus, this alternative will address safety performance at three intersections, and potentially four.

A roundabout with a single circulating lane is anticipated to operate at LOS A in the AM and PM peak hours. Roundabout options were modeled in SIDRA 7.0 using an Environment Factor of 1.0. Generally, crash severity will decrease, and a roundabout that operates within its capacity will produce lower delays than a signalized intersection operating with the same volumes.

See Appendix D for more information.

Crashes are anticipated to be reduced more than with other alternatives. From WSDOT's Crash Modification Short List, CMF #4699 lists a CMF of 0.26 for "All Crash Types – All Severities", and CMF #4700 lists a 0.11 for "All Crash Types, Fatal & Injury".

A roundabout will change the delay characteristics of the intersections by slowing all drivers as they pass through rather than just delaying the side streets. Operations will also be more consistent over the entire day. The Short/Main roundabout will accommodate the southbound left turn movement.

Roundabouts also have an influence on speeds. Roundabouts will introduce delay on US 395 – our preliminary estimate is that it will take an average of 30 seconds longer to drive the 2.36 miles between Burroughs/Dalton and Dahl when considering the additional time needed to slow down to negotiate the roundabouts. At the same time, there will be a reduction in delay for drivers accessing or crossing US 395.

Refinements

The recommended alternative was presented in several different forums, including presentations to the Study Stakeholders Group and to the Spokane County Commissioners in May 2016; an open house in Deer Park on June 1, 2016 with approximately 450 attendees; to the Stevens County Commissioners a week later; and to the Northeast Washington Regional Transportation Planning Organization. The feedback after the first open house led to scheduling an additional open house in Colville in October, 2016.

Although there was some objections from the general public to roundabouts, there was overall support. There were concerns to impeding freight travel, the effect of winter conditions on the southbound downhill approach to Monroe/Crawford due to requiring all drivers to slow to negotiate the roundabout, and the Burroughs/Dalton closure (also expressed by Spokane County). An informal survey indicated that, if Burroughs/Dalton was closed, most drivers would divert to Main/Short to access US 395.

Through further evaluation, it was determined to continue to allow northbound right turns at Dalton Road. This change does not show to have an effect on safety performance, allows the highest turning movement of the intersection to continue to be accommodated, and will provide the County more direct access to their gravel pit.

The Short/Main intersection area will need stormwater consideration and has an estimated wetland take of 1005 sq. ft. The SE quadrant is connected to the NE quadrant by a culvert with an estimated wetland take of 2031 sq. ft. Mitigation is anticipated by purchasing credits at a 4:1. The low-class wetlands in the NW quadrant of the Monroe/Crawford intersection will be addressed by purchasing credits. The estimated wetland take is 1184 sq. ft.

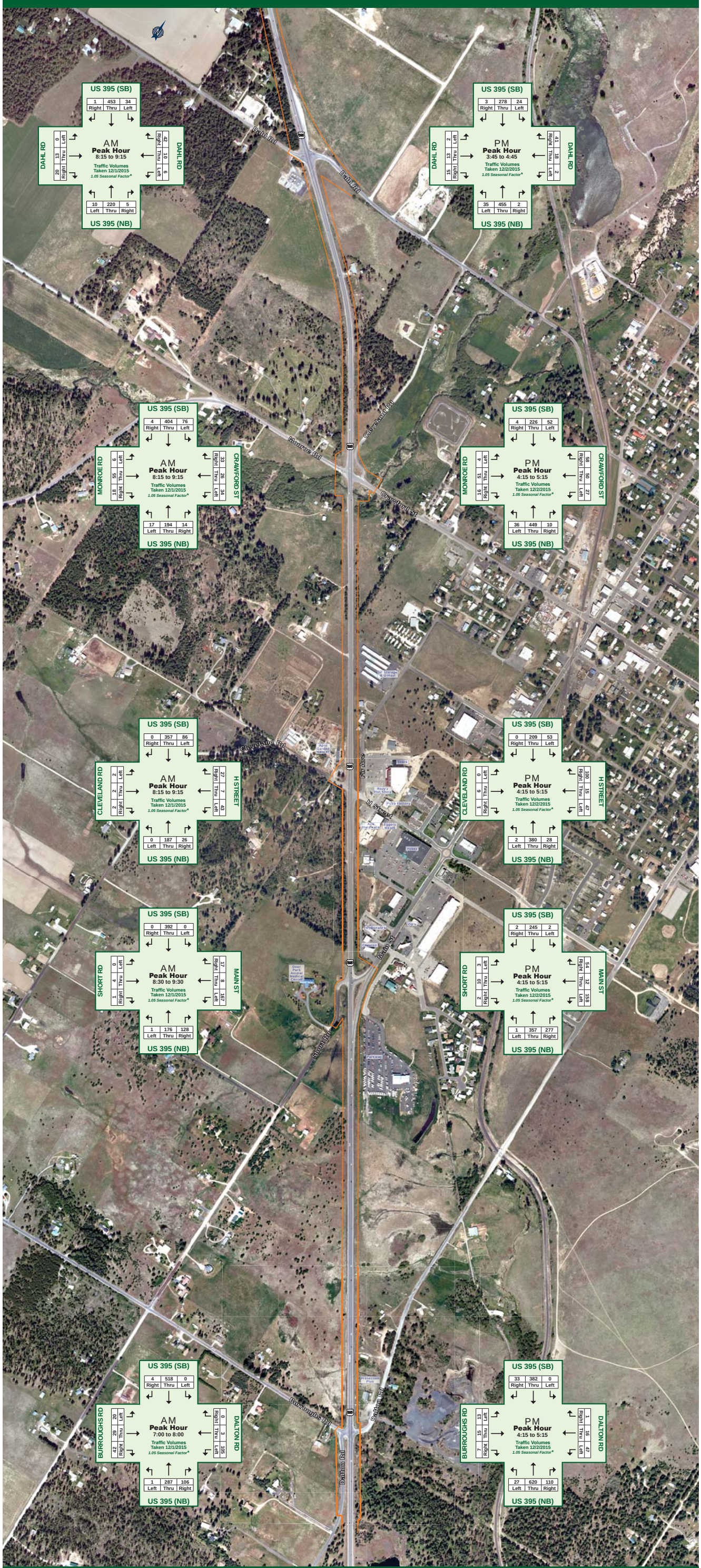
The recommended alternative will require right of way for the Dalton Rd (east) culdesac and the Cleveland Rd (north) culdesac.

The preliminary cost estimate of the proposed project is $4.5 Million.

Appendix A – Traffic Volumes

2015 Intersection Traffic Volumes

US 395 Deer Park - Intersection Improvement Study - Burroughs Road to Dahl Road



Eastern Region Traffic
Washington State
Department of Transportation

Scale in Feet
0 250' 500'

Informational Only
Subject to Revisions

*Volumes shown on this display were collected on 12/1/2015 and 12/2/2015. Because only a two day snapshot of the existing traffic conditions were captured, and traffic is typically below average in the winter these counts were adjusted (multiplied by a 1.05 Seasonal Factor) in order to provide a better representation of traffic conditions on an average day at these intersections.

Right-of-way shown is at a planning level and not to be used for construction.

Display Prepared February 2016.

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
by: D. Kassa; cold, overcast
No peds/bikes. Longest Q: 3 WB @ 52 sec
Of EB Burr vol total - 74 from Dalton Rd

File Name : 395 17870 Burroughs 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US Southbound					BURR Westbound					US Northbound					BURR Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	99	0	99	0	23	1	0	24	0	0	44	4	48	0	1	0	6	7	178
06:15 AM	0	0	140	1	141	0	19	3	0	22	0	1	30	5	36	0	1	3	6	10	209
06:30 AM	0	1	116	0	117	0	35	1	0	36	0	0	31	13	44	0	3	3	13	19	216
06:45 AM	0	0	115	1	116	0	19	4	1	24	0	1	40	21	62	0	2	10	6	18	220
Total	0	1	470	2	473	0	96	9	1	106	0	2	145	43	190	0	7	16	31	54	823
07:00 AM	0	0	149	0	149	0	28	0	0	28	0	0	53	15	68	0	5	3	18	26	271
07:15 AM	0	0	125	0	125	0	31	0	0	31	0	0	70	29	99	0	5	5	10	20	275
07:30 AM	0	0	126	1	127	0	26	0	0	26	0	0	80	34	114	0	2	8	5	15	282
07:45 AM	0	0	118	3	121	0	20	3	0	23	0	1	84	28	113	0	8	13	9	30	287
Total	0	0	518	4	522	0	105	3	0	108	0	1	287	106	394	0	20	29	42	91	1115
08:00 AM	0	1	111	2	114	0	17	4	0	21	0	2	73	19	94	0	4	13	3	20	249
08:15 AM	0	0	121	2	123	0	24	2	0	26	0	3	80	8	91	0	2	4	10	16	256
08:30 AM	0	1	146	3	150	0	19	4	0	23	0	2	80	19	101	0	6	4	6	16	290
08:45 AM	0	0	124	5	129	0	17	2	0	19	0	0	76	8	84	0	3	1	4	8	240
Total	0	2	502	12	516	0	77	12	0	89	0	7	309	54	370	0	15	22	23	60	1035
09:00 AM	0	0	147	3	150	0	17	0	0	17	0	0	81	10	91	0	2	5	7	14	272
09:15 AM	0	0	140	6	146	0	14	0	1	15	0	1	55	4	60	0	4	2	4	10	231
09:30 AM	0	0	129	4	133	0	18	3	1	22	0	0	73	2	75	0	2	2	2	6	236
09:45 AM	0	0	121	0	121	0	16	4	1	21	0	2	78	15	95	0	5	5	4	14	251
Total	0	0	537	13	550	0	65	7	3	75	0	3	287	31	321	0	13	14	17	44	990
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
*** BREAK ***																					
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
11:00 AM	0	0	127	1	128	0	11	0	2	13	0	1	71	9	81	0	4	7	3	14	236
11:15 AM	0	0	115	3	118	0	7	3	1	11	0	1	90	15	106	0	4	4	5	13	248
11:30 AM	0	0	144	2	146	0	12	0	1	13	0	2	83	14	99	0	7	2	4	13	271
11:45 AM	0	1	111	6	118	0	9	2	0	11	0	5	99	9	113	0	6	6	5	17	259
Total	0	1	497	12	510	0	39	5	4	48	0	9	343	47	399	0	21	19	17	57	1014
12:00 PM	0	2	123	9	134	0	15	1	1	17	0	0	101	10	111	0	5	0	1	6	268
12:15 PM	0	0	130	5	135	0	6	2	2	10	0	2	110	9	121	0	9	2	2	13	279
12:30 PM	0	1	127	12	140	0	6	2	1	9	0	3	95	14	112	0	2	3	7	12	273
12:45 PM	0	1	111	5	117	0	5	1	0	6	0	3	114	10	127	0	5	2	1	8	258
Total	0	4	491	31	526	0	32	6	4	42	0	8	420	43	471	0	21	7	11	39	1078

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01:00 PM	0	0	123	5	128	0	7	1	2	10	0	1	91	8	100	0	4	4	1	9	247
01:15 PM	0	0	102	9	111	0	7	2	0	9	0	6	116	13	135	0	8	1	4	13	268
01:30 PM	0	0	87	8	95	0	2	0	1	3	0	3	115	18	136	0	5	3	2	10	244
01:45 PM	0	1	83	1	85	0	6	3	0	9	0	7	131	17	155	0	5	1	5	11	260
Total	0	1	395	23	419	0	22	6	3	31	0	17	453	56	526	0	22	9	12	43	1019
Grand Total	0	9	3410	97	3516	0	436	48	15	499	0	47	2245	380	2672	0	119	116	153	388	7075
Apprch %	0	0.3	97	2.8		0	87.4	9.6	3		0	1.8	84	14.2		0	30.7	29.9	39.4		
Total %	0	0.1	48.2	1.4	49.7	0	6.2	0.7	0.2	7.1	0	0.7	31.7	5.4	37.8	0	1.7	1.6	2.2	5.5	
All Others	0	9	3292	95	3396	0	431	47	9	487	0	44	2080	368	2492	0	117	106	149	372	6747
% All Others	0	100	96.5	97.9	96.6	0	98.9	97.9	60	97.6	0	93.6	92.7	96.8	93.3	0	98.3	91.4	97.4	95.9	95.4
Bus & Trks 4 ax	0	0	54	2	56	0	3	1	5	9	0	3	80	9	92	0	2	10	4	16	173
% Bus & Trks 4 ax	0	0	1.6	2.1	1.6	0	0.7	2.1	33.3	1.8	0	6.4	3.6	2.4	3.4	0	1.7	8.6	2.6	4.1	2.4
Trks 5 ax +	0	0	64	0	64	0	2	0	1	3	0	0	85	3	88	0	0	0	0	0	155
% Trks 5 ax +	0	0	1.9	0	1.8	0	0.5	0	6.7	0.6	0	0	3.8	0.8	3.3	0	0	0	0	0	2.2

	US Southbound					BURR Westbound					US Northbound					BURR Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	**149**	0	**149**	0	28	0	0	28	0	0	53	15	68	0	5	3	**18**	26	271
07:15 AM	0	0	125	0	125	0	**31**	0	0	**31**	0	0	70	29	99	0	5	5	10	20	275
07:30 AM	0	0	126	1	127	0	26	0	0	26	0	0	80	**34**	**114**	0	2	8	5	15	282
07:45 AM	0	0	118	**3**	121	0	20	**3**	0	23	0	**1**	**84**	28	113	0	**8**	**13**	9	**30**	**287**
Total Volume	0	0	518	4	522	0	105	3	0	108	0	1	287	106	394	0	20	29	42	91	1115
% App. Total	0	0	99.2	0.8		0	97.2	2.8	0		0	0.3	72.8	26.9		0	22	31.9	46.2		
PHF	.000	.000	.869	.333	.876	.000	.847	.250	.000	.871	.000	.250	.854	.779	.864	.000	.625	.558	.583	.758	.971

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
By: D. Kassa; cold, hwy-wet, side-snow
No peds/bikes. Longest Q: 8 WB 2mi
Of EB Burr. vol total - 33 from Dalton

File Name : 395 17870 Burroughs 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					DALTON RD Westbound					US 395 Northbound					BURROUGHS RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
02:00 PM	0	2	79	9	90	0	13	3	2	18	0	3	99	12	114	0	2	1	1	4	226
02:15 PM	0	0	93	2	95	0	9	2	1	12	0	1	112	8	121	0	10	6	3	19	247
02:30 PM	0	0	82	6	88	0	9	1	0	10	0	2	128	21	151	0	8	3	1	12	261
02:45 PM	0	1	87	7	95	0	15	4	1	20	0	4	126	20	150	0	1	9	2	12	277
Total	0	3	341	24	368	0	46	10	4	60	0	10	465	61	536	0	21	19	7	47	1011
03:00 PM	0	3	94	5	102	0	14	10	1	25	0	4	112	14	130	0	3	4	2	9	266
03:15 PM	0	0	115	9	124	0	14	4	0	18	0	5	126	20	151	0	4	4	1	9	302
03:30 PM	0	0	107	10	117	0	20	5	1	26	0	4	131	18	153	0	2	4	4	10	306
03:45 PM	0	0	102	10	112	0	8	0	0	8	0	4	165	17	186	0	6	2	0	8	314
Total	0	3	418	34	455	0	56	19	2	77	0	17	534	69	620	0	15	14	7	36	1188
04:00 PM	0	0	89	3	92	0	13	6	0	19	0	6	145	23	174	0	4	0	2	6	291
04:15 PM	0	0	100	6	106	0	13	4	0	17	0	8	155	25	188	0	8	3	2	13	324
04:30 PM	0	0	104	7	111	0	7	2	0	9	0	6	175	28	209	0	1	3	1	5	334
04:45 PM	0	0	85	3	88	0	15	4	0	19	0	10	155	26	191	0	2	4	3	9	307
Total	0	0	378	19	397	0	48	16	0	64	0	30	630	102	762	0	15	10	8	33	1256
05:00 PM	0	0	93	17	110	0	12	6	1	19	0	3	135	31	169	0	2	5	1	8	306
05:15 PM	0	0	89	12	101	0	4	3	0	7	0	6	126	29	161	0	5	5	1	11	280
05:30 PM	0	0	67	8	75	0	9	4	0	13	0	10	146	33	189	0	2	1	1	4	281
05:45 PM	0	0	73	9	82	0	7	3	0	10	0	2	135	42	179	0	1	2	3	6	277
Total	0	0	322	46	368	0	32	16	1	49	0	21	542	135	698	0	10	13	6	29	1144
Grand Total	0	6	1459	123	1588	0	182	61	7	250	0	78	2171	367	2616	0	61	56	28	145	4599
Apprch %	0	0.4	91.9	7.7		0	72.8	24.4	2.8		0	3	83	14		0	42.1	38.6	19.3		
Total %	0	0.1	31.7	2.7	34.5	0	4	1.3	0.2	5.4	0	1.7	47.2	8	56.9	0	1.3	1.2	0.6	3.2	
All Others	0	6	1381	122	1509	0	181	58	7	246	0	78	2126	363	2567	0	57	56	28	141	4463
% All Others	0	100	94.7	99.2	95	0	99.5	95.1	100	98.4	0	100	97.9	98.9	98.1	0	93.4	100	100	97.2	97
Bus & Trks 4 ax	0	0	42	1	43	0	1	3	0	4	0	0	25	4	29	0	4	0	0	4	80
% Bus & Trks 4 ax	0	0	2.9	0.8	2.7	0	0.5	4.9	0	1.6	0	0	1.2	1.1	1.1	0	6.6	0	0	2.8	1.7
Trks 5 ax +	0	0	36	0	36	0	0	0	0	0	0	0	20	0	20	0	0	0	0	0	56
% Trks 5 ax +	0	0	2.5	0	2.3	0	0	0	0	0	0	0	0.9	0	0.8	0	0	0	0	0	1.2

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
By: D. Kassa; cold, hwy-wet, side-snow
No peds/bikes. Longest Q: 8 WB 2mi
Of EB Burr. vol total - 33 from Dalton

File Name : 395 17870 Burroughs 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 2

	US 395 Southbound					DALTON RD Westbound					US 395 Northbound					BURROUGHS RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	0	100	6	106	0	13	4	0	17	0	8	155	25	188	0	**8**	3	2	**13**	324
04:30 PM	0	0	**104**	7	**111**	0	7	2	0	9	0	6	**175**	28	**209**	0	1	3	1	5	**334**
04:45 PM	0	0	85	3	88	0	**15**	4	0	**19**	0	**10**	155	26	191	0	2	4	**3**	9	307
05:00 PM	0	0	93	**17**	110	0	12	**6**	**1**	19	0	3	135	**31**	169	0	2	**5**	1	8	306
Total Volume	0	0	382	33	415	0	47	16	1	64	0	27	620	110	757	0	13	15	7	35	1271
% App. Total	0	0	92	8		0	73.4	25	1.6		0	3.6	81.9	14.5		0	37.1	42.9	20		
PHF	.000	.000	.918	.485	.935	.000	.783	.667	.250	.842	.000	.675	.886	.887	.906	.000	.406	.750	.583	.673	.951

WSDOT

2714 N Mayfair St
Spokane, WA 99207

Counts taken by ER Planning
No Bicyclists
No Peds

File Name : 395 17870 Burroughs-Dalton 16Mid
Site Code : 00000002
Start Date : 5/18/2016
Page No : 1

Groups Printed- All others - bus & 4ax - trks 5+ ax

	Southbound					Westbound					Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
11:00 AM	0	114	9	0	123	9	1	0	0	10	2	87	12	0	101	5	1	1	0	7	241
11:15 AM	0	109	2	0	111	10	3	1	0	14	3	102	10	0	115	7	2	4	0	13	253
11:30 AM	0	102	5	0	107	11	2	0	0	13	4	95	11	0	110	4	3	1	0	8	238
11:45 AM	0	91	5	0	96	6	4	3	0	13	2	95	9	0	106	10	6	3	0	19	234
Total	0	416	21	0	437	36	10	4	0	50	11	379	42	0	432	26	12	9	0	47	966
12:00 PM	0	105	3	0	108	9	3	1	0	13	1	97	11	0	109	5	1	1	0	7	237
12:15 PM	0	111	9	0	120	11	6	0	0	17	1	116	20	0	137	6	0	0	0	6	280
12:30 PM	0	105	3	0	108	6	2	1	0	9	3	110	12	0	125	3	2	2	0	7	249
12:45 PM	2	99	1	0	102	9	4	1	0	14	6	115	11	0	132	6	3	2	0	11	259
Total	2	420	16	0	438	35	15	3	0	53	11	438	54	0	503	20	6	5	0	31	1025
Grand Total	2	836	37	0	875	71	25	7	0	103	22	817	96	0	935	46	18	14	0	78	1991
Apprch %	0.2	95.5	4.2	0		68.9	24.3	6.8	0		2.4	87.4	10.3	0		59	23.1	17.9	0		
Total %	0.1	42	1.9	0	43.9	3.6	1.3	0.4	0	5.2	1.1	41	4.8	0	47	2.3	0.9	0.7	0	3.9	
All others	2	785	37	0	824	67	24	7	0	98	21	758	87	0	866	44	17	13	0	74	1862
% All others	100	93.9	100	0	94.2	94.4	96	100	0	95.1	95.5	92.8	90.6	0	92.6	95.7	94.4	92.9	0	94.9	93.5
bus & 4ax	0	28	0	0	28	4	1	0	0	5	1	34	9	0	44	2	1	1	0	4	81
% bus & 4ax	0	3.3	0	0	3.2	5.6	4	0	0	4.9	4.5	4.2	9.4	0	4.7	4.3	5.6	7.1	0	5.1	4.1
trks 5+ ax	0	23	0	0	23	0	0	0	0	0	0	25	0	0	25	0	0	0	0	0	48
% trks 5+ ax	0	2.8	0	0	2.6	0	0	0	0	0	0	3.1	0	0	2.7	0	0	0	0	0	2.4

	Southbound					Westbound					Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 12:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:00 PM																					
12:00 PM	0	105	3	0	108	9	3	**1**	0	13	1	97	11	0	109	5	1	1	0	7	237
12:15 PM	0	**111**	**9**	0	**120**	**11**	**6**	0	0	**17**	1	**116**	**20**	0	**137**	**6**	0	0	0	6	**280**
12:30 PM	0	105	3	0	108	6	2	1	0	9	3	110	12	0	125	3	2	**2**	0	7	249
12:45 PM	**2**	99	1	0	102	9	4	1	0	14	**6**	115	11	0	132	6	**3**	2	0	**11**	259
Total Volume	2	420	16	0	438	35	15	3	0	53	11	438	54	0	503	20	6	5	0	31	1025
% App. Total	0.5	95.9	3.7	0		66	28.3	5.7	0		2.2	87.1	10.7	0		64.5	19.4	16.1	0		
PHF	.250	.946	.444	.000	.913	.795	.625	.750	.000	.779	.458	.944	.675	.000	.918	.833	.500	.625	.000	.705	.915
All others	2	395	16	0	413	33	15	3	0	51	10	407	50	0	467	19	6	5	0	30	961
% All others	100	94.0	100	0	94.3	94.3	100	100	0	96.2	90.9	92.9	92.6	0	92.8	95.0	100	100	0	96.8	93.8
bus & 4ax	0	16	0	0	16	2	0	0	0	2	1	18	4	0	23	1	0	0	0	1	42
% bus & 4ax	0	3.8	0	0	3.7	5.7	0	0	0	3.8	9.1	4.1	7.4	0	4.6	5.0	0	0	0	3.2	4.1
trks 5+ ax	0	9	0	0	9	0	0	0	0	0	0	13	0	0	13	0	0	0	0	0	22
% trks 5+ ax	0	2.1	0	0	2.1	0	0	0	0	0	0	3.0	0	0	2.6	0	0	0	0	0	2.1

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

DATE: 12/18/2015
TIME: 09:25:17
PAGE: 1

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 06:00 - 10:00
LOCATION JCT SR 395 & SHORT RD 6

ENTIRE COUNT VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												67	4.46		1501
THIS LEG NORTH															
NORTH TO SOUTH	1431	1	29	5		6	17	7			2	67		99.80	1498
NORTH TO EAST	2													0.13	2
NORTH TO WEST	1													0.07	1
SOUTH APPROACH												147	14.03		1048
SOUTH TO NORTH	528	1	45	14		8	20	17			15	120		61.83	648
THIS LEG SOUTH															
SOUTH TO EAST	370	1	19	1		3	3					27		37.88	397
SOUTH TO WEST	3													0.29	3
EAST APPROACH												23	3.93		585
EAST TO NORTH	45		5	1								6		8.72	51
EAST TO SOUTH	504	3	8	2		1	2					16		88.89	520
THIS LEG EAST															
EAST TO WEST	13	1										1		2.39	14
WEST APPROACH												1	5.00		20
WEST TO NORTH	3													15.00	3
WEST TO SOUTH	1													5.00	1
WEST TO EAST	15		1									1		80.00	16
THIS LEG WEST															
															3154
														PCT SPLIT OUT/IN	
NORTH TOTAL	2010	2	79	20		14	37	24			17	193		68/32	2203
PERCENTAGE	91.24	0.09	3.59	0.91		0.64	1.68	1.09			0.77	8.76			
SOUTH TOTAL	2837	6	101	22		18	42	24			17	230		34/66	3067
PERCENTAGE	92.50	0.20	3.29	0.72		0.59	1.37	0.78			0.55	7.50			
EAST TOTAL	949	5	33	4		4	5					51		58/42	1000
PERCENTAGE	94.90	0.50	3.30	0.40		0.40	0.50					5.10			
WEST TOTAL	36	1	1									2		53/47	38
PERCENTAGE	94.74	2.63	2.63									5.26			
TRUCK PERCENTAGE:															6308

LEGS	S/U	%	D/U	%	TRAIN	%	TRUCK	%	AXLE FACTOR
NORTH TOTAL	101	4.58	75	3.40	17	0.77	193	8.76	0.9283
SOUTH TOTAL	129	4.21	84	2.74	17	0.55	230	7.50	0.9438
EAST TOTAL	42	4.20	9	0.90			51	5.10	0.9866
WEST TOTAL	2	5.26					2	5.26	1.0000

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 06:00 - 07:00
LOCATION JCT SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												12	3.26		368
THIS LEG NORTH															
NORTH TO SOUTH	355	1	5	1		1	1	3				12		99.73	367
NORTH TO EAST															
NORTH TO WEST	1													0.27	1
SOUTH APPROACH												29	20.14		144
SOUTH TO NORTH	82		8	1		1	5	5			3	23		72.92	105
THIS LEG SOUTH															
SOUTH TO EAST	32		5				1					6		26.39	38
SOUTH TO WEST	1													0.69	1
EAST APPROACH												7	7.22		97
EAST TO NORTH	2		3	1								4		6.19	6
EAST TO SOUTH	88	2	1									3		93.81	91
THIS LEG EAST															
EAST TO WEST															
WEST APPROACH															1
WEST TO NORTH															
WEST TO SOUTH															
WEST TO EAST	1													100.00	1
THIS LEG WEST															
															610
														PCT SPLIT OUT/IN	
NORTH TOTAL	440	1	16	3		2	6	8			3	39		77/23	479
PERCENTAGE	91.86	0.21	3.34	0.63		0.42	1.25	1.67			0.63	8.14			
SOUTH TOTAL	558	3	19	2		2	7	8			3	44		24/76	602
PERCENTAGE	92.69	0.50	3.16	0.33		0.33	1.16	1.33			0.50	7.31			
EAST TOTAL	123	2	9	1			1					13		71/29	136
PERCENTAGE	90.44	1.47	6.62	0.74			0.74					9.56			
WEST TOTAL	3													33/67	3
PERCENTAGE	100.00														
															1220

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 07:00 - 08:00
LOCATION JCT SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												18	4.59		392
THIS LEG NORTH															
NORTH TO SOUTH	373		7	2		1	4	2			2	18		99.74	391
NORTH TO EAST	1													0.26	1
NORTH TO WEST															
SOUTH APPROACH												39	13.27		294
SOUTH TO NORTH	149		9	3		4	8	6			2	32		61.56	181
THIS LEG SOUTH															
SOUTH TO EAST	106		6				1					7		38.44	113
SOUTH TO WEST															
EAST APPROACH												4	3.01		133
EAST TO NORTH	11		1									1		9.02	12
EAST TO SOUTH	118		1				1					2		90.23	120
THIS LEG EAST															
EAST TO WEST		1										1		0.75	1
WEST APPROACH															4
WEST TO NORTH	2													50.00	2
WEST TO SOUTH															
WEST TO EAST	2													50.00	2
THIS LEG WEST															
															823
														PCT SPLIT OUT/IN	
NORTH TOTAL	536		17	5		5	12	8			4	51		67/33	587
PERCENTAGE	91.31		2.90	0.85		0.85	2.04	1.36			0.68	8.69			
SOUTH TOTAL	746		23	5		5	14	8			4	59		37/63	805
PERCENTAGE	92.67		2.86	0.62		0.62	1.74	0.99			0.50	7.33			
EAST TOTAL	238	1	8				2					11		53/47	249
PERCENTAGE	95.58	0.40	3.21				0.80					4.42			
WEST TOTAL	4	1										1		80/20	5
PERCENTAGE	80.00	20.0										20.00			
															1646

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 08:00 - 09:00
LOCATION JCT SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												16	4.22		379
THIS LEG NORTH															
NORTH TO SOUTH	363		8	1		2	4	1				16		100.00	379
NORTH TO EAST															
NORTH TO WEST															
SOUTH APPROACH												38	12.30		309
SOUTH TO NORTH	168		13	6		2	5	4			5	35		65.70	203
THIS LEG SOUTH															
SOUTH TO EAST	102		2				1					3		33.98	105
SOUTH TO WEST	1													0.32	1
EAST APPROACH												6	3.75		160
EAST TO NORTH	13		1									1		8.75	14
EAST TO SOUTH	136		2	2		1						5		88.12	141
THIS LEG EAST															
EAST TO WEST	5													3.12	5
WEST APPROACH															9
WEST TO NORTH	1													11.11	1
WEST TO SOUTH	1													11.11	1
WEST TO EAST	7													77.78	7
THIS LEG WEST															
															857
														PCT SPLIT OUT/IN	
NORTH TOTAL	545		22	7		4	9	5			5	52		63/37	597
PERCENTAGE	91.29		3.69	1.17		0.67	1.51	0.84			0.84	8.71			
SOUTH TOTAL	771		25	9		5	10	5			5	59		37/63	830
PERCENTAGE	92.89		3.01	1.08		0.60	1.20	0.60			0.60	7.11			
EAST TOTAL	263		5	2		1	1					9		59/41	272
PERCENTAGE	96.69		1.84	0.74		0.37	0.37					3.31			
WEST TOTAL	15													60/40	15
PERCENTAGE	100.00														
															1714

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 09:00 - 10:00
LOCATION JCT SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												21	5.80		362
THIS LEG NORTH															
NORTH TO SOUTH	340		9	1		2	8	1				21		99.72	361
NORTH TO EAST	1													0.28	1
NORTH TO WEST															
SOUTH APPROACH												41	13.62		301
SOUTH TO NORTH	129	1	15	4		1	2	2			5	30		52.82	159
THIS LEG SOUTH															
SOUTH TO EAST	130	1	6	1		3						11		46.84	141
SOUTH TO WEST	1													0.33	1
EAST APPROACH												6	3.08		195
EAST TO NORTH	19													9.74	19
EAST TO SOUTH	162	1	4				1					6		86.15	168
THIS LEG EAST															
EAST TO WEST	8													4.10	8
WEST APPROACH												1	16.67		6
WEST TO NORTH															
WEST TO SOUTH															
WEST TO EAST	5		1									1		100.00	6
THIS LEG WEST															
															864
														PCT SPLIT OUT/IN	
NORTH TOTAL	489	1	24	5		3	10	3			5	51		67/33	540
PERCENTAGE	90.56	0.19	4.44	0.93		0.56	1.85	0.56			0.93	9.44			
SOUTH TOTAL	762	3	34	6		6	11	3			5	68		36/64	830
PERCENTAGE	91.81	0.36	4.10	0.72		0.72	1.33	0.36			0.60	8.19			
EAST TOTAL	325	2	11	1		3	1					18		57/43	343
PERCENTAGE	94.75	0.58	3.21	0.29		0.87	0.29					5.25			
WEST TOTAL	14		1									1		40/60	15
PERCENTAGE	93.33		6.67									6.67			
															1728

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 08:15 - 09:15
LOCATION JCT SR 395 & SHORT RD 6

NORTH LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												18	4.59		392
THIS LEG NORTH															
NORTH TO SOUTH	374		10			2	6					18		100.00	392
NORTH TO EAST															
NORTH TO WEST															
SOUTH APPROACH												45	14.15		318
SOUTH TO NORTH	158		14	6		1	5	5			5	36		61.01	194
THIS LEG SOUTH															
SOUTH TO EAST	115	1	4	1		2	1					9		38.99	124
SOUTH TO WEST															
EAST APPROACH												6	3.35		179
EAST TO NORTH	17													9.50	17
EAST TO SOUTH	146	1	2	2		1						6		84.92	152
THIS LEG EAST															
EAST TO WEST	10													5.59	10
WEST APPROACH															4
WEST TO NORTH															
WEST TO SOUTH	1													25.00	1
WEST TO EAST	3													75.00	3
THIS LEG WEST															
															893
														PCT SPLIT OUT/IN	
NORTH TOTAL	549		24	6		3	11	5			5	54		65/35	603
PERCENTAGE	91.04		3.98	1.00		0.50	1.82	0.83			0.83	8.96			
SOUTH TOTAL	794	2	30	9		6	12	5			5	69		37/63	863
PERCENTAGE	92.00	0.23	3.48	1.04		0.70	1.39	0.58			0.58	8.00			
EAST TOTAL	291	2	6	3		3	1					15		58/42	306
PERCENTAGE	95.10	0.65	1.96	0.98		0.98	0.33					4.90			
WEST TOTAL	14													29/71	14
PERCENTAGE	100.00														
															1786

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 08:30 - 09:30
LOCATION JCT SR 395 & SHORT RD 6

SOUTH LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												16	4.08		392
THIS LEG NORTH															
NORTH TO SOUTH	376		9			2	5					16		100.00	392
NORTH TO EAST															
NORTH TO WEST															
SOUTH APPROACH												46	15.08		305
SOUTH TO NORTH	140		17	4		2	5	4			4	36		57.70	176
THIS LEG SOUTH															
SOUTH TO EAST	118	1	5	1		2	1					10		41.97	128
SOUTH TO WEST	1													0.33	1
EAST APPROACH												6	3.12		192
EAST TO NORTH	17													8.85	17
EAST TO SOUTH	161	1	3	1		1						6		86.98	167
THIS LEG EAST															
EAST TO WEST	8													4.17	8
WEST APPROACH															5
WEST TO NORTH															
WEST TO SOUTH	1													20.00	1
WEST TO EAST	4													80.00	4
THIS LEG WEST															
															894
														PCT SPLIT OUT/IN	
NORTH TOTAL	533		26	4		4	10	4			4	52		67/33	585
PERCENTAGE	91.11		4.44	0.68		0.68	1.71	0.68			0.68	8.89			
SOUTH TOTAL	797	2	34	6		7	11	4			4	68		35/65	865
PERCENTAGE	92.14	0.23	3.93	0.69		0.81	1.27	0.46			0.46	7.86			
EAST TOTAL	308	2	8	2		3	1					16		59/41	324
PERCENTAGE	95.06	0.62	2.47	0.62		0.93	0.31					4.94			
WEST TOTAL	14													36/64	14
PERCENTAGE	100.00														
															1788

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 09:00 - 10:00
LOCATION JCT SR 395 & SHORT RD 6

EAST LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												21	5.80		362
THIS LEG NORTH															
NORTH TO SOUTH	340		9	1		2	8	1				21		99.72	361
NORTH TO EAST	1													0.28	1
NORTH TO WEST															
SOUTH APPROACH												41	13.62		301
SOUTH TO NORTH	129	1	15	4		1	2	2			5	30		52.82	159
THIS LEG SOUTH															
SOUTH TO EAST	130	1	6	1		3						11		46.84	141
SOUTH TO WEST	1													0.33	1
EAST APPROACH												6	3.08		195
EAST TO NORTH	19													9.74	19
EAST TO SOUTH	162	1	4				1					6		86.15	168
THIS LEG EAST															
EAST TO WEST	8													4.10	8
WEST APPROACH												1	16.67		6
WEST TO NORTH															
WEST TO SOUTH															
WEST TO EAST	5		1									1		100.00	6
THIS LEG WEST															
															864
														PCT SPLIT OUT/IN	
NORTH TOTAL	489	1	24	5		3	10	3			5	51		67/33	540
PERCENTAGE	90.56	0.19	4.44	0.93		0.56	1.85	0.56			0.93	9.44			
SOUTH TOTAL	762	3	34	6		6	11	3			5	68		36/64	830
PERCENTAGE	91.81	0.36	4.10	0.72		0.72	1.33	0.36			0.60	8.19			
EAST TOTAL	325	2	11	1		3	1					18		57/43	343
PERCENTAGE	94.75	0.58	3.21	0.29		0.87	0.29					5.25			
WEST TOTAL	14		1									1		40/60	15
PERCENTAGE	93.33		6.67									6.67			
															1728

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 08:45 - 09:45
LOCATION JCT SR 395 & SHORT RD 6

WEST LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												18	4.84		372
THIS LEG NORTH															
NORTH TO SOUTH	354		9	1		2	6					18		100.00	372
NORTH TO EAST															
NORTH TO WEST															
SOUTH APPROACH												44	15.07		292
SOUTH TO NORTH	134		16	4		1	4	4			6	35		57.88	169
THIS LEG SOUTH															
SOUTH TO EAST	113	1	5	1		2						9		41.78	122
SOUTH TO WEST	1													0.34	1
EAST APPROACH												6	3.14		191
EAST TO NORTH	15													7.85	15
EAST TO SOUTH	163	1	4			1						6		88.48	169
THIS LEG EAST															
EAST TO WEST	7													3.66	7
WEST APPROACH															9
WEST TO NORTH															
WEST TO SOUTH	1													11.11	1
WEST TO EAST	8													88.89	8
THIS LEG WEST															
															864
														PCT SPLIT OUT/IN	
NORTH TOTAL	503		25	5		3	10	4			6	53		67/33	556
PERCENTAGE	90.47		4.50	0.90		0.54	1.80	0.72			1.08	9.53			
SOUTH TOTAL	766	2	34	6		6	10	4			6	68		35/65	834
PERCENTAGE	91.85	0.24	4.08	0.72		0.72	1.20	0.48			0.72	8.15			
EAST TOTAL	306	2	9	1		3						15		60/40	321
PERCENTAGE	95.33	0.62	2.80	0.31		0.93						4.67			
WEST TOTAL	17													53/47	17
PERCENTAGE	100.00														
															1728

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1193 COUNT ID 15-009
DATE 12/1/2015 DAY OF WEEK 3 TIME PERIOD HOUR 08:30 - 09:30
LOCATION JCT SR 395 & SHORT RD 6

INTERSECTIONAL PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												16	4.08		392
THIS LEG NORTH															
NORTH TO SOUTH	376		9			2	5					16		100.00	392
NORTH TO EAST															
NORTH TO WEST															
SOUTH APPROACH												46	15.08		305
SOUTH TO NORTH	140		17	4		2	5	4			4	36		57.70	176
THIS LEG SOUTH															
SOUTH TO EAST	118	1	5	1		2	1					10		41.97	128
SOUTH TO WEST	1													0.33	1
EAST APPROACH												6	3.12		192
EAST TO NORTH	17													8.85	17
EAST TO SOUTH	161	1	3	1		1						6		86.98	167
THIS LEG EAST															
EAST TO WEST	8													4.17	8
WEST APPROACH															5
WEST TO NORTH															
WEST TO SOUTH	1													20.00	1
WEST TO EAST	4													80.00	4
THIS LEG WEST															
															894
														PCT SPLIT OUT/IN	
NORTH TOTAL	533		26	4		4	10	4			4	52		67/33	585
PERCENTAGE	91.11		4.44	0.68		0.68	1.71	0.68			0.68	8.89			
SOUTH TOTAL	797	2	34	6		7	11	4			4	68		35/65	865
PERCENTAGE	92.14	0.23	3.93	0.69		0.81	1.27	0.46			0.46	7.86			
EAST TOTAL	308	2	8	2		3	1					16		59/41	324
PERCENTAGE	95.06	0.62	2.47	0.62		0.93	0.31					4.94			
WEST TOTAL	14													36/64	14
PERCENTAGE	100.00														
TRUCK PERCENTAGE:															1788

LEGS	S/U	%	D/U	%	TRAIN	%	TRUCK	%	AXLE FACTOR
NORTH TOTAL	30	5.13	18	3.08	4	0.68	52	8.89	0.9375
SOUTH TOTAL	42	4.86	22	2.54	4	0.46	68	7.86	0.9510
EAST TOTAL	12	3.70	4	1.23			16	4.94	0.9833
WEST TOTAL									1.0000

PEAK HOUR FACTOR	0.924	242	210	231	211	894

Washington State Department of Transportation
Transit, Research, and Intermodal Planning

Vehicle Volume Summary

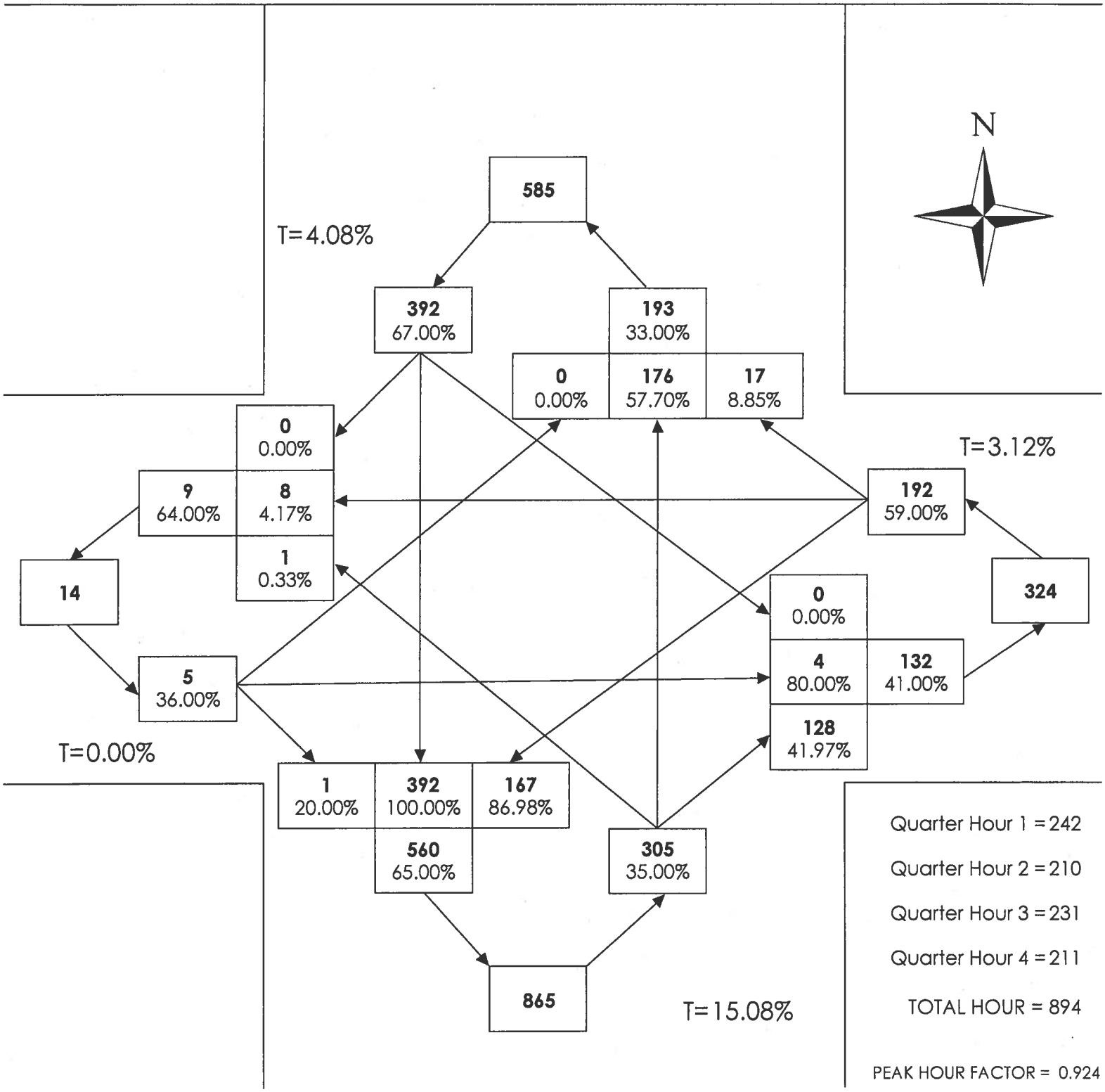
(Block Diagram)

Date: 12/1/2015
Time Period: 08:30 - 09:30

SR: 395 MP: 179.53 Off Sys. ID: Count ID: 15-009

Location: JCT SR 395 & SHORT RD

INTERSECTIONAL PEAK HOUR AND VOLUMES



Washington State Department of Transportation
Transit, Research, and Intermodal Planning

Vehicle Volume Summary

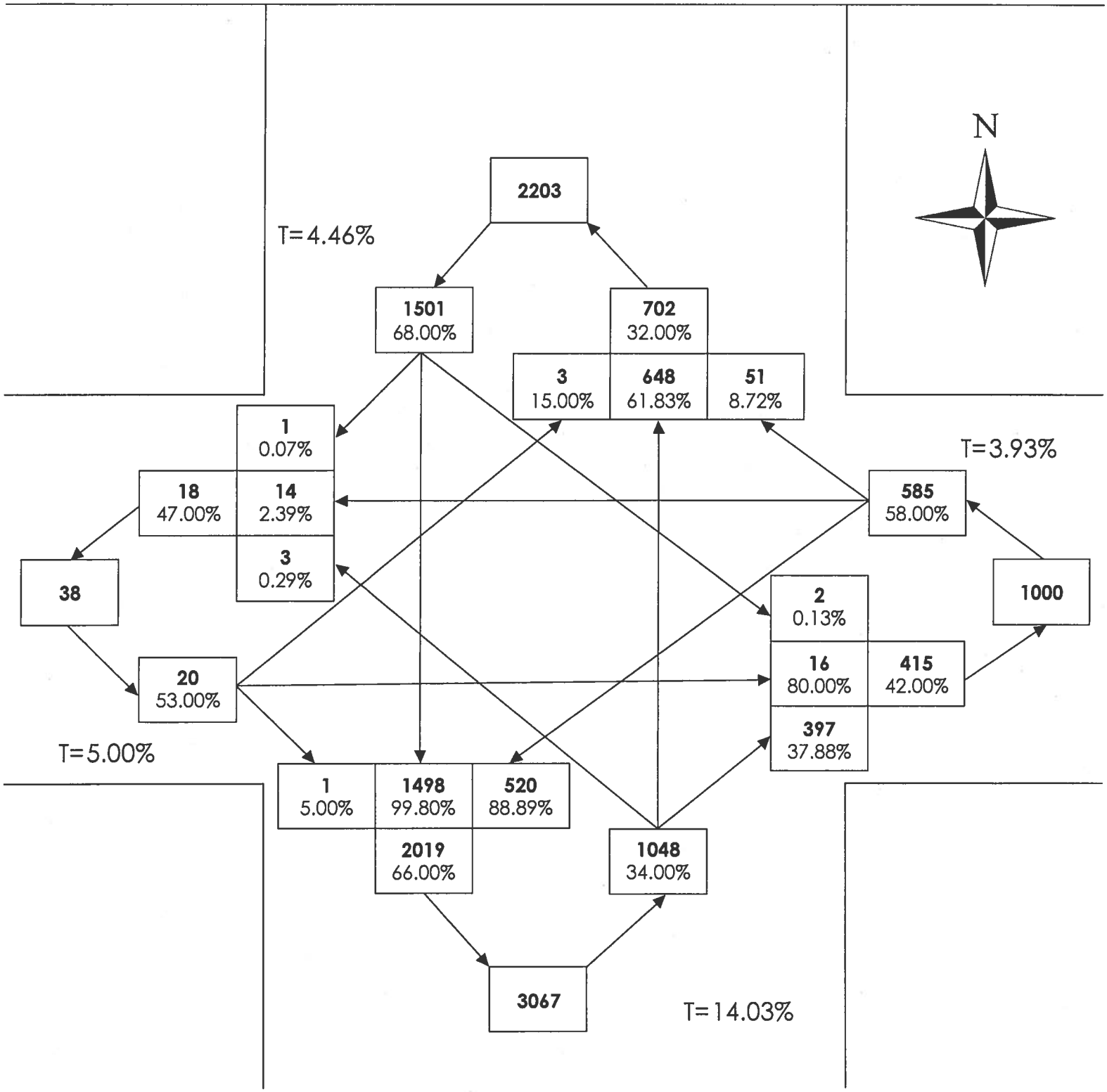
(Block Diagram)

Date: 12/1/2015
Time Period: 06:00 - 10:00

SR: 395 MP: 179.53 Off Sys. ID: Count ID: 15-009

Location: JCT SR 395 & SHORT RD

ENTIRE COUNT VOLUMES

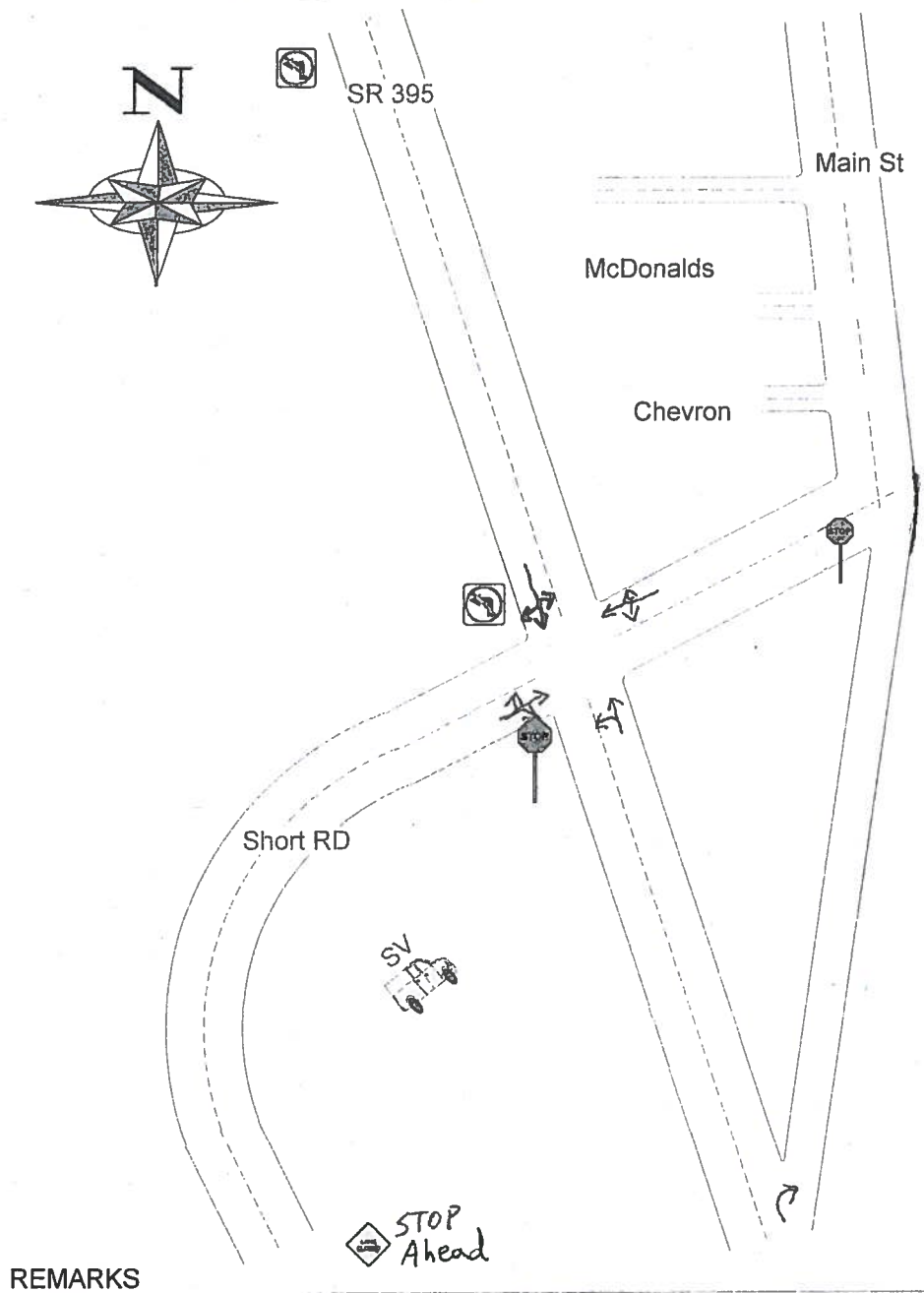


Washington State Department of Transportation

Traffic Station Sketch

SR# 395 MP 179.53 OSID _____ COUNT ID 15-009 DATE 12/1-2/15

STATION LOCATION JCT SR 395 & SHORT RD



REMARKS

A motorist informed me that drivers make a lot of iliegal SBLT's.

Also, when drivers make SBRT's the passing cars dont have much space.

SIGNATURE SNAZA

G:\015-009A.TXT	0600-1000	1193	12/1/2015
G:\015-009B.TXT	1100-1500	1194	12/2/2015
G:\015-009C.TXT	1400-1800	1195	12/3/2015

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

DATE: 12/18/2015
TIME: 09:26:48
PAGE: 1

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 11:00 - 15:00
LOCATION SR 395 & SHORT RD 6

ENTIRE COUNT VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												103	9.00		1145
THIS LEG NORTH															
NORTH TO SOUTH	1033	1	41	5	2	9	19	12			14	103		99.21	1136
NORTH TO EAST	4													0.35	4
NORTH TO WEST	5													0.44	5
SOUTH APPROACH												94	5.19		1812
SOUTH TO NORTH	959		25	7		6	16	14		1	6	75		57.06	1034
THIS LEG SOUTH															
SOUTH TO EAST	755	2	14			1		1				18		42.66	773
SOUTH TO WEST	4		1									1		0.28	5
EAST APPROACH												25	2.96		844
EAST TO NORTH	130		3									3		15.76	133
EAST TO SOUTH	651		15			5	1	1				22		79.74	673
THIS LEG EAST															
EAST TO WEST	38													4.50	38
WEST APPROACH												2	5.88		34
WEST TO NORTH	2													5.88	2
WEST TO SOUTH	2		2									2		11.76	4
WEST TO EAST	28													82.35	28
THIS LEG WEST															
															3835
														PCT SPLIT OUT/IN	
NORTH TOTAL	2133	1	69	12	2	15	35	26		1	20	181		49/51	2314
PERCENTAGE	92.18	0.04	2.98	0.52	0.09	0.65	1.51	1.12		0.04	0.86	7.82			
SOUTH TOTAL	3404	3	98	12	2	21	36	28		1	20	221		50/50	3625
PERCENTAGE	93.90	0.08	2.70	0.33	0.06	0.58	0.99	0.77		0.03	0.55	6.10			
EAST TOTAL	1606	2	32			6	1	2				43		51/49	1649
PERCENTAGE	97.39	0.12	1.94			0.36	0.06	0.12				2.61			
WEST TOTAL	79		3									3		41/59	82
PERCENTAGE	96.34		3.66									3.66			
TRUCK PERCENTAGE:															7670

LEGS	S/U	%	D/U	%	TRAIN	%	TRUCK	%	AXLE FACTOR
NORTH TOTAL	84	3.63	76	3.28	21	0.91	181	7.82	0.9280
SOUTH TOTAL	115	3.17	85	2.34	21	0.58	221	6.10	0.9499
EAST TOTAL	34	2.06	9	0.55			43	2.61	0.9930
WEST TOTAL	3	3.66					3	3.66	1.0000

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 11:00 - 12:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH															
THIS LEG NORTH												29	8.87		327
NORTH TO SOUTH	296		15	2	2	1	5	3			1	29		99.39	325
NORTH TO EAST	2													0.61	2
NORTH TO WEST															
SOUTH APPROACH												20	5.63		355
SOUTH TO NORTH	181		5	3		2	3	3			3	19		56.34	200
THIS LEG SOUTH															
SOUTH TO EAST	153		1									1		43.38	154
SOUTH TO WEST	1													0.28	1
EAST APPROACH												7	3.57		196
EAST TO NORTH	27		2									2		14.80	29
EAST TO SOUTH	155		4				1					5		81.63	160
THIS LEG EAST															
EAST TO WEST	7													3.57	7
WEST APPROACH												1	11.11		9
WEST TO NORTH															
WEST TO SOUTH	1		1									1		22.22	2
WEST TO EAST	7													77.78	7
THIS LEG WEST															
															887
														PCT SPLIT OUT/IN	
NORTH TOTAL	506		22	5	2	3	8	6			4	50		59/41	556
PERCENTAGE	91.01		3.96	0.90	0.36	0.54	1.44	1.08			0.72	8.99			
SOUTH TOTAL	787		26	5	2	3	9	6			4	55		42/58	842
PERCENTAGE	93.47		3.09	0.59	0.24	0.36	1.07	0.71			0.48	6.53			
EAST TOTAL	351		7				1					8		55/45	359
PERCENTAGE	97.77		1.95				0.28					2.23			
WEST TOTAL	16		1									1		53/47	17
PERCENTAGE	94.12		5.88									5.88			
															1774

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 12:00 - 13:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												23	7.44		309
THIS LEG NORTH															
NORTH TO SOUTH	286		10	2			4	4			3	23		100.00	309
NORTH TO EAST															
NORTH TO WEST															
SOUTH APPROACH												28	6.54		428
SOUTH TO NORTH	216		6	2		1	4	8		1	1	23		55.84	239
THIS LEG SOUTH															
SOUTH TO EAST	182	1	3									4		43.46	186
SOUTH TO WEST	2		1									1		0.70	3
EAST APPROACH												3	1.32		227
EAST TO NORTH	22													9.69	22
EAST TO SOUTH	193		2			1						3		86.34	196
THIS LEG EAST															
EAST TO WEST	9													3.96	9
WEST APPROACH												1	10.00		10
WEST TO NORTH	1													10.00	1
WEST TO SOUTH			1									1		10.00	1
WEST TO EAST	8													80.00	8
THIS LEG WEST															
															974
														PCT SPLIT OUT/IN	
NORTH TOTAL	525		16	4		1	8	12		1	4	46		54/46	571
PERCENTAGE	91.94		2.80	0.70		0.18	1.40	2.10		0.18	0.70	8.06			
SOUTH TOTAL	879	1	23	4		2	8	12		1	4	55		46/54	934
PERCENTAGE	94.11	0.11	2.46	0.43		0.21	0.86	1.28		0.11	0.43	5.89			
EAST TOTAL	414	1	5			1						7		54/46	421
PERCENTAGE	98.34	0.24	1.19			0.24						1.66			
WEST TOTAL	20		2									2		45/55	22
PERCENTAGE	90.91		9.09									9.09			
															1948

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 13:00 - 14:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												22	8.80		250
THIS LEG NORTH															
NORTH TO SOUTH	226		6	1		1	5	4			5	22		99.20	248
NORTH TO EAST															
NORTH TO WEST	2													0.80	2
SOUTH APPROACH												17	3.68		462
SOUTH TO NORTH	243		3			2	5	2				12		55.19	255
THIS LEG SOUTH															
SOUTH TO EAST	202		5									5		44.81	207
SOUTH TO WEST															
EAST APPROACH												8	3.83		209
EAST TO NORTH	43		1									1		21.05	44
EAST TO SOUTH	147		5			2						7		73.68	154
THIS LEG EAST															
EAST TO WEST	11													5.26	11
WEST APPROACH															5
WEST TO NORTH															
WEST TO SOUTH															
WEST TO EAST	5													100.00	5
THIS LEG WEST															
															926
														PCT SPLIT OUT/IN	
NORTH TOTAL	514		10	1		3	10	6			5	35		46/54	549
PERCENTAGE	93.62		1.82	0.18		0.55	1.82	1.09			0.91	6.38			
SOUTH TOTAL	818		19	1		5	10	6			5	46		53/47	864
PERCENTAGE	94.68		2.20	0.12		0.58	1.16	0.69			0.58	5.32			
EAST TOTAL	408		11			2						13		50/50	421
PERCENTAGE	96.91		2.61			0.48						3.09			
WEST TOTAL	18													28/72	18
PERCENTAGE	100.00														
															1852

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 14:00 - 15:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												29	11.20		259
THIS LEG NORTH															
NORTH TO SOUTH	225	1	10			7	5	1			5	29		98.07	254
NORTH TO EAST	2													0.77	2
NORTH TO WEST	3													1.16	3
SOUTH APPROACH												29	5.11		567
SOUTH TO NORTH	319		11	2		1	4	1			2	21		59.96	340
THIS LEG SOUTH															
SOUTH TO EAST	218	1	5			1		1				8		39.86	226
SOUTH TO WEST	1													0.18	1
EAST APPROACH												7	3.30		212
EAST TO NORTH	38													17.92	38
EAST TO SOUTH	156		4			2		1				7		76.89	163
THIS LEG EAST															
EAST TO WEST	11													5.19	11
WEST APPROACH															10
WEST TO NORTH	1													10.00	1
WEST TO SOUTH	1													10.00	1
WEST TO EAST	8													80.00	8
THIS LEG WEST															
															1048
														PCT SPLIT OUT/IN	
NORTH TOTAL	588	1	21	2		8	9	2			7	50		41/59	638
PERCENTAGE	92.16	0.16	3.29	0.31		1.25	1.41	0.31			1.10	7.84			
SOUTH TOTAL	920	2	30	2		11	9	4			7	65		58/42	985
PERCENTAGE	93.40	0.20	3.05	0.20		1.12	0.91	0.41			0.71	6.60			
EAST TOTAL	433	1	9			3		2				15		47/53	448
PERCENTAGE	96.65	0.22	2.01			0.67		0.45				3.35			
WEST TOTAL	25													40/60	25
PERCENTAGE	100.00														
															2096

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 14:00 - 15:00
LOCATION SR 395 & SHORT RD 6

NORTH LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												29	11.20		259
THIS LEG NORTH															
NORTH TO SOUTH	225	1	10			7	5	1			5	29		98.07	254
NORTH TO EAST	2													0.77	2
NORTH TO WEST	3													1.16	3
SOUTH APPROACH												29	5.11		567
SOUTH TO NORTH	319		11	2		1	4	1			2	21		59.96	340
THIS LEG SOUTH															
SOUTH TO EAST	218	1	5			1		1				8		39.86	226
SOUTH TO WEST	1													0.18	1
EAST APPROACH												7	3.30		212
EAST TO NORTH	38													17.92	38
EAST TO SOUTH	156		4			2		1				7		76.89	163
THIS LEG EAST															
EAST TO WEST	11													5.19	11
WEST APPROACH															10
WEST TO NORTH	1													10.00	1
WEST TO SOUTH	1													10.00	1
WEST TO EAST	8													80.00	8
THIS LEG WEST															
															1048
														PCT SPLIT OUT/IN	
NORTH TOTAL	588	1	21	2		8	9	2			7	50		41/59	638
PERCENTAGE	92.16	0.16	3.29	0.31		1.25	1.41	0.31			1.10	7.84			
SOUTH TOTAL	920	2	30	2		11	9	4			7	65		58/42	985
PERCENTAGE	93.40	0.20	3.05	0.20		1.12	0.91	0.41			0.71	6.60			
EAST TOTAL	433	1	9			3		2				15		47/53	448
PERCENTAGE	96.65	0.22	2.01			0.67		0.45				3.35			
WEST TOTAL	25													40/60	25
PERCENTAGE	100.00														
															2096

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 14:00 - 15:00
LOCATION SR 395 & SHORT RD 6

SOUTH LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												29	11.20		259
THIS LEG NORTH															
NORTH TO SOUTH	225	1	10			7	5	1			5	29		98.07	254
NORTH TO EAST	2													0.77	2
NORTH TO WEST	3													1.16	3
SOUTH APPROACH												29	5.11		567
SOUTH TO NORTH	319		11	2		1	4	1			2	21		59.96	340
THIS LEG SOUTH															
SOUTH TO EAST	218	1	5			1		1				8		39.86	226
SOUTH TO WEST	1													0.18	1
EAST APPROACH												7	3.30		212
EAST TO NORTH	38													17.92	38
EAST TO SOUTH	156		4			2		1				7		76.89	163
THIS LEG EAST															
EAST TO WEST	11													5.19	11
WEST APPROACH															10
WEST TO NORTH	1													10.00	1
WEST TO SOUTH	1													10.00	1
WEST TO EAST	8													80.00	8
THIS LEG WEST															
															1048
														PCT SPLIT OUT/IN	
NORTH TOTAL	588	1	21	2		8	9	2			7	50		41/59	638
PERCENTAGE	92.16	0.16	3.29	0.31		1.25	1.41	0.31			1.10	7.84			
SOUTH TOTAL	920	2	30	2		11	9	4			7	65		58/42	985
PERCENTAGE	93.40	0.20	3.05	0.20		1.12	0.91	0.41			0.71	6.60			
EAST TOTAL	433	1	9			3		2				15		47/53	448
PERCENTAGE	96.65	0.22	2.01			0.67		0.45				3.35			
WEST TOTAL	25													40/60	25
PERCENTAGE	100.00														
															2096

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 14:00 - 15:00
LOCATION SR 395 & SHORT RD 6

EAST LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												29	11.20		259
THIS LEG NORTH															
NORTH TO SOUTH	225	1	10			7	5	1			5	29		98.07	254
NORTH TO EAST	2													0.77	2
NORTH TO WEST	3													1.16	3
SOUTH APPROACH												29	5.11		567
SOUTH TO NORTH	319		11	2		1	4	1			2	21		59.96	340
THIS LEG SOUTH															
SOUTH TO EAST	218	1	5			1		1				8		39.86	226
SOUTH TO WEST	1													0.18	1
EAST APPROACH												7	3.30		212
EAST TO NORTH	38													17.92	38
EAST TO SOUTH	156		4			2		1				7		76.89	163
THIS LEG EAST															
EAST TO WEST	11													5.19	11
WEST APPROACH															10
WEST TO NORTH	1													10.00	1
WEST TO SOUTH	1													10.00	1
WEST TO EAST	8													80.00	8
THIS LEG WEST															
															1048
														PCT SPLIT OUT/IN	
NORTH TOTAL	588	1	21	2		8	9	2			7	50		41/59	638
PERCENTAGE	92.16	0.16	3.29	0.31		1.25	1.41	0.31			1.10	7.84			
SOUTH TOTAL	920	2	30	2		11	9	4			7	65		58/42	985
PERCENTAGE	93.40	0.20	3.05	0.20		1.12	0.91	0.41			0.71	6.60			
EAST TOTAL	433	1	9			3		2				15		47/53	448
PERCENTAGE	96.65	0.22	2.01			0.67		0.45				3.35			
WEST TOTAL	25													40/60	25
PERCENTAGE	100.00														
															2096

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 13:30 - 14:30
LOCATION SR 395 & SHORT RD 6

WEST LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												26	10.92		238
THIS LEG NORTH															
NORTH TO SOUTH	207		10	1		5	4	1			5	26		97.90	233
NORTH TO EAST	2													0.84	2
NORTH TO WEST	3													1.26	3
SOUTH APPROACH												27	5.12		527
SOUTH TO NORTH	279		6	1		2	7	3			2	21		56.93	300
THIS LEG SOUTH															
SOUTH TO EAST	220	1	4					1				6		42.88	226
SOUTH TO WEST	1													0.19	1
EAST APPROACH												1	0.52		193
EAST TO NORTH	36													18.65	36
EAST TO SOUTH	143		1									1		74.61	144
THIS LEG EAST															
EAST TO WEST	13													6.74	13
WEST APPROACH															10
WEST TO NORTH	1													10.00	1
WEST TO SOUTH															
WEST TO EAST	9													90.00	9
THIS LEG WEST															
															968
														PCT SPLIT OUT/IN	
NORTH TOTAL	528		16	2		7	11	4			7	47		41/59	575
PERCENTAGE	91.83		2.78	0.35		1.22	1.91	0.70			1.22	8.17			
SOUTH TOTAL	850	1	21	2		7	11	5			7	54		58/42	904
PERCENTAGE	94.03	0.11	2.32	0.22		0.77	1.22	0.55			0.77	5.97			
EAST TOTAL	423	1	5					1				7		45/55	430
PERCENTAGE	98.37	0.23	1.16					0.23				1.63			
WEST TOTAL	27													37/63	27
PERCENTAGE	100.00														
															1936

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1194 COUNT ID 15-009
DATE 12/2/2015 DAY OF WEEK 4 TIME PERIOD HOUR 14:00 - 15:00
LOCATION SR 395 & SHORT RD 6

INTERSECTIONAL PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH															
THIS LEG NORTH												29	11.20		259
NORTH TO SOUTH	225	1	10			7	5	1			5	29		98.07	254
NORTH TO EAST	2													0.77	2
NORTH TO WEST	3													1.16	3
SOUTH APPROACH															
SOUTH TO NORTH	319		11	2		1	4	1			2	29	5.11		567
THIS LEG SOUTH												21		59.96	340
SOUTH TO EAST	218	1	5			1		1				8		39.86	226
SOUTH TO WEST	1													0.18	1
EAST APPROACH															
EAST TO NORTH	38											7	3.30		212
EAST TO SOUTH	156		4			2		1				7		17.92	38
THIS LEG EAST														76.89	163
EAST TO WEST	11													5.19	11
WEST APPROACH															
WEST TO NORTH	1														10
WEST TO SOUTH	1													10.00	1
WEST TO EAST	8													10.00	1
THIS LEG WEST														80.00	8
															1048
														PCT SPLIT OUT/IN	
NORTH TOTAL	588	1	21	2		8	9	2			7	50		41/59	638
PERCENTAGE	92.16	0.16	3.29	0.31		1.25	1.41	0.31			1.10	7.84			
SOUTH TOTAL	920	2	30	2		11	9	4			7	65		58/42	985
PERCENTAGE	93.40	0.20	3.05	0.20		1.12	0.91	0.41			0.71	6.60			
EAST TOTAL	433	1	9			3		2				15		47/53	448
PERCENTAGE	96.65	0.22	2.01			0.67		0.45				3.35			
WEST TOTAL	25													40/60	25
PERCENTAGE	100.00														
															2096

TRUCK PERCENTAGE:

LEGS	S/U	%	D/U	%	TRAIN	%	TRUCK	%	AXLE FACTOR
NORTH TOTAL	24	3.76	19	2.98	7	1.10	50	7.84	0.9354
SOUTH TOTAL	34	3.45	24	2.44	7	0.71	65	6.60	0.9507
EAST TOTAL	10	2.23	5	1.12			15	3.35	0.9846
WEST TOTAL									1.0000

PEAK HOUR FACTOR	0.942	264	239	267	278	1048

Washington State Department of Transportation
Transit, Research, and Intermodal Planning

Vehicle Volume Summary

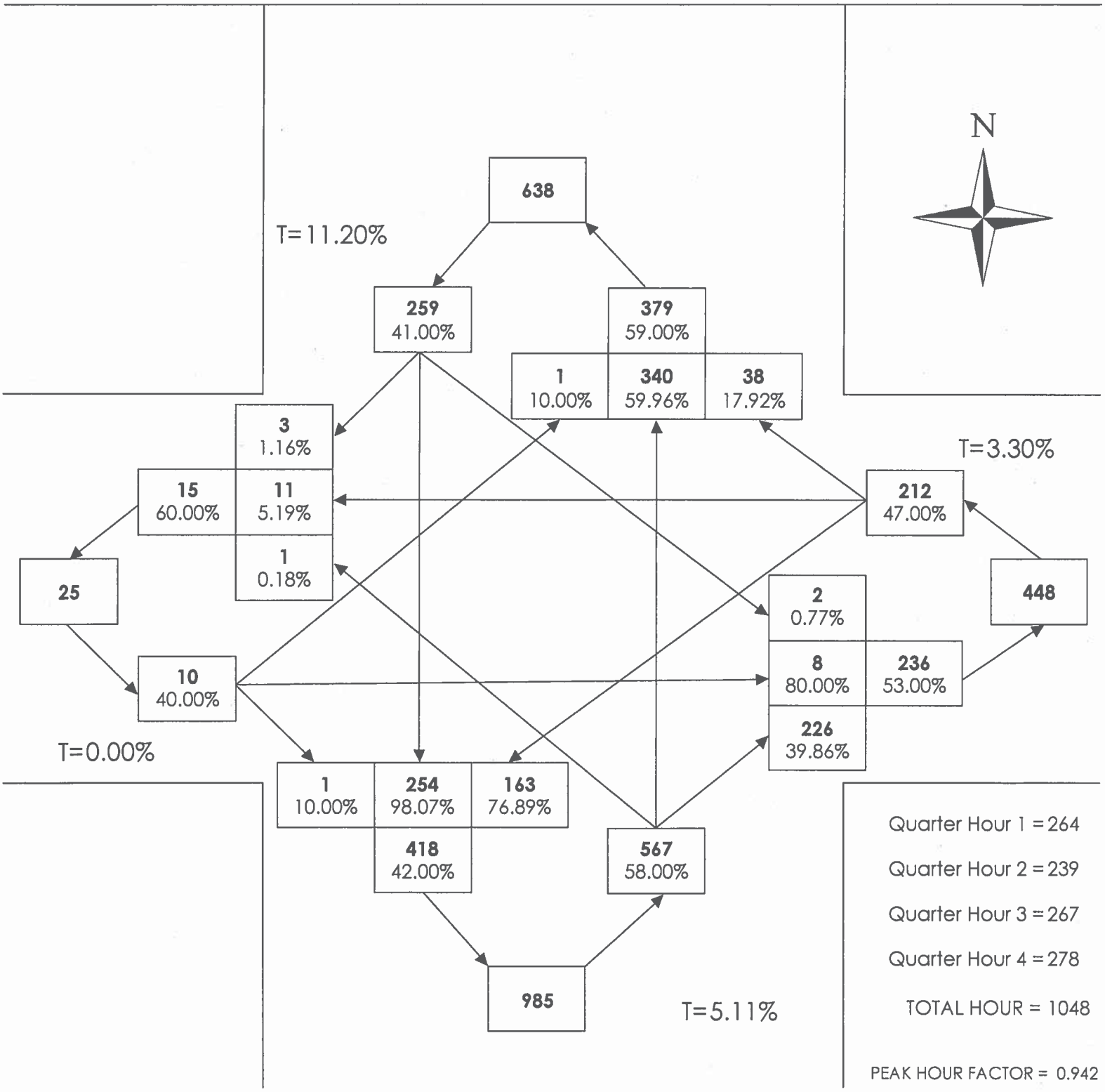
(Block Diagram)

Date: 12/2/2015
Time Period: 14:00 - 15:00

SR: 395 MP: 179.53 Off Sys. ID: Count ID: 15-009

Location: SR 395 & SHORT RD

INTERSECTIONAL PEAK HOUR AND VOLUMES



Washington State Department of Transportation
Transit, Research, and Intermodal Planning

Vehicle Volume Summary

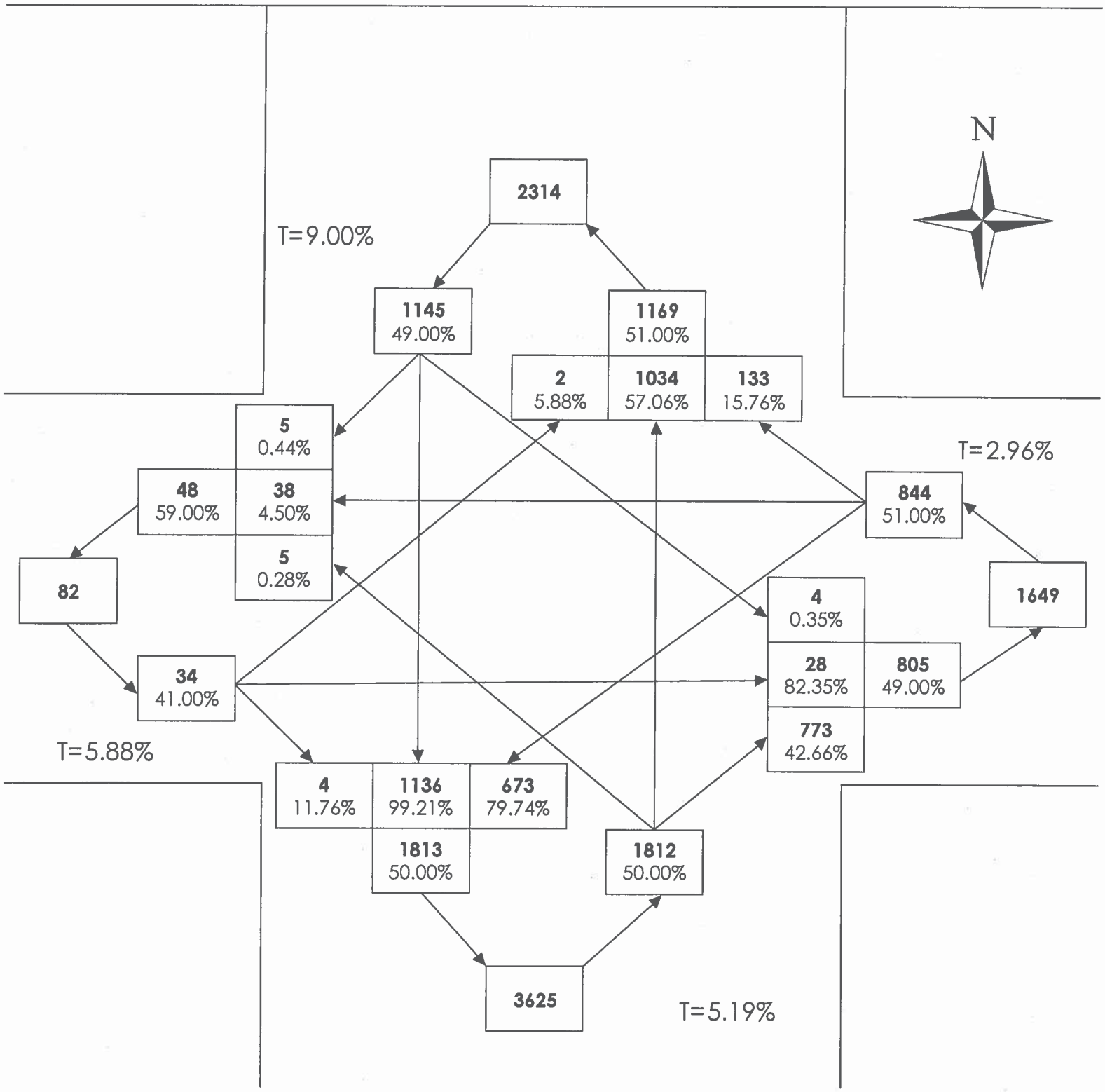
(Block Diagram)

Date: 12/2/2015
Time Period: 11:00 - 15:00

SR: 395 MP: 179.53 Off Sys. ID: Count ID: 15-009

Location: SR 395 & SHORT RD

ENTIRE COUNT VOLUMES

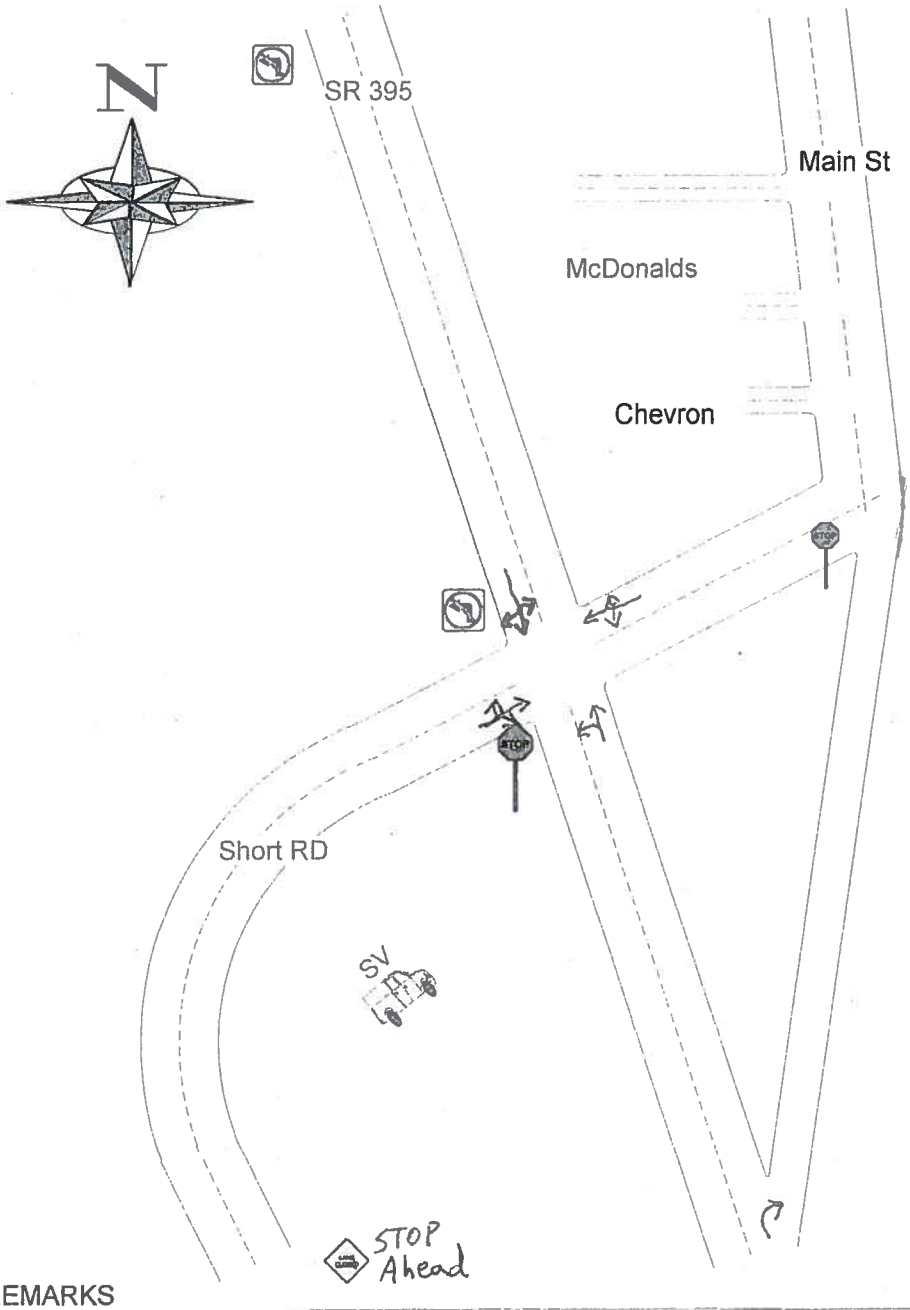


Washington State Department of Transportation

Traffic Station Sketch

SR# 395 MP 179.53 OSID _____ COUNT ID 15-009 DATE 12/1-2/15

STATION LOCATION JCT SR 395 & SHORT RD



REMARKS

A motorist informed me that drivers make a lot of iliegal SBLT's.

Also, when drivers make SBRT's the passing cars dont have much space.

SIGNATURE SNAZA

G:\015-009A.TXT	0600-1000	1193	12/1/2015
G:\015-009B.TXT	1100-1500	1194	12/2/2015
G:\015-009C.TXT	1400-1800	1195	12/3/2015

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

DATE: 12/18/2015
TIME: 09:14:24
PAGE: 1

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 14:00 - 18:00
LOCATION SR 395 & SHORT RD 6

ENTIRE COUNT VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												83	8.74		950
THIS LEG NORTH															
NORTH TO SOUTH	851	1	27	7		12	13	10	1		12	83		98.32	934
NORTH TO EAST	7													0.74	7
NORTH TO WEST	9													0.95	9
SOUTH APPROACH												73	3.35		2177
SOUTH TO NORTH	1215		19	9		3	10	5	1		3	50		58.11	1265
THIS LEG SOUTH															
SOUTH TO EAST	886	3	15	2	1	2						23		41.75	909
SOUTH TO WEST	3													0.14	3
EAST APPROACH												25	3.09		808
EAST TO NORTH	146		2									2		18.32	148
EAST TO SOUTH	603	4	17			1						22		77.35	625
THIS LEG EAST															
EAST TO WEST	34	1										1		4.33	35
WEST APPROACH															32
WEST TO NORTH	5													15.62	5
WEST TO SOUTH	3													9.38	3
WEST TO EAST	24													75.00	24
THIS LEG WEST															
															3967
														PCT SPLIT OUT/IN	
NORTH TOTAL	2233	1	48	16		15	23	15	2		15	135		40/60	2368
PERCENTAGE	94.30	0.04	2.03	0.68		0.63	0.97	0.63	0.08		0.63	5.70			
SOUTH TOTAL	3561	8	78	18	1	18	23	15	2		15	178		58/42	3739
PERCENTAGE	95.24	0.21	2.09	0.48	0.03	0.48	0.62	0.40	0.05		0.40	4.76			
EAST TOTAL	1700	8	34	2	1	3						48		46/54	1748
PERCENTAGE	97.25	0.46	1.95	0.11	0.06	0.17						2.75			
WEST TOTAL	78	1										1		41/59	79
PERCENTAGE	98.73	1.27										1.27			
TRUCK PERCENTAGE:															7934

LEGS	S/U	%	D/U	%	TRAIN	%	TRUCK	%	AXLE FACTOR
NORTH TOTAL	65	2.74	53	2.24	17	0.72	135	5.70	0.9487
SOUTH TOTAL	105	2.81	56	1.50	17	0.45	178	4.76	0.9656
EAST TOTAL	45	2.57	3	0.17			48	2.75	0.9971
WEST TOTAL	1	1.27					1	1.27	1.0000

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 14:00 - 15:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												25	11.16		224
THIS LEG NORTH															
NORTH TO SOUTH	194		6	1		5	3	6	1		3	25		97.77	219
NORTH TO EAST	2													0.89	2
NORTH TO WEST	3													1.34	3
SOUTH APPROACH												27	5.79		466
SOUTH TO NORTH	236		12	3		2	1	2	1		2	23		55.58	259
THIS LEG SOUTH															
SOUTH TO EAST	203	1	3									4		44.42	207
SOUTH TO WEST															
EAST APPROACH												8	4.10		195
EAST TO NORTH	36		1									1		18.97	37
EAST TO SOUTH	143	1	6									7		76.92	150
THIS LEG EAST															
EAST TO WEST	8													4.10	8
WEST APPROACH															5
WEST TO NORTH	1													20.00	1
WEST TO SOUTH															
WEST TO EAST	4													80.00	4
THIS LEG WEST															
															890
														PCT SPLIT OUT/IN	
NORTH TOTAL	472		19	4		7	4	8	2		5	49		43/57	521
PERCENTAGE	90.60		3.65	0.77		1.34	0.77	1.54	0.38		0.96	9.40			
SOUTH TOTAL	776	2	27	4		7	4	8	2		5	59		56/44	835
PERCENTAGE	92.93	0.24	3.23	0.48		0.84	0.48	0.96	0.24		0.60	7.07			
EAST TOTAL	396	2	10									12		48/52	408
PERCENTAGE	97.06	0.49	2.45									2.94			
WEST TOTAL	16													31/69	16
PERCENTAGE	100.00														
															1780

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 15:00 - 16:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												24	9.56		251
THIS LEG NORTH															
NORTH TO SOUTH	223	1	8	3		5	5				2	24		98.41	247
NORTH TO EAST	3													1.20	3
NORTH TO WEST	1													0.40	1
SOUTH APPROACH												21	3.97		529
SOUTH TO NORTH	294		3	3			6	2				14		58.22	308
THIS LEG SOUTH															
SOUTH TO EAST	213		6		1							7		41.59	220
SOUTH TO WEST	1													0.19	1
EAST APPROACH												9	3.73		241
EAST TO NORTH	31													12.86	31
EAST TO SOUTH	189	2	5			1						8		81.74	197
THIS LEG EAST															
EAST TO WEST	12	1										1		5.39	13
WEST APPROACH															4
WEST TO NORTH															
WEST TO SOUTH															
WEST TO EAST	4													100.00	4
THIS LEG WEST															
															1025
														PCT SPLIT OUT/IN	
NORTH TOTAL	552	1	11	6		5	11	2			2	38		43/57	590
PERCENTAGE	93.56	0.17	1.86	1.02		0.85	1.86	0.34			0.34	6.44			
SOUTH TOTAL	920	3	22	6	1	6	11	2			2	53		54/46	973
PERCENTAGE	94.55	0.31	2.26	0.62	0.10	0.62	1.13	0.21			0.21	5.45			
EAST TOTAL	452	3	11		1	1						16		51/49	468
PERCENTAGE	96.58	0.64	2.35		0.21	0.21						3.42			
WEST TOTAL	18	1										1		21/79	19
PERCENTAGE	94.74	5.26										5.26			
															2050

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 16:00 - 17:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												18	7.23		249
THIS LEG NORTH															
NORTH TO SOUTH	228		9	2			3	2			2	18		98.80	246
NORTH TO EAST	2													0.80	2
NORTH TO WEST	1													0.40	1
SOUTH APPROACH												21	3.33		630
SOUTH TO NORTH	349		4	3		1	3				1	12		57.30	361
THIS LEG SOUTH															
SOUTH TO EAST	258	2	4	2		1						9		42.38	267
SOUTH TO WEST	2													0.32	2
EAST APPROACH												2	1.01		198
EAST TO NORTH	54													27.27	54
EAST TO SOUTH	133	1	1									2		68.18	135
THIS LEG EAST															
EAST TO WEST	9													4.55	9
WEST APPROACH															14
WEST TO NORTH	3													21.43	3
WEST TO SOUTH	2													14.29	2
WEST TO EAST	9													64.29	9
THIS LEG WEST															
															1091
														PCT SPLIT OUT/IN	
NORTH TOTAL	637		13	5		1	6	2			3	30		37/63	667
PERCENTAGE	95.50		1.95	0.75		0.15	0.90	0.30			0.45	4.50			
SOUTH TOTAL	972	3	18	7		2	6	2			3	41		62/38	1013
PERCENTAGE	95.95	0.30	1.78	0.69		0.20	0.59	0.20			0.30	4.05			
EAST TOTAL	465	3	5	2		1						11		42/58	476
PERCENTAGE	97.69	0.63	1.05	0.42		0.21						2.31			
WEST TOTAL	26													54/46	26
PERCENTAGE	100.00														
															2182

STATE OF WASHINGTON - DEPARTMENT OF TRANSPORTATION
T R I P S S Y S T E M
SHORT DURATION CLASSIFICATION 4-WAY

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 17:00 - 18:00
LOCATION SR 395 & SHORT RD 6

HOURLY VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												16	7.08		226
THIS LEG NORTH															
NORTH TO SOUTH	206		4	1		2	2	2			5	16		98.23	222
NORTH TO EAST															
NORTH TO WEST	4													1.77	4
SOUTH APPROACH												4	0.72		552
SOUTH TO NORTH	336							1				1		61.05	337
THIS LEG SOUTH															
SOUTH TO EAST	212		2			1						3		38.95	215
SOUTH TO WEST															
EAST APPROACH												6	3.45		174
EAST TO NORTH	25		1									1		14.94	26
EAST TO SOUTH	138		5									5		82.18	143
THIS LEG EAST															
EAST TO WEST	5													2.87	5
WEST APPROACH															9
WEST TO NORTH	1													11.11	1
WEST TO SOUTH	1													11.11	1
WEST TO EAST	7													77.78	7
THIS LEG WEST															
															961
														PCT SPLIT OUT/IN	
NORTH TOTAL	572		5	1		2	2	3			5	18		38/62	590
PERCENTAGE	96.95		0.85	0.17		0.34	0.34	0.51			0.85	3.05			
SOUTH TOTAL	893		11	1		3	2	3			5	25		60/40	918
PERCENTAGE	97.28		1.20	0.11		0.33	0.22	0.33			0.54	2.72			
EAST TOTAL	387		8			1						9		44/56	396
PERCENTAGE	97.73		2.02			0.25						2.27			
WEST TOTAL	18													50/50	18
PERCENTAGE	100.00														
															1922

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 16:00 - 17:00
LOCATION SR 395 & SHORT RD 6

NORTH LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												18	7.23		249
THIS LEG NORTH															
NORTH TO SOUTH	228		9	2			3	2			2	18		98.80	246
NORTH TO EAST	2													0.80	2
NORTH TO WEST	1													0.40	1
SOUTH APPROACH												21	3.33		630
SOUTH TO NORTH	349		4	3		1	3				1	12		57.30	361
THIS LEG SOUTH															
SOUTH TO EAST	258	2	4	2		1						9		42.38	267
SOUTH TO WEST	2													0.32	2
EAST APPROACH												2	1.01		198
EAST TO NORTH	54													27.27	54
EAST TO SOUTH	133	1	1									2		68.18	135
THIS LEG EAST															
EAST TO WEST	9													4.55	9
WEST APPROACH															14
WEST TO NORTH	3													21.43	3
WEST TO SOUTH	2													14.29	2
WEST TO EAST	9													64.29	9
THIS LEG WEST															
															1091
														PCT SPLIT OUT/IN	
NORTH TOTAL	637		13	5		1	6	2			3	30		37/63	667
PERCENTAGE	95.50		1.95	0.75		0.15	0.90	0.30			0.45	4.50			
SOUTH TOTAL	972	3	18	7		2	6	2			3	41		62/38	1013
PERCENTAGE	95.95	0.30	1.78	0.69		0.20	0.59	0.20			0.30	4.05			
EAST TOTAL	465	3	5	2		1						11		42/58	476
PERCENTAGE	97.69	0.63	1.05	0.42		0.21						2.31			
WEST TOTAL	26													54/46	26
PERCENTAGE	100.00														
															2182

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 15:45 - 16:45
LOCATION SR 395 & SHORT RD 6

SOUTH LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												17	6.51		261
THIS LEG NORTH															
NORTH TO SOUTH	242		8	1			4	2			2	17		99.23	259
NORTH TO EAST	2													0.77	2
NORTH TO WEST															
SOUTH APPROACH												19	2.97		640
SOUTH TO NORTH	349		2	4		1	2	1			1	11		56.25	360
THIS LEG SOUTH															
SOUTH TO EAST	270	2	3	1	1	1						8		43.44	278
SOUTH TO WEST	2													0.31	2
EAST APPROACH												5	2.58		194
EAST TO NORTH	36													18.56	36
EAST TO SOUTH	150	1	3			1						5		79.90	155
THIS LEG EAST															
EAST TO WEST	3													1.55	3
WEST APPROACH															9
WEST TO NORTH	1													11.11	1
WEST TO SOUTH	1													11.11	1
WEST TO EAST	7													77.78	7
THIS LEG WEST															
															1104
														PCT SPLIT OUT/IN	
NORTH TOTAL	630		10	5		1	6	3			3	28		40/60	658
PERCENTAGE	95.74		1.52	0.76		0.15	0.91	0.46			0.46	4.26			
SOUTH TOTAL	1014	3	16	6	1	3	6	3			3	41		61/39	1055
PERCENTAGE	96.11	0.28	1.52	0.57	0.09	0.28	0.57	0.28			0.28	3.89			
EAST TOTAL	468	3	6	1	1	2						13		40/60	481
PERCENTAGE	97.30	0.62	1.25	0.21	0.21	0.42						2.70			
WEST TOTAL	14													64/36	14
PERCENTAGE	100.00														
															2208

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 16:15 - 17:15
LOCATION SR 395 & SHORT RD 6

EAST LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												13	5.22		249
THIS LEG NORTH															
NORTH TO SOUTH	232		4	3		1	2	2			1	13		98.39	245
NORTH TO EAST	2													0.80	2
NORTH TO WEST	2													0.80	2
SOUTH APPROACH												17	2.68		635
SOUTH TO NORTH	346		4	3		1	2				1	11		56.22	357
THIS LEG SOUTH															
SOUTH TO EAST	271		2	2		2						6		43.62	277
SOUTH TO WEST	1													0.16	1
EAST APPROACH												3	1.34		224
EAST TO NORTH	54													24.11	54
EAST TO SOUTH	155	1	2									3		70.54	158
THIS LEG EAST															
EAST TO WEST	12													5.36	12
WEST APPROACH															15
WEST TO NORTH	3													20.00	3
WEST TO SOUTH	2													13.33	2
WEST TO EAST	10													66.67	10
THIS LEG WEST															
															1123
														PCT SPLIT OUT/IN	
NORTH TOTAL	639		8	6		2	4	2			2	24		38/62	663
PERCENTAGE	96.38		1.21	0.90		0.30	0.60	0.30			0.30	3.62			
SOUTH TOTAL	1007	1	12	8		4	4	2			2	33		61/39	1040
PERCENTAGE	96.83	0.10	1.15	0.77		0.38	0.38	0.19			0.19	3.17			
EAST TOTAL	504	1	4	2		2						9		44/56	513
PERCENTAGE	98.25	0.19	0.78	0.39		0.39						1.75			
WEST TOTAL	30													50/50	30
PERCENTAGE	100.00														
															2246

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 16:30 - 17:30
LOCATION SR 395 & SHORT RD 6

WEST LEG PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												16	6.35		252
THIS LEG NORTH															
NORTH TO SOUTH	233		6	3		1	2	2			2	16		98.81	249
NORTH TO EAST															
NORTH TO WEST	3													1.19	3
SOUTH APPROACH												11	1.87		589
SOUTH TO NORTH	345		3	2			1				1	7		59.76	352
THIS LEG SOUTH															
SOUTH TO EAST	232		2	1		1						4		40.07	236
SOUTH TO WEST	1													0.17	1
EAST APPROACH												2	0.96		209
EAST TO NORTH	43													20.57	43
EAST TO SOUTH	151		2									2		73.21	153
THIS LEG EAST															
EAST TO WEST	13													6.22	13
WEST APPROACH															14
WEST TO NORTH	2													14.29	2
WEST TO SOUTH	2													14.29	2
WEST TO EAST	10													71.43	10
THIS LEG WEST															
															1064
														PCT SPLIT OUT/IN	
NORTH TOTAL	626		9	5		1	3	2			3	23		39/61	649
PERCENTAGE	96.46		1.39	0.77		0.15	0.46	0.31			0.46	3.54			
SOUTH TOTAL	964		13	6		2	3	2			3	29		59/41	993
PERCENTAGE	97.08		1.31	0.60		0.20	0.30	0.20			0.30	2.92			
EAST TOTAL	449		4	1		1						6		46/54	455
PERCENTAGE	98.68		0.88	0.22		0.22						1.32			
WEST TOTAL	31													45/55	31
PERCENTAGE	100.00														
															2128

SR 395 MP 179.53 OFF SYS ID COUNTER NUM 1195 COUNT ID 15-009
DATE 12/3/2015 DAY OF WEEK 5 TIME PERIOD HOUR 16:15 - 17:15
LOCATION SR 395 & SHORT RD 6

INTERSECTIONAL PEAK HOUR AND VOLUMES

MOVEMENT	CARS AND PICKUPS	---SINGLE UNITS--- BUS	MED	HVY	4+	-DOUBLE UNITS- 4-	5	6+	-TRIPLE UNITS- 5-	6	7+	TOTAL TRUCK	PERCENT TRUCK	PERCENT TURNS	TOTAL
NORTH APPROACH												13	5.22		249
THIS LEG NORTH															
NORTH TO SOUTH	232		4	3		1	2	2			1	13		98.39	245
NORTH TO EAST	2													0.80	2
NORTH TO WEST	2													0.80	2
SOUTH APPROACH												17	2.68		635
SOUTH TO NORTH	346		4	3		1	2				1	11		56.22	357
THIS LEG SOUTH															
SOUTH TO EAST	271		2	2		2						6		43.62	277
SOUTH TO WEST	1													0.16	1
EAST APPROACH												3	1.34		224
EAST TO NORTH	54													24.11	54
EAST TO SOUTH	155	1	2									3		70.54	158
THIS LEG EAST															
EAST TO WEST	12													5.36	12
WEST APPROACH															15
WEST TO NORTH	3													20.00	3
WEST TO SOUTH	2													13.33	2
WEST TO EAST	10													66.67	10
THIS LEG WEST															
															1123
														PCT SPLIT OUT/IN	
NORTH TOTAL	639		8	6		2	4	2			2	24		38/62	663
PERCENTAGE	96.38		1.21	0.90		0.30	0.60	0.30			0.30	3.62			
SOUTH TOTAL	1007	1	12	8		4	4	2			2	33		61/39	1040
PERCENTAGE	96.83	0.10	1.15	0.77		0.38	0.38	0.19			0.19	3.17			
EAST TOTAL	504	1	4	2		2						9		44/56	513
PERCENTAGE	98.25	0.19	0.78	0.39		0.39						1.75			
WEST TOTAL	30													50/50	30
PERCENTAGE	100.00														
															2246

TRUCK PERCENTAGE:

LEGS	S/U	%	D/U	%	TRAIN	%	TRUCK	%	AXLE FACTOR
NORTH TOTAL	14	2.11	8	1.21	2	0.30	24	3.62	0.9707
SOUTH TOTAL	21	2.02	10	0.96	2	0.19	33	3.17	0.9783
EAST TOTAL	7	1.36	2	0.39			9	1.75	0.9941
WEST TOTAL									1.0000

PEAK HOUR FACTOR 0.958 293 293 268 269 1123

Washington State Department of Transportation
Transit, Research, and Intermodal Planning

Vehicle Volume Summary

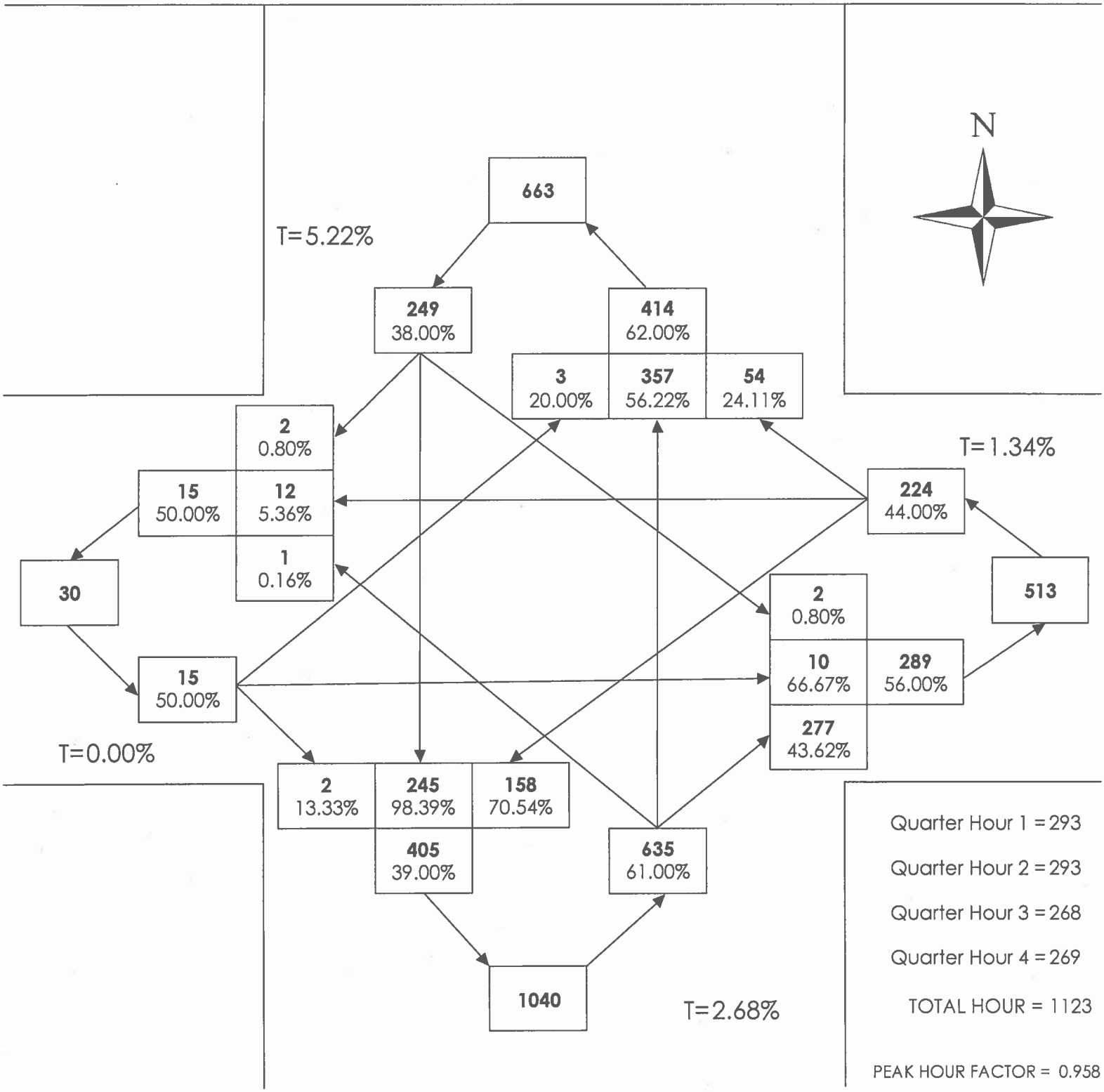
(Block Diagram)

Date: 12/3/2015
Time Period: 16:15 - 17:15

SR: 395 MP: 179.53 Off Sys. ID: Count ID: 15-009

Location: SR 395 & SHORT RD

INTERSECTIONAL PEAK HOUR AND VOLUMES



Washington State Department of Transportation
Transit, Research, and Intermodal Planning

Vehicle Volume Summary

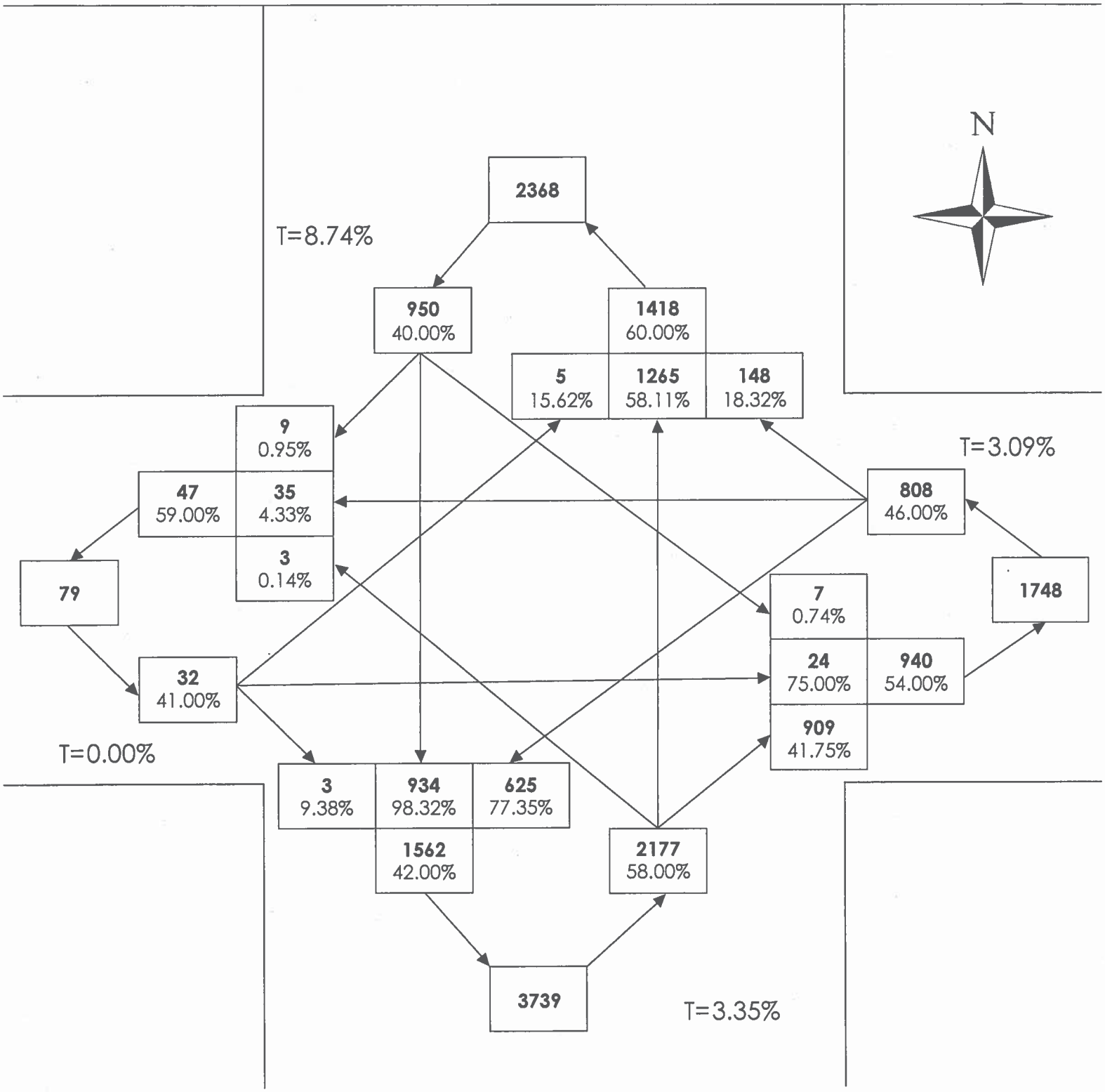
(Block Diagram)

Date: 12/3/2015
Time Period: 14:00 - 18:00

SR: 395 MP: 179.53 Off Sys. ID: Count ID: 15-009

Location: SR 395 & SHORT RD

ENTIRE COUNT VOLUMES

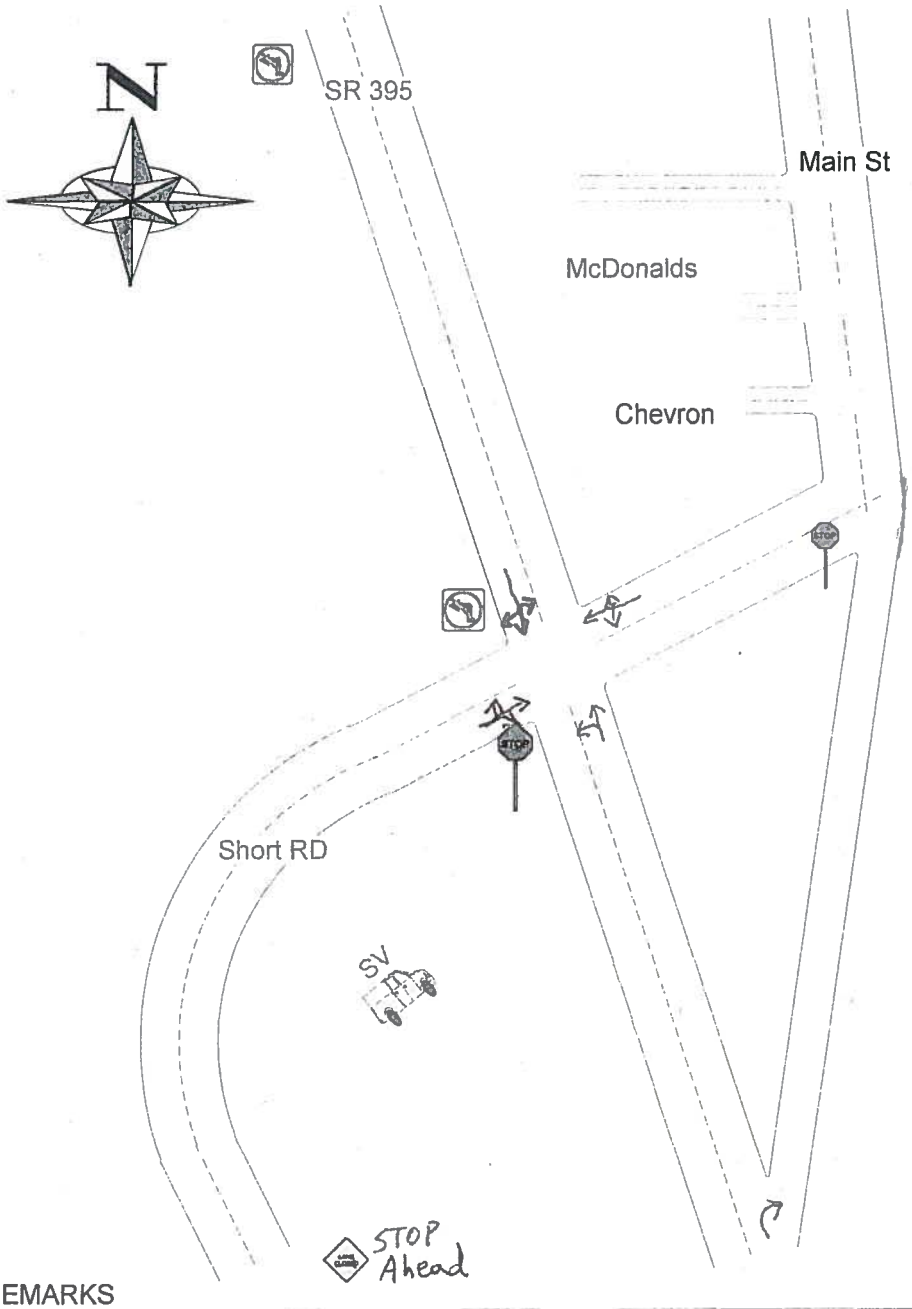


Washington State Department of Transportation

Traffic Station Sketch

SR# 395 MP 179.53 OSID _____ COUNT ID 15-009 DATE 12/1-2/15

STATION LOCATION JCT SR 395 & SHORT RD



REMARKS

A motorist informed me that drivers make a lot of iliegal SBLT's.

Also, when drivers make SBRT's the passing cars dont have much space.

SIGNATURE SNAZA

G:\015-009A.TXT	0600-1000	1193	12/1/2015
G:\015-009B.TXT	1100-1500	1194	12/2/2015
G:\015-009C.TXT	1400-1800	1195	12/3/2015

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
Performed by: K. Ingle, cold/overcast
No peds or bikes, 1 WB u-turn
3 WBL no yield to EBT, longest Q: 3 WB

File Name : 395 17989 cleveland 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					CLEVELAND/H ST Westbound					US 395 Northbound					CLEVELAND/H ST Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
06:00 AM	0	4	68	0	72	0	4	1	2	7	0	0	28	3	31	0	0	1	0	1	111
06:15 AM	0	8	102	0	110	0	7	1	2	10	0	0	25	2	27	0	0	2	1	3	150
06:30 AM	0	12	83	0	95	0	11	1	1	13	0	0	19	1	20	0	0	1	1	2	130
06:45 AM	0	10	82	0	92	0	10	0	0	10	0	0	34	4	38	0	0	0	0	0	140
Total	0	34	335	0	369	0	32	3	5	40	0	0	106	10	116	0	0	4	2	6	531
07:00 AM	0	18	100	0	118	0	10	0	5	15	0	0	30	9	39	0	0	3	0	3	175
07:15 AM	0	14	82	0	96	1	10	0	4	15	0	0	44	8	52	0	0	2	1	3	166
07:30 AM	0	15	91	0	106	0	10	0	2	12	0	0	38	8	46	0	0	3	0	3	167
07:45 AM	0	29	73	1	103	0	8	1	5	14	0	0	45	9	54	0	0	3	2	5	176
Total	0	76	346	1	423	1	38	1	16	56	0	0	157	34	191	0	0	11	3	14	684
08:00 AM	0	25	75	0	100	0	9	0	10	19	0	0	42	6	48	0	0	5	1	6	173
08:15 AM	0	24	70	0	94	0	12	1	7	20	0	0	46	5	51	0	0	0	0	0	165
08:30 AM	0	16	109	0	125	0	9	3	7	19	0	0	45	9	54	0	0	2	0	2	200
08:45 AM	0	18	84	0	102	0	7	1	5	13	0	0	57	7	64	0	2	0	2	4	183
Total	0	83	338	0	421	0	37	5	29	71	0	0	190	27	217	0	2	7	3	12	721
09:00 AM	0	28	94	0	122	0	15	2	8	25	0	0	39	5	44	0	0	0	0	0	191
09:15 AM	0	27	78	0	105	0	7	2	7	16	0	0	31	4	35	0	0	2	0	2	158
09:30 AM	0	14	91	1	106	0	9	1	8	18	0	2	40	10	52	0	0	1	0	1	177
09:45 AM	0	25	72	0	97	0	5	3	14	22	0	0	40	7	47	0	1	1	2	4	170
Total	0	94	335	1	430	0	36	8	37	81	0	2	150	26	178	0	1	4	2	7	696
*** BREAK ***																					
11:00 AM	0	18	73	0	91	0	12	1	17	30	0	0	48	6	54	0	0	1	1	2	177
11:15 AM	0	17	72	2	91	0	8	0	15	23	0	0	51	7	58	0	0	0	0	0	172
11:30 AM	0	14	98	0	112	0	6	3	15	24	0	1	52	5	58	0	0	0	0	0	194
11:45 AM	0	21	66	1	88	0	13	2	22	37	0	0	45	13	58	0	3	1	0	4	187
Total	0	70	309	3	382	0	39	6	69	114	0	1	196	31	228	0	3	2	1	6	730
12:00 PM	0	21	69	0	90	0	15	3	20	38	0	0	48	9	57	0	0	0	0	0	185
12:15 PM	0	23	67	0	90	0	12	2	17	31	0	3	52	4	59	0	2	0	1	3	183
12:30 PM	0	17	73	0	90	0	12	2	18	32	0	0	58	7	65	0	0	3	0	3	190
12:45 PM	0	24	49	0	73	0	7	2	18	27	0	0	63	10	73	0	0	1	1	2	175
Total	0	85	258	0	343	0	46	9	73	128	0	3	221	30	254	0	2	4	2	8	733

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
Performed by: K. Ingle, cold/overcast
No peds or bikes, 1 WB u-turn
3 WBL no yield to EBT, longest Q: 3 WB

File Name : 395 17989 cleveland 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 2

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					CLEVELAND/H ST Westbound					US 395 Northbound					CLEVELAND/H ST Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
01:00 PM	0	21	64	0	85	0	13	3	15	31	0	1	57	6	64	0	0	6	0	6	186
01:15 PM	0	25	58	0	83	0	9	2	32	43	0	2	66	7	75	0	0	0	0	0	201
01:30 PM	0	19	61	2	82	0	6	1	14	21	0	0	69	5	74	0	0	0	0	0	177
01:45 PM	0	15	53	0	68	0	4	3	22	29	0	0	67	15	82	0	0	1	1	2	181
Total	0	80	236	2	318	0	32	9	83	124	0	3	259	33	295	0	0	7	1	8	745
Grand Total	0	522	2157	7	2686	1	260	41	312	614	0	9	1279	191	1479	0	8	39	14	61	4840
Apprch %	0	19.4	80.3	0.3		0.2	42.3	6.7	50.8		0	0.6	86.5	12.9		0	13.1	63.9	23		
Total %	0	10.8	44.6	0.1	55.5	0	5.4	0.8	6.4	12.7	0	0.2	26.4	3.9	30.6	0	0.2	0.8	0.3	1.3	
All Others	0	509	2067	5	2581	1	248	41	303	593	0	9	1130	182	1321	0	7	38	14	59	4554
% All Others	0	97.5	95.8	71.4	96.1	100	95.4	100	97.1	96.6	0	100	88.4	95.3	89.3	0	87.5	97.4	100	96.7	94.1
Bus & Trks 4 ax	0	10	33	2	45	0	9	0	8	17	0	0	67	8	75	0	1	1	0	2	139
% Bus & Trks 4 ax	0	1.9	1.5	28.6	1.7	0	3.5	0	2.6	2.8	0	0	5.2	4.2	5.1	0	12.5	2.6	0	3.3	2.9
Trks 5 ax +	0	3	57	0	60	0	3	0	1	4	0	0	82	1	83	0	0	0	0	0	147
% Trks 5 ax +	0	0.6	2.6	0	2.2	0	1.2	0	0.3	0.7	0	0	6.4	0.5	5.6	0	0	0	0	0	3

	US 395 Southbound					CLEVELAND/H ST Westbound					US 395 Northbound					CLEVELAND/H ST Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 10:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	24	70	0	94	0	12	1	7	20	0	0	46	5	51	0	0	0	0	0	165
08:30 AM	0	16	**109**	0	**125**	0	9	**3**	7	19	0	0	45	**9**	54	0	0	**2**	0	2	**200**
08:45 AM	0	18	84	0	102	0	7	1	5	13	0	0	**57**	7	**64**	0	**2**	0	**2**	**4**	183
09:00 AM	0	**28**	94	0	122	0	**15**	2	**8**	**25**	0	0	39	5	44	0	0	0	0	0	191
Total Volume	0	86	357	0	443	0	43	7	27	77	0	0	187	26	213	0	2	2	2	6	739
% App. Total	0	19.4	80.6	0		0	55.8	9.1	35.1		0	0	87.8	12.2		0	33.3	33.3	33.3		
PHF	.000	.768	.819	.000	.886	.000	.717	.583	.844	.770	.000	.000	.820	.722	.832	.000	.250	.250	.250	.375	.924

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
Performed by: K. Ingle, cold/overcast
No peds or bikes, 1 WB u-turn
3 WBL no yield to EBT, longest Q: 3 WB

File Name : 395 17989 cleveland 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 3

	US 395 Southbound					CLEVELAND/H ST Westbound					US 395 Northbound					CLEVELAND/H ST Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 10:15 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	17	**73**	0	**90**	0	12	2	18	32	0	0	58	7	65	0	0	3	0	3	190
12:45 PM	0	24	49	0	73	0	7	2	18	27	0	0	63	**10**	73	0	0	1	**1**	2	175
01:00 PM	0	21	64	0	85	0	**13**	**3**	15	31	0	1	57	6	64	0	0	**6**	0	**6**	186
01:15 PM	0	**25**	58	0	83	0	9	2	**32**	**43**	0	**2**	**66**	7	**75**	0	0	0	0	0	**201**
Total Volume	0	87	244	0	331	0	41	9	83	133	0	3	244	30	277	0	0	10	1	11	752
% App. Total	0	26.3	73.7	0		0	30.8	6.8	62.4		0	1.1	88.1	10.8		0	0	90.9	9.1		
PHF	.000	.870	.836	.000	.919	.000	.788	.750	.648	.773	.000	.375	.924	.750	.923	.000	.000	.417	.250	.458	.935

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
By: K. Engle; cold, hwy wet/clev snow
1 ped EB/north leg, no bicyclists
1 WBL no yield to EBT, longest Q: 6 WB

File Name : 395 17989 cleveland 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					H ST Westbound					US 395 Northbound					CLEVELAND RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
02:00 PM	0	18	37	0	55	0	8	0	12	20	0	1	63	4	68	0	0	2	1	3	146
02:15 PM	0	7	45	0	52	0	7	1	19	27	0	0	64	4	68	0	0	3	0	3	150
02:30 PM	0	14	50	0	64	0	6	0	21	27	0	0	62	15	77	0	1	0	1	2	170
02:45 PM	0	9	53	0	62	0	8	0	25	33	0	0	83	8	91	0	1	2	0	3	189
Total	0	48	185	0	233	0	29	1	77	107	0	1	272	31	304	0	2	7	2	11	655
03:00 PM	0	10	60	0	70	0	9	5	23	37	0	0	61	9	70	0	0	0	0	0	177
03:15 PM	0	16	57	0	73	0	9	5	20	34	0	0	73	13	86	0	0	1	0	1	194
03:30 PM	0	16	62	0	78	0	4	2	15	21	0	1	86	4	91	0	0	1	0	1	191
03:45 PM	0	18	48	0	66	0	10	3	21	34	0	1	87	8	96	0	0	3	0	3	199
Total	0	60	227	0	287	0	32	15	79	126	0	2	307	34	343	0	0	5	0	5	761
04:00 PM	0	16	54	2	72	1	7	2	23	33	0	0	76	6	82	0	0	2	0	2	189
04:15 PM	0	13	53	0	66	0	13	3	25	41	0	0	99	7	106	0	0	4	1	5	218
04:30 PM	0	13	63	0	76	0	10	6	30	46	0	1	92	8	101	0	0	2	0	2	225
04:45 PM	0	11	43	0	54	0	6	2	18	26	0	1	102	5	108	0	0	0	0	0	188
Total	0	53	213	2	268	1	36	13	96	146	0	2	369	26	397	0	0	8	1	9	820
05:00 PM	0	16	50	0	66	0	18	4	27	49	0	0	87	8	95	0	0	0	0	0	210
05:15 PM	0	7	55	0	62	0	12	0	28	40	0	0	84	3	87	0	0	0	0	0	189
05:30 PM	0	17	34	0	51	0	6	1	18	25	0	0	73	7	80	0	1	4	0	5	161
05:45 PM	0	10	40	0	50	0	10	1	25	36	0	5	73	10	88	0	0	0	0	0	174
Total	0	50	179	0	229	0	46	6	98	150	0	5	317	28	350	0	1	4	0	5	734
Grand Total	0	211	804	2	1017	1	143	35	350	529	0	10	1265	119	1394	0	3	24	3	30	2970
Apprch %	0	20.7	79.1	0.2		0.2	27	6.6	66.2		0	0.7	90.7	8.5		0	10	80	10		
Total %	0	7.1	27.1	0.1	34.2	0	4.8	1.2	11.8	17.8	0	0.3	42.6	4	46.9	0	0.1	0.8	0.1	1	
All Others	0	205	736	2	943	1	142	35	349	527	0	10	1224	118	1352	0	3	24	3	30	2852
% All Others	0	97.2	91.5	100	92.7	100	99.3	100	99.7	99.6	0	100	96.8	99.2	97	0	100	100	100	100	96
Bus & Trks 4 ax	0	5	28	0	33	0	1	0	1	2	0	0	21	1	22	0	0	0	0	0	57
% Bus & Trks 4 ax	0	2.4	3.5	0	3.2	0	0.7	0	0.3	0.4	0	0	1.7	0.8	1.6	0	0	0	0	0	1.9
Trks 5 ax +	0	1	40	0	41	0	0	0	0	0	0	0	20	0	20	0	0	0	0	0	61
% Trks 5 ax +	0	0.5	5	0	4	0	0	0	0	0	0	0	1.6	0	1.4	0	0	0	0	0	2.1

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
By: K. Engle; cold, hwy wet/clev snow
1 ped EB/north leg, no bicyclists
1 WBL no yield to EBT, longest Q: 6 WB

File Name : 395 17989 cleveland 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 2

	US 395 Southbound					H ST Westbound					US 395 Northbound					CLEVELAND RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	13	53	0	66	0	13	3	25	41	0	0	99	7	106	0	0	**4**	**1**	**5**	218
04:30 PM	0	13	**63**	0	**76**	0	10	**6**	**30**	46	0	**1**	92	**8**	101	0	0	2	0	2	**225**
04:45 PM	0	11	43	0	54	0	6	2	18	26	0	1	**102**	5	**108**	0	0	0	0	0	188
05:00 PM	0	**16**	50	0	66	0	**18**	4	27	**49**	0	0	87	8	95	0	0	0	0	0	210
Total Volume	0	53	209	0	262	0	47	15	100	162	0	2	380	28	410	0	0	6	1	7	841
% App. Total	0	20.2	79.8	0		0	29	9.3	61.7		0	0.5	92.7	6.8		0	0	85.7	14.3		
PHF	.000	.828	.829	.000	.862	.000	.653	.625	.833	.827	.000	.500	.931	.875	.949	.000	.000	.375	.250	.350	.934

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
Performed by: Ron Cote cold, overcast
No peds or bikes, 1 NB u-turn at 6:41am
14 times WBL did not yield to EBT

File Name : 395 18046 Monroe 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					MONROE / CRAWFORD Westbound					US 395 Northbound					MONROE / CRAWFORD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	3	69	0	72	0	4	0	0	4	0	0	28	3	31	0	0	5	4	9	116
06:15 AM	0	8	98	0	106	0	10	1	3	14	0	0	24	0	24	0	1	3	10	14	158
06:30 AM	0	6	81	1	88	0	5	5	4	14	0	0	17	2	19	0	1	5	3	9	130
06:45 AM	0	13	87	1	101	0	6	5	2	13	0	1	31	1	33	0	1	14	5	20	167
Total	0	30	335	2	367	0	25	11	9	45	0	1	100	6	107	0	3	27	22	52	571
07:00 AM	0	7	105	2	114	0	9	7	2	18	0	0	35	3	38	0	2	5	6	13	183
07:15 AM	0	16	81	1	98	0	9	6	8	23	0	0	43	4	47	0	0	8	8	16	184
07:30 AM	0	28	92	2	122	0	7	3	7	17	0	3	37	3	43	0	0	21	4	25	207
07:45 AM	0	23	95	1	119	0	7	3	7	17	0	1	46	4	51	0	3	27	10	40	227
Total	0	74	373	6	453	0	32	19	24	75	0	4	161	14	179	0	5	61	28	94	801
08:00 AM	0	27	87	0	114	0	8	2	5	15	0	2	52	5	59	0	0	17	4	21	209
08:15 AM	0	17	81	0	98	0	9	6	6	21	0	3	46	4	53	0	0	13	9	22	194
08:30 AM	0	14	118	0	132	0	6	4	10	20	0	5	53	1	59	0	2	9	2	13	224
08:45 AM	0	23	95	2	120	0	8	9	7	24	0	3	55	4	62	0	3	19	5	27	233
Total	0	81	381	2	464	0	31	21	28	80	0	13	206	14	233	0	5	58	20	83	860
09:00 AM	0	22	110	2	134	0	11	7	10	28	0	6	40	5	51	0	1	14	2	17	230
09:15 AM	0	10	96	1	107	0	6	3	8	17	0	0	35	1	36	0	1	7	2	10	170
09:30 AM	0	9	100	1	110	0	4	6	10	20	0	5	47	0	52	0	3	11	0	14	196
09:45 AM	0	19	95	2	116	0	2	6	15	23	0	4	43	5	52	0	0	8	3	11	202
Total	0	60	401	6	467	0	23	22	43	88	0	15	165	11	191	0	5	40	7	52	798
*** BREAK ***																					
11:00 AM	0	23	76	1	100	0	5	5	8	18	0	5	53	4	62	0	1	12	5	18	198
11:15 AM	0	9	83	0	92	0	7	4	13	24	0	7	48	6	61	0	0	10	5	15	192
11:30 AM	0	30	104	1	135	0	5	6	11	22	0	9	61	3	73	0	1	15	3	19	249
11:45 AM	0	20	75	0	95	0	7	9	13	29	0	6	63	3	72	0	1	16	3	20	216
Total	0	82	338	2	422	0	24	24	45	93	0	27	225	16	268	0	3	53	16	72	855
12:00 PM	0	17	78	1	96	0	7	8	13	28	0	0	67	3	70	0	0	9	2	11	205
12:15 PM	0	16	88	0	104	0	8	5	6	19	0	5	72	2	79	0	0	11	4	15	217
12:30 PM	0	19	75	0	94	0	9	2	10	21	0	5	68	6	79	0	0	16	4	20	214
12:45 PM	0	20	70	2	92	0	5	9	12	26	0	4	74	7	85	0	0	13	3	16	219
Total	0	72	311	3	386	0	29	24	41	94	0	14	281	18	313	0	0	49	13	62	855
01:00 PM	0	17	80	1	98	0	8	14	8	30	0	7	59	2	68	0	0	15	2	17	213

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
Performed by: Ron Cote cold, overcast
No peds or bikes, 1 NB u-turn at 6:41am
14 times WBL did not yield to EBT

File Name : 395 18046 Monroe 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 2

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					MONROE / CRAWFORD Westbound					US 395 Northbound					MONROE / CRAWFORD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
01:15 PM	0	21	72	1	94	0	5	7	10	22	0	6	101	1	108	0	2	8	4	14	238
01:30 PM	0	15	69	1	85	0	2	4	9	15	0	8	73	4	85	0	0	13	2	15	200
01:45 PM	0	17	57	1	75	0	5	15	7	27	0	5	91	4	100	0	0	10	6	16	218
Total	0	70	278	4	352	0	20	40	34	94	0	26	324	11	361	0	2	46	14	62	869
Grand Total	0	469	2417	25	2911	0	184	161	224	569	0	100	1462	90	1652	0	23	334	120	477	5609
Apprch %	0	16.1	83	0.9		0	32.3	28.3	39.4		0	6.1	88.5	5.4		0	4.8	70	25.2		
Total %	0	8.4	43.1	0.4	51.9	0	3.3	2.9	4	10.1	0	1.8	26.1	1.6	29.5	0	0.4	6	2.1	8.5	
All Others	0	450	2303	25	2778	0	178	146	206	530	0	93	1309	83	1485	0	22	313	118	453	5246
% All Others	0	95.9	95.3	100	95.4	0	96.7	90.7	92	93.1	0	93	89.5	92.2	89.9	0	95.7	93.7	98.3	95	93.5
Bus & Trks 4 ax	0	12	53	0	65	0	4	14	10	28	0	7	66	4	77	0	1	21	2	24	194
% Bus & Trks 4 ax	0	2.6	2.2	0	2.2	0	2.2	8.7	4.5	4.9	0	7	4.5	4.4	4.7	0	4.3	6.3	1.7	5	3.5
Trks 5 ax +	0	7	61	0	68	0	2	1	8	11	0	0	87	3	90	0	0	0	0	0	169
% Trks 5 ax +	0	1.5	2.5	0	2.3	0	1.1	0.6	3.6	1.9	0	0	6	3.3	5.4	0	0	0	0	0	3

	US 395 Southbound					MONROE / CRAWFORD Westbound					US 395 Northbound					MONROE / CRAWFORD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 10:00 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	17	81	0	98	0	9	6	6	21	0	3	46	4	53	0	0	13	**9**	22	194
08:30 AM	0	14	**118**	0	132	0	6	4	**10**	20	0	5	53	1	59	0	2	9	2	13	224
08:45 AM	0	**23**	95	**2**	120	0	8	**9**	7	24	0	3	**55**	4	**62**	0	**3**	**19**	5	**27**	**233**
09:00 AM	0	22	110	2	**134**	0	**11**	7	10	**28**	0	**6**	40	**5**	51	0	1	14	2	17	230
Total Volume	0	76	404	4	484	0	34	26	33	93	0	17	194	14	225	0	6	55	18	79	881
% App. Total	0	15.7	83.5	0.8		0	36.6	28	35.5		0	7.6	86.2	6.2		0	7.6	69.6	22.8		
PHF	.000	.826	.856	.500	.903	.000	.773	.722	.825	.830	.000	.708	.882	.700	.907	.000	.500	.724	.500	.731	.945

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
Performed by: Ron Cote cold, overcast
No peds or bikes, 1 NB u-turn at 6:41am
14 times WBL did not yield to EBT

File Name : 395 18046 Monroe 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 3

	US 395 Southbound					MONROE / CRAWFORD Westbound					US 395 Northbound					MONROE / CRAWFORD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 10:15 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 11:30 AM																					
11:30 AM	0	**30**	**104**	**1**	**135**	0	5	6	11	22	0	**9**	61	**3**	73	0	**1**	15	3	19	**249**
11:45 AM	0	20	75	0	95	0	7	**9**	**13**	**29**	0	6	63	3	72	0	1	**16**	3	**20**	216
12:00 PM	0	17	78	1	96	0	7	8	13	28	0	0	67	3	70	0	0	9	2	11	205
12:15 PM	0	16	88	0	104	0	**8**	5	6	19	0	5	**72**	2	**79**	0	0	11	**4**	15	217
Total Volume	0	83	345	2	430	0	27	28	43	98	0	20	263	11	294	0	2	51	12	65	887
% App. Total	0	19.3	80.2	0.5		0	27.6	28.6	43.9		0	6.8	89.5	3.7		0	3.1	78.5	18.5		
PHF	.000	.692	.829	.500	.796	.000	.844	.778	.827	.845	.000	.556	.913	.917	.930	.000	.500	.797	.750	.813	.891

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
By: R. Cote; cold, snow flurries
No peds or bicyclists
15 WBL no yield to EBT, 1 EBL no yield

File Name : 395 18046 Monroe 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US395 Southbound					CRAWFORD ST Westbound					US395 Northbound					MONROE RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
02:00 PM	0	13	52	1	66	0	1	19	18	38	0	5	65	6	76	0	0	10	2	12	192
02:15 PM	0	21	47	0	68	0	4	6	6	16	0	5	77	3	85	0	3	12	3	18	187
02:30 PM	0	21	53	2	76	0	6	7	13	26	0	10	74	0	84	0	2	8	2	12	198
02:45 PM	0	22	49	1	72	0	8	15	12	35	0	7	101	4	112	0	0	8	4	12	231
Total	0	77	201	4	282	0	19	47	49	115	0	27	317	13	357	0	5	38	11	54	808
03:00 PM	0	21	69	2	92	0	6	12	21	39	0	3	74	8	85	0	0	7	2	9	225
03:15 PM	0	14	58	1	73	0	9	18	21	48	0	7	83	3	93	0	1	11	1	13	227
03:30 PM	0	13	62	1	76	0	5	13	15	33	0	15	89	1	105	0	0	10	6	16	230
03:45 PM	0	24	63	1	88	0	4	16	17	37	0	7	93	6	106	0	0	10	4	14	245
Total	0	72	252	5	329	0	24	59	74	157	0	32	339	18	389	0	1	38	13	52	927
04:00 PM	0	4	62	1	67	0	9	13	19	41	0	7	99	3	109	0	0	9	3	12	229
04:15 PM	0	13	64	4	81	0	9	10	14	33	0	4	121	1	126	0	0	11	4	15	255
04:30 PM	0	12	57	0	69	0	8	11	15	34	0	13	113	4	130	0	2	12	3	17	250
04:45 PM	0	18	48	0	66	0	6	17	12	35	0	12	105	1	118	0	1	16	5	22	241
Total	0	47	231	5	283	0	32	51	60	143	0	36	438	9	483	0	3	48	15	66	975
05:00 PM	0	9	57	0	66	0	4	12	17	33	0	7	110	4	121	0	1	12	4	17	237
05:15 PM	0	12	45	0	57	0	5	12	10	27	0	13	92	3	108	0	0	9	4	13	205
05:30 PM	0	7	43	1	51	0	1	13	16	30	0	10	89	2	101	0	1	8	4	13	195
05:45 PM	0	8	49	3	60	0	4	17	7	28	0	6	103	2	111	0	0	9	3	12	211
Total	0	36	194	4	234	0	14	54	50	118	0	36	394	11	441	0	2	38	15	55	848
Grand Total	0	232	878	18	1128	0	89	211	233	533	0	131	1488	51	1670	0	11	162	54	227	3558
Apprch %	0	20.6	77.8	1.6		0	16.7	39.6	43.7		0	7.8	89.1	3.1		0	4.8	71.4	23.8		
Total %	0	6.5	24.7	0.5	31.7	0	2.5	5.9	6.5	15	0	3.7	41.8	1.4	46.9	0	0.3	4.6	1.5	6.4	
All Others	0	221	802	15	1038	0	85	205	225	515	0	128	1438	48	1614	0	11	154	54	219	3386
% All Others	0	95.3	91.3	83.3	92	0	95.5	97.2	96.6	96.6	0	97.7	96.6	94.1	96.6	0	100	95.1	100	96.5	95.2
Bus & Trks 4 ax	0	9	34	3	46	0	3	6	5	14	0	1	30	3	34	0	0	8	0	8	102
% Bus & Trks 4 ax	0	3.9	3.9	16.7	4.1	0	3.4	2.8	2.1	2.6	0	0.8	2	5.9	2	0	0	4.9	0	3.5	2.9
Trks 5 ax +	0	2	42	0	44	0	1	0	3	4	0	2	20	0	22	0	0	0	0	0	70
% Trks 5 ax +	0	0.9	4.8	0	3.9	0	1.1	0	1.3	0.8	0	1.5	1.3	0	1.3	0	0	0	0	0	2

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Volumes include 1.05 Seasonal Factor
By: R. Cote; cold, snow flurries
No peds or bicyclists
15 WBL no yield to EBT, 1 EBL no yield

File Name : 395 18046 Monroe 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 2

	US395 Southbound					CRAWFORD ST Westbound					US395 Northbound					MONROE RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	0	13	**64**	**4**	**81**	0	**9**	10	14	33	0	4	**121**	1	126	0	0	11	4	15	**255**
04:30 PM	0	12	57	0	69	0	8	11	15	34	0	**13**	113	**4**	**130**	0	**2**	12	3	17	250
04:45 PM	0	**18**	48	0	66	0	6	**17**	12	**35**	0	12	105	1	118	0	1	**16**	**5**	**22**	241
05:00 PM	0	9	57	0	66	0	4	12	**17**	33	0	7	110	4	121	0	1	12	4	17	237
Total Volume	0	52	226	4	282	0	27	50	58	135	0	36	449	10	495	0	4	51	16	71	983
% App. Total	0	18.4	80.1	1.4		0	20	37	43		0	7.3	90.7	2		0	5.6	71.8	22.5		
PHF	.000	.722	.883	.250	.870	.000	.750	.735	.853	.964	.000	.692	.928	.625	.952	.000	.500	.797	.800	.807	.964

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Performed by: R. Carlson
Weather: Cold, overcast
Longest Q: WBT @ 2 min (school bus)
With 1.05 Seasonal Factor Applied

File Name : 395 18106 Dahl 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					DAHL RD Westbound					US 395 Northbound					DAHL RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
06:00 AM	0	3	70	0	73	0	0	0	2	2	0	0	28	1	29	0	0	2	6	8	112
06:15 AM	0	2	97	0	99	0	3	0	0	3	0	2	26	1	29	0	0	2	4	6	137
06:30 AM	0	2	78	0	80	0	1	0	2	3	0	0	22	0	22	0	0	3	7	10	115
06:45 AM	0	1	89	0	90	0	3	2	2	7	0	1	34	0	35	0	0	0	15	15	147
Total	0	8	334	0	342	0	7	2	6	15	0	3	110	2	115	0	0	7	32	39	511
07:00 AM	0	4	97	0	101	0	4	2	3	9	0	0	40	0	40	0	0	0	10	10	160
07:15 AM	0	2	87	1	90	0	2	2	4	8	0	4	46	0	50	0	0	2	9	11	159
07:30 AM	0	5	110	0	115	0	2	2	0	4	0	0	45	0	45	0	0	8	9	17	181
07:45 AM	0	7	107	0	114	0	0	1	6	7	0	1	55	1	57	0	0	5	14	19	197
Total	0	18	401	1	420	0	8	7	13	28	0	5	186	1	192	0	0	15	42	57	697
08:00 AM	0	2	100	0	102	0	4	0	5	9	0	5	51	0	56	0	0	1	12	13	180
08:15 AM	0	6	91	0	97	0	2	4	6	12	0	2	49	2	53	0	0	1	6	7	169
08:30 AM	0	7	124	0	131	0	1	3	16	20	0	3	61	0	64	0	0	3	4	7	222
08:45 AM	0	9	116	0	125	0	1	1	12	14	0	3	63	1	67	0	0	7	7	14	220
Total	0	24	431	0	455	0	8	8	39	55	0	13	224	3	240	0	0	12	29	41	791
09:00 AM	0	12	122	1	135	0	2	2	8	12	0	2	47	2	51	0	0	2	3	5	203
09:15 AM	0	5	103	0	108	0	1	1	6	8	0	2	41	0	43	0	0	3	5	8	167
09:30 AM	0	8	103	0	111	0	1	2	4	7	0	2	61	0	63	0	0	3	6	9	190
09:45 AM	0	9	112	0	121	0	1	1	6	8	0	2	54	2	58	0	0	1	6	7	194
Total	0	34	440	1	475	0	5	6	24	35	0	8	203	4	215	0	0	9	20	29	754
*** BREAK ***																					
11:00 AM	0	5	100	0	105	0	0	0	9	9	0	1	63	0	64	0	0	0	2	2	180
11:15 AM	0	7	98	0	105	0	1	1	6	8	0	7	56	2	65	0	0	3	3	6	184
11:30 AM	0	6	114	1	121	0	3	3	5	11	0	3	71	1	75	0	0	0	8	8	215
11:45 AM	0	7	89	1	97	0	2	3	6	11	0	4	74	0	78	0	0	2	6	8	194
Total	0	25	401	2	428	0	6	7	26	39	0	15	264	3	282	0	0	5	19	24	773
12:00 PM	0	7	95	0	102	0	2	2	8	12	0	5	68	3	76	0	0	0	7	7	197
12:15 PM	0	5	89	0	94	0	2	5	7	14	0	3	77	1	81	0	0	4	7	11	200
12:30 PM	0	5	83	0	88	0	1	3	10	14	0	8	72	0	80	0	0	2	5	7	189
12:45 PM	0	6	95	0	101	0	0	3	5	8	0	9	73	0	82	0	0	0	7	7	198
Total	0	23	362	0	385	0	5	13	30	48	0	25	290	4	319	0	0	6	26	32	784

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Performed by: R. Carlson
Weather: Cold, overcast
Longest Q: WBT @ 2 min (school bus)
With 1.05 Seasonal Factor Applied

File Name : 395 18106 Dahl 15AM & MID
Site Code : 00000000
Start Date : 12/1/2015
Page No : 2

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					DAHL RD Westbound					US 395 Northbound					DAHL RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Factor	1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		1.05	1.05	1.05	1.05		
01:00 PM	0	5	82	0	87	0	3	1	7	11	0	3	65	0	68	0	0	0	5	5	171
01:15 PM	0	1	85	0	86	0	2	1	6	9	0	4	105	0	109	0	0	1	4	5	209
01:30 PM	0	4	80	1	85	0	1	1	10	12	0	6	81	0	87	0	0	0	3	3	187
01:45 PM	0	6	71	0	77	0	1	1	10	12	0	3	89	1	93	0	0	1	5	6	188
Total	0	16	318	1	335	0	7	4	33	44	0	16	340	1	357	0	0	2	17	19	755
Grand Total	0	148	2687	5	2840	0	46	47	171	264	0	85	1617	18	1720	0	0	56	185	241	5065
Apprch %	0	5.2	94.6	0.2		0	17.4	17.8	64.8		0	4.9	94	1		0	0	23.2	76.8		
Total %	0	2.9	53.1	0.1	56.1	0	0.9	0.9	3.4	5.2	0	1.7	31.9	0.4	34	0	0	1.1	3.7	4.8	
All Others	0	141	2565	5	2711	0	46	42	158	246	0	83	1451	14	1548	0	0	52	179	231	4736
% All Others	0	95.3	95.5	100	95.5	0	100	89.4	92.4	93.2	0	97.6	89.7	77.8	90	0	0	92.9	96.8	95.9	93.5
Bus & Trks 4 ax	0	7	52	0	59	0	0	5	12	17	0	2	61	4	67	0	0	4	6	10	153
% Bus & Trks 4 ax	0	4.7	1.9	0	2.1	0	0	10.6	7	6.4	0	2.4	3.8	22.2	3.9	0	0	7.1	3.2	4.1	3
Trks 5 ax +	0	0	70	0	70	0	0	0	1	1	0	0	105	0	105	0	0	0	0	0	176
% Trks 5 ax +	0	0	2.6	0	2.5	0	0	0	0.6	0.4	0	0	6.5	0	6.1	0	0	0	0	0	3.5

	US 395 Southbound					DAHL RD Westbound					US 395 Northbound					DAHL RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 01:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:15 AM																					
08:15 AM	0	6	91	0	97	0	**2**	**4**	6	12	0	2	49	**2**	53	0	0	1	6	7	169
08:30 AM	0	7	**124**	0	131	0	1	3	**16**	**20**	0	**3**	61	0	64	0	0	3	4	7	**222**
08:45 AM	0	9	116	0	125	0	1	1	12	14	0	3	**63**	1	**67**	0	0	**7**	**7**	**14**	220
09:00 AM	0	**12**	122	**1**	**135**	0	2	2	8	12	0	2	47	2	51	0	0	2	3	5	203
Total Volume	0	34	453	1	488	0	6	10	42	58	0	10	220	5	235	0	0	13	20	33	814
% App. Total	0	7	92.8	0.2		0	10.3	17.2	72.4		0	4.3	93.6	2.1		0	0	39.4	60.6		
PHF	.000	.708	.913	.250	.904	.000	.750	.625	.656	.725	.000	.833	.873	.625	.877	.000	.000	.464	.714	.589	.917

WSDOT ER Traffic

2714 N. Mayfair St
Spokane, WA 99207

Performed by: R. Carlson
Weather: cold, snow flurries
No peds or bicyclists
With 1.05 Seasonal Factor Applied

File Name : 395 18106 Dahl 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 1

Groups Printed- All Others - Bus & Trks 4 ax - Trks 5 ax +

	US 395 Southbound					DAHL RD Westbound					US 395 Northbound					DAHL RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
02:00 PM	0	6	59	0	65	0	0	5	10	15	0	3	80	2	85	0	0	3	8	11	176
02:15 PM	0	3	70	0	73	0	0	5	4	9	0	6	82	1	89	0	0	3	4	7	178
02:30 PM	0	1	65	0	66	0	0	2	5	7	0	8	77	0	85	0	0	1	8	9	167
02:45 PM	0	7	71	0	78	0	0	1	9	10	0	6	104	0	110	0	0	2	4	6	204
Total	0	17	265	0	282	0	0	13	28	41	0	23	343	3	369	0	0	9	24	33	725
03:00 PM	0	27	88	1	116	0	0	2	16	18	0	5	85	1	91	0	0	3	4	7	232
03:15 PM	0	7	59	0	66	0	0	5	7	12	0	6	102	0	108	0	0	3	6	9	195
03:30 PM	0	3	79	0	82	0	1	3	10	14	0	5	93	0	98	0	0	0	1	1	195
03:45 PM	0	7	77	1	85	0	0	1	10	11	0	9	104	2	115	0	1	2	5	8	219
Total	0	44	303	2	349	0	1	11	43	55	0	25	384	3	412	0	1	8	16	25	841
04:00 PM	0	5	73	2	80	0	0	2	14	16	0	9	101	0	110	0	1	5	3	9	215
04:15 PM	0	6	62	0	68	1	2	9	10	22	0	7	128	0	135	0	0	6	4	10	235
04:30 PM	0	6	66	0	72	0	0	6	7	13	0	10	122	0	132	0	0	0	3	3	220
04:45 PM	0	3	71	0	74	0	0	3	7	10	0	6	115	1	122	0	0	0	6	6	212
Total	0	20	272	2	294	1	2	20	38	61	0	32	466	1	499	0	1	11	16	28	882
05:00 PM	0	4	52	0	56	0	0	7	19	26	0	10	118	1	129	0	0	2	9	11	222
05:15 PM	0	5	50	0	55	0	3	1	3	7	0	12	95	0	107	0	1	0	2	3	172
05:30 PM	0	6	54	0	60	0	0	2	9	11	0	12	98	1	111	0	0	1	2	3	185
05:45 PM	0	5	56	1	62	0	0	4	8	12	0	8	104	0	112	0	0	0	2	2	188
Total	0	20	212	1	233	0	3	14	39	56	0	42	415	2	459	0	1	3	15	19	767
Grand Total	0	101	1052	5	1158	1	6	58	148	213	0	122	1608	9	1739	0	3	31	71	105	3215
Apprch %	0	8.7	90.8	0.4		0.5	2.8	27.2	69.5		0	7	92.5	0.5		0	2.9	29.5	67.6		
Total %	0	3.1	32.7	0.2	36	0	0.2	1.8	4.6	6.6	0	3.8	50	0.3	54.1	0	0.1	1	2.2	3.3	
All Others	0	97	979	5	1081	1	6	54	142	203	0	121	1570	9	1700	0	3	27	70	100	3084
% All Others	0	96	93.1	100	93.4	100	100	93.1	95.9	95.3	0	99.2	97.6	100	97.8	0	100	87.1	98.6	95.2	95.9
Bus & Trks 4 ax	0	4	26	0	30	0	0	4	4	8	0	1	14	0	15	0	0	4	1	5	58
% Bus & Trks 4 ax	0	4	2.5	0	2.6	0	0	6.9	2.7	3.8	0	0.8	0.9	0	0.9	0	0	12.9	1.4	4.8	1.8
Trks 5 ax +	0	0	47	0	47	0	0	0	2	2	0	0	24	0	24	0	0	0	0	0	73
% Trks 5 ax +	0	0	4.5	0	4.1	0	0	0	1.4	0.9	0	0	1.5	0	1.4	0	0	0	0	0	2.3

WSDOT ER Traffic

2714 N. Mayfair St
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File Name : 395 18106 Dahl 15PM
Site Code : 00000000
Start Date : 12/2/2015
Page No : 2

	US 395 Southbound					DAHL RD Westbound					US 395 Northbound					DAHL RD Eastbound					
Start Time	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Peds	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	**7**	**77**	1	**85**	0	0	1	10	11	0	9	104	**2**	115	0	**1**	2	**5**	8	219
04:00 PM	0	5	73	**2**	80	0	0	2	**14**	16	0	9	101	0	110	0	1	5	3	9	215
04:15 PM	0	6	62	0	68	**1**	**2**	**9**	10	**22**	0	7	**128**	0	**135**	0	0	**6**	4	**10**	**235**
04:30 PM	0	6	66	0	72	0	0	6	7	13	0	**10**	122	0	132	0	0	0	3	3	220
Total Volume	0	24	278	3	305	1	2	18	41	62	0	35	455	2	492	0	2	13	15	30	889
% App. Total	0	7.9	91.1	1		1.6	3.2	29	66.1		0	7.1	92.5	0.4		0	6.7	43.3	50		
PHF	.000	.857	.903	.375	.897	.250	.250	.500	.732	.705	.000	.875	.889	.250	.911	.000	.500	.542	.750	.750	.946

Appendix B – Existing Conditions & Area Map

City of Deer Park

Legend

- Roads
- Railroads
- Lakes & Streams
- Fire Stations
- Police Stations
- Schools
- Sections
- Medical Facility
- Government Facility
- Section - Township - Range
- Cemetery
- Parks & Golf Course

Map Produced June 2010
Spokane County ISD-GIS

0 0.25 0.5 0.75 1 Miles

Deer Park Airport

Deer Park Golf & Country Club

Spokane County

City of Deer Park Official Zoning Map

Deer Park Airport

Spokane County, Washington

Map Location

City of Deer Park, Washington Official Zoning Map

- Residential 2A (R-2A)
- Residential 2B (R-2B)
- Residential 3A (R-3A)
- Residential 3B (R-3B)
- Manufactured Home Subdivision (MHS)
- Manufactured Home Park (MHP)
- Multi-Family (MF)
- Central Commercial (CC)
- Diversified Commercial (CD)
- Commercial Recreation (CR)
- Cemetery (CEM)
- Hospital (H)
- Business Park (BP)
- Light Industrial (LI)
- Public/Quasi-Public (P/QP)
- Urban Growth Boundary
- Municipal Boundary

0 800 1,600 3,200 4,800 Feet

Map Projection: WA State Plane North, NAD 83-HARN

Zones Not Currently In Use: Residential 1A (R-1A), Commercial Shopping Center (CS), and Commercial Neighborhood (CN).

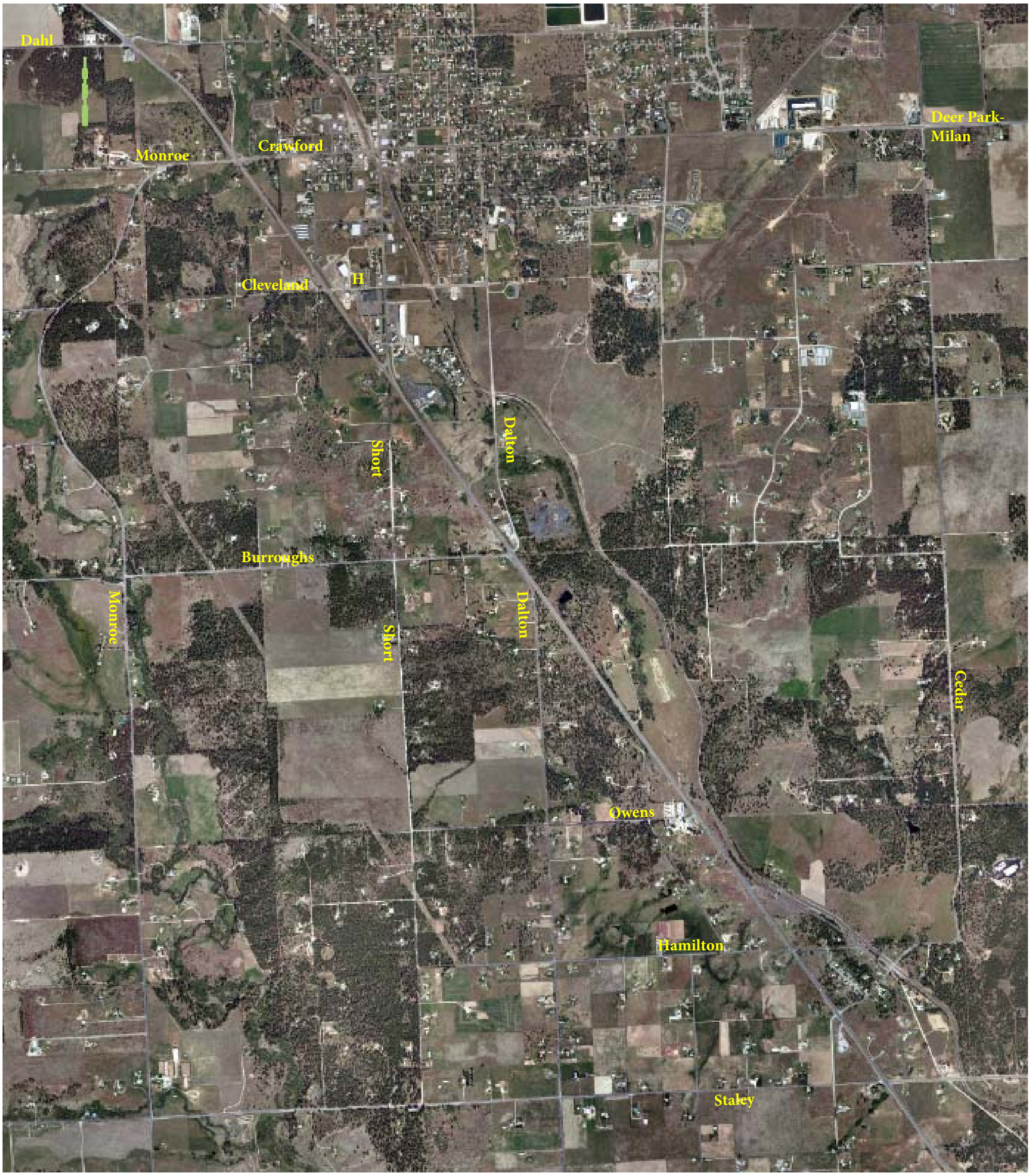
As Amended by Ordinance No. 1999-733
Date of Adoption: September 15, 1999.
As Amended by Ordinance No. 2004-808
Date of Adoption: March 17, 2004.
As Amended by Ordinance No. 2005-819
Date of Adoption: June 1, 2005.
As Amended by Ordinance No. 2007-851
Date of Adoption: October 3, 2007.
As Amended by Ordinance No. 2008-860
Date of Adoption: April 16, 2008.
As Amended by Ordinance No. 2008-861
Date of Adoption: April 16, 2008.
Original Signatures on file with Clerk-Treasurer

N W E S

- 1 - Runway Protection Zone
- 2 - Inner Safety Zone
- 3 - Inner Turning Zone
- 4 - Outer Safety Zone
- 5 - Sideline Safety Zone
- 6 - Traffic Pattern Zone

Map Produced: January 12, 2009

DEER PARK AREA ROADWAY NETWORK



Appendix C – Existing Level of Service

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	13	14	27	77	8	0	5	317	45	1	539	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	76	76	76	87	87	95	86	86	86	88	88	88
Heavy Vehicles, %	2	9	3	1	2	0	6	7	3	0	4	2
Mvmt Flow	17	18	36	89	9	0	6	369	52	1	612	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1033	1055	620	1055	1036	395	627	0	0	421	0	0
Stage 1	622	622	-	406	406	-	-	-	-	-	-	-
Stage 2	411	433	-	649	630	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.59	6.23	7.11	6.52	6.2	4.16	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.59	-	6.11	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.59	-	6.11	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.081	3.327	3.509	4.018	3.3	2.254	-	-	2.2	-	-
Pot Cap-1 Maneuver	211	219	486	204	232	659	936	-	-	1149	-	-
Stage 1	474	468	-	624	598	-	-	-	-	-	-	-
Stage 2	618	570	-	460	475	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	203	217	486	176	230	659	936	-	-	1149	-	-
Mov Cap-2 Maneuver	203	217	-	176	230	-	-	-	-	-	-	-
Stage 1	471	468	-	620	594	-	-	-	-	-	-	-
Stage 2	605	566	-	409	475	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.2	46.5	0.1	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	936	-	-	293	180	1149	-	-
HCM Lane V/C Ratio	0.006	-	-	0.243	0.543	0.001	-	-
HCM Control Delay (s)	8.9	-	-	21.2	46.5	8.1	-	-
HCM Lane LOS	A	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.9	2.8	0	-	-

Intersection	
Int Delay, s/veh	4.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	3	1	142	10	17	0	206	0	0	410	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	3	0	0	0	11	0	0	5	0
Mvmt Flow	0	3	1	154	11	18	0	224	0	0	446	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	685	670	446	672	670	224	446	0	0	224	0	0
Stage 1	446	446	-	224	224	-	-	-	-	-	-	-
Stage 2	239	224	-	448	446	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	365	381	617	368	381	820	1125	-	-	1357	-	-
Stage 1	595	577	-	776	722	-	-	-	-	-	-	-
Stage 2	769	722	-	588	577	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	349	381	617	365	381	820	1125	-	-	1357	-	-
Mov Cap-2 Maneuver	349	381	-	365	381	-	-	-	-	-	-	-
Stage 1	595	577	-	776	722	-	-	-	-	-	-	-
Stage 2	740	722	-	584	577	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.6	22.3	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	421	388	1357	-	-
HCM Lane V/C Ratio	-	-	-	0.01	0.473	-	-	-
HCM Control Delay (s)	0	-	-	13.6	22.3	0	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	2.5	0	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	2	2	43	7	27	0	197	26	86	365	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	300	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	38	38	38	77	77	77	83	83	83	89	89	89
Heavy Vehicles, %	12	3	0	5	0	3	0	12	5	2	4	29
Mvmt Flow	5	5	5	56	9	35	0	237	31	97	410	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	862	840	410	846	840	237	410	0	0	237	0	0
Stage 1	603	603	-	237	237	-	-	-	-	-	-	-
Stage 2	259	237	-	609	603	-	-	-	-	-	-	-
Critical Hdwy	7.22	6.53	6.2	7.15	6.5	6.23	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.22	5.53	-	6.15	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.22	5.53	-	6.15	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.608	4.027	3.3	3.545	4	3.327	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	264	300	646	279	304	800	1160	-	-	1330	-	-
Stage 1	469	487	-	760	713	-	-	-	-	-	-	-
Stage 2	724	707	-	477	492	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	233	278	646	258	282	800	1160	-	-	1330	-	-
Mov Cap-2 Maneuver	233	278	-	258	282	-	-	-	-	-	-	-
Stage 1	469	451	-	760	713	-	-	-	-	-	-	-
Stage 2	683	707	-	433	456	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	19.8	0	1.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1160	-	-	318	342	1330	-	-
HCM Lane V/C Ratio	-	-	-	0.05	0.292	0.073	-	-
HCM Control Delay (s)	0	-	-	16.9	19.8	7.9	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.2	0.2	-	-

Intersection	
Intersection Delay (sec/veh):	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	6	55	18	34	26	33	17	195	14	76	399	4
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		1	0		1	100		0	100		1
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.73	0.73	0.73	0.83	0.83	0.83	0.91	0.91	0.91	0.90	0.90	0.90
Heavy Vehicles(%)	4	6	2	3	9	8	7	10	8	4	5	0
Movement Flow Rate	8	75	25	41	31	40	19	214	15	84	443	4
Number of Lanes	0	1	0	0	1	1	1	1	0	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	909	881	446	923	876	222	448	0	0	230	0	0
Stage 1	614	614	0	259	259	0	0	0	0	0	0	0
Stage 2	295	267	0	664	617	0	0	0	0	0	0	0
Follow-up Headway	3.536	4.054	3.318	3.527	4.081	3.372	2.263	-	-	2.236	0	0
Pot Capacity-1 Maneuver	254	281	612	249	280	803	1085	-	-	1326	-	-
Stage 1	476	477	-	744	681	-	-	-	-	-	-	-
Stage 2	709	681	-	448	470	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	205.8	258.5	612	174.4	257.6	803	1085	-	-	1326	-	-
Mov Capacity-2 Maneuver	205.8	258.5	-	174.4	257.6	-	-	-	-	-	-	-
Stage 1	476	446.5	-	744	669.4	-	-	-	-	-	-	-
Stage 2	631.4	669.4	-	334.5	439.9	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	24.5	24.216	0.6	1.3
HCM LOS	C	C	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				291	203	803			
HCM Control Delay (s)	8.376	-	-	24.5	32.2	9.7	7.9	-	-
HCM Lane VC Ratio	0.017	-	-	0.372	0.356	0.05	0.064	-	-
HCM Lane LOS	A	-	-	C	D	A	A	-	-
HCM 95th Percentile Queue (veh)	0.053	-	-	1.656	1.518	0.156	0.204	-	-

Intersection	
Intersection Delay (sec/veh):	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	13	20	6	10	42	10	219	5	34	453	1
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		0	135		0	225		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.59	0.59	0.59	0.72	0.72	0.72	0.88	0.88	0.88	0.90	0.90	0.90
Heavy Vehicles(%)	0	7	3	0	11	8	2	10	22	5	4	0
Movement Flow Rate	0	22	34	8	14	58	11	249	6	38	503	1
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	-	856	505	882	854	252	504	0	0	255	0	0
Stage 1	-	579	0	274	274	0	0	0	0	0	0	0
Stage 2	-	277	0	608	580	0	0	0	0	0	0	0
Follow-up Headway	-	4.063	3.327	3.5	4.099	3.372	2.218	-	-	2.245	0	0
Pot Capacity-1 Maneuver	-	290	565	269	286	772	1059	-	-	1293	-	-
Stage 1	-	493	-	736	667	-	-	-	-	-	-	-
Stage 2	-	672	-	486	486	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	-	278.5	565	230.3	274.7	772	1059	-	-	1293	-	-
Mov Capacity-2 Maneuver	-	278.5	-	230.3	274.7	-	-	-	-	-	-	-
Stage 1	-	478.7	-	736	659.7	-	-	-	-	-	-	-
Stage 2	-	664.6	-	422.8	471.9	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	15.4	13.7	0.4	0.5
HCM LOS	C	B	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				402	496			
HCM Control Delay (s)	8.436	-	-	15.4	13.7	7.868	-	-
HCM Lane VC Ratio	0.011	-	-	0.139	0.162	0.029	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th Percentile Queue (veh)	0.033	-	-	0.48	0.575	0.09	-	-

Intersection	
Intersection Delay (sec/veh):	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	13	15	7	47	16	1	27	618	110	0	380	33
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		0	100		0	100		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.67	0.67	0.67	0.84	0.84	0.84	0.91	0.91	0.91	0.94	0.94	0.94
Heavy Vehicles(%)	7	0	0	1	5	0	0	2	1	0	5	1
Movement Flow Rate	19	22	10	56	19	1	30	679	121	0	404	35
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	1231	1281	422	1237	1238	740	439	0	0	800	0	0
Stage 1	422	422	0	799	799	0	0	0	0	0	0	0
Stage 2	809	859	0	438	439	0	0	0	0	0	0	0
Follow-up Headway	3.563	4	3.3	3.509	4.045	3.3	2.2	-	-	2.2	0	0
Pot Capacity-1 Maneuver	151	167	636	153	173	420	1133	-	-	832	-	-
Stage 1	600	592	-	381	393	-	-	-	-	-	-	-
Stage 2	367	376	-	599	573	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	134.9	162.7	636	132	168.5	420	1133	-	-	832	-	-
Mov Capacity-2 Maneuver	134.9	162.7	-	132	168.5	-	-	-	-	-	-	-
Stage 1	600	592	-	381	382.8	-	-	-	-	-	-	-
Stage 2	338.7	366.2	-	566.9	573	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	34.1	57.1	0.3	0
HCM LOS	D	F	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				175	141			
HCM Control Delay (s)	8.263	-	-	34.1	57.1	0	-	-
HCM Lane VC Ratio	0.026	-	-	0.299	0.54	-	-	-
HCM Lane LOS	A	-	-	D	F	A	-	-
HCM 95th Percentile Queue (veh)	0.081	-	-	1.185	2.656	0	-	-

Intersection	
Intersection Delay (sec/veh):	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	3	10	2	158	12	54	1	356	0	2	253	2
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		25	0		0	0		1
Median Width		0			0			12			0	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles(%)	0	0	0	1	1	1	3	3	3	5	5	5
Movement Flow Rate	3	10	2	165	13	56	1	371	0	2	264	2
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	675	641	264	647	641	371	266	0	-	371	0	0
Stage 1	268	268	0	373	373	0	0	0	-	0	0	0
Stage 2	407	373	0	274	268	0	0	0	-	0	0	0
Follow-up Headway	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.245	0	0
Pot Capacity-1 Maneuver	371	395	779	385	394	677	1289	-	-	1172	-	-
Stage 1	742	691	-	650	620	-	-	-	-	-	-	-
Stage 2	625	622	-	734	689	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	331.2	393.8	779	375.4	392.8	677	1289	-	-	1172	-	-
Mov Capacity-2 Maneuver	331.2	393.8	-	375.4	392.8	-	-	-	-	-	-	-
Stage 1	742	689.6	-	650	619.4	-	-	-	-	-	-	-
Stage 2	560.9	621.4	-	719.5	687.6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	14.2	23.6	0	0.1
HCM LOS	B	C	A	A

Lane	NBL	NBT	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)			405	422			
HCM Control Delay (s)	7.795	0	14.2	23.6	8.077	-	-
HCM Lane VC Ratio	0.001	-	0.039	0.553	0.002	-	-
HCM Lane LOS	A	-	B	C	A	-	-
HCM 95th Percentile Queue (veh)	0.002	-	0.12	3.26	0.005	-	-

Intersection	
Intersection Delay (sec/veh):	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	0	6	1	47	15	100	2	384	28	53	209	0
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		1	100		470	100		50
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.83	0.83	0.83	0.95	0.95	0.95	0.86	0.86	0.86
Heavy Vehicles(%)	0	0	0	1	0	0	0	3	1	3	8	0
Movement Flow Rate	0	6	1	57	18	120	2	404	29	62	243	0
Number of Lanes	0	1	0	0	1	0	1	1	1	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	-	774	243	778	774	404	243	0	0	434	0	-
Stage 1	-	366	0	408	408	0	0	0	0	0	0	-
Stage 2	-	408	0	370	366	0	0	0	0	0	0	-
Follow-up Headway	-	4	3.3	3.509	4	3.3	2.2	-	-	2.227	0	-
Pot Capacity-1 Maneuver	-	332	800	315	332	651	1331	-	-	1122	-	-
Stage 1	-	626	-	622	600	-	-	-	-	-	-	-
Stage 2	-	600	-	652	626	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	-	313.1	800	296.2	313.1	651	1331	-	-	1122	-	-
Mov Capacity-2 Maneuver	-	313.1	-	296.2	313.1	-	-	-	-	-	-	-
Stage 1	-	591.6	-	622	598.8	-	-	-	-	-	-	-
Stage 2	-	598.8	-	608.6	591.6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	15.7	19	0	1.7
HCM LOS	C	C	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (vph)				343	450		
HCM Control Delay (s)	7.709	-	-	15.7	19	8.395	-
HCM Lane VC Ratio	0.002	-	-	0.022	0.434	0.055	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th Percentile Queue (veh)	0.005	-	-	0.067	2.152	0.174	-

Intersection	
Intersection Delay (sec/veh):	6.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	51	16	27	50	58	36	438	10	52	219	4
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		1	0		1	100		0	100		1
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.81	0.81	0.96	0.96	0.96	0.95	0.95	0.95	0.87	0.87	0.87
Heavy Vehicles(%)	0	5	0	4	3	3	3	3	6	5	9	17
Movement Flow Rate	5	63	20	28	52	60	38	461	11	60	252	5
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	972	921	254	957	918	466	256	0	0	472	0	0
Stage 1	374	374	0	542	542	0	0	0	0	0	0	0
Stage 2	598	547	0	415	376	0	0	0	0	0	0	0
Follow-up Headway	3.5	4.045	3.3	3.536	4.027	3.327	2.227	-	-	2.245	0	0
Pot Capacity-1 Maneuver	234	267	789	235	271	594	1305	-	-	1076	-	-
Stage 1	651	612	-	521	519	-	-	-	-	-	-	-
Stage 2	492	513	-	611	615	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	165.4	244.7	789	172.4	248.4	594	1305	-	-	1076	-	-
Mov Capacity-2 Maneuver	165.4	244.7	-	172.4	248.4	-	-	-	-	-	-	-
Stage 1	651	577.7	-	521	503.9	-	-	-	-	-	-	-
Stage 2	384.8	498.1	-	501.1	580.6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	23.5	27.7	0.6	1.6
HCM LOS	C	D	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				281	296			
HCM Control Delay (s)	7.841	-	-	23.5	27.7	8.542	-	-
HCM Lane VC Ratio	0.029	-	-	0.312	0.475	0.056	-	-
HCM Lane LOS	A	-	-	C	D	A	-	-
HCM 95th Percentile Queue (veh)	0.09	-	-	1.291	2.415	0.176	-	-

Intersection	
Intersection Delay (sec/veh):	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	8	22	2	25	43	35	463	2	19	251	0
Conflicting Peds.(#/hr)	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		60	0		0	135		100	225		30
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.71	0.71	0.71	0.91	0.91	0.91	0.90	0.90	0.90
Heavy Vehicles(%)	0	13	0	0	7	4	1	2	0	4	7	0
Movement Flow Rate	3	11	29	3	35	61	38	509	2	21	279	0
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	957	911	281	930	910	511	280	0	0	512	0	-
Stage 1	322	322	0	588	588	0	0	0	0	0	0	-
Stage 2	635	589	0	342	322	0	0	0	0	0	0	-
Follow-up Headway	3.5	4.117	3.3	3.5	4.063	3.336	2.209	-	-	2.236	0	-
Pot Capacity-1 Maneuver	239	263	762	250	269	558	1287	-	-	1043	-	-
Stage 1	694	632	-	499	488	-	-	-	-	-	-	-
Stage 2	470	478	-	677	642	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	183.3	249.8	761	223.4	255.3	558	1286	-	-	1042	-	-
Mov Capacity-2 Maneuver	183.3	249.8	-	223.4	255.3	-	-	-	-	-	-	-
Stage 1	693	618.8	-	499	473	-	-	-	-	-	-	-
Stage 2	376.2	463.3	-	626.4	628.6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	13.9	17.7	0.6	0.6
HCM LOS	B	C	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (vph)				445	381		
HCM Control Delay (s)	7.886	-	-	13.9	17.7	8.526	-
HCM Lane VC Ratio	0.03	-	-	0.096	0.259	0.02	-
HCM Lane LOS	A	-	-	B	C	A	-
HCM 95th Percentile Queue (veh)	0.092	-	-	0.316	1.018	0.062	-

Appendix D – Proposed Level of Service

MOVEMENT SUMMARY

Site: 0 [Short Rd Dec 2015 AM Peak]

Proposed
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: NB US 395											
3	L2	6	6.0	0.147	3.3	LOS A	0.8	21.6	0.21	0.08	38.0
8	T1	226	7.0	0.147	3.4	LOS A	0.8	21.6	0.21	0.08	38.0
18	R2	1	0.0	0.001	0.0	LOS A	0.0	0.0	0.00	0.00	40.6
Approach		233	6.9	0.147	3.4	LOS A	0.8	21.6	0.20	0.08	38.1
East: WB (Main)											
1	L2	249	3.0	0.238	5.1	LOS A	1.2	31.7	0.41	0.27	30.4
6	T1	20	2.0	0.238	5.0	LOS A	1.2	31.7	0.41	0.27	30.2
16	R2	19	0.0	0.238	4.9	LOS A	1.2	31.7	0.41	0.27	29.4
Approach		289	2.7	0.238	5.1	LOS A	1.2	31.7	0.41	0.27	30.3
North: SB US 395											
7	L2	32	3.0	0.425	7.3	LOS A	2.8	71.6	0.53	0.39	35.9
4	T1	449	5.0	0.425	7.5	LOS A	2.8	71.6	0.53	0.39	35.7
14	R2	15	2.0	0.425	7.2	LOS A	2.8	71.6	0.53	0.39	35.1
Approach		495	4.8	0.425	7.5	LOS A	2.8	71.6	0.53	0.39	35.7
West: EB (Short Road)											
5	L2	8	2.0	0.083	5.2	LOS A	0.5	12.4	0.68	0.55	32.0
2	T1	26	9.0	0.083	5.6	LOS A	0.5	12.4	0.68	0.55	31.7
12	R2	32	3.0	0.083	5.2	LOS A	0.5	12.4	0.68	0.55	30.8
Approach		66	5.3	0.083	5.4	LOS A	0.5	12.4	0.68	0.55	31.3
All Vehicles		1083	4.7	0.425	5.8	LOS A	2.8	71.6	0.44	0.30	34.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 0 [Monroe Rd / Crawford St Dec 2015 AM Peak]

Review for project scoping. Counts taken December 2015 ER Traffic
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: NB US 395											
3	L2	19	7.0	0.161	13.6	LOS B	0.8	21.5	0.29	0.54	41.7
8	T1	214	10.0	0.161	7.7	LOS A	0.8	21.5	0.29	0.54	44.5
18	R2	15	8.0	0.010	6.9	LOS A	0.0	1.2	0.25	0.54	38.5
Approach		248	9.7	0.161	8.1	LOS A	0.8	21.5	0.29	0.54	43.9
East: Crawford Road											
1	L2	37	3.0	0.089	9.5	LOS A	0.4	10.9	0.38	0.53	37.1
6	T1	28	9.0	0.089	3.7	LOS A	0.4	10.9	0.38	0.53	34.3
16	R2	36	8.0	0.089	4.0	LOS A	0.4	10.9	0.38	0.53	35.5
Approach		102	6.5	0.089	5.9	LOS A	0.4	10.9	0.38	0.53	35.7
North: SB US 395											
7	L2	83	4.0	0.370	13.4	LOS B	2.3	59.3	0.27	0.55	39.5
4	T1	437	5.0	0.370	7.5	LOS A	2.3	59.3	0.27	0.55	45.1
14	R2	4	0.0	0.370	6.8	LOS A	2.3	59.3	0.27	0.55	41.6
Approach		525	4.8	0.370	8.4	LOS A	2.3	59.3	0.27	0.55	44.1
West: Monroe Road											
5	L2	7	4.0	0.092	13.4	LOS B	0.5	12.5	0.57	0.64	40.9
2	T1	60	6.0	0.092	7.2	LOS A	0.5	12.5	0.57	0.64	35.7
12	R2	20	2.0	0.092	7.0	LOS A	0.5	12.5	0.57	0.64	39.9
Approach		87	4.9	0.092	7.7	LOS A	0.5	12.5	0.57	0.64	36.9
All Vehicles		961	6.2	0.370	8.0	LOS A	2.3	59.3	0.32	0.55	42.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 0 [Short Rd Dec 2015 PM Peak]

Counts taken December 2015 ER Traffic. Adjusted with seasonal factor. Volumes from Burroughs/Dalton is included in Short volumes. 1 closure & 2 RAB's
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: NB US 395											
3	L2	32	3.0	0.257	13.2	LOS B	1.6	41.6	0.20	0.51	43.0
8	T1	401	3.0	0.257	7.3	LOS A	1.6	41.6	0.20	0.51	46.7
18	R2	1	3.0	0.001	6.3	LOS A	0.0	0.0	0.00	0.59	46.8
Approach		434	3.0	0.257	7.7	LOS A	1.6	41.6	0.20	0.51	46.4
East: WB (Main)											
1	L2	233	2.0	0.303	7.4	LOS A	1.7	43.8	0.56	0.63	30.5
6	T1	32	1.0	0.303	2.1	LOS A	1.7	43.8	0.56	0.63	29.2
16	R2	63	1.0	0.303	3.1	LOS A	1.7	43.8	0.56	0.63	30.7
Approach		327	1.7	0.303	6.1	LOS A	1.7	43.8	0.56	0.63	30.4
North: SB US 395											
7	L2	14	5.0	0.272	14.4	LOS B	1.6	40.6	0.49	0.63	34.5
4	T1	250	5.0	0.272	8.5	LOS A	1.6	40.6	0.49	0.63	45.2
14	R2	40	5.0	0.272	7.9	LOS A	1.6	40.6	0.49	0.63	40.9
Approach		303	5.0	0.272	8.7	LOS A	1.6	40.6	0.49	0.63	44.0
West: EB (Short Road)											
5	L2	7	7.0	0.050	13.0	LOS B	0.3	6.4	0.52	0.59	41.0
2	T1	35	0.0	0.050	6.6	LOS A	0.3	6.4	0.52	0.59	29.0
12	R2	10	0.0	0.050	6.5	LOS A	0.3	6.4	0.52	0.59	40.2
Approach		52	0.9	0.050	7.4	LOS A	0.3	6.4	0.52	0.59	32.1
All Vehicles		1117	3.1	0.303	7.5	LOS A	1.7	43.8	0.40	0.58	39.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 0 [Monroe Rd / Crawford St Dec 2015 PM Peak]

Review for project scoping. Counts taken December 2015 ER Traffic. 1 closure & 2 RAB's
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: NB US 395											
3	L2	39	3.0	0.323	13.4	LOS B	1.9	47.9	0.28	0.54	46.6
8	T1	480	3.0	0.323	7.4	LOS A	1.9	47.9	0.28	0.54	51.1
18	R2	11	6.0	0.007	6.8	LOS A	0.0	0.8	0.21	0.54	43.3
Approach		530	3.1	0.323	7.9	LOS A	1.9	47.9	0.28	0.54	50.7
East: Crawford Road											
1	L2	30	4.0	0.150	11.0	LOS B	0.8	20.6	0.57	0.63	41.3
6	T1	55	3.0	0.150	4.9	LOS A	0.8	20.6	0.57	0.63	35.0
16	R2	64	3.0	0.150	5.3	LOS A	0.8	20.6	0.57	0.63	40.8
Approach		148	3.2	0.150	6.3	LOS A	0.8	20.6	0.57	0.63	39.0
North: SB US 395											
7	L2	57	5.0	0.237	13.6	LOS B	1.3	34.1	0.31	0.57	43.9
4	T1	240	9.0	0.237	7.7	LOS A	1.3	34.1	0.31	0.57	49.4
14	R2	4	17.0	0.237	7.4	LOS A	1.3	34.1	0.31	0.57	43.2
Approach		301	8.4	0.237	8.8	LOS A	1.3	34.1	0.31	0.57	48.4
West: Monroe Road											
5	L2	4	0.0	0.070	12.1	LOS B	0.3	8.5	0.43	0.54	46.6
2	T1	56	5.0	0.070	6.0	LOS A	0.3	8.5	0.43	0.54	36.2
12	R2	18	0.0	0.070	5.8	LOS A	0.3	8.5	0.43	0.54	45.2
Approach		78	3.6	0.070	6.3	LOS A	0.3	8.5	0.43	0.54	39.1
All Vehicles		1057	4.6	0.323	7.8	LOS A	1.9	47.9	0.34	0.56	47.8

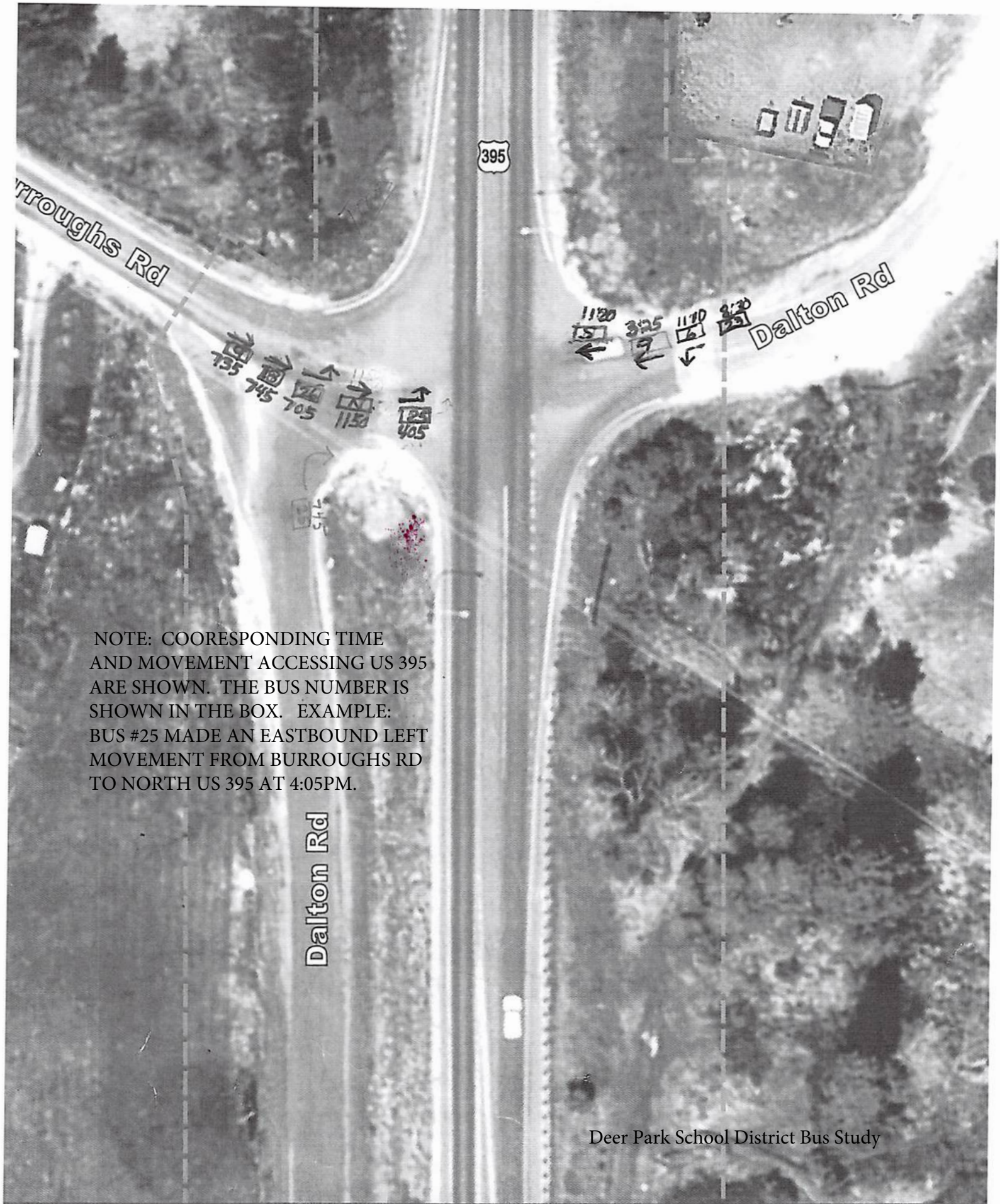
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Appendix E – Field Studies

US 395 BURROUGHS RD - DALTON RD (west) COUNTS

Between 1100-1300 May 18, 2016. by Mohamed Traore

	Dalton		Total westleg	% to/from Dalton Rd (west) vs. Burroughs Rd
NBND US 395 to SBND Dalton	1		22	5%
SBND US 395 to SBND Dalton	18		37	49%
Dalton WBND to SBND Dalton	6		25	24%
Burroughs EBND to Dalton SBND	3		-	
Dalton NBND to Burroughs WBND	3		-	
Dalton NBND to US 395	25		78	32%



95 Deer Park - Intersection Improvement Study (Burroughs Road) Handout 1

ngton State

Scale in Feet

Right-of-way shown is at a planning level and not to

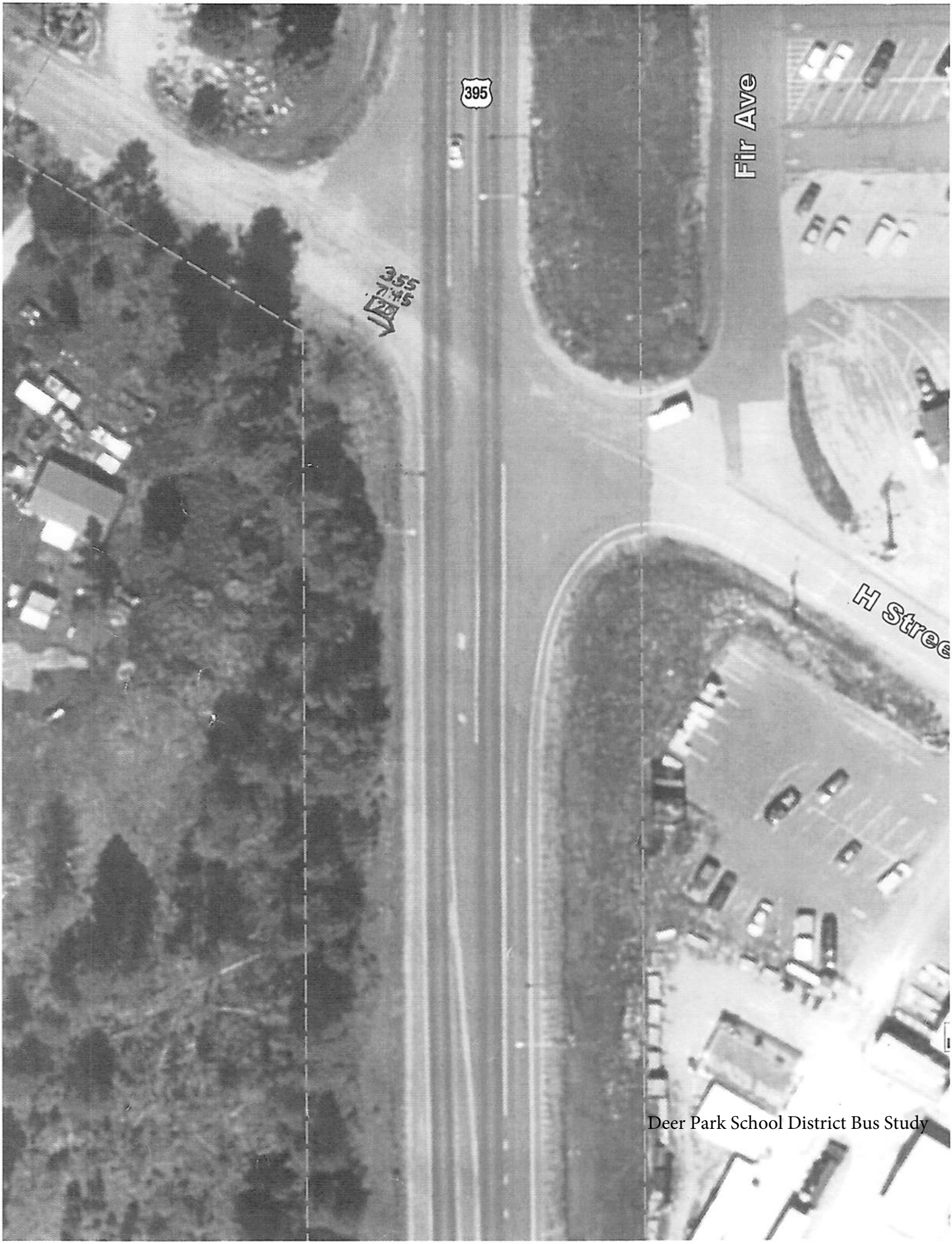
Existing Condit

395 Deer Park - Intersection Improvement Study (Short Road) Handout 2 of

Scale in Feet

Right-of-way shown is at a planning level and not to

Existing Condit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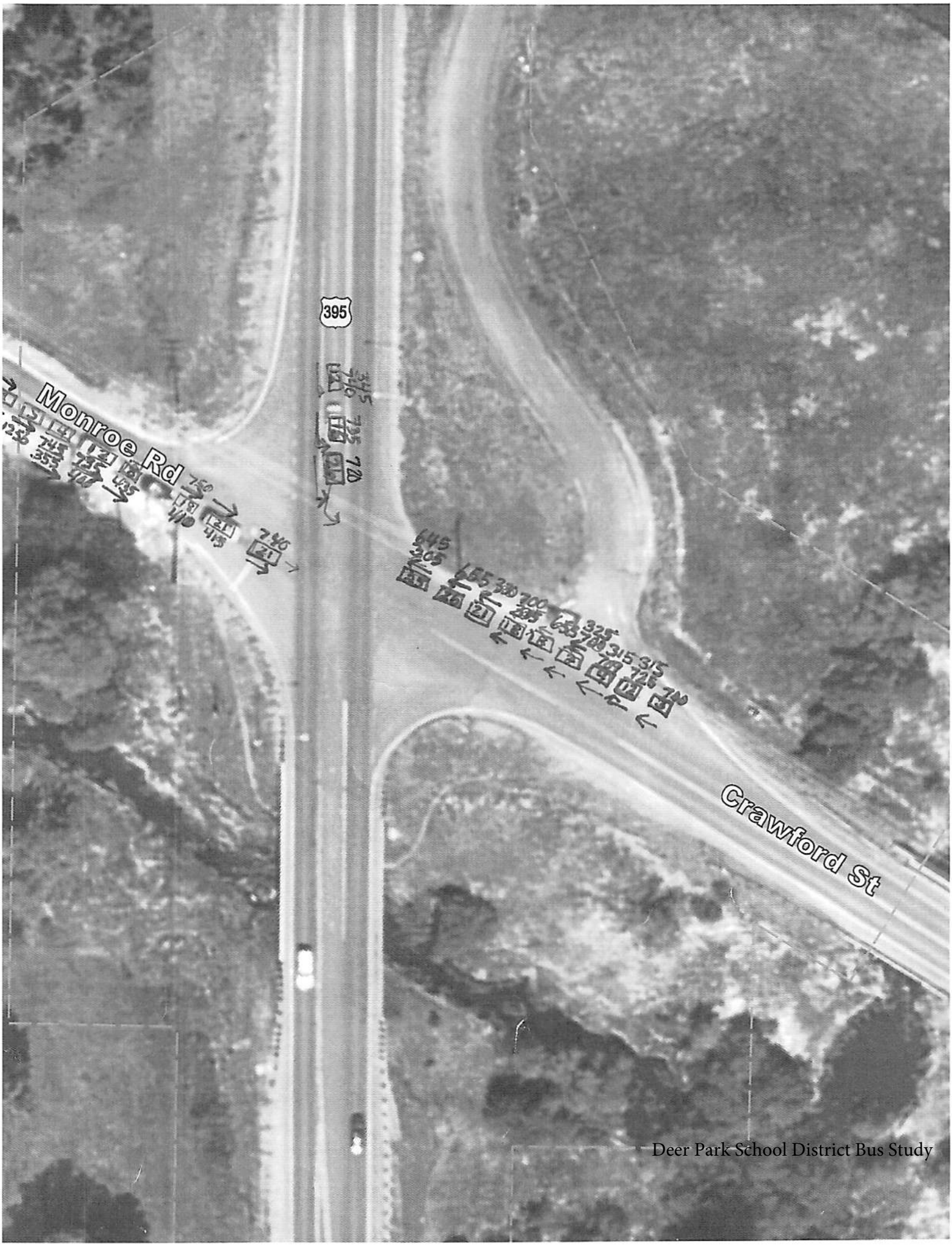
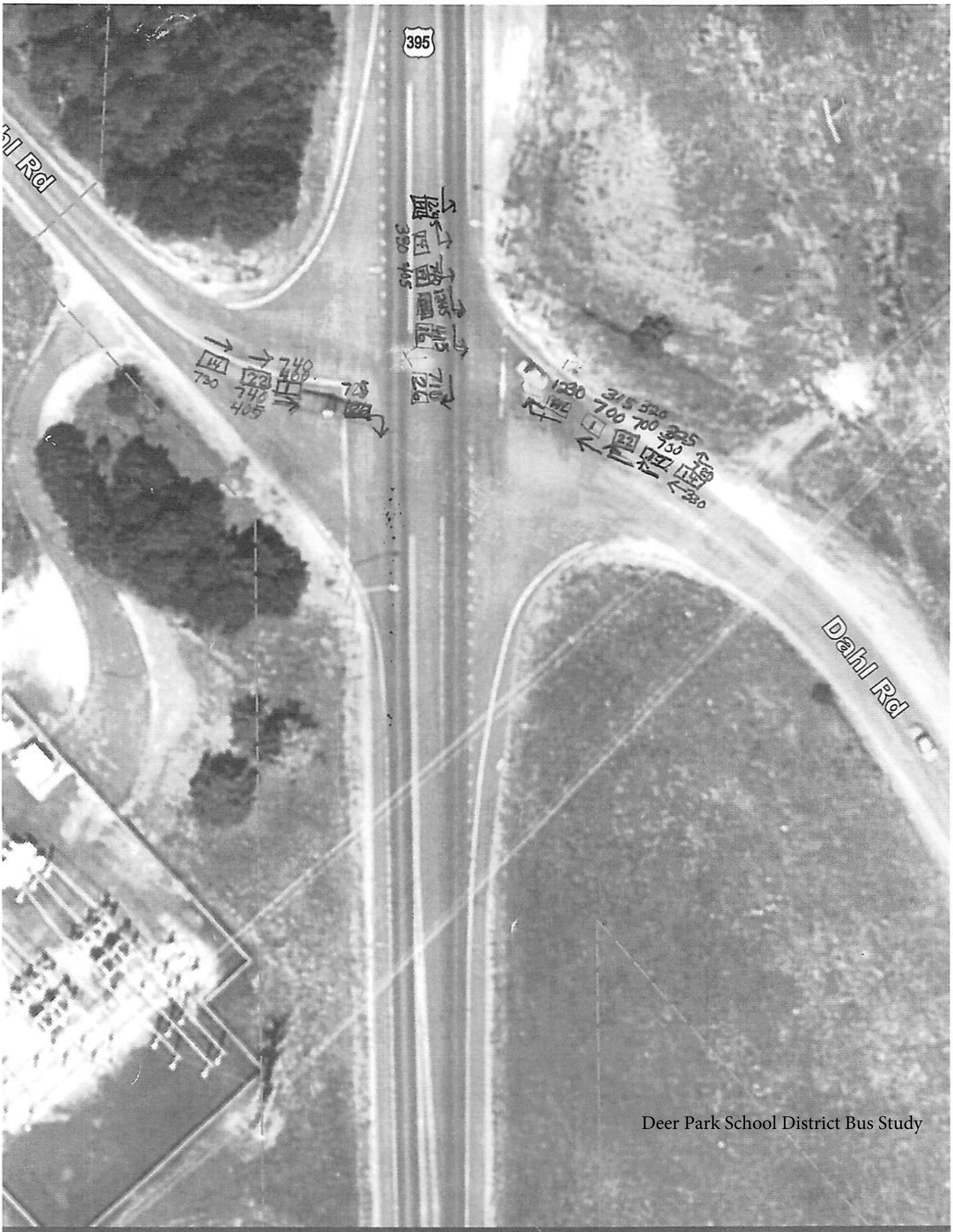
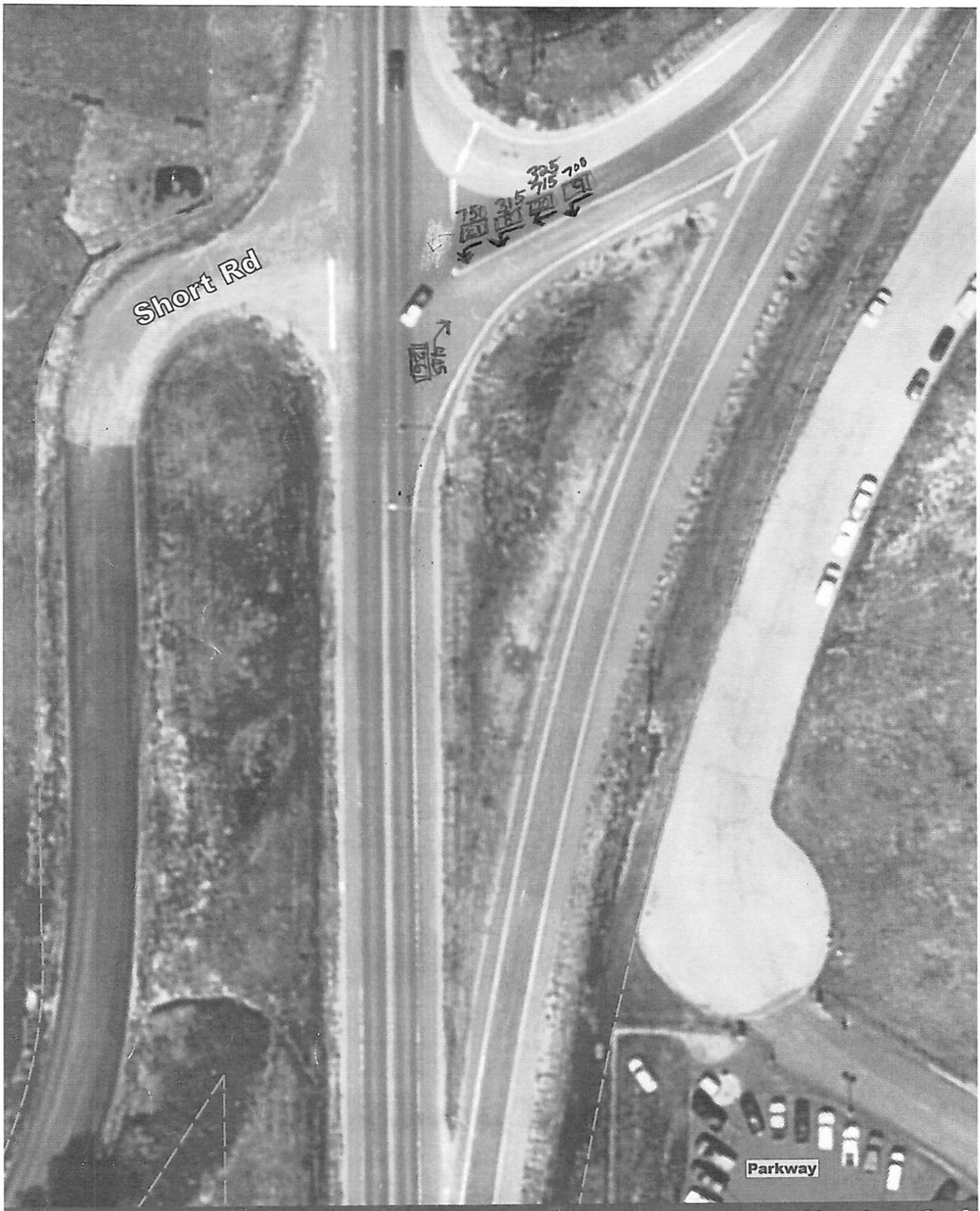


Deer Park School District Bus Study



Deer Park School District Bus Study



395 Deer Park - Intersection Improvement Study (Short Road) Handout 2 of

Scale in Feet

Right-of-way shown is at a planning level and not to

Existing Condit

US 395 VICINITY OF DEER PARK TRAVEL TIME STUDY

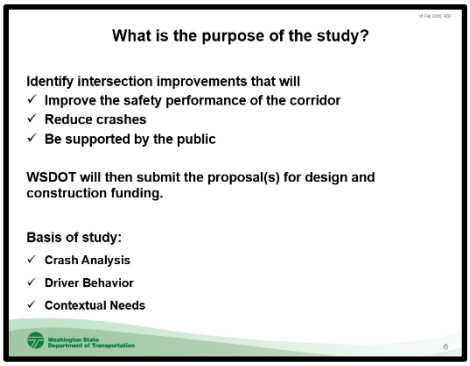
Origin	Routes				Destination	Travel Time (s)	SUMMARY
US 395/Staley	Staley	Monroe			Monroe/Burroughs	425	Traveling between US 395/Staley & Burroughs/Monroe generally speaking is within 1 minute difference via accessing US 395 via Staley, Burroughs or Short Rd. Shortest - likely Staley Rd.
Burroughs/Monroe	Burroughs	Dalton	Owens	US395	US 395/Staley	368.5	
US 395/Staley	US 395	Short	Burroughs		Monroe/Burroughs	417	
Burroughs/Short	Burroughs				US 395/Burroughs	54	
US 395/Burroughs	Dalton				Dalton/H St	102	Traveling between Dalton/H & US395/Burroughs generally speaking is within 1minute difference via Dalton or H/US395. One test showed 11 seconds difference.
Dalton/H St	H	Main	US 395		US 395/Burroughs	91	
Dalton / H St	Dalton	Burroughs			Burroughs/Short	156	Traveling between Dalton/H & Burroughs/Short generally speaking is within 1 minute difference via Dalton, H/US395, or H/Short. Shortest - inconclusive due to travel times in different directions.
Dalton / H St	H	Main	Short		Burroughs/Short	201	
Dalton/H St	H	Main	US 395	Burroughs	Burroughs/Short	145	

Travel Time Study by Mohamed Traore on 5-18 and Rebecca Fouts 5-25.

Appendix F – Public Involvement

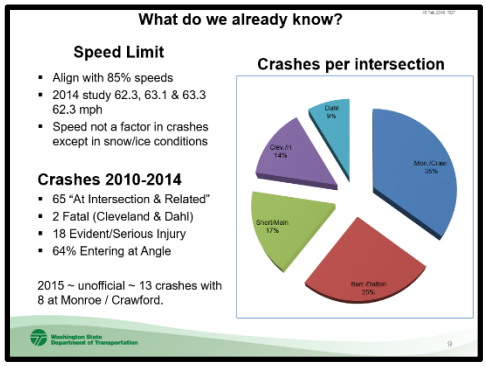
February 16, 2016 Stakeholders Meeting Attendees

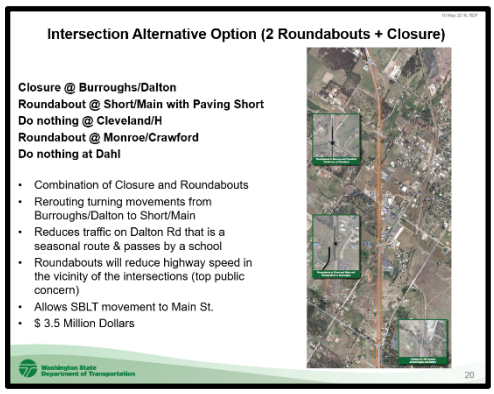
Agency	Representative
Spokane County Fire District 4	Randy Johnson
Citizen of Deer Park – Community Point	Dianne Allard
City of Deer Park	Brian Ramsden
Deer Park School District	Sonja Rosenthal
Deer Park School District	Kerri Leliefeld
Spokane County Engineering	Nate Thompson
Deer Park Community Service Director	Roger Krieger
Deer Park Chamber of Commerce	Ryan Moore
Spokane County Sheriff's Office	Sheriff Dan Dutton
WSDOT – Traffic Engineer	Glenn Wagemann
WSDOT– Asst. Traffic Engineer	Larry Frostad
WSDOT – Study Team Manager	ReBecca Fouts
WSDOT – Study Team	Kathy Engle
WSDOT – Study Team	Amber Haveman
WSDOT – Planning Engineer	Char Kay
WSDOT – Maintenance	Doug Bierce
WSDOT – ARA Development	Mike Frucci



May 10, 2016 Stakeholders Meeting Attendees

Agency	Representative
Spokane County Fire District 4	Randy Johnson
Citizen of Deer Park – Community Point	Dianne Allard
City of Deer Park - Maintenance	Brian Ramsden
Deer Park Community Service Director	Roger Krieger
Deer Park School District	Sonja Rosenthal
Washington State Patrol	Joel Gordon
Spokane County Engineering	Nate Thompson
Spokane County Engineering	Chad Coles
Spokane County Engineering	Barry Greene
Spokane County Sheriff's Office	Sheriff Dan Dutton
WSDOT– Asst. Traffic Engineer	Larry Frostad
WSDOT – Study Team Manager	ReBecca Fouts
WSDOT – Study Team	Kathy Engle
WSDOT – Study Team	Amber Haveman
WSDOT – Planning Office	Greg Figg
WSDOT – Planning Office	Dan McKernan
WSDOT – Materials	Kevin Littleton





US 395 Deer Park Intersection Improvement Study

ReBecca Fouts
Project Manager

Larry Frostad, P.E.
Eastern Region Assistant Traffic Engineer

Stakeholders Meeting #2
WSDOT Campus
May 10, 2016

Presentation Outline

- **Introductions, safety and logistics**
- **Background Information, Purpose of Study & Safety Approach**
- **Existing Conditions**
- **What have we heard previous to this study?**
- **What did we hear from the Stakeholders Meeting, Community Meeting & Deer Park Chamber Meeting?**
- **Discussion on Intersection Alternative Options**
  - **Grade Separation, Traffic Signals, RIRO with R-Turns, Roundabouts, access revisions**
- **Recommended Alternative Conceptual Design**
- **Moving Forward**

Safety, Logistics and Introductions

- **Safety**
  - **#911 & #3333**
  - **Emergency Exit – two exits & Pole B**
- **Representing**
  - **WSDOT**
  - **Spokane County**
  - **City of Deer Park**
  - **Community Organizer**
  - **Target Zero**
  - **WSP / Sheriff's Office**
  - **Fire District 4**
  - **Deer Park Schools**
  - **Deer Park Chamber**

Background Information

- In March 2003, WSDOT published a Route Development Plan for US 395 from MP 172 to MP 183.69. While it presented a long-term vision, it was not funded.
- Intersection-related collisions continue to occur in the Deer Park area.
- Recognizing that current asset needs are greater than the ability to fund them, WSDOT has increased efforts in the area of Least Cost Planning – the planning and development of solutions that meet objectives at the lowest possible cost.
- In the Deer Park area, this means that WSDOT is looking at smaller-scale sustainable improvements. This biennium, WSDOT Eastern Region received funding to develop proposals to address safety in the segment of US 395 from Burroughs/Dalton Road to Dahl Road.

What is the purpose of the study?

Identify intersection improvements to

- ✓ **Improve the safety performance of the corridor**
- ✓ **Reduce crashes**
- ✓ **Be supported by the public**

WSDOT will then submit the proposal(s) for design and construction funding.

Basis of study:

- ✓ **Crash Analysis**
- ✓ **Driver Behavior**
- ✓ **Contextual Needs**

Our Safety Approach

- Per Highway Safety Manual these intersections are performing at or above average:
  - Short/Main (well above, no potential safety)
  - Cleveland/H (small potential for safety improvement)
  - Dahl (no potential safety improvement)
- Per Highway Safety Manual these intersections are performing below average & have potential for safety improvement:
  - Monroe/Crawford
  - Burroughs/Dalton
- We use Crash Modification Factors in estimating the potential changes in crash frequency/severity due to installing a particular treatment.

What have we heard previous to this study?

Previous constituent response comments/requests:

- 19+ letters, emails and/or phone calls with the public
- Majority requested speed reduction (to better access US 395)
- SBLT at Short Rd
- Requests for traffic signals, right turn lanes, crosswalks
- More vegetation management
- Multiple vehicles at stop line as drivers wait to make various turning movements
- Intersection offset/skew
- Impatience when choosing a gap

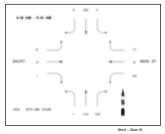
Existing Conditions

Geometrics

- Speed – 60 mph mainline, 25-45 mph on minor road
- Channelization – mainline typically has left turn lanes (not Short Rd) & right turn tapers
- Shoulders 8', 4' in channelization areas
- 11'-12' lanes
- Adequate sight distance (triangle) per Design Manual

Volumes

- 12,000 AADT south of Short Rd
- 10,000 AADT north of Short Rd
- AADT <1,000 west leg & <5,000 east leg
- Avg entering leg volumes < 200 vph
- 1% growth since year 2000



Existing Conditions

Speed Limit

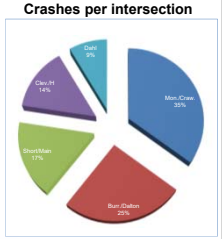
- Aligns with 85 percentile speeds
- 2014 study 62.3, 63.1 & 63.3 62.3 mph
- Speed not a factor in crashes except in snow/ice conditions

Crashes 2010-2014

- 65 "At Intersection & Related"
- 2 Fatal (Cleveland & Dahl)
- 18 Evident/Serious Injury
- 64% Entering at Angle

2015 ~ unofficial ~ 13 crashes with 8 at Monroe / Crawford.

Crashes per intersection



Study looking at fatal/serious & all injury types.

What did we hear from the Stakeholders Meeting?

February 16th Stakeholders Meeting Highlights:

- Heard from WSP, law enforcement, Maintenance, DP School District, City of DP, DP Chamber of Commerce, Spokane County
- Education key – e.g. left turning vehicle must yield to through vehicle (RCW)
- Keep access open for the businesses, school bus routes & emergency response
- SBLT at Short Rd ~ people still make illegal movement
- Driver behavior is effecting crash rates
- Understanding that speed limit is set according to driver expectancy
- Current sight obstructions – vegetation, guardrail & signs
- Vehicles park side by side at stop line – causing sight obstruction
- Intersection offset/skew

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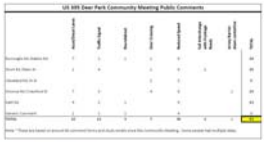
What did we hear from the March 1st Community Meeting?

Community Meeting Highlights:

- Approximately 200 people in attendance
- 45 minutes of one-on-one with public & 1 ½ hours of presentation / Q&A
- Captain Otis & Sherriff Dutton educated public on speed limits and how they are set
- Reminder to consider 10,000 ADT commuters who live north of Deer Park
- Burroughs/Dalton & Monroe/Crawford are the top intersections of concern

Main themes heard from Public:

- Lower the speed limit
- Signals / Roundabout
- Interchange
- Acceleration/deceleration lanes



11

What did we hear from Deer Park Chamber Meeting?

March 15th Chamber Meeting Highlights:

- 2016 Eastern Region Regionwide Intersection Project
  - Based on community comments added candlesticks to limit side street vehicles two abreast (improve sight distance) & stop line location were possible.
- Heard observations, needs & concerns of public from March 1st Meeting.
- Looking at least cost planning alternatives @ up to $5 million total project funds
- Ensured business owners Study Team is aware / becoming aware of conditions and driver behavior
- City interested in maintaining access

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Intersection Alternative Option

Separated Grade Crossing

- Other intersections are not conducive for a grade separation crossing
  - Wetland mitigation

- Includes Right-in-Right-Out, centerline median barrier & Cleveland Rd cul-de-sac
- Steep grades (6-8%) & truck turning movement challenges
- $7 Million Dollars = not a low-cost enhancement option & no other improvements

- Allows crossing US 395
- No turning movements
- Other access points closed
- $3 Million Dollars

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Intersection Alternative Option

Traffic Signals

Per Design Manual:

If signal warrants are met, evaluate multi-way stop, roundabout, and signal. If warrants are not met, evaluate yield, two-way stop, multi-way stop, and roundabout. Please note, the evaluation of a roundabout option is always required by resolution of the Multimodal Safety Executive Committee (MSEC). This evaluation requirement is based on the measured performance benefits of roundabouts.

Traffic Signal Warrants ~

Signal Warrants will be completed more thoroughly upon another field delay study.

What is Evident:

Burroughs/Dalton meets at least W1b.
Short/Main meets W1 & W2.
Cleveland/H likely will not meet a warrant.
Monroe/Crawford meets at least W1b.
Dahl does not meet a warrant.

"The single-lane roundabout is the preferred alternative. If selected, no comparison with other alternatives is required."

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Intersection Alternative Option

Right-In-Right-Out and R-Turns @ Burroughs/Dalton

- South end in the middle of a grade, between two guardrails
- North end will affect wetlands
- Negative effects to access ~ school buses & emergency response
- $700,000 CN

Right-In-Right-Out and R-Turns @ Monroe/Crawford

- South end affects driveways
- North end in the middle of a grade & effects driveway
- Negative effects to access ~ school buses & emergency response
- $700,000 CN

Not addressing other 3 intersections
Approx. Cost $1,660,000 (PE,CN,RW)

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Intersection Alternative Option (3 Roundabouts)

Roundabout @ Burroughs/Dalton
Roundabout @ Short/Main
Do nothing @ Cleveland/H
Roundabout @ Monroe/Crawford
Do nothing at Dahl

- 3 Roundabouts
- Provides existing turning movements plus SBLT movement to Main St
- Roundabouts will reduce highway speed in the vicinity of the intersections (top public concern)
- $ 4.6 Million (PE, CN, RW)

16

Intersection Alternative Option ~ 3 Roundabouts cont.

Roundabout @ Burroughs/Dalton

Estimate ~ $1,700,000 (CN & RW)

Roundabout @ Short/Main

Estimate ~ $1,300,000 (CN & RW)

Roundabout @ Monroe/Crawford

Estimate ~ $1,200,000 (CN, within RW)

Do nothing @ Cleveland/H
(Skewed intersection)

Do nothing at Dahl Rd

17

Intersection Alternative Option (2 Roundabouts + RIRO)

Right-In-Right-Out @ Burroughs/Dalton
Roundabout @ Short/Main with Paving Short
Do nothing @ Cleveland/H
Roundabout @ Monroe/Crawford
Do nothing at Dahl

- Combination of Right-in-Right-Out and Roundabouts
- Rerouting turning movements from Burroughs/Dalton to Short/Main
- Roundabouts will reduce highway speed in the vicinity of the intersections (top public concern)
- Allows SBLT movement to Main St.
- $ 3.5 Million Dollars

18

Intersection Alternative Option ~ 2 Roundabouts + RIRO cont.

Right-In-Right-Out @ Burroughs/Dalton

Approx. cost ~ $300,000 (CN, within RW)

Roundabout @ Short/Main

Approx. cost ~ $1,600,000 (CN & RW)

Paving Short Rd

- Existing base course
- 6" CSBC & 4" HMA
- Address slopes and 15 approaches
- Approx. cost ~ $400,000

Roundabout @ Monroe/Crawford

Approx. cost ~ $1,200,000 (CN, within RW)

Do nothing @ Cleveland/H
Do nothing at Dahl Rd

19

Intersection Alternative Option (2 Roundabouts + Closure)

Closure @ Burroughs/Dalton
Roundabout @ Short/Main with Paving Short
Do nothing @ Cleveland/H
Roundabout @ Monroe/Crawford
Do nothing at Dahl

- Combination of Closure and Roundabouts
- Rerouting turning movements from Burroughs/Dalton to Short/Main
- Reduces traffic on Dalton Rd that is a seasonal route & passes by a school
- Roundabouts will reduce highway speed in the vicinity of the intersections (top public concern)
- Allows SBLT movement to Main St.
- $ 3.5 Million Dollars

20

Intersection Alternative Option ~ 2 Roundabouts + Closure cont.

Closure @ Burroughs/Dalton

Approx. cost ~ $300,000 (CN, within RW)

Roundabout @ Short/Main

Approx. cost ~ $1,600,000 (CN & RW)

Paving Short Rd

- Existing base course
- 6" CSBC & 4" HMA
- Address slopes and 15 approaches
- Approx. cost ~ $400,000

Roundabout @ Monroe/Crawford

Approx. cost ~ $1,200,000 (CN, within RW)

Do nothing @ Cleveland/H
Do nothing at Dahl Rd

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Recommended Alternative Conceptual Design

Burroughs-Dalton

22

Recommended Alternative Conceptual Design Short - Main

Looking Northeast

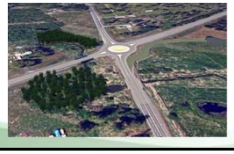
Looking Northwest

23

Recommended Alternative Conceptual Design Monroe - Crawford

Looking East

Looking West



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Recommended Alternative Conceptual Design - Conversations

Business Owners
- Protection Plus & Twin Willows Equestrian Center

Deer Park Council
- Protection Plus?
- Mayor ~ roundabouts are a preferred alternative
- Discussion on closing Dalton Rd
- Seasonal operations with recommendation

Spokane County Engineers
- Spokane County Maintenance Pit (access is on Dalton Rd just east of US 395)
- Volumes now utilizing Burroughs Road to access US 395 will use other roads.

RBtoRBAM.avi MainShortAM.avi

MonroeCrawfordAM.avi

What does the School District, Chamber Of Commerce, Fire, WSP and others have to say about our proposal?

With a roundabout, drivers may find Short/Main more accessible than Cleveland/H and change their habits. Thus, this alternative will address safety performance at three intersections, and potentially four.

RBtoRB AM 20yr 2%.avi

25

Moving Forward

1. **Continue analyzing existing conditions and potential staged alternatives**
2. **Update Website with draft report**
3. **Present intersection improvement concepts at June 1st Open House**
4. **Present recommended intersection improvement concept to WSDOT Safety Panel on June 8th for design and construction funding (to get into '17-'19 construction budget)**

26

Credits: US 395 Deer Park Intersection Improvement Study

ReBecca Fouts
Traffic Project Manager
509-324-6559
foutsr@wsdot.wa.gov

Larry Frostad
Assistant Traffic Engineer
509-324-6194
frostal@wsdot.wa.gov

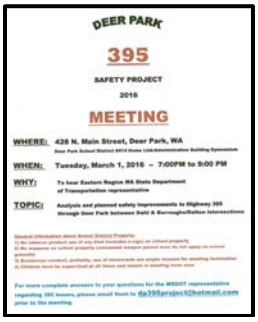
Glenn Wagemann
Traffic & Maintenance Engineer
509-324-6550
wagemg@wsdot.wa.gov

Study Team
Amber Haveman – ER Traffic
Chad Roberts – ER Traffic
Kathy Engle - ER Planning
Jerry Compton – ER Planning

27

Public Involvement
Invitations and Media Releases

March 1st Community Meeting Invitation by Dianne Allard:



DEER PARK

395

SAFETY PROJECT

2016

MEETING

WHERE: 428 N. Main Street, Deer Park, WA

Deer Park School District 2014 Home Link/Administration Building Gymnasium

WHEN: Tuesday, March 1, 2016 – 7:00PM to 9:00 PM

WHY: To hear Eastern Region WA State Department of Transportation representative

TOPIC: Analysis and planned safety improvements to Highway 395 through Deer Park between Dahl & Burroughs/Dalton Intersections

General Information about School District Property:

1) No tobacco product use of any kind (including e-cigs) on school property

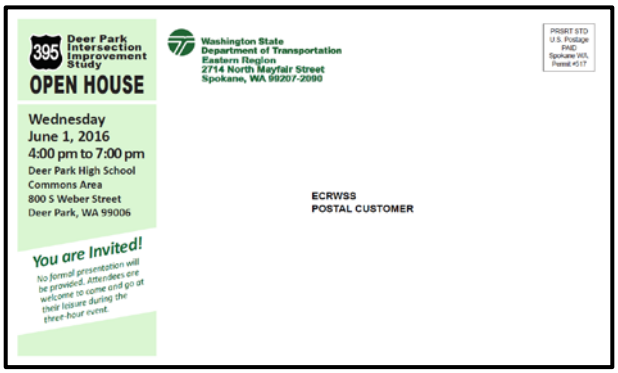
2) No weapons on school property (concealed weapon permit does do not apply on school grounds)

3) Business conduct, profanity, use of intoxicants are single reasons for meeting termination

4) Children must be supervised at all times and remain in meeting room area

For more complete answers to your questions for the WSDOT representative regarding 395 issues, please email them to dp395project@hotmail.com prior to the meeting.

June 1st Open House Invitation:



395 Deer Park Intersection Improvement Study

OPEN HOUSE

Wednesday
June 1, 2016
4:00 pm to 7:00 pm
Deer Park High School
Commons Area
800 S Weber Street
Deer Park, WA 99006

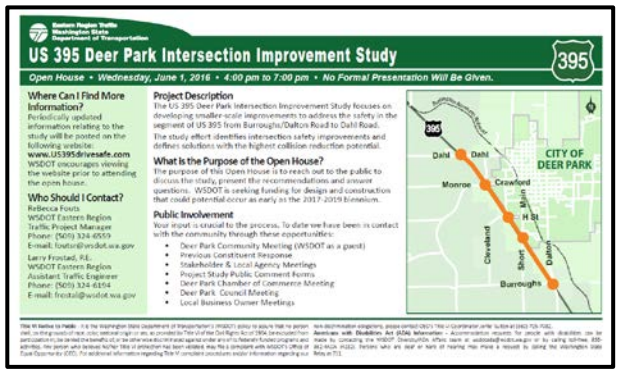
You are Invited!

No formal presentation will be provided. Attendees are welcome to come and go at their leisure during the three-hour event.

Washington State Department of Transportation
Eastern Region
2714 North Mayfair Street
Spokane, WA 99207-2090

PRSRT STD
U.S. Postage
PAID
Spokane WA
Permit #517

ECRWSS
POSTAL CUSTOMER



Eastern Region Traffic
Washington State Department of Transportation

US 395 Deer Park Intersection Improvement Study

Open House • Wednesday, June 1, 2016 • 4:00 pm to 7:00 pm • No Formal Presentation Will Be Given.

Where Can I Find More Information?
Periodically updated information relating to the study will be posted on the following website:
www.US395drivesafe.com
WSDOT encourages viewing the website prior to attending the open house.

Who Should I Contact?
Rebecca Fouts
WSDOT Eastern Region
Traffic Project Manager
Phone: (509) 324-6559
E-mail: foutsr@wsdot.wa.gov
Larry Frostad, P.E.
WSDOT Eastern Region
Assistant Traffic Engineer
Phone: (509) 324-6154
E-mail: frostal@wsdot.wa.gov

Project Description
The US 395 Deer Park Intersection Improvement Study focuses on developing smaller-scale improvements to address the safety in the segment of US 395 from Burroughs/Dalton Road to Dahl Road.
The study effort identifies intersection safety improvements and defines solutions with the highest collision reduction potential.

What is the Purpose of the Open House?
The purpose of this Open House is to reach out to the public to discuss the study, present the recommendations and answer questions. WSDOT is seeking funding for design and construction that could potential occur as early as the 2017-2019 Biennium.

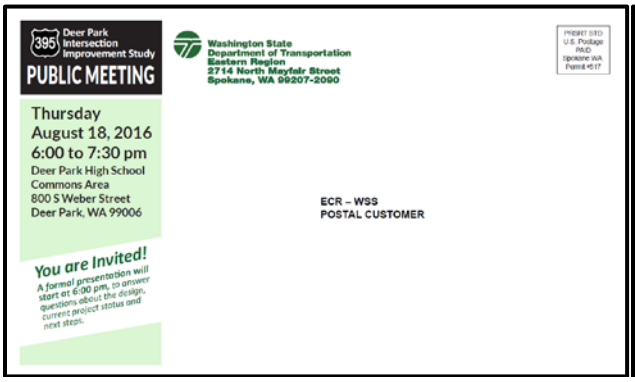
Public Involvement
Your input is crucial to the process. To date we have been in contact with the community through these opportunities:
- Deer Park Community Meeting (WSDOT as a guest)
- Previous Constituent Response
- Stakeholder & Local Agency Meetings
- Project Study Public Comment Forms
- Deer Park Chamber of Commerce Meeting
- Deer Park Council Meeting
- Local Business Owner Meetings

395
Dahl
Dahl
Monroe
Crawford
Main
H St
Cleveland
Short
Dalton
Burroughs
CITY OF DEER PARK

Title VI Notice to Public: It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin or sex, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its federally funded programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity. For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at (360) 705-7082.

Americans with Disabilities Act (ADA) Information – Accommodation requests for people with disabilities can be made by contacting the WSDOT Diversity/ADA Affairs team at wsdotada@wsdot.wa.gov or by calling toll-free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

August 18th Public Meeting Invitation:



395 Deer Park Intersection Improvement Study

PUBLIC MEETING

Thursday
August 18, 2016
6:00 pm to 7:30 pm
Deer Park High School
Commons Area
800 S Weber Street
Deer Park, WA 99006

You are Invited!

A formal presentation will start at 6:00 pm, to answer questions about the design, current project status and next steps.

Washington State Department of Transportation
Eastern Region
2714 North Mayfair Street
Spokane, WA 99207-2090

PRSRT STD
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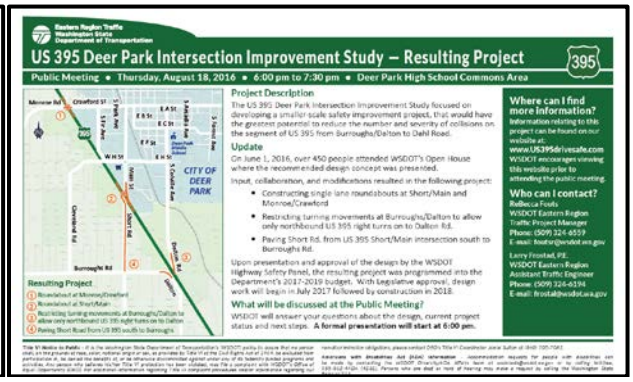
Spokane WA
Permit #517

ECR – WSS
POSTAL CUSTOMER



Eastern Region Traffic
Washington State Department of Transportation

US 395 Deer Park Intersection Improvement Study – Resulting Project

Public Meeting • Thursday, August 18, 2016 • 6:00 pm to 7:30 pm • Deer Park High School Commons Area

Project Description
The US 395 Deer Park Intersection Improvement Study focused on developing a smaller-scale safety improvement project, that would have the greatest potential to reduce the number and severity of collisions on the segment of US 395 from Burroughs/Dalton to Dahl Road.

Update
On June 1, 2016, over 450 people attended WSDOT's Open House where the recommended design concept was presented.
Input, collaboration, and modifications resulted in the following project:
- Constructing single lane roundabouts at Short/Main and Monroe/Crawford
- Restricting turning movements at Burroughs/Dalton to allow only northbound US 395 right turns on to Dalton Rd.
- Paving Short Rd. from US 395 Short/Main intersection south to Burroughs Rd.

Upon presentation and approval of the design by the WSDOT Highway Safety Panel, the resulting project was programmed into the Department's 2017-2019 budget. With Legislative approval, design work will begin in July 2017 followed by construction in 2018.

What will be discussed at the Public Meeting?
WSDOT will answer your questions about the design, current project status and next steps. **A formal presentation will start at 6:00 pm.**

Where can I find more information?
Information relating to this project can be found on our website at:
www.US395drivesafe.com
WSDOT encourages viewing this website prior to attending the public meeting.

Who can I contact?
Rebecca Fouts
WSDOT Eastern Region
Traffic Project Manager
Phone: (509) 324-6559
E-mail: foutsr@wsdot.wa.gov
Larry Frostad, P.E.
WSDOT Eastern Region
Assistant Traffic Engineer
Phone: (509) 324-6154
E-mail: frostal@wsdot.wa.gov

Monroe Rd
Crawford St
Main St
Short Rd
Cleveland Rd
Burroughs Rd
Dalton Rd
CITY OF DEER PARK
Resulting Project
1 Roundabout at Monroe/Crawford
2 Roundabout at Short/Main
3 Restricting turning movements at Burroughs/Dalton to allow only northbound US 395 right turns on to Dalton
4 Paving Short Road from US 395 south to Burroughs

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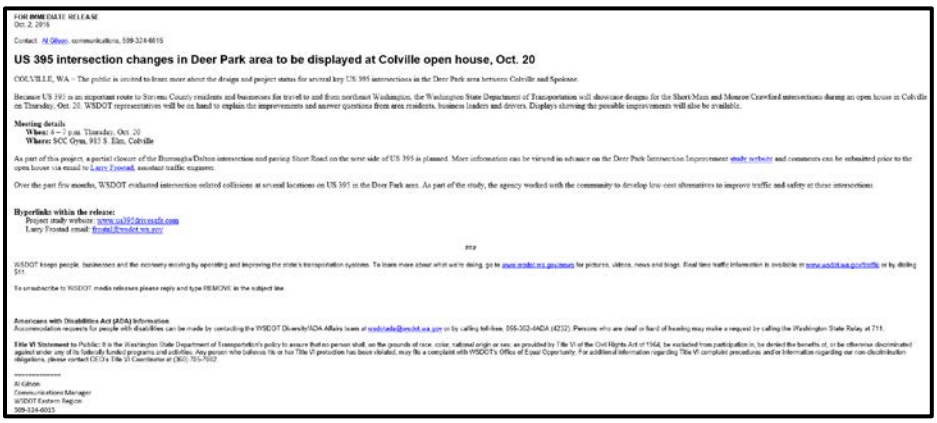
October 20th Colville Open House Media Release:



FOR IMMEDIATE RELEASE
Oct. 2, 2016

Contact: Al Gibson, communications, 509-324-6015

US 395 intersection changes in Deer Park area to be displayed at Colville open house, Oct. 20

COLVILLE, WA – The public is invited to learn more about the design and project status for several key US 395 intersections in the Deer Park area between Colville and Spokane.

Because US 395 is an important route to Stevens County residents and businesses for travel to and from northeast Washington, the Washington State Department of Transportation will showcase designs for the Short/Main and Monroe/Crawford intersections during an open house in Colville on Thursday, Oct. 20. WSDOT representatives will be on hand to explain the improvements and answer questions from area residents, business leaders and drivers. Displays showing the possible improvements will also be available.

Meeting details
When: 4 – 7 p.m. Thursday, Oct. 20
Where: SCC Gym, 915 S. Elm, Colville

As part of this project, a partial closure of the Burroughs/Dalton intersection and paving Short Road on the west side of US 395 is planned. More information can be viewed in advance on the Deer Park Intersection Improvement study website and comments can be submitted prior to the open house via email to Larry Frostad, assistant traffic engineer.

Over the past few months, WSDOT evaluated intersection-related collisions at several locations on US 395 in the Deer Park area. As part of the study, the agency worked with the community to develop low-cost alternatives to improve traffic and safety at these intersections.

Hyperlinks within the release:
Project study website: www.us395drivesafe.com
Larry Frostad email: frostal@wsdot.wa.gov

###

WSDOT keeps people, businesses and the economy moving by operating and improving the state's transportation systems. To learn more about what we're doing, go to www.wsdot.wa.gov/news for pictures, videos, news and blogs. Real-time traffic information is available at www.wsdot.wa.gov/traffic or by dialing 511.

To unsubscribe to WSDOT media releases please reply and type REMOVE in the subject line

Americans with Disabilities Act (ADA) Information
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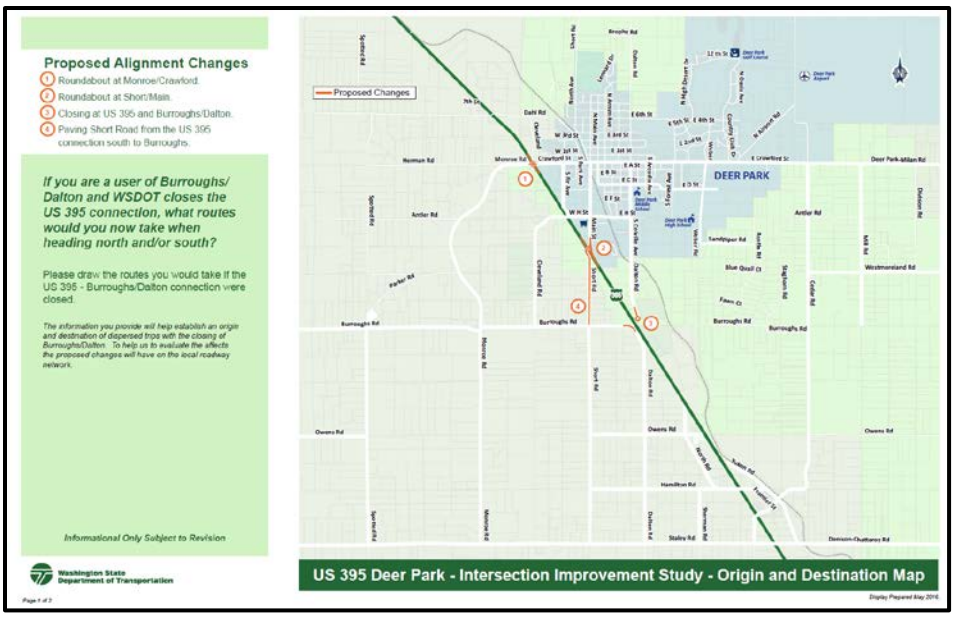
Al Gibson
Communications Manager
WSDOT Eastern Region
509-324-6015

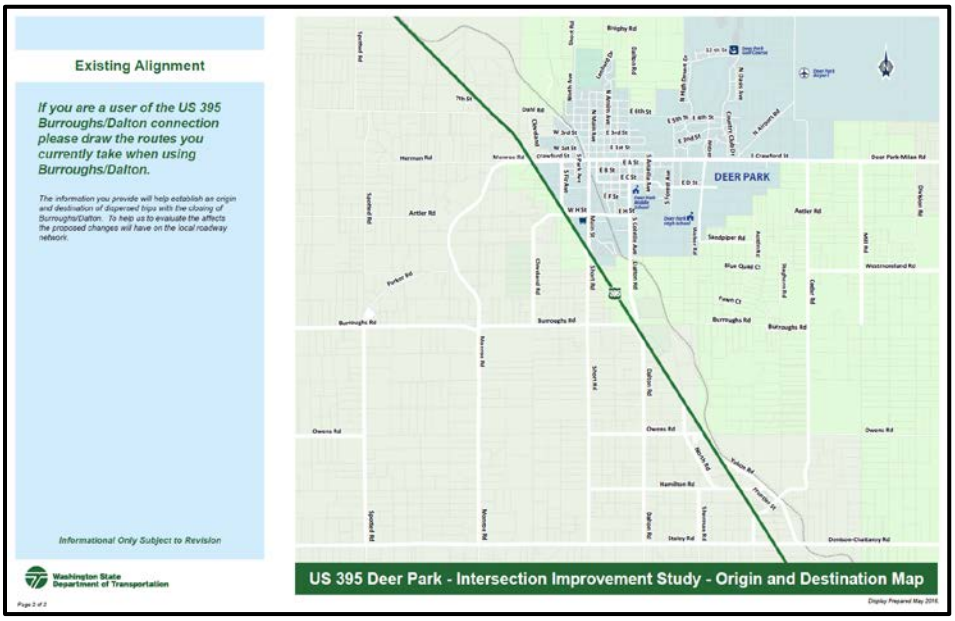
Public Involvement
Closing Burroughs Road – Origin Destination

At the June 2016 Open House, we asked users of the US 395 Burroughs Rd / Dalton Rd connection to provide their typical route and what route they will take if WSDOT closes the US 395 connection. Based on the 41 comments, over 70% will use the proposed US 395 roundabout at Short Rd / Main St and newly paved section to the west.

1)	Main St/Short	30
2)	Monroe/Crawford	3
3)	Staley Rd	3
4)	Cedar Rd	2
5)	Hamilton	2
6)	Owens	1

Below are images of the two part comment form provided at the open house.

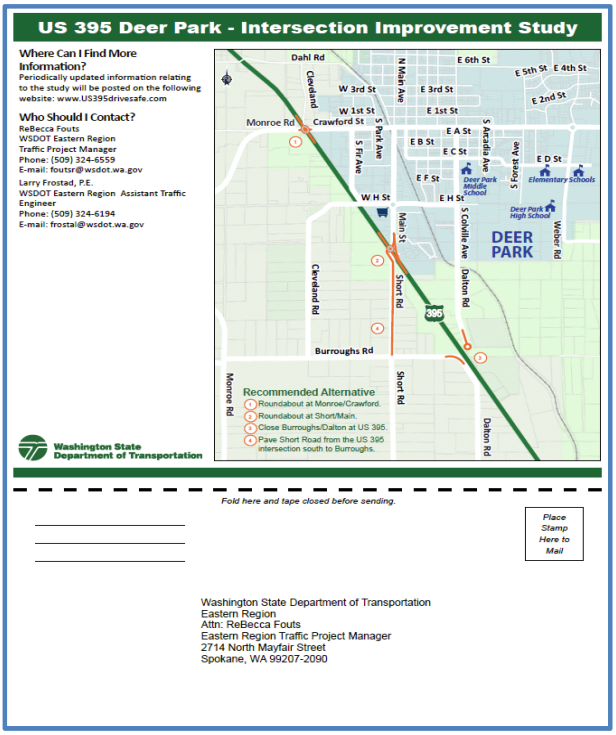




US 395 Deer Park June 1st Open House Comments

Do Something (Yes)	64
Note ~ 20 against B/D closure	
Against the recommendation	50
Do Nothing	3
Just lower the speed limit	4
Don't close Burroughs Rd, make roundabout, RIRO, or NBRT only	31
TOTAL	**152**

Note ~ Approximately 1/4 filled out a comment form without viewing the displays or asking questions of WSDOT representatives.



US 395 Deer Park - Intersection Improvement Study

Where Can I Find More Information?
Periodically updated information relating to the study will be posted on the following website: www.US395drivesafe.com

Who Should I Contact?
ReBecca Fouts
WSDOT Eastern Region
Traffic Project Manager
Phone: (509) 324-6559
E-mail: foutsr@wsdot.wa.gov

Larry Frostad, P.E.
WSDOT Eastern Region Assistant Traffic Engineer
Phone: (509) 324-6194
E-mail: frostal@wsdot.wa.gov

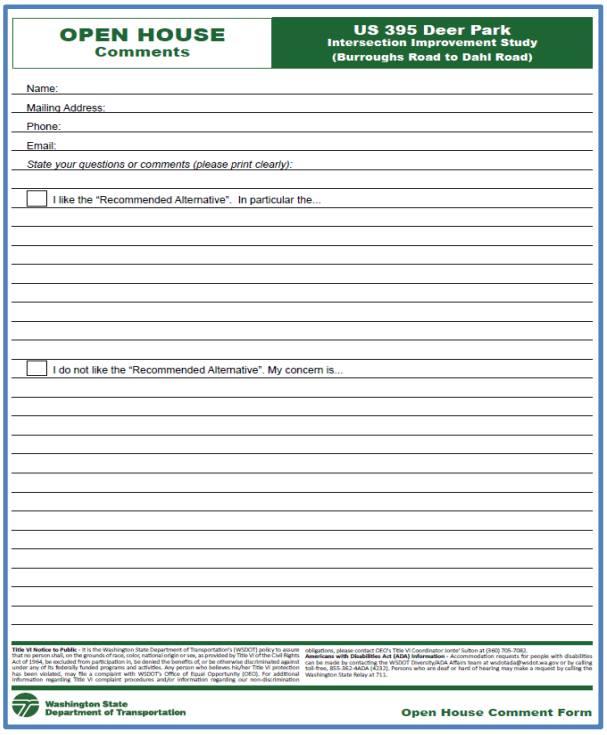
Washington State Department of Transportation

Recommended Alternative
1. Roundabout at Monroe/Crawford.
2. Roundabout at Short/Main.
3. Close Burroughs/Dalton at US 395.
4. Pave Short Road from the US 395 intersection south to Burroughs.

Fold here and tape closed before sending.

Place Stamp Here to Mail

Washington State Department of Transportation
Eastern Region
Attn: ReBecca Fouts
Eastern Region Traffic Project Manager
2714 North Mayfair Street
Spokane, WA 99207-2090



OPEN HOUSE Comments

US 395 Deer Park
Intersection Improvement Study
(Burroughs Road to Dahl Road)

Name:
Mailing Address:
Phone:
Email:
State your questions or comments (please print clearly):

☐ I like the "Recommended Alternative". In particular the...

☐ I do not like the "Recommended Alternative". My concern is...

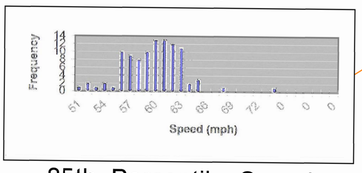
Washington State Department of Transportation

Open House Comment Form

This was one of our displays provided at our public involvement meetings and open houses.

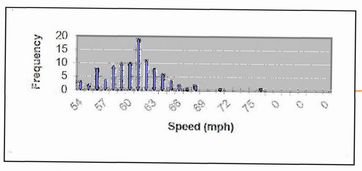
OCTOBER 2014 SPEED STUDIES

Measured Speeds



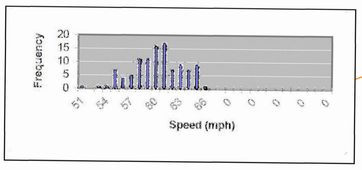
85th Percentile Speed
= 62.3 MPH

Measured Speeds



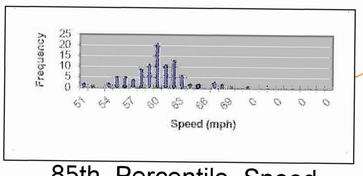
85th Percentile Speed
= 63.3 MPH

Measured Speeds



85th Percentile Speed
= 63.1 MPH

Measured Speeds



85th Percentile Speed
= 63.1 MPH

HOW ARE SPEED LIMITS SET?

The setting of speed limits on streets and highways is a technical science backed by many years of research and experience. We at the Washington State Department of Transportation are often approached by citizens who feel that a change in the posted speed limit is the answer to a safety problem on a specific highway. Safety is the highest concern in any project we undertake, however changing the posted speed limit is not always the answer.

When setting speed limits, traffic engineers base decisions on several fundamental concepts proven over the years to be true, including:

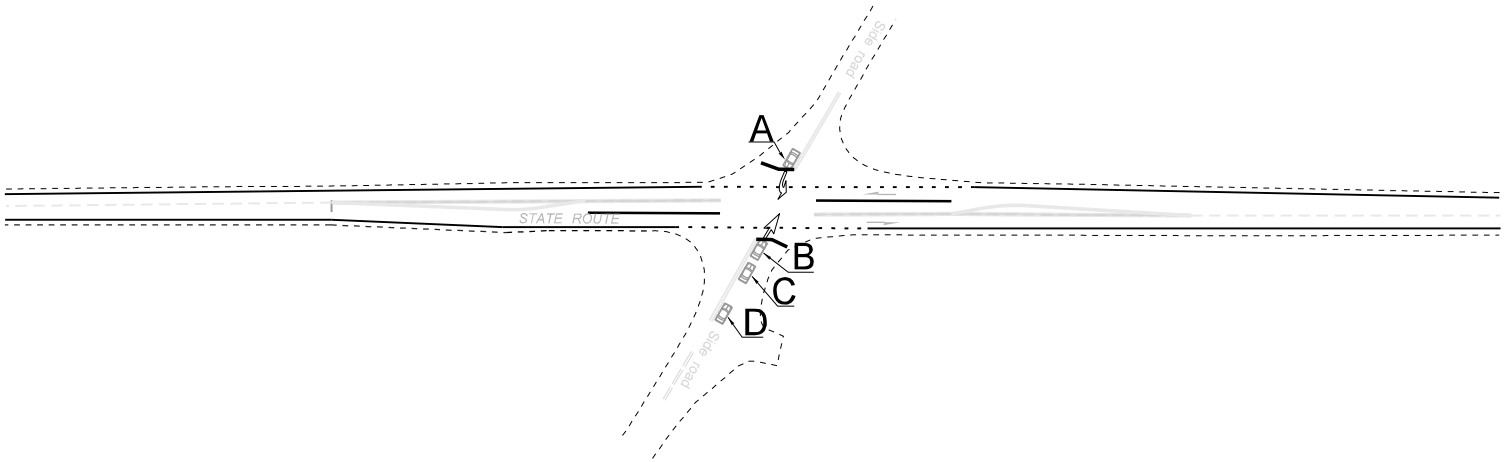
- The majority of motorists drive in a safe and reasonable manner.
- The Laws cannot be effectively enforced without the consent and voluntary compliance of the majority.
- Research has shown that effective speed limits are those that the majority of motorists naturally drive, and that raising or lowering posted speed limits does not substantially influence that speed.

Overall speed limits are determined through an analysis which considers principles of human behavior, the design of the highway, including lane and shoulder width, curves, hills, sight distance and surrounding area characteristics. As these are considered by the driver in selecting their speed, we conduct speed studies to determine the 85th percentile speed, or the speed of which 85 out of 100 drivers travel at or below.

Statistics show that roadways with speed limits set at the 85th percentile speed have fewer accidents than roads where the posted speed limit is above or below what the majority naturally travels.

This was one of our displays provided at our public involvement meetings and open houses.

WHO HAS THE RIGHT-OF-WAY?



How many times have you encountered this situation? Does it always turn out the same way?
In reality, while Drivers B, C, or D might wave Driver A on, legally, Driver A turning left must yield to Drivers B, C, and D traveling straight or turning right, regardless if Driver A arrived at the intersection first.

RCW 46.61.185 Vehicle turning left.

The driver of a vehicle intending to turn to the left within an intersection or into an alley, private road, or driveway shall yield to the right-of-way to any vehicle approaching from the opposite direction which is within the intersection or so close thereto as to constitute an immediate hazard.

US 395 - Deer Park Intersection Improvement Study

Because US 395 is an important route to Stevens County residents and businesses for travel to and from northeast Washington, the Washington State Department of Transportation will showcase designs for the Short/Main and Monroe/Crawford intersections during an open house in Colville on Thursday, Oct. 20. WSDOT representatives will be on hand to explain the improvements and answer questions from area residents, business leaders and drivers. Displays showing the possible improvements will also be available.

Previous public meetings were held in august and October in Deer Park and Colville
Here is the presentation from those meetings (pdf 802 kb)

Graphic illustration of the resulting project (pdf 1.3 mb)

We've also produced a video animation of the morning and afternoon commute periods at the two roundabouts and placed it on YouTube. These animations were developed using the actual traffic counts during those periods.

Below are design visualizations of the new intersections:

Burroughs/Dalton intersection

Main Street/Short Road

Monroe Road/Crawford Street

Study Description:
The previous study of this area (2003 Route Development Plan) resulted in a bypass proposal that has little prospect of funding and is not under consideration at this time. This study focused on developing lower-cost project alternatives (under $5,000,000) to improve operations and safety at the intersections on US 395 in the Deer Park vicinity. The Eastern Region Program Management, Traffic, Planning, and Design offices developed a team to complete the study ensuring public involvement.

Update – August 4, 2016
There have been at least 10 intersection-related crashes (eight entering-at-angle) at the intersections since the study effort began in November 2015: four at Burroughs/Dalton, two at Short/Main, and two each at Cleveland/H Street and Monroe/Crawford.

We presented the recommended concept to the WSDOT Highway Safety Panel. As a result, the resulting project was programmed into the WSDOT 2017-2019 budget. Upon Legislative approval, design work will begin in 2017 with construction in 2018.

Identifying the Need:
The opportunity for improvement was identified through WSDOT's screening process, which uses the Highway Safety Manual's Safety Analyst tool in the identification of sites on the state system with the potential for reducing crash severity or frequency. Here is a link to our crash analysis diagrams (pdf 2.6 mb).

Public Involvement:
Public input is crucial to the process. To date we have been in contact with the community through these opportunities:

- US 395 Community Meeting (WSDOT as a guest)
- Previous Constituent Response
- Stakeholder & Local Agency Meetings
- Project Study Public Comment Forms
- Deer Park Chamber of Commerce Meetings
- Deer Park City Council Meeting
- Local Business Owners
- Stevens & Spokane County Commissioners
- Deer Park Public Open House
- Northeast Washington Regional Transportation Planning Organization

WSDOT Study team would like to thank the community for allowing us to be a guest at the US 395 Community Meeting held March 1st, chaired by Dianne Allard. At this meeting we presented information about changes that will be implemented in a region-wide safety project this summer (separate to our study), and listened to attendee's thoughts and comments on what should be covered in the intersection study. Following the Community Meeting, the team incorporated comments into alternative concepts to address the safety of these five intersections and were presented at the Open House.

Study and Alternatives:
The study team evaluated several methods to deal with intersection movements. Here is a link to the 2015 Intersection Traffic Volumes (pdf 1 mb). These included turning movement restrictions, constructing u-turn locations (to accommodate restricted movements), traffic signals, roundabouts, splitting four-leg intersections into two three leg intersections, and grade separations. The study team evaluated crash reduction potential as well as changes in traffic patterns, effects on the environment, costs, freight movement, and need for right-of-way purchase. Here is a pdf of the "Alternatives Considered" (pdf 3.5 mb).

effects on the environment, costs, freight movement, and need for right-of-way purchase. Here is a pdf of the "Alternatives Considered" (pdf 3.5 mb) presented at the Open House.

The original recommendations were to close all access at Burroughs/Dalton and construct single-lane roundabouts at Short/Main and Monroe/Crawford. No changes were proposed at Cleveland/H or Dahl. Here is a pdf of the "Recommended Alternative" presented at the Open House. (pdf 3.8 mb)

We selected Short/Main for a roundabout rather than Burroughs/Dalton in considering the capacity and availability of the local system to handle the change, and the opportunity to address an intersection with higher entering volume. From previous experience, we also anticipate that drivers will find Short/Main more accessible than Cleveland/H and change their habits. Thus, this alternative will address performance at three intersections, and potentially four. On the other hand, we understand that closing access is controversial. It requires drivers to change their driving patterns and it requires analysis to determine effects on the routes drivers may choose. If you are affected by the proposed closure we would like to hear from you as it will improve the analysis of the change.

Your feedback on this proposal is important
While the Open House has already occurred, your feedback is always welcome. Please contact the study team:

ReBecca Fouts
Eastern Region WSDOT
Traffic Project Manager
Phone (509) 324-6559
Email: foutsr@wsdot.wa.gov

Larry Frostad, P.E.
Eastern Region WSDOT
Assistant Traffic Engineer
Phone (509) 324-6194
Email: frostal@wsdot.wa.gov

Why Roundabouts?
Studies have shown that roundabouts are safer than traditional stop sign or signal-controlled intersections. Roundabouts reduced injury crashes by 75 percent at intersections where stop signs or signals were previously used for traffic control, according to a study by the Insurance Institute for Highway Safety (IIHS). Studies by the IIHS and Federal Highway Administration have shown that roundabouts typically achieve a 37% reduction in overall collisions, a 75 percent reduction in injury collisions, and a 90 percent reduction in fatality collisions. The state of Washington has over 150 roundabouts. State, County & City agencies continue to pursue this intersection control for these reasons:

- Increased safety
- Lower maintenance costs
- "Green" – reduced emissions
- Longer Service Life
- Improved traffic flow
- Community livability

For more information, please see http://www.wsdot.wa.gov/Safety/roundabouts/benefits.htm.

Why can't we just lower the speed limit?
Existing traffic data analysis does not support lowering the speed limits.
But it is more than that. If the speed limit were lowered to 45mph (the most common speed people suggest), this would be for at least 2.5 miles. This adds 50 seconds to travel. However, this does not address the intersection geometry or improve intersection operations: the time the driver on the side street needs to negotiate the gap in traffic is the same regardless of the speed. When considering the additional time needed to slow down to negotiate the roundabouts, the two roundabouts will, on average, add around the same 50 seconds of travel on US 395, but create more opportunities for drivers on side streets to enter because drivers need less of a gap.

Lowering the speed does not address crashes as well as a roundabout. Further, if people on the side street are expecting traffic to be approaching at the lower speed limit and they enter traffic only to find out differently, that can lead to an undesirable outcome.
For further information on speed limits, here's an information page (pdf 965 kb).

What about a traffic signal?
Existing data analysis and state policy do not support installation of traffic signals at these locations.

The guidance in Section 4B.04 of the Manual on Uniform Traffic Control Devices is to consider alternatives to traffic signals, even if one or more of the signal warrants has been satisfied.

To summarize why traffic signals are not supported:

1. When a signal is installed other types of crashes, notably rear-end collisions, usually increase.
2. Signals almost always create more "overall intersection delay". As a result, many drivers switch to less desirable alternate routes to avoid the added delay. Minor movements may experience excessive delay while the signal is serving the mainline heavy flow. During off-peak hours, mainline traffic often has to stop to serve one or more minor movement entering vehicles
3. A single-lane roundabout lessens the number of intersection conflict points and provides statistically better crash reduction.

What about acceleration / deceleration lanes?
Incorporating acceleration / deceleration lanes for turning movements on major streets at intersections can increase intersection capacity and efficiency.

These designated areas allow for turning traffic to move away from the main lanes or to join traffic with a reduction of interrupting the major street flow. With additional lanes comes additional width, potentially increasing problems for pedestrians and vehicles to cross the intersection. The cost to construct these lanes for the crash reduction provided is less favorable than the roundabout option.

What about an interchange or a grade separated crossing?
The primary reason is that our policy is that if an analysis determines that an at-grade intersection can provide adequate performance, then a grade separation or an interchange is not to be evaluated. The recommended project will provide improved intersection operations over the existing conditions.

Additionally, an interchange or a grade separated crossing is outside of current funding limits and availability. Assuming one was within funding limits, in order for it to be cost-effective for crash reduction multiple intersections would be closed or access restricted.

When will the study be completed?
The study will be completed in 2016.
When can we expect construction?
With approval of funding, construction could start as early as Spring 2018 and completed by as early as Fall 2018.

Website Links:
How to Drive a Roundabout
Practical Design

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