

APPENDIX A

SCREENING FORM AND CITY COMMENTS

City of Ottawa 2017 TIA Guidelines

Date

22-Nov-21

TIA Screening Form

Project

1009 Trim Road Development

Project Number

477526

Results of Screening	Yes/No
Development Satisfies the Trip Generation Trigger	Yes
Development Satisfies the Location Trigger	Yes
Development Satisfies the Safety Trigger	Yes

Module 1.1 - Description of Proposed Development	
Municipal Address	1009 Trim Road Ottawa Ontario
Description of location	Vacant parcel located on the northeast corner of Trim/Jeanne D'Arc/Inlet intersection
Land Use	existing - Development Reserve Zone (DR), proposed - medium to high density residential
Development Size	proposes four towers, approximately 24 to 32 storeys (960 units)
Number of Accesses and Locations	2: 75m E of Tweddle, addition N leg realigned Trim/Jeanne D'Arc
Development Phasing	Two phases (assumed)
Buildout Year	2024
Sketch Plan / Site Plan	See attached

Module 1.2 - Trip Generation Trigger	
Land Use Type	Townhomes or Apartments
Development Size	960 Units
Trip Generation Trigger Met?	Yes

Module 1.3 - Location Triggers	
Development Proposes a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit, or Spine Bicycle Networks (See Sheet 3)	No
Development is in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone. (See Sheet 3)	Yes Trim LRT Station
Location Trigger Met?	Yes

Module 1.4 - Safety Triggers	
Posted Speed Limit on any boundary road	<80 km/h
Horizontal / Vertical Curvature on a boundary street limits sight lines at a proposed driveway	No
A proposed driveway is within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions) or within auxiliary lanes of an intersection;	Yes Will access new intersection from realigned Trim Road and OR-174 intersection
A proposed driveway makes use of an existing median break that serves an existing site	No
There is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development	Yes
The development includes a drive-thru facility	No
Safety Trigger Met?	Yes

17 June 2020

City of Ottawa

Development Review Services

110 Laurier Avenue West

Ottawa, ON K1P 1J1

Attention: Mike Giampa, P.Eng.

Dear Mike:

Re: 1009 Trim Road
Step 2 – Comment and Response Form

The following response form has been prepared to address City of Ottawa comments received on June 3rd, 2020. City comments are noted in black with the corresponding responses from Parsons in **Green**.

Transportation Engineering Services

Regarding the highlighted bullet on the narrowing of the ROW question that came up at the pre-consultation, the ROW at this location seems to be too wide (50 m) and I don't see major issues with narrowing the ROW. I noticed that there is a sanitary sewer in the right of way as well (the section that they may want to buy). So, there may be concerns with selling that land from infrastructure perspective too. **Noted**

If the applicant would like to consider buying some of the land at this location from the City, please consult with real estate department regarding the process. This will most [likely] initiate another City process and be circulated to various City groups (transportation, infrastructure etc.) to ensure there are no issues of further interests with the narrowing of the ROW. **Noted**

My pre-consultation notes are as follows:

- Follow Traffic Impact Assessment Guidelines
 - Please proceed to forecasting. **Noted**
 - Applicant advised that their application will not be deemed complete until the submission of the draft step 1-4, including the functional draft RMA package (if applicable) and/or monitoring report (if applicable). **Noted**
 - Request base mapping as soon as possible if RMA is required. Contact Engineering Services (<https://ottawa.ca/en/city-hall/planning-and-development/engineering-services> [ottawa.ca]) **Noted**
- Site triangles at the following locations on the final plan will be required:
 - Local to Arterial Road: 5 metre x 5 metres **Noted**
- Good cycling and pedestrian connectivity in the area needs to be considered. **Noted**
- If the applicant wants to initiate the process of narrowing the ROW on Inlet Private/Jeanne D'arc east of Trim, please consult with real estate. A technical circulation to various City groups will be required to ensure there are no concerns with the narrowing. Note that there should be sufficient right of way to accommodate turning lanes (if required) and cycling/ped connections. Further review with regards to infrastructure may also be required. **Noted**
- Noise Impact Studies required for the following:
 - Road **Noted**

20 July 2020

City of Ottawa

Development Review Services

110 Laurier Avenue West

Ottawa, ON K1P 1J1

Attention: Neeti Paudel, P.Eng.

Dear Neeti:

Re: 1009 Trim Road
Step 3 – Comment and Response Form

The following response form has been prepared to address City of Ottawa comments received on July 17th, 2020. City comments are noted in black with the corresponding responses from Parsons in **Green**.

Transportation Engineering Services

Section 2.1.2 Existing Conditions:

The Existing Study Area Intersections section notes that the northbound approach of Jeanne d'Arc Boulevard / Inlet Private / Trim Road includes a bike lane. However, this section does not mention all other bike lanes at study area intersections. There is a bike lane on the eastbound approach to the Jeanne d'Arc Boulevard / Inlet Private / Trim Road intersection, and bike lanes on the northbound and southbound approaches of the Trim Road / Highway 174 intersection. **Noted, description expanded on “Pedestrian/Cycling Network” and “Existing Study Area Intersections” sub-headers.**

Sidewalks and bike lanes are not area traffic management measures. **Noted**

At the top of page 5, clarify what is meant by the phrase “Trim Road is part of a ‘cycle track’”. **Noted, text adjusted.**

Specify the exact locations of the Route #38 bus stops “on both sides of Trim Road”. **“Transit Network” updated**

Section 3.1.1 Trip Generation and Mode Shares and Section 3.1.2 Mode Shares:

Separate the pedestrian and cycling mode trips in Tables 5, 7 and 8. **Noted**

Section 3.1.4 Trip Assignment:

Ensure that pedestrian trips are captured within intersection analysis, as applicable. While it is acknowledged that pedestrians and cyclists will make up a negligible portion of the commuting trips, these transit trips will begin as pedestrians or cyclists heading to Trim Station. **Noted, will be included in analysis.**

Section 3.3 Demand Rationalization:

Include the background and total traffic at all horizon years as part of the demand rationalization module. **Noted**

16 November 2020

City of Ottawa
Development Review Services
110 Laurier Avenue West
Ottawa, ON K1P 1J1

Attention: Neeti Paudel, P.Eng.

Dear Neeti:

**Re: 1009 Trim Road
Step 4 – Response to Comments Letter**

The following response letter has been prepared to address City of Ottawa comments received on November 5th, 2020. City comments are noted in black with the corresponding responses from Parsons in Green. We have prepared a Step 5 submission that incorporates revisions identified in our responses below.

Transportation Engineering Services

Section 3.1.4 - Trip Assignment

Correct the trip assignment. While it is acknowledged that pedestrians and cyclists will make up a negligible portion of the commuting trips, the transit trips will mostly begin as pedestrians or cyclists heading to Trim Station.

Agreed, although future pedestrians and cyclists heading to the LRT station were not explicitly shown in a future traffic volume figure within the report, they were captured within Synchro modelling and were considered in the MMLOS analysis.

Section 4.3.1 - Existing Conditions

Correct PLOS achievement on the south side. The operating speed should be taken as the posted speed limit + 10 km/hr in the absence of speed surveys.

Noted, MMLOS has been updated to reflect speed limit +10km/h.

Section 4.3.2 - Future Conditions

A multi-use pathway will replace the sidewalk on the south side of Inlet Private.

A multi-use pathway will be present on the east side of New Trim Road.

Noted.

The proponent should endeavor to maximize MMLOS achievement along the development's frontage including the inclusion of a boulevard-separated sidewalk.

Noted, specific details regarding the type and location of future pedestrian facilities will be confirmed during the SPA and detailed design.

Section 4.4 - Access Intersection Design

Resubmit the signal warrant with the pedestrians destined to Trim Station crossing the intersection of New Trim/Jeanne d'Arc.

As per OTM Book 12, Section 4.10, the pedestrian volume is only one part of the Justification 2 segment. In this case, adding pedestrian volumes had no effect in the signal warrant results. Note the signal warrant will be revisited during the SPA.

Section 4.5.3 - TDM Program

Include the TDM Measures Checklist. Despite some details remaining unknown at the time of submission, the TDM Measures prescribed at this stage can help shape the development at the Site Plan Application stage.

Noted, TDM checklist has been included.

Section 4.7.1 - Route Capacity

Include the subject development's transit demand as a percentage of the Confederation Line's Capacity.

Noted, this has been included in Section 4.7.1.

Section 4.8 - Review of Network Concept

Include a screen line analysis of the affected links as per the TIA Guidelines to justify that no changes to the transportation network are required.

Noted, we have included this analysis in Section 4.8. The analysis concludes there is sufficient screenline capacity in the adjacent transportation network to accommodate the proposed development.

Section 4.9.2 - Intersection Design

Cross-rides will be provided on the north and east legs of the existing Trim and Jeanne d'Arc intersection in the future.

Noted, specific details regarding the type and location of future cycling/pedestrian facilities will be confirmed during the SPA and detailed design.

Correct PLOS achievement and worksheets in Appendix I. The number of lanes crossed should be taken as the crossing distance divided by a 3.5m lane width.

Noted, the PLoS calculation method has been updated.

Correct the BLOS achievement of Future realigned Trim and OR-174. There will be no curb side or pocket bike lane on the southbound approach, the only cycling facility will be a MUP with cross-ride through the intersection.

Noted, the BLoS calculations method has been updated.

All background volume horizon years should be analyzed, not just the critical year of 2029.

Noted, the 2024 horizon year has been included.

Consider operating the circular access as one way to distribute vehicle volumes more evenly between the two accesses.

Noted, specific on-site circulation will be confirmed during the SPA.

The proposed T intersection of realigned Trim and Jeanne D'Arc is anticipated to operate as all way stop control and does not meet traffic signal warrants. However, the report indicates that the spill back queue of NB vehicles requires an auxiliary left turn lane at this new all way stop intersection. Review the need for alternative intersection control (i.e. roundabout, traffic signal) given this auxiliary lane requirement. Confirm that the intersection aligns with site boundaries for a potential future access at this intersection. Post build out monitoring of the spill back queue at this intersection may be required if all way stop control is implemented.

The analysis in Section 4.9.2 confirms that an AWSC intersection with a 60m northbound left turn-lane at New Trim/Jeanne D'Arc would be sufficient to prevent spillback to Hwy-174/New Trim at full buildout assuming the custom mode shares used (30% auto driver), which are already more conservative than the City's own TOD targets (15% auto driver).

The future intersection details regarding control, access integration and monitoring will be confirmed during the SPA.

Traffic Signal Operations

Eastbound & Westbound left turns at 174 & Trim should be modelled as protected as they currently are today. Synchro results will vary based on this required correction and the report should be updated accordingly.

Noted, the Synchro analysis has been updated.

Traffic Signal Design

No comments to this TIA for this circulation. Traffic Signal Design and Specification reserves the right to make future comments based on subsequent submissions.

Future considerations:

If there are any future proposed changes in the existing roadway geometry for the purpose of construction of a new TCS(s) or modifications to existing TCS(s) the City of Ottawa Traffic Signal Design and Specification Unit is required to complete a review for traffic signal plant re-design and provide the actual re-design to the proponent or involved consultant.

If the proposed traffic signals are warranted/approved for installation or modifications to existing TCS are approved, and RMA approved, please forward an approved geometry detail design drawings (dwg digital format in NAD 83 coordinates) including following: base mapping, existing and new underground utility and sewers, new and existing catch basins locations, AutoTurn-Radius Modeling for approved vehicles and approved pavement marking drawings in separate files , no Xref files attached in master file(s), for detail traffic plant design lay out.

Please send all digital (CADD) design files to Peter.Grajcar@ottawa.ca 613 580 2424x23035. If not sure as per above request and more detail info needed as per input files, (i.e. format, etc.) please ask for our Dispatch checklist document and it will be gladly provided.

The above comments have been noted.

Street Lighting

No comments with initial TIS for this circulation. Street Lighting reserves the right to make future comments based on subsequent submissions.

Future considerations are as follows:

If there are any proposed changes to the existing roadway geometry, the City of Ottawa Street Light Asset Management Group is required to provide a full street light design. Upon completion of proposed roadway geometry design changes, please submit digital Micro Station drawings with proposed roadway geometry changes to the Street Lighting Department, so that we may proceed with the detailed street light design and coordination with the Street Light maintenance provider and all necessary parties.

Be advised that the applicant will be 100% responsible for all costs associated with any Street Light design as a result of the roadway geometry change.

Alterations and/or repairs are required where the existing street light plant is directly, indirectly or adversely affected by the scope of work under this circulation, due to the proposed road reconstruction process. All street light plant alterations and/or repairs must be performed by the City of Ottawa's Street Light maintenance provider.

Be advised that the applicant will be 100% responsible for all costs associated with any relocations/modifications to the existing street light plant.

The above comments have been noted.

Transit Services

No comments on the TIA forecasting or strategy portions of this submission. Transit Services reserves the right to make future comments based on subsequent submissions.

Site Plan considerations:

- Inlet Private will become a transit street when it is redesigned as a major collector road and becomes an extension of existing Jeanne d'Arc to realigned Trim Road. Site plans for both phases should anticipate bus stops along the site frontage and protect for direct and convenient pedestrian connections between major building entrances/exits and the future sidewalk along the north side of the street.
- OC Transpo is supportive of the initial proposed number of residential parking spaces, which equals about 0.89 spaces per unit and is less than the maximum allowed under zoning. While per zoning this site is allowed a typical suburban rate of parking, the ultimate rate of parking should also be reflective of the site's location in a TOD zone within 600m of Trim Station. We suggest that forthcoming Site Plan applications should maintain or further reduce the current proposed rate of parking to support the targeted transit mode share.

The above comments have been noted and will be reviewed during the SPA.

Sincerely,

Austin Shih, M.A.Sc., P.Eng.

APPENDIX B

TRAFFIC COUNT DATA



Transportation Services - Traffic Services

Turning Movement Count - Full Study Peak Hour Diagram

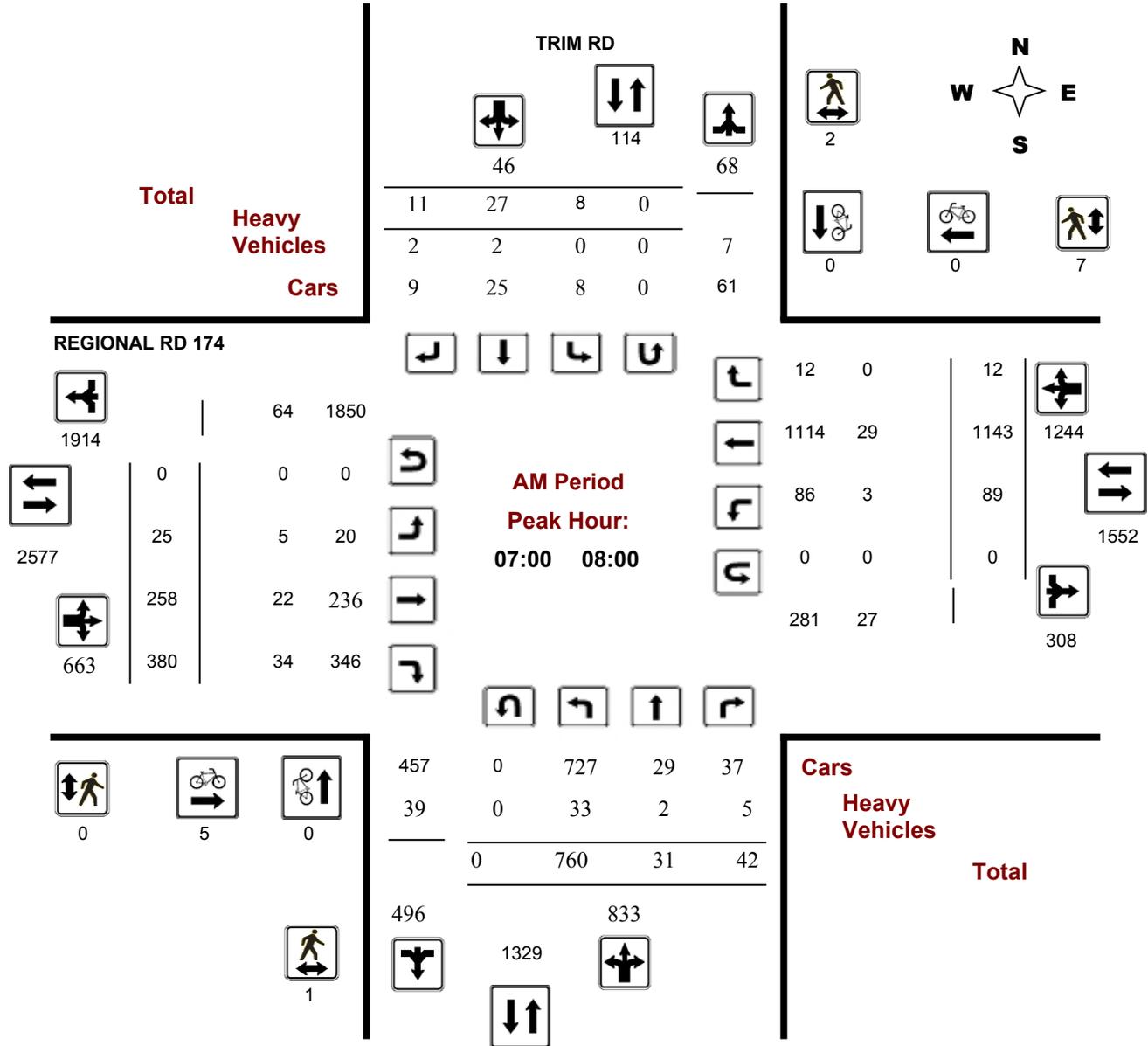
REGIONAL RD 174 @ TRIM RD

Survey Date: Wednesday, April 19, 2017

Start Time: 07:00

WO No: 36942

Device: Miovision

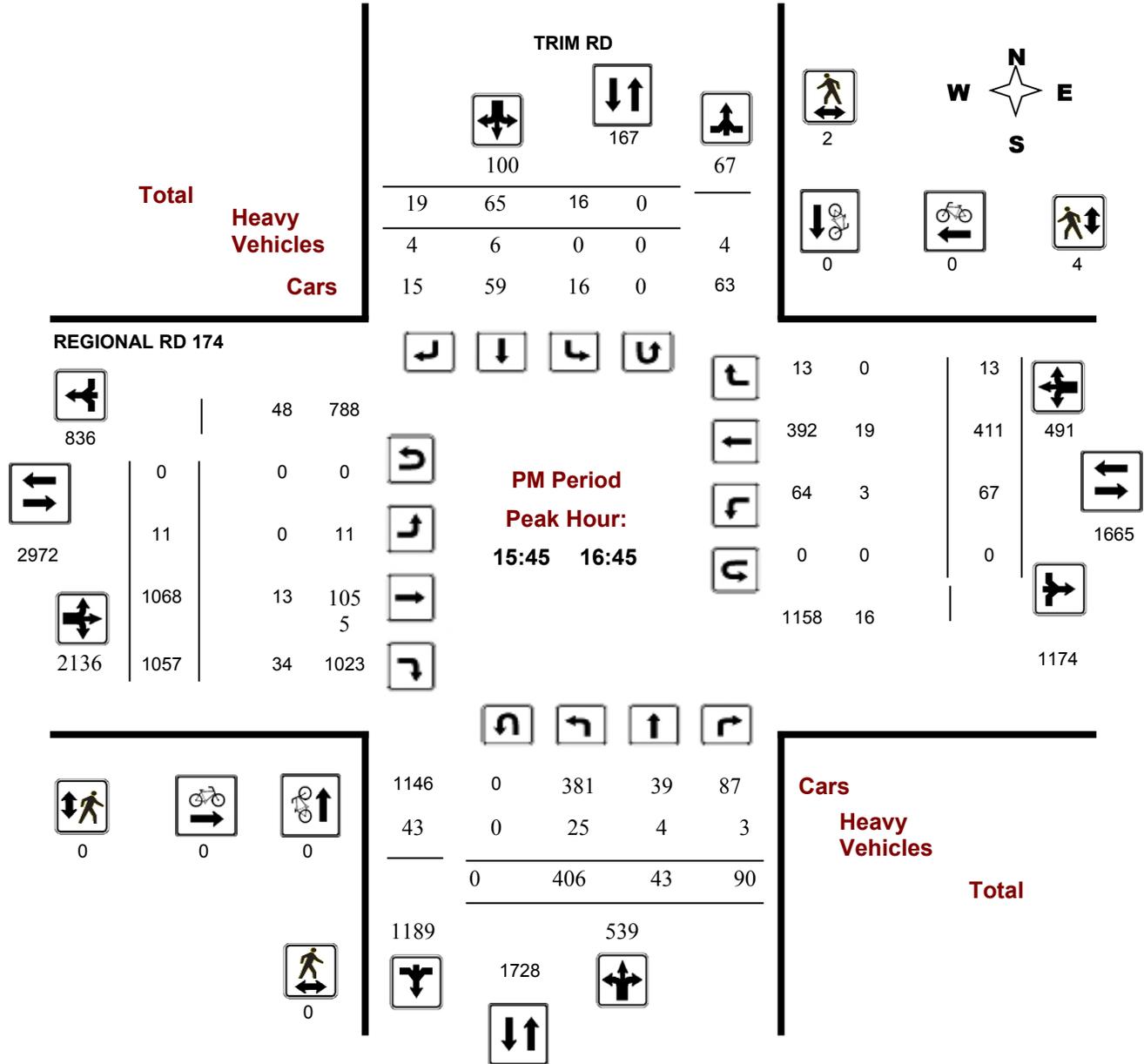


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Device: Miovision

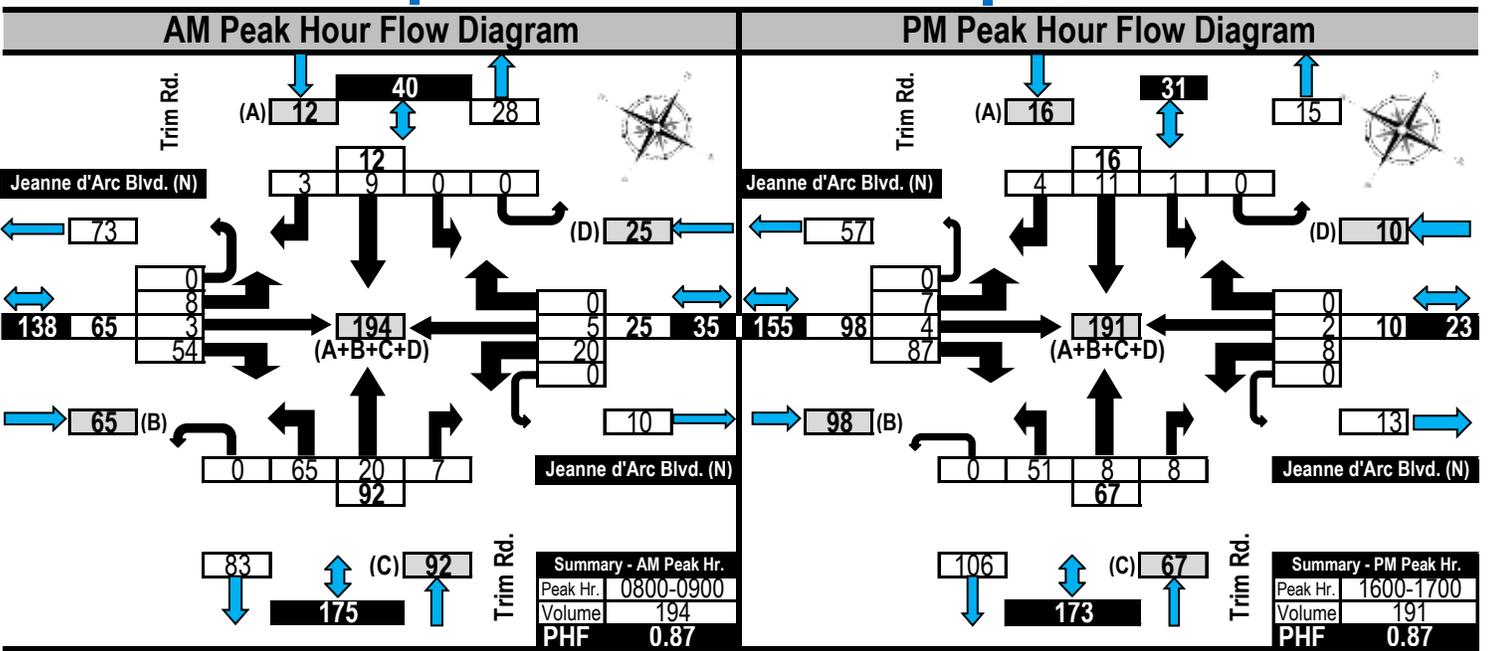
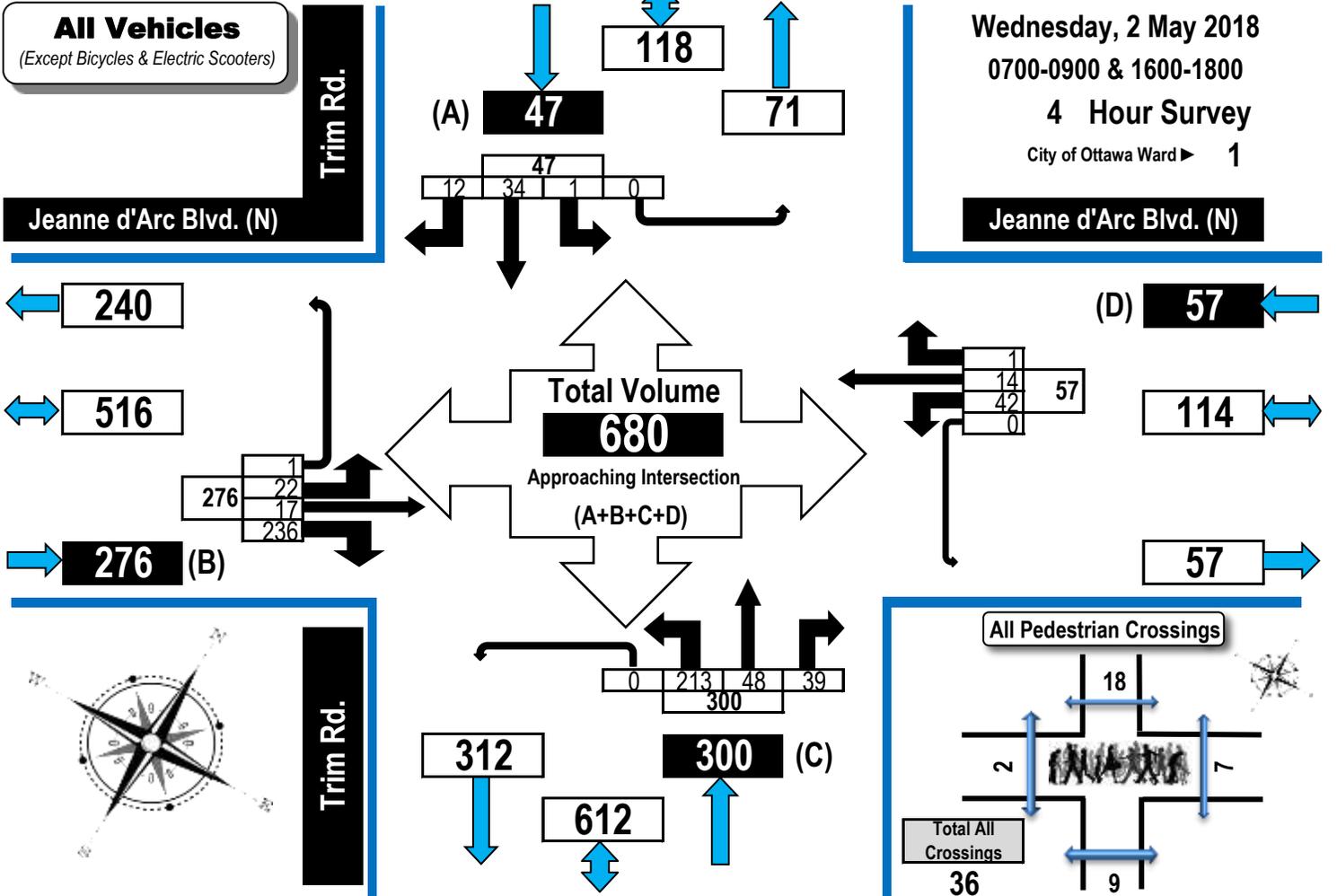




Turning Movement Count Summary, AM and PM Peak Hour Flow Diagrams

Automobiles, Taxis, Light Trucks, Vans, SUV's, Motorcycles, Heavy Trucks, Buses, and School Buses

Jeanne d'Arc Boulevard North & Trim Road Orléans, ON



APPENDIX C

COLLISION DATA

Total Area

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	46	4	16	8	1	9	0	1	85
Non-fatal injury	11	0	2	2	0	2	0	1	18
Fatal injury	0	0	0	0	0	1	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	57	4	18	10	1	12	0	2	104
	#1 or 55%	#5 or 4%	#2 or 17%	#4 or 10%	#7 or 1%	#3 or 12%	#8 or 0%	#6 or 2%	

82%
17%
1%
0%
100%

REGIONAL RD 174 / TRIM RD (0012835)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	62	34,178	1825	0.99

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	35	4	7	1	0	4	0	1	52
Non-fatal injury	8	0	0	1	0	0	0	0	9
Fatal injury	0	0	0	0	0	1	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	43	4	7	2	0	5	0	1	62
	69%	6%	11%	3%	0%	8%	0%	2%	

84%
15%
2%
0%
100%

TRIM RD / DAIRY DR/TAYLOR CREEK DR (0012921)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	32	17,909	1825	0.98

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	6	0	9	6	0	4	0	0	25
Non-fatal injury	2	0	2	1	0	2	0	0	7
Non reportable	0	0	0	0	0	0	0	0	0
Total	8	0	11	7	0	6	0	0	32
	25%	0%	34%	22%	0%	19%	0%	0%	

78%
22%
0%
100%

SEGMENTS

NORTH SERVICE RD /twn ROSSIGNOL CRES & TRIM RD (3ZA18P)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	2	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	0	0	1	0	0	0	2
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0	0	2
	50%	0%	0%	0%	50%	0%	0%	0%	

100%
0%
0%
100%

TRIM RD /twn NORTH SERVICE RD & END (3ZA1VR)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	1	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	0	0	0	0	0	0	0	0	0
Non-fatal injury	0	0	0	0	0	0	0	1	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	1
	0%	0%	0%	0%	0%	0%	0%	100%	

0%
100%
0%
100%

TRIM RD /twn NORTH SERVICE RD & REGIONAL ROAD 174 (3ZA11M)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	1	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	0	0	0	0	0	1	0	0	1
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	1
	0%	0%	0%	0%	0%	100%	0%	0%	

100%
0%
0%
100%

TRIM RD /twn REGIONAL ROAD 174 & RAMP (3ZA1ZG)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	2	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	2	0	0	0	0	0	0	0	2
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	2	0	0	0	0	0	0	0	2
	100%	0%	0%	0%	0%	0%	0%	0%	

100%
0%
0%
100%

TRIM RD /twn RAMP & SOUTH FRONTAGE (58GXDO)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	1	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	0	0	0	0	0	0	1
Non-fatal injury	0	0	0	0	0	0	0	0	0
Non reportable	0	0	0	0	0	0	0	0	0
Total	1	0	0	0	0	0	0	0	1
	100%	0%	0%	0%	0%	0%	0%	0%	

100%
0%
0%
100%

TRIM RD /twn SOUTH FRONTAGE & TAYLOR CREEK DR (3ZA3YV)

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2014-2018	3	n/a	1825	n/a

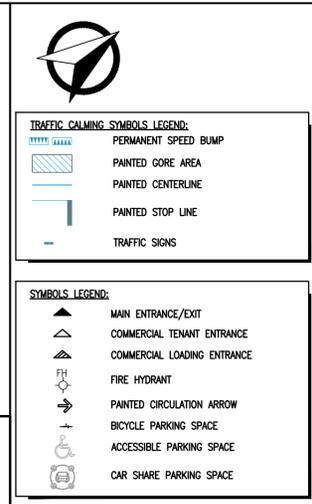
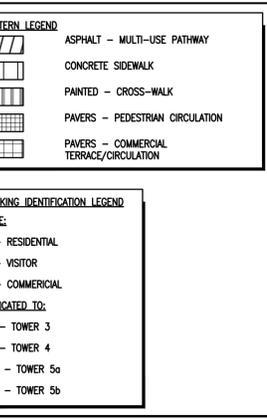
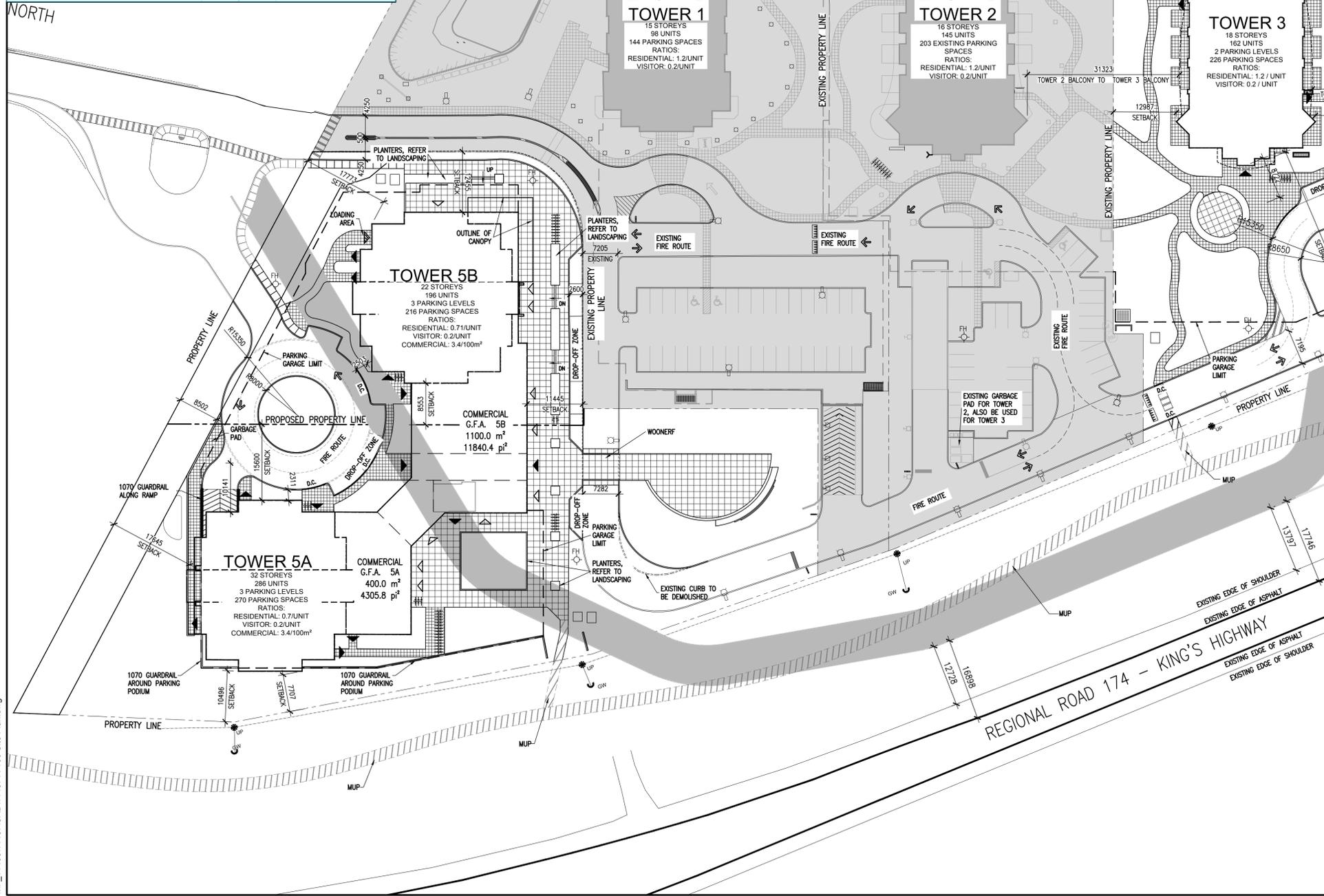
Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	Single Vehicle (other)	Single vehicle (Unattended vehicle)	Other	Total
P.D. only	1	0	0	1	0	0	0	0	2
Non-fatal injury	1	0	0	0	0	0	0	0	1
Non reportable	0	0	0	0	0	0	0	0	0
Total	2	0	0	1	0	0	0	0	3
	67%	0%	0%	33%	0%	0%	0%	0%	

67%
33%
0%
100%

APPENDIX D

GENERAL SITE PLANS FOR PETRIE'S LANDING

Requirement	Proposed	Notes
Table 1604A for Apartment Dwelling Mid High Rise		
Minimum Lot Width (m)	25	55.38
Minimum Lot Area (sq. m)	1000	11660.8
Maximum Building Height (m)	109.4 A.S.L.	109.4 A.S.L.
Minimum Front Yard Setback (m)	6	min. 7.5
Minimum Corner Side Yard Setback (m)	4.5	min. 7.5
Minimum Interior Side Yard Setback (m)	7.5	min. 7.5
Minimum Rear Yard Setback (m)	7.5	min. 7.5
Table 1604A for PUD		
Minimum Lot Width (m)	18	55.38
Minimum Lot Area (sq. m)	1400	11660.8
Maximum Building Height (m)	109.4 A.S.L.	109.4 A.S.L.
Minimum Front Yard Setback (m)	6	min. 7.5
Minimum Corner Side Yard Setback (m)	4.5	min. 7.5
Minimum Interior Side Yard Setback (m)	see note	min. 7.5
Minimum Rear Yard Setback (m)	see note	min. 7.5
Section 1609(1)		
Minimum landscape area (% of site)	30%	49%
Section 301 and 302 (Area C - Table 301)		
Minimum No. of parking spaces per unit	0.5	0.7
Minimum No. of visitor parking spaces per unit	0.2	0.2
Section 306		
Parking space width (m)	2.6 min 3.1 max	2.6
Minimum parking space depth (m)	5.2 / 6.7 parallel	5.2 / 6.7 parallel
Reduced parking space width (m)	2.4	2.4
Reduced parking space depth (m)	4.6	4.6
Section 307		
Driveway access - min width (m) one way	3	N/A
Driveway access - min width (m) two way	6.7	6.7
Driveway access - parking garage min width (m) two way	6	6
Section 310		
Minimum landscape area of parking lot (%)	15	60%
Minimum landscape buffer width of parking lot not abutting street (m)	1.5/3	3
Minimum landscape buffer width of parking lot abutting street (m)	3	N/A
Outdoor loading and refuse collection area within parking lot - min. distance abutting a public street (m)	9	N/A
...min. distance abutting any other lot line (m)	3	0
...Screened with 2 m high opaque screen (m)	2	N/A
Section 311		
Bicycle Parking Space Provisions (number per unit)	0.5	0.5
Section 337		
Total amenity area (6m ² per unit)	6 m ² x 482 units	>9971 m ²
Communal amenity area - % of total required 'total amenity area'	54	100
Layout of Communal Amenity Area (m ²)	54	>9971 m ²
Section 131 (PUD)		
Ancillary uses maximum floor area (m ²)	150	1500
Ancillary uses limited to one building in PUD	1	2
Min. width of private way (m)	1.8	2.4
Min. setback of wall of residential use bldg. to private way (m)	5.2	1.8
Min. setback for any garage entrance to private way (m)	3	0
Min. separation distance between buildings more than 14.5 m in height (m)	8.5	N/A
Private way width required to permit parallel visitor parking (m)		



Requirement	Proposed	Notes
Table 1604A for Apartment Dwelling Mid High Rise		
Minimum Lot Width (m)	25	52.79
Minimum Lot Area (sq. m)	1000	11772.4
Maximum Building Height (m)	109.4 A.S.L.	109.4 A.S.L.
Minimum Front Yard Setback (m)	6	min. 7.5
Minimum Corner Side Yard Setback (m)	4.5	min. 7.5
Minimum Interior Side Yard Setback (m)	7.5	min. 7.5
Minimum Rear Yard Setback (m)	7.5	min. 7.5
Table 1604A for PUD		
Minimum Lot Width (m)	18	52.79
Minimum Lot Area (sq. m)	1400	11772.4
Maximum Building Height (m)	109.4 A.S.L.	109.4 A.S.L.
Minimum Front Yard Setback (m)	6	min. 7.5
Minimum Corner Side Yard Setback (m)	4.5	min. 7.5
Minimum Interior Side Yard Setback (m)	see note	min. 7.5
Minimum Rear Yard Setback (m)	see note	min. 7.5
Section 1609(1)		
Minimum landscape area (% of site)	30%	68%
Section 301 and 302 (Area C - Table 301)		
Minimum No. of parking spaces per unit	1.2	1.2
Minimum No. of visitor parking spaces per unit	0.2	0.2
Section 306		
Parking space width (m)	2.6 min 3.1 max	2.6
Minimum parking space depth (m)	5.2 / 6.7 parallel	5.2 / 6.7 parallel
Reduced parking space width (m)	2.4	2.4
Reduced parking space depth (m)	4.6	4.6
Section 307		
Driveway access - min width (m) one way	3	N/A
Driveway access - min width (m) two way	6.7	6.7
Driveway access - parking garage min width (m) two way	6	6
Section 310		
Minimum landscape area of parking lot (%)	15	54%
Minimum landscape buffer width of parking lot not abutting street (m)	1.5/3	1.5
Minimum landscape buffer width of parking lot abutting street (m)	3	N/A
Outdoor loading and refuse collection area within parking lot - min. distance abutting a public street (m)	9	N/A
...min. distance abutting any other lot line (m)	3	8.9
...Screened with 2 m high opaque screen (m)	2	3
Section 311		
Bicycle Parking Space Provisions (number per unit)	0.5	0.5
Section 337		
Total amenity area (6m ² per unit)	6 m ² x 360 units	>9720 m ²
Communal amenity area - % of total required 'total amenity area'	50	100
Layout of Communal Amenity Area (m ²)	50	>9720 m ²
Section 131 (PUD)		
Ancillary uses maximum floor area (m ²)	150	N/A
Ancillary uses limited to one building in PUD	1	2
Min. width of private way (m)	1.8	2.4
Min. setback of wall of residential use bldg. to private way (m)	5.2	1.8
Min. setback for any garage entrance to private way (m)	3	0
Min. separation distance between buildings more than 14.5 m in height (m)	8.5	N/A
Private way width required to permit parallel visitor parking (m)		

Requirement	Proposed	Notes
Table 1604A for Apartment Dwelling Mid High Rise		
Minimum Lot Width (m)	25	52.79
Minimum Lot Area (sq. m)	1000	11772.4
Maximum Building Height (m)	109.4 A.S.L.	109.4 A.S.L.
Minimum Front Yard Setback (m)	6	min. 7.5
Minimum Corner Side Yard Setback (m)	4.5	min. 7.5
Minimum Interior Side Yard Setback (m)	7.5	min. 7.5
Minimum Rear Yard Setback (m)	7.5	min. 7.5
Table 1604A for PUD		
Minimum Lot Width (m)	18	52.79
Minimum Lot Area (sq. m)	1400	11772.4
Maximum Building Height (m)	109.4 A.S.L.	109.4 A.S.L.
Minimum Front Yard Setback (m)	6	min. 7.5
Minimum Corner Side Yard Setback (m)	4.5	min. 7.5
Minimum Interior Side Yard Setback (m)	see note	min. 7.5
Minimum Rear Yard Setback (m)	see note	min. 7.5
Section 1609(1)		
Minimum landscape area (% of site)	30%	68%
Section 301 and 302 (Area C - Table 301)		
Minimum No. of parking spaces per unit	1.2	1.2
Minimum No. of visitor parking spaces per unit	0.2	0.2
Section 306		
Parking space width (m)	2.6 min 3.1 max	2.6
Minimum parking space depth (m)	5.2 / 6.7 parallel	5.2 / 6.7 parallel
Reduced parking space width (m)	2.4	2.4
Reduced parking space depth (m)	4.6	4.6
Section 307		
Driveway access - min width (m) one way	3	N/A
Driveway access - min width (m) two way	6.7	6.7
Driveway access - parking garage min width (m) two way	6	6
Section 310		
Minimum landscape area of parking lot (%)	15	54%
Minimum landscape buffer width of parking lot not abutting street (m)	1.5/3	1.5
Minimum landscape buffer width of parking lot abutting street (m)	3	N/A
Outdoor loading and refuse collection area within parking lot - min. distance abutting a public street (m)	9	N/A
...min. distance abutting any other lot line (m)	3	8.9
...Screened with 2 m high opaque screen (m)	2	3
Section 311		
Bicycle Parking Space Provisions (number per unit)	0.5	0.5
Section 337		
Total amenity area (6m ² per unit)	6 m ² x 360 units	>9720 m ²
Communal amenity area - % of total required 'total amenity area'	50	100
Layout of Communal Amenity Area (m ²)	50	>9720 m ²
Section 131 (PUD)		
Ancillary uses maximum floor area (m ²)	150	N/A
Ancillary uses limited to one building in PUD	1	2
Min. width of private way (m)	1.8	2.4
Min. setback of wall of residential use bldg. to private way (m)	5.2	1.8
Min. setback for any garage entrance to private way (m)	3	0
Min. separation distance between buildings more than 14.5 m in height (m)	8.5	N/A
Private way width required to permit parallel visitor parking (m)		

NOTES GÉNÉRALES / General Notes

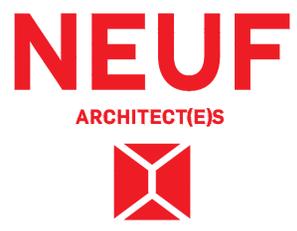
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SCÉAU Seal



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QUVRAGE Project
PETRIE'S LANDING I - PHASES 3 - 5
 EMPLACEMENT Location NO PROJET No.
 OTTAWA, ONTARIO 11467

NO	REVISION	DATE (aa.mm.jj)
A	FOR SPA - CITY COMMENTS	2018.07.18
B	FOR SPA - CITY COMMENTS-REV2	2018.07.19
C	FOR SPA - CITY COMMENTS-REV2	2018.08.07
D	FOR COORDINATION	2019.04.04
E	FOR SPA - CITY COMMENTS-REV3	2019.05.05
F	FOR COMMENTS	2019.06.27
G	FOR SPA - CITY COMMENTS-REV4	2019.07.10

DESSIN PAR Drawn by
 OC
 DATE (aa.mm.jj)
 19.07.11

VÉRIFIÉ PAR Checked by
 ANT. C / FP
 ECHELLE Scale
 1:500

TITRE DU DESSIN Drawing Title
SITE PLAN

REVISION Revision NO. DESSIN Dwg Number
H A-100
 #14602

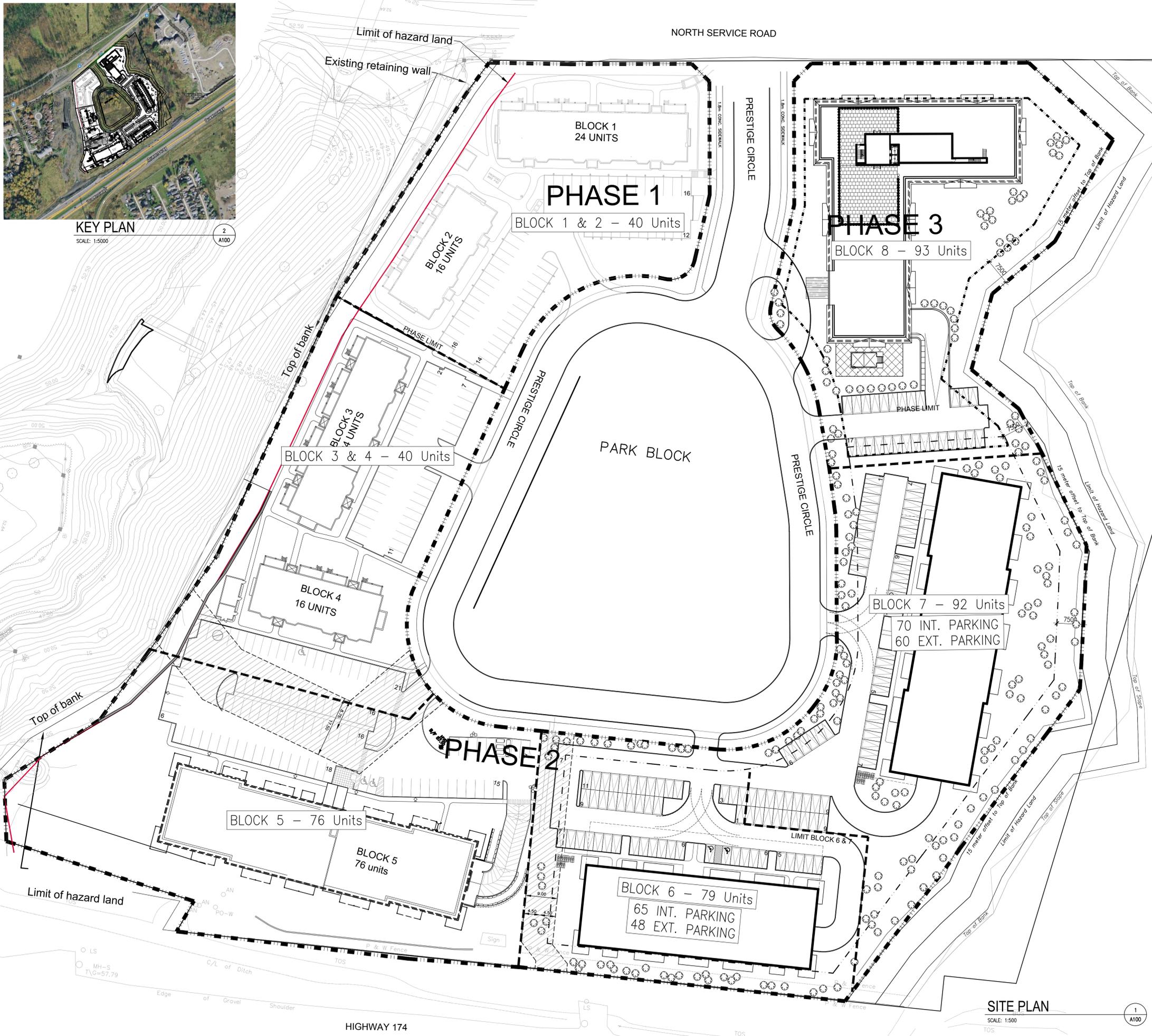
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KEY PLAN

SCALE: 1:5000

2
A100



ENTIRE SITE STATISTICS		
Phase 1 - Block 1 & 2	40	
Phase 2 - Block 3 & 4	40	
Phase 2 - Block 5	76	
Phase 2 - Block 6	79	
Phase 2 - Block 7	92	
Phase 3 - Block 8	93	
TOTAL	420 Units	
Area of Entire site m ²	42 834	
Unit Density - Provided	98,00 units/ha	
Unit Density - Required	100,00 units/ha	
GAZ PARKING (Ratio min 2:1.4)		
Requirement	Provided	
Ratio	Qty	
Phase 1 - Block 1 & 2	1.40	56
Phase 2 - Block 3 & 4	1.40	66
Phase 2 - Block 5	1.40	108
Phase 2 - Block 6	1.40	111
Phase 2 - Block 7	1.40	129
Phase 3 - Block 8	0.25	23
TOTAL	506	
BIKE PARKING (Ratio 2:0.5 & PHASE 2)		
Requirement	Provided	
Phase 2 - Block 3 & 4	20	
Phase 2 - Block 5	38	
Phase 2 - Block 6	39.5	
Phase 2 - Block 7	46	
Phase 3 - Block 8	23.25	
TOTAL	167	

NOTES GÉNÉRALES / General Notes

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- Les dimensions sur ces documents doivent être lues et non mesurées. / The dimensions on these documents must be read and not measured.

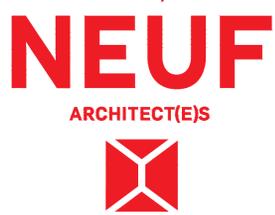
ARCHITECTURE DE PAYSAGE / Landscape architect

CIVIL / Civil

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 T 514 847 1117 NEUFArchitectes.com

SCEAU / Seal

DCYSA devient / becomes



BRIGIL
 CLIENT / Client

OUVRAGE / Project
**PETRIES LANDING
 BLOCK 6 & 7**

EMPLACEMENT / Location
 ORLEANS, ON NO PROJET No.
 10498.03

NO	REVISION	DATE (aa.mm.jj)
A	CITY VALIDATION	2016-12-15
B	Site plan revision	2017-03-27

Préliminaire
 NE PAS UTILISER POUR
 CONSTRUCTION

DESSIN PAR / Drawn by
 O.C. VERIFIÉ PAR / Checked by
 ANT. C.

DATE (aa.mm.jj)
 16.11.04 ECHELLE / Scale
 INDIQUÉE

TITRE DU DESSIN / Drawing Title
Site Plan

REVISION / Revision NO. DESSIN / Dwg Number

B A100

NOTE 1:
 - Exterior lighting fixtures from Keene Conlyte, model: Silhouette Roadway Luminaire
 Types: A2 and A3, Metal Halide (MH) 70W.
 - To be installed on 18' poles (see plan for locations)
 Informations herein are per Electrical Eng. preliminary documents. Please refer to annex technical data sheets for further information.

APPROVED REFUSED
 DATE _____
 Felice Petti, P.Eng., Manager, Development Review,
 Suburban Services

LEGEND
 - - - - - PROPERTY LINE
 - - - - - BOUNDARY OF PHASES

SITE PLAN
 SCALE: 1:500
 1
 A100

I:\P_1040010498.03\CAD\1049803_A100_Site_Plan.dwg

APPENDIX E

INTERNAL REDUCTION CALCULATIONS

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	477526 - 01000	Organization:	Parsons
Project Location:	1009 Trim Road	Performed By:	
Scenario Description:	External - Internal Trips AM	Date:	3-Dec-21
Analysis Year:	2029 TRANS Mode Share	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	19,850	sq ft GFA	22	18	4
Retail	820	26,156	sq ft GFA	20	11	9
Restaurant	931	9,754	sq ft GFA	4	2	2
Cinema/Entertainment				0		
Residential	220	956	units	199	62	137
Hotel				0		
All Other Land Uses ²				0		
				245	93	152

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail	1		1	0	1	0
Restaurant	1	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	245	93	152
Internal Capture Percentage	6%	8%	5%
External Vehicle-Trips ⁵	231	86	145
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	17%	25%
Retail	18%	33%
Restaurant	50%	50%
Cinema/Entertainment	N/A	N/A
Residential	2%	1%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	477526 - 01000
Analysis Period:	AM Street Peak Hour

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	18	18	1.00	4	4
Retail	1.00	11	11	1.00	9	9
Restaurant	1.00	2	2	1.00	2	2
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	62	62	1.00	137	137
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	3	0	0	0
Retail	3		1	0	1	0
Restaurant	1	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	1	27	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	0	0
Retail	1		1	0	1	0
Restaurant	3	1		0	3	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	2	0	0		0
Hotel	1	0	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	3	15	18	15	0	0
Retail	2	9	11	9	0	0
Restaurant	1	1	2	1	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	61	62	61	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	1	3	4	3	0	0
Retail	3	6	9	6	0	0
Restaurant	1	1	2	1	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	135	137	135	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	477526 - 01000	Organization:	Parsons
Project Location:	1009 Trim Road	Performed By:	
Scenario Description:	External - Internal Trips AM	Date:	3-Dec-21
Analysis Year:	2029 TRANS Mode Share	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	19,850	sq ft GFA	12	2	10
Retail	820	26,156	sq ft GFA	76	40	36
Restaurant	931	9,754	sq ft GFA	40	26	14
Cinema/Entertainment				0		
Residential	220	956	units	229	133	96
Hotel				0		
All Other Land Uses ²				0		
				357	201	156

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		50	50		50	
Retail					50	
Restaurant					50	
Cinema/Entertainment						
Residential		50	50			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	0		8	0	9	0
Restaurant	0	6		0	3	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	4	4	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	357	201	156
Internal Capture Percentage	21%	18%	24%
External Vehicle-Trips ⁵	283	164	119
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	50%	20%
Retail	30%	47%
Restaurant	46%	64%
Cinema/Entertainment	N/A	N/A
Residential	9%	9%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	477526 - 01000
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	2	2	1.00	10	10
Retail	1.00	40	40	1.00	36	36
Restaurant	1.00	26	26	1.00	14	14
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	133	133	1.00	96	96
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	1		10	1	9	2
Restaurant	0	6		1	3	1
Cinema/Entertainment	0	0	0		0	0
Residential	4	40	20	0		3
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	1	0	5	0
Retail	1		8	0	61	0
Restaurant	1	20		0	21	0
Cinema/Entertainment	0	2	1		5	0
Residential	1	4	4	0		0
Hotel	0	1	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	1	1	2	1	0	0
Retail	12	28	40	28	0	0
Restaurant	12	14	26	14	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	121	133	121	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	2	8	10	8	0	0
Retail	17	19	36	19	0	0
Restaurant	9	5	14	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	9	87	96	87	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	477526 - 01000	Organization:	Parsons
Project Location:	1009 Trim Road	Performed By:	
Scenario Description:	External - Internal Trips AM	Date:	3-Dec-21
Analysis Year:	2029 TARGET Mode Share	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	19,850	sq ft GFA	22	18	4
Retail	820	26,156	sq ft GFA	20	11	9
Restaurant	931	9,754	sq ft GFA	4	2	2
Cinema/Entertainment				0		
Residential	220	956	units	117	36	81
Hotel				0		
All Other Land Uses ²				0		
				163	67	96

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail	1		1	0	1	0
Restaurant	1	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	163	67	96
Internal Capture Percentage	9%	10%	7%
External Vehicle-Trips ⁵	149	60	89
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	17%	25%
Retail	18%	33%
Restaurant	50%	50%
Cinema/Entertainment	N/A	N/A
Residential	3%	2%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	477526 - 01000
Analysis Period:	AM Street Peak Hour

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	18	18	1.00	4	4
Retail	1.00	11	11	1.00	9	9
Restaurant	1.00	2	2	1.00	2	2
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	36	36	1.00	81	81
Hotel	1.00	0	0	1.00	0	0

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1	3	0	0	0
Retail	3		1	0	1	0
Restaurant	1	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	16	0		0
Hotel	0	0	0	0	0	

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		4	0	0	0	0
Retail	1		1	0	1	0
Restaurant	3	1		0	2	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	2	0	0		0
Hotel	1	0	0	0	0	

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	3	15	18	15	0	0
Retail	2	9	11	9	0	0
Restaurant	1	1	2	1	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	35	36	35	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	1	3	4	3	0	0
Retail	3	6	9	6	0	0
Restaurant	1	1	2	1	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	79	81	79	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	477526 - 01000	Organization:	Parsons
Project Location:	1009 Trim Road	Performed By:	
Scenario Description:	External - Internal Trips AM	Date:	3-Dec-21
Analysis Year:	2029 TARGET Mode Share	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	710	19,850	sq ft GFA	12	2	10
Retail	820	26,156	sq ft GFA	76	40	36
Restaurant	931	9,754	sq ft GFA	40	26	14
Cinema/Entertainment				0		
Residential	220	956	units	117	68	49
Hotel				0		
All Other Land Uses ²				0		
				245	136	109

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		50	50		50	
Retail					50	
Restaurant					50	
Cinema/Entertainment						
Residential		50	50			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	0		8	0	9	0
Restaurant	0	6		0	3	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	4	4	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	245	136	109
Internal Capture Percentage	30%	27%	34%
External Vehicle-Trips ⁵	171	99	72
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	50%	20%
Retail	30%	47%
Restaurant	46%	64%
Cinema/Entertainment	N/A	N/A
Residential	18%	18%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	477526 - 01000
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	2	2	1.00	10	10
Retail	1.00	40	40	1.00	36	36
Restaurant	1.00	26	26	1.00	14	14
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	68	68	1.00	49	49
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		2	0	0	0	0
Retail	1		10	1	9	2
Restaurant	0	6		1	3	1
Cinema/Entertainment	0	0	0		0	0
Residential	2	21	10	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		3	1	0	3	0
Retail	1		8	0	31	0
Restaurant	1	20		0	11	0
Cinema/Entertainment	0	2	1		3	0
Residential	1	4	4	0		0
Hotel	0	1	1	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	1	1	2	1	0	0
Retail	12	28	40	28	0	0
Restaurant	12	14	26	14	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	56	68	56	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	2	8	10	8	0	0
Retail	17	19	36	19	0	0
Restaurant	9	5	14	5	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	9	40	49	40	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX F

BACKGROUND VOLUME GROWTH

Trim/OR 174
8 hrs

Year	Date	North Leg		South Leg		East Leg		West Leg		Total
		SB	NB	NB	SB	WB	EB	EB	WB	
2007	Wednesday 31 January	322	242	4191	4602	5927	5317	8831	9110	38542
2008	Friday 20 June	618	391	4770	5319	6281	6058	10034	9935	43406
2010	Friday 9 July	744	722	5389	4539	6433	6484	9542	10363	44216
2012	Friday 8 June	329	441	4696	4430	5833	5818	8875	9044	39466
2017	Wednesday 19 April	590	518	4739	5742	5522	5570	10003	9024	41708

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2007	242	322	564	38542				
2008	391	618	1009	43406	61.6%	91.9%	78.9%	12.6%
2010	722	744	1466	44216	84.7%	20.4%	45.3%	1.9%
2012	441	329	770	39466	-38.9%	-55.8%	-47.5%	-10.7%
2017	518	590	1108	41708	17.5%	79.3%	43.9%	5.7%

Regression Estimate 2007 393 490 883 41312
 Regression Estimate 2017 576 570 1147 41722
Average Annual Change 3.89% 1.53% 2.64% 0.10%

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2007	8831	9110	17941	38542				
2008	10034	9935	19969	43406	13.6%	9.1%	11.3%	12.6%
2010	9542	10363	19905	44216	-4.9%	4.3%	-0.3%	1.9%
2012	8875	9044	17919	39466	-7.0%	-12.7%	-10.0%	-10.7%
2017	10003	9024	19027	41708	12.7%	-0.2%	6.2%	5.7%

Regression Estimate 2007 9252 9733 18985
 Regression Estimate 2017 9791 9108 18899
Average Annual Change 0.57% -0.66% -0.05%

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2007	5317	5927	11244	38542				
2008	6058	6281	12339	43406	13.9%	6.0%	9.7%	12.6%
2010	6484	6433	12917	44216	7.0%	2.4%	4.7%	1.9%
2012	5818	5833	11651	39466	-10.3%	-9.3%	-9.8%	-10.7%
2017	5570	5522	11092	41708	-4.3%	-5.3%	-4.8%	5.7%

Regression Estimate 2007 5900 6242 12143
 Regression Estimate 2017 5767 5602 11369
Average Annual Change -0.23% -1.08% -0.66%

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2007	4191	4602	8793	38542				
2008	4770	5319	10089	43406	13.8%	15.6%	14.7%	12.6%
2010	5389	4539	9928	44216	13.0%	-14.7%	-1.6%	1.9%
2012	4696	4430	9126	39466	-12.9%	-2.4%	-8.1%	-10.7%
2017	4739	5742	10481	41708	0.9%	29.6%	14.8%	5.7%

Regression Estimate 2007 4671 4630 9300
 Regression Estimate 2017 4898 5411 10308
Average Annual Change 0.48% 1.57% 1.03%

Trim/OR 174
AM Peak

Year	Date	North Leg		South Leg		East Leg		West Leg		Total
		SB	NB	NB	SB	WB	EB	EB	WB	
2007	Wednesday 31 January	50	32	626	402	1346	395	658	1651	5160
2008	Friday 20 June	34	14	649	439	1326	294	674	1836	5266
2010	Friday 9 July	42	46	819	454	1309	387	720	2003	5780
2012	Friday 8 June	62	64	875	414	1292	313	578	2016	5614
2017	Wednesday 19 April	48	51	807	537	1324	428	727	1890	5812

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2007	32	50	82	5160				
2008	14	34	48	5266	-56.3%	-32.0%	-41.5%	2.1%
2010	46	42	88	5780	228.6%	23.5%	83.3%	9.8%
2012	64	62	126	5614	39.1%	47.6%	43.2%	-2.9%
2017	51	48	99	5812	-20.3%	-22.6%	-21.4%	3.5%

Regression Estimate 2007 30 44 74 5297
 Regression Estimate 2017 61 52 113 5901
Average Annual Change 7.45% 1.78% 4.40% 1.09%

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2007	658	1651	2309	5160				
2008	674	1836	2510	5266	2.4%	11.2%	8.7%	2.1%
2010	720	2003	2723	5780	6.8%	9.1%	8.5%	9.8%
2012	578	2016	2594	5614	-19.7%	0.6%	-4.7%	-2.9%
2017	727	1890	2617	5812	25.8%	-6.3%	0.9%	3.5%

Regression Estimate 2007 657 1811 2468
 Regression Estimate 2017 695 1990 2685
Average Annual Change 0.56% 0.94% 0.84%

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2007	395	1346	1741	5160				
2008	294	1326	1620	5266	-25.6%	-1.5%	-7.0%	2.1%
2010	387	1309	1696	5780	31.6%	-1.3%	4.7%	9.8%
2012	313	1292	1605	5614	-19.1%	-1.3%	-5.4%	-2.9%
2017	428	1324	1752	5812	36.7%	2.5%	9.2%	3.5%

Regression Estimate 2007 339 1326 1666
 Regression Estimate 2017 402 1308 1710
Average Annual Change 1.72% -0.14% 0.26%

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2007	626	402	1028	5160				
2008	649	439	1088	5266	3.7%	9.2%	5.8%	2.1%
2010	819	454	1273	5780	26.2%	3.4%	17.0%	9.8%
2012	875	414	1289	5614	6.8%	-8.8%	1.3%	-2.9%
2017	807	537	1344	5812	-7.8%	29.7%	4.3%	3.5%

Regression Estimate 2007 682 406 1089
 Regression Estimate 2017 874 519 1393
Average Annual Change 2.50% 2.47% 2.49%

Trim/OR 174
PM Peak

Year	Date	North Leg		South Leg		East Leg		West Leg		Total
		SB	NB	NB	SB	WB	EB	EB	WB	
2007	Wednesday 31 January	144	50	455	788	672	1440	2018	911	6478
2008	Friday 20 June	64	60	494	1051	424	1354	2206	723	6376
2010	Friday 9 July	107	40	603	1007	664	1334	2131	1124	7010
2012	Friday 8 June	94	69	634	905	624	1353	2024	1049	6752
2017	Wednesday 19 April	56	61	587	801	657	1284	1839	993	6278

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2007	50	144	194	6478				
2008	60	64	124	6376	20.0%	-55.6%	-36.1%	-1.6%
2010	40	107	147	7010	-33.3%	67.2%	18.5%	9.9%
2012	69	94	163	6752	72.5%	-12.1%	10.9%	-3.7%
2017	61	56	117	6278	-11.6%	-40.4%	-28.2%	-7.0%

Regression Estimate 2007 52 114 166 6642
 Regression Estimate 2017 63 58 121 6475
Average Annual Change 2.00% -6.52% -3.09% -0.25%

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2007	2018	911	2929	6478				
2008	2206	723	2929	6376	9.3%	-20.6%	0.0%	-1.6%
2010	2131	1124	3255	7010	-3.4%	55.5%	11.1%	9.9%
2012	2024	1049	3073	6752	-5.0%	-6.7%	-5.6%	-3.7%
2017	1839	993	2832	6278	-9.1%	-5.3%	-7.8%	-7.0%

Regression Estimate 2007 2148 898 3045
 Regression Estimate 2017 1874 1062 2936
Average Annual Change -1.35% 1.69% -0.37%

Year	Counts				% Change			
	EB	WB	EB+WB	INT	EB	WB	EB+WB	INT
2007	1440	672	2112	6478				
2008	1354	424	1778	6376	-6.0%	-36.9%	-15.8%	-1.6%
2010	1334	664	1998	7010	-1.5%	56.6%	12.4%	9.9%
2012	1353	624	1977	6752	1.4%	-6.0%	-1.1%	-3.7%
2017	1284	657	1941	6278	-5.1%	5.3%	-1.8%	-7.0%

Regression Estimate 2007 1398 575 1973
 Regression Estimate 2017 1279 663 1942
Average Annual Change -0.88% 1.43% -0.16%

Year	Counts				% Change			
	NB	SB	NB+SB	INT	NB	SB	NB+SB	INT
2007	455	788	1243	6478				
2008	494	1051	1545	6376	8.6%	33.4%	24.3%	-1.6%
2010	603	1007	1610	7010	22.1%	-4.2%	4.2%	9.9%
2012	634	905	1539	6752	5.1%	-10.1%	-4.4%	-3.7%
2017	587	801	1388	6278	-7.4%	-11.5%	-9.8%	-7.0%

Regression Estimate 2007 506 952 1458
 Regression Estimate 2017 634 842 1476
Average Annual Change 2.29% -1.22% 0.12%

APPENDIX G

MMLOS ROAD SEGMENTS

APPENDIX H

WARRANT CHECKS

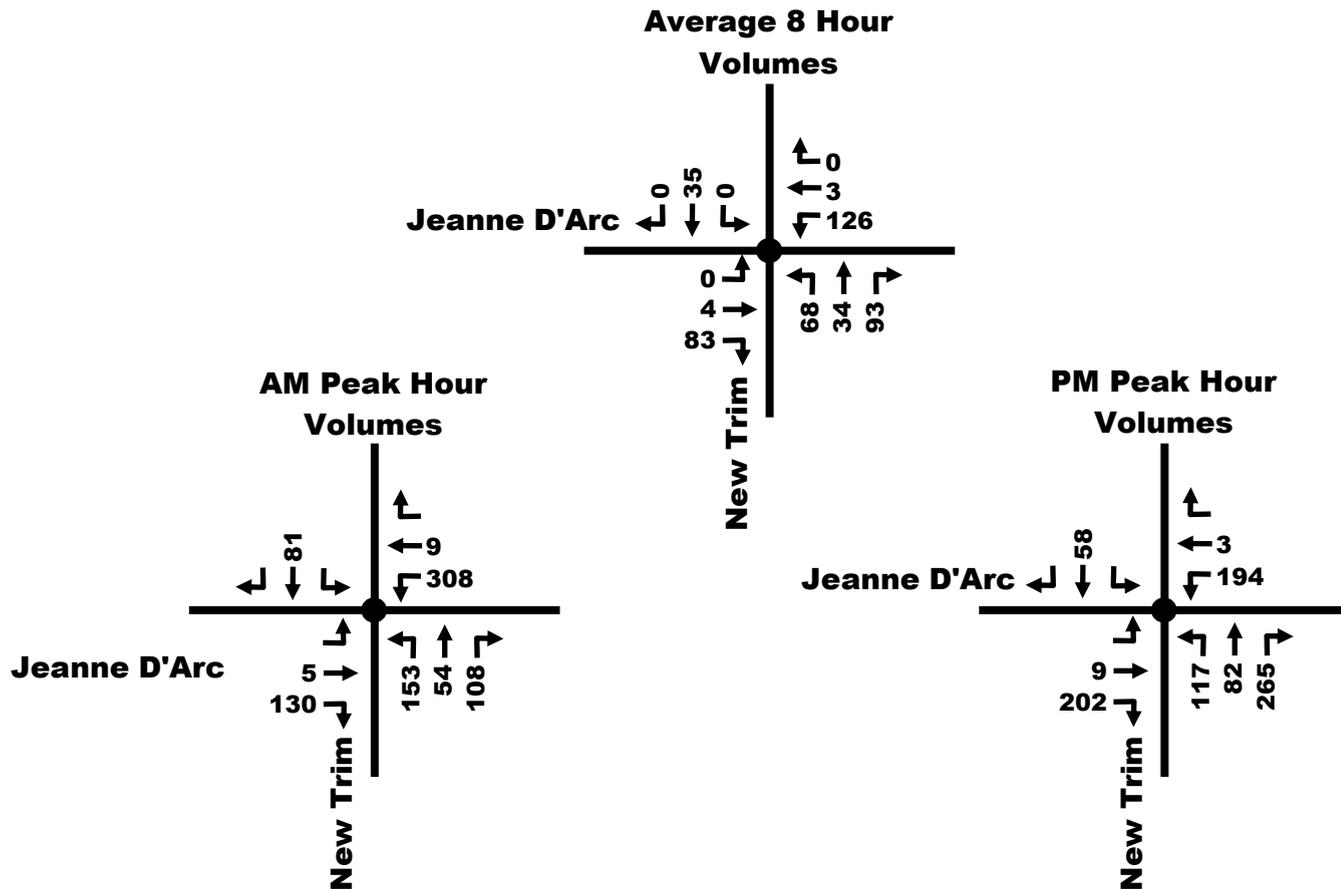
Target Mode Share

New Trim/Jeanne D'Arc - (peak hour signal warrant)

Signal Warrant	Description	Minimum Requirement for Two-Lane Roadways	Compliance			
		Restricted Flow - Operating Speed Less Than 70 km/h	Sectional %	Entire %	Warrant	
Intersection	1. Minimum Vehicular Volume	(1) A Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of on Average Day, and	720	62%	62%	62% No
		(4) B Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	170	127%		
	2. Delay to Cross Traffic	(1) A Vehicle Volume, Along Major Street for Each of the Heaviest 8 Hours of an Average Day, and	720	32%	32%	
		(2) B Combined Vehicle and Pedestrian Volume <u>Crossing</u> the Major Street for Each of the Same 8 Hours	75	173%		

Notes

- 1 Vehicle Volume Warrants (1A), (2A) and (5B) for Roadways Having Two or More Moving Lanes in one Direction Should Be 25% Higher Than Values Given Above **No**
- 2 For Definition of Crossing Volume Refer to Note 4 on the Signal Warrant Analysis Form B2.03.08
- 3 The Lowest Sectional Percentage Governs the Entire Warrant
- 4 For "T" Intersections the Warrant Values for Minor Street Should be Increased by 50% (Warrant 1B only) **No**



New Trim/Jeanne D'Arc - (peak hour signal warrant)

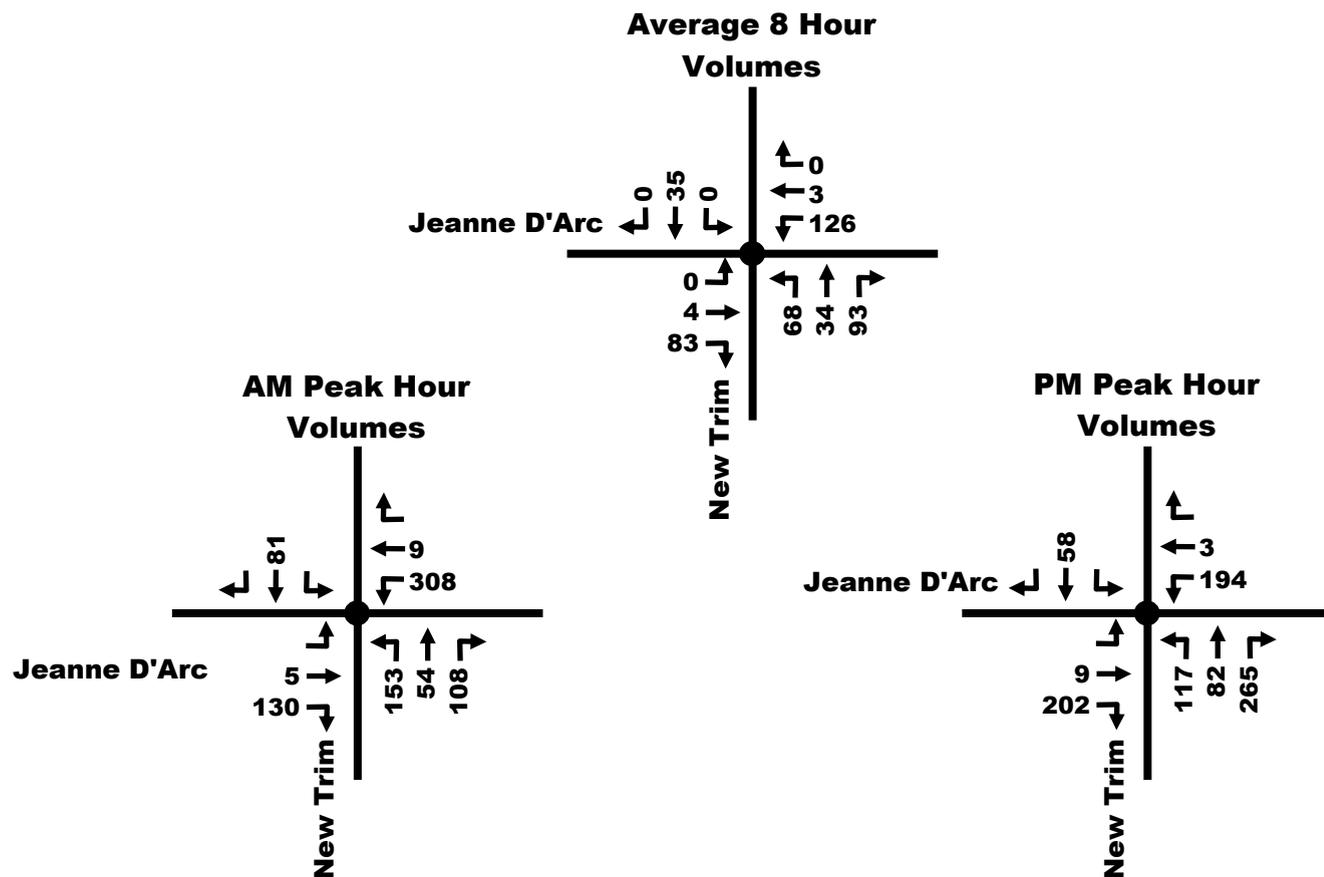
Signal Warrant	Description	Minimum Requirement for Two-Lane Roadways	Compliance			
		Restricted Flow - Operating Speed Less Than 70 km/h	Sectional %	Entire %	Warrant	
Intersection	1. Minimum Vehicular Volume	(1) A Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of on Average Day, and	720	68%	68%	68% No
		(4) B Vehicle Volume, Along Minor Streets for Each of the Same 8 Hours	170	128%		
	2. Delay to Cross Traffic	(1) A Vehicle Volume, Along Major Street for Each of the Heaviest 8 Hours of an Average Day, and	720	38%	38%	
		(2) B Combined Vehicle and Pedestrian Volume <u>Crossing</u> the Major Street for Each of the Same 8 Hours	75	173%		

Notes

- 1 Vehicle Volume Warrants (1A), (2A) and (5B) for Roadways Having Two or More Moving Lanes in one Direction Should Be 25% Higher Than Values Given Above
- 2 For Definition of Crossing Volume Refer to Note 4 on the Signal Warrant Analysis Form B2.03.08
- 3 The Lowest Sectional Percentage Governs the Entire Warrant
- 4 For "T" Intersections the Warrant Values for Minor Street Should be Increased by 50% (Warrant 1B only)

No

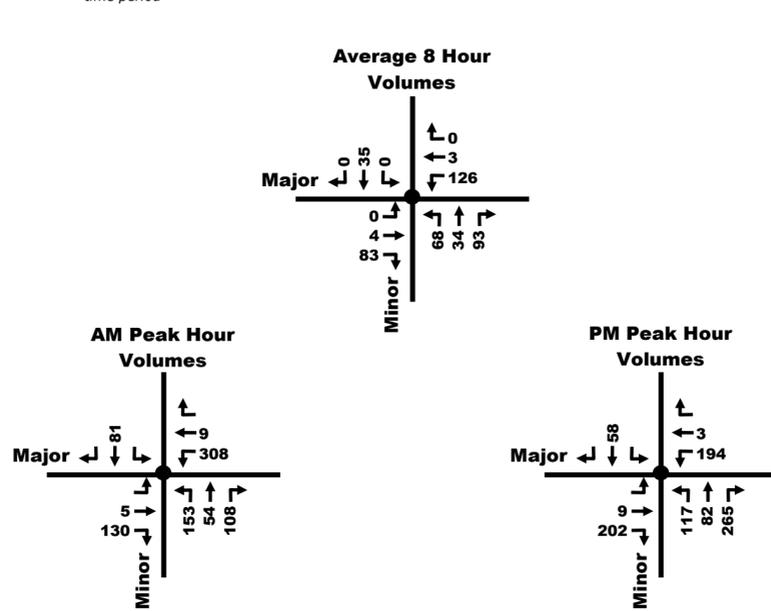
No



New Trim/Jeanne D'Arc - Existing

AWSC Warrant	Description	Minimum Requirement for a four-leg intersection	Compliance			
			Sectional %	Entire %	Warrant	
Intersection 1. Minimum Volume Criterion	A	Vehicle Volume, All Approaches for Each of the Heaviest 8 Hours of on Average Day, or	200	223%	198%	Yes
	B	Vehicle Volume, All Approaches for the Heaviest Peak Hour, and	350	266%		
	C	Vehicle and pedestrian Volume, Along Minor Streets for Each of the Same 8 Hours, and	80	288%		
	D	The volume split between the major and minor streets	65/35	198%		
2. Minimum Collision Criterion	A	Vehicle Volume, Along Major Street for Each of the Heaviest 8 Hours of an Average Day, and	9	0%	0%	

Note: 0 preventable by AWSC collisions (i.e. right angle and turning movement collisions) were reported during a 3 year time period



Peak	Minor Road				Major							
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
Existing												
8 hr												
AM	153	54	108		81				5	130	308	9
PM	117	82	265		58				9	202	194	3
Site Generated												
AM												
PM												
Avg. 8 hr	68	34	93	0	35	0	0	4	83	126	3	0

APPENDIX I

TDM CHECKLIST

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

Legend	
REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
1. WALKING & CYCLING: ROUTES		
1.1 Building location & access points		
BASIC	1.1.1 Locate building close to the street, and do not locate parking areas between the street and building entrances	<input checked="" type="checkbox"/> <i>Minimal visitor parking</i>
BASIC	1.1.2 Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	<input checked="" type="checkbox"/> <i>entrances towards road</i>
BASIC	1.1.3 Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	<input checked="" type="checkbox"/> <i>Modern design</i>
1.2 Facilities for walking & cycling		
REQUIRED	1.2.1 Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations (<i>see Official Plan policy 4.3.3</i>)	<input checked="" type="checkbox"/> <i>MUP and sidewalks proposed</i>
REQUIRED	1.2.2 Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible (<i>see Official Plan policy 4.3.12</i>)	<input checked="" type="checkbox"/> <i>Internal pathways shown on current plan</i>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3 Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks (see <i>Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/> Assumed to be built to city standards
REQUIRED	1.2.4 Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps (see <i>Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/> Assumed to be built to city standards
REQUIRED	1.2.5 Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (see <i>Official Plan policy 4.3.11</i>)	<input checked="" type="checkbox"/> MUP and sidewalks proposed connecting to other MUPs
BASIC	1.2.6 Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	<input checked="" type="checkbox"/> MUP and sidewalks proposed connecting to Trim Station
BASIC	1.2.7 Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	<input type="checkbox"/>
BASIC	1.2.8 Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	<input type="checkbox"/>
1.3 Amenities for walking & cycling		
BASIC	1.3.1 Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	<input type="checkbox"/>
BASIC	1.3.2 Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
2. WALKING & CYCLING: END-OF-TRIP FACILITIES		
2.1 Bicycle parking		
REQUIRED	2.1.1 Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see <i>Official Plan policy 4.3.6</i>)	<input type="checkbox"/> Unknown at this time
REQUIRED	2.1.2 Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas (see <i>Zoning By-law Section 111</i>)	<input type="checkbox"/> Unknown at this time
REQUIRED	2.1.3 Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored (see <i>Zoning By-law Section 111</i>)	<input type="checkbox"/> Unknown at this time
BASIC	2.1.4 Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	<input type="checkbox"/>
2.2 Secure bicycle parking		
REQUIRED	2.2.1 Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see <i>Zoning By-law Section 111</i>)	<input type="checkbox"/> Unknown at this time
BETTER	2.2.2 Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	<input type="checkbox"/>
2.3 Bicycle repair station		
BETTER	2.3.1 Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	<input type="checkbox"/>
3. TRANSIT		
3.1 Customer amenities		
BASIC	3.1.1 Provide shelters, lighting and benches at any on-site transit stops	<input type="checkbox"/>
BASIC	3.1.2 Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	<input type="checkbox"/>
BETTER	3.1.3 Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
4. RIDESHARING		
4.1 Pick-up & drop-off facilities		
BASIC	4.1.1 Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	<input type="checkbox"/>
5. CARSHARING & BIKESHARING		
5.1 Carshare parking spaces		
BETTER	5.1.1 Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses (see <i>Zoning By-law Section 94</i>)	<input type="checkbox"/>
5.2 Bikeshare station location		
BETTER	5.2.1 Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	<input type="checkbox"/>
6. PARKING		
6.1 Number of parking spaces		
REQUIRED	6.1.1 Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	<input checked="" type="checkbox"/> Quantity of parking unknown at this time, but assumed to meet
BASIC	6.1.2 Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	<input type="checkbox"/>
BASIC	6.1.3 Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly (see <i>Zoning By-law Section 104</i>)	<input type="checkbox"/>
BETTER	6.1.4 Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking (see <i>Zoning By-law Section 111</i>)	<input type="checkbox"/>
6.2 Separate long-term & short-term parking areas		
BETTER	6.2.1 Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	<input type="checkbox"/>

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend	
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance
★	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
1. TDM PROGRAM MANAGEMENT		
1.1 Program coordinator		
BASIC	★ 1.1.1 Designate an internal coordinator, or contract with an external coordinator	<input checked="" type="checkbox"/>
1.2 Travel surveys		
BETTER	1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	<input type="checkbox"/>
2. WALKING AND CYCLING		
2.1 Information on walking/cycling routes & destinations		
BASIC	2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances (<i>multi-family, condominium</i>)	<input type="checkbox"/>
2.2 Bicycle skills training		
BETTER	2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses	<input checked="" type="checkbox"/>

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
3. TRANSIT		
3.1 Transit information		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances (<i>multi-family, condominium</i>)	<input type="checkbox"/>
BETTER	3.1.2 Provide real-time arrival information display at entrances (<i>multi-family, condominium</i>)	<input checked="" type="checkbox"/>
3.2 Transit fare incentives		
BASIC ★	3.2.1 Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	<input checked="" type="checkbox"/>
BETTER	3.2.2 Offer at least one year of free monthly transit passes on residence purchase/move-in	<input type="checkbox"/>
3.3 Enhanced public transit service		
BETTER ★	3.3.1 Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels (<i>subdivision</i>)	<input type="checkbox"/>
3.4 Private transit service		
BETTER	3.4.1 Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	<input type="checkbox"/>
4. CARSHARING & BIKESHARING		
4.1 Bikeshare stations & memberships		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station (<i>multi-family</i>)	<input type="checkbox"/>
BETTER	4.1.2 Provide residents with bikeshare memberships, either free or subsidized (<i>multi-family</i>)	<input checked="" type="checkbox"/>
4.2 Carshare vehicles & memberships		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	<input type="checkbox"/>
BETTER	4.2.2 Provide residents with carshare memberships, either free or subsidized	<input checked="" type="checkbox"/>
5. PARKING		
5.1 Priced parking		
BASIC ★	5.1.1 Unbundle parking cost from purchase price (<i>condominium</i>)	<input type="checkbox"/>
BASIC ★	5.1.2 Unbundle parking cost from monthly rent (<i>multi-family</i>)	<input checked="" type="checkbox"/>

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
6. TDM MARKETING & COMMUNICATIONS		
6.1 Multimodal travel information		
BASIC ★	6.1.1 Provide a multimodal travel option information package to new residents	<input checked="" type="checkbox"/>
6.2 Personalized trip planning		
BETTER ★	6.2.1 Offer personalized trip planning to new residents	<input type="checkbox"/>

APPENDIX J

MMLOS INTERSECTIONS

Multi-Modal Level of Service - Intersections Form

Consultant
Scenario
Comments

Parsons
1009 Trim Road

Project
Date

477526-01000
20-Oct-21

Unlocked Rows for Replicating

INTERSECTIONS		Old Trim/Hwy-174				Trim/Hwy-174 (Realigned)				Intersection C			
Crossing Side		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Pedestrian	Lanes	9	7	10+		5	6	10+					
	Median	No Median - 2.4 m	No Median - 2.4 m	No Median - 2.4 m		No Median - 2.4 m	No Median - 2.4 m	Median > 2.4 m					
	Conflicting Left Turns	Protected	Protected	Protected		Protected	Protected	Protected					
	Conflicting Right Turns	Permissive or yield control	Permissive or yield control	Permissive or yield control		Permissive or yield control	Permissive or yield control	Permissive or yield control					
	Right Turns on Red (RTor)?	RTOR allowed	RTOR allowed	RTOR allowed		RTOR allowed	RTOR allowed	RTOR allowed					
	Ped Signal Leading Interval?	No	No	No		No	No	No					
	Right Turn Channel	No Channel	No Channel	No Channel		Conv'tl without Receiving Lane	Conv'tl without Receiving Lane	Conv'tl without Receiving Lane					
	Corner Radius	5-10m	10-15m	10-15m		10-15m	10-15m	10-15m					
	Crosswalk Type	Std transverse markings	Std transverse markings	Std transverse markings		Std transverse markings	Textured/coloured pavement	Textured/coloured pavement					
	PETSI Score	-20	12	-37		49	35	-20					
	Ped. Exposure to Traffic LoS	#N/A	F	#N/A	-	D	E	#N/A	-	-	-	-	-
	Cycle Length	120	120	120									
Effective Walk Time	5	8	8										
Average Pedestrian Delay	55	52	52										
Pedestrian Delay LoS	E	E	E	-	-	-	-	-	-	-	-	-	
Level of Service	#N/A	F	#N/A	-	D	E	#N/A	-	-	-	-	-	
		#N/A				#N/A				-			
Approach From		NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST
Bicycle	Bicycle Lane Arrangement on Approach	Mixed Traffic	Mixed Traffic	Pocket Bike Lane	Pocket Bike Lane	Mixed Traffic	Mixed Traffic	Curb Bike Lane, Cycletrack or MUP					
	Right Turn Lane Configuration	≤ 50 m	≤ 50 m	Bike lane shifts to the left of right turn	Bike lane shifts to the left of right turn	≤ 50 m	≤ 50 m	Not Applicable					
	Right Turning Speed	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	≤ 25 km/h	Not Applicable					
	Cyclist relative to RT motorists	D	D	D	D	D	D	Not Applicable	-	-	-	-	-
	Separated or Mixed Traffic	Mixed Traffic	Mixed Traffic	Separated	Separated	Mixed Traffic	Mixed Traffic	Separated	-	-	-	-	-
	Left Turn Approach	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed	No lane crossed					
	Operating Speed	≥ 60 km/h	≥ 60 km/h	> 50 to < 60 km/h	> 50 to < 60 km/h	≥ 60 km/h	≥ 60 km/h	≥ 60 km/h					
	Left Turning Cyclist	C	C	C	C	C	C	C	-	-	-	-	-
Level of Service	D	D	D	D	D	D	C	-	-	-	-	-	
		D				D				-			
Transit	Average Signal Delay	≤ 30 sec	> 40 sec			≤ 40 sec	> 40 sec						
	Level of Service	D	F	-	-	E	F	-	-	-	-	-	-
		F				F				-			
Truck	Effective Corner Radius	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m	> 15 m				
	Number of Receiving Lanes on Departure from Intersection	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2	≥ 2				
	Level of Service	A	A	A	A	A	A	A	A	-	-	-	-
		A				A				-			
Auto	Volume to Capacity Ratio												
	Level of Service												
		-				-				-			

APPENDIX K

SYCNHRO: EXISTING CONDITIONS

Lanes, Volumes, Timings
2: Realigned Trim & Hwy 174

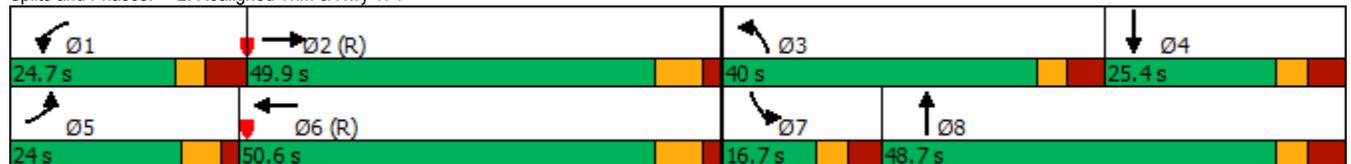
Existing AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	258	5	89	1143	13	760	34	42	16	61	60
Future Volume (vph)	33	258	5	89	1143	13	760	34	42	16	61	60
Satd. Flow (prot)	1695	3330	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1673	3330	0	893	4871	1460	1349	1784	1315	1009	1784	1270
Satd. Flow (RTOR)		1				247			247			247
Lane Group Flow (vph)	37	293	0	99	1270	14	844	38	47	18	68	67
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	24.0	49.9		24.7	50.6		40.0	48.7		16.7	25.4	
Total Split (%)	17.1%	35.6%		17.6%	36.1%		28.6%	34.8%		11.9%	18.1%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	8.5	49.9		13.2	58.4	140.0	29.6	48.7	140.0	7.1	18.0	140.0
Actuated g/C Ratio	0.06	0.36		0.09	0.42	1.00	0.21	0.35	1.00	0.05	0.13	1.00
v/c Ratio	0.36	0.25		0.62	0.62	0.01	0.83	0.06	0.04	0.21	0.30	0.05
Control Delay	72.2	33.8		77.3	35.4	0.0	60.8	32.7	0.0	68.9	59.2	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.2	33.8		77.3	35.4	0.0	60.8	32.7	0.0	68.9	59.2	0.1
LOS	E	C		E	D	A	E	C	A	E	E	A
Approach Delay		38.1			38.0			56.5				34.4
Approach LOS		D			D			E				C
Queue Length 50th (m)	10.0	30.3		26.8	104.7	0.0	79.3	6.4	0.0	4.9	17.3	0.0
Queue Length 95th (m)	21.4	44.9		44.8	129.3	0.0	93.0	16.3	0.0	13.0	32.4	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	217	1187		208	2032	1460	1119	620	1315	118	229	1270
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.25		0.48	0.63	0.01	0.75	0.06	0.04	0.15	0.30	0.05

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 44.0
 Intersection LOS: D
 Intersection Capacity Utilization 66.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Realigned Trim & Hwy 174



1: Realigned Trim & Jeanne D'Arc/Inlet Private

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	63	74	8	84	19
Future Vol, veh/h	4	63	74	8	84	19
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	70	82	9	93	21
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7	8	8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	82%	0%	90%
Vol Thru, %	0%	6%	10%
Vol Right, %	18%	94%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	103	67	82
LT Vol	84	0	74
Through Vol	0	4	8
RT Vol	19	63	0
Lane Flow Rate	114	74	91
Geometry Grp	1	1	1
Degree of Util (X)	0.136	0.075	0.111
Departure Headway (Hd)	4.27	3.641	4.374
Convergence, Y/N	Yes	Yes	Yes
Cap	831	965	810
Service Time	2.344	1.735	2.45
HCM Lane V/C Ratio	0.137	0.077	0.112
HCM Control Delay	8	7	8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.2	0.4

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	58	0	0	72	20	0	0	0	9	0	3
Future Vol, veh/h	8	58	0	0	72	20	0	0	0	9	0	3
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	64	0	0	80	22	0	0	0	10	0	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.5	7.4	0	7.4
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	12%	0%	75%
Vol Thru, %	100%	88%	78%	0%
Vol Right, %	0%	0%	22%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	66	92	12
LT Vol	0	8	0	9
Through Vol	0	58	72	0
RT Vol	0	0	20	3
Lane Flow Rate	0	73	102	13
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.083	0.11	0.016
Departure Headway (Hd)	4.247	4.058	3.882	4.235
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	883	923	836
Service Time	2.321	2.082	1.905	2.305
HCM Lane V/C Ratio	0	0.083	0.111	0.016
HCM Control Delay	7.3	7.5	7.4	7.4
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.3	0.4	0

Lanes, Volumes, Timings
2: Realigned Trim & Hwy 174

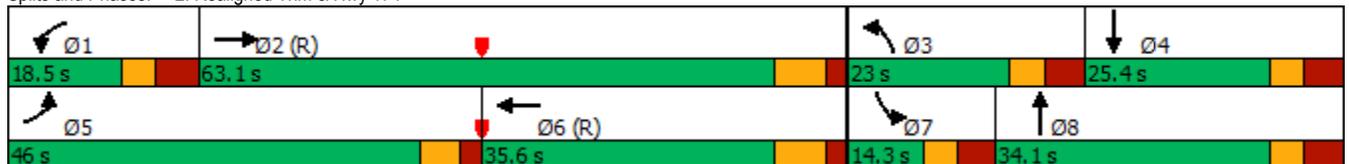
Existing PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	1068	5	67	411	17	406	51	90	17	70	36
Future Volume (vph)	36	1068	5	67	411	17	406	51	90	17	70	36
Satd. Flow (prot)	1695	3375	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1630	3375	0	1472	4871	1460	1515	1784	1315	1048	1784	1270
Satd. Flow (RTOR)						329			329			329
Lane Group Flow (vph)	40	1193	0	74	457	19	451	57	100	19	78	40
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	46.0	63.1		18.5	35.6		23.0	34.1		14.3	25.4	
Total Split (%)	35.4%	48.5%		14.2%	27.4%		17.7%	26.2%		11.0%	19.5%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	8.5	60.0		9.8	62.2	130.0	15.8	35.2	130.0	6.7	18.0	130.0
Actuated g/C Ratio	0.07	0.46		0.08	0.48	1.00	0.12	0.27	1.00	0.05	0.14	1.00
v/c Ratio	0.36	0.77		0.58	0.20	0.01	0.78	0.12	0.08	0.22	0.32	0.03
Control Delay	66.3	34.6		76.3	20.8	0.0	65.4	39.4	0.1	64.9	54.4	0.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.3	34.6		76.3	20.8	0.0	65.4	39.4	0.1	64.9	54.4	0.1
LOS	E	C		E	C	A	E	D	A	E	D	A
Approach Delay		35.6			27.5			52.2			40.0	
Approach LOS		D			C			D			D	
Queue Length 50th (m)	10.0	143.1		18.5	25.6	0.0	39.7	10.1	0.0	4.8	18.3	0.0
Queue Length 95th (m)	21.5	168.8		34.5	34.1	0.0	52.6	24.1	0.0	13.0	33.7	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	521	1566		143	2329	1460	595	483	1315	96	247	1270
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.76		0.52	0.20	0.01	0.76	0.12	0.08	0.20	0.32	0.03

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 38.1
 Intersection Capacity Utilization 69.0%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 2: Realigned Trim & Hwy 174



1: Realigned Trim & Jeanne D'Arc/Inlet Private

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	98	31	3	59	45
Future Vol, veh/h	7	98	31	3	59	45
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	109	34	3	66	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.2	7.7	7.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	57%	0%	91%
Vol Thru, %	0%	7%	9%
Vol Right, %	43%	93%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	104	105	34
LT Vol	59	0	31
Through Vol	0	7	3
RT Vol	45	98	0
Lane Flow Rate	116	117	38
Geometry Grp	1	1	1
Degree of Util (X)	0.13	0.117	0.046
Departure Headway (Hd)	4.055	3.606	4.411
Convergence, Y/N	Yes	Yes	Yes
Cap	879	982	805
Service Time	2.102	1.67	2.477
HCM Lane V/C Ratio	0.132	0.119	0.047
HCM Control Delay	7.7	7.2	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.4	0.1

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	93	0	0	54	8	0	0	0	12	0	4
Future Vol, veh/h	7	93	0	0	54	8	0	0	0	12	0	4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	103	0	0	60	9	0	0	0	13	0	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.3	0	7.4
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	7%	0%	75%
Vol Thru, %	100%	93%	87%	0%
Vol Right, %	0%	0%	13%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	100	62	16
LT Vol	0	7	0	12
Through Vol	0	93	54	0
RT Vol	0	0	8	4
Lane Flow Rate	0	111	69	18
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.124	0.076	0.021
Departure Headway (Hd)	4.258	4.031	3.971	4.242
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	890	900	834
Service Time	2.339	2.053	2.002	2.318
HCM Lane V/C Ratio	0	0.125	0.077	0.022
HCM Control Delay	7.3	7.6	7.3	7.4
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.4	0.2	0.1

APPENDIX L

SYCNHRO: BACKGROUND CONDITIONS

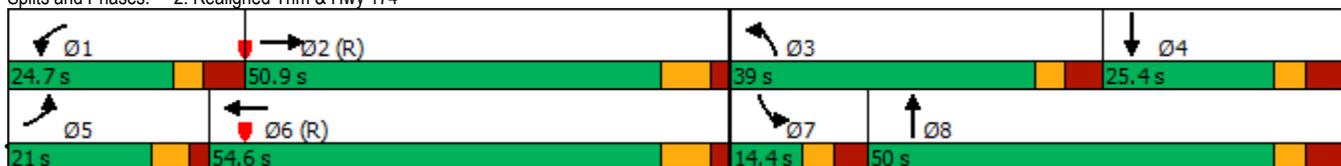


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	161	356	5	114	1492	19	986	64	61	38	126	272
Future Volume (vph)	161	356	5	114	1492	19	986	64	61	38	126	272
Satd. Flow (prot)	1695	3349	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1678	3349	0	965	4871	1460	1615	1784	1315	1033	1784	1270
Satd. Flow (RTOR)		1				247			247			272
Lane Group Flow (vph)	161	361	0	114	1492	19	986	64	61	38	126	272
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	21.0	50.9		24.7	54.6		39.0	50.0		14.4	25.4	
Total Split (%)	15.0%	36.4%		17.6%	39.0%		27.9%	35.7%		10.3%	18.1%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	14.8	47.4		14.1	48.1	140.0	31.2	45.0	140.0	7.0	18.0	140.0
Actuated g/C Ratio	0.11	0.34		0.10	0.34	1.00	0.22	0.32	1.00	0.05	0.13	1.00
v/c Ratio	0.90	0.32		0.67	0.89	0.01	0.93	0.11	0.05	0.45	0.55	0.21
Control Delay	106.5	36.0		79.5	51.4	0.0	67.8	35.6	0.1	81.2	67.1	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.5	36.0		79.5	51.4	0.0	67.8	35.6	0.1	81.2	67.1	0.4
LOS	F	D		E	D	A	E	D	A	F	E	A
Approach Delay		57.7			52.8			62.2				26.7
Approach LOS		E			D			E				C
Queue Length 50th (m)	44.7	39.3		30.8	144.0	0.0	95.1	12.8	0.0	10.4	33.2	0.0
Queue Length 95th (m)	#85.7	54.3		50.6	164.6	0.0	#118.1	24.4	0.0	22.4	54.6	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	181	1135		208	1675	1460	1085	572	1315	90	229	1270
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.32		0.55	0.89	0.01	0.91	0.11	0.05	0.42	0.55	0.21

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 53.2
 Intersection Capacity Utilization 97.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Realigned Trim & Hwy 174



1: Realigned Trim & Jeanne D'Arc/Inlet Private

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	126	308	9	150	108
Future Vol, veh/h	5	126	308	9	150	108
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	126	308	9	150	108
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	11.7	10.5
HCM LOS	A	B	B

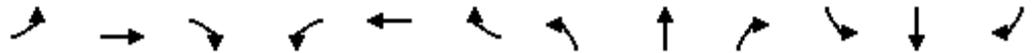
Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	58%	0%	97%
Vol Thru, %	0%	4%	3%
Vol Right, %	42%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	258	131	317
LT Vol	150	0	308
Through Vol	0	5	9
RT Vol	108	126	0
Lane Flow Rate	258	131	317
Geometry Grp	1	1	1
Degree of Util (X)	0.348	0.16	0.433
Departure Headway (Hd)	4.852	4.395	4.917
Convergence, Y/N	Yes	Yes	Yes
Cap	738	808	729
Service Time	2.909	2.462	2.974
HCM Lane V/C Ratio	0.35	0.162	0.435
HCM Control Delay	10.5	8.3	11.7
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.6	0.6	2.2

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	120	0	0	139	20	0	0	0	10	0	4
Future Vol, veh/h	10	120	0	0	139	20	0	0	0	10	0	4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	120	0	0	139	20	0	0	0	10	0	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	7.9	0	7.6
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	8%	0%	71%
Vol Thru, %	100%	92%	87%	0%
Vol Right, %	0%	0%	13%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	130	159	14
LT Vol	0	10	0	10
Through Vol	0	120	139	0
RT Vol	0	0	20	4
Lane Flow Rate	0	130	159	14
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.148	0.176	0.018
Departure Headway (Hd)	4.568	4.091	3.979	4.52
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	874	898	797
Service Time	2.569	2.133	2.018	2.52
HCM Lane V/C Ratio	0	0.149	0.177	0.018
HCM Control Delay	7.6	7.8	7.9	7.6
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.5	0.6	0.1

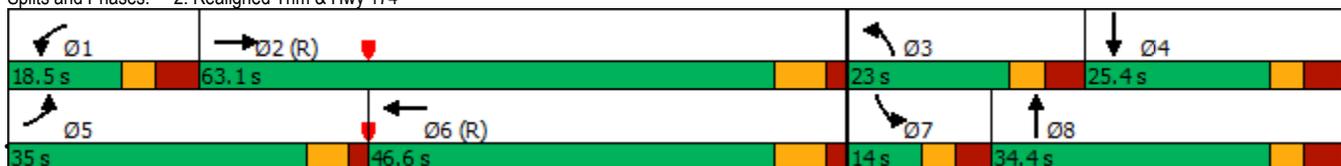


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	1405	5	130	598	37	539	111	151	35	127	225
Future Volume (vph)	237	1405	5	130	598	37	539	111	151	35	127	225
Satd. Flow (prot)	1695	3378	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1642	3378	0	1530	4871	1460	1730	1784	1315	1095	1784	1270
Satd. Flow (RTOR)						329			329			329
Lane Group Flow (vph)	237	1410	0	130	598	37	539	111	151	35	127	225
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	35.0	63.1		18.5	46.6		23.0	34.4		14.0	25.4	
Total Split (%)	26.9%	48.5%		14.2%	35.8%		17.7%	26.5%		10.8%	19.5%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	22.9	55.7		11.0	45.3	130.0	16.0	32.8	130.0	6.7	18.0	130.0
Actuated g/C Ratio	0.18	0.43		0.08	0.35	1.00	0.12	0.25	1.00	0.05	0.14	1.00
v/c Ratio	0.80	0.97		0.91	0.35	0.03	0.92	0.25	0.11	0.40	0.51	0.18
Control Delay	69.9	54.8		113.1	33.0	0.0	78.3	43.0	0.2	73.2	60.1	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.9	54.8		113.1	33.0	0.0	78.3	43.0	0.2	73.2	60.1	0.3
LOS	E	D		F	C	A	E	D	A	E	E	A
Approach Delay		57.0			45.0			58.7			26.5	
Approach LOS		E			D			E			C	
Queue Length 50th (m)	58.5	183.0		33.6	41.6	0.0	49.2	24.3	0.0	8.8	30.6	0.0
Queue Length 95th (m)	83.1	#234.1		#71.5	56.1	0.0	#70.8	41.5	0.0	19.9	51.2	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	378	1452		143	1698	1460	586	449	1315	92	247	1270
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.97		0.91	0.35	0.03	0.92	0.25	0.11	0.38	0.51	0.18

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 51.5
 Intersection LOS: D
 Intersection Capacity Utilization 99.0%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Realigned Trim & Hwy 174



Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	9	199	194	3	112	265
Future Vol, veh/h	9	199	194	3	112	265
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	199	194	3	112	265
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.2	10.5	11.7
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	30%	0%	98%
Vol Thru, %	0%	4%	2%
Vol Right, %	70%	96%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	377	208	197
LT Vol	112	0	194
Through Vol	0	9	3
RT Vol	265	199	0
Lane Flow Rate	377	208	197
Geometry Grp	1	1	1
Degree of Util (X)	0.474	0.261	0.288
Departure Headway (Hd)	4.528	4.509	5.259
Convergence, Y/N	Yes	Yes	Yes
Cap	792	788	678
Service Time	2.59	2.586	3.339
HCM Lane V/C Ratio	0.476	0.264	0.291
HCM Control Delay	11.7	9.2	10.5
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.6	1	1.2

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	193	0	0	107	8	0	0	0	13	0	5
Future Vol, veh/h	9	193	0	0	107	8	0	0	0	13	0	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	193	0	0	107	8	0	0	0	13	0	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	7.7	0	7.7
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	0%	72%
Vol Thru, %	100%	96%	93%	0%
Vol Right, %	0%	0%	7%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	202	115	18
LT Vol	0	9	0	13
Through Vol	0	193	107	0
RT Vol	0	0	8	5
Lane Flow Rate	0	202	115	18
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.228	0.13	0.023
Departure Headway (Hd)	4.638	4.06	4.075	4.591
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	881	873	784
Service Time	2.639	2.098	2.13	2.591
HCM Lane V/C Ratio	0	0.229	0.132	0.023
HCM Control Delay	7.6	8.3	7.7	7.7
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.9	0.4	0.1

APPENDIX M

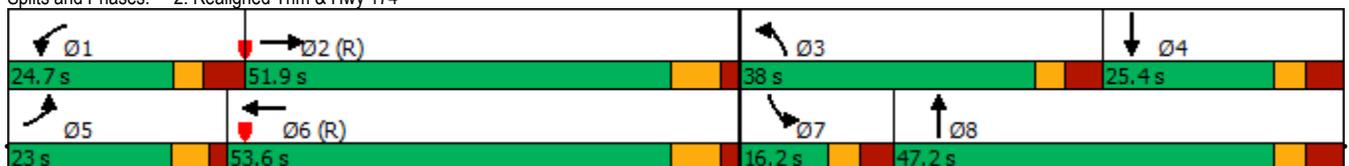
SYCNHRO: FUTURE PROPOSED CONDITIONDS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	356	5	114	1492	22	986	76	61	42	144	335
Future Volume (vph)	203	356	5	114	1492	22	986	76	61	42	144	335
Satd. Flow (prot)	1695	3346	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1695	3346	0	885	4871	1517	4780	1784	1268	973	1784	1517
Satd. Flow (RTOR)		1				247			247			335
Lane Group Flow (vph)	203	361	0	114	1492	22	986	76	61	42	144	335
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	23.0	51.9		24.7	53.6		38.0	47.2		16.2	25.4	
Total Split (%)	16.4%	37.1%		17.6%	38.3%		27.1%	33.7%		11.6%	18.1%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	17.9	48.1		14.1	45.8	140.0	30.5	43.2	140.0	8.1	18.0	140.0
Actuated g/C Ratio	0.13	0.34		0.10	0.33	1.00	0.22	0.31	1.00	0.06	0.13	1.00
v/c Ratio	0.94	0.31		0.67	0.94	0.01	0.95	0.14	0.05	0.43	0.63	0.22
Control Delay	108.1	35.3		79.5	57.5	0.0	71.4	37.7	0.1	77.0	71.0	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	108.1	35.3		79.5	57.5	0.0	71.4	37.7	0.1	77.0	71.0	0.3
LOS	F	D		E	E	A	E	D	A	E	E	A
Approach Delay		61.5			58.3			65.2			26.0	
Approach LOS		E			E			E			C	
Queue Length 50th (m)	57.0	38.8		30.8	145.7	0.0	95.9	15.7	0.0	11.4	38.4	0.0
Queue Length 95th (m)	#107.5	53.7		50.6	#169.4	0.0	#121.6	28.8	0.0	23.9	61.5	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	215	1150		208	1614	1517	1051	551	1268	112	229	1517
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.31		0.55	0.92	0.01	0.94	0.14	0.05	0.38	0.63	0.22

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 56.4
 Intersection LOS: E
 Intersection Capacity Utilization 93.6%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Realigned Trim & Hwy 174



Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	3	150	163	3	4	4
Future Vol, veh/h	3	150	163	3	4	4
Conflicting Peds, #/hr	125	0	0	125	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	150	163	3	4	4
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	291	0	-	0	446	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	156	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1271	-	-	-	570	749
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	872	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1136	-	-	-	454	670
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	780	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.2	0	11.8			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1136	-	-	-	541	
HCM Lane V/C Ratio	0.003	-	-	-	0.015	
HCM Control Delay (s)	8.2	0	-	-	11.8	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0	

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	5	130	308	9	0	153	54	108	0	81	0
Future Vol, veh/h	0	5	130	308	9	0	153	54	108	0	81	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	130	308	9	0	153	54	108	0	81	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	13.3	12.5	9.6
HCM LOS	A	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	49%	0%	97%	0%
Vol Thru, %	17%	4%	3%	100%
Vol Right, %	34%	96%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	315	135	317	81
LT Vol	153	0	308	0
Through Vol	54	5	9	81
RT Vol	108	130	0	0
Lane Flow Rate	315	135	317	81
Geometry Grp	1	1	1	1
Degree of Util (X)	0.454	0.186	0.476	0.128
Departure Headway (Hd)	5.183	4.951	5.411	5.675
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	724	666	631
Service Time	3.215	2.992	3.444	3.719
HCM Lane V/C Ratio	0.453	0.186	0.476	0.128
HCM Control Delay	12.5	9.1	13.3	9.6
HCM Lane LOS	B	A	B	A
HCM 95th-tile Q	2.4	0.7	2.6	0.4

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	123	0	0	143	20	0	0	0	10	0	4
Future Vol, veh/h	10	123	0	0	143	20	0	0	0	10	0	4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	123	0	0	143	20	0	0	0	10	0	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	7.9	0	7.6
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	8%	0%	71%
Vol Thru, %	100%	92%	88%	0%
Vol Right, %	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	133	163	14
LT Vol	0	10	0	10
Through Vol	0	123	143	0
RT Vol	0	0	20	4
Lane Flow Rate	0	133	163	14
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.151	0.18	0.018
Departure Headway (Hd)	4.581	4.094	3.983	4.533
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	872	896	794
Service Time	2.582	2.136	2.023	2.533
HCM Lane V/C Ratio	0	0.153	0.182	0.018
HCM Control Delay	7.6	7.9	7.9	7.6
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.5	0.7	0.1

Lanes, Volumes, Timings
2: Realigned Trim & Hwy 174

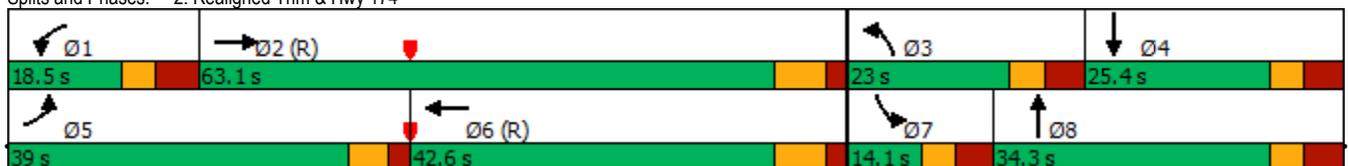
Projected 2029 PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	301	1405	5	130	598	42	539	129	151	38	140	270
Future Volume (vph)	301	1405	5	130	598	42	539	129	151	38	140	270
Satd. Flow (prot)	1695	3378	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1695	3378	0	1513	4871	1517	4780	1784	1268	1048	1784	1517
Satd. Flow (RTOR)						329			329			329
Lane Group Flow (vph)	301	1410	0	130	598	42	539	129	151	38	140	270
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	39.0	63.1		18.5	42.6		23.0	34.3		14.1	25.4	
Total Split (%)	30.0%	48.5%		14.2%	32.8%		17.7%	26.4%		10.8%	19.5%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	27.4	55.7		11.0	40.8	130.0	16.0	29.9	130.0	6.8	18.0	130.0
Actuated g/C Ratio	0.21	0.43		0.08	0.31	1.00	0.12	0.23	1.00	0.05	0.14	1.00
v/c Ratio	0.84	0.97		0.91	0.39	0.03	0.92	0.31	0.12	0.43	0.57	0.18
Control Delay	69.6	54.8		113.1	36.7	0.0	78.3	45.7	0.2	74.7	62.2	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	54.8		113.1	36.7	0.0	78.3	45.7	0.2	74.7	62.2	0.3
LOS	E	D		F	D	A	E	D	A	E	E	A
Approach Delay		57.4			47.6			58.8			25.9	
Approach LOS		E			D			E			C	
Queue Length 50th (m)	73.9	183.0		33.6	44.2	0.0	49.2	28.5	0.0	9.6	34.0	0.0
Queue Length 95th (m)	102.6	#234.1		#71.5	58.7	0.0	#70.8	47.2	0.0	21.3	55.6	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	430	1452		143	1529	1517	586	410	1268	93	247	1517
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.97		0.91	0.39	0.03	0.92	0.31	0.12	0.41	0.57	0.18

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 51.9
 Intersection LOS: D
 Intersection Capacity Utilization 92.4%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Realigned Trim & Hwy 174



Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	9	214	133	8	7	7
Future Vol, veh/h	9	214	133	8	7	7
Conflicting Peds, #/hr	150	0	0	150	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	214	133	8	7	7
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	291	0	-	0	519	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	232	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1271	-	-	-	517	752
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	807	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1110	-	-	-	390	656
Mov Cap-2 Maneuver	-	-	-	-	390	-
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	705	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		12.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1110	-	-	-	489	
HCM Lane V/C Ratio	0.008	-	-	-	0.029	
HCM Control Delay (s)	8.3	0	-	-	12.6	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection	
Intersection Delay, s/veh	13.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	9	202	194	3	0	117	82	265	0	58	0
Future Vol, veh/h	0	9	202	194	3	0	117	82	265	0	58	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	9	202	194	3	0	117	82	265	0	58	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	11.6	15.7	9.4
HCM LOS	B	B	C	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	0%	98%	0%
Vol Thru, %	18%	4%	2%	100%
Vol Right, %	57%	96%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	464	211	197	58
LT Vol	117	0	194	0
Through Vol	82	9	3	58
RT Vol	265	202	0	0
Lane Flow Rate	464	211	197	58
Geometry Grp	1	1	1	1
Degree of Util (X)	0.626	0.296	0.318	0.093
Departure Headway (Hd)	4.855	5.058	5.816	5.767
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	742	709	617	619
Service Time	2.888	3.102	3.86	3.819
HCM Lane V/C Ratio	0.625	0.298	0.319	0.094
HCM Control Delay	15.7	10.2	11.6	9.4
HCM Lane LOS	C	B	B	A
HCM 95th-tile Q	4.4	1.2	1.4	0.3

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	198	0	0	110	9	0	0	0	13	0	5
Future Vol, veh/h	8	198	0	0	110	9	0	0	0	13	0	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	198	0	0	110	9	0	0	0	13	0	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	7.8	0	7.7
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	0%	72%
Vol Thru, %	100%	96%	92%	0%
Vol Right, %	0%	0%	8%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	206	119	18
LT Vol	0	8	0	13
Through Vol	0	198	110	0
RT Vol	0	0	9	5
Lane Flow Rate	0	206	119	18
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.232	0.135	0.023
Departure Headway (Hd)	4.654	4.062	4.074	4.607
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	882	873	782
Service Time	2.655	2.101	2.129	2.607
HCM Lane V/C Ratio	0	0.234	0.136	0.023
HCM Control Delay	7.7	8.3	7.8	7.7
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.9	0.5	0.1

APPENDIX N

SIMTRAFFIC 95TH PERCENTILE RESULTS

Intersection: 1: Realigned Trim & Jeanne D'Arc/Inlet Private

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (m)	38.8	137.6	84.4	25.0
Average Queue (m)	17.0	92.8	47.5	10.6
95th Queue (m)	31.8	162.0	72.8	20.7
Link Distance (m)	54.0	130.6	254.2	73.4
Upstream Blk Time (%)	0	30		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (m)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 2: Realigned Trim & Hwy 174

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	TR	L	T	T	T	R	L	L	L	T
Maximum Queue (m)	115.6	86.5	74.0	91.8	137.9	136.7	126.6	37.2	119.1	116.4	113.0	61.8
Average Queue (m)	73.8	36.4	28.3	33.2	105.3	103.5	91.3	4.8	109.2	98.2	78.1	14.8
95th Queue (m)	124.6	84.9	69.2	64.5	131.3	131.4	122.7	25.1	125.2	124.3	114.9	40.6
Link Distance (m)		571.3	571.3		701.9	701.9	701.9					
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	150.0			150.0				30.0	200.0	200.0		
Storage Blk Time (%)	2	0			0		33	0				1
Queuing Penalty (veh)	4	0			0		7	0				0

Intersection: 2: Realigned Trim & Hwy 174

Movement	NB	SB	SB	SB
Directions Served	R	L	T	R
Maximum Queue (m)	8.5	31.7	114.8	47.5
Average Queue (m)	0.3	11.4	50.7	25.1
95th Queue (m)	6.3	24.8	94.2	63.5
Link Distance (m)			254.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	40.0	150.0		40.0
Storage Blk Time (%)	0		14	4
Queuing Penalty (veh)	0		51	8

Intersection: 1: Realigned Trim & Jeanne D'Arc/Inlet Private

Movement	EB	B6	WB	NB	SB
Directions Served	LTR	T	LTR	LTR	LTR
Maximum Queue (m)	70.1	11.4	70.0	266.4	18.1
Average Queue (m)	29.5	1.0	33.1	180.1	7.9
95th Queue (m)	58.5	10.1	76.1	310.6	15.5
Link Distance (m)	54.0	32.3	130.6	254.2	73.4
Upstream Blk Time (%)	6	0	3	6	
Queuing Penalty (veh)	14	1	0	29	
Storage Bay Dist (m)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Intersection: 2: Realigned Trim & Hwy 174

Movement	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	NB
Directions Served	L	T	TR	L	T	T	T	R	L	L	L	T
Maximum Queue (m)	157.4	344.6	333.7	80.4	75.7	69.9	64.5	13.5	110.2	93.1	64.7	68.9
Average Queue (m)	122.7	223.0	215.0	45.0	44.1	40.5	24.3	0.7	78.3	63.1	40.1	26.9
95th Queue (m)	199.9	390.2	377.3	81.4	65.1	62.1	53.8	8.8	106.0	87.1	64.0	53.6
Link Distance (m)		571.3	571.3		701.9	701.9	701.9					
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (m)	150.0			150.0				30.0	200.0	200.0		
Storage Blk Time (%)	28	13					2	0				5
Queuing Penalty (veh)	198	40					1	0				7

Intersection: 2: Realigned Trim & Hwy 174

Movement	NB	SB	SB	SB
Directions Served	R	L	T	R
Maximum Queue (m)	47.3	31.4	81.9	47.5
Average Queue (m)	4.8	11.5	35.8	11.1
95th Queue (m)	28.0	24.7	65.4	44.1
Link Distance (m)			254.2	
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (m)	40.0	150.0		40.0
Storage Blk Time (%)	0		8	0
Queuing Penalty (veh)	0		23	0

Intersection: 1: Realigned Trim & Jeanne D'Arc/Inlet Private

Movement	EB	B6	WB	NB	NB	SB
Directions Served	LTR	T	LTR	LT	R	LTR
Maximum Queue (m)	64.9	5.2	67.6	58.8	104.0	24.3
Average Queue (m)	29.4	0.3	27.8	25.7	34.8	8.6
95th Queue (m)	55.9	4.3	57.4	48.9	75.0	18.1
Link Distance (m)	54.0	32.3	129.5	254.2	254.2	73.4
Upstream Blk Time (%)	4	0			0	
Queuing Penalty (veh)	9	0			0	
Storage Bay Dist (m)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 1: Realigned Trim & Jeanne D'Arc/Inlet Private

Movement	EB	B6	WB	NB	NB	SB
Directions Served	LTR	T	LTR	LT	R	LTR
Maximum Queue (m)	68.1	8.3	78.4	128.2	56.6	23.2
Average Queue (m)	32.3	1.4	38.4	31.8	33.5	8.6
95th Queue (m)	63.1	12.5	81.4	78.4	57.9	17.5
Link Distance (m)	54.0	32.3	129.5	254.2		73.4
Upstream Blk Time (%)	9	1	0	0		
Queuing Penalty (veh)	21	2	0	0		
Storage Bay Dist (m)					50.0	
Storage Blk Time (%)				1	5	
Queuing Penalty (veh)				2	10	

Intersection: 1: Realigned Trim & Jeanne D'Arc/Inlet Private

Movement	EB	B6	WB	NB	NB	SB
Directions Served	LTR	T	LTR	L	TR	LTR
Maximum Queue (m)	71.9	17.2	62.3	57.4	222.0	21.0
Average Queue (m)	31.7	1.6	28.5	30.6	75.8	8.3
95th Queue (m)	65.3	12.8	60.3	67.1	174.3	16.6
Link Distance (m)	54.0	32.3	130.6		254.2	73.4
Upstream Blk Time (%)	11	1			0	
Queuing Penalty (veh)	24	2			1	
Storage Bay Dist (m)				50.0		
Storage Blk Time (%)				0	29	
Queuing Penalty (veh)				0	34	

APPENDIX O

SYCNHRO: FUTURE CONDITIONS IF MODE SHARE TARGETS NOT MET



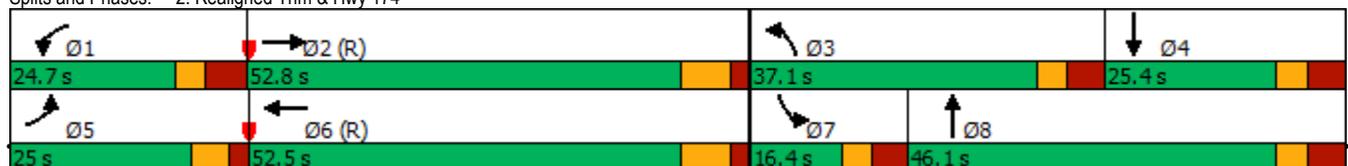
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	221	356	5	114	1492	23	986	82	61	45	155	374
Future Volume (vph)	221	356	5	114	1492	23	986	82	61	45	155	374
Satd. Flow (prot)	1695	3346	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1695	3346	0	885	4871	1517	4780	1784	1268	979	1784	1517
Satd. Flow (RTOR)		1				259			259			372
Lane Group Flow (vph)	221	361	0	114	1492	23	986	82	61	45	155	374
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	25.0	52.8		24.7	52.5		37.1	46.1		16.4	25.4	
Total Split (%)	17.9%	37.7%		17.6%	37.5%		26.5%	32.9%		11.7%	18.1%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	19.2	48.6		14.1	45.0	140.0	30.0	42.6	140.0	8.2	18.0	140.0
Actuated g/C Ratio	0.14	0.35		0.10	0.32	1.00	0.21	0.30	1.00	0.06	0.13	1.00
v/c Ratio	0.95	0.31		0.67	0.95	0.02	0.96	0.15	0.05	0.45	0.68	0.25
Control Delay	107.7	34.8		79.5	60.5	0.0	74.6	38.5	0.1	77.6	73.8	0.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.7	34.8		79.5	60.5	0.0	74.6	38.5	0.1	77.6	73.8	0.4
LOS	F	C		E	E	A	E	D	A	E	E	A
Approach Delay		62.5			60.9			67.9				26.3
Approach LOS		E			E			E				C
Queue Length 50th (m)	61.7	38.5		30.8	147.6	0.0	96.8	17.2	0.0	12.2	41.6	0.0
Queue Length 95th (m)	#112.6	53.1		50.6	#177.8	0.0	#124.7	31.1	0.0	25.3	#68.0	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	232	1162		208	1576	1517	1025	542	1268	115	229	1517
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.31		0.55	0.95	0.02	0.96	0.15	0.05	0.39	0.68	0.25

Intersection Summary

Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 58.1
 Intersection Capacity Utilization 94.9%
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 2: Realigned Trim & Hwy 174



Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	4	150	163	5	7	7
Future Vol, veh/h	4	150	163	5	7	7
Conflicting Peds, #/hr	125	0	0	125	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	150	163	5	7	7
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	293	0	-	0	449	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	158	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1269	-	-	-	568	748
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	871	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1135	-	-	-	452	669
Mov Cap-2 Maneuver	-	-	-	-	452	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	779	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.2	0	11.9			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1135	-	-	-	539	
HCM Lane V/C Ratio	0.004	-	-	-	0.026	
HCM Control Delay (s)	8.2	0	-	-	11.9	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection	
Intersection Delay, s/veh	12.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	133	308	9	0	155	77	108	0	131	0
Future Vol, veh/h	0	5	133	308	9	0	155	77	108	0	131	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	5	133	308	9	0	155	77	108	0	131	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.6	14.3	13.8	10.4
HCM LOS	A	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	46%	0%	97%	0%
Vol Thru, %	23%	4%	3%	100%
Vol Right, %	32%	96%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	340	138	317	131
LT Vol	155	0	308	0
Through Vol	77	5	9	131
RT Vol	108	133	0	0
Lane Flow Rate	340	138	317	131
Geometry Grp	1	1	1	1
Degree of Util (X)	0.505	0.201	0.499	0.211
Departure Headway (Hd)	5.348	5.237	5.664	5.799
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	673	682	634	616
Service Time	3.397	3.298	3.712	3.861
HCM Lane V/C Ratio	0.505	0.202	0.5	0.213
HCM Control Delay	13.8	9.6	14.3	10.4
HCM Lane LOS	B	A	B	B
HCM 95th-tile Q	2.9	0.7	2.8	0.8

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	124	0	0	146	20	0	0	0	10	0	4
Future Vol, veh/h	10	124	0	0	146	20	0	0	0	10	0	4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	124	0	0	146	20	0	0	0	10	0	4
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	7.9	0	7.6
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	7%	0%	71%
Vol Thru, %	100%	93%	88%	0%
Vol Right, %	0%	0%	12%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	134	166	14
LT Vol	0	10	0	10
Through Vol	0	124	146	0
RT Vol	0	0	20	4
Lane Flow Rate	0	134	166	14
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.152	0.184	0.018
Departure Headway (Hd)	4.591	4.097	3.985	4.543
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	872	896	793
Service Time	2.592	2.139	2.025	2.543
HCM Lane V/C Ratio	0	0.154	0.185	0.018
HCM Control Delay	7.6	7.9	7.9	7.6
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.5	0.7	0.1

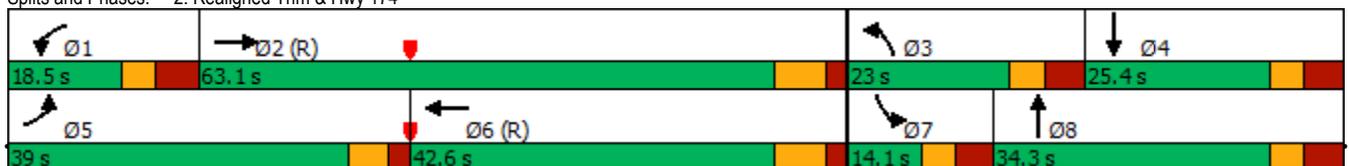
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	346	1405	5	130	598	45	539	143	151	41	149	303
Future Volume (vph)	346	1405	5	130	598	45	539	143	151	41	149	303
Satd. Flow (prot)	1695	3378	0	1695	4871	1517	4780	1784	1517	1695	1784	1517
Fit Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1695	3378	0	1513	4871	1517	4780	1784	1268	1060	1784	1517
Satd. Flow (RTOR)						329			329			329
Lane Group Flow (vph)	346	1410	0	130	598	45	539	143	151	41	149	303
Turn Type	Prot	NA		Prot	NA	Free	Prot	NA	Free	Prot	NA	Free
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases						Free			Free			Free
Detector Phase	5	2		1	6		3	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		5.0	10.0		5.0	10.0	
Minimum Split (s)	11.0	25.2		12.5	25.2		12.2	25.4		11.9	25.4	
Total Split (s)	39.0	63.1		18.5	42.6		23.0	34.3		14.1	25.4	
Total Split (%)	30.0%	48.5%		14.2%	32.8%		17.7%	26.4%		10.8%	19.5%	
Yellow Time (s)	4.0	5.1		3.3	5.1		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.0	2.1		4.2	2.1		3.9	4.1		3.6	4.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	7.2		7.5	7.2		7.2	7.4		6.9	7.4	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	29.9	55.7		11.0	38.3	130.0	16.0	29.9	130.0	6.9	18.0	130.0
Actuated g/C Ratio	0.23	0.43		0.08	0.29	1.00	0.12	0.23	1.00	0.05	0.14	1.00
v/c Ratio	0.89	0.97		0.91	0.42	0.03	0.92	0.35	0.12	0.46	0.60	0.20
Control Delay	72.7	54.8		113.1	38.6	0.0	78.3	46.4	0.2	76.6	63.8	0.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.7	54.8		113.1	38.6	0.0	78.3	46.4	0.2	76.6	63.8	0.3
LOS	E	D		F	D	A	E	D	A	E	E	A
Approach Delay		58.3			48.8			58.7			25.8	
Approach LOS		E			D			E			C	
Queue Length 50th (m)	84.3	183.0		33.6	46.3	0.0	49.2	31.9	0.0	10.4	36.4	0.0
Queue Length 95th (m)	#128.2	#234.1		#71.5	58.7	0.0	#70.8	52.0	0.0	22.4	59.1	0.0
Internal Link Dist (m)		572.1			692.6			218.7			259.5	
Turn Bay Length (m)	150.0			150.0		30.0	200.0		40.0	150.0		40.0
Base Capacity (vph)	430	1452		143	1435	1517	586	410	1268	93	247	1517
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.97		0.91	0.42	0.03	0.92	0.35	0.12	0.44	0.60	0.20

Intersection Summary

Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 39 (30%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 52.3
 Intersection Capacity Utilization 92.4%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 2: Realigned Trim & Hwy 174



Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	13	214	133	11	10	10
Future Vol, veh/h	13	214	133	11	10	10
Conflicting Peds, #/hr	125	0	0	125	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	214	133	11	10	10
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	269	0	-	0	504	264
Stage 1	-	-	-	-	264	-
Stage 2	-	-	-	-	240	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1295	-	-	-	528	775
Stage 1	-	-	-	-	780	-
Stage 2	-	-	-	-	800	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1158	-	-	-	417	693
Mov Cap-2 Maneuver	-	-	-	-	417	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	715	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.5	0	12.2			
HCM LOS			B			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1158	-	-	-	521	
HCM Lane V/C Ratio	0.011	-	-	-	0.038	
HCM Control Delay (s)	8.1	0	-	-	12.2	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	9	205	194	3	0	120	140	265	0	100	0
Future Vol, veh/h	0	9	205	194	3	0	120	140	265	0	100	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	9	205	194	3	0	120	140	265	0	100	0
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.1	12.4	20.9	10.3
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	0%	98%	0%
Vol Thru, %	27%	4%	2%	100%
Vol Right, %	50%	96%	0%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	525	214	197	100
LT Vol	120	0	194	0
Through Vol	140	9	3	100
RT Vol	265	205	0	0
Lane Flow Rate	525	214	197	100
Geometry Grp	1	1	1	1
Degree of Util (X)	0.736	0.322	0.338	0.166
Departure Headway (Hd)	5.046	5.418	6.182	5.977
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	714	659	579	596
Service Time	3.096	3.486	4.252	4.055
HCM Lane V/C Ratio	0.735	0.325	0.34	0.168
HCM Control Delay	20.9	11.1	12.4	10.3
HCM Lane LOS	C	B	B	B
HCM 95th-tile Q	6.5	1.4	1.5	0.6

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	202	0	0	113	9	0	0	0	13	0	5
Future Vol, veh/h	8	202	0	0	113	9	0	0	0	13	0	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	202	0	0	113	9	0	0	0	13	0	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	7.8	0	7.7
HCM LOS	A	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	4%	0%	72%
Vol Thru, %	100%	96%	93%	0%
Vol Right, %	0%	0%	7%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	0	210	122	18
LT Vol	0	8	0	13
Through Vol	0	202	113	0
RT Vol	0	0	9	5
Lane Flow Rate	0	210	122	18
Geometry Grp	1	1	1	1
Degree of Util (X)	0	0.237	0.138	0.023
Departure Headway (Hd)	4.669	4.064	4.078	4.622
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	0	880	872	779
Service Time	2.67	2.103	2.135	2.622
HCM Lane V/C Ratio	0	0.239	0.14	0.023
HCM Control Delay	7.7	8.4	7.8	7.7
HCM Lane LOS	N	A	A	A
HCM 95th-tile Q	0	0.9	0.5	0.1