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Proposed Plan of Subdivision
1101 Baxter Road

Transportation Impact Assessment

Proposed Plan of Subdivision
1101 Baxter Road

Transportation Impact Assessment

Prepared By:

NOVATECH
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario
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December 2025

Novatech File: 121019
Ref: R-2025-083

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Engineers, Planners & Landscape Architects

December 22, 2025

City of Ottawa
Planning, Development, & Building Services Dept.
110 Laurier Avenue West, 4th Floor
Ottawa, ON K1P 1J1

Attention: Ms. Josiane Gervais
Transportation Project Manager,
Infrastructure Approvals

Ministry of Transportation – Eastern Region
Highway Corridor Management Section
1355 John Counter Boulevard
Kingston, ON K7L 5A3

Attention: Mr. Brian Hickey,
Corridor Management Planner,
Operations Division East Region

Dear Ms. Gervais and Mr. Hickey:

Reference: 1101 Baxter Road
Transportation Impact Assessment
Novatech File No. 121019

We are pleased to submit the following Transportation Impact Assessment (TIA), in support of a Draft Plan of Subdivision application at 1101 Baxter Road, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa's *Revised Transportation Impact Assessment Guidelines* (June 2023) and the Ministry of Transportation of Ontario's *General Guidelines for the Preparation of Traffic Impact Studies* (March 2023).

If you have any questions or comments regarding this report, please feel free to contact Jennifer Luong, or the undersigned.

Yours truly,

NOVATECH

Joshua Audia, P.Eng.
Project Engineer | Transportation

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Certification Form for Transportation Impact Assessment (TIA) Study Program Manager

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that they meet the four criteria listed below.

Certification

- ☑ I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines (Update Effective July 2023);
- ☑ I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;
- ☑ I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and

City of Ottawa
Transportation Engineering Services
Planning, Real Estate and Economic Development
110 Laurier Avenue West, 4th fl.
Ottawa, ON K1P 1J1
Tel. : 613-580-2424
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☑ I am either a licensed or registered[1] professional in good standing, whose field of expertise [check ✓ appropriate field(s)]:

- ☑ is either transportation engineering
- ☐ or transportation planning.

Dated at Ottawa (City) this 22nd day of December, 20 25.

Name: Jennifer Luong, P.Eng.

Professional Title: Senior Project Manager

Jennifer Luong

Signature of Individual certifier that they meet the above four criteria

Office Contact Information (Please Print)	
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Stamp

[1] License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

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EXECUTIVE SUMMARY

This Transportation Impact Assessment (TIA) has been prepared in support of a Draft Plan of Subdivision application for the property located at 1101 Baxter Road. The subject property is approximately 3.13 hectares in area, and is currently occupied by an office building. The subject site is currently accessed via four driveways to Baxter Road.

The subject site is surrounded by the following:

- Baxter Road, followed by Highway 417 and the future Queensview Station to the north,
- Residences, followed by Dempsey Avenue and Iris Street to the south,
- Commercial and recreational uses to the east, and
- Baxter Road, followed by commercial uses and the Pinecrest Shopping Centre to the west.

The proposed development concept includes six high-rise towers, with the towers located at each 'corner' of the subject site. In total, 1,400 residential dwellings and approximately 100,640 ft^2 gross floor area (GFA) of ground-floor commercial spaces are proposed. A description of each building is included as follows:

- Northwest corner: 30-storey Tower A (275 dwellings and 23,680 ft^2 of commercial space) and 30-storey Tower B (275 dwellings and 23,680 ft^2 of commercial space);
- Northeast corner: 30-storey Tower C (275 dwellings and 20,990 ft^2 of commercial space) and 30-storey Tower D (275 dwellings and 21,530 ft^2 of commercial space);
- Southwest corner: 9-storey Tower E (130 dwellings and 8,610 ft^2 of commercial space);
- Southeast corner: 16-storey Tower F (170 dwellings and 2,150 ft^2 of commercial space).

A central private roadway (termed 'Street 1') is proposed to provide connectivity from Baxter Road to each building within the subject site. In addition to the two Baxter Road/Street 1 connections, four other private approaches are proposed to Baxter Road. All accesses will be full-movement. The development is assumed to be constructed in phases, with an ultimate buildout year of 2035.

The subject site is designated as 'Hub' and 'Evolving Neighbourhood' on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Mixed-Use Centre' (MC20 S508), and the site is located within the 'Pinecrest and Queensview Stations' Secondary Plan area.

Site Plan Control applications will be filed in the future for each individual block. Building heights and unit counts are all conceptual based on the Secondary Planning exercise. The intent of this Draft Plan application is to subdivide the land, and all building footprints will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications.

The study area for this report includes the boundary roadway Baxter Road, as well as the intersections at Pinecrest Road/Highway 417 WB Ramps, Greenbank Road/Iris Street/Highway 417 EB Ramps, Iris Street/Pinecrest Shopping Centre, Iris Street/Southwood Drive, and Iris Street/ Baxter Road.

The selected time periods for this report are the weekday AM and PM peak hours and the Saturday peak hour, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2035 and five-year horizon 2040 have been considered. Analysis of the MTO ramp terminals for the ten-year horizon 2045 has not been included, as the timeframe of the study already considers 15 years into the future, and updated plans and reports will be submitted as required in relation to future Site Plan Control applications for each individual block.

The conclusions and recommendations of this TIA can be summarized as follows:

Site-Generated Traffic

- Using City's methodology, the proposed development is estimated to generate the following number of peak hour external trips:
  - 102 vehicle trips, 434 transit trips, and 105 non-auto trips during the AM peak hour;
  - 145 vehicle trips, 495 transit trips, and 130 non-auto trips during the PM peak hour;
  - 175 vehicle trips, 573 transit trips, and 154 non-auto trips during the Sat peak hour.

- Using MTO's methodology, the proposed development is estimated to generate the following number of peak hour external trips:
  - 341 vehicle trips during the AM peak hour;
  - 428 vehicle trips during the PM peak hour;
  - 527 vehicle trips during the Saturday peak hour.

Development Design

- It is anticipated that the minimum required stopping sight distance (SSD) will be accommodated at all connections/accesses to Baxter Road. As shown on the concept plan, the building envelopes of Tower A and Tower B are proposed to accommodate the critical intersection sight distance (ISD) minimums for right turns at the eastern Street 1 connection and left turns at the western Street 1 connection. This will be confirmed as part of future Site Plan Control applications for each block.

- Internal sidewalks will be provided on both sides of Street 1, around the perimeter of the proposed parkland at the southern end of the subject site, and adjacent to all proposed buildings. A pathway is proposed along the southern limit of the subject site to connect Baxter Road with the proposed park. A sidewalk is also proposed along the entirety of the subject site's frontage to Baxter Road, in accordance with the policy outlined in the *Pinecrest and Queensview Stations Secondary Plan*. Additionally, a pedestrian bridge over Baxter Road is proposed to connect to the existing pedestrian bridge over Highway 417, which will provide direct connectivity between the proposed development and Queensview Station. An at-grade pedestrian crossover (PXO) is proposed at the Baxter Road/Street 1 connection near the pedestrian bridge.

- OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. It is anticipated that all proposed entrances will be within 400m walking distance of Queensview Station. Additionally, it is anticipated that all proposed entrances will be within 800m walking distance of bus stops on Iris Street, with southern entrances within 400m walking distance.

- The two Street 1 connections to Baxter Road are approximately 180m apart, measuring from centreline to centreline along the centre of Baxter Road.

- The conceptual design meets the relevant provisions of the City's *Private Approach By-Law (PABL)*. The details of each block will be reviewed as part of subsequent Site Plan Control applications.

- The proposed alignment of Street 1 consists of two straight sections that connect at a 90-degree bend. The bend is proposed to have an inside radius of approximately 6.5m and centreline radius of 12m. The proposed centreline radius meets the minimum requirement for fire routes.

- The proposed private ROW of Street 1 is 20m. In general, Street 1 has a proposed roadway width of 11.0m, which accommodates a travel lane in each direction plus on-street parallel parking spaces on both sides. At the two connections to Baxter Road, the conceptual roadway width of Street 1 narrows to 7.0m at the street line. A minimum width of 7m is recommended and this can be reviewed at detailed design. Outside of the roadway platform, 2.5m-wide inner boulevards and 2.0m-wide sidewalks are proposed.

- Street 1 is anticipated to have an operating speed of 30 km/h and average annual daily traffic (AADT) volumes less than 1,000 vpd. Based on these parameters, no dedicated cycling facilities are required for Street 1.

Boundary Streets

- Baxter Road does not meet the target pedestrian level of service (PLOS) A or bicycle level of service (BLOS) D.

- Baxter Road has no sidewalks along the frontage of the subject site. The *Pinecrest and Queensview Stations Secondary Plan* identifies that the proposed development shall include a sidewalk along the subject's site frontage. The proposed development will include a 2.0m-wide sidewalk with 1.5m-wide boulevard along the subject site's frontage to Baxter Road, and will meet the target PLOS A.

- Baxter Road has no cycling facilities. Based on the operating speed and AADT of Baxter Road, a designated operating space is appropriate for Baxter Road, which can include bike lanes. The City has developed a functional design of improved active transportation facilities on Baxter Road. Buffered bike lanes are shown on both sides of Baxter Road from Iris Street to the southerly Pinecrest Shopping Centre access, a southbound curbside bike lane north of the southerly Pinecrest Shopping Centre access, and bike sharrows elsewhere. This design meets the target BLOS D.

Transit

- The proposed development does not include any driveways on a street that serves transit vehicles, and the majority of site-generated transit traffic are anticipated to use O-Train Line 3. The addition of site-generated transit traffic that is expected to use a bus is anticipated to have marginal impacts to transit delays.

Intersection Multi-Modal Levels of Service (MMLOS)

- The results of the intersections MMLOS analysis can be summarized as follows:
  - No study area intersections meet the target PLOS;
  - No study area intersections meet the target BLOS;
  - Pinecrest Road/Highway 417 WB Ramps does not meet the target transit level of service (TLOS) A;
  - Pinecrest Road/Highway 417 WB Ramps and Greenbank Road/Iris Street/Highway 417 EB Ramps meet the target truck level of service (TkLOS) D.

- For each study area intersection, there is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or restricting turning movements. There is limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

- At Pinecrest Road/Highway 417 WB Ramps, there are currently no permitted left or right turn movements for cyclists at this intersection. Therefore, no modifications are identified for cyclists. A future multi-use pathway (MUP) is planned north of the bus loop from Dumaurier Avenue to Pinecrest Station, per the conceptual Pinecrest Station layout.

- At Greenbank Road/Iris Street/Highway 417 EB Ramps, the east approach does not meet the target BLOS, based on both left and right turn characteristics. The north approach does not meet the target BLOS based on only left turn characteristics, and the south approach does not meet the target BLOS based on only right turn characteristics. From a capacity perspective, the north and east approaches require dual left turn lanes, the east approach requires dual right turn lanes, and the south approach requires a right turn lane longer than 50m. A protected intersection design would be required for all approaches to meet the target BLOS.

- At Iris Street/Pinecrest Shopping Centre, the east approach does not meet the target BLOS, based on left or right turn characteristics. Exhibit 12 of the *MMLOS Guidelines* identifies that the target BLOS B can be met if a two-stage left turn bike box is provided at the north approach. This is identified for the City's consideration.

- The west approach at Pinecrest Road/Highway 417 WB Ramps, which is transit-exclusive, does not the target TLOS A. The target TLOS requires grade-separated transit. The future LRT service will achieve the target TLOS.

Existing and Background Traffic Operations

- All movements at Iris Street/Pinecrest Shopping Centre, Iris Street/Southwood Drive, and Iris Street/Baxter Road meet the target Auto LOS.

- At Pinecrest Road/Highway 417 WB Ramps, all movements meet the City's target during all peak hours. At Greenbank Road/Iris Street/Highway 417 EB Ramps, the northbound through movement does not meet the City's target during the AM peak hour and the eastbound left turn movement does not meet the City's target during any peak hour.

- The following movements exceed the MTO's target vehicle-to-capacity (v/c) ratios during one or more peak hours:
    - Pinecrest Road/Highway 417 WB Ramps
        - Westbound left turn (AM, PM, and Saturday peak hours);
        - Westbound right turn (PM and Saturday peak hours).
    - Greenbank Road/Iris Street/Highway 417 EB Ramps
        - Northbound through (AM peak hour);
        - Southbound left turn (Saturday peak hour);
        - Eastbound left turn (AM, PM, and Saturday peak hours);
        - Eastbound through (AM peak hour);
        - Westbound left turn (Saturday peak hour).

- In all peak hours, applying the ultimate westbound lane configuration at Pinecrest Road/ Highway 417 WB Ramps (i.e. dual left turn lanes, a transit-exclusive through lane, and a right turn lane) allows all westbound movements to operate at the MTO's target v/c ratio of 0.75 or better.

- With signal timing adjustments at Greenbank Road/Iris Street/Highway 417 EB Ramps, all movements can be improved to meet the City's target v/c ratio of 1.00 during the peak hours, but not the MTO's target v/c ratios of 0.85 or 0.75.

Total Traffic Operations

- The 2035 and 2040 total traffic conditions are generally consistent with the 2035 and 2040 background conditions, indicating that site-generated traffic will have marginal impacts to traffic operations within the study area. The outbound movements at the two Street 1 connections and all proposed private approaches will operate acceptably.

- The proposed conceptual development is recommended from a transportation perspective. All building footprints and unit statistics will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications.

1.0 SCREENING

1.1 Introduction

This Transportation Impact Assessment (TIA) has been prepared in support of a Draft Plan of Subdivision application for the property located at 1101 Baxter Road. The subject property is approximately 3.13 hectares in area, and is currently occupied by an office building. The subject site is currently accessed via four driveways to Baxter Road.

The subject site is surrounded by the following:

- Baxter Road, followed by Highway 417 and the future Queensview Station to the north,
- Residences, followed by Dempsey Avenue and Iris Street to the south,
- Commercial and recreational uses to the east, and
- Baxter Road, followed by commercial uses and the Pinecrest Shopping Centre to the west.

An aerial of the vicinity around the subject site is provided in **Figure 1**.

1.2 Proposed Development

The proposed development concept includes six high-rise towers, with the towers located at each 'corner' of the subject site. In total, 1,400 residential dwellings and approximately 100,640 ft^2 gross floor area (GFA) of ground-floor commercial spaces are proposed. A description of each building is included as follows:

- Northwest corner: 30-storey Tower A (275 dwellings and 23,680 ft^2 of commercial space) and 30-storey Tower B (275 dwellings and 23,680 ft^2 of commercial space);
- Northeast corner: 30-storey Tower C (275 dwellings and 20,990 ft^2 of commercial space) and 30-storey Tower D (275 dwellings and 21,530 ft^2 of commercial space);
- Southwest corner: 9-storey Tower E (130 dwellings and 8,610 ft^2 of commercial space);
- Southeast corner: 16-storey Tower F (170 dwellings and 2,150 ft^2 of commercial space).

A central private roadway (termed 'Street 1') is proposed to provide connectivity from Baxter Road to each building within the subject site. In addition to the two Baxter Road/Street 1 connections, four other private approaches are proposed to Baxter Road. All accesses will be full-movement. The development is assumed to be constructed in phases, with an ultimate buildout year of 2035.

The subject site is designated as 'Hub' and 'Evolving Neighbourhood' on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Mixed-Use Centre' (MC20 S508), and the site is located within the 'Pinecrest and Queensview Stations' Secondary Plan area.

Copies of the proposed draft plan and concept plan are included in **Appendix A**. Site Plan Control applications will be filed in the future for each individual block. Building heights and unit counts are all conceptual based on the Secondary Planning exercise. The intent of this Draft Plan application is to subdivide the land, and all building footprints will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications.

Figure 1: View of the Subject Site

1.3 Screening Form

The City's *Revised TIA Guidelines* identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form, which is included in **Appendix B**. The trigger results are as follows:

- Trip Generation Trigger – The development is anticipated to generate over 60 peak hour person trips; further assessment is **required** based on this trigger.

- Location Triggers – The development is located within a Hub, Protected Major Transit Station Area (PMTSA), and Design Priority Area (DPA); further assessment is **required** based on this trigger.

- Safety Triggers – The proposed development will access Baxter Road, which has a horizontal curvature that may impact sightlines; further assessment is **required** based on this trigger.

2.0 SCOPING

2.1 Existing Conditions

2.1.1 Roadways

Ontario Highway 417 ('Queensway') is a provincial 400-series highway that generally runs on an east-west alignment between Highway 17 (west of Arnprior) and the Québec border (near Pointe-Fortune). The highway continues west as Highway 17 and east as Autoroute 40. Within the study area, Highway 417 has a six- to eight-lane divided rural cross-section, with one- or two-lane eastbound/westbound on-ramps and off-ramps at Pinecrest Road and Greenbank Road. The posted speed limit within the study area is 100 km/h, with advisory speeds of 60 km/h for the eastbound off-ramp at Greenbank Road and 50 km/h for the westbound off-ramp at Pinecrest Road. Highway 417 is classified as a highway truck route. Paved shoulders are provided on Highway 417.

All other roadways within the study area fall under the jurisdiction of the City of Ottawa.

Pinecrest Road is an arterial roadway that generally runs on a north-south alignment between Carling Avenue and Highway 417. North of Carling Avenue, the roadway continues as Greenview Avenue. South of Highway 417, the roadway continues as Greenbank Road. Pinecrest Road has a four-lane urban cross-section, which is divided south of Queensview Drive and undivided north of Queensview Drive (i.e. immediately north of the study area). Concrete sidewalks are provided on both sides of Pinecrest Road. The posted speed limit is 50 km/h. Pinecrest Road is classified as a truck route, allowing full loads. On-street parking is not permitted.

Greenbank Road is an arterial roadway that generally runs on a north-south alignment between Highway 417 and Prince of Wales Drive. North of Highway 417, the roadway continues as Pinecrest Road. Within the study area, Greenbank Road has a four-lane divided urban cross-section. Concrete sidewalks are provided on both sides of Greenbank Road. The posted speed limit within the study area is 50 km/h, increasing to 60 km/h at Morrison Drive (i.e. immediately south of the study area). Greenbank Road is classified as a truck route, allowing full loads. On-street parking is not permitted.

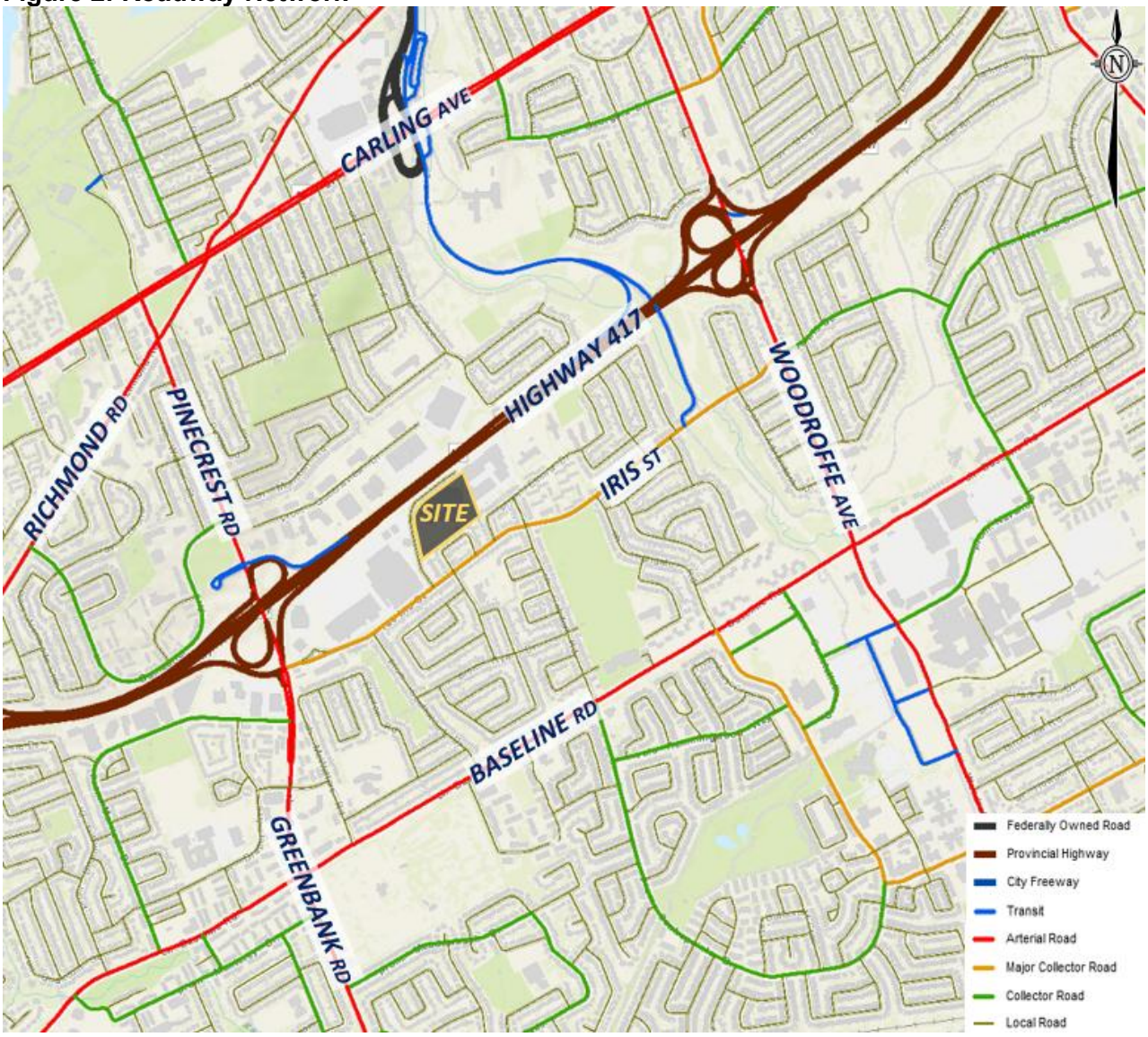
Iris Street is a roadway that generally runs on an east-west alignment that is classified as a major collector from Greenbank Road to Woodroffe Avenue, and a collector roadway from Woodroffe Avenue to Navaho Drive. Within the study area, Iris Street has a two- to four-lane urban cross-section, which is divided between Greenbank Road and the Pinecrest Shopping Centre intersection, and undivided east of the Pinecrest Shopping Centre intersection. Asphalt or concrete sidewalks are provided on both sides of Iris Street. The unposted regulatory speed limit is 50 km/h. Iris Street is not classified as a truck route. On-street parking is generally permitted on the north side of Iris Street, east of the Pinecrest Shopping Centre intersection.

Southwood Drive is a local roadway that generally runs on a north-south alignment between Iris Street and Baseline Road. Within the study area, Southwood Drive has a two-lane undivided urban cross-section. No sidewalks are provided on Southwood Drive. The posted speed limit is 40 km/h, with signage indicating the presence of traffic calming. Southwood Drive is not classified as a truck route. On-street parking is permitted seasonally in select locations on the west side of Southwood Drive.

Baxter Road is a local roadway that runs on a curvilinear alignment north of Iris Street, for a total distance of approximately 480m. Baxter Road has a two-lane undivided urban cross-section. Concrete sidewalks are provided on both sides of Baxter Road for the first 140m north of Iris Street, and no sidewalks are provided further north. The unposted regulatory speed limit is 50 km/h. Baxter Road is not classified as a truck route. On-street parking is not permitted, except on the west side of the north-south portion. Along the subject site's frontage to Baxter Road, the existing right-of-way (ROW) is approximately 26.0m at the southern end, tapering to 20.0m prior to the curve of Baxter Road. Schedule C16 of the City's *Official Plan* does not identify a specific ROW protection for Baxter Road and does not identify a general minimum ROW protection for existing local roadways. A widening is not anticipated as part of this application.

The roadway network of the greater area surrounding the subject site is illustrated in **Figure 2**.

Figure 2: Roadway Network



2.1.2 Intersections

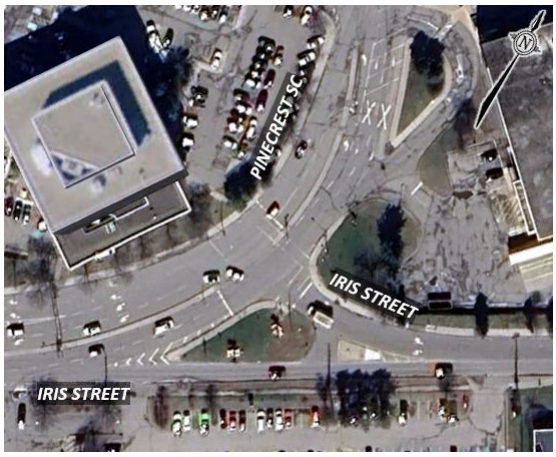
Pinecrest Road/Highway 417 WB Ramps

- Signalized four-legged intersection
- North Approach (Pinecrest Road):
  two through lanes and one shared through/transit-only right turn lane
- South Approach (Pinecrest Road):
  one transit-only left turn lane, two through lanes, and one channelized on-ramp
- East Approach (Highway 417 WB Off-Ramp):
  one left turn lane and one shared left turn/right turn lane
- West Approach (Transitway):
  one left turn lane and one right turn lane (both lanes restricted to transit vehicles only)
- Standard crosswalks on north, east, and west approaches

Greenbank Road/Iris Street/Highway 417 EB Ramps

- Signalized four-legged intersection
- North Approach (Greenbank Road):
  two left turn lanes, two through lanes, one channelized on-ramp for all vehicles, and one channelized on-ramp restricted to transit vehicles
- South Approach (Greenbank Road):
  three through lanes and one right turn lane
- East Approach (Iris Street):
  two left turn lanes and two right turn lanes (right turns on red restricted)
- West Approach (Highway 417 EB Off-Ramp):
  two channelized left turn lanes, one through lane, and one channelized right turn lane
- Standard crosswalks on south, east, and west approaches

Iris Street/Pinecrest Shopping Centre



- Signalized three-legged intersection
- North Approach (Pinecrest Shopping Centre): three through lanes exiting Pinecrest Shopping Centre
- East Approach (Iris Street): one left turn lane and one right turn lane
- West Approach (Iris Street): two through lanes into Pinecrest Shopping Centre and one by-pass lane continuing onto Iris Street
- Standard crosswalks on north and east approaches

Iris Street/Southwood Drive

- Unsignalized three-legged intersection
- All-way stop-controlled
- South Approach (Southwood Drive): one shared left turn/right turn lane
- East Approach (Iris Street): one shared left turn/through lane
- West Approach (Iris Street): one shared through/right turn lane
- Standard crosswalks on all approaches

Iris Street/Baxter Road

- Unsignalized three-legged intersection
- All-way stop-controlled
- North Approach (Baxter Road): one shared left turn/right turn lane
- East Approach (Iris Street): one shared through/right turn lane
- West Approach (Iris Street): one shared left turn/through lane
- Standard crosswalks on all approaches

2.1.3 Driveways

In accordance with the *TIA Guidelines*, a review of the existing adjacent driveways along the boundary street are provided as follows:

Baxter Road, west side

- Two shopping centre driveways serving 2685 Iris Street.

Baxter Road, east side and at terminus

- Two commercial driveways serving 1119 Baxter Road;
- One commercial driveway serving 1050 Baxter Road.

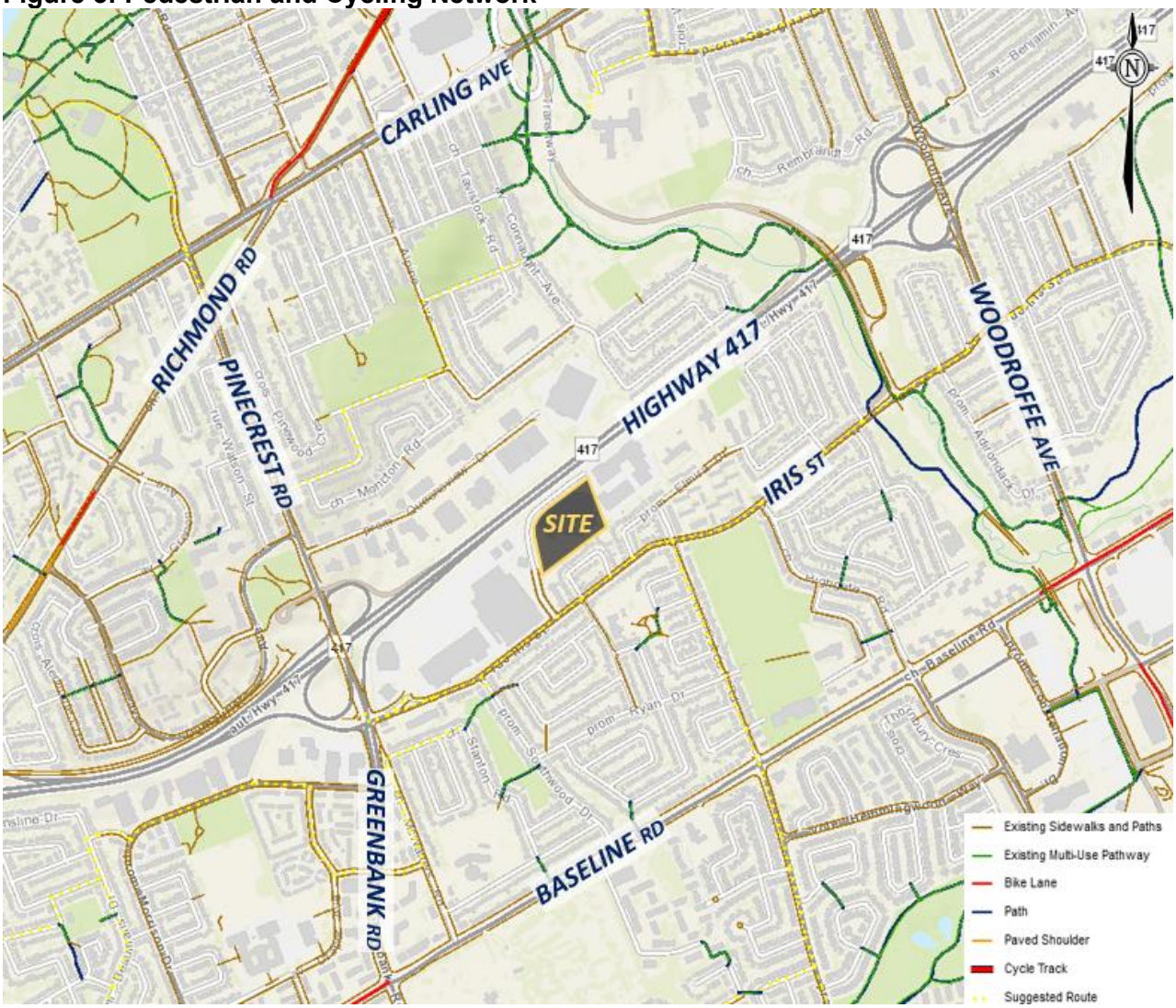
2.1.4 Pedestrian and Cycling Facilities

Within the study area, sidewalks are generally provided on both sides of Pinecrest Road, Greenbank Road, Iris Street, and Baxter Road (south of the first driveway serving the Pinecrest Shopping Centre). North of the subject site, a new pedestrian overpass crossing Highway 417 has been constructed, providing connectivity between Baxter Road and the Queensview LRT Station and Queensview Drive.

No roadways within the study area are designated in the City's Crosstown Bikeway network. Pinecrest Road, Greenbank Road, and Iris Street are identified in the City's Primary Cycling Network. Iris Street is also designated as a suggested cycling route. No dedicated cycling facilities are provided within the study area. Painted bike sharrows are provided on Iris Street.

The pedestrian and cycling network of the greater area surrounding the subject site is illustrated in **Figure 3**.

Figure 3: Pedestrian and Cycling Network



2.1.5 Area Traffic Management

Within the study area, there are no Neighbourhood Traffic Calming studies that are in progress. East of the study area, there is an ongoing study for Cobden Road. The proposed concept plan involves a total of three speed humps on Cobden Road between Iris Street and Baseline Road.

Painted edge lines are provided along the north side of Iris Street. Centreline flex posts have been implemented on Iris Street at the all-way stop bars, where Iris Street is intersected by Southwood Drive and Baxter Road.

Area speed limit signs of 40 km/h and 'traffic calmed neighbourhood' signage has been implemented within the Iris neighbourhood, including on Southwood Drive. Centreline flex posts and 'MAX 40 KM/H' pavement markings have been implemented on Southwood Drive.

2.1.6 Transit

The locations of OC Transpo bus stops relevant to the subject site are described in **Table 1**, and are shown in **Figure 4**. It is noted that future light rail transit (LRT) will serve the Queensview Station, and construction is ongoing at the time of this report. The location of the Queensview Station is included in **Figure 4**, and further discussion of future LRT service is included in Section 2.2.1.

A summary of the routes serving the study area is included in **Table 2**. Detailed route information, the future LRT alignment, and an excerpt from the OC Transpo System Map are included in **Appendix C**.

Table 1: OC Transpo Transit Stops

Stop	Location	Routes Serviced
#1946	Western end of Pinecrest Shopping Centre, north of Iris Street	82
#2395	South side of Queensview Drive, west of terminus	61
#4000	North side of Queensview Drive, west of terminus	61
#4564	North side of Iris Street, east of Baxter Road	81
#4565	South side of Iris Street, east of Soderlind Street	81

Table 2: OC Transpo Route Information

Route	From ↔ To	Frequency
61	Stittsville / Terry Fox ↔ Tunney's Pasture	All day and limited overnight service, seven days a week; 15- to 30-min headways
81	Bayshore ↔ Tunney's Pasture	All day service, seven days a week; 30-min headways
82	Baseline ↔ Tunney's Pasture / Lincoln Fields	All day service, seven days a week; 30- to 60-min headways

2.1.7 Existing Traffic Volumes

Traffic counts were completed by the City of Ottawa, Ministry of Transportation of Ontario (MTO), and Novatech. These counts have been used to determine the existing pedestrian, cyclist, and vehicular traffic volumes at the study area intersections, during the weekday and Saturday peak hours. These counts were completed on the dates listed in **Table 3**.

Figure 4: OC Transpo Bus Stop Locations

Table 3: Traffic Count Dates

Intersection	Weekday	Saturday
Pinecrest Road/Highway 417 WB Ramp Terminal	January 22, 2019	September 6, 2025
Pinecrest Road SB/Highway 417 WB On-Ramp	May 8, 2019	September 6, 2025
Greenbank Road/Highway 417 EB On-Ramps	May 9-10, 2019	September 6, 2025
Greenbank Road/Iris Street/Highway 417 EB Off-Ramp	January 16, 2019	September 6, 2025
Iris Street/Pinecrest Shopping Centre	January 16, 2019	September 6, 2025
Iris Street/Southwood Drive	September 4, 2025	September 6, 2025
Iris Street/Baxter Road	September 4, 2025	September 6, 2025

It is noted that the counts from 2019 are more than five years old. However, they can be considered conservative and appropriate because they were collected prior to the COVID-19 pandemic and the ongoing LRT construction, which includes temporary roadway modifications within the study area. New traffic counts were collected on Saturday as no recent data was available.

It is also noted that active transportation volumes observed in January 2019 may be lower than typical conditions, as those counts were conducted outside of the warmest months. Based on the traffic count data, the average annual daily traffic (AADT) of Baxter Road is approximately 4,450 vehicles per day (vpd).

All traffic count data previously discussed are included in **Appendix D**. Traffic volumes within the study area are shown in the following figures, with vehicular traffic volumes shown in **Figure 5** and pedestrian/cyclist volumes shown in **Figure 6**.

Figure 5: Existing Traffic Volumes

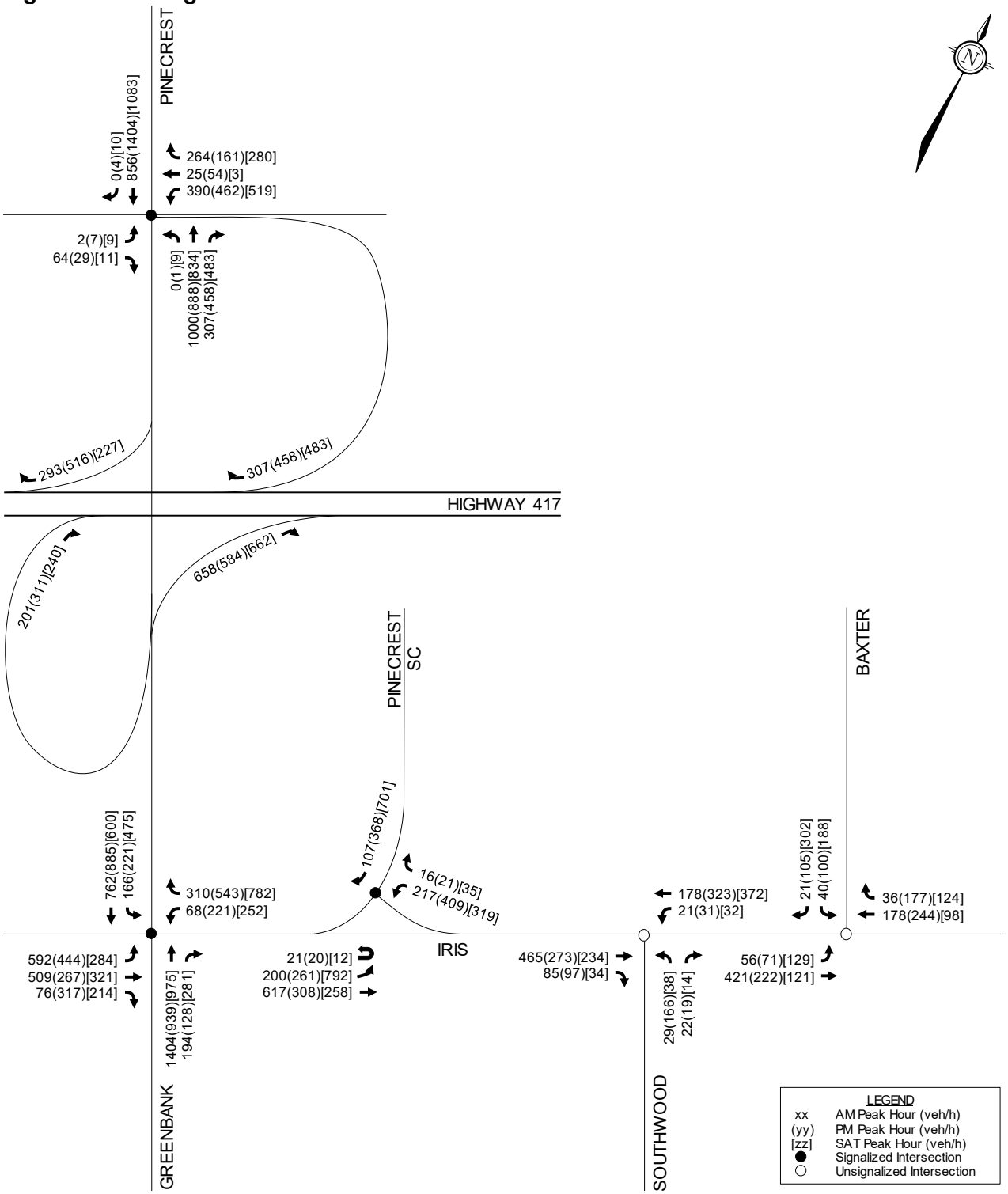
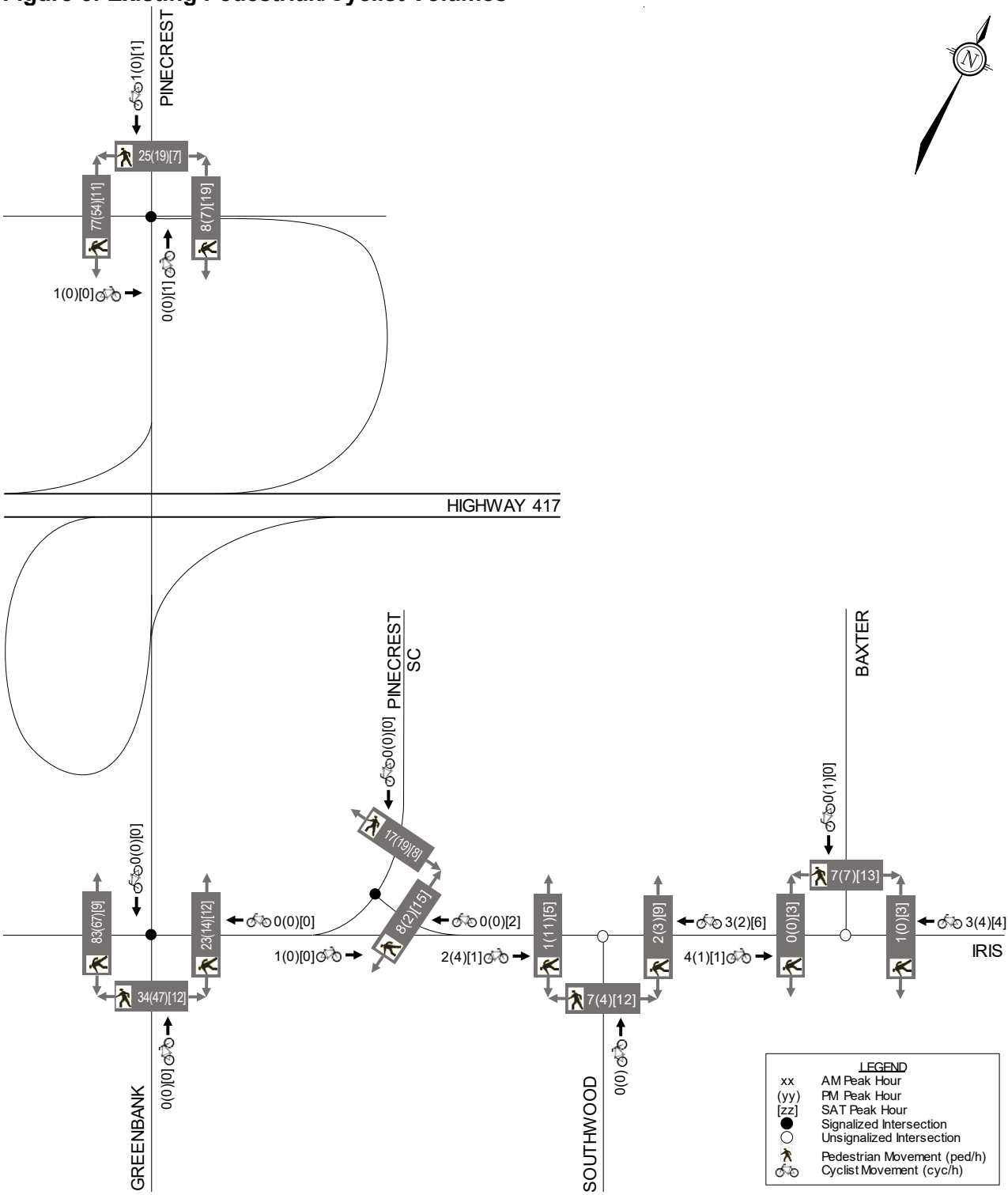


Figure 6: Existing Pedestrian/Cyclist Volumes



2.1.8 Collision Records

Historical collision data from the last five full years available was obtained from the City's Public Works and Service Department for the study area intersections and midblock segments. Copies of the collision summary reports are included in **Appendix E**.

The collision data has been evaluated to determine if there are any identifiable collision patterns, which are defined in the *Revised TIA Guidelines* as 'more than six collisions in five years' for any one movement. The number of collisions at each intersection from January 1, 2019 to December 31, 2024 (excluding 2023) is summarized in **Table 4**.

Table 4: Reported Collisions

Intersection or Segment	Impact Types						Total
	Approach	Angle	Rear End	Sideswipe	Turning Mvmt	SMV[1]/ Other	
Pinecrest Rd/ Highway 417 WB Ramps	-	4	7	4	2	1	**18**
Greenbank Rd/Iris St/ Highway 417 EB Ramps	-	7	59	19	7	6	**98**
Iris St/ Pinecrest SC	-	1	-	1	1	-	**3**
Iris St/ Southwood Dr	-	-	-	-	-	-	**0**
Iris St/ Baxter Rd	-	-	1	-	3	-	**4**
Pinecrest Rd btwn WB Ramps & Greenbank Rd	-	-	3	3	-	-	**6**
Greenbank Rd btwn Pinecrest Rd & Iris St	-	-	6	8	-	-	**14**
Iris St btwn Greenbank Rd & Pinecrest SC	-	2	1	1	2	-	**6**
Iris St btwn Pinecrest SC & Southwood Dr	1	-	-	-	-	1	**2**
Iris St btwn Southwood Dr & Baxter Rd	-	-	-	2	1	4	**7**
Baxter Rd btwn Iris St & End	-	-	-	1	1	1	**3**

1. SMV = Single Motor Vehicle

Pinecrest Road/Highway 417 WB Ramps

A total of 18 collisions were reported at this intersection, consisting of four angle impacts, seven rear-end impacts, four sideswipe impacts, two turning movement impacts, and one single vehicle/ other impacts. Four collisions resulted in injuries, but none caused fatalities. Five of the 18 collisions (28%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Of the seven rear-end impacts, three involved northbound vehicles, one involved southbound vehicles, and three involved westbound vehicles. No movement meets the threshold of a collision pattern.

Greenbank Road/Iris Street/Highway 417 EB Ramps
A total of 98 collisions were reported at this intersection, consisting of seven angle impacts, 59 rear-end impacts, 19 sideswipe impacts, seven turning movement impacts, and six single vehicle/other impacts. Sixteen collisions resulted in injuries, but none caused fatalities. Thirty of the 98 collisions (30%) occurred in poor driving conditions. Four of the six single vehicle impacts involved pedestrians. No collisions involved cyclists.

Of the seven angle impacts, three involved a northbound-eastbound impact, two involved a northbound-westbound impact, one involved a southbound-eastbound impact, and one involved a southbound-westbound impact. No combination meets the threshold of a collision pattern.

Of the 59 rear-end impacts, 21 involved northbound vehicles, 17 involved southbound vehicles, 17 involved eastbound vehicles, and four involved westbound vehicles. The northbound, southbound, and eastbound movements meet the threshold of a collision pattern. The magnitude of traffic volumes at each approach is a likely factor in the number of rear-end impacts.

Of the 19 sideswipe impacts, ten involved northbound vehicles, six involved eastbound vehicles, and three involved westbound impacts. The northbound movement meets the threshold of a collision pattern. The magnitude of traffic volumes and upcoming on-ramps to Highway 417 (leading to an increased frequency of lane changes) are likely factors in the number of sideswipe impacts.

Of the seven turning movement impacts, two involved a northbound left turn, one involved a northbound right turn, one involved a southbound left turn, and three involved a westbound left turn. No movement meets the threshold of a collision pattern.

Of the six single vehicle/other impacts, four involved pedestrians. These pedestrians were impacted by a northbound vehicle turning right, southbound vehicle turning left, eastbound vehicle travelling through, or westbound vehicle turning right. In all cases, it is assumed that these impacts occurred at the east crosswalk. Zebra-striped crosswalks could be considered to enhance the visibility of pedestrians at this intersection.

Iris Street/Pinecrest Shopping Centre
A total of three collisions were reported at this intersection, consisting of one angle impact, one sideswipe impact, and one turning movement impact. No collisions resulted in injuries or fatalities, occurred in poor driving conditions, or involved pedestrians or cyclists.

Iris Street/Southwood Drive
No collisions were reported at this intersection.

Iris Street/Baxter Road
A total of four collisions were reported at this intersection, consisting of one rear-end impact and three turning movement impacts. No collisions resulted in injuries or fatalities. One of the four collisions (25%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Pinecrest Road between Highway 417 WB Ramps & Greenbank Road
A total of six collisions were reported along this segment, consisting of three rear-end impacts and three sideswipe impacts. One collision resulted in injuries, but none caused fatalities. Two of the six collisions (33%) occurred in poor driving conditions. No collisions involved pedestrians. One sideswipe collision involved a cyclist.

Greenbank Road between Pinecrest Road & Iris Street/Highway 417 EB Off-Ramp
A total of 14 collisions were reported along this segment, consisting of six rear-end impacts and eight sideswipe impacts. Three collisions resulted in injuries, but none caused fatalities. Six of the 14 collisions (43%) occurred in poor driving conditions. No collisions involved pedestrians. One rear-end collision involved a cyclist.

Of the eight sideswipe impacts, six involved northbound vehicles and two involved southbound vehicles. Neither movement meets the threshold of a collision pattern.

Iris Street between Greenbank Road & Pinecrest Shopping Centre
A total of six collisions were reported along this segment, consisting of two angle impacts, one rear-end impact, one sideswipe impact, and two turning movement impacts. No collisions resulted in injuries or fatalities. One of the six collisions (17%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Iris Street between Pinecrest Shopping Centre & Southwood Drive
A total of two collisions were reported along this segment, consisting of one approaching impact and one single vehicle/other impact. Neither collision resulted in injuries or fatalities, occurred in poor driving conditions, or involved pedestrians or cyclists.

Iris Street between Southwood Drive & Baxter Road
A total of seven collisions were reported along this segment, consisting of two sideswipe impacts, one turning movement impact, and four single vehicle/other impacts. No collisions resulted in injuries or fatalities. Four of the seven collisions (57%) occurred in poor driving conditions. No collisions involved pedestrians or cyclists.

Baxter Road between Iris Street & end of roadway
A total of three collisions were reported along this segment, consisting of one sideswipe impact, one turning movement impact, and one single vehicle/other impact. One collision resulted in injuries, but none caused fatalities. One of the three collisions (33%) occurred in poor driving conditions. No collisions involved pedestrians. The sideswipe collision involved a cyclist.

2.2 Planned Conditions

2.2.1 Planned Transportation Projects

Transit Projects
Within the study area, the City's *2025 Transportation Master Plan (TMP)* identifies O-Train Line 3 from Tunney's Pasture Station to Moodie Station as 'existing rapid transit,' as construction is underway. O-Train service is anticipated to begin in 2027. The future Queensview Station includes a pedestrian bridge to cross Highway 417, which connects to Baxter Road at the subject site. A future extension of Line 3 west to Hazeldean Station in Kanata is identified in both the Needs-Based and Priority Transit Networks.

South of the study area, the City's *2025 TMP* identifies the Baseline-Heron Transitway from Bayshore Station to Billings Bridge Station. The Algonquin College to Billings Bridge Station phase is identified in the Priority Transit Network, and the Bayshore Station to Algonquin College phase is identified in the Needs-Based Transit Network.

Roadway Projects
Within the study area, the City's *2025 TMP* does not identify any roadway projects in its Needs-Based or Priority Road Networks. North of the study area, the City's *2025 TMP* identifies a Phase 2 Mainstreet Improvement project on Carling Avenue (from Pinecrest Road to Connaught Avenue) and a Phase 1 Urbanization project on Richmond Road (from Bayshore Drive to Pinecrest Road) in its Priority Road Network.

Active Transportation Projects
The City's *2025 TMP* identifies multiple prioritized active transportation projects within or adjacent to the study area. Related to prioritized pedestrian projects, new sidewalks are planned on Southwood Drive from Iris Street to Baseline Road, and on Stanton Road from McWatters Road to Thorson Avenue.

Related to prioritized cycling projects, the *2025 TMP* identifies a feasibility study to improve cycling facilities on Iris Street from Greenbank Road to Iris Station, planned bike lanes on Queensview Drive wherever feasible, and planned cycling facilities on Pinecrest Road and Greenbank Road between the Highway 417 ramp terminals (discussed below).

As part of the ongoing construction of Pinecrest Station, the City has developed designs to modify the Pinecrest Road intersections at Queensview Drive and the Highway 417 ramp terminal. A bidirectional cycle track is planned along the west side of Pinecrest Road, south of Dumaurier Avenue. Zebra-striped crosswalks are planned for all approaches at Queensview Drive and the north, east, and west approaches at the Highway 417 ramp terminal. Crossrides are planned to cross Pinecrest Road at Queensview Drive, and planned to cross the transit approach across from the Highway 417 ramp terminal. Specific to the Highway 417 ramp terminal to Pinecrest Road, the westbound approach is planned to include dual left turn lanes, a transit-exclusive through lane, and one right turn lane. The functional design drawings for the modifications described above are included in **Appendix F**.

As part of the Stage 2 LRT Station Connectivity Enhancement Study, the City has developed a functional design of improved active transportation facilities on Baxter Road, to connect pedestrians and cyclists to the new Queensview Station pedestrian bridge. This includes a new sidewalk on the north/west side of Baxter Road from the southerly Pinecrest Shopping Centre access to the Queensview Station bridge, a left turn bike box for southbound cyclists turning onto Iris Street, buffered bike lanes on both sides of Baxter Road from Iris Street to the southerly Pinecrest Shopping Centre access, a southbound curbside bike lane north of the southerly Pinecrest Shopping Centre access, bike sharrows elsewhere, and a speed hump at the proposed southerly connection to Street 1. There is no defined timeline for these improvements on Baxter Road. The functional design drawings are included in **Appendix F**.

2.2.2 Pinecrest and Queensview Stations Secondary Plan

The *Pinecrest and Queensview Stations Secondary Plan* includes multiple relevant policies that aim to prioritize pedestrians, cyclists, and transit users, improve connectivity, increase density and height near transit, and develop complete streets, among others.

Section 7.1 of the *Secondary Plan* includes a policy to extend Baxter Road east of the existing cul-de-sac through 1050 Baxter Road. The *Secondary Plan* states that a future traffic study will determine whether the extension shall terminate in the southeast corner of 1050 Baxter Road (with an active transportation connection continuing to Elmira Drive) or connect to Elmira Drive. This section also includes a policy to reconstruct Baxter Road with additional pick-up/drop-off lanes, cycle tracks, cycling ramps at the pedestrian bridge to Queensview Station, and pedestrian crossovers. These policies will improve connectivity for all modes throughout the surrounding community.

Specific to 1101 Baxter Road, the *Secondary Plan* identifies that upon redevelopment, a sidewalk and cycling facilities are required on the south/east side of Baxter Road (i.e. along the subject site's frontage). Additionally, redevelopment shall include a new public or private street that improves site connectivity, direct access to Queensview Station, prioritized active transportation modes, and connections to the broader street network. These criteria can be satisfied by the proposed Street 1. The policy also identifies the possibility of a pedestrian bridge crossing Baxter Road to connect directly to the pedestrian bridge crossing Highway 417 to Queensview Station.

Relevant to the study area, the *Secondary Plan* identifies that future consideration should be given to improved active transportation facilities on Iris Street, reconfiguration and relocation of the signalized Iris Street/Pinecrest Shopping Centre intersection further east (improving safety for active users and increasing the amount of westbound queueing at Greenbank Road that can be accommodated), and improved facilities for active users if/when the Pinecrest Road overpass is replaced or eastbound Highway 417 ramps are modified at Greenbank Road.

2.2.3 Other Area Developments

Based on a review of the City's Development Application Search Tool, there are other developments that were significant enough to include traffic projections, and are in proximity of the subject site that are under construction, approved, or are in the approval process. These developments are summarized as follows.

1300 McWatters Road
This property is located on the east side of Greenbank Road and south side of Lisa Avenue (i.e. approximately 400m driving distance south of Greenbank Road/Iris Street). A TIA was prepared by GHD in June 2022, in support of a high-rise residential development with 235 dwellings. This development is currently under construction.

2829 Dumaurier Avenue
This property is located on the north side of Dumaurier Avenue, west of Pinecrest Road (i.e. approximately 350m driving distance northwest of Pinecrest Road/Highway 417 WB Ramps). A TIA was prepared by Parsons in April 2023, in support of a high-rise mixed-use development with 422 dwellings and approximately 3,230 ft^2 of ground-floor commercial space. The TIA identified an estimated buildout year of 2025, but this will not be achieved.

2.3 Study Area and Time Periods

The study area for this report includes the boundary roadway Baxter Road, as well as the intersections at Pinecrest Road/Highway 417 WB Ramps, Greenbank Road/Iris Street/Highway 417 EB Ramps, Iris Street/Pinecrest Shopping Centre, Iris Street/Southwood Drive, and Iris Street/ Baxter Road.

The selected time periods for this report are the weekday AM and PM peak hours and the Saturday peak hour, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. The buildout year 2035 and five-year horizon 2040 have been considered. Analysis of the MTO ramp terminals for the ten-year horizon 2045 has not been included, as the timeframe of the study already considers 15 years into the future, and updated plans and reports will be submitted as required in relation to future Site Plan Control applications for each individual block. Building heights and unit counts are all conceptual based on the Secondary Planning exercise. The intent of this Draft Plan application is to subdivide the land, and all building footprints will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications.

2.4 Access Design

Based on the concept plan and proposed draft plan, the proposed development will include two private connections to Baxter Road (i.e. the two ends of the new 'Street 1') and four private approaches to Baxter Road.

As the subject site is located along the inside of the curvature of Baxter Road, the Transportation Association of Canada (TAC)'s *Geometric Design Guide for Canadian Roads* has been consulted to review sight distance requirements at the proposed locations of the Street 1 connections and private approaches. The design of the new Street 1 is reviewed in this TIA. The design of the private approaches will be evaluated as part of future Site Plan Control applications.

A review of stopping sight distance (SSD) and intersection sight distance (ISD) requirements at the proposed access locations has been conducted, in accordance with the minimum requirements outlined in TAC's *Geometric Design Guide*. The centreline radius of the Baxter Road curve is approximately 90m, consistent with a design speed of 50 km/h. Therefore, a design speed of 50 km/h has also been considered in selecting the SSD and ISD requirements, which are summarized as follows:

- SSD: 65m required;
- ISD, looking right to turn left out of access: 105m desired;
- ISD, looking left to turn right out of access: 95m desired.

It is anticipated that the minimum required SSD will be accommodated at all connections/accesses to Baxter Road. As shown on the concept plan, the building envelopes of Tower A and Tower B are proposed to accommodate the critical ISD minimums for right turns at the eastern Street 1 connection and left turns at the western Street 1 connection. All building footprints will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications, as this Draft Plan application includes conceptual building footprints that are subject to change. Any vegetation along the east and south side of Baxter Road will need to be maintained to preserve sightlines at both Street 1 connections and future private approaches.

The conceptual design has been evaluated against the relevant provisions of the City's *Private Approach By-Law (PABL)*. The details of each block will be reviewed as part of subsequent Site Plan Control applications.

Based on the concept plan, one private approach is proposed to each of the three residential blocks plus the servicing block at the eastern limit of the site. Section 25(1)(a) of the PABL identifies that there is no minimum frontage requirement to permit one two-way private approach.

Section 25(1)(c) of the PABL identifies that no private approach shall exceed 9m in width. This will be reviewed as part of future Site Plan Control applications.

Section 25(1)(g) of the PABL identifies that the nearest limits of any two private approaches serving the same site shall be separated by a minimum distance of 9m. Based on the concept plan, this requirement will be met.

Section 25(1)(p) of the PABL identifies that all private approaches shall be separated from the nearest property line by a minimum distance of 3m. This requirement will be reviewed for the proposed private approaches, as part of future Site Plan Control applications.

Section 25(1)(u) of the PABL identifies that all private approaches serving 50 or more parking spaces shall have a maximum grade of 2% for the first 9m inside the street line. The grades of all private approaches will be confirmed as part of future Site Plan Control applications.

2.5 Development-Generated Travel Demand

2.5.1 Trip Generation

The number of trips generated by each of the existing uses on Baxter Road has been estimated using first principles, based on the approximate number of parking spaces, types of commercial uses at each property, and hours of operation. In addition to the subject site, Baxter Road provides access to the following properties:

- 1050 Baxter Road
  - Amusement centre and 20+ other commercial/light industrial tenants;
  - Approximately 360 parking spaces.
- 1119 Baxter Road
  - Strip retail plaza with five restaurants, a deli, and other businesses;
  - Approximately 44 parking spaces.
- 2865 Iris Street – south access
  - Two restaurant pads and a drive-through bank pad;
  - Approximately 165 spaces.
- 2865 Iris Street – north access
  - Same retail pads plus access to Pinecrest Shopping Centre;
  - Approximately 165 spaces at the retail pads plus thousands of parking spaces at the Pinecrest Shopping Centre.

The observed peak hour traffic volumes on Baxter Road are assumed to be generated by the properties listed above in the proportions shown in **Table 5**.

Table 5: Existing Vehicle Trip Generation

Site (PROPORTION OF TRIPS)	Parking Supply	AM Peak (vph)			PM Peak (vph)			SAT Peak (vph)		
		IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
1050 Baxter Road (20% AM, 40% PM, 50% SAT)	360 spaces	20	15	*35*	110	75	*185*	120	240	*360*
1101 Baxter Road (50% AM, 20% PM, 15% SAT)	**275 spaces**	**57**	**16**	***73***	**28**	**60**	***88***	**38**	**80**	***118***
1119 Baxter Road (0% AM, 5% PM, 5% SAT)	44 spaces	-	-	*0*	15	10	*25*	10	25	*35*
2865 Iris Street – Restaurants (5% AM, 20% PM, 15% SAT)	165 spaces	5	5	*10*	60	30	*90*	45	70	*115*
2865 Iris Street – Pinecrest SC (25% AM, 15% PM, 15% SAT)	n/a	10	25	*35*	35	30	*65*	40	75	*115*
Total Existing Volumes on Baxter Road		**92**	**61**	***153***	**248**	**205**	***453***	**253**	**490**	***743***

From the previous table, the existing development is estimated to generate approximately 73 vehicle trips in the AM peak hour, 88 vehicle trips in the PM peak hour, and 118 vehicle trips in the Saturday peak hour.

The proposed site traffic has been estimated using two methods to satisfy both the City's and MTO's requirements. The City's *TIA Guidelines* recommend the use of *TRANS Trip Generation Manual* rates for residential developments. The MTO's *General Guidelines for the Preparation of Traffic Impact Studies* recommend the use of *ITE Trip Generation Manual* rates. Based on Novatech's experience with Transit-Oriented Development (TOD) zones, MTO generally prefers a more conservative estimate of vehicle trip generation for a robust analysis of intersections in their jurisdiction.

2.5.2 Proposed Site Trip Generation (City Method)

Proposed Residential Trip Generation

The number of peak hour person trips generated by the proposed development has been estimated using the *TRANS Trip Generation Manual*, which present peak period trip generation rates and mode shares for different types of housing for the AM and PM peak periods. For the High-Rise Multifamily Housing land use, the process of converting the trip generation estimates from peak period to peak hour is shown as follows.

The *TRANS Trip Generation Manual* identifies the subject site as being located within the Bayshore/ Cedarview district, which has the following observed mode shares for high-rise multifamily housing during the weekday peak periods:

- Auto Driver: 40% in AM peak, 40% in PM peak;
- Auto Passenger: 12% in AM peak, 15% in PM peak;
- Transit: 38% in AM peak, 33% in PM peak;
- Cyclist: 2% in AM peak, 1% in PM peak;
- Pedestrian: 8% in AM peak, 11% in PM peak.

The subject site is located within a TOD zone, as it will be within walking distance of the future Queensview Station. The City has provided target mode shares for any transit-oriented developments, which are the following:

- Auto Driver: 15% during both weekday peak hours;
- Auto Passenger: 5% during both weekday peak hours;
- Transit: 65% during both weekday peak hours;
- Non-Auto: 15% during both weekday peak hours.

For the City's method of trip generation, the proposed development is assumed to follow the mode share targets for TOD areas, during all peak hours. The non-auto shares have been split as 2% cyclist and 13% pedestrian, based on the observed Bayshore/Cedarview active mode shares. Therefore, the assumed mode shares of the proposed development can be summarized as 15% auto driver, 5% auto passenger, 65% transit, 2% cyclist, and 13% pedestrian.

The process of converting the trip generation estimates from peak period to peak hour is shown in the following tables. The *ITE Trip Generation Manual* identifies a ratio of 1.11 between the number of Saturday peak hour trips to PM peak hour trips, as generated by High-Rise Multifamily Housing (land use code 222). This ratio has been applied to the PM peak period rate as shown in the following table, to estimate the number of Saturday peak period trips. The PM peak period to peak hour adjustment factors have been applied to the Saturday values.

Using the City's method, the estimated number of person trips generated by the proposed residential development during the peak periods are shown in **Table 6**. A breakdown of these trips by mode share is shown in **Table 7**.

Table 6: Proposed Residential – Peak Period Trip Generation

Land Use	TRANS Rate	Units	AM Peak (ppp[1])			PM Peak (ppp[1])			SAT Peak (ppp[1])		
			IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
High-Rise Multifamily Housing	AM: 0.80 PM: 0.90 Sat: 1.00	1,400	347	773	*1,120*	731	529	*1,260*	798	602	*1,400*

1. ppp: Person Trips per Peak Period

Table 7: Proposed Residential – Peak Period Trips by Mode Share

Travel Mode	Modal Share	AM Peak Period			PM Peak Period			SAT Peak Period		
		IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Residential Person Trips		**347**	**773**	***1,120***	**731**	**529**	***1,260***	**798**	**602**	***1,400***
Auto Driver	15%	52	116	*168*	110	79	*189*	120	90	*210*
Auto Passenger	5%	17	39	*56*	37	26	*63*	40	30	*70*
Transit	65%	226	502	*728*	475	344	*819*	519	391	*910*
Cyclist	2%	7	15	*22*	14	11	*25*	16	12	*28*
Pedestrian	13%	45	101	*146*	95	69	*164*	104	78	*182*

Table 4 of the *TRANS Trip Generation Manual* includes adjustment factors to convert the estimated number of trips generated for each mode from peak period to peak hour. A breakdown of the peak hour trips by mode is shown in **Table 8**.

Table 8: Proposed Residential – Peak Hour Trips by Mode Share

Travel Mode	Adj. Factor		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	AM	PM/S	IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Auto Driver	0.48	0.44	25	56	*81*	48	35	*83*	53	40	*93*
Auto Passenger	0.48	0.44	8	19	*27*	16	12	*28*	18	13	*31*
Transit	0.55	0.47	124	276	*400*	223	162	*385*	244	184	*428*
Cyclist	0.58	0.48	4	9	*13*	7	5	*12*	8	6	*14*
Pedestrian	0.58	0.52	26	58	*84*	49	36	*85*	54	41	*95*
Residential Person Trips			**187**	**418**	***605***	**343**	**250**	***593***	**377**	**284**	***661***

From the previous table, the proposed residential component is estimated to generate 605 person trips (including 81 vehicle trips) during the AM peak hour, 593 person trips (including 83 vehicle trips) during the PM peak hour, and 661 person trips (including 93 vehicle trips) during the Saturday peak hour.

Proposed Commercial Trip Generation

The number of person trips generated by the proposed ground-floor commercial units has been estimated using the trip generation rates in the *ITE Trip Generation Manual, 11th Edition*, corresponding to the Shopping Centre (code 820) land use. The *TRANS Trip Generation Manual* identifies the following observed mode shares for commercial developments within Bayshore/ Cedarview during the weekday peak hours:

- Auto Driver: 64% in AM peak, 62% in PM peak;
- Auto Passenger: 15% in AM peak, 20% in PM peak;
- Transit: 4% in AM peak, 6% in PM peak;
- Cyclist: 0% in AM peak, 1% in PM peak;
- Pedestrian: 17% in AM peak, 11% in PM peak.

The assumed proposed ground-floor commercial is a blend of the TOD shares and the Bayshore/ Cedarview commercial mode shares described above. This can be summarized as 25% driver, 15% passenger, 45% transit, 1% cyclist, and 14% pedestrian. The estimated number of person trips generated by the proposed commercial uses are shown in **Table 9**, and broken down by mode share in **Table 10**.

Table 9: Proposed Commercial – Peak Hour Trip Generation

Land Use	ITE Code	GFA	AM Peak (pph[1])			PM Peak (pph[1])			SAT Peak (pph[1])		
			IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Shopping Centre	820	100,640 ft^2	68	41	*109*	210	228	*438*	295	272	*567*

1. pph: Person Trips per Peak Hour – Calculated using an ITE Trip to Person Trip factor of 1.28, consistent with the *TIA Guidelines*

Table 10: Proposed Commercial – Person Trips by Modal Share

Travel Mode	Modal Share	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Commercial Person Trips		**68**	**41**	***109***	**210**	**228**	***438***	**295**	**272**	***567***
Auto Driver	25%	17	10	*27*	53	57	*110*	74	68	*142*
Auto Passenger	15%	10	7	*17*	32	34	*66*	44	41	*85*
Transit	45%	31	18	*49*	94	103	*197*	133	122	*255*
Cyclist	1%	1	-	*1*	2	2	*4*	3	3	*6*
Pedestrian	14%	9	6	*15*	29	32	*61*	41	38	*79*

From the previous table, the proposed commercial component is estimated to generate 109 person trips (including 27 vehicle trips) during the AM peak hour, 438 person trips (including 110 vehicle trips) during the PM peak hour, and 567 person trips (including 142 vehicle trips) during the Saturday peak hour.

As a whole, using the City's method, the proposed development is estimated to generate 714 person trips (including 109 vehicle trips) during the AM peak hour, 1,031 person trips (including 193 vehicle trips) during the PM peak hour, and 1,228 person trips (including 235 vehicle trips) during the Saturday peak hour.

Internally Captured Trips

As the subject site contains residential and commercial uses, it is anticipated that some trips may be internally captured (i.e. residents may travel downstairs to the ground-floor commercial spaces). Since the Shopping Centre land use rates in the *ITE Trip Generation Manual* account for multiple retail uses in one location, no reduction is required to account for internally captured trips between commercial spaces.

The *ITE Trip Generation Handbook* identifies internal trip rates between residential and retail land uses, and these rates have been used to estimate the number of internally captured trips at buildout of the proposed development. Internally captured trips between the proposed land uses have been estimated using the methodology outlined in the *ITE Trip Generation Handbook* and the *NCHRP Report 684 Estimator* spreadsheet tool (developed by the Texas A&M Transportation Institute in 2010). Person trips have been entered directly into the spreadsheet where required, as the tool's method of estimating person trips is incompatible with the results shown in the previous tables. The internal capture worksheets are included in **Appendix G**.

Internally captured trip estimates by the proposed development is presented in **Table 11**.

Table 11: Internally Captured Trips – Proposed Development

Trip Type		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Residential Trips	**Vehicle**	**25**	**56**	***81***	**48**	**35**	***83***	**53**	**40**	***93***
	Transit	**124**	**276**	***400***	**223**	**162**	***385***	**244**	**184**	***428***
	Non-Auto	**30**	**67**	***97***	**56**	**41**	***97***	**62**	**47**	***109***
Internal Adjustment	Vehicle	-1	-1	*-2*	-12	-4	*-16*	-14	-6	*-20*
	Transit	-5	-7	*-12*	-38	-13	*-51*	-45	-19	*-64*
	Non-Auto	-3	-5	*-8*	-13	-7	*-20*	-16	-9	*-25*
External Trips	Vehicle	24	55	*79*	36	31	*67*	39	34	*73*
	Transit	119	269	*388*	185	149	*334*	199	165	*364*
	Non-Auto	27	62	*89*	43	34	*77*	46	38	*84*
Retail Trips	**Vehicle**	**17**	**10**	***27***	**53**	**57**	***110***	**74**	**68**	***142***
	Transit	**31**	**18**	***49***	**94**	**103**	***197***	**133**	**122**	***255***
	Non-Auto	**10**	**6**	***16***	**31**	**34**	***65***	**44**	**41**	***85***
Internal Adjustment	Vehicle	-2	-2	*-4*	-8	-24	*-32*	-12	-28	*-40*
	Transit	-2	-1	*-3*	-9	-27	*-36*	-14	-32	*-46*
	Non-Auto	-	-	*0*	-3	-9	*-12*	-2	-11	*-13*
External Trips	Vehicle	15	8	*23*	45	33	*78*	62	40	*102*
	Transit	29	17	*46*	85	76	*161*	119	90	*209*
	Non-Auto	10	6	*16*	28	25	*53*	40	30	*70*
Total External Trips	**Vehicle**	**39**	**63**	***102***	**81**	**64**	***145***	**101**	**74**	***175***
	Transit	**148**	**288**	***434***	**270**	**225**	***495***	**318**	**255**	***573***
	Non-Auto	**37**	**68**	***105***	**71**	**59**	***130***	**86**	**68**	***154***

From the previous table, the proposed development is projected to generate the following number of external peak hour trips using the City's method of estimating trip generation:

- 102 vehicle trips, 434 transit trips, and 105 non-auto trips during the AM peak hour;
- 145 vehicle trips, 495 transit trips, and 130 non-auto trips during the PM peak hour;
- 175 vehicle trips, 573 transit trips, and 154 non-auto trips during the Saturday peak hour.

Pass-by Trips
The subject site is not anticipated to generate any pass-by trips, as Baxter Road is a dead-end roadway. Therefore, all external commercial trips are assumed to be made for the specific purpose of visiting the site.

2.5.3 Proposed Site Trip Generation (MTO Method)

The number of vehicle trips generated by the proposed residential development has been estimated using the trip generation rates in the *ITE Trip Generation Manual, 11th Edition*. Based on the context of the development, the Multifamily Housing High-Rise land use (code 222) has been considered, with the 'Close to Rail Transit' subcategory and 'Dense Multi-Use Urban' setting selected. The estimated number of commercial trips has been estimated using the Shopping Centre land use (code 820), but without adjusting for the City's TOD mode shares.

The estimated number of vehicle trips generated by the proposed development using ITE rates are shown in **Table 12**.

Table 12: Proposed Development – Peak Hour Trip Generation (ITE Rates)

Land Use	ITE Code	Units/GFA	AM Peak (vph[1])			PM Peak (vph[1])			SAT Peak (vph[1])		
			IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Multifamily Housing (High-Rise)	222	1,400 units	29	233	*262*	145	65	*210*	93	123	*216*
Shopping Centre	820	100,640 ft^2	53	32	*85*	164	178	*342*	230	213	*443*
		Total	**82**	**265**	***347***	**309**	**243**	***552***	**323**	**336**	***659***

1. vph: Vehicles per Peak Hour

Internally Captured Trips
The number of internally captured trips has been estimated using the same tool as described in the previous section. The alternate internal capture worksheets are included in **Appendix G**. Internally captured trip estimates by the proposed development is presented in **Table 13**.

Table 13: Internally Captured Trips – Proposed Development (MTO)

Trip Type	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Residential Vehicle Trips	**29**	**233**	***262***	**145**	**65**	***210***	**93**	**123**	***216***
Internal Adjustment	-1	-2	*-3*	-46	-16	*-62*	-43	-23	*-66*
External Residential Trips	28	231	*259*	99	49	*148*	50	100	*150*
Retail Vehicle Trips	**53**	**32**	***85***	**164**	**178**	***342***	**230**	**213**	***443***
Internal Adjustment	-2	-1	*-3*	-16	-46	*-62*	-23	-43	*-66*
External Retail Trips	51	31	*82*	148	132	*280*	207	170	*377*
Total External Trips	**79**	**262**	***341***	**247**	**181**	***428***	**257**	**270**	***527***

From the previous table, the proposed development is projected to generate the following number of external peak hour trips using the MTO's method of estimating trip generation:

- 341 vehicle trips during the AM peak hour;
- 428 vehicle trips during the PM peak hour;
- 527 vehicle trips during the Saturday peak hour.

2.5.4 Trip Distribution

Existing Development
Trips generated by the existing development are assumed to all enter and exit via Iris Street/Baxter Road (i.e. trips are not assumed to enter/exit via the Pinecrest Shopping Centre). Trips entering and exiting Baxter Road to the west on Iris Street have then been proportionally distributed to Highway 417, Pinecrest Road, Greenbank Road, and Southwood Drive, based on the observed volumes on those roadways.

Proposed Development
The assumed distribution of weekday trips generated by the proposed residential component has been estimated by generally considering the typical commuter patterns (i.e. outbound volumes during the AM peak hour and inbound volumes during the PM peak hour). It is assumed that a higher proportion of trips will use the free-flowing Highway 417 instead of travelling north on Pinecrest Road. The assumed distribution of Saturday residential trips and commercial trips during all peak hours has been estimated by considering the two-way Saturday peak hour volumes. The assumed distributions are summarized as follows.

Residential AM and PM Distribution
- 35% to/from the north via Pinecrest Road;
- 20% to/from the south via Greenbank Road;
- 0% to/from the south via Southwood Drive;
- 25% to/from the east via Highway 417;
- 10% to/from the east via Iris Street;
- 10% to/from the west via Highway 417.

Residential SAT and Commercial Distribution
- 25% to/from the north via Pinecrest Road;
- 25% to/from the south via Greenbank Road;
- 5% to/from the south via Southwood Drive;
- 20% to/from the east via Highway 417;
- 5% to/from the east via Iris Street;
- 20% to/from the west via Highway 417.

These distributions have been applied to trip generation estimates using the City's method, as shown in the previous sections, for the entire study area. They have also been applied to the trip generation estimates using the MTO's method for sensitivity analysis at the ramp terminal intersections.

2.5.5 Trip Assignment

Building heights and unit counts are all conceptual based on the Secondary Planning exercise. The intent of this Draft Plan application is to subdivide the land, and all building footprints will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications.

The current concept plan of the proposed development includes six access locations along Baxter Road. Access to the parking garage is shown to be provided at the four private approaches. It is assumed that all residential trips will enter/exit the parking garage at those four private approaches, and all commercial trips will enter/exit the proposed development via the connections to Street 1 (i.e. commercial vehicle trips will park at-grade along Street 1).

The assignment of residential trips is based on the number of units closest to each driveway. For example, Tower A and Tower B are adjacent to the central driveway, and trips generated by those 550 dwellings have been assigned to that driveway. The assignment of commercial trips have been split evenly between the two Street 1 connections. The assumed trip assignment can be summarized as follows:

- Residential trips are assigned to the Building E access, Building A/B access, Building C/D access, and Building F access 10%/40%/40%/10%;
- Commercial trips are assigned to the north and south Street 1 connections 50%/50%.

The figures listed below illustrate the following traffic volumes:

- The existing site-generated traffic volumes are shown in **Figure 7**;

City Methodology for Site-Generated Trip Projections

- The proposed residential-generated traffic volumes are shown in **Figure 8**;
- The proposed commercial-generated traffic volumes are shown in **Figure 9**;
- The net difference in site-generated traffic volumes are shown in **Figure 10**.

MTO Methodology for Site-Generated Trip Projections

- The proposed residential-generated traffic volumes are shown in **Figure 11**;
- The proposed commercial-generated traffic volumes are shown in **Figure 12**;
- The net difference in site-generated traffic volumes are shown in **Figure 13**.

Figure 7: Existing Site-Generated Traffic Volumes

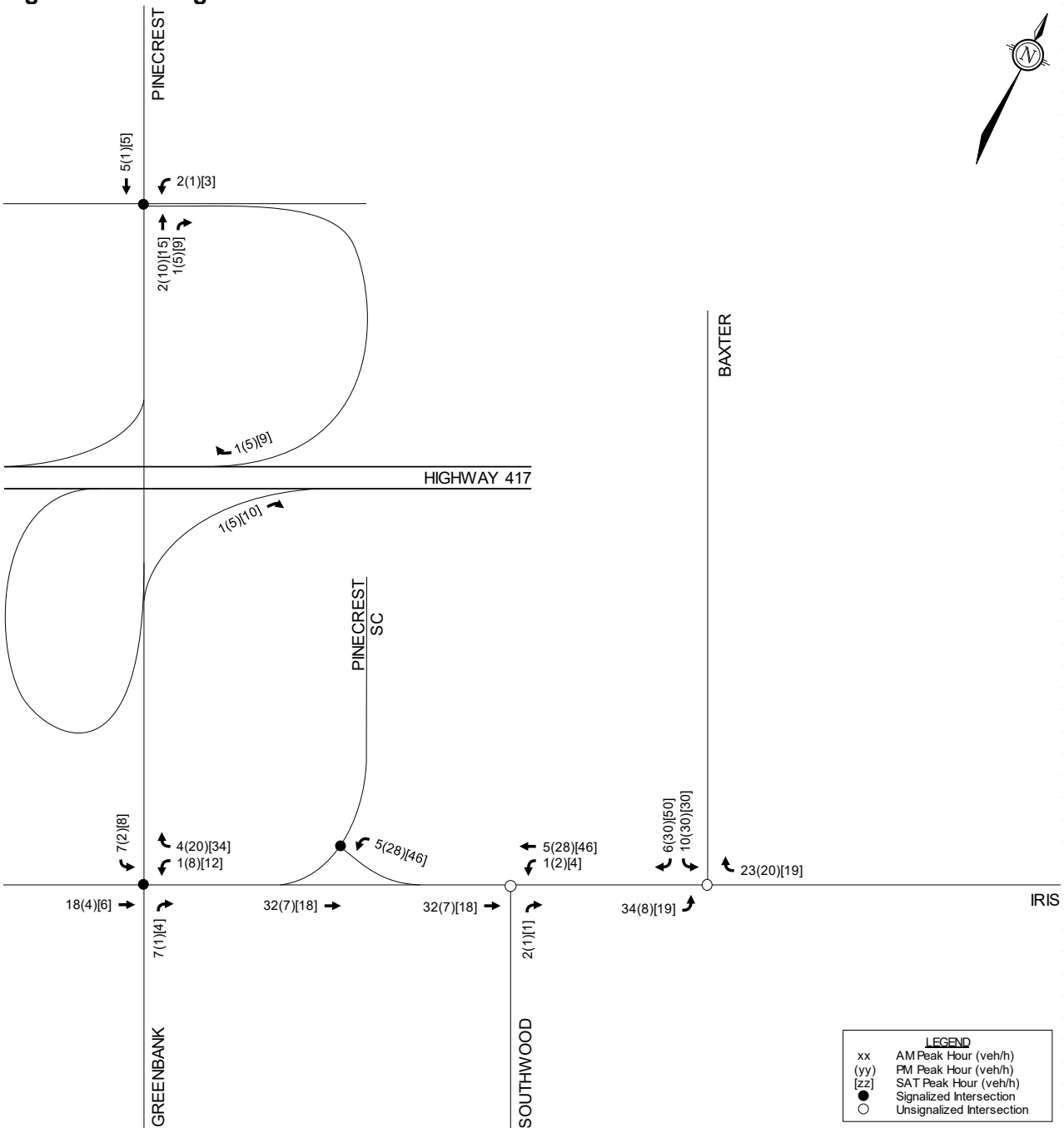


Figure 8: Proposed Residential-Generated Traffic Volumes (City Method)

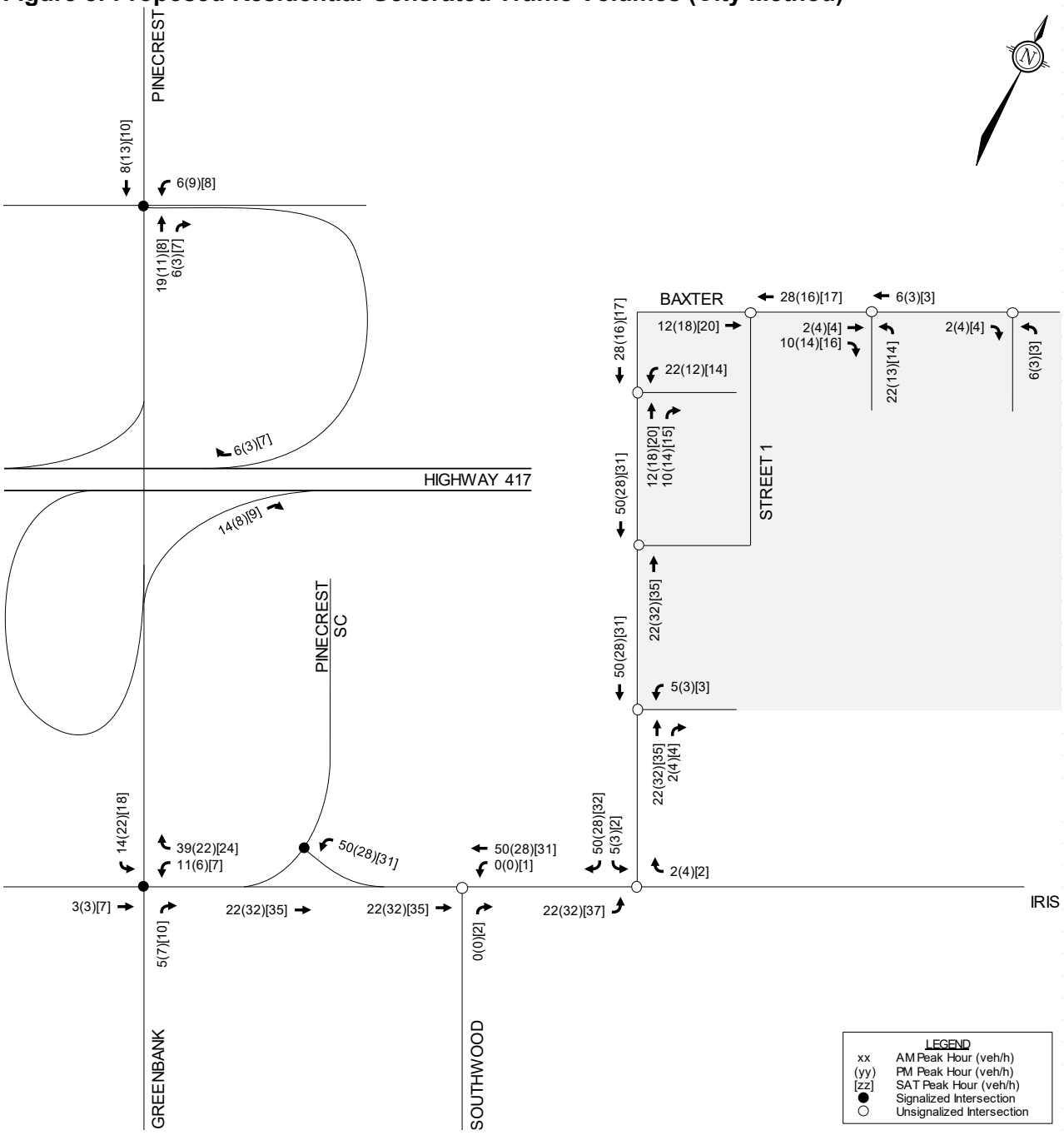


Figure 9: Proposed Commercial-Generated Traffic Volumes (City Method)

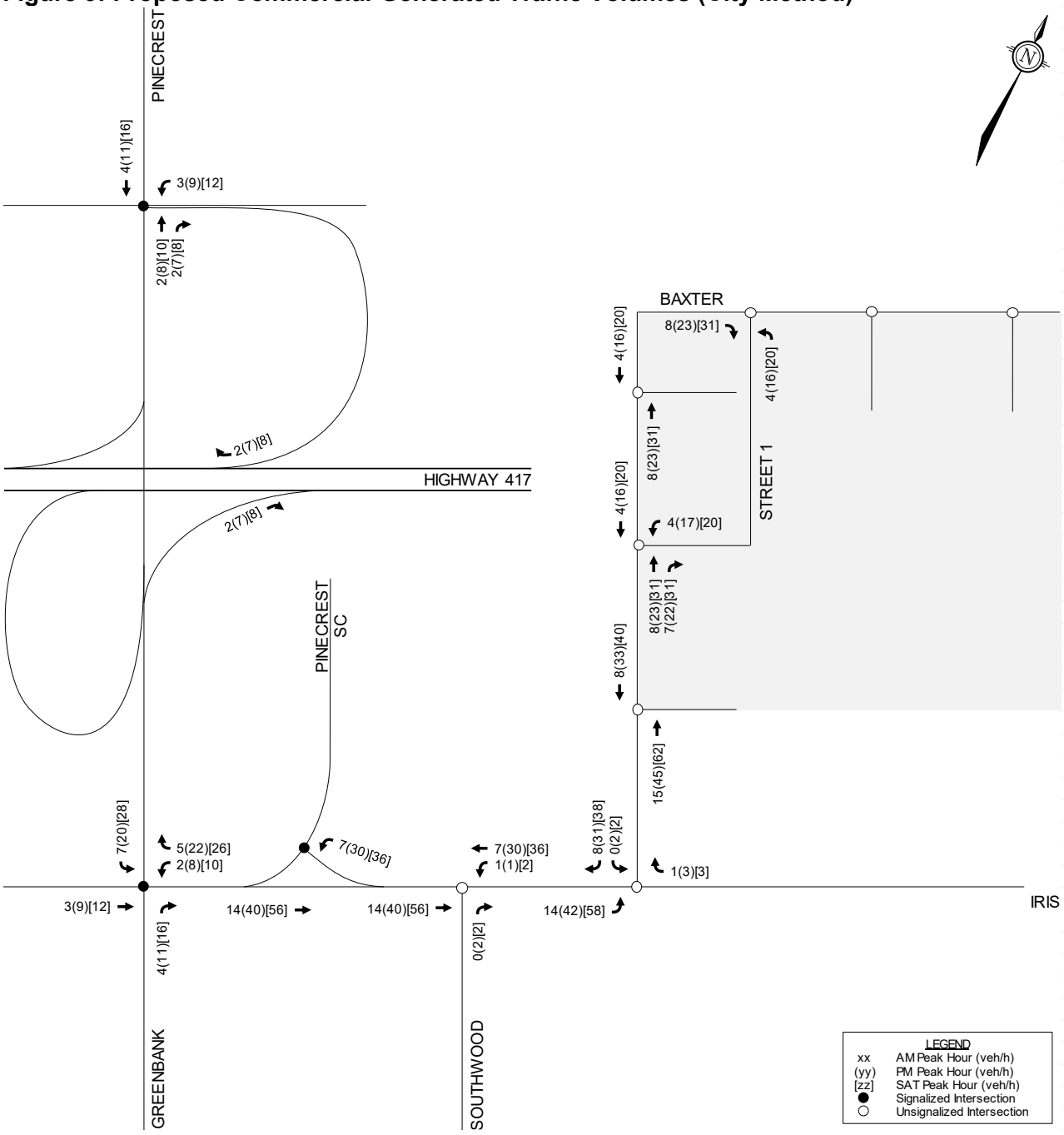


Figure 10: Net Site-Generated Traffic Volumes (City Method)

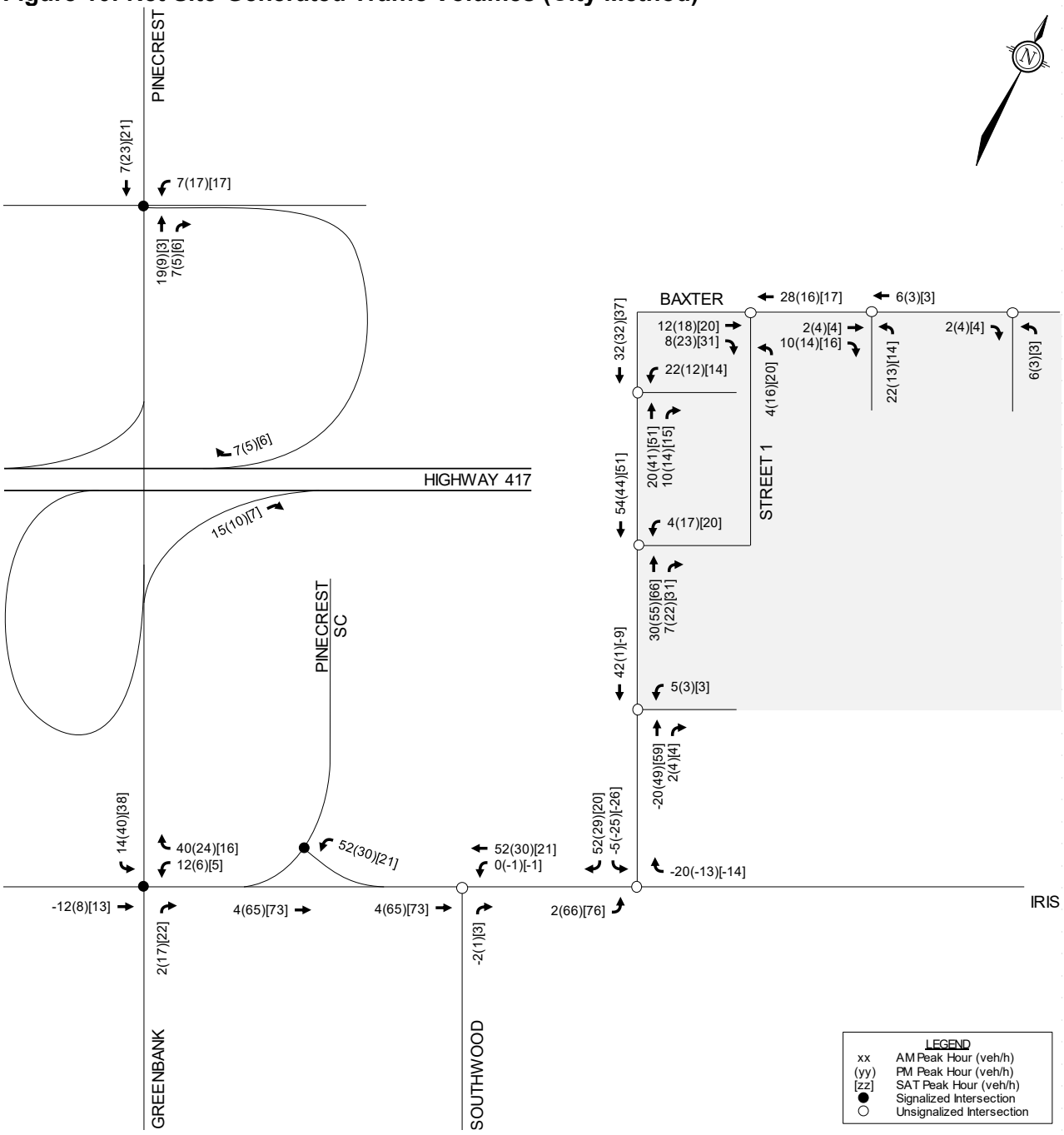


Figure 11: Proposed Residential-Generated Traffic Volumes (MTO Method)

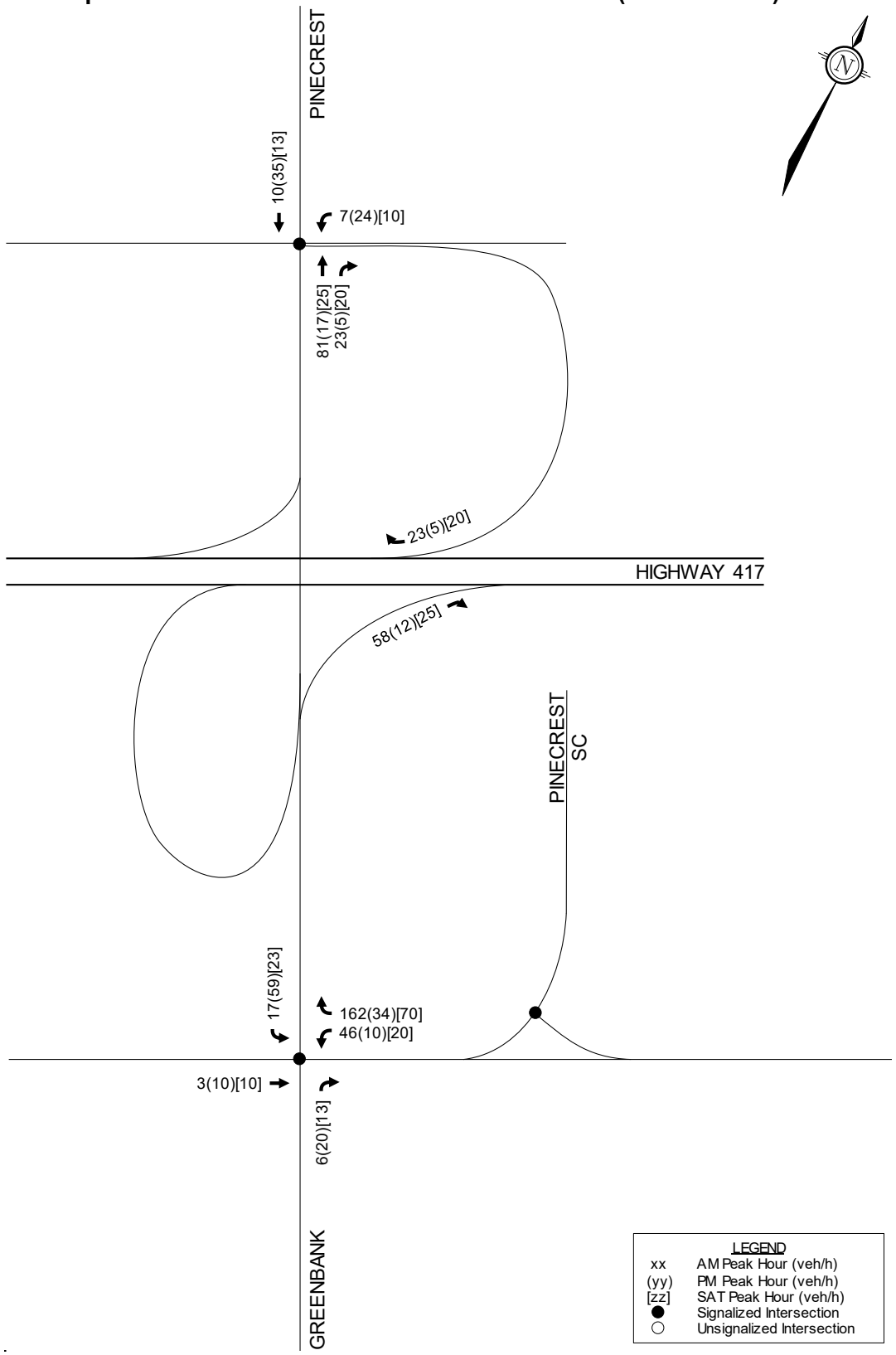


Figure 12: Proposed Commercial-Generated Traffic Volumes (MTO Method)

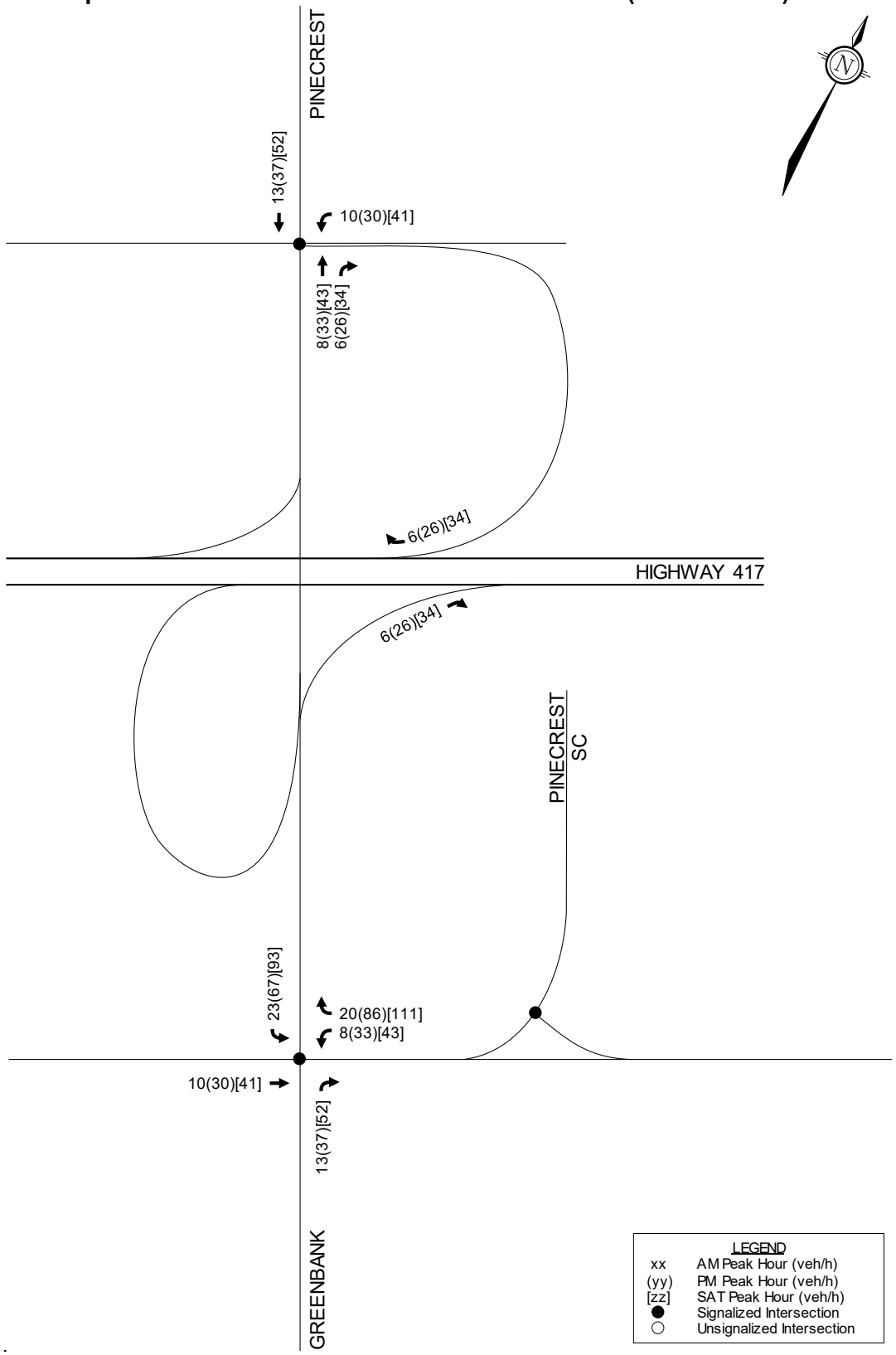
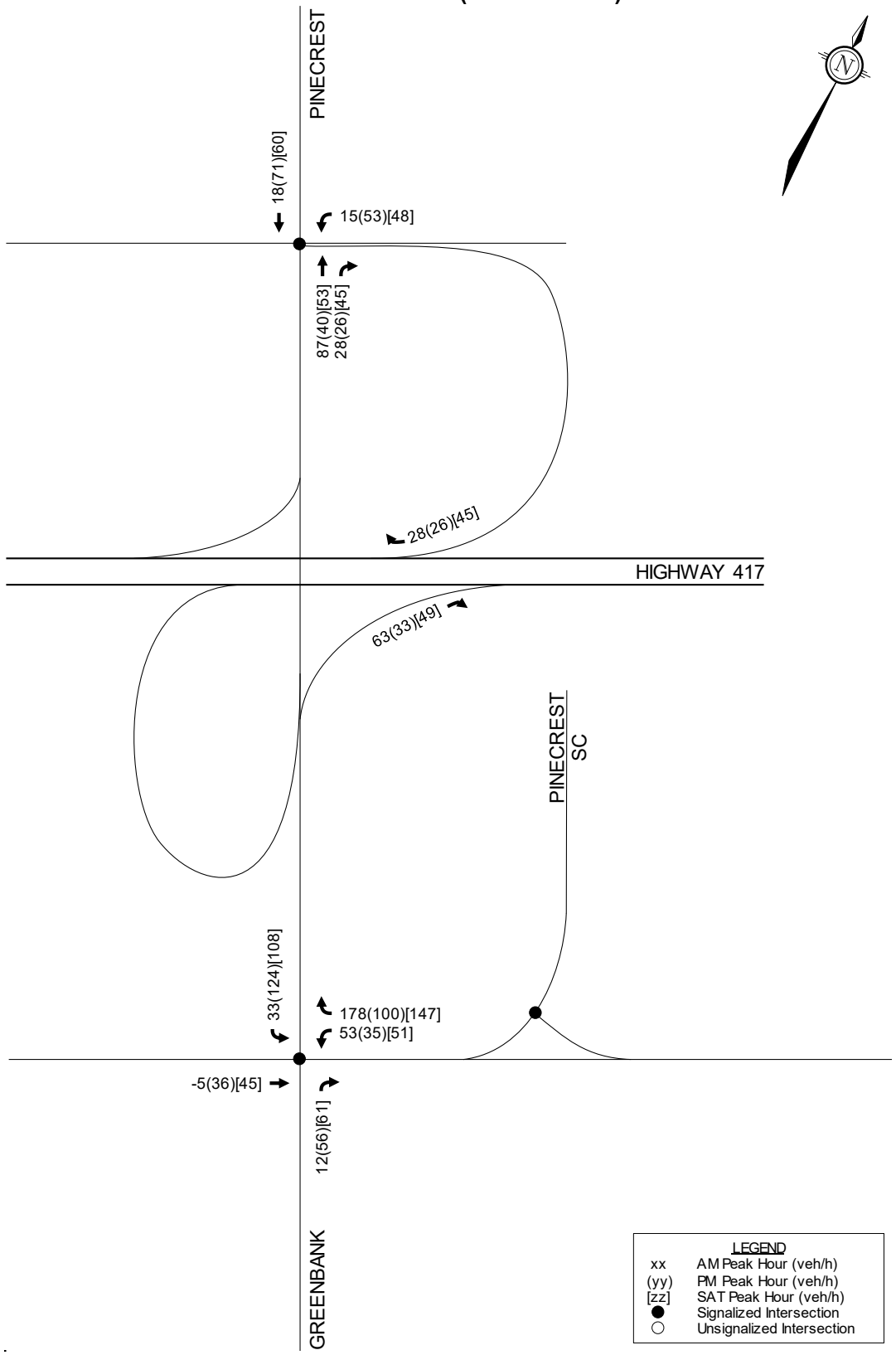


Figure 13: Net Site-Generated Traffic Volumes (MTO Method)



2.6 Exemptions Review

This module reviews possible exemptions from the final TIA, as outlined in the City's *Revised TIA Guidelines*. The applicable exemptions for this site are shown in **Table 14**.

Table 14: TIA Exemptions

Module	Element	Exemption Criteria	Status
4.1 Development Design	*4.1.2* Circulation and Access	• Required for site plan control and zoning by-law amendment applications	Exempt
	4.1.3 New Street Networks	• Required for draft plan of subdivision applications	Not Exempt
4.2 Parking	*All elements*	• Required for site plan control and zoning by-law amendment applications	Exempt
4.6 Neighbourhood Traffic Calming	*All elements*	• If all of the following criteria are met: 1. Access is provided to a collector or local roadway 2. Application is for zoning by-law amendment or draft plan of subdivision 3. Development generates more than 75 vehicle trips 4. Site trip infiltration is expected, and site-generated traffic will increase peak volumes by 50% or more along the route between the site and an arterial 5. The subject street segment is adjacent to two or more of the following significant sensitive land uses: o School (within 250m walking distance) o Park o Retirement/older adult facility o Licensed child care centre o Community centre o 50+% of adjacent properties along the route(s) are occupied by residential lands and at least ten dwellings are occupied	Exempt
4.7 Transit	*4.7.1* Transit Route Capacity	• Required when proposed development generates more than 75 transit trips	Not Exempt
	4.7.2 Transit Priority Requirements	• Required when proposed development generates more than 75 vehicle trips	Not Exempt
4.8 Network Concept	*All elements*	• Required when proposed development generates more than 200 peak hour person trips in excess of the equivalent volume permitted by the established zoning	Exempt
4.9 Intersection Design	*All elements*	• Required when proposed development generates more than 75 vehicle trips	Not Exempt

Based on the foregoing, the following modules will be included in the TIA report:

- Module 4.1: Development Design
- Module 4.3: Boundary Streets
- Module 4.5: Transportation Demand Management
- Module 4.7: Transit
- Module 4.9: Intersection Design

3.0 FORECASTING

3.1 Other Area Developments

As first discussed in Section 2.2.3, the following developments are in proximity of the subject site, and transportation studies with projections were prepared in support of those applications. Relevant excerpts of the studies are included in **Appendix H**.

1300 McWatters Road
The proposed development includes a high-rise residential development with 235 dwellings. This development is currently under construction. Therefore, projected volumes generated by this development have been added to all future background conditions.

2829 Dumaurier Avenue
The proposed development includes a high-rise mixed-use development with 422 dwellings and approximately 3,230 ft^2 of ground-floor commercial space. The TIA identified an estimated buildout year of 2025, but this will not be achieved. Therefore, projected volumes generated by this development have been added to all future background conditions.

Other area development-generated traffic volumes are shown in **Figure 14**. For the purposes of this study, Saturday trips generated by the above developments are assumed to equal the projected PM peak hour volumes.

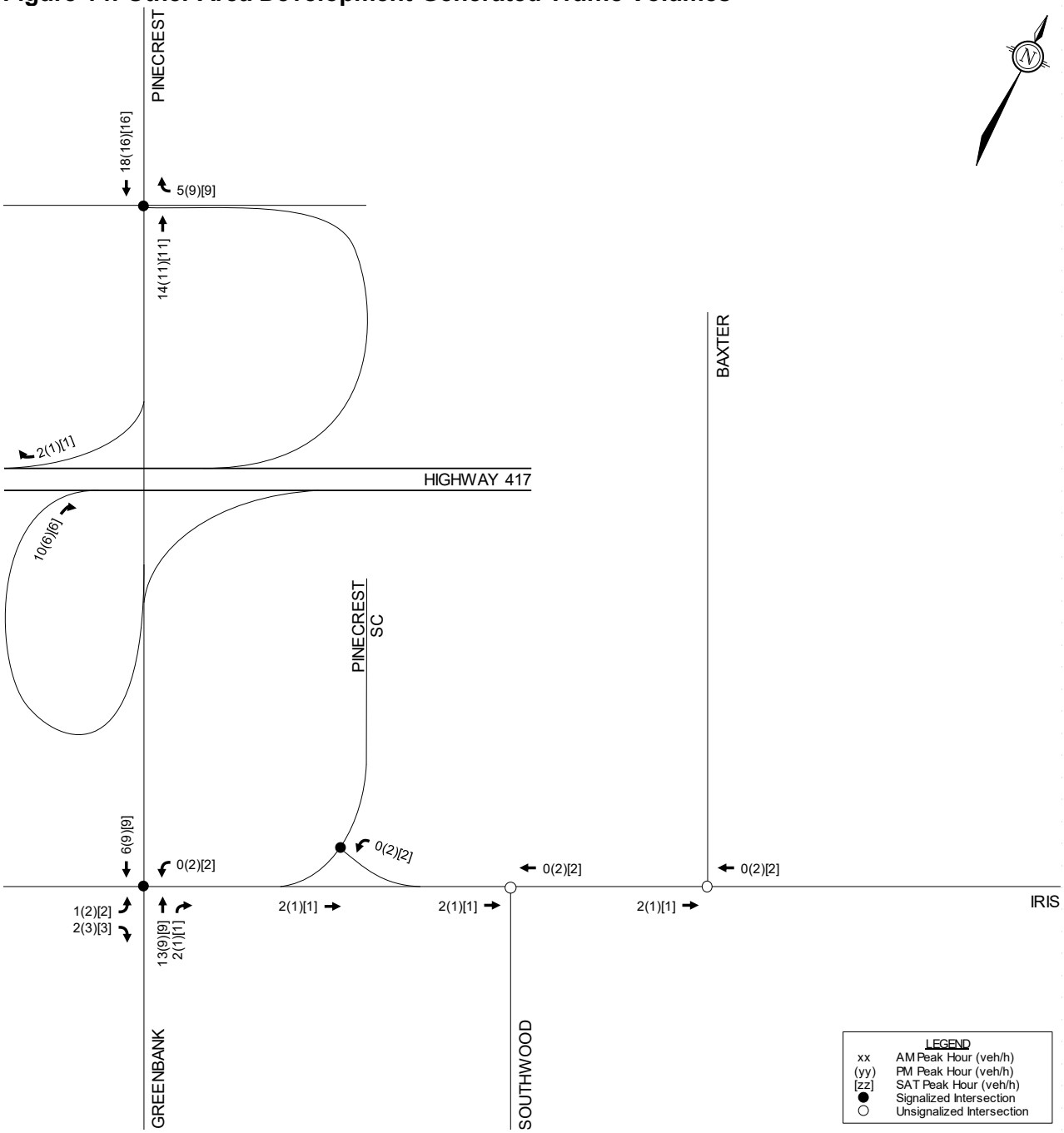
3.2 General Background Growth Rate

A review of the City's *Strategic Long-Range Model* (comparing snapshots of 2022 and 2046 AM peak hour volumes) has been conducted. The snapshots are included in **Appendix I**. A review of the long-range snapshots estimate annual growth rates of approximately 0% to 0.5% on Highway 417, Pinecrest Road, Greenbank Road, and Southwood Drive, and annual growth rates of 0.5% to 1.5% along Iris Street.

A review of MTO's *Provincial Highways Traffic Volumes* publication has been conducted, which includes annual daily traffic volumes at provincial highway ramps from 1988 to 2021 (skipping 2020 due to the COVID-19 pandemic). Relevant pages from the publication are included in **Appendix J**. A review of the annual AADT volumes indicate growth rates of approximately 1.7% to 2.1% per annum during the period of 2012 to 2021.

Given the relatively long horizon, a conservative annual growth rate of 1.5% has been applied to all Highway 417 on- and off-ramps to Pinecrest Road or Greenbank Road. An annual growth rate of 0.5% has been applied to Pinecrest Road, Greenbank Road, Iris Street, and Southwood Drive. Additionally, the projected volumes generated by the other area developments listed in Section 3.1 have been considered in the future background volumes.

Figure 14: Other Area Development-Generated Traffic Volumes



3.3 Future Traffic Volume Figures

The figures below present the following traffic conditions:

- Background traffic volumes in 2035 are shown in **Figure 15**;
- Background traffic volumes in 2040 are shown in **Figure 16**;
- Total traffic volumes in 2035 (based on City methodology for site trip projections) are shown in **Figure 17**;
- Total traffic volumes in 2040 (based on City methodology for site trip projections) are shown in **Figure 18**;
- Total traffic volumes in 2035 (based on MTO methodology for site trip projections) are shown in **Figure 19**;
- Total traffic volumes in 2040 (based on MTO methodology for site trip projections) are shown in **Figure 20**.

3.4 Demand Rationalization

A review of the existing and background intersection operations has been conducted to determine where traffic volumes exceed capacity within the study area, using Synchro 11 software. The intersection parameters used in the analysis are consistent with the *TIA Guidelines* (Saturated Flow Rate: 1,800 vphpl, Peak Hour Factor: 0.9 in existing conditions and 1.0 in future conditions). Signal timing plans have been obtained from the City, and are included in **Appendix K**.

Per Exhibit 22 of the *Multi-Modal Level of Service (MMLOS) Guidelines*, the City's target vehicular level of service (Auto LOS) at all study area intersections is an Auto LOS E, as they are within 600m of a rapid transit station. This equates to a vehicle-to-capacity (v/c) ratio of 1.00 at signalized intersections, and a maximum delay of 50 seconds at unsignalized intersections.

In accordance with the MTO's *General Guidelines for the Preparation of Traffic Impact Studies*, the MTO's target v/c ratio for all movements at signalized intersections is 0.85. The target v/c ratio for ramp approaches is more critical, at 0.75. These targets are stricter than the City's targets.

Figure 15: 2035 Background Traffic Volumes

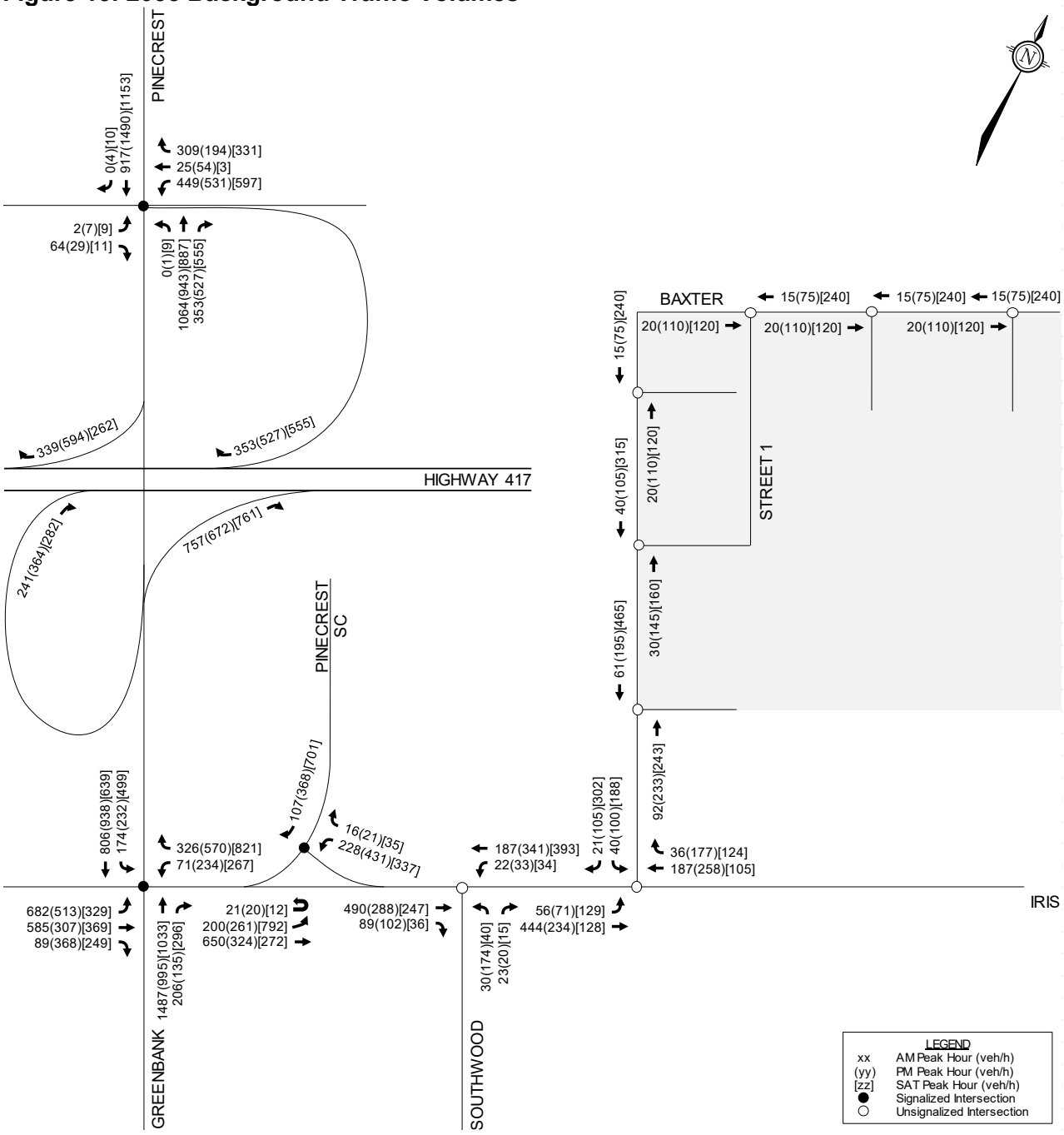


Figure 16: 2040 Background Traffic Volumes

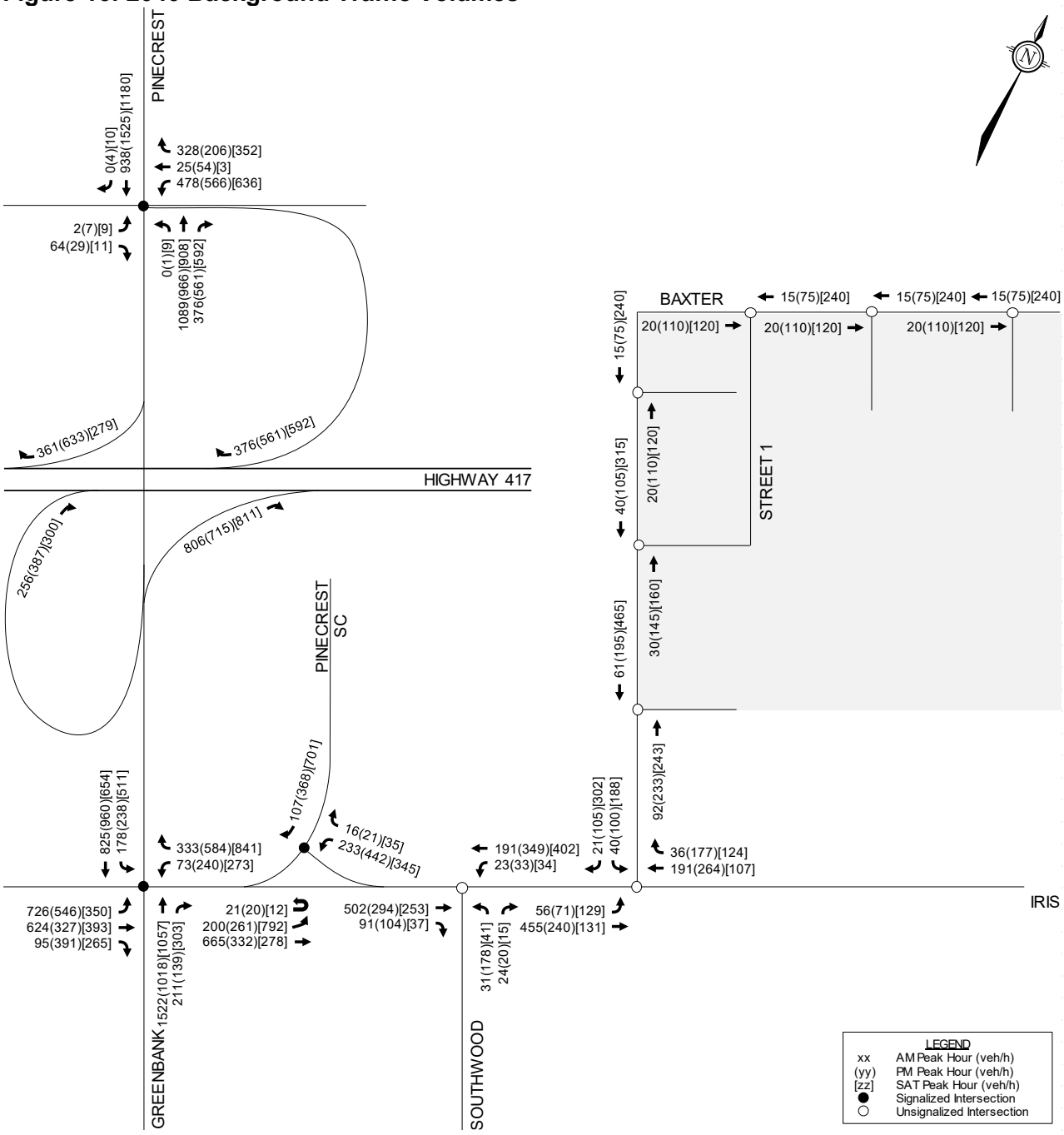


Figure 17: 2035 Total Traffic Volumes (City Method)

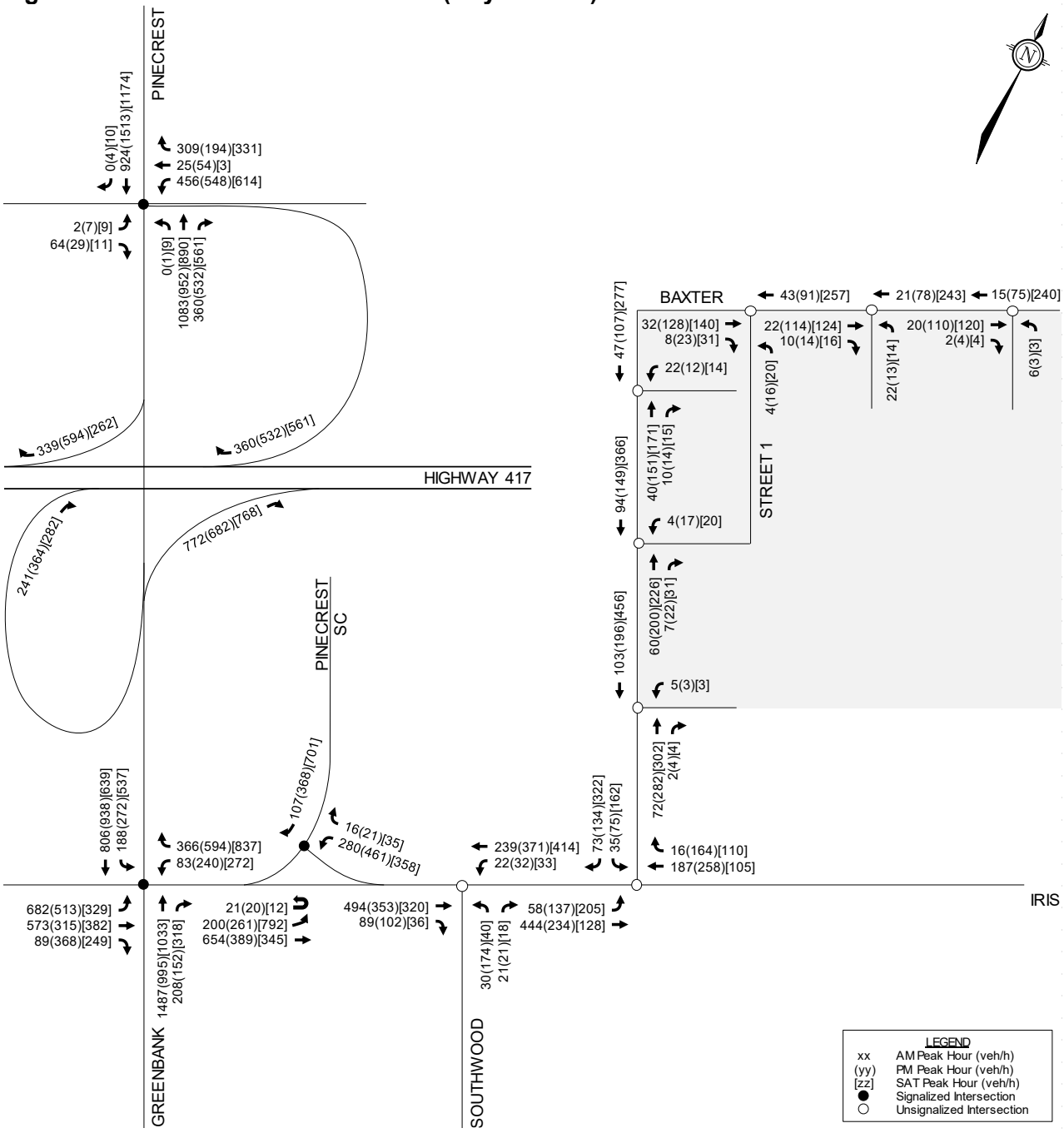


Figure 18: 2040 Total Traffic Volumes (City Method)

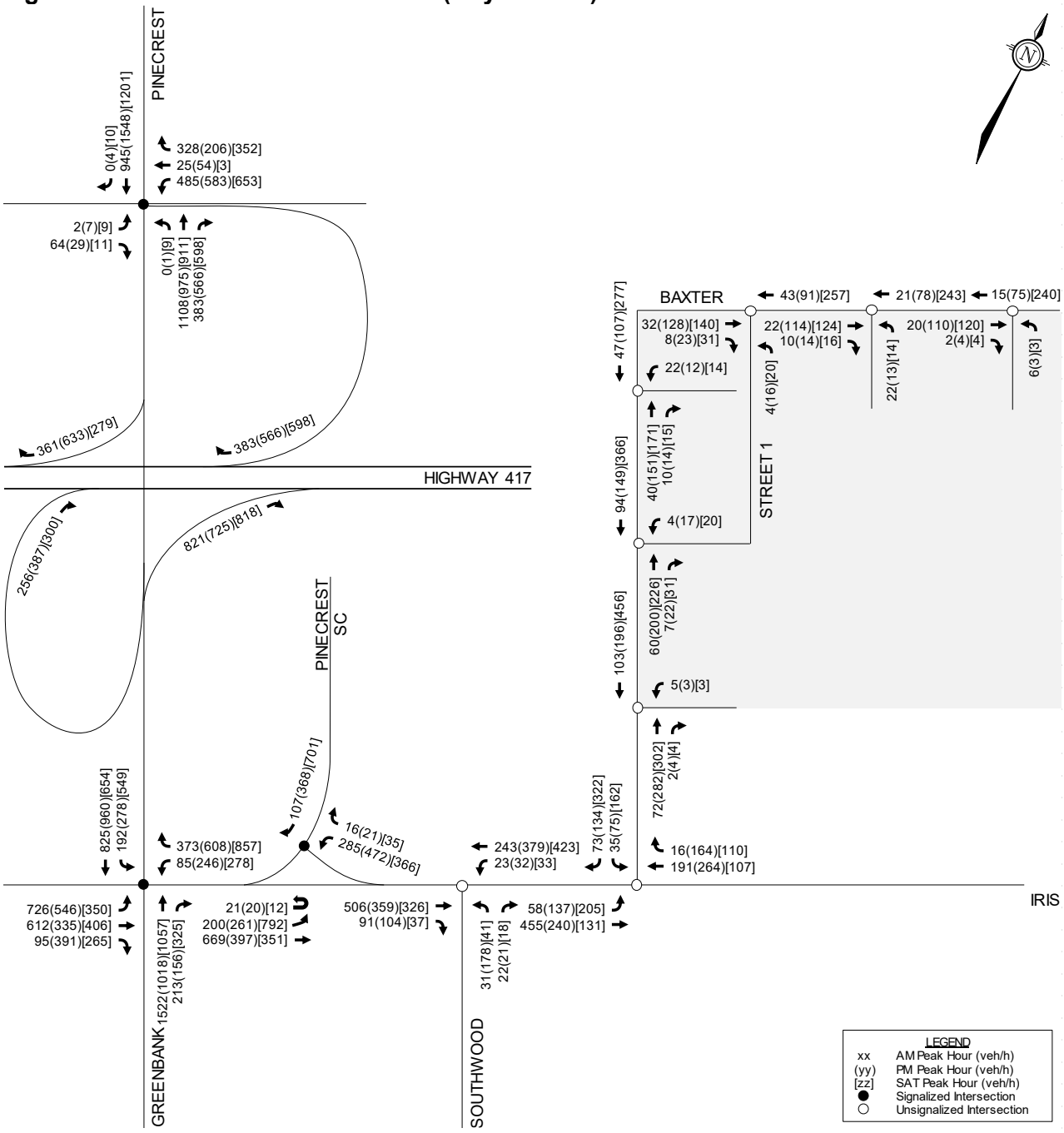


Figure 19: 2035 Total Traffic Volumes (MTO Method)

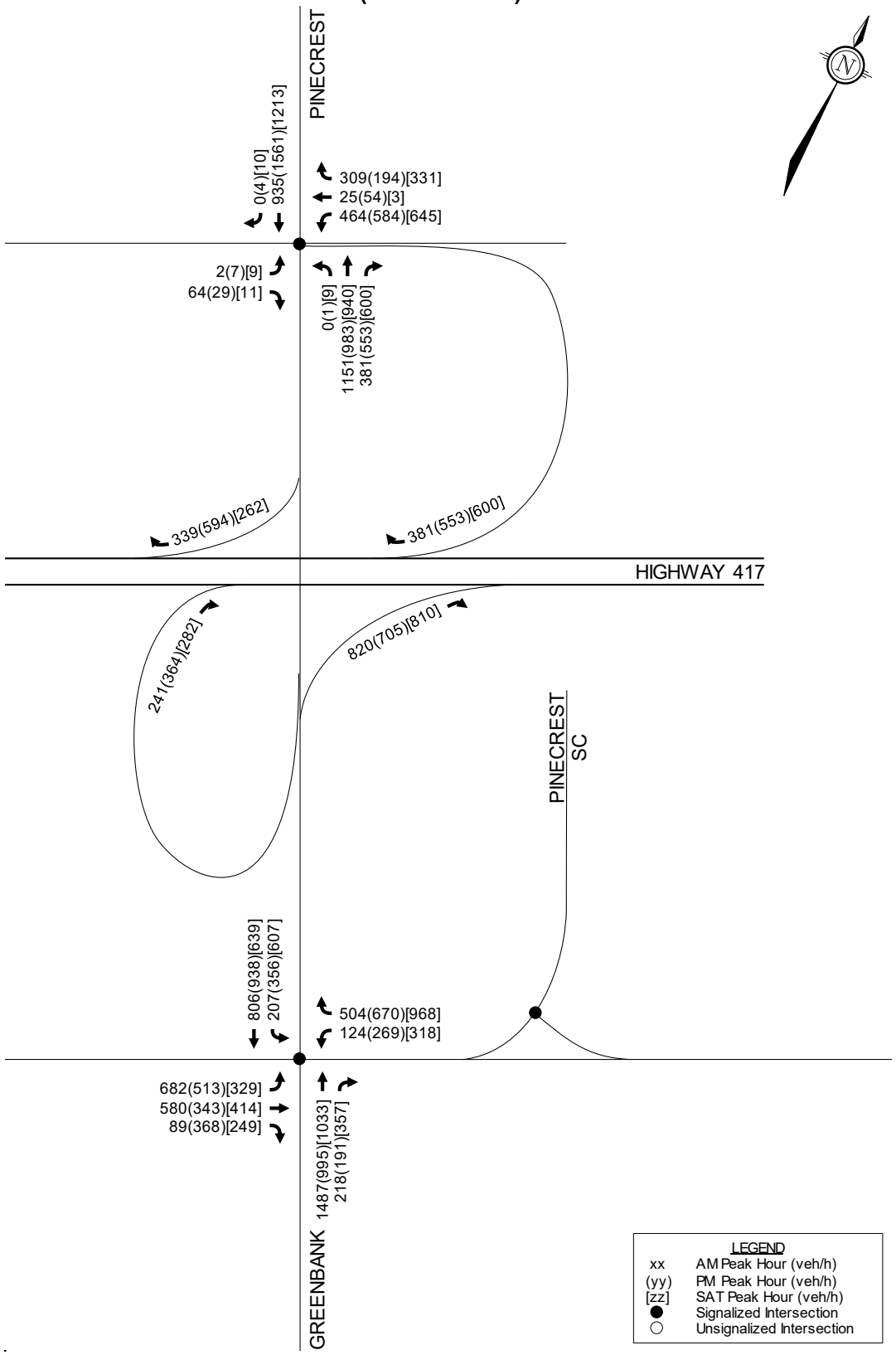
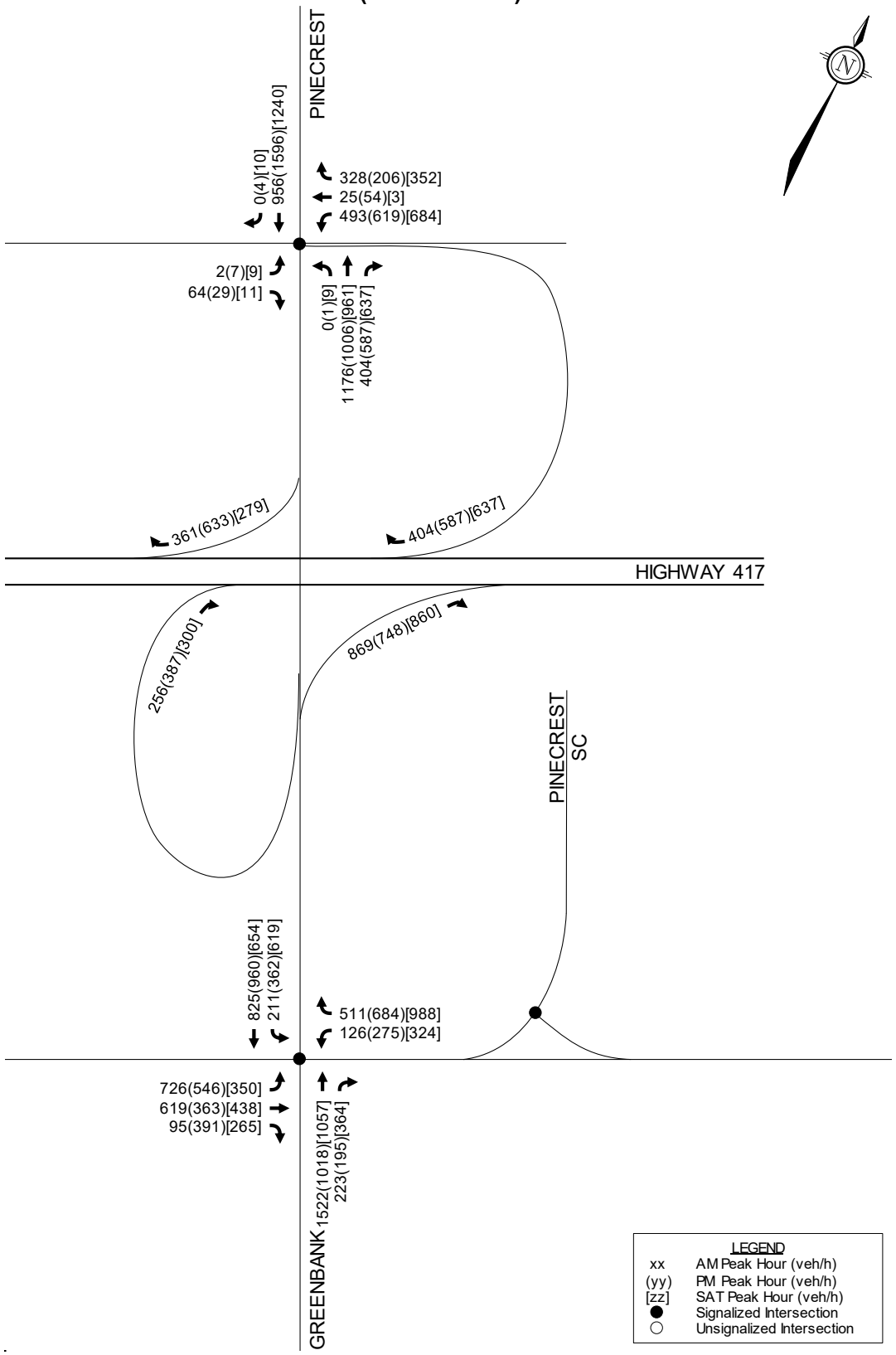


Figure 20: 2040 Total Traffic Volumes (MTO Method)



3.4.1 Existing Traffic Conditions

Intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the existing traffic conditions. This includes analysis of the temporary westbound lane configuration at Pinecrest Road/Highway 417 WB Ramps. The results of the analysis are summarized in **Table 15** and **Table 16**. Detailed Synchro reports are included in **Appendix L**.

Table 15: Existing Traffic Operations

Intersection	AM Peak			PM Peak			SAT Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
Pinecrest Road/ Highway 417 WB Ramps(1)	**0.89**	**D**	**WBL**	**0.93**	**E**	**WBR**	**0.91**	**E**	**WBL**
				0.86	**D**	**WBL**	**0.76**	**C**	**WBR**
Greenbank Road/Iris Street/ Highway 417 EB Ramps(1)	**1.27**	**F**	**EBL**	**1.11**	**F**	**EBL**	**1.01**	**F**	**EBL**
	1.14	**F**	**NBT**				**0.89**	**D**	**WBL**
	0.84	**D**	**EBT**				**0.87**	**D**	**SBL**
Iris Street/ Pinecrest Shopping Centre(1)	0.60	A	WBL	0.81	D	WBL	0.75	C	WBL
Iris Street/ Southwood Drive(2)	18 sec	C	EBT/R	15 sec	B	WBL/T	13 sec	B	WBL/T
Iris Street/ Baxter Road(2)	16 sec	C	EBL/T	16 sec	C	WBT/R	24 sec	C	SBL/R

1. Signalized intersection
2. Unsignalized intersection

Table 16: Existing Queues

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.63 [B]	83	112	0.54 [A]	71	95	0.53 [A]	48	89
	SBT (80m)	0.46 [A]	52	68	0.69 [B]	**101**	**#137**	0.54 [A]	43	**#102**
	WBL (300m)	**0.89 [D]**	**72**	**#118**	**0.86 [D]**	**70**	**#114**	**0.91 [E]**	**76**	**#128**
	WBR (120m)	0.72 [C]	28	61	**0.93 [E]**	**61**	**#112**	**0.76 [C]**	**45**	**79**
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.14 [F]**	**~157**	**#184**	0.72 [C]	83	98	0.80 [C]	97	113
	SBL (110m)	0.58 [A]	22	#51	0.82 [D]	30	#59	**0.87 [D]**	**68**	**#102**
	SBT (340m)	0.58 [A]	83	107	0.65 [B]	99	124	0.38 [A]	55	72
	EBL (110m)	**1.27 [F]**	**~101**	**#134**	**1.11 [F]**	**~68**	**#100**	**1.01 [F]**	**~43**	**#71**
	EBT (150m)	**0.84 [D]**	**120**	**162**	0.56 [A]	58	84	0.75 [C]	83	113
	WBL (90m)	0.37 [A]	7	14	0.68 [B]	27	37	**0.89 [D]**	**38**	**#58**
	WBR (90m)	0.31 [A]	29	43	0.53 [A]	50	61	0.65 [B]	78	**94**

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Iris St/ Pinecrest SC	NBT (100m)	0.13 [A]	9	m15	0.20 [A]	18	m24	0.47 [A]	46	m52
	SBT (50m)	0.04 [A]	2	5	0.16 [A]	9	14	0.27 [A]	16	26
	WBL (200m)	0.60 [A]	24	34	0.81 [D]	44	69	0.75 [C]	39	57
	WBR (30m)	0.05 [A]	0	3	0.04 [A]	0	4	0.09 [A]	0	5

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: Volume for the 50th percentile queue exceeds capacity
#: Volume for the 95th percentile queue exceeds capacity
m: Volume for the 95th percentile queue is metered by an upstream signal

From the previous tables, all movements at Iris Street/Pinecrest Shopping Centre, Iris Street/ Southwood Drive, and Iris Street/Baxter Road meet the target Auto LOS.

At Pinecrest Road/Highway 417 WB Ramps, all movements meet the City's target during all peak hours. At Greenbank Road/Iris Street/Highway 417 EB Ramps, the northbound through movement does not meet the City's target during the AM peak hour and the eastbound left turn movement does not meet the City's target during any peak hour.

The following movements exceed the MTO's target v/c ratios during one or more peak hours:

- Pinecrest Road/Highway 417 WB Ramps
  - Westbound left turn (AM, PM, and Saturday peak hours);
  - Westbound right turn (PM and Saturday peak hours).

- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Northbound through (AM peak hour);
  - Southbound left turn (Saturday peak hour);
  - Eastbound left turn (AM, PM, and Saturday peak hours);
  - Eastbound through (AM peak hour);
  - Westbound left turn (Saturday peak hour).

The following movements have 50th-percentile (i.e. average) or 95th-percentile (i.e. maximum) queue lengths that exceed the storage length provided or extend into an upstream intersection:

AM Peak Hour
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 134m max (exceeds 110m storage length);
  - Eastbound through: 162m max (extends through Ashley Street).

PM Peak Hour
- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 101m average/137m max (extends through Queensview Drive).

SAT Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 102m max (extends through Queensview Drive).
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Westbound right turn: 94m max (extends into upstream Iris Street intersection).

Scenarios with alternate peak hour signal timings have been developed in Synchro, for the purposes of mitigating the critical movements. Detailed Synchro reports with alternate timings are included in **Appendix L**. A description of the alternate timings and the results of the alternate scenarios are described below.

In cases where the critical movements remain over-capacity, the required demand rationalization is also included in accordance with the City's *TIA Guidelines*. The purpose of demand rationalization is to adjust projected travel demands that cannot physically be accommodated by the road network. Traffic throughout the study area could be displaced or alleviated through a combination of increased use of non-auto modes of transportation, alternate time to travel for drivers using the study area roadways to make use of off-peak capacity, and alternate routes for travel.

Pinecrest Road/Highway 417 WB Ramps

In all peak hours, applying the ultimate westbound lane configuration (i.e. dual left turn lanes, a transit-exclusive through lane, and a right turn lane) allows all westbound movements to operate at the MTO's target v/c ratio of 0.75 or better.

Greenbank Road/Iris Street/Highway 417 EB Ramps

In the AM peak hour, the westbound phases were shortened and all other phases were lengthened. The cycle length of 130 seconds was not changed. With these adjustments, the v/c ratio of the northbound through movement improves from 1.14 to 0.95, the v/c ratio of the eastbound left turn movement improves from 1.27 to 0.82, and the v/c ratio of the eastbound through movement downgrades from 0.84 to 0.90. These movements meet the City's target v/c ratio of 1.00, but not the MTO's target v/c ratios of 0.85 or 0.75. To meet the MTO's targets, an approximate reduction of 140 northbound through vehicles, 210 eastbound left turning vehicles, and 150 eastbound through vehicles would be required.

In the PM peak hour, the westbound phases were shortened and the southbound left turn, southbound through, and eastbound left turn phases were lengthened. The cycle length of 130 seconds was not changed. With these adjustments, the v/c ratio of the eastbound left turn movement improves from 1.11 to 0.80. This meets the City's target v/c ratio, but not the MTO's target of 0.75. To meet the MTO's target, an approximate reduction of 70 eastbound left turning vehicles would be required.

In the Saturday peak hour, the westbound right turn phase was shortened and the eastbound left turn phase was lengthened. The cycle length of 140 seconds was not changed. With this adjustment, the v/c ratio of the southbound left turn downgrades from 0.87 to 0.92, the v/c ratio of the eastbound left turn movement improves from 1.01 to 0.74 (meeting City and MTO targets), and the v/c ratio of the westbound left turn movement remains at 0.89. The southbound and westbound left turn movements meet the City's target v/c ratio, but not the MTO's target v/c ratio. To meet the MTO's target, an approximate reduction of 60 southbound left turning vehicles and ten westbound left turning vehicles would be required.

3.4.2 2035 Background Traffic Conditions

Intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the 2035 background traffic conditions. This includes analysis of the ultimate westbound lane configuration at Pinecrest Road/Highway 417 WB Ramps. The results of the analysis are summarized in **Table 17** and **Table 18**. Detailed Synchro reports are included in **Appendix M**.

Table 17: 2035 Background Traffic Operations

Intersection	AM Peak			PM Peak			SAT Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
Pinecrest Road/ Highway 417 WB Ramps[1]	0.63	B	WBL	0.69	B	WBL	0.71	C	WBL
Greenbank Road/Iris Street/ Highway 417 EB Ramps[1]	**1.31**	**F**	**EBL**	**1.15**	**F**	**EBL**	**1.05**	**F**	**EBL**
	1.08	**F**	**NBT**				**0.79**	**C**	**EBT**
	0.82	**D**	**EBT**						
Iris Street/ Pinecrest Shopping Centre[1]	0.57	A	WBL	0.81	D	WBL	0.75	C	WBL
Iris Street/ Southwood Drive[2]	16 sec	C	EBT/R	14 sec	B	WBL/T	12 sec	B	WBL/T
Iris Street/ Baxter Road[2]	14 sec	B	EBL/T	14 sec	B	WBT/R	18 sec	C	SBL/R

1. Signalized intersection
2. Unsignalized intersection

Table 18: 2035 Background Queues

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.54 [A]	63	102	0.47 [A]	57	88	0.45 [A]	37	83
	SBT (80m)	0.39 [A]	42	64	0.60 [A]	**83**	**#124**	0.46 [A]	33	**#95**
	WBL (300m)	0.63 [B]	41	49	0.69 [B]	48	59	0.71 [C]	48	58
	WBR (120m)	0.61 [B]	11	32	0.40 [A]	0	15	0.58 [A]	11	30
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.08 [F]**	**~144**	**#171**	0.68 [B]	78	93	0.74 [C]	91	107
	SBL (110m)	0.68 [B]	~25	#48	0.79 [C]	28	#55	0.84 [D]	62	#93
	SBT (340m)	0.58 [A]	81	101	0.61 [B]	92	116	0.36 [A]	50	68
	EBL (110m)	**1.31 [F]**	**~107**	**#141**	**1.15 [F]**	**~73**	**#105**	**1.05 [F]**	**~47**	**#75**
	EBT (150m)	**0.82 [D]**	**121**	**#172**	0.58 [A]	60	87	**0.79 [C]**	**89**	**117**
	EBR (150m)	0.13 [A]	0	0	0.69 [B]	43	75	0.50 [A]	21	43
	WBL (90m)	0.35 [A]	7	13	0.66 [B]	26	36	0.85 [D]	36	#56
	WBR (90m)	0.29 [A]	28	41	0.51 [A]	46	58	0.62 [B]	74	86

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Iris St/ Pinecrest SC	NBT (100m)	0.11 [A]	8	m14	0.17 [A]	17	m23	0.42 [A]	44	50
	SBT (50m)	0.04 [A]	2	5	0.15 [A]	8	13	0.24 [A]	14	24
	WBL (200m)	0.57 [A]	23	33	0.79 [C]	42	65	0.73 [C]	37	54
	WBR (30m)	0.04 [A]	0	3	0.04 [A]	0	3	0.08 [A]	0	5

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: volume for the 50th percentile queue exceeds capacity
#: volume for the 95th percentile queue exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

At Greenbank Road/Iris Street/Highway 417 EB Ramps, the northbound through movement exceeds the City's target during the AM peak hour, the eastbound left turn movement exceeds the City's target during all peak hours, and the eastbound through movement exceeds the MTO target during the AM and Saturday peak hours. All other movements in the study area achieve the City and MTO targets. Some results appear to improve when compared to existing conditions, due to differences in the Peak Hour Factor (0.9 in existing conditions versus 1.0 in future conditions, per the *TIA Guidelines*).

The following movements have average or maximum queue lengths that exceed the storage length provided or extend into an upstream intersection:

AM Peak Hour
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 141m max (exceeds 110m storage length);
  - Eastbound through: 172m max (extends through Ashley Street).

PM Peak Hour
- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 83m average/124m max (extends through Queensview Drive).

SAT Peak Hour
- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 95m max (extends through Queensview Drive).

The alternate peak hour signal timings described in the previous section have been applied to the 2035 background conditions where failing movements were identified. Detailed Synchro reports with the alternate timings are included in **Appendix M**. The results of the alternate scenarios are described below.

Greenbank Road/Iris Street/Highway 417 EB Ramps
In the AM peak hour, the v/c ratio of the northbound through movement improves from 1.08 to 0.90, the v/c ratio of the eastbound left turn movement improves from 1.31 to 0.83, and the v/c ratio of the eastbound through movement downgrades from 0.82 to 0.92. These movements meet the City's target v/c ratio of 1.00, but not the MTO's target v/c ratios of 0.85 or 0.75.

In the PM peak hour, the v/c ratio of the eastbound left turn movement improves from 1.15 to 0.82. This meets the City's target v/c ratio of 1.00, but not the MTO's target v/c ratio of 0.75.

In the Saturday peak hour, the v/c ratio of the southbound left turn movement downgrades from 0.87 to 0.92, the v/c ratio of the eastbound left turn movement improves from 1.10 to 0.78, the v/c ratio of the eastbound through movement improves from 0.81 to 0.77, and the v/c ratio of the westbound left turn movement remains at 0.88. These movements meet the City's target v/c ratio of 1.00, but not the MTO's target v/c ratios of 0.85 or 0.75.

3.4.3 2040 Background Traffic Conditions

Intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the 2040 background traffic conditions. This includes analysis of the ultimate westbound lane configuration at Pinecrest Road/Highway 417 WB Ramps. The results of the analysis are summarized in **Table 19** and **Table 20**. Detailed Synchro reports are included in **Appendix M**.

Table 19: 2040 Background Traffic Operations

Intersection	AM Peak			PM Peak			SAT Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
Pinecrest Road/ Highway 417 WB Ramps(1)	0.65	B	WBL	0.71	C	WBL	0.73	C	WBL
Greenbank Road/Iris Street/ Highway 417 EB Ramps(1)	**1.40**	**F**	**EBL**	**1.22**	**F**	**EBL**	**1.12**	**F**	**EBL**
	1.11	**F**	**NBT**				**0.86**	**D**	**SBL**
	1.06	**F**	**SBL**				**0.86**	**D**	**WBL**
	0.82	**D**	**EBT**				**0.83**	**D**	**EBT**
Iris Street/ Pinecrest Shopping Centre(1)	0.58	A	WBL	0.80	C	WBL	0.75	C	WBL
Iris Street/ Southwood Drive(2)	17 sec	C	EBT/R	14 sec	B	WBL/T	12 sec	B	WBL/T
Iris Street/ Baxter Road(2)	15 sec	B	EBL/T	14 sec	B	WBT/R	18 sec	C	SBL/R

1. Signalized intersection
2. Unsignalized intersection

Table 20: 2040 Background Queues

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.56 [A]	66	106	0.49 [A]	60	91	0.47 [A]	39	86
	SBT (80m)	0.41 [A]	43	65	0.62 [B]	**87**	**#130**	0.48 [A]	35	**#99**
	WBL (300m)	0.65 [B]	44	53	0.71 [C]	51	63	0.73 [C]	50	62
	WBR (120m)	0.64 [B]	15	37	0.41 [A]	0	15	0.61 [B]	14	35

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.11 [F]**	**~150**	**#177**	0.70 [B]	80	96	0.76 [C]	94	110
	SBL (110m)	**1.06 [F]**	**~27**	**#49**	0.80 [C]	29	#57	**0.86 [D]**	**65**	**#97**
	SBT (340m)	0.63 [B]	84	104	0.63 [B]	95	120	0.37 [A]	53	70
	EBL (110m)	**1.40 [F]**	**~118**	**#152**	**1.22 [F]**	**~82**	**#114**	**1.12 [F]**	**~53**	**#81**
	EBT (150m)	**0.82 [D]**	**132**	**#198**	0.62 [B]	65	93	**0.83 [D]**	**95**	**126**
	EBR (150m)	0.13 [A]	0	0	0.73 [C]	49	83	0.53 [A]	25	48
	WBL (90m)	0.36 [A]	7	13	0.67 [B]	27	37	**0.86 [D]**	**37**	**#58**
	WBR (90m)	0.30 [A]	28	42	0.52 [A]	48	59	0.63 [B]	76	90
Iris St/ Pinecrest SC	NBT (100m)	0.11 [A]	8	m14	0.18 [A]	17	m23	0.42 [A]	44	51
	SBT (50m)	0.04 [A]	2	5	0.15 [A]	8	13	0.24 [A]	14	24
	WBL (200m)	0.58 [A]	24	33	0.80 [C]	43	67	0.74 [C]	38	55
	WBR (30m)	0.04 [A]	0	3	0.04 [A]	0	3	0.08 [A]	0	5

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: volume for the 50th percentile queue exceeds capacity
#: volume for the 95th percentile queue exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

From the previous tables, the following movements at Greenbank Road/Iris Street/Highway 417 EB Ramps exceed the MTO's target v/c ratios during one or more peak hours:

- Northbound through (AM peak hour);
- Southbound left turn (AM and Saturday peak hours);
- Eastbound left turn (AM, PM, and Saturday peak hours);
- Eastbound through (AM and Saturday peak hours);
- Westbound left turn (Saturday peak hour).

The following movements at Greenbank Road/Iris Street/Highway 417 EB Ramps exceed the City's target v/c ratio during one or more peak hours:

- Northbound through (AM peak hour);
- Southbound left turn (AM peak hour);
- Eastbound left turn (AM, PM, and Saturday peak hours).

All other movements in the study area achieve the City and MTO targets. The following movements have average or maximum queue lengths that exceed the storage length provided or extend into an upstream intersection.

AM Peak Hour
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 118m average/152m max (exceeds 110m storage length);
  - Eastbound through: 198m max (extends through Ashley Street).

PM Peak Hour
- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 87m average/130m max (extends through Queensview Drive).

SAT Peak Hour
- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 99m max (extends through Queensview Drive).

The alternate peak hour signal timings described in Section 3.4.1 have been applied to the 2040 background conditions. Detailed Synchro reports with the alternate timings are included in **Appendix M**. The results of the alternate scenarios are described below.

Greenbank Road/Iris Street/Highway 417 EB Ramps
In the AM peak hour, the v/c ratio of the northbound through movement improves from 1.11 to 0.93, the v/c ratio of the southbound left turn movement improves from 1.06 to 0.69, the v/c ratio of the eastbound left turn movement improves from 1.40 to 0.85, and the v/c ratio of the eastbound through movement downgrades from 0.82 to 0.97. These movements meet the City's target v/c ratio of 1.00, but not the MTO's target v/c ratios of 0.85 or 0.75.

In the PM peak hour, the v/c ratio of the eastbound left turn movement improves from 1.22 to 0.84. This meets the City's target v/c ratio of 1.00, but not the MTO's target v/c ratio of 0.75.

In the Saturday peak hour, the v/c ratio of the southbound left turn movement downgrades from 0.86 to 0.91, the v/c ratio of the eastbound left turn movement improves from 1.12 to 0.79, the v/c ratio of the eastbound through movement improves from 0.83 to 0.78, and the v/c ratio of the westbound left turn movement remains at 0.86. These movements meet the City's target v/c ratio of 1.00, but not the MTO's target v/c ratios of 0.85 or 0.75.

4.0 ANALYSIS

4.1 Development Design

4.1.1 Design for Sustainable Modes

Based on the concept plan, internal sidewalks will be provided on both sides of Street 1, around the perimeter of the proposed parkland at the southern end of the subject site, and adjacent to all proposed buildings. A pathway is proposed along the southern limit of the subject site to connect Baxter Road with the proposed park. A sidewalk is also proposed along the entirety of the subject site's frontage to Baxter Road, in accordance with the policy outlined in the *Pinecrest and Queensview Stations Secondary Plan*. Additionally, a pedestrian bridge over Baxter Road is proposed to connect to the existing pedestrian bridge over Highway 417, which will provide direct connectivity between the proposed development and Queensview Station. An at-grade pedestrian crossover (PXO) is proposed at the Baxter Road/Street 1 connection near the pedestrian bridge.

The locations of surface and interior bike parking spaces, as well as any other on-site bike infrastructure will be confirmed as part of future Site Plan Control applications.

OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. It is anticipated that all proposed entrances will be within 400m walking distance of Queensview Station. Additionally, it is anticipated that all proposed entrances will be within 800m walking distance of bus stops on Iris Street, with southern entrances within 400m walking distance.

A review of the *Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist* will be conducted in subsequent Site Plan Control applications.

4.1.2 Circulation and Access

This element will be reviewed as part of subsequent Site Plan Control applications, in support of each block of the proposed subdivision as more details are known.

4.1.3 New Street Networks

This section provides a review of the proposed Street 1, which will be a private roadway with two connections to Baxter Road. The two connections are approximately 180m apart, measuring from centreline to centreline along the centre of Baxter Road.

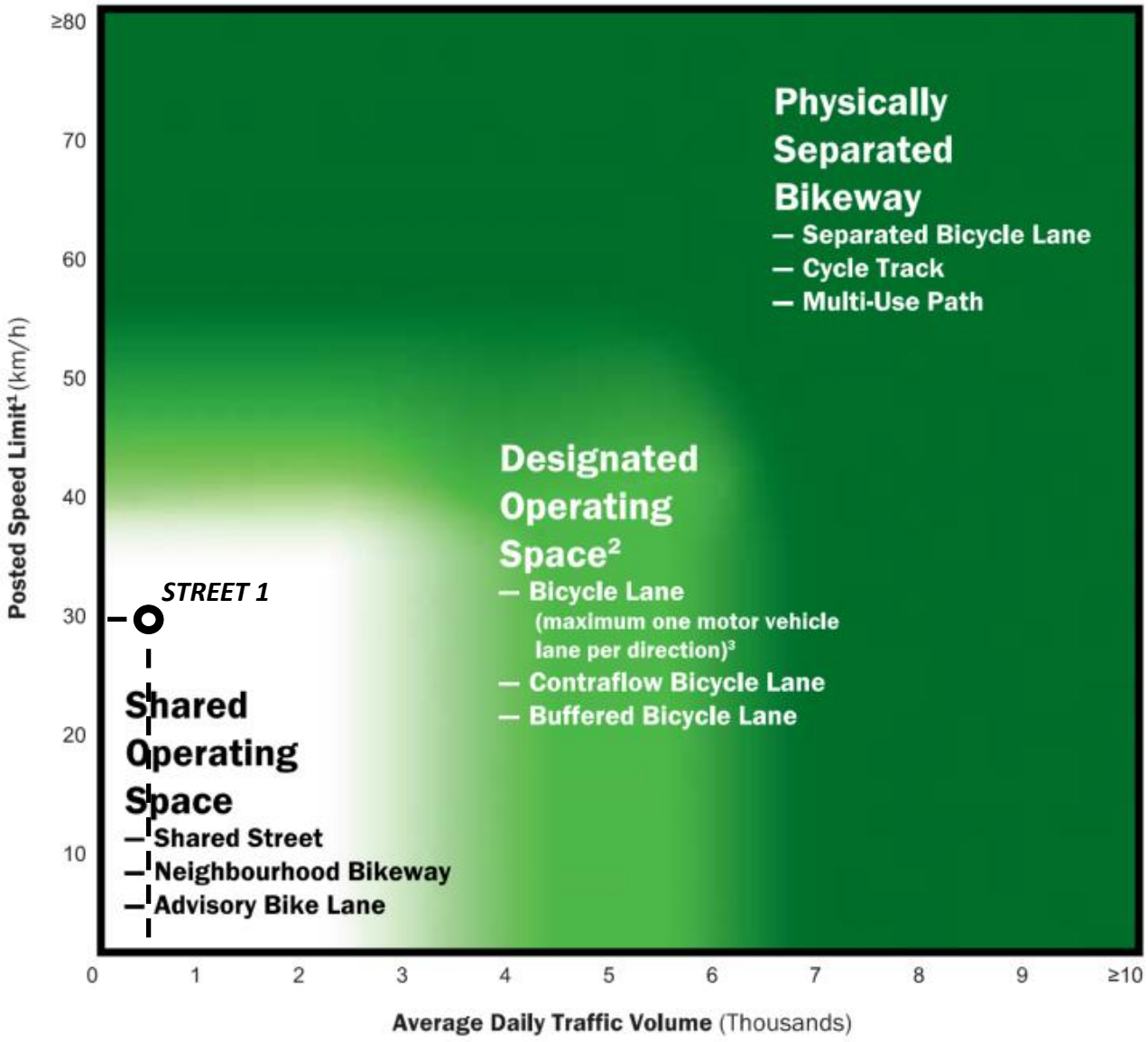
The proposed alignment of Street 1 consists of two straight sections that connect at a 90-degree bend. The bend is proposed to have an inside radius of approximately 6.5m and centreline radius of 12m. The proposed centreline radius meets the minimum requirement for fire routes.

The proposed private ROW of Street 1 is 20m. In general, Street 1 has a proposed roadway width of 11.0m, which accommodates a travel lane in each direction plus on-street parallel parking spaces on both sides. At the two connections to Baxter Road, the conceptual roadway width of Street 1 narrows to 7.0m at the street line. A minimum width of 7m is recommended and this can be reviewed as part of detailed design. Outside of the roadway platform, 2.5m-wide inner boulevards and 2.0m-wide sidewalks are proposed.

The *Ontario Traffic Manual (OTM) – Book 18* includes a desirable cycling facility pre-selection nomograph, which identifies the desirable facility based on speed limit and AADT. Street 1 is anticipated to have an operating speed of 30 km/h and AADT less than 1,000 vpd. Based on these parameters, the nomograph identifies that a 'shared operating space' is appropriate for Street 1. The nomograph used in *OTM Book 18* is shown in **Figure 21**.

The design of Street 1 meets Policy 7.2.18 of the *Pinecrest and Queensview Stations Secondary Plan*, which identifies that redevelopment shall include a new public or private street that improves site connectivity, direct access to Queensview Station, prioritized active transportation modes, and connections to the broader street network.

Figure 21: Desirable Cycling Facility Pre-Selection Nomograph (Street 1)



1 Operating speeds are assumed to be similar to posted speeds. If evidence suggests this is not the case, practitioners may consider using 85th percentile speeds or implementing measures to reduce operating speeds.

2 Physically separated bikeways may always be considered in the designated operating space area of the nomograph.

3 On roadways with two or more lanes per direction (including multi-lane one-way roadways), a buffered bicycle lane should be considered the minimum with a typical facility being a physically separated bikeway.

The proposed subdivision is anticipated to meet the following strategic directions of the City's *Building Better and Smarter Suburbs (BBSS): Strategic Directions and Action Plan*, prepared in February 2015:

- Design the street network as an integral part and extension of the municipal grid, taking into consideration its future adjustments and evolution;
- Design the street network in conjunction with the land use and open space system to ensure direct pedestrian and cycling connectivity to key destinations in the community (schools, shops, bus stops and stations, etc.);
- Implement traffic calming measures at the outset of road design for local and collector streets.

4.2 Boundary Streets

This section provides a review of the boundary frontage to Baxter Road, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on Baxter Road. The MMLOS review has been conducted based on existing conditions.

Based on Exhibit 22 of the *MMLOS Guidelines*, Baxter Road has been evaluated using the targets for roadways 'within 600m of a rapid transit station.' A detailed MMLOS review of the boundary streets is included in **Appendix N**. A summary of the segment MMLOS results for Baxter Road is provided in **Table 21**. Note that as Baxter Road is not a transit route or truck route, the transit level of service (TLOS) and truck level of service (TkLOS) of Baxter Road have not been evaluated.

Table 21: Segment MMLOS Summary

Segment	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Baxter Road	**F**	A	**F**	D	-	-	-	-

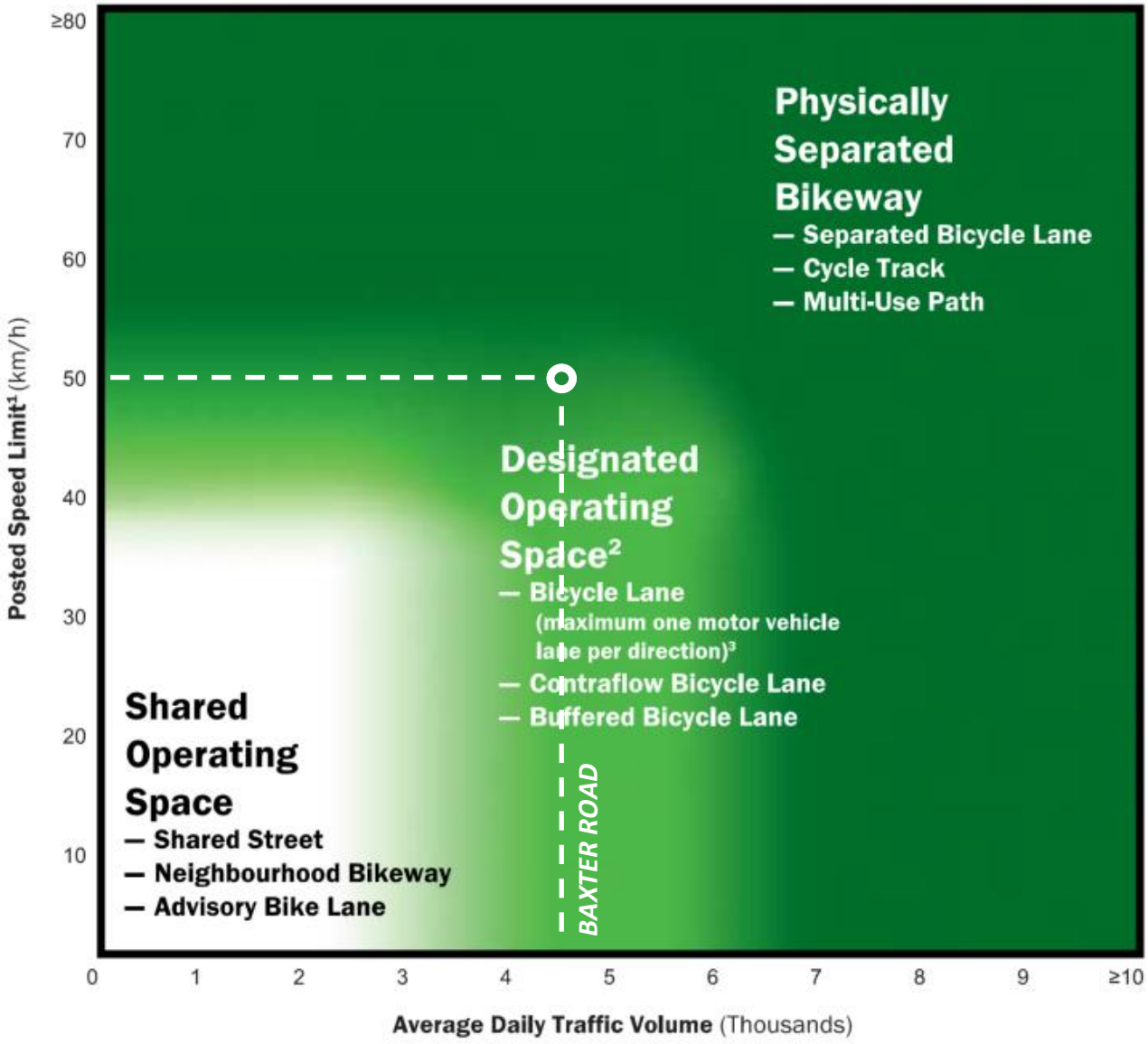
From the previous table, Baxter Road does not meet the target pedestrian level of service (PLOS) A or bicycle level of service (BLOS) D.

Baxter Road has no sidewalks along the frontage of the subject site, and achieves a PLOS F. The *Pinecrest and Queensview Stations Secondary Plan* identifies that the proposed development shall include a sidewalk along the subject's site frontage. Exhibit 4 of the *MMLOS Guidelines* identifies that, for roadways with daily curb lane traffic volumes of less than 3,000 vpd, the target PLOS A can be met if sidewalks with a minimum width of 2.0m and minimum boulevard width of 0.5m are provided. The proposed development will include a 2.0m-wide sidewalk with 1.5m-wide boulevard along the subject site's frontage to Baxter Road, and will meet the target PLOS A.

Baxter Road has no cycling facilities, and achieves a BLOS F. The operating speed is assumed to be 60 km/h (i.e. 10 km/h above the regulatory speed limit), although it is noted that the design speed of Baxter Road at the curvature is 50 km/h. The *Pinecrest and Queensview Stations Secondary Plan* identifies the proposed development may require cycling facilities.

Exhibit 11 of the *MMLOS Guidelines* identifies that no cycling facilities are required if the operating speed is 50 km/h along the entire length of Baxter Road. Based on the AADT of Baxter Road, the cycling facility pre-selection nomograph from *OTM Book 18* identifies that a 'designated operating space' is appropriate for Baxter Road, which can include bike lanes. The nomograph used in *OTM Book 18* is shown in **Figure 22**.

Figure 22: Desirable Cycling Facility Pre-Selection Nomograph (Baxter Road)



As discussed in Section 2.2.1, the City has developed a functional design of improved active transportation facilities on Baxter Road. Related to cyclists, buffered bike lanes are shown on both sides of Baxter Road from Iris Street to the southerly Pinecrest Shopping Centre access, a southbound curbside bike lane north of the southerly Pinecrest Shopping Centre access, and bike sharrows elsewhere. This design meets the target BLOS for a design speed of 50 km/h.

4.3 Transportation Demand Management

4.3.1 Context for TDM

In total, the proposed development includes the following dwelling counts and commercial GFAs. A breakdown of the residential dwellings by unit type (i.e. studio units, 1-bedroom, 2-bedroom, etc.) will be provided in future Site Plan Control applications.

- Tower A: 275 dwellings and 23,680 ft^2 of commercial space;
- Tower B: 275 dwellings and 23,680 ft^2 of commercial space;
- Tower C: 275 dwellings and 20,990 ft^2 of commercial space;
- Tower D: 275 dwellings and 21,530 ft^2 of commercial space;
- Tower E: 130 dwellings and 8,610 ft^2 of commercial space;
- Tower F: 170 dwellings and 2,150 ft^2 of commercial space.

4.3.2 Need and Opportunity

The subject site is designated as 'Hub' and 'Evolving Neighbourhood' on Schedule B2 of the City of Ottawa's Official Plan. The implemented zoning for the property is 'Mixed-Use Centre' (MC20 S508), and the site is located within the 'Pinecrest and Queensview Stations' Secondary Plan area. As discussed in Section 2.5.2, the weekday peak hour driver shares within the Bayshore/Cedarview district are 40% for residential generators and 62% to 64% for commercial generators. These are significantly higher than the City's 15% driver share target for Transit-Oriented Developments, however most sites within Bayshore/Cedarview are not currently or planned to be adjacent to rapid transit.

It is anticipated that the mode share targets specified in Section 2.5.2 (15% for the proposed residential and 25% for the proposed commercial) are attainable, as the subject site will connect directly to the Queensview Station, via a pedestrian bridge crossing Highway 417. The subject site is also proximally located to the Pinecrest Shopping Centre, other adjacent commercial areas, and parks/recreation amenities to the east of the study area.

4.3.3 TDM Program

A review of the City's *TDM Measures Checklist* will be conducted by the proponent as part of future Site Plan Control applications.

4.4 Transit

4.4.1 Transit Route Capacity

Based on the trip generation estimates presented in Section 2.5.2, the conceptual development is anticipated to generate the following number of external transit trips:

- AM peak: 388 residential trips (119 in, 269 out) and 46 commercial trips (29 in, 17 out);
- PM peak: 334 residential trips (185 in, 149 out) and 161 commercial trips (85 in, 76 out);
- SAT peak: 364 residential trips (199 in, 165 out) and 209 commercial trips (119 in, 90 out).

A significant majority of site-generated transit trips are anticipated to use O-Train Line 3 (Moodie–Lincoln Fields), which will be in operation prior to any phase of the proposed development being completed. A small proportion are anticipated to board and alight buses at stops #4564 and #4565 (Route 81), and stop #1946 (Route 82). Route 61 does not serve the study area during any peak hours. Based on the availability of transit routes during different peak hours, the transit distributions are assumed to be different for the residential and commercial components during the peak hours. A summary of the assumed transit distributions is included in **Table 22**.

Table 22: Transit Distribution

Route, Terminus	Distribution			AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	AM	PM	SAT	IN	OUT	TOT	IN	OUT	TOT	IN	OUT	TOT
Residential Transit Trips												
Line 3, east (Lincoln Fields)	70%	70%	40%	83	188	*271*	130	104	*234*	80	66	*146*
Line 3, west (Moodie)	20%	15%	35%	24	54	*78*	28	22	*50*	69	58	*127*
Route 81, east (Tunney's Pasture)	5%	5%	10%	6	14	*20*	9	8	*17*	20	16	*36*
Route 81, west (Bayshore)	5%	5%	10%	6	13	*19*	9	8	*17*	20	16	*36*
Route 82, south (Baseline)	0%	5%	5%	-	-	*0*	9	7	*16*	10	9	*19*
Commercial Transit Trips												
Line 3, east (Lincoln Fields)	40%	40%	40%	12	7	*19*	34	30	*64*	47	36	*83*
Line 3, west (Moodie)	40%	35%	35%	12	7	*19*	29	26	*55*	42	32	*74*
Route 81, east (Tunney's Pasture)	10%	10%	10%	3	1	*4*	9	8	*17*	12	9	*21*
Route 81, west (Bayshore)	10%	10%	10%	2	2	*4*	9	8	*17*	12	9	*21*
Route 82, south (Baseline)	0%	5%	5%	-	-	*0*	4	4	*8*	6	4	*10*
Total Transit Trips												
Line 3, east (Lincoln Fields)				95	195	*290*	164	134	*298*	127	102	*229*
Line 3, west (Moodie)				36	61	*97*	57	48	*95*	111	90	*201*
Route 81, east (Tunney's Pasture)				9	15	*24*	18	16	*34*	32	25	*57*
Route 81, west (Bayshore)				8	15	*23*	18	16	*34*	32	25	*57*
Route 82, south (Baseline)				-	-	*0*	13	11	*24*	16	13	*29*

O-Train Line 3 (eastbound; to/from Lincoln Fields)
During the peak hours, the proposed development is projected to generate an additional 195 AM boarding trips, 36 AM alighting trips, 134 PM boarding trips, 57 PM alighting trips, 102 Saturday boarding trips, and 111 Saturday alighting trips at Queensview Station. Assuming Line 3 runs on five-minute headways on weekdays and ten-minute headways on weekends (consistent with other LRT lines), this averages to 16 AM boardings, three AM alightings, 11 PM boardings, five PM alightings, 17 Saturday boardings, and 19 Saturday alightings per train.

O-Train Line 3 (westbound; to/from Moodie)
During the peak hours, the proposed development is projected to generate an additional 61 AM boarding trips, 95 AM alighting trips, 48 PM boarding trips, 164 PM alighting trips, 90 Saturday boarding trips, and 127 Saturday alighting trips at Queensview Station. Assuming Line 3 runs on five-minute headways on weekdays and ten-minute headways on weekends, this averages to five AM boardings, eight AM alightings, four PM boardings, 14 PM alightings, 15 Saturday boardings, and 21 Saturday alightings per train.

OC Route 81 (eastbound; to/from Tunney's Pasture)
At stop #4565, the proposed development is projected to generate an additional 15 AM boarding trips, nine AM alighting trips, 16 PM boarding trips, 18 PM alighting trips, 25 Saturday boarding trips, and 32 Saturday alighting trips. As Route 81 runs on 30-minute headways during the peak hours, this averages to eight AM boardings, five AM alightings, eight PM boardings, nine PM alightings, 13 Saturday boardings, and 16 Saturday alightings per bus.

OC Route 81 (westbound; to/from Bayshore)
At stop #4564, the proposed development is projected to generate an additional 15 AM boarding trips, nine AM alighting trips, 16 PM boarding trips, 18 PM alighting trips, 25 Saturday boarding trips, and 32 Saturday alighting trips. As Route 81 runs on 30-minute headways during the peak hours, this averages to eight AM boardings, five AM alightings, eight PM boardings, nine PM alightings, 13 Saturday boardings, and 16 Saturday alightings per bus.

OC Route 82 (southbound; to/from Baseline)
At stop #1946, the proposed development is projected to generate an additional 11 PM boarding trips, 13 PM alighting trips, 13 Saturday boarding trips, and 16 Saturday alighting trips. As Route 82 runs on 30-minute headways during the peak hours, this averages to six PM boardings, seven PM alightings, seven Saturday boardings, and eight Saturday alightings per bus.

4.4.2 Transit Priority Requirements

The proposed development does not include any driveways on a street that serves transit vehicles, and the majority of site-generated transit traffic are anticipated to use O-Train Line 3. The addition of site-generated transit traffic that is expected to use a bus is anticipated to have marginal impacts to transit delays.

As discussed in Section 2.2.1, there are no transit priority measures that are identified within the study area in the *2025 TMP*.

4.5 Intersection Design

4.5.1 Intersection MMLOS

This section provides a review of the signalized study area intersections using complete streets principles. All intersections within the study area have been evaluated for PLOS, BLOS, TLOS, and TkLOS, using the targets associated with intersections 'within 600m of a rapid transit station.' The full intersection MMLOS analysis is included in **Appendix N**. A summary of the results is shown in **Table 23**.

Table 23: Intersection MMLOS Summary

Intersection	PLOS		BLOS		TLOS		TkLOS	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
Pinecrest Road/ Highway 417 WB Ramps	**F**	A	-	C	**E**	A	B	D
Greenbank Road/Iris Street/ Highway 417 EB Ramps	**F**	A	**F**	B	F	-	B	D
Iris Street/ Pinecrest Shopping Centre	**E**	A	**D**	B	E	-	B	-

The results of the intersections MMLOS analysis can be summarized as follows:

- No study area intersections meet the target PLOS;
- No study area intersections meet the target BLOS;
- Pinecrest Road/Highway 417 WB Ramps does not meet the target TLOS A;
- Pinecrest Road/Highway 417 WB Ramps and Greenbank Road/Iris Street/Highway 417 EB Ramps meet the target TkLOS D.

Pinecrest Road/Highway 417 WB Ramps
The intersection does not meet the target PLOS A or TLOS A.

All approaches with a crosswalk have a divided cross-section with a width equivalent to seven lanes crossed or more (assuming a lane width equals 3.5m, per the *MMLOS Guidelines*). There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or restricting turning movements. Zebra-striped crosswalks will be provided at the north, east, and west approaches as part of the final intersection design that is now under construction. There is limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

There are currently no permitted left or right turn movements for cyclists at this intersection. Therefore, no modifications are identified for cyclists. A future MUP is planned north of the bus loop from Dumaurier Avenue to Pinecrest Station, per the conceptual Pinecrest Station layout.

The west approach, which is transit-exclusive, does not the target TLOS A. The target TLOS requires grade-separated transit. The future LRT service will achieve the target TLOS.

Greenbank Road/Iris Street/Highway 417 EB Ramps
The intersection does not meet the target PLOS A or BLOS B.

All approaches with a crosswalk have a divided cross-section with a width equivalent to nine lanes crossed or more. There is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or restricting turning movements. The south, east, and west approaches meet the City's vehicle/pedestrian conflict threshold for zebra-striped crosswalks. There is limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

The east approach does not meet the target BLOS, based on both left and right turn characteristics. The north approach does not meet the target BLOS based on only left turn characteristics, and the south approach does not meet the target BLOS based on only right turn characteristics. From a capacity perspective, the north and east approaches require dual left turn lanes, the east approach requires dual right turn lanes, and the south approach requires a right turn lane longer than 50m. A protected intersection design would be required for all approaches to meet the target BLOS.

Iris Street/Pinecrest Shopping Centre
The intersection does not meet the target PLOS A or BLOS B.

The east approach has a width equivalent to three lanes crossed, and meets the target PLOS based on pedestrian exposure to traffic. The north approach has a divided cross-section with a width equivalent to six lanes crossed. There is limited opportunity in improving the PLOS at the north approach without reducing the number of travel lanes. The north approach meets the City's vehicle/pedestrian conflict threshold for zebra-striped crosswalks. Neither approach meets the target PLOS based on delay score, but there is no opportunity in improving the delay score for both approaches simultaneously.

The east approach does not meet the target BLOS, based on left or right turn characteristics. Exhibit 12 of the *MMLOS Guidelines* identifies that the target BLOS B can be met if a two-stage left turn bike box is provided at the north approach. This is identified for the City's consideration.

4.5.2 2035 Total Traffic Conditions (City Method)

Using City methodology, intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the 2035 total traffic conditions. The results of the analysis are summarized in **Table 24** and **Table 25**. Detailed Synchro reports are included in **Appendix O**.

Table 24: 2035 Total Traffic Operations (City)

Intersection	AM Peak			PM Peak			SAT Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
Pinecrest Road/ Highway 417 WB Ramps(1)	0.64	B	WBL	0.71	C	WBL	0.72	C	WBL
Greenbank Road/Iris Street/ Highway 417 EB Ramps(1)	**1.31**	**F**	**EBL**	**1.15**	**F**	**EBL**	**1.05**	**F**	**EBL**
	1.08	**F**	**NBT**						
Iris Street/ Pinecrest Shopping Centre(1)	0.65	B	WBL	0.82	D	WBL	0.75	C	WBL
Iris Street/ Southwood Drive(2)	17 sec	C	EBT/R	16 sec	C	EBT/R	13 sec	B	WBL/T
Iris Street/ Baxter Road(2)	15 sec	C	EBL/T	14 sec	B	WBT/R	19 sec	C	SBL/R
Baxter Road/ Building E Access(2)	10 sec	A	WB	12 sec	B	WB	15 sec	B	WB
Baxter Road/ Street 1 South(2)	9 sec	A	WB	11 sec	B	WB	13 sec	B	WB
Baxter Road/ Building A/B Access(2)	9 sec	A	WB	10 sec	A	WB	12 sec	B	WB
Baxter Road/ Street 1 North(2)	9 sec	A	NB	10 sec	A	NB	11 sec	B	NB
Baxter Road/ Building C/D Access(2)	9 sec	A	NB	10 sec	A	NB	11 sec	B	NB
Baxter Road/ Building F Access(2)	9 sec	A	NB	10 sec	A	NB	11 sec	B	NB

1. Signalized intersection
2. Unsignalized intersection

Table 25: 2035 Total Queues (City)

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.55 [A]	65	105	0.48 [A]	58	89	0.46 [A]	38	83
	SBT (80m)	0.40 [A]	42	64	0.61 [B]	**85**	**#128**	0.47 [A]	34	**#98**
	WBL (300m)	0.64 [B]	42	50	0.71 [C]	50	61	0.72 [C]	49	60
	WBR (120m)	0.61 [B]	11	32	0.40 [A]	0	15	0.58 [A]	10	30
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.08 [F]**	**~144**	**#171**	0.70 [B]	78	93	0.76 [C]	91	107
	SBL (110m)	0.85 [D]	23	#52	0.82 [D]	~34	#67	0.86 [D]	68	#104
	SBT (340m)	0.59 [A]	79	101	0.61 [B]	92	116	0.36 [A]	51	68
	EBL (110m)	**1.31 [F]**	**~107**	**#141**	**1.15 [F]**	**~73**	**#105**	**1.05 [F]**	**~47**	**#75**
	EBT (150m)	0.84 [D]	121	**#168**	0.60 [A]	62	89	0.83 [D]	92	122
	WBL (90m)	0.39 [A]	8	15	0.67 [B]	27	37	0.86 [D]	37	#57
	WBR (90m)	0.33 [A]	31	45	0.52 [A]	48	60	0.62 [B]	75	88

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Iris St/ Pinecrest SC	NBT (100m)	0.12 [A]	8	m14	0.18 [A]	16	m21	0.43 [A]	42	48
	SBT (50m)	0.04 [A]	2	5	0.15 [A]	8	13	0.24 [A]	11	24
	WBL (200m)	0.65 [B]	28	40	0.82 [D]	45	#71	0.75 [C]	39	58
	WBR (30m)	0.04 [A]	0	3	0.04 [A]	0	3	0.08 [A]	0	5

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: volume for the 50th percentile queue exceeds capacity
#: volume for the 95th percentile queue exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

At Greenbank Road/Iris Street/Highway 417 EB Ramps, the northbound through movement exceeds the City's target Auto LOS during the AM peak hour and the eastbound left turn movement exceeds the target during all peak hours. All other movements (including at all proposed access locations) achieve the target. This is consistent with the 2035 background conditions, indicating that site-generated traffic will have marginal impacts to traffic operations within the study area.

The following movements have average or maximum queue lengths that exceed the storage length provided or extend into an upstream intersection.

AM Peak Hour

- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 141m max (exceeds 110m storage length);
  - Eastbound through: 168m max (extends through Ashley Street, but does not extend to Highway 417).

PM Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 85m average/128m max (extends through Queensview Drive).

SAT Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 98m max (extends through Queensview Drive).

The alternate peak hour signal timings described in Section 3.4.1 have been applied to the 2035 total conditions. Detailed Synchro reports with the alternate timings are included in **Appendix O**. The results of the alternate scenarios are described below.

Greenbank Road/Iris Street/Highway 417 EB Ramps

In the AM peak hour, the v/c ratio of the northbound through movement improves from 1.08 to 0.90, and the v/c ratio of the eastbound left turn movement improves from 1.31 to 0.83. Both movements meet the target.

In the PM peak hour, the v/c ratio of the eastbound left turn movement improves from 1.15 to 0.82, meeting the target.

In the Saturday peak hour, the v/c ratio of the eastbound left turn movement improves from 1.05 to 0.76, meeting the target.

4.5.3 2035 Total Traffic Conditions (MTO Method)

Using MTO methodology, intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the 2035 total traffic conditions at the ramp terminals. The results of the analysis are summarized in **Table 26**. Detailed Synchro reports are included in **Appendix O**.

Table 26: 2035 Total Operations (MTO)

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.59 [A]	71	114	0.50 [A]	62	94	0.49 [A]	42	90
	SBT (80m)	0.40 [A]	43	65	0.64 [B]	**91**	**#136**	0.49 [A]	36	**#103**
	WBL (300m)	0.64 [B]	42	51	0.73 [C]	53	64	0.74 [C]	51	63
	WBR (120m)	0.61 [B]	12	33	0.39 [A]	0	15	0.57 [A]	11	31
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.08 [F]**	**~144**	**#171**	0.72 [C]	78	93	0.80 [C]	91	107
	SBL (110m)	**1.16 [F]**	**~35**	**#58**	**1.06 [F]**	**~60**	**#91**	**1.00 [E]**	**~91**	**#125**
	SBT (340m)	0.61 [B]	81	101	0.62 [B]	94	116	0.37 [A]	55	68
	EBL (110m)	**1.31 [F]**	**~107**	**#141**	**1.15 [F]**	**~73**	**#105**	**1.15 [F]**	**~47**	**#75**
	EBT (150m)	**0.85 [D]**	**122**	**#185**	0.65 [B]	68	98	**0.83 [D]**	**97**	**134**
	EBR (150m)	0.14 [A]	0	0	0.69 [B]	43	75	0.47 [A]	20	43
	WBL (90m)	0.49 [A]	13	m19	0.71 [C]	30	m38	**1.01 [F]**	**~43**	**m#65**
	WBR (90m)	0.45 [A]	46	66	0.57 [A]	55	m64	0.70 [B]	86	**110**

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: volume for the 50th percentile queue exceeds capacity
#: volume for the 95th percentile queue exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

From the previous tables, the following movements at Greenbank Road/Iris Street/Highway 417 EB Ramps exceed the MTO's target v/c ratios during one or more peak hours:

- Northbound through (AM peak hour);
- Southbound left turn (AM, PM, and Saturday peak hours);
- Eastbound left turn (AM, PM, and Saturday peak hours);
- Eastbound through (AM and Saturday peak hours);
- Westbound left turn (Saturday peak hour).

The following movements have average or maximum queue lengths that exceed the storage length provided or extend into an upstream intersection.

AM Peak Hour

- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 141m max (exceeds 110m storage length);
  - Eastbound through: 185m max (extends through Ashley Street, but does not extend to Highway 417).

PM Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 91m average/136m max (extends through Queensview Drive).

SAT Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 103m max (extends through Queensview Drive).
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Southbound left turn: 125m max (exceeds 110m storage length);
  - Westbound right turn: 110m max (extends into upstream Iris Street intersection).

The alternate peak hour signal timings described in Section 3.4.1 have been applied to the 2035 total conditions. Detailed Synchro reports with the alternate timings are included in **Appendix O**. The results of the alternate scenarios are described below.

Greenbank Road/Iris Street/Highway 417 EB Ramps

In the AM peak hour, the v/c ratio of the northbound through movement improves from 1.08 to 0.90, the v/c ratio of the southbound left turn movement improves from 1.16 to 0.90, the v/c ratio of the eastbound left turn movement improves from 1.31 to 0.83, and the v/c ratio of the eastbound through movement downgrades from 0.85 to 0.93. Operations for the movements that exceed capacity improve, however they do not achieve the target v/c ratios of 0.75 (for the eastbound movements) or 0.85 (for the northbound/ southbound movements).

In the PM peak hour, the v/c ratio of the southbound left turn movement improves from 1.06 to 0.88, and the v/c ratio of the eastbound left turn movement improves from 1.15 to 0.82. Operations for the movements that exceed capacity improve, however they do not achieve the target v/c ratios of 0.75 (for the eastbound movement) or 0.85 (for the southbound movement).

In the Saturday peak hour, the v/c ratio of the southbound left turn movement downgrades from 1.00 to 1.04, the v/c ratio of the eastbound left turn movement improves from 1.15 to 0.76, the v/c ratio of the eastbound through movement improves from 0.83 to 0.81, and the v/c ratio of the westbound left turn movement remains at 1.01. Operations for the eastbound movements improve but still do not achieve the target v/c ratio of 0.75. There is no improvement or a marginal downgrade to the v/c ratios of the southbound and westbound left turn movements.

4.5.4 2040 Total Traffic Conditions (City Method)

Using City methodology, intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the 2040 total traffic conditions. The results of the analysis are summarized in **Table 27** and **Table 28**. Detailed Synchro reports are included in **Appendix O**.

Table 27: 2040 Total Traffic Operations (City)

Intersection	AM Peak			PM Peak			SAT Peak		
	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt	Max v/c or Delay	LOS	Mvmt
Pinecrest Road/ Highway 417 WB Ramps(1)	0.66	B	WBL	0.73	C	WBL	0.74	C	WBL
Greenbank Road/Iris Street/ Highway 417 EB Ramps(1)	**1.40**	**F**	**EBL**	**1.22**	**F**	**EBL**	**1.12**	**F**	**EBL**
	1.38	**F**	**SBL**						
	1.11	**F**	**NBT**						
Iris Street/ Pinecrest Shopping Centre(1)	0.66	B	WBL	0.83	D	WBL	0.78	C	WBL
Iris Street/ Southwood Drive(2)	18 sec	C	EBT/R	17 sec	C	EBT/R	13 sec	B	WBL/T
Iris Street/ Baxter Road(2)	16 sec	C	EBL/T	14 sec	B	WBT/R	19 sec	C	SBL/R
Baxter Road/ Building E Access(2)	10 sec	A	WB	12 sec	B	WB	15 sec	B	WB
Baxter Road/ Street 1 South(2)	9 sec	A	WB	11 sec	B	WB	13 sec	B	WB
Baxter Road/ Building A/B Access(2)	9 sec	A	WB	10 sec	A	WB	12 sec	B	WB
Baxter Road/ Street 1 North(2)	9 sec	A	NB	10 sec	A	NB	11 sec	B	NB
Baxter Road/ Building C/D Access(2)	9 sec	A	NB	10 sec	A	NB	11 sec	B	NB
Baxter Road/ Building F Access(2)	9 sec	A	NB	10 sec	A	NB	11 sec	B	NB

1. Signalized intersection
2. Unsignalized intersection

Table 28: 2040 Total Queues (City)

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.57 [A]	68	108	0.50 [A]	61	93	0.48 [A]	40	86
	SBT (80m)	0.41 [A]	44	66	0.63 [B]	**90**	**#134**	0.49 [A]	36	**#102**
	WBL (300m)	0.66 [B]	44	53	0.73 [C]	53	64	0.74 [C]	52	63
	WBR (120m)	0.64 [B]	18	38	0.41 [A]	0	15	0.60 [A]	14	35

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.11 [F]**	**~144**	**#171**	0.72 [C]	80	96	0.80 [C]	94	110
	SBL (110m)	**1.38 [F]**	**~31**	**#53**	0.83 [D]	~37	#69	0.86 [D]	71	#108
	SBT (340m)	0.59 [A]	84	104	0.63 [B]	96	120	0.37 [A]	53	70
	EBL (110m)	**1.31 [F]**	**~118**	**#152**	**1.22 [F]**	**~82**	**#114**	**1.12 [F]**	**~53**	**#81**
	EBT (150m)	0.84 [D]	130	**#194**	0.64 [B]	67	96	0.87 [D]	99	131
	WBL (90m)	0.39 [A]	8	15	0.68 [B]	27	m38	0.88 [D]	38	#59
	WBR (90m)	0.33 [A]	32	45	0.53 [A]	49	61	0.63 [B]	77	**91**
Iris St/ Pinecrest SC	NBT (100m)	0.12 [A]	8	m13	0.18 [A]	17	m21	0.44 [A]	43	m49
	SBT (50m)	0.04 [A]	2	5	0.15 [A]	8	13	0.25 [A]	15	24
	WBL (200m)	0.66 [B]	29	41	0.83 [D]	46	#75	0.78 [C]	42	64
	WBR (30m)	0.04 [A]	0	3	0.04 [A]	0	3	0.07 [A]	0	5

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: volume for the 50th percentile queue exceeds capacity
#: volume for the 95th percentile queue exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

At Greenbank Road/Iris Street/Highway 417 EB Ramps, the northbound through and southbound left turn movement exceeds the City's target Auto LOS during the AM peak hour and the eastbound left turn movement exceeds the target during all peak hours. All other movements (including at all proposed access locations) achieve the target. This is consistent with the 2040 background conditions, indicating that site-generated traffic will have marginal impacts to traffic operations within the study area. The following movements have average or maximum queue lengths that exceed the storage length provided or extend into an upstream intersection:

AM Peak Hour

- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 118m average/152m max (exceeds 110m storage length);
  - Eastbound through: 194m max (extends through Ashley Street, but does not extend to Highway 417).

PM Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 90m average/134m max (extends through Queensview Drive).

SAT Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 102m max (extends through Queensview Drive).
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Westbound right turn: 91m max (extends to upstream Iris Street intersection).

The alternate peak hour signal timings described in Section 3.4.1 have been applied to the 2040 total conditions. Detailed Synchro reports with the alternate timings are included in **Appendix O**. The results of the alternate scenarios are described below.

Greenbank Road/Iris Street/Highway 417 EB Ramps
In the AM peak hour, the v/c ratio of the northbound through movement improves from 1.11 to 0.93, the southbound left turn movement improves from 1.38 to 0.91, and the v/c ratio of the eastbound left turn movement improves from 1.31 to 0.85. All movements meet the target.

In the PM peak hour, the v/c ratio of the eastbound left turn movement improves from 1.22 to 0.84, meeting the target.

In the Saturday peak hour, the v/c ratio of the eastbound left turn movement improves from 1.12 to 0.79, meeting the target.

4.5.5 2040 Total Traffic Conditions (MTO Method)

Using MTO methodology, intersection capacity analysis of the weekday AM, weekday PM, and Saturday peak hours has been conducted for the 2040 total traffic conditions at the ramp terminals. The results of the analysis are summarized in **Table 29**. Detailed Synchro reports are included in **Appendix O**.

Table 29: 2040 Total Operations (MTO)

Intersection	Mvmt (Spacing)[1]	AM Peak			PM Peak			SAT Peak		
		v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)	v/c [LOS]	50th % Queue (m)	95th % Queue (m)
Pinecrest Rd/ Hwy 417 WB	NBT (340m)	0.61 [B]	75	118	0.52 [A]	66	97	0.51 [A]	44	93
	SBT (80m)	0.42 [A]	45	67	0.66 [B]	**96**	**#141**	0.52 [A]	39	**#107**
	WBL (300m)	0.66 [B]	45	54	0.75 [C]	56	69	0.75 [C]	54	67
	WBR (120m)	0.64 [B]	15	39	0.40 [A]	0	15	0.59 [A]	14	36
Greenbank Rd/ Iris St/ Hwy 417 EB	NBT (400m)	**1.11 [F]**	**~150**	**#177**	0.74 [C]	80	96	0.82 [D]	94	110
	SBL (110m)	**1.52 [F]**	**~36**	**#59**	**1.09 [F]**	**~62**	**#92**	**1.04 [E]**	**~94**	**#128**
	SBT (340m)	0.64 [B]	84	104	0.64 [B]	97	120	0.38 [A]	56	70
	EBL (110m)	**1.40 [F]**	**~118**	**#152**	**1.22 [F]**	**~82**	**#114**	**1.12 [F]**	**~53**	**#81**
	EBT (150m)	**0.88 [D]**	**135**	**#206**	0.69 [B]	74	105	**0.87 [D]**	**105**	**#151**
	EBR (150m)	0.14 [A]	0	0	0.73 [C]	49	83	0.50 [A]	23	48
	WBL (90m)	0.49 [A]	13	m19	0.72 [C]	31	m38	**1.03 [F]**	**~46**	**m#66**
	WBR (90m)	0.46 [A]	47	67	0.58 [A]	56	m64	0.72 [C]	89	**m113**

1: Spacing refers to distance to nearest upstream intersection for through movements, or auxiliary storage length for turning movements
~: volume for the 50th percentile queue exceeds capacity #: volume for the 95th percentile queue exceeds capacity
m: volume for the 95th percentile queue is metered by an upstream signal

From the previous tables, the following movements at Greenbank Road/Iris Street/Highway 417 EB Ramps exceed the MTO's target v/c ratios during one or more peak hours:

- Northbound through (AM peak hour);
- Southbound left turn (AM, PM, and Saturday peak hours);
- Eastbound left turn (AM, PM, and Saturday peak hours);
- Eastbound through (AM and Saturday peak hours);
- Westbound left turn (Saturday peak hour).

The following movements have average or maximum queue lengths that exceed the storage length provided or extend into an upstream intersection.

AM Peak Hour

- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 118m average/152m max (exceeds 110m storage length);
  - Eastbound through: 206m max (extends through Ashley Street, but does not extend to Highway 417).

PM Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 96m average/141m max (extends through Queensview Drive).
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Eastbound left turn: 114m max (exceeds 110m storage length).

SAT Peak Hour

- Pinecrest Road/Highway 417 WB Ramps
  - Southbound through: 107m max (extends through Queensview Drive).
- Greenbank Road/Iris Street/Highway 417 EB Ramps
  - Southbound left turn: 128m max (exceeds 110m storage length);
  - Eastbound through: 151m max (exceeds to Ashley Street);
  - Westbound right turn: 113m max (extends into upstream Iris Street intersection).

The alternate peak hour signal timings described in Section 3.4.1 have been applied to the 2040 total conditions. Detailed Synchro reports with the alternate timings are included in **Appendix O**. The results of the alternate scenarios are described below.

Greenbank Road/Iris Street/Highway 417 EB Ramps

In the AM peak hour, the v/c ratio of the northbound through movement improves from 1.11 to 0.93, the v/c ratio of the southbound left turn movement improves from 1.52 to 1.03, the v/c ratio of the eastbound left turn movement improves from 1.40 to 0.85, and the v/c ratio of the eastbound through movement downgrades from 0.88 to 0.97. Operations for the movements that exceed capacity improve, however they do not achieve the target v/c ratios of 0.75 (for the eastbound movements) or 0.85 (for the northbound/southbound movements). The southbound left turn operates marginally above capacity.

In the PM peak hour, the v/c ratio of the southbound left turn movement improves from 1.09 to 0.93, and the v/c ratio of the eastbound left turn movement improves from 1.22 to 0.84. Operations for the movements that exceed capacity improve, however they do not achieve the target v/c ratios of 0.75 (for the eastbound movement) or 0.85 (for the southbound movement).

In the Saturday peak hour, the v/c ratio of the southbound left turn movement downgrades from 1.04 to 1.07, the v/c ratio of the eastbound left turn movement improves from 1.12 to 0.79, the v/c ratio of the eastbound through movement improves from 0.87 to 0.85, and the v/c ratio of the westbound left turn movement remains at 1.03. Operations for the eastbound movements improve but still do not achieve the target v/c ratio of 0.75. There is no improvement or a marginal downgrade to the v/c ratios of the southbound and westbound left turn movements.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

Site-Generated Traffic

- Using City's methodology, the proposed development is estimated to generate the following number of peak hour external trips:
    - 102 vehicle trips, 434 transit trips, and 105 non-auto trips during the AM peak hour;
    - 145 vehicle trips, 495 transit trips, and 130 non-auto trips during the PM peak hour;
    - 175 vehicle trips, 573 transit trips, and 154 non-auto trips during the Sat peak hour.

- Using MTO's methodology, the proposed development is estimated to generate the following number of peak hour external trips:
    - 341 vehicle trips during the AM peak hour;
    - 428 vehicle trips during the PM peak hour;
    - 527 vehicle trips during the Saturday peak hour.

Development Design

- It is anticipated that the minimum required stopping sight distance (SSD) will be accommodated at all connections/accesses to Baxter Road. As shown on the concept plan, the building envelopes of Tower A and Tower B are proposed to accommodate the critical intersection sight distance (ISD) minimums for right turns at the eastern Street 1 connection and left turns at the western Street 1 connection. This will be confirmed as part of future Site Plan Control applications for each block.

- Internal sidewalks will be provided on both sides of Street 1, around the perimeter of the proposed parkland at the southern end of the subject site, and adjacent to all proposed buildings. A pathway is proposed along the southern limit of the subject site to connect Baxter Road with the proposed park. A sidewalk is also proposed along the entirety of the subject site's frontage to Baxter Road, in accordance with the policy outlined in the *Pinecrest and Queensview Stations Secondary Plan*. Additionally, a pedestrian bridge over Baxter Road is proposed to connect to the existing pedestrian bridge over Highway 417, which will provide direct connectivity between the proposed development and Queensview Station. An at-grade pedestrian crossover (PXO) is proposed at the Baxter Road/Street 1 connection near the pedestrian bridge.

- OC Transpo's service design guideline for peak period service is to provide service within a five-minute (400m) walk of home, work, or school for 95% of urban residents. It is anticipated that all proposed entrances will be within 400m walking distance of Queensview Station. Additionally, it is anticipated that all proposed entrances will be within 800m walking distance of bus stops on Iris Street, with southern entrances within 400m walking distance.

- The two Street 1 connections to Baxter Road are approximately 180m apart, measuring from centreline to centreline along the centre of Baxter Road.

- The conceptual design meets the relevant provisions of the City's *Private Approach By-Law (PABL)*. The details of each block will be reviewed as part of subsequent Site Plan Control applications.

- The proposed alignment of Street 1 consists of two straight sections that connect at a 90-degree bend. The bend is proposed to have an inside radius of approximately 6.5m and centreline radius of 12m. The proposed centreline radius meets the minimum requirement for fire routes.

- The proposed private ROW of Street 1 is 20m. In general, Street 1 has a proposed roadway width of 11.0m, which accommodates a travel lane in each direction plus on-street parallel parking spaces on both sides. At the two connections to Baxter Road, the conceptual roadway width of Street 1 narrows to 7.0m at the street line. A minimum width of 7m is recommended and this can be reviewed at detailed design. Outside of the roadway platform, 2.5m-wide inner boulevards and 2.0m-wide sidewalks are proposed.

- Street 1 is anticipated to have an operating speed of 30 km/h and average annual daily traffic (AADT) volumes less than 1,000 vpd. Based on these parameters, no dedicated cycling facilities are required for Street 1.

Boundary Streets

- Baxter Road does not meet the target pedestrian level of service (PLOS) A or bicycle level of service (BLOS) D.

- Baxter Road has no sidewalks along the frontage of the subject site. The *Pinecrest and Queensview Stations Secondary Plan* identifies that the proposed development shall include a sidewalk along the subject's site frontage. The proposed development will include a 2.0m-wide sidewalk with 1.5m-wide boulevard along the subject site's frontage to Baxter Road, and will meet the target PLOS A.

- Baxter Road has no cycling facilities. Based on the operating speed and AADT of Baxter Road, a designated operating space is appropriate for Baxter Road, which can include bike lanes. The City has developed a functional design of improved active transportation facilities on Baxter Road. Buffered bike lanes are shown on both sides of Baxter Road from Iris Street to the southerly Pinecrest Shopping Centre access, a southbound curbside bike lane north of the southerly Pinecrest Shopping Centre access, and bike sharrows elsewhere. This design meets the target BLOS D.

Transit

- The proposed development does not include any driveways on a street that serves transit vehicles, and the majority of site-generated transit traffic are anticipated to use O-Train Line 3. The addition of site-generated transit traffic that is expected to use a bus is anticipated to have marginal impacts to transit delays.

Intersection Multi-Modal Levels of Service (MMLOS)

- The results of the intersections MMLOS analysis can be summarized as follows:
  - No study area intersections meet the target PLOS;
  - No study area intersections meet the target BLOS;
  - Pinecrest Road/Highway 417 WB Ramps does not meet the target transit level of service (TLOS) A;
  - Pinecrest Road/Highway 417 WB Ramps and Greenbank Road/Iris Street/Highway 417 EB Ramps meet the target truck level of service (TkLOS) D.

- For each study area intersection, there is limited opportunity in improving the PLOS at each approach without reducing the number of travel lanes or restricting turning movements. There is limited opportunity in improving the delay score for pedestrians without incurring major delays for vehicles.

- At Pinecrest Road/Highway 417 WB Ramps, there are currently no permitted left or right turn movements for cyclists at this intersection. Therefore, no modifications are identified for cyclists. A future multi-use pathway (MUP) is planned north of the bus loop from Dumaurier Avenue to Pinecrest Station, per the conceptual Pinecrest Station layout.

- At Greenbank Road/Iris Street/Highway 417 EB Ramps, the east approach does not meet the target BLOS, based on both left and right turn characteristics. The north approach does not meet the target BLOS based on only left turn characteristics, and the south approach does not meet the target BLOS based on only right turn characteristics. From a capacity perspective, the north and east approaches require dual left turn lanes, the east approach requires dual right turn lanes, and the south approach requires a right turn lane longer than 50m. A protected intersection design would be required for all approaches to meet the target BLOS.

- At Iris Street/Pinecrest Shopping Centre, the east approach does not meet the target BLOS, based on left or right turn characteristics. Exhibit 12 of the *MMLOS Guidelines* identifies that the target BLOS B can be met if a two-stage left turn bike box is provided at the north approach. This is identified for the City's consideration.

- The west approach at Pinecrest Road/Highway 417 WB Ramps, which is transit-exclusive, does not the target TLOS A. The target TLOS requires grade-separated transit. The future LRT service will achieve the target TLOS.

Existing and Background Traffic Operations

- All movements at Iris Street/Pinecrest Shopping Centre, Iris Street/Southwood Drive, and Iris Street/Baxter Road meet the target Auto LOS.

- At Pinecrest Road/Highway 417 WB Ramps, all movements meet the City's target during all peak hours. At Greenbank Road/Iris Street/Highway 417 EB Ramps, the northbound through movement does not meet the City's target during the AM peak hour and the eastbound left turn movement does not meet the City's target during any peak hour.

- The following movements exceed the MTO's target vehicle-to-capacity (v/c) ratios during one or more peak hours:
    - Pinecrest Road/Highway 417 WB Ramps
        - Westbound left turn (AM, PM, and Saturday peak hours);
        - Westbound right turn (PM and Saturday peak hours).
    - Greenbank Road/Iris Street/Highway 417 EB Ramps
        - Northbound through (AM peak hour);
        - Southbound left turn (Saturday peak hour);
        - Eastbound left turn (AM, PM, and Saturday peak hours);
        - Eastbound through (AM peak hour);
        - Westbound left turn (Saturday peak hour).

- In all peak hours, applying the ultimate westbound lane configuration at Pinecrest Road/ Highway 417 WB Ramps (i.e. dual left turn lanes, a transit-exclusive through lane, and a right turn lane) allows all westbound movements to operate at the MTO's target v/c ratio of 0.75 or better.

- With signal timing adjustments at Greenbank Road/Iris Street/Highway 417 EB Ramps, all movements can be improved to meet the City's target v/c ratio of 1.00 during the peak hours, but not the MTO's target v/c ratios of 0.85 or 0.75.

Total Traffic Operations

- The 2035 and 2040 total traffic conditions are generally consistent with the 2035 and 2040 background conditions, indicating that site-generated traffic will have marginal impacts to traffic operations within the study area. The outbound movements at the two Street 1 connections and all proposed private approaches will operate acceptably.

Based on the foregoing, the proposed conceptual development is recommended from a transportation perspective. All building footprints and unit statistics will be confirmed via separate Site Plan Control and Zoning By-Law Amendment applications.

NOVATECH

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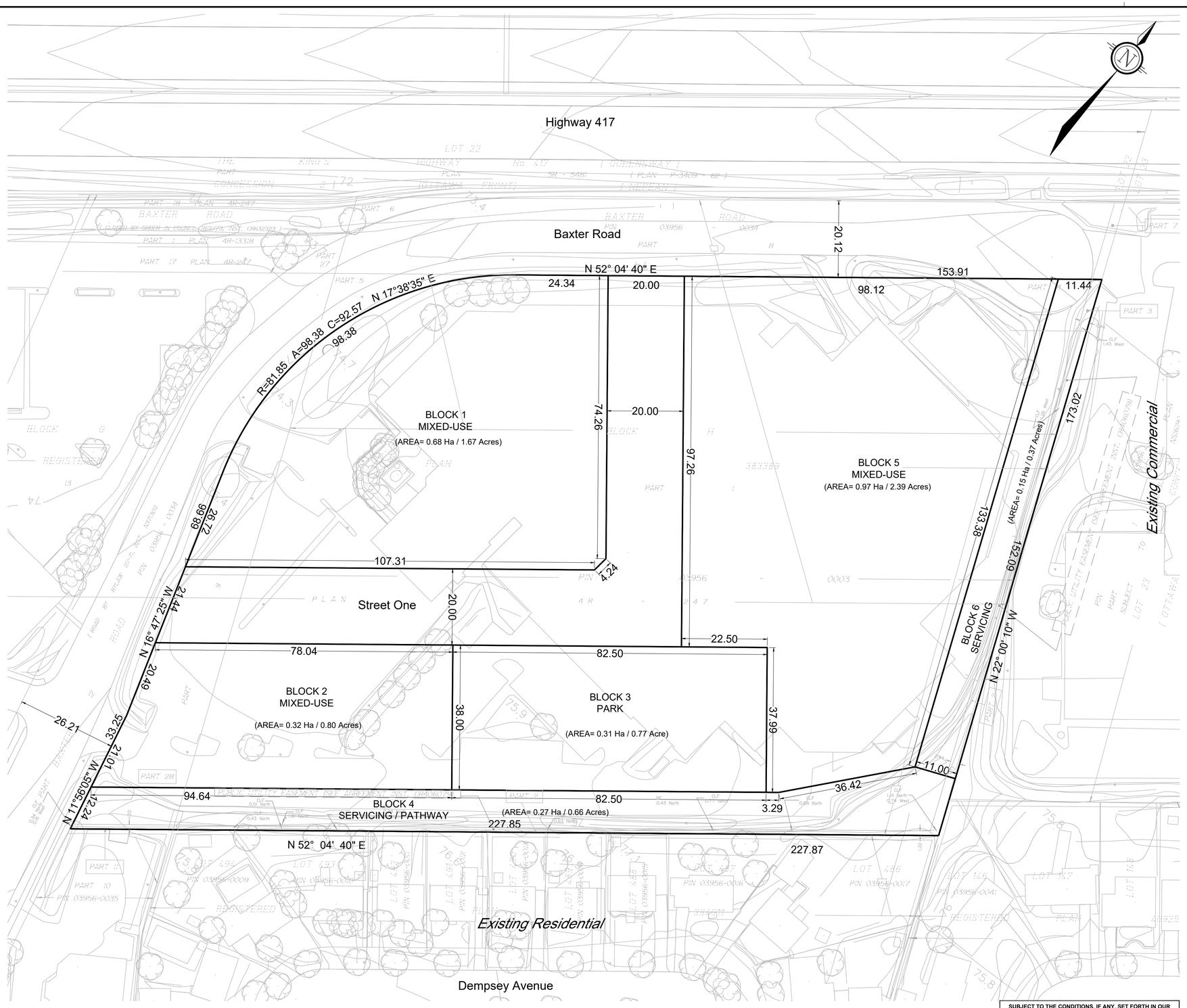
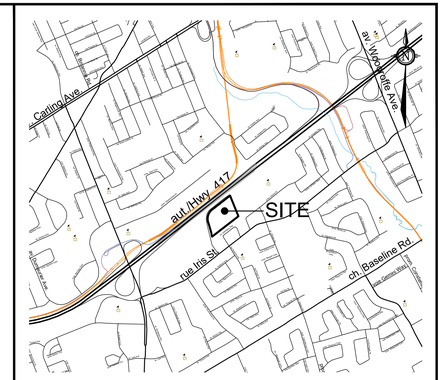
Reviewed by:

Jennifer Luong, P.Eng.
Senior Project Manager | Transportation

APPENDIX A

Draft and Concept Plans





KEY MAP
NOT TO SCALE

METRIC : MEASUREMENTS SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

DRAFT PLAN OF SUBDIVISION OF
PART OF BLOCKS G AND H
REGISTERED PLAN No. 383389
CITY OF OTTAWA

SCALE:
1 : 500

DATE: DECEMBER, 2025

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AND THEIR RELATIONSHIP TO ADJOINING LANDS ARE CORRECTLY SHOWN.

DATED __ __ __ __ __ __ __ __ __ __ __ __ __ __

ONTARIO LAND SURVEYOR

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
ONTARIO LAND SURVEYORS 25770-25

OWNER'S CERTIFICATE

WE, BAXTER REGIONAL INC., BEING THE REGISTERED OWNER(S), HEREBY AUTHORIZE NOVATECH TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF OTTAWA FOR REVIEW AND APPROVAL.

DATED __ __ __ __ __ __ __ __ __ __ __ __ __ __

Evan Garfinkel
(I have the authority to bind the corporation)

ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51 (17) OF THE PLANNING ACT.

A) The boundaries of the land proposed to be subdivided, certified by an Ontario land Surveyor;
As shown on Draft Plan

B) The locations, widths & names of the proposed highways within the proposed subdivision & of existing highways on which the proposed subdivision abuts;
As shown on Draft Plan

C) On a small keyplan, on a scale of not less than 1cm to 100m, all of the land adjacent to the proposed subdivision that is owned by the applicant or in which the applicant has an interest, every subdivision adjacent to the proposed subdivision & the relationship of the boundaries of the land to be subdivided to the boundaries of the township lot of other original grant of which the land forms the whole part;
As Shown on Draft Plan

D) The purpose for which the proposed lots are to be used;
Residential, and Park shown on Draft Plan

E) The existing uses of all adjoining lands;
Residential, and Commercial shown on Draft Plan

F) The approximate dimensions & layout of the proposed lots;
As shown on Draft Plan

F.1) If any affordable housing units are being proposed, the shape and dimensions of each proposed affordable housing unit and the approximate location of each proposed affordable housing unit in relation to other proposed residential units;
No affordable housing units are proposed

G) Natural & artificial features such as buildings or other structures or installations, railways, highways, watercourses, drainage ditches, wetlands & wooded areas within or adjacent to the land proposed to be subdivided;
As shown on Draft Plan

H) The availability and nature of domestic water supplies;
Development will be supplied with full municipal piped water service

I) The nature & porosity of the soil;
Brown Silty Clay, trace Sand

J) Existing contours or elevations as may be required to determine the grade of the highways and the drainage of the land proposed to be subdivided;
Contours shown at 0.5 metre intervals on Draft Plan

K) The municipal services available or to be available to the land proposed to be subdivided;
Development will be supplied with full sanitary and storm water sewer services.

L) The nature & extent of any restrictions affecting the land proposed to be subdivided, including restrictive covenants or easements. 1994, c. 23, s. 30; 1996, c. 4, s. 28 (3); 2016, c. 25, Sched. 4, s. 8 (1);
As shown on Draft Plan.

BAXTER ROAD

SUBJECT TO THE CONDITIONS, IF ANY, SET FORTH IN OUR LETTER DATED _____, THIS DRAFT PLAN IS APPROVED BY THE CITY OF OTTAWA UNDER SECTION 51 OF THE PLANNING ACT THIS _____ DAY OF _____, 20____

DERRICK MOODIE, MANAGER
DEVELOPMENT REVIEW WEST
PLANNING, INFRASTRUCTURE AND ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

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PROJECT No. 121019

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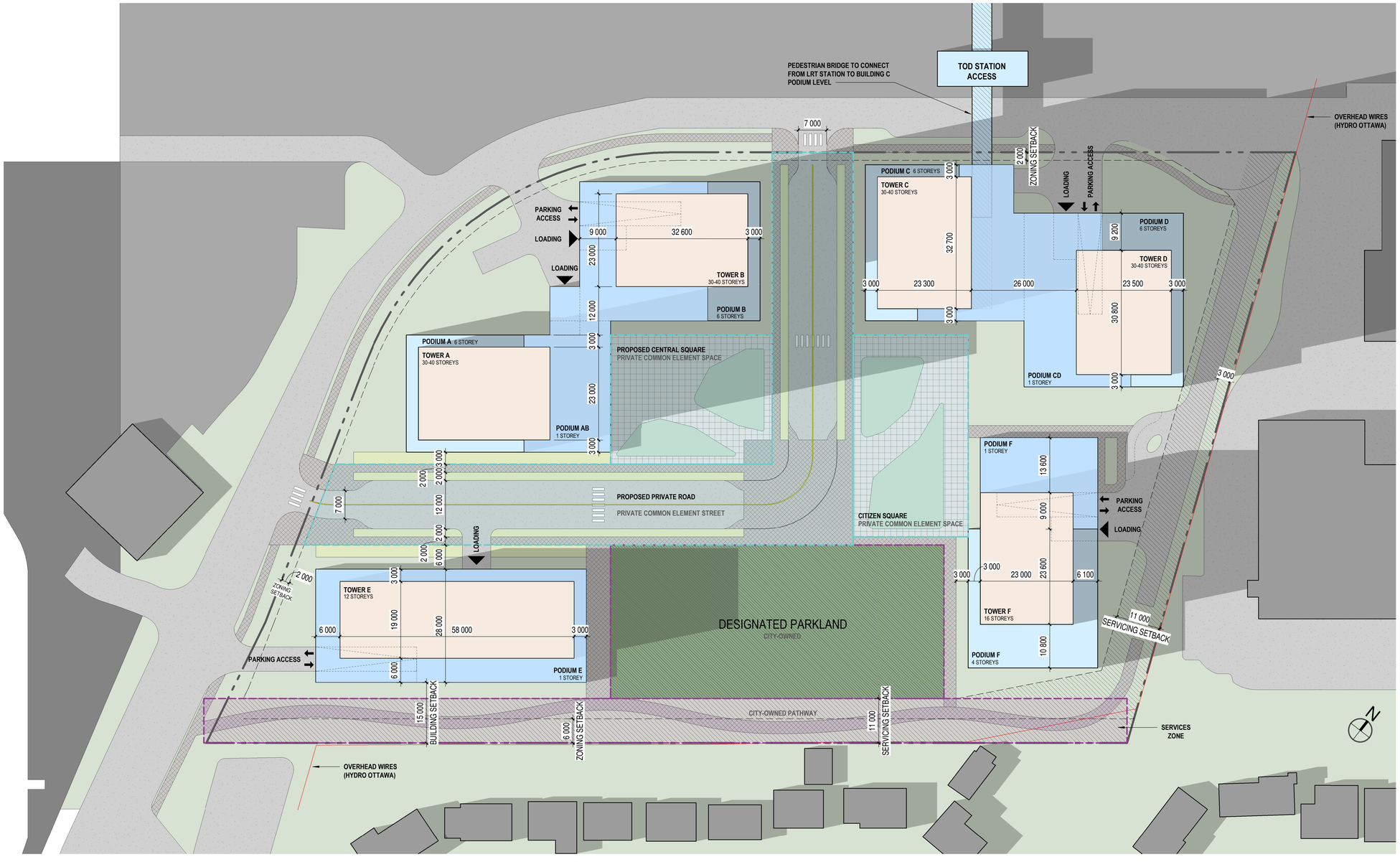
Dxx-xx-xx-xxxx

#xxxxx



SITE PLAN
1 : 500

1
GFS 05

C:\Fichiers Revit Locaux\12435_OVS_ARCH_SITE_R24_rdunnL4TSL.rvt

NOTES GÉNÉRALES General Notes

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REGIONAL

ARCHITECTURE DE PAYSAGE Landscape Architect
Nom de la firme
Adresse de la firme
Téléphone et adresse courriel

CIVIL Civil
Nom de la firme
Adresse de la firme
Téléphone et adresse courriel

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T 514 847 1117 NEUFarchitectes.com

SCEAU / Seal

NEUF
ARCHITECT(E)S
NEUF ARCHITECTES SENCRL

CLIENT Client
Regional Group
1737 Woodward Dr 2nd floor, Ottawa, ON K2C 0P9
T (613) 230-2100

OUVRAGE Project
BAXTER ROAD MASTERPLAN

EMPLACEMENT Location
Ottawa

NO PROJET No.
12424

NO	RÉVISION	DATE (aa-mm-jj)

Préliminaire
NE PAS UTILISER POUR CONSTRUCTION

DESSINÉ PAR Drawn by
Author

VÉRIFIÉ PAR Checked
Checker

DATE (aa.mm.jj)
08/07/25

ÉCHELLE Scale
1 : 500

TITRE DU DESSIN Drawing Title
GROUND FLOOR STUDY A6

RÉVISION Revision

NO. DESSIN Dwg Number
GFS 06

APPENDIX B

TIA Screening Form

City of Ottawa 2017 TIA Guidelines TIA Screening

1. Description of Proposed Development

Municipal Address	1101 Baxter Road
Description of Location	South of Baxter Road at terminus
Land Use Classification	Mixed Use (multifamily residential + grd-floor retail)
Development Size (units)	1,400 dwellings
Development Size square metre (m^2)	9,350 m2 (100,640 ft2) retail
Number of Accesses and Locations	5 to Baxter Road
Phase of Development	
Buildout Year	2035

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Table notes:

1. Table 2, Table 3 & Table 4 TRANS Trip Generation Manual
2. Institute of Transportation Engineers (ITE) Trip Generation Manual 11.1 Ed.

Land Use Type	Minimum Development Size
Single-family homes	**60 units**
Multi-Use Family (Low-Rise)[1]	**90 units**
Multi-Use Family (High-Rise)[1]	**150 units**
Office[2]	**1,400 m^2**
Industrial[2]	**7,000 m^2**
Fast-food restaurant or coffee shop[2]	**110 m^2**
Destination retail[2]	**1,800 m^2**
Gas station or convenience market[2]	**90 m^2**

If the proposed development size is equal to or greater than the sizes identified above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	☐	☑
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?[2]	☑	☐

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street are 80 kilometers per hour (km/h) or greater?	☐	☑
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	☑	☐
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 metre [m] of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)?	☐	☑
Is the proposed driveway within auxiliary lanes of an intersection?	☐	☑
Does the proposed driveway make use of an existing median break that serves an existing site?	☐	☑

[2] Hubs are identified in Schedules B1 to B8 of the City of Ottawa Official Plan. PMTSAs are identified in Schedule C1 of the Official Plan. DPAs are identified in Schedule C7A and C7B of the Official. See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.

	Yes	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	☐	☑
Does the development include a drive-thru facility?	☐	☑

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

Results of Screening	Yes	No
Does the development satisfy the Trip Generation Trigger?	☑	☐
Does the development satisfy the Location Trigger?	☑	☐
Does the development satisfy the Safety Trigger?	☑	☐

If none of the triggers are satisfied, the TIA Study is complete. If one or more of the triggers is satisfied, the TIA Study must continue into the next stage (Screening and Scoping).

APPENDIX C

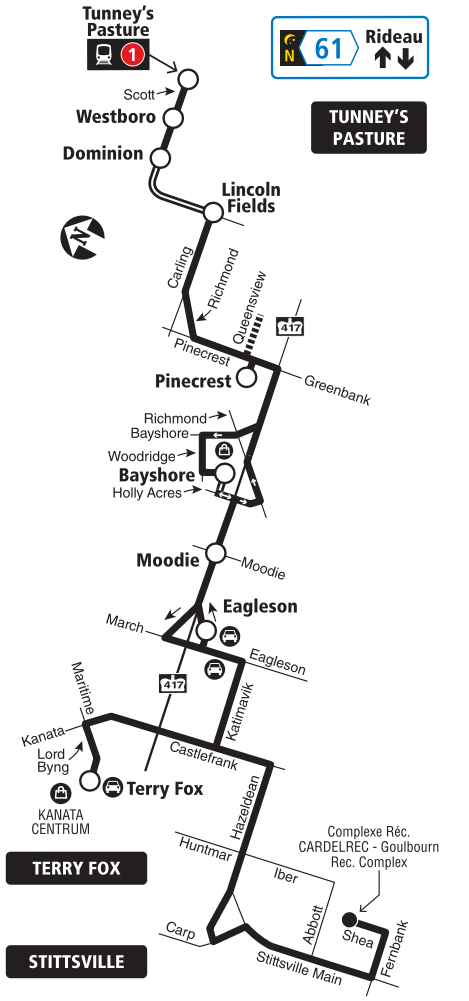
OC Transpo Route Maps

61 Fréquent

STITTSVILLE TERRY FOX
TUNNEY'S PASTURE

7 days a week / 7 jours par semaine

All day and limited overnight service
Service toute la journée et limité la nuit



05/2025

- Transitway & Station
- Selected time periods / Périodes sélectionnées
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

61 When O-Train Line 1 is not running overnight, Route 61 will be extended downtown to Rideau Station. / Lorsque la Ligne 1 de l'O-Train ne circule pas la nuit, le circuit 61 sera prolongée au centre-ville jusqu'à la station Rideau.

2025.04

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service / Service à la clientèle **613-560-5000**

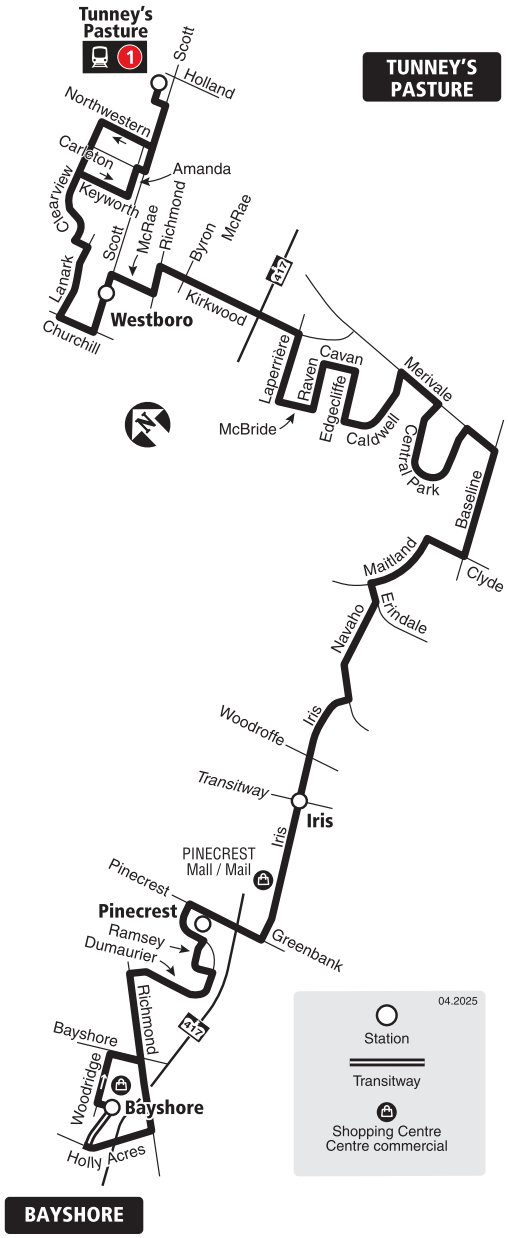
Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**

81 TUNNEY'S PASTURE / BAYSHORE

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



2025.04

This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service / Service à la clientèle **613-560-5000**

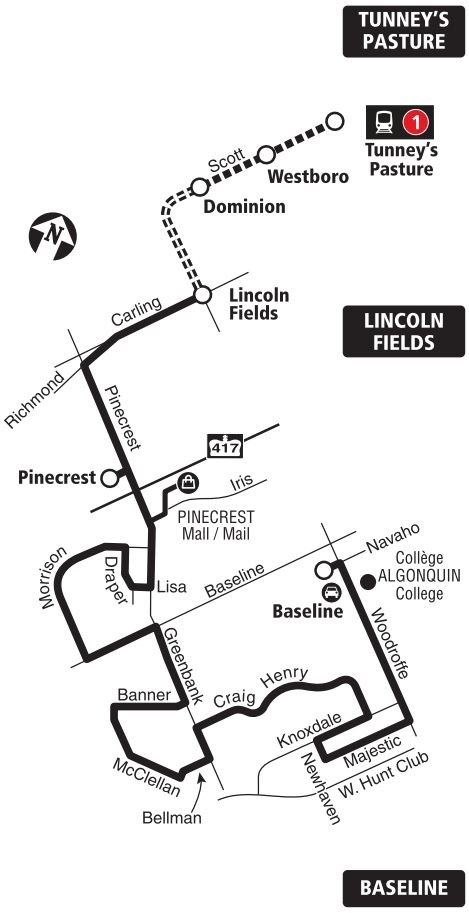
Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**

82 TUNNEY'S PASTURE LINCOLN FIELDS BASELINE

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



04/2025

- Transitway & Station (Peak periods / périodes de pointe)
- Peak periods / périodes de pointe
- Park & Ride / Parc relais
- Shopping Centre / Centre commercial

2025.04

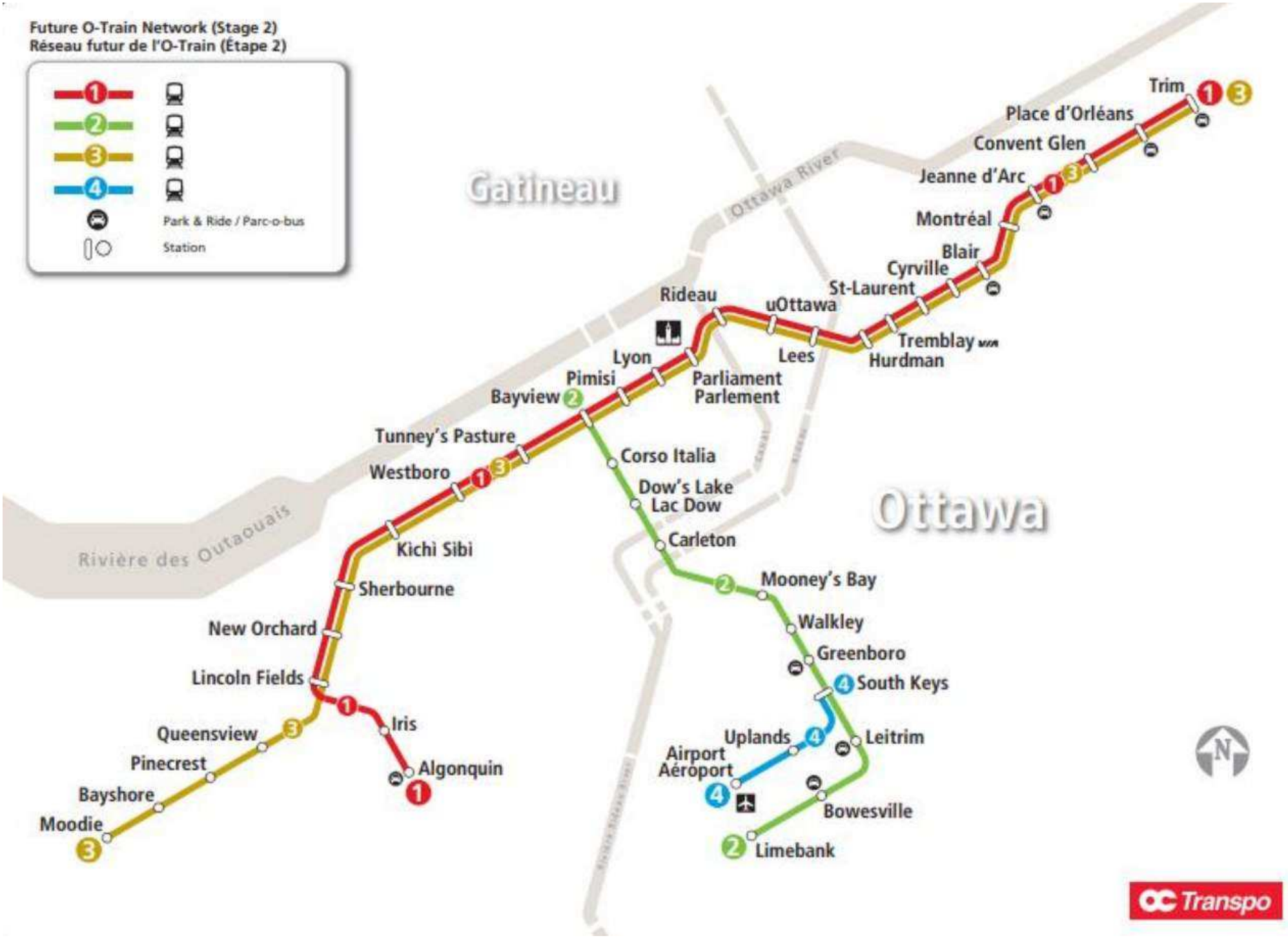
This route starts on April 27, 2025 when the New Ways to Bus network comes into effect.

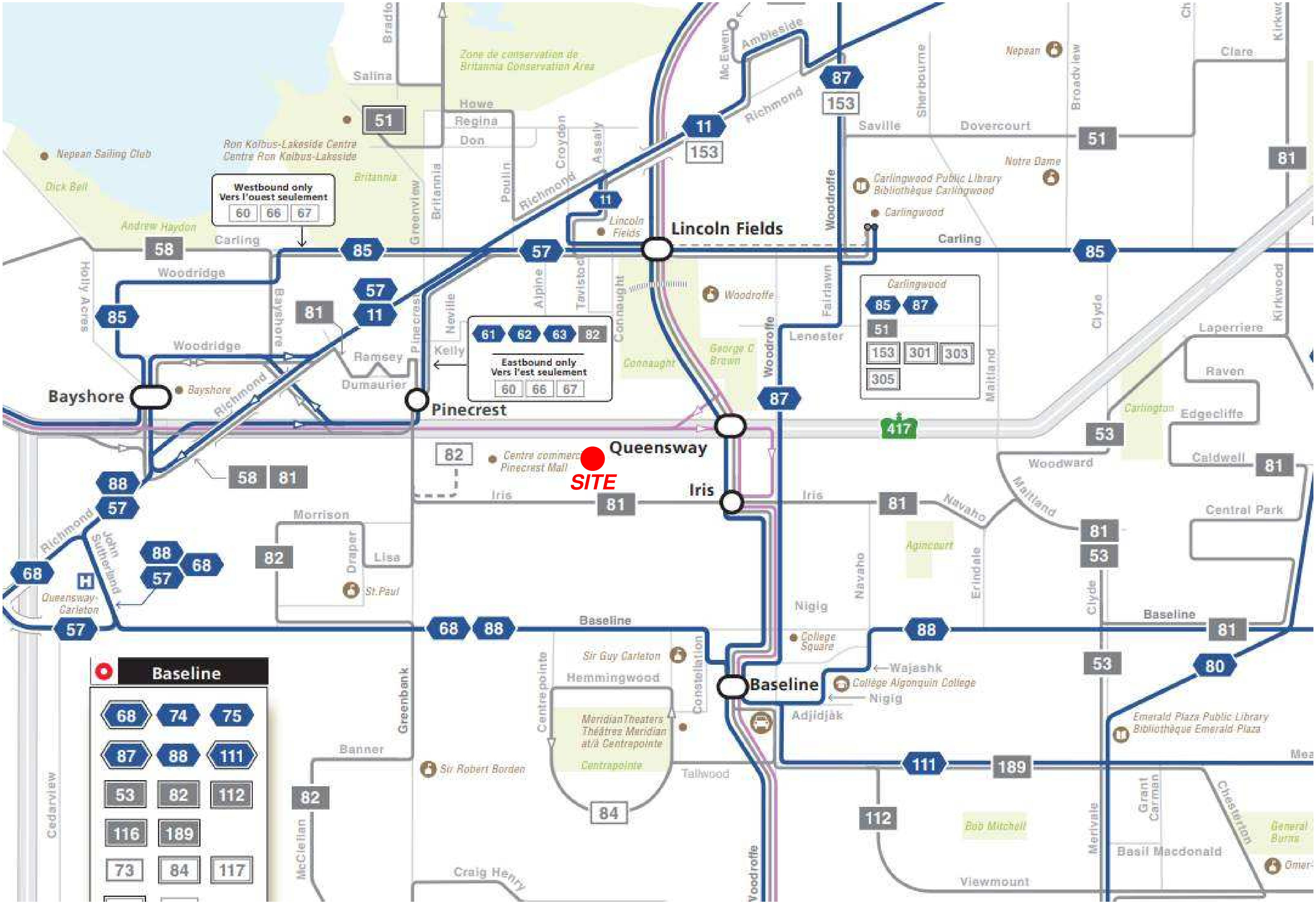
Ce circuit sera mis en service le 27 avril 2025, lorsque le réseau L'autobus réinventé entrera en vigueur.

Customer Service / Service à la clientèle **613-560-5000**

Security / Sécurité **613-741-2478**

OC Transpo **octranspo.com**


Future O-Train Network (Stage 2)
Réseau futur de l'O-Train (Étape 2)
Park & Ride / Parc-o-bus
Station
Gatineau
Ottawa River
Rivière des Outaouais
Ottawa
Trim
Place d'Orléans
Convent Glen
Jeanne d'Arc
Montréal
Blair
Cyrville
St-Laurent
uOttawa
Rideau
Tremblay
Hurdman
Lees
Parliament
Parlement
Lyon
Pimisi
Bayview
Tunney's Pasture
Westboro
Corso Italia
Dow's Lake
Lac Dow
Carleton
Kichi Sibi
Sherbourne
Mooney's Bay
New Orchard
Walkley
Greenboro
Lincoln Fields
South Keys
Iris
Uplands
Leitrim
Queensview
Airport
Aéroport
Pinecrest
Algonquin
Bayshore
Bowesville
Moodie
Limebank
OC Transpo


SITE
Queensway
Iris
Lincoln Fields
Bayshore
Pinecrest
Baseline
Centre commercial Pinecrest Mall
Westbound only
Vers l'ouest seulement
60 66 67
Eastbound only
Vers l'est seulement
61 62 63 82
60 66 67
Carlingwood
85 87
51
153 301 303
305
Baseline
68 74 75
87 88 111
53 82 112
116 189
73 84 117
Carling
Woodridge
Richmond
Iris
Baseline
Morrison
Lisa
Banner
Hemmingwood
Craig Henry
Viewmount
Basil Macdonald
Woodward
Caldwell
Central Park
Edgecliffe
Laperriere
Raven
Clare
Dovercourt
Saville
Lenester
Navaho
Nigig
Wajashk
Adjidjak
Tallwood
Zone de conservation de Britannia Conservation Area
Ron Kolbus-Lakeside Centre
Centre Ron Kolbus-Lakeside
Nepean Sailing Club
Carlingwood Public Library
Bibliothèque Carlingwood
Collège Algonquin College
Emerald Plaza Public Library
Bibliothèque Emerald Plaza
Meridian Theaters
Théâtres Meridian
at/à Centrepointe
Queensway-Carleton
College Square
Sir Guy Carleton
Sir Robert Borden
St.Paul
417

APPENDIX D

Traffic Count Data

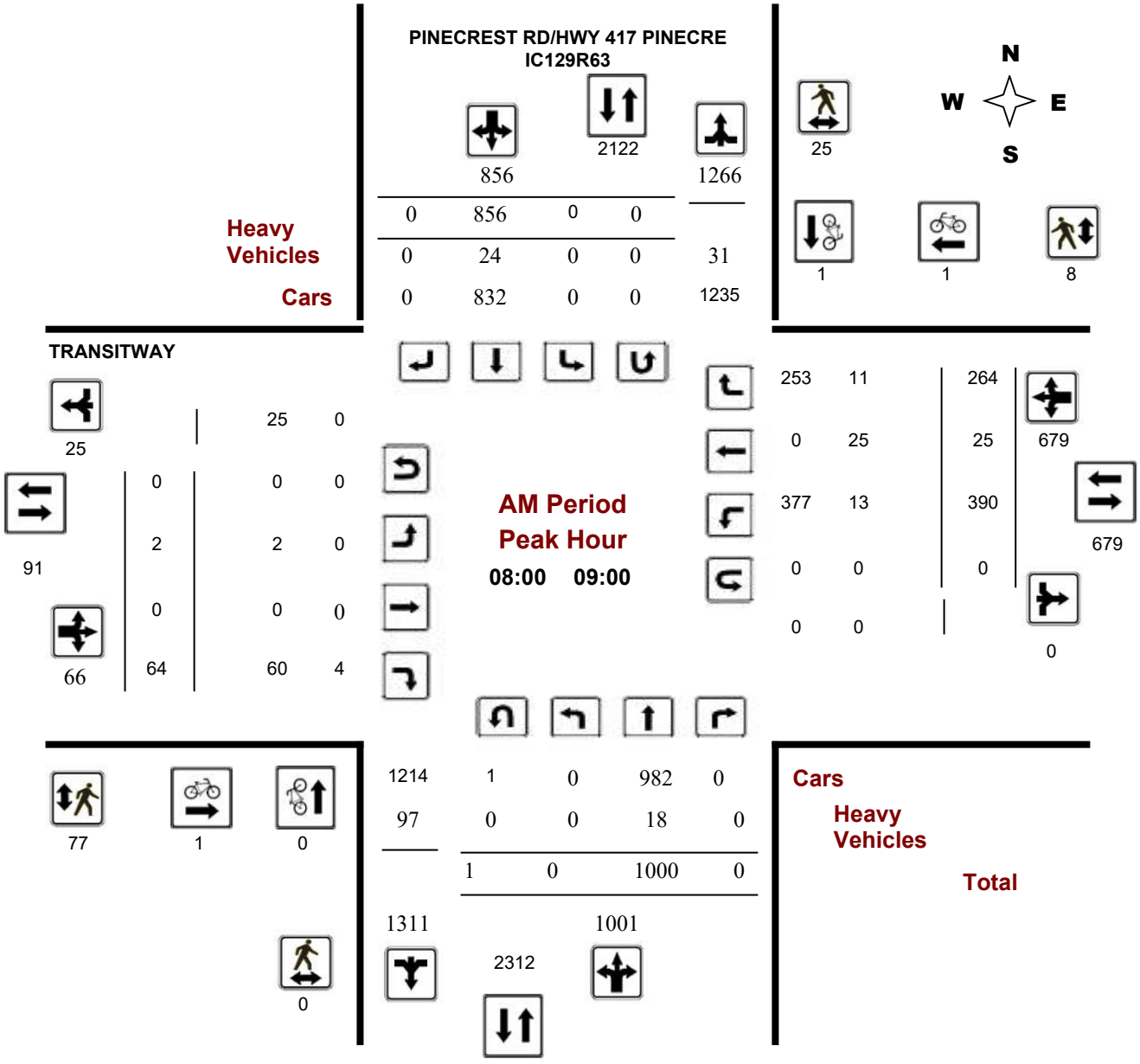
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PINECREST RD/HWY 417 PINECRE IC129R63 @ TRANSI

Survey Date: Tuesday, January 22, 2019 **WO No:** 38298

Start Time: 07:00 **Device:** Miovision



Comments

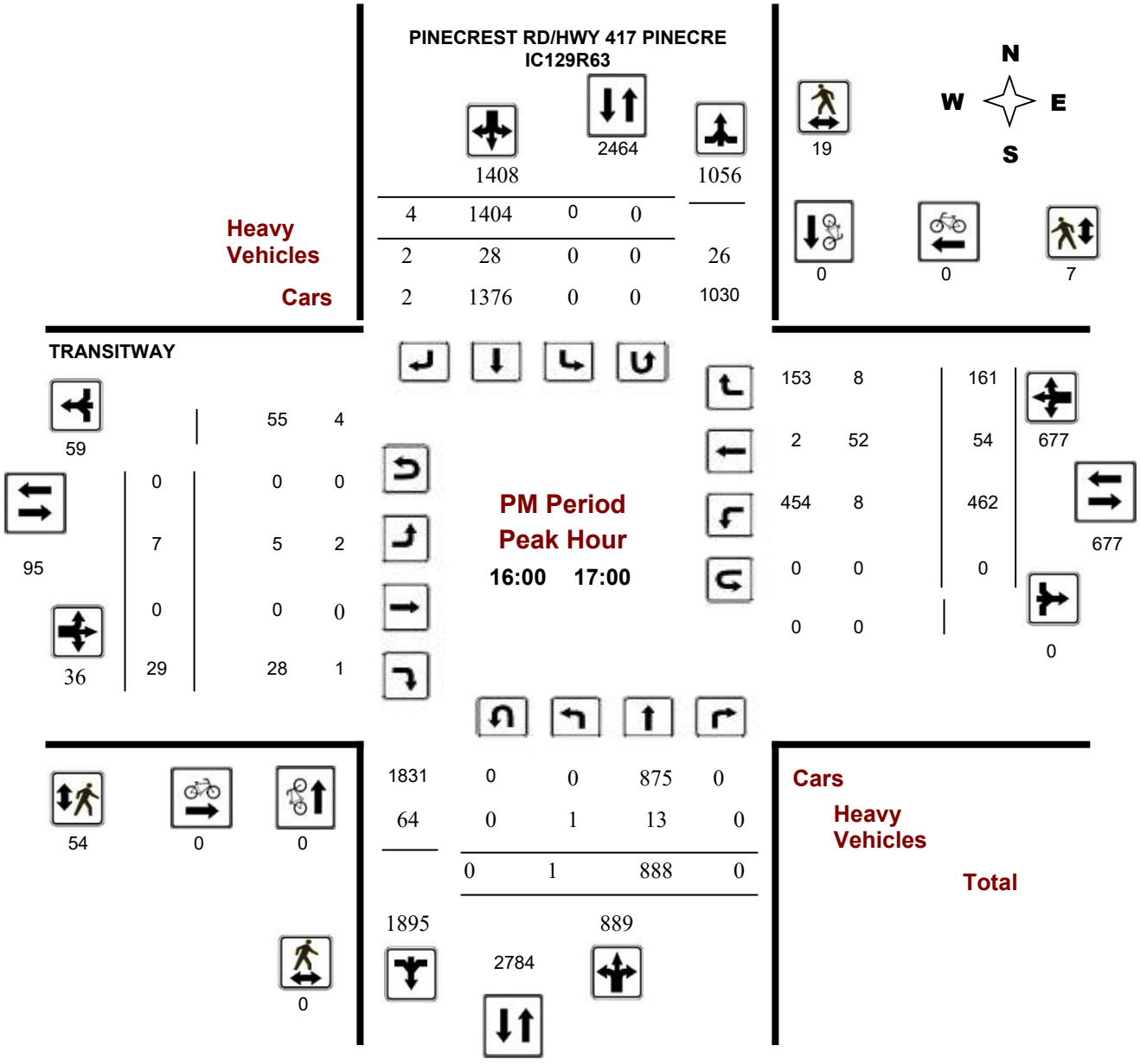
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

PINECREST RD/HWY 417 PINECRE IC129R63 @ TRANSI

Survey Date: Tuesday, January 22, 2019 **WO No:** 38298

Start Time: 07:00 **Device:** Miovision



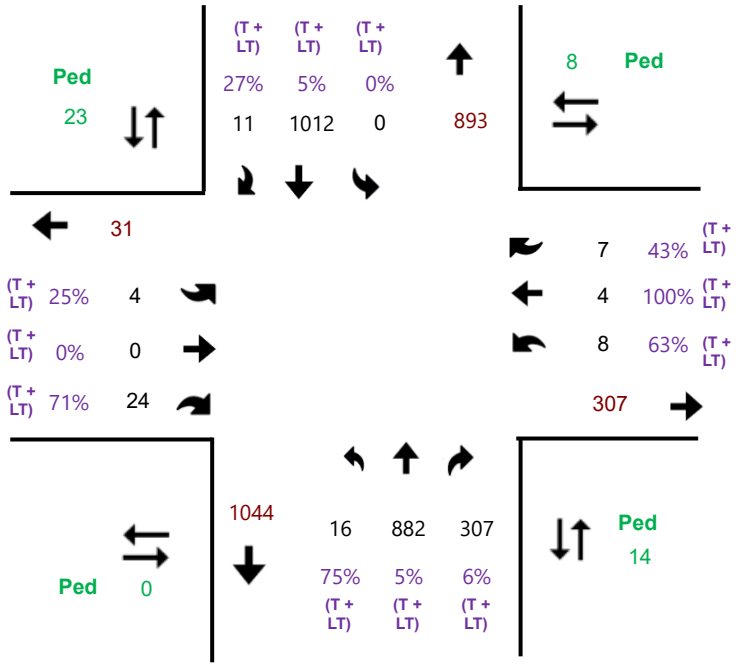
Comments

Ontario

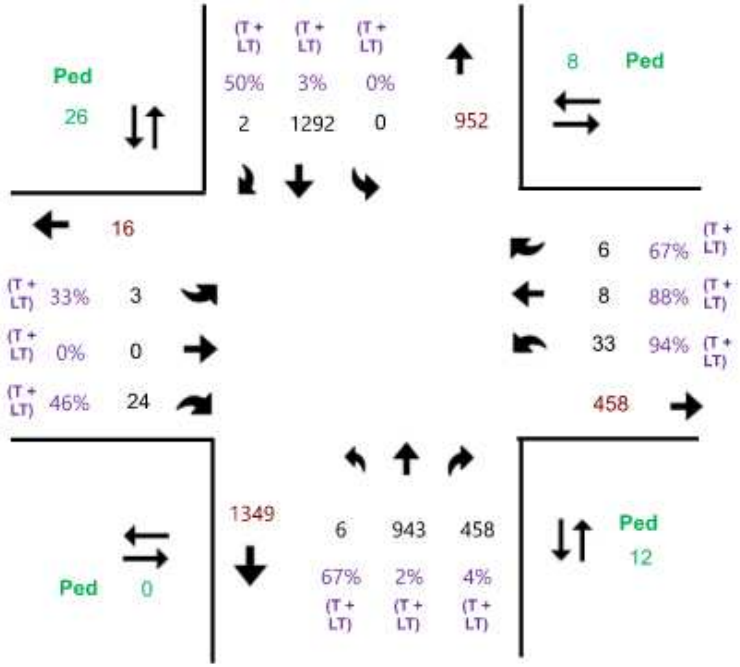
TES - Traffic Engineering System
Turning Movement Total Count and Peak Summary Report

Description:	HWY 417 @ HWY 417 - RAMP 61		
Region	EAST	**Hwy #:**	HWY 417
LHRS_Offset:	49510_0000_61T	**Int. Type:**	Cross
Count Date:	Tuesday, 01 November, 2022		

AM Period Tue, 01 Nov, 2022 08:00 AM - 09:00 AM



PM Period Tue, 01 Nov, 2022 04:00 PM - 05:00 PM

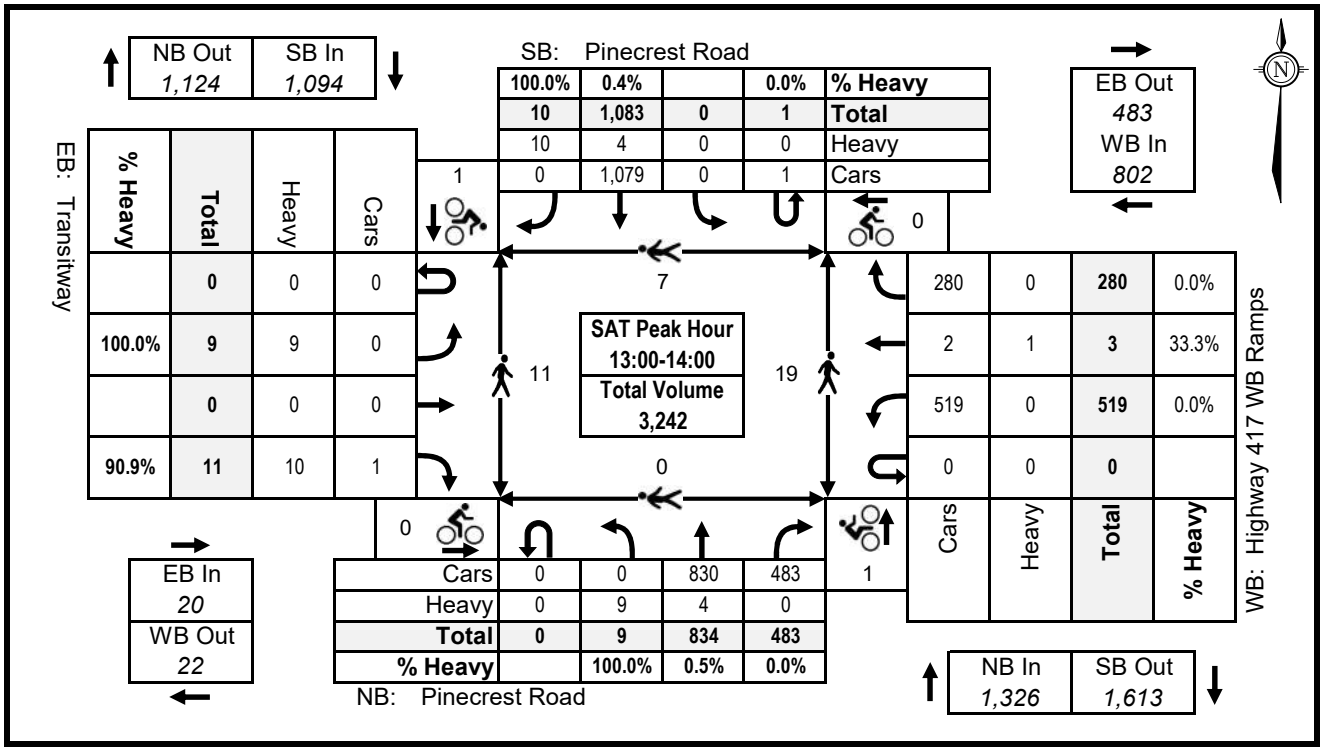


PINECREST RD @ HIGHWAY 417 WB RAMPS

Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

Period	Pinecrest Road NORTHBOUND				Pinecrest Road SOUTHBOUND				N/S Tot	Transitway EASTBOUND				Highway 417 WB Ramps WESTBOUND				E/W Tot	Grand Tot
	L	T	R	*Tot*	L	T	R	*Tot*		L	T	R	*Tot*	L	T	R	*Tot*		
11:00 - 12:00	7	725	367	*1,099*	0	757	9	*766*	**1,865**	7	0	9	*16*	530	1	259	*790*	**806**	**2,671**
12:00 - 13:00	6	799	375	*1,180*	0	922	12	*934*	**2,114**	10	0	9	*19*	511	0	294	*805*	**824**	**2,938**
13:00 - 14:00	9	834	483	*1,326*	0	1,083	10	*1,093*	**2,419**	9	0	11	*20*	519	3	280	*802*	**822**	**3,241**
14:00 - 15:00	3	873	442	*1,318*	0	949	9	*958*	**2,276**	5	0	10	*15*	547	2	328	*877*	**892**	**3,168**
15:00 - 16:00	7	877	436	*1,320*	0	980	11	*991*	**2,311**	6	0	11	*17*	485	1	321	*807*	**824**	**3,135**
Subtotal	32	4,108	2,103	*6,243*	0	4,691	51	*4,742*	**10,985**	37	0	50	*87*	2,592	7	1,482	*4,081*	**4,168**	**15,153**
U-Turns				*2*				*1*					*0*				*0*		
Total	32	4,108	2,103	*6,245*	0	4,691	51	*4,743*	**10,988**	37	0	50	*87*	2,592	7	1,482	*4,081*	**4,168**	**15,156**

Ontario

Ministry of Transportation

TVIS II - Traffic Volume information System

Ramp Weekly Volume Summary

Hwy: 417 **Between:** PINECREST RD UP IC-129
TS: 195 **and:** RICHMOND RD-BAYSHORE DR IC
Regn: EASTERN **Pattern:** SC **PDCS:** 22
LHRS: 49510 **Offset:** 0 **Locn:** PINECREST RD UP IC-129
Ramp: 39 **Lanes:** 1 **Speed:** **Dates:** 05-May-2019 to 12-May-2019

	Sun		Mon		Tue		Wed		Thu		Fri		Sat		Sun	
H. Interval	05/05		05/06	Pk.	05/07	Pk.	05/08	Pk.	05/09	Pk.	05/10	Pk.	05/11	Pk.	05/12	Pk.
00:00-01:00			15		20		22		16		21		43		27	
01:00-02:00			6		9		4		8		7		15		24	
02:00-03:00			11		11		11		9		10		18		17	
03:00-04:00			7		8		8		9		10		11		6	
04:00-05:00			19		18		20		12		15		14		11	
05:00-06:00			98		94		83		83		74		14		9	
06:00-07:00			180		178		183		185		147		65		19	
07:00-08:00			225		250		247		244		258		94		39	
08:00-09:00			297	◄	289	◄	293	◄	296	◄	306	◄	174	◄	76	◄
09:00-10:00			256		255		284		242		267		229		141	
10:00-11:00			195		197		229		176		240		272		201	
11:00-12:00			184		179		244	◄	201		211		267	◄	259	◄
AM Total			**1493**		**1508**		**1628**		**1481**		**1566**		**1216**		**829**	
12:00-13:00	242		239	◄	230	◄	234		247	◄	275	◄	236			
13:00-14:00	273	◄	214		212		219		218		266		259			
14:00-15:00	311		268		284		303		278		312		221			
15:00-16:00	245	◄	411		404		404		413		463		252	◄		
16:00-17:00	230		462	◄	466	◄	516	◄	473	◄	467	◄	242			
17:00-18:00	197		407		388		408		393		435		184			
18:00-19:00	132		258		279		275		266		317		153			
19:00-20:00	114		163		187		188		183		222		142			
20:00-21:00	94		108		128		131		118		105		89			
21:00-22:00	77		91		109		94		87		118		76			
22:00-23:00	38		46		58		59		66		91		69			
23:00-00:00	42		45		51		46		52		56		82			
PM Total	**1995**		**2712**		**2796**		**2877**		**2794**		**3127**		**2005**			
24h. Total	**1995**		**4205**		**4304**		**4505**		**4275**		**4693**		**3221**		**829**	

Noon - Noon	3488	4220	4424	4358	4360	4343	2834

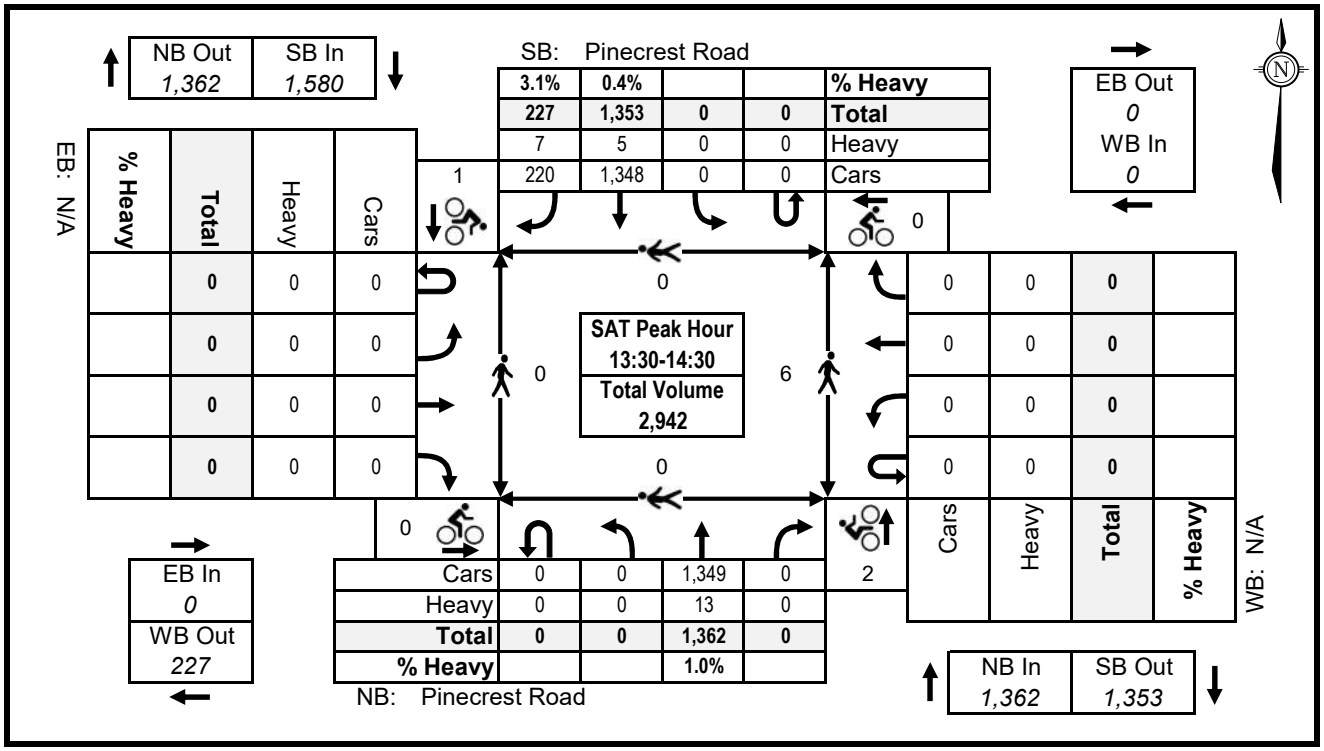
ADT	AWD
4004	4340

PINECREST RD @ HIGHWAY 417 WB ON-RAMP

NOVATECH
Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

Period	Pinecrest Road NORTHBOUND L	T	R	Tot	Pinecrest Road SOUTHBOUND L	T	R	Tot	N/S Tot	N/A EASTBOUND L	T	R	Tot	N/A WESTBOUND L	T	R	Tot	E/W Tot	Grand Tot
11:00 - 12:00	0	1,124	0	*1,124*	0	1,183	107	*1,290*	**2,414**	0	0	0	*0*	0	0	0	*0*	**0**	**2,414**
12:00 - 13:00	0	1,213	0	*1,213*	0	1,282	170	*1,452*	**2,665**	0	0	0	*0*	0	0	0	*0*	**0**	**2,665**
13:00 - 14:00	0	1,315	0	*1,315*	0	1,346	259	*1,605*	**2,920**	0	0	0	*0*	0	0	0	*0*	**0**	**2,920**
14:00 - 15:00	0	1,340	0	*1,340*	0	1,317	198	*1,515*	**2,855**	0	0	0	*0*	0	0	0	*0*	**0**	**2,855**
15:00 - 16:00	0	1,332	0	*1,332*	0	1,258	218	*1,476*	**2,808**	0	0	0	*0*	0	0	0	*0*	**0**	**2,808**
Subtotal	0	6,324	0	*6,324*	0	6,386	952	*7,338*	**13,662**	0	0	0	*0*	0	0	0	*0*	**0**	**13,662**
U-Turns				*0*				*0*					*0*				*0*		
Total	0	6,324	0	*6,324*	0	6,386	952	*7,338*	**13,662**	0	0	0	*0*	0	0	0	*0*	**0**	**13,662**

Ontario

TES - Traffic Engineering System

Ramp Weekly Volume Summary

Hwy:	417	TS:	195	Start:	49510.0000	End:	49520.0000
Btwn.:	HWY 417			and:	RICHMOND RD		
Regn:	ER	Pattern:	SC	PDCS:	22	Factor:	0.91
LHRS:	49510	Offset:	0.700	Locn:	PINECREST RD UP IC-129		
Ramp:	25	Lanes:	1	Speed:		Dates:	05-May-2019 to 12-May-2019

		05/05	05/06	05/07	05/08	05/09	05/10	05/11	05/12
Part of Day	Interval	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
AM	00:00-01:00		30	34	36	41	42	84	102
	01:00-02:00		19	20	17	13	23	56	69
	02:00-03:00		22	15	26	16	22	35	31
	03:00-04:00		31	34	31	33	28	22	32
	04:00-05:00		112	115	125	133	112	41	24
	05:00-06:00		463	493	499	465	440	93	83
	06:00-07:00		633	688	670	655	658	202	156
	07:00-08:00		596	605	608	611	542	382	198
	08:00-09:00		420	518	516	533	445	574	431
	09:00-10:00		507	482	518	482	497	706	555
	10:00-11:00		478	578	562	613	606	703	658
	11:00-12:00		547	610	607	627	631	782	696
AM Total			3,858	4,192	4,215	4,222	4,046	3,680	3,035
PM	12:00-13:00	627	571	603	562	604	673	769	
	13:00-14:00	616	626	639	633	679	676	778	
	14:00-15:00	606	648	590	541	571	531	787	
	15:00-16:00	655	502	526	500	537	518	740	
	16:00-17:00	591	530	476	472	532	584	660	
	17:00-18:00	450	514	524	539	511	548	604	
	18:00-19:00	335	441	446	482	460	518	533	
	19:00-20:00	322	376	440	471	443	559	463	
	20:00-21:00	231	314	342	355	325	387	413	
	21:00-22:00	188	148	180	221	200	247	241	
	22:00-23:00	88	93	93	100	109	169	191	
	23:00-00:00	67	40	71	72	56	155	149	
PM Total		4,776	4,803	4,930	4,948	5,027	5,565	6,328	
24-hour Total		4,776	8,661	9,122	9,163	9,249	9,611	10,008	3,035
Noon - Noon			8,634	8,995	9,145	9,170	9,073	9,245	9,363

ADT	AWD	AADT	SADT	SAWDT	WADT
9,089	9,096	8,245	8,807	8,761	7,253

Ontario

TES - Traffic Engineering System

Ramp Weekly Volume Summary

Hwy:	417	TS:	195	Start:	49510.0000	End:	49520.0000
Btwn.:	HWY 417			and:	RICHMOND RD		
Regn:	ER	Pattern:	SC	PDCS:	22	Factor:	0.91
LHRS:	49510	Offset:	0.700	Locn:	PINECREST RD UP IC-129		
Ramp:	35	Lanes:	1	Speed:		Dates:	05-May-2019 to 12-May-2019

		05/05	05/06	05/07	05/08	05/09	05/10	05/11	05/12
Part of Day	Interval	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
AM	00:00-01:00		38	43	52	38	61	70	92
	01:00-02:00		23	22	28	29	21	43	75
	02:00-03:00		14	12	15	15	19	34	38
	03:00-04:00		16	19	18	19	15	18	21
	04:00-05:00		22	25	20	33	29	16	22
	05:00-06:00		76	66	87	86	78	35	22
	06:00-07:00		177	190	192	191	191	78	49
	07:00-08:00		198	208	201	201	200	110	85
	08:00-09:00		179	185	169	168	180	242	150
	09:00-10:00		200	173	170	181	198	248	211
	10:00-11:00		266	242	225	268	211	276	225
	11:00-12:00		287	259	272	285	275	290	229
AM Total			1,496	1,444	1,449	1,514	1,478	1,460	1,219
PM	12:00-13:00	254	321	291	309	282	285	280	
	13:00-14:00	273	259	279	279	290	301	263	
	14:00-15:00	235	282	305	280	318	283	256	
	15:00-16:00	241	292	266	256	311	231	273	
	16:00-17:00	275	258	263	266	275	264	297	
	17:00-18:00	256	294	274	282	304	288	279	
	18:00-19:00	194	312	279	302	259	307	278	
	19:00-20:00	226	215	262	240	256	222	234	
	20:00-21:00	191	176	212	234	172	210	170	
	21:00-22:00	149	188	185	181	176	221	212	
	22:00-23:00	105	124	133	124	133	172	176	
	23:00-00:00	89	72	82	80	88	118	159	
PM Total		2,488	2,793	2,831	2,833	2,864	2,902	2,877	
24-hour Total		2,488	4,289	4,275	4,282	4,378	4,380	4,337	1,219
Noon - Noon			3,984	4,237	4,280	4,347	4,342	4,362	4,096

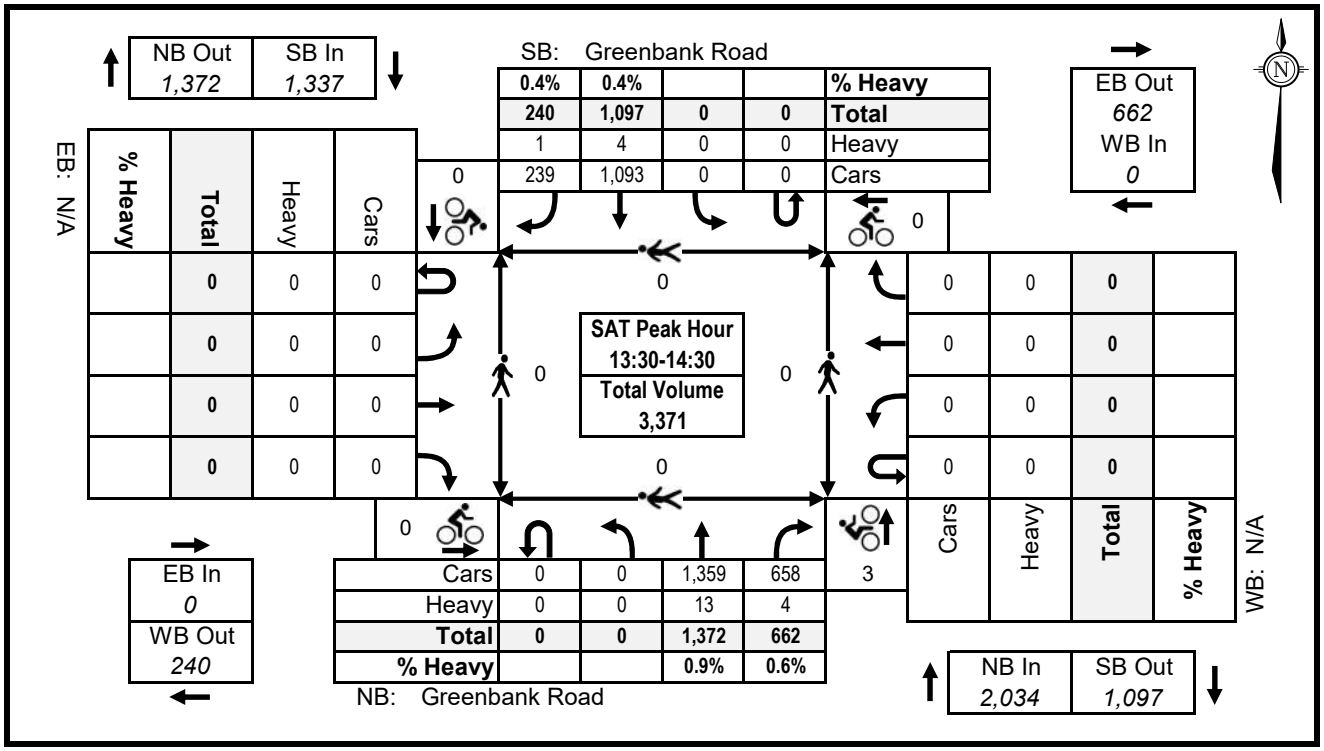
ADT	AWD	AADT	SADT	SAWDT	WADT
4,235	4,302	3,842	4,104	4,082	3,380

GREENBANK RD @ HIGHWAY 417 EB ON-RAMPS

NOVATECH
Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

Period	Greenbank Road NORTHBOUND L	T	R	Tot	Greenbank Road SOUTHBOUND L	T	R	Tot	N/S Tot	N/A EASTBOUND L	T	R	Tot	N/A WESTBOUND L	T	R	Tot	E/W Tot	Grand Tot
11:00 - 12:00	0	1,115	649	*1,764*	0	957	231	*1,188*	**2,952**	0	0	0	*0*	0	0	0	*0*	**0**	**2,952**
12:00 - 13:00	0	1,210	584	*1,794*	0	1,056	223	*1,279*	**3,073**	0	0	0	*0*	0	0	0	*0*	**0**	**3,073**
13:00 - 14:00	0	1,312	649	*1,961*	0	1,108	240	*1,348*	**3,309**	0	0	0	*0*	0	0	0	*0*	**0**	**3,309**
14:00 - 15:00	0	1,351	645	*1,996*	0	1,064	236	*1,300*	**3,296**	0	0	0	*0*	0	0	0	*0*	**0**	**3,296**
15:00 - 16:00	0	1,344	666	*2,010*	0	1,041	225	*1,266*	**3,276**	0	0	0	*0*	0	0	0	*0*	**0**	**3,276**
Subtotal	0	6,332	3,193	*9,525*	0	5,226	1,155	*6,381*	**15,906**	0	0	0	*0*	0	0	0	*0*	**0**	**15,906**
U-Turns				*0*				*0*					*0*				*0*		
Total	0	6,332	3,193	*9,525*	0	5,226	1,155	*6,381*	**15,906**	0	0	0	*0*	0	0	0	*0*	**0**	**15,906**

Transportation Services - Traffic Services

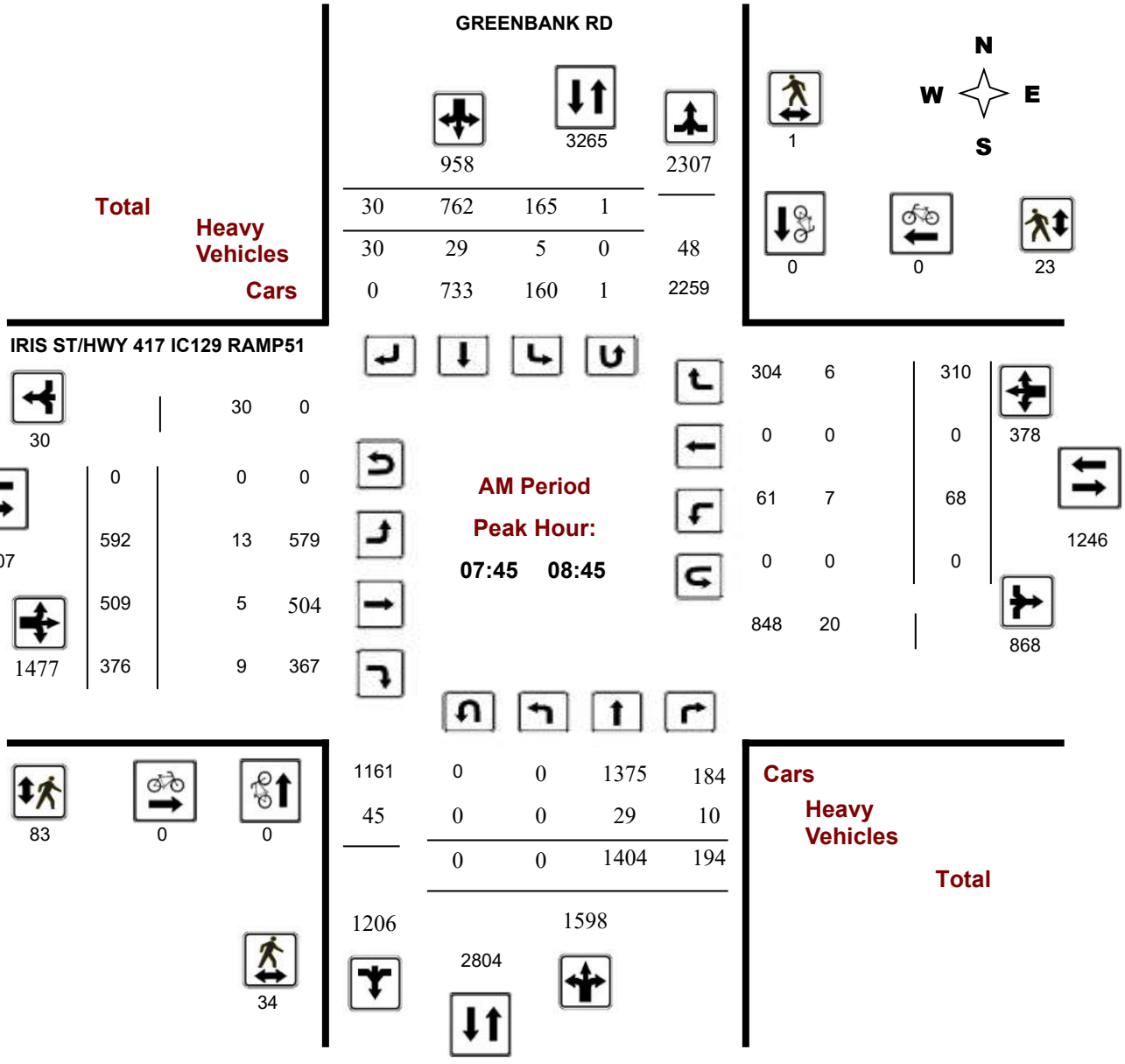
Turning Movement Count - Study Results

GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Survey Date: Wednesday, January 16, 2019 **WO No:** 38263

Start Time: 07:00 **Device:** Miovision

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

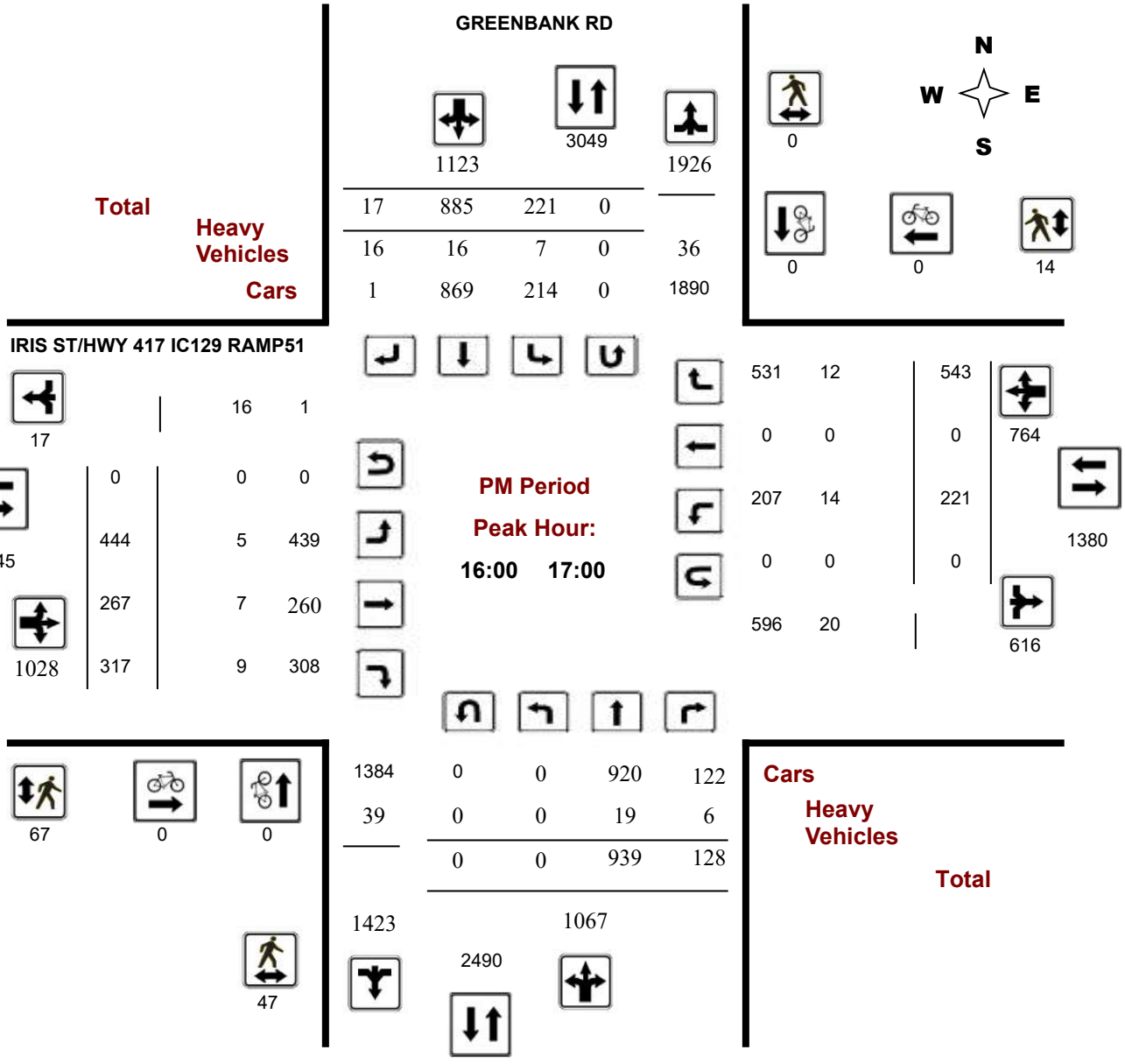
Turning Movement Count - Study Results

GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Survey Date: Wednesday, January 16, 2019 **WO No:** 38263

Start Time: 07:00 **Device:** Miovision

PM Period Peak Hour Diagram

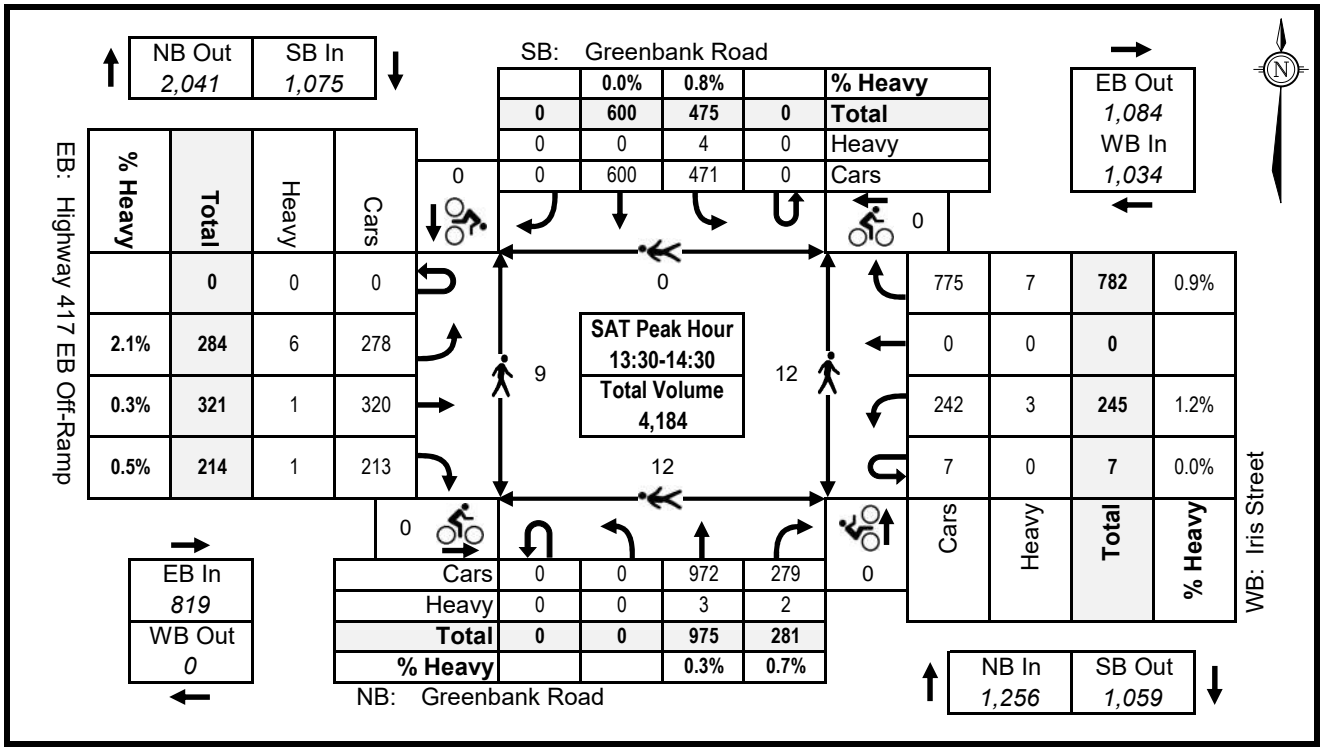


GREENBANK RD @ IRIS ST/HIGHWAY 417 EB OFF-RAMP

Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

Period	Greenbank Road NORTHBOUND L	T	R	Tot	Greenbank Road SOUTHBOUND L	T	R	Tot	N/S Tot	Highway 417 EB Off-Ramp EASTBOUND L	T	R	Tot	Iris Street WESTBOUND L	T	R	Tot	E/W Tot	Grand Tot
11:00 - 12:00	0	990	265	*1,255*	440	518	0	*958*	**2,213**	235	303	215	*753*	206	0	534	*740*	**1,493**	**3,706**
12:00 - 13:00	0	892	288	*1,180*	455	602	0	*1,057*	**2,237**	277	302	205	*784*	230	0	655	*885*	**1,669**	**3,906**
13:00 - 14:00	0	950	244	*1,194*	475	622	0	*1,097*	**2,291**	275	316	186	*777*	244	0	741	*985*	**1,762**	**4,053**
14:00 - 15:00	0	961	263	*1,224*	438	613	0	*1,051*	**2,275**	292	296	239	*827*	246	0	765	*1,011*	**1,838**	**4,113**
15:00 - 16:00	0	1,008	228	*1,236*	380	650	0	*1,030*	**2,266**	258	274	217	*749*	209	0	748	*957*	**1,706**	**3,972**
Subtotal	0	4,801	1,288	*6,089*	2,188	3,005	0	*5,193*	**11,282**	1,337	1,491	1,062	*3,890*	1,135	0	3,443	*4,578*	**8,468**	**19,750**
U-Turns				*0*				*1*					*0*				*24*		
Total	0	4,801	1,288	*6,089*	2,188	3,005	0	*5,194*	**11,283**	1,337	1,491	1,062	*3,890*	1,135	0	3,443	*4,602*	**8,492**	**19,775**

Transportation Services - Traffic Services

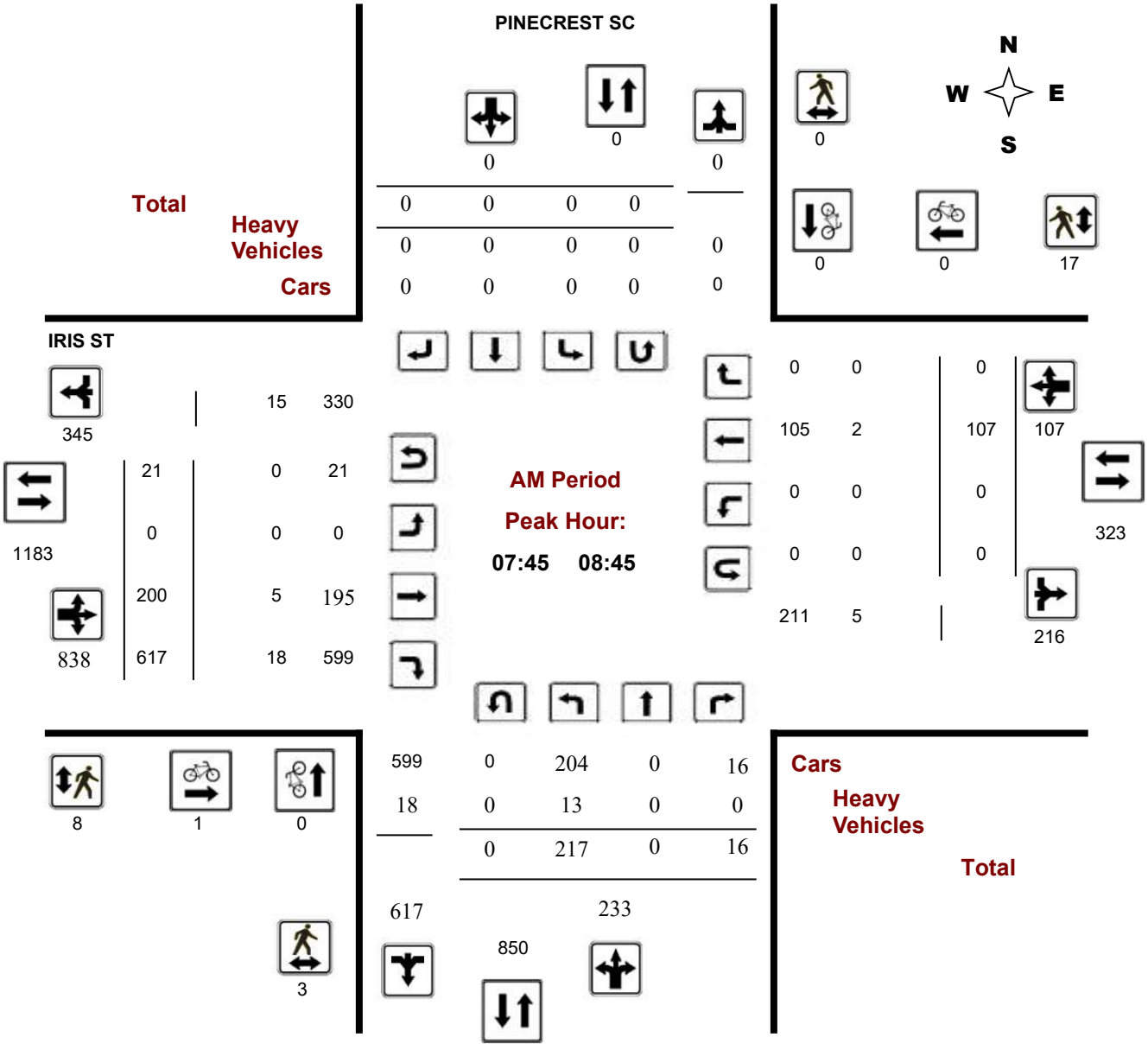
Turning Movement Count - Study Results

IRIS ST @ PINECREST SC

Survey Date: Wednesday, January 16, 2019 **WO No:** 38262

Start Time: 07:00 **Device:** Miovision

AM Period Peak Hour Diagram



Transportation Services - Traffic Services

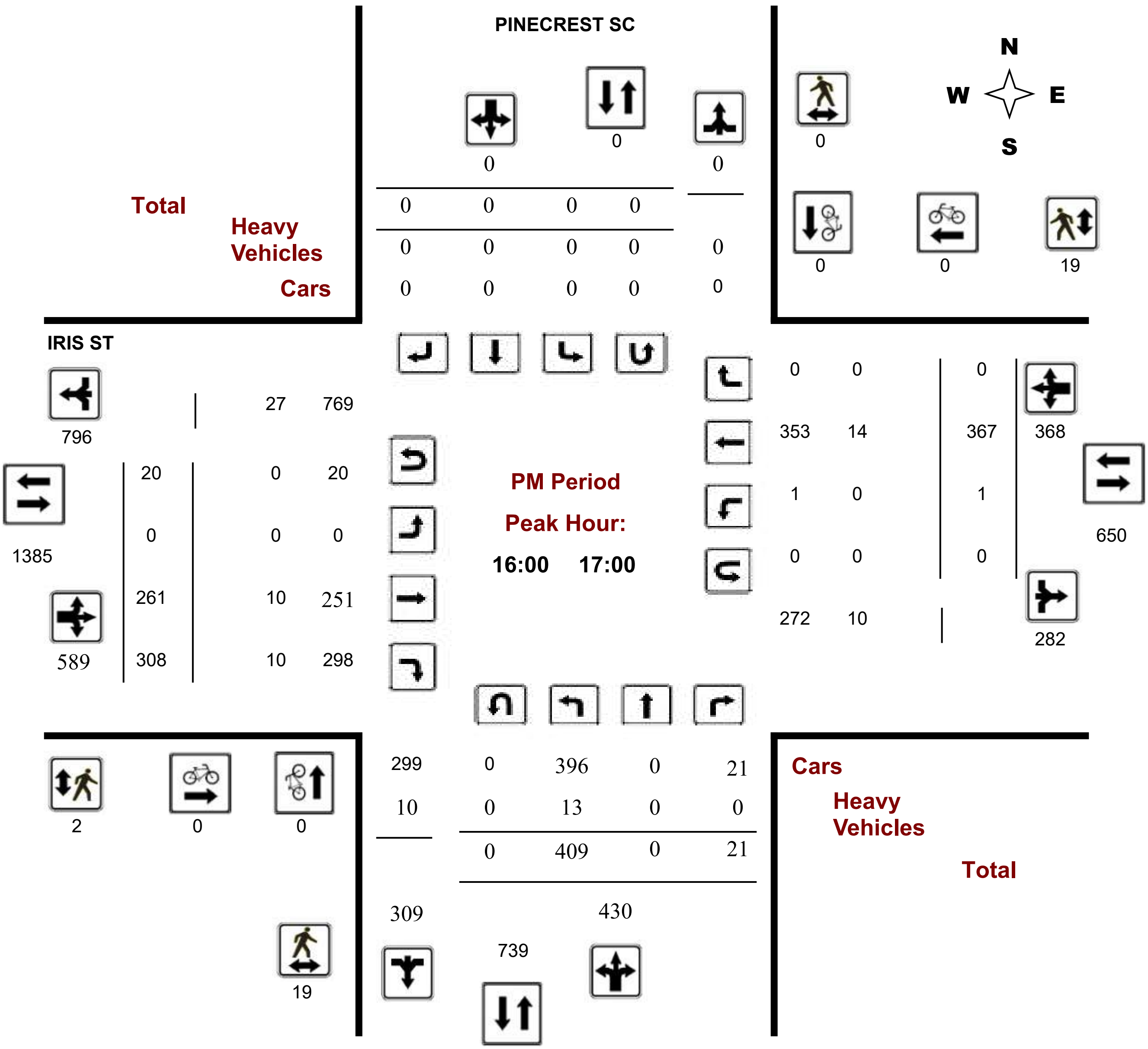
Turning Movement Count - Study Results

IRIS ST @ PINECREST SC

Survey Date: Wednesday, January 16, 2019 **WO No:** 38262

Start Time: 07:00 **Device:** Miovision

PM Period Peak Hour Diagram

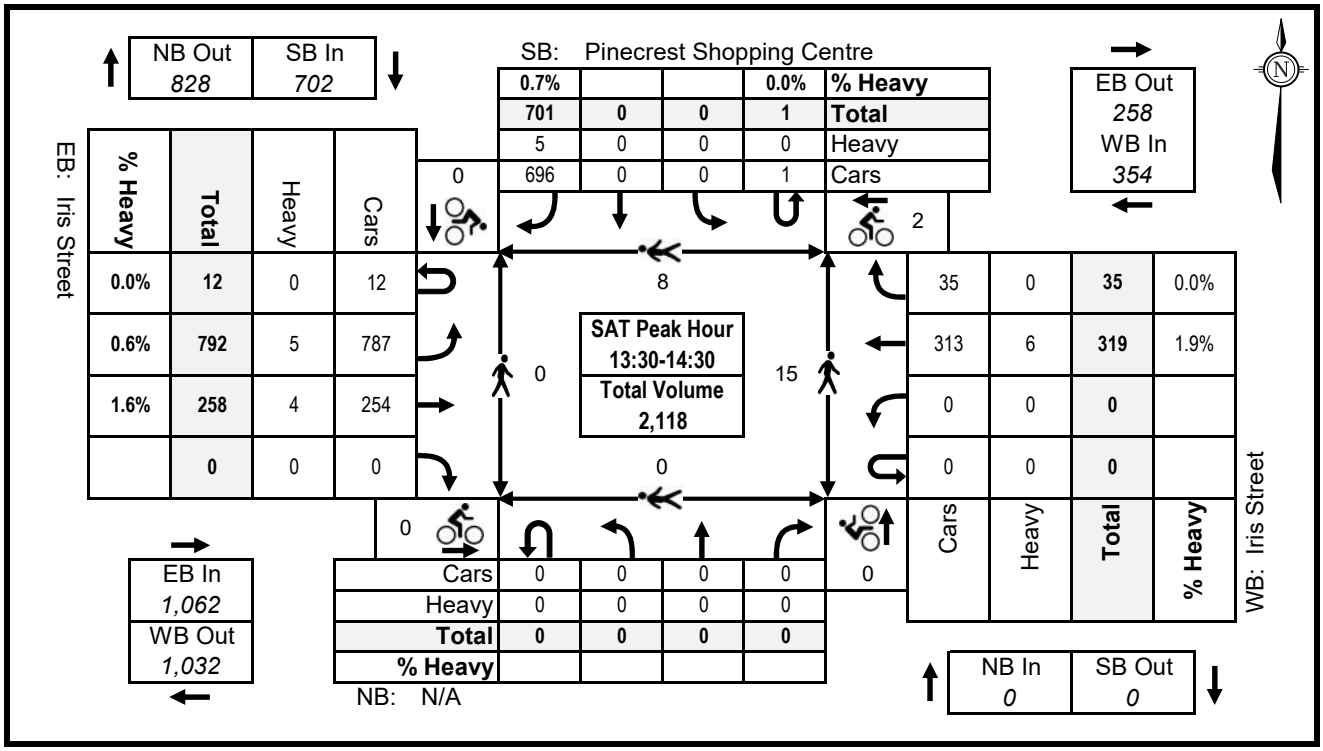


IRIS STREET @ IRIS STREET-PINECREST SC

Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

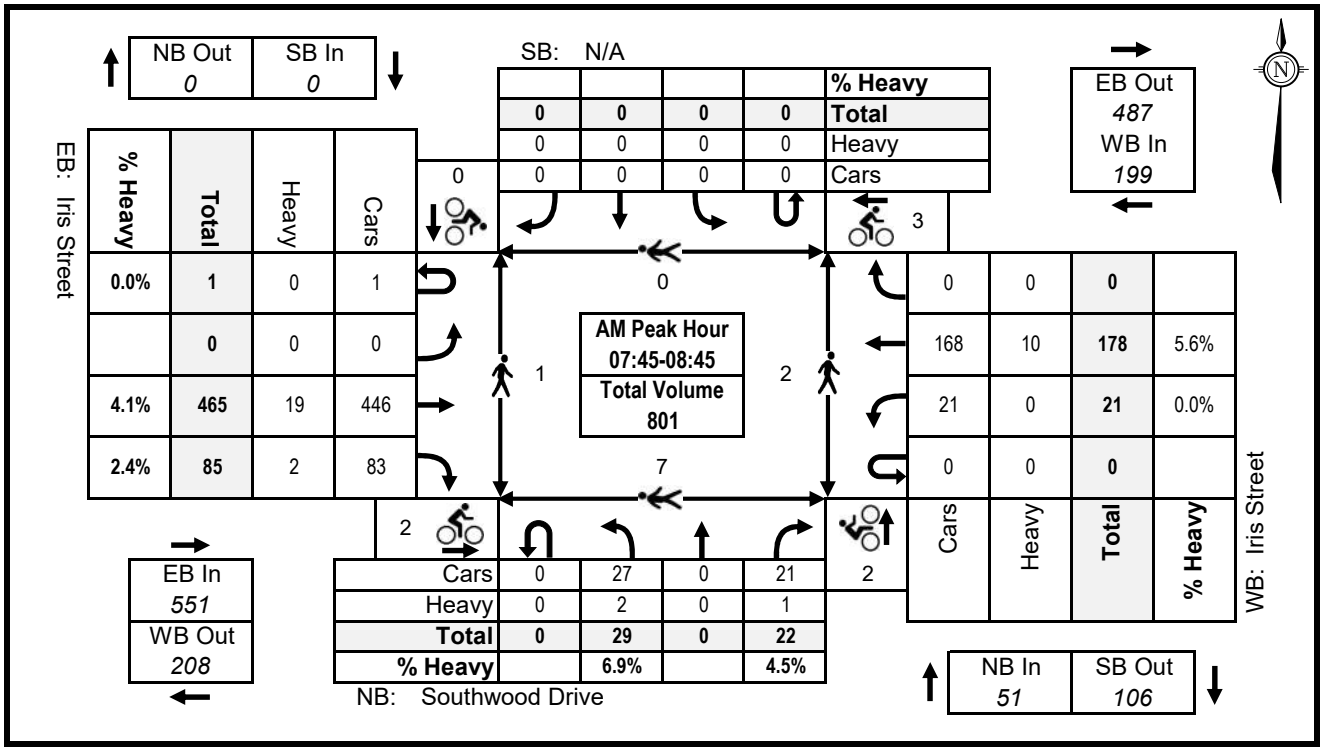
Period	N/A				Pinecrest Shopping Centre					Iris Street				Iris Street					
	NORTHBOUND				SOUTHBOUND				N/S	EASTBOUND				WESTBOUND				E/W	Grand
	L	T	R	*Tot*	L	T	R	*Tot*	Tot	L	T	R	*Tot*	L	T	R	*Tot*	Tot	Tot
11:00 - 12:00	0	0	0	*0*	0	0	550	*550*	**550**	744	218	0	*962*	0	182	42	*224*	**1,186**	**1,736**
12:00 - 13:00	0	0	0	*0*	1	0	645	*646*	**646**	790	232	0	*1,022*	0	238	44	*282*	**1,304**	**1,950**
13:00 - 14:00	0	0	0	*0*	0	0	731	*731*	**731**	788	220	0	*1,008*	0	252	29	*281*	**1,289**	**2,020**
14:00 - 15:00	0	0	0	*0*	0	0	642	*642*	**642**	719	258	0	*977*	0	355	31	*386*	**1,363**	**2,005**
15:00 - 16:00	0	0	0	*0*	0	0	664	*664*	**664**	640	250	0	*890*	0	316	23	*339*	**1,229**	**1,893**
Subtotal	0	0	0	*0*	1	0	3,232	*3,233*	**3,233**	3,681	1,178	0	*4,859*	0	1,343	169	*1,512*	**6,371**	**9,604**
U-Turns				*0*				*4*					*45*				*0*		
Total	0	0	0	*0*	1	0	3,232	*3,237*	**3,237**	3,681	1,178	0	*4,904*	0	1,343	169	*1,512*	**6,416**	**9,653**

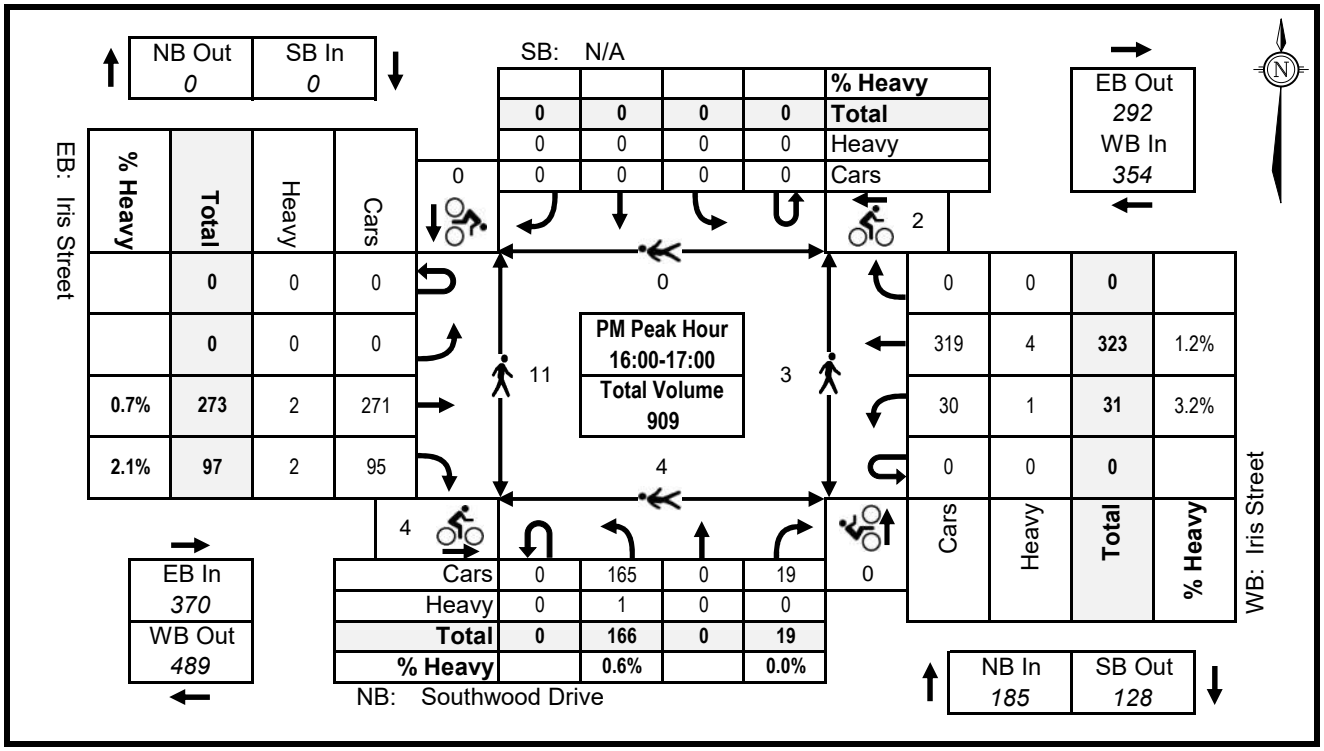
NOVATECH
Engineers, Planners & Landscape Architects

IRIS STREET @ SOUTHWOOD DRIVE

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARIES

Date: Thursday, September 4, 2025
Survey Hours: 07:00-10:00, 11:30-13:30, 15:00-18:00
Surveyor(s): J.Morris, B.Cameron

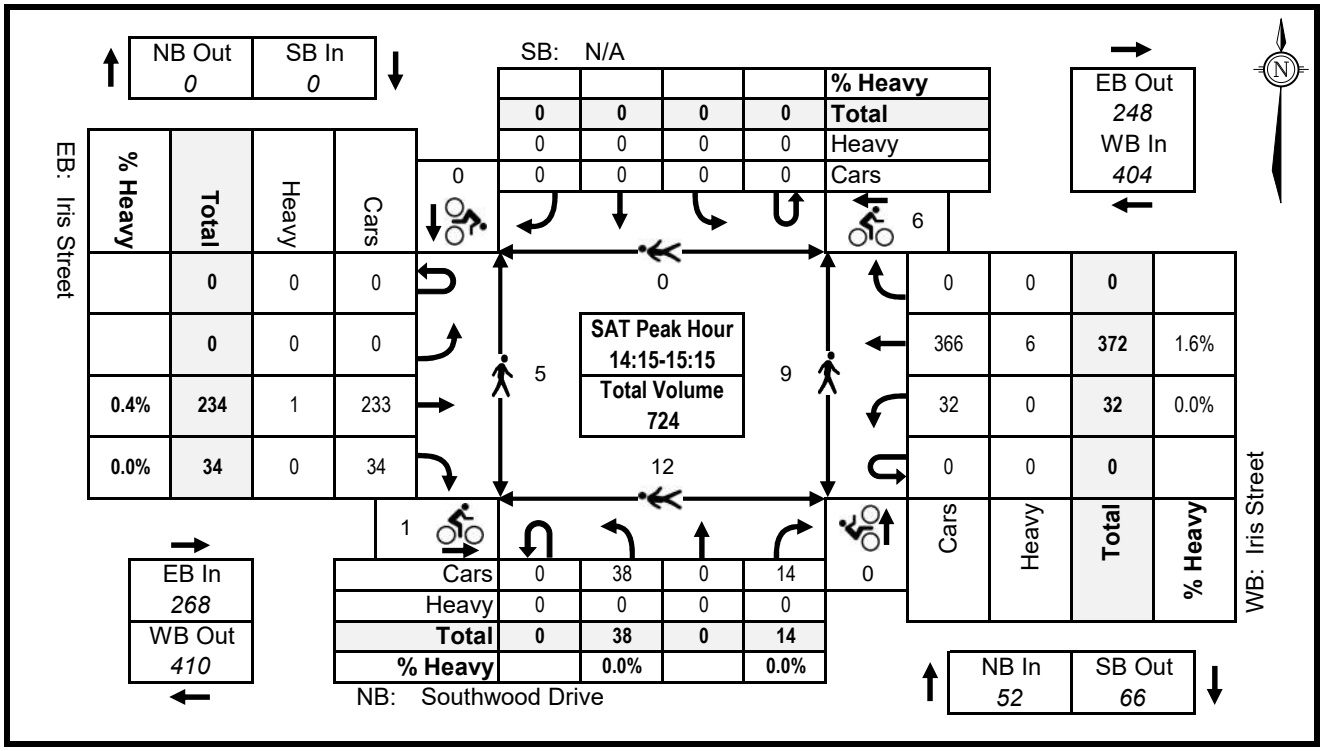




IRIS STREET @ SOUTHWOOD DRIVE

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

Period	Southwood Drive NORTHBOUND L	T	R	Tot	N/A SOUTHBOUND L	T	R	Tot	N/S Tot	Iris Street EASTBOUND L	T	R	Tot	Iris Street WESTBOUND L	T	R	Tot	E/W Tot	Grand Tot
11:00 - 12:00	32	0	17	*49*	0	0	0	*0*	**49**	0	192	29	*221*	21	169	0	*190*	**411**	**460**
12:00 - 13:00	33	0	10	*43*	0	0	0	*0*	**43**	0	193	31	*224*	19	237	0	*256*	**480**	**523**
13:00 - 14:00	35	0	17	*52*	0	0	0	*0*	**52**	0	198	25	*223*	15	232	0	*247*	**470**	**522**
14:00 - 15:00	36	0	17	*53*	0	0	0	*0*	**53**	0	231	32	*263*	36	335	0	*371*	**634**	**687**
15:00 - 16:00	22	0	6	*28*	0	0	0	*0*	**28**	0	218	41	*259*	25	317	0	*342*	**601**	**629**
Subtotal	158	0	67	*225*	0	0	0	*0*	**225**	0	1,032	158	*1,190*	116	1,290	0	*1,406*	**2,596**	**2,821**
U-Turns				*0*				*0*					*1*				*0*		
Total	158	0	67	*225*	0	0	0	*0*	**225**	0	1,032	158	*1,191*	116	1,290	0	*1,406*	**2,597**	**2,822**

IRIS STREET @ BAXTER ROAD

NOVATECH
Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARIES

Date: Thursday, September 4, 2025
Survey Hours: 07:00-10:00, 11:30-13:30, 15:00-18:00
Surveyor(s): J.Morris, B.Cameron

AM Peak Hour 08:00-09:00 — Total Volume 752

NB Out	SB In
92	61

EB Out	WB In
461	214

SB: Baxter Road

	Right	Through	Left	U-Turn
% Heavy	23.8%		5.0%	
Total	21	0	40	0
Heavy	5	0	2	0
Cars	16	0	38	0

EB: Iris Street

	% Heavy	Total	Heavy	Cars
U-Turn		0	0	0
Left	12.5%	56	7	49
Through	1.9%	421	8	413
Right		0	0	0

WB: Iris Street

	Cars	Heavy	Total	% Heavy
Right	36	0	36	0.0%
Through	175	3	178	1.7%
Left	0	0	0	
U-Turn	0	0	0	

NB: N/A

	U-Turn	Left	Through	Right
Cars	0	0	0	0
Heavy	0	0	0	0
Total	0	0	0	0
% Heavy				

Pedestrians: North crosswalk 7; West crosswalk 0; East crosswalk 1; South crosswalk 0

Bicycles: SB 0; WB 3; EB 4; NB 0

EB In	WB Out
477	199

NB In	SB Out
0	0

PM Peak Hour 16:30-17:30 — Total Volume 919

NB Out	SB In
248	205

EB Out	WB In
322	421

SB: Baxter Road

	Right	Through	Left	U-Turn
% Heavy	0.0%		0.0%	
Total	105	0	100	0
Heavy	0	0	0	0
Cars	105	0	100	0

EB: Iris Street

	% Heavy	Total	Heavy	Cars
U-Turn		0	0	0
Left	0.0%	71	0	71
Through	0.9%	222	2	220
Right		0	0	0

WB: Iris Street

	Cars	Heavy	Total	% Heavy
Right	177	0	177	0.0%
Through	241	3	244	1.2%
Left	0	0	0	
U-Turn	0	0	0	

NB: N/A

	U-Turn	Left	Through	Right
Cars	0	0	0	0
Heavy	0	0	0	0
Total	0	0	0	0
% Heavy				

Pedestrians: North crosswalk 7; West crosswalk 0; East crosswalk 0; South crosswalk 0

Bicycles: SB 1; WB 4; EB 1; NB 0

EB In	WB Out
293	349

NB In	SB Out
0	0

NOVATECH
Engineers, Planners & Landscape Architects

IRIS STREET @ BAXTER ROAD

TURNING MOVEMENT COUNT
8-HOUR SUMMARY

Date: Thursday, September 4, 2025
Survey Hours: 07:00-10:00, 11:30-13:30, 15:00-18:00
Surveyor(s): J.Morris, B.Cameron

Period	N/A				Baxter Road					Iris Street				Iris Street					
	NORTHBOUND				SOUTHBOUND				N/S Tot	EASTBOUND				WESTBOUND				E/W Tot	Grand Tot
	L	T	R	*Tot*	L	T	R	*Tot*		L	T	R	*Tot*	L	T	R	*Tot*		
07:00 - 08:00	0	0	0	*0*	17	0	17	*34*	**34**	56	214	0	*270*	0	89	26	*115*	**385**	**419**
08:00 - 09:00	0	0	0	*0*	40	0	21	*61*	**61**	56	421	0	*477*	0	178	36	*214*	**691**	**752**
09:00 - 10:00	0	0	0	*0*	28	0	46	*74*	**74**	74	129	0	*203*	0	123	60	*183*	**386**	**460**
11:30 - 12:30	0	0	0	*0*	82	0	113	*195*	**195**	105	115	0	*220*	0	83	110	*193*	**413**	**608**
12:30 - 13:30	0	0	0	*0*	91	0	105	*196*	**196**	78	111	0	*189*	0	107	114	*221*	**410**	**606**
15:00 - 16:00	0	0	0	*0*	102	0	91	*193*	**193**	51	240	0	*291*	0	186	85	*271*	**562**	**755**
16:00 - 17:00	0	0	0	*0*	97	0	97	*194*	**194**	78	216	0	*294*	0	257	147	*404*	**698**	**892**
17:00 - 18:00	0	0	0	*0*	91	0	116	*207*	**207**	61	196	0	*257*	0	200	148	*348*	**605**	**812**
Subtotal	0	0	0	*0*	548	0	606	*1,154*	**1,154**	559	1,642	0	*2,201*	0	1,223	726	*1,949*	**4,150**	**5,304**
U-Turns				*0*				*0*					*0*				*0*		
Total	0	0	0	*0*	548	0	606	*1,154*	**1,154**	559	1,642	0	*2,201*	0	1,223	726	*1,949*	**4,150**	**5,304**
Equivalent 12-hr	0	0	0	*0*	762	0	842	*1,604*	**1,604**	777	2,282	0	*3,059*	0	1,700	1,009	*2,709*	**5,768**	**7,372**
Expansion Factor: Calculated by multiplying the 8-hour totals by the 8- to 12-hour expansion factor of													**1.39**						
Average 12-hr	0	0	0	*0*	762	0	842	*1,604*	**1,604**	777	2,282	0	*3,059*	0	1,700	1,009	*2,709*	**5,768**	**7,372**
Expansion Factor: Calculated by multiplying the equivalent 12-hour totals by the month AADT factor of													**1.00**						
AADT 24-hr	0	0	0	*0*	998	0	1,103	*2,101*	**2,101**	1,018	2,989	0	*4,007*	0	2,227	1,322	*3,549*	**7,556**	**9,657**
Expansion Factor: Calculated by multiplying the avg 12-hour totals by the 12- to 24-hour expansion factor													**1.31**						

Notes

1. Volumes include passenger vehicles and heavy vehicles (cyclists and pedestrians excluded)
2. Volumes have been rounded where factors are applied (i.e. for the rows displaying equivalent 12-hr, average 12-hr, and AADT 24-hr volumes)

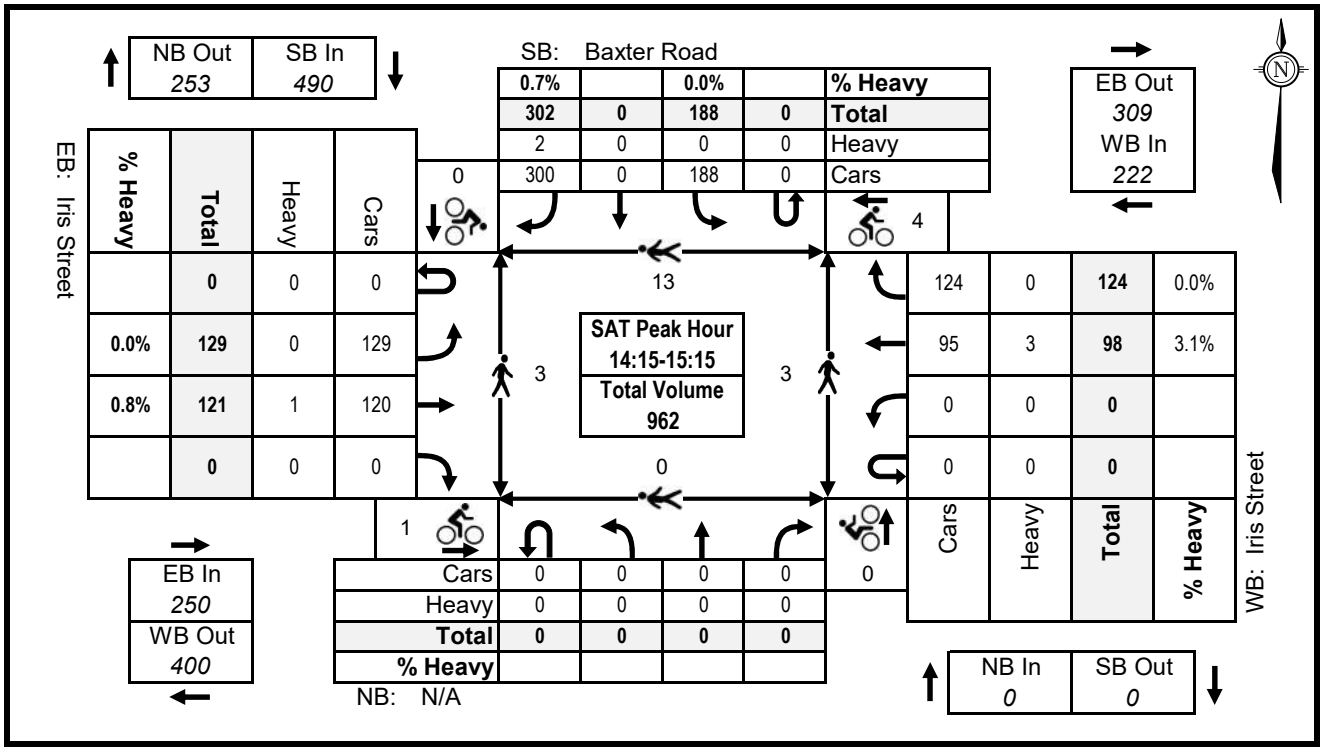
Project No.: 121019

IRIS STREET @ BAXTER ROAD

Engineers, Planners & Landscape Architects

TURNING MOVEMENT COUNT
PEAK HOUR SUMMARY

Date: Saturday, September 6, 2025
Survey Hours: 11:00-16:00
Surveyor(s): J.Morris, B.Cameron



TURNING MOVEMENT COUNT
5-HOUR SUMMARY

Period	N/A				Baxter Road					Iris Street				Iris Street					
	NORTHBOUND				SOUTHBOUND				N/S Tot	EASTBOUND				WESTBOUND				E/W Tot	Grand Tot
	L	T	R	*Tot*	L	T	R	*Tot*		L	T	R	*Tot*	L	T	R	*Tot*		
11:00 - 12:00	0	0	0	*0*	118	0	88	*206*	**206**	111	93	0	*204*	0	102	131	*233*	**437**	**643**
12:00 - 13:00	0	0	0	*0*	132	0	153	*285*	**285**	115	94	0	*209*	0	107	181	*288*	**497**	**782**
13:00 - 14:00	0	0	0	*0*	126	0	153	*279*	**279**	120	97	0	*217*	0	95	153	*248*	**465**	**744**
14:00 - 15:00	0	0	0	*0*	192	0	269	*461*	**461**	131	118	0	*249*	0	106	127	*233*	**482**	**943**
15:00 - 16:00	0	0	0	*0*	164	0	249	*413*	**413**	109	115	0	*224*	0	82	138	*220*	**444**	**857**
Subtotal	0	0	0	*0*	732	0	912	*1,644*	**1,644**	586	517	0	*1,103*	0	492	730	*1,222*	**2,325**	**3,969**
U-Turns				*0*				*0*					*0*				*0*		
Total	0	0	0	*0*	732	0	912	*1,644*	**1,644**	586	517	0	*1,103*	0	492	730	*1,222*	**2,325**	**3,969**

APPENDIX E

Collision Records

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: BAXTER RD @ IRIS ST

Traffic Control: Stop sign **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Aug-13, Fri,18:22	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2021-Dec-15, Wed,14:01	Snow	Turning movement	P.D. only	Loose snow	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Oct-24, Thu,11:19	Clear	Turning movement	P.D. only	Dry	North	Turning right	Truck - closed	Other motor vehicle	0
					North	Overtaking	Pick-up truck	Other motor vehicle	
2024-Nov-28, Thu,14:00	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: BAXTER RD btwn IRIS ST & END

Traffic Control: No control **Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Oct-10, Sun,15:42	Clear	SMV other	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Ran off road	0
2022-Jun-12, Sun,12:52	Clear	Turning movement	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2024-Oct-08, Tue,20:30	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-12, Sat,19:24	Clear	Rear end	P.D. only	Dry	East	Unknown	Unknown	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-17, Thu,16:00	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-29, Tue,09:42	Snow	SMV other	P.D. only	Loose snow	East	Going ahead	Snow plow	Pole (utility, power)	0
2019-Jan-29, Tue,10:35	Clear	Rear end	P.D. only	Loose snow	South	Unknown	Unknown	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-15, Fri,17:24	Clear	Rear end	Non-fatal injury	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Feb-17, Sun,16:10	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-21, Thu,12:34	Clear	Angle	P.D. only	Slush	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	
2019-Feb-28, Thu,13:46	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Mar-27, Wed,12:20	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Truck - open	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-30, Sat,17:38	Rain	Rear end	P.D. only	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Apr-01, Mon,09:36	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Apr-07, Sun,20:30	Rain	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Apr-12, Fri,16:17	Clear	Rear end	P.D. only	Dry	West	Turning right	Unknown	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Apr-20, Sat,20:16	Clear	Angle	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-May-14, Tue,07:21	Rain	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-May-15, Wed,14:00	Rain	Rear end	Non-fatal injury	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-05, Wed,14:50	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jun-26, Wed,20:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Jul-29, Mon,05:47	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-15, Thu,05:50	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-26, Mon,15:50	Clear	Sideswipe	P.D. only	Dry	East	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	
2019-Aug-30, Fri,16:00	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Sep-18, Wed,17:05	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Unknown	Other motor vehicle	0
					West	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Sep-26, Thu,22:07	Clear	SMV other	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Pedestrian	1
2019-Oct-12, Sat,11:54	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-14, Mon,16:45	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Truck - closed	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Oct-18, Fri,17:43	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-19, Sat,15:16	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-19, Sat,18:57	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Pick-up truck	Other motor vehicle	
2019-Nov-05, Tue,09:51	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-06, Wed,06:30	Clear	Rear end	Non-fatal injury	Ice	East	Turning right	Automobile, station wagon	Skidding/sliding	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-11, Mon,11:45	Clear	Rear end	P.D. only	Dry	West	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Unknown	Other motor vehicle	
2019-Nov-25, Mon,14:47	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-26, Tue,12:00	Clear	Rear end	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Nov-26, Tue,15:20	Clear	Sideswipe	P.D. only	Dry	East	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Dec-14, Sat,18:00	Rain	Rear end	Non-fatal injury	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Dec-15, Sun,13:45	Clear	Rear end	P.D. only	Wet	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2019-Dec-21, Sat,09:50	Clear	Sideswipe	P.D. only	Loose snow	East	Changing lanes	Passenger van	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Jan-20, Mon,16:00	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Unknown	Other motor vehicle	
2020-Jan-23, Thu,11:16	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Truck and trailer	Other motor vehicle	
2020-Feb-14, Fri,08:51	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Truck - closed	Other motor vehicle	
2020-Feb-14, Fri,11:30	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Mar-14, Sat,12:57	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jun-02, Tue,07:22	Rain	Rear end	P.D. only	Wet	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jul-13, Mon,08:26	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2020-Nov-22, Sun,17:30	Snow	Rear end	P.D. only	Slush	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Jan-06, Wed,06:20	Clear	SMV other	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Pedestrian	1
2021-Feb-21, Sun,11:45	Clear	Rear end	Non-fatal injury	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Feb-25, Thu,09:20	Clear	Rear end	P.D. only	Ice	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Unknown	Unknown	Other motor vehicle	
2021-Mar-10, Wed,06:24	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Jun-05, Sat,11:00	Clear	Rear end	Non-fatal injury	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Jul-03, Sat,21:00	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Sep-10, Fri,13:44	Clear	Rear end	Non-fatal injury	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Oct-16, Sat,14:20	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Nov-23, Tue,13:00	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2021-Dec-10, Fri,13:00	Clear	Rear end	P.D. only	Dry	East	Turning right	Pick-up truck	Other motor vehicle	0
					East	Turning right	Delivery van	Other motor vehicle	
2021-Dec-11, Sat,16:35	Snow	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
2022-Jan-20, Thu,14:45	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Municipal transit bus	Other motor vehicle	0
					West	Turning right	Pick-up truck	Other motor vehicle	
2022-Mar-02, Wed,12:30	Clear	Rear end	P.D. only	Slush	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2022-Mar-15, Tue,12:58	Clear	Rear end	P.D. only	Loose snow	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2022-Mar-17, Thu,08:47	Clear	Rear end	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Mar-30, Wed,11:10	Clear	Rear end	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Pick-up truck	Other motor vehicle	
2022-May-04, Wed,20:18	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Pick-up truck	Other motor vehicle	
2022-May-21, Sat,16:00	Rain	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2022-May-31, Tue,15:00	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jun-02, Thu,21:45	Rain	Sideswipe	P.D. only	Wet	East	Changing lanes	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2022-Jun-09, Thu,08:51	Rain	Sideswipe	P.D. only	Wet	East	Changing lanes	Truck - open	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jun-24, Fri,14:45	Clear	Rear end	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2022-Jul-08, Fri,17:05	Clear	Rear end	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Other motor vehicle	
2022-Jul-27, Wed,12:55	Clear	Rear end	P.D. only	Dry				Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2022-Aug-12, Fri,11:11	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2022-Aug-21, Sun,19:40	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2022-Sep-17, Sat,10:56	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Sep-24, Sat,15:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2022-Oct-15, Sat,12:00	Clear	SMV other	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Pedestrian	1
2022-Oct-27, Thu,16:43	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Pedestrian	1
2022-Nov-10, Thu,14:00	Clear	Turning movement	P.D. only	Dry	North	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Unknown	Other motor vehicle	
2022-Nov-10, Thu,14:15	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Turning left	Pick-up truck	Other motor vehicle	
2022-Dec-29, Thu,11:45	Clear	Rear end	P.D. only	Dry	North	Stopped	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Jan-09, Tue,13:30	Snow	Rear end	P.D. only	Loose snow	South	Going ahead	Passenger van	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Jan-15, Mon,19:30	Clear	Turning movement	P.D. only	Dry	North	Turning right	Truck - dump	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2024-Feb-19, Mon,12:20	Clear	Angle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Feb-20, Tue,11:45	Clear	Turning movement	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2024-Feb-21, Wed,08:00	Clear	Rear end	P.D. only	Dry	South	Stopped	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Apr-17, Wed,09:00	Snow	Turning movement	P.D. only	Wet	North	Turning left	Truck - car carrier	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2024-Apr-18, Thu,11:30	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2024-May-28, Tue,13:07	Clear	Turning movement	P.D. only	Dry	North	Slowing or stopping	Truck - open	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2024-Jul-30, Tue,13:55	Clear	Rear end	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					South	Merging	Passenger van	Other motor vehicle	
2024-Aug-08, Thu,09:20	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Sep-13, Fri,08:15	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Changing lanes	Automobile, station wagon	Other motor vehicle	
2024-Oct-02, Wed,16:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Oct-13, Sun,14:30	Clear	Other	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Reversing	Automobile, station wagon	Other motor vehicle	
2024-Oct-18, Fri,10:30	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Changing lanes	Automobile, station wagon	Other motor vehicle	
2024-Oct-23, Wed,14:10	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2024-Nov-03, Sun,07:45	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2024-Dec-07, Sat,19:30	Snow	Rear end	P.D. only	Loose snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2024-Dec-07, Sat,20:30	Snow	Rear end	P.D. only	Loose snow	South	Stopped	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD @ IRIS ST/HWY 417 IC129 RAMP51

Traffic Control: Traffic signal **Total Collisions:** 98

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2024-Dec-23, Mon,22:30	Snow	Rear end	Non-reportable	Packed snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Location: GREENBANK RD btwn HWY417 IC129 RAMP25 & HWY 417 IC129 RAMP57/IRIS ST

Traffic Control: No control **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Sep-16, Mon,16:26	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Nov-19, Tue,07:45	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: GREENBANK RD btwn HWY417 IC129 RAMP35 & HWY417 IC129 RAMP25

Traffic Control: No control **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-25, Fri,12:00	Snow	Rear end	P.D. only	Slush	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-06, Sun,18:49	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Pick-up truck	Other motor vehicle	
2020-Mar-07, Sat,12:46	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	
2020-Oct-19, Mon,19:24	Rain	Sideswipe	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Pick-up truck	Other motor vehicle	
2020-Nov-21, Sat,12:20	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: GREENBANK RD btwn HWY417 IC129 RAMP35 & HWY417 IC129 RAMP25

Traffic Control: No control **Total Collisions:** 11

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Jun-04, Fri,15:51	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Slowing or stopping	Pick-up truck	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2021-Aug-02, Mon,12:30	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2022-Aug-19, Fri,12:25	Clear	Rear end	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					North	Slowing or stopping	Unknown	Other motor vehicle	
2022-Aug-26, Fri,10:46	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
2022-Sep-24, Sat,15:33	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Dec-30, Fri,13:40	Rain	Sideswipe	P.D. only	Wet	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Changing lanes	Automobile, station wagon	Other motor vehicle	

Location: GREENBANK RD btwn PINECREST RD & HWY417 IC129 RAMP35

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2022-Jun-09, Thu,06:40	Rain	Rear end	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Cyclist	0
					South	Going ahead	Bicycle	Other motor vehicle	

Location: IRIS ST @ PINECREST SC

Traffic Control: Traffic signal **Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: IRIS ST @ PINECREST SC

Traffic Control: Traffic signal **Total Collisions:** 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Oct-15, Tue,11:45	Clear	Sideswipe	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Turning right	Truck and trailer	Other motor vehicle	
2021-Aug-24, Tue,16:44	Clear	Angle	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2022-Jun-19, Sun,15:10	Clear	Turning movement	P.D. only	Dry	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: IRIS ST btwn GREENBANK RD & IRIS ST W

Traffic Control: No control **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-30, Wed,09:00	Clear	Angle	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Making "U" turn	Automobile, station wagon	Other motor vehicle	
2020-Jul-07, Tue,11:50	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2021-Oct-17, Sun,11:45	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2022-Jan-20, Thu,22:03	Snow	Turning movement	P.D. only	Packed snow	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Truck - open	Other motor vehicle	
					West	Going ahead	Truck - open	Other motor vehicle	
2024-Apr-27, Sat,23:00	Clear	Rear end	P.D. only	Wet	West	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Dec-09, Mon,12:10	Clear	Angle	P.D. only	Dry	North	Stopped	Truck - dump	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: IRIS ST btwn IRIS ST E & SOUTHWOOD DR

Traffic Control: No control **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Feb-06, Wed,14:50	Clear	Approaching	P.D. only	Wet	West	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
2021-Apr-14, Wed,06:21	Clear	SMV other	P.D. only	Dry	West	Going ahead	Pick-up truck	Pole (utility, power)	0

Location: IRIS ST btwn SOUTHWOOD DR & BAXTER RD

Traffic Control: No control **Total Collisions:** 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Mar-22, Fri,16:01	Rain	Turning movement	P.D. only	Wet	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-May-24, Fri,12:10	Clear	Sideswipe	P.D. only	Dry	West	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-09, Sat,03:06	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Ran off road	0
2019-Nov-09, Sat,03:35	Clear	SMV unattended vehicle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Unattended vehicle	0
2020-Feb-16, Sun,00:00	Clear	SMV unattended vehicle	P.D. only	Wet	Unknown	Unknown	Unknown	Unattended vehicle	0
2021-Aug-06, Fri,19:15	Clear	Sideswipe	P.D. only	Dry	East	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2024-Jun-30, Sun,02:25	Clear	SMV other	P.D. only	Dry	West	Going ahead	Delivery van	Fence/noice barrier	0

Location: PINECREST RD @ HWY 417 PINECRE IC129R36/63

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jun-15, Sat,12:38	Rain	Sideswipe	P.D. only	Wet	North	Overtaking	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: PINECREST RD @ HWY 417 PINECRE IC129R36/63

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jul-31, Wed,19:30	Clear	Sideswipe	P.D. only	Dry	West	Turning left	Unknown	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2019-Nov-08, Fri,01:38	Clear	Angle	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-22, Wed,10:54	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Feb-14, Fri,11:29	Clear	Rear end	Non-fatal injury	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					South	Merging	Automobile, station wagon	Other motor vehicle	
2020-Feb-14, Fri,14:08	Clear	Sideswipe	P.D. only	Dry	South	Going ahead	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jun-13, Sat,15:00	Clear	Angle	P.D. only	Dry	South	Going ahead	Passenger van	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Aug-01, Sat,14:20	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Passenger van	Other motor vehicle	0
					West	Stopped	Passenger van	Other motor vehicle	
2020-Nov-09, Mon,13:33	Clear	Turning movement	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Municipal transit bus	Other motor vehicle	
					East	Stopped	Municipal transit bus	Other motor vehicle	
2020-Nov-15, Sun,14:45	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Turning left	Pick-up truck	Other motor vehicle	
2020-Dec-04, Fri,12:23	Rain	Rear end	Non-fatal injury	Wet	North	Slowing or stopping	Delivery van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Dec-08, Tue,03:55	Clear	SMV other	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Curb	0
2021-Jun-21, Mon,12:52	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

Location: PINECREST RD @ HWY 417 PINECRE IC129R36/63

Traffic Control: Traffic signal **Total Collisions:** 18

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2021-Oct-29, Fri,14:13	Clear	Rear end	P.D. only	Dry	West	Turning right	Pick-up truck	Other motor vehicle	0
					West	Turning right	Pick-up truck	Other motor vehicle	
2022-Nov-02, Wed,16:25	Clear	Rear end	Non-reportable	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Jul-12, Fri,07:00	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Aug-26, Mon,12:31	Clear	Sideswipe	P.D. only	Dry	South	Changing lanes	Truck - closed	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2024-Oct-20, Sun,12:30	Clear	Rear end	P.D. only	Dry	West	Going ahead	Truck - dump	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Location: PINECREST RD btwn HWY417 IC129 RAMP26 & GREENBANK RD

Traffic Control: No control **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jan-03, Thu,07:20	Snow	Rear end	P.D. only	Slush	South	Slowing or stopping	Passenger van	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Aug-23, Fri,10:42	Clear	Sideswipe	Non-fatal injury	Dry	North	Unknown	Unknown	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	
2020-Mar-03, Tue,09:55	Clear	Sideswipe	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Mar-11, Wed,09:18	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2019 **To:** December 31, 2024

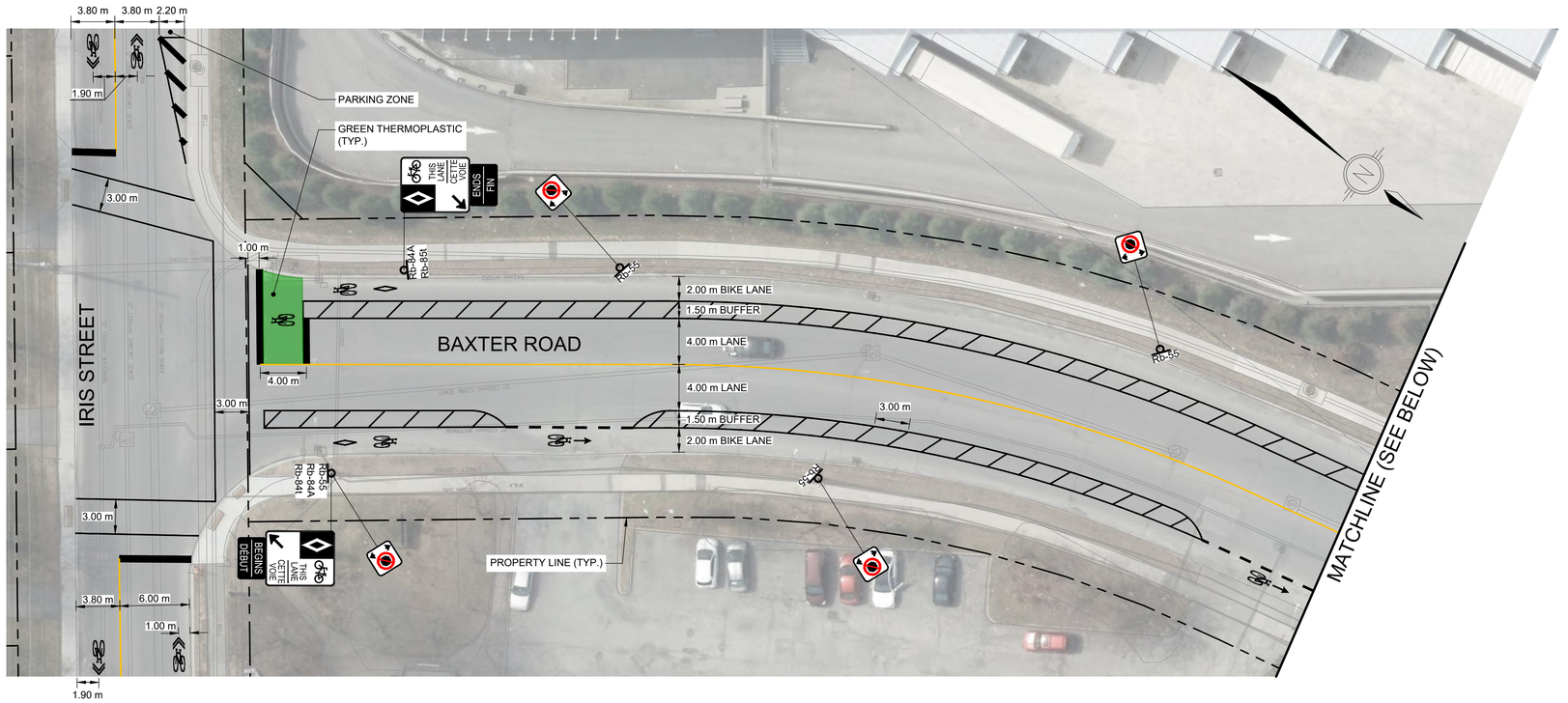
Location: PINECREST RD btwn HWY417 IC129 RAMP26 & GREENBANK RD

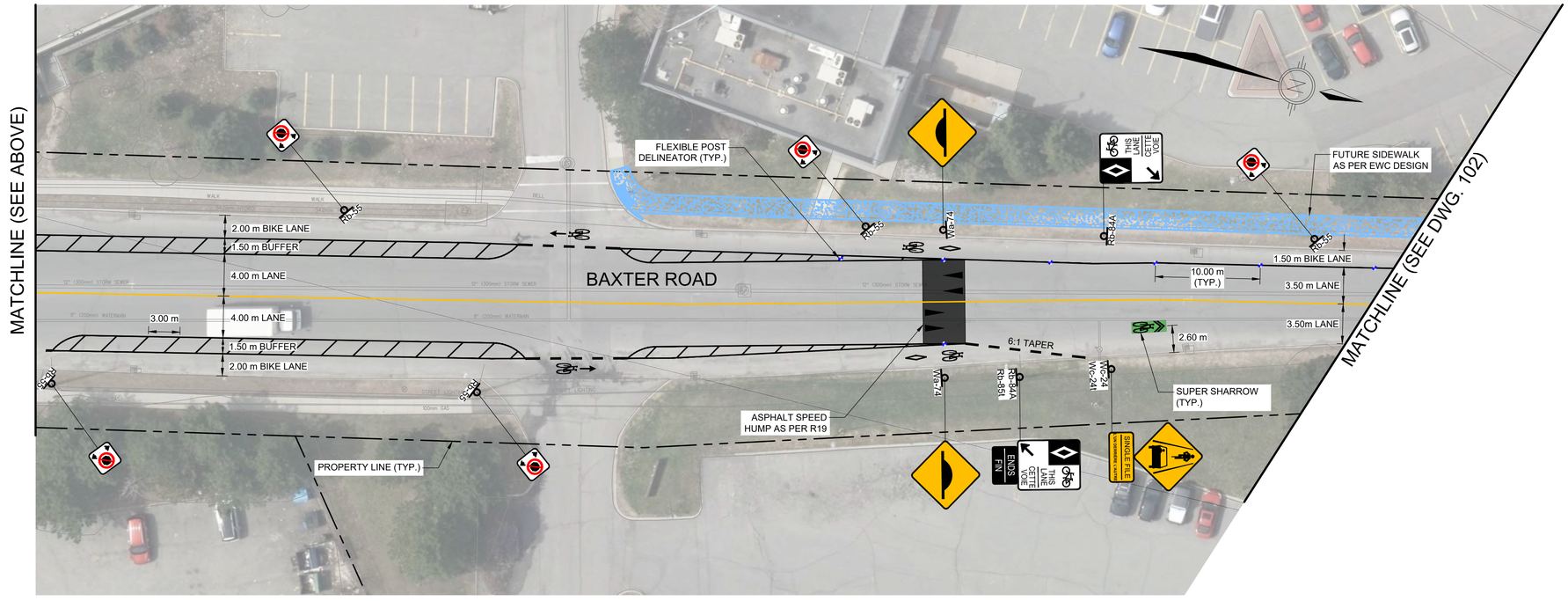
Traffic Control: No control **Total Collisions:** 6

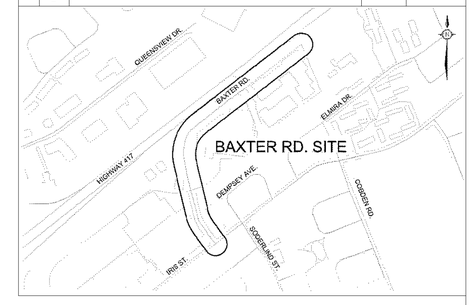
Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Jun-22, Mon,14:32	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					North	Stopped	Pick-up truck	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2021-Feb-16, Tue,09:10	Snow	Sideswipe	P.D. only	Loose snow	South	Going ahead	Pick-up truck	Other motor vehicle	0
					South	Changing lanes	Automobile, station wagon	Other motor vehicle	

APPENDIX F

Planned Facilities – Functional Design Drawings







OTTAWA STAGE 2 LIGHT RAIL TRANSIT PROJECT
CONFEDERATION WEST

BAXTER ROAD
CYCLING CONNECTIVITY
FUNCTIONAL DESIGN

N/A *Manager - Division*	LEONORE EVANS *Project Manager*

Ottawa

Contract No.	Dwg. No.
N/A	101

Sheet 02 of 03

Asset No.

Asset Group

Des.	Chk'd.
A.EAGEN	B.DAWOD
Dwn.	Chk'd.
A.EAGEN	B.DAWOD

Utility Circ. No. Index No.

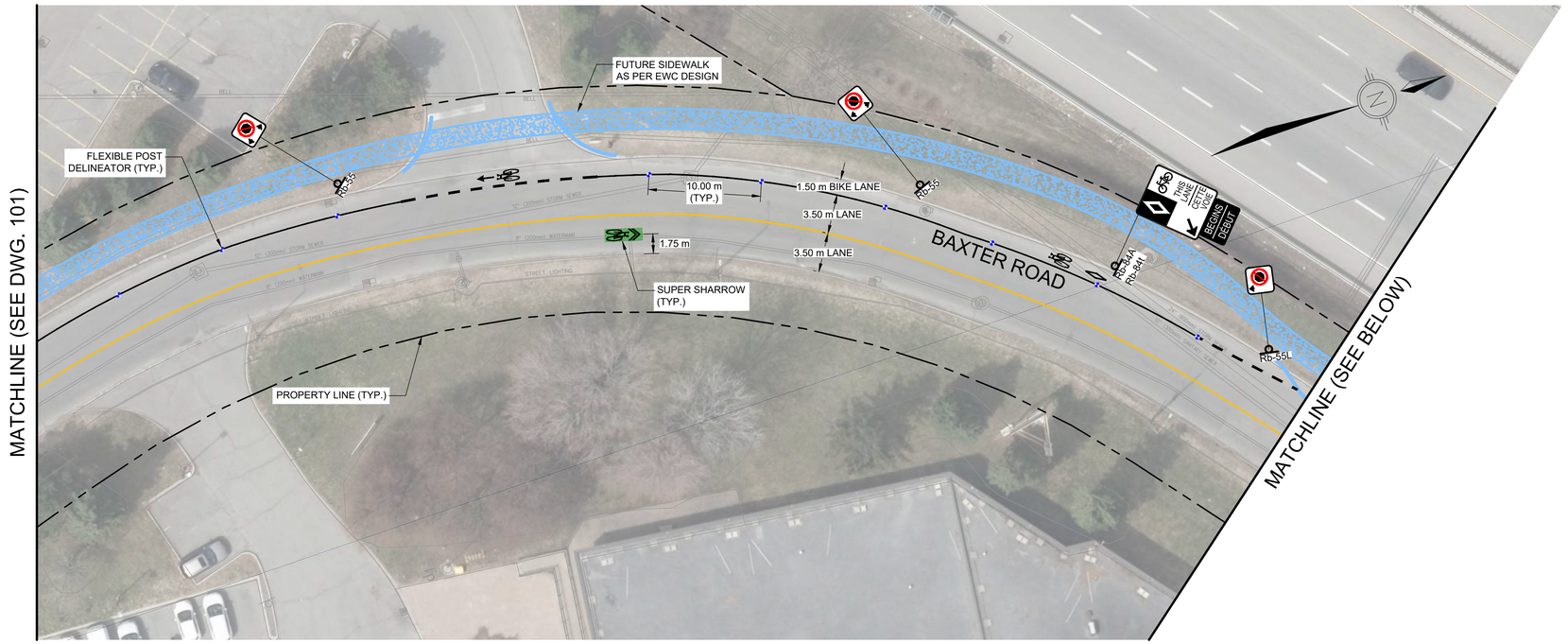
Const. Inspector

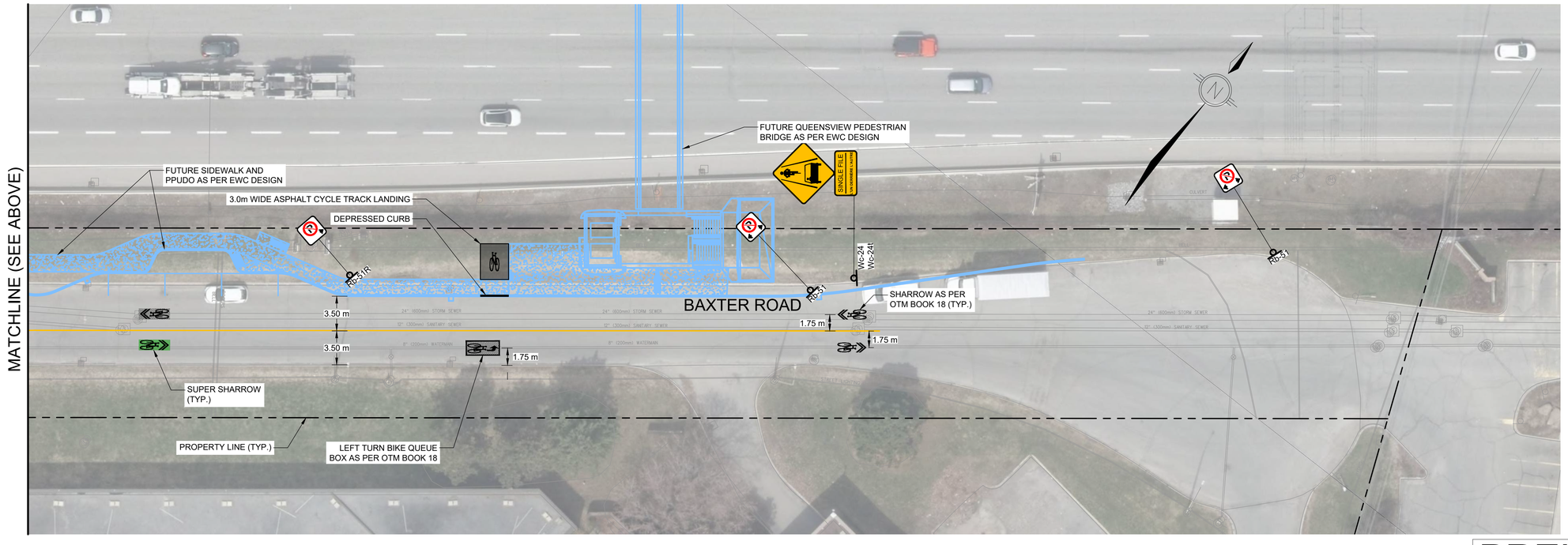
Scale:
FULL SIZE: 1:250
0m 2.5 5 10
HALF SIZE: 1:500

NOTE:
The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS	No.	Description	By	Date (dd/mm/yy)
	A	ISSUED FOR DRAFT FUNCTIONAL DESIGN	AE	21/05/21
	B	ISSUED FOR FUNCTIONAL DESIGN	AE	08/09/21
	C			
	D			
	E			

PRELIMINARY
NOT FOR CONSTRUCTION





OTTAWA STAGE 2 LIGHT RAIL TRANSIT PROJECT
CONFEDERATION WEST

BAXTER ROAD CYCLING CONNECTIVITY FUNCTIONAL DESIGN

N/A	LEONORE EVANS
Manager - Division	*Project Manager*

Ottawa

Contract No.	Dwg. No.
N/A	102

Sheet 03 of 03

Asset No.

Asset Group

Des.	Chk'd.
A.EAGEN	B.DAWOD
Dwn.	Chk'd.
A.EAGEN	B.DAWOD

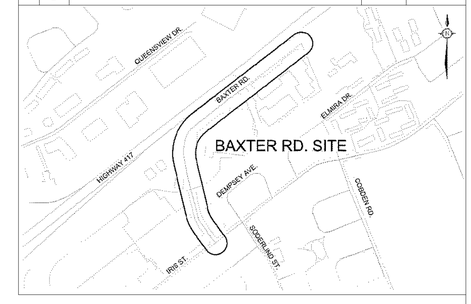
Utility Circ. No. Index No.

Const. Inspector

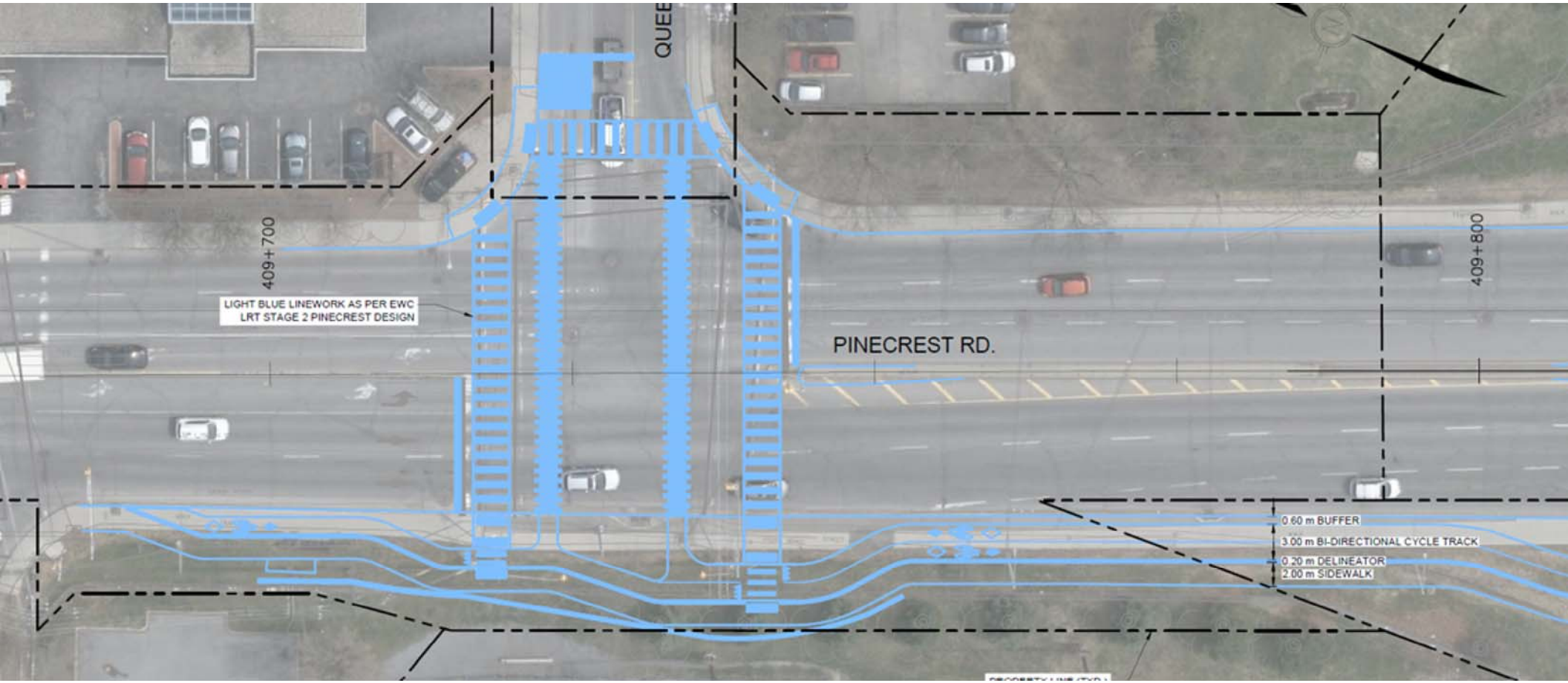
Scale:
FULL SIZE: 1:250
0m 2.5 5 10
HALF SIZE: 1:500

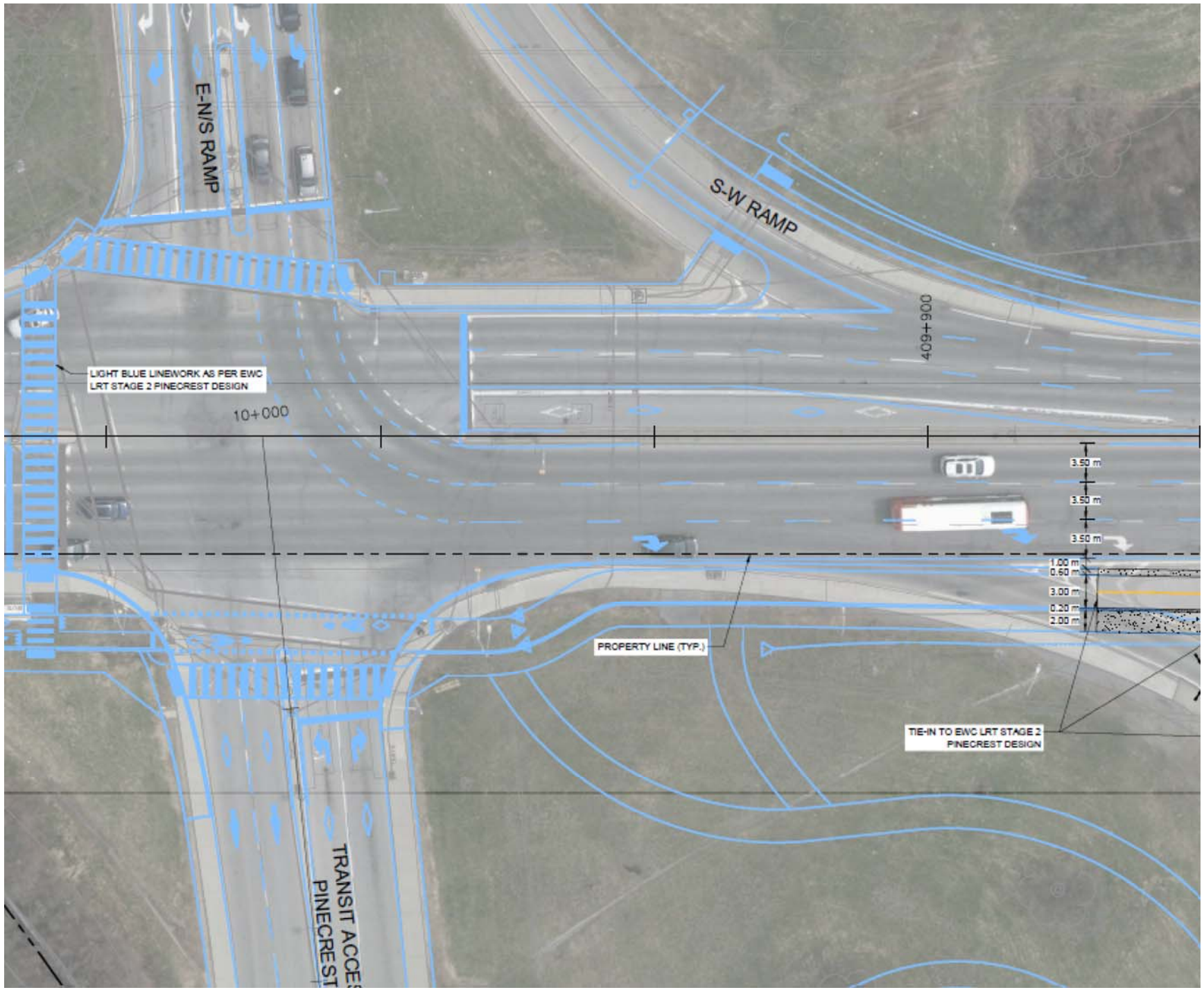
NOTE:
The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

REVISIONS	No.	Description	By	Date (dd/mm/yy)
	A	ISSUED FOR DRAFT FUNCTIONAL DESIGN	AE	21/05/21
	B	ISSUED FOR FUNCTIONAL DESIGN	AE	08/09/21
	C			
	D			
	E			



PRELIMINARY
NOT FOR CONSTRUCTION


409+700
LIGHT BLUE LINEWORK AS PER EWC
LRT STAGE 2 PINECREST DESIGN
PINECREST RD.
409+800
0.60 m BUFFER
3.00 m BI-DIRECTIONAL CYCLE TRACK
0.20 m DELINEATOR
2.00 m SIDEWALK


E-N/S RAMP
S-W RAMP
409+900
LIGHT BLUE LINEWORK AS PER EWC LRT STAGE 2 PINECREST DESIGN
10+000
3.50 m
3.50 m
3.50 m
1.00 m
0.60 m
3.00 m
0.20 m
2.00 m
PROPERTY LINE (TYP.)
TIE-IN TO EWC LRT STAGE 2 PINECREST DESIGN
TRANSIT ACCES
PINECREST

APPENDIX G

Internal Capture Worksheets

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	121019	**Organization:**	Novatech
Project Location:	1101 Baxter Road	**Performed By:**	J. Audia
Scenario Description:	City Method	**Date:**	10/1/2025
Analysis Year:	Buildout	**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				0		
Retail				27	17	10
Restaurant				0		
Cinema/Entertainment				0		
Residential				81	25	56
Hotel				0		
All Other Land Uses[2]				0		
				108	42	66

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		45%	15%		45%	15%
Restaurant						
Cinema/Entertainment						
Residential		65%	15%		65%	15%
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		0	0	0	0	0
Retail	0		0	0	4	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	4	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	714	255	459
Internal Capture Percentage	2%	3%	2%
External Vehicle-Trips[5]	102	39	63
External Transit-Trips[6]	434	148	286
External Non-Motorized Trips[6]	105	37	68

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	6%	10%
Restaurant	N/A	N/A
Cinema/Entertainmen	N/A	N/A
Residential	2%	1%
Hotel	N/A	N/A

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

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

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

[4]Enter 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.

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

[6]Person-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:	121019
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
		Vehicle-Trips	Person-Trips*		Vehicle-Trips	Person-Trips*
Office		0	0		0	0
Retail		17	68		10	41
Restaurant		0	0		0	0
Cinema/Entertainment		0	0		0	0
Residential		25	187		56	418
Hotel		0	0		0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	12		5	0	6	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	8	4	84	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	0	0
Retail	0		0	0	4	0
Restaurant	0	5		0	9	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	12	0	0		0
Hotel	0	3	0	0	0	

Table 9-A (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	0	0	0	0	0	0
Retail	4	64	68	15	29	10
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	183	187	24	119	27
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (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	0	0	0	0	0	0
Retail	4	37	41	8	17	6
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	4	414	418	55	269	62
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

[3]Total 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:	121019	**Organization:**	Novatech
Project Location:	1101 Baxter Road	**Performed By:**	J. Audia
Scenario Description:	City Method	**Date:**	10/1/2025
Analysis Year:	Buildout	**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				0		
Retail				110	53	57
Restaurant				0		
Cinema/Entertainment				0		
Residential				83	48	35
Hotel				0		
All Other Land Uses[2]				0		
				193	101	92

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		45%	15%		45%	15%
Restaurant						
Cinema/Entertainment						
Residential		65%	15%		65%	15%
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						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	59	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	21	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,031	553	478
Internal Capture Percentage	16%	14%	17%
External Vehicle-Trips[5]	145	81	64
External Transit-Trips[6]	495	270	225
External Non-Motorized Trips[6]	130	71	59

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	26%
Restaurant	N/A	N/A
Cinema/Entertainmen	N/A	N/A
Residential	17%	8%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-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:	121019
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		
		Vehicle-Trips	Person-Trips*		Vehicle-Trips	Person-Trips*
Office		0	0		0	0
Retail		53	210		57	228
Restaurant		0	0		0	0
Cinema/Entertainment		0	0		0	0
Residential		48	343		35	250
Hotel		0	0		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		0	0	0	0	0
Retail	5		66	9	59	11
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	10	105	53	0		8
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		17	0	0	14	0
Retail	0		0	0	158	0
Restaurant	0	105		0	55	0
Cinema/Entertainment	0	8	0		14	0
Residential	0	21	0	0		0
Hotel	0	4	0	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	0	0	0	0	0	0
Retail	21	189	210	45	85	28
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	59	284	343	36	185	43
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	0	0	0	0	0	0
Retail	59	169	228	33	76	25
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	21	229	250	31	149	34
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

[3]Total 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:	121019	**Organization:**	Novatech
Project Location:	1101 Baxter Road	**Performed By:**	J. Audia
Scenario Description:	City Method	**Date:**	10/1/2025
Analysis Year:	Buildout	**Checked By:**	
Analysis Period:	**SAT 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				0		
Retail				142	74	68
Restaurant				0		
Cinema/Entertainment				0		
Residential				93	53	40
Hotel				0		
All Other Land Uses[2]				0		
				235	127	108

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		45%	15%		45%	15%
Restaurant						
Cinema/Entertainment						
Residential		65%	15%		65%	15%
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						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	71	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	30	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	1,228	672	556
Internal Capture Percentage	16%	15%	18%
External Vehicle-Trips[5]	175	101	74
External Transit-Trips[6]	573	318	255
External Non-Motorized Trips[6]	154	86	68

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	26%
Restaurant	N/A	N/A
Cinema/Entertainmen	N/A	N/A
Residential	19%	11%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-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:	121019
Analysis Period:	SAT 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		
		Vehicle-Trips	Person-Trips*		Vehicle-Trips	Person-Trips*
Office		0	0		0	0
Retail		74	295		68	272
Restaurant		0	0		0	0
Cinema/Entertainment		0	0		0	0
Residential		53	377		40	284
Hotel		0	0		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		0	0	0	0	0
Retail	5		79	11	71	14
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	11	119	60	0		9
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		24	0	0	15	0
Retail	0		0	0	173	0
Restaurant	0	148		0	60	0
Cinema/Entertainment	0	12	0		15	0
Residential	0	30	0	0		0
Hotel	0	6	0	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	0	0	0	0	0	0
Retail	30	265	295	62	119	40
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	71	306	377	39	199	46
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	0	0	0	0	0	0
Retail	71	201	272	40	90	30
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	30	254	284	34	165	38
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

[3]Total 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:	121019	**Organization:**	Novatech
Project Location:	1101 Baxter Road	**Performed By:**	J. Audia
Scenario Description:	MTO Method	**Date:**	10/1/2025
Analysis Year:	Buildout	**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				0		
Retail				85	53	32
Restaurant				0		
Cinema/Entertainment				0		
Residential				262	29	233
Hotel				0		
All Other Land Uses[2]				0		
				347	82	265

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		0	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	2	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	347	82	265
Internal Capture Percentage	2%	4%	1%
External Vehicle-Trips[5]	341	79	262
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	N/A	N/A
Retail	4%	3%
Restaurant	N/A	N/A
Cinema/Entertainmen	N/A	N/A
Residential	3%	1%
Hotel	N/A	N/A

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

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

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

[4]Enter 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.

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

[6]Person-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:	121019
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
		Vehicle-Trips	Person-Trips*		Vehicle-Trips	Person-Trips*
Office		0	0		0	0
Retail		53	53		32	32
Restaurant		0	0		0	0
Cinema/Entertainment		0	0		0	0
Residential		29	29		233	233
Hotel		0	0		0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	9		4	0	4	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	2	47	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	0	0	0	0
Retail	0		0	0	1	0
Restaurant	0	4		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	9	0	0		0
Hotel	0	2	0	0	0	

Table 9-A (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	0	0	0	0	0	0
Retail	2	51	53	51	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	28	29	28	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (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	0	0	0	0	0	0
Retail	1	31	32	31	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	2	231	233	231	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

[3]Total 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:	121019	**Organization:**	Novatech
Project Location:	1101 Baxter Road	**Performed By:**	J. Audia
Scenario Description:	MTO Method	**Date:**	10/1/2025
Analysis Year:	Buildout	**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				0		
Retail				342	164	178
Restaurant				0		
Cinema/Entertainment				0		
Residential				210	145	65
Hotel				0		
All Other Land Uses[2]				0		
				552	309	243

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						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	46	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	16	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	552	309	243
Internal Capture Percentage	22%	20%	26%
External Vehicle-Trips[5]	428	247	181
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	N/A	N/A
Retail	10%	26%
Restaurant	N/A	N/A
Cinema/Entertainmen	N/A	N/A
Residential	32%	25%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

Project Name:	121019
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		
		Vehicle-Trips	Person-Trips*		Vehicle-Trips	Person-Trips*
Office		0	0		0	0
Retail		164	164		178	178
Restaurant		0	0		0	0
Cinema/Entertainment		0	0		0	0
Residential		145	145		65	65
Hotel		0	0		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		0	0	0	0	0
Retail	4		52	7	46	9
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	3	27	14	0		2
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		13	0	0	6	0
Retail	0		0	0	67	0
Restaurant	0	82		0	23	0
Cinema/Entertainment	0	7	0		6	0
Residential	0	16	0	0		0
Hotel	0	3	0	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	0	0	0	0	0	0
Retail	16	148	164	148	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	46	99	145	99	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	0	0	0	0	0	0
Retail	46	132	178	132	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	16	49	65	49	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

[3]Total 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:	121019	**Organization:**	Novatech
Project Location:	1101 Baxter Road	**Performed By:**	J. Audia
Scenario Description:	MTO Method	**Date:**	10/1/2025
Analysis Year:	Buildout	**Checked By:**	
Analysis Period:	SAT 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				0		
Retail				443	230	213
Restaurant				0		
Cinema/Entertainment				0		
Residential				216	93	123
Hotel				0		
All Other Land Uses[2]				0		
				659	323	336

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						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	43	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	23	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	659	323	336
Internal Capture Percentage	20%	20%	20%
External Vehicle-Trips[5]	527	257	270
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	N/A	N/A
Retail	10%	20%
Restaurant	N/A	N/A
Cinema/Entertainmen	N/A	N/A
Residential	46%	19%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

Project Name:	121019
Analysis Period:	**SAT 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		
		Vehicle-Trips	Person-Trips*		Vehicle-Trips	Person-Trips*
Office		0	0		0	0
Retail		230	230		213	213
Restaurant		0	0		0	0
Cinema/Entertainment		0	0		0	0
Residential		93	93		123	123
Hotel		0	0		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		0	0	0	0	0
Retail	4		62	9	55	11
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	5	52	26	0		4
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		18	0	0	4	0
Retail	0		0	0	43	0
Restaurant	0	115		0	15	0
Cinema/Entertainment	0	9	0		4	0
Residential	0	23	0	0		0
Hotel	0	5	0	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	0	0	0	0	0	0
Retail	23	207	230	207	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	43	50	93	50	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	0	0	0	0	0	0
Retail	43	170	213	170	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	23	100	123	100	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

[3]Total 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 H

Other Area Developments

vacant, the southern half is occupied by a small shopping plaza that extends beyond the south property boundary, and includes a U-Haul, Al Waha Grocery, Musalla As-Sahaba and Barney's Pizza. The proposed study area includes the intersections of Dumaurier/Pinecrest, Queensview/Pinecrest, Hwy 417/Pinecrest, Iris/Greenbank and roadway segments adjacent to site or between intersections as shown in **Figure 1**. More details regarding the study area can be found in **Section 2.1.2**.

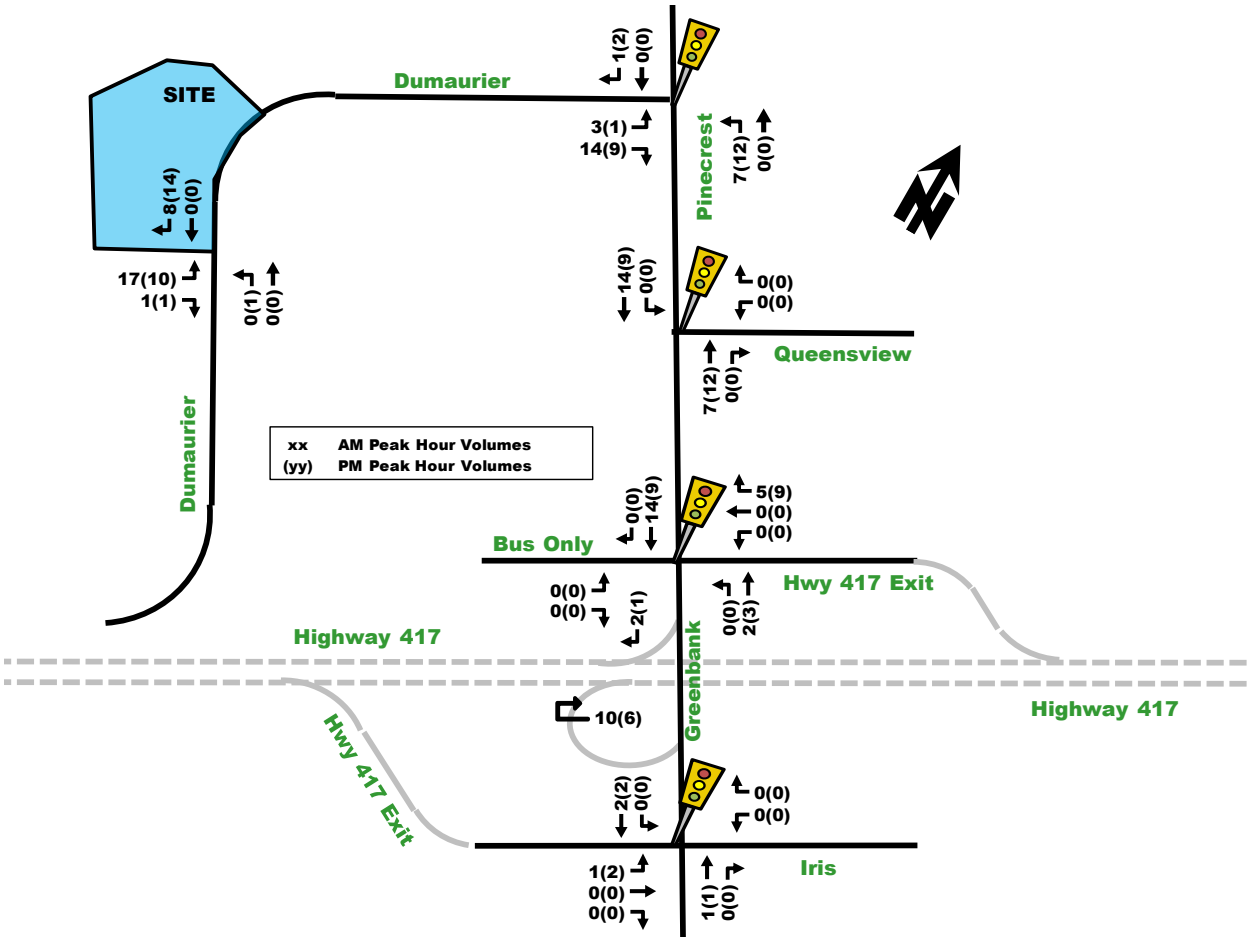
Figure 1: Local Context

The property is currently zoned as GM[62] F(0.25) which means general mixed use and has a maximum of 325 m^2 of retail stores permitted. Under general GM zoning, building heights of up to 18 meters are allowed, which triggers the re-zoning application to allow a higher maximum building height forecasted at 126 meters. The owners intend to develop a 40-storey apartment building containing approximately 422 residential apartment units and 3,230 ft^2 of commercial space.

Full buildout of the site is expected by 2025. A new driveway access on the south side of the property parcel will provide a connection to Dumaurier Avenue for both the subject site and the adjacent property to the south. Access to an underground parking structure will be provided from this driveway connection. A total of 198 underground and 6 above grade parking spaces are proposed for the development. The latest site plan concept is shown in **Figure 2**.

location. The new driveway will be approximately 90 meters north of the intersection of Dumaurier/Ramsey and its nearest neighboring driveway will be approximately 25 meters south which provides access to the strip mall. The 'new' site-generated vehicle trips outlined in **Table 11** were assigned to the study area network and are illustrated as **Figure 14**.

Figure 14: 'New' Site-Generated Traffic



3.2. Background Network Travel Demands

3.2.1. TRANSPORTATION NETWORK PLANS

Refer to section 2.1.3 Planned Conditions – Planned Study Area Transportation Network Changes.

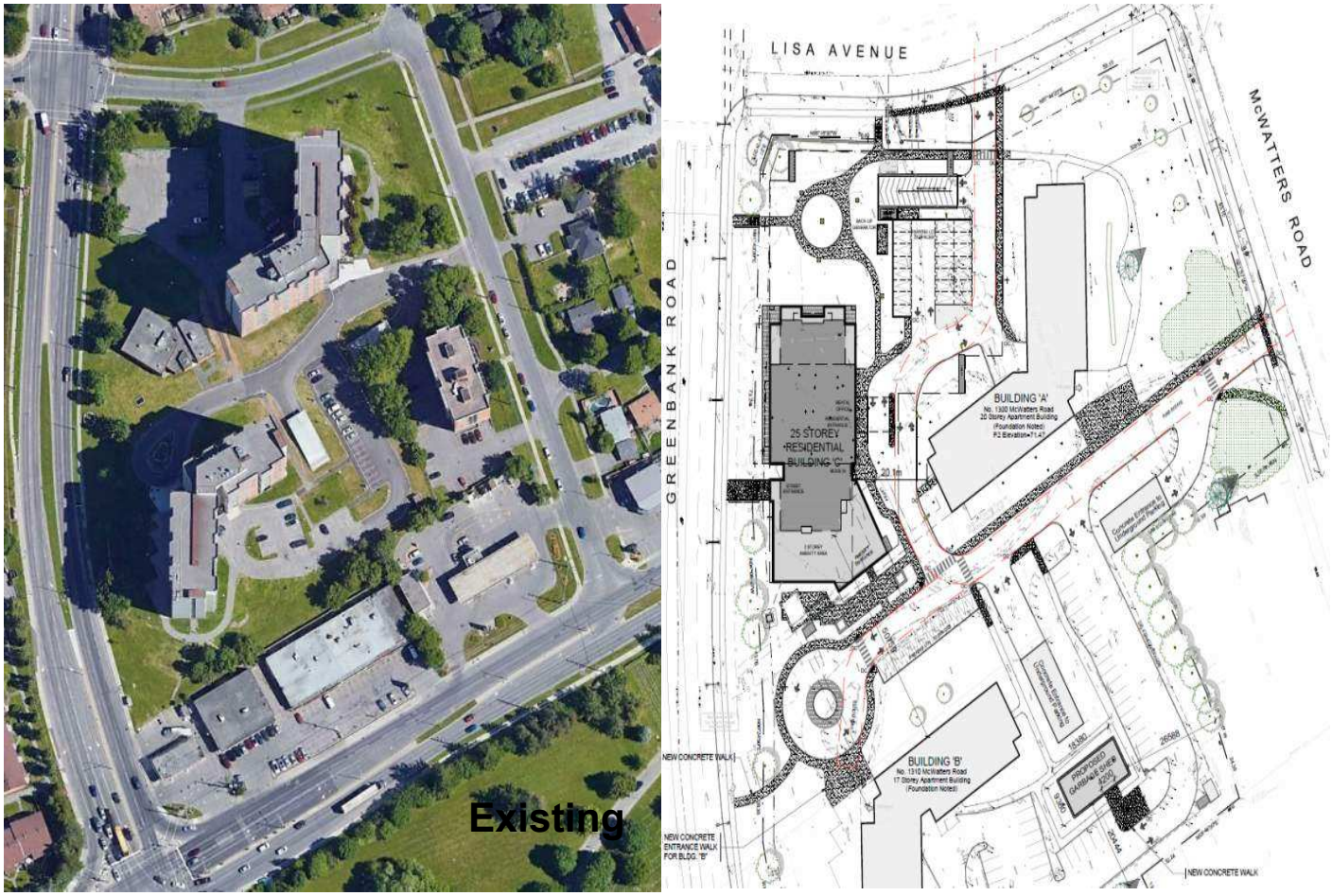
3.2.2. BACKGROUND GROWTH

The background traffic growth through the immediate study area, summarized in **Table 12,** was calculated based on historical traffic count data (2011, 2015-April, 2015-July and 2019) provided by the City of Ottawa at the Iris/Greenbank intersection. Detailed analysis of the background growth is included in **Appendix D**.

Table 12: Iris/Greenbank Historical Background Growth (2011 – 2019)

Time Period	Percent Annual Change				
	North Leg	South Leg	East Leg	West Leg	Overall
8 hrs	-2.04%	-1.89%	-1.43%	0.27%	**-1.59%**
AM Peak	-1.18%	-1.50%	1.52%	0.61%	**-0.63%**
PM Peak	-2.19%	-2.73%	-3.67%	0.47%	**-2.23%**

Figure 1 – Existing site and proposed plan



2.2 Existing Conditions

2.2.1 Area Multi-Modal Network

Greenbank Road is a north-south arterial road. Within the study area it is a four-lane divided roadway with two lanes in each direction and a posted speed limit of 60 km/hr. There are sidewalks on both sides of the road.

Baseline Road is an east-west arterial road. Within the study area it is a four-lane divided roadway with two lanes in each direction with a posted speed limit of 60 km/hr. There are sidewalks on both sides of the road and a cycle lane in both directions west of Greenbank Road.

Lisa Avenue is a residential undivided two-lane, east-west local road with an unposted speed limit of 40 km/hr. There are sidewalks on both sides of the street.

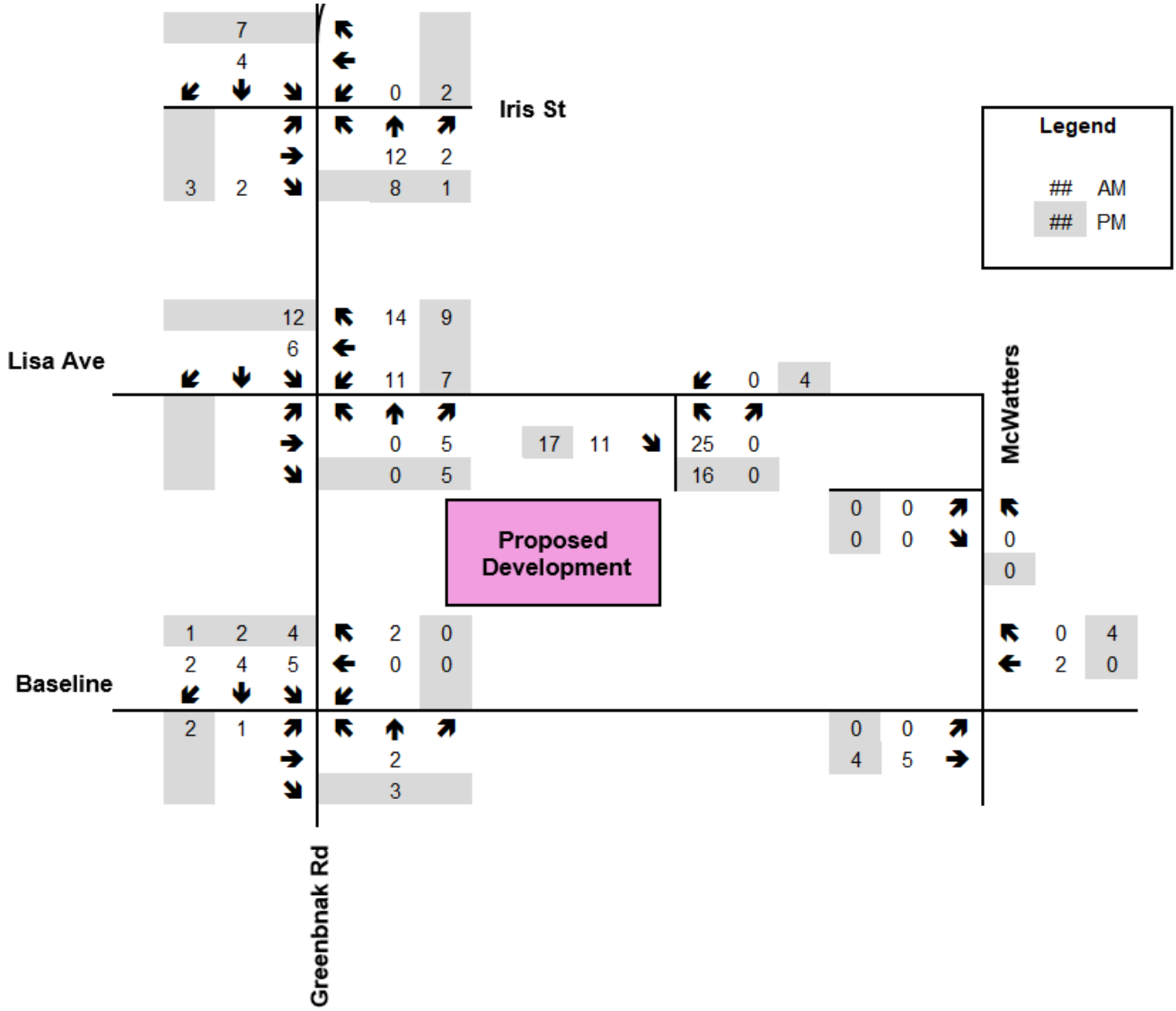
Iris Street is an undivided two-lane, east-west major collector road with an unposted speed limit of 40 km/hr. There is a sidewalk on the north side of the road and a paved strip on the south side of the road.

McWatters Road is an undivided two-lane, north-south local road with a posted speed limit of 50 km/hr. There are sidewalks on both sides of the street.

Highway 417 (Queensway) is a provincial highway. The entrance and exit ramps to the highway are located on Greenbank Road and Pinecrest Road.

There are no traffic management measures existing in the study area. Baseline Road and Greenbank Road, north of Baseline Road, are full-load truck routes. The road classification is shown in Figure 2.

Figure 11 – Development New Trips Assignment



3.2 Background Network Traffic

3.2.1 Changes to the Background Transportation Network

The transportation network plans were discussed in the Scoping Report. No changes are planned on the road network.

3.2.2 General Background Growth Rates

The background growth rates were calculated using data from the TRANS Regional Model. GHD was provided snapshots for horizons 2011 and 2031. From the volumes estimated for both horizons, the growth was calculated on each road within the study area on a yearly basis. These annual growth rates were then used to expand the traffic counts, from the year they were completed to the forecasted horizons 2025 and 2031. The annual growth rates are the following:

- 0.5% on Greenbank Road;
- 0.1% on Baseline Road;
- 0.6% on Iris Street;

APPENDIX I

Long-Range Model Snapshots

TRANS Regional Model

Version 1.01 - Assigned December 09, 2024

AM Peak Hour Total Traffic Volume

Iris/Ikea Area

2022 Model

User Initials: AJ
Plot Prepared: August 18, 2025
EMME Scenario: 22002

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

50 100 150 200 250

TRANS Regional Model

Version 1.01 - Assigned December 09, 2024

AM Peak Hour Total Traffic Volume

Iris/Ikea Area

2046 Model

User Initials: AJ
Plot Prepared: August 18, 2025
EMME Scenario: 46001

TRANS

Legend

AM Peak Hour Total Traffic Volume

1000 2000 3000 4000 5000

N

Distance (m)

50 100 150 200 250

APPENDIX J

MTO Historic Daily Traffic Volumes

Year	Highway	Location Description	Dist (KM)	Pattern Type	AADT	SADT	SWADT	WADT	Truck AADT	Total Collisions	Total CR	Trucks Collisions	Truck CR
1996	417			UC	109,600	116,000	128,200	104,200	20,800	28	0.3	4	0.0
1997	417			UC	113,100	118,800	132,300	106,300	21,500	24	0.3	1	0.0
1998	417			UC	116,600	123,600	136,400	110,800	22,200	20	0.2	1	0.0
1999	417			UC	117,200	124,200	137,100	111,300	22,300	42	0.5	1	0.0
2000	417			UC	119,800	127,000	141,400	112,600	22,800	27	0.3	3	0.0
2001	417			UC	122,300	131,000	143,900	114,900	23,200	29	0.3	4	0.0
2002	417			UC	124,800	133,000	146,800	116,800	23,700	36	0.4	2	0.0
2003	417			UC	126,300	133,500	147,900	119,300	24,000	31	0.3	4	0.0
2004	417			UC	129,900	139,100	152,800	122,100	24,700	37	0.4	2	0.0
2005	417			UC	126,800	134,200	148,300	118,900	24,100	18	0.2	1	0.0
2006	417			UC	127,500	134,800	149,000	120,000	10,200	28	0.3	2	0.0
2007	417			UC	128,000	135,800	148,100	120,100	10,200	32	0.3	2	0.0
2008	417			UC	125,300	132,400	124,200	117,200	10,000	30	0.3	3	0.0
2009	417			UC	125,400	132,900	146,700	117,900	10,000	30	0.3	1	0.0
2010	417			UC	127,600	134,900	148,500	120,000	10,200	59	0.6	4	0.0
2011	417			UC	133,600	134,000	138,700	126,800	10,700	86	0.8	10	0.1
2012	417			UC	135,100	135,900	144,600	128,400	10,800	45	0.4	0	0.0
2013	417			UC	136,500	136,900	137,300	129,500	10,900	77	0.7	9	0.1
2014	417			UC	138,000	138,400	132,700	131,000	11,000	53	0.5	6	0.1
2015	417			UC	139,400	139,800	134,100	132,300	11,200	57	0.5	6	0.1
2016	417			UC	140,900	141,400	135,500	133,700	11,300	61	0.6	6	0.1
2017	417			UC	142,300	141,400	142,700	136,400	11,400	72	0.7	7	0.1
2018	417			UC	143,800	142,600	144,900	138,000	11,500	77	0.7	7	0.1
2019	417			UC	145,200	143,100	145,300	139,900	11,600	72	0.6	12	0.1
2021	417			UC	148,100	148,500	150,400	142,700	11,800	34	0.3	2	0.0
1988	417	PINECREST RD UP IC-129	1.3	UC	73,100	76,800	82,600	68,700	13,900	48	1.3	3	0.1
1989	417			UC	74,600	78,300	84,300	70,900	14,200	39	1.1	2	0.1
1990	417			UC	77,600	83,000	90,000	73,700	14,700	46	1.2	4	0.1
1991	417			UC	79,200	84,000	91,100	76,800	15,000	59	1.5	5	0.1
1992	417			UC	79,000	83,700	90,800	75,800	15,000	47	1.2	4	0.1
1993	417			UC	79,000	83,200	89,800	74,000	15,000	25	0.7	0	0.0
1994	417			UC	86,000	91,200	98,300	80,000	16,300	18	0.4	1	0.0
1995	417			UC	88,800	93,700	101,500	82,800	16,900	17	0.4	1	0.0
1996	417			UC	91,600	96,900	107,200	87,100	17,400	21	0.5	2	0.0
1997	417			UC	94,400	99,100	110,400	88,700	17,900	24	0.5	1	0.0
1998	417			UC	97,200	103,000	113,700	92,300	18,500	20	0.4	3	0.1
1999	417			UC	96,500	102,300	112,900	91,700	18,300	25	0.5	4	0.1
2000	417			UC	102,000	108,100	120,400	95,900	19,400	21	0.4	3	0.1
2001	417			UC	107,500	115,100	126,500	101,000	20,400	22	0.4	2	0.0
2002	417			UC	113,100	120,500	133,000	105,900	21,500	24	0.4	2	0.0
2003	417			SC	118,600	125,200	138,400	104,900	22,500	27	0.5	6	0.1

Year	Highway	Location Description	Dist (KM)	Pattern Type	AADT	SADT	SWADT	WADT	Truck AADT	Total Collisions	Total CR	Trucks Collisions	Truck CR
2004	417			SC	118,400	126,300	138,600	104,300	22,500	33	0.6	3	0.1
2005	417			SC	124,400	131,700	145,300	109,500	23,600	27	0.4	3	0.0
2006	417			SC	118,500	125,400	138,500	104,500	9,500	19	0.3	3	0.1
2007	417			SC	120,800	127,700	139,700	106,200	9,650	26	0.4	3	0.1
2008	417			SC	123,100	129,100	121,800	108,300	9,850	23	0.4	2	0.0
2009	417			SC	125,400	132,900	146,700	110,400	10,000	29	0.5	2	0.0
2010	417			SC	127,700	135,100	149,500	112,600	10,200	42	0.7	7	0.1
2011	417			SC	133,800	171,200	156,400	106,500	10,700	44	0.7	5	0.1
2012	417			SC	136,600	144,700	136,000	120,600	10,900	19	0.3	3	0.0
2013	417			SC	139,400	147,500	134,400	122,900	11,200	34	0.5	3	0.0
2014	417			SC	142,100	150,300	146,700	125,300	11,400	31	0.4	8	0.1
2015	417			SC	144,900	153,300	149,600	127,800	11,600	25	0.4	2	0.0
2016	417			SC	147,600	156,100	152,400	130,200	11,800	56	0.8	4	0.1
2017	417			SC	150,400	159,900	160,100	133,400	12,000	40	0.5	6	0.1
2018	417			SC	153,100	163,500	162,700	134,700	12,200	26	0.3	2	0.0
2019	417			SC	155,900	165,500	164,500	137,800	7,800	42	0.6	2	0.0
2021	417			SC	161,400	170,800	170,100	143,500	8,050	18	0.2	1	0.0
1988	417	RICHMOND RD BAYSHORE DR IC	2.9	UC	63,800	67,000	72,100	60,000	12,100	14	0.2	1	0.0
1989	417			UC	65,800	69,100	74,400	62,500	12,500	7	0.1	1	0.0
1990	417			UC	68,700	73,500	79,700	65,300	13,100	11	0.2	4	0.1
1991	417			UC	70,300	74,500	80,800	68,200	13,400	34	0.5	6	0.1
1992	417			UC	66,900	70,900	76,900	64,200	12,700	48	0.7	6	0.1
1993	417			UC	66,900	70,500	76,000	62,700	12,700	74	1.0	6	0.1
1994	417			UC	74,800	79,300	85,500	69,600	14,200	39	0.5	5	0.1
1995	417			UC	77,200	81,500	88,300	72,000	14,700	34	0.4	1	0.0
1996	417			UC	79,700	84,300	93,200	75,800	15,100	36	0.4	3	0.0
1997	417			SC	82,100	87,000	96,100	73,100	15,600	34	0.4	1	0.0
1998	417			SC	84,700	89,800	99,100	75,400	16,100	28	0.3	5	0.1
1999	417			SC	87,100	92,300	101,900	77,500	16,500	62	0.7	6	0.1
2000	417			SC	89,600	95,000	104,800	78,800	17,000	60	0.6	12	0.1
2001	417			SC	92,100	98,200	107,800	81,200	17,500	54	0.6	8	0.1
2002	417			SC	94,500	100,300	110,600	83,300	18,000	49	0.5	4	0.0
2003	417			SC	97,000	102,400	113,200	85,800	18,400	49	0.5	1	0.0
2004	417			SC	99,500	106,100	116,500	87,700	18,900	61	0.6	6	0.1
2005	417			SC	102,000	108,000	119,100	89,800	19,400	66	0.6	5	0.0
2006	417			SC	105,000	111,100	122,700	92,600	9,450	62	0.6	8	0.1
2007	417			SC	108,000	114,200	124,900	95,000	9,700	52	0.5	6	0.1
2008	417			SC	111,000	116,400	109,800	97,600	10,000	68	0.6	9	0.1
2009	417			SC	114,000	120,800	133,400	100,300	10,300	57	0.5	8	0.1
2010	417			SC	117,000	123,800	137,000	103,200	10,500	40	0.3	2	0.0
2011	417			SC	120,000	153,600	140,200	95,500	10,800	55	0.4	4	0.0

APPENDIX K

Signal Timing Plans

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

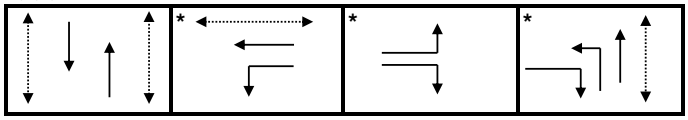
Intersection:	***Main:*** Pinecrest	***Side:***	Hwy 417 WB Ramp / Transitway
Controller:	**MS 3200**	**TSD:**	**5570**
Author:	Kymen Kwan	**Date:**	14-Aug-2025

Existing Timing Plans†

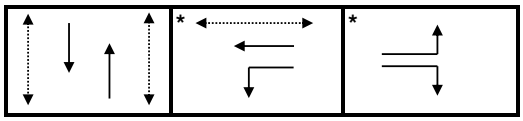
	Plan					**Ped Minimum Time**		
	AM Peak 1	**Off Peak** 2	**PM Peak** 3	**Night** 4	**Weekend** 5	***Walk***	***DW***	***A+R***
Cycle	105	95	105	90	95			
Offset	93	83	93	X	83			
NB Thru	50	41	50	31	41	7	17	3.3+3.1
SB Thru	38	30	38	31	30	7	17	3.3+3.1
WB Thru	37	37	37	37	37	7	23	3.3+3.3
WB Left (fp)	37	37	37	37	37	-	-	3.3+3.3
EB Left (fp)	18	17	18	22	17	-	-	3.3+3.7
EB Right (fp)	30	28	30	22	28	-	-	3.3+3.7
NB Left	12	11	12	-	11	-	-	3.3+3.1

Phasing Sequence‡

Plan: 1,2,3,5



Plan: 4



Notes: 1) Access to the transitway is prohibited except for authorized vehicles
2) The EB Thru movement is prohibited
3) The SB Left Turn movement is prohibited
4) The NB Right Turn movement is prohibited

Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	2
15:00	3
18:45	2
21:30	4

Weekend

Time	Plan
0:15	4
8:30	5
22:30	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $63.94 ($56.58 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

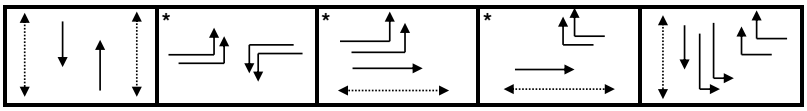
Intersection:	***Main:*** Greenbank	***Side:***	Iris / Hwy 417 EB Off Ramp
Controller:	**ATC 3**	**TSD:**	**5112**
Author:	Kymen Kwan	**Date:**	14-Aug-2025

Existing Timing Plans†

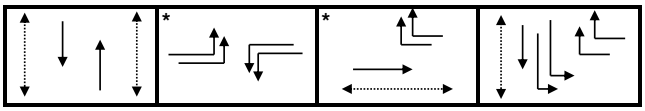
	Plan						Ped Minimum Time		
	AM Peak 1	**Evening** 2	**PM Peak** 3	**Night** 4	**Off Peak** 15	**Weekend** 16	***Walk***	***DW***	***A+R***
Cycle	130	120	130	130	130	140			
Offset	70	79	10	X	10	10			
NB Thru	43	43	43	44	43	43	7	28	3.3+4.2
SB Thru	56	58	59	44	61	73	7	28	3.3+4.2
EB Left (fp)	27	15	24	20	22	20	-	-	3.3+3.8
WB Left (fp)	27	15	24	20	22	20	-	-	3.3+3.8
EB Thru	47	47	47	47	47	47	27	13	3.3+3.7
WB Right	47	47	47	47	47	47	-	-	3.3+2.3
SB Left (fp)	13	15	16	19	18	30	-	-	3.3+4.3

Phasing Sequence‡

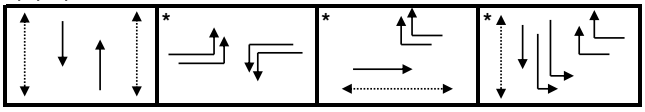
Plan: **1**



Plan: **2**



Plan: **3, 4, 15, 16**



Notes: 1) The WB Right Turn on red is prohibited

2) For Plans 1, 2 the SB Left Turn movement has a maximum recall of 45s green

Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	15
15:00	3
18:45	2
21:30	4

Saturday

Time	Plan
0:15	4
8:45	3
10:00	15
12:00	16
18:00	3
22:30	4

Sunday

Time	Plan
0:15	4
8:30	2
9:30	15
12:00	16
18:00	3
22:30	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $63.94 ($56.58 + HST)

Traffic Signal Timing

City of Ottawa, Public Works Department

Traffic Signal Operations Unit

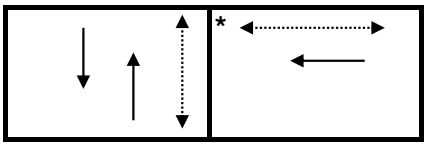
Intersection:	***Main:*** Pinecrest SC / Iris	***Side:***	Iris
Controller:	**MS 3200**	**TSD:**	**5670**
Author:	Kymen Kwan	**Date:**	14-Aug-2025

Existing Timing Plans†

	Plan						**Ped Minimum Time**		
	AM Peak 1	**Evening** 2	**PM Peak** 3	**Night** 4	**Off Peak** 15	**Weekend** 16	***Walk***	***DW***	***A+R***
Cycle	65	60	65	60	65	70			
Offset	3	45	50	X	45	45			
NB Thru	35	30	35	30	35	40	13	7	3.3+2.4
SB Thru	35	30	35	30	35	40	13	7	3.3+2.4
WB Thru	30	30	30	30	30	30	7	17	3.3+2.3

Phasing Sequence‡

Plan: All



Schedule

Weekday

Time	Plan
0:15	4
6:30	1
9:30	15
15:00	3
18:45	2
21:30	4

Saturday

Time	Plan
0:15	4
8:45	3
10:00	15
12:00	16
18:00	3
22:30	4

Sunday

Time	Plan
0:15	4
8:30	2
9:30	15
12:00	16
18:00	3
22:30	4

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

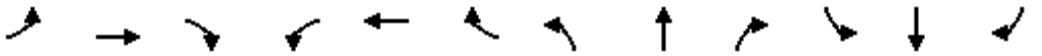
(fp): Fully Protected Left Turn

◄·····► Pedestrian signal

Cost is $63.94 ($56.58 + HST)

APPENDIX L

Existing Synchro Analysis



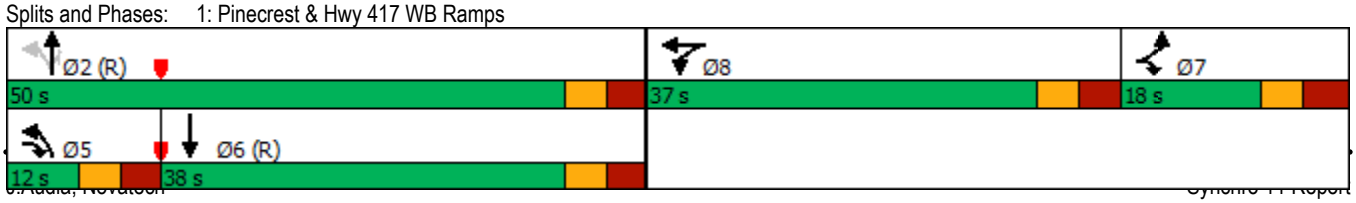
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	390	25	264	0	1000	307	0	856	0
Future Volume (vph)	2	0	64	390	25	264	0	1000	307	0	856	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		0.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98				0.97				0.96			
Frt			0.850		0.879				0.850			
Flt Protected	0.950			0.950	0.994							
Satd. Flow (prot)	893	0	799	1631	1358	0	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950	0.994							
Satd. Flow (perm)	879	0	799	1631	1358	0	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		199				278			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	71	433	28	293	0	1111	341	0	951	0
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	2	0	71	390	364	0	0	1111	341	0	951	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		4.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2		1	2	1		2	
Detector Template	Left		Right	Left	Thru		Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0		2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6		2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA		pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases							2		2			
Detector Phase	7		7 5	8	8		5	2	2		6	

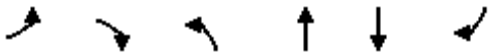
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0		5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6		11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0		12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%		11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4		5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3		3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3		3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6		6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead		Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0		3.0	3.0	3.0		3.0	
Recall Mode	None			None	None		None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0			17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20			50	50		8	
Act Effct Green (s)	6.4		16.0	28.1	28.1			53.0	53.0		43.4	
Actuated g/C Ratio	0.06		0.15	0.27	0.27			0.50	0.50		0.41	
v/c Ratio	0.04		0.34	0.89	0.72			0.63	0.38		0.46	
Control Delay	46.5		7.3	60.8	23.6			22.5	5.4		25.7	
Queue Delay	0.0		0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay	46.5		7.3	60.8	23.6			22.5	5.4		25.7	
LOS	D		A	E	C			C	A		C	
Approach Delay		8.4			42.8			18.5			25.7	
Approach LOS		A			D			B			C	
Queue Length 50th (m)	0.4		0.0	72.0	28.3			83.4	6.4		51.9	
Queue Length 95th (m)	2.5		5.2	#118.3	61.0			111.9	23.8		67.9	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0								50.0			
Base Capacity (vph)	93		203	472	534			1768	906		2061	
Starvation Cap Reductn	0		0	0	0			0	0		0	
Spillback Cap Reductn	0		0	0	0			0	0		0	
Storage Cap Reductn	0		0	0	0			0	0		0	
Reduced v/c Ratio	0.02		0.35	0.83	0.68			0.63	0.38		0.46	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 26.1 Intersection LOS: C
Intersection Capacity Utilization 68.2% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

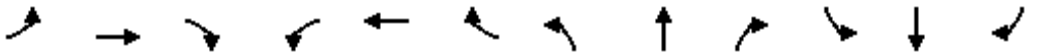
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1307	928	201
Future Volume (vph)	0	0	0	1307	928	201
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1452	1031	223
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1452	1031	223
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	592	509	76	68	0	310	0	1404	194	166	762	0
Future Volume (vph)	592	509	76	68	0	310	0	1404	194	166	762	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.97					0.96	1.00		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3071	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						216			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	658	566	84	76	0	344	0	1560	216	184	847	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	658	566	84	76	0	344	0	1560	216	184	847	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

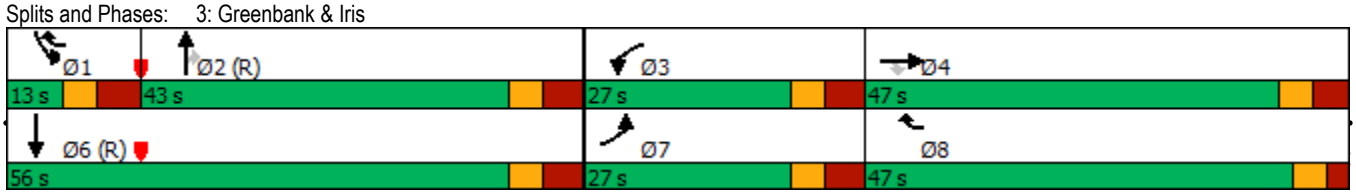
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	47.2	47.2	8.5		52.4		35.5	35.5	12.2	55.3	
Actuated g/C Ratio	0.15	0.36	0.36	0.07		0.40		0.27	0.27	0.09	0.43	
v/c Ratio	1.27	0.84	0.13	0.37		0.31		1.14	0.39	0.58	0.58	
Control Delay	178.4	50.1	0.4	55.0		23.6		113.3	6.8	65.6	32.0	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	178.4	50.1	0.4	55.0		23.6		113.3	6.8	65.6	32.0	
LOS	F	D	A	E		C		F	A	E	C	
Approach Delay		111.4			29.3			100.4			38.0	
Approach LOS		F			C			F			D	
Queue Length 50th (m)	~100.5	120.3	0.0	7.2		29.3		~156.7	0.0	22.4	83.0	
Queue Length 95th (m)	#134.4	161.8	0.0	13.8		42.9		#184.0	17.1	#50.8	107.3	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	675	645	482		1088		1374	557	316	1462	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.27	0.84	0.13	0.16		0.32		1.14	0.39	0.58	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 82.8 Intersection LOS: F
Intersection Capacity Utilization 84.3% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

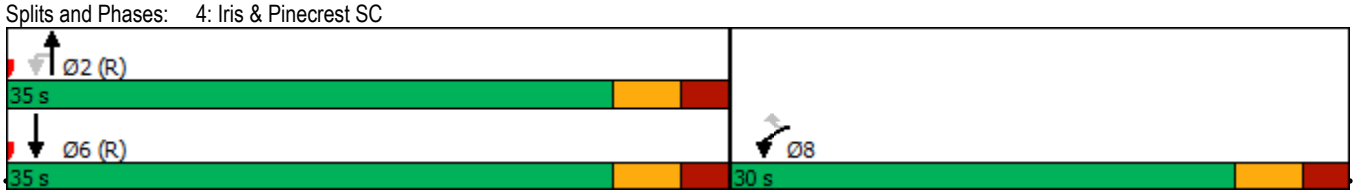
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	217	16	21	200	0	0	107
Future Volume (vph)	217	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.928			
Satd. Flow (perm)	1701	1542	0	3253	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		18					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	241	18	23	222	0	0	119
Shared Lane Traffic (%)							
Lane Group Flow (vph)	241	18	0	245	0	0	119
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	15.5	15.5		38.2			38.2
Actuated g/C Ratio	0.24	0.24		0.59			0.59
v/c Ratio	0.60	0.05		0.13			0.04
Control Delay	27.2	7.7		6.8			7.2
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	27.2	7.7		6.8			7.2
LOS	C	A		A			A
Approach Delay	25.8			6.8			7.2
Approach LOS	C			A			A
Queue Length 50th (m)	24.3	0.0		8.5			1.7
Queue Length 95th (m)	34.2	3.2		m15.3			4.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	590		1911			2957
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.38	0.03		0.13			0.04

Intersection Summary

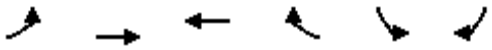
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.60
Intersection Signal Delay: 14.8 Intersection LOS: B
Intersection Capacity Utilization 41.9% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	465	85	21	178	29	22
Future Volume (vph)	465	85	21	178	29	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.942	
Flt Protected				0.995	0.972	
Satd. Flow (prot)	1775	0	0	1773	1628	0
Flt Permitted				0.995	0.972	
Satd. Flow (perm)	1775	0	0	1773	1628	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		7	7		1	2
Confl. Bikes (#/hr)		2				2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	2%	1%	6%	7%	4%
Adj. Flow (vph)	517	94	23	198	32	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	611	0	0	221	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	56	421	178	36	40	21
Future Volume (vph)	56	421	178	36	40	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.977		0.954	
Flt Protected		0.994			0.968	
Satd. Flow (prot)	0	1811	1804	0	1576	0
Flt Permitted		0.994			0.968	
Satd. Flow (perm)	0	1811	1804	0	1576	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	7			7		1
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	12%	2%	2%	1%	5%	20%
Adj. Flow (vph)	62	468	198	40	44	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	530	238	0	67	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

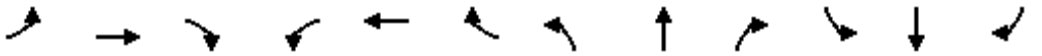
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	617	0	378
Future Volume (vph)	0	0	221	617	0	378
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.890			
Flt Protected						
Satd. Flow (prot)	0	0	3094	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3094	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	246	686	0	420
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	932	0	0	420
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	617	0	233
Future Volume (vph)	0	0	0	617	0	233
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	686	0	259
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	686	0	259
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

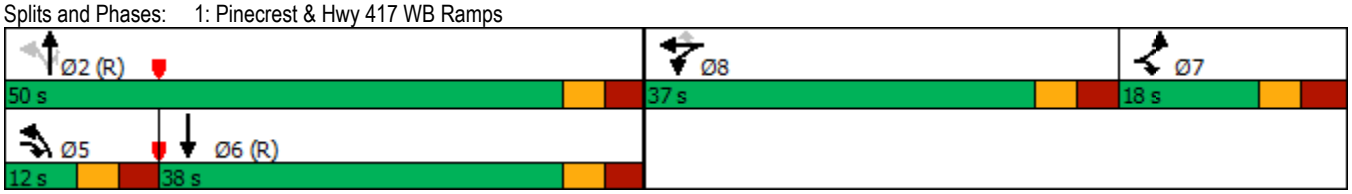


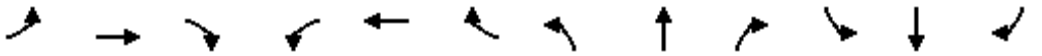
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	390	25	264	0	1000	307	0	856	0
Future Volume (vph)	2	0	64	390	25	264	0	1000	307	0	856	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			237			278			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	71	433	28	293	0	1111	341	0	951	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	71	433	28	293	0	1111	341	0	951	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.4		16.0	22.2	22.2	22.2		58.9	58.9		49.3	
Actuated g/C Ratio	0.06		0.15	0.21	0.21	0.21		0.56	0.56		0.47	
v/c Ratio	0.04		0.34	0.62	0.14	0.59		0.57	0.35		0.41	
Control Delay	46.5		7.3	40.6	32.0	12.6		18.7	4.9		22.1	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	46.5		7.3	40.6	32.0	12.6		18.7	4.9		22.1	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		8.4			29.4			15.4			22.1	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	39.5	4.4	9.0		65.7	5.1		43.0	
Queue Length 95th (m)	2.5		5.2	47.5	10.3	28.8		111.0	23.5		67.5	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	596		1965	976		2341	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.35	0.45	0.10	0.49		0.57	0.35		0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 69.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	592	509	76	68	0	310	0	1404	194	166	762	0
Future Volume (vph)	592	509	76	68	0	310	0	1404	194	166	762	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.97					0.96	1.00		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3071	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	658	566	84	76	0	344	0	1560	216	184	847	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	658	566	84	76	0	344	0	1560	216	184	847	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

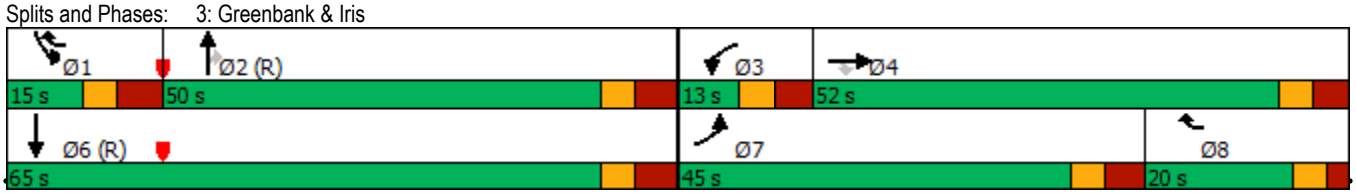
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	30.6	43.9	43.9	5.9		34.7		42.5	42.5	11.1	61.2	
Actuated g/C Ratio	0.24	0.34	0.34	0.05		0.27		0.33	0.33	0.09	0.47	
v/c Ratio	0.82	0.90	0.14	0.54		0.47		0.95	0.35	0.64	0.52	
Control Delay	56.2	59.9	0.5	66.7		37.2		55.7	5.5	69.4	26.5	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.2	59.9	0.5	66.7		37.2		55.7	5.5	69.4	26.5	
LOS	E	E	A	E		D		E	A	E	C	
Approach Delay		54.2			42.5			49.6			34.1	
Approach LOS		D			D			D			C	
Queue Length 50th (m)	76.5	125.0	0.0	7.6		32.8		131.2	0.0	22.7	76.5	
Queue Length 95th (m)	89.7	#182.8	0.0	15.2		49.2		#159.7	15.6	#44.2	94.5	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		710		1645	625	287	1617	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.66	0.88	0.13	0.54		0.48		0.95	0.35	0.64	0.52	

Intersection Summary

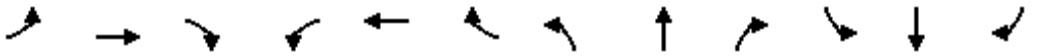
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 46.8 Intersection LOS: D
Intersection Capacity Utilization 84.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



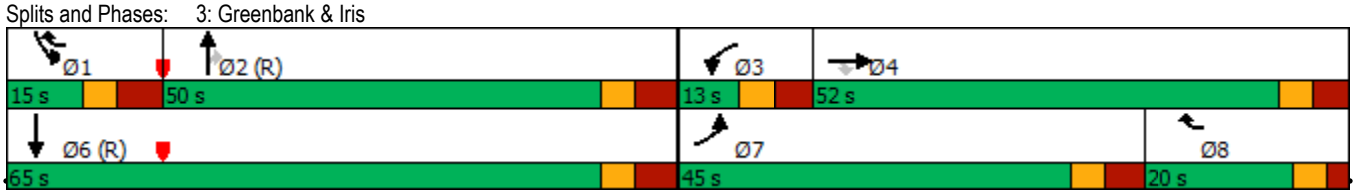
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	359	76	68	0	310	0	1264	194	166	762	0
Future Volume (vph)	382	359	76	68	0	310	0	1264	194	166	762	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.97					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3050	0	2757	0	5032	1465	3343	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	424	399	84	76	0	344	0	1404	216	184	847	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	424	399	84	76	0	344	0	1404	216	184	847	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	21.7	37.6	37.6	5.9		43.6		42.5	42.5	17.4	67.5	
Actuated g/C Ratio	0.17	0.29	0.29	0.05		0.34		0.33	0.33	0.13	0.52	
v/c Ratio	0.75	0.74	0.15	0.54		0.37		0.85	0.35	0.41	0.48	
Control Delay	60.0	50.5	0.6	66.9		29.7		47.0	5.5	57.1	22.4	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	60.0	50.5	0.6	66.9		29.7		47.0	5.5	57.1	22.4	
LOS	E	D	A	E		C		D	A	E	C	
Approach Delay		50.3			36.4			41.5			28.6	
Approach LOS		D			D			D			C	
Queue Length 50th (m)	49.6	83.0	0.0	7.6		30.9		113.0	0.0	21.8	70.7	
Queue Length 95th (m)	62.7	110.9	0.0	15.2		46.6		130.6	15.6	#40.6	92.9	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		901		1645	625	449	1782	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.43	0.62	0.13	0.54		0.38		0.85	0.35	0.41	0.48	

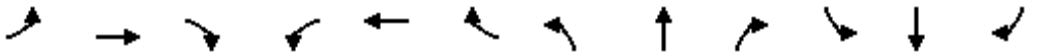
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 39.6		Intersection LOS: D	
Intersection Capacity Utilization 81.6%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

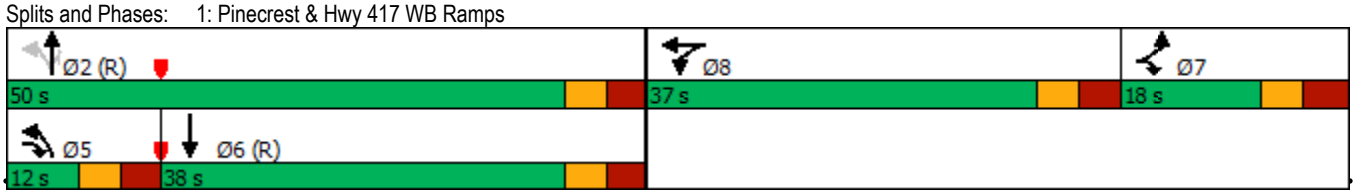


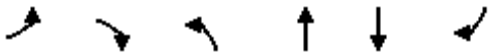
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	462	54	161	1	888	458	0	1404	4
Future Volume (vph)	7	0	29	462	54	161	1	888	458	0	1404	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		0.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99				0.98				0.96		1.00	
Frt			0.850		0.927				0.850			
Flt Protected	0.950			0.950	0.983		0.950					
Satd. Flow (prot)	893	0	799	1663	1341	0	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950	0.983		0.082					
Satd. Flow (perm)	882	0	799	1663	1341	0	77	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		46				468			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	8	0	32	513	60	179	1	987	509	0	1560	4
Shared Lane Traffic (%)				25%								
Lane Group Flow (vph)	8	0	32	385	367	0	1	987	509	0	1564	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		4.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2		1	2	1		2	
Detector Template	Left		Right	Left	Thru		Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0		2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6		2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA		pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases							2		2			
Detector Phase	7		7 5	8	8		5	2	2		6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0		5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6		11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0		12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%		11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4		5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3		3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3		3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6		6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead		Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0		3.0	3.0	3.0		3.0	
Recall Mode	None			None	None		None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0			17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15			50	50		5	
Act Effct Green (s)	6.7		14.0	28.4	28.4		54.8	54.8	54.8		47.5	
Actuated g/C Ratio	0.06		0.13	0.27	0.27		0.52	0.52	0.52		0.45	
v/c Ratio	0.14		0.16	0.86	0.93		0.01	0.54	0.50		0.69	
Control Delay	51.1		1.8	55.1	63.2		17.0	20.0	4.5		28.6	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	51.1		1.8	55.1	63.2		17.0	20.0	4.5		28.6	
LOS	D		A	E	E		B	B	A		C	
Approach Delay		11.6			59.0			14.7			28.6	
Approach LOS		B			E			B			C	
Queue Length 50th (m)	1.5		0.0	70.3	61.2		0.1	71.4	4.2		101.4	
Queue Length 95th (m)	5.8		0.0	#114.3	#112.1		1.0	94.6	24.0		#137.3	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0						35.0		50.0			
Base Capacity (vph)	93		197	481	420		84	1828	1021		2274	
Starvation Cap Reductn	0		0	0	0		0	0	0		0	
Spillback Cap Reductn	0		0	0	0		0	0	0		0	
Storage Cap Reductn	0		0	0	0		0	0	0		0	
Reduced v/c Ratio	0.09		0.16	0.80	0.87		0.01	0.54	0.50		0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 29.0		Intersection LOS: C	
Intersection Capacity Utilization 72.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

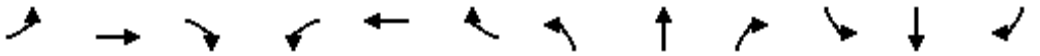
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1347	1106	311
Future Volume (vph)	0	0	0	1347	1106	311
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1497	1229	346
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1497	1229	346
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	444	267	317	221	0	543	0	939	128	221	885	0
Future Volume (vph)	444	267	317	221	0	543	0	939	128	221	885	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3074	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						157			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	493	297	352	246	0	603	0	1043	142	246	983	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	493	297	352	246	0	603	0	1043	142	246	983	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

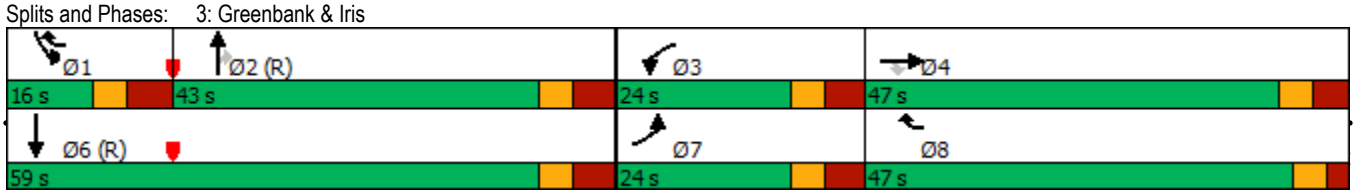
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.2	37.2	14.6		53.6		37.3	37.3	11.7	56.6	
Actuated g/C Ratio	0.13	0.29	0.29	0.11		0.41		0.29	0.29	0.09	0.44	
v/c Ratio	1.11	0.56	0.66	0.68		0.53		0.72	0.26	0.82	0.65	
Control Delay	125.7	43.4	27.3	57.9		25.1		45.6	5.4	79.7	32.5	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	125.7	43.4	27.3	57.9		25.1		45.6	5.4	79.7	32.5	
LOS	F	D	C	E		C		D	A	E	C	
Approach Delay		74.0			34.6			40.8			42.0	
Approach LOS		E			C			D			D	
Queue Length 50th (m)	~68.1	57.8	38.6	27.0		49.5		83.0	0.0	30.2	98.9	
Queue Length 95th (m)	#99.5	83.7	69.4	37.4		61.2		98.4	11.5	#59.4	123.6	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1062		1444	536	301	1523	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.11	0.52	0.63	0.59		0.57		0.72	0.26	0.82	0.65	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 48.5 Intersection LOS: D
Intersection Capacity Utilization 93.7% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

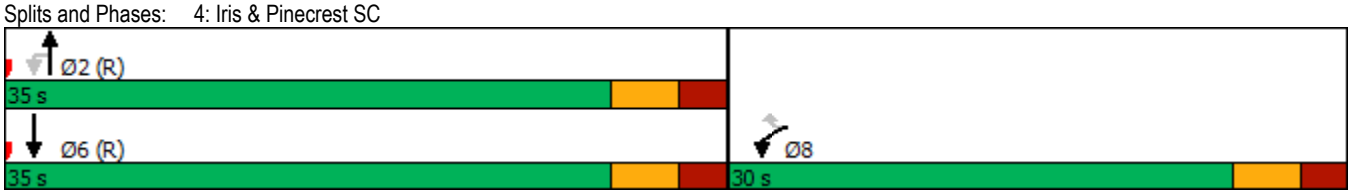
Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	409	21	20	261	0	0	368
Future Volume (vph)	409	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.913			
Satd. Flow (perm)	1734	1539	0	3142	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		23					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	454	23	22	290	0	0	409
Shared Lane Traffic (%)							
Lane Group Flow (vph)	454	23	0	312	0	0	409
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	21.0	21.0		32.7			32.7
Actuated g/C Ratio	0.32	0.32		0.50			0.50
v/c Ratio	0.81	0.04		0.20			0.16
Control Delay	32.2	6.3		10.5			9.7
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	32.2	6.3		10.5			9.7
LOS	C	A		B			A
Approach Delay	30.9			10.5			9.7
Approach LOS	C			B			A
Queue Length 50th (m)	44.2	0.0		18.4			8.7
Queue Length 95th (m)	68.9	3.6		m23.8			14.2
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	592		1581			2484
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.70	0.04		0.20			0.16

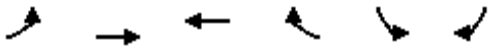
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 18.4		Intersection LOS: B	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	273	97	31	323	166	19
Future Volume (vph)	273	97	31	323	166	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.965				0.986	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1792	0	0	1851	1756	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1792	0	0	1851	1756	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		4	4		11	3
Confl. Bikes (#/hr)		4				2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	2%	3%	1%	1%	1%
Adj. Flow (vph)	303	108	34	359	184	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	411	0	0	393	205	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.5%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	71	222	244	177	100	105
Future Volume (vph)	71	222	244	177	100	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.943		0.931	
Flt Protected		0.988			0.976	
Satd. Flow (prot)	0	1839	1755	0	1691	0
Flt Permitted		0.988			0.976	
Satd. Flow (perm)	0	1839	1755	0	1691	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	7			7		
Confl. Bikes (#/hr)				4		1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	79	247	271	197	111	117
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	326	468	0	228	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

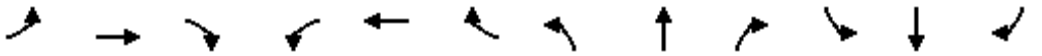
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.4%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	308	0	764
Future Volume (vph)	0	0	281	308	0	764
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.922			
Flt Protected						
Satd. Flow (prot)	0	0	3199	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3199	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	312	342	0	849
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	654	0	0	849
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	308	0	430
Future Volume (vph)	0	0	0	308	0	430
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	342	0	478
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	342	0	478
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 31.4%		ICU Level of Service A	
Analysis Period (min) 15			

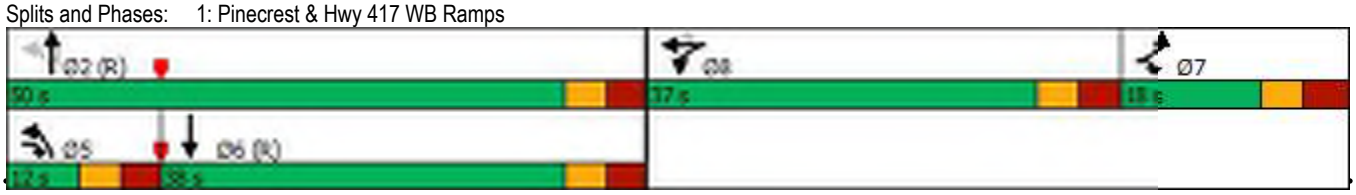


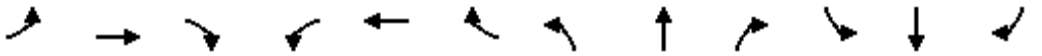
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	462	54	161	1	888	458	0	1404	4
Future Volume (vph)	7	0	29	462	54	161	1	888	458	0	1404	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.075					
Satd. Flow (perm)	877	0	799	3397	940	1474	71	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			179			468			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	8	0	32	513	60	179	1	987	509	0	1560	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	0	32	513	60	179	1	987	509	0	1564	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.7		14.0	23.4	23.4	23.4	59.9	59.9	59.9		52.6	
Actuated g/C Ratio	0.06		0.13	0.22	0.22	0.22	0.57	0.57	0.57		0.50	
v/c Ratio	0.14		0.16	0.68	0.29	0.38	0.01	0.49	0.47		0.62	
Control Delay	51.1		1.8	41.5	35.4	6.9	16.0	17.2	4.1		25.0	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	51.1		1.8	41.5	35.4	6.9	16.0	17.2	4.1		25.0	
LOS	D		A	D	D	A	B	B	A		C	
Approach Delay		11.6			32.7			12.7			25.0	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.5		0.0	46.5	9.6	0.0	0.1	59.6	3.5		87.8	
Queue Length 95th (m)	5.8		0.0	56.4	18.8	14.1	1.0	93.9	23.8		#135.6	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	553	85	1997	1072		2517	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.09		0.16	0.52	0.22	0.32	0.01	0.49	0.47		0.62	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 21.6		Intersection LOS: C	
Intersection Capacity Utilization 63.5%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	444	267	317	221	0	543	0	939	128	221	885	0
Future Volume (vph)	444	267	317	221	0	543	0	939	128	221	885	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3074	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	493	297	352	246	0	603	0	1043	142	246	983	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	493	297	352	246	0	603	0	1043	142	246	983	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

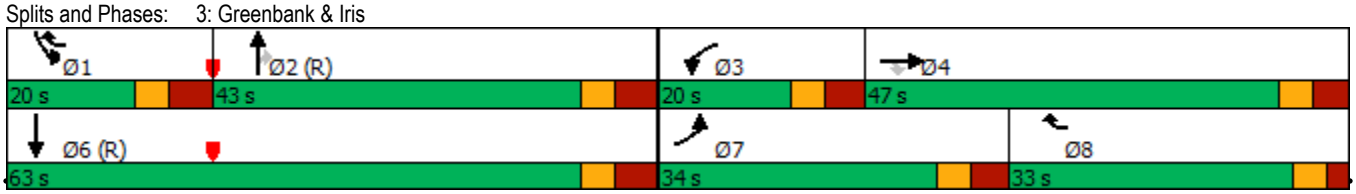
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	23.3	36.5	36.5	12.6		45.1		39.4	39.4	12.3	59.3	
Actuated g/C Ratio	0.18	0.28	0.28	0.10		0.35		0.30	0.30	0.09	0.46	
v/c Ratio	0.80	0.57	0.67	0.79		0.63		0.68	0.24	0.77	0.62	
Control Delay	61.4	44.3	27.9	66.6		32.0		43.5	1.2	74.3	29.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	61.4	44.3	27.9	66.6		32.0		43.5	1.2	74.3	29.6	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		46.7			42.1			38.4			38.6	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	57.8	57.8	38.6	27.5		50.7		83.0	0.0	29.6	95.8	
Queue Length 95th (m)	73.2	83.7	69.4	#42.6		70.2		98.4	0.7	#46.3	116.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		919		1523	599	325	1597	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.70	0.52	0.63	0.77		0.66		0.68	0.24	0.76	0.62	

Intersection Summary

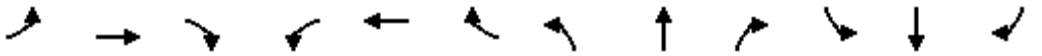
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 41.3 Intersection LOS: D
Intersection Capacity Utilization 93.7% ICU 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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



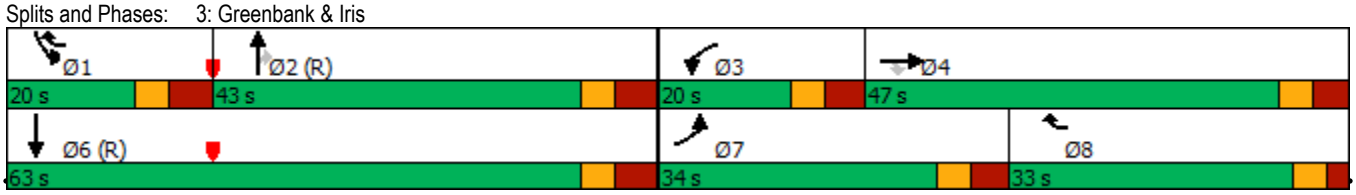
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	374	267	317	221	0	543	0	939	128	221	885	0
Future Volume (vph)	374	267	317	221	0	543	0	939	128	221	885	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3074	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	416	297	352	246	0	603	0	1043	142	246	983	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	416	297	352	246	0	603	0	1043	142	246	983	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	20.9	37.2	37.2	12.6		48.0		38.9	38.9	12.1	58.6	
Actuated g/C Ratio	0.16	0.29	0.29	0.10		0.37		0.30	0.30	0.09	0.45	
v/c Ratio	0.75	0.56	0.66	0.79		0.59		0.69	0.24	0.79	0.62	
Control Delay	60.9	43.4	27.3	66.6		30.3		44.2	1.2	75.7	30.3	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	60.9	43.4	27.3	66.6		30.3		44.2	1.2	75.7	30.3	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		44.9			40.8			39.0			39.4	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	48.9	57.8	38.6	27.5		50.7		83.0	0.0	29.6	95.8	
Queue Length 95th (m)	62.1	83.7	69.4	#42.6		68.6		98.4	0.7	#46.3	116.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		1009		1504	594	320	1578	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.59	0.52	0.63	0.77		0.60		0.69	0.24	0.77	0.62	

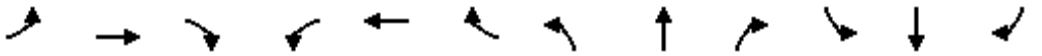
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 40.9		Intersection LOS: D	
Intersection Capacity Utilization 93.7%		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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



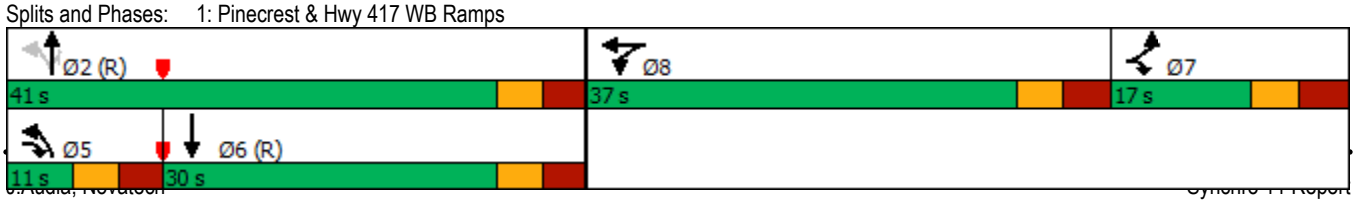
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	519	3	280	9	834	483	0	1083	10
Future Volume (vph)	9	0	11	519	3	280	9	834	483	0	1083	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		0.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	1.00				0.99		1.00		0.94		1.00	
Frt			0.850		0.891				0.850		0.999	
Flt Protected	0.950			0.950	0.987		0.950					
Satd. Flow (prot)	893	0	799	1680	1531	0	1768	3537	1582	0	5030	0
Flt Permitted	0.950			0.950	0.987		0.112					
Satd. Flow (perm)	890	0	799	1680	1531	0	208	3537	1491	0	5030	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		147				534		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	10	0	12	577	3	311	10	927	537	0	1203	11
Shared Lane Traffic (%)				20%								
Lane Group Flow (vph)	10	0	12	462	429	0	10	927	537	0	1214	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		4.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2		1	2	1		2	
Detector Template	Left		Right	Left	Thru		Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0		2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6		2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA		pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases							2		2			
Detector Phase	7		7 5	8	8		5	2	2		6	

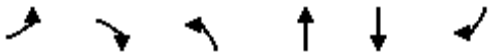
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0		5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6		11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0		11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%		11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4		4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3		3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3		3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6		6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead		Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0		3.0	3.0	3.0		3.0	
Recall Mode	None			None	None		None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0			17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5			15	15		10	
Act Effct Green (s)	6.8		11.7	28.8	28.8		47.1	47.1	47.1		42.2	
Actuated g/C Ratio	0.07		0.12	0.30	0.30		0.50	0.50	0.50		0.44	
v/c Ratio	0.16		0.06	0.91	0.76		0.05	0.53	0.53		0.54	
Control Delay	46.1		0.5	55.1	28.6		17.8	19.8	4.2		24.6	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	46.1		0.5	55.1	28.6		17.8	19.8	4.2		24.6	
LOS	D		A	E	C		B	B	A		C	
Approach Delay		21.3			42.3			14.1			24.6	
Approach LOS		C			D			B			C	
Queue Length 50th (m)	1.6		0.0	76.4	44.5		0.8	48.1	0.2		42.5	
Queue Length 95th (m)	6.2		0.0	#127.8	79.3		4.1	88.8	19.8		#102.1	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0						35.0		50.0			
Base Capacity (vph)	94		202	537	589		196	1752	1007		2234	
Starvation Cap Reductn	0		0	0	0		0	0	0		0	
Spillback Cap Reductn	0		0	0	0		0	0	0		0	
Storage Cap Reductn	0		0	0	0		0	0	0		0	
Reduced v/c Ratio	0.11		0.06	0.86	0.73		0.05	0.53	0.53		0.54	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 24.7 Intersection LOS: C
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

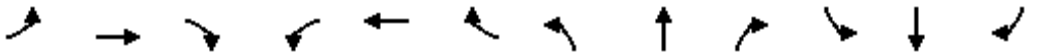
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1326	1075	240
Future Volume (vph)	0	0	0	1326	1075	240
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1473	1194	267
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1473	1194	267
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	321	214	252	0	782	0	975	281	475	600	0
Future Volume (vph)	284	321	214	252	0	782	0	975	281	475	600	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3387	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						291			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	316	357	238	280	0	869	0	1083	312	528	667	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	316	357	238	280	0	869	0	1083	312	528	667	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

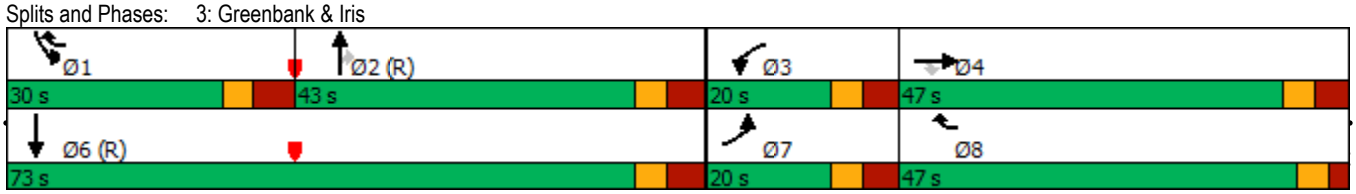
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	35.9	35.9	12.9		67.6		37.3	37.3	24.7	69.6	
Actuated g/C Ratio	0.09	0.26	0.26	0.09		0.48		0.27	0.27	0.18	0.50	
v/c Ratio	1.01	0.75	0.47	0.89		0.65		0.80	0.50	0.87	0.38	
Control Delay	115.4	58.0	18.6	84.1		26.2		53.5	9.0	72.3	23.2	
Queue Delay	0.0	0.0	0.0	0.0		0.9		0.0	0.0	0.0	0.0	
Total Delay	115.4	58.0	18.6	84.1		27.1		53.5	9.0	72.3	23.2	
LOS	F	E	B	F		C		D	A	E	C	
Approach Delay		67.6			41.0			43.6			44.9	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	~42.7	83.3	17.6	37.8		78.2		96.6	4.1	67.9	55.2	
Queue Length 95th (m)	#71.3	113.0	39.7	#58.3		93.6		112.8	27.3	#101.8	71.7	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1325		1355	624	604	1758	
Starvation Cap Reductn	0	0	0	0		213		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.01	0.67	0.43	0.89		0.78		0.80	0.50	0.87	0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 48.0		Intersection LOS: D	
Intersection Capacity Utilization 95.8%		ICU Level of Service F	
Analysis Period (min) 15			

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	319	35	12	792	0	0	701
Future Volume (vph)	319	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.941			
Satd. Flow (perm)	1751	1550	0	3328	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		39					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	354	39	13	880	0	0	779
Shared Lane Traffic (%)							
Lane Group Flow (vph)	354	39	0	893	0	0	779
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	19.0	19.0		39.7			39.7
Actuated g/C Ratio	0.27	0.27		0.57			0.57
v/c Ratio	0.75	0.09		0.47			0.27
Control Delay	32.9	6.4		10.7			8.7
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	32.9	6.4		10.7			8.7
LOS	C	A		B			A
Approach Delay	30.3			10.7			8.7
Approach LOS	C			B			A
Queue Length 50th (m)	38.5	0.0		46.1			16.1
Queue Length 95th (m)	56.7	5.1		m52.3			26.2
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	565		1888			2883
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.58	0.07		0.47			0.27

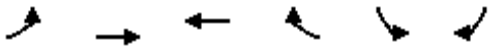
Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 78.2% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	234	34	32	372	38	14
Future Volume (vph)	234	34	32	372	38	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.983				0.963	
Flt Protected				0.996	0.965	
Satd. Flow (prot)	1830	0	0	1837	1730	0
Flt Permitted				0.996	0.965	
Satd. Flow (perm)	1830	0	0	1837	1730	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		12	12		5	9
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	260	38	36	413	42	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	298	0	0	449	58	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	129	121	98	124	188	302
Future Volume (vph)	129	121	98	124	188	302
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.925		0.917	
Flt Protected		0.975			0.981	
Satd. Flow (prot)	0	1815	1707	0	1674	0
Flt Permitted		0.975			0.981	
Satd. Flow (perm)	0	1815	1707	0	1674	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	13			13	3	3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	3%	1%	1%	1%
Adj. Flow (vph)	143	134	109	138	209	336
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	277	247	0	545	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

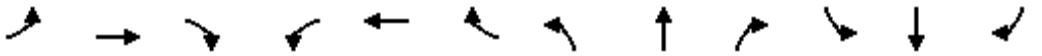
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.2%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	258	0	1034
Future Volume (vph)	0	0	804	258	0	1034
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.964			
Flt Protected						
Satd. Flow (prot)	0	0	3409	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3409	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	893	287	0	1149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1180	0	0	1149
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 78.2%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	258	0	354
Future Volume (vph)	0	0	0	258	0	354
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	287	0	393
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	287	0	393
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.5%	ICU Level of Service	A
Analysis Period (min)	15		



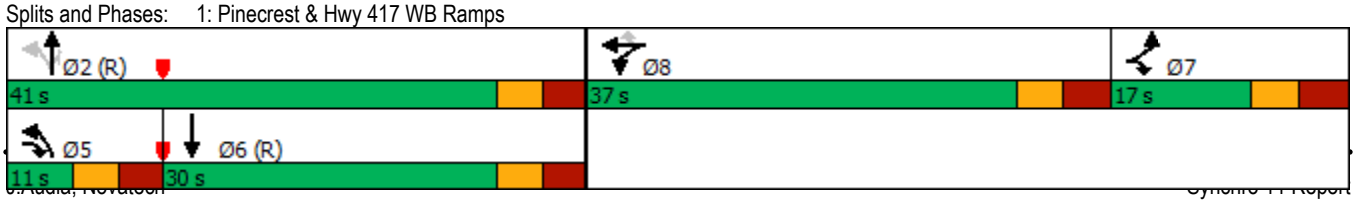
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	519	3	280	9	834	483	0	1083	10
Future Volume (vph)	9	0	11	519	3	280	9	834	483	0	1083	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98	1.00		0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5030	0
Flt Permitted	0.950			0.950			0.135					
Satd. Flow (perm)	887	0	799	3431	1414	1553	251	3537	1491	0	5030	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			246			534		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	10	0	12	577	3	311	10	927	537	0	1203	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	10	0	12	577	3	311	10	927	537	0	1214	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

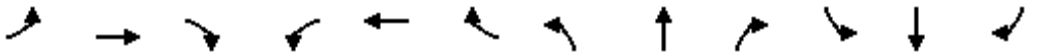
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.8		11.8	22.6	22.6	22.6	53.2	53.2	53.2		48.3	
Actuated g/C Ratio	0.07		0.12	0.24	0.24	0.24	0.56	0.56	0.56		0.51	
v/c Ratio	0.16		0.06	0.71	0.01	0.56	0.04	0.47	0.50		0.47	
Control Delay	46.1		0.5	37.6	24.0	11.1	15.9	16.1	3.7		20.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	46.1		0.5	37.6	24.0	11.1	15.9	16.1	3.7		20.8	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		21.3			28.3			11.6			20.8	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.6		0.0	46.5	0.4	8.8	0.6	37.4	0.2		33.1	
Queue Length 95th (m)	6.2		0.0	55.6	2.2	27.3	4.0	88.2	19.5		#102.1	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	664	231	1982	1070		2556	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.11		0.06	0.53	0.01	0.47	0.04	0.47	0.50		0.47	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 62.1% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





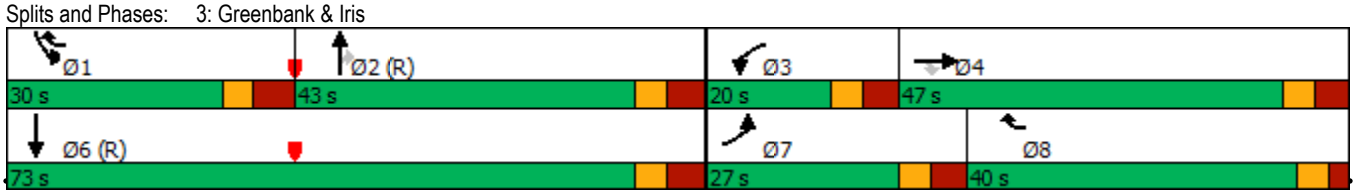
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	321	214	252	0	782	0	975	281	475	600	0
Future Volume (vph)	284	321	214	252	0	782	0	975	281	475	600	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3387	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						301			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	316	357	238	280	0	869	0	1083	312	528	667	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	316	357	238	280	0	869	0	1083	312	528	667	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	17.6	37.5	37.5	12.9		63.3		36.9	36.9	23.5	68.0	
Actuated g/C Ratio	0.13	0.27	0.27	0.09		0.45		0.26	0.26	0.17	0.49	
v/c Ratio	0.74	0.72	0.46	0.89		0.69		0.81	0.50	0.92	0.39	
Control Delay	70.0	54.9	18.0	83.9		30.0		54.2	8.1	79.4	24.1	
Queue Delay	0.0	0.0	0.0	0.0		0.7		0.0	0.0	0.0	0.0	
Total Delay	70.0	54.9	18.0	83.9		30.7		54.2	8.1	79.4	24.1	
LOS	E	D	B	F		C		D	A	E	C	
Approach Delay		50.5			43.7			43.9			48.6	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	40.4	80.8	17.1	37.8		84.9		96.6	2.1	69.7	57.6	
Queue Length 95th (m)	54.5	113.0	39.7	#57.3		105.8		112.8	24.5	#101.8	71.7	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1240		1339	627	574	1716	
Starvation Cap Reductn	0	0	0	0		126		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.66	0.67	0.43	0.89		0.78		0.81	0.50	0.92	0.39	

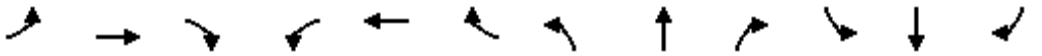
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 46.3		Intersection LOS: D	
Intersection Capacity Utilization 95.8%		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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	321	214	242	0	782	0	975	281	415	600	0
Future Volume (vph)	284	321	214	242	0	782	0	975	281	415	600	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3387	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						304			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	316	357	238	269	0	869	0	1083	312	461	667	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	316	357	238	269	0	869	0	1083	312	461	667	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

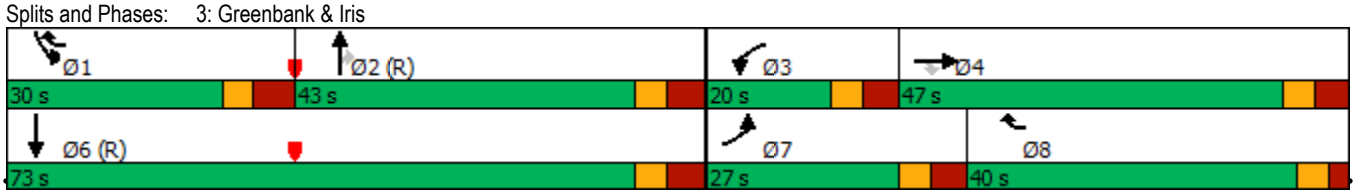
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	17.6	38.1	38.1	12.9		62.6		37.7	37.7	22.2	67.4	
Actuated g/C Ratio	0.13	0.27	0.27	0.09		0.45		0.27	0.27	0.16	0.48	
v/c Ratio	0.74	0.71	0.45	0.85		0.70		0.79	0.49	0.85	0.39	
Control Delay	70.0	54.1	17.9	79.6		30.5		53.1	7.7	72.6	24.4	
Queue Delay	0.0	0.0	0.0	0.0		0.7		0.0	0.0	0.0	0.0	
Total Delay	70.0	54.1	17.9	79.6		31.3		53.1	7.7	72.6	24.4	
LOS	E	D	B	E		C		D	A	E	C	
Approach Delay		50.1			42.7			43.0			44.1	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	40.4	80.8	17.1	36.2		84.9		96.6	1.5	59.5	57.6	
Queue Length 95th (m)	54.5	113.0	39.7	#53.9		105.8		112.8	23.6	#82.2	71.7	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1228		1367	636	555	1703	
Starvation Cap Reductn	0	0	0	0		126		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.66	0.67	0.43	0.85		0.79		0.79	0.49	0.83	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 44.6 Intersection LOS: D
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: 3: Greenbank & Iris

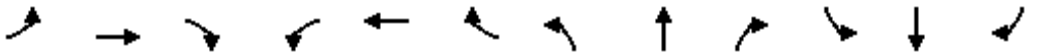


Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

APPENDIX M

Background Synchro Analysis

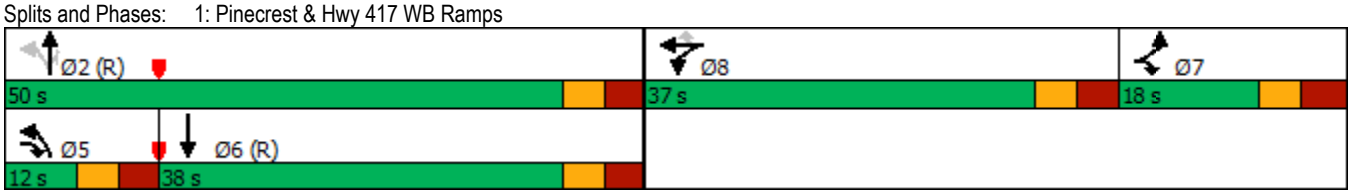


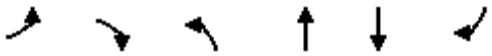
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	449	25	309	0	1064	353	0	917	0
Future Volume (vph)	2	0	64	449	25	309	0	1064	353	0	917	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			240			301			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	64	449	25	309	0	1064	353	0	917	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	64	449	25	309	0	1064	353	0	917	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.2		15.7	22.4	22.4	22.4		58.9	58.9		49.3	
Actuated g/C Ratio	0.06		0.15	0.21	0.21	0.21		0.56	0.56		0.47	
v/c Ratio	0.04		0.31	0.63	0.12	0.61		0.54	0.36		0.39	
Control Delay	47.5		6.0	40.8	31.5	14.0		18.1	4.4		21.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	47.5		6.0	40.8	31.5	14.0		18.1	4.4		21.8	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		7.3			29.9			14.7			21.8	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	40.9	3.9	11.1		62.5	4.2		41.5	
Queue Length 95th (m)	2.5		3.6	49.3	9.5	32.1		102.2	21.5		63.5	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	598		1964	986		2341	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.32	0.47	0.09	0.52		0.54	0.36		0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

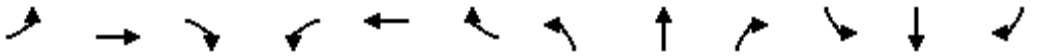
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1417	980	241
Future Volume (vph)	0	0	0	1417	980	241
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1417	980	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1417	980	241
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Future Volume (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3073	0	2757	0	5032	1465	3346	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						206			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

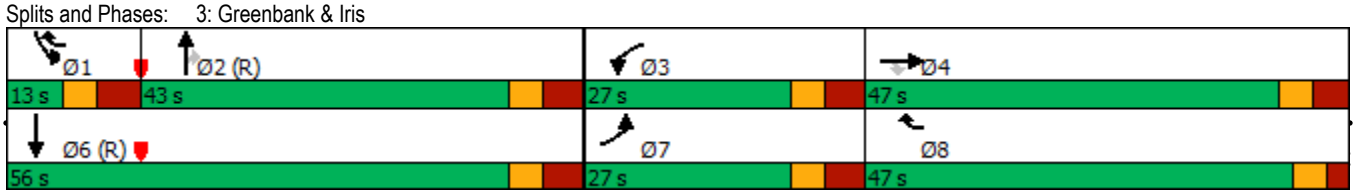
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	49.7	49.7	8.3		52.4		35.5	35.5	9.9	53.0	
Actuated g/C Ratio	0.15	0.38	0.38	0.06		0.40		0.27	0.27	0.08	0.41	
v/c Ratio	1.31	0.82	0.13	0.35		0.29		1.08	0.38	0.68	0.58	
Control Delay	196.3	47.2	0.4	54.3		23.3		94.3	6.8	73.3	33.0	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	196.3	47.2	0.4	54.3		23.3		94.3	6.8	73.3	33.0	
LOS	F	D	A	D		C		F	A	E	C	
Approach Delay		119.1			28.8			83.7			40.2	
Approach LOS		F			C			F			D	
Queue Length 50th (m)	~106.6	121.0	0.0	6.7		27.7		~143.6	0.0	~24.6	80.8	
Queue Length 95th (m)	#140.7	#172.3	0.0	13.0		40.7		#170.9	16.7	#47.7	101.0	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	712	672	482		1063		1374	549	255	1399	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.31	0.82	0.13	0.15		0.31		1.08	0.38	0.68	0.58	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 80.0 Intersection LOS: E
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

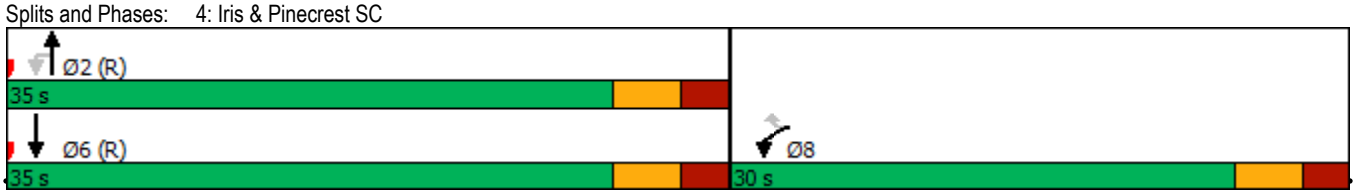
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	228	16	21	200	0	0	107
Future Volume (vph)	228	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.930			
Satd. Flow (perm)	1701	1542	0	3260	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		16					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	228	16	21	200	0	0	107
Shared Lane Traffic (%)							
Lane Group Flow (vph)	228	16	0	221	0	0	107
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	15.2	15.2		38.5			38.5
Actuated g/C Ratio	0.23	0.23		0.59			0.59
v/c Ratio	0.57	0.04		0.11			0.04
Control Delay	26.8	8.1		6.7			7.1
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	26.8	8.1		6.7			7.1
LOS	C	A		A			A
Approach Delay	25.6			6.7			7.1
Approach LOS	C			A			A
Queue Length 50th (m)	23.0	0.0		7.6			1.5
Queue Length 95th (m)	32.5	3.0		m14.4			4.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	588		1929			2979
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.36	0.03		0.11			0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay: 14.8		Intersection LOS: B	
Intersection Capacity Utilization 42.3%		ICU Level of Service A	
Analysis Period (min) 15			

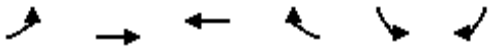
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	490	89	22	187	30	23
Future Volume (vph)	490	89	22	187	30	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.941	
Flt Protected				0.995	0.972	
Satd. Flow (prot)	1775	0	0	1774	1627	0
Flt Permitted				0.995	0.972	
Satd. Flow (perm)	1775	0	0	1774	1627	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		7	7		1	2
Confl. Bikes (#/hr)		2				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	2%	1%	6%	7%	4%
Adj. Flow (vph)	490	89	22	187	30	23
Shared Lane Traffic (%)						
Lane Group Flow (vph)	579	0	0	209	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	56	444	187	36	40	21
Future Volume (vph)	56	444	187	36	40	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.978		0.954	
Flt Protected		0.994			0.968	
Satd. Flow (prot)	0	1812	1805	0	1576	0
Flt Permitted		0.994			0.968	
Satd. Flow (perm)	0	1812	1805	0	1576	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	7			7		1
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	2%	2%	1%	5%	20%
Adj. Flow (vph)	56	444	187	36	40	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	500	223	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

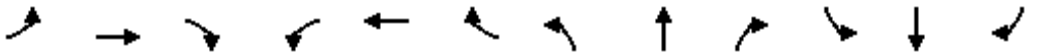
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.9%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	650	0	397
Future Volume (vph)	0	0	221	650	0	397
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.888			
Flt Protected						
Satd. Flow (prot)	0	0	3087	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3087	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	221	650	0	397
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	871	0	0	397
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	650	0	244
Future Volume (vph)	0	0	0	650	0	244
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	650	0	244
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	650	0	244
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Future Volume (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3073	0	2757	0	5032	1465	3346	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	585	89	71	0	326	0	1487	206	174	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

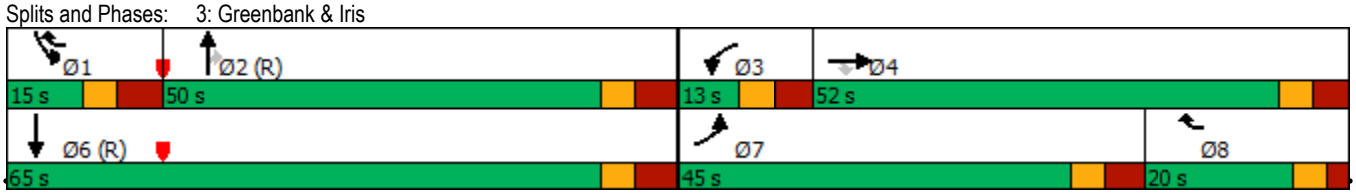
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	31.4	44.4	44.4	5.9		33.9		42.5	42.5	10.6	60.7	
Actuated g/C Ratio	0.24	0.34	0.34	0.05		0.26		0.33	0.33	0.08	0.47	
v/c Ratio	0.83	0.92	0.14	0.50		0.45		0.90	0.33	0.63	0.50	
Control Delay	56.1	62.5	0.5	64.4		37.4		50.6	4.9	69.8	26.3	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.1	62.5	0.5	64.4		37.4		50.6	4.9	69.8	26.3	
LOS	E	E	A	E		D		D	A	E	C	
Approach Delay		55.2			42.2			45.1			34.0	
Approach LOS		E			D			D			C	
Queue Length 50th (m)	79.1	131.1	0.0	7.0		31.0		122.6	0.0	21.4	71.7	
Queue Length 95th (m)	92.8	#192.6	0.0	14.2		46.8		141.0	13.4	#41.2	88.9	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		695		1645	625	275	1605	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.69	0.91	0.14	0.50		0.47		0.90	0.33	0.63	0.50	

Intersection Summary

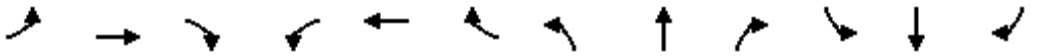
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 45.5 Intersection LOS: D
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

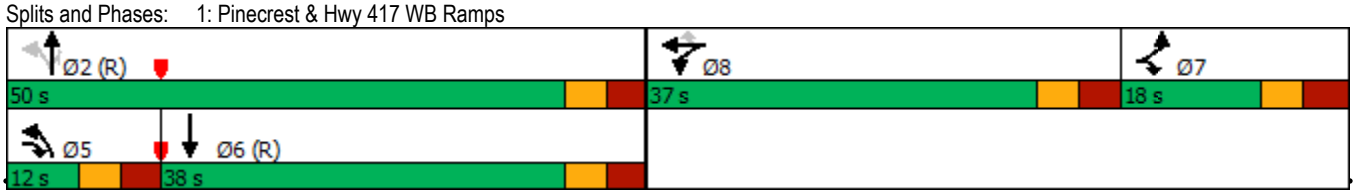


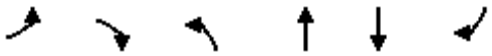
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	531	54	194	1	943	527	0	1490	4
Future Volume (vph)	7	0	29	531	54	194	1	943	527	0	1490	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.086					
Satd. Flow (perm)	876	0	799	3397	940	1474	81	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			194			507			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	7	0	29	531	54	194	1	943	527	0	1490	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	0	29	531	54	194	1	943	527	0	1494	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.6		13.9	23.7	23.7	23.7	59.7	59.7	59.7		52.4	
Actuated g/C Ratio	0.06		0.13	0.23	0.23	0.23	0.57	0.57	0.57		0.50	
v/c Ratio	0.12		0.15	0.69	0.26	0.40	0.01	0.47	0.48		0.60	
Control Delay	50.7		1.6	41.7	34.3	6.9	16.0	16.9	3.7		24.4	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	50.7		1.6	41.7	34.3	6.9	16.0	16.9	3.7		24.4	
LOS	D		A	D	C	A	B	B	A		C	
Approach Delay		11.1			32.6			12.1			24.4	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3		0.0	48.2	8.5	0.0	0.1	56.5	1.7		82.8	
Queue Length 95th (m)	5.3		0.0	58.6	17.2	14.6	1.0	87.9	19.9		#124.2	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	564	90	1991	1087		2509	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.08		0.15	0.54	0.20	0.34	0.01	0.47	0.48		0.60	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 21.2		Intersection LOS: C	
Intersection Capacity Utilization 67.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

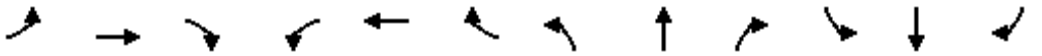
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1471	1170	364
Future Volume (vph)	0	0	0	1471	1170	364
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1471	1170	364
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1471	1170	364
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Future Volume (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3077	0	2757	0	5032	1480	3342	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						157			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

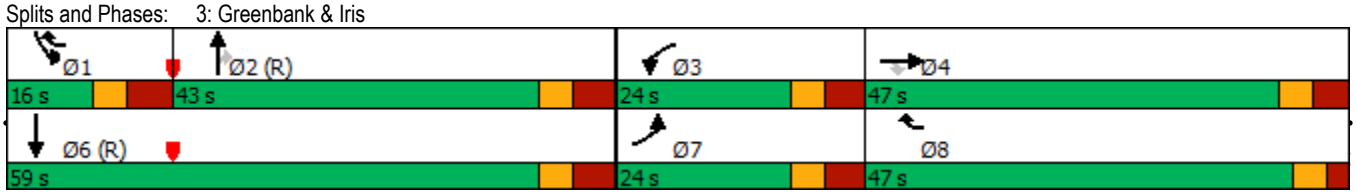
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.2	37.2	14.3		53.0		37.9	37.9	11.4	56.9	
Actuated g/C Ratio	0.13	0.29	0.29	0.11		0.41		0.29	0.29	0.09	0.44	
v/c Ratio	1.15	0.58	0.69	0.66		0.51		0.68	0.25	0.79	0.61	
Control Delay	140.1	44.1	29.3	58.0		25.0		44.1	4.6	77.4	31.4	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	140.1	44.1	29.3	58.0		25.0		44.1	4.6	77.4	31.4	
LOS	F	D	C	E		C		D	A	E	C	
Approach Delay		81.0			34.6			39.3			40.5	
Approach LOS		F			C			D			D	
Queue Length 50th (m)	~73.2	60.2	42.7	25.9		46.3		78.1	0.0	28.2	92.0	
Queue Length 95th (m)	#104.8	86.9	75.1	36.0		58.1		93.1	9.8	#55.4	116.3	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1055		1468	543	294	1533	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.15	0.54	0.66	0.56		0.54		0.68	0.25	0.79	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 50.3 Intersection LOS: D
Intersection Capacity Utilization 94.9% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

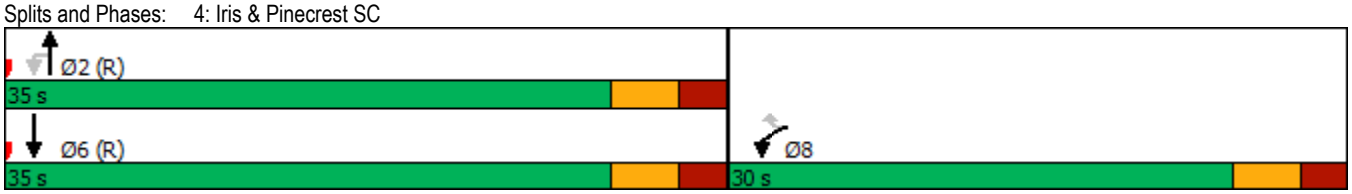
Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	431	21	20	261	0	0	368
Future Volume (vph)	431	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.918			
Satd. Flow (perm)	1734	1539	0	3159	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		21					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	431	21	20	261	0	0	368
Shared Lane Traffic (%)							
Lane Group Flow (vph)	431	21	0	281	0	0	368
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	20.4	20.4		33.3			33.3
Actuated g/C Ratio	0.31	0.31		0.51			0.51
v/c Ratio	0.79	0.04		0.17			0.15
Control Delay	31.3	6.5		10.3			9.4
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	31.3	6.5		10.3			9.4
LOS	C	A		B			A
Approach Delay	30.1			10.3			9.4
Approach LOS	C			B			A
Queue Length 50th (m)	42.0	0.0		17.1			7.5
Queue Length 95th (m)	64.5	3.3		m22.8			12.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	590		1618			2528
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.66	0.04		0.17			0.15

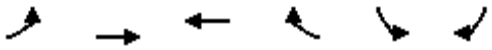
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 18.1		Intersection LOS: B	
Intersection Capacity Utilization 65.5%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	288	102	33	341	174	20
Future Volume (vph)	288	102	33	341	174	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.965				0.986	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1792	0	0	1851	1756	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1792	0	0	1851	1756	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		4	4		11	3
Confl. Bikes (#/hr)		4				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	2%	3%	1%	1%	1%
Adj. Flow (vph)	288	102	33	341	174	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	390	0	0	374	194	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	71	234	258	177	100	105
Future Volume (vph)	71	234	258	177	100	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.945		0.931	
Flt Protected		0.988			0.976	
Satd. Flow (prot)	0	1839	1759	0	1691	0
Flt Permitted		0.988			0.976	
Satd. Flow (perm)	0	1839	1759	0	1691	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	7			7		
Confl. Bikes (#/hr)				4		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	71	234	258	177	100	105
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	305	435	0	205	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

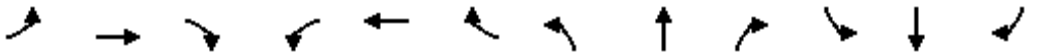
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.8%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	324	0	804
Future Volume (vph)	0	0	281	324	0	804
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.920			
Flt Protected						
Satd. Flow (prot)	0	0	3193	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3193	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	281	324	0	804
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	605	0	0	804
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	324	0	452
Future Volume (vph)	0	0	0	324	0	452
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	324	0	452
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	324	0	452
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Future Volume (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3077	0	2757	0	5032	1480	3342	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	307	368	234	0	570	0	995	135	232	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

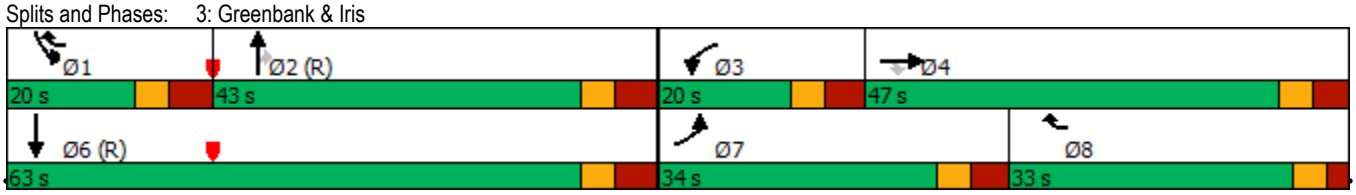
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	23.9	36.5	36.5	12.5		44.2		39.8	39.8	12.1	59.5	
Actuated g/C Ratio	0.18	0.28	0.28	0.10		0.34		0.31	0.31	0.09	0.46	
v/c Ratio	0.82	0.59	0.70	0.75		0.61		0.65	0.22	0.74	0.59	
Control Delay	61.9	45.0	30.1	64.4		31.9		42.3	0.9	72.3	28.8	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	61.9	45.0	30.1	64.4		31.9		42.3	0.9	72.3	28.8	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		47.7			41.4			37.4			37.4	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	60.2	60.2	42.7	26.3		47.7		78.1	0.0	27.8	89.7	
Queue Length 95th (m)	76.2	86.9	75.1	#38.5		65.2		93.1	0.0	#42.3	109.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		910		1539	603	322	1601	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.72	0.54	0.66	0.73		0.63		0.65	0.22	0.72	0.59	

Intersection Summary

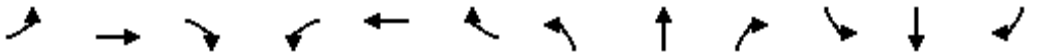
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 41.0 Intersection LOS: D
Intersection Capacity Utilization 94.9% ICU 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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



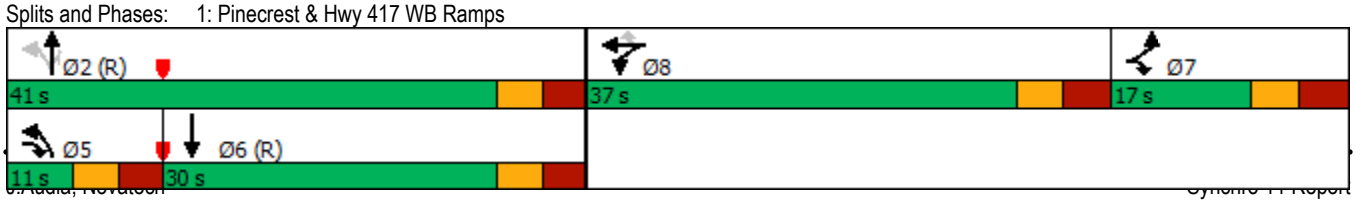
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	597	3	331	9	887	555	0	1153	10
Future Volume (vph)	9	0	11	597	3	331	9	887	555	0	1153	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98	1.00		0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5032	0
Flt Permitted	0.950			0.950			0.145					
Satd. Flow (perm)	887	0	799	3431	1414	1553	269	3537	1491	0	5032	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			253			555		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	9	0	11	597	3	331	9	887	555	0	1153	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	0	11	597	3	331	9	887	555	0	1163	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

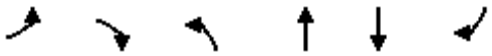
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.7		11.7	23.2	23.2	23.2	52.8	52.8	52.8		47.8	
Actuated g/C Ratio	0.07		0.12	0.24	0.24	0.24	0.56	0.56	0.56		0.50	
v/c Ratio	0.14		0.06	0.71	0.01	0.58	0.04	0.45	0.52		0.46	
Control Delay	45.7		0.5	37.4	24.0	11.9	16.0	16.1	3.7		20.7	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	45.7		0.5	37.4	24.0	11.9	16.0	16.1	3.7		20.7	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		20.9			28.3			11.4			20.7	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.5		0.0	47.5	0.4	10.5	0.5	36.7	0.0		32.7	
Queue Length 95th (m)	5.7		0.0	57.6	2.2	30.3	3.7	83.0	19.2		#95.1	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	669	239	1964	1074		2531	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.10		0.05	0.54	0.01	0.49	0.04	0.45	0.52		0.46	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 18.9 Intersection LOS: B
Intersection Capacity Utilization 66.3% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

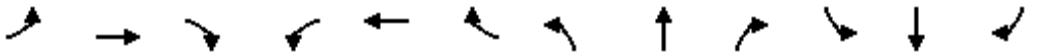
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1451	1138	282
Future Volume (vph)	0	0	0	1451	1138	282
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1451	1138	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1451	1138	282
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Future Volume (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3387	0	2785	0	5082	1541	3411	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						286			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

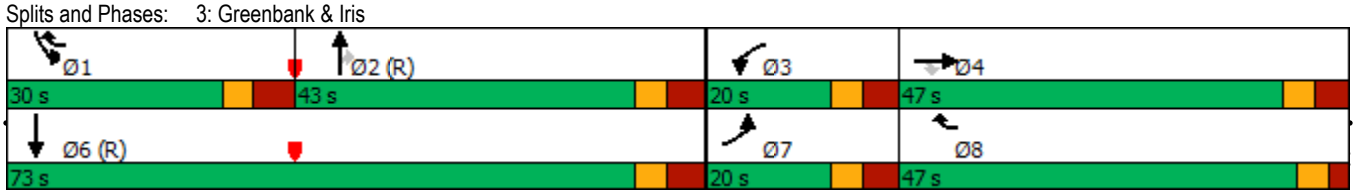
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	35.0	35.0	12.8		66.3		38.6	38.6	24.4	70.6	
Actuated g/C Ratio	0.09	0.25	0.25	0.09		0.47		0.28	0.28	0.17	0.50	
v/c Ratio	1.05	0.79	0.50	0.85		0.62		0.74	0.47	0.84	0.36	
Control Delay	124.5	62.0	20.3	80.3		26.3		50.6	7.9	68.8	22.3	
Queue Delay	0.0	0.0	0.0	0.0		1.1		0.0	0.0	0.0	0.0	
Total Delay	124.5	62.0	20.3	80.3		27.4		50.6	7.9	68.8	22.3	
LOS	F	E	C	F		C		D	A	E	C	
Approach Delay		72.8			40.4			41.1			42.7	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	~47.0	89.0	20.8	35.9		73.9		90.9	1.9	62.1	50.3	
Queue Length 95th (m)	#75.1	117.0	43.1	#55.5		86.4		106.7	23.9	#93.4	68.4	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1288		1399	631	600	1782	
Starvation Cap Reductn	0	0	0	0		238		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.05	0.69	0.45	0.84		0.78		0.74	0.47	0.83	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 48.0 Intersection LOS: D
Intersection Capacity Utilization 98.7% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	337	35	12	792	0	0	701
Future Volume (vph)	337	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.942			
Satd. Flow (perm)	1751	1550	0	3332	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		35					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	337	35	12	792	0	0	701
Shared Lane Traffic (%)							
Lane Group Flow (vph)	337	35	0	804	0	0	701
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

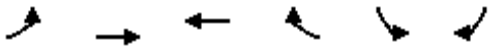
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	18.5	18.5		40.2			40.2
Actuated g/C Ratio	0.26	0.26		0.57			0.57
v/c Ratio	0.73	0.08		0.42			0.24
Control Delay	32.5	6.6		9.8			8.3
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	32.5	6.6		9.8			8.3
LOS	C	A		A			A
Approach Delay	30.1			9.8			8.3
Approach LOS	C			A			A
Queue Length 50th (m)	36.8	0.0		43.6			13.9
Queue Length 95th (m)	53.7	4.8		50.2			23.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	563		1914			2920
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.55	0.06		0.42			0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 13.3		Intersection LOS: B	
Intersection Capacity Utilization 79.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	247	36	34	393	40	15
Future Volume (vph)	247	36	34	393	40	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.983				0.963	
Flt Protected				0.996	0.965	
Satd. Flow (prot)	1830	0	0	1837	1730	0
Flt Permitted				0.996	0.965	
Satd. Flow (perm)	1830	0	0	1837	1730	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		12	12		5	9
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	247	36	34	393	40	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	283	0	0	427	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	129	128	105	124	188	302
Future Volume (vph)	129	128	105	124	188	302
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.927		0.917	
Flt Protected		0.976			0.981	
Satd. Flow (prot)	0	1817	1710	0	1674	0
Flt Permitted		0.976			0.981	
Satd. Flow (perm)	0	1817	1710	0	1674	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	13			13	3	3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	3%	1%	1%	1%
Adj. Flow (vph)	129	128	105	124	188	302
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	257	229	0	490	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

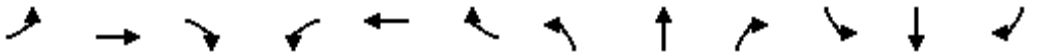
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.0%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	272	0	1088
Future Volume (vph)	0	0	804	272	0	1088
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.962			
Flt Protected						
Satd. Flow (prot)	0	0	3402	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3402	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	804	272	0	1088
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1076	0	0	1088
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 79.5%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	272	0	372
Future Volume (vph)	0	0	0	272	0	372
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	272	0	372
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	272	0	372
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		



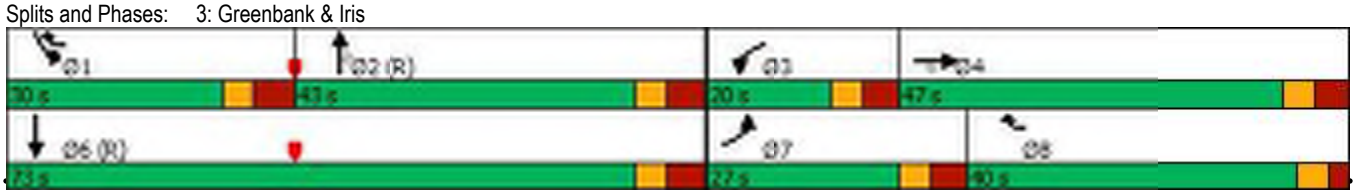
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Future Volume (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3387	0	2785	0	5082	1541	3411	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						296			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	369	249	267	0	821	0	1033	296	499	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	17.9	37.3	37.3	12.8		62.3		37.6	37.6	23.0	68.3	
Actuated g/C Ratio	0.13	0.27	0.27	0.09		0.44		0.27	0.27	0.16	0.49	
v/c Ratio	0.76	0.75	0.48	0.85		0.66		0.76	0.47	0.88	0.37	
Control Delay	70.8	56.8	19.3	80.0		30.0		51.7	7.0	75.4	23.7	
Queue Delay	0.0	0.0	0.0	0.0		0.8		0.0	0.0	0.0	0.0	
Total Delay	70.8	56.8	19.3	80.0		30.8		51.7	7.0	75.4	23.7	
LOS	E	E	B	E		C		D	A	E	C	
Approach Delay		51.8			42.9			41.8			46.3	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	42.1	84.1	19.5	35.9		78.3		90.9	0.0	65.3	54.6	
Queue Length 95th (m)	56.5	117.0	43.1	#54.5		99.1		106.7	21.2	#93.4	68.4	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1200		1365	630	566	1724	
Starvation Cap Reductn	0	0	0	0		144		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.68	0.69	0.45	0.84		0.78		0.76	0.47	0.88	0.37	

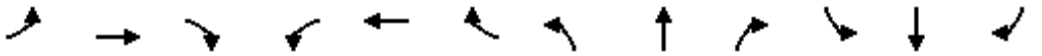
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 135			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 45.3		Intersection LOS: D	
Intersection Capacity Utilization 98.7%		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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

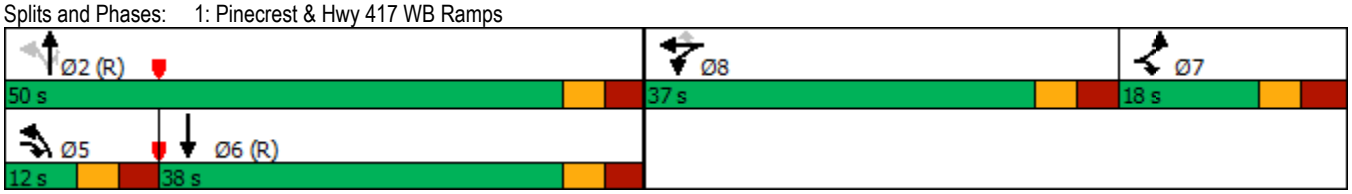


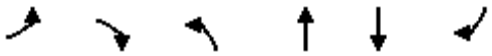
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	478	25	328	0	1089	376	0	938	0
Future Volume (vph)	2	0	64	478	25	328	0	1089	376	0	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			238			313			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	64	478	25	328	0	1089	376	0	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	64	478	25	328	0	1089	376	0	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.2		15.7	23.1	23.1	23.1		58.2	58.2		48.7	
Actuated g/C Ratio	0.06		0.15	0.22	0.22	0.22		0.55	0.55		0.46	
v/c Ratio	0.04		0.31	0.65	0.12	0.64		0.56	0.38		0.41	
Control Delay	47.5		6.0	40.9	31.2	16.1		18.7	4.8		22.3	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	47.5		6.0	40.9	31.2	16.1		18.7	4.8		22.3	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		7.3			30.8			15.1			22.3	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	43.5	3.9	14.5		66.1	5.2		43.4	
Queue Length 95th (m)	2.5		3.6	52.7	9.5	37.4		105.5	24.0		65.2	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	596		1942	984		2310	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.32	0.50	0.09	0.55		0.56	0.38		0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 20.9		Intersection LOS: C	
Intersection Capacity Utilization 73.7%		ICU Level of Service D	
Analysis Period (min) 15			

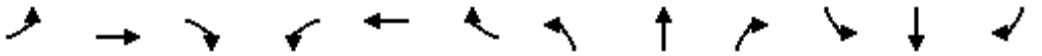
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1465	1003	256
Future Volume (vph)	0	0	0	1465	1003	256
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1465	1003	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1465	1003	256
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Future Volume (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3077	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						211			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

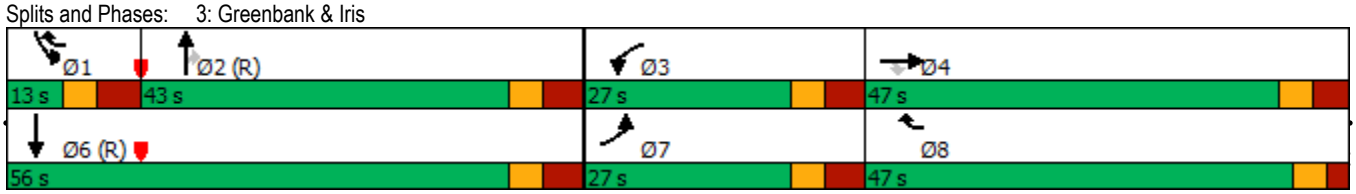
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	53.0	53.0	8.4		52.4		35.5	35.5	6.5	49.6	
Actuated g/C Ratio	0.15	0.41	0.41	0.06		0.40		0.27	0.27	0.05	0.38	
v/c Ratio	1.40	0.82	0.13	0.36		0.30		1.11	0.38	1.06	0.63	
Control Delay	230.1	45.7	0.4	54.4		23.4		103.2	6.8	144.4	35.7	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	230.1	45.7	0.4	54.4		23.4		103.2	6.8	144.4	35.7	
LOS	F	D	A	D		C		F	A	F	D	
Approach Delay		135.4			29.0			91.4			55.0	
Approach LOS		F			C			F			D	
Queue Length 50th (m)	~117.7	132.3	0.0	6.9		28.3		~149.9	0.0	~27.3	83.8	
Queue Length 95th (m)	#152.3	#198.3	0.0	13.4		41.5		#177.2	16.9	#49.0	104.0	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	758	705	482		1102		1374	553	168	1310	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.40	0.82	0.13	0.15		0.30		1.11	0.38	1.06	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay: 91.8 Intersection LOS: F
Intersection Capacity Utilization 89.5% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

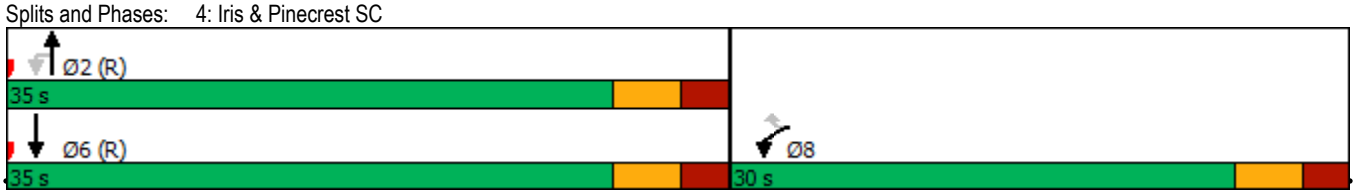
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	233	16	21	200	0	0	107
Future Volume (vph)	233	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.930			
Satd. Flow (perm)	1701	1542	0	3260	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		16					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	233	16	21	200	0	0	107
Shared Lane Traffic (%)							
Lane Group Flow (vph)	233	16	0	221	0	0	107
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	15.3	15.3		38.4			38.4
Actuated g/C Ratio	0.24	0.24		0.59			0.59
v/c Ratio	0.58	0.04		0.11			0.04
Control Delay	27.0	8.0		6.8			7.1
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	27.0	8.0		6.8			7.1
LOS	C	A		A			A
Approach Delay	25.7			6.8			7.1
Approach LOS	C			A			A
Queue Length 50th (m)	23.5	0.0		8.4			1.5
Queue Length 95th (m)	33.1	3.0		m13.6			4.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	588		1924			2971
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.37	0.03		0.11			0.04

Intersection Summary

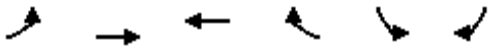
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 15.0 Intersection LOS: B
Intersection Capacity Utilization 42.5% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	502	91	23	191	31	24
Future Volume (vph)	502	91	23	191	31	24
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.941	
Flt Protected				0.995	0.973	
Satd. Flow (prot)	1775	0	0	1774	1629	0
Flt Permitted				0.995	0.973	
Satd. Flow (perm)	1775	0	0	1774	1629	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		7	7		1	2
Confl. Bikes (#/hr)		2				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	2%	1%	6%	7%	4%
Adj. Flow (vph)	502	91	23	191	31	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	593	0	0	214	55	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	56	455	191	36	40	21
Future Volume (vph)	56	455	191	36	40	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.979		0.954	
Flt Protected		0.995			0.968	
Satd. Flow (prot)	0	1814	1807	0	1576	0
Flt Permitted		0.995			0.968	
Satd. Flow (perm)	0	1814	1807	0	1576	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	7			7		1
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	2%	2%	1%	5%	20%
Adj. Flow (vph)	56	455	191	36	40	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	511	227	0	61	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

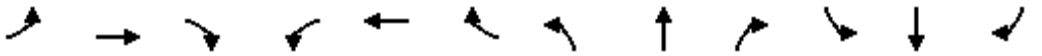
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.7%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	665	0	406
Future Volume (vph)	0	0	221	665	0	406
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.887			
Flt Protected						
Satd. Flow (prot)	0	0	3084	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3084	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	221	665	0	406
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	886	0	0	406
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	665	0	249
Future Volume (vph)	0	0	0	665	0	249
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	665	0	249
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	665	0	249
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		



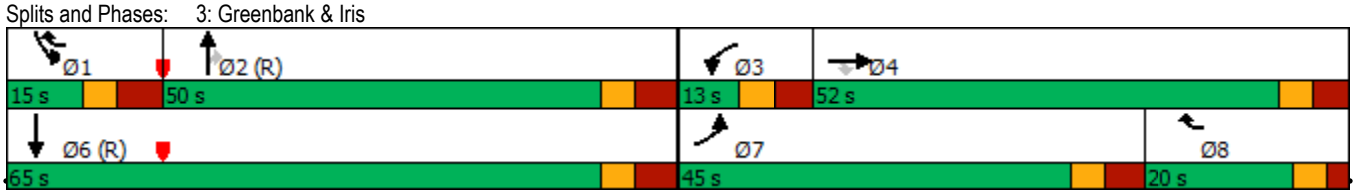
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Future Volume (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3077	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	726	624	95	73	0	333	0	1522	211	178	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	32.6	45.0	45.0	5.9		32.7		42.5	42.5	10.0	60.1	
Actuated g/C Ratio	0.25	0.35	0.35	0.05		0.25		0.33	0.33	0.08	0.46	
v/c Ratio	0.85	0.97	0.15	0.51		0.48		0.93	0.34	0.69	0.52	
Control Delay	56.6	70.9	0.5	65.2		38.5		52.8	5.2	73.3	26.8	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.6	70.9	0.5	65.2		38.5		52.8	5.2	73.3	26.8	
LOS	E	E	A	E		D		D	A	E	C	
Approach Delay		59.1			43.3			47.0			35.1	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	84.2	144.2	0.0	7.2		32.1		126.6	0.0	21.9	73.9	
Queue Length 95th (m)	99.8	#212.7	0.0	14.7		47.7		#152.8	14.5	#42.5	91.6	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		667		1645	625	259	1589	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.73	0.97	0.15	0.51		0.50		0.93	0.34	0.69	0.52	

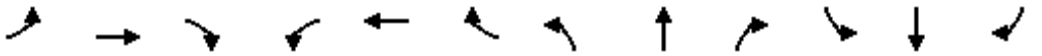
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 115			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 47.9		Intersection LOS: D	
Intersection Capacity Utilization 89.5%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



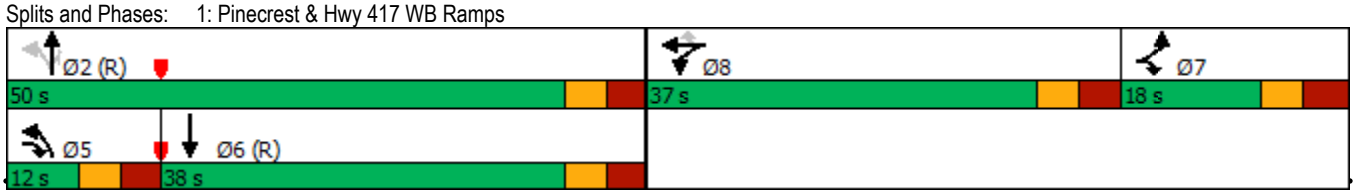
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	566	54	206	1	966	561	0	1525	4
Future Volume (vph)	7	0	29	566	54	206	1	966	561	0	1525	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.078					
Satd. Flow (perm)	876	0	799	3397	940	1474	73	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			206			527			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	7	0	29	566	54	206	1	966	561	0	1525	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	0	29	566	54	206	1	966	561	0	1529	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

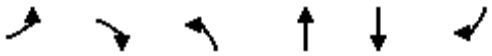
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.6		13.9	24.5	24.5	24.5	58.9	58.9	58.9		51.6	
Actuated g/C Ratio	0.06		0.13	0.23	0.23	0.23	0.56	0.56	0.56		0.49	
v/c Ratio	0.12		0.15	0.71	0.25	0.41	0.01	0.49	0.52		0.62	
Control Delay	50.7		1.6	41.9	33.7	6.7	16.0	17.4	4.1		25.2	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	50.7		1.6	41.9	33.7	6.7	16.0	17.4	4.1		25.2	
LOS	D		A	D	C	A	B	B	A		C	
Approach Delay		11.1			32.6			12.6			25.2	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3		0.0	51.3	8.4	0.0	0.1	59.9	3.0		87.3	
Queue Length 95th (m)	5.3		0.0	62.5	17.2	15.0	1.0	91.1	23.7		#130.1	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	573	85	1964	1087		2470	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.08		0.15	0.58	0.20	0.36	0.01	0.49	0.52		0.62	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 21.7 Intersection LOS: C
Intersection Capacity Utilization 69.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1522	1198	387
Future Volume (vph)	0	0	0	1522	1198	387
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1522	1198	387
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1522	1198	387
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Future Volume (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3081	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						157			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

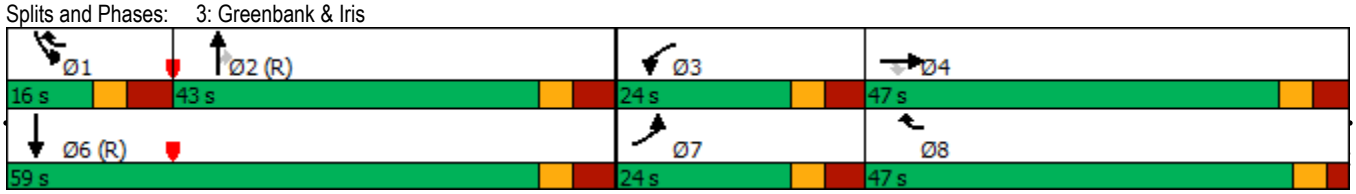
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.2	37.2	14.5		53.2		37.7	37.7	11.5	56.7	
Actuated g/C Ratio	0.13	0.29	0.29	0.11		0.41		0.29	0.29	0.09	0.44	
v/c Ratio	1.22	0.62	0.73	0.67		0.52		0.70	0.26	0.80	0.63	
Control Delay	166.1	45.4	32.4	58.0		25.0		44.7	5.1	78.5	32.0	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	166.1	45.4	32.4	58.0		25.0		44.7	5.1	78.5	32.0	
LOS	F	D	C	E		C		D	A	E	C	
Approach Delay		93.5			34.6			40.0			41.2	
Approach LOS		F			C			D			D	
Queue Length 50th (m)	~81.5	65.0	48.7	26.6		47.5		80.4	0.0	29.1	95.4	
Queue Length 95th (m)	#113.7	93.3	83.4	36.9		59.2		95.5	10.8	#57.2	119.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1057		1458	540	297	1528	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.22	0.58	0.70	0.57		0.55		0.70	0.26	0.80	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 54.5 Intersection LOS: D
Intersection Capacity Utilization 95.5% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

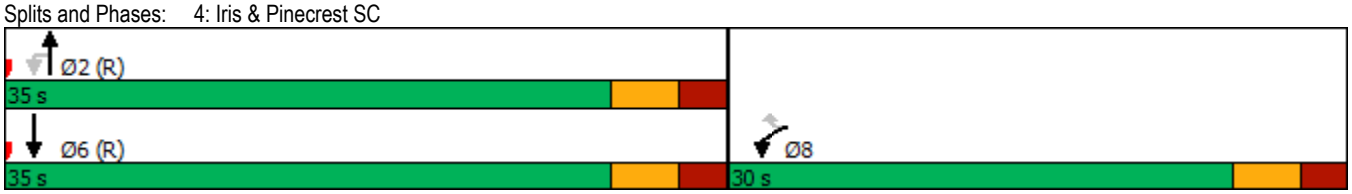
Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	442	21	20	261	0	0	368
Future Volume (vph)	442	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.918			
Satd. Flow (perm)	1734	1539	0	3159	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		21					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	442	21	20	261	0	0	368
Shared Lane Traffic (%)							
Lane Group Flow (vph)	442	21	0	281	0	0	368
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	20.7	20.7		33.0			33.0
Actuated g/C Ratio	0.32	0.32		0.51			0.51
v/c Ratio	0.80	0.04		0.18			0.15
Control Delay	31.7	6.5		10.3			9.5
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	31.7	6.5		10.3			9.5
LOS	C	A		B			A
Approach Delay	30.6			10.3			9.5
Approach LOS	C			B			A
Queue Length 50th (m)	43.2	0.0		17.4			7.6
Queue Length 95th (m)	66.5	3.3		m23.1			12.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	590		1605			2508
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.68	0.04		0.18			0.15

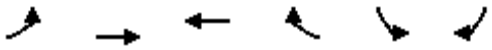
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	294	104	33	349	178	20
Future Volume (vph)	294	104	33	349	178	20
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.965				0.986	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1792	0	0	1851	1756	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1792	0	0	1851	1756	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		4	4		11	3
Confl. Bikes (#/hr)		4				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	2%	3%	1%	1%	1%
Adj. Flow (vph)	294	104	33	349	178	20
Shared Lane Traffic (%)						
Lane Group Flow (vph)	398	0	0	382	198	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.3%		ICU Level of Service C	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	71	240	264	177	100	105
Future Volume (vph)	71	240	264	177	100	105
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.946		0.931	
Flt Protected		0.989			0.976	
Satd. Flow (prot)	0	1841	1761	0	1691	0
Flt Permitted		0.989			0.976	
Satd. Flow (perm)	0	1841	1761	0	1691	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	7			7		
Confl. Bikes (#/hr)				4		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	71	240	264	177	100	105
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	311	441	0	205	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

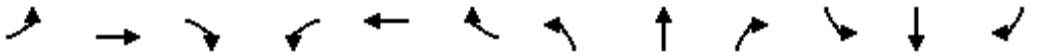
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	332	0	824
Future Volume (vph)	0	0	281	332	0	824
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.919			
Flt Protected						
Satd. Flow (prot)	0	0	3190	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3190	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	281	332	0	824
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	613	0	0	824
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	332	0	463
Future Volume (vph)	0	0	0	332	0	463
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	332	0	463
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	332	0	463
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Future Volume (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3081	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	546	327	391	240	0	584	0	1018	139	238	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

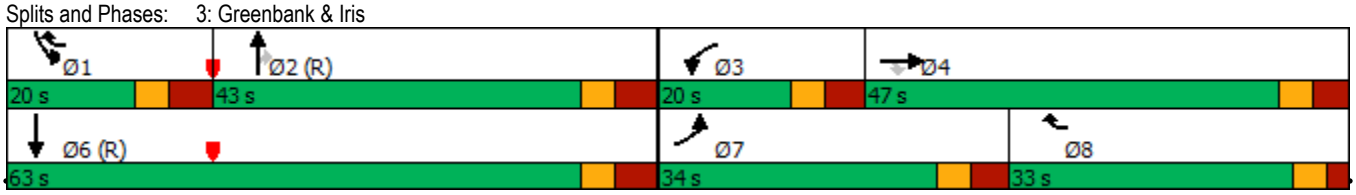
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	24.6	37.0	37.0	12.5		44.1		39.1	39.1	12.2	58.9	
Actuated g/C Ratio	0.19	0.28	0.28	0.10		0.34		0.30	0.30	0.09	0.45	
v/c Ratio	0.84	0.62	0.74	0.77		0.62		0.67	0.23	0.76	0.61	
Control Delay	63.4	45.8	32.7	65.4		31.7		43.3	1.0	73.2	29.5	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	63.4	45.8	32.7	65.4		31.7		43.3	1.0	73.2	29.5	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		49.4			41.5			38.2			38.2	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	64.0	65.0	48.7	27.0		48.8		80.4	0.0	28.6	92.7	
Queue Length 95th (m)	81.4	93.3	83.4	#40.3		67.1		95.5	0.0	#44.1	113.2	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		905		1513	596	323	1586	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.77	0.58	0.70	0.75		0.65		0.67	0.23	0.74	0.61	

Intersection Summary

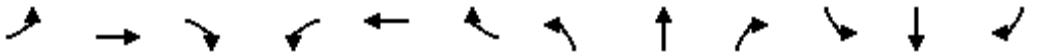
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 42.0 Intersection LOS: D
Intersection Capacity Utilization 95.5% ICU 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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



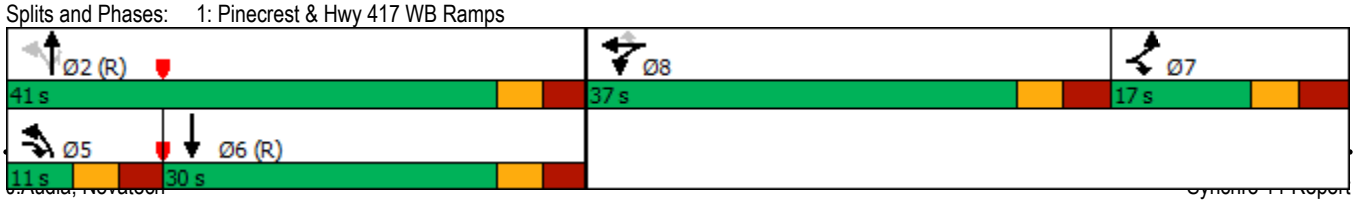
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	636	3	352	9	908	592	0	1180	10
Future Volume (vph)	9	0	11	636	3	352	9	908	592	0	1180	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98	1.00		0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5033	0
Flt Permitted	0.950			0.950			0.136					
Satd. Flow (perm)	887	0	799	3431	1414	1553	253	3537	1491	0	5033	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			251			592		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	9	0	11	636	3	352	9	908	592	0	1180	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	0	11	636	3	352	9	908	592	0	1190	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

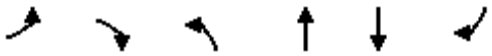
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.7		11.6	24.1	24.1	24.1	51.8	51.8	51.8		46.9	
Actuated g/C Ratio	0.07		0.12	0.25	0.25	0.25	0.55	0.55	0.55		0.49	
v/c Ratio	0.14		0.06	0.73	0.01	0.61	0.04	0.47	0.55		0.48	
Control Delay	45.7		0.5	37.3	23.3	13.4	16.4	16.8	4.0		21.4	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	45.7		0.5	37.3	23.3	13.4	16.4	16.8	4.0		21.4	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		20.9			28.8			11.8			21.4	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.5		0.0	50.4	0.4	13.6	0.6	39.4	0.0		35.0	
Queue Length 95th (m)	5.7		0.0	61.5	2.2	35.1	3.7	86.1	20.1		#98.8	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	667	228	1930	1082		2487	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.10		0.05	0.58	0.01	0.53	0.04	0.47	0.55		0.48	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 19.5 Intersection LOS: B
Intersection Capacity Utilization 68.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

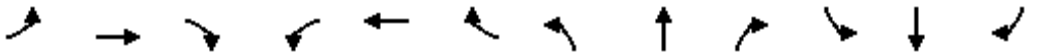
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1509	1165	300
Future Volume (vph)	0	0	0	1509	1165	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1509	1165	300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1509	1165	300
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Future Volume (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3389	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						276			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

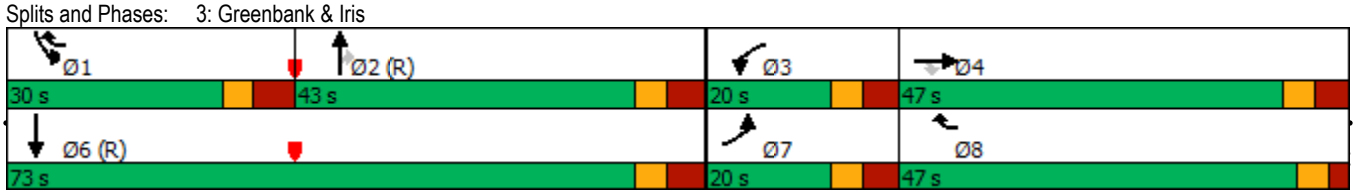
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	35.5	35.5	12.9		66.8		38.1	38.1	24.3	70.0	
Actuated g/C Ratio	0.09	0.25	0.25	0.09		0.48		0.27	0.27	0.17	0.50	
v/c Ratio	1.12	0.83	0.53	0.86		0.63		0.76	0.49	0.86	0.37	
Control Delay	142.7	65.1	22.2	82.0		26.4		51.8	9.5	71.0	22.8	
Queue Delay	0.0	0.0	0.0	0.0		1.2		0.0	0.0	0.0	0.0	
Total Delay	142.7	65.1	22.2	82.0		27.6		51.8	9.5	71.0	22.8	
LOS	F	E	C	F		C		D	A	E	C	
Approach Delay		80.7			41.0			42.3			44.0	
Approach LOS		F			D			D			D	
Queue Length 50th (m)	~52.7	95.3	24.5	36.8		75.7		93.6	5.3	64.5	52.6	
Queue Length 95th (m)	#81.3	125.7	48.1	#57.8		89.8		109.6	28.6	#96.9	70.1	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1286		1382	619	595	1768	
Starvation Cap Reductn	0	0	0	0		237		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.12	0.74	0.48	0.86		0.80		0.76	0.49	0.86	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 50.7 Intersection LOS: D
Intersection Capacity Utilization 100.1% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	345	35	12	792	0	0	701
Future Volume (vph)	345	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.942			
Satd. Flow (perm)	1751	1550	0	3332	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		35					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	345	35	12	792	0	0	701
Shared Lane Traffic (%)							
Lane Group Flow (vph)	345	35	0	804	0	0	701
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

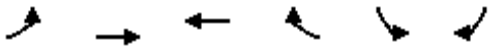
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	18.7	18.7		40.0			40.0
Actuated g/C Ratio	0.27	0.27		0.57			0.57
v/c Ratio	0.74	0.08		0.42			0.24
Control Delay	32.7	6.5		10.0			8.4
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	32.7	6.5		10.0			8.4
LOS	C	A		B			A
Approach Delay	30.3			10.0			8.4
Approach LOS	C			B			A
Queue Length 50th (m)	37.6	0.0		44.0			14.1
Queue Length 95th (m)	55.2	4.8		50.8			23.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	563		1902			2902
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.57	0.06		0.42			0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 80.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	253	37	34	402	41	15
Future Volume (vph)	253	37	34	402	41	15
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.983				0.964	
Flt Protected				0.996	0.965	
Satd. Flow (prot)	1830	0	0	1837	1732	0
Flt Permitted				0.996	0.965	
Satd. Flow (perm)	1830	0	0	1837	1732	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		12	12		5	9
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	253	37	34	402	41	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	290	0	0	436	56	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	129	131	107	124	188	302
Future Volume (vph)	129	131	107	124	188	302
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.928		0.917	
Flt Protected		0.976			0.981	
Satd. Flow (prot)	0	1817	1712	0	1674	0
Flt Permitted		0.976			0.981	
Satd. Flow (perm)	0	1817	1712	0	1674	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		154.5	
Travel Time (s)		19.3	14.3		11.1	
Confl. Peds. (#/hr)	13			13	3	3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	3%	1%	1%	1%
Adj. Flow (vph)	129	131	107	124	188	302
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	260	231	0	490	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

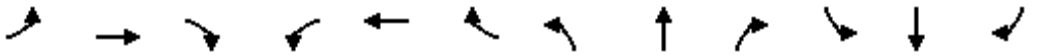
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.3%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	278	0	1114
Future Volume (vph)	0	0	804	278	0	1114
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.961			
Flt Protected						
Satd. Flow (prot)	0	0	3399	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3399	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	804	278	0	1114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1082	0	0	1114
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	278	0	380
Future Volume (vph)	0	0	0	278	0	380
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	278	0	380
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	278	0	380
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Future Volume (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3389	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						287			
Link Speed (k/h)		60			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		19.7			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	350	393	265	273	0	841	0	1057	303	511	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

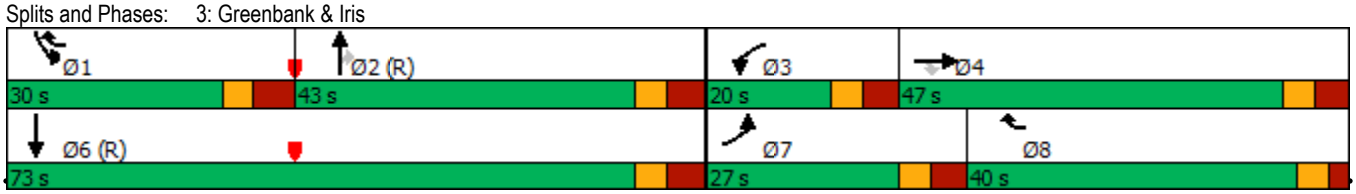
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	18.3	37.8	37.8	12.9		62.4		37.1	37.1	23.0	67.7	
Actuated g/C Ratio	0.13	0.27	0.27	0.09		0.45		0.26	0.26	0.16	0.48	
v/c Ratio	0.79	0.78	0.50	0.86		0.68		0.79	0.49	0.91	0.38	
Control Delay	72.1	59.1	21.1	81.7		30.6		53.1	8.6	78.0	24.1	
Queue Delay	0.0	0.0	0.0	0.0		0.9		0.0	0.0	0.0	0.0	
Total Delay	72.1	59.1	21.1	81.7		31.4		53.1	8.6	78.0	24.1	
LOS	E	E	C	F		C		D	A	E	C	
Approach Delay		53.6			43.7			43.2			47.8	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	44.7	91.1	23.3	36.8		84.9		93.6	3.1	67.1	56.2	
Queue Length 95th (m)	60.1	125.7	48.1	#56.8		102.6		109.6	25.6	#96.9	70.1	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1194		1346	618	564	1711	
Starvation Cap Reductn	0	0	0	0		137		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.73	0.74	0.48	0.86		0.80		0.79	0.49	0.91	0.38	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 46.7 Intersection LOS: D
Intersection Capacity Utilization 100.1% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

APPENDIX N

MMLOS Analysis

Segment MMLOS Analysis

This section provides a review of the boundary street Baxter Road, using complete streets principles. The *Multi-Modal Level of Service (MMLOS) Guidelines*, produced by IBI Group in October 2015, were used to evaluate the levels of service for each alternative mode of transportation on Baxter Road, based on existing conditions. Baxter Road has been evaluated using the targets for roadways 'within 600m of a rapid transit station.'

Exhibit 4 of the *MMLOS Guidelines* has been used to evaluate the segment pedestrian level of service (PLOS) of Baxter Road. Exhibit 22 of the *MMLOS Guidelines* identifies a target PLOS A for all roadways within 600m of a rapid transit station. The results of the segment PLOS analysis are summarized in **Table 1**.

Exhibit 11 of the *MMLOS Guidelines* has been used to evaluate the segment bicycle level of service (BLOS) of Baxter Road. Exhibit 22 of the *MMLOS Guidelines* identifies a target BLOS D for roadways within 600m of a rapid transit station that have no cycling route designation. The results of the segment BLOS analysis are summarized in **Table 2**.

As Baxter Road is not a transit route or truck route, the transit level of service (TLOS) and truck level of service (TkLOS) of Baxter Road have not been evaluated.

Table 1: PLOS Segment Analysis

Sidewalk Width	Boulevard Width	Avg. Daily Curb Lane Traffic Volume	Presence of On-Street Parking	Operating Speed[1]	PLOS
Baxter Road (south/east side)					
No sidewalk		≤ 3,000 vpd	No	60 km/h	**F**
Baxter Road (north/west side)					
No sidewalk		≤ 3,000 vpd	No	60 km/h	**F**

1. Operating speed taken as the speed limit plus 10 km/h.

Table 2: BLOS Segment Analysis

Road Class	Route Type	Bikeway Type	Travel Lanes	Operating Speed	BLOS
Baxter Road (along site frontage)					
Local	No Class	Mixed Traffic	2	60 km/h	**F**

Intersection MMLOS Analysis

The following is a review of the MMLOS of the signalized intersections within the study area, using complete streets principles. The MMLOS targets associated with intersections 'within 600m of a rapid transit station' have been considered.

Exhibit 5 of the *Addendum to the MMLOS Guidelines* has been used to evaluate the existing PLOS at the intersections listed above. Exhibit 22 of the *MMLOS Guidelines* suggests a target PLOS A for all roadways within 600m of a rapid transit station. The results of the intersection PLOS analysis are summarized in **Table 3** through **Table 5**.

Exhibit 12 of the *MMLOS Guidelines* has been used to evaluate the existing BLOS at the intersections listed above. Within 600m of a rapid transit station, Exhibit 22 of the *MMLOS Guidelines* suggests a target BLOS B for Local Routes (Iris Street) and a target BLOS C for arterial Spine Routes (Pinecrest Road, Greenbank Road). The results of the intersection BLOS analysis are summarized in **Table 6**.

Exhibit 16 of the *MMLOS Guidelines* has been used to evaluate the existing TLOS at the intersections listed above. Exhibit 22 of the *MMLOS Guidelines* identifies a target TLOS A for the transitway approach at Pinecrest Road/Highway 417 WB Ramps. Exhibit 22 of the *MMLOS Guidelines* does not identify a target TLOS for Greenbank Road/Iris Street/Highway 417 EB Ramps or Iris Street/Pinecrest Shopping Centre, as they are not designated as rapid transit/transit priority routes. The TLOS has still been evaluated for every approach that is currently used by transit. The results of the intersection TLOS analysis are summarized in **Table 7**.

Exhibit 21 of the *MMLOS Guidelines* has been used to evaluate the existing TkLOS at the intersections listed above. Exhibit 22 of the *MMLOS Guidelines* identifies a target TkLOS D for arterial truck routes within 600m of a rapid transit station (Pinecrest Road, Greenbank Road), and no target for collector roadways without a truck route designation (Iris Street). Approaches that include a right turn onto a receiving approach have been evaluated for TkLOS. The results of the intersection TkLOS analysis are summarized in **Table 8**.

Table 3: PLOS Intersection Analysis – Pinecrest Road/Highway 417 WB Ramps

CRITERIA	North Approach		East Approach		West Approach	
PETSI SCORE						
CROSSING DISTANCE CONDITIONS						
Median > 2.4m in Width	No	23	No	39	No	39
Lanes Crossed (3.5m Lane Width)	8		7		7	
SIGNAL PHASING AND TIMING						
Left Turn Conflict	Protected	0	No Left Turn/Prohibited	0	Perm + Prot	-8
Right Turn Conflict	Permissive or Yield	-5	No Right Turn/Prohibited	0	Permissive or Yield	-5
Right Turn on Red	RTOR Allowed	-3	RTOR Allowed	-3	RTOR Allowed	-3
Leading Pedestrian Interval	No	-2	No	-2	No	-2
CORNER RADIUS						
Parallel Radius	> 15m to 25m	-8	N/A	0	> 10m to 15m	-6
Parallel Right Turn Channel	No Right Turn Channel	-4	N/A	0	No Right Turn Channel	-4
Perpendicular Radius	N/A	0	N/A	0	N/A	0
Perpendicular Right Turn Channel	N/A	0	N/A	0	N/A	0
CROSSING TREATMENT						
Treatment	Zebra Stripe	-4	Zebra Stripe	-4	Zebra Stripe	-4
PETSI SCORE		**-3**		**30**		**7**
LOS		**F**		**E**		**F**
DELAY SCORE						
Cycle Length		105		105		105
Pedestrian Walk Time		7.4		26.6		14.6
DELAY SCORE		**45.4**		**29.3**		**38.9**
LOS		**E**		**C**		**D**
OVERALL		**F**		**E**		**F**

Table 4: PLOS Intersection Analysis – Greenbank Road/Iris Street/Highway 417 EB Ramps

CRITERIA	South Approach		East Approach		West Approach	
PETSI SCORE						
CROSSING DISTANCE CONDITIONS						
Median > 2.4m in Width	Yes	0	No	-10	Yes	15
Lanes Crossed (3.5m Lane Width)	10 +		10 +		9	
SIGNAL PHASING AND TIMING						
Left Turn Conflict	Protected	0	Protected	0	No Left Turn/Prohibited	0
Right Turn Conflict	Permissive or Yield	-5	Permissive or Yield	-5	Permissive or Yield	-5
Right Turn on Red	RTOR Allowed	-3	RTOR Prohibited	0	N/A	0
Leading Pedestrian Interval	No	-2	No	-2	No	-2
CORNER RADIUS						
Parallel Radius	> 15m to 25m	-8	> 15m to 25m	-8	N/A	0
Parallel Right Turn Channel	Conventional without Receiving	0	No Right Turn Channel	-4	N/A	0
Perpendicular Radius	N/A	0	N/A	0	> 15m to 25m	-8
Perpendicular Right Turn Channel	N/A	0	N/A	0	Conventional without Receiving	0
CROSSING TREATMENT						
Treatment	Standard	-7	Standard	-7	Standard	-7
PETSI SCORE		**-25**		**-36**		**-7**
LOS		**F**		**F**		**F**
DELAY SCORE						
Cycle Length		140		140		130
Pedestrian Walk Time		27.0		7.5		20.5
DELAY SCORE		**45.6**		**62.7**		**46.1**
LOS		**E**		**F**		**E**
OVERALL		**F**		**F**		**F**

Table 5: PLOS Intersection Analysis – Iris Street/Pinecrest Shopping Centre

CRITERIA	North Approach		East Approach	
PETSI SCORE				
CROSSING DISTANCE CONDITIONS				
Median > 2.4m in Width	No	55	No	105
Lanes Crossed (3.5m Lane Width)	6		3	
SIGNAL PHASING AND TIMING				
Left Turn Conflict	No Left Turn/Prohibited	0	No Left Turn/Prohibited	0
Right Turn Conflict	Permissive or Yield	-5	No Right Turn/Prohibited	0
Right Turn on Red	N/A	0	RTOR Allowed	-3
Leading Pedestrian Interval	No	-2	No	-2
CORNER RADIUS				
Parallel Radius	> 5m to 10m	-5	N/A	0
Parallel Right Turn Channel	No Right Turn Channel	-4	N/A	0
Perpendicular Radius	N/A	0	N/A	0
Perpendicular Right Turn Channel	N/A	0	N/A	0
CROSSING TREATMENT				
Treatment	Standard	-7	Standard	-7
	PETSI SCORE	**32**		**93**
	LOS	**E**		**A**
DELAY SCORE				
Cycle Length		70		65
Pedestrian Walk Time		7.4		22.3
	DELAY SCORE	**28.0**		**14.0**
	LOS	**C**		**B**
	OVERALL	**E**		**B**

Table 6: BLOS Intersection Analysis

Approach	Facility Type	Criteria	Travel Lanes and/or Speed	BLOS
Pinecrest Road/Highway 417 WB Ramps				
North Approach (Pinecrest Road)	Mixed Traffic	Right Turn Lane Characteristics	No right turn permitted	-
		Left Turn Accommodation	No left turn permitted	-
South Approach (Pinecrest Road)	Mixed Traffic	Right Turn Lane Characteristics	No right turn permitted	-
		Left Turn Accommodation	No left turn permitted	-
East Approach (Highway 417)	Cyclists Prohibited	Right Turn Lane Characteristics	N/A	-
		Left Turn Accommodation	N/A	-
West Approach (Transitway)	Cyclists Prohibited	Right Turn Lane Characteristics	No right turn permitted	-
		Left Turn Accommodation	No left turn permitted	-
Greenbank Road/Iris Street/Highway 417 EB Ramps				
North Approach (Greenbank Road)	Mixed Traffic	Right Turn Lane Characteristics	No right turn permitted	-
		Left Turn Accommodation	Dual left turn lanes	**F**
South Approach (Greenbank Road)	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane > 50m	**F**
		Left Turn Accommodation	No left turn permitted	-
East Approach (Iris Street)	Mixed Traffic	Right Turn Lane Characteristics	Dual right turn lanes	**F**
		Left Turn Accommodation	Dual left turn lanes	**F**
West Approach (Highway 417)	Cyclists Prohibited	Right Turn Lane Characteristics	N/A	-
		Left Turn Accommodation	N/A	-
Iris Street/Pinecrest Shopping Centre				
North Approach (Pinecrest SC)	Mixed Traffic	Right Turn Lane Characteristics	No right turn	-
		Left Turn Accommodation	No left turn	-
South Approach (Iris Street)	Mixed Traffic	Right Turn Lane Characteristics	No right turn (Iris Street bypass is prior to intersection)	-
		Left Turn Accommodation	No left turn	-
East Approach (Iris Street)	Mixed Traffic	Right Turn Lane Characteristics	Right turn lane < 50m	**D**
		Left Turn Accommodation	No lanes crossed; $\geq$ 60 km/h	**D**

Table 7: TLOS Intersection Analysis

Approach	Approach Delay[1]			TLOS
	AM Peak	PM Peak	SAT Peak	
Pinecrest Road/Highway 417 WB Ramps				
North Approach	22 sec	25 sec	21 sec	D
South Approach	15 sec	13 sec	12 sec	C
East Approach	29 sec	33 sec	28 sec	E
West Approach	8 sec	12 sec	21 sec	**D**
Greenbank Road/Iris Street/Highway 417 EB Ramps				
North Approach	38 sec	42 sec	45 sec	F
South Approach	100 sec	41 sec	44 sec	F
East Approach	29 sec	35 sec	41 sec	F
Iris Street/Pinecrest Shopping Centre				
North Approach	7 sec	10 sec	9 sec	B
South Approach	7 sec	11 sec	11 sec	C
East Approach	26 sec	31 sec	30 sec	E

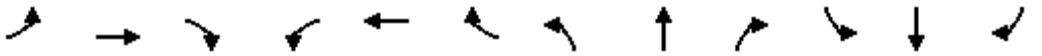
1. Delay based on outputs from Synchro analysis of existing conditions

Table 8: TkLOS Intersection Analysis

Approach	Effective Corner Radius	Number of Receiving Lanes Departing Intersection	TkLOS
Pinecrest Road/Highway 417 WB Ramps			
North Approach	10m to 15m	2	B
South Approach	N/A; highway on-ramp		-
East Approach	> 15m	3	A
West Approach	10m to 15m	3	B
Greenbank Road/Iris Street/Highway 417 EB Ramps			
North Approach	N/A; highway on-ramp		-
South Approach	10m to 15m	2	B
East Approach	10m to 15m	3	B
West Approach	> 15m	3	A
Iris Street/Pinecrest Shopping Centre			
East Approach	10m to 15m	2	B

APPENDIX O

Total Synchro Analysis

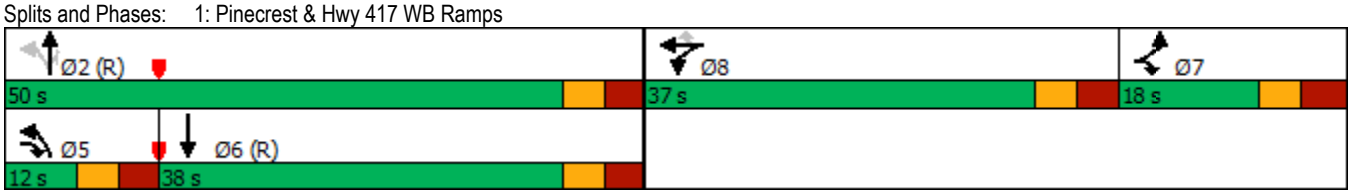


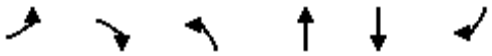
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	456	25	309	0	1083	360	0	924	0
Future Volume (vph)	2	0	64	456	25	309	0	1083	360	0	924	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			239			302			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	64	456	25	309	0	1083	360	0	924	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	64	456	25	309	0	1083	360	0	924	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.2		15.7	22.6	22.6	22.6		58.8	58.8		49.2	
Actuated g/C Ratio	0.06		0.15	0.22	0.22	0.22		0.56	0.56		0.47	
v/c Ratio	0.04		0.31	0.64	0.12	0.61		0.55	0.37		0.40	
Control Delay	47.5		6.0	40.9	31.4	14.1		18.3	4.6		21.9	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	47.5		6.0	40.9	31.4	14.1		18.3	4.6		21.9	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		7.3			30.1			14.9			21.9	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	41.5	3.9	11.2		64.5	4.7		42.1	
Queue Length 95th (m)	2.5		3.6	50.2	9.5	32.2		104.7	22.7		64.0	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	597		1960	985		2335	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.32	0.47	0.09	0.52		0.55	0.37		0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 20.5		Intersection LOS: C	
Intersection Capacity Utilization 73.0%		ICU Level of Service D	
Analysis Period (min) 15			

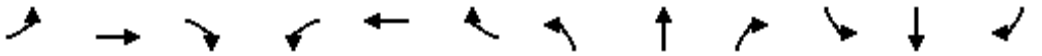
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1443	994	241
Future Volume (vph)	0	0	0	1443	994	241
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1443	994	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1443	994	241
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Future Volume (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3071	0	2757	0	5032	1465	3346	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						208			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

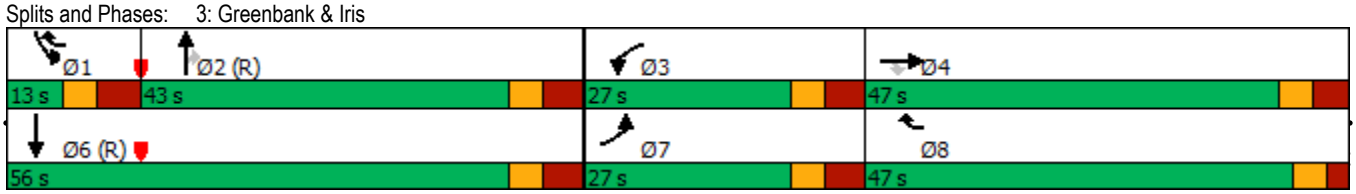
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	47.9	47.9	8.8		52.4		35.5	35.5	8.6	51.7	
Actuated g/C Ratio	0.15	0.37	0.37	0.07		0.40		0.27	0.27	0.07	0.40	
v/c Ratio	1.31	0.84	0.14	0.39		0.33		1.08	0.38	0.85	0.59	
Control Delay	196.3	49.5	0.4	55.9		22.8		94.3	6.8	91.1	33.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	196.3	49.5	0.4	55.9		22.8		94.3	6.8	91.1	33.6	
LOS	F	D	A	E		C		F	A	F	C	
Approach Delay		120.7			28.9			83.6			44.5	
Approach LOS		F			C			F			D	
Queue Length 50th (m)	~106.6	120.5	0.0	7.9		31.0		~143.6	0.0	23.2	79.4	
Queue Length 95th (m)	#140.7	#167.8	0.0	14.8		44.6		#170.9	16.9	#52.1	101.0	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	685	653	482		1076		1374	551	221	1365	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.31	0.84	0.14	0.17		0.34		1.08	0.38	0.85	0.59	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 80.6 Intersection LOS: F
Intersection Capacity Utilization 89.4% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

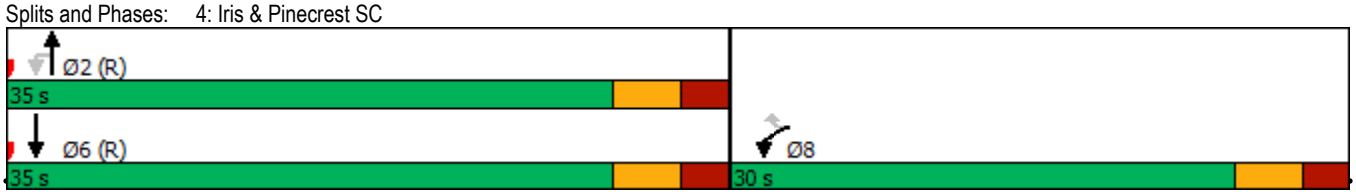
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	280	16	21	200	0	0	107
Future Volume (vph)	280	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.930			
Satd. Flow (perm)	1701	1542	0	3260	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		16					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	280	16	21	200	0	0	107
Shared Lane Traffic (%)							
Lane Group Flow (vph)	280	16	0	221	0	0	107
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	16.4	16.4		37.3			37.3
Actuated g/C Ratio	0.25	0.25		0.57			0.57
v/c Ratio	0.65	0.04		0.12			0.04
Control Delay	28.3	7.8		7.0			7.6
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	28.3	7.8		7.0			7.6
LOS	C	A		A			A
Approach Delay	27.2			7.0			7.6
Approach LOS	C			A			A
Queue Length 50th (m)	28.0	0.0		8.0			1.6
Queue Length 95th (m)	40.1	3.0		m13.6			4.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	588		1870			2887
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.44	0.03		0.12			0.04

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 16.7		Intersection LOS: B	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			

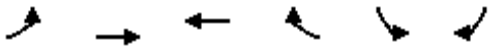
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	494	89	22	239	30	21
Future Volume (vph)	494	89	22	239	30	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.944	
Flt Protected				0.996	0.971	
Satd. Flow (prot)	1775	0	0	1774	1629	0
Flt Permitted				0.996	0.971	
Satd. Flow (perm)	1775	0	0	1774	1629	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		7	7		1	2
Confl. Bikes (#/hr)		2				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	2%	1%	6%	7%	4%
Adj. Flow (vph)	494	89	22	239	30	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	583	0	0	261	51	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	58	444	187	16	35	73
Future Volume (vph)	58	444	187	16	35	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.989		0.909	
Flt Protected		0.994			0.984	
Satd. Flow (prot)	0	1812	1824	0	1460	0
Flt Permitted		0.994			0.984	
Satd. Flow (perm)	0	1812	1824	0	1460	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		140.0	
Travel Time (s)		19.3	14.3		10.1	
Confl. Peds. (#/hr)	50			50	50	50
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	2%	2%	1%	5%	20%
Adj. Flow (vph)	58	444	187	16	35	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	502	203	0	108	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	654	0	449
Future Volume (vph)	0	0	221	654	0	449
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.888			
Flt Protected						
Satd. Flow (prot)	0	0	3087	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3087	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	221	654	0	449
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	875	0	0	449
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

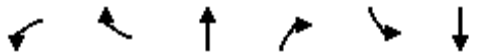
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	654	0	296
Future Volume (vph)	0	0	0	654	0	296
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	654	0	296
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	654	0	296
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.7%		ICU Level of Service A	
Analysis Period (min) 15			

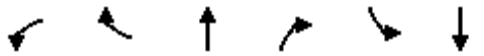
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	0	72	2	0	103
Future Volume (vph)	5	0	72	2	0	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1836	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1836	0	0	1843
Link Speed (k/h)	30		50			50
Link Distance (m)	71.6		140.0			52.4
Travel Time (s)	8.6		10.1			3.8
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	0	72	2	0	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	74	0	0	103
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	0	60	7	0	94
Future Volume (vph)	4	0	60	7	0	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.986			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1817	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1817	0	0	1843
Link Speed (k/h)	30		50			50
Link Distance (m)	131.0		52.4			103.1
Travel Time (s)	15.7		3.8			7.4
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	0	60	7	0	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	67	0	0	94
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	0	40	10	0	47
Future Volume (vph)	22	0	40	10	0	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.973			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1793	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1793	0	0	1843
Link Speed (k/h)	30		50			50
Link Distance (m)	58.0		103.1			79.2
Travel Time (s)	7.0		7.4			5.7
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	0	40	10	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	50	0	0	47
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		14	24	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	32	8	0	43	4	0
Future Volume (vph)	32	8	0	43	4	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.973					
Flt Protected					0.950	
Satd. Flow (prot)	1793	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1793	0	0	1843	1751	0
Link Speed (k/h)	50			50	30	
Link Distance (m)	79.2			61.7	93.2	
Travel Time (s)	5.7			4.4	11.2	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	32	8	0	43	4	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	43	4	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

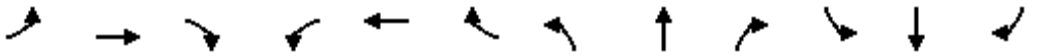
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	22	10	0	21	22	0
Future Volume (vph)	22	10	0	21	22	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.958					
Flt Protected					0.950	
Satd. Flow (prot)	1766	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1766	0	0	1843	1751	0
Link Speed (k/h)	50			50	30	
Link Distance (m)	61.7			49.9	89.6	
Travel Time (s)	4.4			3.6	10.8	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	10	0	21	22	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	21	22	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	20	2	0	15	6	0
Future Volume (vph)	20	2	0	15	6	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988					
Flt Protected					0.950	
Satd. Flow (prot)	1821	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1821	0	0	1843	1751	0
Link Speed (k/h)	50			50	30	
Link Distance (m)	49.9			41.2	94.8	
Travel Time (s)	3.6			3.0	11.4	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	2	0	15	6	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	15	6	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Future Volume (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3071	0	2757	0	5032	1465	3346	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	573	89	83	0	366	0	1487	208	188	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

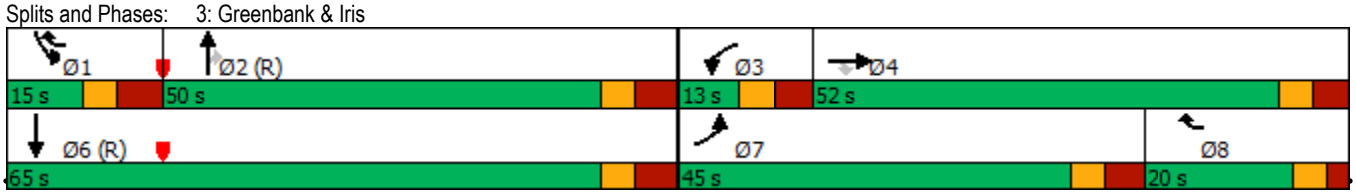
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	31.4	42.8	42.8	5.9		33.9		42.5	42.5	9.6	59.7	
Actuated g/C Ratio	0.24	0.33	0.33	0.05		0.26		0.33	0.33	0.07	0.46	
v/c Ratio	0.83	0.94	0.15	0.58		0.51		0.90	0.33	0.76	0.51	
Control Delay	56.1	66.0	0.5	69.5		38.0		50.6	5.0	78.6	26.7	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.1	66.0	0.5	69.5		38.0		50.6	5.0	78.6	26.7	
LOS	E	E	A	E		D		D	A	E	C	
Approach Delay		56.7			43.8			45.0			36.5	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	79.1	127.3	0.0	8.1		34.6		122.6	0.0	23.2	71.7	
Queue Length 95th (m)	92.8	#186.2	0.0	#17.0		52.2		141.0	14.0	#45.5	88.9	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		719		1645	625	249	1578	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.69	0.89	0.14	0.58		0.51		0.90	0.33	0.76	0.51	

Intersection Summary

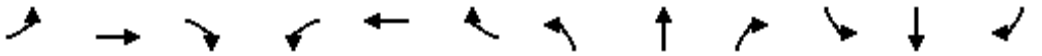
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 46.5 Intersection LOS: D
Intersection Capacity Utilization 89.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

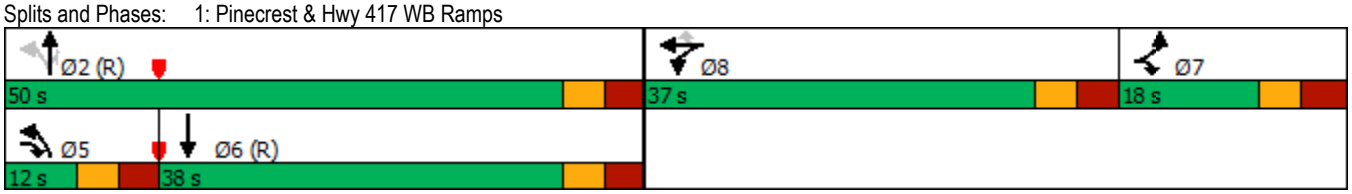


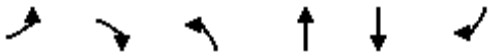
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	464	25	309	0	1151	381	0	935	0
Future Volume (vph)	2	0	64	464	25	309	0	1151	381	0	935	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			234			300			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	64	464	25	309	0	1151	381	0	935	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	64	464	25	309	0	1151	381	0	935	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.2		15.7	22.7	22.7	22.7		58.6	58.6		49.1	
Actuated g/C Ratio	0.06		0.15	0.22	0.22	0.22		0.56	0.56		0.47	
v/c Ratio	0.04		0.31	0.64	0.12	0.61		0.59	0.39		0.40	
Control Delay	47.5		6.0	41.0	31.4	14.6		19.1	5.3		22.0	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	47.5		6.0	41.0	31.4	14.6		19.1	5.3		22.0	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		7.3			30.4			15.7			22.0	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	42.2	3.9	12.0		71.1	6.7		42.9	
Queue Length 95th (m)	2.5		3.6	51.0	9.5	33.3		114.1	27.0		65.0	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	593		1955	982		2328	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.32	0.48	0.09	0.52		0.59	0.39		0.40	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 20.8		Intersection LOS: C	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			

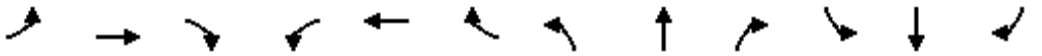
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1532	1013	241
Future Volume (vph)	0	0	0	1532	1013	241
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1532	1013	241
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1532	1013	241
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Future Volume (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3072	0	2757	0	5032	1465	3346	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						218			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

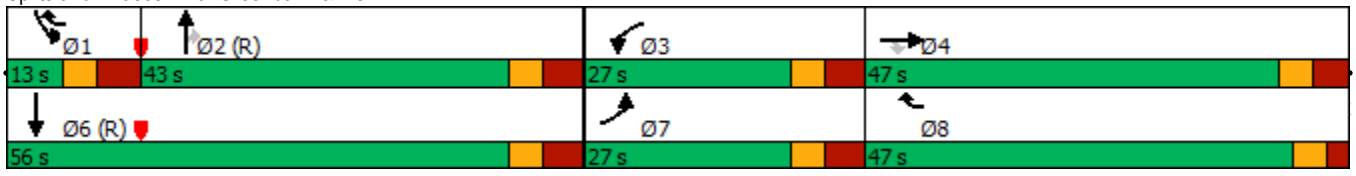
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	47.9	47.9	10.5		52.4		35.5	35.5	6.9	50.0	
Actuated g/C Ratio	0.15	0.37	0.37	0.08		0.40		0.27	0.27	0.05	0.38	
v/c Ratio	1.31	0.85	0.14	0.49		0.45		1.08	0.39	1.16	0.61	
Control Delay	196.3	50.6	0.4	60.4		26.4		94.3	6.8	169.4	34.9	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	196.3	50.6	0.4	60.4		26.4		94.3	6.8	169.4	34.9	
LOS	F	D	A	E		C		F	A	F	C	
Approach Delay		120.9			33.1			83.1			62.4	
Approach LOS		F			C			F			E	
Queue Length 50th (m)	~106.6	122.2	0.0	12.5		45.8		~143.6	0.0	~34.6	81.3	
Queue Length 95th (m)	#140.7	#184.8	0.0	m18.5		66.3		#170.9	17.1	#57.8	101.0	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	686	653	482		1079		1374	558	178	1321	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.31	0.85	0.14	0.26		0.47		1.08	0.39	1.16	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.31
Intersection Signal Delay: 82.8 Intersection LOS: F
Intersection Capacity Utilization 95.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

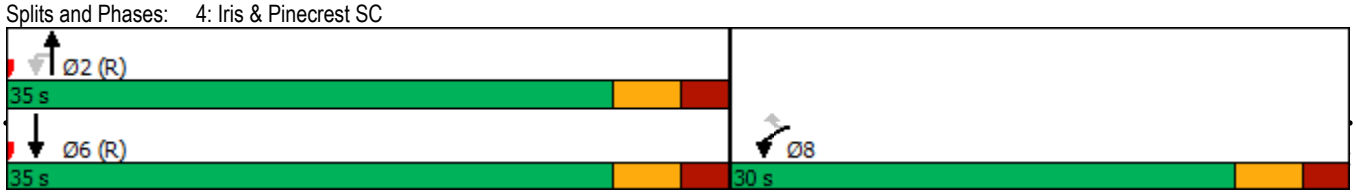
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	459	16	21	200	0	0	107
Future Volume (vph)	459	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.929			
Satd. Flow (perm)	1701	1542	0	3256	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		16					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	459	16	21	200	0	0	107
Shared Lane Traffic (%)							
Lane Group Flow (vph)	459	16	0	221	0	0	107
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	21.3	21.3		32.4			32.4
Actuated g/C Ratio	0.33	0.33		0.50			0.50
v/c Ratio	0.82	0.03		0.14			0.04
Control Delay	33.2	6.9		9.0			9.6
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	33.2	6.9		9.0			9.6
LOS	C	A		A			A
Approach Delay	32.3			9.0			9.6
Approach LOS	C			A			A
Queue Length 50th (m)	44.4	0.0		9.3			2.1
Queue Length 95th (m)	#72.5	3.0		m13.1			4.6
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	588		1621			2506
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.72	0.03		0.14			0.04

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 77.9% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC

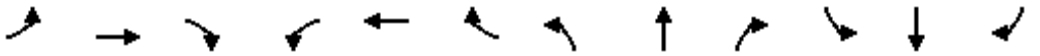


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	689	0	628
Future Volume (vph)	0	0	221	689	0	628
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.886			
Flt Protected						
Satd. Flow (prot)	0	0	3080	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3080	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	221	689	0	628
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	910	0	0	628
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.9%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	689	0	475
Future Volume (vph)	0	0	0	689	0	475
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	87.4	
Travel Time (s)	3.3			6.0	6.3	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	689	0	475
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	689	0	475
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Future Volume (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3072	0	2757	0	5032	1465	3346	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	682	580	89	124	0	504	0	1487	218	207	806	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

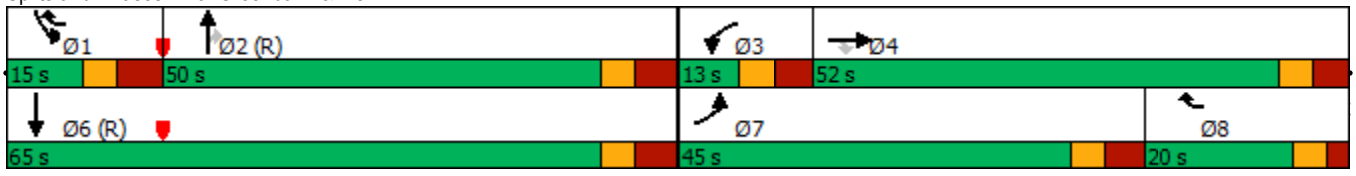
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	31.4	43.4	43.4	5.9		33.9		42.5	42.5	9.0	59.1	
Actuated g/C Ratio	0.24	0.33	0.33	0.05		0.26		0.33	0.33	0.07	0.45	
v/c Ratio	0.83	0.93	0.15	0.87		0.70		0.90	0.35	0.90	0.52	
Control Delay	56.1	64.9	0.5	101.6		45.8		50.6	5.7	97.1	27.1	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.1	64.9	0.5	101.6		45.8		50.6	5.7	97.1	27.1	
LOS	E	E	A	F		D		D	A	F	C	
Approach Delay		56.2			56.8			44.9			41.4	
Approach LOS		E			E			D			D	
Queue Length 50th (m)	79.1	129.4	0.0	13.6		52.0		122.6	0.2	~28.1	71.7	
Queue Length 95th (m)	92.8	#189.7	0.0	m#26.9		#91.5		141.0	15.9	#51.3	88.9	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		719		1645	625	231	1560	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.69	0.90	0.14	0.87		0.70		0.90	0.35	0.90	0.52	

Intersection Summary

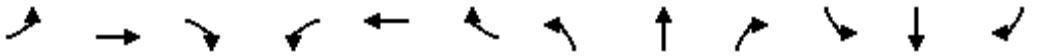
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 49.0 Intersection LOS: D
Intersection Capacity Utilization 95.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

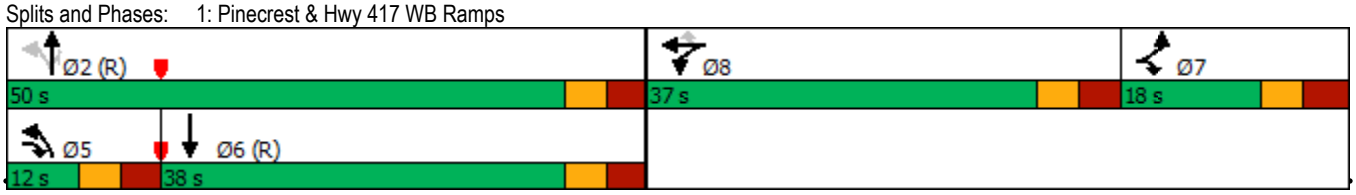


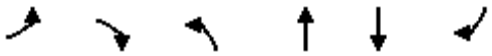
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	548	54	194	1	952	532	0	1513	4
Future Volume (vph)	7	0	29	548	54	194	1	952	532	0	1513	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.081					
Satd. Flow (perm)	876	0	799	3397	940	1474	76	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			194			507			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	7	0	29	548	54	194	1	952	532	0	1513	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	0	29	548	54	194	1	952	532	0	1517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.6		13.9	24.0	24.0	24.0	59.4	59.4	59.4		52.2	
Actuated g/C Ratio	0.06		0.13	0.23	0.23	0.23	0.57	0.57	0.57		0.50	
v/c Ratio	0.12		0.15	0.71	0.25	0.40	0.01	0.48	0.49		0.61	
Control Delay	50.7		1.6	42.0	34.1	6.8	16.0	17.1	3.8		24.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	50.7		1.6	42.0	34.1	6.8	16.0	17.1	3.8		24.8	
LOS	D		A	D	C	A	B	B	A		C	
Approach Delay		11.1			32.9			12.3			24.8	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3		0.0	49.7	8.5	0.0	0.1	58.0	2.2		85.4	
Queue Length 95th (m)	5.3		0.0	60.5	17.2	14.6	1.0	89.0	21.1		#127.7	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	564	87	1982	1084		2495	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.08		0.15	0.56	0.20	0.34	0.01	0.48	0.49		0.61	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 68.3%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

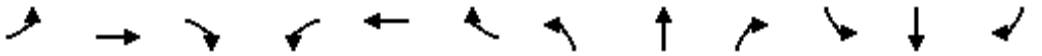
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1485	1210	364
Future Volume (vph)	0	0	0	1485	1210	364
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1485	1210	364
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1485	1210	364
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Future Volume (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3078	0	2757	0	5032	1480	3342	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						157			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

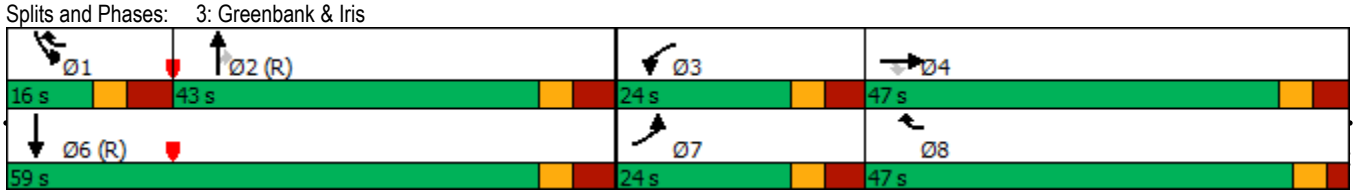
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.0	37.0	14.5		54.4		36.5	36.5	12.8	56.9	
Actuated g/C Ratio	0.13	0.28	0.28	0.11		0.42		0.28	0.28	0.10	0.44	
v/c Ratio	1.15	0.60	0.69	0.67		0.52		0.70	0.29	0.82	0.61	
Control Delay	140.1	44.8	29.5	57.6		24.5		45.3	6.5	78.2	31.5	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	140.1	44.8	29.5	57.6		24.5		45.3	6.5	78.2	31.5	
LOS	F	D	C	E		C		D	A	E	C	
Approach Delay		80.9			34.0			40.2			42.0	
Approach LOS		F			C			D			D	
Queue Length 50th (m)	~73.2	62.1	42.7	26.7		48.2		78.1	0.0	~34.1	92.4	
Queue Length 95th (m)	#104.8	89.4	75.1	37.1		60.0		93.1	13.8	#67.0	116.3	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1081		1414	529	330	1533	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.15	0.56	0.66	0.57		0.55		0.70	0.29	0.82	0.61	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 50.6 Intersection LOS: D
Intersection Capacity Utilization 96.4% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

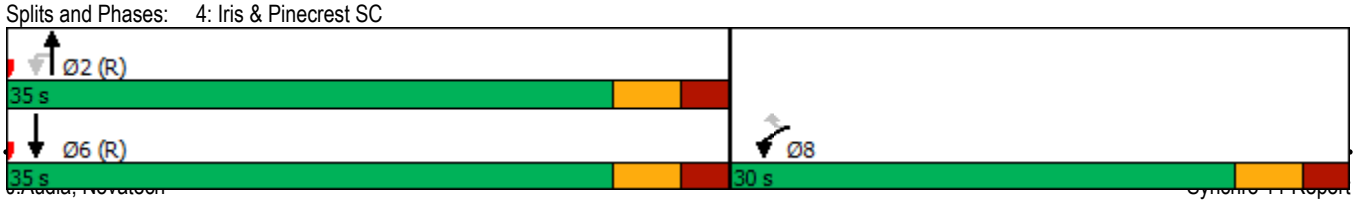
Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	461	21	20	261	0	0	368
Future Volume (vph)	461	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.918			
Satd. Flow (perm)	1734	1539	0	3159	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		21					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	461	21	20	261	0	0	368
Shared Lane Traffic (%)							
Lane Group Flow (vph)	461	21	0	281	0	0	368
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	21.1	21.1		32.6			32.6
Actuated g/C Ratio	0.32	0.32		0.50			0.50
v/c Ratio	0.82	0.04		0.18			0.15
Control Delay	32.6	6.4		10.1			9.7
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	32.6	6.4		10.1			9.7
LOS	C	A		B			A
Approach Delay	31.5			10.1			9.7
Approach LOS	C			B			A
Queue Length 50th (m)	44.7	0.0		16.3			7.8
Queue Length 95th (m)	#70.5	3.3		m21.0			12.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	590		1582			2472
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.71	0.04		0.18			0.15

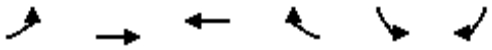
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 19.1		Intersection LOS: B	
Intersection Capacity Utilization 69.5%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	353	102	32	371	174	21
Future Volume (vph)	353	102	32	371	174	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.970				0.985	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1802	0	0	1851	1755	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1802	0	0	1851	1755	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		4	4		11	3
Confl. Bikes (#/hr)		4				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	2%	3%	1%	1%	1%
Adj. Flow (vph)	353	102	32	371	174	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	455	0	0	403	195	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	137	234	258	164	75	134
Future Volume (vph)	137	234	258	164	75	134
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.948		0.913	
Flt Protected		0.982			0.982	
Satd. Flow (prot)	0	1828	1765	0	1669	0
Flt Permitted		0.982			0.982	
Satd. Flow (perm)	0	1828	1765	0	1669	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		140.0	
Travel Time (s)		19.3	14.3		10.1	
Confl. Peds. (#/hr)	50			50	50	50
Confl. Bikes (#/hr)				4		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	137	234	258	164	75	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	371	422	0	209	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.1%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	389	0	834
Future Volume (vph)	0	0	281	389	0	834
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.913			
Flt Protected						
Satd. Flow (prot)	0	0	3171	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3171	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	281	389	0	834
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	670	0	0	834
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

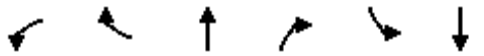
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	389	0	482
Future Volume (vph)	0	0	0	389	0	482
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	389	0	482
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	389	0	482
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

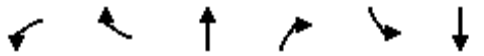
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	282	4	0	196
Future Volume (vph)	3	0	282	4	0	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1839	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1839	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	71.6		140.0			52.4
Travel Time (s)	5.2		10.1			3.8
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	282	4	0	196
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	286	0	0	196
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	0	200	22	0	149
Future Volume (vph)	17	0	200	22	0	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.987			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1819	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1819	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	131.0		52.4			103.1
Travel Time (s)	9.4		3.8			7.4
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	0	200	22	0	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	222	0	0	149
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	0	151	14	0	107
Future Volume (vph)	12	0	151	14	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.989			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1823	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1823	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	58.0		103.1			79.2
Travel Time (s)	4.2		7.4			5.7
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	0	151	14	0	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	165	0	0	107
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	128	23	0	91	16	0
Future Volume (vph)	128	23	0	91	16	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979					
Flt Protected					0.950	
Satd. Flow (prot)	1804	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1804	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	79.2			61.7	93.2	
Travel Time (s)	5.7			4.4	6.7	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	23	0	91	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	91	16	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

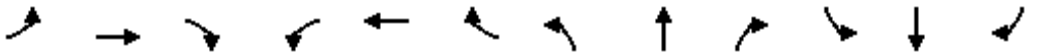
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	114	14	0	78	13	0
Future Volume (vph)	114	14	0	78	13	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985					
Flt Protected					0.950	
Satd. Flow (prot)	1815	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1815	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	61.7			49.9	89.6	
Travel Time (s)	4.4			3.6	6.5	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	114	14	0	78	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	0	0	78	13	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	110	4	0	75	3	0
Future Volume (vph)	110	4	0	75	3	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995					
Flt Protected					0.950	
Satd. Flow (prot)	1834	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1834	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	49.9			41.2	94.8	
Travel Time (s)	3.6			3.0	6.8	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	4	0	75	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	114	0	0	75	3	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Future Volume (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3078	0	2757	0	5032	1480	3342	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	315	368	240	0	594	0	995	152	272	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

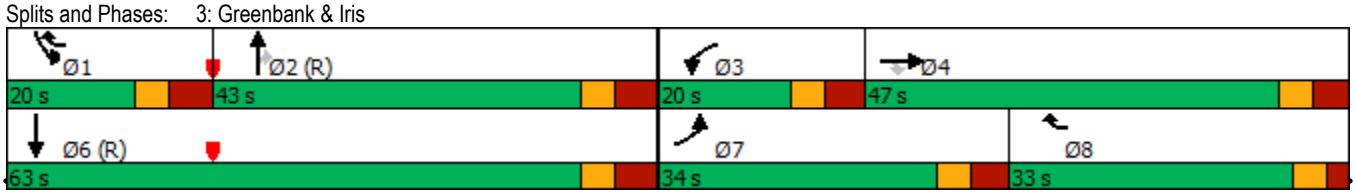
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	23.9	36.6	36.6	12.5		45.1		38.8	38.8	12.9	59.3	
Actuated g/C Ratio	0.18	0.28	0.28	0.10		0.35		0.30	0.30	0.10	0.46	
v/c Ratio	0.82	0.61	0.70	0.77		0.62		0.66	0.26	0.82	0.59	
Control Delay	61.9	45.4	30.0	64.8		30.9		43.2	1.9	77.4	28.9	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	61.9	45.4	30.0	64.8		30.9		43.2	1.9	77.4	28.9	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		47.7			40.7			37.7			39.8	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	60.2	62.1	42.7	27.1		49.6		78.1	0.0	33.0	89.7	
Queue Length 95th (m)	76.2	89.4	75.1	#40.7		68.8		93.1	2.8	#53.9	109.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		918		1502	593	332	1597	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.72	0.56	0.66	0.75		0.65		0.66	0.26	0.82	0.59	

Intersection Summary

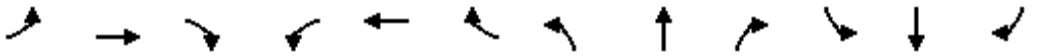
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 41.6 Intersection LOS: D
Intersection Capacity Utilization 96.4% ICU 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: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

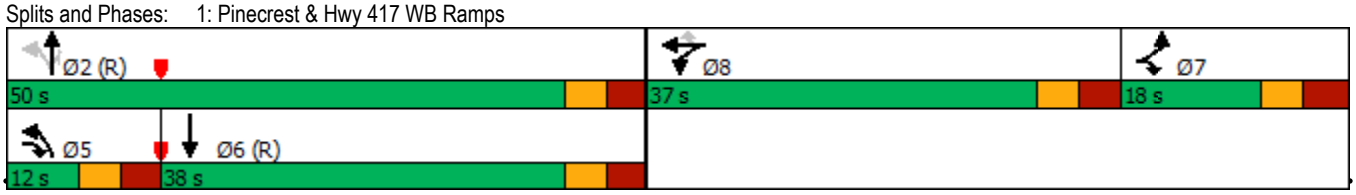


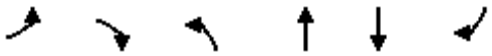
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	584	54	194	1	983	553	0	1561	4
Future Volume (vph)	7	0	29	584	54	194	1	983	553	0	1561	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.076					
Satd. Flow (perm)	876	0	799	3397	940	1474	71	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			194			511			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	7	0	29	584	54	194	1	983	553	0	1561	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	0	29	584	54	194	1	983	553	0	1565	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.6		13.9	24.8	24.8	24.8	58.6	58.6	58.6		51.3	
Actuated g/C Ratio	0.06		0.13	0.24	0.24	0.24	0.56	0.56	0.56		0.49	
v/c Ratio	0.12		0.15	0.73	0.24	0.39	0.01	0.50	0.51		0.64	
Control Delay	50.7		1.6	42.1	33.4	6.7	16.0	17.8	4.3		25.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	50.7		1.6	42.1	33.4	6.7	16.0	17.8	4.3		25.8	
LOS	D		A	D	C	A	B	B	A		C	
Approach Delay		11.1			33.3			12.9			25.8	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3		0.0	52.9	8.3	0.0	0.1	62.1	3.7		91.1	
Queue Length 95th (m)	5.3		0.0	64.4	17.1	14.5	1.0	93.6	25.5		#136.0	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	564	84	1953	1077		2453	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.08		0.15	0.59	0.20	0.34	0.01	0.50	0.51		0.64	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

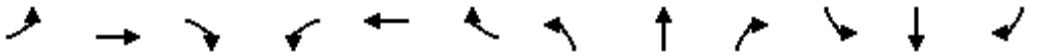
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1537	1294	364
Future Volume (vph)	0	0	0	1537	1294	364
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1537	1294	364
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1537	1294	364
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Future Volume (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3085	0	2757	0	5032	1480	3342	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						191			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

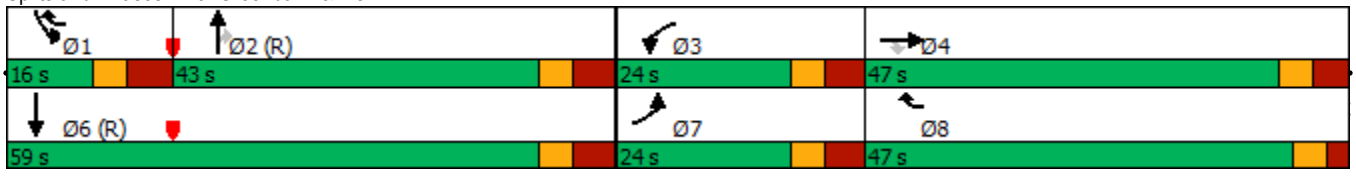
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.1	37.1	15.2		55.4		35.5	35.5	13.0	56.1	
Actuated g/C Ratio	0.13	0.29	0.29	0.12		0.43		0.27	0.27	0.10	0.43	
v/c Ratio	1.15	0.65	0.69	0.71		0.57		0.72	0.35	1.06	0.62	
Control Delay	140.1	46.7	29.4	57.6		24.5		46.4	6.8	120.0	32.1	
Queue Delay	0.0	0.0	0.0	0.0		0.9		0.0	0.0	0.0	0.0	
Total Delay	140.1	46.7	29.4	57.6		25.4		46.4	6.8	120.0	32.1	
LOS	F	D	C	E		C		D	A	F	C	
Approach Delay		80.6			34.6			40.0			56.3	
Approach LOS		F			C			D			E	
Queue Length 50th (m)	~73.2	68.8	42.7	30.4		54.5		78.1	0.0	~59.5	93.8	
Queue Length 95th (m)	#104.8	98.1	75.1	m37.5		m63.9		93.1	16.3	#90.5	116.3	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1124		1374	542	336	1511	
Starvation Cap Reductn	0	0	0	0		215		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.15	0.60	0.66	0.64		0.74		0.72	0.35	1.06	0.62	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.15
Intersection Signal Delay: 54.2 Intersection LOS: D
Intersection Capacity Utilization 100.1% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

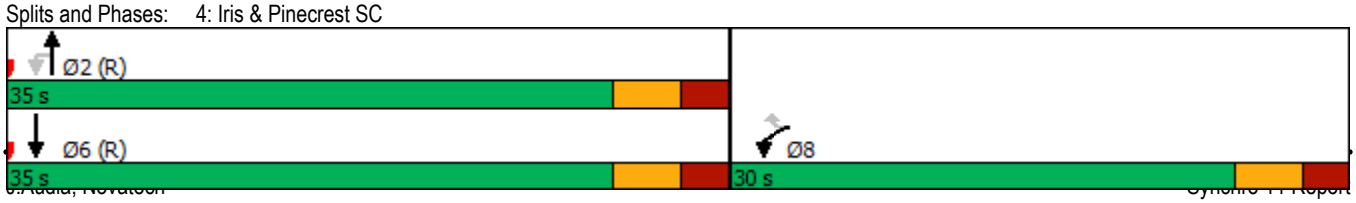
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	566	21	20	261	0	0	368
Future Volume (vph)	566	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.917			
Satd. Flow (perm)	1734	1539	0	3156	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		21					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	566	21	20	261	0	0	368
Shared Lane Traffic (%)							
Lane Group Flow (vph)	566	21	0	281	0	0	368
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	23.5	23.5		30.2			30.2
Actuated g/C Ratio	0.36	0.36		0.46			0.46
v/c Ratio	0.91	0.04		0.19			0.16
Control Delay	40.6	6.4		9.7			10.6
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	40.6	6.4		9.7			10.6
LOS	D	A		A			B
Approach Delay	39.4			9.7			10.6
Approach LOS	D			A			B
Queue Length 50th (m)	56.5	0.0		15.1			8.3
Queue Length 95th (m)	#105.8	3.3		m15.8			12.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	590		1468			2295
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.87	0.04		0.19			0.16

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 24.0 Intersection LOS: C
Intersection Capacity Utilization 80.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC

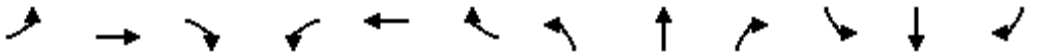


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	539	0	939
Future Volume (vph)	0	0	281	539	0	939
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.901			
Flt Protected						
Satd. Flow (prot)	0	0	3134	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3134	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	281	539	0	939
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	820	0	0	939
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	539	0	587
Future Volume (vph)	0	0	0	539	0	587
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	87.4	
Travel Time (s)	3.3			6.0	6.3	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	539	0	587
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	539	0	587
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		



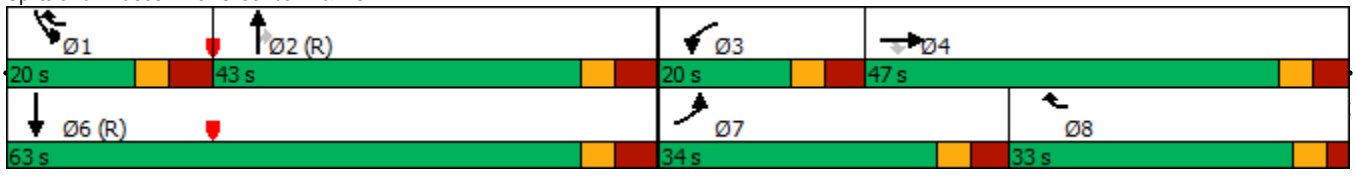
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Future Volume (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3085	0	2757	0	5032	1480	3342	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	513	343	368	269	0	670	0	995	191	356	938	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	23.9	36.6	36.6	12.8		48.3		35.7	35.7	15.7	59.0	
Actuated g/C Ratio	0.18	0.28	0.28	0.10		0.37		0.27	0.27	0.12	0.45	
v/c Ratio	0.82	0.66	0.70	0.85		0.65		0.72	0.34	0.88	0.59	
Control Delay	61.9	47.4	29.9	68.8		30.1		46.2	4.6	79.0	29.2	
Queue Delay	0.0	0.0	0.0	0.0		0.3		0.0	0.0	0.0	0.0	
Total Delay	61.9	47.4	29.9	68.8		30.5		46.2	4.6	79.0	29.2	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		48.2			41.4			39.5			42.9	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	60.2	68.8	42.7	30.9		55.2		78.1	0.0	~49.4	89.7	
Queue Length 95th (m)	76.2	98.1	75.1	m#40.5		m78.4		93.1	11.3	#77.4	109.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		1012		1380	563	406	1589	
Starvation Cap Reductn	0	0	0	0		65		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.72	0.60	0.66	0.84		0.71		0.72	0.34	0.88	0.59	

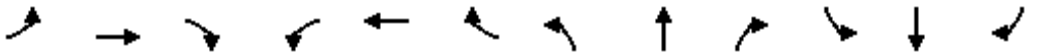
Intersection Summary			
Area Type:	Other		
Cycle Length: 130			
Actuated Cycle Length: 130			
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 125			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 43.1		Intersection LOS: D	
Intersection Capacity Utilization 100.1%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



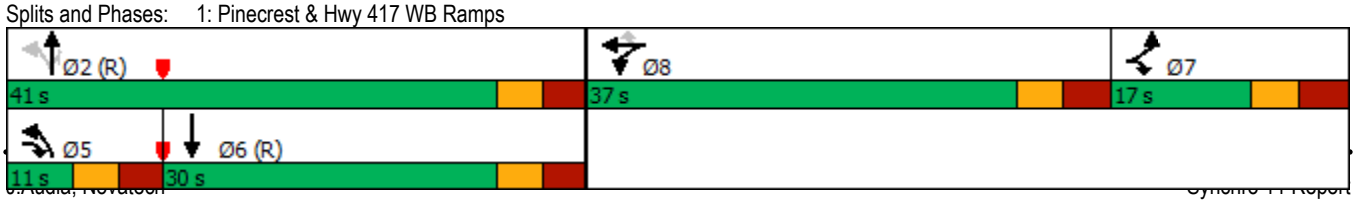
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	614	3	331	9	890	561	0	1174	10
Future Volume (vph)	9	0	11	614	3	331	9	890	561	0	1174	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98	1.00		0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5033	0
Flt Permitted	0.950			0.950			0.139					
Satd. Flow (perm)	887	0	799	3431	1414	1553	258	3537	1491	0	5033	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			253			561		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	9	0	11	614	3	331	9	890	561	0	1174	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	0	11	614	3	331	9	890	561	0	1184	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

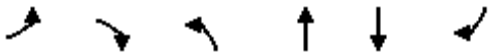
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.7		11.7	23.6	23.6	23.6	52.4	52.4	52.4		47.4	
Actuated g/C Ratio	0.07		0.12	0.25	0.25	0.25	0.55	0.55	0.55		0.50	
v/c Ratio	0.14		0.06	0.72	0.01	0.58	0.04	0.46	0.52		0.47	
Control Delay	45.7		0.5	37.4	23.7	11.7	16.1	16.3	3.8		21.1	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	45.7		0.5	37.4	23.7	11.7	16.1	16.3	3.8		21.1	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		20.9			28.4			11.5			21.1	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.5		0.0	48.7	0.4	10.4	0.5	37.6	0.0		34.1	
Queue Length 95th (m)	5.7		0.0	59.6	2.2	30.3	3.7	83.4	19.2		#98.0	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	669	233	1950	1073		2511	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.10		0.05	0.56	0.01	0.49	0.04	0.46	0.52		0.47	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 19.1 Intersection LOS: B
Intersection Capacity Utilization 66.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

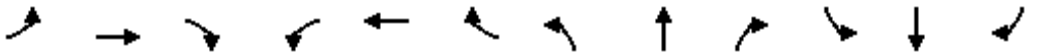
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1460	1176	282
Future Volume (vph)	0	0	0	1460	1176	282
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1460	1176	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1460	1176	282
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Future Volume (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3388	0	2785	0	5082	1541	3411	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						279			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

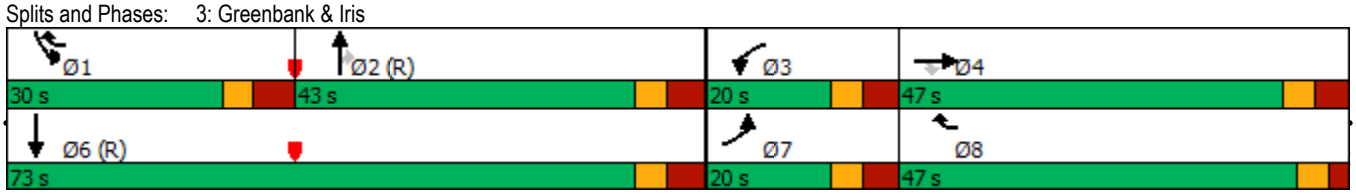
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	34.9	34.9	12.9		67.5		37.4	37.4	25.6	70.6	
Actuated g/C Ratio	0.09	0.25	0.25	0.09		0.48		0.27	0.27	0.18	0.50	
v/c Ratio	1.05	0.83	0.50	0.86		0.62		0.76	0.52	0.86	0.36	
Control Delay	124.5	64.7	20.3	81.2		25.8		51.9	10.7	69.5	22.4	
Queue Delay	0.0	0.0	0.0	0.0		1.1		0.0	0.0	0.0	0.0	
Total Delay	124.5	64.7	20.3	81.2		27.0		51.9	10.7	69.5	22.4	
LOS	F	E	C	F		C		D	B	E	C	
Approach Delay		73.7			40.3			42.2			43.9	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	~47.0	92.2	20.6	36.5		75.2		90.9	7.7	68.2	51.0	
Queue Length 95th (m)	#75.1	122.0	43.1	#57.3		88.3		106.7	32.7	#104.3	68.4	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1302		1358	616	627	1784	
Starvation Cap Reductn	0	0	0	0		242		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.05	0.72	0.45	0.86		0.79		0.76	0.52	0.86	0.36	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 48.8 Intersection LOS: D
Intersection Capacity Utilization 100.5% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	358	35	12	792	0	0	701
Future Volume (vph)	358	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.942			
Satd. Flow (perm)	1751	1550	0	3332	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		35					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	358	35	12	792	0	0	701
Shared Lane Traffic (%)							
Lane Group Flow (vph)	358	35	0	804	0	0	701
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

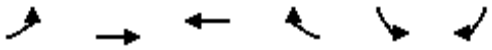
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	19.1	19.1		39.6			39.6
Actuated g/C Ratio	0.27	0.27		0.57			0.57
v/c Ratio	0.75	0.08		0.43			0.24
Control Delay	33.1	6.5		10.0			8.6
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	33.1	6.5		10.0			8.6
LOS	C	A		A			A
Approach Delay	30.8			10.0			8.6
Approach LOS	C			A			A
Queue Length 50th (m)	39.0	0.0		42.1			14.3
Queue Length 95th (m)	57.5	4.8		48.4			23.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	563		1885			2876
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.59	0.06		0.43			0.24

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 13.8		Intersection LOS: B	
Intersection Capacity Utilization 83.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	320	36	33	414	40	18
Future Volume (vph)	320	36	33	414	40	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986				0.958	
Flt Protected				0.996	0.967	
Satd. Flow (prot)	1835	0	0	1837	1724	0
Flt Permitted				0.996	0.967	
Satd. Flow (perm)	1835	0	0	1837	1724	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		12	12		5	9
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	320	36	33	414	40	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	356	0	0	447	58	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	205	128	105	110	162	322
Future Volume (vph)	205	128	105	110	162	322
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.931		0.910	
Flt Protected		0.970			0.984	
Satd. Flow (prot)	0	1806	1716	0	1667	0
Flt Permitted		0.970			0.984	
Satd. Flow (perm)	0	1806	1716	0	1667	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		140.0	
Travel Time (s)		19.3	14.3		10.1	
Confl. Peds. (#/hr)	50			50	50	50
Confl. Bikes (#/hr)				4		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	3%	1%	1%	1%
Adj. Flow (vph)	205	128	105	110	162	322
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	333	215	0	484	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 77.1%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	345	0	1109
Future Volume (vph)	0	0	804	345	0	1109
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.955			
Flt Protected						
Satd. Flow (prot)	0	0	3377	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3377	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	804	345	0	1109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1149	0	0	1109
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	345	0	393
Future Volume (vph)	0	0	0	345	0	393
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	345	0	393
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	345	0	393
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	302	4	0	456
Future Volume (vph)	3	0	302	4	0	456
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1839	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1839	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	71.6		140.0			52.4
Travel Time (s)	5.2		10.1			3.8
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	302	4	0	456
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	306	0	0	456
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	0	226	31	0	366
Future Volume (vph)	20	0	226	31	0	366
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.984			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1814	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1814	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	131.0		52.4			103.1
Travel Time (s)	9.4		3.8			7.4
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	226	31	0	366
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	257	0	0	366
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	0	171	15	0	277
Future Volume (vph)	14	0	171	15	0	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.989			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1823	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1823	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	58.0		103.1			79.2
Travel Time (s)	4.2		7.4			5.7
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	0	171	15	0	277
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	186	0	0	277
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	140	31	0	257	20	0
Future Volume (vph)	140	31	0	257	20	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.976					
Flt Protected					0.950	
Satd. Flow (prot)	1799	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1799	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	79.2			61.7	93.2	
Travel Time (s)	5.7			4.4	6.7	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	31	0	257	20	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	257	20	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

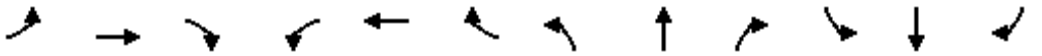
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	124	16	0	243	14	0
Future Volume (vph)	124	16	0	243	14	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985					
Flt Protected					0.950	
Satd. Flow (prot)	1815	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1815	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	61.7			49.9	89.6	
Travel Time (s)	4.4			3.6	6.5	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	16	0	243	14	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	140	0	0	243	14	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	4	0	240	3	0
Future Volume (vph)	120	4	0	240	3	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996					
Flt Protected					0.950	
Satd. Flow (prot)	1836	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1836	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	49.9			41.2	94.8	
Travel Time (s)	3.6			3.0	6.8	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	4	0	240	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	124	0	0	240	3	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Future Volume (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3388	0	2785	0	5082	1541	3411	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						291			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	382	249	272	0	837	0	1033	318	537	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

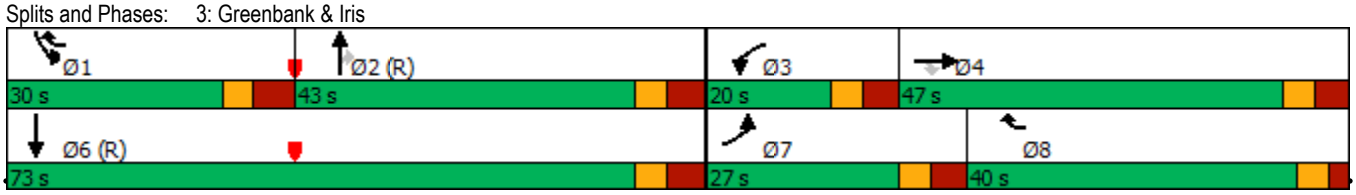
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	17.9	37.1	37.1	12.9		63.1		36.8	36.8	24.0	68.4	
Actuated g/C Ratio	0.13	0.26	0.26	0.09		0.45		0.26	0.26	0.17	0.49	
v/c Ratio	0.76	0.77	0.48	0.86		0.67		0.77	0.51	0.92	0.37	
Control Delay	70.8	58.8	19.3	80.9		29.7		52.8	9.6	78.3	23.7	
Queue Delay	0.0	0.0	0.0	0.0		0.8		0.0	0.0	0.0	0.0	
Total Delay	70.8	58.8	19.3	80.9		30.6		52.8	9.6	78.3	23.7	
LOS	E	E	B	F		C		D	A	E	C	
Approach Delay		52.6			42.9			42.6			48.6	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	42.1	87.9	19.5	36.5		80.9		90.9	5.3	71.2	54.6	
Queue Length 95th (m)	56.5	122.0	43.1	#56.2		101.1		106.7	29.4	#104.3	68.4	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1216		1335	619	586	1726	
Starvation Cap Reductn	0	0	0	0		148		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.68	0.72	0.45	0.86		0.78		0.77	0.51	0.92	0.37	

Intersection Summary

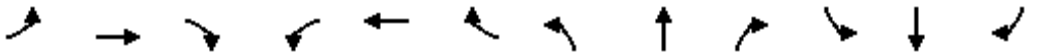
Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 46.3 Intersection LOS: D
Intersection Capacity Utilization 100.5% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



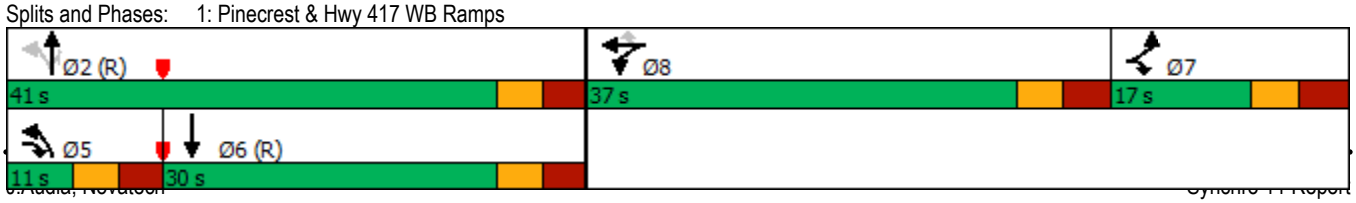
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	645	3	331	9	940	600	0	1213	10
Future Volume (vph)	9	0	11	645	3	331	9	940	600	0	1213	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98	1.00		0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5034	0
Flt Permitted	0.950			0.950			0.127					
Satd. Flow (perm)	887	0	799	3431	1414	1553	236	3537	1491	0	5034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			248			588		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	9	0	11	645	3	331	9	940	600	0	1213	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	0	11	645	3	331	9	940	600	0	1223	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

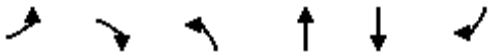
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.7		11.6	24.3	24.3	24.3	51.7	51.7	51.7		46.8	
Actuated g/C Ratio	0.07		0.12	0.26	0.26	0.26	0.54	0.54	0.54		0.49	
v/c Ratio	0.14		0.06	0.74	0.01	0.57	0.04	0.49	0.56		0.49	
Control Delay	45.7		0.5	37.4	23.3	11.8	16.6	17.2	4.3		21.8	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	45.7		0.5	37.4	23.3	11.8	16.6	17.2	4.3		21.8	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		20.9			28.7			12.2			21.8	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.5		0.0	51.1	0.4	11.0	0.6	41.6	0.8		36.4	
Queue Length 95th (m)	5.7		0.0	62.5	2.2	31.1	3.7	90.0	23.2		#103.3	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	665	219	1924	1079		2479	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.10		0.05	0.59	0.01	0.50	0.04	0.49	0.56		0.49	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 19.6 Intersection LOS: B
Intersection Capacity Utilization 67.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

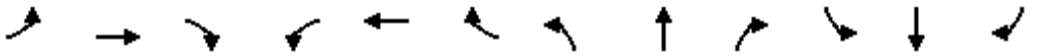
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1549	1246	282
Future Volume (vph)	0	0	0	1549	1246	282
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1549	1246	282
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1549	1246	282
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Future Volume (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3390	0	2785	0	5082	1541	3411	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						265			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

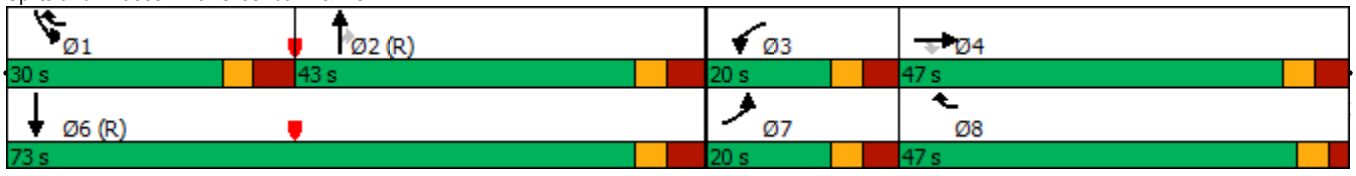
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	37.7	37.7	12.9		69.4		35.5	35.5	24.7	67.8	
Actuated g/C Ratio	0.09	0.27	0.27	0.09		0.50		0.25	0.25	0.18	0.48	
v/c Ratio	1.05	0.83	0.47	1.01		0.70		0.80	0.61	1.00	0.37	
Control Delay	124.5	62.5	19.2	104.6		26.3		54.6	16.9	94.7	24.0	
Queue Delay	0.0	0.0	0.0	0.0		2.0		0.0	0.0	0.0	0.0	
Total Delay	124.5	62.5	19.2	104.6		28.3		54.6	16.9	94.7	24.0	
LOS	F	E	B	F		C		D	B	F	C	
Approach Delay		72.2			47.1			44.9			58.4	
Approach LOS		E			D			D			E	
Queue Length 50th (m)	~47.0	97.4	19.5	~42.6		85.6		90.9	18.9	~90.6	54.6	
Queue Length 95th (m)	#75.1	134.2	43.1	m#65.3		109.5		106.7	50.1	#124.7	68.4	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1358		1288	588	604	1711	
Starvation Cap Reductn	0	0	0	0		238		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.05	0.78	0.45	1.01		0.86		0.80	0.61	1.00	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 54.4 Intersection LOS: D
Intersection Capacity Utilization 105.2% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	534	35	12	792	0	0	701
Future Volume (vph)	534	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.942			
Satd. Flow (perm)	1751	1550	0	3332	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		35					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	534	35	12	792	0	0	701
Shared Lane Traffic (%)							
Lane Group Flow (vph)	534	35	0	804	0	0	701
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	23.5	23.5		35.2			35.2
Actuated g/C Ratio	0.34	0.34		0.50			0.50
v/c Ratio	0.91	0.06		0.48			0.27
Control Delay	44.3	6.2		12.0			10.6
Queue Delay	0.7	0.0		0.0			0.0
Total Delay	45.0	6.2		12.0			10.6
LOS	D	A		B			B
Approach Delay	42.6			12.0			10.6
Approach LOS	D			B			B
Queue Length 50th (m)	59.2	0.0		40.8			17.2
Queue Length 95th (m)	#108.1	4.8		m41.6			23.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	563		1674			2554
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	9	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.89	0.06		0.48			0.27

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 19.9 Intersection LOS: B
Intersection Capacity Utilization 98.1% 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.
m Volume for 95th percentile queue is metered by upstream signal.

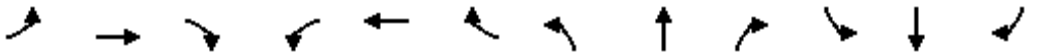
Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	485	0	1286
Future Volume (vph)	0	0	804	485	0	1286
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.944			
Flt Protected						
Satd. Flow (prot)	0	0	3339	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3339	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	804	485	0	1286
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1289	0	0	1286
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	485	0	569
Future Volume (vph)	0	0	0	485	0	569
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	87.4	
Travel Time (s)	3.3			6.0	6.3	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	485	0	569
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	485	0	569
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		



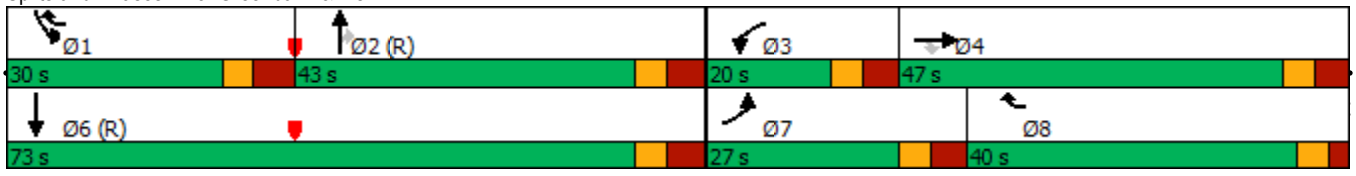
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Future Volume (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3390	0	2785	0	5082	1541	3411	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						278			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	329	414	249	318	0	968	0	1033	357	607	639	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	17.9	38.5	38.5	12.9		64.4		35.5	35.5	23.9	67.0	
Actuated g/C Ratio	0.13	0.28	0.28	0.09		0.46		0.25	0.25	0.17	0.48	
v/c Ratio	0.76	0.81	0.47	1.01		0.76		0.80	0.60	1.04	0.38	
Control Delay	70.8	60.6	19.0	104.2		31.1		54.6	15.2	102.6	24.4	
Queue Delay	0.0	0.0	0.0	0.0		2.5		0.0	0.0	0.0	0.0	
Total Delay	70.8	60.6	19.0	104.2		33.5		54.6	15.2	102.6	24.4	
LOS	E	E	B	F		C		D	B	F	C	
Approach Delay		53.5			51.0			44.5			62.5	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	42.1	97.4	19.5	~40.9		100.7		90.9	16.0	~90.6	54.6	
Queue Length 95th (m)	56.5	134.2	43.1	m#64.3		128.6		106.7	46.3	#124.7	68.4	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1258		1288	598	585	1692	
Starvation Cap Reductn	0	0	0	0		175		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.68	0.78	0.45	1.01		0.89		0.80	0.60	1.04	0.38	

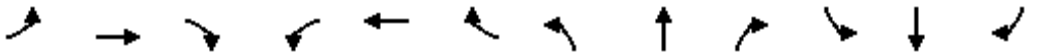
Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.04			
Intersection Signal Delay: 52.6		Intersection LOS: D	
Intersection Capacity Utilization 105.2%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

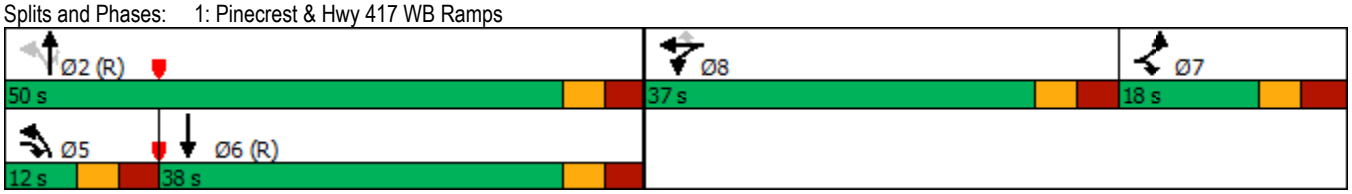


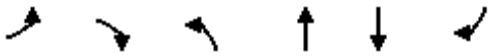
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	485	25	328	0	1108	383	0	945	0
Future Volume (vph)	2	0	64	485	25	328	0	1108	383	0	945	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			237			314			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	64	485	25	328	0	1108	383	0	945	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	64	485	25	328	0	1108	383	0	945	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.2		15.7	23.2	23.2	23.2		58.1	58.1		48.6	
Actuated g/C Ratio	0.06		0.15	0.22	0.22	0.22		0.55	0.55		0.46	
v/c Ratio	0.04		0.31	0.66	0.12	0.64		0.57	0.39		0.41	
Control Delay	47.5		6.0	41.0	31.1	16.1		19.0	4.9		22.4	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	47.5		6.0	41.0	31.1	16.1		19.0	4.9		22.4	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		7.3			31.0			15.4			22.4	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	44.1	3.9	14.6		68.2	5.8		44.0	
Queue Length 95th (m)	2.5		3.6	53.4	9.5	37.6		108.2	25.2		65.7	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	596		1938	983		2304	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.32	0.50	0.09	0.55		0.57	0.39		0.41	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.1		Intersection LOS: C	
Intersection Capacity Utilization 74.3%		ICU Level of Service D	
Analysis Period (min) 15			

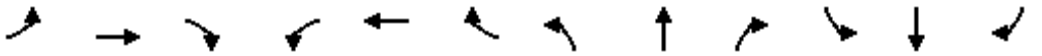
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1491	1017	256
Future Volume (vph)	0	0	0	1491	1017	256
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1491	1017	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1491	1017	256
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Future Volume (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3075	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						213			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

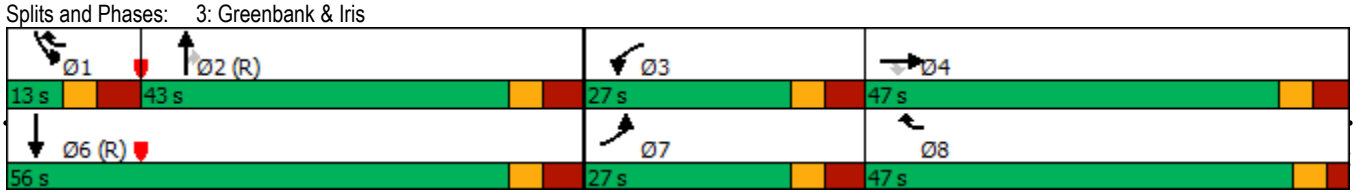
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	51.0	51.0	8.9		52.4		35.5	35.5	5.4	48.5	
Actuated g/C Ratio	0.15	0.39	0.39	0.07		0.40		0.27	0.27	0.04	0.37	
v/c Ratio	1.40	0.84	0.14	0.40		0.34		1.11	0.38	1.38	0.64	
Control Delay	230.1	48.0	0.4	56.0		22.9		103.2	6.8	254.4	36.5	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	230.1	48.0	0.4	56.0		22.9		103.2	6.8	254.4	36.5	
LOS	F	D	A	E		C		F	A	F	D	
Approach Delay		137.1			29.0			91.3			77.6	
Approach LOS		F			C			F			E	
Queue Length 50th (m)	~117.7	129.5	0.0	8.0		31.7		~149.9	0.0	~30.8	83.8	
Queue Length 95th (m)	#152.3	#194.1	0.0	15.3		45.2		#177.2	16.9	#53.3	104.0	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	730	685	482		1111		1374	554	139	1281	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.40	0.84	0.14	0.18		0.34		1.11	0.38	1.38	0.64	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.40
Intersection Signal Delay: 96.3 Intersection LOS: F
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

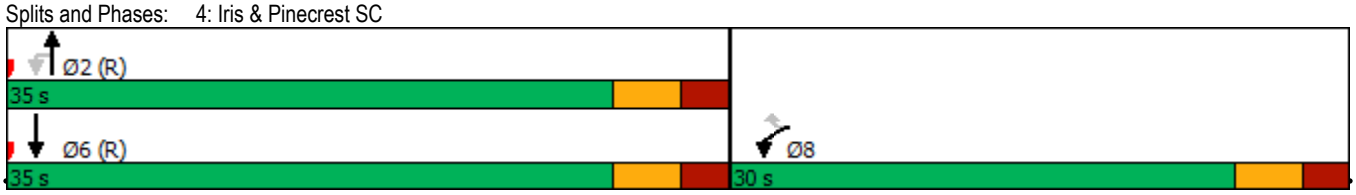
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	285	16	21	200	0	0	107
Future Volume (vph)	285	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.930			
Satd. Flow (perm)	1701	1542	0	3260	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		16					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	285	16	21	200	0	0	107
Shared Lane Traffic (%)							
Lane Group Flow (vph)	285	16	0	221	0	0	107
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	16.5	16.5		37.2			37.2
Actuated g/C Ratio	0.25	0.25		0.57			0.57
v/c Ratio	0.66	0.04		0.12			0.04
Control Delay	28.4	7.8		7.2			7.7
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	28.4	7.8		7.2			7.7
LOS	C	A		A			A
Approach Delay	27.3			7.2			7.7
Approach LOS	C			A			A
Queue Length 50th (m)	28.5	0.0		8.6			1.6
Queue Length 95th (m)	40.8	3.0		m12.8			4.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	588		1864			2878
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.45	0.03		0.12			0.04

Intersection Summary

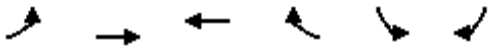
Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 16.9 Intersection LOS: B
Intersection Capacity Utilization 44.2% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	506	91	23	243	31	22
Future Volume (vph)	506	91	23	243	31	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979				0.944	
Flt Protected				0.996	0.972	
Satd. Flow (prot)	1775	0	0	1774	1631	0
Flt Permitted				0.996	0.972	
Satd. Flow (perm)	1775	0	0	1774	1631	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		7	7		1	2
Confl. Bikes (#/hr)		2				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	2%	1%	6%	7%	4%
Adj. Flow (vph)	506	91	23	243	31	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	597	0	0	266	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	58	455	191	16	35	73
Future Volume (vph)	58	455	191	16	35	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.990		0.909	
Flt Protected		0.994			0.984	
Satd. Flow (prot)	0	1812	1826	0	1460	0
Flt Permitted		0.994			0.984	
Satd. Flow (perm)	0	1812	1826	0	1460	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		140.0	
Travel Time (s)		19.3	14.3		10.1	
Confl. Peds. (#/hr)	7			7		1
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	12%	2%	2%	1%	5%	20%
Adj. Flow (vph)	58	455	191	16	35	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	513	207	0	108	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	669	0	458
Future Volume (vph)	0	0	221	669	0	458
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.887			
Flt Protected						
Satd. Flow (prot)	0	0	3084	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3084	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	221	669	0	458
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	890	0	0	458
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

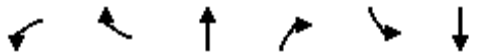
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	669	0	301
Future Volume (vph)	0	0	0	669	0	301
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	669	0	301
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	669	0	301
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

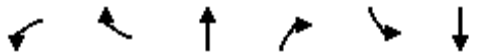
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	5	0	72	2	0	103
Future Volume (vph)	5	0	72	2	0	103
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.996			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1836	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1836	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	71.6		140.0			52.4
Travel Time (s)	5.2		10.1			3.8
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	5	0	72	2	0	103
Shared Lane Traffic (%)						
Lane Group Flow (vph)	5	0	74	0	0	103
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	4	0	60	7	0	94
Future Volume (vph)	4	0	60	7	0	94
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.986			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1817	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1817	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	131.0		52.4			103.1
Travel Time (s)	9.4		3.8			7.4
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	4	0	60	7	0	94
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	67	0	0	94
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	22	0	40	10	0	47
Future Volume (vph)	22	0	40	10	0	47
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.973			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1793	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1793	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	58.0		103.1			79.2
Travel Time (s)	4.2		7.4			5.7
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	0	40	10	0	47
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	50	0	0	47
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	32	8	0	43	4	0
Future Volume (vph)	32	8	0	43	4	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.973					
Flt Protected					0.950	
Satd. Flow (prot)	1793	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1793	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	79.2			61.7	93.2	
Travel Time (s)	5.7			4.4	6.7	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	32	8	0	43	4	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	40	0	0	43	4	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

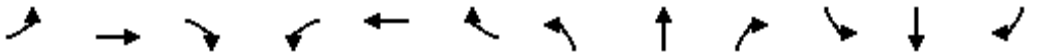
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	22	10	0	21	22	0
Future Volume (vph)	22	10	0	21	22	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.958					
Flt Protected					0.950	
Satd. Flow (prot)	1766	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1766	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	61.7			49.9	89.6	
Travel Time (s)	4.4			3.6	6.5	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	22	10	0	21	22	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	21	22	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	20	2	0	15	6	0
Future Volume (vph)	20	2	0	15	6	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988					
Flt Protected					0.950	
Satd. Flow (prot)	1821	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1821	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	49.9			41.2	94.8	
Travel Time (s)	3.6			3.0	6.8	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	2	0	15	6	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	0	0	15	6	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Future Volume (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3075	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	726	612	95	85	0	373	0	1522	213	192	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

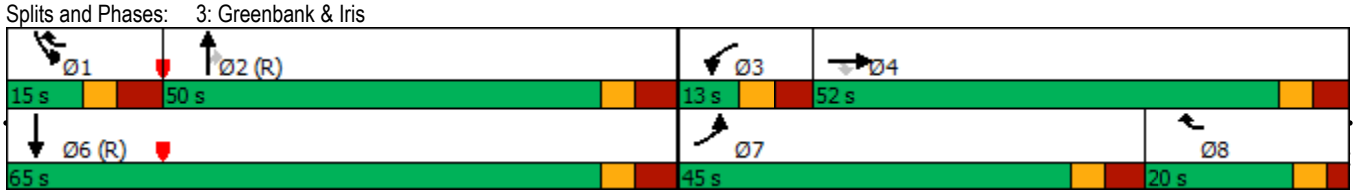
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	32.6	44.2	44.2	5.9		32.7		42.5	42.5	8.2	58.3	
Actuated g/C Ratio	0.25	0.34	0.34	0.05		0.25		0.33	0.33	0.06	0.45	
v/c Ratio	0.85	0.97	0.15	0.60		0.54		0.93	0.34	0.91	0.54	
Control Delay	56.6	70.9	0.5	70.6		39.4		52.8	5.3	102.4	27.8	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.6	70.9	0.5	70.6		39.4		52.8	5.3	102.4	27.8	
LOS	E	E	A	E		D		D	A	F	C	
Approach Delay		59.0			45.2			46.9			41.9	
Approach LOS		E			D			D			D	
Queue Length 50th (m)	84.2	140.1	0.0	8.3		35.7		126.6	0.0	~23.8	73.9	
Queue Length 95th (m)	99.8	#206.3	0.0	#19.1		53.0		#152.8	14.9	#46.8	91.6	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		693		1645	625	211	1540	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.73	0.95	0.15	0.60		0.54		0.93	0.34	0.91	0.54	

Intersection Summary

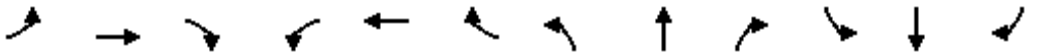
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 49.4 Intersection LOS: D
Intersection Capacity Utilization 91.1% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

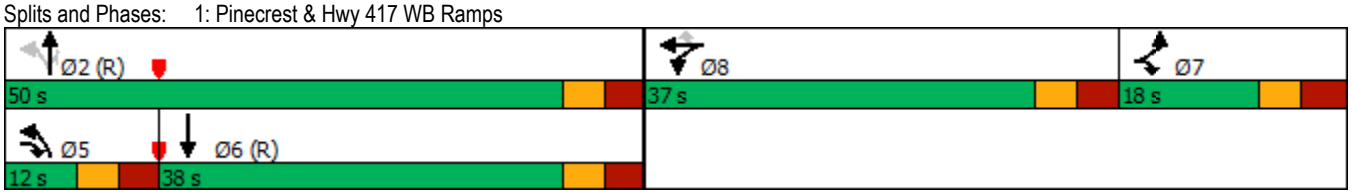


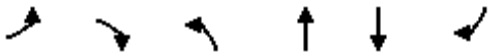
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	64	493	25	328	0	1176	404	0	956	0
Future Volume (vph)	2	0	64	493	25	328	0	1176	404	0	956	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.97					0.96			0.96			
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950								
Satd. Flow (prot)	893	0	799	3332	940	1537	1861	3502	1582	0	4983	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	870	0	799	3332	940	1477	1861	3502	1523	0	4983	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			232			312			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	25					25	77		8	8		77
Confl. Bikes (#/hr)			1			1						1
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 (%)	100%	1%	100%	4%	100%	4%	1%	2%	1%	1%	3%	1%
Adj. Flow (vph)	2	0	64	493	25	328	0	1176	404	0	956	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	0	64	493	25	328	0	1176	404	0	956	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				20	20	20		50	50		8	
Act Effct Green (s)	6.2		15.7	23.4	23.4	23.4		58.0	58.0		48.4	
Actuated g/C Ratio	0.06		0.15	0.22	0.22	0.22		0.55	0.55		0.46	
v/c Ratio	0.04		0.31	0.66	0.12	0.64		0.61	0.41		0.42	
Control Delay	47.5		6.0	41.1	31.1	16.6		19.8	5.7		22.5	
Queue Delay	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	
Total Delay	47.5		6.0	41.1	31.1	16.6		19.8	5.7		22.5	
LOS	D		A	D	C	B		B	A		C	
Approach Delay		7.3			31.3			16.2			22.5	
Approach LOS		A			C			B			C	
Queue Length 50th (m)	0.4		0.0	44.8	3.9	15.4		75.0	7.9		44.9	
Queue Length 95th (m)	2.5		3.6	54.3	9.5	38.6		117.6	29.8		66.7	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0			50.0			
Base Capacity (vph)	93		203	964	272	592		1933	980		2296	
Starvation Cap Reductn	0		0	0	0	0		0	0		0	
Spillback Cap Reductn	0		0	0	0	0		0	0		0	
Storage Cap Reductn	0		0	0	0	0		0	0		0	
Reduced v/c Ratio	0.02		0.32	0.51	0.09	0.55		0.61	0.41		0.42	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 21.5		Intersection LOS: C	
Intersection Capacity Utilization 76.3%		ICU Level of Service D	
Analysis Period (min) 15			

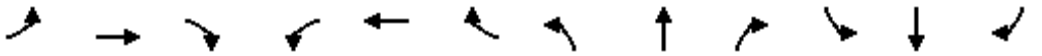
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1580	1036	256
Future Volume (vph)	0	0	0	1580	1036	256
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1580	1036	256
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1580	1036	256
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Future Volume (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3076	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						223			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

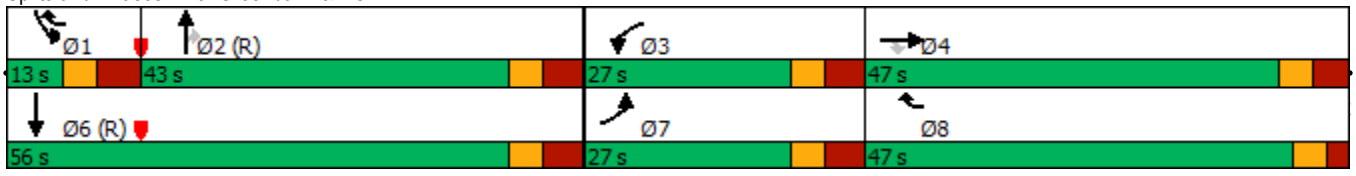
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	27.0				43.0	43.0	13.0	56.0	
Total Split (%)	20.8%	36.2%	36.2%	20.8%				33.1%	33.1%	10.0%	43.1%	
Maximum Green (s)	19.9	40.0	40.0	19.9				35.5	35.5	5.4	48.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	19.9	49.3	49.3	10.6		52.4		35.5	35.5	5.4	48.5	
Actuated g/C Ratio	0.15	0.38	0.38	0.08		0.40		0.27	0.27	0.04	0.37	
v/c Ratio	1.40	0.88	0.14	0.49		0.46		1.11	0.40	1.52	0.64	
Control Delay	230.1	53.0	0.4	60.3		26.6		103.2	6.8	306.7	36.5	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	230.1	53.0	0.4	60.3		26.6		103.2	6.8	306.7	36.5	
LOS	F	D	A	E		C		F	A	F	D	
Approach Delay		138.8			33.3			90.8			91.5	
Approach LOS		F			C			F			F	
Queue Length 50th (m)	~117.7	134.8	0.0	12.7		46.7		~149.9	0.0	~35.6	83.8	
Queue Length 95th (m)	#152.3	#205.7	0.0	m18.6		67.2		#177.2	17.4	#58.9	104.0	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	520	706	668	482		1111		1374	562	139	1281	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.40	0.88	0.14	0.26		0.46		1.11	0.40	1.52	0.64	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 70 (54%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.52
Intersection Signal Delay: 97.7 Intersection LOS: F
Intersection Capacity Utilization 97.3% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

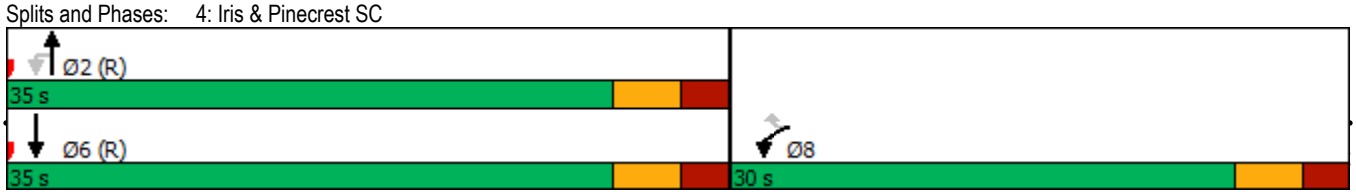
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	464	16	21	200	0	0	107
Future Volume (vph)	464	16	21	200	0	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.995			
Satd. Flow (prot)	1701	1582	0	3488	0	0	5032
Flt Permitted	0.950			0.929			
Satd. Flow (perm)	1701	1542	0	3256	0	0	5032
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		16					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		17			3	3	
Confl. Bikes (#/hr)					1		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	1%	1%	2%	3%	1%	2%
Adj. Flow (vph)	464	16	21	200	0	0	107
Shared Lane Traffic (%)							
Lane Group Flow (vph)	464	16	0	221	0	0	107
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	15	15			5
Act Effct Green (s)	21.4	21.4		32.3			32.3
Actuated g/C Ratio	0.33	0.33		0.50			0.50
v/c Ratio	0.83	0.03		0.14			0.04
Control Delay	33.5	6.9		9.3			9.6
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	33.5	6.9		9.3			9.6
LOS	C	A		A			A
Approach Delay	32.6			9.3			9.6
Approach LOS	C			A			A
Queue Length 50th (m)	44.8	0.0		10.1			2.1
Queue Length 95th (m)	#74.8	3.0		m12.6			4.6
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	638	588		1615			2497
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.73	0.03		0.14			0.04

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 3 (5%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 23.2 Intersection LOS: C
Intersection Capacity Utilization 78.7% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC

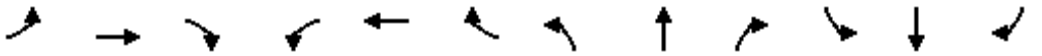


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	221	704	0	637
Future Volume (vph)	0	0	221	704	0	637
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.886			
Flt Protected						
Satd. Flow (prot)	0	0	3080	0	0	4888
Flt Permitted						
Satd. Flow (perm)	0	0	3080	0	0	4888
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	2%	3%	1%	5%
Adj. Flow (vph)	0	0	221	704	0	637
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	925	0	0	637
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	704	0	480
Future Volume (vph)	0	0	0	704	0	480
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1549
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1549
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	87.4	
Travel Time (s)	3.3			6.0	6.3	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	5%
Adj. Flow (vph)	0	0	0	704	0	480
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	704	0	480
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Future Volume (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.96	0.98					0.96	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1567	3150	0	2757	0	5032	1522	3364	3435	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1497	3076	0	2757	0	5032	1465	3347	3435	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			34	34			83		23	23		83
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%	1%	2%	10%	1%	2%	1%	2%	5%	3%	4%	1%
Adj. Flow (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	726	619	95	126	0	511	0	1522	223	211	825	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	45.0	52.0	52.0	13.0				50.0	50.0	15.0	65.0	
Total Split (%)	34.6%	40.0%	40.0%	10.0%				38.5%	38.5%	11.5%	50.0%	
Maximum Green (s)	37.9	45.0	45.0	5.9				42.5	42.5	7.4	57.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	Max	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		30	30					50	50		20	
Act Effct Green (s)	32.6	44.4	44.4	5.9		32.7		42.5	42.5	8.0	58.1	
Actuated g/C Ratio	0.25	0.34	0.34	0.05		0.25		0.33	0.33	0.06	0.45	
v/c Ratio	0.85	0.97	0.15	0.89		0.74		0.93	0.36	1.03	0.54	
Control Delay	56.6	72.0	0.5	104.0		48.0		52.8	6.1	129.0	27.9	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	56.6	72.0	0.5	104.0		48.0		52.8	6.1	129.0	27.9	
LOS	E	E	A	F		D		D	A	F	C	
Approach Delay		59.6			59.1			46.8			48.5	
Approach LOS		E			E			D			D	
Queue Length 50th (m)	84.2	142.4	0.0	13.8		53.4		126.6	1.0	~29.1	73.9	
Queue Length 95th (m)	99.8	#210.3	0.0	m#27.2		#93.8		#152.8	17.1	#52.3	91.6	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	990	644	623	142		693		1645	625	205	1534	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.73	0.96	0.15	0.89		0.74		0.93	0.36	1.03	0.54	

Intersection Summary

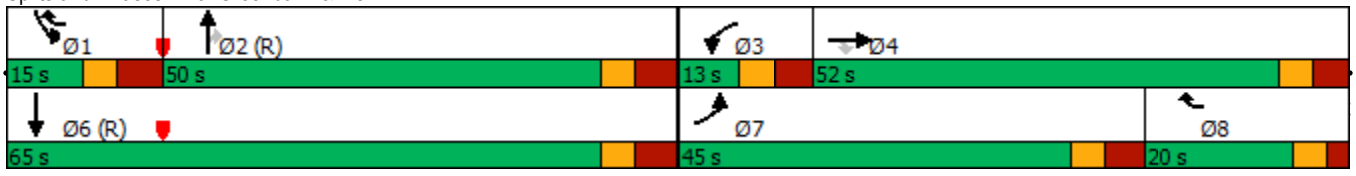
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 69 (53%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 52.6 Intersection LOS: D
Intersection Capacity Utilization 97.3% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

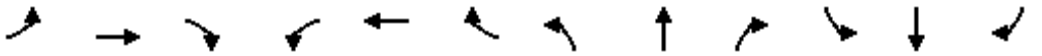
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	20.0
Total Split (%)	15%
Maximum Green (s)	14.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

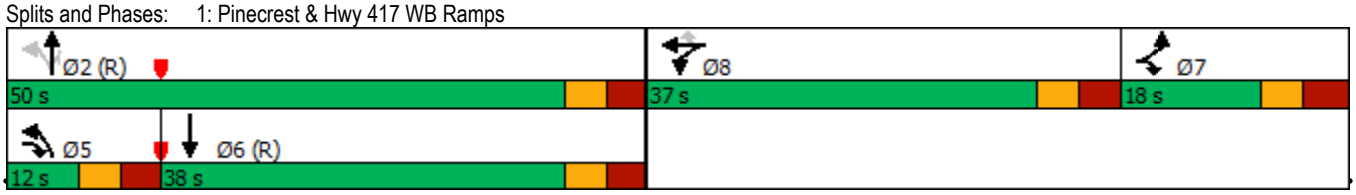


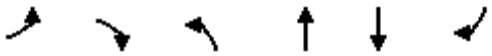
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	583	54	206	1	975	566	0	1548	4
Future Volume (vph)	7	0	29	583	54	206	1	975	566	0	1548	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.076					
Satd. Flow (perm)	876	0	799	3397	940	1474	71	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			206			527			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	7	0	29	583	54	206	1	975	566	0	1548	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	0	29	583	54	206	1	975	566	0	1552	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.6		13.9	24.8	24.8	24.8	58.6	58.6	58.6		51.3	
Actuated g/C Ratio	0.06		0.13	0.24	0.24	0.24	0.56	0.56	0.56		0.49	
v/c Ratio	0.12		0.15	0.73	0.24	0.41	0.01	0.50	0.52		0.63	
Control Delay	50.7		1.6	42.0	33.4	6.6	16.0	17.7	4.3		25.7	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	50.7		1.6	42.0	33.4	6.6	16.0	17.7	4.3		25.7	
LOS	D		A	D	C	A	B	B	A		C	
Approach Delay		11.1			32.8			12.8			25.7	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3		0.0	52.8	8.3	0.0	0.1	61.4	3.5		90.0	
Queue Length 95th (m)	5.3		0.0	64.4	17.1	14.9	1.0	92.5	25.2		#134.1	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	573	84	1953	1084		2453	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.08		0.15	0.59	0.20	0.36	0.01	0.50	0.52		0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 22.1		Intersection LOS: C	
Intersection Capacity Utilization 70.1%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

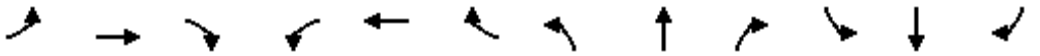
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1539	1238	387
Future Volume (vph)	0	0	0	1539	1238	387
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1539	1238	387
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1539	1238	387
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Future Volume (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3083	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						157			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

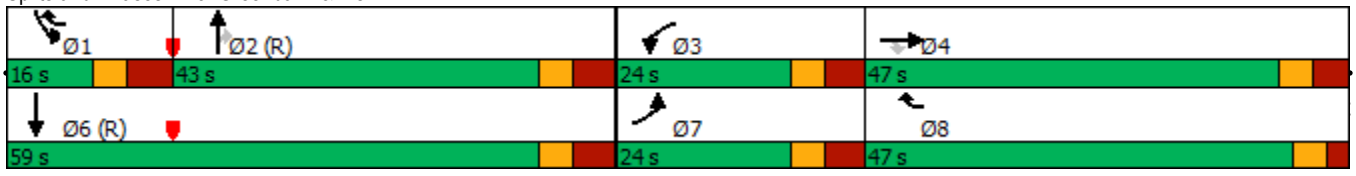
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.0	37.0	14.6		54.6		36.3	36.3	12.9	56.8	
Actuated g/C Ratio	0.13	0.28	0.28	0.11		0.42		0.28	0.28	0.10	0.44	
v/c Ratio	1.22	0.64	0.74	0.68		0.53		0.72	0.30	0.83	0.63	
Control Delay	166.1	46.2	32.6	57.8		24.5		46.1	6.9	79.3	32.0	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	166.1	46.2	32.6	57.8		24.5		46.1	6.9	79.3	32.0	
LOS	F	D	C	E		C		D	A	E	C	
Approach Delay		93.5			34.1			40.9			42.6	
Approach LOS		F			C			D			D	
Queue Length 50th (m)	~81.5	66.9	48.7	27.3		49.4		80.4	0.0	~36.9	95.7	
Queue Length 95th (m)	#113.7	95.5	83.4	m37.6		61.0		95.5	14.8	#68.5	119.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1083		1405	526	333	1529	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.22	0.59	0.70	0.59		0.56		0.72	0.30	0.83	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 54.8 Intersection LOS: D
Intersection Capacity Utilization 97.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

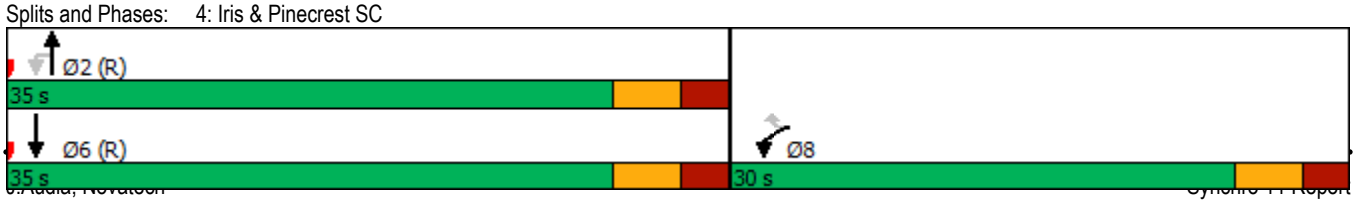
Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	472	21	20	261	0	0	368
Future Volume (vph)	472	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.917			
Satd. Flow (perm)	1734	1539	0	3156	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		21					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	472	21	20	261	0	0	368
Shared Lane Traffic (%)							
Lane Group Flow (vph)	472	21	0	281	0	0	368
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	21.4	21.4		32.3			32.3
Actuated g/C Ratio	0.33	0.33		0.50			0.50
v/c Ratio	0.83	0.04		0.18			0.15
Control Delay	33.1	6.4		10.1			9.8
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	33.1	6.4		10.1			9.8
LOS	C	A		B			A
Approach Delay	32.0			10.1			9.8
Approach LOS	C			B			A
Queue Length 50th (m)	45.6	0.0		16.6			7.9
Queue Length 95th (m)	#74.9	3.3		m20.6			12.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	590		1566			2449
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.73	0.04		0.18			0.15

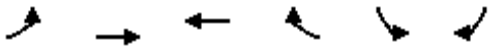
Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 19.5		Intersection LOS: B	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 4: Iris & Pinecrest SC



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	359	104	32	379	178	21
Future Volume (vph)	359	104	32	379	178	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.970				0.986	
Flt Protected				0.996	0.957	
Satd. Flow (prot)	1802	0	0	1851	1756	0
Flt Permitted				0.996	0.957	
Satd. Flow (perm)	1802	0	0	1851	1756	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		4	4		11	3
Confl. Bikes (#/hr)		4				2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	2%	3%	1%	1%	1%
Adj. Flow (vph)	359	104	32	379	178	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	463	0	0	411	199	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.6%		ICU Level of Service C	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	137	240	264	164	75	134
Future Volume (vph)	137	240	264	164	75	134
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.948		0.913	
Flt Protected		0.982			0.982	
Satd. Flow (prot)	0	1828	1765	0	1669	0
Flt Permitted		0.982			0.982	
Satd. Flow (perm)	0	1828	1765	0	1669	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		140.0	
Travel Time (s)		19.3	14.3		10.1	
Confl. Peds. (#/hr)	7			7		
Confl. Bikes (#/hr)				4		1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	137	240	264	164	75	134
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	377	428	0	209	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 69.9%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	397	0	854
Future Volume (vph)	0	0	281	397	0	854
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.912			
Flt Protected						
Satd. Flow (prot)	0	0	3168	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3168	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	281	397	0	854
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	678	0	0	854
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

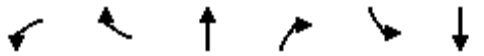
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	397	0	493
Future Volume (vph)	0	0	0	397	0	493
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	397	0	493
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	397	0	493
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

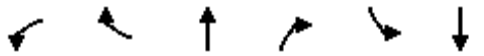
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	282	4	0	196
Future Volume (vph)	3	0	282	4	0	196
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1839	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1839	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	71.6		140.0			52.4
Travel Time (s)	5.2		10.1			3.8
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	282	4	0	196
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	286	0	0	196
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	17	0	200	22	0	149
Future Volume (vph)	17	0	200	22	0	149
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.987			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1819	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1819	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	131.0		52.4			103.1
Travel Time (s)	9.4		3.8			7.4
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	17	0	200	22	0	149
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	222	0	0	149
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	12	0	151	14	0	107
Future Volume (vph)	12	0	151	14	0	107
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.989			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1823	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1823	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	58.0		103.1			79.2
Travel Time (s)	4.2		7.4			5.7
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	12	0	151	14	0	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	12	0	165	0	0	107
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	128	23	0	91	16	0
Future Volume (vph)	128	23	0	91	16	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.979					
Flt Protected					0.950	
Satd. Flow (prot)	1804	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1804	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	79.2			61.7	93.2	
Travel Time (s)	5.7			4.4	6.7	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	128	23	0	91	16	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	151	0	0	91	16	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

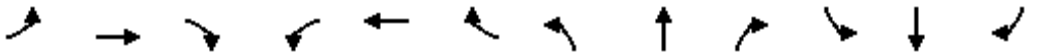
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	114	14	0	78	13	0
Future Volume (vph)	114	14	0	78	13	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985					
Flt Protected					0.950	
Satd. Flow (prot)	1815	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1815	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	61.7			49.9	89.6	
Travel Time (s)	4.4			3.6	6.5	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	114	14	0	78	13	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	128	0	0	78	13	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.0%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	110	4	0	75	3	0
Future Volume (vph)	110	4	0	75	3	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.995					
Flt Protected					0.950	
Satd. Flow (prot)	1834	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1834	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	49.9			41.2	94.8	
Travel Time (s)	3.6			3.0	6.8	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	110	4	0	75	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	114	0	0	75	3	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 18.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Future Volume (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3083	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	546	335	391	246	0	608	0	1018	156	278	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

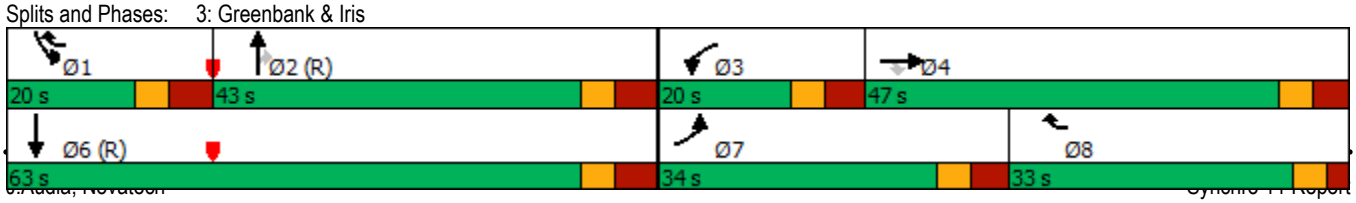
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	24.6	37.1	37.1	12.6		45.1		38.1	38.1	13.0	58.7	
Actuated g/C Ratio	0.19	0.29	0.29	0.10		0.35		0.29	0.29	0.10	0.45	
v/c Ratio	0.84	0.64	0.73	0.79		0.64		0.69	0.27	0.83	0.61	
Control Delay	63.4	46.2	32.6	65.8		31.4		44.2	2.1	78.0	29.6	
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Total Delay	63.4	46.2	32.6	65.8		31.4		44.2	2.1	78.0	29.6	
LOS	E	D	C	E		C		D	A	E	C	
Approach Delay		49.4			41.3			38.6			40.5	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	64.0	66.9	48.7	27.8		50.5		80.4	0.0	33.9	92.7	
Queue Length 95th (m)	81.4	95.5	83.4	m#41.7		70.9		95.5	3.7	#55.4	113.2	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		916		1475	587	336	1582	
Starvation Cap Reductn	0	0	0	0		0		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.77	0.59	0.70	0.77		0.66		0.69	0.27	0.83	0.61	

Intersection Summary

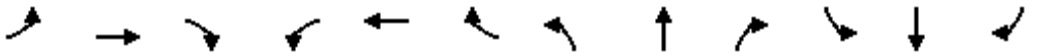
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 42.7 Intersection LOS: D
Intersection Capacity Utilization 97.0% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



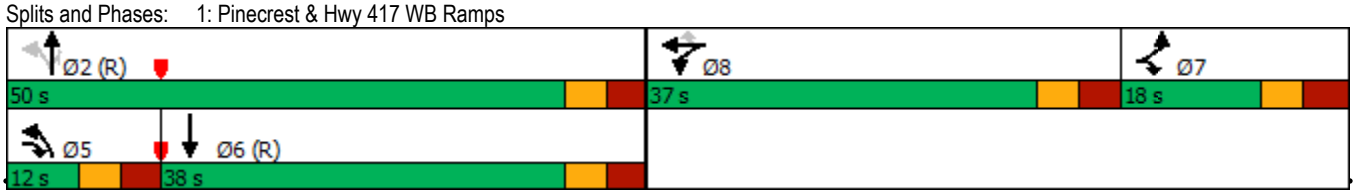
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	0	29	619	54	206	1	1006	587	0	1596	4
Future Volume (vph)	7	0	29	619	54	206	1	1006	587	0	1596	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.98					0.97			0.96		1.00	
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3397	940	1522	893	3502	1582	0	5024	0
Flt Permitted	0.950			0.950			0.077					
Satd. Flow (perm)	876	0	799	3397	940	1474	72	3502	1527	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104			206			530			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	19					19	54		7	7		54
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 (%)	100%	1%	100%	2%	100%	5%	100%	2%	1%	1%	2%	50%
Adj. Flow (vph)	7	0	29	619	54	206	1	1006	587	0	1596	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	7	0	29	619	54	206	1	1006	587	0	1600	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	
Switch Phase												

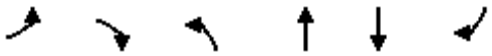
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	18.0			37.0	37.0	37.0	12.0	50.0	50.0		38.0	
Total Split (%)	17.1%			35.2%	35.2%	35.2%	11.4%	47.6%	47.6%		36.2%	
Maximum Green (s)	11.0			30.4	30.4	30.4	5.6	43.6	43.6		31.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				15	15	15		50	50		5	
Act Effct Green (s)	6.6		13.9	25.4	25.4	25.4	58.0	58.0	58.0		50.7	
Actuated g/C Ratio	0.06		0.13	0.24	0.24	0.24	0.55	0.55	0.55		0.48	
v/c Ratio	0.12		0.15	0.75	0.24	0.40	0.01	0.52	0.54		0.66	
Control Delay	50.7		1.6	42.7	33.0	6.6	16.0	18.3	4.8		26.5	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	50.7		1.6	42.7	33.0	6.6	16.0	18.3	4.8		26.5	
LOS	D		A	D	C	A	B	B	A		C	
Approach Delay		11.1			33.7			13.3			26.5	
Approach LOS		B			C			B			C	
Queue Length 50th (m)	1.3		0.0	56.1	8.2	0.0	0.1	65.6	5.2		95.7	
Queue Length 95th (m)	5.3		0.0	68.8	17.1	14.9	1.0	96.5	29.5		#141.1	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	93		197	983	272	573	84	1933	1080		2426	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.08		0.15	0.63	0.20	0.36	0.01	0.52	0.54		0.66	

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 93 (89%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 22.8 Intersection LOS: C
Intersection Capacity Utilization 72.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

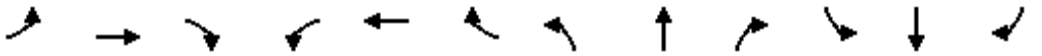
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1594	1322	387
Future Volume (vph)	0	0	0	1594	1322	387
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5032	3502	1567
Flt Permitted						
Satd. Flow (perm)	0	0	0	5032	3502	1567
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	0	0	0	1594	1322	387
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1594	1322	387
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Future Volume (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3089	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						195			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

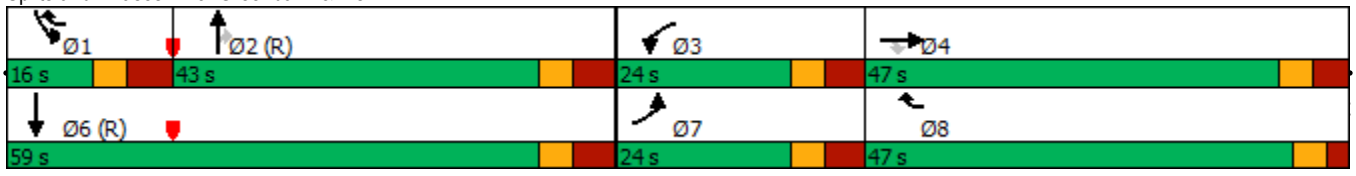
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	24.0	47.0	47.0	24.0				43.0	43.0	16.0	59.0	
Total Split (%)	18.5%	36.2%	36.2%	18.5%				33.1%	33.1%	12.3%	45.4%	
Maximum Green (s)	16.9	40.0	40.0	16.9				35.5	35.5	8.4	51.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	16.9	37.2	37.2	15.3		55.4		35.5	35.5	12.8	55.9	
Actuated g/C Ratio	0.13	0.29	0.29	0.12		0.43		0.27	0.27	0.10	0.43	
v/c Ratio	1.22	0.69	0.73	0.72		0.58		0.74	0.36	1.09	0.64	
Control Delay	166.1	48.2	32.4	57.9		24.6		47.0	6.8	129.2	32.6	
Queue Delay	0.0	0.0	0.0	0.0		1.0		0.0	0.0	0.0	0.0	
Total Delay	166.1	48.2	32.4	57.9		25.6		47.0	6.8	129.2	32.6	
LOS	F	D	C	E		C		D	A	F	C	
Approach Delay		93.0			34.9			40.5			59.1	
Approach LOS		F			C			D			E	
Queue Length 50th (m)	~81.5	73.8	48.7	31.1		55.6		80.4	0.0	~61.7	97.2	
Queue Length 95th (m)	#113.7	104.5	83.4	m38.0		m64.3		95.5	16.3	#92.3	119.8	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	446	567	561	420		1123		1374	545	332	1506	
Starvation Cap Reductn	0	0	0	0		214		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.22	0.64	0.70	0.65		0.75		0.74	0.36	1.09	0.64	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 10 (8%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 58.7 Intersection LOS: E
Intersection Capacity Utilization 100.7% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	36%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

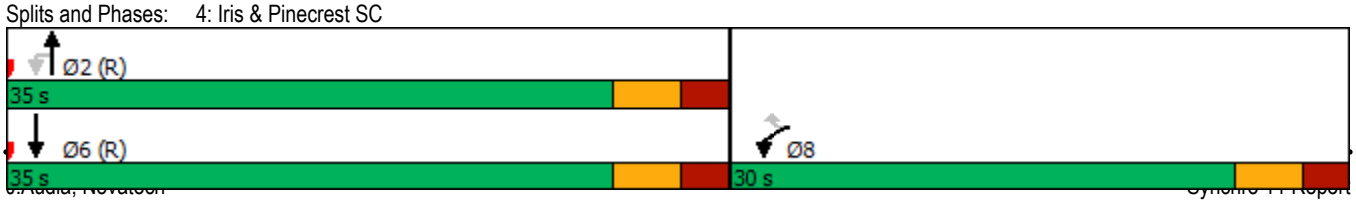
Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	577	21	20	261	0	0	368
Future Volume (vph)	577	21	20	261	0	0	368
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.97					
Frt		0.850					
Flt Protected	0.950			0.996			
Satd. Flow (prot)	1734	1582	0	3428	0	0	4935
Flt Permitted	0.950			0.917			
Satd. Flow (perm)	1734	1539	0	3156	0	0	4935
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		21					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		19			19	19	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	1%	1%	4%	3%	1%	4%
Adj. Flow (vph)	577	21	20	261	0	0	368
Shared Lane Traffic (%)							
Lane Group Flow (vph)	577	21	0	281	0	0	368
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6
Switch Phase							

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	35.0	35.0			35.0
Total Split (%)	46.2%	46.2%	53.8%	53.8%			53.8%
Maximum Green (s)	24.4	24.4	29.3	29.3			29.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	15	15	15	15			5
Act Effct Green (s)	23.6	23.6		30.1			30.1
Actuated g/C Ratio	0.36	0.36		0.46			0.46
v/c Ratio	0.92	0.04		0.19			0.16
Control Delay	42.4	6.4		9.6			10.6
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	42.4	6.4		9.6			10.6
LOS	D	A		A			B
Approach Delay	41.1			9.6			10.6
Approach LOS	D			A			B
Queue Length 50th (m)	58.2	0.0		15.4			8.3
Queue Length 95th (m)	#108.9	3.3		m15.2			12.9
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	650	590		1461			2285
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.89	0.04		0.19			0.16

Intersection Summary

Area Type: Other
Cycle Length: 65
Actuated Cycle Length: 65
Offset: 50 (77%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 25.0 Intersection LOS: C
Intersection Capacity Utilization 81.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC

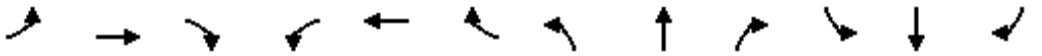


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	281	547	0	959
Future Volume (vph)	0	0	281	547	0	959
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.901			
Flt Protected						
Satd. Flow (prot)	0	0	3134	0	0	4983
Flt Permitted						
Satd. Flow (perm)	0	0	3134	0	0	4983
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	4%	2%	1%	3%
Adj. Flow (vph)	0	0	281	547	0	959
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	828	0	0	959
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	547	0	598
Future Volume (vph)	0	0	0	547	0	598
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1825	0	1579
Flt Permitted						
Satd. Flow (perm)	0	0	0	1825	0	1579
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	87.4	
Travel Time (s)	3.3			6.0	6.3	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	3%	1%	3%
Adj. Flow (vph)	0	0	0	547	0	598
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	547	0	598
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Future Volume (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.94	0.95					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3431	1843	1551	3238	0	2757	0	5032	1522	3364	3502	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3431	1843	1463	3089	0	2757	0	5032	1480	3343	3502	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			161						217			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			47	47			67		14	14		67
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 (%)	1%	2%	3%	7%	1%	2%	1%	2%	5%	3%	2%	1%
Adj. Flow (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	546	363	391	275	0	684	0	1018	195	362	960	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

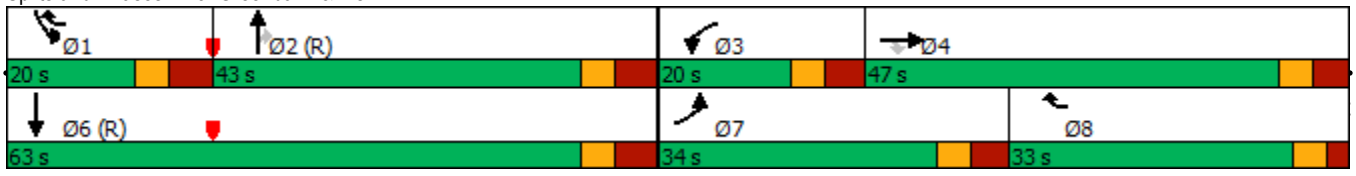
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	34.0	47.0	47.0	20.0				43.0	43.0	20.0	63.0	
Total Split (%)	26.2%	36.2%	36.2%	15.4%				33.1%	33.1%	15.4%	48.5%	
Maximum Green (s)	26.9	40.0	40.0	12.9				35.5	35.5	12.4	55.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		40	40					10	10		50	
Act Effct Green (s)	24.6	37.3	37.3	12.9		47.7		35.5	35.5	15.1	58.2	
Actuated g/C Ratio	0.19	0.29	0.29	0.10		0.37		0.27	0.27	0.12	0.45	
v/c Ratio	0.84	0.69	0.73	0.86		0.68		0.74	0.35	0.93	0.61	
Control Delay	63.4	48.1	32.4	69.9		30.9		47.0	5.0	87.2	30.0	
Queue Delay	0.0	0.0	0.0	0.0		0.3		0.0	0.0	0.0	0.0	
Total Delay	63.4	48.1	32.4	69.9		31.2		47.0	5.0	87.2	30.0	
LOS	E	D	C	E		C		D	A	F	C	
Approach Delay		49.8			42.3			40.2			45.7	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	64.0	73.8	48.7	31.7		59.5		80.4	0.0	~50.9	92.7	
Queue Length 95th (m)	81.4	104.5	83.4	m#41.4		m79.5		95.5	12.1	#79.2	113.2	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	709	567	561	321		998		1374	561	391	1569	
Starvation Cap Reductn	0	0	0	0		52		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.77	0.64	0.70	0.86		0.72		0.74	0.35	0.93	0.61	

Intersection Summary

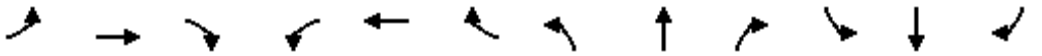
Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 44.7 Intersection LOS: D
Intersection Capacity Utilization 100.7% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	33.0
Total Split (%)	25%
Maximum Green (s)	27.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



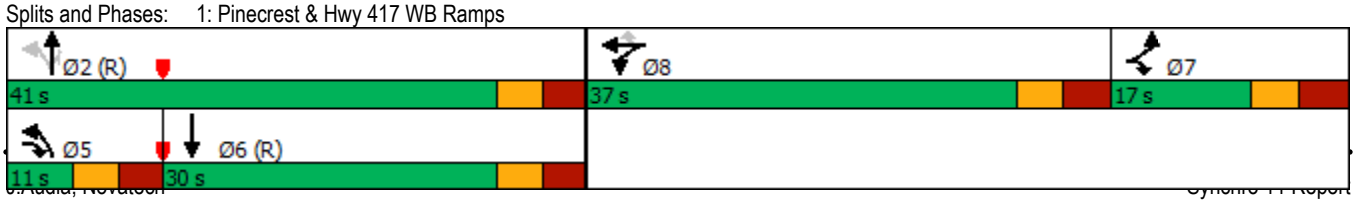
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	653	3	352	9	911	598	0	1201	10
Future Volume (vph)	9	0	11	653	3	352	9	911	598	0	1201	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98	1.00		0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5034	0
Flt Permitted	0.950			0.950			0.129					
Satd. Flow (perm)	887	0	799	3431	1414	1553	240	3537	1491	0	5034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			250			598		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	9	0	11	653	3	352	9	911	598	0	1201	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	0	11	653	3	352	9	911	598	0	1211	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

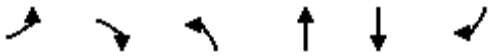
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.7		11.6	24.6	24.6	24.6	51.4	51.4	51.4		46.5	
Actuated g/C Ratio	0.07		0.12	0.26	0.26	0.26	0.54	0.54	0.54		0.49	
v/c Ratio	0.14		0.06	0.74	0.01	0.60	0.04	0.48	0.55		0.49	
Control Delay	45.7		0.5	37.2	23.0	13.2	16.7	17.2	4.0		21.9	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	45.7		0.5	37.2	23.0	13.2	16.7	17.2	4.0		21.9	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		20.9			28.7			12.0			21.9	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.5		0.0	51.8	0.4	13.6	0.6	40.1	0.0		36.1	
Queue Length 95th (m)	5.7		0.0	63.4	2.2	35.4	3.7	86.4	20.4		#101.7	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	666	220	1912	1080		2463	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.10		0.05	0.60	0.01	0.53	0.04	0.48	0.55		0.49	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 19.7 Intersection LOS: B
Intersection Capacity Utilization 68.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

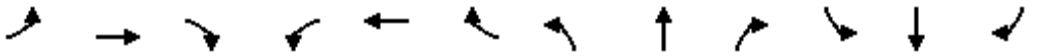
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1518	1203	300
Future Volume (vph)	0	0	0	1518	1203	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1518	1203	300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1518	1203	300
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Future Volume (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3390	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						269			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

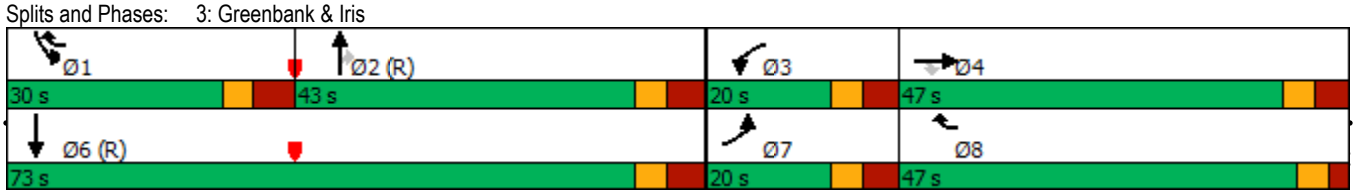
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	35.3	35.3	12.9		68.3		36.6	36.6	26.0	70.2	
Actuated g/C Ratio	0.09	0.25	0.25	0.09		0.49		0.26	0.26	0.19	0.50	
v/c Ratio	1.12	0.87	0.53	0.88		0.63		0.80	0.54	0.86	0.37	
Control Delay	142.7	68.9	22.2	83.1		25.5		53.7	12.6	69.6	22.7	
Queue Delay	0.0	0.0	0.0	0.0		1.0		0.0	0.0	0.0	0.0	
Total Delay	142.7	68.9	22.2	83.1		26.5		53.7	12.6	69.6	22.7	
LOS	F	E	C	F		C		D	B	E	C	
Approach Delay		82.1			40.4			44.1			44.1	
Approach LOS		F			D			D			D	
Queue Length 50th (m)	~52.7	98.6	24.3	37.6		76.7		93.6	11.1	70.7	53.2	
Queue Length 95th (m)	#81.3	130.8	48.1	#59.2		91.1		109.6	37.8	#107.8	70.1	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1342		1329	601	637	1774	
Starvation Cap Reductn	0	0	0	0		240		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.12	0.76	0.48	0.88		0.78		0.80	0.54	0.86	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 51.4 Intersection LOS: D
Intersection Capacity Utilization 101.9% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	390	35	12	792	0	0	701
Future Volume (vph)	390	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.942			
Satd. Flow (perm)	1751	1550	0	3332	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		35					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	390	35	12	792	0	0	701
Shared Lane Traffic (%)							
Lane Group Flow (vph)	390	35	0	804	0	0	701
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	20.0	20.0		38.7			38.7
Actuated g/C Ratio	0.29	0.29		0.55			0.55
v/c Ratio	0.78	0.07		0.44			0.25
Control Delay	34.0	6.4		10.4			9.1
Queue Delay	0.0	0.0		0.0			0.0
Total Delay	34.0	6.4		10.4			9.1
LOS	C	A		B			A
Approach Delay	31.7			10.4			9.1
Approach LOS	C			B			A
Queue Length 50th (m)	42.3	0.0		42.9			15.0
Queue Length 95th (m)	63.6	4.8		m49.1			23.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	563		1842			2809
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	0	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.64	0.06		0.44			0.25

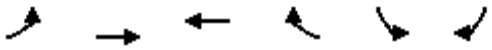
Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 14.6 Intersection LOS: B
Intersection Capacity Utilization 85.2% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	326	37	33	423	41	18
Future Volume (vph)	326	37	33	423	41	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.986				0.959	
Flt Protected				0.996	0.966	
Satd. Flow (prot)	1835	0	0	1837	1724	0
Flt Permitted				0.996	0.966	
Satd. Flow (perm)	1835	0	0	1837	1724	0
Link Speed (k/h)	50			50	40	
Link Distance (m)	174.8			268.2	279.9	
Travel Time (s)	12.6			19.3	25.2	
Confl. Peds. (#/hr)		12	12		5	9
Confl. Bikes (#/hr)		1				
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	326	37	33	423	41	18
Shared Lane Traffic (%)						
Lane Group Flow (vph)	363	0	0	456	59	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		14	24		24	14
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.3%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	205	131	107	110	162	322
Future Volume (vph)	205	131	107	110	162	322
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.932		0.910	
Flt Protected		0.970			0.984	
Satd. Flow (prot)	0	1806	1718	0	1667	0
Flt Permitted		0.970			0.984	
Satd. Flow (perm)	0	1806	1718	0	1667	0
Link Speed (k/h)		50	50		50	
Link Distance (m)		268.2	198.7		140.0	
Travel Time (s)		19.3	14.3		10.1	
Confl. Peds. (#/hr)	13			13	3	3
Confl. Bikes (#/hr)				4		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	3%	1%	1%	1%
Adj. Flow (vph)	205	131	107	110	162	322
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	336	217	0	484	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		4.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		5.0	5.0		5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24			14	24	14
Sign Control		Stop	Stop		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	351	0	1135
Future Volume (vph)	0	0	804	351	0	1135
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.954			
Flt Protected						
Satd. Flow (prot)	0	0	3374	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3374	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	804	351	0	1135
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1155	0	0	1135
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	351	0	425
Future Volume (vph)	0	0	0	351	0	425
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	174.8	
Travel Time (s)	3.3			6.0	12.6	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	351	0	425
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	351	0	425
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

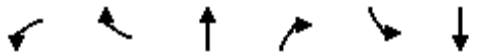
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	31.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	3	0	302	4	0	456
Future Volume (vph)	3	0	302	4	0	456
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.998			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1839	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1839	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	71.6		140.0			52.4
Travel Time (s)	5.2		10.1			3.8
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	3	0	302	4	0	456
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	0	306	0	0	456
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.3%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	0	226	31	0	366
Future Volume (vph)	20	0	226	31	0	366
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.984			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1814	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1814	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	131.0		52.4			103.1
Travel Time (s)	9.4		3.8			7.4
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	226	31	0	366
Shared Lane Traffic (%)						
Lane Group Flow (vph)	20	0	257	0	0	366
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 30.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	14	0	171	15	0	277
Future Volume (vph)	14	0	171	15	0	277
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt			0.989			
Flt Protected	0.950					
Satd. Flow (prot)	1751	0	1823	0	0	1843
Flt Permitted	0.950					
Satd. Flow (perm)	1751	0	1823	0	0	1843
Link Speed (k/h)	50		50			50
Link Distance (m)	58.0		103.1			79.2
Travel Time (s)	4.2		7.4			5.7
Confl. Peds. (#/hr)				10	10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	14	0	171	15	0	277
Shared Lane Traffic (%)						
Lane Group Flow (vph)	14	0	186	0	0	277
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	4.0		0.0			0.0
Link Offset(m)	0.0		0.0			0.0
Crosswalk Width(m)	5.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	97	97		97	97	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	140	31	0	257	20	0
Future Volume (vph)	140	31	0	257	20	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.976					
Flt Protected					0.950	
Satd. Flow (prot)	1799	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1799	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	79.2			61.7	93.2	
Travel Time (s)	5.7			4.4	6.7	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	140	31	0	257	20	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	171	0	0	257	20	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

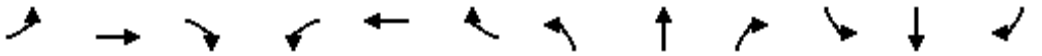
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	124	16	0	243	14	0
Future Volume (vph)	124	16	0	243	14	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.985					
Flt Protected					0.950	
Satd. Flow (prot)	1815	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1815	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	61.7			49.9	89.6	
Travel Time (s)	4.4			3.6	6.5	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	124	16	0	243	14	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	140	0	0	243	14	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.5%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	4	0	240	3	0
Future Volume (vph)	120	4	0	240	3	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.996					
Flt Protected					0.950	
Satd. Flow (prot)	1836	0	0	1843	1751	0
Flt Permitted					0.950	
Satd. Flow (perm)	1836	0	0	1843	1751	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	49.9			41.2	94.8	
Travel Time (s)	3.6			3.0	6.8	
Confl. Peds. (#/hr)		10	10			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	120	4	0	240	3	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	124	0	0	240	3	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	4.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	0.0			0.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)		97	97		97	97
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Future Volume (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3390	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						281			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	350	406	265	278	0	857	0	1057	325	549	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

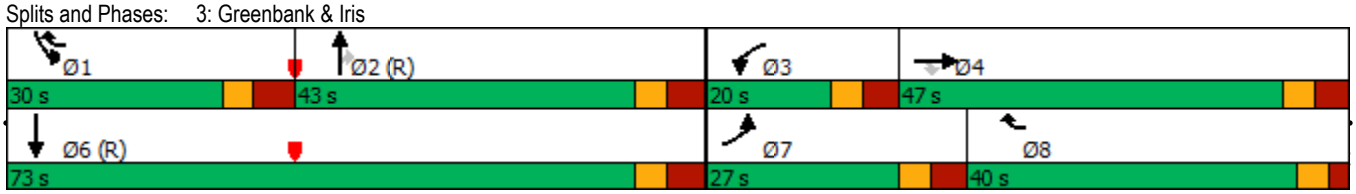
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	18.3	37.6	37.6	12.9		63.2		36.3	36.3	24.0	67.9	
Actuated g/C Ratio	0.13	0.27	0.27	0.09		0.45		0.26	0.26	0.17	0.48	
v/c Ratio	0.79	0.81	0.51	0.88		0.68		0.80	0.54	0.94	0.38	
Control Delay	72.1	61.4	21.1	82.8		30.0		54.3	11.3	81.2	24.1	
Queue Delay	0.0	0.0	0.0	0.0		0.7		0.0	0.0	0.0	0.0	
Total Delay	72.1	61.4	21.1	82.8		30.7		54.3	11.3	81.2	24.1	
LOS	E	E	C	F		C		D	B	F	C	
Approach Delay		54.6			43.5			44.2			50.1	
Approach LOS		D			D			D			D	
Queue Length 50th (m)	44.7	94.9	23.3	37.6		86.1		93.6	8.7	~73.1	56.2	
Queue Length 95th (m)	60.1	130.8	48.1	#58.1		103.9		109.6	34.5	#107.8	70.1	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1245		1316	607	587	1714	
Starvation Cap Reductn	0	0	0	0		142		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.73	0.76	0.48	0.88		0.78		0.80	0.54	0.94	0.38	

Intersection Summary

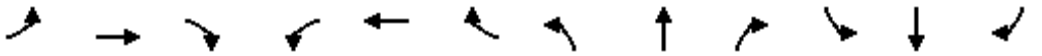
Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 47.8 Intersection LOS: D
Intersection Capacity Utilization 101.9% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary



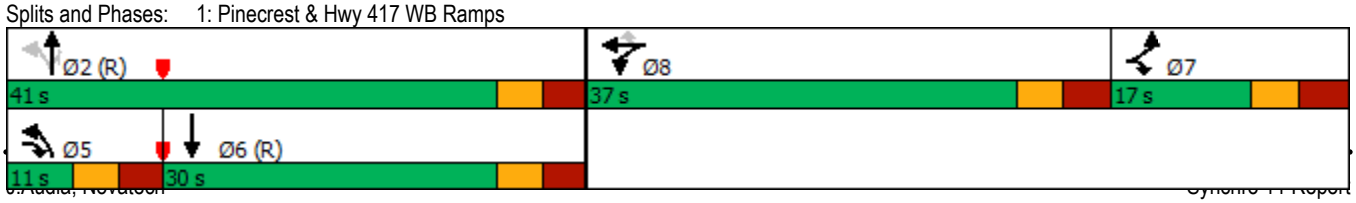
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	11	684	3	352	9	961	637	0	1240	10
Future Volume (vph)	9	0	11	684	3	352	9	961	637	0	1240	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	70.0		0.0	0.0		110.0	35.0		50.0	0.0		0.0
Storage Lanes	1		1	2		2	1		1	0		0
Taper Length (m)	10.0			10.0			25.0			10.0		
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.91	0.91
Ped Bike Factor	0.99					0.98			0.94		1.00	
Frt			0.850			0.850			0.850		0.999	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	893	0	799	3431	1414	1582	1768	3537	1582	0	5035	0
Flt Permitted	0.950			0.950			0.117					
Satd. Flow (perm)	887	0	799	3431	1414	1553	218	3537	1491	0	5035	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115			246			611		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		127.1			199.4			233.3			168.3	
Travel Time (s)		9.2			14.4			16.8			12.1	
Confl. Peds. (#/hr)	7					7	11		19	19		11
Confl. Bikes (#/hr)									1			1
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 (%)	100%	1%	100%	1%	33%	1%	1%	1%	1%	1%	1%	100%
Adj. Flow (vph)	9	0	11	684	3	352	9	961	637	0	1240	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	9	0	11	684	3	352	9	961	637	0	1250	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	R NA	L NA	Left	R NA	Left	Right	Right	Left	Left	R NA
Median Width(m)		8.0			8.0			6.0			4.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		50	24		14
Number of Detectors	1		1	1	2	1	1	2	1		2	
Detector Template	Left		Right	Left	Thru	Right	Left	Thru	Right		Thru	
Leading Detector (m)	2.0		2.0	2.0	10.0	2.0	2.0	10.0	2.0		10.0	
Trailing Detector (m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Position(m)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Size(m)	2.0		2.0	2.0	0.6	2.0	2.0	0.6	2.0		0.6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Detector 2 Position(m)					9.4			9.4			9.4	
Detector 2 Size(m)					0.6			0.6			0.6	
Detector 2 Type					Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0			0.0	
Turn Type	Prot		pt+ov	Split	NA	Perm	pm+pt	NA	Perm		NA	
Protected Phases	7		7 5	8	8		5	2			6	
Permitted Phases						8	2		2			
Detector Phase	7		7 5	8	8	8	5	2	2		6	

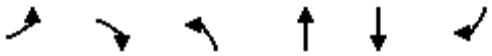
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0			10.0	10.0	10.0	5.0	10.0	10.0		10.0	
Minimum Split (s)	12.0			36.6	36.6	36.6	11.4	30.4	30.4		30.4	
Total Split (s)	17.0			37.0	37.0	37.0	11.0	41.0	41.0		30.0	
Total Split (%)	17.9%			38.9%	38.9%	38.9%	11.6%	43.2%	43.2%		31.6%	
Maximum Green (s)	10.0			30.4	30.4	30.4	4.6	34.6	34.6		23.6	
Yellow Time (s)	3.3			3.3	3.3	3.3	3.3	3.3	3.3		3.3	
All-Red Time (s)	3.7			3.3	3.3	3.3	3.1	3.1	3.1		3.1	
Lost Time Adjust (s)	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0			6.6	6.6	6.6	6.4	6.4	6.4		6.4	
Lead/Lag	Lag			Lead	Lead	Lead	Lead				Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0			3.0	3.0	3.0	3.0	3.0	3.0		3.0	
Recall Mode	None			None	None	None	None	C-Max	C-Max		C-Max	
Walk Time (s)				7.0	7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)				23.0	23.0	23.0		17.0	17.0		17.0	
Pedestrian Calls (#/hr)				5	5	5		15	15		10	
Act Effct Green (s)	6.7		11.7	25.4	25.4	25.4	50.6	50.6	50.6		45.7	
Actuated g/C Ratio	0.07		0.12	0.27	0.27	0.27	0.53	0.53	0.53		0.48	
v/c Ratio	0.14		0.06	0.75	0.01	0.59	0.04	0.51	0.59		0.52	
Control Delay	45.7		0.5	37.0	23.0	13.1	17.0	18.0	4.8		22.7	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	
Total Delay	45.7		0.5	37.0	23.0	13.1	17.0	18.0	4.8		22.7	
LOS	D		A	D	C	B	B	B	A		C	
Approach Delay		20.9			28.9			12.8			22.7	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	1.5		0.0	54.1	0.4	14.0	0.6	44.2	1.7		38.7	
Queue Length 95th (m)	5.7		0.0	66.8	2.2	36.0	3.7	92.7	28.0		#107.0	
Internal Link Dist (m)		103.1			175.4			209.3			144.3	
Turn Bay Length (m)	70.0					110.0	35.0		50.0			
Base Capacity (vph)	94		202	1097	452	664	208	1883	1079		2420	
Starvation Cap Reductn	0		0	0	0	0	0	0	0		0	
Spillback Cap Reductn	0		0	0	0	0	0	0	0		0	
Storage Cap Reductn	0		0	0	0	0	0	0	0		0	
Reduced v/c Ratio	0.10		0.05	0.62	0.01	0.53	0.04	0.51	0.59		0.52	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 83 (87%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 20.3 Intersection LOS: C
Intersection Capacity Utilization 69.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

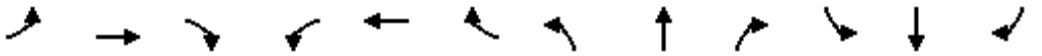
Splits and Phases: 1: Pinecrest & Hwy 417 WB Ramps





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	1607	1273	300
Future Volume (vph)	0	0	0	1607	1273	300
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Ped Bike Factor						
Frt						0.850
Flt Protected						
Satd. Flow (prot)	0	0	0	5082	3537	1582
Flt Permitted						
Satd. Flow (perm)	0	0	0	5082	3537	1582
Link Speed (k/h)	50			50	50	
Link Distance (m)	351.5			153.6	233.3	
Travel Time (s)	25.3			11.1	16.8	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	0	1607	1273	300
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	1607	1273	300
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			6.0	4.0	
Link Offset(m)	-10.0			0.0	0.0	
Crosswalk Width(m)	0.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		



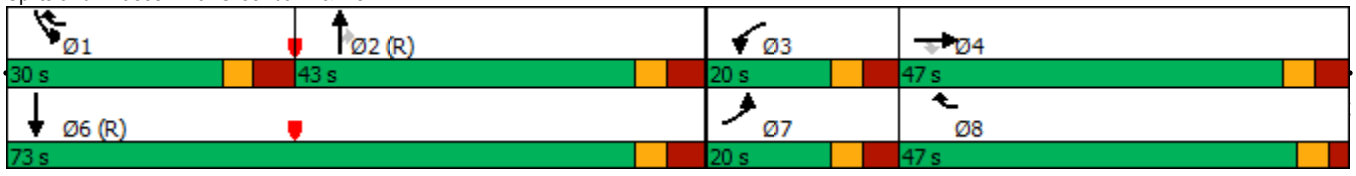
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Future Volume (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3391	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						257			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	20.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	14.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	12.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	12.9	38.1	38.1	12.9		69.4		35.5	35.5	24.3	67.4	
Actuated g/C Ratio	0.09	0.27	0.27	0.09		0.50		0.25	0.25	0.17	0.48	
v/c Ratio	1.12	0.87	0.50	1.03		0.72		0.82	0.63	1.04	0.38	
Control Delay	142.7	66.1	21.0	108.8		26.8		55.5	18.7	103.5	24.3	
Queue Delay	0.0	0.0	0.0	0.0		2.3		0.0	0.0	0.0	0.0	
Total Delay	142.7	66.1	21.0	108.8		29.1		55.5	18.7	103.5	24.3	
LOS	F	E	C	F		C		E	B	F	C	
Approach Delay		80.2			48.8			46.1			62.8	
Approach LOS		F			D			D			E	
Queue Length 50th (m)	~52.7	104.7	23.3	~45.7		89.4		93.6	22.9	~93.9	56.2	
Queue Length 95th (m)	#81.3	#151.4	48.1	m#66.2		m112.5		109.6	54.8	#128.0	70.1	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	313	531	548	316		1354		1288	582	594	1701	
Starvation Cap Reductn	0	0	0	0		234		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	1.12	0.82	0.48	1.03		0.88		0.82	0.63	1.04	0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 140			
Offset: 10 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 145			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.12			
Intersection Signal Delay: 58.1		Intersection LOS: E	
Intersection Capacity Utilization 106.6%		ICU Level of Service G	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	47.0
Total Split (%)	34%
Maximum Green (s)	41.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	542	35	12	792	0	0	701
Future Volume (vph)	542	35	12	792	0	0	701
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0	0.0		0.0	25.0	
Storage Lanes	1	1	0		0	1	
Taper Length (m)	10.0		10.0			25.0	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	0.91
Ped Bike Factor		0.98					
Frt		0.850					
Flt Protected	0.950			0.999			
Satd. Flow (prot)	1751	1582	0	3533	0	0	5082
Flt Permitted	0.950			0.942			
Satd. Flow (perm)	1751	1550	0	3332	0	0	5082
Right Turn on Red		Yes			Yes		
Satd. Flow (RTOR)		35					
Link Speed (k/h)	50			50			50
Link Distance (m)	45.5			55.8			69.5
Travel Time (s)	3.3			4.0			5.0
Confl. Peds. (#/hr)		8			15	15	
Confl. Bikes (#/hr)		2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	1%	1%	1%	2%	1%	1%
Adj. Flow (vph)	542	35	12	792	0	0	701
Shared Lane Traffic (%)							
Lane Group Flow (vph)	542	35	0	804	0	0	701
Enter Blocked Intersection	No	No	Yes	No	No	No	No
Lane Alignment	L NA	R NA	R NA	Left	Right	Left	Left
Median Width(m)	4.0			2.0			2.0
Link Offset(m)	0.0			0.0			0.0
Crosswalk Width(m)	5.0			5.0			5.0
Two way Left Turn Lane							
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	14		14	24	
Number of Detectors	1	1	1	2			2
Detector Template	Left	Right	Left	Thru			Thru
Leading Detector (m)	2.0	2.0	2.0	10.0			10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0			0.0
Detector 1 Size(m)	2.0	2.0	2.0	0.6			0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0			0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0			0.0
Detector 2 Position(m)				9.4			9.4
Detector 2 Size(m)				0.6			0.6
Detector 2 Type				Cl+Ex			Cl+Ex
Detector 2 Channel							
Detector 2 Extend (s)				0.0			0.0
Turn Type	Prot	Perm	Perm	NA			NA
Protected Phases	8			2			6
Permitted Phases		8	2				
Detector Phase	8	8	2	2			6

Lane Group	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	10.0			10.0
Minimum Split (s)	29.6	29.6	25.7	25.7			25.7
Total Split (s)	30.0	30.0	40.0	40.0			40.0
Total Split (%)	42.9%	42.9%	57.1%	57.1%			57.1%
Maximum Green (s)	24.4	24.4	34.3	34.3			34.3
Yellow Time (s)	3.3	3.3	3.3	3.3			3.3
All-Red Time (s)	2.3	2.3	2.4	2.4			2.4
Lost Time Adjust (s)	0.0	0.0		0.0			0.0
Total Lost Time (s)	5.6	5.6		5.7			5.7
Lead/Lag							
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	3.0			3.0
Recall Mode	None	None	C-Max	C-Max			C-Max
Walk Time (s)	7.0	7.0	13.0	13.0			13.0
Flash Dont Walk (s)	17.0	17.0	7.0	7.0			7.0
Pedestrian Calls (#/hr)	5	5	5	5			15
Act Effct Green (s)	23.6	23.6		35.1			35.1
Actuated g/C Ratio	0.34	0.34		0.50			0.50
v/c Ratio	0.92	0.06		0.48			0.28
Control Delay	45.8	6.2		12.1			10.6
Queue Delay	1.2	0.0		0.0			0.0
Total Delay	47.0	6.2		12.1			10.6
LOS	D	A		B			B
Approach Delay	44.5			12.1			10.6
Approach LOS	D			B			B
Queue Length 50th (m)	60.5	0.0		41.2			17.2
Queue Length 95th (m)	#110.4	4.8		m41.7			23.5
Internal Link Dist (m)	21.5			31.8			45.5
Turn Bay Length (m)							
Base Capacity (vph)	610	563		1670			2548
Starvation Cap Reductn	0	0		0			0
Spillback Cap Reductn	12	0		0			0
Storage Cap Reductn	0	0		0			0
Reduced v/c Ratio	0.91	0.06		0.48			0.28

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 45 (64%), Referenced to phase 2:NBTU and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 98.8% 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.
m Volume for 95th percentile queue is metered by upstream signal.

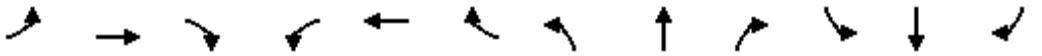
Splits and Phases: 4: Iris & Pinecrest SC

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	804	491	0	1312
Future Volume (vph)	0	0	804	491	0	1312
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.91
Ped Bike Factor						
Frt			0.943			
Flt Protected						
Satd. Flow (prot)	0	0	3335	0	0	5082
Flt Permitted						
Satd. Flow (perm)	0	0	3335	0	0	5082
Link Speed (k/h)	50		50			50
Link Distance (m)	83.3		81.7			55.8
Travel Time (s)	6.0		5.9			4.0
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	0	0	804	491	0	1312
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	1295	0	0	1312
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(m)	0.0		2.0			2.0
Link Offset(m)	-4.0		0.0			0.0
Crosswalk Width(m)	0.0		0.0			0.0
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14		50	24	
Sign Control	Free		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	491	0	577
Future Volume (vph)	0	0	0	491	0	577
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1861	0	1594
Flt Permitted						
Satd. Flow (perm)	0	0	0	1861	0	1594
Link Speed (k/h)	50			50	50	
Link Distance (m)	45.5			83.3	87.4	
Travel Time (s)	3.3			6.0	6.3	
Confl. Peds. (#/hr)						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%
Adj. Flow (vph)	0	0	0	491	0	577
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	491	0	577
Enter Blocked Intersection	Yes	Yes	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	5.0			5.0	5.0	
Two way Left Turn Lane						
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24	14	24			50
Sign Control	Free			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Future Volume (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	100.0		0.0	0.0		0.0	0.0		110.0	80.0		0.0
Storage Lanes	2		1	2		2	0		1	2		0
Taper Length (m)	50.0			10.0			10.0			60.0		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	0.88	1.00	0.91	1.00	0.97	0.95	1.00
Ped Bike Factor			0.98	0.99					0.97	0.99		
Frt			0.850			0.850			0.850			
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	3397	1861	1582	3431	0	2785	0	5082	1582	3431	3537	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	3397	1861	1544	3391	0	2785	0	5082	1541	3412	3537	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)			150						270			
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		328.3			81.7			201.5			153.6	
Travel Time (s)		23.6			5.9			14.5			11.1	
Confl. Peds. (#/hr)			12	12			9		12	12		9
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%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	350	438	265	324	0	988	0	1057	364	619	654	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	L NA	Left	Right	Left	Left	R NA	Left	Left	Right	Left	Left	Right
Median Width(m)		8.0			8.0			8.0			12.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		5.0			5.0			5.0			5.0	
Two way Left Turn Lane												
Headway Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
Turning Speed (k/h)	24		14	24		14	24		14	24		14
Number of Detectors	1	2	1	1		1		2	1	1	2	
Detector Template	Left	Thru	Right	Left		Right		Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0		2.0		10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0		2.0		0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4						9.4			9.4	
Detector 2 Size(m)		0.6						0.6			0.6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Prot	NA	Perm	Prot		pt+ov		NA	Perm	Prot	NA	
Protected Phases	7	4		3		1 8		2		1	6	
Permitted Phases			4						2			
Detector Phase	7	4	4	3		1 8		2	2	1	6	
Switch Phase												

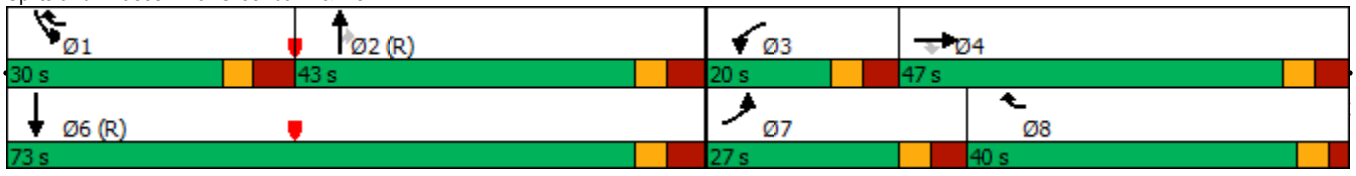
Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(m)	
Link Offset(m)	
Crosswalk Width(m)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (k/h)	
Number of Detectors	
Detector Template	
Leading Detector (m)	
Trailing Detector (m)	
Detector 1 Position(m)	
Detector 1 Size(m)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(m)	
Detector 2 Size(m)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	
Detector Phase	
Switch Phase	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	10.0	10.0	5.0				10.0	10.0	5.0	10.0	
Minimum Split (s)	12.1	47.0	47.0	12.1				42.5	42.5	12.6	42.5	
Total Split (s)	27.0	47.0	47.0	20.0				43.0	43.0	30.0	73.0	
Total Split (%)	19.3%	33.6%	33.6%	14.3%				30.7%	30.7%	21.4%	52.1%	
Maximum Green (s)	19.9	40.0	40.0	12.9				35.5	35.5	22.4	65.5	
Yellow Time (s)	3.3	3.3	3.3	3.3				3.3	3.3	3.3	3.3	
All-Red Time (s)	3.8	3.7	3.7	3.8				4.2	4.2	4.3	4.2	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.0	7.0	7.1				7.5	7.5	7.6	7.5	
Lead/Lag	Lead	Lag	Lag	Lead				Lag	Lag	Lead		
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0				3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None				C-Max	C-Max	None	C-Max	
Walk Time (s)		27.0	27.0					7.0	7.0		7.0	
Flash Dont Walk (s)		13.0	13.0					28.0	28.0		28.0	
Pedestrian Calls (#/hr)		10	10					10	10		10	
Act Effct Green (s)	18.3	38.8	38.8	12.9		64.0		35.5	35.5	23.6	66.7	
Actuated g/C Ratio	0.13	0.28	0.28	0.09		0.46		0.25	0.25	0.17	0.48	
v/c Ratio	0.79	0.85	0.49	1.03		0.78		0.82	0.61	1.07	0.39	
Control Delay	72.1	64.0	20.8	108.4		32.3		55.5	17.0	112.7	24.7	
Queue Delay	0.0	0.0	0.0	0.0		3.0		0.0	0.0	0.0	0.0	
Total Delay	72.1	64.0	20.8	108.4		35.3		55.5	17.0	112.7	24.7	
LOS	E	E	C	F		D		E	B	F	C	
Approach Delay		55.8			53.3			45.6			67.5	
Approach LOS		E			D			D			E	
Queue Length 50th (m)	44.7	104.7	23.3	~45.7		107.5		93.6	19.5	~93.9	56.2	
Queue Length 95th (m)	60.1	#151.4	48.1	m#65.3		m132.4		109.6	51.0	#128.0	70.1	
Internal Link Dist (m)		304.3			57.7			177.5			129.6	
Turn Bay Length (m)	100.0								110.0	80.0		
Base Capacity (vph)	482	531	548	316		1244		1288	592	577	1683	
Starvation Cap Reductn	0	0	0	0		162		0	0	0	0	
Spillback Cap Reductn	0	0	0	0		0		0	0	0	0	
Storage Cap Reductn	0	0	0	0		0		0	0	0	0	
Reduced v/c Ratio	0.73	0.82	0.48	1.03		0.91		0.82	0.61	1.07	0.39	

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 12 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 55.2 Intersection LOS: E
Intersection Capacity Utilization 106.6% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Greenbank & Iris



Lane Group	Ø8
Minimum Initial (s)	10.0
Minimum Split (s)	15.6
Total Split (s)	40.0
Total Split (%)	29%
Maximum Green (s)	34.4
Yellow Time (s)	3.3
All-Red Time (s)	2.3
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary