Appendix A

NOP and Scoping Meeting Materials

City of West Covina 2016 General Plan Update and Downtown Master Plan and Code

Notice of Preparation of a Draft Environmental Impact Report

The City of West Covina will be the Lead Agency for the preparation of an Environmental Impact Report (EIR) that will analyze the environmental impacts associated with a proposed update to the West Covina General Plan and adoption of a Downtown Master Plan and Code. These two related actions are described below. More information on the Downtown Master Plan and Code are available on the project website at: http://www.planwc.org/index.html.

2016 General Plan Update (PlanWC)

The proposed project is a comprehensive update of the City's General Plan, which has not been comprehensively updated since 1985. The General Plan will be reorganized and reformatted, with updated goals and policies that reflect the community's vision of West Covina that the General Plan seeks to achieve. The General Plan Land Use Map will also be updated. The General Plan Land Use map (see attached) reflects the community's vision to direct the majority of new growth to the Downtown area where the development pressures are the greatest and change is desired. Housing and job growth is targeted to strategic areas along the corridors and neighborhood centers.

The Draft 2016 General Plan includes the following eight Elements:

- Our Natural Community
- Our Prosperous Community
- Our Well Planned Community
- Our Accessible Community
- Our Resilient Community
- Our Healthy and Safe Community
- Our Active Community
- Our Creative Community

Among the goals of PlanWC and the Downtown Master Plan and Code are the following:

- Direct new growth to the downtown area where development pressures are the greatest and change is desired, while protecting stable residential areas. This strategy is referred to as "Downtown First."
- Target housing and job growth in strategic areas along key transportation corridors.
- Encourage pedestrian-oriented mixed-use development in Downtown, while providing vibrant public spaces and gathering places.
- Preserve existing open spaces, improve the quality of natural resources, and improve access to open space.
- Maintain and monitor West Covina's fiscal health by reinforcing West Covina's brand as a great place to Live, Work and Play in the San Gabriel Valley, and nurturing local businesses and attracting non-retail jobs.
- Design streets that provide safe access for all users—pedestrians, cyclists, public transit users, and motorists—of all ages and abilities, while also being in harmony with the area's history, environmental resources, and overall aesthetic.
- Support development patterns and support systems that yield a resilient low-carbon built environment.
- Create environments that encourage safe and healthy lifestyles and maximize the opportunities for physical activity.
- Become a vibrant cultural center by weaving the arts and local heritage into everyday life.
- Enhance the value of fitness and celebrate healthy living; improve the existing condition of public open spaces and facilities to encourage use; and acquire, develop, and maintain quality public open spaces and trails.

West Covina includes many different kinds of places, with very different characters. Accommodating new growth requires either designing changes to match the character of the area or carefully and intentionally changing the character of key locations.

Plan WC contains a description of the different land use planning designations for West Covina, and the equivalent transect zone. The transect zones provide a framework to describe a broad but continuous range of environments for human habitation and activity. The transect zones reflect how intensely land is used, and how placement and scale of buildings, the type of streets, presence and width of sidewalks should reinforce the character of the area.

The allocation of separate land use designations evolves to a geography of places that address "form and character" of the place. Plan WC informs the nature of intended change in different areas. The basic organizing place types for areas designated for growth are neighborhoods, districts and corridors. The majority of new growth will be directed to the downtown district and the corridors. The level of change ranges from reinvestment in existing buildings and

minor improvements to utility infrastructure and the public realm, to the occasional infill development that completes the prevalent development pattern.

This rigorous and principled approach to planning establishes the regulatory geography and sets the stage for coding. The Downtown Plan and Code's regulatory framework seamlessly carries the logic of good design and sound planning from the scale of a building, lot and block to the scale of neighborhood, community, and city.

Downtown Master Plan and Code

The Downtown Plan and accompanying form-based code seeks to form consensus around and establish a common image for Downtown West Covina as a livable, healthy and economically vibrant center for the community. The Downtown Master Plan and Code will guide public funding and seek to attract private investments. The central theme of PlanWC is Downtown First. As the Downtown Master Plan and Code and PlanWC were prepared and adopted simultaneously, the two documents are entirely consistent with each other.

The Development Code implements the Downtown Vision and Goals and Policies. The prescriptive standards in the Development Code ensure that new development projects exhibit the highest standards of urban design, architecture, and landscaping at the scale of neighborhood, block, lot, and building according to the Transect. The Downtown vision's form is compact, walkable, and mixed use. The urban form is intended to be inviting, comfortable, safe, and ecologically resilient. The Development Code allows a mix of uses within a walkable environment so driving is an option, not a necessity to meet every day needs.

The Downtown Code provides all requirements for development and land use activity within the boundaries identified in the Code (see attached). Except as specifically referenced within the Downtown Code, the West Covina Municipal Code requirements in place prior to the adoption of the Downtown Code would be replaced by the requirements of the Downtown Code within these boundaries.

Environmental Impact Report

The Draft EIR will be a program EIR. Per the *CEQA Guidelines*, a program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project. The purpose of a program EIR is to allow the lead agency to consider broad policy alternatives and programwide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts.

The EIR will examine each of the issue areas on the City's environmental checklist. Issues to be discussed include:

- Aesthetics
- Agriculture Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Greenhouse Gas Emissions
- Hazards & Hazardous Materials
- Hydrology/Water Quality
- Land Use/Planning
- Mineral Resources
- Noise
- Population/Housing
- Public Services
- Recreation
- Transportation/Traffic
- Utilities/Service Systems
- Mandatory Findings of Significance

In addition to the CEQA-required "no project" alternative, the EIR will examine a range of land use scenarios that address one or more of the projects' potential environmental effects.

The City of West Covina would like to know the views of your organization as to the scope and content of the environmental information that should be addressed in connection with the proposed project. Public agencies may need to use the EIR prepared by the City of West Covina when considering permits or other approvals regarding certain aspects of the proposed actions. Due to time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Jeff Anderson, Planning Director, at

City of West Covina
Planning Department
1444 West Garvey Avenue South
West Covina, California 91790

Mr. Anderson can be reached at (626) 939-8422. Mr. Anderson's email address is Jeff.Anderson@westcovina.org. Please provide the name for a contact person in your agency.

The City of West Covina will hold an EIR scoping meeting to provide an additional opportunity for input on the scope and content of the EIR. The scoping meeting is scheduled for Monday, February 29, at 6:00 p.m., in the Community Room at West Covina City Hall, located at 1444 West Garvey Avenue South.

Project Title: City of West Covina 2016 General Plan Update and Downtown Master Plan and Code

Project Sponsor: City of West Covina

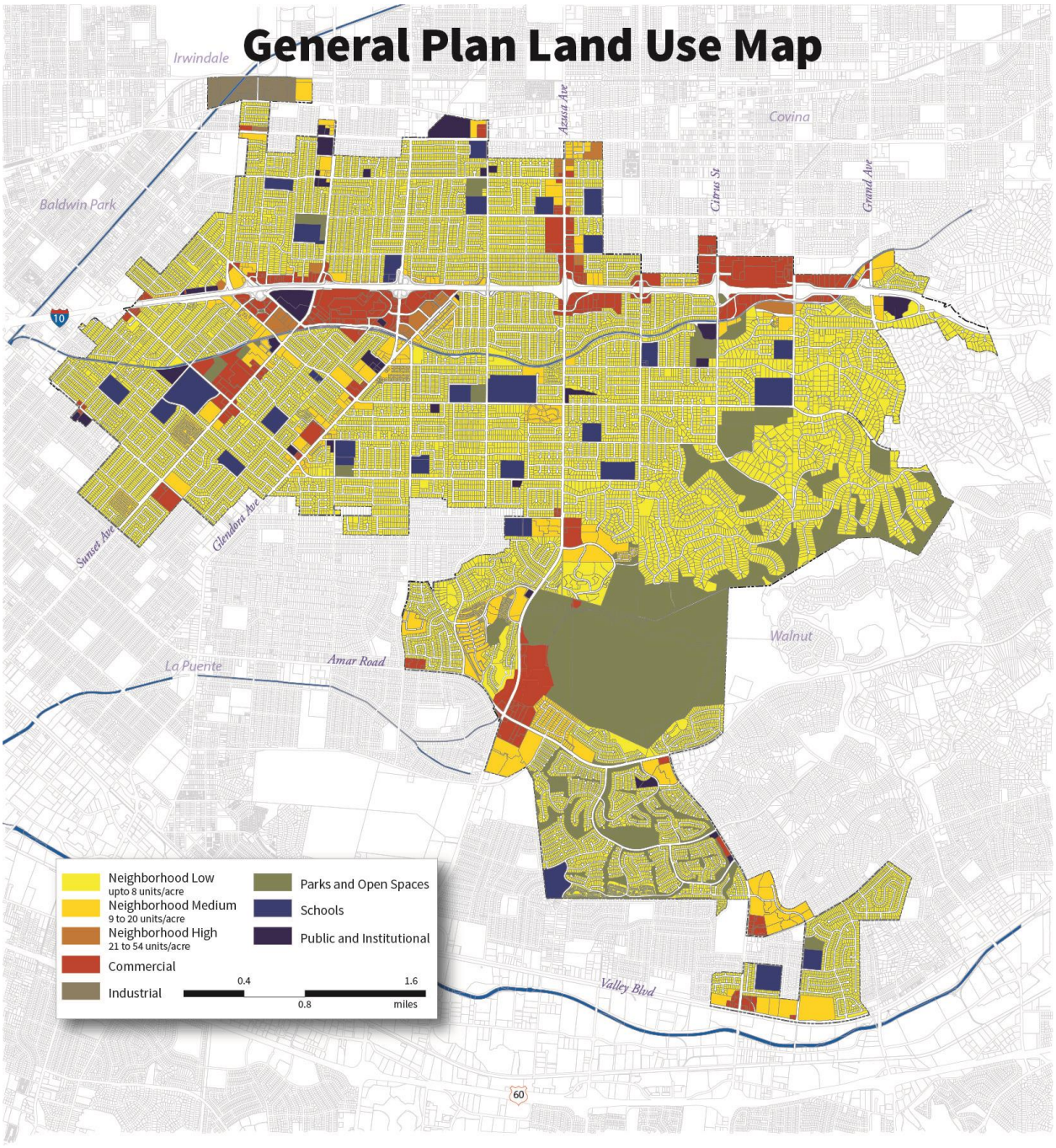
Date February 16, 2016

Signature

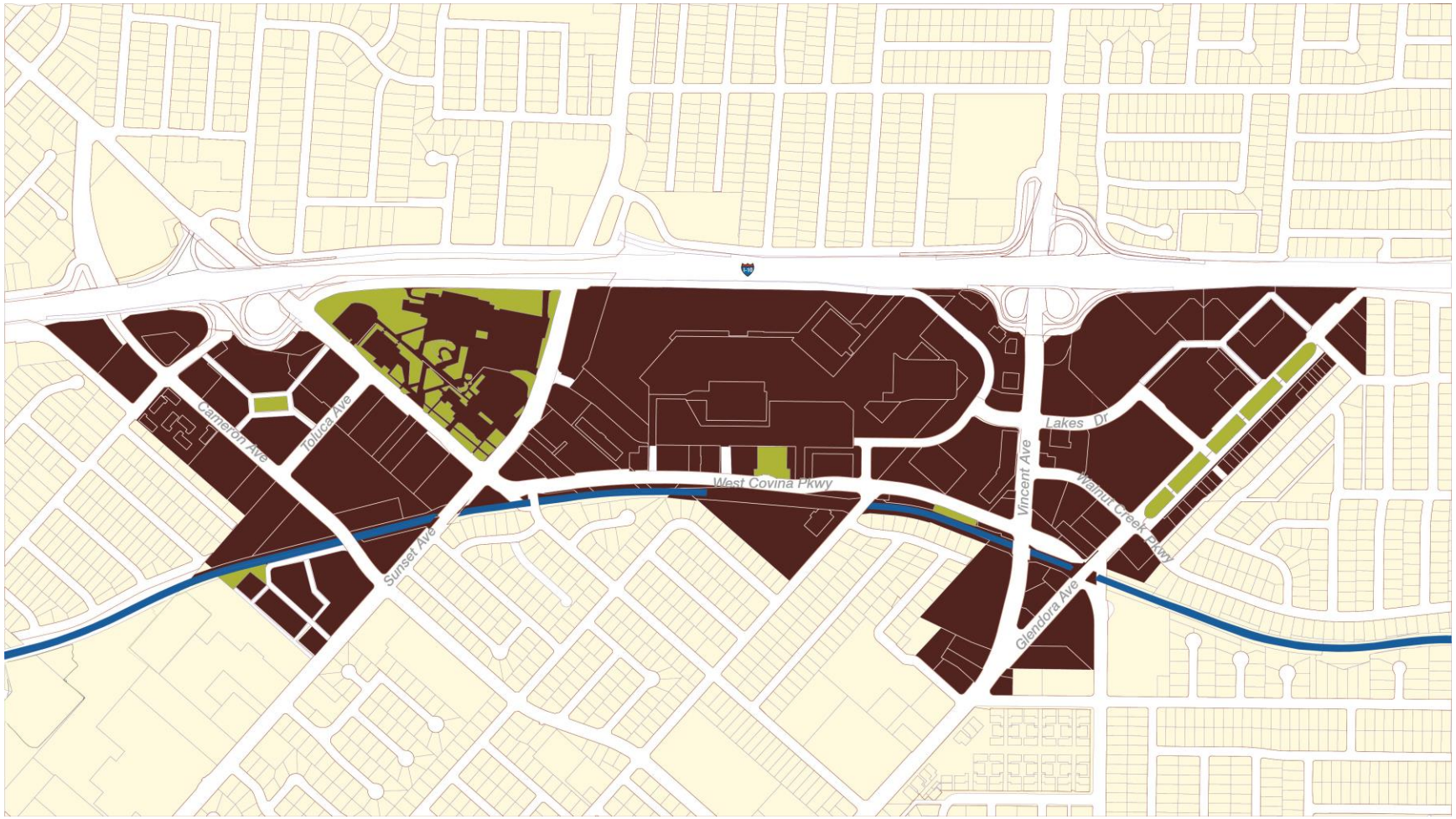
Title Planning Director

Telephone (626) 939-8422

General Plan Land Use Map



Downtown Plan Area



STATE OF CALIFORNIA
NATIVE AMERICAN HERITAGE COMMISSION
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Edmund G. Brown Jr., Governor

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February 22, 2016

Jeff Anderson
City of West Covina
1444 W. Garvey Avenue, Room 218
West Covina, Ca 90406

RE: SCH# 2016021069, City of West Covina 2016 General Plan Update and Downtown Master Plan and Code Project, City of West Covina, Los Angeles County, California

Dear Mr. Anderson:

The Native American Heritage Commission has received the DEIR Notice of Preparation (NOP) for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code § 21000 et seq.), specifically Public Resources Code section 21084.1, states that a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines Section 15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an environmental impact report (EIR) shall be prepared. (Pub. Resources Code § 21080 (d); Cal. Code Regs., tit. 14, § 15064 subd.(a)(1) (CEQA Guidelines § 15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources with the area of project effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code § 21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code § 21084.3 (a)). **AB 52 applies to any project for which a notice of preparation or a notice of negative declaration or mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. § 800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments. **Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.**

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:
   a. A brief description of the project.
   b. The lead agency contact information.
   c. Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code § 21080.3.1 (d)).
   d. A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code § 21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code § 21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or environmental impact report. (Pub. Resources Code § 21080.3.1(b)).
   a. For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code § 65352.4 (SB 18). (Pub. Resources Code § 21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:
   a. Alternatives to the project.
   b. Recommended mitigation measures.

c. Significant effects. (Pub. Resources Code § 21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:
   a. Type of environmental review necessary.
   b. Significance of the tribal cultural resources.
   c. Significance of the project's impacts on tribal cultural resources.
   d. If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code § 21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code sections 6254 (r) and 6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code § 21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:
   a. Whether the proposed project has a significant impact on an identified tribal cultural resource.
   b. Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code section 21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code § 21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:
   a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
   b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code § 21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code section 21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code section 21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code § 21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code section 21084.3 (b). (Pub. Resources Code § 21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:
    a. Avoidance and preservation of the resources in place, including, but not limited to:
       i. Planning and construction to avoid the resources and protect the cultural and natural context.
       ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
    b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
       i. Protecting the cultural character and integrity of the resource.
       ii. Protecting the traditional use of the resource.
       iii. Protecting the confidentiality of the resource.
    c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
    d. Protecting the resource. (Pub. Resource Code § 21084.3 (b)).
    e. Please note that a federally recognized California Native American tribe or a nonfederally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code § 815.3 (c)).
    f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code § 5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An environmental impact report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
    a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code sections 21080.3.1 and 21080.3.2 and concluded pursuant to Public Resources Code section 21080.3.2.
    b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
    c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code section 21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code § 21082.3 (d)).

    This process should be documented in the Cultural Resources section of your environmental document.

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code § 65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code § 65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code section 65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code sections 5097.9 and 5097.993 that are within the city's or county's jurisdiction. (Gov. Code § 65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have been already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.
    b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:
    a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
    b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
    a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, section 15064.5(f) (CEQA Guidelines section 15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
    b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
    c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code section 7050.5, Public Resources Code section 5097.98, and Cal. Code Regs., tit. 14, section 15064.5,

subdivisions (d) and (e) (CEQA Guidelines section 15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

Please contact me if you need any additional information at gayle.totton@nahc.ca.gov.

Sincerely,

Gayle Totton
Associate Government Planning Analyst

cc: State Clearinghouse

STATE OF CALIFORNIA EDMUND G. BROWN JR., *Governor*

PUBLIC UTILITIES COMMISSION
320 WEST 4TH STREET, SUITE 500
LOS ANGELES, CA 90013

March 10, 2016

Jeff Anderson
City of West Covina
1444 W. Garvey Avenue, Room 218
West Covina, CA 90406

Dear Jeff:

Re: SCH 2016021069 West Covina (LOS ANGELES) 2016 General Plan Update - NOP

The California Public Utilities Commission (Commission) has jurisdiction over the safety of highway-rail crossings (crossings) in California. The California Public Utilities Code requires Commission approval for the construction or alteration of crossings and grants the Commission exclusive power on the design, alteration, and closure of crossings in California. The Commission's Rail Crossings and Engineering Branch (RCEB) has received the *Notice of Preparation (NOP)* from the State Clearinghouse for the proposed City of West Covina (City) 2016 General Plan Update.

According to the NOP, the project area includes active railroad tracks. RCEB recommends that the City add language to the General Plan Update so that any future development adjacent to or near the rail right-of-way (ROW) is planned with the safety of the rail corridor in mind. New developments may increase traffic volumes not only on streets and at intersections, but also at at-grade crossings. This includes considering pedestrian circulation patterns or destinations with respect to railroad ROW and compliance with the Americans with Disabilities Act. Mitigation measures to consider include the planning for grade separations for major thoroughfares, improvements to existing at-grade crossings due to increase in traffic volumes, and continuous vandal resistant fencing or other appropriate barriers to prevent trespassers onto the railroad ROW.

If you have any questions in this matter, please contact me at (213) 576-7076, ykc@cpuc.ca.gov.

Sincerely,

Ken Chiang, P.E.
Utilities Engineer
Rail Crossings and Engineering Branch
Safety and Enforcement Division

C: State Clearinghouse

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

February 19, 2016

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Jeff Anderson, Planning Director
City of West Covina, Planning Department
1444 West Garvey Avenue South
West Covina, CA 91790

Notice of Preparation of a CEQA Document for the
City of West Covina 2016 General Plan Update and Downtown Master Plan and Code Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the CEQA document upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). SCAQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing

a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies.
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at Jwong1@aqmd.gov or call me at (909) 396-3176.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Program Supervisor
Planning, Rule Development & Area Sources

LAC160212-02
Control Number

SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS

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Transportation
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March 11, 2016

Mr. Jeff Anderson, Planning Director
City of West Covina, Planning Department
1444 West Garvey Avenue South
West Covina, California 91790
Phone: (626) 939-8422
E-mail: jeff.anderson@westcovina.org

RE: SCAG Comments on the Notice of Preparation of a Draft Environmental Impact Report for the City of West Covina 2016 General Plan Update and Downtown Master Plan and Code [SCAG NO. IGR8765]

Dear Mr. Anderson,

Thank you for submitting the Notice of Preparation of a Draft Environmental Impact Report for the City of West Covina 2016 General Plan Update and Downtown Master Plan and Code ("proposed project") to the Southern California Association of Governments (SCAG) for review and comment. SCAG is the authorized regional agency for Inter-Governmental Review (IGR) of programs proposed for federal financial assistance and direct development activities, pursuant to Presidential Executive Order 12372. Additionally, SCAG reviews the Environmental Impact Reports of projects of regional significance for consistency with regional plans pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

SCAG is also the designated Regional Transportation Planning Agency under state law, and is responsible for preparation of the Regional Transportation Plan (RTP) including its Sustainable Communities Strategy (SCS) component pursuant to SB 375. As the clearinghouse for regionally significant projects per Executive Order 12372, SCAG reviews the consistency of local plans, projects, and programs with regional plans.[1] Guidance provided by these reviews is intended to assist local agencies and project sponsors to take actions that contribute to the attainment of the regional goals and policies in the RTP/SCS.

SCAG staff has reviewed the Notice of Preparation of a Draft Environmental Impact Report for the City of West Covina 2016 General Plan Update and Downtown Master Plan and Code. The proposed project includes a comprehensive update to the City's General Plan and proposal to adopt a Downtown Master Plan and Code. The proposed Downtown Master Plan and accompanying form-based code establishes an image for Downtown West Covina as a livable, healthy, and economically vibrant community. As the General Plan Update and Downtown Master Plan are prepared simultaneously, the two documents are entirely consistent with each other.

When available, please send environmental documentation to SCAG's *office in Los Angeles or by email to sunl@scag.ca.gov* providing, at a minimum, the full public comment period for review. If you have any questions regarding the attached comments, please contact the Inter-Governmental Review (IGR) Program, attn.: Lijin Sun, Esq., Senior Regional Planner, at (213) 236-1882 or sunl@scag.ca.gov. Thank you.

Sincerely,

Ping Chang

Ping Chang
Program Manager II, Land Use and Environmental Planning

---

[1] SB 375 amends CEQA to add Chapter 4.2 Implementation of the Sustainable Communities Strategy, which allows for certain CEQA streamlining for projects consistent with the RTP/SCS. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining "consistency" of any future project with the SCS. Any "consistency" finding by SCAG pursuant to the IGR process should not be construed as a finding of consistency under SB 375 for purposes of CEQA streamlining.

The Regional Council consists of 86 elected officials representing 191 cities, six counties, six County Transportation Commissions, one representative from the Transportation Corridor Agencies, one Tribal Government representative and one representative for the Air Districts within Southern California.

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COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE CITY OF WEST COVINA INTERIM GENERAL PLAN UPDATE AND DOWNTOWN MASTER PLAN AND CODE [SCAG NO. IGR8748]

CONSISTENCY WITH RTP/SCS

SCAG reviews environmental documents for regionally significant projects for their consistency with the adopted RTP/SCS.

2012 RTP/SCS GOALS

The SCAG Regional Council adopted the 2012 RTP/SCS in April 2012. The 2012 RTP/SCS links the goal of sustaining mobility with the goals of fostering economic development, enhancing the environment, reducing energy consumption, promoting transportation-friendly development patterns, and encouraging fair and equitable access to residents affected by socio-economic, geographic and commercial limitations (see http://rtpscs.scag.ca.gov). The goals included in the 2012 RTP/SCS may be pertinent to the proposed project. These goals are meant to provide guidance for considering the proposed project within the context of regional goals and policies. Among the relevant goals of the 2012 RTP/SCS are the following:

SCAG 2012 RTP/SCS GOALS	
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*
RTP/SCS G3:	*Ensure travel safety and reliability for all people and goods in the region*
RTP/SCS G4:	*Preserve and ensure a sustainable regional transportation system*
RTP/SCS G5:	*Maximize the productivity of our transportation system*
RTP/SCS G6:	*Protect the environment and health for our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)*
RTP/SCS G7:	*Actively encourage and create incentives for energy efficiency, where possible*
RTP/SCS G8:	*Encourage land use and growth patterns that facilitate transit and non-motorized transportation*
RTP/SCS G9:	*Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies*

For ease of review, we encourage the use of a side-by-side comparison of SCAG goals with discussions of the consistency, non-consistency or non-applicability of the policy and supportive analysis in a table format. Suggested format is as follows:

SCAG 2012 RTP/SCS GOALS		
	Goal	Analysis
RTP/SCS G1:	*Align the plan investments and policies with improving regional economic development and competitiveness*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
RTP/SCS G2:	*Maximize mobility and accessibility for all people and goods in the region*	*Consistent: Statement as to why;* *Not-Consistent: Statement as to why;* *Or* *Not Applicable: Statement as to why;* *DEIR page number reference*
etc.		etc.

RTP/SCS STRATEGIES

To achieve the goals of the 2012 RTP/SCS, a wide range of strategies are included in SCS Chapter (starting on page 152) of the RTP/SCS focusing on four key areas: 1) Land Use Actions and Strategies; 2) Transportation Network Actions and Strategies; 3) Transportation Demand Management (TDM) Actions and Strategies and; 4) Transportation System Management (TSM) Actions and Strategies. If applicable to the proposed project, please refer to these strategies as guidance for considering the proposed project within the context of regional goals and policies. To access a listing of the strategies, please visit http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf (Tables 4.3 – 4.7, beginning on page 152).

REGIONAL GROWTH FORECASTS

At the time of this letter, the most recently adopted SCAG forecasts, at the jurisdictional level, consists of the 2020 and 2035 RTP/SCS population, household and employment forecasts. To view them, please visit http://scag.ca.gov/Documents/2012AdoptedGrowthForecastPDF.pdf. The forecasts for the region and applicable jurisdictions are below.

	Adopted SCAG Region Wide Forecasts		Adopted City of West Covina Forecasts	
	Year 2020	**Year 2035**	**Year 2020**	**Year 2035**
Population	19,663,000	22,091,000	112,200	120,200
Households	6,458,000	7,325,000	32,600	33,900
Employment	8,414,000	9,441,000	29,300	30,900

MITIGATION

SCAG staff recommends that you review the SCAG 2012 RTP/SCS Final Program EIR Mitigation Measures for guidance, as appropriate. See Chapter 6 (beginning on page 143) at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/Final2012PEIR.pdf

As referenced in Chapter 6, a comprehensive list of example mitigation measures that may be considered as appropriate is included in Appendix G: *Examples of Measures that Could Reduce Impacts from Planning, Development and Transportation Projects.* Appendix G can be accessed at:
http://rtpscs.scag.ca.gov/Documents/peir/2012/final/2012fPEIR_AppendixG_ExampleMeasures.pdf

Los Angeles County
Metropolitan Transportation Authority

One Gateway Plaza
Los Angeles, CA 90012-2952

213.922.2000 Tel
metro.net

Metro

March 14, 2016

Jeff Anderson
City of West Covina
Planning Department
1444 West Garvey Avenue South
West Covina, CA 91790

RE: City of West Covina 2016 General Plan Update and Downtown Master Plan and Code Notice of Preparation of a Draft EIR

Dear Mr. Anderson:

Thank you for the opportunity to comment on the proposed City of West Covina 2016 General Plan Update and Downtown Master Plan EIR. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency's statutory responsibility in relation to our facilities and services that may be affected by the proposed project.

Metro bus line 190/194 operates on San Bernadino Road, within the boundary of the proposed project. Although the project is not expected to result in any long-term impacts on transit, the developer should be aware of the bus services that are present. Please contact Metro Bus Operations Control Special Events Coordinator at 213-922-4632 regarding construction activities that may Impact Metro bus lines at least 30 days in advance of initiating construction activities. For closures that last more than six months, Metro's Stops and Zones Department will also need to be notified at 213-922-5188, 30 days in advance of initiating construction activities. Other municipal bus operators may also be impacted and should be included in construction outreach efforts.

If you have any questions regarding this response, please contact Elizabeth Carvajal at 213-922-3084 or by email at DevReview@metro.net.

LACMTA Development Review
One Gateway Plaza MS 99-23-4
Los Angeles, CA 90012-2952

Sincerely,

Elizabeth Carvajal
Transportation Planning Manager

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9140
FAX (213) 897-1337
www.dot.ca.gov

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MAR 22 2016

PLANNING DEPT.

March 15, 2016

Mr. Jerry Anderson
City of West Covina
1444 W. Garvey Avenue, Room 218
West Covina, CA 90406

Re: City of West Covina 2016 General Plan
Update and Downtown Mater Plan Code
Vic: LA-39, 60, 57
SCH# 2016021069
IGR#160234ME -NOP

Dear Mr. Anderson:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the proposed update of the City of West Covina 2016 General Plan Update and Downtown Mater Plan Code.

The proposed project is a comprehensive update of the City's General Plan, which has not been updated since 1985. The General Plan Land Use Map will also be updated to reflect the community's vision to direct the majority of new growth to the Downtown area. The Downtown Plan and Code seeks to form consensus around and establish a common image for Downtown West Covina.

As a State agency with jurisdiction over State highway transportation facilities, Caltrans will review the City of West Covina 2016 General Plan Update and Downtown Mater Plan Code with special interest to the Mobility and Land Use Elements.

Please be aware of Caltrans's new mission statement: "To provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. The Local Development-Intergovernmental Review (LD-IGR) Program reviews land use project and plans to ensure consistency with our mission and state planning priorities of infill, conservation, and efficient development.

Caltrans through its efforts to continually improve its standards and processes to provide flexibility while maintain the safety and integrity of the state's transportation system has updated

the Highway Design Manual (HDM) to incorporate streets policies, which incorporate a multimodal approach to highway design.

To ensure a safe, efficient, and reliable transportation system, we encourage early consultation and coordination with local jurisdictions and project proponents on all development projects that utilize the state highway transportation network. Please include language that will direct traffic consultants, for local development projects, to consult with Caltrans early when evaluating potential traffic impacts to Interstate-10 (I-10). The I-10 freeway is part of the State Highway system, and any modifications to it will require a permit from Caltrans.

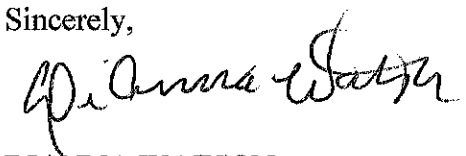
We encourage the City to include vehicle demand-reducing strategies. These may include incentives for commuters to use transit, park-and-ride lots, discounts on monthly bus and rail passes, shuttle buses, vanpools, etc. To the extent that more of the population shifts to transit or alternate modes of transportation for some of tier inter-regional trips. Future cumulative traffic impacts to freeways may be satisfactorily mitigated.

Please be aware that although the City is required to comply with Los Angeles County Congestion Management Program (CMP) standards and thresholds of significance, Caltrans does not consider the Los Angeles County's (CMP) criteria alone to be adequate for the analysis of transportation impacts pursuant to a CEQA review. The CMP does not adequately address cumulative transportation impacts and does not analyze for safety. The 2010 CMP guidelines, Appendix D, states that Caltrans should be consulted for the analysis of State Highway facilities. Caltrans' Guide directs prepares of traffic impact analysis to consult with the

In the spirit of mutual cooperation, Caltrans staff is available to work with the City's traffic engineers to identify the parameters of traffic impact analysis such as study area, vehicle trip reduction factors, method of analysis, significant criteria, and possible mitigation measures if any are necessary.

If you have any questions, please feel free to contact Ms. Miya Edmonson, the project coordinator, at (213) 897-6536 should you have any questions. Please reference IGR/CEQA No. 160234-ME

Sincerely,



DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

GRACE ROBINSON HYDE
Chief Engineer and General Manager

March 16, 2016

Ref File No.: 3617972

RECEIVED

MAR 22 2016

PLANNING DEPT.

Mr. Jeff Anderson, Planning Director
Planning Department
City of West Covina
1444 West Garvey Avenue South
West Covina, CA 91790

Dear Mr. Anderson:

Comment Letter for the City of West Covina
2016 General Plan Update and Downtown Master Plan and Code

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on February 12, 2016. The majority of the City of West Covina is located within the jurisdictional boundaries of District No. 22 with remaining portions in Districts Nos. 15 and 21. We offer the following comments regarding sewerage service:

1. The Districts own, operate, and maintain the large trunk sewers that form the backbone of the regional wastewater conveyance system. Local collector and/or lateral sewer lines are the responsibility of the jurisdiction in which they are located. As such, the Districts cannot comment on any deficiencies in the sewerage system in the City of West Covina (City) except to state that presently no deficiencies exist in Districts' facilities that serve the City. For information on deficiencies in the City sewerage system, please contact the City Department of Public Works and/or the Los Angeles County Department of Public Works.

2. The Districts would appreciate the opportunity to review individual developments within the City in order to determine whether or not sufficient trunk sewer capacity exists to serve each project and if Districts' facilities will be affected by the project.

3. The wastewater generated by the City is treated at one or more of the following: the San Jose Creek Water Reclamation Plant (WRP) located adjacent to the City of Industry, which has a design capacity of 100 million gallons per day (mgd) and currently processes an average flow of 66.3 mgd; the Whittier Narrows WRP located near the City of South El Monte, which has a design capacity of 15 mgd and currently processes an average flow of 4.8 mgd; and/or the Los Coyotes WRP located in the City of Cerritos, which has a design capacity of 37.5 mgd and currently processes an average flow of 20.8 mgd.

4. In order to estimate the volume of wastewater a project will generate, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and click on the Table 1, Loadings for Each Class of Land Use link for a copy of the Districts' average wastewater generation factors.

5. The Districts are empowered by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or for increasing the strength or quantity of wastewater discharged from connected facilities. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For more information and a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Wastewater & Sewer Systems, click on Will Serve Program, and search for the appropriate link. In determining the impact to the Sewerage System and applicable connection fees, the Districts' Chief Engineer will determine the user category (e.g. Condominium, Single Family home, etc.) that best represents the actual or anticipated use of the parcel or facilities on the parcel. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at (562) 908-4288, extension 2727.

6. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CCA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Adriana Raza
Customer Service Specialist
Facilities Planning Department

AR:ar

DOC: #3655997.D221521

1919 S. State College Blvd.
Anaheim, CA 92806-6114

April 21, 2016

City of West Covina
1444 W Garvey Ave South
West Covina, CA 91790

Attn: Jeff Anderson

Subject: Environmental Impact Report for General Plan Update and Downtown Master Plan for City of West Covina and Downtown Area Bounded by I-10, Cameron Ave, West Covina Pkwy & Glendora Ave; West Covina

Thank you for providing the opportunity to respond to this Environmental Document. This letter is not to be interpreted as a contractual commitment to serve the proposed project but only as an information service. Its intent is to notify you that the Southern California Gas Company has facilities in the area where the above named project is proposed. Gas facilities within the service area of the project could be installed, altered or abandoned as necessary without any significant impact on the environment.

The availability of natural gas service is based upon conditions of gas supply and regulatory agencies. As a Public Utility, Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. Our ability to serve can also be affected by actions of federal regulatory agencies. Should these agencies take any action, which affect gas supply or the conditions under which service is available, gas service will be provided in accordance with the revised conditions.

This letter is also provided without considering any conditions or non-utility laws and regulations (such as environmental regulations), which could affect construction of a main and/or service line extension (i.e., if hazardous wastes were encountered in the process of installing the line). The regulations can only be determined around the time contractual arrangements are made and construction has begun.

Information regarding construction particulars and any costs associated with initiating service may be obtained by contacting our area Service Center at 800-427-2200.

Sincerely,

Katrina Regan
Planning Supervisor
SouthEast Region - Anaheim Planning & Engineering

KR/rl
EIR.doc

Estefania Sanchez
Program Assistant 3

9400 Oakdale Blvd
Chatsworth, CA 91311

ESanchez5@semprautilities.com

April 21, 2016

City of West Covina

Email: Jeff Anderson - jeff.anderson@westcovina.org

Subject: **City of West Covina 2016 General Plan Update and Downtown Master Plan and Code**
Notice of Preparation of a Draft Environmental Impact Report

DCF: **505-16NC416**

The Transmission Department of SoCalGas does not operate any facilities within your proposed improvement. However, SoCalGas Southeast Distribution Region may maintain and operate facilities within your project scope.

To assure no conflict with the Southeast Distribution's pipeline system, please contact them at (**714**) **634-5067**.

Sincerely,

Estefania Sanchez
Program Assistant 3
ESanchez5@semprautilities.com

Tuesday, March 01, 2016

City of West Covina

1444 W. Garvey Av

West Covina, CA

Attn.: Mr. Jeff Anderson - WC Planning Director

Mr. Anderson,

The City of West Covina is in the process of preparing an Environmental Impact Report (EIR) as part of the comprehensive drafting of a General Plan Update and this letter is in regards to seeking to study the making of a safe community and our current Public safety status!

It should be noted that there is a current severe shortage of West Covina Sworn Patrol Officers. In the past few years there have been more than a few instances where my neighbors and I have called regarding exigent situations and the WCPD uniformed response time was more than 20 minutes. Each time when asked what took so long? The Dispatcher and or the Officer who arrived usually say, "all our units were involved on a critical matter."

Please, at this time I am requesting a comparison City population study of the impact (professional examination and understanding) on our City of the current low per capita Police numbers? Additionally, what happens going forward as the demand increases for police service without immediate corrections and appropriate preparation for future impact of the General Plan Update?

Thank you,

Fredrick Sykes

Greg Martin

From: Jeff Anderson <Jeff.Anderson@westcovina.org>
Sent: Tuesday, March 01, 2016 8:16 AM
To: Greg Martin
Subject: FW: General Plan and Downtown Plan and Code- EIR Scoping Meeting
Attachments: Review Draft WC Downtown Plan & Code.pdf

Greg,

I received these comments this morning regarding the Scoping Meeting last night from someone who did not attend.

Jeff

From: ROBERT TORRES [mailto:roberthtorres@yahoo.com]
Sent: Tuesday, March 01, 2016 8:11 AM
To: Jeff Anderson <Jeff.Anderson@westcovina.org>
Cc: Ron Garcia <Ron.Garcia@westcovina.org>; Chris Freeland <Chris.Freeland@westcovina.org>; James Toma <James.Toma@westcovina.org>; Corey Warshaw <Corey.Warshaw@westcovina.org>; Councilman Mike Spence <westcovina@mikespence.com>; Lloyd Johnson <Lloyd.Johnson@westcovina.org>; Tony Wu <Tony.Wu@westcovina.org>
Subject: General Plan and Downtown Plan and Code- EIR Scoping Meeting

Good Morning Jeff,

I had planned to attend last night's EIR scoping meeting for the General Plan and Downtown Plan and Code, but unfortunately I ran into a few roadblocks. However, I have provided my comments below:

General Plan:

- Include analysis within the EIR that specifically addresses the current and future negative impacts of train horn noise on West Covina residents who reside in the northern end of the city.
    - I previously made this recommendation at the joint Council/Commission meeting and the General Plan consultant stated that this would be included in the EIR.
    - As a result of the EIR findings, the goal would be to development a mechanism to partially fund the cost of establishing a "Quiet Zone" along the portion of railroad that runs between Covina and West Covina. As a reminder, a "Quiet Zone" is a section of railroad in which locomotives are not required to sound their train horn, and may only sound their horn when warranted (i.e emergencies, heavy rain, etc.)
    - Additionally, increased train traffic and subsequent horn noise is directly related to economic growth and development, so a nexus exists.

Downtown Plan and Code:

My comments related to the Downtown Plan and Code are lengthy, so I have attached a PDF for your review. I have commented in general, but have highlighted the comments in yellow that I believe may be relevant to the EIR scoping.

The comments highlighted in blue and green are question I have for either you or Mr. Freeland.

Thank you

Robert Torres

Specific Comments on WC Downtown Plan and Code

Introduction

(Page 7, Downtown First)

- 135 Hotel Rooms are mentioned. Revision to include additional rooms, as requested by Council, may be necessary.
- Potential parcels for the anticipated hotel should be identified within the Downtown Plan

(Page 7, Fiscal Health)

- "Community Facilities District (CFD) bond currently being paid with Plaza West Covina Sales Tax Revenue (Mello-Roos Act of 1982) until 2022".
    - What facilities and/or services were financed by the CFD bond?
    - What will happen to the CFD after 2022?
    - Where will Plaza West Covina sales tax revenue be directed after 2022?

(Page 7, Mobility, Pedestrian)

- Recommendation(although costly): Pedestrian Bridge Over Vincent Ave
    - Possible connection to future developments near Vincent Ave and Plaza Drive with subsequent connection to the Plaza West Covina.

Vision

(Page 15: Key Concepts, 5. Strategic Infill Development & Figure 2-8)

- The Americas Tires Project was recently approved at the property located just north of Glendora Ave and Vincent Ave split. Should the anticipated residential units at this site be considered in the EIR?

- The site which currently houses McDonalds and El Pollo Loco restaurants is shown as a potential development site. Is this for future mixed use? If so, the recent construction and long term investment of the 2 restaurants should be considered in estimating anticipated development.

- Portos Bakery site is identified for potential development. Is modification to projected commercial development needed because of this future development?

(Page 15: Key Components, Public Projects, 1. Enhancing the Walnut Creek Wash)

- The EIR should look at the impact the opening of the Walnut Creek Trail may have on adjacent residents and recommend mitigation measures to preserve residents' privacy, noise level, and security.

(Page 15: Key Components, Public Projects, 2. Various Street Enhancements)

- Recommendation: Investigate the aesthetic and operational enhancements at the 4 major intersections located at the West Covina Parkway and Vincent Ave I-10 Freeway exits within the EIR.

    - West Covina Parkway/Pacific Ave @ I-10 Westbound Exit/Entrance
    - West Covina Parkway/Pacific Ave @ I-10 Eastbound Exit/Entrance
    - Vincent Ave@ I-10 Westbound Exit/Entrance
    - Vincent Ave@ I-10 Eastbound Exit/Entrance

- Although the EIR should address traffic impacts at these 4 intersections, it should also address potential aesthetic improvements to enhance the current gateways to the Downtown District, similar to the street enhancements already include in the Vision.

- Diagrams of potential intersection Improvements should be added to the Downtown General Plan.

(Page 15: Key Components, Public Projects, 5. Ped. Crossing on South Sunset Ave and Vincent Ave)

- Pedestrian Bridge over Vincent Ave may be more effective that sidewalk improvements and other road reconfigurations. Also provide for City Monument/Identification sign.

- The positive impact on pedestrian circulation as a result of such a bridge should be investigated within the EIR.

- Where is the future Vincent Ave enhanced pedestrian crossing proposed?

(Page 18: Key Components, Private Project, 6. Multi-family Housing along Walnut Greek Pkwy)

- The primary parcel at this location was recently approved for a new tire center. Should the potential loss in projected units be considered in the EIR?

(Page 19: Key Components, Private Project, 10. Two Office Buildings near East Garvey Ave)

- With the reconfiguration of Glendora Ave to incorporate La Ramblas, the additional traffic created by the two potential office buildings may be significant.

- EIR should address potential circulation issues and alternative routes for tenants of the office buildings, considering Glendora Ave will be only one lane in each direction.

- Potential construction of a Lark Ellen freeway exists may alleviate Glendora Ave traffic circulation issues.

Goals, Policies, & Actions

(Page 21: 3. Our Well Planned Community, Goal 5, Policy 5.2 Establish a dramatic visual cue into Downtown at Sunset Ave and Vincent Avenue)

- The 4 intersections previously recommended for Aesthetics should be included in Policy 5.2

(Page 29: 5. Our Resilient Community, Goal 11, Policy 11.4 Encourage new "green businesses" and institutions to locate Downtown, and existing businesses and institutions to reduce operating costs by going "green.")

- Add Action 11.4D- Regularly search for and acknowledge business within West Covina that demonstrate exceptional "Green" business practices. Present recognition awards to these businesses at regular City Council meetings.

(Page 30: 6. Our Healthy and Safe Community, Goal 12, Policy 12.2 Provide community safety through enhanced police and fire services)

- Add Action 12.2D- Add horse patrol along trails (i.e. Equestrian Trail and Park Trails), other open spaces, and during large public gatherings.

Code

(Page 40: Section 1: Purpose and Applicability, 1.2C Non-conformity Regulations, 1.2C.1 Nonconforming Buildings or Structures, 1.2C.1 (B) Additions)

- In addition to the requirement that additions of 50% or more of the existing floor area adhere to current Downtown Code, a height requirement should also be considered (i.e. Additions 2 times, or more, higher than the existing building must adhere to the current Downtown Code). Alternatively, a specific height limit can be used as a threshold for triggering conformance to current Downtown Code.

(Page 46: Table 4.2.1: Summary of Zoning Districts, T4 General Urban, Desired Form)

- It is stated that building up to 3 stories in height are to be allowed in the T4 Zone. Will this height requirement apply to the envisioned private developments (i.e. Office Buildings and Mixed used developments) within the Lakes Entertainment Area?

(Page 46: Table 4.2.1: Summary of Zoning Districts, T3 Urban Neighborhood, Desired Form)

- It is stated that building in the T4 Zone are intended for residential uses and ther id no mention of commercial/retail uses. Since the current commercial properties along Glendora Ave are proposed to be within the T4 Zone, should verbage of commercial uses be incorporated? Or is the intent to eliminate the existing retail uses?

(Page 47: Section 3.1A Permitted Land Uses)

- Requested Revision: "…provided the director makes ALL of the following finding:"

(Page 47: Table 4.3.1 Permitted Land Used)

- Requested Revision: Include a key to define the symbols "P", "U", and "X".

(Page 50: Development Standards, Section 4.1 T-5 Urban Center Zone)

- Will anticipated hotels in Downtown District be limited to 5 stories? In not, an asterisk should be included that proposed hotels MAY be allowed greater heights through variances or any other applicable planning mechanism. This will inform residents now as opposed to when a potential 8 or 9 story hotel is being proposed.

(Page 51: Development Standards, Section 4.2 T-4 General Urban Zone)

- Will anticipated office building at the north end of Glendora Ave be limited to 3 stories? In not, an asterisk should be included that proposed hotels MAY be allowed greater heights through variances or any other applicable planning mechanism. This will inform residents now as opposed to when a potential 8 or 9 story office building is being proposed.

(Page 52: Development Standards, Section 4.3 T-4 Urban Neighborhood Zone)

- On Page 46 it states that Urban Neighborhood Zone allows up to 2-Stories, but this section state that up to 3-Stories are allowed.

(Page 85: Section 7 Streets and Block Standards)

- Recommend adding and additional section (i.e. Section 7.3) identifying intersection standards (with respect to aesthetics and possibly lane configuration) of the four key entry way intersections at Vincent Ave and West Covina Pkwy and the I-10 FWY.

- The addition of these 4 intersections will significantly enhance the "wow" factor when visitors and residents enter Downtown West Covina from the I-10 Freeway.

(Page 116: Table 1A)

- Recommend that variances require mandatory final approval by the City Council. Typically variances are appealed by residents and result in a significant cost to the residents and discourage appeals.

Regards

Robert Torres

rincon

Rincon Consultants, Inc.

Environmental Scientists Planners Engineers

MEMORANDUM

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Date: 3/14/16

To: Jeff Anderson, Planning Director

Organization: City of West Covina

From: Greg Martin, AICP, Senior Planner/Project Manager

Email: Jeff.Anderson@westcovina.org

cc: rangwalaassoc@gmail.com; jpower@rinconconsultants.com

Re: City of West Covina 2016 General Plan Update and Downtown Master Plan and Code EIR Scoping Meeting Summary

---

Hi, Jeff. The following is a summary of comments received at the Public Scoping Meeting for the City of West Covina 2016 General Plan Update and Downtown Master Plan and Code held at West Covina City Hall on Monday, February 29th, 2016. If you have any questions or comments on this memo, please feel free to contact me. Thanks very much.

EIR Scope, Focus and Content

- Hazards and Health
  - Study potential hazards from the BKK landfill.
  - Study potential hazards/health risks in City parks related to left-behind drug paraphernalia.
- Noise
  - Study potential noise impacts from new development downtown, including traffic noise.
- Public Services
  - Study public safety in public parks, especially related to drug use and left-behind drug paraphernalia.
- Specific Future Developments
  - Study proposed developments at the Pioneer School site and the Vincent School site.

- Transportation/Circulation
    - Study potential traffic impacts from new development downtown.
    - Study parking demand in relation to supply.
    - Study the potential impacts of street redesign (such as traffic calming) on aesthetics, walkability, and safety.
- Utilities/Infrastructure
    - Study streetlights.

Mitigation Measures

- Synchronize traffic lights in order to reduce traffic congestion.
- Have a shuttle for downtown.
- Synchronize traffic lights in order to reduce air pollution.

Alternatives

- Construct hotel(s) at eastern end of town on Holt rather than downtown.

Appendix B

Hazardous Materials Sites

SITE NAME	GLOBAL ID	STATUS	ADDRESS	CITY
BKK SANITARY LANDFILL / CLASS I AREA	19490005	ACTIVE	2210 SOUTH AZUZA AVENUE	WEST COVINA
HONEYWELL INC	CAD008351827	CLOSED	--	WEST COVINA
76 PRODUCTS STATION #5817	T0603703723	COMPLETED - CASE CLOSED	1200 GLENDORA AVE S	WEST COVINA
ALL AMERICAN RENT-A-CAR	T0603704422	COMPLETED - CASE CLOSED	702 AZUSA AVE N	WEST COVINA
ARCO #0103	T0603703897	COMPLETED - CASE CLOSED	1333 MERCED AVE W	WEST COVINA
ARCO #0103	T0603743869	COMPLETED - CASE CLOSED	1333 MERCED AVE. W	WEST COVINA
ARCO #1276	T0603724238	COMPLETED - CASE CLOSED	300 NORTH AZUSA AVENUE	WEST COVINA
ARCO #1276	T0603703037	COMPLETED - CASE CLOSED	300 AZUSA AVE N	WEST COVINA
ARCO #6176	T0603703924	COMPLETED - CASE CLOSED	1001 AMAR RD E	WEST COVINA
ARCO SERVICE STATION (FORMER)	T0603704841	COMPLETED - CASE CLOSED	249 BARRANCA ST N	WEST COVINA
BKK LANDFILL INC	T0603704694	COMPLETED - CASE CLOSED	2210 AZUSA AVE S	WEST COVINA
BOZZANI PONTIAC/HYUNDAI	T0603703672	COMPLETED - CASE CLOSED	1800 GARVEY AVE E	WEST COVINA
CHASE AUTOMOTIVE	T0603704256	COMPLETED - CASE CLOSED	1827 SAN BERNARDINO RD W	WEST COVINA
CHEVRON #9-1449	T0603702645	COMPLETED - CASE CLOSED	201 GRAND AVE N	WEST COVINA
CHEVRON #9-5906	T0603703533	COMPLETED - CASE CLOSED	1347 AZUSA AVE S	WEST COVINA
CHEVRON #9-7829	T0603703531	COMPLETED - CASE CLOSED	246 CITRUS AVE S	WEST COVINA
CHEVRON #9-8263	T0603703532	COMPLETED - CASE CLOSED	2500 AZUSA AVE S	WEST COVINA
CRESTVIEW CADILLAC	T0603779603	COMPLETED - CASE CLOSED	2700 EAST GARVEY AVENUE	WEST COVINA
DOCTOR'S HOSPITAL OF WEST COVINA	T0603726822	COMPLETED - CASE CLOSED	725 ORANGE AVE. S	WEST COVINA
EASTLAND CENTER	T0603776919	COMPLETED - CASE CLOSED	2753 EASTLAND CENTER	WEST COVINA
EXXON #7-2516	T0603705118	COMPLETED - CASE CLOSED	2450 AZUSA AVE S	WEST COVINA
FIRESTONE TIRE	T0603704233	COMPLETED - CASE CLOSED	1035 WEST COVINA PKWY W	WEST COVINA
K-MART	T0603705241	COMPLETED - CASE CLOSED	730 ORANGE AVE S	WEST COVINA
MOBIL #11-DAF	T0603703414	COMPLETED - CASE CLOSED	700 SUNSET AVE S	WEST COVINA
MOBIL #17-M51V	T0603700021	COMPLETED - CASE CLOSED	201 AZUSA AVE S	WEST COVINA
MOBIL #17-M6A	T0603703406	COMPLETED - CASE CLOSED	333 VINCENT AVE S	WEST COVINA
PENSKE MOTOR GROUP, INC	T0603766259	COMPLETED - CASE CLOSED	2010 E GARVEY AVENUE	WEST COVINA
S & K SERVICE STATION (FORMER)	T0603792987	COMPLETED - CASE CLOSED	360 GLENDORA AVE S	WEST COVINA
SAN LUIS ARCO	T0603704134	COMPLETED - CASE CLOSED	550 GLENDORA AVE S	WEST COVINA
SHELL	T0603733554	COMPLETED - CASE CLOSED	200 S AZUSA AVE	WEST COVINA
SHELL #204-8343-0508	T0603703441	COMPLETED - CASE CLOSED	305 CITRUS AVE N	WEST COVINA
TOSCO - 76 STATION #4180	T0603705015	COMPLETED - CASE CLOSED	150 CITRUS AVE S	WEST COVINA
TOSCO/UNOCAL #30614	T0603720937	COMPLETED - CASE CLOSED	150 CITRUS ST. S.	WEST COVINA
UNOCAL #4550	T0603703737	COMPLETED - CASE CLOSED	245 AZUSA AVE N	WEST COVINA
UNOCAL #6187	T0603705018	COMPLETED - CASE CLOSED	123 GRAND AVE N	WEST COVINA
WEST COVINA GAS UP	T0603703350	COMPLETED - CASE CLOSED	711 AZUSA AVE N	WEST COVINA
WEST COVINA HAND WASH	T0603705436	COMPLETED - CASE CLOSED	310 VINCENT AVE S	WEST COVINA
WEST COVINA MAINTENANCE YARD	T0603703985	COMPLETED - CASE CLOSED	825 SUNSET AVE S	WEST COVINA
WEST COVINA OIL, INC.	T0603752090	COMPLETED - CASE CLOSED	1200 GLENDORA AVE	WEST COVINA
COGENERATION PLANT	WDR100000265	HISTORICAL - WDR	2210 AZUSA	WEST COVINA
EAST VALLEY COMMUNITY HEALTH CENTER	19800034	NO ACTION REQUIRED	420 S. GLENDORA AVENUE	WEST COVINA
WEST COVINA HIGH SCHOOL - COMMUNICATION	60001279	NO ACTION REQUIRED	1609 E. CAMERON AVENUE	WEST COVINA
HONEYWELL INC	80001565	NO FURTHER ACTION	--	WEST COVINA
SOUTH HILLS HIGH SCHOOL ADDITION	60000402	NO FURTHER ACTION	645 SOUTH BARRANCA STR	WEST COVINA
BKK CLASS I LANDFILL	L10009731452	OPEN - CLOSED/WITH MONITORING	2210 AZUSA	WEST COVINA
BKK CLASS III LANDFILL	L10005364254	OPEN - CLOSED/WITH MONITORING	2210 AZUSA	WEST COVINA
MOBIL OIL CORP S/S #18-M51	T10000000562	OPEN - ELIGIBLE FOR CLOSURE	201 S AZUSA AVE	WEST COVINA
76 STATION - RON ROSE OIL CO	T0603705010	OPEN - SITE ASSESSMENT	2010 PACIFIC AVE N	WEST COVINA
WEST COVINA UNIFIED SCHOOL DISTRICT	T10000003069	OPEN - SITE ASSESSMENT	1717 MERCED AVE W	WEST COVINA
BKK SANITARY LANDFILL	CAD067786749	OPERATING PERMIT	2210 S AZUSA AVE	WEST COVINA
BKK SANITARY LANDFILL	3002168	PENDING	2210 S AZUSA AVE	WEST COVINA
BKK SANITARY LANDFILL	80001464	REFER: EPA	2210 S AZUSA AVE	WEST COVINA
CONCORDE/INTERSPACE BATTERY CORP.	71002894	REFER: OTHER AGENCY	2009 SAN BERNADINO ROAD	WEST COVINA

Appendix C

Traffic Study

NELSON
NYGAARD

MEMORANDUM

To: Kaizer Rangwala, Greg Martin and Jeff Anderson

From: Steve Boland, Max Scheideman and Pete Costa

Date: August 29, 2016

Subject: West Covina General Plan Update: Revised Draft Traffic Study

INTRODUCTION

This memorandum presents draft results of the traffic study conducted for the West Covina General Plan Update, addressing the impacts of proposed land use and roadway configuration changes on traffic congestion at key intersections identified by City staff.

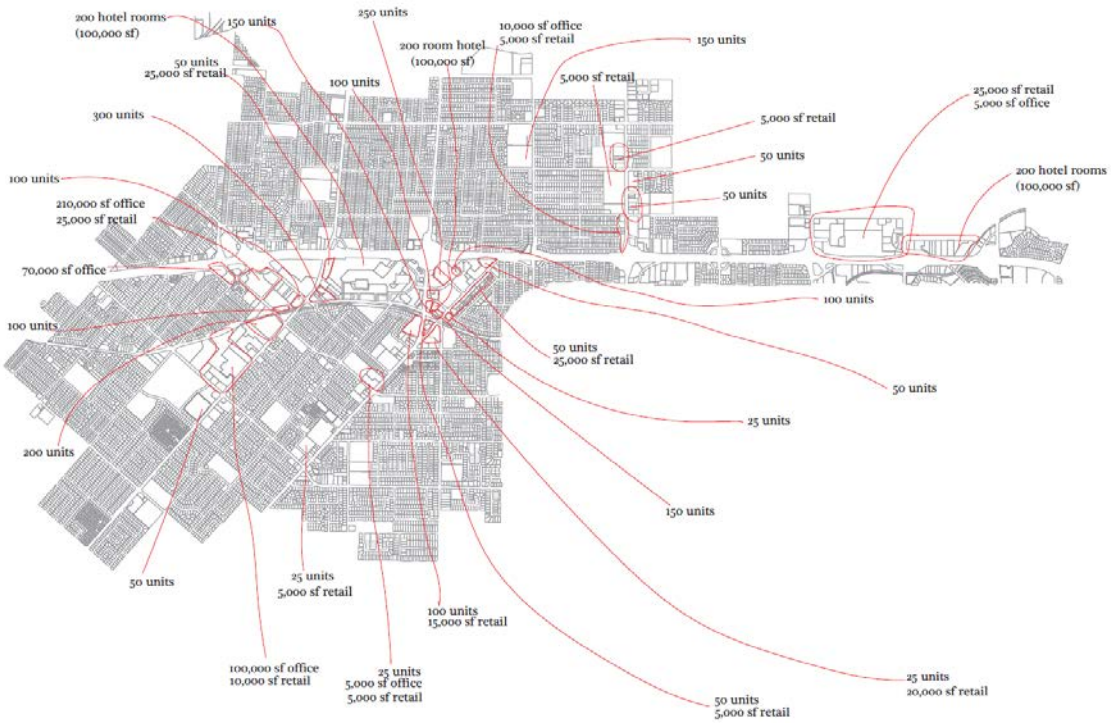
BACKGROUND

Proposed Land Use Changes

The development program developed for the General Plan Update is described in the "Our Well Planned Community" chapter of the draft Plan and is summarized in Tables 4.1 and 4.2 and Figure 4.3 of that document. The development program specifies total amounts of development in different categories (numbers of housing units and hotel rooms, area of commercial space) by area, but does not identify specific development sites. For purposes of traffic analysis, assumptions must be made about scale and type of development at specific locations – at the parcel level. The analysis contained in this document, then, should be viewed as based on one possible – but not the only possible – development scenario.

Specific locations and sizes of future developments assumed for purposes of analysis are shown in Figure 1, developed for this document. (Note that "units" refers to housing, and that "sf" represents square feet.) For purposes of the impact analysis, residential developments have been assigned to one of three scale/intensity categories – "townhome," "low-rise apartment" and "mid-rise apartment" categories, corresponding to the "Neighborhood Low," "Neighborhood Medium" and "Neighborhood High" categories in the draft Plan – with higher-density developments generally consisting of those with more units, located closer to downtown.

Figure 1 Proposed Land Use Changes



Proposed Roadway Configuration Changes

In addition to changes to land use, the General Plan Update calls for changes to the configuration/vehicular capacity of the following roadway segments:

- *West Covina Parkway between Vincent and Sunset avenues*: the second (outer) travel lane in each direction would be converted to a Business, Access and Transit (BAT) lane in which through travel by private vehicles is prohibited. They would be reserved instead for transit and right-turn movements.
- *Glendora Avenue between Lakes Drive and West Covina Parkway*: The second travel lane in each direction would be eliminated.
- *Lakes Drive*: The second westbound travel lane would be eliminated.
- *Walnut Creek Parkway*: The second travel lane in each direction would be eliminated.
- *Sunset Avenue*: Changes would be made to the configuration of the roadway; however, number of vehicle lanes would not be changed.

SCOPE OF STUDY

To determine the intersection level of service (LOS) analysis was conducted at 19 intersections including:

- Vincent Avenue at the Westbound Interstate 10 (I-10) On- and Off-Ramps
- Vincent at the Eastbound I-10 Ramps
- Vincent at Plaza Drive/Lakes
- Vincent at West Covina Parkway
- Vincent at Glendora
- Glendora at Lakes
- Glendora at Walnut Creek
- Glendora at West Covina Parkway
- West Covina Parkway at Sunset
- West Covina Parkway at the Eastbound I-10 Ramps
- West Covina Parkway at the Westbound I-10 Ramps
- Sunset at Merced Avenue
- Azusa Avenue at Rowland Avenue
- Azusa at Workman Avenue
- Azusa at Cameron Avenue
- Azusa at Amar Avenue
- Citrus Street at Garvey Avenue North/Eastland Center
- Citrus at Garvey South
- Lark Ellen at Cameron

Figure 2 shows the locations of the 19 study intersections.

Figure 2 Intersections

ANALYSIS METHODS

Traffic counts were conducted during weekday peak periods on Wednesday and Thursday, June 1 and 2, 2015, between the hours of 7 and 9 a.m. and 4 and 6 p.m.

Intersection operations were evaluated for the following scenarios:

- Existing Conditions (2016) without project
- Planning Horizon (2036) without project
- Planning Horizon (2036) with project

The analysis was conducted using the Intersection Capacity Utilization (ICU) method specified by the Los Angeles County Metropolitan Transportation Authority (Metro) Congestion Management Program (CMP). The intersections were evaluated using vehicle capacity (V/C) ratio, which is a commonly used metric for traffic analysis. The V/C ratio, also referred to as the degree of saturation, represents the sufficiency of an intersection to accommodate vehicular demand. A V/C ratio less than 0.8 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the V/C ratio approaches 1.0 and higher, traffic flow is unstable and excessive delays and queuing conditions may occur.

Figure 3 describes intersection operations using the categories of V/C ratio ranges and the corresponding level of service as defined by the CMP, the significance criteria from which have been adopted for use by the City of West Covina (see following section)[1].

[1] CMP LOS definitions are different from those typically used in ICU analysis. For this reason, the reports provided as an appendix to this document (generated by Synchro modeling software) show LOS figures different from those shown in this document.

Figure 3 Level of Service Definitions for Arterial Intersections

Level of Service	Description	Volume to Capacity (V/C) Ratio
A	At LOS A, there are no cycles that are fully loaded, and few are even close to loaded. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	0.00-0.60
B	LOS B represents stable operation. An occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within platoons of vehicles.	>0.60-0.70
C	In LOS C stable operation continues. Full signal cycle loading is still intermittent, but more frequent. Occasionally drivers may have to wait through more than one red signal indication, and back-ups may develop behind turning vehicles.	>0.70-0.80
D	LOS D encompasses a zone of increasing restriction, approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive back-ups.	>0.80-0.90
E	LOS E represents the most vehicles that any particular intersection approach can accommodate. At capacity (V/C=1.00) there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).	>0.90-1.00
F	LOS F represents jammed conditions. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration, hence, volumes carried are not predictable. V/C values are highly variable because full utilization of the approach may be prevented by outside conditions.	>1.00

Synchro 9.0 software was used to model and analyze the levels of service at the study intersections. The existing signal timing sheets were provided by the City of West Covina (City) and the California Department of Transportation (Caltrans)[2].

As described in a following section, Institute of Traffic Engineers (ITE) trip generation rates were used. It should be noted that an annual growth rate of 0.82 percent in traffic volumes was assumed for the future-year "without project" scenario, consistent with the CMP; traffic generated by the additional development included in the "with project" scenario is assumed to be in addition to, rather than part of this baseline amount. Additionally, where new development is assumed, it is assumed that it would be in addition to existing development, rather than replacing existing

[2] Caltrans provided signal timing sheets for intersections with I-10 ramps. Note that these ramps are currently undergoing reconstruction, and timings will be different post-construction. However, because no information on future timings was yet available, previous timings and configurations have been used.

development, and trips from existing development were not subtracted from totals. For these reasons, the approach used should be considered a conservative one, representing "worst case" conditions.

EXISTING CONDITIONS

As indicated by the Synchro model, all intersections currently operate at level of service (LOS) E or better during both the AM and PM peak periods. Figures 4 through 6 display the results of this analysis.

Figure 4 Map of Existing Conditions AM LOS Results

Figure 5 Map of Existing Conditions PM LOS Results

Figure 6 Existing Conditions at Study Intersections

Intersection	Peak Hour	Existing Conditions	
		LOS	V/C Ratio
1. Vincent Ave & WB Interstate 10 Ramps	AM	A	0.468
	PM	A	0.530
2. Vincent Ave & EB Interstate 10 Ramps	AM	A	0.520
	PM	B	0.674
3. Vincent Ave & Plaza Dr / Lakes Dr	AM	A	0.566
	PM	C	0.759
4. Vincent Ave & West Covina Pkwy	AM	C	0.784
	PM	D	0.839
5. Vincent Ave & Glendora Ave	AM	A	0.384
	PM	B	0.607
6. Glendora Ave & Lakes Dr	AM	A	0.413
	PM	B	0.551
7. Glendora Ave & Walnut Creek Ave	AM	A*	0.399*
	PM	A*	0.392*
8. Glendora & West Covina Pkwy	AM	A	0.580
	PM	A	0.600
9. Sunset & West Covina Pkwy	AM	C	0.752
	PM	C	0.748
10. West Covina Pkwy & EB Interstate 10 Ramps	AM	B	0.673
	PM	A	0.570
11. West Covina Pkwy & WB Interstate 10 Ramps	AM	D	0.860
	PM	D	0.803
12. Sunset Ave & Merced Ave	AM	C	0.767
	PM	D	0.813
13. Azusa Ave & Rowland Ave	AM	C	0.759
	PM	E	0.911
14. Azusa Ave & Workman Ave	AM	D	0.883
	PM	E	0.921
15. Azusa Ave & Cameron Ave	AM	D	0.826
	PM	D	0.889
16. Azusa Ave & Amar Rd	AM	C	0.759
	PM	E	0.930
17. Citrus Ave & Garvey Ave N / Eastland Center	AM	A	0.561
	PM	D	0.866

18. Citrus Ave & Garvey Ave S	AM PM	B D	0.686 0.891
19. Lake Ellen Ave & Cameron Ave	AM PM	D D	0.837 0.857

* indicates worst lane approach V/C for all-way stop control intersection

PROJECT TRIPS

Trip generation refers to the process of estimating the amount of motor vehicle traffic that a project will add to (or subtract from) the surrounding roadway system. Estimates are made of future trips for the peak one-hour periods during the morning and evening commute periods when traffic volumes on the adjacent streets are highest.

The baseline trip generation estimates for the project were developed using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 9th Edition. The associated land uses of the General Plan Update were assigned as closely as possible to categories represented in the manual, in order to estimate the baseline number of AM peak and PM peak hour trips (including hotels, offices, retail, mid- and low-rise housing, and townhomes).

For purposes of analysis, developments proposed by the Plan have been grouped into one of four districts and corridors including the Eastland area and the Azusa, Vincent, and Sunset corridors.

The General Plan Update proposes denser development than much of what currently exists in West Covina, including mixed-use infill development in appropriate locations. The Plan also includes projects, programs and policies designed to reduce impacts from development by making transit, walking and cycling more attractive alternatives to driving, including transit-only lanes on West Covina Parkway in the downtown area.

The ITE cautions that average ITE trip generation rates are not appropriate or accurate for assessing land use projects located in downtowns, mixed-use projects, places served by public transit, or with transportation demand management (TDM) programs.[3] This is because ITE data is collected primarily at single-use, suburban land-use developments with plentiful free parking and little or no transit service. Therefore, adjusting the baseline number of trips, which were estimated using average ITE rates, is necessary to achieve a realistic projection of trips generated by the project.[4]

To accomplish this, the land use and transportation characteristics of the West Covina districts were examined. Based on the development characteristics, a 15 percent trip reduction rate was applied to the baseline trip generation for each district. The trip reduction percentages were then applied to the baseline ITE values for each district to determine the net new trips expected in the AM and PM peak hour for each district.

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[3] *Trip Generation Handbook: An ITE Recommended Practice (June 2004)*. Page 15: "If the site is located in a downtown setting, served by significant public transportation, or is the site of an extensive transportation demand management program, the site is not consistent with the ITE data..."

[4] Parker, Terry. "Overview of Trip-Generation for Urban Infill, Mixed-Use, and Transit-Oriented Development Land Use Projects." Caltrans Division of Transportation Planning, December 2012. http://www.dot.ca.gov/hq/tpp/offices/ocp/sp_files/Trip-GenerationRatesForUrbanInfill_and_TODprojects_Dec2012.pdf. This Caltrans memo explains the importance of completing this step for accurate trip generation results, and recommends appropriate modeling approaches.

Figure 7 Trip Generation Rates by District/Corridor and Land Use

District	ITE Code	ITE Trip Rate		Total New Residential Units/ Total New Nonresidential Space	Total New Trips	
		AM Peak Hour	PM Peak Hour		AM Peak Hour	PM Peak Hour
Eastland						
Hotel (rm)	*310*	*0.64*	*0.58*	*200*	128	116
Office (ksf)	*710*	*1.56*	*1.49*	*5*	8	7
Retail (ksf)	*820*	*0.96*	*3.71*	*25*	24	24
Azusa						
Office (ksf)	*710*	*1.56*	*1.49*	*10*	16	15
Retail (ksf)	*820*	*0.96*	*3.71*	*15*	14	14
Townhome (du)	*n/a*	*0.54*	*0.73*	*250*	135	183
Vincent						
Hotel (rm)	*310*	*0.64*	*0.58*	*200*	128	116
Office (ksf)	*710*	*1.56*	*1.49*	*5*	8	7
Retail (ksf)	*820*	*0.96*	*3.71*	*75*	72	72
Townhome (du)	*n/a*	*0.54*	*0.73*	*50*	27	37
Low-Rise Residential (du)	*221*	*0.51*	*0.62*	*200*	102	124
Mid-Rise Residential (du)	*223*	*0.51*	*0.62*	*850*	434	527
Sunset						
Hotel (rm)	*310*	*0.64*	*0.58*	*200*	128	116
Office (ksf)	*710*	*1.56*	*1.49*	*380*	593	566
Retail (ksf)	*820*	*0.96*	*3.71*	*60*	58	58
Townhome (du)	*n/a*	*0.54*	*0.73*	*50*	27	37
Low-Rise (du)	*221*	*0.51*	*0.62*	*250*	128	155
Mid-Rise (du)	*223*	*0.51*	*0.62*	*500*	255	310
Note:						
1. ksf = 1,000 square feet of non-residential built space						
2. du = dwelling unit						
3. rm = occupied room						
4. Townhome trip generation rate per by LA County TIA Guidelines						

Figure 8 Trip Generation Summary

District	AM Peak Hour			PM Peak Hour		
	Total Trips	Internal Reduction (15%)	Net New Trips	Total Trips	Internal Reduction (15%)	Net New Trips
Eastland	160	*-24*	136	147	*-22*	125
Azusa	165	*-25*	140	212	*-32*	180
Vincent	770	*-116*	655	883	*-132*	751
Sunset	1,188	*-178*	1,010	1,241	*-186*	1,055

The trip distribution and assignment forecasts were developed based on existing turning movement volumes, understanding of the circulation system, and known traffic controls. Trip assignment using vehicle routing was not feasible due to unknown circulation information such as driveway location and building footprint characteristics. As an alternative, project trips were applied to each studied intersection within the respective district of the project. The number of project trips added to each turning movement was weighted based on the existing turning movement volume compared to the total intersection volume.

Figure 9 Trip Assignment Summary

Intersections	No. of Project Trips Assigned to Intersection	
	AM Peak Hour	PM Peak Hour
Vincent District		
Vincent Ave & WB Interstate 10 Ramps	655	751
Vincent Ave & at EB Interstate 10 Ramps		
Vincent Ave & Plaza Dr / Lakes Dr		
Vincent Ave & West Covina Pkwy		
Vincent Ave & Glendora Ave		
Glendora Ave & Lakes Dr		
Glendora Ave & Walnut Creek Ave		
Glendora & West Covina Pkwy		
Sunset District		
Sunset & West Covina Pkwy	1,010	1,055
West Covina Pkwy & EB Interstate 10 Ramps		
West Covina Pkwy & EB Interstate 10 Ramps		
Sunset Ave & Merced Ave		
Azusa District		
Azusa Ave & Rowland Ave	140	180
Azusa Ave & Workman Ave		
Azusa Ave & Cameron Ave		
Lake Ellen Ave & Cameron Ave		
Eastland District		
Citrus Ave & Garvey Ave N / Eastland Center	136	125
Citrus Ave & Garvey Ave S		
Outside District Boundaries		
Azusa Ave & Amar Rd	0	0

SIGNIFICANCE CRITERIA

The City of West Covina has adopted Los Angeles County CMP guidelines for acceptable intersection level of service. The LOS standard identified in the CMP is E (except where LOS in

the base year of 1992 was worse than E)[5]. LOS E, then, is considered less than significant, while LOS F is considered significant.

Azusa Avenue is part of the CMP roadway system. For CMP intersections, a significant impact occurs when the proposed project increases traffic demand by 2 percent of capacity (V/C ≥.0.02), causing LOS F (V/C > 1.00). If the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2 percent of capacity (V/C ≥ 0.02). Additionally:

- For CMP intersections currently in compliance with the adopted LOS standard, a project will be considered to have a CMP impact if the cumulative analysis indicates that the combination of the proposed project and future cumulative traffic demand will result in the CMP intersection operating at a level of service that violates the standard adopted in the current Congestion Management Program (CMP) and the proposed project increases average control delay at the intersection by four (4) seconds or more.
- For CMP intersections currently not in compliance with the adopted LOS standard, a project is considered to have a CMP impact if the project will add any additional traffic to the CMP intersection that is currently not in compliance with its adopted level of service standard as established in the CMP.

Four of the 19 intersections for which analysis was conducted – the intersections with I-10 ramps – are managed by the California Department of Transportation, or Caltrans. As noted in the *Caltrans Guide for the Preparation of Traffic Impact Studies* (Caltrans, December 2002), Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities. However, Caltrans has not established specific traffic thresholds of significance.

PROJECT CONDITIONS

Level of service analysis was conducted of future (year 2036) traffic conditions with and without the proposed changes. The potential impacts to traffic at each intersection are summarized in Figures 10 through 14.

[5] Section 2.3.1, pg. 17.

Figure 10 Map of Future without Project Conditions AM LOS Results

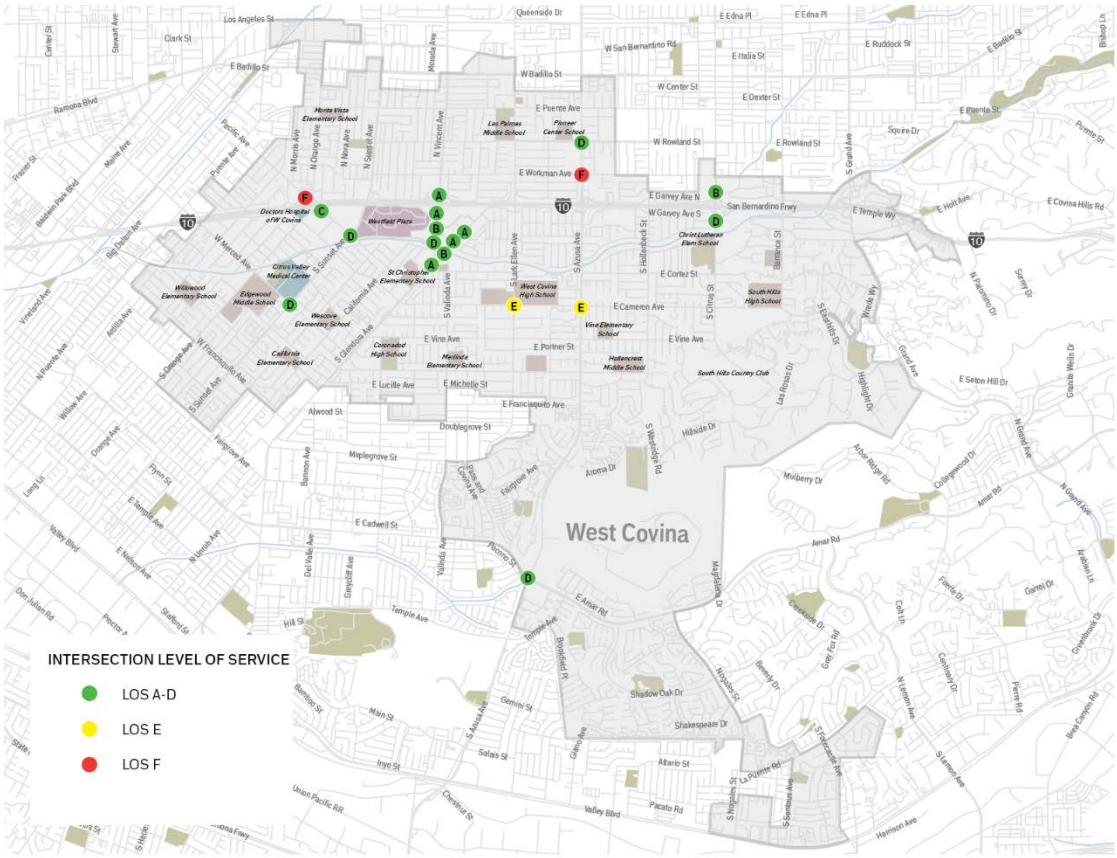

Figure 11 Map of Future without Project Conditions PM LOS Results

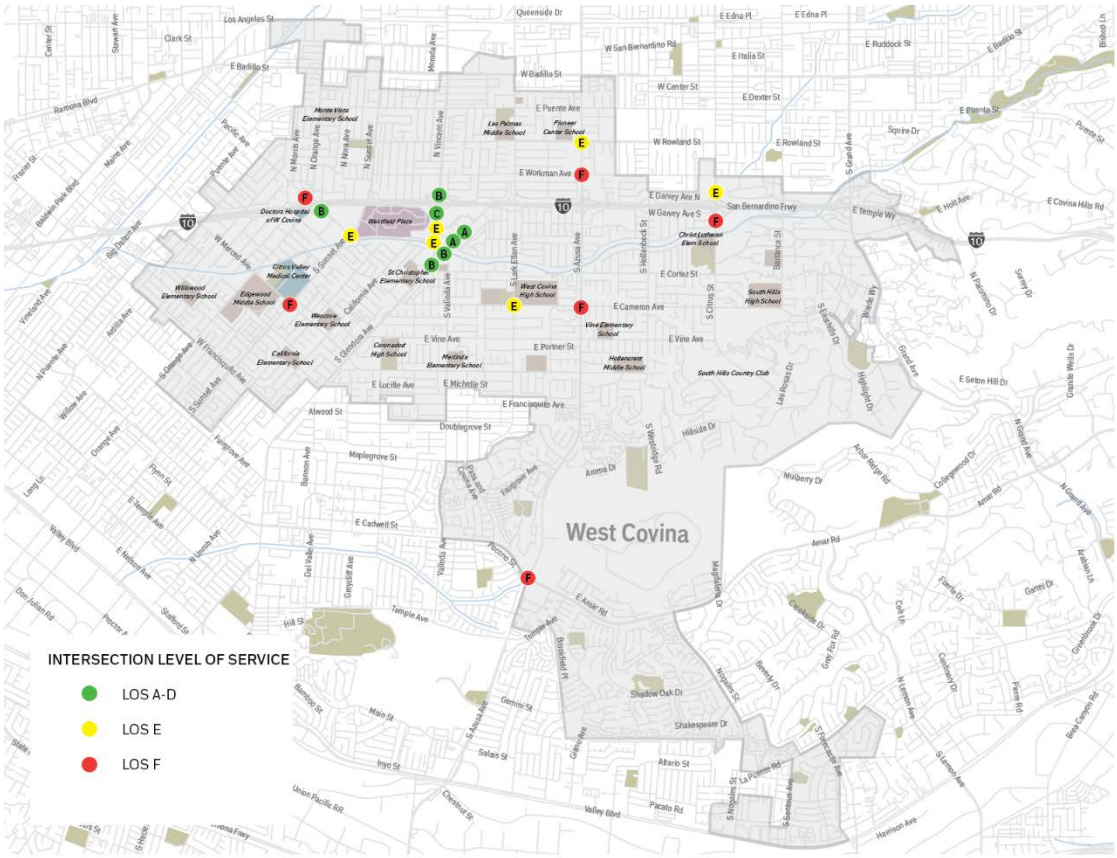

Figure 12 Map of Future with Project Conditions AM LOS Results

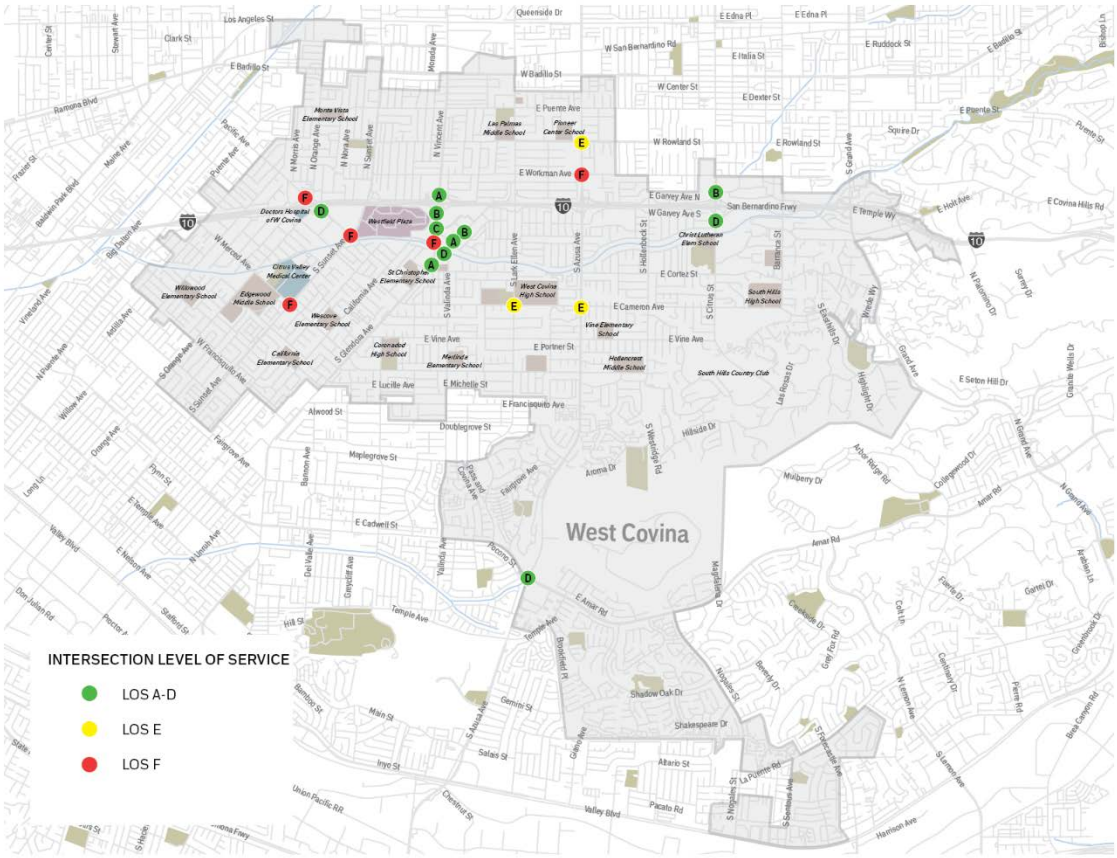

Figure 13 Map of Future with Project Conditions PM LOS Results

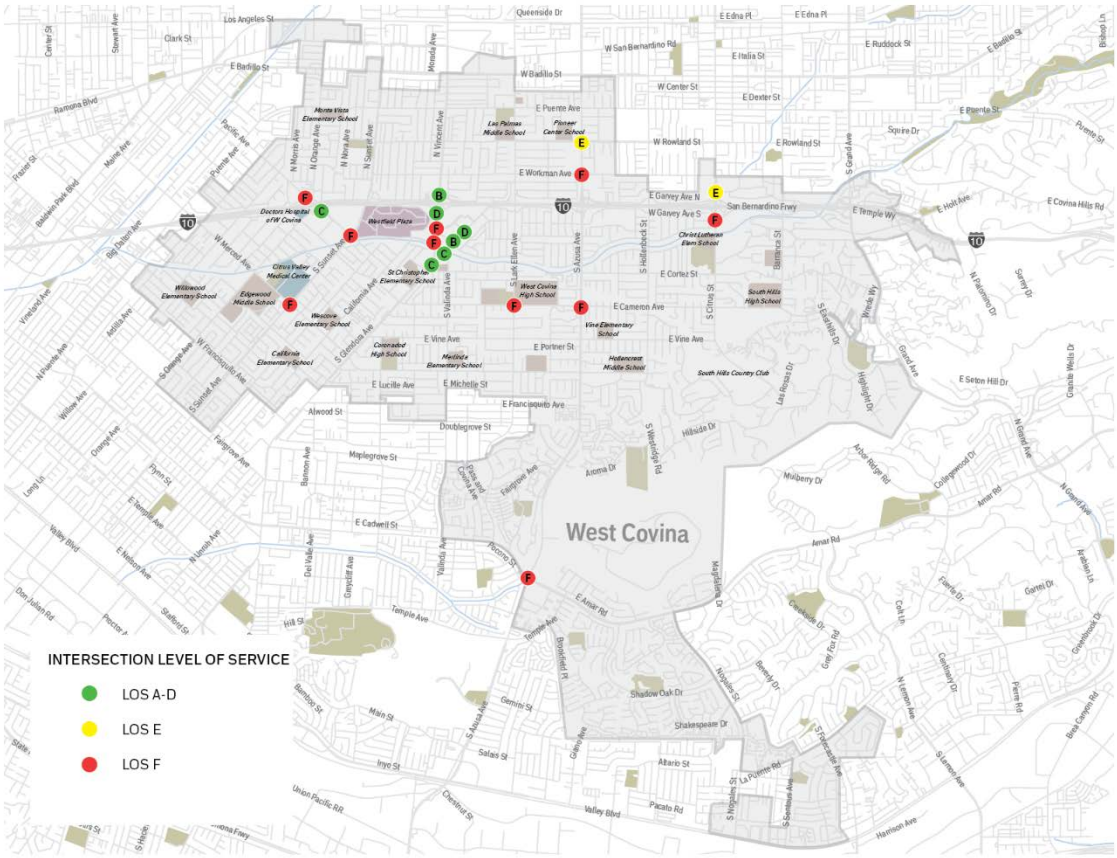

Figure 14 Comparison of Project Conditions LOS at Study Area Intersections

Intersection	Peak Hour	Existing Conditions		Y2036 Planning Horizon without Project		Y2036 Planning Horizon with Project	
		LOS	V/C Ratio	LOS	V/C Ratio	LOS	V/C Ratio
1. Vincent Ave & WB Interstate 10 Ramps	AM	A	0.468	A	0.545	A	0.562
	PM	A	0.530	B	0.603	B	0.666
2. Vincent Ave & at EB Interstate 10 Ramps	AM	A	0.520	A	0.573	B	0.670
	PM	B	0.674	C	0.752	D	0.845
3. Vincent Ave & Plaza Dr / Lakes Dr	AM	A	0.566	B	0.634	C	0.723
	PM	C	0.759	E	0.955	F	1.023
4. Vincent Ave & West Covina Pkwy	AM	C	0.784	D	0.860	F	1.005
	PM	D	0.839	E	0.956	F	1.105
5. Vincent Ave & Glendora Ave	AM	A	0.384	A	0.426	A	0.513
	PM	B	0.607	B	0.672	C	0.764
6. Glendora Ave & Lakes Dr	AM	A	0.413	A	0.444	B	0.618
	PM	A	0.551	A	0.616	D	0.878
7. Glendora Ave & Walnut Creek Ave	AM	A	0.399*	A	0.435*	A	0.533*
	PM	A	0.392*	A	0.469*	B	0.655*
8. Glendora & West Covina Pkwy	AM	A	0.580	B	0.644	D	0.865
	PM	A	0.600	B	0.661	C	0.795
9. Sunset & West Covina Pkwy	AM	C	0.752	D	0.855	F	1.122
	PM	C	0.748	E	0.910	F	1.083
10. West Covina Pkwy & EB Interstate 10 Ramps	AM	B	0.673	C	0.723	D	0.805
	PM	A	0.570	B	0.636	C	0.721
11. West Covina Pkwy & WB Interstate 10 Ramps	AM	D	0.860	F	1.084	F	1.335
	PM	D	0.803	F	1.038	F	1.277
12. Sunset Ave & Merced Ave	AM	C	0.767	D	0.871	F	1.020
	PM	D	0.813	F	1.041	F	1.208
13. Azusa Ave & Rowland Ave	AM	C	0.759	D	0.865	E	0.987
	PM	E	0.911	E	0.929	E	0.954
14. Azusa Ave & Workman Ave	AM	D	0.883	F	1.011	F	1.028
	PM	E	0.921	F	1.056	F	1.081
15. Azusa Ave & Cameron Ave	AM	D	0.826	E	0.938	E	0.962
	PM	D	0.889	F	1.020	F	1.053
16. Azusa Ave & Amar Rd	AM	C	0.759	D	0.862	D	0.862
	PM	E	0.930	F	1.062	F	1.062

17. Citrus Ave & Garvey Ave N / Eastland Center	AM PM	A D	0.561 0.866	B E	0.617 0.977	B E	0.633 0.993
18. Citrus Ave & Garvey Ave S	AM PM	B D	0.686 0.891	D F	0.825 1.023	D F	0.841 1.039
19. Lake Ellen Ave & Cameron Ave	AM PM	D D	0.837 0.857	E E	0.942 0.969	E F	0.968 1.004

Note: BOLD indicates unacceptable LOS conditions (i.e., LOS F) and signifies a "significant traffic impact".

* indicates worst lane approach V/C for all-way stop control intersection

FINDINGS

The following conclusions are drawn from the analysis:

- Under existing conditions, all intersections operate at LOS D or better in both the AM and PM peak period.
- Under the CMP guidelines, LOS F is defined as unacceptable. In the future year (2036) without project condition, six intersections operate at LOS F during either the AM or PM peak period:
  - The intersection of West Covina Parkway with the westbound I-10 ramps during both the AM and PM peak periods
  - The intersection of Sunset and Merced during the PM peak period
  - The intersection of Azusa and Workman during both the AM and PM peak periods
  - The intersection of Azusa and Cameron during the PM peak period
  - The intersection of Azusa and Amar during the PM peak period
  - The intersection of Citrus and Garvey during the PM peak period
- Under the CMP guidelines, LOS F is defined as unacceptable. In the future year with project condition, ten intersections operate at LOS F during either the AM or PM peak period:
  - The intersection of Vincent and Plaza/Lakes during the PM peak period
  - The intersection of West Covina Parkway and Vincent during both the AM and PM peak periods
  - The intersection of West Covina Parkway and Sunset during both the AM and PM peak periods
  - The intersection of West Covina Parkway with the westbound I-10 ramps during both the AM and PM peak periods
  - The intersection of Sunset and Merced during both the AM and PM peak periods
  - The intersection of Azusa and Workman during both the AM and PM peak periods
  - The intersection of Azusa and Cameron during the PM peak period
  - The intersection of Azusa and Amar during the PM peak period
  - The intersection of Citrus and Garvey during the PM peak period
  - The intersection of Lake Ellen and Cameron during the PM peak period

MITIGATIONS

According to the analysis, in the future year (2036) with project condition, there would be significant traffic impacts at seven locations:

- Vincent and Plaza/Lakes
- West Covina Parkway and Vincent
- West Covina Parkway and Sunset
- Sunset and Merced
- Azusa and Workman
- Azusa and Cameron
- Lake Ellen and Cameron

Additional locations at which LOS would be F with project were found to be F without project; thus, a significant impact does not exist. Note, however, that at the above intersections on Azusa that were already at F, a significant impact appears to exist under CMP guidelines for roadways in the CMP system itself, as the project would add traffic (see previous "Significance Criteria" section).

At two of the seven locations – the intersections of West Covina Parkway with Vincent and Sunset – the impact is related in part to changes to the roadway recommended as part of this General Plan Update, specifically conversion of general-purpose travel lanes to BAT lanes in which through travel by private vehicles is prohibited. Mitigating the impacts at these locations by maintaining the existing general-purpose lanes in order to maintain throughput would be inconsistent with General Plan policy.

At the remaining five locations, it might be possible to make physical changes to increase vehicular capacity without contradicting specific General Plan Update recommendations. However, this would require property takings, and to the extent reconfiguration served to degrade conditions for pedestrians and cyclists, it would be inconsistent with General Plan direction.

Significant impacts at these or other intersections found through future project-level traffic analysis could be mitigated in a number of ways. Historically, mitigation measures to reduce significant traffic impacts to a less-than-significant level under the California Environmental Quality Act (CEQA) have typically consisted of physical changes to roadways to increase vehicular throughput and reduce delay. However, signal timings may be adjusted to increase throughput, fees might be paid by a project's developer into a municipality's traffic in-lieu program, or additional transportation demand management (TDM) measures may be required. Alternately, capacity might be expanded not by providing additional turn lanes, or other typical measures, but by implementing measures designed to maintain throughput while improving safety and reducing impacts on pedestrians and other users, such as modern roundabouts.

Two additional issues related to traffic analysis, impacts and mitigation should be noted:

1. Under current CEQA guidelines, some projects are exempt from analysis.
2. CEQA guidelines for traffic analysis are currently undergoing revision.

First, under California Senate Bill 375 (SB 375, Steinberg, 2008), in regions with an adopted Sustainable Communities Strategy or SCS there is an exemption from CEQA traffic analysis for "Transit Priority Projects," or TPP's. These are defined as projects with at least a 50 percent residential component (25 percent if FAR is greater than 0.75) and at least 20 net dwelling units

per acre located within one-half mile of a "high quality transit corridor," defined as "a corridor with fixed route bus service with intervals no longer than 15 minutes during peak commute hours." The Foothill Transit Routes Silver Streak, 488 and 498 all meet this standard and make stops in the downtown area, including along West Covina Parkway. (Note, however, that projects still may have to conduct traffic analysis in order to meet CEQA requirements related to "secondary" impacts such as safety and air quality.)

Second, as a result of passage of Senate Bill 743 (SB 743, Steinberg, 2013) the City will soon be required to update its significance criteria for traffic impacts, in order to remain consistent with state law. SB 743 created a process to change the way that transportation impacts are analyzed under CEQA: specifically, it required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Per SB 743, auto delay can no longer be considered a significant impact under CEQA.

In December of 2013, OPR published a preliminary evaluation of possible metrics to replace level of service in transportation analyses and invited public comment on that evaluation. In January of this year, it released for public review a "Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA." That proposal can be found online at: *https://www.opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf.*

The OPR proposal states the following:

> Senate Bill 743 mandates a change in the way that public agencies evaluate transportation impacts of projects under the California Environmental Quality Act. Legislative findings in that bill plainly state that California's foundational environmental law can no longer treat vibrant communities, transit and active transportation options as adverse environmental outcomes. On the contrary, aspects of project location and design that influence travel choices, and thereby improve or degrade our air quality, safety, and health, must be considered. ...
>
> Once finally adopted, these Guidelines should result in a better, more transparent evaluation of project impacts, and better environmental outcomes. Procedurally, traffic studies that accompany in-depth environmental review will now typically take days rather than weeks to prepare. Because models to estimate vehicle miles traveled are publicly available, decision-makers and the public will be better able to engage in the review process. Substantively, a focus on vehicle miles traveled will facilitate the production of badly-needed housing in urban locations. It will also facilitate transit projects and better uses of existing infrastructure as well as bicycle and pedestrian improvements. As a result, people will have better transportation options. It also means that CEQA will no longer mandate roadways that focus on automobiles to the exclusion of every other transportation option. It will no longer mandate excessive, and expensive, roadway capacity....
>
> Senate Bill 743 (Steinberg, 2013) required changes to the Guidelines Implementing the California Environmental Quality Act (CEQA Guidelines) regarding the analysis of transportation impacts. Those proposed changes identify vehicle miles traveled as the most appropriate metric to evaluate a project's transportation impacts. Those proposed changes also provide that the analysis of certain transportation projects must address the potential for induced travel. Once the Natural Resources Agency adopts these changes to

> the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, will no longer constitute a significant environmental effect under CEQA.[6]

The OPR proposal provides technical guidance on the implementation of vehicle miles traveled, or VMT, as the metric for determining transportation impacts under CEQA, including alternative analytical tools and methods and revised significance criteria. Under its section on "Screening Thresholds", it recommends a "presumption of less than significant impact near transit stations" that would exempt from CEQA review all development (and not just primarily residential projects) within one-half mile of a stop on a "high quality transit corridor," again defined as "a corridor with fixed route bus service with intervals no longer than 15 minutes during peak commute hours."[7] It also recommends presumption of less than significant impact for smaller projects generating fewer than 100 trips per day.

Finally, in its "Mitigation and Alternatives" section, the OPR proposal recommends mitigation strategies designed to reduce VMT rather than auto delay. These include a range of transportation demand management (TDM) measures as well as changes to the location and design of the project.

As previously noted, the proposed Guidelines have not yet been adopted, and the proposal recommends that analysis of VMT will remain voluntary for two years following adoption of the new Guidelines. However, a number of California cities have already begun to update their policies based on the proposed Guidelines, and in order to allow for development and roadway reconfigurations consistent with this General Plan Update, we recommend that West Covina similarly begin this process as soon as possible.

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[6] Pages 1 and 13.

[7] The OPR proposal notes that the presumption might not apply if the project might still generate significant levels of VMT, for example by having a floor area ratio less than 0.75 or provides more parking than required by the jurisdiction.

Appendix C1

Modeling Software Results

Intersection Capacity Utilization
1: S Vincent Ave & I-10 WB on- and off-ramps

8/25/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	274	0	98	0	567	362	0	672	582
Pedestrians									7			2
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.5	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	274	0	98	0	567	362	0	672	582
Lane Utilization Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	2952	0	1360	0	4358	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.3
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	11.1	0.0	8.6	0.0	15.6	32.8	0.0	26.5	51.6
Adj Reference Time (s)	0.0	0.0	0.0	15.6	0.0	13.1	0.0	22.5	37.3	0.0	31.0	56.1
Permitted Option												
Adj Saturation A (vph)	0	0		98	0		0	1453		0	1523	
Reference Time A (s)	0.0	0.0		167.1	0.0		0.0	15.6		0.0	26.5	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		19.1	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			19.1			15.6			26.5	
Adj Reference Time (s)		8.0			23.1			22.5			31.0	
Split Option												
Ref Time Combined (s)	0.0	0.0		11.1	0.0		0.0	15.6		0.0	26.5	
Ref Time Seperate (s)	0.0	0.0		11.1	0.0		0.0	15.6		0.0	26.5	
Reference Time (s)	0.0	0.0		11.1	11.1		15.6	15.6		26.5	26.5	
Adj Reference Time (s)	0.0	0.0		15.1	15.1		22.5	22.5		31.0	31.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	15.6	31.0	
Permitted Option (s)	23.1	31.0	
Split Option (s)	15.1	53.5	
Minimum (s)	15.1	31.0	46.1

Right Turns	WBR	NBR	SBR
Adj Reference Time (s)	13.1	37.3	56.1
Cross Thru Ref Time (s)	22.5	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	35.6	37.3	56.1

Intersection Summary			
Intersection Capacity Utilization	46.8%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	158	0	206	0	0	0	0	782	686	0	979	1
Pedestrians							1		8	8		1
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.0	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	5.0	4.0	5.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	158	0	206	0	0	0	0	1011	457	0	979	1
Lane Utilization Factor	1.00	1.00	0.89	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	2407	0	0	0	1520	2943	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	12.5	0.0	10.3	0.0	0.0	0.0	0.0	41.4	41.4	0.0	38.6	0.2
Adj Reference Time (s)	17.0	0.0	14.8	0.0	0.0	0.0	9.5	45.9	45.9	0.0	43.1	22.5
Permitted Option												
Adj Saturation A (vph)	101	0		0	0		101	1472		0	1523	
Reference Time A (s)	187.1	0.0		0.0	0.0		0.0	41.4		0.0	38.6	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	20.5	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		20.5			0.0			41.4			38.6	
Adj Reference Time (s)		24.5			8.0			45.9			43.1	
Split Option												
Ref Time Combined (s)	12.5	0.0		0.0	0.0		0.0	41.4		0.0	38.6	
Ref Time Seperate (s)	12.5	0.0		0.0	0.0		0.0	32.1		0.0	38.6	
Reference Time (s)	12.5	12.5		0.0	0.0		41.4	41.4		38.6	38.6	
Adj Reference Time (s)	16.5	16.5		0.0	0.0		45.9	45.9		43.1	43.1	

Summary	EB WB	NB SB	Combined
Protected Option (s)	17.0	52.6	
Permitted Option (s)	24.5	45.9	
Split Option (s)	16.5	89.0	
Minimum (s)	16.5	45.9	62.4

Right Turns	EBR	NBR	SBR
Adj Reference Time (s)	14.8	45.9	22.5
Cross Thru Ref Time (s)	43.1	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	57.8	45.9	22.5

Intersection Summary			
Intersection Capacity Utilization	52.0%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	76	27	35	17	41	73	3	19	1196	18	9	119
Pedestrians	2		21	21		2		7		20		20
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	76	27	35	0	58	73	0	22	1214	0	0	128
Lane Utilization Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	2952	1600	1360	0	3153	1360	0	2952	4349	0	0	2952
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	0.3	0.0	0.0	0.0	2.3	0.0	0.0
Pedestrian Frequency (%)		0.50			0.06				1.00			
Protected Option Allowed		No			No				Yes			
Reference Time (s)			5.5			6.7	0.0	0.9	33.5	0.0	0.0	5.2
Adj Reference Time (s)			10.0			11.2	0.0	8.5	38.5	0.0	0.0	9.7
Permitted Option												
Adj Saturation A (vph)	98	1600		0	571		0	98	1450		0	98
Reference Time A (s)	46.3	2.0		0.0	12.2		0.0	13.4	33.5		0.0	78.1
Adj Saturation B (vph	0	1600		0	0		NA	NA	NA		NA	NA
Reference Time B (s)	11.1	2.0		8.7	10.2		NA	NA	NA		NA	NA
Reference Time (s)		11.1			10.2				33.5			
Adj Reference Time (s)		15.6			14.7				38.5			
Split Option												
Ref Time Combined (s)	3.1	2.0		0.0	2.2		0.0	0.9	33.5		0.0	5.2
Ref Time Seperate (s)	3.1	2.0		0.7	3.1		0.2	0.8	33.0		0.7	4.8
Reference Time (s)	3.1	3.1		3.1	3.1		33.5	33.5	33.5		24.4	24.4
Adj Reference Time (s)	8.5	8.5		8.5	8.5		38.5	38.5	38.5		29.4	29.4

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	48.2	
Permitted Option (s)	15.6	83.1	
Split Option (s)	17.0	67.9	
Minimum (s)	15.6	48.2	63.8

Right Turns	EBR	WBR	SBR
Adj Reference Time (s)	10.0	11.2	25.1
Cross Thru Ref Time (s)	37.9	48.2	8.5
Oncoming Left Ref Time (s)	8.5	8.5	8.5
Combined (s)	56.4	67.9	42.1

Intersection Summary			
Intersection Capacity Utilization	56.6%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	886	218
Pedestrians		7
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	5.0	5.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	886	218
Lane Utilization Factor	0.91	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	4358	1360
Ped Intf Time (s)	0.0	0.9
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	24.4	20.1
Adj Reference Time (s)	29.4	25.1
Permitted Option		
Adj Saturation A (vph)	1453	
Reference Time A (s)	24.4	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	78.1	
Adj Reference Time (s)	83.1	
Split Option		
Ref Time Combined (s)	24.4	
Ref Time Seperate (s)	24.4	
Reference Time (s)	24.4	
Adj Reference Time (s)	29.4	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	18	430	385	183	118	48	69	552	3	34	158	525
Pedestrians	1		9	9		1	12		6		6	
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.5	6.0	4.0	5.0	5.0	6.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	448	385	0	301	48	69	555	0	0	192	744
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.97	0.91
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.96
Saturated Flow (vph)	0	3194	1360	0	2954	1360	2952	4355	0	0	2952	4166
Ped Intf Time (s)	0.0	0.0	1.1	0.0	0.0	0.1	0.0	0.0	0.8	0.0	0.0	0.4
Pedestrian Frequency (%)		0.26			0.03			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			35.1			4.4	2.8	15.3	0.0	0.0	7.8	21.9
Adj Reference Time (s)			40.6			11.5	8.5	21.3	0.0	0.0	12.8	27.9
Permitted Option												
Adj Saturation A (vph)	0	2026		0	98		98	1452		0	98	1389
Reference Time A (s)	0.0	26.5		0.0	223.0		42.1	15.3		0.0	117.1	21.9
Adj Saturation B (vph	0	0		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	8.7	24.8		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		24.8			223.0			42.1				117.1
Adj Reference Time (s)		30.3			228.5			48.1				123.1
Split Option												
Ref Time Combined (s)	0.0	16.8		0.0	12.2		2.8	15.3		0.0	7.8	21.9
Ref Time Seperate (s)	0.7	32.3		14.4	4.6		2.8	15.2		2.7	6.4	15.6
Reference Time (s)	32.3	32.3		14.4	14.4		15.3	15.3		21.9	21.9	21.9
Adj Reference Time (s)	37.8	37.8		19.9	19.9		21.3	21.3		27.9	27.9	27.9

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	36.4	
Permitted Option (s)	228.5	123.1	
Split Option (s)	57.7	49.2	
Minimum (s)	57.7	36.4	94.1

Right Turns	EBR	WBR
Adj Reference Time (s)	40.6	11.5
Cross Thru Ref Time (s)	27.9	34.1
Oncoming Left Ref Time (s)	19.9	30.3
Combined (s)	88.4	75.9

Intersection Summary			
Intersection Capacity Utilization	78.4%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	219
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	SWR2
Lane Configurations												
Volume (vph)	42	0	11	20	579	0	0	525	9	98	3	10
Pedestrians	11					1	1					11
Ped Button					No					Yes		
Pedestrian Timing (s)					16.0					16.0		
Free Right			No			No			No		No	No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	4.0	5.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0
Minimum Green (s)	4.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	42	0	11	20	579	0	0	534	0	104	0	7
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.94	0.85	0.85
Saturated Flow (vph)	1520	0	1360	1520	3046	0	0	3039	0	2934	0	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	1.4
Pedestrian Frequency (%)		0.00			1.00			0.00		0.31		
Protected Option Allowed		No			Yes			Yes		No		
Reference Time (s)			1.0	1.6	22.8	0.0	0.0	21.1	0.0		0.0	1.9
Adj Reference Time (s)			9.0	15.0	27.8	0.0	0.0	26.1	0.0		0.0	9.0
Permitted Option												
Adj Saturation A (vph)	101	0		101	1523		0	1519		98		
Reference Time A (s)	49.7	0.0		23.7	22.8		0.0	21.1		64.1		
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA		
Reference Time (s)					23.7			21.1				
Adj Reference Time (s)					28.7			26.1				
Split Option												
Ref Time Combined (s)	3.3	0.0		1.6	22.8		0.0	21.1		4.3		
Ref Time Seperate (s)	3.3	0.0		1.6	22.8		0.0	20.7		4.1		
Reference Time (s)	3.3	3.3		22.8	22.8		21.1	21.1		4.3		
Adj Reference Time (s)	8.0	8.0		27.8	27.8		26.1	26.1		9.3		

Summary	EB	NB SB	SW	Combined
Protected Option (s)	NA	41.1	NA	
Permitted Option (s)	Err	28.7	Err	
Split Option (s)	8.0	53.9	9.3	
Minimum (s)	8.0	28.7	9.3	46.0

Right Turns	EBR	SWR2
Adj Reference Time (s)	9.0	9.0
Cross Thru Ref Time (s)	26.1	27.8
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	35.1	36.8

Intersection Summary			
Intersection Capacity Utilization	38.4%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	19	4	17	0	4	0	20	104	5	0	167	93
Pedestrians	3		8	8		3			4	4		
Ped Button		Yes			No			No				
Pedestrian Timing (s)		16.0			16.0			16.0				
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	4.0	8.0	8.0	8.0	8.0	8.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	23	17	0	4	0	20	104	5	0	260	0
Lane Utilization 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
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1534	1360	0	1600	0	1520	1600	1360	0	1514	0
Ped Intf Time (s)	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.0	0.0
Pedestrian Frequency (%)		0.23			1.00			1.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			2.5			0.0			1.0			0.0
Adj Reference Time (s)			11.0			0.0			13.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	117		0	1600		101	1600		0	1514	
Reference Time A (s)	0.0	23.7		0.0	0.3		23.7	7.8		0.0	20.6	
Adj Saturation B (vph	0	0		0	1600		NA	NA		0	1514	
Reference Time B (s)	9.5	9.8		0.0	0.3		NA	NA		0.0	20.6	
Reference Time (s)		9.8			0.3			23.7			20.6	
Adj Reference Time (s)		14.8			11.0			28.7			25.6	
Split Option												
Ref Time Combined (s)	0.0	1.8		0.0	0.3		1.6	7.8		0.0	20.6	
Ref Time Seperate (s)	1.5	0.3		0.0	0.3		1.6	7.8		0.0	13.2	
Reference Time (s)	1.8	1.8		0.3	0.3		7.8	7.8		20.6	20.6	
Adj Reference Time (s)	11.0	11.0		11.0	11.0		13.0	13.0		25.6	25.6	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	14.8	28.7	
Split Option (s)	22.0	38.6	
Minimum (s)	14.8	28.7	43.5

Right Turns	SER	NER
Adj Reference Time (s)	11.0	13.0
Cross Thru Ref Time (s)	25.6	11.0
Oncoming Left Ref Time (s)	11.0	25.6
Combined (s)	47.6	49.6

Intersection Summary			
Intersection Capacity Utilization	41.3%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	4	3	5	119	58	5	3	21	123	36	7	167
Pedestrians	1		5	5		1		1		17	17	
Ped Button		Yes			Yes				Yes			Yes
Pedestrian Timing (s)		16.0			16.0				16.0			16.0
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	7	5	0	182	0	0	24	123	36	7	183
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.96	0.85	0.95	0.95	1.00	0.85	0.95	0.99
Saturated Flow (vph)	0	1554	1360	0	1541	0	0	1520	3046	1360	1520	3006
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.0	0.0	2.0	0.0	0.0
Pedestrian Frequency (%)		0.15			0.03				0.43			0.03
Protected Option Allowed		No			No				Yes			Yes
Reference Time (s)			1.1			0.0	0.0	1.9	4.8	5.2	0.6	7.3
Adj Reference Time (s)			9.8			0.0	0.0	8.0	13.7	13.9	8.0	11.6
Permitted Option												
Adj Saturation A (vph)	0	1383		0	141		0	101	1523		101	1503
Reference Time A (s)	0.0	0.6		0.0	155.3		0.0	28.4	4.8		8.3	7.3
Adj Saturation B (vph	0	0		0	0		NA	NA	NA		NA	NA
Reference Time B (s)	8.3	8.5		17.4	22.2		NA	NA	NA		NA	NA
Reference Time (s)		0.6			22.2				28.4			8.3
Adj Reference Time (s)		9.8			26.2				32.4			12.5
Split Option												
Ref Time Combined (s)	0.0	0.5		0.0	14.2		0.0	1.9	4.8		0.6	7.3
Ref Time Seperate (s)	0.3	0.2		9.4	4.4		0.2	1.7	4.8		0.6	6.7
Reference Time (s)	0.5	0.5		14.2	14.2		4.8	4.8	4.8		7.3	7.3
Adj Reference Time (s)	9.8	9.8		18.2	18.2		13.7	13.7	13.7		11.6	11.6

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	21.7	
Permitted Option (s)	26.2	32.4	
Split Option (s)	28.1	25.3	
Minimum (s)	26.2	21.7	47.8

Right Turns	SER	NER
Adj Reference Time (s)	9.8	13.9
Cross Thru Ref Time (s)	19.6	9.8
Oncoming Left Ref Time (s)	18.2	8.0
Combined (s)	47.7	31.7

Intersection Summary			
Intersection Capacity Utilization	39.9%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	16
Pedestrians	1
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.1
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	198	5	6	694	77	9	97	4	24	110	163
Pedestrians	4		5	5		4	5		7	7		5
Ped Button		Yes			No			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	50	203	0	6	771	0	9	97	4	24	273	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.91	0.85
Saturated Flow (vph)	1520	3035	0	1520	3001	0	1520	3046	1360	1520	2774	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.1	0.5	0.0	0.0	0.9	0.0	0.4	0.6
Pedestrian Frequency (%)		0.15			1.00			0.21			0.15	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.9	8.0	0.0	0.5	30.9	0.0	0.7	3.8	1.2	1.9	12.2	0.0
Adj Reference Time (s)	15.5	15.5	0.0	15.5	36.4	0.0	11.5	11.5	11.5	11.5	17.7	0.0
Permitted Option												
Adj Saturation A (vph)	101	1518		101	1500		101	1523		101	1387	
Reference Time A (s)	59.2	8.0		7.1	30.9		10.7	3.8		28.4	12.2	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		0	2774	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		9.9	12.2	
Reference Time (s)		59.2			30.9			10.7			12.2	
Adj Reference Time (s)		64.7			36.4			16.2			17.7	
Split Option												
Ref Time Combined (s)	3.9	8.0		0.5	30.9		0.7	3.8		1.9	12.2	
Ref Time Seperate (s)	3.9	7.8		0.5	27.8		0.7	3.8		1.9	5.1	
Reference Time (s)	8.0	8.0		30.9	30.9		3.8	3.8		12.2	12.2	
Adj Reference Time (s)	15.5	15.5		36.4	36.4		11.5	11.5		17.7	17.7	

Summary	NW SE	NE SW	Combined
Protected Option (s)	51.9	29.2	
Permitted Option (s)	64.7	17.7	
Split Option (s)	51.9	29.2	
Minimum (s)	51.9	17.7	69.6

Right Turns	NER
Adj Reference Time (s)	11.5
Cross Thru Ref Time (s)	15.5
Oncoming Left Ref Time (s)	11.5
Combined (s)	38.5

Intersection Summary			
Intersection Capacity Utilization	58.0%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWU	SWL
Lane Configurations												
Volume (vph)	85	129	41	101	369	109	2	149	585	128	6	68
Pedestrians	17		11	11		17		6		13		13
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	6.0	4.0	4.5	6.0	4.0	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	4.0	6.0	6.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	85	170	0	101	478	0	0	151	585	128	0	74
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	2936	0	1520	2942	0	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.3	1.4	0.0	0.5	2.0	0.0	0.0	0.0	1.6	0.0	0.0
Pedestrian Frequency (%)		0.31			0.43				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	6.7	7.3	0.0	8.0	20.0	0.0	0.0	11.9	23.0	12.9	0.0	5.8
Adj Reference Time (s)	11.2	13.3	0.0	12.5	26.0	0.0	0.0	16.4	29.0	18.9	0.0	10.3
Permitted Option												
Adj Saturation A (vph)	101	1468		101	1471		0	101	1523		0	101
Reference Time A (s)	100.7	7.3		119.6	20.0		0.0	178.8	23.0		0.0	87.6
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		100.7			119.6				178.8			
Adj Reference Time (s)		106.7			125.6				184.8			
Split Option												
Ref Time Combined (s)	6.7	7.3		8.0	20.0		0.0	11.9	23.0		0.0	5.8
Ref Time Seperate (s)	6.7	5.6		8.0	15.5		0.2	11.8	23.0		0.5	5.4
Reference Time (s)	7.3	7.3		20.0	20.0		23.0	23.0	23.0		30.6	30.6
Adj Reference Time (s)	13.3	13.3		26.0	26.0		29.0	29.0	29.0		36.6	36.6

Summary	NW SE	NE SW	Combined
Protected Option (s)	37.2	53.0	
Permitted Option (s)	125.6	184.8	
Split Option (s)	39.2	65.7	
Minimum (s)	37.2	53.0	90.2

Right Turns	NER	SWR
Adj Reference Time (s)	18.9	25.3
Cross Thru Ref Time (s)	13.3	26.0
Oncoming Left Ref Time (s)	10.3	16.4
Combined (s)	42.5	67.7

Intersection Summary			
Intersection Capacity Utilization	75.2%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWT	SWR
Lane Configurations		
Volume (vph)	777	210
Pedestrians		6
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	6.0	6.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	777	210
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.8
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	30.6	19.3
Adj Reference Time (s)	36.6	25.3
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	30.6	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	87.6	
Adj Reference Time (s)	93.6	
Split Option		
Ref Time Combined (s)	30.6	
Ref Time Seperate (s)	30.6	
Reference Time (s)	30.6	
Adj Reference Time (s)	36.6	

Summary

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	27	199	554	2	192	446	15	2	7	1	21	10
Pedestrians	3		3		3		3					
Ped Button		No				No						
Pedestrian Timing (s)		16.0				16.0						
Free Right			No				No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	3.7	4.9	4.0	3.7	3.7	4.9	4.0	4.1	4.1	4.1	4.1	4.1
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	27	753	0	0	194	461	0	0	9	1	21	10
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.89	0.85	0.95	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00
Saturated Flow (vph)	1520	2710	0	0	2952	3032	0	0	1582	1360	1520	1600
Ped Intf Time (s)	0.0	0.3	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		1.00				1.00			0.00			0.00
Protected Option Allowed		Yes				Yes			No			No
Reference Time (s)	2.1	33.6	0.0	0.0	7.9	18.3	0.0			0.1		
Adj Reference Time (s)	14.0	38.5	0.0	0.0	14.0	23.2	0.0			14.1		
Permitted Option												
Adj Saturation A (vph)	101	1355		0	98	1516		0	360		101	1600
Reference Time A (s)	32.0	33.6		0.0	118.3	18.3		0.0	3.0		24.9	0.8
Adj Saturation B (vph	NA	NA		NA	NA	NA		0	0		0	1600
Reference Time B (s)	NA	NA		NA	NA	NA		8.2	8.7		9.7	0.8
Reference Time (s)		33.6				118.3			3.0			9.7
Adj Reference Time (s)		38.5				123.2			14.1			14.1
Split Option												
Ref Time Combined (s)	2.1	33.6		0.0	7.9	18.3		0.0	0.7		1.7	0.8
Ref Time Seperate (s)	2.1	9.1		0.2	7.8	17.7		0.2	0.5		1.7	0.8
Reference Time (s)	33.6	33.6		18.3	18.3	18.3		0.7	0.7		1.7	1.7
Adj Reference Time (s)	38.5	38.5		23.2	23.2	23.2		14.1	14.1		14.1	14.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	52.5	NA	
Permitted Option (s)	123.2	14.1	
Split Option (s)	61.7	28.2	
Minimum (s)	52.5	14.1	66.6

Right Turns	NER	SWR
Adj Reference Time (s)	14.1	14.1
Cross Thru Ref Time (s)	52.5	23.2
Oncoming Left Ref Time (s)	14.1	14.1
Combined (s)	80.7	51.4

Intersection Summary			
Intersection Capacity Utilization	67.3%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	46
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.1
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	46
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	4.1
Adj Reference Time (s)	14.1
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWU	NWL	NWT
Lane Configurations												
Volume (vph)	55	1	56	142	315	77	26	579	154	2	289	178
Pedestrians							3		2		2	
Ped Button								No				No
Pedestrian Timing (s)								16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.1	4.1	4.1	4.1	4.1	4.0	3.7	4.9	4.9	3.7	3.7	4.9
Minimum Green (s)	10.0	10.0	10.0	9.9	9.9	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	56	56	0	534	0	26	579	154	0	291	217
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.97	0.95
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.97
Saturated Flow (vph)	0	1521	1360	0	1545	0	1520	3046	1360	0	2952	2964
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			4.9			0.0	2.1	22.8	13.9	0.0	11.8	8.9
Adj Reference Time (s)			14.1			0.0	14.0	27.7	18.8	0.0	15.8	14.9
Permitted Option												
Adj Saturation A (vph)	0	513		0	303		101	1523		0	98	1482
Reference Time A (s)	0.0	13.1		0.0	211.2		30.8	22.8		0.0	177.4	8.9
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		19.2	49.5		NA	NA		NA	NA	NA
Reference Time (s)		13.1			49.5			30.8				177.4
Adj Reference Time (s)		17.2			53.6			35.7				182.3
Split Option												
Ref Time Combined (s)	0.0	4.4		0.0	41.5		2.1	22.8		0.0	11.8	8.9
Ref Time Seperate (s)	4.3	0.1		11.2	24.3		2.1	22.8		0.2	11.7	7.3
Reference Time (s)	4.4	4.4		41.5	41.5		22.8	22.8		11.8	11.8	11.8
Adj Reference Time (s)	14.1	14.1		45.6	45.6		27.7	27.7		16.7	16.7	16.7

Summary	NB SB	NW SE	Combined
Protected Option (s)	NA	43.5	
Permitted Option (s)	53.6	182.3	
Split Option (s)	59.7	44.4	
Minimum (s)	53.6	43.5	97.1

Right Turns	NBR	SER
Adj Reference Time (s)	14.1	18.8
Cross Thru Ref Time (s)	43.5	45.6
Oncoming Left Ref Time (s)	45.6	15.8
Combined (s)	103.2	80.2

Intersection Summary			
Intersection Capacity Utilization	86.0%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NWR
Lane Configurations	
Volume (vph)	39
Pedestrians	3
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.4
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWU	SWL	SWT
Lane Configurations												
Volume (vph)	94	252	61	113	400	80	86	785	51	21	98	791
Pedestrians	14		12	12		14	12		7		7	
Ped Button		Yes			No			No				Yes
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	3.5	6.0	4.0	3.5	3.5	6.0
Minimum Green (s)	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	4.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	94	313	0	113	480	0	86	836	0	0	119	896
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.95	0.98
Saturated Flow (vph)	1520	2957	0	1520	2970	0	1520	3019	0	0	1520	2993
Ped Intf Time (s)	0.0	0.3	1.5	0.0	0.3	1.7	0.0	0.1	0.9	0.0	0.0	0.2
Pedestrian Frequency (%)		0.33			1.00			1.00				0.33
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	7.4	13.0	0.0	8.9	19.7	0.0	6.8	33.3	0.0	0.0	9.4	36.1
Adj Reference Time (s)	13.4	19.0	0.0	14.9	25.7	0.0	10.8	39.3	0.0	0.0	13.4	42.1
Permitted Option												
Adj Saturation A (vph)	101	1479		101	1485		101	1509		0	101	1496
Reference Time A (s)	111.3	13.0		133.8	19.7		101.8	33.3		0.0	140.9	36.1
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		111.3			133.8			101.8				140.9
Adj Reference Time (s)		117.3			139.8			107.8				146.9
Split Option												
Ref Time Combined (s)	7.4	13.0		8.9	19.7		6.8	33.3		0.0	9.4	36.1
Ref Time Seperate (s)	7.4	10.5		8.9	16.4		6.8	31.3		1.7	7.7	31.9
Reference Time (s)	13.0	13.0		19.7	19.7		33.3	33.3		36.1	36.1	36.1
Adj Reference Time (s)	19.0	19.0		25.7	25.7		39.3	39.3		42.1	42.1	42.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	39.1	52.9	
Permitted Option (s)	139.8	146.9	
Split Option (s)	44.7	81.4	
Minimum (s)	39.1	52.9	92.0

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	76.7%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	105
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	4	56	306	84	2	146	593	134	11	66	752	92
Pedestrians		16		16		16		16		14		39
Ped Button			Yes				Yes				No	
Pedestrian Timing (s)			16.0				16.0				16.0	
Free Right				No				No				No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0	4.0	4.0	6.0	6.0	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	60	306	84	0	148	593	134	0	77	752	92
Lane Utilization Factor	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360	0	1520	3046	1360	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.0
Pedestrian Frequency (%)			0.41				0.41				1.00	
Protected Option Allowed			Yes				Yes				Yes	
Reference Time (s)	0.0	4.7	12.1	9.3	0.0	11.7	23.4	13.7	0.0	6.1	29.6	12.1
Adj Reference Time (s)	0.0	9.2	18.1	15.3	0.0	15.7	29.4	19.7	0.0	10.6	35.6	18.1
Permitted Option												
Adj Saturation A (vph)	0	101	1523		0	101	1523		0	101	1523	
Reference Time A (s)	0.0	71.1	12.1		0.0	175.3	23.4		0.0	91.2	29.6	
Adj Saturation B (vph	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time B (s)	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time (s)			71.1				175.3				91.2	
Adj Reference Time (s)			77.1				181.3				97.2	
Split Option												
Ref Time Combined (s)	0.0	4.7	12.1		0.0	11.7	23.4		0.0	6.1	29.6	
Ref Time Seperate (s)	0.3	4.4	12.1		0.2	11.5	23.4		0.9	5.2	29.6	
Reference Time (s)	12.1	12.1	12.1		23.4	23.4	23.4		29.6	29.6	29.6	
Adj Reference Time (s)	18.1	18.1	18.1		29.4	29.4	29.4		35.6	35.6	35.6	

Summary	EB WB	NB SB	Combined
Protected Option (s)	38.6	52.5	
Permitted Option (s)	181.3	97.2	
Split Option (s)	47.4	77.6	
Minimum (s)	38.6	52.5	91.1

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	15.3	19.7	18.1	16.0
Cross Thru Ref Time (s)	52.5	45.0	33.7	38.6
Oncoming Left Ref Time (s)	15.7	9.2	9.4	10.6
Combined (s)	83.5	74.0	61.2	65.2

Intersection Summary			
Intersection Capacity Utilization	75.9%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	10	52	913	42
Pedestrians		39		14
Ped Button			No	
Pedestrian Timing (s)			16.0	
Free Right				No
Ideal Flow	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120
Volume Combined (vph)	0	62	913	42
Lane Utilization Factor	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	1.7
Pedestrian Frequency (%)			1.00	
Protected Option Allowed			Yes	
Reference Time (s)	0.0	4.9	36.0	5.4
Adj Reference Time (s)	0.0	9.4	42.0	16.0
Permitted Option				
Adj Saturation A (vph)	0	101	1523	
Reference Time A (s)	0.0	73.4	36.0	
Adj Saturation B (vph	NA	NA	NA	
Reference Time B (s)	NA	NA	NA	
Reference Time (s)			73.4	
Adj Reference Time (s)			79.4	
Split Option				
Ref Time Combined (s)	0.0	4.9	36.0	
Ref Time Seperate (s)	0.8	4.1	36.0	
Reference Time (s)	36.0	36.0	36.0	
Adj Reference Time (s)	42.0	42.0	42.0	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	51	170	264	121	308	96	13	122	820	76	20	58
Pedestrians	19		3	3		19		13		7		7
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	5.5	5.5	4.5	5.5	5.5	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	51	170	264	121	308	96	0	135	820	76	0	78
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	0.4	0.0	0.0	2.2	0.0	0.0	0.0	0.9	0.0	0.0
Pedestrian Frequency (%)		0.10			0.47				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	4.0	12.8	23.7	9.6	23.1	10.7	0.0	10.7	32.3	7.6	0.0	6.2
Adj Reference Time (s)	8.5	18.3	29.2	14.1	28.6	16.2	0.0	15.2	38.3	16.0	0.0	10.7
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	60.4	12.8		143.3	23.1		0.0	159.9	32.3		0.0	92.4
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		60.4			143.3				159.9			
Adj Reference Time (s)		65.9			148.8				165.9			
Split Option												
Ref Time Combined (s)	4.0	12.8		9.6	23.1		0.0	10.7	32.3		0.0	6.2
Ref Time Seperate (s)	4.0	12.8		9.6	23.1		1.0	9.6	32.3		1.6	4.6
Reference Time (s)	12.8	12.8		23.1	23.1		32.3	32.3	32.3		41.6	41.6
Adj Reference Time (s)	18.3	18.3		28.6	28.6		38.3	38.3	38.3		47.6	47.6

Summary	EB WB	NB SB	Combined
Protected Option (s)	37.1	62.8	
Permitted Option (s)	148.8	165.9	
Split Option (s)	46.9	85.9	
Minimum (s)	37.1	62.8	99.9

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	29.2	16.2	16.0	16.0
Cross Thru Ref Time (s)	62.8	49.0	18.3	28.6
Oncoming Left Ref Time (s)	14.1	8.5	10.7	15.2
Combined (s)	106.0	73.7	44.9	59.8

Intersection Summary			
Intersection Capacity Utilization	88.3%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	1056	40
Pedestrians		13
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1056	40
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	1.6
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	41.6	5.1
Adj Reference Time (s)	47.6	16.0
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	41.6	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	92.4	
Adj Reference Time (s)	98.4	
Split Option		
Ref Time Combined (s)	41.6	
Ref Time Seperate (s)	41.6	
Reference Time (s)	41.6	
Adj Reference Time (s)	47.6	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	130	303	116	220	384	71	73	1039	136	2	36	897
Pedestrians	5		15	15		5	5		8		8	
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		18.0			18.0			18.0				18.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	130	419	0	220	455	0	73	1039	136	0	38	897
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	1.00
Saturated Flow (vph)	1520	2920	0	1520	2975	0	1520	3046	1360	0	1520	3046
Ped Intf Time (s)	0.0	0.5	1.8	0.0	0.1	0.6	0.0	0.0	1.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.39			0.15			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	10.3	17.7	0.0	17.4	18.5	0.0	5.8	40.9	13.0	0.0	3.0	35.3
Adj Reference Time (s)	14.8	22.3	0.0	21.9	23.0	0.0	10.3	45.4	22.5	0.0	9.5	39.8
Permitted Option												
Adj Saturation A (vph)	101	1460		101	1488		101	1523		0	101	1523
Reference Time A (s)	153.9	17.7		260.5	18.5		86.4	40.9		0.0	45.0	35.3
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		153.9			260.5			86.4				45.0
Adj Reference Time (s)		158.4			265.0			90.9				49.5
Split Option												
Ref Time Combined (s)	10.3	17.7		17.4	18.5		5.8	40.9		0.0	3.0	35.3
Ref Time Seperate (s)	10.3	13.0		17.4	15.6		5.8	40.9		0.2	2.8	35.3
Reference Time (s)	17.7	17.7		18.5	18.5		40.9	40.9		35.3	35.3	35.3
Adj Reference Time (s)	22.3	22.3		23.0	23.0		45.4	45.4		39.8	39.8	39.8

Summary	EB WB	NB SB	Combined
Protected Option (s)	44.2	54.9	
Permitted Option (s)	265.0	90.9	
Split Option (s)	45.3	85.3	
Minimum (s)	44.2	54.9	99.1

Right Turns	NBR	SBR
Adj Reference Time (s)	22.5	22.5
Cross Thru Ref Time (s)	22.3	23.0
Oncoming Left Ref Time (s)	9.5	10.3
Combined (s)	54.3	55.7

Intersection Summary			
Intersection Capacity Utilization	82.6%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	90
Pedestrians	5
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.5
Minimum Green (s)	5.0
Refr Cycle Length (s)	120
Volume Combined (vph)	90
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.6
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	8.6
Adj Reference Time (s)	22.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	692	228	173	1006	427	202	581	95	362	894	90
Pedestrians	23		56	56		23	30		31	31		30
Ped Button		Yes			Yes			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	4.5	7.5	4.0	4.5	7.5	4.0
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	135	692	228	173	1006	427	202	676	0	362	984	0
Lane Utilization Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	2952	3046	1360	2952	4358	1360	4428	4267	0	4428	4299	0
Ped Intf Time (s)	0.0	0.0	5.1	0.0	0.0	2.6	0.0	0.5	3.3	0.0	0.3	3.2
Pedestrian Frequency (%)		0.85			0.54			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	5.5	27.3	25.3	7.0	27.7	40.3	5.5	19.5	0.0	9.8	27.8	0.0
Adj Reference Time (s)	10.0	34.3	32.3	11.5	34.7	47.3	10.0	27.0	0.0	14.3	35.3	0.0
Permitted Option												
Adj Saturation A (vph)	98	1523		98	1453		98	1422		98	1433	
Reference Time A (s)	82.3	27.3		105.5	27.7		82.1	19.5		147.2	27.8	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		82.3			105.5			82.1			147.2	
Adj Reference Time (s)		89.3			112.5			89.6			154.7	
Split Option												
Ref Time Combined (s)	5.5	27.3		7.0	27.7		5.5	19.5		9.8	27.8	
Ref Time Seperate (s)	5.5	27.3		7.0	27.7		5.5	16.8		9.8	25.3	
Reference Time (s)	27.3	27.3		27.7	27.7		19.5	19.5		27.8	27.8	
Adj Reference Time (s)	34.3	34.3		34.7	34.7		27.0	27.0		35.3	35.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	45.8	45.2	
Permitted Option (s)	112.5	154.7	
Split Option (s)	69.0	62.2	
Minimum (s)	45.8	45.2	91.0

Right Turns	EBR	WBR
Adj Reference Time (s)	32.3	47.3
Cross Thru Ref Time (s)	35.3	27.0
Oncoming Left Ref Time (s)	11.5	10.0
Combined (s)	79.1	84.3

Intersection Summary			
Intersection Capacity Utilization	75.9%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	18	17	58	62	41	32	118	923	123	1	52	707
Pedestrians	4					4			7		7	
Ped Button					Yes			No				
Pedestrian Timing (s)					16.0			16.0				
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5	4.5
Minimum Green (s)	6.0	6.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	93	0	0	103	32	118	923	123	0	53	752
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	0.91
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.99
Saturated Flow (vph)	0	1436	0	0	3104	1360	1520	4358	1360	0	1520	4319
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.12			1.00				0.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			0.0			3.3	9.3	25.4	11.7	0.0	4.2	20.9
Adj Reference Time (s)			0.0			15.0	14.3	30.9	17.2	0.0	8.7	25.4
Permitted Option												
Adj Saturation A (vph)	0	365		0	1229		101	1453		0	101	1440
Reference Time A (s)	0.0	30.6		0.0	10.1		139.7	25.4		0.0	62.8	20.9
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	9.4	15.8		10.4	12.0		NA	NA		NA	NA	NA
Reference Time (s)		15.8			10.1			139.7				62.8
Adj Reference Time (s)		20.8			15.1			145.2				67.3
Split Option												
Ref Time Combined (s)	0.0	7.8		0.0	4.0		9.3	25.4		0.0	4.2	20.9
Ref Time Seperate (s)	1.4	1.4		2.4	3.1		9.3	25.4		0.1	4.1	19.6
Reference Time (s)	7.8	7.8		4.0	4.0		25.4	25.4		20.9	20.9	20.9
Adj Reference Time (s)	12.8	12.8		15.0	15.0		30.9	30.9		25.4	25.4	25.4

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	39.7	
Permitted Option (s)	20.8	145.2	
Split Option (s)	27.8	56.3	
Minimum (s)	20.8	39.7	60.5

Right Turns	WBR	NBR
Adj Reference Time (s)	15.0	17.2
Cross Thru Ref Time (s)	39.6	12.8
Oncoming Left Ref Time (s)	12.8	8.7
Combined (s)	67.4	38.7

Intersection Summary			
Intersection Capacity Utilization	56.1%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	45
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	81	13	62	120	366	16	468	221	334	517	69
Pedestrians			3	3			1		2	2		1
Ped Button		Yes						No			No	
Pedestrian Timing (s)		16.0						16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	4.5	5.0	4.0	4.5	5.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	34	94	0	62	120	366	16	689	0	334	586	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	1567	0	1520	1600	1360	1520	2900	0	1520	4281	0
Ped Intf Time (s)	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.10			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	2.7	7.3	0.0	4.9	9.0	32.3	1.3	28.6	0.0	26.4	16.4	0.0
Adj Reference Time (s)	9.0	12.3	0.0	9.9	14.0	37.3	8.5	33.6	0.0	30.9	21.4	0.0
Permitted Option												
Adj Saturation A (vph)	101	1567		101	1600		101	1450		101	1427	
Reference Time A (s)	40.3	7.3		73.4	9.0		18.9	28.6		395.5	16.4	
Adj Saturation B (vph	0	1567		0	1600		NA	NA		NA	NA	
Reference Time B (s)	10.7	7.3		12.9	9.0		NA	NA		NA	NA	
Reference Time (s)		10.7			12.9			28.6			395.5	
Adj Reference Time (s)		15.7			17.9			33.6			400.5	
Split Option												
Ref Time Combined (s)	2.7	7.3		4.9	9.0		1.3	28.6		26.4	16.4	
Ref Time Seperate (s)	2.7	6.3		4.9	9.0		1.3	19.5		26.4	14.5	
Reference Time (s)	7.3	7.3		9.0	9.0		28.6	28.6		26.4	26.4	
Adj Reference Time (s)	12.3	12.3		14.0	14.0		33.6	33.6		31.4	31.4	

Summary	EB WB	NB SB	Combined
Protected Option (s)	23.0	64.5	
Permitted Option (s)	17.9	400.5	
Split Option (s)	26.3	65.0	
Minimum (s)	17.9	64.5	82.4

Right Turns	WBR
Adj Reference Time (s)	37.3
Cross Thru Ref Time (s)	33.6
Oncoming Left Ref Time (s)	9.0
Combined (s)	79.9

Intersection Summary			
Intersection Capacity Utilization	68.6%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	429	14	89	736	91	44	309	146	114	224	62
Pedestrians	86		19	19		86	7		51	51		7
Ped Button		No			No			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.0	4.0	5.5	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	29	443	0	89	827	0	0	499	0	0	400	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.98	0.85	0.95	0.95	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1520	3032	0	1520	2996	0	0	2900	0	0	2933	0
Ped Intf Time (s)	0.0	0.1	2.2	0.0	0.7	6.6	0.0	1.4	4.8	0.0	0.1	0.9
Pedestrian Frequency (%)		1.00			1.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	2.3	17.6	0.0	7.0	33.9	0.0			0.0			0.0
Adj Reference Time (s)	12.5	23.1	0.0	12.5	39.4	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	101	1516		101	1498		0	279		0	98	
Reference Time A (s)	34.3	17.6		105.4	33.9		0.0	70.9		0.0	140.1	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		34.3			105.4			70.9			140.1	
Adj Reference Time (s)		39.8			110.9			75.9			145.1	
Split Option												
Ref Time Combined (s)	2.3	17.6		7.0	33.9		0.0	22.1		0.0	16.5	
Ref Time Seperate (s)	2.3	17.0		7.0	30.2		3.5	14.2		9.0	9.3	
Reference Time (s)	17.6	17.6		33.9	33.9		22.1	22.1		16.5	16.5	
Adj Reference Time (s)	23.1	23.1		39.4	39.4		27.1	27.1		21.5	21.5	

Summary	EB WB	NB SB	Combined
Protected Option (s)	51.9	NA	
Permitted Option (s)	110.9	145.1	
Split Option (s)	62.5	48.6	
Minimum (s)	51.9	48.6	100.4

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	83.7%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
1: S Vincent Ave & I-10 WB on- and off-ramps

8/25/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	650	0	178	0	1006	307	0	729	249
Pedestrians									7			3
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.5	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	650	0	178	0	1006	307	0	729	249
Lane Utilization Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	2952	0	1360	0	4358	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.4
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	26.4	0.0	15.7	0.0	27.7	28.0	0.0	28.7	22.4
Adj Reference Time (s)	0.0	0.0	0.0	30.9	0.0	20.2	0.0	32.2	32.5	0.0	33.2	26.9
Permitted Option												
Adj Saturation A (vph)	0	0		98	0		0	1453		0	1523	
Reference Time A (s)	0.0	0.0		396.4	0.0		0.0	27.7		0.0	28.7	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		34.4	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			34.4			27.7			28.7	
Adj Reference Time (s)		8.0			38.4			32.2			33.2	
Split Option												
Ref Time Combined (s)	0.0	0.0		26.4	0.0		0.0	27.7		0.0	28.7	
Ref Time Seperate (s)	0.0	0.0		26.4	0.0		0.0	27.7		0.0	28.7	
Reference Time (s)	0.0	0.0		26.4	26.4		27.7	27.7		28.7	28.7	
Adj Reference Time (s)	0.0	0.0		30.4	30.4		32.2	32.2		33.2	33.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	30.9	33.2	
Permitted Option (s)	38.4	33.2	
Split Option (s)	30.4	65.4	
Minimum (s)	30.4	33.2	63.6

Right Turns	WBR	NBR	SBR
Adj Reference Time (s)	20.2	32.5	26.9
Cross Thru Ref Time (s)	32.2	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	52.4	32.5	26.9

Intersection Summary			
Intersection Capacity Utilization	53.0%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	221	0	261	0	0	0	0	1085	802	0	1359	1
Pedestrians												7
Ped Button											No	
Pedestrian Timing (s)											18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.0	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	5.0	4.0	5.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	221	0	261	0	0	0	0	1352	535	0	1359	1
Lane Utilization Factor	1.00	1.00	0.89	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	2407	0	0	0	1520	2956	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Pedestrian Frequency (%)		0.00			0.00			0.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	17.4	0.0	13.0	0.0	0.0	0.0	0.0	54.9	47.2	0.0	53.5	1.0
Adj Reference Time (s)	21.9	0.0	17.5	0.0	0.0	0.0	9.5	59.4	51.7	0.0	58.0	22.5
Permitted Option												
Adj Saturation A (vph)	101	0		0	0		101	1478		0	1523	
Reference Time A (s)	261.7	0.0		0.0	0.0		0.0	54.9		0.0	53.5	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	25.4	0.0		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		25.4			0.0			54.9			53.5	
Adj Reference Time (s)		29.4			8.0			59.4			58.0	
Split Option												
Ref Time Combined (s)	17.4	0.0		0.0	0.0		0.0	54.9		0.0	53.5	
Ref Time Seperate (s)	17.4	0.0		0.0	0.0		0.0	44.0		0.0	53.5	
Reference Time (s)	17.4	17.4		0.0	0.0		54.9	54.9		53.5	53.5	
Adj Reference Time (s)	21.4	21.4		0.0	0.0		59.4	59.4		58.0	58.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	21.9	67.5	
Permitted Option (s)	29.4	59.4	
Split Option (s)	21.4	117.4	
Minimum (s)	21.4	59.4	80.8

Right Turns	EBR	NBR	SBR
Adj Reference Time (s)	17.5	51.7	22.5
Cross Thru Ref Time (s)	58.0	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	75.5	51.7	22.5

Intersection Summary			
Intersection Capacity Utilization	67.4%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	462	115	171	184	77	102	9	101	1097	4	9	253
Pedestrians			32			37						
Ped Button		Yes			Yes							
Pedestrian Timing (s)		16.0			16.0							
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	462	115	171	0	261	102	0	110	1101	0	0	262
Lane Utilization Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.96	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	2952	1600	1360	0	3087	1360	0	2952	4356	0	0	2952
Ped Intf Time (s)	0.0	0.0	3.4	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.66			0.71				0.00			
Protected Option Allowed		No			No				Yes			
Reference Time (s)			18.5			12.8	0.0	4.5	30.3	0.0	0.0	10.7
Adj Reference Time (s)			23.0			17.3	0.0	9.0	35.3	0.0	0.0	15.2
Permitted Option												
Adj Saturation A (vph)	98	1600		0	265		0	98	1452		0	98
Reference Time A (s)	281.7	8.6		0.0	118.1		0.0	67.1	30.3		0.0	159.8
Adj Saturation B (vph	0	1600		0	0		NA	NA	NA		NA	NA
Reference Time B (s)	26.8	8.6		15.3	18.1		NA	NA	NA		NA	NA
Reference Time (s)		26.8			18.1				67.1			
Adj Reference Time (s)		31.3			22.6				72.1			
Split Option												
Ref Time Combined (s)	18.8	8.6		0.0	10.1		0.0	4.5	30.3		0.0	10.7
Ref Time Seperate (s)	18.8	8.6		7.3	5.8		0.7	4.1	30.2		0.7	10.3
Reference Time (s)	18.8	18.8		10.1	10.1		30.3	30.3	30.3		25.8	25.8
Adj Reference Time (s)	23.3	23.3		14.6	14.6		35.3	35.3	35.3		30.8	30.8

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	50.5	
Permitted Option (s)	31.3	164.8	
Split Option (s)	37.9	66.2	
Minimum (s)	31.3	50.5	81.8

Right Turns	EBR	WBR	SBR
Adj Reference Time (s)	23.0	17.3	44.6
Cross Thru Ref Time (s)	39.8	50.5	14.6
Oncoming Left Ref Time (s)	14.6	23.3	9.0
Combined (s)	77.5	91.1	68.2

Intersection Summary			
Intersection Capacity Utilization	75.9%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑↑	↱
Volume (vph)	938	432
Pedestrians		12
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	5.0	5.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	938	432
Lane Utilization Factor	0.91	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	4358	1360
Ped Intf Time (s)	0.0	1.5
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	25.8	39.6
Adj Reference Time (s)	30.8	44.6
Permitted Option		
Adj Saturation A (vph)	1453	
Reference Time A (s)	25.8	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	159.8	
Adj Reference Time (s)	164.8	
Split Option		
Ref Time Combined (s)	25.8	
Ref Time Seperate (s)	25.8	
Reference Time (s)	25.8	
Adj Reference Time (s)	30.8	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	293	367	102	16	273	233	120	712	21	18	228	703
Pedestrians						2			8			
Ped Button					Yes			No				No
Pedestrian Timing (s)					16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.5	6.0	4.0	5.0	5.0	6.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	660	102	0	289	233	120	733	0	0	246	917
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.97	0.91
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.96
Saturated Flow (vph)	0	3129	1360	0	3038	1360	2952	4340	0	0	2952	4206
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.0	0.0	0.0	0.3
Pedestrian Frequency (%)		0.00			0.06			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			9.0			20.8	4.9	20.3	0.0	0.0	10.0	26.5
Adj Reference Time (s)			14.5			26.3	9.4	26.3	0.0	0.0	15.0	32.5
Permitted Option												
Adj Saturation A (vph)	0	396		0	486		98	1447		0	98	1402
Reference Time A (s)	0.0	199.9		0.0	27.8		73.2	20.3		0.0	150.0	26.5
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		199.9			27.8			73.2				150.0
Adj Reference Time (s)		205.4			33.3			79.2				156.0
Split Option												
Ref Time Combined (s)	0.0	25.3		0.0	11.4		4.9	20.3		0.0	10.0	26.5
Ref Time Seperate (s)	11.6	27.5		1.3	10.8		4.9	19.7		1.4	9.3	20.4
Reference Time (s)	27.5	27.5		11.4	11.4		20.3	20.3		26.5	26.5	26.5
Adj Reference Time (s)	33.0	33.0		16.9	16.9		26.3	26.3		32.5	32.5	32.5

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	41.9	
Permitted Option (s)	205.4	156.0	
Split Option (s)	49.9	58.8	
Minimum (s)	49.9	41.9	91.8

Right Turns	EBR	WBR
Adj Reference Time (s)	14.5	26.3
Cross Thru Ref Time (s)	32.5	41.3
Oncoming Left Ref Time (s)	16.9	33.0
Combined (s)	63.9	100.6

Intersection Summary			
Intersection Capacity Utilization	83.9%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	214
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	SWR2
Lane Configurations												
Volume (vph)	67	0	39	41	756	0	0	791	7	151	13	14
Pedestrians	11					3						11
Ped Button					No					Yes		
Pedestrian Timing (s)					16.0					16.0		
Free Right			No			No			No		No	No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	4.0	5.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0
Minimum Green (s)	4.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	67	0	39	41	756	0	0	798	0	169	0	9
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.94	0.85	0.85
Saturated Flow (vph)	1520	0	1360	1520	3046	0	0	3042	0	2921	0	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	1.4
Pedestrian Frequency (%)		0.00			1.00			0.00		0.31		
Protected Option Allowed		No			Yes			Yes		No		
Reference Time (s)			3.4	3.2	29.8	0.0	0.0	31.5	0.0		0.0	2.2
Adj Reference Time (s)			9.0	15.0	34.8	0.0	0.0	36.5	0.0		0.0	9.0
Permitted Option												
Adj Saturation A (vph)	101	0		101	1523		0	1521		97		
Reference Time A (s)	79.3	0.0		48.6	29.8		0.0	31.5		104.1		
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA		
Reference Time (s)					48.6			31.5				
Adj Reference Time (s)					53.6			36.5				
Split Option												
Ref Time Combined (s)	5.3	0.0		3.2	29.8		0.0	31.5		7.1		
Ref Time Seperate (s)	5.3	0.0		3.2	29.8		0.0	31.2		6.3		
Reference Time (s)	5.3	5.3		29.8	29.8		31.5	31.5		7.1		
Adj Reference Time (s)	9.3	9.3		34.8	34.8		36.5	36.5		12.1		

Summary	EB	NB SB	SW	Combined
Protected Option (s)	NA	51.5	NA	
Permitted Option (s)	Err	53.6	Err	
Split Option (s)	9.3	71.3	12.1	
Minimum (s)	9.3	51.5	12.1	72.8

Right Turns	EBR	SWR2
Adj Reference Time (s)	9.0	9.0
Cross Thru Ref Time (s)	36.5	34.8
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	45.5	43.8

Intersection Summary			
Intersection Capacity Utilization	60.7%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	94	41	84	12	21	13	72	222	31	6	152	47
Pedestrians			3			3	3		4	1		3
Ped Button		Yes			No			No			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	4.0	8.0	8.0	8.0	8.0	8.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	135	84	0	46	0	72	222	31	0	205	0
Lane Utilization 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
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.96	0.85
Saturated Flow (vph)	0	1544	1360	0	1512	0	1520	1600	1360	0	1543	0
Ped Intf Time (s)	0.0	0.0	0.4	0.0	0.1	0.4	0.0	0.0	0.5	0.0	0.1	0.4
Pedestrian Frequency (%)		0.10			1.00			1.00			0.10	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			7.8			0.0			3.3			0.0
Adj Reference Time (s)			12.8			0.0			13.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	670		0	302		146	1600		0	1089	
Reference Time A (s)	0.0	24.2		0.0	18.4		59.3	16.6		0.0	22.7	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	15.4	18.5		8.9	11.8		NA	NA		NA	NA	
Reference Time (s)		18.5			11.8			59.3			22.7	
Adj Reference Time (s)		23.5			16.8			64.3			27.7	
Split Option												
Ref Time Combined (s)	0.0	10.5		0.0	3.8		5.7	16.6		0.0	16.0	
Ref Time Seperate (s)	7.4	3.1		0.9	1.8		5.7	16.6		0.5	11.9	
Reference Time (s)	10.5	10.5		3.8	3.8		16.6	16.6		16.0	16.0	
Adj Reference Time (s)	15.5	15.5		11.0	11.0		21.6	21.6		21.0	21.0	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	23.5	64.3	
Split Option (s)	26.5	42.7	
Minimum (s)	23.5	42.7	66.2

Right Turns	SER	NER
Adj Reference Time (s)	12.8	13.0
Cross Thru Ref Time (s)	21.0	15.5
Oncoming Left Ref Time (s)	11.0	21.0
Combined (s)	44.8	49.5

Intersection Summary			
Intersection Capacity Utilization	55.1%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	12	18	19	88	21	12	3	29	318	110	25	213
Pedestrians	6		4	4		6		2		9	9	
Ped Button		Yes			Yes				Yes			Yes
Pedestrian Timing (s)		16.0			16.0				16.0			16.0
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	30	19	0	121	0	0	32	318	110	25	226
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.95	0.85	0.95	0.95	1.00	0.85	0.95	0.99
Saturated Flow (vph)	0	1568	1360	0	1519	0	0	1520	3046	1360	1520	3020
Ped Intf Time (s)	0.0	0.0	0.5	0.0	0.1	0.8	0.0	0.0	0.0	1.1	0.0	0.0
Pedestrian Frequency (%)		0.12			0.18				0.26			0.06
Protected Option Allowed		No			No				Yes			Yes
Reference Time (s)			2.2			0.0	0.0	2.5	12.5	10.8	2.0	9.0
Adj Reference Time (s)			9.5			0.0	0.0	8.0	17.4	16.2	8.0	13.4
Permitted Option												
Adj Saturation A (vph)	0	1570		0	127		0	101	1523		101	1510
Reference Time A (s)	0.0	2.3		0.0	114.2		0.0	37.9	12.5		29.6	9.0
Adj Saturation B (vph	0	0		0	0		NA	NA	NA		NA	NA
Reference Time B (s)	8.9	10.3		14.9	17.6		NA	NA	NA		NA	NA
Reference Time (s)		2.3			17.6				37.9			29.6
Adj Reference Time (s)		9.5			21.6				41.9			33.6
Split Option												
Ref Time Combined (s)	0.0	2.3		0.0	9.6		0.0	2.5	12.5		2.0	9.0
Ref Time Seperate (s)	0.9	1.4		6.9	1.7		0.2	2.3	12.5		2.0	8.5
Reference Time (s)	2.3	2.3		9.6	9.6		12.5	12.5	12.5		9.0	9.0
Adj Reference Time (s)	9.5	9.5		14.8	14.8		17.4	17.4	17.4		13.4	13.4

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	25.4	
Permitted Option (s)	21.6	41.9	
Split Option (s)	24.3	30.9	
Minimum (s)	21.6	25.4	47.1

Right Turns	SER	NER
Adj Reference Time (s)	9.5	16.2
Cross Thru Ref Time (s)	21.4	9.5
Oncoming Left Ref Time (s)	14.8	8.0
Combined (s)	45.7	33.7

Intersection Summary			
Intersection Capacity Utilization	39.2%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	13
Pedestrians	2
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.3
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	114	515	27	12	419	100	19	257	6	105	141	82
Pedestrians	7		11	11		7	7		10	7		10
Ped Button		Yes			No			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	114	542	0	12	519	0	19	257	6	105	223	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.94	0.85
Saturated Flow (vph)	1520	3024	0	1520	2958	0	1520	3046	1360	1520	2878	0
Ped Intf Time (s)	0.0	0.1	1.4	0.0	0.2	0.9	0.0	0.0	1.2	0.0	0.5	1.2
Pedestrian Frequency (%)		0.31			1.00			0.28			0.28	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	9.0	21.6	0.0	0.9	21.2	0.0	1.5	10.1	1.8	8.3	9.8	0.0
Adj Reference Time (s)	15.5	27.1	0.0	15.5	26.7	0.0	11.5	15.6	11.5	13.8	15.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1512		101	1479		101	1523		101	1439	
Reference Time A (s)	135.0	21.6		14.2	21.2		22.5	10.1		124.3	9.8	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		135.0			21.2			22.5			124.3	
Adj Reference Time (s)		140.5			26.7			28.0			129.8	
Split Option												
Ref Time Combined (s)	9.0	21.6		0.9	21.2		1.5	10.1		8.3	9.8	
Ref Time Seperate (s)	9.0	20.5		0.9	17.2		1.5	10.1		8.3	6.3	
Reference Time (s)	21.6	21.6		21.2	21.2		10.1	10.1		9.8	9.8	
Adj Reference Time (s)	27.1	27.1		26.7	26.7		15.6	15.6		15.3	15.3	

Summary	NW SE	NE SW	Combined
Protected Option (s)	42.6	29.4	
Permitted Option (s)	140.5	129.8	
Split Option (s)	53.8	30.9	
Minimum (s)	42.6	29.4	72.0

Right Turns	NER
Adj Reference Time (s)	11.5
Cross Thru Ref Time (s)	27.1
Oncoming Left Ref Time (s)	13.8
Combined (s)	52.4

Intersection Summary			
Intersection Capacity Utilization	60.0%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWU	SWL
Lane Configurations												
Volume (vph)	150	348	66	101	287	84	2	119	784	262	9	124
Pedestrians			8			16				24		
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	6.0	4.0	4.5	6.0	4.0	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	4.0	6.0	6.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	150	414	0	101	371	0	0	121	784	262	0	133
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.97	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	2974	0	1520	2943	0	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.2	1.0	0.0	0.4	1.9	0.0	0.0	0.0	2.7	0.0	0.0
Pedestrian Frequency (%)		0.23			0.41				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	11.8	16.9	0.0	8.0	15.6	0.0	0.0	9.6	30.9	25.8	0.0	10.5
Adj Reference Time (s)	16.3	22.9	0.0	12.5	21.6	0.0	0.0	14.1	36.9	31.8	0.0	15.0
Permitted Option												
Adj Saturation A (vph)	101	1487		101	1471		0	101	1523		0	101
Reference Time A (s)	177.6	16.9		119.6	15.6		0.0	143.3	30.9		0.0	157.5
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		177.6			119.6				143.3			
Adj Reference Time (s)		183.6			125.6				149.3			
Split Option												
Ref Time Combined (s)	11.8	16.9		8.0	15.6		0.0	9.6	30.9		0.0	10.5
Ref Time Seperate (s)	11.8	14.2		8.0	12.1		0.2	9.4	30.9		0.7	9.8
Reference Time (s)	16.9	16.9		15.6	15.6		30.9	30.9	30.9		30.8	30.8
Adj Reference Time (s)	22.9	22.9		21.6	21.6		36.9	36.9	36.9		36.8	36.8

Summary	NW SE	NE SW	Combined
Protected Option (s)	37.9	51.9	
Permitted Option (s)	183.6	163.5	
Split Option (s)	44.4	73.7	
Minimum (s)	37.9	51.9	89.8

Right Turns	NER	SWR
Adj Reference Time (s)	31.8	22.8
Cross Thru Ref Time (s)	22.9	21.6
Oncoming Left Ref Time (s)	15.0	14.1
Combined (s)	69.7	58.4

Intersection Summary			
Intersection Capacity Utilization	74.8%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWT	SWR
Lane Configurations		
Volume (vph)	782	180
Pedestrians		7
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	6.0	6.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	782	180
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.9
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	30.8	16.8
Adj Reference Time (s)	36.8	22.8
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	30.8	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	157.5	
Adj Reference Time (s)	163.5	
Split Option		
Ref Time Combined (s)	30.8	
Ref Time Seperate (s)	30.8	
Reference Time (s)	30.8	
Adj Reference Time (s)	36.8	

Summary

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	109	366	448	1	242	429	40	0	0	0	23	40
Pedestrians	7		6		6		7					
Ped Button		No				No						
Pedestrian Timing (s)		16.0				16.0						
Free Right			No				No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	3.7	4.9	4.0	3.7	3.7	4.9	4.0	4.1	4.1	4.1	4.1	4.1
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	109	814	0	0	243	469	0	0	0	0	23	40
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00
Saturated Flow (vph)	1520	2795	0	0	2952	3007	0	0	1600	1360	1520	1600
Ped Intf Time (s)	0.0	0.4	0.8	0.0	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		1.00				1.00			0.00			0.00
Protected Option Allowed		Yes				Yes			No			No
Reference Time (s)	8.6	35.4	0.0	0.0	9.9	18.8	0.0			0.0		
Adj Reference Time (s)	14.0	40.3	0.0	0.0	14.0	23.7	0.0			14.1		
Permitted Option												
Adj Saturation A (vph)	101	1397		0	98	1504		0	1600		101	1600
Reference Time A (s)	129.1	35.4		0.0	148.2	18.8		0.0	0.0		27.2	3.0
Adj Saturation B (vph	NA	NA		NA	NA	NA		0	1600		0	1600
Reference Time B (s)	NA	NA		NA	NA	NA		0.0	0.0		9.8	3.0
Reference Time (s)		129.1				148.2			0.0			9.8
Adj Reference Time (s)		134.0				153.1			14.1			14.1
Split Option												
Ref Time Combined (s)	8.6	35.4		0.0	9.9	18.8		0.0	0.0		1.8	3.0
Ref Time Seperate (s)	8.6	16.1		0.1	9.8	17.2		0.0	0.0		1.8	3.0
Reference Time (s)	35.4	35.4		18.8	18.8	18.8		0.0	0.0		3.0	3.0
Adj Reference Time (s)	40.3	40.3		23.7	23.7	23.7		0.0	0.0		14.1	14.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	54.3	NA	
Permitted Option (s)	153.1	14.1	
Split Option (s)	64.0	14.1	
Minimum (s)	54.3	14.1	68.4

Right Turns	NER	SWR
Adj Reference Time (s)	14.1	19.5
Cross Thru Ref Time (s)	0.0	23.7
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	0.0	43.1

Intersection Summary			
Intersection Capacity Utilization	57.0%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	174
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.1
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	174
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	15.4
Adj Reference Time (s)	19.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWU	NWL	NWT
Lane Configurations												
Volume (vph)	220	10	81	105	137	79	53	686	85	2	289	280
Pedestrians									2			
Ped Button								No				No
Pedestrian Timing (s)								16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.1	4.1	4.1	4.1	4.1	4.0	3.7	4.9	4.9	3.7	3.7	4.9
Minimum Green (s)	10.0	10.0	10.0	9.9	9.9	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	230	81	0	321	0	53	686	85	0	291	344
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.97	0.95
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.95	0.97
Saturated Flow (vph)	0	1523	1360	0	1516	0	1520	3046	1360	0	2952	2961
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			7.1			0.0	4.2	27.0	7.8	0.0	11.8	14.1
Adj Reference Time (s)			14.1			0.0	14.0	31.9	14.9	0.0	15.8	19.0
Permitted Option												
Adj Saturation A (vph)	0	620		0	250		101	1523		0	98	1481
Reference Time A (s)	0.0	44.5		0.0	154.2		62.8	27.0		0.0	177.4	14.1
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		16.3	33.4		NA	NA		NA	NA	NA
Reference Time (s)		44.5			33.4			62.8				177.4
Adj Reference Time (s)		48.6			37.5			67.7				182.3
Split Option												
Ref Time Combined (s)	0.0	18.1		0.0	25.4		4.2	27.0		0.0	11.8	14.1
Ref Time Seperate (s)	17.4	0.8		8.3	10.9		4.2	27.0		0.2	11.7	11.5
Reference Time (s)	18.1	18.1		25.4	25.4		27.0	27.0		14.1	14.1	14.1
Adj Reference Time (s)	22.2	22.2		29.5	29.5		31.9	31.9		19.0	19.0	19.0

Summary	NB SB	NW SE	Combined
Protected Option (s)	NA	47.8	
Permitted Option (s)	48.6	182.3	
Split Option (s)	51.7	50.9	
Minimum (s)	48.6	47.8	96.4

Right Turns	NBR	SER
Adj Reference Time (s)	14.1	14.9
Cross Thru Ref Time (s)	47.8	29.5
Oncoming Left Ref Time (s)	29.5	15.8
Combined (s)	91.4	60.2

Intersection Summary			
Intersection Capacity Utilization	80.3%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NWR
Lane Configurations	
Volume (vph)	64
Pedestrians	5
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.6
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWU	SWL	SWT
Lane Configurations												
Volume (vph)	159	560	63	80	219	67	71	938	119	43	127	864
Pedestrians	16		10	10		16			11			
Ped Button		Yes			No			No				Yes
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	3.5	6.0	4.0	3.5	3.5	6.0
Minimum Green (s)	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	4.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	159	623	0	80	286	0	71	1057	0	0	170	982
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.96	0.85	0.95	0.98	0.85	0.95	0.95	0.98
Saturated Flow (vph)	1520	3000	0	1520	2939	0	1520	2995	0	0	1520	2991
Ped Intf Time (s)	0.0	0.1	1.2	0.0	0.4	1.9	0.0	0.2	1.4	0.0	0.0	0.1
Pedestrian Frequency (%)		0.28			1.00			1.00				0.18
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	12.6	25.0	0.0	6.3	12.1	0.0	5.6	42.5	0.0	0.0	13.4	39.5
Adj Reference Time (s)	18.6	31.0	0.0	12.3	18.1	0.0	9.6	48.5	0.0	0.0	17.4	45.5
Permitted Option												
Adj Saturation A (vph)	101	1500		101	1470		101	1497		0	101	1496
Reference Time A (s)	188.3	25.0		94.7	12.1		84.1	42.5		0.0	201.3	39.5
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		188.3			94.7			84.1				201.3
Adj Reference Time (s)		194.3			100.7			90.1				207.3
Split Option												
Ref Time Combined (s)	12.6	25.0		6.3	12.1		5.6	42.5		0.0	13.4	39.5
Ref Time Seperate (s)	12.6	22.5		6.3	9.4		5.6	37.7		3.4	10.0	34.8
Reference Time (s)	25.0	25.0		12.1	12.1		42.5	42.5		39.5	39.5	39.5
Adj Reference Time (s)	31.0	31.0		18.1	18.1		48.5	48.5		45.5	45.5	45.5

Summary	NW SE	NE SW	Combined
Protected Option (s)	43.4	65.9	
Permitted Option (s)	194.3	207.3	
Split Option (s)	49.2	94.0	
Minimum (s)	43.4	65.9	109.3

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	91.1%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	118
Pedestrians	6
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.8
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	6	144	421	154	2	112	318	78	20	76	833	76
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right				No				No				No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0	4.0	4.0	6.0	6.0	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	150	421	154	0	114	318	78	0	96	833	76
Lane Utilization Factor	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360	0	1520	3046	1360	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)			0.00				0.00				0.00	
Protected Option Allowed			Yes				Yes				Yes	
Reference Time (s)	0.0	11.8	16.6	13.6	0.0	9.0	12.5	6.9	0.0	7.6	32.8	6.7
Adj Reference Time (s)	0.0	16.3	22.6	19.6	0.0	13.0	18.5	12.9	0.0	12.1	38.8	16.0
Permitted Option												
Adj Saturation A (vph)	0	101	1523		0	101	1523		0	101	1523	
Reference Time A (s)	0.0	177.6	16.6		0.0	135.0	12.5		0.0	113.7	32.8	
Adj Saturation B (vph	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time B (s)	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time (s)			177.6				135.0				113.7	
Adj Reference Time (s)			183.6				141.0				119.7	
Split Option												
Ref Time Combined (s)	0.0	11.8	16.6		0.0	9.0	12.5		0.0	7.6	32.8	
Ref Time Seperate (s)	0.5	11.4	16.6		0.2	8.8	12.5		1.6	6.0	32.8	
Reference Time (s)	16.6	16.6	16.6		12.5	12.5	12.5		32.8	32.8	32.8	
Adj Reference Time (s)	22.6	22.6	22.6		18.5	18.5	18.5		38.8	38.8	38.8	

Summary	EB WB	NB SB	Combined
Protected Option (s)	35.6	62.0	
Permitted Option (s)	183.6	199.0	
Split Option (s)	41.1	88.7	
Minimum (s)	35.6	62.0	97.6

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	19.6	12.9	16.0	16.0
Cross Thru Ref Time (s)	62.0	56.2	35.6	34.9
Oncoming Left Ref Time (s)	13.0	16.3	17.4	12.1
Combined (s)	94.6	85.4	69.0	62.9

Intersection Summary			
Intersection Capacity Utilization	81.3%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	34	129	1115	49
Pedestrians				
Ped Button				
Pedestrian Timing (s)				
Free Right				No
Ideal Flow	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120
Volume Combined (vph)	0	163	1115	49
Lane Utilization Factor	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)			0.00	
Protected Option Allowed			Yes	
Reference Time (s)	0.0	12.9	43.9	4.3
Adj Reference Time (s)	0.0	17.4	49.9	16.0
Permitted Option				
Adj Saturation A (vph)	0	101	1523	
Reference Time A (s)	0.0	193.0	43.9	
Adj Saturation B (vph	NA	NA	NA	
Reference Time B (s)	NA	NA	NA	
Reference Time (s)			193.0	
Adj Reference Time (s)			199.0	
Split Option				
Ref Time Combined (s)	0.0	12.9	43.9	
Ref Time Seperate (s)	2.7	10.2	43.9	
Reference Time (s)	43.9	43.9	43.9	
Adj Reference Time (s)	49.9	49.9	49.9	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	93	308	267	114	153	88	21	115	904	79	42	93
Pedestrians						11				4		
Ped Button					Yes				No			
Pedestrian Timing (s)					16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	5.5	5.5	4.5	5.5	5.5	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	93	308	267	114	153	88	0	136	904	79	0	135
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.5	0.0	0.0
Pedestrian Frequency (%)		0.00			0.31				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	7.3	23.1	23.6	9.0	11.5	9.1	0.0	10.7	35.6	7.5	0.0	10.7
Adj Reference Time (s)	11.8	28.6	29.1	13.5	17.0	14.6	0.0	15.2	41.6	16.0	0.0	15.2
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	110.1	23.1		135.0	11.5		0.0	161.1	35.6		0.0	159.9
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		110.1			135.0				161.1			
Adj Reference Time (s)		115.6			140.5				167.1			
Split Option												
Ref Time Combined (s)	7.3	23.1		9.0	11.5		0.0	10.7	35.6		0.0	10.7
Ref Time Seperate (s)	7.3	23.1		9.0	11.5		1.7	9.1	35.6		3.3	7.3
Reference Time (s)	23.1	23.1		11.5	11.5		35.6	35.6	35.6		46.7	46.7
Adj Reference Time (s)	28.6	28.6		17.0	17.0		41.6	41.6	41.6		52.7	52.7

Summary	EB WB	NB SB	Combined
Protected Option (s)	42.1	68.0	
Permitted Option (s)	140.5	167.1	
Split Option (s)	45.6	94.3	
Minimum (s)	42.1	68.0	110.1

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	29.1	14.6	16.0	16.0
Cross Thru Ref Time (s)	68.0	56.8	28.6	17.0
Oncoming Left Ref Time (s)	13.5	11.8	15.2	15.2
Combined (s)	110.5	83.2	59.8	48.2

Intersection Summary			
Intersection Capacity Utilization	92.1%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	1186	43
Pedestrians		3
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1186	43
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.4
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	46.7	4.2
Adj Reference Time (s)	52.7	16.0
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	46.7	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	159.9	
Adj Reference Time (s)	165.9	
Split Option		
Ref Time Combined (s)	46.7	
Ref Time Seperate (s)	46.7	
Reference Time (s)	46.7	
Adj Reference Time (s)	52.7	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	136	548	77	184	358	35	83	1141	176	4	45	958
Pedestrians			7			7			9			
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	136	625	0	184	393	0	83	1141	176	0	49	958
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	1.00
Saturated Flow (vph)	1520	2990	0	1520	3006	0	1520	3046	1360	0	1520	3046
Ped Intf Time (s)	0.0	0.1	0.9	0.0	0.1	0.9	0.0	0.0	1.1	0.0	0.0	0.0
Pedestrian Frequency (%)		0.21			0.21			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	10.7	25.2	0.0	14.5	15.8	0.0	6.6	44.9	16.7	0.0	3.9	37.7
Adj Reference Time (s)	15.2	29.7	0.0	19.0	20.3	0.0	11.1	49.4	21.2	0.0	8.5	42.2
Permitted Option												
Adj Saturation A (vph)	101	1495		101	1503		101	1523		0	101	1523
Reference Time A (s)	161.1	25.2		217.9	15.8		98.3	44.9		0.0	58.0	37.7
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		161.1			217.9			98.3				58.0
Adj Reference Time (s)		165.6			222.4			102.8				62.5
Split Option												
Ref Time Combined (s)	10.7	25.2		14.5	15.8		6.6	44.9		0.0	3.9	37.7
Ref Time Seperate (s)	10.7	22.1		14.5	14.4		6.6	44.9		0.3	3.6	37.7
Reference Time (s)	25.2	25.2		15.8	15.8		44.9	44.9		37.7	37.7	37.7
Adj Reference Time (s)	29.7	29.7		20.3	20.3		49.4	49.4		42.2	42.2	42.2

Summary	EB WB	NB SB	Combined
Protected Option (s)	48.7	57.9	
Permitted Option (s)	222.4	102.8	
Split Option (s)	50.0	91.7	
Minimum (s)	48.7	57.9	106.7

Right Turns	NBR	SBR
Adj Reference Time (s)	21.2	14.5
Cross Thru Ref Time (s)	29.7	20.3
Oncoming Left Ref Time (s)	8.5	11.1
Combined (s)	59.3	45.8

Intersection Summary			
Intersection Capacity Utilization	88.9%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	86
Pedestrians	2
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.5
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	86
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.3
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	7.9
Adj Reference Time (s)	14.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	217	845	185	201	850	493	343	1119	63	507	747	146
Pedestrians			50			25			14			49
Ped Button		Yes			Yes			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	4.5	7.5	4.0	4.5	7.5	4.0
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	217	845	185	201	850	493	343	1182	0	507	893	0
Lane Utilization Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.98	0.85
Saturated Flow (vph)	2952	3046	1360	2952	4358	1360	4428	4324	0	4428	4252	0
Ped Intf Time (s)	0.0	0.0	4.8	0.0	0.0	2.8	0.0	0.1	1.7	0.0	0.8	4.7
Pedestrian Frequency (%)		0.81			0.57			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	8.8	33.3	21.1	8.2	23.4	46.3	9.3	32.9	0.0	13.7	26.0	0.0
Adj Reference Time (s)	13.3	40.3	28.1	12.7	30.4	53.3	13.8	40.4	0.0	18.2	33.5	0.0
Permitted Option												
Adj Saturation A (vph)	98	1523		98	1453		98	1441		98	1417	
Reference Time A (s)	132.3	33.3		122.6	23.4		139.4	32.9		206.1	26.0	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		132.3			122.6			139.4			206.1	
Adj Reference Time (s)		139.3			129.6			146.9			213.6	
Split Option												
Ref Time Combined (s)	8.8	33.3		8.2	23.4		9.3	32.9		13.7	26.0	
Ref Time Seperate (s)	8.8	33.3		8.2	23.4		9.3	31.1		13.7	21.9	
Reference Time (s)	33.3	33.3		23.4	23.4		32.9	32.9		26.0	26.0	
Adj Reference Time (s)	40.3	40.3		30.4	30.4		40.4	40.4		33.5	33.5	

Summary	EB WB	NB SB	Combined
Protected Option (s)	53.0	58.6	
Permitted Option (s)	139.3	213.6	
Split Option (s)	70.7	73.9	
Minimum (s)	53.0	58.6	111.6

Right Turns	EBR	WBR
Adj Reference Time (s)	28.1	53.3
Cross Thru Ref Time (s)	33.5	40.4
Oncoming Left Ref Time (s)	12.7	13.3
Combined (s)	74.2	107.0

Intersection Summary			
Intersection Capacity Utilization	93.0%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	362	40	134	35	74	61	44	631	283	169	1016	44
Pedestrians						6			15			1
Ped Button					Yes			No			No	
Pedestrian Timing (s)					16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5	4.0
Minimum Green (s)	6.0	6.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	536	0	0	109	61	44	631	283	169	1060	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.93	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1488	0	0	3149	1360	1520	4358	1360	1520	4331	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.18			1.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			0.0			6.1	3.5	17.4	26.8	13.3	29.4	0.0
Adj Reference Time (s)			0.0			15.0	9.0	22.9	32.3	17.8	33.9	0.0
Permitted Option												
Adj Saturation A (vph)	0	132		0	3139		101	1453		101	1444	
Reference Time A (s)	0.0	486.3		0.0	4.2		52.1	17.4		200.1	29.4	
Adj Saturation B (vph	0	0		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	36.6	51.2		NA	NA		NA	NA		NA	NA	
Reference Time (s)		51.2			4.2			52.1			200.1	
Adj Reference Time (s)		56.2			15.0			57.6			204.6	
Split Option												
Ref Time Combined (s)	0.0	43.2		0.0	4.2		3.5	17.4		13.3	29.4	
Ref Time Seperate (s)	28.6	3.4		1.4	5.5		3.5	17.4		13.3	28.2	
Reference Time (s)	43.2	43.2		5.5	5.5		17.4	17.4		29.4	29.4	
Adj Reference Time (s)	48.2	48.2		15.0	15.0		22.9	22.9		33.9	33.9	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	42.9	
Permitted Option (s)	56.2	204.6	
Split Option (s)	63.2	56.7	
Minimum (s)	56.2	42.9	99.1

Right Turns	WBR	NBR
Adj Reference Time (s)	15.0	32.3
Cross Thru Ref Time (s)	40.7	48.2
Oncoming Left Ref Time (s)	48.2	17.8
Combined (s)	103.9	98.3

Intersection Summary			
Intersection Capacity Utilization	86.6%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	161	12	70	53	323	11	463	211	519	536	49
Pedestrians												1
Ped Button											No	
Pedestrian Timing (s)											16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	4.5	5.0	4.0	4.5	5.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	55	173	0	70	53	323	11	674	0	519	585	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1520	1583	0	1520	1600	1360	1520	2903	0	1520	4304	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			0.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	4.3	13.1	0.0	5.5	4.0	28.5	0.9	27.9	0.0	41.0	16.3	0.0
Adj Reference Time (s)	9.3	18.1	0.0	10.5	9.0	33.5	8.5	32.9	0.0	45.5	21.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1583		101	1600		101	1452		101	1435	
Reference Time A (s)	65.1	13.1		82.9	4.0		13.0	27.9		614.6	16.3	
Adj Saturation B (vph	0	1583		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	12.3	13.1		NA	NA		NA	NA		NA	NA	
Reference Time (s)		13.1			82.9			27.9			614.6	
Adj Reference Time (s)		18.1			87.9			32.9			619.6	
Split Option												
Ref Time Combined (s)	4.3	13.1		5.5	4.0		0.9	27.9		41.0	16.3	
Ref Time Seperate (s)	4.3	12.2		5.5	4.0		0.9	19.1		41.0	15.0	
Reference Time (s)	13.1	13.1		5.5	5.5		27.9	27.9		41.0	41.0	
Adj Reference Time (s)	18.1	18.1		10.5	10.5		32.9	32.9		46.0	46.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	28.6	78.3	
Permitted Option (s)	87.9	619.6	
Split Option (s)	28.6	78.8	
Minimum (s)	28.6	78.3	107.0

Right Turns	WBR
Adj Reference Time (s)	33.5
Cross Thru Ref Time (s)	32.9
Oncoming Left Ref Time (s)	9.3
Combined (s)	75.7

Intersection Summary			
Intersection Capacity Utilization	89.1%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	668	54	68	417	81	46	388	107	102	399	81
Pedestrians	12		5	5		12	8		8	8		8
Ped Button		No			No			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.0	4.0	5.5	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	95	722	0	68	498	0	0	541	0	0	582	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.97	0.85	0.95	0.97	0.85
Saturated Flow (vph)	1520	3012	0	1520	2972	0	0	2943	0	0	2957	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.2	1.5	0.0	0.2	1.0	0.0	0.1	1.0
Pedestrian Frequency (%)		1.00			1.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	7.5	28.8	0.0	5.4	20.3	0.0			0.0			0.0
Adj Reference Time (s)	13.0	34.3	0.0	12.5	25.8	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	101	1506		101	1486		0	297		0	99	
Reference Time A (s)	112.5	28.8		80.5	20.3		0.0	72.4		0.0	124.3	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		112.5			80.5			72.4			124.3	
Adj Reference Time (s)		118.0			86.0			77.4			129.3	
Split Option												
Ref Time Combined (s)	7.5	28.8		5.4	20.3		0.0	22.3		0.0	23.8	
Ref Time Seperate (s)	7.5	26.7		5.4	17.1		3.6	16.0		8.1	16.3	
Reference Time (s)	28.8	28.8		20.3	20.3		22.3	22.3		23.8	23.8	
Adj Reference Time (s)	34.3	34.3		25.8	25.8		27.3	27.3		28.8	28.8	

Summary	EB WB	NB SB	Combined
Protected Option (s)	46.8	NA	
Permitted Option (s)	118.0	129.3	
Split Option (s)	60.2	56.0	
Minimum (s)	46.8	56.0	102.8

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	85.7%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
1: S Vincent Ave & I-10 WB on- and off-ramps

8/25/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	323	0	116	0	669	427	0	793	687
Pedestrians									7			2
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.5	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	323	0	116	0	669	427	0	793	687
Lane Utilization Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	2952	0	1360	0	4358	1360	0	4358	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.3
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	13.1	0.0	10.2	0.0	18.4	38.6	0.0	21.8	60.9
Adj Reference Time (s)	0.0	0.0	0.0	17.6	0.0	14.7	0.0	22.9	43.1	0.0	26.3	65.4
Permitted Option												
Adj Saturation A (vph)	0	0		98	0		0	1453		0	1453	
Reference Time A (s)	0.0	0.0		197.2	0.0		0.0	18.4		0.0	21.8	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		21.1	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			21.1			18.4			21.8	
Adj Reference Time (s)		8.0			25.1			22.9			26.3	
Split Option												
Ref Time Combined (s)	0.0	0.0		13.1	0.0		0.0	18.4		0.0	21.8	
Ref Time Seperate (s)	0.0	0.0		13.1	0.0		0.0	18.4		0.0	21.8	
Reference Time (s)	0.0	0.0		13.1	13.1		18.4	18.4		21.8	21.8	
Adj Reference Time (s)	0.0	0.0		17.1	17.1		22.9	22.9		26.3	26.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	17.6	26.3	
Permitted Option (s)	25.1	26.3	
Split Option (s)	17.1	49.3	
Minimum (s)	17.1	26.3	43.5

Right Turns	WBR	NBR	SBR
Adj Reference Time (s)	14.7	43.1	65.4
Cross Thru Ref Time (s)	22.9	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	37.6	43.1	65.4

Intersection Summary			
Intersection Capacity Utilization	54.5%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	186	0	243	0	0	0	0	923	809	0	1155	1
Pedestrians							1		8	8		1
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	267	162	0	0	0	0	1193	540	0	1155	1
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	2948	1360	0	0	0	1520	2943	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			14.3			0.0	0.0	48.9	48.6	0.0	45.5	0.2
Adj Reference Time (s)			18.8			0.0	9.5	53.4	53.1	0.0	50.0	22.5
Permitted Option												
Adj Saturation A (vph)	0	255		0	0		101	1472		0	1523	
Reference Time A (s)	0.0	125.6		0.0	0.0		0.0	48.9		0.0	45.5	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	15.4	18.9		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		18.9			0.0			48.9			45.5	
Adj Reference Time (s)		23.4			8.0			53.4			50.0	
Split Option												
Ref Time Combined (s)	0.0	10.9		0.0	0.0		0.0	48.9		0.0	45.5	
Ref Time Seperate (s)	7.4	0.0		0.0	0.0		0.0	37.9		0.0	45.5	
Reference Time (s)	10.9	10.9		0.0	0.0		48.9	48.9		45.5	45.5	
Adj Reference Time (s)	15.4	15.4		0.0	0.0		53.4	53.4		50.0	50.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	59.5	
Permitted Option (s)	23.4	53.4	
Split Option (s)	15.4	103.4	
Minimum (s)	15.4	53.4	68.7

Right Turns	EBR	NBR	SBR
Adj Reference Time (s)	18.8	53.1	22.5
Cross Thru Ref Time (s)	50.0	15.4	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	68.8	68.5	22.5

Intersection Summary			
Intersection Capacity Utilization	57.3%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	90	32	41	20	48	86	4	22	1411	21	11	140
Pedestrians	2		21	21		2		7		20		20
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	90	32	41	0	68	86	0	26	1433	0	0	151
Lane Utilization Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	2952	1600	1360	0	3153	1360	0	2952	4349	0	0	2952
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	0.3	0.0	0.0	0.0	2.3	0.0	0.0
Pedestrian Frequency (%)		0.50			0.06				1.00			
Protected Option Allowed		No			No				Yes			
Reference Time (s)			6.1			7.9	0.0	1.1	39.6	0.0	0.0	6.1
Adj Reference Time (s)			10.6			12.4	0.0	8.5	44.6	0.0	0.0	10.6
Permitted Option												
Adj Saturation A (vph)	98	1600		0	571		0	98	1450		0	98
Reference Time A (s)	54.7	2.4		0.0	14.4		0.0	15.8	39.6		0.0	92.1
Adj Saturation B (vph	0	1600		0	0		NA	NA	NA		NA	NA
Reference Time B (s)	11.6	2.4		8.8	10.6		NA	NA	NA		NA	NA
Reference Time (s)		11.6			10.6				39.6			
Adj Reference Time (s)		16.1			15.1				44.6			
Split Option												
Ref Time Combined (s)	3.6	2.4		0.0	2.6		0.0	1.1	39.6		0.0	6.1
Ref Time Seperate (s)	3.6	2.4		0.8	3.6		0.3	0.9	39.0		0.8	5.7
Reference Time (s)	3.6	3.6		3.6	3.6		39.6	39.6	39.6		28.8	28.8
Adj Reference Time (s)	8.5	8.5		8.5	8.5		44.6	44.6	44.6		33.8	33.8

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	55.2	
Permitted Option (s)	16.1	97.1	
Split Option (s)	17.0	78.3	
Minimum (s)	16.1	55.2	71.3

Right Turns	EBR	WBR	SBR
Adj Reference Time (s)	10.6	12.4	28.6
Cross Thru Ref Time (s)	42.3	55.2	8.5
Oncoming Left Ref Time (s)	8.5	8.5	8.5
Combined (s)	61.3	76.1	45.6

Intersection Summary			
Intersection Capacity Utilization	63.4%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	1045	257
Pedestrians		7
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	5.0	5.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1045	257
Lane Utilization Factor	0.91	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	4358	1360
Ped Intf Time (s)	0.0	0.9
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	28.8	23.6
Adj Reference Time (s)	33.8	28.6
Permitted Option		
Adj Saturation A (vph)	1453	
Reference Time A (s)	28.8	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	92.1	
Adj Reference Time (s)	97.1	
Split Option		
Ref Time Combined (s)	28.8	
Ref Time Seperate (s)	28.8	
Reference Time (s)	28.8	
Adj Reference Time (s)	33.8	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	216	139	57	21	507	454	81	651	4	40	186	620
Pedestrians	1		9	9		1	12		6		6	
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.5	6.0	4.0	5.0	5.0	6.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	355	57	0	529	454	81	655	0	0	227	878
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.97	0.91
Turning Factor (vph)	0.95	0.97	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.96
Saturated Flow (vph)	0	3103	1360	0	3040	1360	2952	4355	0	0	2952	4166
Ped Intf Time (s)	0.0	0.0	1.1	0.0	0.0	0.1	0.0	0.0	0.8	0.0	0.0	0.4
Pedestrian Frequency (%)		0.26			0.03			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			6.1			40.2	3.3	18.1	0.0	0.0	9.2	25.7
Adj Reference Time (s)			11.6			45.7	8.5	24.1	0.0	0.0	14.2	31.7
Permitted Option												
Adj Saturation A (vph)	0	301		0	631		98	1452		0	98	1389
Reference Time A (s)	0.0	141.8		0.0	42.2		49.6	18.1		0.0	138.2	25.7
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		141.8			42.2			49.6				138.2
Adj Reference Time (s)		147.3			47.7			55.6				144.2
Split Option												
Ref Time Combined (s)	0.0	13.7		0.0	20.9		3.3	18.1		0.0	9.2	25.7
Ref Time Seperate (s)	8.5	10.4		1.7	20.0		3.3	18.0		3.2	7.6	18.3
Reference Time (s)	13.7	13.7		20.9	20.9		18.1	18.1		25.7	25.7	25.7
Adj Reference Time (s)	19.2	19.2		26.4	26.4		24.1	24.1		31.7	31.7	31.7

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	40.2	
Permitted Option (s)	147.3	144.2	
Split Option (s)	45.6	55.8	
Minimum (s)	45.6	40.2	85.8

Right Turns	EBR	WBR
Adj Reference Time (s)	11.6	45.7
Cross Thru Ref Time (s)	31.7	38.3
Oncoming Left Ref Time (s)	26.4	19.2
Combined (s)	69.7	103.2

Intersection Summary			
Intersection Capacity Utilization	86.0%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	258
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	SWR2
Lane Configurations												
Volume (vph)	50	0	13	24	683	0	0	620	11	116	4	12
Pedestrians	11					1	1					11
Ped Button					No					Yes		
Pedestrian Timing (s)					16.0					16.0		
Free Right			No			No			No		No	No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	4.0	5.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0
Minimum Green (s)	4.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	50	0	13	24	683	0	0	630	0	123	0	8
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.94	0.85	0.85
Saturated Flow (vph)	1520	0	1360	1520	3046	0	0	3039	0	2934	0	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	1.4
Pedestrian Frequency (%)		0.00			1.00			0.00		0.31		
Protected Option Allowed		No			Yes			Yes		No		
Reference Time (s)			1.1	1.9	26.9	0.0	0.0	24.9	0.0		0.0	2.0
Adj Reference Time (s)			9.0	15.0	31.9	0.0	0.0	29.9	0.0		0.0	9.0
Permitted Option												
Adj Saturation A (vph)	101	0		101	1523		0	1519		98		
Reference Time A (s)	58.7	0.0		27.9	26.9		0.0	24.9		75.6		
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA		
Reference Time (s)					27.9			24.9				
Adj Reference Time (s)					32.9			29.9				
Split Option												
Ref Time Combined (s)	3.9	0.0		1.9	26.9		0.0	24.9		5.1		
Ref Time Seperate (s)	3.9	0.0		1.9	26.9		0.0	24.5		4.8		
Reference Time (s)	3.9	3.9		26.9	26.9		24.9	24.9		5.1		
Adj Reference Time (s)	8.0	8.0		31.9	31.9		29.9	29.9		10.1		

Summary	EB	NB SB	SW	Combined
Protected Option (s)	NA	44.9	NA	
Permitted Option (s)	Err	32.9	Err	
Split Option (s)	8.0	61.8	10.1	
Minimum (s)	8.0	32.9	10.1	51.1

Right Turns	EBR	SWR2
Adj Reference Time (s)	9.0	9.0
Cross Thru Ref Time (s)	29.9	31.9
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	38.9	40.9

Intersection Summary			
Intersection Capacity Utilization	42.6%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	22	5	20	0	5	0	24	123	6	0	197	110
Pedestrians	3		8	8		3			4	4		
Ped Button		Yes			No			No				
Pedestrian Timing (s)		16.0			16.0			16.0				
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	4.0	8.0	8.0	8.0	8.0	8.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	27	20	0	5	0	24	123	6	0	307	0
Lane Utilization 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
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.85
Saturated Flow (vph)	0	1534	1360	0	1600	0	1520	1600	1360	0	1514	0
Ped Intf Time (s)	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.0	0.0
Pedestrian Frequency (%)		0.23			1.00			1.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			2.8			0.0			1.0			0.0
Adj Reference Time (s)			11.0			0.0			13.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	117		0	1600		101	1600		0	1514	
Reference Time A (s)	0.0	27.9		0.0	0.4		27.9	9.2		0.0	24.3	
Adj Saturation B (vph	0	0		0	1600		NA	NA		NA	NA	
Reference Time B (s)	9.8	10.1		0.0	0.4		NA	NA		NA	NA	
Reference Time (s)		10.1			0.4			27.9			24.3	
Adj Reference Time (s)		15.1			11.0			32.9			29.3	
Split Option												
Ref Time Combined (s)	0.0	2.1		0.0	0.4		1.9	9.2		0.0	24.3	
Ref Time Seperate (s)	1.8	0.4		0.0	0.4		1.9	9.2		0.0	15.6	
Reference Time (s)	2.1	2.1		0.4	0.4		9.2	9.2		24.3	24.3	
Adj Reference Time (s)	11.0	11.0		11.0	11.0		14.2	14.2		29.3	29.3	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	15.1	32.9	
Split Option (s)	22.0	43.5	
Minimum (s)	15.1	32.9	48.1

Right Turns	SER	NER
Adj Reference Time (s)	11.0	13.0
Cross Thru Ref Time (s)	29.3	11.0
Oncoming Left Ref Time (s)	11.0	29.3
Combined (s)	51.3	53.3

Intersection Summary			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	5	4	6	140	68	6	25	145	42	8	197	19
Pedestrians	1		5	5		1	1		17	17		1
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	8	6	0	215	0	25	188	0	8	216	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1554	1360	0	1541	0	1520	2943	0	1520	3006	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.5	2.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.15			0.03			0.43			0.03	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			1.2			0.0	2.0	8.1	0.0	0.7	8.6	0.0
Adj Reference Time (s)			9.8			0.0	8.0	15.5	0.0	8.0	12.9	0.0
Permitted Option												
Adj Saturation A (vph)	0	1383		0	141		101	1471		101	1503	
Reference Time A (s)	0.0	0.7		0.0	183.2		29.3	8.1		9.8	8.6	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.4	8.6		19.1	24.7		NA	NA		NA	NA	
Reference Time (s)		0.7			24.7			29.3			9.8	
Adj Reference Time (s)		9.8			28.7			33.3			14.0	
Split Option												
Ref Time Combined (s)	0.0	0.6		0.0	16.7		2.0	8.1		0.7	8.6	
Ref Time Seperate (s)	0.4	0.3		11.1	5.2		2.0	6.4		0.7	7.9	
Reference Time (s)	0.6	0.6		16.7	16.7		8.1	8.1		8.6	8.6	
Adj Reference Time (s)	9.8	9.8		20.7	20.7		15.5	15.5		12.9	12.9	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	23.5	
Permitted Option (s)	28.7	33.3	
Split Option (s)	30.6	28.4	
Minimum (s)	28.7	23.5	52.2

Right Turns	SER
Adj Reference Time (s)	9.8
Cross Thru Ref Time (s)	12.9
Oncoming Left Ref Time (s)	20.7
Combined (s)	43.4

Intersection Summary			
Intersection Capacity Utilization	43.5%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	59	234	6	7	819	91	11	114	5	28	130	192
Pedestrians	4		5	5		4	5		7	7		5
Ped Button		Yes			No			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	59	240	0	7	910	0	11	114	5	28	322	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.91	0.85
Saturated Flow (vph)	1520	3035	0	1520	3001	0	1520	3046	1360	1520	2774	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.1	0.5	0.0	0.0	0.9	0.0	0.4	0.6
Pedestrian Frequency (%)		0.15			1.00			0.21			0.15	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	4.7	9.5	0.0	0.6	36.4	0.0	0.8	4.5	1.3	2.2	14.3	0.0
Adj Reference Time (s)	15.5	15.5	0.0	15.5	41.9	0.0	11.5	11.5	11.5	11.5	19.8	0.0
Permitted Option												
Adj Saturation A (vph)	101	1518		101	1500		101	1523		101	1387	
Reference Time A (s)	69.9	9.5		8.4	36.4		12.6	4.5		33.5	14.3	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		0	2774	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		10.2	14.3	
Reference Time (s)		69.9			36.4			12.6			14.3	
Adj Reference Time (s)		75.4			41.9			18.1			19.8	
Split Option												
Ref Time Combined (s)	4.7	9.5		0.6	36.4		0.8	4.5		2.2	14.3	
Ref Time Seperate (s)	4.7	9.3		0.6	32.8		0.8	4.5		2.2	6.0	
Reference Time (s)	9.5	9.5		36.4	36.4		4.5	4.5		14.3	14.3	
Adj Reference Time (s)	15.5	15.5		41.9	41.9		11.5	11.5		19.8	19.8	

Summary	NW SE	NE SW	Combined
Protected Option (s)	57.4	31.3	
Permitted Option (s)	75.4	19.8	
Split Option (s)	57.4	31.3	
Minimum (s)	57.4	19.8	77.3

Right Turns	NER
Adj Reference Time (s)	11.5
Cross Thru Ref Time (s)	15.5
Oncoming Left Ref Time (s)	11.5
Combined (s)	38.5

Intersection Summary			
Intersection Capacity Utilization	64.4%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWU	SWL
Lane Configurations												
Volume (vph)	100	152	48	119	435	129	2	176	690	151	7	80
Pedestrians	17		11	11		17		6		13		13
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	6.0	4.0	4.5	6.0	4.0	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	4.0	6.0	6.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	100	201	0	119	564	0	0	178	690	151	0	87
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.97	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	2936	0	1520	2942	0	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.3	1.4	0.0	0.5	2.0	0.0	0.0	0.0	1.6	0.0	0.0
Pedestrian Frequency (%)		0.31			0.43				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	7.9	8.5	0.0	9.4	23.5	0.0	0.0	14.1	27.2	14.9	0.0	6.9
Adj Reference Time (s)	12.4	14.5	0.0	13.9	29.5	0.0	0.0	18.6	33.2	20.9	0.0	11.4
Permitted Option												
Adj Saturation A (vph)	101	1468		101	1471		0	101	1523		0	101
Reference Time A (s)	118.8	8.5		141.1	23.5		0.0	211.0	27.2		0.0	103.4
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		118.8			141.1				211.0			
Adj Reference Time (s)		124.8			147.1				217.0			
Split Option												
Ref Time Combined (s)	7.9	8.5		9.4	23.5		0.0	14.1	27.2		0.0	6.9
Ref Time Seperate (s)	7.9	6.5		9.4	18.2		0.2	13.9	27.2		0.6	6.3
Reference Time (s)	8.5	8.5		23.5	23.5		27.2	27.2	27.2		36.1	36.1
Adj Reference Time (s)	14.5	14.5		29.5	29.5		33.2	33.2	33.2		42.1	42.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	41.9	60.7	
Permitted Option (s)	147.1	217.0	
Split Option (s)	44.0	75.3	
Minimum (s)	41.9	60.7	102.6

Right Turns	NER	SWR
Adj Reference Time (s)	20.9	28.6
Cross Thru Ref Time (s)	14.5	29.5
Oncoming Left Ref Time (s)	11.4	18.6
Combined (s)	46.8	76.7

Intersection Summary			
Intersection Capacity Utilization	85.5%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWT	SWR
Lane Configurations		
Volume (vph)	917	248
Pedestrians		6
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	6.0	6.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	917	248
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.8
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	36.1	22.6
Adj Reference Time (s)	42.1	28.6
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	36.1	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	103.4	
Adj Reference Time (s)	109.4	
Split Option		
Ref Time Combined (s)	36.1	
Ref Time Seperate (s)	36.1	
Reference Time (s)	36.1	
Adj Reference Time (s)	42.1	

Summary

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	32	235	654	2	227	526	18	2	8	1	25	12
Pedestrians	3		3		3		3					
Ped Button		No				No						
Pedestrian Timing (s)		16.0				16.0						
Free Right			No				No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	3.7	4.9	4.0	3.7	3.7	4.9	4.0	4.1	4.1	4.1	4.1	4.1
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	32	889	0	0	229	544	0	0	11	1	25	12
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.89	0.85	0.95	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00
Saturated Flow (vph)	1520	2710	0	0	2952	3032	0	0	1582	1360	1520	1600
Ped Intf Time (s)	0.0	0.3	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		1.00				1.00			0.00			0.00
Protected Option Allowed		Yes				Yes			No			No
Reference Time (s)	2.5	39.6	0.0	0.0	9.3	21.5	0.0			0.1		
Adj Reference Time (s)	14.0	44.5	0.0	0.0	14.0	26.4	0.0			14.1		
Permitted Option												
Adj Saturation A (vph)	101	1355		0	98	1516		0	360		101	1600
Reference Time A (s)	37.7	39.6		0.0	139.6	21.5		0.0	3.5		29.3	0.9
Adj Saturation B (vph	NA	NA		NA	NA	NA		0	0		0	1600
Reference Time B (s)	NA	NA		NA	NA	NA		8.2	8.8		10.0	0.9
Reference Time (s)		39.6				139.6			3.5			10.0
Adj Reference Time (s)		44.5				144.5			14.1			14.1
Split Option												
Ref Time Combined (s)	2.5	39.6		0.0	9.3	21.5		0.0	0.8		2.0	0.9
Ref Time Seperate (s)	2.5	10.7		0.2	9.2	20.8		0.2	0.6		2.0	0.9
Reference Time (s)	39.6	39.6		21.5	21.5	21.5		0.8	0.8		2.0	2.0
Adj Reference Time (s)	44.5	44.5		26.4	26.4	26.4		14.1	14.1		14.1	14.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	58.5	NA	
Permitted Option (s)	144.5	14.1	
Split Option (s)	71.0	28.2	
Minimum (s)	58.5	14.1	72.6

Right Turns	NER	SWR
Adj Reference Time (s)	14.1	14.1
Cross Thru Ref Time (s)	58.5	26.4
Oncoming Left Ref Time (s)	14.1	14.1
Combined (s)	86.7	54.6

Intersection Summary			
Intersection Capacity Utilization	72.3%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	54
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.1
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	54
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	4.8
Adj Reference Time (s)	14.1
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWU	NWL	NWT
Lane Configurations												
Volume (vph)	65	1	66	168	372	91	31	683	182	2	341	210
Pedestrians							3		2		2	
Ped Button								No				No
Pedestrian Timing (s)								16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.1	4.1	4.1	4.1	4.1	4.0	3.7	4.9	4.9	3.7	3.7	4.9
Minimum Green (s)	10.0	10.0	10.0	9.9	9.9	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	66	66	0	630	0	31	683	182	0	343	256
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.97
Saturated Flow (vph)	0	1521	1360	0	1545	0	1520	3046	1360	0	1520	2964
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			5.8			0.0	2.4	26.9	16.3	0.0	27.1	10.4
Adj Reference Time (s)			14.1			0.0	14.0	31.8	21.2	0.0	31.1	15.3
Permitted Option												
Adj Saturation A (vph)	0	513		0	303		101	1523		0	101	1482
Reference Time A (s)	0.0	15.5		0.0	249.3		36.3	26.9		0.0	406.6	10.4
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		21.2	57.0		NA	NA		NA	NA	NA
Reference Time (s)		15.5			57.0			36.3				406.6
Adj Reference Time (s)		19.6			61.1			41.2				411.5
Split Option												
Ref Time Combined (s)	0.0	5.2		0.0	49.0		2.4	26.9		0.0	27.1	10.4
Ref Time Seperate (s)	5.1	0.1		13.2	28.7		2.4	26.9		0.2	26.9	8.6
Reference Time (s)	5.2	5.2		49.0	49.0		26.9	26.9		27.1	27.1	27.1
Adj Reference Time (s)	14.1	14.1		53.1	53.1		31.8	31.8		32.0	32.0	32.0

Summary	NB SB	NW SE	Combined
Protected Option (s)	NA	62.9	
Permitted Option (s)	61.1	411.5	
Split Option (s)	67.2	63.8	
Minimum (s)	61.1	62.9	124.0

Right Turns	NBR	SER
Adj Reference Time (s)	14.1	21.2
Cross Thru Ref Time (s)	62.9	53.1
Oncoming Left Ref Time (s)	53.1	31.1
Combined (s)	130.1	105.4

Intersection Summary			
Intersection Capacity Utilization	108.4%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NWR
Lane Configurations	
Volume (vph)	46
Pedestrians	3
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.4
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWU	SWL	SWT
Lane Configurations												
Volume (vph)	111	297	72	133	472	94	101	926	60	25	116	933
Pedestrians	14		12	12		14	12		7		7	
Ped Button		Yes			No			No				Yes
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	3.5	6.0	4.0	3.5	3.5	6.0
Minimum Green (s)	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	4.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	111	369	0	133	566	0	101	986	0	0	140	1057
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.95	0.98
Saturated Flow (vph)	1520	2957	0	1520	2970	0	1520	3019	0	0	1520	2993
Ped Intf Time (s)	0.0	0.3	1.5	0.0	0.3	1.7	0.0	0.1	0.9	0.0	0.0	0.2
Pedestrian Frequency (%)		0.33			1.00			1.00				0.33
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	8.8	15.3	0.0	10.5	23.2	0.0	8.0	39.3	0.0	0.0	11.1	42.6
Adj Reference Time (s)	14.8	21.3	0.0	16.5	29.2	0.0	12.0	45.3	0.0	0.0	15.1	48.6
Permitted Option												
Adj Saturation A (vph)	101	1479		101	1485		101	1509		0	101	1496
Reference Time A (s)	131.4	15.3		157.9	23.2		120.2	39.3		0.0	166.3	42.6
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		131.4			157.9			120.2				166.3
Adj Reference Time (s)		137.4			163.9			126.2				172.3
Split Option												
Ref Time Combined (s)	8.8	15.3		10.5	23.2		8.0	39.3		0.0	11.1	42.6
Ref Time Seperate (s)	8.8	12.4		10.5	19.4		8.0	36.9		2.0	9.1	37.6
Reference Time (s)	15.3	15.3		23.2	23.2		39.3	39.3		42.6	42.6	42.6
Adj Reference Time (s)	21.3	21.3		29.2	29.2		45.3	45.3		48.6	48.6	48.6

Summary	NW SE	NE SW	Combined
Protected Option (s)	43.9	60.6	
Permitted Option (s)	163.9	172.3	
Split Option (s)	50.4	93.8	
Minimum (s)	43.9	60.6	104.5

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	87.1%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	124
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	5	66	361	99	2	172	700	158	13	78	887	109
Pedestrians		16		16		16		16		14		39
Ped Button			Yes				Yes				No	
Pedestrian Timing (s)			16.0				16.0				16.0	
Free Right				No				No				No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0	4.0	4.0	6.0	6.0	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	71	361	99	0	175	700	158	0	91	887	109
Lane Utilization Factor	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360	0	1520	3046	1360	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.0
Pedestrian Frequency (%)			0.41				0.41				1.00	
Protected Option Allowed			Yes				Yes				Yes	
Reference Time (s)	0.0	5.6	14.2	10.7	0.0	13.8	27.6	15.9	0.0	7.2	35.0	13.6
Adj Reference Time (s)	0.0	10.1	20.2	16.7	0.0	17.8	33.6	21.9	0.0	11.7	41.0	19.6
Permitted Option												
Adj Saturation A (vph)	0	101	1523		0	101	1523		0	101	1523	
Reference Time A (s)	0.0	83.8	14.2		0.0	206.8	27.6		0.0	107.6	35.0	
Adj Saturation B (vph	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time B (s)	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time (s)			83.8				206.8				107.6	
Adj Reference Time (s)			89.8				212.8				113.6	
Split Option												
Ref Time Combined (s)	0.0	5.6	14.2		0.0	13.8	27.6		0.0	7.2	35.0	
Ref Time Seperate (s)	0.4	5.2	14.2		0.2	13.6	27.6		1.0	6.1	35.0	
Reference Time (s)	14.2	14.2	14.2		27.6	27.6	27.6		35.0	35.0	35.0	
Adj Reference Time (s)	20.2	20.2	20.2		33.6	33.6	33.6		41.0	41.0	41.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	43.7	60.1	
Permitted Option (s)	212.8	113.6	
Split Option (s)	53.8	89.4	
Minimum (s)	43.7	60.1	103.8

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	16.7	21.9	19.6	16.0
Cross Thru Ref Time (s)	60.1	51.2	38.0	43.7
Oncoming Left Ref Time (s)	17.8	10.1	10.3	11.7
Combined (s)	94.5	83.2	67.8	71.3

Intersection Summary			
Intersection Capacity Utilization	86.5%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	12	61	1077	50
Pedestrians		39		14
Ped Button			No	
Pedestrian Timing (s)			16.0	
Free Right				No
Ideal Flow	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120
Volume Combined (vph)	0	73	1077	50
Lane Utilization Factor	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	1.7
Pedestrian Frequency (%)			1.00	
Protected Option Allowed			Yes	
Reference Time (s)	0.0	5.8	42.4	6.1
Adj Reference Time (s)	0.0	10.3	48.4	16.0
Permitted Option				
Adj Saturation A (vph)	0	101	1523	
Reference Time A (s)	0.0	86.6	42.4	
Adj Saturation B (vph	NA	NA	NA	
Reference Time B (s)	NA	NA	NA	
Reference Time (s)			86.6	
Adj Reference Time (s)			92.6	
Split Option				
Ref Time Combined (s)	0.0	5.8	42.4	
Ref Time Seperate (s)	0.9	4.8	42.4	
Reference Time (s)	42.4	42.4	42.4	
Adj Reference Time (s)	48.4	48.4	48.4	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	60	201	312	143	363	113	15	144	968	90	24	68
Pedestrians	19		3	3		19		13		7		7
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	5.5	5.5	4.5	5.5	5.5	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	60	201	312	143	363	113	0	159	968	90	0	92
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	0.4	0.0	0.0	2.2	0.0	0.0	0.0	0.9	0.0	0.0
Pedestrian Frequency (%)		0.10			0.47				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	4.8	15.0	27.9	11.3	27.3	12.2	0.0	12.6	38.1	8.8	0.0	7.3
Adj Reference Time (s)	9.3	20.5	33.4	15.8	32.8	17.7	0.0	17.1	44.1	16.0	0.0	11.8
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	71.3	15.0		169.1	27.3		0.0	188.6	38.1		0.0	109.0
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		71.3			169.1				188.6			
Adj Reference Time (s)		76.8			174.6				194.6			
Split Option												
Ref Time Combined (s)	4.8	15.0		11.3	27.3		0.0	12.6	38.1		0.0	7.3
Ref Time Seperate (s)	4.8	15.0		11.3	27.3		1.2	11.4	38.1		1.9	5.4
Reference Time (s)	15.0	15.0		27.3	27.3		38.1	38.1	38.1		49.1	49.1
Adj Reference Time (s)	20.5	20.5		32.8	32.8		44.1	44.1	44.1		55.1	55.1

Summary	EB WB	NB SB	Combined
Protected Option (s)	42.0	72.2	
Permitted Option (s)	174.6	194.6	
Split Option (s)	53.3	99.2	
Minimum (s)	42.0	72.2	114.2

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	33.4	17.7	16.0	16.0
Cross Thru Ref Time (s)	72.2	55.9	20.5	32.8
Oncoming Left Ref Time (s)	15.8	9.3	11.8	17.1
Combined (s)	121.3	82.8	48.3	65.8

Intersection Summary			
Intersection Capacity Utilization	101.1%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	1246	47
Pedestrians		13
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1246	47
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	1.6
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	49.1	5.7
Adj Reference Time (s)	55.1	16.0
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	49.1	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	109.0	
Adj Reference Time (s)	115.0	
Split Option		
Ref Time Combined (s)	49.1	
Ref Time Seperate (s)	49.1	
Reference Time (s)	49.1	
Adj Reference Time (s)	55.1	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	153	358	137	260	453	84	86	1226	160	2	42	1058
Pedestrians	5		15	15		5	5		8		8	
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		18.0			18.0			18.0				18.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	153	494	0	260	537	0	86	1226	160	0	45	1058
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	1.00
Saturated Flow (vph)	1520	2920	0	1520	2975	0	1520	3046	1360	0	1520	3046
Ped Intf Time (s)	0.0	0.5	1.8	0.0	0.1	0.6	0.0	0.0	1.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.39			0.15			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	12.1	20.8	0.0	20.5	21.8	0.0	6.8	48.3	15.2	0.0	3.5	41.7
Adj Reference Time (s)	16.6	25.3	0.0	25.0	26.3	0.0	11.3	52.8	22.5	0.0	9.5	46.2
Permitted Option												
Adj Saturation A (vph)	101	1460		101	1488		101	1523		0	101	1523
Reference Time A (s)	181.7	20.8		307.4	21.8		102.0	48.3		0.0	53.1	41.7
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		181.7			307.4			102.0				53.1
Adj Reference Time (s)		186.2			311.9			106.5				57.6
Split Option												
Ref Time Combined (s)	12.1	20.8		20.5	21.8		6.8	48.3		0.0	3.5	41.7
Ref Time Seperate (s)	12.1	15.2		20.5	18.4		6.8	48.3		0.2	3.4	41.7
Reference Time (s)	20.8	20.8		21.8	21.8		48.3	48.3		41.7	41.7	41.7
Adj Reference Time (s)	25.3	25.3		26.3	26.3		52.8	52.8		46.2	46.2	46.2

Summary	EB WB	NB SB	Combined
Protected Option (s)	50.3	62.3	
Permitted Option (s)	311.9	106.5	
Split Option (s)	51.6	99.0	
Minimum (s)	50.3	62.3	112.6

Right Turns	NBR	SBR
Adj Reference Time (s)	22.5	22.5
Cross Thru Ref Time (s)	25.3	26.3
Oncoming Left Ref Time (s)	9.5	11.3
Combined (s)	57.3	60.1

Intersection Summary			
Intersection Capacity Utilization	93.8%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	106
Pedestrians	5
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.5
Minimum Green (s)	5.0
Refr Cycle Length (s)	120
Volume Combined (vph)	106
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.6
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	10.0
Adj Reference Time (s)	22.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	817	269	204	1187	504	238	686	112	427	1055	106
Pedestrians	23		56	56		23	30		31	31		30
Ped Button		Yes			Yes			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	4.5	7.5	4.0	4.5	7.5	4.0
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	159	817	269	204	1187	504	238	798	0	427	1161	0
Lane Utilization Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	2952	3046	1360	2952	4358	1360	4428	4267	0	4428	4299	0
Ped Intf Time (s)	0.0	0.0	5.1	0.0	0.0	2.6	0.0	0.5	3.3	0.0	0.3	3.2
Pedestrian Frequency (%)		0.85			0.54			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	6.5	32.2	28.9	8.3	32.7	47.1	6.5	22.9	0.0	11.6	32.7	0.0
Adj Reference Time (s)	11.0	39.2	35.9	12.8	39.7	54.1	11.0	30.4	0.0	16.1	40.2	0.0
Permitted Option												
Adj Saturation A (vph)	98	1523		98	1453		98	1422		98	1433	
Reference Time A (s)	97.1	32.2		124.5	32.7		96.9	22.9		173.7	32.7	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		97.1			124.5			96.9			173.7	
Adj Reference Time (s)		104.1			131.5			104.4			181.2	
Split Option												
Ref Time Combined (s)	6.5	32.2		8.3	32.7		6.5	22.9		11.6	32.7	
Ref Time Seperate (s)	6.5	32.2		8.3	32.7		6.5	19.8		11.6	29.7	
Reference Time (s)	32.2	32.2		32.7	32.7		22.9	22.9		32.7	32.7	
Adj Reference Time (s)	39.2	39.2		39.7	39.7		30.4	30.4		40.2	40.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	52.0	51.2	
Permitted Option (s)	131.5	181.2	
Split Option (s)	78.8	70.6	
Minimum (s)	52.0	51.2	103.1

Right Turns	EBR	WBR
Adj Reference Time (s)	35.9	54.1
Cross Thru Ref Time (s)	40.2	30.4
Oncoming Left Ref Time (s)	12.8	11.0
Combined (s)	88.9	95.4

Intersection Summary			
Intersection Capacity Utilization	85.9%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	21	20	68	73	48	38	139	1089	145	1	61	834
Pedestrians	4					4			7		7	
Ped Button					Yes			No				
Pedestrian Timing (s)					16.0			16.0				
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5	4.5
Minimum Green (s)	6.0	6.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	110	0	0	122	38	139	1089	145	0	63	887
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	0.91
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.99
Saturated Flow (vph)	0	1436	0	0	3104	1360	1520	4358	1360	0	1520	4319
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.12			1.00				0.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			0.0			3.8	11.0	30.0	13.7	0.0	4.9	24.7
Adj Reference Time (s)			0.0			15.0	16.0	35.5	19.2	0.0	9.4	29.2
Permitted Option												
Adj Saturation A (vph)	0	365		0	1229		101	1453		0	101	1440
Reference Time A (s)	0.0	36.1		0.0	11.9		164.9	30.0		0.0	74.1	24.7
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	9.7	17.2		10.9	12.7		NA	NA		NA	NA	NA
Reference Time (s)		17.2			11.9			164.9				74.1
Adj Reference Time (s)		22.2			16.9			170.4				78.6
Split Option												
Ref Time Combined (s)	0.0	9.2		0.0	4.7		11.0	30.0		0.0	4.9	24.7
Ref Time Seperate (s)	1.7	1.7		2.9	3.6		11.0	30.0		0.1	4.8	23.2
Reference Time (s)	9.2	9.2		4.7	4.7		30.0	30.0		24.7	24.7	24.7
Adj Reference Time (s)	14.2	14.2		15.0	15.0		35.5	35.5		29.2	29.2	29.2

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	45.1	
Permitted Option (s)	22.2	170.4	
Split Option (s)	29.2	64.6	
Minimum (s)	22.2	45.1	67.3

Right Turns	WBR	NBR
Adj Reference Time (s)	15.0	19.2
Cross Thru Ref Time (s)	44.9	14.2
Oncoming Left Ref Time (s)	14.2	9.4
Combined (s)	74.1	42.8

Intersection Summary			
Intersection Capacity Utilization	61.7%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	53
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	96	15	73	142	432	19	552	261	394	610	81
Pedestrians			3	3			1		2	2		1
Ped Button		Yes						No			No	
Pedestrian Timing (s)		16.0						16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	4.5	5.0	4.0	4.5	5.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	40	111	0	73	142	432	19	813	0	394	691	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	1567	0	1520	1600	1360	1520	2900	0	1520	4281	0
Ped Intf Time (s)	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.10			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.2	8.5	0.0	5.8	10.6	38.1	1.5	33.7	0.0	31.1	19.4	0.0
Adj Reference Time (s)	9.0	13.5	0.0	10.8	15.6	43.1	8.5	38.7	0.0	35.6	24.4	0.0
Permitted Option												
Adj Saturation A (vph)	101	1567		101	1600		101	1450		101	1427	
Reference Time A (s)	47.5	8.5		86.6	10.6		22.4	33.7		466.7	19.4	
Adj Saturation B (vph	NA	NA		0	1600		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		13.8	10.6		NA	NA		NA	NA	
Reference Time (s)		47.5			13.8			33.7			466.7	
Adj Reference Time (s)		52.5			18.8			38.7			471.7	
Split Option												
Ref Time Combined (s)	3.2	8.5		5.8	10.6		1.5	33.7		31.1	19.4	
Ref Time Seperate (s)	3.2	7.4		5.8	10.6		1.5	22.9		31.1	17.1	
Reference Time (s)	8.5	8.5		10.6	10.6		33.7	33.7		31.1	31.1	
Adj Reference Time (s)	13.5	13.5		15.6	15.6		38.7	38.7		36.1	36.1	

Summary	EB WB	NB SB	Combined
Protected Option (s)	24.6	74.3	
Permitted Option (s)	52.5	471.7	
Split Option (s)	29.2	74.8	
Minimum (s)	24.6	74.3	99.0

Right Turns	WBR
Adj Reference Time (s)	43.1
Cross Thru Ref Time (s)	38.7
Oncoming Left Ref Time (s)	9.0
Combined (s)	90.8

Intersection Summary			
Intersection Capacity Utilization	82.5%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	34	506	17	105	868	107	52	365	172	135	264	73
Pedestrians	86		19	19		86	7		51	51		7
Ped Button		No			No			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.0	4.0	5.5	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	34	523	0	105	976	0	0	589	0	0	472	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.98	0.85	0.95	0.95	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1520	3032	0	1520	2996	0	0	2900	0	0	2933	0
Ped Intf Time (s)	0.0	0.1	2.2	0.0	0.7	6.6	0.0	1.4	4.8	0.0	0.1	0.9
Pedestrian Frequency (%)		1.00			1.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	2.7	20.8	0.0	8.3	39.8	0.0			0.0			0.0
Adj Reference Time (s)	12.5	26.3	0.0	13.8	45.3	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	101	1516		101	1498		0	279		0	98	
Reference Time A (s)	40.5	20.8		124.4	39.8		0.0	83.4		0.0	165.2	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		40.5			124.4			83.4			165.2	
Adj Reference Time (s)		46.0			129.9			88.4			170.2	
Split Option												
Ref Time Combined (s)	2.7	20.8		8.3	39.8		0.0	25.8		0.0	19.4	
Ref Time Seperate (s)	2.7	20.1		8.3	35.5		4.1	16.5		10.6	10.9	
Reference Time (s)	20.8	20.8		39.8	39.8		25.8	25.8		19.4	19.4	
Adj Reference Time (s)	26.3	26.3		45.3	45.3		30.8	30.8		24.4	24.4	

Summary	EB WB	NB SB	Combined
Protected Option (s)	57.8	NA	
Permitted Option (s)	129.9	170.2	
Split Option (s)	71.6	55.2	
Minimum (s)	57.8	55.2	113.0

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	94.2%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
1: S Vincent Ave & I-10 WB on- and off-ramps

8/25/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	767	0	210	0	1187	362	0	860	294
Pedestrians									7			3
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.5	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	767	0	210	0	1187	362	0	860	294
Lane Utilization Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	2952	0	1360	0	4358	1360	0	4358	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.4
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	31.2	0.0	18.5	0.0	32.7	32.9	0.0	23.7	26.3
Adj Reference Time (s)	0.0	0.0	0.0	35.7	0.0	23.0	0.0	37.2	37.4	0.0	28.2	30.8
Permitted Option												
Adj Saturation A (vph)	0	0		98	0		0	1453		0	1453	
Reference Time A (s)	0.0	0.0		467.7	0.0		0.0	32.7		0.0	23.7	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		39.2	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			39.2			32.7			23.7	
Adj Reference Time (s)		8.0			43.2			37.2			28.2	
Split Option												
Ref Time Combined (s)	0.0	0.0		31.2	0.0		0.0	32.7		0.0	23.7	
Ref Time Seperate (s)	0.0	0.0		31.2	0.0		0.0	32.7		0.0	23.7	
Reference Time (s)	0.0	0.0		31.2	31.2		32.7	32.7		23.7	23.7	
Adj Reference Time (s)	0.0	0.0		35.2	35.2		37.2	37.2		28.2	28.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	35.7	37.2	
Permitted Option (s)	43.2	37.2	
Split Option (s)	35.2	65.4	
Minimum (s)	35.2	37.2	72.4

Right Turns	WBR	NBR	SBR
Adj Reference Time (s)	23.0	37.4	30.8
Cross Thru Ref Time (s)	37.2	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	60.2	37.4	30.8

Intersection Summary			
Intersection Capacity Utilization	60.3%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	0	308	0	0	0	0	1280	946	0	1604	1
Pedestrians												7
Ped Button											No	
Pedestrian Timing (s)											18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	363	205	0	0	0	0	1596	631	0	1604	1
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	2954	1360	0	0	0	1520	2956	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Pedestrian Frequency (%)		0.00			0.00			0.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			18.1			0.0	0.0	64.8	55.7	0.0	63.2	1.0
Adj Reference Time (s)			22.6			0.0	9.5	69.3	60.2	0.0	67.7	22.5
Permitted Option												
Adj Saturation A (vph)	0	250		0	0		101	1478		0	1523	
Reference Time A (s)	0.0	174.3		0.0	0.0		0.0	64.8		0.0	63.2	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	18.3	22.8		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		22.8			0.0			64.8			63.2	
Adj Reference Time (s)		27.3			8.0			69.3			67.7	
Split Option												
Ref Time Combined (s)	0.0	14.8		0.0	0.0		0.0	64.8		0.0	63.2	
Ref Time Seperate (s)	10.3	0.0		0.0	0.0		0.0	52.0		0.0	63.2	
Reference Time (s)	14.8	14.8		0.0	0.0		64.8	64.8		63.2	63.2	
Adj Reference Time (s)	19.3	19.3		0.0	0.0		69.3	69.3		67.7	67.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	77.2	
Permitted Option (s)	27.3	69.3	
Split Option (s)	19.3	136.9	
Minimum (s)	19.3	69.3	88.5

Right Turns	EBR	NBR	SBR
Adj Reference Time (s)	22.6	60.2	22.5
Cross Thru Ref Time (s)	67.7	19.3	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	90.3	79.4	22.5

Intersection Summary			
Intersection Capacity Utilization	75.2%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	545	136	202	120	91	217	11	119	1294	87	11	299
Pedestrians			32			37						
Ped Button		Yes			Yes							
Pedestrian Timing (s)		16.0			16.0							
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	545	136	202	0	211	217	0	130	1382	0	0	309
Lane Utilization Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.99	0.85	0.95	0.95
Saturated Flow (vph)	2952	1600	1360	0	3109	1360	0	2952	4317	0	0	2952
Ped Intf Time (s)	0.0	0.0	3.4	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.66			0.71				0.00			
Protected Option Allowed		No			No				Yes			
Reference Time (s)			21.2			23.0	0.0	5.3	38.4	0.0	0.0	12.6
Adj Reference Time (s)			25.7			27.5	0.0	9.8	43.4	0.0	0.0	17.1
Permitted Option												
Adj Saturation A (vph)	98	1600		0	318		0	98	1439		0	98
Reference Time A (s)	332.4	10.2		0.0	79.7		0.0	79.2	38.4		0.0	188.5
Adj Saturation B (vph	0	1600		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	30.2	10.2		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		30.2			79.7				79.2			
Adj Reference Time (s)		34.7			84.2				84.2			
Split Option												
Ref Time Combined (s)	22.2	10.2		0.0	8.2		0.0	5.3	38.4		0.0	12.6
Ref Time Seperate (s)	22.2	10.2		4.8	6.8		0.8	4.8	36.0		0.8	12.1
Reference Time (s)	22.2	22.2		8.2	8.2		38.4	38.4	38.4		30.5	30.5
Adj Reference Time (s)	26.7	26.7		12.7	12.7		43.4	43.4	43.4		35.5	35.5

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	60.5	
Permitted Option (s)	84.2	193.5	
Split Option (s)	39.3	78.9	
Minimum (s)	39.3	60.5	99.8

Right Turns	EBR	WBR	SBR
Adj Reference Time (s)	25.7	27.5	51.4
Cross Thru Ref Time (s)	45.3	60.5	12.7
Oncoming Left Ref Time (s)	12.7	26.7	9.8
Combined (s)	83.6	114.6	73.9

Intersection Summary			
Intersection Capacity Utilization	95.5%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations		
Volume (vph)	1107	510
Pedestrians		12
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	5.0	5.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1107	510
Lane Utilization Factor	0.91	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	4358	1360
Ped Intf Time (s)	0.0	1.5
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	30.5	46.4
Adj Reference Time (s)	35.5	51.4
Permitted Option		
Adj Saturation A (vph)	1453	
Reference Time A (s)	30.5	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	188.5	
Adj Reference Time (s)	193.5	
Split Option		
Ref Time Combined (s)	30.5	
Ref Time Seperate (s)	30.5	
Reference Time (s)	30.5	
Adj Reference Time (s)	35.5	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	346	433	120	19	322	275	142	840	25	21	269	830
Pedestrians						2			8			
Ped Button					Yes			No				No
Pedestrian Timing (s)					16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.5	6.0	4.0	5.0	5.0	6.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	779	120	0	341	275	142	865	0	0	290	1082
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.97	0.91
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.96
Saturated Flow (vph)	0	3129	1360	0	3038	1360	2952	4340	0	0	2952	4206
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.0	0.0	0.0	0.3
Pedestrian Frequency (%)		0.00			0.06			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			10.6			24.5	5.8	23.9	0.0	0.0	11.8	31.2
Adj Reference Time (s)			16.1			30.0	10.3	29.9	0.0	0.0	16.8	37.2
Permitted Option												
Adj Saturation A (vph)	0	396		0	486		98	1447		0	98	1402
Reference Time A (s)	0.0	235.9		0.0	32.8		86.3	23.9		0.0	177.0	31.2
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		235.9			32.8			86.3				177.0
Adj Reference Time (s)		241.4			38.3			92.3				183.0
Split Option												
Ref Time Combined (s)	0.0	29.9		0.0	13.5		5.8	23.9		0.0	11.8	31.2
Ref Time Seperate (s)	13.6	32.5		1.5	12.7		5.8	23.3		1.7	10.9	24.0
Reference Time (s)	32.5	32.5		13.5	13.5		23.9	23.9		31.2	31.2	31.2
Adj Reference Time (s)	38.0	38.0		19.0	19.0		29.9	29.9		37.2	37.2	37.2

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	47.5	
Permitted Option (s)	241.4	183.0	
Split Option (s)	56.9	67.2	
Minimum (s)	56.9	47.5	104.4

Right Turns	EBR	WBR
Adj Reference Time (s)	16.1	30.0
Cross Thru Ref Time (s)	37.2	46.7
Oncoming Left Ref Time (s)	19.0	38.0
Combined (s)	72.3	114.7

Intersection Summary			
Intersection Capacity Utilization	95.6%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	253
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	SWR2
Lane Configurations												
Volume (vph)	79	0	46	48	892	0	0	933	8	178	15	17
Pedestrians	11					3						11
Ped Button					No					Yes		
Pedestrian Timing (s)					16.0					16.0		
Free Right			No			No			No		No	No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	4.0	5.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0
Minimum Green (s)	4.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	79	0	46	48	892	0	0	942	0	199	0	11
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.94	0.85	0.85
Saturated Flow (vph)	1520	0	1360	1520	3046	0	0	3042	0	2921	0	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	1.4
Pedestrian Frequency (%)		0.00			1.00			0.00		0.31		
Protected Option Allowed		No			Yes			Yes		No		
Reference Time (s)			4.1	3.8	35.1	0.0	0.0	37.1	0.0		0.0	2.3
Adj Reference Time (s)			9.1	15.0	40.1	0.0	0.0	42.1	0.0		0.0	9.0
Permitted Option												
Adj Saturation A (vph)	101	0		101	1523		0	1521		97		
Reference Time A (s)	93.6	0.0		57.3	35.1		0.0	37.1		122.8		
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA		
Reference Time (s)					57.3			37.1				
Adj Reference Time (s)					62.3			42.1				
Split Option												
Ref Time Combined (s)	6.2	0.0		3.8	35.1		0.0	37.1		8.3		
Ref Time Seperate (s)	6.2	0.0		3.8	35.1		0.0	36.8		7.5		
Reference Time (s)	6.2	6.2		35.1	35.1		37.1	37.1		8.3		
Adj Reference Time (s)	10.2	10.2		40.1	40.1		42.1	42.1		13.3		

Summary	EB	NB SB	SW	Combined
Protected Option (s)	NA	57.1	NA	
Permitted Option (s)	Err	62.3	Err	
Split Option (s)	10.2	82.3	13.3	
Minimum (s)	10.2	57.1	13.3	80.7

Right Turns	EBR	SWR2
Adj Reference Time (s)	9.1	9.0
Cross Thru Ref Time (s)	42.1	40.1
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	51.2	49.1

Intersection Summary			
Intersection Capacity Utilization	67.2%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	111	48	99	14	25	15	85	262	37	7	179	55
Pedestrians			3			3	3		4	1		3
Ped Button		Yes			No			No			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	4.0	8.0	8.0	8.0	8.0	8.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	159	99	0	54	0	85	262	37	0	242	0
Lane Utilization 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
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.96	0.85
Saturated Flow (vph)	0	1544	1360	0	1512	0	1520	1600	1360	0	1543	0
Ped Intf Time (s)	0.0	0.0	0.4	0.0	0.1	0.4	0.0	0.0	0.5	0.0	0.1	0.4
Pedestrian Frequency (%)		0.10			1.00			1.00			0.10	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			9.1			0.0			3.7			0.0
Adj Reference Time (s)			14.1			0.0			13.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	670		0	302		146	1600		0	1089	
Reference Time A (s)	0.0	28.5		0.0	21.7		69.9	19.6		0.0	26.8	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	16.8	20.4		9.1	12.4		NA	NA		NA	NA	
Reference Time (s)		20.4			12.4			69.9			26.8	
Adj Reference Time (s)		25.4			17.4			74.9			31.8	
Split Option												
Ref Time Combined (s)	0.0	12.4		0.0	4.4		6.7	19.6		0.0	18.9	
Ref Time Seperate (s)	8.8	3.6		1.1	2.1		6.7	19.6		0.6	14.0	
Reference Time (s)	12.4	12.4		4.4	4.4		19.6	19.6		18.9	18.9	
Adj Reference Time (s)	17.4	17.4		11.0	11.0		24.6	24.6		23.9	23.9	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	25.4	74.9	
Split Option (s)	28.4	48.6	
Minimum (s)	25.4	48.6	73.9

Right Turns	SER	NER
Adj Reference Time (s)	14.1	13.0
Cross Thru Ref Time (s)	23.9	17.4
Oncoming Left Ref Time (s)	11.0	23.9
Combined (s)	49.0	54.3

Intersection Summary			
Intersection Capacity Utilization	61.6%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	14	21	22	104	25	14	34	375	130	30	251	15
Pedestrians	6		4	4		6	2		9	9		2
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	35	22	0	143	0	34	505	0	30	267	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.95	0.85	0.95	0.96	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1568	1360	0	1519	0	1520	2929	0	1520	3020	0
Ped Intf Time (s)	0.0	0.0	0.5	0.0	0.1	0.8	0.0	0.3	1.1	0.0	0.0	0.3
Pedestrian Frequency (%)		0.12			0.18			0.26			0.06	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			2.5			0.0	2.7	21.0	0.0	2.3	10.6	0.0
Adj Reference Time (s)			9.5			0.0	8.0	25.0	0.0	8.0	15.0	0.0
Permitted Option												
Adj Saturation A (vph)	0	1570		0	127		101	1464		101	1510	
Reference Time A (s)	0.0	2.7		0.0	134.7		40.5	21.0		34.9	10.6	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	9.1	10.7		16.2	19.4		NA	NA		NA	NA	
Reference Time (s)		2.7			19.4			40.5			34.9	
Adj Reference Time (s)		9.5			23.4			44.5			38.9	
Split Option												
Ref Time Combined (s)	0.0	2.7		0.0	11.4		2.7	21.0		2.3	10.6	
Ref Time Seperate (s)	1.1	1.6		8.2	2.0		2.7	15.7		2.3	10.0	
Reference Time (s)	2.7	2.7		11.4	11.4		21.0	21.0		10.6	10.6	
Adj Reference Time (s)	9.5	9.5		16.2	16.2		25.0	25.0		15.0	15.0	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	33.0	
Permitted Option (s)	23.4	44.5	
Split Option (s)	25.7	39.9	
Minimum (s)	23.4	33.0	56.3

Right Turns	SER
Adj Reference Time (s)	9.5
Cross Thru Ref Time (s)	15.0
Oncoming Left Ref Time (s)	16.2
Combined (s)	40.7

Intersection Summary			
Intersection Capacity Utilization	46.9%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	135	608	32	14	494	118	22	303	7	124	166	97
Pedestrians	7		11	11		7	7		10	7		10
Ped Button		Yes			No			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	135	640	0	14	612	0	22	303	7	124	263	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.94	0.85
Saturated Flow (vph)	1520	3024	0	1520	2958	0	1520	3046	1360	1520	2878	0
Ped Intf Time (s)	0.0	0.1	1.4	0.0	0.2	0.9	0.0	0.0	1.2	0.0	0.5	1.2
Pedestrian Frequency (%)		0.31			1.00			0.28			0.28	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	10.6	25.4	0.0	1.1	25.0	0.0	1.8	11.9	1.9	9.8	11.4	0.0
Adj Reference Time (s)	16.1	30.9	0.0	15.5	30.5	0.0	11.5	17.4	11.5	15.3	16.9	0.0
Permitted Option												
Adj Saturation A (vph)	101	1512		101	1479		101	1523		101	1439	
Reference Time A (s)	159.3	25.4		16.8	25.0		26.6	11.9		146.7	11.4	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		159.3			25.0			26.6			146.7	
Adj Reference Time (s)		164.8			30.5			32.1			152.2	
Split Option												
Ref Time Combined (s)	10.6	25.4		1.1	25.0		1.8	11.9		9.8	11.4	
Ref Time Seperate (s)	10.6	24.2		1.1	20.2		1.8	11.9		9.8	7.4	
Reference Time (s)	25.4	25.4		25.0	25.0		11.9	11.9		11.4	11.4	
Adj Reference Time (s)	30.9	30.9		30.5	30.5		17.4	17.4		16.9	16.9	

Summary	NW SE	NE SW	Combined
Protected Option (s)	46.6	32.7	
Permitted Option (s)	164.8	152.2	
Split Option (s)	61.5	34.4	
Minimum (s)	46.6	32.7	79.4

Right Turns	NER
Adj Reference Time (s)	11.5
Cross Thru Ref Time (s)	30.9
Oncoming Left Ref Time (s)	15.3
Combined (s)	57.7

Intersection Summary			
Intersection Capacity Utilization	66.1%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWU	SWL
Lane Configurations												
Volume (vph)	177	411	78	119	339	99	2	140	925	309	11	146
Pedestrians			8			16				24		
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	6.0	4.0	4.5	6.0	6.0	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	177	489	0	119	339	99	0	143	925	309	0	157
Lane Utilization Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	2974	0	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.2	1.0	0.0	0.0	1.9	0.0	0.0	0.0	2.7	0.0	0.0
Pedestrian Frequency (%)		0.23			0.41				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	14.0	19.9	0.0	9.4	25.4	10.7	0.0	11.3	36.4	30.0	0.0	12.4
Adj Reference Time (s)	18.5	25.9	0.0	13.9	31.4	16.7	0.0	15.8	42.4	36.0	0.0	16.9
Permitted Option												
Adj Saturation A (vph)	101	1487		101	1600		0	101	1523		0	101
Reference Time A (s)	209.6	19.9		141.1	25.4		0.0	169.1	36.4		0.0	185.8
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		209.6			141.1				169.1			
Adj Reference Time (s)		215.6			147.1				175.1			
Split Option												
Ref Time Combined (s)	14.0	19.9		9.4	25.4		0.0	11.3	36.4		0.0	12.4
Ref Time Seperate (s)	14.0	16.7		9.4	25.4		0.2	11.1	36.4		0.8	11.6
Reference Time (s)	19.9	19.9		25.4	25.4		36.4	36.4	36.4		36.3	36.3
Adj Reference Time (s)	25.9	25.9		31.4	31.4		42.4	42.4	42.4		42.3	42.3

Summary	NW SE	NE SW	Combined
Protected Option (s)	49.9	59.3	
Permitted Option (s)	215.6	191.8	
Split Option (s)	57.3	84.8	
Minimum (s)	49.9	59.3	109.2

Right Turns	NWR	NER	SWR
Adj Reference Time (s)	16.7	36.0	25.6
Cross Thru Ref Time (s)	59.3	25.9	31.4
Oncoming Left Ref Time (s)	18.5	16.9	15.8
Combined (s)	94.5	78.7	72.8

Intersection Summary			
Intersection Capacity Utilization	91.0%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWT	SWR
Lane Configurations		
Volume (vph)	923	212
Pedestrians		7
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	6.0	6.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	923	212
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.9
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	36.3	19.6
Adj Reference Time (s)	42.3	25.6
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	36.3	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	185.8	
Adj Reference Time (s)	191.8	
Split Option		
Ref Time Combined (s)	36.3	
Ref Time Seperate (s)	36.3	
Reference Time (s)	36.3	
Adj Reference Time (s)	42.3	

Summary

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	129	432	529	1	286	506	47	0	0	0	27	47
Pedestrians	7		6		6		7					
Ped Button		No				No						
Pedestrian Timing (s)		16.0				16.0						
Free Right			No				No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	3.7	4.9	4.0	3.7	3.7	4.9	4.0	4.1	4.1	4.1	4.1	4.1
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	129	961	0	0	287	553	0	0	0	0	27	47
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00
Saturated Flow (vph)	1520	2795	0	0	2952	3007	0	0	1600	1360	1520	1600
Ped Intf Time (s)	0.0	0.4	0.8	0.0	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		1.00				1.00			0.00			0.00
Protected Option Allowed		Yes				Yes			No			No
Reference Time (s)	10.2	41.7	0.0	0.0	11.7	22.2	0.0			0.0		
Adj Reference Time (s)	14.2	46.6	0.0	0.0	15.7	27.1	0.0			14.1		
Permitted Option												
Adj Saturation A (vph)	101	1397		0	98	1504		0	1600		101	1600
Reference Time A (s)	152.3	41.7		0.0	174.9	22.2		0.0	0.0		32.1	3.5
Adj Saturation B (vph	NA	NA		NA	NA	NA		0	1600		0	1600
Reference Time B (s)	NA	NA		NA	NA	NA		0.0	0.0		10.1	3.5
Reference Time (s)		152.3				174.9			0.0			10.1
Adj Reference Time (s)		157.2				179.8			14.1			14.2
Split Option												
Ref Time Combined (s)	10.2	41.7		0.0	11.7	22.2		0.0	0.0		2.1	3.5
Ref Time Seperate (s)	10.2	19.0		0.1	11.6	20.3		0.0	0.0		2.1	3.5
Reference Time (s)	41.7	41.7		22.2	22.2	22.2		0.0	0.0		3.5	3.5
Adj Reference Time (s)	46.6	46.6		27.1	27.1	27.1		0.0	0.0		14.1	14.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	62.2	NA	
Permitted Option (s)	179.8	14.2	
Split Option (s)	73.6	14.1	
Minimum (s)	62.2	14.1	76.3

Right Turns	NER	SWR
Adj Reference Time (s)	14.1	22.2
Cross Thru Ref Time (s)	0.0	27.1
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	0.0	49.3

Intersection Summary			
Intersection Capacity Utilization	63.6%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	205
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.1
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	205
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	18.1
Adj Reference Time (s)	22.2
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWU	NWL	NWT
Lane Configurations												
Volume (vph)	260	12	96	124	162	93	63	809	100	2	341	330
Pedestrians									2			
Ped Button								No				No
Pedestrian Timing (s)								16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.1	4.1	4.1	4.1	4.1	4.0	3.7	4.9	4.9	3.7	3.7	4.9
Minimum Green (s)	10.0	10.0	10.0	9.9	9.9	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	271	96	0	379	0	63	809	100	0	343	406
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.95	0.97
Saturated Flow (vph)	0	1523	1360	0	1516	0	1520	3046	1360	0	1520	2961
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			8.4			0.0	4.9	31.9	9.1	0.0	27.1	16.6
Adj Reference Time (s)			14.1			0.0	14.0	36.8	14.9	0.0	31.1	21.5
Permitted Option												
Adj Saturation A (vph)	0	620		0	250		101	1523		0	101	1481
Reference Time A (s)	0.0	52.6		0.0	182.0		74.1	31.9		0.0	406.6	16.6
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		17.8	38.0		NA	NA		NA	NA	NA
Reference Time (s)		52.6			38.0			74.1				406.6
Adj Reference Time (s)		56.7			42.1			79.0				411.5
Split Option												
Ref Time Combined (s)	0.0	21.4		0.0	30.0		4.9	31.9		0.0	27.1	16.6
Ref Time Seperate (s)	20.5	0.9		9.8	12.8		4.9	31.9		0.2	26.9	13.5
Reference Time (s)	21.4	21.4		30.0	30.0		31.9	31.9		27.1	27.1	27.1
Adj Reference Time (s)	25.5	25.5		34.1	34.1		36.8	36.8		32.0	32.0	32.0

Summary	NB SB	NW SE	Combined
Protected Option (s)	NA	67.9	
Permitted Option (s)	56.7	411.5	
Split Option (s)	59.6	68.8	
Minimum (s)	56.7	67.9	124.6

Right Turns	NBR	SER
Adj Reference Time (s)	14.1	14.9
Cross Thru Ref Time (s)	67.9	34.1
Oncoming Left Ref Time (s)	34.1	31.1
Combined (s)	116.1	80.1

Intersection Summary			
Intersection Capacity Utilization	103.8%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NWR
Lane Configurations	
Volume (vph)	76
Pedestrians	5
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.6
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWU	SWL	SWT
Lane Configurations												
Volume (vph)	188	661	74	94	258	79	84	1107	140	51	150	1020
Pedestrians	16		10	10		16			11			
Ped Button		Yes			No			No				Yes
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	3.5	6.0	4.0	3.5	3.5	6.0
Minimum Green (s)	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	4.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	188	735	0	94	337	0	84	1247	0	0	201	1159
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.96	0.85	0.95	0.98	0.85	0.95	0.95	0.98
Saturated Flow (vph)	1520	3000	0	1520	2939	0	1520	2995	0	0	1520	2991
Ped Intf Time (s)	0.0	0.1	1.2	0.0	0.4	1.9	0.0	0.2	1.4	0.0	0.0	0.1
Pedestrian Frequency (%)		0.28			1.00			1.00				0.18
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	14.8	29.5	0.0	7.5	14.2	0.0	6.6	50.1	0.0	0.0	15.8	46.6
Adj Reference Time (s)	20.8	35.5	0.0	13.5	20.2	0.0	10.6	56.1	0.0	0.0	19.8	52.6
Permitted Option												
Adj Saturation A (vph)	101	1500		101	1470		101	1497		0	101	1496
Reference Time A (s)	222.2	29.5		111.8	14.2		99.2	50.1		0.0	237.6	46.6
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		222.2			111.8			99.2				237.6
Adj Reference Time (s)		228.2			117.8			105.2				243.6
Split Option												
Ref Time Combined (s)	14.8	29.5		7.5	14.2		6.6	50.1		0.0	15.8	46.6
Ref Time Seperate (s)	14.8	26.6		7.5	11.0		6.6	44.5		4.0	11.8	41.0
Reference Time (s)	29.5	29.5		14.2	14.2		50.1	50.1		46.6	46.6	46.6
Adj Reference Time (s)	35.5	35.5		20.2	20.2		56.1	56.1		52.6	52.6	52.6

Summary	NW SE	NE SW	Combined
Protected Option (s)	49.0	76.0	
Permitted Option (s)	228.2	243.6	
Split Option (s)	55.8	108.7	
Minimum (s)	49.0	76.0	124.9

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	104.1%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	139
Pedestrians	6
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.8
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	7	170	497	182	2	132	375	92	24	90	983	90
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right				No				No				No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0	4.0	4.0	6.0	6.0	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	177	497	182	0	135	375	92	0	113	983	90
Lane Utilization Factor	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360	0	1520	3046	1360	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)			0.00				0.00				0.00	
Protected Option Allowed			Yes				Yes				Yes	
Reference Time (s)	0.0	14.0	19.6	16.0	0.0	10.6	14.8	8.1	0.0	8.9	38.7	7.9
Adj Reference Time (s)	0.0	18.5	25.6	22.0	0.0	14.6	20.8	14.1	0.0	13.4	44.7	16.0
Permitted Option												
Adj Saturation A (vph)	0	101	1523		0	101	1523		0	101	1523	
Reference Time A (s)	0.0	209.6	19.6		0.0	159.3	14.8		0.0	134.1	38.7	
Adj Saturation B (vph	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time B (s)	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time (s)			209.6				159.3				134.1	
Adj Reference Time (s)			215.6				165.3				140.1	
Split Option												
Ref Time Combined (s)	0.0	14.0	19.6		0.0	10.6	14.8		0.0	8.9	38.7	
Ref Time Seperate (s)	0.6	13.4	19.6		0.2	10.4	14.8		1.9	7.1	38.7	
Reference Time (s)	19.6	19.6	19.6		14.8	14.8	14.8		38.7	38.7	38.7	
Adj Reference Time (s)	25.6	25.6	25.6		20.8	20.8	20.8		44.7	44.7	44.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	40.2	71.3	
Permitted Option (s)	215.6	233.8	
Split Option (s)	46.3	102.5	
Minimum (s)	40.2	71.3	111.5

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	22.0	14.1	16.0	16.0
Cross Thru Ref Time (s)	71.3	64.4	40.2	39.3
Oncoming Left Ref Time (s)	14.6	18.5	19.7	13.4
Combined (s)	107.9	97.0	75.9	68.7

Intersection Summary			
Intersection Capacity Utilization	92.9%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	40	152	1316	58
Pedestrians				
Ped Button				
Pedestrian Timing (s)				
Free Right				No
Ideal Flow	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120
Volume Combined (vph)	0	192	1316	58
Lane Utilization Factor	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)			0.00	
Protected Option Allowed			Yes	
Reference Time (s)	0.0	15.2	51.8	5.1
Adj Reference Time (s)	0.0	19.7	57.8	16.0
Permitted Option				
Adj Saturation A (vph)	0	101	1523	
Reference Time A (s)	0.0	227.8	51.8	
Adj Saturation B (vph	NA	NA	NA	
Reference Time B (s)	NA	NA	NA	
Reference Time (s)			227.8	
Adj Reference Time (s)			233.8	
Split Option				
Ref Time Combined (s)	0.0	15.2	51.8	
Ref Time Seperate (s)	3.2	12.0	51.8	
Reference Time (s)	51.8	51.8	51.8	
Adj Reference Time (s)	57.8	57.8	57.8	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	110	363	315	135	181	104	25	136	1067	93	50	110
Pedestrians						11				4		
Ped Button					Yes				No			
Pedestrian Timing (s)					16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	5.5	5.5	4.5	5.5	5.5	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	110	363	315	135	181	104	0	160	1067	93	0	159
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.5	0.0	0.0
Pedestrian Frequency (%)		0.00			0.31				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	8.7	27.3	27.8	10.6	13.5	10.5	0.0	12.7	42.0	8.7	0.0	12.6
Adj Reference Time (s)	13.2	32.8	33.3	15.1	19.0	16.0	0.0	17.2	48.0	16.0	0.0	17.1
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	130.0	27.3		159.3	13.5		0.0	190.0	42.0		0.0	188.6
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		130.0			159.3				190.0			
Adj Reference Time (s)		135.5			164.8				196.0			
Split Option												
Ref Time Combined (s)	8.7	27.3		10.6	13.5		0.0	12.7	42.0		0.0	12.6
Ref Time Seperate (s)	8.7	27.3		10.6	13.5		2.0	10.7	42.0		3.9	8.7
Reference Time (s)	27.3	27.3		13.5	13.5		42.0	42.0	42.0		55.1	55.1
Adj Reference Time (s)	32.8	32.8		19.0	19.0		48.0	48.0	48.0		61.1	61.1

Summary	EB WB	NB SB	Combined
Protected Option (s)	47.9	78.3	
Permitted Option (s)	164.8	196.0	
Split Option (s)	51.8	109.1	
Minimum (s)	47.9	78.3	126.2

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	33.3	16.0	16.0	16.0
Cross Thru Ref Time (s)	78.3	65.1	32.8	19.0
Oncoming Left Ref Time (s)	15.1	13.2	17.1	17.2
Combined (s)	126.7	94.3	65.8	52.2

Intersection Summary			
Intersection Capacity Utilization	105.6%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	1399	51
Pedestrians		3
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1399	51
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.4
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	55.1	4.9
Adj Reference Time (s)	61.1	16.0
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	55.1	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	188.6	
Adj Reference Time (s)	194.6	
Split Option		
Ref Time Combined (s)	55.1	
Ref Time Seperate (s)	55.1	
Reference Time (s)	55.1	
Adj Reference Time (s)	61.1	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	160	647	91	217	422	41	98	1346	208	5	53	1130
Pedestrians			7			7			9			
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	160	738	0	217	464	0	98	1346	208	0	58	1130
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	1.00
Saturated Flow (vph)	1520	2990	0	1520	3006	0	1520	3046	1360	0	1520	3046
Ped Intf Time (s)	0.0	0.1	0.9	0.0	0.1	0.9	0.0	0.0	1.1	0.0	0.0	0.0
Pedestrian Frequency (%)		0.21			0.21			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	12.7	29.7	0.0	17.1	18.6	0.0	7.7	53.0	19.4	0.0	4.6	44.5
Adj Reference Time (s)	17.2	34.2	0.0	21.6	23.1	0.0	12.2	57.5	23.9	0.0	9.1	49.0
Permitted Option												
Adj Saturation A (vph)	101	1495		101	1503		101	1523		0	101	1523
Reference Time A (s)	190.0	29.7		257.1	18.6		116.0	53.0		0.0	68.5	44.5
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		190.0			257.1			116.0				68.5
Adj Reference Time (s)		194.5			261.6			120.5				73.0
Split Option												
Ref Time Combined (s)	12.7	29.7		17.1	18.6		7.7	53.0		0.0	4.6	44.5
Ref Time Seperate (s)	12.7	26.1		17.1	16.9		7.7	53.0		0.4	4.2	44.5
Reference Time (s)	29.7	29.7		18.6	18.6		53.0	53.0		44.5	44.5	44.5
Adj Reference Time (s)	34.2	34.2		23.1	23.1		57.5	57.5		49.0	49.0	49.0

Summary	EB WB	NB SB	Combined
Protected Option (s)	55.8	66.6	
Permitted Option (s)	261.6	120.5	
Split Option (s)	57.3	106.6	
Minimum (s)	55.8	66.6	122.4

Right Turns	NBR	SBR
Adj Reference Time (s)	23.9	14.5
Cross Thru Ref Time (s)	34.2	23.1
Oncoming Left Ref Time (s)	9.1	12.2
Combined (s)	67.2	49.8

Intersection Summary			
Intersection Capacity Utilization	102.0%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	101
Pedestrians	2
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.5
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	101
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.3
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	9.2
Adj Reference Time (s)	14.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	256	997	218	237	1003	582	405	1320	74	598	881	172
Pedestrians			50			25			14			49
Ped Button		Yes			Yes			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	4.5	7.5	4.0	4.5	7.5	4.0
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	256	997	218	237	1003	582	405	1395	0	598	1054	0
Lane Utilization Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.98	0.85
Saturated Flow (vph)	2952	3046	1360	2952	4358	1360	4428	4324	0	4428	4252	0
Ped Intf Time (s)	0.0	0.0	4.8	0.0	0.0	2.8	0.0	0.1	1.7	0.0	0.8	4.7
Pedestrian Frequency (%)		0.81			0.57			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	10.4	39.3	24.0	9.6	27.6	54.1	11.0	38.8	0.0	16.2	30.5	0.0
Adj Reference Time (s)	14.9	46.3	31.0	14.1	34.6	61.1	15.5	46.3	0.0	20.7	38.0	0.0
Permitted Option												
Adj Saturation A (vph)	98	1523		98	1453		98	1441		98	1417	
Reference Time A (s)	156.1	39.3		144.6	27.6		164.5	38.8		243.2	30.5	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		156.1			144.6			164.5			243.2	
Adj Reference Time (s)		163.1			151.6			172.0			250.7	
Split Option												
Ref Time Combined (s)	10.4	39.3		9.6	27.6		11.0	38.8		16.2	30.5	
Ref Time Seperate (s)	10.4	39.3		9.6	27.6		11.0	36.7		16.2	25.6	
Reference Time (s)	39.3	39.3		27.6	27.6		38.8	38.8		30.5	30.5	
Adj Reference Time (s)	46.3	46.3		34.6	34.6		46.3	46.3		38.0	38.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	60.4	67.0	
Permitted Option (s)	163.1	250.7	
Split Option (s)	80.9	84.3	
Minimum (s)	60.4	67.0	127.4

Right Turns	EBR	WBR
Adj Reference Time (s)	31.0	61.1
Cross Thru Ref Time (s)	38.0	46.3
Oncoming Left Ref Time (s)	14.1	14.9
Combined (s)	83.2	122.3

Intersection Summary			
Intersection Capacity Utilization	106.2%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	427	47	158	41	87	72	52	745	334	199	1199	52
Pedestrians						6			15			1
Ped Button					Yes			No			No	
Pedestrian Timing (s)					16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5	4.0
Minimum Green (s)	6.0	6.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	632	0	0	129	72	52	745	334	199	1251	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.93	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1488	0	0	3149	1360	1520	4358	1360	1520	4331	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.18			1.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			0.0			7.1	4.1	20.5	31.3	15.7	34.7	0.0
Adj Reference Time (s)			0.0			15.0	9.1	26.0	36.8	20.2	39.2	0.0
Permitted Option												
Adj Saturation A (vph)	0	132		0	3139		101	1453		101	1444	
Reference Time A (s)	0.0	573.9		0.0	4.9		61.5	20.5		236.2	34.7	
Adj Saturation B (vph	0	0		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	41.7	59.0		NA	NA		NA	NA		NA	NA	
Reference Time (s)		59.0			4.9			61.5			236.2	
Adj Reference Time (s)		64.0			15.0			67.0			240.7	
Split Option												
Ref Time Combined (s)	0.0	51.0		0.0	4.9		4.1	20.5		15.7	34.7	
Ref Time Seperate (s)	33.7	4.0		1.6	6.5		4.1	20.5		15.7	33.2	
Reference Time (s)	51.0	51.0		6.5	6.5		20.5	20.5		34.7	34.7	
Adj Reference Time (s)	56.0	56.0		15.0	15.0		26.0	26.0		39.2	39.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	48.3	
Permitted Option (s)	64.0	240.7	
Split Option (s)	71.0	65.2	
Minimum (s)	64.0	48.3	112.3

Right Turns	WBR	NBR
Adj Reference Time (s)	15.0	36.8
Cross Thru Ref Time (s)	46.2	56.0
Oncoming Left Ref Time (s)	56.0	20.2
Combined (s)	117.3	113.0

Intersection Summary			
Intersection Capacity Utilization	97.7%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	190	14	83	63	381	13	546	249	612	632	58
Pedestrians												1
Ped Button											No	
Pedestrian Timing (s)											16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	4.5	5.0	4.0	4.5	5.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	65	204	0	83	63	381	13	795	0	612	690	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1520	1583	0	1520	1600	1360	1520	2903	0	1520	4304	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			0.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	5.1	15.5	0.0	6.5	4.7	33.6	1.0	32.9	0.0	48.3	19.3	0.0
Adj Reference Time (s)	10.1	20.5	0.0	11.5	9.7	38.6	8.5	37.9	0.0	52.8	24.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1583		101	1600		101	1452		101	1435	
Reference Time A (s)	76.9	15.5		97.8	4.7		15.4	32.9		725.2	19.3	
Adj Saturation B (vph	0	1583		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	13.1	15.5		NA	NA		NA	NA		NA	NA	
Reference Time (s)		15.5			97.8			32.9			725.2	
Adj Reference Time (s)		20.5			102.8			37.9			730.2	
Split Option												
Ref Time Combined (s)	5.1	15.5		6.5	4.7		1.0	32.9		48.3	19.3	
Ref Time Seperate (s)	5.1	14.4		6.5	4.7		1.0	22.6		48.3	17.6	
Reference Time (s)	15.5	15.5		6.5	6.5		32.9	32.9		48.3	48.3	
Adj Reference Time (s)	20.5	20.5		11.5	11.5		37.9	37.9		53.3	53.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	32.0	90.7	
Permitted Option (s)	102.8	730.2	
Split Option (s)	32.0	91.2	
Minimum (s)	32.0	90.7	122.7

Right Turns	WBR
Adj Reference Time (s)	38.6
Cross Thru Ref Time (s)	37.9
Oncoming Left Ref Time (s)	10.1
Combined (s)	86.6

Intersection Summary			
Intersection Capacity Utilization	102.3%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	112	788	64	80	492	96	54	458	126	120	471	96
Pedestrians	12		5	5		12	8		8	8		8
Ped Button		No			No			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.0	4.0	5.5	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	112	852	0	80	588	0	0	638	0	0	687	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.97	0.85	0.95	0.97	0.85
Saturated Flow (vph)	1520	3012	0	1520	2972	0	0	2943	0	0	2957	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.2	1.5	0.0	0.2	1.0	0.0	0.1	1.0
Pedestrian Frequency (%)		1.00			1.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	8.8	34.0	0.0	6.3	24.0	0.0			0.0			0.0
Adj Reference Time (s)	14.3	39.5	0.0	12.5	29.5	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	101	1506		101	1486		0	297		0	99	
Reference Time A (s)	132.8	34.0		95.0	24.0		0.0	85.4		0.0	146.7	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		132.8			95.0			85.4			146.7	
Adj Reference Time (s)		138.3			100.5			90.4			151.7	
Split Option												
Ref Time Combined (s)	8.8	34.0		6.3	24.0		0.0	26.2		0.0	28.0	
Ref Time Seperate (s)	8.8	31.4		6.3	20.1		4.3	18.8		9.5	19.2	
Reference Time (s)	34.0	34.0		24.0	24.0		26.2	26.2		28.0	28.0	
Adj Reference Time (s)	39.5	39.5		29.5	29.5		31.2	31.2		33.0	33.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	52.0	NA	
Permitted Option (s)	138.3	151.7	
Split Option (s)	69.0	64.2	
Minimum (s)	52.0	64.2	116.2

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	96.9%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
1: S Vincent Ave & I-10 WB on- and off-ramps

8/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	334	0	120	0	813	442	0	963	710
Pedestrians									7			2
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.5	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	334	0	120	0	813	442	0	963	710
Lane Utilization Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	2952	0	1360	0	4358	1360	0	4358	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.3
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	13.6	0.0	10.6	0.0	22.4	39.9	0.0	26.5	62.9
Adj Reference Time (s)	0.0	0.0	0.0	18.1	0.0	15.1	0.0	26.9	44.4	0.0	31.0	67.4
Permitted Option												
Adj Saturation A (vph)	0	0		98	0		0	1453		0	1453	
Reference Time A (s)	0.0	0.0		203.7	0.0		0.0	22.4		0.0	26.5	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		21.6	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			21.6			22.4			26.5	
Adj Reference Time (s)		8.0			25.6			26.9			31.0	
Split Option												
Ref Time Combined (s)	0.0	0.0		13.6	0.0		0.0	22.4		0.0	26.5	
Ref Time Seperate (s)	0.0	0.0		13.6	0.0		0.0	22.4		0.0	26.5	
Reference Time (s)	0.0	0.0		13.6	13.6		22.4	22.4		26.5	26.5	
Adj Reference Time (s)	0.0	0.0		17.6	17.6		26.9	26.9		31.0	31.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	18.1	31.0	
Permitted Option (s)	25.6	31.0	
Split Option (s)	17.6	57.9	
Minimum (s)	17.6	31.0	48.6

Right Turns	WBR	NBR	SBR
Adj Reference Time (s)	15.1	44.4	67.4
Cross Thru Ref Time (s)	26.9	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	42.0	44.4	67.4

Intersection Summary			
Intersection Capacity Utilization	56.2%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	0	290	0	0	0	0	1102	967	0	1380	1
Pedestrians							1		8	8		1
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	289	193	0	0	0	0	1424	645	0	1380	1
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	2938	1360	0	0	0	1520	2943	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			17.1			0.0	0.0	58.3	57.9	0.0	54.4	0.2
Adj Reference Time (s)			21.6			0.0	9.5	62.8	62.4	0.0	58.9	22.5
Permitted Option												
Adj Saturation A (vph)	0	264		0	0		101	1471		0	1523	
Reference Time A (s)	0.0	131.0		0.0	0.0		0.0	58.3		0.0	54.4	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	15.6	19.8		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		19.8			0.0			58.3			54.4	
Adj Reference Time (s)		24.3			8.0			62.8			58.9	
Split Option												
Ref Time Combined (s)	0.0	11.8		0.0	0.0		0.0	58.3		0.0	54.4	
Ref Time Seperate (s)	7.6	0.0		0.0	0.0		0.0	45.2		0.0	54.4	
Reference Time (s)	11.8	11.8		0.0	0.0		58.3	58.3		54.4	54.4	
Adj Reference Time (s)	16.3	16.3		0.0	0.0		62.8	62.8		58.9	58.9	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	68.4	
Permitted Option (s)	24.3	62.8	
Split Option (s)	16.3	121.7	
Minimum (s)	16.3	62.8	79.1

Right Turns	EBR	NBR	SBR
Adj Reference Time (s)	21.6	62.4	22.5
Cross Thru Ref Time (s)	58.9	16.3	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	80.4	78.7	22.5

Intersection Summary			
Intersection Capacity Utilization	67.0%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	92	38	50	24	58	103	4	27	1694	25	13	169
Pedestrians	2		21	21		2		7		20		20
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	92	38	50	0	82	103	0	31	1719	0	0	182
Lane Utilization Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	2952	1600	1360	0	3153	1360	0	2952	4349	0	0	2952
Ped Intf Time (s)	0.0	0.0	2.4	0.0	0.0	0.3	0.0	0.0	0.0	2.3	0.0	0.0
Pedestrian Frequency (%)		0.50			0.06				1.00			
Protected Option Allowed		No			No				Yes			
Reference Time (s)			6.8			9.4	0.0	1.3	47.5	0.0	0.0	7.4
Adj Reference Time (s)			11.3			13.9	0.0	8.5	52.5	0.0	0.0	11.9
Permitted Option												
Adj Saturation A (vph)	98	1600		0	571		0	98	1450		0	98
Reference Time A (s)	56.1	2.9		0.0	17.2		0.0	18.9	47.5		0.0	111.0
Adj Saturation B (vph	0	1600		0	0		NA	NA	NA		NA	NA
Reference Time B (s)	11.7	2.9		8.9	11.1		NA	NA	NA		NA	NA
Reference Time (s)		11.7			11.1				47.5			
Adj Reference Time (s)		16.2			15.6				52.5			
Split Option												
Ref Time Combined (s)	3.7	2.9		0.0	3.1		0.0	1.3	47.5		0.0	7.4
Ref Time Seperate (s)	3.7	2.9		0.9	4.3		0.3	1.1	46.8		1.0	6.9
Reference Time (s)	3.7	3.7		4.3	4.3		47.5	47.5	47.5		34.6	34.6
Adj Reference Time (s)	8.5	8.5		8.8	8.8		52.5	52.5	52.5		39.6	39.6

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	64.4	
Permitted Option (s)	16.2	116.0	
Split Option (s)	17.4	92.0	
Minimum (s)	16.2	64.4	80.6

Right Turns	EBR	WBR	SBR
Adj Reference Time (s)	11.3	13.9	33.2
Cross Thru Ref Time (s)	48.1	64.4	8.8
Oncoming Left Ref Time (s)	8.8	8.5	8.5
Combined (s)	68.2	86.7	50.5

Intersection Summary			
Intersection Capacity Utilization	72.3%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑↑	↱
Volume (vph)	1255	309
Pedestrians		7
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	5.0	5.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1255	309
Lane Utilization Factor	0.91	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	4358	1360
Ped Intf Time (s)	0.0	0.9
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	34.6	28.2
Adj Reference Time (s)	39.6	33.2
Permitted Option		
Adj Saturation A (vph)	1453	
Reference Time A (s)	34.6	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	111.0	
Adj Reference Time (s)	116.0	
Split Option		
Ref Time Combined (s)	34.6	
Ref Time Seperate (s)	34.6	
Reference Time (s)	34.6	
Adj Reference Time (s)	39.6	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	223	167	68	25	609	545	98	782	4	48	224	743
Pedestrians	1		9	9		1	12		6		6	
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.5	6.0	4.0	5.0	5.0	6.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	223	167	68	25	609	545	98	786	0	0	272	1053
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97	0.91
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.96
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	2952	4355	0	0	2952	4166
Ped Intf Time (s)	0.0	0.0	1.1	0.0	0.0	0.1	0.0	0.0	0.8	0.0	0.0	0.4
Pedestrian Frequency (%)		0.26			0.03			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	17.6	12.5	7.1	2.0	45.7	48.2	4.0	21.7	0.0	0.0	11.1	30.8
Adj Reference Time (s)	23.1	18.0	12.6	11.5	51.2	53.7	8.5	27.7	0.0	0.0	16.1	36.8
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		98	1452		0	98	1389
Reference Time A (s)	264.1	12.5		29.6	45.7		59.8	21.7		0.0	165.9	30.8
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		264.1			45.7			59.8				165.9
Adj Reference Time (s)		269.6			51.2			65.8				171.9
Split Option												
Ref Time Combined (s)	17.6	12.5		2.0	45.7		4.0	21.7		0.0	11.1	30.8
Ref Time Seperate (s)	17.6	12.5		2.0	45.7		4.0	21.6		3.8	9.1	21.8
Reference Time (s)	17.6	17.6		45.7	45.7		21.7	21.7		30.8	30.8	30.8
Adj Reference Time (s)	23.1	23.1		51.2	51.2		27.7	27.7		36.8	36.8	36.8

Summary	EB WB	NB SB	Combined
Protected Option (s)	74.3	45.3	
Permitted Option (s)	269.6	171.9	
Split Option (s)	74.3	64.4	
Minimum (s)	74.3	45.3	119.5

Right Turns	EBR	WBR
Adj Reference Time (s)	12.6	53.7
Cross Thru Ref Time (s)	36.8	43.7
Oncoming Left Ref Time (s)	11.5	23.1
Combined (s)	60.9	120.5

Intersection Summary			
Intersection Capacity Utilization	100.5%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	310
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	SWR2
Lane Configurations												
Volume (vph)	53	0	18	33	952	0	0	864	15	98	3	10
Pedestrians	11					1	1					11
Ped Button					No					Yes		
Pedestrian Timing (s)					16.0					16.0		
Free Right			No			No			No		No	No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	4.0	5.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0
Minimum Green (s)	4.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	53	0	18	33	952	0	0	879	0	104	0	7
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.94	0.85	0.85
Saturated Flow (vph)	1520	0	1360	1520	3046	0	0	3039	0	2934	0	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	1.4
Pedestrian Frequency (%)		0.00			1.00			0.00		0.31		
Protected Option Allowed		No			Yes			Yes		No		
Reference Time (s)			1.6	2.6	37.5	0.0	0.0	34.7	0.0		0.0	1.9
Adj Reference Time (s)			9.0	15.0	42.5	0.0	0.0	39.7	0.0		0.0	9.0
Permitted Option												
Adj Saturation A (vph)	101	0		101	1523		0	1519		98		
Reference Time A (s)	62.8	0.0		39.1	37.5		0.0	34.7		64.1		
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA		
Reference Time (s)					39.1			34.7				
Adj Reference Time (s)					44.1			39.7				
Split Option												
Ref Time Combined (s)	4.2	0.0		2.6	37.5		0.0	34.7		4.3		
Ref Time Seperate (s)	4.2	0.0		2.6	37.5		0.0	34.1		4.1		
Reference Time (s)	4.2	4.2		37.5	37.5		34.7	34.7		4.3		
Adj Reference Time (s)	8.2	8.2		42.5	42.5		39.7	39.7		9.3		

Summary	EB	NB SB	SW	Combined
Protected Option (s)	NA	54.7	NA	
Permitted Option (s)	Err	44.1	Err	
Split Option (s)	8.2	82.2	9.3	
Minimum (s)	8.2	44.1	9.3	61.6

Right Turns	EBR	SWR2
Adj Reference Time (s)	9.0	9.0
Cross Thru Ref Time (s)	39.7	42.5
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	48.7	51.5

Intersection Summary			
Intersection Capacity Utilization	51.3%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	27	11	24	0	11	0	29	280	7	0	449	133
Pedestrians	3		8	8		3			4	4		
Ped Button		Yes			No			No				
Pedestrian Timing (s)		16.0			16.0			16.0				
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	4.0	8.0	8.0	8.0	8.0	8.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	38	24	0	11	0	29	280	7	0	582	0
Lane Utilization 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
Turning Factor (vph)	0.95	0.96	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	1543	1360	0	1600	0	1520	1600	1360	0	1545	0
Ped Intf Time (s)	0.0	0.0	1.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.0	0.0
Pedestrian Frequency (%)		0.23			1.00			1.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			3.1			0.0			1.1			0.0
Adj Reference Time (s)			11.0			0.0			13.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	132		0	1600		101	1600		0	1545	
Reference Time A (s)	0.0	34.6		0.0	0.8		34.3	21.0		0.0	45.2	
Adj Saturation B (vph	0	0		0	1600		NA	NA		NA	NA	
Reference Time B (s)	10.1	11.0		0.0	0.8		NA	NA		NA	NA	
Reference Time (s)		11.0			0.8			34.3			45.2	
Adj Reference Time (s)		16.0			11.0			39.3			50.2	
Split Option												
Ref Time Combined (s)	0.0	3.0		0.0	0.8		2.3	21.0		0.0	45.2	
Ref Time Seperate (s)	2.1	0.8		0.0	0.8		2.3	21.0		0.0	34.9	
Reference Time (s)	3.0	3.0		0.8	0.8		21.0	21.0		45.2	45.2	
Adj Reference Time (s)	11.0	11.0		11.0	11.0		26.0	26.0		50.2	50.2	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	16.0	50.2	
Split Option (s)	22.0	76.2	
Minimum (s)	16.0	50.2	66.2

Right Turns	SER	NER
Adj Reference Time (s)	11.0	13.0
Cross Thru Ref Time (s)	50.2	11.0
Oncoming Left Ref Time (s)	11.0	50.2
Combined (s)	72.2	74.2

Intersection Summary			
Intersection Capacity Utilization	61.8%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	5	7	7	163	135	7	29	287	49	16	389	22
Pedestrians	1		5	5		1	1		17	17		1
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	12	7	0	305	0	29	336	0	16	411	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1567	1360	0	1552	0	1520	2980	0	1520	3022	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.0	0.1	0.0	0.3	2.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.15			0.03			0.43			0.03	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			1.3			0.0	2.3	13.8	0.0	1.3	16.3	0.0
Adj Reference Time (s)			9.8			0.0	8.0	18.8	0.0	8.0	20.3	0.0
Permitted Option												
Adj Saturation A (vph)	0	1371		0	168		101	1490		101	1511	
Reference Time A (s)	0.0	1.1		0.0	218.4		34.3	13.8		18.9	16.3	
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		20.9	31.6		NA	NA		NA	NA	
Reference Time (s)		1.1			31.6			34.3			18.9	
Adj Reference Time (s)		9.8			35.6			38.3			22.9	
Split Option												
Ref Time Combined (s)	0.0	0.9		0.0	23.6		2.3	13.8		1.3	16.3	
Ref Time Seperate (s)	0.4	0.5		12.9	10.2		2.3	11.9		1.3	15.5	
Reference Time (s)	0.9	0.9		23.6	23.6		13.8	13.8		16.3	16.3	
Adj Reference Time (s)	9.8	9.8		27.6	27.6		18.8	18.8		20.3	20.3	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	28.3	
Permitted Option (s)	35.6	38.3	
Split Option (s)	37.4	39.1	
Minimum (s)	35.6	28.3	63.9

Right Turns	SER
Adj Reference Time (s)	9.8
Cross Thru Ref Time (s)	20.3
Oncoming Left Ref Time (s)	27.6
Combined (s)	57.8

Intersection Summary			
Intersection Capacity Utilization	53.3%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	63	323	6	8	1133	96	11	158	5	39	180	204
Pedestrians	4		5	5		4	5		7	7		5
Ped Button		Yes			No			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	63	329	0	8	1229	0	11	158	5	39	384	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.92	0.85
Saturated Flow (vph)	1520	3038	0	1520	3011	0	1520	3046	1360	1520	2804	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.3	0.6
Pedestrian Frequency (%)		0.15			1.00			0.21			0.15	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	5.0	13.0	0.0	0.6	49.0	0.0	0.9	6.2	1.3	3.1	16.8	0.0
Adj Reference Time (s)	15.5	18.5	0.0	15.5	54.5	0.0	11.5	11.7	11.5	11.5	22.3	0.0
Permitted Option												
Adj Saturation A (vph)	101	1519		101	1505		101	1523		101	1402	
Reference Time A (s)	74.6	13.0		9.5	49.0		13.0	6.2		46.2	16.8	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		74.6			49.0			13.0			46.2	
Adj Reference Time (s)		80.1			54.5			18.5			51.7	
Split Option												
Ref Time Combined (s)	5.0	13.0		0.6	49.0		0.9	6.2		3.1	16.8	
Ref Time Seperate (s)	5.0	12.8		0.6	45.2		0.9	6.2		3.1	8.0	
Reference Time (s)	13.0	13.0		49.0	49.0		6.2	6.2		16.8	16.8	
Adj Reference Time (s)	18.5	18.5		54.5	54.5		11.7	11.7		22.3	22.3	

Summary	NW SE	NE SW	Combined
Protected Option (s)	70.0	33.8	
Permitted Option (s)	80.1	51.7	
Split Option (s)	73.0	34.0	
Minimum (s)	70.0	33.8	103.8

Right Turns	NER
Adj Reference Time (s)	11.5
Cross Thru Ref Time (s)	18.5
Oncoming Left Ref Time (s)	11.5
Combined (s)	41.5

Intersection Summary			
Intersection Capacity Utilization	86.5%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWU	SWL
Lane Configurations												
Volume (vph)	108	199	52	128	569	138	3	189	903	162	8	86
Pedestrians	17		11	11		17		6		13		13
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	108	199	52	128	569	138	0	192	903	162	0	94
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	1.4	0.0	0.0	2.0	0.0	0.0	0.0	1.6	0.0	0.0
Pedestrian Frequency (%)		0.31			0.43				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	8.5	14.9	5.9	10.1	42.7	14.2	0.0	15.2	35.6	15.9	0.0	7.4
Adj Reference Time (s)	13.0	20.9	12.0	14.6	48.7	20.2	0.0	19.7	41.6	21.9	0.0	11.9
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	127.9	14.9		151.6	42.7		0.0	227.4	35.6		0.0	111.3
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		127.9			151.6				227.4			
Adj Reference Time (s)		133.9			157.6				233.4			
Split Option												
Ref Time Combined (s)	8.5	14.9		10.1	42.7		0.0	15.2	35.6		0.0	7.4
Ref Time Seperate (s)	8.5	14.9		10.1	42.7		0.2	14.9	35.6		0.6	6.8
Reference Time (s)	14.9	14.9		42.7	42.7		35.6	35.6	35.6		47.2	47.2
Adj Reference Time (s)	20.9	20.9		48.7	48.7		41.6	41.6	41.6		53.2	53.2

Summary	NW SE	NE SW	Combined
Protected Option (s)	61.7	72.9	
Permitted Option (s)	157.6	233.4	
Split Option (s)	69.6	94.8	
Minimum (s)	61.7	72.9	134.6

Right Turns	SER	NWR	NER	SWR
Adj Reference Time (s)	12.0	20.2	21.9	30.2
Cross Thru Ref Time (s)	72.9	53.5	20.9	48.7
Oncoming Left Ref Time (s)	14.6	13.0	11.9	19.7
Combined (s)	99.5	86.7	54.7	98.6

Intersection Summary			
Intersection Capacity Utilization	112.2%	ICU Level of Service	H

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWT	SWR
Lane Configurations		
Volume (vph)	1199	266
Pedestrians		6
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	6.0	6.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1199	266
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.8
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	47.2	24.2
Adj Reference Time (s)	53.2	30.2
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	47.2	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	111.3	
Adj Reference Time (s)	117.3	
Split Option		
Ref Time Combined (s)	47.2	
Ref Time Seperate (s)	47.2	
Reference Time (s)	47.2	
Adj Reference Time (s)	53.2	

Summary

Movement	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT
Lane Configurations												
Volume (vph)	36	366	744	3	258	821	20	3	13	1	28	18
Pedestrians	3		3		3		3					
Ped Button		No				No						
Pedestrian Timing (s)		16.0				16.0						
Free Right			No				No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	3.7	4.9	4.0	3.7	3.7	4.9	4.0	4.1	4.1	4.1	4.1	4.1
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	36	1110	0	0	261	841	0	0	16	1	28	18
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.95	1.00	0.85	0.95	0.99	0.85	0.95	1.00
Saturated Flow (vph)	1520	2740	0	0	2952	3036	0	0	1585	1360	1520	1600
Ped Intf Time (s)	0.0	0.3	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		1.00				1.00			0.00			0.00
Protected Option Allowed		Yes				Yes			No			No
Reference Time (s)	2.8	48.9	0.0	0.0	10.6	33.3	0.0			0.1		
Adj Reference Time (s)	14.0	53.8	0.0	0.0	14.6	38.2	0.0			14.1		
Permitted Option												
Adj Saturation A (vph)	101	1370		0	98	1518		0	413		101	1600
Reference Time A (s)	42.6	48.9		0.0	159.2	33.3		0.0	4.7		33.2	1.4
Adj Saturation B (vph	NA	NA		NA	NA	NA		0	0		0	1600
Reference Time B (s)	NA	NA		NA	NA	NA		8.2	9.2		10.2	1.4
Reference Time (s)		48.9				159.2			4.7			10.2
Adj Reference Time (s)		53.8				164.1			14.1			14.3
Split Option												
Ref Time Combined (s)	2.8	48.9		0.0	10.6	33.3		0.0	1.2		2.2	1.4
Ref Time Seperate (s)	2.8	16.3		0.2	10.5	32.5		0.2	1.0		2.2	1.4
Reference Time (s)	48.9	48.9		33.3	33.3	33.3		1.2	1.2		2.2	2.2
Adj Reference Time (s)	53.8	53.8		38.2	38.2	38.2		14.1	14.1		14.1	14.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	68.4	NA	
Permitted Option (s)	164.1	14.3	
Split Option (s)	91.9	28.2	
Minimum (s)	68.4	14.3	82.7

Right Turns	NER	SWR
Adj Reference Time (s)	14.1	14.1
Cross Thru Ref Time (s)	68.4	38.2
Oncoming Left Ref Time (s)	14.1	14.1
Combined (s)	96.6	66.4

Intersection Summary			
Intersection Capacity Utilization	80.5%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	62
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.1
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	62
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	5.5
Adj Reference Time (s)	14.1
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWU	NWL	NWT
Lane Configurations												
Volume (vph)	72	2	73	186	537	108	34	987	202	1	378	304
Pedestrians							3		2		2	
Ped Button								No				No
Pedestrian Timing (s)								16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.1	4.1	4.1	4.1	4.1	4.0	3.7	4.9	4.9	3.7	3.7	4.9
Minimum Green (s)	10.0	10.0	10.0	9.9	9.9	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	74	73	0	831	0	34	987	202	0	379	355
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.98
Saturated Flow (vph)	0	1522	1360	0	1551	0	1520	3046	1360	0	1520	2981
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			6.4			0.0	2.7	38.9	18.1	0.0	29.9	14.3
Adj Reference Time (s)			14.1			0.0	14.0	43.8	23.0	0.0	33.9	19.2
Permitted Option												
Adj Saturation A (vph)	0	452		0	351		101	1523		0	101	1490
Reference Time A (s)	0.0	19.6		0.0	284.1		40.3	38.9		0.0	448.8	14.3
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		22.7	72.3		NA	NA		NA	NA	NA
Reference Time (s)		19.6			72.3			40.3				448.8
Adj Reference Time (s)		23.7			76.4			45.2				453.7
Split Option												
Ref Time Combined (s)	0.0	5.8		0.0	64.3		2.7	38.9		0.0	29.9	14.3
Ref Time Seperate (s)	5.7	0.1		14.7	41.3		2.7	38.9		0.1	29.8	12.3
Reference Time (s)	5.8	5.8		64.3	64.3		38.9	38.9		29.9	29.9	29.9
Adj Reference Time (s)	14.1	14.1		68.4	68.4		43.8	43.8		34.8	34.8	34.8

Summary	NB SB	NW SE	Combined
Protected Option (s)	NA	77.7	
Permitted Option (s)	76.4	453.7	
Split Option (s)	82.5	78.6	
Minimum (s)	76.4	77.7	154.1

Right Turns	NBR	SER
Adj Reference Time (s)	14.1	23.0
Cross Thru Ref Time (s)	77.7	68.4
Oncoming Left Ref Time (s)	68.4	33.9
Combined (s)	160.2	125.3

Intersection Summary			
Intersection Capacity Utilization	133.5%	ICU Level of Service	H

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NWR
Lane Configurations	
Volume (vph)	51
Pedestrians	3
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.4
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWU	SWL	SWT
Lane Configurations												
Volume (vph)	119	383	77	143	608	101	109	1194	64	27	124	1203
Pedestrians	14		12	12		14	12		7		7	
Ped Button		Yes			No			No				Yes
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	3.5	6.0	4.0	3.5	3.5	6.0
Minimum Green (s)	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	4.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	119	460	0	143	709	0	109	1258	0	0	151	1336
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.98	0.85	0.95	0.99	0.85	0.95	0.95	0.99
Saturated Flow (vph)	1520	2970	0	1520	2981	0	1520	3023	0	0	1520	3001
Ped Intf Time (s)	0.0	0.2	1.5	0.0	0.2	1.7	0.0	0.0	0.9	0.0	0.0	0.1
Pedestrian Frequency (%)		0.33			1.00			1.00				0.33
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	9.4	18.8	0.0	11.3	28.8	0.0	8.6	50.0	0.0	0.0	11.9	53.6
Adj Reference Time (s)	15.4	24.8	0.0	17.3	34.8	0.0	12.6	56.0	0.0	0.0	15.9	59.6
Permitted Option												
Adj Saturation A (vph)	101	1485		101	1491		101	1512		0	101	1500
Reference Time A (s)	140.9	18.8		169.3	28.8		129.1	50.0		0.0	178.8	53.6
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		140.9			169.3			129.1				178.8
Adj Reference Time (s)		146.9			175.3			135.1				184.8
Split Option												
Ref Time Combined (s)	9.4	18.8		11.3	28.8		8.6	50.0		0.0	11.9	53.6
Ref Time Seperate (s)	9.4	15.7		11.3	24.7		8.6	47.4		2.1	9.8	48.3
Reference Time (s)	18.8	18.8		28.8	28.8		50.0	50.0		53.6	53.6	53.6
Adj Reference Time (s)	24.8	24.8		34.8	34.8		56.0	56.0		59.6	59.6	59.6

Summary	NW SE	NE SW	Combined
Protected Option (s)	50.2	72.2	
Permitted Option (s)	175.3	184.8	
Split Option (s)	59.6	115.5	
Minimum (s)	50.2	72.2	122.3

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	102.0%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	133
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	5	67	373	100	2	173	723	159	13	145	1001	90
Pedestrians		16		16		16		16		14		39
Ped Button			Yes				Yes				No	
Pedestrian Timing (s)			16.0				16.0				16.0	
Free Right				No				No				No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0	4.0	4.0	6.0	6.0	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	72	373	100	0	175	723	159	0	158	1001	90
Lane Utilization Factor	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360	0	1520	3046	1360	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	1.9	0.0	0.0	0.0	1.9	0.0	0.0	0.0	4.0
Pedestrian Frequency (%)			0.41				0.41				1.00	
Protected Option Allowed			Yes				Yes				Yes	
Reference Time (s)	0.0	5.7	14.7	10.7	0.0	13.8	28.5	15.9	0.0	12.5	39.4	11.9
Adj Reference Time (s)	0.0	10.2	20.7	16.7	0.0	17.8	34.5	21.9	0.0	17.0	45.4	17.9
Permitted Option												
Adj Saturation A (vph)	0	101	1523		0	101	1523		0	101	1523	
Reference Time A (s)	0.0	85.3	14.7		0.0	207.2	28.5		0.0	187.1	39.4	
Adj Saturation B (vph	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time B (s)	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time (s)			85.3				207.2				187.1	
Adj Reference Time (s)			91.3				213.2				193.1	
Split Option												
Ref Time Combined (s)	0.0	5.7	14.7		0.0	13.8	28.5		0.0	12.5	39.4	
Ref Time Seperate (s)	0.4	5.3	14.7		0.2	13.7	28.5		1.0	11.4	39.4	
Reference Time (s)	14.7	14.7	14.7		28.5	28.5	28.5		39.4	39.4	39.4	
Adj Reference Time (s)	20.7	20.7	20.7		34.5	34.5	34.5		45.4	45.4	45.4	

Summary	EB WB	NB SB	Combined
Protected Option (s)	44.7	73.7	
Permitted Option (s)	213.2	193.1	
Split Option (s)	55.2	102.2	
Minimum (s)	44.7	73.7	118.4

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	16.7	21.9	17.9	16.0
Cross Thru Ref Time (s)	73.7	57.3	38.5	44.7
Oncoming Left Ref Time (s)	17.8	10.2	11.8	17.0
Combined (s)	108.3	89.4	68.3	77.6

Intersection Summary			
Intersection Capacity Utilization	98.7%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	24	69	1289	48
Pedestrians		39		14
Ped Button			No	
Pedestrian Timing (s)			16.0	
Free Right				No
Ideal Flow	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120
Volume Combined (vph)	0	93	1289	48
Lane Utilization Factor	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	1.7
Pedestrian Frequency (%)			1.00	
Protected Option Allowed			Yes	
Reference Time (s)	0.0	7.3	50.8	5.9
Adj Reference Time (s)	0.0	11.8	56.8	16.0
Permitted Option				
Adj Saturation A (vph)	0	101	1523	
Reference Time A (s)	0.0	110.1	50.8	
Adj Saturation B (vph	NA	NA	NA	
Reference Time B (s)	NA	NA	NA	
Reference Time (s)			110.1	
Adj Reference Time (s)			116.1	
Split Option				
Ref Time Combined (s)	0.0	7.3	50.8	
Ref Time Seperate (s)	1.9	5.4	50.8	
Reference Time (s)	50.8	50.8	50.8	
Adj Reference Time (s)	56.8	56.8	56.8	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	61	208	314	144	376	114	15	145	1001	90	24	69
Pedestrians	19		3	3		19		13		7		7
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	5.5	5.5	4.5	5.5	5.5	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	61	208	314	144	376	114	0	160	1001	90	0	93
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	0.4	0.0	0.0	2.2	0.0	0.0	0.0	0.9	0.0	0.0
Pedestrian Frequency (%)		0.10			0.47				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	4.8	15.6	28.1	11.4	28.2	12.3	0.0	12.6	39.4	8.8	0.0	7.3
Adj Reference Time (s)	9.3	21.1	33.6	15.9	33.7	17.8	0.0	17.1	45.4	16.0	0.0	11.8
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	72.2	15.6		170.5	28.2		0.0	189.5	39.4		0.0	110.1
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		72.2			170.5				189.5			
Adj Reference Time (s)		77.7			176.0				195.5			
Split Option												
Ref Time Combined (s)	4.8	15.6		11.4	28.2		0.0	12.6	39.4		0.0	7.3
Ref Time Seperate (s)	4.8	15.6		11.4	28.2		1.2	11.4	39.4		1.9	5.4
Reference Time (s)	15.6	15.6		28.2	28.2		39.4	39.4	39.4		50.8	50.8
Adj Reference Time (s)	21.1	21.1		33.7	33.7		45.4	45.4	45.4		56.8	56.8

Summary	EB WB	NB SB	Combined
Protected Option (s)	43.0	73.9	
Permitted Option (s)	176.0	195.5	
Split Option (s)	54.8	102.2	
Minimum (s)	43.0	73.9	116.9

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	33.6	17.8	16.0	16.0
Cross Thru Ref Time (s)	73.9	57.3	21.1	33.7
Oncoming Left Ref Time (s)	15.9	9.3	11.8	17.1
Combined (s)	123.4	84.4	48.9	66.8

Intersection Summary			
Intersection Capacity Utilization	102.8%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	1289	48
Pedestrians		13
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1289	48
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	1.6
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	50.8	5.8
Adj Reference Time (s)	56.8	16.0
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	50.8	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	110.1	
Adj Reference Time (s)	116.1	
Split Option		
Ref Time Combined (s)	50.8	
Ref Time Seperate (s)	50.8	
Reference Time (s)	50.8	
Adj Reference Time (s)	56.8	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	154	369	141	268	467	86	89	1265	166	2	44	1092
Pedestrians	5		15	15		5	5		8		8	
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		18.0			18.0			18.0				18.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	154	510	0	268	553	0	89	1265	166	0	46	1092
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	1.00
Saturated Flow (vph)	1520	2920	0	1520	2975	0	1520	3046	1360	0	1520	3046
Ped Intf Time (s)	0.0	0.5	1.8	0.0	0.1	0.6	0.0	0.0	1.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.39			0.15			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	12.2	21.5	0.0	21.2	22.4	0.0	7.0	49.8	15.7	0.0	3.6	43.0
Adj Reference Time (s)	16.7	26.0	0.0	25.7	26.9	0.0	11.5	54.3	22.5	0.0	9.5	47.5
Permitted Option												
Adj Saturation A (vph)	101	1460		101	1488		101	1523		0	101	1523
Reference Time A (s)	182.4	21.5		317.4	22.4		105.4	49.8		0.0	54.5	43.0
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		182.4			317.4			105.4				54.5
Adj Reference Time (s)		186.9			321.9			109.9				59.0
Split Option												
Ref Time Combined (s)	12.2	21.5		21.2	22.4		7.0	49.8		0.0	3.6	43.0
Ref Time Seperate (s)	12.2	15.7		21.2	18.9		7.0	49.8		0.2	3.5	43.0
Reference Time (s)	21.5	21.5		22.4	22.4		49.8	49.8		43.0	43.0	43.0
Adj Reference Time (s)	26.0	26.0		26.9	26.9		54.3	54.3		47.5	47.5	47.5

Summary	EB WB	NB SB	Combined
Protected Option (s)	51.6	63.8	
Permitted Option (s)	321.9	109.9	
Split Option (s)	52.9	101.8	
Minimum (s)	51.6	63.8	115.4

Right Turns	NBR	SBR
Adj Reference Time (s)	22.5	22.5
Cross Thru Ref Time (s)	26.0	26.9
Oncoming Left Ref Time (s)	9.5	11.5
Combined (s)	58.0	60.9

Intersection Summary			
Intersection Capacity Utilization	96.2%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	110
Pedestrians	5
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.5
Minimum Green (s)	5.0
Refr Cycle Length (s)	120
Volume Combined (vph)	110
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.6
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	10.3
Adj Reference Time (s)	22.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	817	269	204	1187	504	238	686	112	427	1055	107
Pedestrians	23		56	56		23	30		31	31		30
Ped Button		Yes			Yes			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	4.5	7.5	4.0	4.5	7.5	4.0
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	159	817	269	204	1187	504	238	798	0	427	1162	0
Lane Utilization Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.98	0.85	0.95	0.99	0.85
Saturated Flow (vph)	2952	3046	1360	2952	4358	1360	4428	4267	0	4428	4298	0
Ped Intf Time (s)	0.0	0.0	5.1	0.0	0.0	2.6	0.0	0.5	3.3	0.0	0.3	3.2
Pedestrian Frequency (%)		0.85			0.54			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	6.5	32.2	28.9	8.3	32.7	47.1	6.5	22.9	0.0	11.6	32.7	0.0
Adj Reference Time (s)	11.0	39.2	35.9	12.8	39.7	54.1	11.0	30.4	0.0	16.1	40.2	0.0
Permitted Option												
Adj Saturation A (vph)	98	1523		98	1453		98	1422		98	1433	
Reference Time A (s)	97.0	32.2		124.4	32.7		96.8	22.9		173.6	32.7	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		97.0			124.4			96.8			173.6	
Adj Reference Time (s)		104.0			131.4			104.3			181.1	
Split Option												
Ref Time Combined (s)	6.5	32.2		8.3	32.7		6.5	22.9		11.6	32.7	
Ref Time Seperate (s)	6.5	32.2		8.3	32.7		6.5	19.8		11.6	29.8	
Reference Time (s)	32.2	32.2		32.7	32.7		22.9	22.9		32.7	32.7	
Adj Reference Time (s)	39.2	39.2		39.7	39.7		30.4	30.4		40.2	40.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	52.0	51.2	
Permitted Option (s)	131.4	181.1	
Split Option (s)	78.9	70.7	
Minimum (s)	52.0	51.2	103.2

Right Turns	EBR	WBR
Adj Reference Time (s)	35.9	54.1
Cross Thru Ref Time (s)	40.2	30.4
Oncoming Left Ref Time (s)	12.8	11.0
Combined (s)	88.9	95.5

Intersection Summary			
Intersection Capacity Utilization	86.0%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	22	21	70	75	51	39	143	1143	149	1	63	876
Pedestrians	4					4			7		7	
Ped Button					Yes			No				
Pedestrian Timing (s)					16.0			16.0				
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5	4.5
Minimum Green (s)	6.0	6.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	113	0	0	126	39	143	1143	149	0	64	930
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	1.00	0.91
Turning Factor (vph)	0.95	0.90	0.85	0.95	0.97	0.85	0.95	1.00	0.85	0.95	0.95	0.99
Saturated Flow (vph)	0	1437	0	0	3105	1360	1520	4358	1360	0	1520	4320
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.12			1.00				0.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			0.0			4.0	11.3	31.5	14.0	0.0	5.1	25.8
Adj Reference Time (s)			0.0			15.0	16.3	37.0	19.5	0.0	9.6	30.3
Permitted Option												
Adj Saturation A (vph)	0	363		0	1245		101	1453		0	101	1440
Reference Time A (s)	0.0	37.3		0.0	12.1		169.3	31.5		0.0	75.8	25.8
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	9.7	17.4		11.0	12.9		NA	NA		NA	NA	NA
Reference Time (s)		17.4			12.1			169.3				75.8
Adj Reference Time (s)		22.4			17.1			174.8				80.3
Split Option												
Ref Time Combined (s)	0.0	9.4		0.0	4.9		11.3	31.5		0.0	5.1	25.8
Ref Time Seperate (s)	1.7	1.8		3.0	3.8		11.3	31.5		0.1	5.0	24.3
Reference Time (s)	9.4	9.4		4.9	4.9		31.5	31.5		25.8	25.8	25.8
Adj Reference Time (s)	14.4	14.4		15.0	15.0		37.0	37.0		30.3	30.3	30.3

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	46.6	
Permitted Option (s)	22.4	174.8	
Split Option (s)	29.4	67.3	
Minimum (s)	22.4	46.6	69.1

Right Turns	WBR	NBR
Adj Reference Time (s)	15.0	19.5
Cross Thru Ref Time (s)	46.5	14.4
Oncoming Left Ref Time (s)	14.4	9.6
Combined (s)	76.0	43.5

Intersection Summary			
Intersection Capacity Utilization	63.3%	ICU Level of Service	B

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	54
Pedestrians	
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.0
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	100	15	74	148	436	19	578	263	398	640	82
Pedestrians			3	3			1		2	2		1
Ped Button		Yes						No			No	
Pedestrian Timing (s)		16.0						16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	4.5	5.0	4.0	4.5	5.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	41	115	0	74	148	436	19	841	0	398	722	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.98	0.85
Saturated Flow (vph)	1520	1569	0	1520	1600	1360	1520	2903	0	1520	4284	0
Ped Intf Time (s)	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.10			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	3.2	8.8	0.0	5.8	11.1	38.5	1.5	34.8	0.0	31.4	20.2	0.0
Adj Reference Time (s)	9.0	13.8	0.0	10.8	16.1	43.5	8.5	39.8	0.0	35.9	25.2	0.0
Permitted Option												
Adj Saturation A (vph)	101	1569		101	1600		101	1452		101	1428	
Reference Time A (s)	48.6	8.8		87.6	11.1		22.5	34.8		471.3	20.2	
Adj Saturation B (vph	NA	NA		0	1600		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		13.8	11.1		NA	NA		NA	NA	
Reference Time (s)		48.6			13.8			34.8			471.3	
Adj Reference Time (s)		53.6			18.8			39.8			476.3	
Split Option												
Ref Time Combined (s)	3.2	8.8		5.8	11.1		1.5	34.8		31.4	20.2	
Ref Time Seperate (s)	3.2	7.7		5.8	11.1		1.5	24.0		31.4	17.9	
Reference Time (s)	8.8	8.8		11.1	11.1		34.8	34.8		31.4	31.4	
Adj Reference Time (s)	13.8	13.8		16.1	16.1		39.8	39.8		36.4	36.4	

Summary	EB WB	NB SB	Combined
Protected Option (s)	25.1	75.8	
Permitted Option (s)	53.6	476.3	
Split Option (s)	29.9	76.3	
Minimum (s)	25.1	75.8	100.9

Right Turns	WBR
Adj Reference Time (s)	43.5
Cross Thru Ref Time (s)	39.8
Oncoming Left Ref Time (s)	9.0
Combined (s)	92.3

Intersection Summary			
Intersection Capacity Utilization	84.1%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	531	17	106	911	109	52	383	174	136	277	74
Pedestrians	86		19	19		86	7		51	51		7
Ped Button		No			No			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.0	4.0	5.5	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	35	548	0	106	1020	0	0	609	0	0	487	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.98	0.85	0.95	0.95	0.85	0.95	0.96	0.85
Saturated Flow (vph)	1520	3032	0	1520	2998	0	0	2903	0	0	2935	0
Ped Intf Time (s)	0.0	0.1	2.2	0.0	0.7	6.6	0.0	1.4	4.8	0.0	0.1	0.9
Pedestrian Frequency (%)		1.00			1.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	2.8	21.8	0.0	8.4	41.5	0.0			0.0			0.0
Adj Reference Time (s)	12.5	27.3	0.0	13.9	47.0	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	101	1516		101	1499		0	291		0	98	
Reference Time A (s)	41.4	21.8		125.5	41.5		0.0	84.0		0.0	166.9	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		41.4			125.5			84.0			166.9	
Adj Reference Time (s)		46.9			131.0			89.0			171.9	
Split Option												
Ref Time Combined (s)	2.8	21.8		8.4	41.5		0.0	26.6		0.0	20.0	
Ref Time Seperate (s)	2.8	21.1		8.4	37.2		4.1	17.2		10.7	11.4	
Reference Time (s)	21.8	21.8		41.5	41.5		26.6	26.6		20.0	20.0	
Adj Reference Time (s)	27.3	27.3		47.0	47.0		31.6	31.6		25.0	25.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	59.5	NA	
Permitted Option (s)	131.0	171.9	
Split Option (s)	74.3	56.6	
Minimum (s)	59.5	56.6	116.1

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	96.8%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Intersection Capacity Utilization
1: S Vincent Ave & I-10 WB on- and off-ramps

8/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	791	0	217	0	1427	374	0	1024	303
Pedestrians									7			3
Ped Button								No			No	
Pedestrian Timing (s)								18.0			18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.5	4.0	4.5	4.0	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	0	791	0	217	0	1427	374	0	1024	303
Lane Utilization Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	0	0	2952	0	1360	0	4358	1360	0	4358	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.4
Pedestrian Frequency (%)		0.00			0.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	0.0	0.0	0.0	32.2	0.0	19.1	0.0	39.3	33.9	0.0	28.2	27.1
Adj Reference Time (s)	0.0	0.0	0.0	36.7	0.0	23.6	0.0	43.8	38.4	0.0	32.7	31.6
Permitted Option												
Adj Saturation A (vph)	0	0		98	0		0	1453		0	1453	
Reference Time A (s)	0.0	0.0		482.3	0.0		0.0	39.3		0.0	28.2	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	0.0	0.0		40.2	0.0		NA	NA		NA	NA	
Reference Time (s)		0.0			40.2			39.3			28.2	
Adj Reference Time (s)		8.0			44.2			43.8			32.7	
Split Option												
Ref Time Combined (s)	0.0	0.0		32.2	0.0		0.0	39.3		0.0	28.2	
Ref Time Seperate (s)	0.0	0.0		32.2	0.0		0.0	39.3		0.0	28.2	
Reference Time (s)	0.0	0.0		32.2	32.2		39.3	39.3		28.2	28.2	
Adj Reference Time (s)	0.0	0.0		36.2	36.2		43.8	43.8		32.7	32.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	36.7	43.8	
Permitted Option (s)	44.2	43.8	
Split Option (s)	36.2	76.5	
Minimum (s)	36.2	43.8	79.9

Right Turns	WBR	NBR	SBR
Adj Reference Time (s)	23.6	38.4	31.6
Cross Thru Ref Time (s)	43.8	0.0	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	67.4	38.4	31.6

Intersection Summary			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	268	0	316	0	0	0	0	1495	971	0	1873	1
Pedestrians												7
Ped Button											No	
Pedestrian Timing (s)											18.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.0	4.0	4.0	4.5	4.5	4.5	4.0	4.5	4.5
Minimum Green (s)	5.0	5.0	5.0	4.0	4.0	4.0	5.0	5.0	5.0	4.0	5.0	5.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	373	211	0	0	0	0	1819	647	0	1873	1
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	1.00	0.85	0.95	0.97	0.85	0.95	1.00	0.85
Saturated Flow (vph)	0	2955	1360	0	0	0	1520	2965	1360	0	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Pedestrian Frequency (%)		0.00			0.00			0.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			18.6			0.0	0.0	73.6	57.1	0.0	73.8	1.0
Adj Reference Time (s)			23.1			0.0	9.5	78.1	61.6	0.0	78.3	22.5
Permitted Option												
Adj Saturation A (vph)	0	250		0	0		101	1483		0	1523	
Reference Time A (s)	0.0	179.1		0.0	0.0		0.0	73.6		0.0	73.8	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	18.6	23.2		0.0	0.0		NA	NA		NA	NA	
Reference Time (s)		23.2			0.0			73.6			73.8	
Adj Reference Time (s)		27.7			8.0			78.1			78.3	
Split Option												
Ref Time Combined (s)	0.0	15.2		0.0	0.0		0.0	73.6		0.0	73.8	
Ref Time Seperate (s)	10.6	0.0		0.0	0.0		0.0	60.5		0.0	73.8	
Reference Time (s)	15.2	15.2		0.0	0.0		73.6	73.6		73.8	73.8	
Adj Reference Time (s)	19.7	19.7		0.0	0.0		78.1	78.1		78.3	78.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	87.8	
Permitted Option (s)	27.7	78.3	
Split Option (s)	19.7	156.4	
Minimum (s)	19.7	78.3	97.9

Right Turns	EBR	NBR	SBR
Adj Reference Time (s)	23.1	61.6	22.5
Cross Thru Ref Time (s)	78.3	19.7	0.0
Oncoming Left Ref Time (s)	0.0	0.0	0.0
Combined (s)	101.4	81.3	22.5

Intersection Summary			
Intersection Capacity Utilization	84.5%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	588	157	207	139	105	222	11	122	1496	89	11	306
Pedestrians			32			37						
Ped Button		Yes			Yes							
Pedestrian Timing (s)		16.0			16.0							
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.0	4.5	4.5
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	588	157	207	0	244	222	0	133	1585	0	0	317
Lane Utilization Factor	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.97	0.85	0.95	0.95	0.99	0.85	0.95	0.95
Saturated Flow (vph)	2952	1600	1360	0	3109	1360	0	2952	4322	0	0	2952
Ped Intf Time (s)	0.0	0.0	3.4	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.66			0.71				0.00			
Protected Option Allowed		No			No				Yes			
Reference Time (s)			21.7			23.4	0.0	5.4	44.0	0.0	0.0	12.9
Adj Reference Time (s)			26.2			27.9	0.0	9.9	49.0	0.0	0.0	17.4
Permitted Option												
Adj Saturation A (vph)	98	1600		0	318		0	98	1441		0	98
Reference Time A (s)	358.6	11.8		0.0	92.1		0.0	81.1	44.0		0.0	193.3
Adj Saturation B (vph	0	1600		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	31.9	11.8		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		31.9			92.1				81.1			
Adj Reference Time (s)		36.4			96.6				86.1			
Split Option												
Ref Time Combined (s)	23.9	11.8		0.0	9.4		0.0	5.4	44.0		0.0	12.9
Ref Time Seperate (s)	23.9	11.8		5.5	7.9		0.9	5.0	41.5		0.9	12.4
Reference Time (s)	23.9	23.9		9.4	9.4		44.0	44.0	44.0		35.2	35.2
Adj Reference Time (s)	28.4	28.4		13.9	13.9		49.0	49.0	49.0		40.2	40.2

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	66.4	
Permitted Option (s)	96.6	198.3	
Split Option (s)	42.3	89.2	
Minimum (s)	42.3	66.4	108.7

Right Turns	EBR	WBR	SBR
Adj Reference Time (s)	26.2	27.9	52.5
Cross Thru Ref Time (s)	50.1	66.4	13.9
Oncoming Left Ref Time (s)	13.9	28.4	9.9
Combined (s)	90.2	122.7	76.4

Intersection Summary			
Intersection Capacity Utilization	102.3%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑↑	↱
Volume (vph)	1279	522
Pedestrians		12
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	5.0	5.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1279	522
Lane Utilization Factor	0.91	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	4358	1360
Ped Intf Time (s)	0.0	1.5
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	35.2	47.5
Adj Reference Time (s)	40.2	52.5
Permitted Option		
Adj Saturation A (vph)	1453	
Reference Time A (s)	35.2	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	193.3	
Adj Reference Time (s)	198.3	
Split Option		
Ref Time Combined (s)	35.2	
Ref Time Seperate (s)	35.2	
Reference Time (s)	35.2	
Adj Reference Time (s)	40.2	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	356	514	124	22	382	283	146	997	25	22	350	984
Pedestrians						2			8			
Ped Button					Yes			No				No
Pedestrian Timing (s)					16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	4.5	6.0	4.0	5.0	5.0	6.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.0	6.0	4.0	4.0	4.0	6.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	870	124	22	382	283	146	1022	0	0	372	1244
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.91	1.00	1.00	0.97	0.91
Turning Factor (vph)	0.95	0.98	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	0.97
Saturated Flow (vph)	0	3135	1360	1520	1600	1360	2952	4342	0	0	2952	4222
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	1.0	0.0	0.0	0.3
Pedestrian Frequency (%)		0.00			0.06			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			10.9			25.2	5.9	28.3	0.0	0.0	15.1	35.7
Adj Reference Time (s)			16.4			30.7	10.4	34.3	0.0	0.0	20.1	41.7
Permitted Option												
Adj Saturation A (vph)	0	426		101	1600		98	1447		0	98	1407
Reference Time A (s)	0.0	245.2		26.1	28.6		89.0	28.3		0.0	226.8	35.7
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		245.2			28.6			89.0				226.8
Adj Reference Time (s)		250.7			34.1			95.0				232.8
Split Option												
Ref Time Combined (s)	0.0	33.3		1.7	28.6		5.9	28.3		0.0	15.1	35.7
Ref Time Seperate (s)	14.1	38.5		1.7	28.6		5.9	27.6		1.7	14.2	28.3
Reference Time (s)	38.5	38.5		28.6	28.6		28.3	28.3		35.7	35.7	35.7
Adj Reference Time (s)	44.0	44.0		34.1	34.1		34.3	34.3		41.7	41.7	41.7

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	54.4	
Permitted Option (s)	250.7	232.8	
Split Option (s)	78.2	75.9	
Minimum (s)	78.2	54.4	132.6

Right Turns	EBR	WBR
Adj Reference Time (s)	16.4	30.7
Cross Thru Ref Time (s)	41.7	54.4
Oncoming Left Ref Time (s)	34.1	44.0
Combined (s)	92.3	129.2

Intersection Summary			
Intersection Capacity Utilization	110.5%	ICU Level of Service	H

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	260
Pedestrians	12
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	1.5
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR	SWR2
Lane Configurations												
Volume (vph)	83	0	48	51	1156	0	0	1210	9	231	20	17
Pedestrians	11					3						11
Ped Button					No					Yes		
Pedestrian Timing (s)					16.0					16.0		
Free Right			No			No			No		No	No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	4.0	5.0	5.0	5.0	4.0	4.0	5.0	4.0	5.0	4.0	5.0
Minimum Green (s)	4.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	83	0	48	51	1156	0	0	1219	0	257	0	11
Lane Utilization Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	1.00	0.85	0.95	1.00	0.85	0.94	0.85	0.85
Saturated Flow (vph)	1520	0	1360	1520	3046	0	0	3043	0	2923	0	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	1.4
Pedestrian Frequency (%)		0.00			1.00			0.00		0.31		
Protected Option Allowed		No			Yes			Yes		No		
Reference Time (s)			4.2	4.0	45.5	0.0	0.0	48.1	0.0		0.0	2.4
Adj Reference Time (s)			9.2	15.0	50.5	0.0	0.0	53.1	0.0		0.0	9.0
Permitted Option												
Adj Saturation A (vph)	101	0		101	1523		0	1522		97		
Reference Time A (s)	98.3	0.0		60.4	45.5		0.0	48.1		158.2		
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA		
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA		
Reference Time (s)					60.4			48.1				
Adj Reference Time (s)					65.4			53.1				
Split Option												
Ref Time Combined (s)	6.6	0.0		4.0	45.5		0.0	48.1		10.7		
Ref Time Seperate (s)	6.6	0.0		4.0	45.5		0.0	47.7		9.6		
Reference Time (s)	6.6	6.6		45.5	45.5		48.1	48.1		10.7		
Adj Reference Time (s)	10.6	10.6		50.5	50.5		53.1	53.1		15.7		

Summary	EB	NB SB	SW	Combined
Protected Option (s)	NA	68.1	NA	
Permitted Option (s)	Err	65.4	Err	
Split Option (s)	10.6	103.6	15.7	
Minimum (s)	10.6	65.4	15.7	91.6

Right Turns	EBR	SWR2
Adj Reference Time (s)	9.2	9.0
Cross Thru Ref Time (s)	53.1	50.5
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	62.3	59.5

Intersection Summary			
Intersection Capacity Utilization	76.4%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	125	87	41	17	45	17	96	471	41	13	322	63
Pedestrians			3			3	3		4	1		3
Ped Button		Yes			No			No			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	5.0	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.0	4.0
Minimum Green (s)	6.0	6.0	6.0	6.0	6.0	4.0	8.0	8.0	8.0	8.0	8.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	212	41	0	79	0	96	471	41	0	398	0
Lane Utilization 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
Turning Factor (vph)	0.95	0.97	0.85	0.95	0.96	0.85	0.95	1.00	0.85	0.95	0.97	0.85
Saturated Flow (vph)	0	1553	1360	0	1532	0	1520	1600	1360	0	1559	0
Ped Intf Time (s)	0.0	0.0	0.4	0.0	0.1	0.4	0.0	0.0	0.5	0.0	0.1	0.4
Pedestrian Frequency (%)		0.10			1.00			1.00			0.10	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			4.0			0.0			4.1			0.0
Adj Reference Time (s)			11.0			0.0			13.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	670		0	358		151	1600		0	1064	
Reference Time A (s)	0.0	38.0		0.0	26.6		76.3	35.3		0.0	45.0	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	17.9	24.4		9.3	14.3		NA	NA		NA	NA	
Reference Time (s)		24.4			14.3			76.3			45.0	
Adj Reference Time (s)		29.4			19.3			81.3			50.0	
Split Option												
Ref Time Combined (s)	0.0	16.4		0.0	6.3		7.6	35.3		0.0	30.7	
Ref Time Seperate (s)	9.9	6.5		1.3	3.6		7.6	35.3		1.0	24.8	
Reference Time (s)	16.4	16.4		6.3	6.3		35.3	35.3		30.7	30.7	
Adj Reference Time (s)	21.4	21.4		11.3	11.3		40.3	40.3		35.7	35.7	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	29.4	81.3	
Split Option (s)	32.7	76.0	
Minimum (s)	29.4	76.0	105.4

Right Turns	SER	NER
Adj Reference Time (s)	11.0	13.0
Cross Thru Ref Time (s)	35.7	21.4
Oncoming Left Ref Time (s)	11.3	35.7
Combined (s)	58.0	70.1

Intersection Summary			
Intersection Capacity Utilization	87.8%	ICU Level of Service	E

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	16	37	25	116	43	16	38	645	145	51	432	17
Pedestrians	6		4	4		6	2		9	9		2
Ped Button		Yes			Yes			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	53	25	0	175	0	0	683	145	51	449	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1576	1360	0	1526	0	0	3038	1360	1520	3029	0
Ped Intf Time (s)	0.0	0.0	0.5	0.0	0.1	0.8	0.0	0.0	1.1	0.0	0.0	0.3
Pedestrian Frequency (%)		0.12			0.18			0.26			0.06	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			2.7			0.0			13.9			0.0
Adj Reference Time (s)			9.5			0.0			18.5			0.0
Permitted Option												
Adj Saturation A (vph)	0	1571		0	138		0	483		101	1515	
Reference Time A (s)	0.0	4.0		0.0	152.6		0.0	65.9		60.4	17.8	
Adj Saturation B (vph	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	9.3	12.0		17.2	21.8		NA	NA		NA	NA	
Reference Time (s)		4.0			21.8			65.9			60.4	
Adj Reference Time (s)		9.5			25.8			69.9			64.4	
Split Option												
Ref Time Combined (s)	0.0	4.0		0.0	13.8		0.0	27.0		4.0	17.8	
Ref Time Seperate (s)	1.3	2.8		9.2	3.4		3.0	25.4		4.0	17.1	
Reference Time (s)	4.0	4.0		13.8	13.8		27.0	27.0		17.8	17.8	
Adj Reference Time (s)	9.5	9.5		18.2	18.2		31.0	31.0		21.8	21.8	

Summary	NW SE	NE SW	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	25.8	69.9	
Split Option (s)	27.8	52.8	
Minimum (s)	25.8	52.8	78.6

Right Turns	SER	NER
Adj Reference Time (s)	9.5	18.5
Cross Thru Ref Time (s)	21.8	9.5
Oncoming Left Ref Time (s)	18.2	21.8
Combined (s)	49.5	49.8

Intersection Summary			
Intersection Capacity Utilization	65.5%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	142	821	34	15	685	125	24	410	7	167	225	102
Pedestrians	7		11	11		7	7		10	7		10
Ped Button		Yes			No			Yes			Yes	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.5	5.5	5.5	5.5	4.0
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	6.0	6.0	6.0	6.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	142	855	0	15	810	0	24	410	7	167	327	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.95	0.85
Saturated Flow (vph)	1520	3028	0	1520	2976	0	1520	3046	1360	1520	2904	0
Ped Intf Time (s)	0.0	0.1	1.4	0.0	0.1	0.9	0.0	0.0	1.2	0.0	0.4	1.2
Pedestrian Frequency (%)		0.31			1.00			0.28			0.28	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	11.2	33.9	0.0	1.2	32.8	0.0	1.9	16.2	1.9	13.2	13.9	0.0
Adj Reference Time (s)	16.7	39.4	0.0	15.5	38.3	0.0	11.5	21.7	11.5	18.7	19.4	0.0
Permitted Option												
Adj Saturation A (vph)	101	1514		101	1488		101	1523		101	1452	
Reference Time A (s)	168.2	33.9		17.8	32.8		28.4	16.2		197.8	13.9	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		168.2			32.8			28.4			197.8	
Adj Reference Time (s)		173.7			38.3			33.9			203.3	
Split Option												
Ref Time Combined (s)	11.2	33.9		1.2	32.8		1.9	16.2		13.2	13.9	
Ref Time Seperate (s)	11.2	32.6		1.2	27.8		1.9	16.2		13.2	9.7	
Reference Time (s)	33.9	33.9		32.8	32.8		16.2	16.2		13.9	13.9	
Adj Reference Time (s)	39.4	39.4		38.3	38.3		21.7	21.7		19.4	19.4	

Summary	NW SE	NE SW	Combined
Protected Option (s)	55.0	40.3	
Permitted Option (s)	173.7	203.3	
Split Option (s)	77.7	41.1	
Minimum (s)	55.0	40.3	95.3

Right Turns	NER
Adj Reference Time (s)	11.5
Cross Thru Ref Time (s)	39.4
Oncoming Left Ref Time (s)	18.7
Combined (s)	69.6

Intersection Summary			
Intersection Capacity Utilization	79.5%	ICU Level of Service	D

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEU	NEL	NET	NER	SWU	SWL
Lane Configurations												
Volume (vph)	189	521	83	133	429	106	3	150	1173	329	11	156
Pedestrians			8			16				24		
Ped Button		Yes			Yes				No			
Pedestrian Timing (s)		16.0			16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	189	521	83	133	429	106	0	153	1173	329	0	167
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	1.0	0.0	0.0	1.9	0.0	0.0	0.0	2.7	0.0	0.0
Pedestrian Frequency (%)		0.23			0.41				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	14.9	39.1	8.3	10.5	32.2	11.3	0.0	12.1	46.2	31.7	0.0	13.2
Adj Reference Time (s)	19.4	45.1	14.3	15.0	38.2	17.3	0.0	16.6	52.2	37.7	0.0	17.7
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	223.8	39.1		157.5	32.2		0.0	181.2	46.2		0.0	197.8
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		223.8			157.5				181.2			
Adj Reference Time (s)		229.8			163.5				187.2			
Split Option												
Ref Time Combined (s)	14.9	39.1		10.5	32.2		0.0	12.1	46.2		0.0	13.2
Ref Time Seperate (s)	14.9	39.1		10.5	32.2		0.2	11.8	46.2		0.9	12.3
Reference Time (s)	39.1	39.1		32.2	32.2		46.2	46.2	46.2		46.1	46.1
Adj Reference Time (s)	45.1	45.1		38.2	38.2		52.2	52.2	52.2		52.1	52.1

Summary	NW SE	NE SW	Combined
Protected Option (s)	60.1	69.9	
Permitted Option (s)	229.8	203.8	
Split Option (s)	83.3	104.3	
Minimum (s)	60.1	69.9	130.0

Right Turns	SER	NWR	NER	SWR
Adj Reference Time (s)	14.3	17.3	37.7	26.8
Cross Thru Ref Time (s)	68.7	69.9	45.1	38.2
Oncoming Left Ref Time (s)	15.0	19.4	17.7	16.6
Combined (s)	98.0	106.6	100.5	81.6

Intersection Summary			
Intersection Capacity Utilization	108.3%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWT	SWR
Lane Configurations		
Volume (vph)	1170	226
Pedestrians		7
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	6.0	6.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1170	226
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.9
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	46.1	20.8
Adj Reference Time (s)	52.1	26.8
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	46.1	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	197.8	
Adj Reference Time (s)	203.8	
Split Option		
Ref Time Combined (s)	46.1	
Ref Time Seperate (s)	46.1	
Reference Time (s)	46.1	
Adj Reference Time (s)	52.1	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	144	588	591	319	750	53	0	0	0	30	70	230
Pedestrians	7		6	6		7						
Ped Button		No			No							
Pedestrian Timing (s)		16.0			16.0							
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	3.7	4.9	4.0	3.7	4.9	4.0	4.1	4.1	4.1	4.1	4.1	4.1
Minimum Green (s)	10.0	10.0	4.0	10.0	10.0	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	144	1179	0	319	803	0	0	0	0	30	70	230
Lane Utilization Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.92	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	2817	0	2952	3016	0	0	1600	1360	1520	1600	1360
Ped Intf Time (s)	0.0	0.4	0.8	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		1.00			1.00			0.00			0.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	11.4	50.6	0.0	13.0	32.0	0.0			0.0			20.3
Adj Reference Time (s)	15.4	55.5	0.0	17.0	36.9	0.0			14.1			24.4
Permitted Option												
Adj Saturation A (vph)	101	1409		98	1508		0	1600		101	1600	
Reference Time A (s)	170.5	50.6		194.5	32.0		0.0	0.0		35.5	5.3	
Adj Saturation B (vph	NA	NA		NA	NA		0	1600		0	1600	
Reference Time B (s)	NA	NA		NA	NA		0.0	0.0		10.4	5.3	
Reference Time (s)		170.5			194.5			0.0			10.4	
Adj Reference Time (s)		175.4			199.4			14.1			14.5	
Split Option												
Ref Time Combined (s)	11.4	50.6		13.0	32.0		0.0	0.0		2.4	5.3	
Ref Time Seperate (s)	11.4	25.4		13.0	29.9		0.0	0.0		2.4	5.3	
Reference Time (s)	50.6	50.6		32.0	32.0		0.0	0.0		5.3	5.3	
Adj Reference Time (s)	55.5	55.5		36.9	36.9		0.0	0.0		14.1	14.1	

Summary	NW SE	NE SW	Combined
Protected Option (s)	72.5	NA	
Permitted Option (s)	199.4	14.5	
Split Option (s)	92.4	14.1	
Minimum (s)	72.5	14.1	86.6

Right Turns	NER	SWR
Adj Reference Time (s)	14.1	24.4
Cross Thru Ref Time (s)	0.0	36.9
Oncoming Left Ref Time (s)	0.0	0.0
Combined (s)	0.0	61.3

Intersection Summary			
Intersection Capacity Utilization	72.1%	ICU Level of Service	C

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWU	NWL	NWT
Lane Configurations												
Volume (vph)	287	17	106	137	230	103	69	1152	111	3	388	470
Pedestrians									2			
Ped Button								No				No
Pedestrian Timing (s)								16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.1	4.1	4.1	4.1	4.1	4.0	3.7	4.9	4.9	3.7	3.7	4.9
Minimum Green (s)	10.0	10.0	10.0	9.9	9.9	4.0	10.0	10.0	10.0	10.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	304	106	0	470	0	69	1152	111	0	391	553
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.95	0.98
Saturated Flow (vph)	0	1524	1360	0	1525	0	1520	3046	1360	0	1520	2978
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			1.00				1.00
Protected Option Allowed		No			No			Yes				Yes
Reference Time (s)			9.4			0.0	5.4	45.4	10.1	0.0	30.9	22.4
Adj Reference Time (s)			14.1			0.0	14.0	50.3	15.0	0.0	34.9	27.3
Permitted Option												
Adj Saturation A (vph)	0	570		0	277		101	1523		0	101	1489
Reference Time A (s)	0.0	64.0		0.0	203.4		81.7	45.4		0.0	463.0	22.4
Adj Saturation B (vph	NA	NA		0	0		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		18.8	45.0		NA	NA		NA	NA	NA
Reference Time (s)		64.0			45.0			81.7				463.0
Adj Reference Time (s)		68.1			49.1			86.6				467.9
Split Option												
Ref Time Combined (s)	0.0	23.9		0.0	37.0		5.4	45.4		0.0	30.9	22.4
Ref Time Seperate (s)	22.7	1.3		10.8	18.1		5.4	45.4		0.2	30.6	19.0
Reference Time (s)	23.9	23.9		37.0	37.0		45.4	45.4		30.9	30.9	30.9
Adj Reference Time (s)	28.0	28.0		41.1	41.1		50.3	50.3		35.8	35.8	35.8

Summary	NB SB	NW SE	Combined
Protected Option (s)	NA	85.1	
Permitted Option (s)	68.1	467.9	
Split Option (s)	69.1	86.0	
Minimum (s)	68.1	85.1	153.2

Right Turns	NBR	SER
Adj Reference Time (s)	14.1	15.0
Cross Thru Ref Time (s)	85.1	41.1
Oncoming Left Ref Time (s)	41.1	34.9
Combined (s)	140.3	90.9

Intersection Summary			
Intersection Capacity Utilization	127.7%	ICU Level of Service	H

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	NWR
Lane Configurations	
Volume (vph)	83
Pedestrians	5
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.6
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWU	SWL	SWT
Lane Configurations												
Volume (vph)	199	831	79	100	325	84	89	1393	149	54	159	1283
Pedestrians	16		10	10		16			11			
Ped Button		Yes			No			No				Yes
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	6.0	6.0	4.0	6.0	6.0	4.0	3.5	6.0	4.0	3.5	3.5	6.0
Minimum Green (s)	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	4.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	199	910	0	100	409	0	89	1542	0	0	213	1431
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.97	0.85	0.95	0.99	0.85	0.95	0.95	0.98
Saturated Flow (vph)	1520	3007	0	1520	2953	0	1520	3002	0	0	1520	2999
Ped Intf Time (s)	0.0	0.1	1.2	0.0	0.4	1.9	0.0	0.1	1.4	0.0	0.0	0.1
Pedestrian Frequency (%)		0.28			1.00			1.00				0.18
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	15.7	36.4	0.0	7.9	17.0	0.0	7.0	61.8	0.0	0.0	16.8	57.3
Adj Reference Time (s)	21.7	42.4	0.0	13.9	23.0	0.0	11.0	67.8	0.0	0.0	20.8	63.3
Permitted Option												
Adj Saturation A (vph)	101	1503		101	1476		101	1501		0	101	1500
Reference Time A (s)	235.7	36.4		118.4	17.0		105.4	61.8		0.0	252.2	57.3
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		235.7			118.4			105.4				252.2
Adj Reference Time (s)		241.7			124.4			111.4				258.2
Split Option												
Ref Time Combined (s)	15.7	36.4		7.9	17.0		7.0	61.8		0.0	16.8	57.3
Ref Time Seperate (s)	15.7	33.3		7.9	13.6		7.0	55.8		4.3	12.6	51.4
Reference Time (s)	36.4	36.4		17.0	17.0		61.8	61.8		57.3	57.3	57.3
Adj Reference Time (s)	42.4	42.4		23.0	23.0		67.8	67.8		63.3	63.3	63.3

Summary	NW SE	NE SW	Combined
Protected Option (s)	56.3	88.6	
Permitted Option (s)	241.7	258.2	
Split Option (s)	65.4	131.1	
Minimum (s)	56.3	88.6	144.9

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	120.8%	ICU Level of Service	H

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SWR
Lane Configurations	
Volume (vph)	148
Pedestrians	6
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.0
Minimum Green (s)	4.0
Refr Cycle Length (s)	120
Volume Combined (vph)	0
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	0
Ped Intf Time (s)	0.8
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	0.0
Adj Reference Time (s)	0.0
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Volume (vph)	7	171	517	183	2	133	390	93	24	90	1022	90
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right				No				No				No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0	4.0	4.0	6.0	6.0	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	6.0	6.0	4.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	178	517	183	0	135	390	93	0	114	1022	90
Lane Utilization Factor	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360	0	1520	3046	1360	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)			0.00				0.00				0.00	
Protected Option Allowed			Yes				Yes				Yes	
Reference Time (s)	0.0	14.1	20.4	16.1	0.0	10.7	15.4	8.2	0.0	9.0	40.3	7.9
Adj Reference Time (s)	0.0	18.6	26.4	22.1	0.0	14.7	21.4	14.2	0.0	13.5	46.3	16.0
Permitted Option												
Adj Saturation A (vph)	0	101	1523		0	101	1523		0	101	1523	
Reference Time A (s)	0.0	210.8	20.4		0.0	159.9	15.4		0.0	135.0	40.3	
Adj Saturation B (vph	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time B (s)	NA	NA	NA		NA	NA	NA		NA	NA	NA	
Reference Time (s)			210.8				159.9				135.0	
Adj Reference Time (s)			216.8				165.9				141.0	
Split Option												
Ref Time Combined (s)	0.0	14.1	20.4		0.0	10.7	15.4		0.0	9.0	40.3	
Ref Time Seperate (s)	0.6	13.5	20.4		0.2	10.5	15.4		1.9	7.1	40.3	
Reference Time (s)	20.4	20.4	20.4		15.4	15.4	15.4		40.3	40.3	40.3	
Adj Reference Time (s)	26.4	26.4	26.4		21.4	21.4	21.4		46.3	46.3	46.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	41.0	73.4	
Permitted Option (s)	216.8	234.6	
Split Option (s)	47.7	106.2	
Minimum (s)	41.0	73.4	114.4

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	22.1	14.2	16.0	16.0
Cross Thru Ref Time (s)	73.4	66.0	41.0	39.9
Oncoming Left Ref Time (s)	14.7	18.6	19.7	13.5
Combined (s)	110.2	98.8	76.8	69.4

Intersection Summary			
Intersection Capacity Utilization	95.4%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Volume (vph)	40	153	1369	58
Pedestrians				
Ped Button				
Pedestrian Timing (s)				
Free Right				No
Ideal Flow	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	6.0	6.0
Minimum Green (s)	4.0	4.0	10.0	10.0
Refr Cycle Length (s)	120	120	120	120
Volume Combined (vph)	0	193	1369	58
Lane Utilization Factor	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.95	1.00	0.85
Saturated Flow (vph)	0	1520	3046	1360
Ped Intf Time (s)	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)			0.00	
Protected Option Allowed			Yes	
Reference Time (s)	0.0	15.2	53.9	5.1
Adj Reference Time (s)	0.0	19.7	59.9	16.0
Permitted Option				
Adj Saturation A (vph)	0	101	1523	
Reference Time A (s)	0.0	228.6	53.9	
Adj Saturation B (vph	NA	NA	NA	
Reference Time B (s)	NA	NA	NA	
Reference Time (s)			228.6	
Adj Reference Time (s)			234.6	
Split Option				
Ref Time Combined (s)	0.0	15.2	53.9	
Ref Time Seperate (s)	3.2	12.1	53.9	
Reference Time (s)	53.9	53.9	53.9	
Adj Reference Time (s)	59.9	59.9	59.9	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Volume (vph)	111	378	318	136	188	105	25	137	1110	94	50	111
Pedestrians						11				4		
Ped Button					Yes				No			
Pedestrian Timing (s)					16.0				16.0			
Free Right			No			No				No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	5.5	5.5	4.5	5.5	5.5	4.5	4.5	6.0	6.0	4.5	4.5
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	111	378	318	136	188	105	0	162	1110	94	0	161
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.95	1.00	0.85	0.95	0.95
Saturated Flow (vph)	1520	1600	1360	1520	1600	1360	0	1520	3046	1360	0	1520
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.5	0.0	0.0
Pedestrian Frequency (%)		0.00			0.31				1.00			
Protected Option Allowed		Yes			Yes				Yes			
Reference Time (s)	8.8	28.4	28.1	10.7	14.1	10.6	0.0	12.8	43.7	8.8	0.0	12.7
Adj Reference Time (s)	13.3	33.9	33.6	15.2	19.6	16.1	0.0	17.3	49.7	16.0	0.0	17.2
Permitted Option												
Adj Saturation A (vph)	101	1600		101	1600		0	101	1523		0	101
Reference Time A (s)	131.4	28.4		161.1	14.1		0.0	191.8	43.7		0.0	190.7
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA	NA		NA	NA
Reference Time (s)		131.4			161.1				191.8			
Adj Reference Time (s)		136.9			166.6				197.8			
Split Option												
Ref Time Combined (s)	8.8	28.4		10.7	14.1		0.0	12.8	43.7		0.0	12.7
Ref Time Seperate (s)	8.8	28.4		10.7	14.1		2.0	10.8	43.7		3.9	8.8
Reference Time (s)	28.4	28.4		14.1	14.1		43.7	43.7	43.7		57.4	57.4
Adj Reference Time (s)	33.9	33.9		19.6	19.6		49.7	49.7	49.7		63.4	63.4

Summary	EB WB	NB SB	Combined
Protected Option (s)	49.1	80.7	
Permitted Option (s)	166.6	197.8	
Split Option (s)	53.5	113.1	
Minimum (s)	49.1	80.7	129.8

Right Turns	EBR	WBR	NBR	SBR
Adj Reference Time (s)	33.6	16.1	16.0	16.0
Cross Thru Ref Time (s)	80.7	66.9	33.9	19.6
Oncoming Left Ref Time (s)	15.2	13.3	17.2	17.3
Combined (s)	129.5	96.3	67.1	52.9

Intersection Summary			
Intersection Capacity Utilization	108.1%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBT	SBR
Lane Configurations	↑↑	↱
Volume (vph)	1457	51
Pedestrians		3
Ped Button	No	
Pedestrian Timing (s)	16.0	
Free Right		No
Ideal Flow	1600	1600
Lost Time (s)	6.0	6.0
Minimum Green (s)	10.0	10.0
Refr Cycle Length (s)	120	120
Volume Combined (vph)	1457	51
Lane Utilization Factor	0.95	1.00
Turning Factor (vph)	1.00	0.85
Saturated Flow (vph)	3046	1360
Ped Intf Time (s)	0.0	0.4
Pedestrian Frequency (%)	1.00	
Protected Option Allowed	Yes	
Reference Time (s)	57.4	4.9
Adj Reference Time (s)	63.4	16.0
Permitted Option		
Adj Saturation A (vph)	1523	
Reference Time A (s)	57.4	
Adj Saturation B (vph	NA	
Reference Time B (s)	NA	
Reference Time (s)	190.7	
Adj Reference Time (s)	196.7	
Split Option		
Ref Time Combined (s)	57.4	
Ref Time Seperate (s)	57.4	
Reference Time (s)	57.4	
Adj Reference Time (s)	63.4	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Volume (vph)	161	671	94	225	438	43	102	1397	215	5	55	1173
Pedestrians			7			7			9			
Ped Button		Yes			Yes			No				No
Pedestrian Timing (s)		16.0			16.0			16.0				16.0
Free Right			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	4.5	4.0	4.5	4.5	4.0	4.5	4.5	4.5	4.5	4.5	4.5
Minimum Green (s)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	10.0	10.0	4.0	4.0	10.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	161	765	0	225	481	0	102	1397	215	0	60	1173
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Turning Factor (vph)	0.95	0.98	0.85	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	1.00
Saturated Flow (vph)	1520	2990	0	1520	3006	0	1520	3046	1360	0	1520	3046
Ped Intf Time (s)	0.0	0.1	0.9	0.0	0.1	0.9	0.0	0.0	1.1	0.0	0.0	0.0
Pedestrian Frequency (%)		0.21			0.21			1.00				1.00
Protected Option Allowed		Yes			Yes			Yes				Yes
Reference Time (s)	12.7	30.8	0.0	17.8	19.3	0.0	8.1	55.0	20.1	0.0	4.7	46.2
Adj Reference Time (s)	17.2	35.3	0.0	22.3	23.8	0.0	12.6	59.5	24.6	0.0	9.2	50.7
Permitted Option												
Adj Saturation A (vph)	101	1495		101	1503		101	1523		0	101	1523
Reference Time A (s)	190.7	30.8		266.4	19.3		120.8	55.0		0.0	71.1	46.2
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	NA
Reference Time (s)		190.7			266.4			120.8				71.1
Adj Reference Time (s)		195.2			270.9			125.3				75.6
Split Option												
Ref Time Combined (s)	12.7	30.8		17.8	19.3		8.1	55.0		0.0	4.7	46.2
Ref Time Seperate (s)	12.7	27.0		17.8	17.6		8.1	55.0		0.4	4.3	46.2
Reference Time (s)	30.8	30.8		19.3	19.3		55.0	55.0		46.2	46.2	46.2
Adj Reference Time (s)	35.3	35.3		23.8	23.8		59.5	59.5		50.7	50.7	50.7

Summary	EB WB	NB SB	Combined
Protected Option (s)	57.6	68.8	
Permitted Option (s)	270.9	125.3	
Split Option (s)	59.1	110.2	
Minimum (s)	57.6	68.8	126.3

Right Turns	NBR	SBR
Adj Reference Time (s)	24.6	14.5
Cross Thru Ref Time (s)	35.3	23.8
Oncoming Left Ref Time (s)	9.2	12.6
Combined (s)	69.1	50.8

Intersection Summary			
Intersection Capacity Utilization	105.3%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	SBR
Lane Configurations	
Volume (vph)	105
Pedestrians	2
Ped Button	
Pedestrian Timing (s)	
Free Right	No
Ideal Flow	1600
Lost Time (s)	4.5
Minimum Green (s)	10.0
Refr Cycle Length (s)	120
Volume Combined (vph)	105
Lane Utilization Factor	1.00
Turning Factor (vph)	0.85
Saturated Flow (vph)	1360
Ped Intf Time (s)	0.3
Pedestrian Frequency (%)	
Protected Option Allowed	
Reference Time (s)	9.5
Adj Reference Time (s)	14.5
Permitted Option	
Adj Saturation A (vph)	
Reference Time A (s)	
Adj Saturation B (vph	
Reference Time B (s)	
Reference Time (s)	
Adj Reference Time (s)	
Split Option	
Ref Time Combined (s)	
Ref Time Seperate (s)	
Reference Time (s)	
Adj Reference Time (s)	

Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	256	997	218	237	1003	582	405	1320	74	598	881	172
Pedestrians			50			25			14			49
Ped Button		Yes			Yes			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.5	7.0	7.0	4.5	7.0	7.0	4.5	7.5	4.0	4.5	7.5	4.0
Minimum Green (s)	4.0	6.0	6.0	4.0	6.0	6.0	4.0	6.0	4.0	4.0	6.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	256	997	218	237	1003	582	405	1394	0	598	1053	0
Lane Utilization Factor	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.99	0.85	0.95	0.98	0.85
Saturated Flow (vph)	2952	3046	1360	2952	4358	1360	4428	4324	0	4428	4252	0
Ped Intf Time (s)	0.0	0.0	4.8	0.0	0.0	2.8	0.0	0.1	1.7	0.0	0.8	4.7
Pedestrian Frequency (%)		0.81			0.57			1.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	10.4	39.3	24.0	9.6	27.6	54.2	11.0	38.8	0.0	16.2	30.5	0.0
Adj Reference Time (s)	14.9	46.3	31.0	14.1	34.6	61.2	15.5	46.3	0.0	20.7	38.0	0.0
Permitted Option												
Adj Saturation A (vph)	98	1523		98	1453		98	1441		98	1417	
Reference Time A (s)	156.1	39.3		144.5	27.6		164.6	38.8		243.1	30.5	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		156.1			144.5			164.6			243.1	
Adj Reference Time (s)		163.1			151.5			172.1			250.6	
Split Option												
Ref Time Combined (s)	10.4	39.3		9.6	27.6		11.0	38.8		16.2	30.5	
Ref Time Seperate (s)	10.4	39.3		9.6	27.6		11.0	36.7		16.2	25.6	
Reference Time (s)	39.3	39.3		27.6	27.6		38.8	38.8		30.5	30.5	
Adj Reference Time (s)	46.3	46.3		34.6	34.6		46.3	46.3		38.0	38.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	60.4	67.0	
Permitted Option (s)	163.1	250.6	
Split Option (s)	80.9	84.3	
Minimum (s)	60.4	67.0	127.4

Right Turns	EBR	WBR
Adj Reference Time (s)	31.0	61.2
Cross Thru Ref Time (s)	38.0	46.3
Oncoming Left Ref Time (s)	14.1	14.9
Combined (s)	83.1	122.3

Intersection Summary			
Intersection Capacity Utilization	106.2%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	434	49	161	42	90	73	53	770	339	203	1240	53
Pedestrians						6			15			1
Ped Button					Yes			No			No	
Pedestrian Timing (s)					16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5	4.0
Minimum Green (s)	6.0	6.0	4.0	10.0	10.0	10.0	4.0	10.0	10.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	644	0	0	132	73	53	770	339	203	1293	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.93	0.85	0.95	0.98	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	0	1488	0	0	3149	1360	1520	4358	1360	1520	4332	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	1.8	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.18			1.00			1.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			0.0			7.2	4.2	21.2	31.7	16.0	35.8	0.0
Adj Reference Time (s)			0.0			15.0	9.2	26.7	37.2	20.5	40.3	0.0
Permitted Option												
Adj Saturation A (vph)	0	132		0	3140		101	1453		101	1444	
Reference Time A (s)	0.0	583.2		0.0	5.0		62.8	21.2		240.4	35.8	
Adj Saturation B (vph	0	0		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	42.3	59.9		NA	NA		NA	NA		NA	NA	
Reference Time (s)		59.9			5.0			62.8			240.4	
Adj Reference Time (s)		64.9			15.0			68.3			244.9	
Split Option												
Ref Time Combined (s)	0.0	51.9		0.0	5.0		4.2	21.2		16.0	35.8	
Ref Time Seperate (s)	34.3	4.2		1.7	6.8		4.2	21.2		16.0	34.4	
Reference Time (s)	51.9	51.9		6.8	6.8		21.2	21.2		35.8	35.8	
Adj Reference Time (s)	56.9	56.9		15.0	15.0		26.7	26.7		40.3	40.3	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	49.5	
Permitted Option (s)	64.9	244.9	
Split Option (s)	71.9	67.0	
Minimum (s)	64.9	49.5	114.4

Right Turns	WBR	NBR
Adj Reference Time (s)	15.0	37.2
Cross Thru Ref Time (s)	47.2	56.9
Oncoming Left Ref Time (s)	56.9	20.5
Combined (s)	119.2	114.7

Intersection Summary			
Intersection Capacity Utilization	99.3%	ICU Level of Service	F

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	198	14	83	65	384	13	569	251	617	658	58
Pedestrians												1
Ped Button											No	
Pedestrian Timing (s)											16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.0	5.0	4.0	5.0	5.0	5.0	4.5	5.0	4.0	4.5	5.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	10.0	4.0	4.0	10.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	65	212	0	83	65	384	13	820	0	617	716	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.91	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	1.00	0.85	0.95	0.95	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1520	1584	0	1520	1600	1360	1520	2907	0	1520	4305	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Pedestrian Frequency (%)		0.00			0.00			0.00			1.00	
Protected Option Allowed		Yes			Yes			Yes			Yes	
Reference Time (s)	5.1	16.1	0.0	6.6	4.9	33.9	1.0	33.9	0.0	48.7	20.0	0.0
Adj Reference Time (s)	10.1	21.1	0.0	11.6	9.9	38.9	8.5	38.9	0.0	53.2	25.0	0.0
Permitted Option												
Adj Saturation A (vph)	101	1584		101	1600		101	1453		101	1435	
Reference Time A (s)	77.0	16.1		98.3	4.9		15.4	33.9		730.7	20.0	
Adj Saturation B (vph	0	1584		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	13.1	16.1		NA	NA		NA	NA		NA	NA	
Reference Time (s)		16.1			98.3			33.9			730.7	
Adj Reference Time (s)		21.1			103.3			38.9			735.7	
Split Option												
Ref Time Combined (s)	5.1	16.1		6.6	4.9		1.0	33.9		48.7	20.0	
Ref Time Seperate (s)	5.1	15.0		6.6	4.9		1.0	23.5		48.7	18.4	
Reference Time (s)	16.1	16.1		6.6	6.6		33.9	33.9		48.7	48.7	
Adj Reference Time (s)	21.1	21.1		11.6	11.6		38.9	38.9		53.7	53.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	32.6	92.1	
Permitted Option (s)	103.3	735.7	
Split Option (s)	32.6	92.6	
Minimum (s)	32.6	92.1	124.7

Right Turns	WBR
Adj Reference Time (s)	38.9
Cross Thru Ref Time (s)	38.9
Oncoming Left Ref Time (s)	10.1
Combined (s)	87.9

Intersection Summary			
Intersection Capacity Utilization	103.9%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	834	65	81	521	97	55	485	128	122	498	97
Pedestrians	12		5	5		12	8		8	8		8
Ped Button		No			No			No			No	
Pedestrian Timing (s)		16.0			16.0			16.0			16.0	
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	5.5	5.5	4.0	5.5	5.5	4.0	5.5	5.0	4.0	5.5	5.0	4.0
Minimum Green (s)	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0	7.0	7.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	114	899	0	81	618	0	0	668	0	0	717	0
Lane Utilization Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	0.99	0.85	0.95	0.98	0.85	0.95	0.97	0.85	0.95	0.97	0.85
Saturated Flow (vph)	1520	3013	0	1520	2975	0	0	2947	0	0	2959	0
Ped Intf Time (s)	0.0	0.0	0.6	0.0	0.2	1.5	0.0	0.2	1.0	0.0	0.1	1.0
Pedestrian Frequency (%)		1.00			1.00			1.00			1.00	
Protected Option Allowed		Yes			Yes			No			No	
Reference Time (s)	9.0	35.8	0.0	6.4	25.2	0.0			0.0			0.0
Adj Reference Time (s)	14.5	41.3	0.0	12.5	30.7	0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	101	1507		101	1487		0	309		0	99	
Reference Time A (s)	135.0	35.8		95.9	25.2		0.0	87.1		0.0	148.6	
Adj Saturation B (vph	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time B (s)	NA	NA		NA	NA		NA	NA		NA	NA	
Reference Time (s)		135.0			95.9			87.1			148.6	
Adj Reference Time (s)		140.5			101.4			92.1			153.6	
Split Option												
Ref Time Combined (s)	9.0	35.8		6.4	25.2		0.0	27.4		0.0	29.2	
Ref Time Seperate (s)	9.0	33.3		6.4	21.2		4.3	19.9		9.6	20.2	
Reference Time (s)	35.8	35.8		25.2	25.2		27.4	27.4		29.2	29.2	
Adj Reference Time (s)	41.3	41.3		30.7	30.7		32.4	32.4		34.2	34.2	

Summary	EB WB	NB SB	Combined
Protected Option (s)	53.8	NA	
Permitted Option (s)	140.5	153.6	
Split Option (s)	72.0	66.6	
Minimum (s)	53.8	66.6	120.5

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	100.4%	ICU Level of Service	G

Reference Times and Phasing Options do not represent an optimized timing plan.