



CITY OF REDMOND

CITY HALL
411 SW 9th STREET
REDMOND, OR 97756

541.923.7710
FAX: 541.548.0706
info@ci.redmond.or.us
www.ci.redmond.or.us

CITY COUNCIL

April 28, 2020
Council Chambers • 411 SW 9th Street

COUNCIL MEMBERS

George Endicott
Mayor

Jay Patrick
Council President

Jon Bullock
Councilor

Joe Centanni
Councilor

Krisanna
Clark-Endicott
Councilor

Camden King
Councilor

Ginny McPherson
Councilor

APRIL 28, 2020

REGULAR MEETING AGENDA

6:00 PM

I. CALL TO ORDER / ESTABLISH A QUORUM

II. COMMENTS FROM CITIZENS AT THE MEETING - Anyone wishing to address the Council regarding items not on the agenda should email their comments to publictestimony@ci.redmond.or.us by 4:00 p.m. on April 28, 2020.

III. PRESENTATIONS

A. COVID-19 Update

IV. CONSENT AGENDA

A. Certified Local Government Historical Preservation Grant Acceptance for \$12,000

B. Res. #2020-03 - A resolution of the City of Redmond declaring certain items to be surplus.

V. PROCLAMATIONS

A. Fair Housing Month

VI. BID AWARDS / BID REJECTIONS

A. Juniper Golf Course Golf Cart Lease

B. Juniper Golf Course Spray Vehicle Financing

VII. PUBLIC HEARINGS

A. Ord. #2020-06 - An ordinance approving a tentative subdivision and an amendment to the Redmond Comprehensive Plan and the adopted City of Redmond Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential) for Cinder Butte Village Phase 1, located at the SE Corner of NW 10th Street and NW Upas Avenue (Deschutes County Tax Lot #151304AB00102) Redmond, OR 97756.

- B. Ord. #2020-07 - An ordinance approving a tentative subdivision, Cottage Development, Conditional Use, Variance and Modification of Approval for Cinder Butte Village Phases 2-4, located northeast of the intersection of NW 10th Street and Upas Avenue (Deschutes County Tax Lot #1413330001806), Redmond, OR 97756.

VIII. ORDINANCES

In accordance with the City of Redmond Charter, an ordinance takes effect 30 days after its enactment except when a later effective date is specified in the ordinance; when the ordinance contains an emergency clause, it takes effective immediately.

- A. Ord. #2020-03 - An ordinance granting a non-exclusive telecommunication franchise to Woden, LLC
- B. Ord. #2020-05 - An ordinance amending the Redmond City Code Chapter 9 - Building and Fire Codes, establishing local building codes.

IX. ACTION ITEMS

- A. Public Transportation Services Agreement with Central Oregon Intergovernmental Council

X. MAYOR'S COMMENTS

XI. COUNCIL COMMENTS

XII. CITY MANAGER COMMENTS

XIII. ADDITIONAL COMMENTS FROM CITIZENS AT THE MEETING - Anyone wishing to address the Council regarding items not on the agenda should email their comments to publictestimony@ci.redmond.or.us by 4:00 p.m. on April 28, 2020.

XIV. ADJOURN

Regular Council meetings are broadcast live on COTV11 – BendBroadband Channel 11 beginning at 6:00 p.m. on the 2nd and 4th Tuesdays of each month. Rebroadcasts are scheduled for the non-meeting Tuesdays at 6:00 p.m.

The City of Redmond encourages all citizens to participate in its programs and activities. This meeting location is accessible to people with disabilities. Requests for accommodation may include sign language interpreter service, assistive listening devices, materials in an alternate format or any other accommodation. If any accommodations are needed, please contact the ADA Coordinator at 541-504-3036 or access@ci.redmond.or.us. Requests should be made as soon as possible, but at least 3 business days prior to the scheduled meeting.

The City of Redmond does not discriminate on the basis of disability status in the admission or access to, or treatment, or employment in, its programs or activities



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STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Deborah McMahon, Planning Manager
FROM: Scott Woodford, Senior Planner
SUBJECT: Certified Local Government Historical Preservation Grant Acceptance for \$12,000

Addresses Council Goal:

1. Sustain Operations
- C. Explore opportunities to augment revenues to support existing operations.

Report in Brief:

This item requests City Council accept a \$12,000 Certified Local Government (CLG) Grant to fund historic preservation projects undertaken by the City's Historic Landmarks Commission (HLC). The grant is required to be matched by a City investment of an equal amount. This amount has been budgeted as Contractual Services in the Long-Range Planning sub-fund.

Background:

CLG is a federal program of the National Park Service, which is administered by the State of Oregon Historic Preservation Office (SHPO). Local governments must meet certain qualifications to become "certified" (such as having a Landmarks Commission and an historic preservation ordinance) and are thereby eligible to receive matching grants from SHPO. The City has participated in the CLG program since 2011 and has received the grant four times.

Per City policy, all grant acceptances are to be authorized by the Council prior to signing an grant agreement and/or expending any grant funds.

Discussion:

The City was recently notified by SHPO that our 2020-2021 application was approved for \$12,000 (document attached). The City will use the grant and other budgeted funds, totaling \$24,000, to hire a preservation consultant. The consultant will: update the citywide survey of all historic properties; complete the Multiple Property Document Form for the Historic Resources of Redmond; create historic building photo displays and conduct tours; and provide approved training for staff and HLC.

Fiscal Impact:

The City is required to provide a \$12,000 match coming from Contractual Services in the Long-Range Planning sub-fund.

Alternative Courses of Action:

1. Accept the grant.
2. Do not accept the grant.
3. Request more information.

Recommendation / Suggested Motion:

"I move to authorize the City Manager to accept the Certified Local Government grant award in the amount of \$12,000."

Grant Agreement

2020 Certified Local Government Grant (OR-20-14)

This Agreement is made and entered into, by and between, the State of Oregon, acting by and through Oregon Parks and Recreation Department (OPRD), Heritage Programs, hereinafter referred to as the “State” and:

City of Redmond
411 SW 9th St
Redmond, OR 97756

or designated representative, hereinafter referred to as the “Grantee.”

1. **GENERAL PURPOSE:** The general purpose of this agreement is: to undertake the heritage-related project as detailed in Attachment A.
2. **AGREEMENT PERIOD:** The effective date of this Agreement is the date on which it is fully executed by both parties. Unless otherwise terminated or extended in writing, the Project shall be completed on 8/31/2021. If project is completed before the designated completion date, this Agreement shall expire on the date final reimbursement payment is made by OPRD to Grantee. Unless otherwise terminated or extended, Grant Funds under this Agreement shall be available for Project Costs incurred on or before the Project Completion Date. No Grant Funds are available for any expenditures after the Project Completion Date.
3. **GRANT FUNDS:** The State agrees to pay the Grantee a maximum reimbursement amount of \$12,000, for costs authorized under this agreement.
4. **AGREEMENT DOCUMENTS: Included as Part of this Agreement are:**
 - Attachment A: Scope of Work
 - Attachment B: Information required by 2 CFR § 200.331(a)(1)
 - Attachment C: Standard Terms and Conditions
 - Attachment D: Reporting and Payment – Historic Preservation Fund Grants
 - Attachment E: Insurance Requirements
 - Attachment F: Grant Application

In the event of a conflict between two or more of the documents comprising this Agreement, the language in the document with the highest precedence shall control. The precedence of each of the documents is as follows, listed from highest precedence to lowest precedence: this Agreement without Attachments; Attachment A; Attachment C; Attachment D; Attachment B; Attachment F; Attachment E.

Contact Information: A change in the contact information for either party is effective upon providing written notice to the other party:

Grantee Administrator
Scott Woodford
City of Redmond
411 SW 9th St
Redmond, OR 97756
541-923-7758
Scott.Woodford@ci.redmond.or.u

Grantee Billing Contact
Scott Woodford
City of Redmond
411 SW 9th St
Redmond, OR 97756
541-923-7758
Scott.Woodford@ci.redmond.or.u

OPRD Contact
Kuri Gill
Grant and Outreach Coordinator
Oregon Heritage
Oregon Parks & Recreation Dept
725 Summer St NE, Suite C
Salem, OR 97301
(503) 986-0685
Kuri.Gill@oregon.gov

Contractor or Sub-Recipient Determination: In accordance with the State Controller's Oregon Accounting Manual, policy 30.40.00.102, OPRD's determination is that:

Recipient is a sub-recipient; OR Recipient is a contractor.

5. SIGNATURES:

In witness thereof: the parties hereto have caused this Agreement to be properly executed by their authorized representatives as of the last date hereinafter written.

GRANTEE:

Signature, Authorized Representative

Date

Name and Title of Signer (Type or Print)

STATE:

Christine Curran, Deputy State Historic Preservation Officer
OPRD Heritage Programs

Date

Attachment A -- Scope of Work

2020 Certified Local Government Grant (OR-20-14)

Grantee: City of Redmond

Grant Amount: \$12,000

Match Amount: \$12,000

Estimated Overmatch: \$0

Project Summary: Complete update of a city-wide Reconnaissance Level Survey. Complete the Multiple Property Document for the Redmond resources. Provide preservation month activities including historic building photo displays and tours. Provide approved training for staff and commissioners.

The grant funds and matching local contributions will be used to accomplish the work items detailed in the Budget and Work Description sections that follow. OPRD Heritage Programs staff must approve any changes to this Scope of Work.

PROPOSED BUDGET

1 . National Register Nominations		
Contractor/Consultant	\$9,000	
	Total	\$9,000
2 . Other Preservation Activities		
Travel	\$2,500	
	Total	\$2,500
3 . Planning - CLG		
Staff time	\$4,500	
	Total	\$4,500
4 . Public Education - CLG		
Printing, publishing, etc.	\$3,500	
	Total	\$3,500
5 . Reconnaissance Level Survey		
Contractor/Consultant	\$4,500	
	Total	\$4,500
Total Project Budget		\$24,000

WORK DESCRIPTION

1 . National Register Nominations \$9,000

Products:

Complete the Multiple Property Document for the Redmond resources.

Standards and Provisions:

Project Standards:

- The completed National Register documentation must meet the requirements set forth in National Register bulletins (especially "How to Complete the National Register Registration Form" and "How to Apply the National Register Criteria for Evaluation") and the Secretary of the Interior's Standards and Guidelines for Historic Preservation and Archaeology.
- Property selection must be approved by SHPO staff.
- Two copies of all materials shall be generated: one for the grantee and one for the SHPO.
- Any purchases or contracts for services over \$10,000 should follow appropriate

procurement procedures, including obtaining at least three estimates.

- All reports and publications related to this project must give credit to the State Historic Preservation and National Park Service.

"This publication has been funded with the assistance of a matching grant-in-aid from the Oregon State Historic Preservation Office and the Historic Preservation Fund, National Park Service, Department of the Interior. Any opinion, findings, and conclusions or recommendations expressed in this material do not necessarily reflect the views of the Department of the Interior. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination on the basis of race, color, national origin, age or handicap.

Any person who believes he or she has been discriminated against in any program, activity, or facility operated by a recipient of Federal assistance should write to: Office of Equal Opportunity, National Park Service, 1201 Eye Street, NW (2740) Washington, DC 20005"

"The activity that is the subject of this [type of publication] has been financed [in part/entirely] with Federal funds from the National Park Service, U.S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies

2 . Other Preservation Activities

\$2,500

Products:

Provide approved training for staff and commissioners.

Standards and Provisions:

Project Standards: Activities in this program area include any activity that is eligible for HPF assistance but that does not readily fall within one of the Program Areas described in the Historic Preservation Fund manual, or involves Multiple Program Areas and the activity cannot reasonably be divided among the specific Program Areas. One example is HABS/HAER documentation projects.

- Completed work must be consistent with The Secretary of the Interior's "Standards for Archeology and Historic Preservation," which include the "Standards for Preservation Planning."
- Any purchases or contracts for services over \$10,000 should follow appropriate procurement procedures, including obtaining at least three estimates.
- All reports and publications related to this project must give credit to the State Historic Preservation and National Park Service.

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Any person who believes he or she has been discriminated against in any program, activity, or facility operated by a recipient of Federal assistance should write to: Office of Equal Opportunity, National Park Service, 1201 Eye Street, NW (2740) Washington, DC 20005"

- Pictures of exhibits, programs and events are required for reimbursement. Digital images of 300dpi or higher are required.

3 . Planning - CLG

\$4,500

Products:

Develop Old Town zoning standards.

Standards and Provisions:

Project Standards:

- Eligible costs and activities include those related to local “design review” as well as to participation with the SHPO in state or federal compliance activities for properties within the local government’s boundaries.
- Activities and products must be consistent with local, state, and federal preservation standards and guidelines, including the National Register bulletin “How to Apply the National Register Criteria for Evaluation” and the Secretary of the Interior’s “Standards for Rehabilitation”.
- The grantee must maintain records of cases it reviews and the decisions it make.
- Any purchases or contracts for services over \$10,000 should follow appropriate procurement procedures, including obtaining at least three estimates.
- All reports and publications related to this project must give credit to the State Historic Preservation and National Park Service.

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"The activity that is the subject of this [type of publication] has been financed [in part/entirely] with Federal funds from the National Park Service, U.S. Department of the

4 . Public Education - CLG

\$3,500

Products:

Standards and Provisions:

Project Standards:

- Prior to starting the public education project, the grant recipient must receive written approval from Oregon Heritage on the final work plan and final draft of publications prior to printing and distribution.
- Any purchases or contracts for services over \$10,000 should follow appropriate procurement procedures, including obtaining at least three estimates.
- Prior to publication, a draft of all products, newsletters, brochures, etc. must be submitted to and approved by Oregon Heritage.
- Information in all interpretive materials must be authentic and documented.
- All reports and publications related to this project must give credit to the State Historic Preservation and National Park Service.

"This publication has been funded with the assistance of a matching grant-in-aid from the Oregon State Historic Preservation Office and the Historic Preservation Fund, National Park Service, Department of the Interior. Any opinion, findings, and conclusions or recommendations expressed in this material do not necessarily reflect the views of the Department of the Interior. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination on the basis of race, color, national origin, age or handicap. Any person who believes he or she has been discriminated against in any program, activity, or facility operated by a recipient of Federal assistance should write to: Office of Equal Opportunity, National Park Service, 1201 Eye Street, NW (2740) Washington, DC 20005"

"The activity that is the subject of this [type of publication] has been financed [in part/entirely] with Federal funds from the National Park Service, U.S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, nor does the mention of trade names or commercial

products constitute endorsement or recommendation by the Department of the Interior."

- Pictures of exhibits, programs and events are required for reimbursement. Digital images of 300dpi or higher are required.

5 . Reconnaissance Level Survey

\$4,500

Products:

Complete update of a city-wide Reconnaissance Level Survey.

Standards and Provisions:

Project Standards:

- Prior to starting the survey project, the grant recipient must receive written approval from the SHPO on the final work plan, unless the location and scope is included in the grant agreement and it is not a selective RLS.
- The survey must be conducted in accordance with the SHPO'S "Reconnaissance Level Survey Standard Operating Procedures" (current version) and the Secretary of the Interior's Standards and Guidelines for Historic Preservation and Archaeology (Federal Register, Vol. 48, No. 190, Sept. 29, 1983). Work that does not meet these standards is ineligible for reimbursement.
- Originals of all survey materials must be submitted to the SHPO. These include the survey maps, photographs, survey forms, research design, electronic data, and a final report.
- The consultant must submit two copies of all survey products, one for the grantee and one for the SHPO.
- Any purchases or contracts for services over \$10,000 should follow appropriate procurement procedures, including obtaining at least three bids.
- All reports and publications related to this project must give credit to the State Historic Preservation and National Park Service.

"This publication has been funded with the assistance of a matching grant-in-aid from the Oregon State Historic Preservation Office and the Historic Preservation Fund, National Park Service, Department of the Interior. Any opinion, findings, and conclusions or recommendations expressed in this material do not necessarily reflect the views of the Department of the Interior. Regulations of the U.S. Department of the Interior strictly prohibit unlawful discrimination on the basis of race, color, national origin, age or handicap.

Any person who believes he or she has been discriminated against in any program, activity, or facility operated by a recipient of Federal assistance should write to: Office of Equal Opportunity, National Park Service, 1201 Eye Street, NW (2740) Washington, DC 20005"20240."

"The activity that is the subject of this [type of publication] has been financed [in part/entirely] with Federal funds from the National Park Service, U.S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior, nor does the mention of trade names or commercial products constitute endorsement or recommendation by the Department of the Interior."

ATTACHMENT B
Information required by 2 CFR § 200.331(a)(1)*

Federal Award Identification:

1. Subrecipient name (which must match registered name in DUNS): City of Redmond
2. Subrecipient's DUNS number: 01-3805932
3. Federal Award: P20AF00042
4. Federal Award Date: 3/9/2020
5. Sub-award Period of Performance Start and End Date: From 4/1/2020 to 8/31/2021
6. Total Amount of Federal Funds Obligated by the Agreement: \$12,000
7. Total Amount of Federal Funds Obligated to the Subrecipient by the pass-through entity including this Agreement:
8. Total Amount of Federal Award committed to the Subrecipient by the pass-through entity:
9. Federal Award Project Description:
Complete update of a city-wide Reconnaissance Level Survey. Complete the Multiple Property Document for the Redmond resources. Provide preservation month activities including historic building photo displays and tours. Provide approved training for staff and commissioners.
10. Name of Federal awarding agency, pass-through entity, and contact information for awarding official of the pass-through entity:
 - (a) Name of Federal awarding agency: National Park Service
 - (b) Name of pass-through entity: State Parks and Recreation, Oregon
 - (c) Contact information for awarding official of pass-through entity:
*Christine Curran, Deputy State Historic Preservation Officer
State Historic Preservation Office
Oregon Parks and Recreation Department
725 Summer Street NE, Suite C
Salem, Oregon 97301*
11. CFDA Number and Name: 15-904 Historic Preservation Fund Grants in Aid
Amount: \$12,000
12. Is Award Research and Development? No
13. Indirect cost rate for the Federal award: 0%

*For the purposes of this Exhibit, the term "Subrecipient" refers to the Grantee, and the term "pass-through entity" refers to State Parks and Recreation, Oregon.

Attachment C

Standard Terms and Conditions – Historic Preservation Fund Grants

1. **Authority:** ORS 358.590 (3) authorizes the Oregon Parks and Recreation Department to award grants for heritage projects throughout Oregon.
2. **Compliance with Law:** Grantee shall comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to the Agreement or to implementation of the Project, including without limitation, 36 CFR 61.6 and Chapter 9 of the Historic Preservation Fund Grant Manual.
3. **Work Plan Approval:** Prior to commencing the project described in Attachment A, Grantee shall receive approval on a final work plan from the State.
4. **Amendments:** This Agreement may be amended only by a written amendment to the Agreement, executed by the parties. Notwithstanding any other provision to the contrary, if Grantee seeks any changes in either the Project Scope or the Project Budget (a “Project Change”) Grantee must obtain prior approval of State as specified below. The Grantee shall be fully responsible for all costs that occur outside the established Project Scope, schedule or budget and prior to State’s approval of a Project Change. State may in its sole discretion, approve or disapprove of any proposed Project Change in Project Scope or Project Budget. In the event State approves Project Change, such Change must be reduced to writing and implemented as an amendment to this Agreement. The following Project Changes must be approved by State to be eligible for funding under this Agreement:
 - a. Any significant change or reduction in the Scope of Work described in the Project Description of Attachment F (Project Application, including the Project description and project budget).
 - b. Any deviation from the original Project Budget set forth in Attachment F. Any budget change request must explain in detail what change is requested, the reason for the requested change, and any efforts that Grantor has made or will make to mitigate the effect of the proposed budget change.
5. **Employment Practices Clause:** In carrying out its responsibilities under this agreement, the Grantee shall not deny benefits to or discriminate against any person on the basis of race, religion, sex, color, national origin, family status, marital status, sexual orientation, age, creed, and source of income or mental or physical disability, and shall comply with all requirements of federal and state civil rights statutes, rules and regulations including:
 - Title VI of the Civil Rights Act of 1964 (42 USC 200d et. seq.).
 - Section 504 of the Rehabilitation Act of 1973 (20 USC 794).
 - Title IX of the Education Amendments of 1972 (20 USC 1681 et. seq.).
 - Americans with Disabilities Act of 1990 (42 USC sections 12101 to 12213).
 - ORS 659.400 to 659.460 relating to civil rights of persons with disabilities.
6. **Records Maintenance and Access; Audit:** Grantee shall document, maintain and submit records to OPRD for all Project expenses in accordance with generally accepted accounting principles, and in sufficient detail to permit OPRD to verify how Grant Funds were expended. Grantee shall ensure that each of its subgrantees and subcontractors complies with these requirements.
 - a. **Access to Records and Facilities.** OPRD, the Secretary of State of the State of Oregon (Secretary), the United States Department of the Interior, or their duly authorized representatives shall have access to the books, documents, papers and records of Grantee that are directly related to this Agreement, the funds provided hereunder, or the Project for the purpose of making audits and examinations. In addition, OPRD, the Secretary, the United States Department of the Interior and their duly authorized representatives may make and retain excerpts, copies, and transcriptions of the foregoing books, documents, papers, and records. Grantee shall permit authorized representatives of OPRD, the Secretary, or their designees to perform site reviews of the Project, and to inspect all vehicles, real

property, facilities and equipment purchased by Grantee as part of the Project, and any transportation services rendered by Grantee.

- b. **Retention of Records.** Grantee shall retain and keep accessible all books, documents, papers, and records that are directly related to this Agreement, the Grant Funds or the Project for a minimum of six (6) years, or such longer period as may be required by other provisions of this Agreement or applicable law, following expiration or termination of this Agreement. If there are unresolved audit questions at the end of the six-year period, Grantee shall retain the records until the questions are resolved.

- c. **Audit Requirements.**

- i. Grantees receiving federal funds in excess of \$750,000 in a fiscal year are subject to audit conducted in accordance with 2 CFR Part 200, Subpart F. If subject to this requirement, Grantee shall, at Grantee's own expense, submit to State, a copy of, or electronic link to, its annual audit subject to this requirement covering the funds expended under this Agreement.
 - ii. Grantee shall save, protect and hold harmless State from the cost of any audits or special investigations performed by the Secretary with respect to the funds expended under this Agreement. Grantee acknowledges and agrees that any audit costs incurred by Grantee as a result of allegations of fraud, waste or abuse are ineligible for reimbursement under this or any other agreement between Grantee and either State or State of Oregon.
- 7. **Matching Funds:** The Grantee shall contribute matching funds or the equivalent in labor, materials, or services, which are shown as eligible match in the rules, policies and guidelines for the CLG Grant Program. Volunteer labor used as a match requires a log with the name of volunteer, date volunteered, hours worked, location worked at and rate used for match to be eligible.
- 8. **Duplicate Payment.** Grantee is not entitled to compensation or any other form of duplicate, overlapping or multiple payments for the same work performed under this Agreement from any agency of the State of Oregon or the United States of America or any other party, organization or individual.
- 9. **Inspection of Equipment and Project Property:** Grantee shall permit authorized representatives of State, the Secretary, or their designees to perform site reviews of the Project, and to inspect all Equipment, real property, facilities, and other property purchased and any property on which development work was completed by Grantee as part of the Project services rendered by Grantee.
- 10. **Preservation Agreements and Covenants:** Development projects on historic properties are subject to a preservation agreement between Grantee and the State Historic Preservation Office.
- 11. **Tax Obligations:** Grantee will be responsible for any federal or state taxes applicable to payments under this Agreement.
- 12. **Contribution:** If any third party makes any claim or brings any action, suit or proceeding alleging a tort as now or hereafter defined in ORS 30.260 ("Third Party Claim") against a party (the "Notified Party") with respect to which the other party ("Other Party") may have liability, the Notified Party must promptly notify the Other Party in writing of the Third Party Claim and deliver to the Other Party a copy of the claim, process, and all legal pleadings with respect to the Third Party Claim. Either party is entitled to participate in the defense of a Third Party Claim, and to defend a Third Party Claim with counsel of its own choosing. Receipt by the Other Party of the notice and copies required in this paragraph and meaningful opportunity for the Other Party to participate in the investigation, defense and settlement of the Third Party Claim with counsel of its own choosing are conditions precedent to the Other Party's liability with respect to the Third Party Claim.

With respect to a Third Party Claim for which the State is jointly liable with the Grantee (or would be if joined in the Third Party Claim), the State shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by the Grantee in such proportion as is appropriate to reflect the relative fault of the State on the one hand and of the Grantee on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of the State on the one hand and of the Grantee on the other hand shall be determined by reference to, among other things, the parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. The State's contribution

amount in any instance is capped to the same extent it would have been capped under Oregon law if the State had sole liability in the proceeding.

With respect to a Third Party Claim for which the Grantee is jointly liable with the State (or would be if joined in the Third Party Claim), the Grantee shall contribute to the amount of expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred and paid or payable by the State in such proportion as is appropriate to reflect the relative fault of the Grantee on the one hand and of the State on the other hand in connection with the events which resulted in such expenses, judgments, fines or settlement amounts, as well as any other relevant equitable considerations. The relative fault of the Grantee on the one hand and of the State on the other hand shall be determined by reference to, among other things, the parties' relative intent, knowledge, access to information and opportunity to correct or prevent the circumstances resulting in such expenses, judgments, fines or settlement amounts. The Grantee's contribution amount in any instance is capped to the same extent it would have been capped under Oregon law if it had sole liability in the proceeding.

Grantee shall take all reasonable steps to cause its contractor(s) that are not units of local government as defined in ORS 190.003, if any, to indemnify, defend, save and hold harmless the State of Oregon and its officers, employees and agents ("Indemnitee") from and against any and all claims, actions, liabilities, damages, losses, or expenses (including attorneys' fees) arising from a tort (as now or hereafter defined in ORS 30.260) caused, or alleged to be caused, in whole or in part, by the negligent or willful acts or omissions of Grantee's contractor or any of the officers, agents, employees or subcontractors of the contractor ("Claims"). It is the specific intention of the parties that the Indemnitee shall, in all instances, except for Claims arising solely from the negligent or willful acts or omissions of the Indemnitee, be indemnified by the contractor from and against any and all Claims.

13. **Governing Law:** The laws of the State of Oregon (without giving effect to its conflicts of law principles) govern all matters arising out of or relating to this Agreement, including, without limitation, its validity, interpretation, construction, performance, and enforcement. Any party bringing a legal action or proceeding against any other party arising out of or relating to this Agreement shall bring the legal action or proceeding in the Circuit Court of the State of Oregon for Marion County. Each party hereby consents to the exclusive jurisdiction of such court, waives any objection to venue, and waives any claim that such forum is an inconvenient forum. In no event shall this section be construed as a waiver by the State of Oregon of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the eleventh amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court.
14. **Condition for Disbursement:** Disbursement of grant funds by OPRD is contingent upon the following:
 - a. OPRD having received sufficient funding, appropriations, limitations, allotments, or other expenditure authority sufficient to allow OPRD, in the exercise of its reasonable administrative discretion, to make the disbursement;
 - b. Grantee's compliance with the terms of this Agreement, including all Attachments; and
 - c. Grantee's representations and warranties set forth in Section 15 hereof are true and correct on the date of disbursement with the same effect as though made on the date of disbursement.
15. **Repayment:** In the event that the Grantee spends Grant Funds in any way prohibited by state or federal law, or for any purpose other than the completion of the Project, the Grantee shall reimburse the State for all such unlawfully or improperly expended funds. Such payment shall be made within 15 days of demand by the State. Any funds disbursed to Grantee under this Agreement that remain unexpended on the earlier of termination or expiration of this Agreement must be returned to State. Grantee shall return all such unexpended funds to State within 14 days after the earlier of expiration or termination of this agreement.
16. **Independent Contractor.** Grantee shall perform the Project as an independent contractor and not as an agent or employee of OPRD. Grantee has no right or authority to incur or create any obligation for or legally bind OPRD in any way. OPRD cannot and will not control the means or manner by which Grantee performs the Project, except as specifically set forth in this Agreement. Grantee is responsible for determining the appropriate means and manner of performing the Project. Grantee acknowledges and agrees that Grantee is not an "officer", "employee", or "agent" of OPRD, as those terms are used in ORS 30.265, and shall not make

representations to third parties to the contrary.

17. **Representations and Warranties of Grantee.** Grantee represents and warrants to State as follows:

- a. **Organization and Authority.** Grantee is duly organized and validly existing under the laws of the State of Oregon and is eligible to receive the Grant Funds. Grantee has full power, authority, and legal right to make this Agreement and to incur and perform its obligations hereunder, and the making and performance by Grantee of this Agreement (1) have been duly authorized by all necessary action of Grantee and (2) do not and will not violate any provision of any applicable law, rule, regulation, or order of any court, regulatory commission, board, or other administrative agency or any provision of Grantee's Articles of Incorporation or Bylaws, if applicable, (3) do not and will not result in the breach of, or constitute a default or require any consent under any other agreement or instrument to which Grantee is a party or by which Grantee or any of its properties may be bound or affected. No authorization, consent, license, approval of, filing or registration with or notification to any governmental body or regulatory or supervisory authority is required for the execution, delivery or performance by Grantee of this Agreement.
- b. **Binding Obligation.** This Agreement has been duly executed and delivered by Grantee and constitutes a legal, valid and binding obligation of Grantee, enforceable in accordance with its terms subject to the laws of bankruptcy, insolvency, or other similar laws affecting the enforcement of creditors' rights generally.
- c. **No Solicitation.** Grantee's officers, employees, and agents shall neither solicit nor accept gratuities, favors, or any item of monetary value from contractors, potential contractors, or parties to subagreements. No member or delegate to the Congress of the United States or State of Oregon employee shall be admitted to any share or part of this Agreement or any benefit arising therefrom.
- d. **No Debarment.** Neither Grantee nor its principals is presently debarred, suspended, or voluntarily excluded from this federally-assisted transaction, or proposed for debarment, declared ineligible or voluntarily excluded from participating in this Agreement by any state or federal agency. Grantee agrees to notify State immediately if it is debarred, suspended or otherwise excluded from this federally-assisted transaction for any reason or if circumstances change that may affect this status, including without limitation upon any relevant indictments or convictions of crimes.

The warranties set in this section are in addition to, and not in lieu of, any other warranties set forth in this Agreement, including all Attachments, or implied by law.

18. **Responsibility for Grant Funds:** Any Grantee of Grant Funds, pursuant to this Agreement with State, shall assume sole liability for that Grantee's breach of the conditions of this Agreement, and shall, upon Grantee's breach of conditions that requires State to return funds to the federal government, hold harmless and indemnify State for an amount equal to the funds received under this Agreement; or if legal limitations apply to the indemnification ability of the Grantee of Grant Funds, the indemnification amount shall be the maximum amount of funds available for expenditure, including any available contingency funds or other available non-appropriated funds, up to the amount received under this Agreement.
19. **Termination:** This contract may be terminated by mutual consent of both parties, or by either party upon a 30-day notice in writing, delivered by certified mail or in person to the other party's contact identified in the Agreement. On termination of this contract, all accounts and payments will be processed according to the financial arrangements set forth herein for approved services rendered to date of termination. Full credit shall be allowed for reimbursable expenses and the non-cancelable obligations properly incurred up to the effective date of the termination.
20. **Entire Agreement:** This Agreement, including all Attachments, constitutes the entire Agreement between the parties. No waiver, consent, modification or change of terms of this Agreement shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, Agreements, or representations, oral or written, not specified herein regarding this Agreement. The delay or failure of either Party to enforce any provision of this Agreement shall not constitute a waiver by that Party of that or any other

provision. The Grantee, by signature of its authorized representative on the Agreement, acknowledges that the Grantee has read this Agreement, understands it, and agrees to be bound by its terms and conditions.

21. **Notices:** Except as otherwise expressly provided in this Agreement, any communications between the parties hereto or notices to be given hereunder shall be given in writing by personal delivery, facsimile, email, or mailing the same, postage prepaid, to Grantee contact or State contact at the address or number set forth in this Agreement, or to such other addresses or numbers as either party may hereinafter indicate. Any communication or notice delivered by facsimile shall be deemed to be given when receipt of the transmission is generated by the transmitting machine, and to be effective against State, such facsimile transmission must be confirmed by telephone notice to State Contact. Any communication by email shall be deemed to be given when the recipient of the email acknowledges receipt of the email. Any communication or notice mailed shall be deemed to be given when received, or five days after mailing.
22. **Counterparts:** This agreement may be executed in two or more counterparts (by facsimile or otherwise), each of which is an original and all of which together are deemed one agreement binding on all parties, notwithstanding that all parties are not signatories to the same counterpart.
23. **Severability:** If any term or provision of this agreement is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if this Agreement did not contain the particular term or provision held to be invalid.
24. **Super Circular Requirements.** Grantee will comply with 2 CFR Part 200, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, including but not limited to the following:
 - a. Property Standards. 2 CFR 200.313, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, which generally describes the required maintenance, documentation, and allowed disposition of equipment purchased with federal funds.
 - b. Procurement Standards. When procuring goods or services (including professional consulting services), applicable state procurement regulations found in the Oregon Public Contracting Code, ORS chapters 279A, 279B and 279C or 2 CFR §§ 200.318 through 200.326, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, as applicable.
 - c. Contract Provisions. The contract provisions listed in 2 CFR Part 200, Appendix II, or the equivalent applicable provision adopted by the awarding federal agency in 2 CFR Subtitle B, that are hereby incorporated into this Exhibit. These are, to the extent applicable, obligations of Contractor, and Contractor shall also include these contract provisions in its contracts with non-Federal entities.

Attachment D

Reporting and Payment – Historic Preservation Fund Grants

1. **Grant Payments / Reimbursements:** Grant funds are awarded by the State and paid on a reimbursement basis, and only for the Project described in this Agreement; Attachment A, Scope of Work; and the original Application included as Attachment F. The source of the Grant funds is the United States Department of the Interior, National Park Service. To request reimbursement, Grantee shall use OPRD's online grant management system accessible at oprdrgrants.org. The request for reimbursement shall include documentation of all project expenses plus documentation confirming project invoices have been paid by Grantee. Grantee may request reimbursement as often as quarterly for costs accrued to date. A progress report submitted to OPRD's online grant management system is required with each reimbursement request. The Grant Funds shall be used solely for the Project described in Attachments A and F and shall not be used for any other purpose. No Grant Funds will be disbursed for any changes to the Project unless such changes are approved by State by amendment pursuant to the terms of this Agreement.
 2. **State Fiscal Year-End Request for Reimbursement:** Grantee must submit a Progress Report and a Reimbursement Request to OPRD for all Project expenses including matching expenses, if any, accrued up to June 30, of each state fiscal year. The State Fiscal Year-End Reimbursement Request must be submitted to OPRD by July 15th of each year.
 3. **Reimbursement Terms:** The total estimated project cost is included in the grant agreement. Subject to and in accordance with the terms and conditions of this Agreement, OPRD shall provide Grant Funds to Grantee for the project in an amount not to exceed the amount awarded in the grant agreement, whichever is less, for eligible costs of work completed. Grantee shall accept the Grant Funds and provide Match Funds for the Project as required by the grant.
 4. **Progress Reports:** The Grantee shall report to OPRD regarding the status and progress of the project as follows:

For the year one period beginning April 1, ending June 30, 2020:	report is due July 15, 2020
For the year one/two period beginning July 1, ending June 30, 2021:	report is due July 15, 2021
For the year two period beginning July 1, ending August 31, 2021:	report is due September 15, 2021
- Progress Reports shall be submitted using OPRD's online grant management system accessible at oprdrgrants.org.
5. **Retention:** OPRD shall disburse up to 90 percent of the Grant Funds to Grantee on a cost reimbursement basis upon approval of invoices submitted to OPRD. OPRD will disburse the final 10 percent of the Grant Funds upon approval by OPRD of the completed Project and Final Report.
 6. **Final Report:** Grantee must submit a Final Progress Report, a Final Reimbursement Request and digital pictures of the completed project to OPRD within 45 days of the Project Completion Date or the required deadlines, whichever is first. OPRD may, at its sole discretion, conduct appropriate inspections of the Project within a reasonable time following submission of the Final Report. Grantee shall assist OPRD and cooperate fully to the satisfaction of OPRD with all inspections that OPRD conducts.

ATTACHMENT E

Insurance Requirements

GENERAL.

Grantee shall require in its first tier contracts (for the performance of work on the Project) with entities that are not units of local government as defined in ORS 190.003, if any, to: i) obtain insurance specified under TYPES AND AMOUNTS and meeting the requirements under ADDITIONAL INSURED, “TAIL” COVERAGE, NOTICE OF CANCELLATION OR CHANGE, and CERTIFICATES OF INSURANCE before performance under the contract commencing 3/31/2020, and ii) maintain the insurance in full force throughout the duration of the contract. The insurance must be provided by insurance companies or entities that are authorized to transact the business of insurance and issue coverage in the State of Oregon and that are acceptable to the Oregon Parks and Recreation Department (“OPRD”). Grantee shall not authorize work to begin under contracts until the insurance is in full force. Thereafter, Grantee shall monitor continued compliance with the insurance requirements on an annual or more frequent basis. Grantee shall incorporate appropriate provisions in the contracts permitting it to enforce compliance with the insurance requirements and shall take all reasonable steps to enforce such compliance. In no event shall Grantee permit work under a contract when Grantee is aware that the contractor is not in compliance with the insurance requirements. As used in this section, “first tier” means a contract in which the Grantee is a party.

TYPES AND AMOUNTS.

i. **WORKERS COMPENSATION.** Insurance in compliance with ORS 656.017, which requires all employers that employ subject workers, as defined in ORS 656.027, to provide workers’ compensation coverage for those workers, unless they meet the requirement for an exemption under ORS 656.126(2). Employers liability insurance with coverage limits of not less than \$500,000 must be included.

ii. **COMMERCIAL GENERAL LIABILITY.**

Commercial General Liability Insurance covering bodily injury, death, and property damage in a form and with coverages that are satisfactory to OPRD. This insurance shall include personal injury liability, products and completed operations. Coverage shall be written on an occurrence form basis, with not less than the following coverage amounts:

Bodily Injury, Death and Property Damage:

\$1,000,000 per occurrence (for all claimants for claims arising out of a single accident or occurrence).

iii. **AUTOMOBILE Liability Insurance:** Automobile Liability.

Automobile Liability Insurance covering all owned, non-owned and hired vehicles. This coverage may be written in combination with the Commercial General Liability Insurance (with separate limits for “Commercial General Liability” and “Automobile Liability”). Automobile Liability Insurance must be in not less than the following amounts:

Bodily Injury, Death and Property Damage:

\$1,000,000 per occurrence (for all claimants for claims arising out of a single accident or occurrence).

ADDITIONAL INSURED. The Commercial General Liability Insurance and Automobile Liability insurance must include the State of Oregon, OPRD, its officers, employees and agents as Additional Insureds but only with respect to the activities to be performed under the contract. Coverage must be primary and non-contributory with any other insurance and self-insurance.

“TAIL” COVERAGE. If any of the required insurance policies is on a “claims made” basis, such as professional liability insurance, either “tail” coverage or continuous “claims made” liability coverage must be maintained, provided the effective date of the continuous “claims made” coverage is on or before the effective date of the contract, for a minimum of 24 months following the later of : (i) the contractor’s completion and

Grantee's acceptance of all services required under the subagreement or, (ii) the expiration of all warranty periods provided under the contract. Notwithstanding the foregoing 24-month requirement, if the contractor elects to maintain "tail" coverage and if the maximum time period "tail" coverage reasonably available in the marketplace is less than the 24-month period described above, then the contractor may request and OPRD may grant approval of the maximum "tail" coverage period reasonably available in the marketplace. If OPRD approval is granted, the contractor shall maintain "tail" coverage for the maximum time period that "tail" coverage is reasonably available in the marketplace.

NOTICE OF CANCELLATION OR CHANGE. The contractor or its insurer must provide 30 days' written notice to Grantee before cancellation of, material change to, potential exhaustion of aggregate limits of, or non-renewal of the required insurance coverage(s).

CERTIFICATE(S) OF INSURANCE. Grantee shall obtain from the contractor a certificate(s) of insurance for all required insurance before the contractor performs under the contract. The certificate(s) or an attached endorsement must specify: i) all entities and individuals who are endorsed on the policy as Additional Insured and ii) for insurance on a "claims made" basis, the extended reporting period applicable to "tail" or continuous "claims made" coverage.



CITY OF REDMOND

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STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: Dave Tarbet, Police Chief
Devin Lewis, Police Captain
FROM: Jesse Petersen, Lieutenant
SUBJECT: Res. #2020-03 - A resolution of the City of Redmond declaring certain items to be surplus.

Addresses Council Goal:

Sustain Operations: Provide critical and necessary services for the entire city.

Report in Brief:

This item seeks City Council authorization to surplus a 2008 Ford Crown Victoria. Since the value of the vehicle (estimated to be \$2,500) is greater than \$1,000 it requires Council approval.

Background:

In 2008, the Police Department purchased a 2008 Ford Crown Victoria for use as a patrol vehicle. The vehicle has been designated as a spare vehicle since 2018.

Discussion:

Spare patrol vehicles with lower mileage have been identified. The vehicle has more than 108,000 miles and has reached the end of its service life as a patrol vehicle. It will be auctioned off through the City's usual process.

The vehicle is described as a white, 2008 Ford Crown Victoria, VIN#2FAHP71V98X139760, City Asset #2804.

Fiscal Impact:

There is no direct cost to the City through this action.

Alternative Courses of Action:

1. Accept / approve said item
2. Do not accept / approve said item
3. Take No Action and Request more information

Recommendation / Suggested Motion:

"I move to accept Res. #2020-03."

**CITY OF REDMOND
RESOLUTION NO. 2020-03**

A RESOLUTION OF THE CITY OF REDMOND DECLARING CERTAIN CITY PROPERTY TO BE SURPLUS.

WHEREAS, certain property of the City of Redmond is beyond its service life, and

WHEREAS, certain City of Redmond property needs to be disposed of accordingly.

THEREFORE, be it resolved that such City of Redmond Property listed below shall be declared surplus and disposed of in the most judicious manner.

- One (1) 2008 Ford Crown Victoria, VIN #2FAHP71V98X139760, asset number 2804

SECTION ONE. The City Council finds that it is in the best interest of the City to enact this resolution immediately upon passage of this resolution; and therefore, this resolution shall be effective upon the date of passage.

ADOPTED by the City Council and **SIGNED** by the Mayor this 28th day of April 2020.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

City of Redmond PROCLAMATION

A proclamation designating April 2020, as

FAIR HOUSING MONTH

WHEREAS, The Fair Housing Act, enacted on April 11, 1968, enshrined into federal law the goal of eliminating racial segregation and ending housing discrimination in the United States; and

WHEREAS, The Fair Housing Act prohibits discrimination in housing based on race, color, religion, sex, familial status, national origin, and disability, and commits recipients of federal funding to affirmatively further fair housing in their communities; and

WHEREAS, the City of Redmond is committed to the mission and intent of Congress to provide fair and equal housing opportunities for all; and

WHEREAS, Our social fabric, the economy, health, and environment are strengthened in diverse, inclusive communities; and

WHEREAS, More than fifty years after the passage of the Fair Housing Act, discrimination persists, and many communities remain segregated; and

WHEREAS, Acts of housing discrimination and barriers to equal housing opportunity are repugnant to a common sense of decency and fairness.

NOW, THEREFORE BE IT RESOLVED THAT the City Council hereby proclaims April 2020, to be **FAIR HOUSING MONTH** in Redmond as an inclusive community committed to fair housing, and to promoting appropriate activities by private and public entities to provide and advocate for equal housing opportunities for all residents and prospective residents of Redmond.

APPROVED by the City Council and **SIGNED** by the Mayor this 28th day of April 2020.

The City of Redmond, Oregon

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder



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STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
THROUGH: Jason Neff, Chief Financial Officer
Keith Witcosky, City Manager
FROM: Annie McVay, Parks Division Manager
SUBJECT: Juniper Golf Course Golf Cart Lease

Addresses Council Goal:

3 A. Endeavor to adequately maintain the City's roads, utility infrastructure parks and pedestrian/bicycle infrastructure.

Report in Brief:

This item requests City Council approve a 48-month lease agreement with Yamaha Golf Company for a fleet of golf carts for an amount of \$220,920.00 for Juniper Golf Course.

Background:

The City owned Juniper Golf Course is managed by CourseCo, Inc. As outlined in the management agreement, CourseCo shall procure by lease and maintain in good condition power-driven golf carts in sufficient numbers to meet the public demand. The existing 48-month golf cart lease has expired and a new fleet is needed. The 48-month term factors in battery life, warranty, and mechanical issues associated with golf carts. 48-months is the industry standard length of lease for this kind of equipment.

Discussion:

This City advertised a golf cart lease request for proposals. The lease includes 50 new year-round carts, 15 seasonal carts and one range picker. The following proposals were received:

Company	Lease Payment per Month	Total Lease Payment
Yamaha Golf Car Company	\$4,602.50	\$220,920.00
Pacific Gold and Turf/ E-Z-Go	\$5,025.00	\$241,200.00
Perfect Drive Golf & Utility Vehicles	\$6,917.31	\$301,888.32

The City selected Yamaha Golf Car Company.

Fiscal Impact:

The approved FY 19/20 Budget for Juniper Golf Course contains \$50,580 for Equipment/Vehicle Lease and \$55,964 in FY 20/21. The \$4,602.50 monthly lease payment is within the approved budget amounts for Juniper Golf Course. The money has also been planned for years three and four of the lease payment schedule.

Alternative Courses of Action:

1. Approve the lease.
2. Reject the lease.
3. Request more information.

Recommendation / Suggested Motion:

"I move to authorize the City Manager enter into a 48-month lease with Yamaha Golf Car Company in the amount of \$220,920."



Juniper Golf Course

Golf Cart Lease

City Council meeting
April 28, 2020



Why/what

- **Management Agreement with Courseco** - CourseCo shall procure by lease and maintain in good condition power-driven golf carts in sufficient numbers to meet the public demand
- The current golf cart lease reached expiration and new fleet is needed
- Determined that a 48 month lease typically most economical based on life cycle costs





Request for Proposal s

City advertised a request for proposals:

Company	Lease Payment per Month	Total Lease Payment
Yamaha Golf Car Company	\$4,602.50	\$220,920.00
Pacific Gold and Turf/ E-Z-Go	\$5,025.00	\$241,200.00
Perfect Drive Golf & Utility Vehicles	\$6,917.31	\$301,888.32

- City selected Yamaha Golf Car Company
- City is seeking to enter into a 48 month lease for 50 year rounds carts, 15 seasonal carts and a range picker
- Monthly Lease of \$4,602.50 and total lease



Questions?



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STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
THROUGH: Jason Neff, Chief Financial Officer
Keith Witcosky, City Manager
FROM: Annie McVay, Parks Division Manager
SUBJECT: Juniper Golf Course Spray Vehicle Financing

Addresses Council Goal:

3 A. Endeavor to adequately maintain the City's roads, utility infrastructure, parks and pedestrian/bicycle infrastructure.

Report in Brief:

This action requests City Council authorization to enter into a financing arrangement with US Bank for a sprayer vehicle from RMT in the amount of \$49,990 for Juniper Golf Course.

Background:

The City owned Juniper Golf Course is managed by CourseCo Inc. Maintenance of the Course requires regular applications of fertilizer and pesticide. These occur more than 70 times a season. The equipment used to apply these substances is nearly 20 years old, and more 4800 use hours, and has reached obsolescence. Several replacement models were researched by staff to determine the best option.

Discussion:

CourseCo obtained three bids for the sprayer and attachments (see table below). RMT provided the lowest bid.

	Purchase Price
TurfStar	\$52,376
John Deere	\$54,845
RMT	\$49,990

Fiscal Impact:

The purchase price of the sprayer is \$49,990. The City will acquire the sprayer from RMT then enter into a financing arrangement with US Bank for 60 months at an interest rate of 2.8% with a payment of just under \$900 a month. The rate offered by US Bank is much lower than the interest rate offered by the manufacturer.

The approved FY 19/20 Budget for Juniper Golf Course contains \$27,924 for Course Maintenance - Equipment/Vehicle Lease and \$30,228 in FY 20/21. The monthly payment is within the approved budget amounts for Juniper Golf Course.

Alternative Courses of Action:

1. Authorize the purchase of the sprayer and financing lease.
2. Request additional information.
3. Reject the purchase.

Recommendation / Suggested Motion:

I move to authorize the City Manager to enter into a financing arrangement with US Bank for a sprayer vehicle from RMT in the amount of \$49,990.



JUNIPER GOLF COURSE SPRAY VEHICLE PURCHASE/FINANCING

REDMOND CITY COUNCIL APRIL 28, 2020



WHY/WHAT

- COURSE MAINTENANCE REQUIRES CONTINUAL FERTILIZER AND PESTICIDE APPLICATIONS
- APPLICATION FREQUENCY: MORE THAN 70 TIMES A SEASON
- EXISTING EQUIPMENT: 19 YEARS OLD AND OVER 4,800 HOURS OF USE
- RE-USE OF OLD SPRAYER: WILL BE CONVERTED TO A SWEEPER





PURCHASE AND FINANCING

THREE BIDS OBTAINED:

Manufacturer	Purchase Price
TurfStar	\$52,376
John Deere	\$54,845
RMT	\$49,990

- ACQUISITION COST: \$49,990
- FINANCING ARRANGEMENT:
 - THROUGH US BANK
 - INTEREST RATE 2.8%
 - MONTHLY PAYMENT AROUND \$900/MONTH



QUESTIONS?



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STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Deborah McMahon, Planning Manager
FROM: Scott Woodford, Senior Planner
SUBJECT: Ord. #2020-06 - An ordinance approving a tentative subdivision and an amendment to the Redmond Comprehensive Plan and the adopted City of Redmond Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential) for Cinder Butte Village Phase 1, located at the SE Corner of NW 10th Street and NW Upas Avenue (Deschutes County Tax Lot #151304AB00102) Redmond, OR 97756.

Addresses Council Goal:

7. COMPREHENSIVE PLANNING: Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining its unique character.
- A. Promote quality development.
 - B. Support orderly annexation from Urban Growth Boundary.

Report in Brief:

This item requests City Council approve a Tentative 16-Lot Subdivision and Zoning Map and Comprehensive Plan Amendment to rezone a property from the R-3 (Limited Residential) to R-4 (General Residential) zone district.

Background:

The subject property is 3.97 acres and located directly across from the Tom McCall Elementary School; situated at the southeast corner of the NW Upas Avenue and NW 10th Street intersection (locator map attached).

The property is part of the Highway Area Plan adopted in 2007 intended to guide future development that is brought into the Urban Growth Boundary. The Plan recommends a variety of land uses within its boundary, including medium and high density residential, mixed use neighborhood, service commercial, open space and civic uses. The Plan designates the subject property as future R-4 zoned land (Highway Area Plan Land Use Map attached).

Discussion:

The applicant, Hayden Homes, proposes to subdivide the property into sixteen (16) individual lots, each a minimum of 6,000 square feet in size, accessed via a cul de sac off of an improved NW Upas Avenue (Project Plans/Site Plan attached as Exhibit C to Ordinance). The lots are intended for single family residences.

To accommodate the proposed lot sizes, and be in conformance with the Highway Area Plan, the applicant proposes to rezone the property from R-3 (Limited Residential) to R-4 (General Residential). The rezone would allow an increase in density of approximately five lots by reducing the minimum lot size from 7,500 square feet to 6,000 square feet.

NW Upas Avenue and NW 10th Streets, along the subject property frontage, will be designated as a Major Collector. The streets will be required to be improved and conform to related standards (i.e., pavement, widening, right-of-way, turn lanes, curb, sidewalk and storm drainage requirements).

With the subdivision, the applicant will be required to improve the street and cul de sac per Minor Collector standards. The standards require new pavement, widening, curb and sidewalks on the east side and storm drainage along property frontage.

To facilitate access to the neighboring schools, a sidewalk connection is provided at the end of the cul de sac (NW Upas

Place).

All the lots with the subdivision will be connected to City water and sewer, which are available.

Conditions have been added to the approval to ensure all the appropriate road, access, water and sewer improvements and dedications are completed (Exhibit A of Attachment A in Ordinance 2020-06).

Staff has reviewed the applicant's 'burden of proof' and finds that the proposal complies with all required findings. The 'Conclusionary Findings' are contained in Ordinance 2020-06 (Exhibit B of Attachment A) and indicate how the proposal complies with the all applicable criteria and City's Development Code.

As required by City Charter, notices regarding this Ordinance were posted in three places (the Library, the Police Department, and the Redmond Chamber of Commerce) in addition to City Hall on April 21, 2020.

Fiscal Impact:

There are no initial costs and expenditures which are the responsibility of the City. The City will be responsible for ongoing maintenance of the streets, water and sewer systems.

Alternative Courses of Action:

After conducting the public hearing and considering all evidence and testimony:

1. Accept the Planning Commission recommendation to approve.
2. Continue the public hearing and leave the written record open to request additional information.
3. Deny the Planning Commission recommendation.

Recommendation / Suggested Motion:

"I move to have a first and second reading of Ord. #2020-06 by title only." (Voice vote)

(City Attorney will read ordinance by title only, twice.)

"I move to approve Ordinance #2020-06." (Roll call vote)





**CITY OF REDMOND
ORDINANCE NO. 2020-06**

AN ORDINANCE APPROVING A TENTATIVE SUBDIVISION AND AN AMENDMENT TO THE REDMOND COMPREHENSIVE PLAN AND THE ADOPTED CITY OF REDMOND ZONING MAP TO REZONE THE PROPERTY FROM R-3 (LIMITED RESIDENTIAL) TO R-4 (GENERAL RESIDENTIAL) FOR CINDER BUTTE VILLAGE PHASE 1, LOCATED AT THE SE CORNER OF NW 10TH STREET AND NW UPAS AVENUE (DESCHUTES COUNTY TAX LOT #151304AB00102) REDMOND, OR 97756.

WHEREAS, the City of Redmond has adopted zoning and planning regulations in accordance with Oregon Revised Statutes Chapter 227 that regulate and control the development of land within the City; and

WHEREAS, the City of Redmond City Council has adopted a set of goals that include: “enhance the quality of life in the City through the adoption of programs, policies and standards that balance growth while maintaining the city’s unique character; promote quality development”; and

WHEREAS, the City of Redmond Comprehensive Plan is the product of hundreds of citizens from the public and private sector who participated in the Redmond Vision 2020 planning process; and

WHEREAS, the City of Redmond Comprehensive Plan 2020 Addendum contains multiple visioning statements, including statements on improving urban form and community design; and

WHEREAS, the City of Redmond has set the action steps necessary to implement the goals and policies in the Comprehensive Plan related to the vision; and

WHEREAS, the Redmond Urban Area Planning Commission held a public hearing on March 2, 2020 and, after reviewing the record and gathering public testimony, has recommended that the Redmond City Council approve the Tentative Subdivision and Amendment to Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential) for a 16-lot subdivision, subject to conditions of approval; and

WHEREAS, the City Council held a public hearing on April 28, 2020, to consider the recommendation of the Redmond Urban Area Planning Commission, review the existing record and gather additional evidence and public testimony; and

WHEREAS, the City Council has received the Planning Commission’s recommendation and, after receiving additional evidence and testimony, determined that the requested Tentative Subdivision and Amendment to Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential) is in compliance with the Redmond Development Code and would contribute to the Redmond Comprehensive Plan Goals and Policies; and

WHEREAS, the City Council finds that the findings for the Tentative Subdivision and Amendment to Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential) have fully addressed the City’s Comprehensive Plan amendment process, the applicable state law, the Statewide Planning Goals and the City’s standards and criteria for an amendment to the Redmond Development Code; and,

WHEREAS, the City Council finds that the proposed the Tentative Subdivision and Amendment to Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential), furthers the interests of the City.

NOW, THEREFORE, THE CITY OF REDMOND ORDAINS AS FOLLOWS:

SECTION ONE: The City of Redmond hereby approves the Tentative Subdivision and Amendment to Zoning Map to rezone the property from R-3 (Limited Residential) to R-4 (General Residential), subject to the conditions of approval. The Decision, Findings, and Project Plans are attached hereto as “Exhibits A, B, and C.”

SECTION TWO: In support of the approval, the City of Redmond hereby adopts the findings, which are attached hereto as Exhibit B which were prepared by City staff and demonstrate compliance with the Redmond Development Code, Section 8.0760-Amendments and Section 8.2335 – Tentative Subdivision, and the applicable Statewide Planning Goals.

SECTION THREE: SEVERABILITY. The provisions of this Ordinance are severable. The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance, which can be given without such invalid part, or parts.

PASSED by the City Council and **APPROVED** by the Mayor this 28th day of April 2020.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

FINDINGS OF THE REDMOND CITY COUNCIL FOR APPROVAL OF A TENTATIVE SUBDIVISION AND AMENDMENT TO THE REDMOND COMPREHENSIVE PLAN AND ZONING MAP FOR CINDER BUTTE VILLAGE PHASE 1

FILE NO. Cinder Butte Village Phase 1 / City File #711-19-000236-ZMA, #711-19-000237-SUB)

REQUEST: Approval of a Tentative Subdivision for a 16 Lot Single Family Subdivision and Comprehensive Plan and Zoning Map Amendment to rezone the property from R-3 (Limited Residential) to R-4 (General Residential)

LOCATION: SE corner of NW 10th Street and NW Upas Avenue (Deschutes County Tax Lot # 151304AB00102), Redmond, OR 97756

APPLICANT: Hayden Homes, LLC

STAFF: Scott Woodford, Senior Planner

HEARINGS BODY: Redmond Urban Area Planning Commission

DATE & TIME: April 28, 2020 at 6 pm in front of the Redmond City Council; March 2, 2020 at 6:30 pm in front of the Redmond Urban Area Planning Commission; Meetings held at City Council Chambers, 411 SW 9th Street, Redmond, Oregon

Locator Map



DECISION: APPROVAL WITH CONDITIONS

[illegible]

SUMMARY

Approval of a Comprehensive Plan and Zoning Map Amendment from R-3 (Limited Residential) to R-4 (General Residential) and Tentative Subdivision Plat for a 16-lot residential subdivision.

A full plan set with preliminary site plan, street layout and proposed zoning is provided in Exhibit C.

COMMENTS

Informational comments from related agencies concerning this project are presented in the record.

At the time of the completion of this staff report, there was no public comment received from noticed neighbors by the Planning Department concerning this application during the comment period.

EXHIBITS

The following exhibits are on-file and make up the record in this matter:

1. Proposed Findings and Conclusions included herein.
2. The Staff Report.
3. Public Notices.
4. Planning Commission and City Council Public Hearing Staff Reports.
5. Public testimony received.

ATTACHMENTS

Exhibit A – Decision and Conditions of Approval

Exhibit B – Conclusionary Findings

Exhibit C – Project Plans/Site Plan

EXHIBIT A – DECISION AND CONDITIONS OF APPROVAL**DECISION**

Based on the submitted plans, staff findings and conclusions, the City Council approves the Comprehensive Plan and Zoning Map Amendment to rezone the property from R-3 (Limited Residential) to R-4 (General Residential) and a Tentative Subdivision Plat approval for a 16-lot subdivision, subject to the conditions of approval below.

CONDITIONS OF APPROVAL

1. **Transportation:** All public streets shall be designed, constructed and dedicated to current City of Redmond Standards & Specifications and Transportation System Plan (TSP) standards and extended to the limits of the project or each phase unless otherwise specified or approved. Five (5) ft. minimum width public utility easement (PUE) shall be dedicated along all street right-of-way per COR Standard Drawing 2-1. Street signage, lane striping, streetlights and postal box installation shall be required. All street names shall be approved by Redmond Fire and Rescue and/or Deschutes County. The proposed public street system shall be subject to the following:
 - a. NW 10th St. - major collector street. A paved street and sixty-six (66) ft. right-of-way exist, no curb or sidewalks, along property frontage. Street frontage improvements conforming to City major collector street standards shall be required per COR Standard Drawing 2-1 with new pavement widening and/or overlay, curb and sidewalks on the east side and storm drainage along property frontage. Ten (10) ft. right-of-way dedication shall be required for a total of forty (40) ft. east of street centerline along property frontage. Street and right-of-way centerline shall match existing.
 - b. NW Upas Ave. - major collector street. A gravel road and ten (10) ft. right-of-way exists along property frontage. A paved street and sixty (60) ft. right-of-way exist west of 10th Street. Street frontage improvements conforming to full width City major collector street standards shall be required per COR Standard Drawing 2-1 with new pavement, turn lanes to match existing west of 10th St., curb on both sides, sidewalk on the south side and storm drainage along property frontage from 10th St. to east property boundary. Seventy (70) ft. right-of-way dedication shall be required for a total width of eighty (80) ft. along property frontage. Street and right-of-way centerline shall match existing.
 - c. NW Upas Place - local/cul-de-sac street. The proposed alignment with right-angle elbow is acceptable. Street improvements conforming to City local/cul-de-sac street standards shall be required per COR Standard Drawing 2-1 and 2-4 with new pavement, curb, property tight sidewalk, storm drainage, sixty (60) ft. right-of-way dedication and fifty (50) ft. cul-de-sac radius right-of-way dedication.
 - d. Street Storm Drainage:
 - i. Stormwater drainage systems in the public right-of-way shall be subject to current City design standards.
 - ii. New drywells shall comply with City/DEQ pretreatment and City testing requirements. Drywell drain rock shall not extend under any street pavement section.
 - iii. The location of drywells or other UIC's within City streets shall not conflict with existing active private water wells, community water wells or existing/future municipal drinking water wells. Identify all existing water wells that are within 500 ft. or the two-year time of travel zone of subject properties.

- e. Lot Access:
 - i. Vehicular access to each new lot shall conform to City access management, corner clearance, clear vision and driveway construction standards.
 - ii. Direct vehicular access to NW 10th St. and Upas Ave., major collector streets, shall not be permitted from any lot except for approved street and emergency access connections.
 - iii. Corner lots and double fronting lots shall take vehicular access from the lower order street, alley or access easement.
 - iv. Postal box installation shall be subject to US Postal Service standards and City Engineer approval.
 - f. Traffic Impacts: The proposed sixteen (16) lot SFD subdivision is expected to generate less than two hundred (200) average daily trips (ADT) and twenty (20) pm peak hour trips. Therefore, a Transportation/Traffic Impact Analysis (TIA) will not be required.
2. Water: A twelve (12) inch City water main exists in Upas Ave. at 10th Street. An eight (8) inch City water main exists in 10th St. along property frontage.
- a. Connection to the City's public water system shall be required for each new lot.
 - b. Proposed public water system complies with City "to & through" Public Facility Requirement and City Water System Plan (WSP) standards for service to each new lot and adjacent property subject to City standards and design review of the public improvement construction plans.
 - c. A separate domestic water service connection conforming to City standards shall be required for each new SFD lot with meter located at the property/right-of-way line. A City approved backflow prevention device shall be required for all non-residential properties, water services larger than one (1) inch, fire sprinkler systems and irrigation systems.
 - d. Fire flow, fire hydrant locations and fire code requirements to be determined by Redmond Fire & Rescue (RFR).
 - i. A water system/fire flow analysis and mitigation plan prepared by a registered professional engineer shall be provided as required by the Redmond Fire Marshal.
 - ii. Public water system improvements may be required as deemed necessary by the fire flow analysis mitigation plan to meet minimum fire code and fire flow requirements for the proposed development.
 - e. Abandonment of any existing water well, cistern or other private water facility located on subject properties shall be in accordance with Oregon Water Resource Department regulations.
3. Wastewater: A ten (10) inch City gravity sewer main exists in Upas Ave. at 10th Street.
- a. Connection to the City's public sewer system shall be required for each new lot.
 - b. Proposed public gravity sewer system complies with City "to & through" Public Facility Requirement and City Wastewater System Master Plan (WSMP) standards for service to each new lot and adjacent property subject to City standards and the following:
 - i. Public gravity sewer mains shall be designed and constructed to provide a gravity service to each new lot and neighboring properties unless otherwise approved by the City Engineer.
 - ii. Sewer services shall be located to provide complete gravity service.
 - iii. Sewer manholes shall be located on street centerline whenever possible, at 400 ft. max spacing and at any main line terminus. Manholes shall be added or moved accordingly and to avoid conflicts with public water.
 - iv. Design review of the public improvement construction plans.

- c. A separate sanitary sewer service conforming to City standards shall be required for each new SFD lot with cleanout located at the property/right-of-way or easement line. All sewer services shall be connected at right angles to the sewer mainline, and not to manholes, unless otherwise approved by the City Engineer.
 - d. Any existing sewage drill hole, septic tank or other private sewer facility located on subject property shall be permanently abandoned in accordance with Deschutes County and Oregon Dept. of Environmental Quality (DEQ) regulations.
4. Subdivision Grading and Drainage: A subdivision site grading and drainage plan with erosion/sediment control plan and drainage report shall be required upon development each phase and shall be subject to current City standards and the following:
- a. Lot and Tract grading shall conform to current COR Development Code 8.2720 and shall not create steep banks, extreme cut/fills or areas unsightly to adjacent properties or lots.
 - b. All storm water runoff and drainage shall be maintained on each lot or tract and shall not drain onto public streets, neighboring properties or irrigation canals/ditches except as provided for in City standards.
 - c. The stormwater system shall be designed to pass up-gradient flow through the site without damage to the proposed development, public stormwater facilities or neighboring properties.
 - d. Storm water runoff from private property shall not impact public right-of-way or easements unless otherwise approved by the Public Works Director or City Engineer.
 - e. New on-site private drywells and other underground injection control (UIC) systems not part of the public drainage system must be registered and approved or permitted by the Oregon Department of Environmental Quality (DEQ) prior to construction or building permit issuance. Contact DEQ UIC Program Coordinator at 503-229-5945. Send copy of UIC Registration Packet to DEQ and City of Redmond, 3100 NW 19th Street, Redmond, OR, 97756.
 - f. Private drywells serving paved areas may not be located within public or community wellhead protection areas or 500 ft. of existing irrigation or drinking water wells. Locate and identify existing water wells and wellhead protection zones that could affect the location of proposed drywells. Please note that the eastern two-thirds of this site is located within the 2-year time of travel zone of an existing community well where UIC/drywells are not allowed.
5. Construction Plans: Upon land use approval, a separate set of construction drawings shall be submitted directly to the Engineering Department for design review of all required and/or proposed public improvements, utilities and subdivision site grading for each development phase.
6. The proposed Upas Place does not meet grid name requirements. Please contact Redmond Fire and Rescue for acceptable names.
7. Lots 1 and Lots 12-16, as depicted on the submitted plans and which are located along the north property line, are subject to the solar setback standards.

//////////////////////////////////**END OF CONDITIONS**//////////////////////////////////

EXHIBIT B –CONCLUSIONARY FINDINGS**I. APPLICABLE CRITERIA:**

The following are the applicable sections from The City of Redmond Urban Area Comprehensive Plan and Chapter 8 of the Redmond Development Code.:

- The City of Redmond Urban Area 2020 Comprehensive Plan.
- City of Redmond Transportation System Plan
- City of Redmond Public Facility Master Plans (Water, Wastewater)
- City of Redmond Park Master Plan
- Oregon Revised Statutes (ORS) – ORS 197.250
- Oregon Administrative Rules (OAR)
 - Division 12, Transportation Planning Rule – OAR 660-012-0000
 - Division 15, Statewide Planning Goals and Guidelines – OAR 660-015-0000
- The City of Redmond Development Code, Chapter 8;
 - Section 8.0750, Amendments
 - Section 8.2235, Tentative Subdivision Plat

II. BACKGROUND & HISTORY:

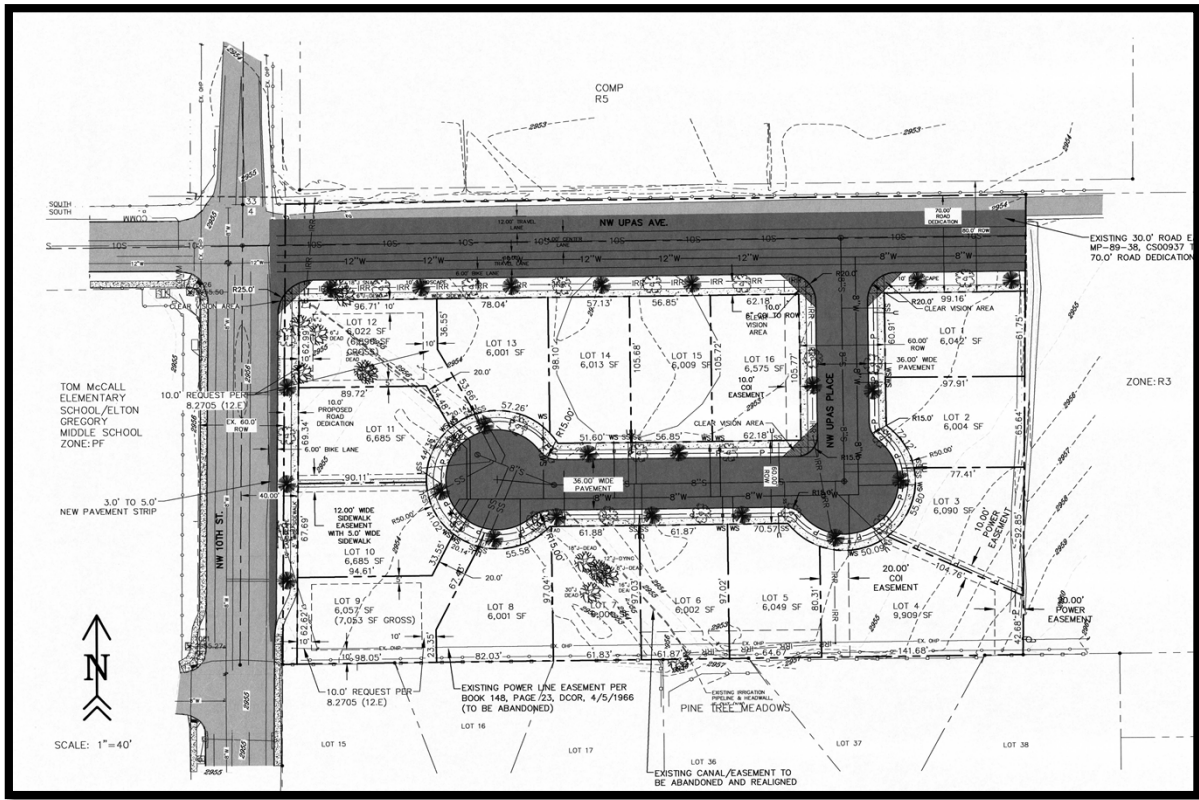
The 3.97 acre parcel, located across from Tom McCall Elementary School and at the southeastern corner of the intersection of NW Upas Avenue and NW 10th Street (see aerial map below), is part of the Highway Area Plan, which was adopted by the City in 2007 to help guide future development of land that was brought into the Redmond Urban Growth Boundary. The Highway Area Plan recommends a variety of different land uses within its boundary, including medium and high density residential, mixed use neighborhood, service commercial, open space and civic uses. Specifically, the Plan designates the subject property as future R-4 zoned land.

Locator Map

Highway Area Plan Land Use Map (subject site in red)**Proposal:**

The applicant, Hayden Homes, proposes to subdivide the property into sixteen (16) individual lots, each a minimum of 6,000 square feet in size, accessed via a cul de sac off an improved NW Upas Avenue (see plan below). To accommodate the proposed lot sizes – and be in conformance with the Highway Area Plan that recommends the parcel be zoned at a higher density – the applicant proposes to rezone the property from R-3 (Limited Residential) to R-4 (General Residential). In terms of density, this allows an increase in density of approximately five lots (facilitated by the minimum 6,000 square foot lots as opposed to the 7,500 square foot minimum in R-3). Single family residences will be accommodated on the lots. To facilitate easy access to the neighboring schools, a sidewalk connection is provided at the end of the cul de sac (NW Upas Place).

Proposed Cinder Butte Village Phase 1 Layout



To accommodate the subdivision, NW Upas Avenue and NW 10th Streets, along the subject property frontage, will be required to be improved, as follows:

- NW Upas Avenue is designated as a Major Collector in the City and the section in front of the property is currently a gravel road. With this subdivision, street frontage improvements are required conforming to full width, Major Collector Street standards, including new pavement, turn lanes (to match existing Upas Avenue west of 10th St.), curb on both sides, sidewalk on the south side and storm drainage along the property frontage from 10th St. to east property boundary. Seventy (70) ft. of right-of-way dedication is required - for a total width of eighty (80) ft. along property frontage - since right of way for this street does not currently exist in front of the property. These improvements and dedication are conditions of approval.
- NW 10th Street is designated as a Major Collector in the City and exists as a paved street in front of the property with 66 feet of right of way, but it does not have curb or sidewalks along the property frontage. With the subdivision, the applicant will be required to improve the street per the City's Major Collector Standards with new pavement widening and/or overlay, curb and sidewalks on the east side and storm drainage along property frontage. Ten (10) ft. right-of-way dedication is required for a total of forty (40) ft. east of street centerline along property frontage. A condition of approval has been added to ensure these improvements and dedication are completed.

All lots will be connected to City water and sewer. There currently is a 12-inch water main in Upas Avenue at 10th Street, an 8-inch water line in NW 10th Street and a ten-inch gravity sewer main in Upas Avenue at 10th Street that the development can connect into.

- III. SITE DESCRIPTION:** The project area is located at southeast corner of NW 10th Street and NW Upas Avenue (Deschutes County Tax Lot # 151304AB00102), Redmond, OR 97756. The total acreage is 3.9 acres, is generally flat and has an historic use as irrigated farmland.

IV. EXHIBITS:

The following exhibits make up the record in this matter:

1. Proposed Findings and Conclusions included herein.
2. The Staff Report.
3. Public Notices.
4. Planning Commission Work Session/Public Hearing Staff Reports.
5. Public testimony received.

V. SUMMARY:

1. This is a proposed Comprehensive Plan and Zoning Map Amendment to rezone the property from R-3 to R-4 and a Tentative Subdivision Plat approval for a 16-lot subdivision.
2. The findings and supporting materials, all demonstrate the proposed Comprehensive Plan and Zoning Map Amendment to rezone the property from R-3 to R-4 and a Tentative Subdivision Plat approval for a 16-lot subdivision are consistent with the Statewide Planning Goals, the Redmond Comprehensive Plan, the City Council Goals and other policies adopted by the City.
3. The criteria set forth in RDC Section 8.0750 *Amendments* and Section 8.2235, *Tentative Subdivision Plat* are addressed herein/below, as well as all applicable state laws and requirements.

VII. FINDINGS AND CONCLUSIONS:

Chapter 8, Sections 8.0750 through 8.0775 *Amendments* and Section 8.2235, *Tentative Subdivision Plat* set forth the procedure and standards for approval.

Amendments:

Chapter 8, Sections 8.0750 through 8.0775 (Amendments) sets forth the procedure and standards for an amendment to the text of the Code or to the adopted Comprehensive Plan or Zoning map. Section 8.0760 - Criteria for Amendments, sets forth the four (4) criteria that the applicant shall show the proposed change is:

A. In conformity with all applicable State Statutes;

- **Finding: Staff has examined the record in this matter and finds the applicant meets the criteria. The State Statutes that directly apply to this application include:**

ORS 197.610, Local Government Notice of Amendment or New Regulation
ORS 197.250, Compliance with Goals Required
ORS 197.763, Conduct of Local Quasi-Judicial Land Use Hearings; Notices

The applicable City of Redmond Code standards (sections 8.0750 to 8.0775, Amendment Procedures and Notice Requirements), and, (sections 8.1010 through 8.10355, and 8.1300 through 8.1380, Land Use Procedures), were developed in compliance with the applicable State Statutes listed above regarding noticing and public hearings. Applicability of the Statewide Planning Goals is addressed in greater detail below. Those findings, incorporated by reference herein, show compliance with the applicable Statutes listed above.

With regard to the Statutory noticing requirements referenced above, notice of the proposed amendment has been provided to DLCD and the public hearings advertised in the local newspaper (public notice) as required by City Code and State Statute.

With regard to the Statutory public hearing requirements referenced above, this proposal is subject to Sections 8.1300 through 8.1380 of the Redmond Development Code, which implement the quasi-judicial Statutory requirements in similar fashion have been met. Subsequently, the Planning Commission and (ultimately) City Council's public hearing and review processes meet the statutory requirements for the purpose of the review.

Oregon Administrative Rule 660-012, Transportation Planning Rule.

Notwithstanding the Statutory requirements addressed herein, the Oregon Administrative Rules (OAR's) also implement the Statutes. The applicable Rule addressed in this document is ORS 660-012, the Transportation Planning Rule (TPR). The proposed findings addressing the specific elements of the TPR are included in the Transportation Impact Analysis (TIA) submitted with this application. These findings are incorporated by reference herein as evidence of compliance with the TPR rather than being copied over into this burden of proof statement.

Based on the City of Redmond's conformance with the procedural requirements of this land use process and the conformance with the TPR, the proposed Master Development Plan and Zone Change conforms to applicable State Statutes and Administrative Rules.

B. In conformity with the State-wide planning goals whenever they are determined to be applicable:

- **Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. The Highway Area Plan (HAP) was adopted by the City of Redmond with a finding that it met all the required state-wide planning goals. This adoption was later upheld by the Department of Land and Conservation and Development. The proposal is to rezone the property to be in compliance with the recommendations of the HAP. Staff has further addressed compliance with Goal 10 (Housing). The City's recently approved Housing Needs Analysis (HNA) studied and considered the master plan and area plan for the Highway Area Plan (HAP). It did not require any changes within this acknowledged area plan in order to comply

with Goal 10. The HNA indicates that all housing types are needed in Redmond, including single family. The HNA also indicates that Redmond has a surplus of developable land in the Urban Growth Boundary to meet its 20-year projected housing need.

The proposal to rezone the property from the R-3 zone to the R-4 zone will increase the number of needed housing units recommended in the HNA because the R-4 permits a greater variety of residential uses and at a higher density than the R-3 allows, thus increasing the prospect that the units will be more affordable. Under the R-3 zone, the minimum lot size is 7,500 square feet, while the R-4 zone allows a 6,000 square foot minimum lot size. At 3.9 acres of the subject site, this results in five additional lots over what could be developed in the R-3 zone versus the R-4 zone. The proposal meets the goal of the HNA, which recommends providing additional housing and a greater variety of housing over the 20-year horizon.

The subject property is part of the Highway Area Plan (HAP), which helps to achieve the objective of Goal 10. It does so by zoning land for a mix of medium and high-density housing. The R-4 and R-5 zones in the HAP allow for a variety of housing types, including single family detached and attached housing, accessory dwelling units, duplexes, tri-plexes and other multi-family units.

The subject parcel proposes single family lots, but is Phase 1 of a larger Cinder Butte Village development by the same applicant. Phases 2-4 of Cinder Butte Village, across the street, provide 53 cottage units, in addition to single family lots. Overall, this results in a variety of housing units, including cottage units less than 1,000 square feet in size.

For the above reasons, the proposal complies with state requirements for housing per Statewide Land Use Planning Goal 10.

C. In conformity with the Redmond Comprehensive Plan, land use requirements and policies:

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. The Highway Area Plan (HAP) was adopted by the City of Redmond with a finding that it met all of the applicable Redmond Comprehensive Plan policies. The proposal is to rezone the property to be in compliance with the recommendations of the HAP.

D. That there is a change in circumstances or further studies justifying the amendment or mistake in the original zoning:

- **Staff Finding:** Staff has examined the record in this matter and finds the applicant meets the criteria. There is a change in circumstances justifying the amendment, which is the adoption of the Highway Area Plan that requires all properties within its boundaries to develop in compliance with the land use plan contained within it. The HAP recommended this parcel be zoned R-4.

TENTATIVE SUBDIVISION APPROVAL

8.2235 Required Findings for Tentative Subdivision Approval.

1. The Hearings Body shall approve no application for a subdivision unless the following requirements are met:
 - A. Proposal is in compliance with ORS Chapter 92, the Comprehensive Plan, the Transportation System Plan (TSP) and applicable zoning.
 - **Findings: The proposal is in compliance with ORS Chapter 92: upon approval by the City of Redmond, a licensed professional land surveyor will prepare a final subdivision plat map in accordance with ORS 92.010 to 92.192. The subdivision plat map will lawfully establish the proposed sixteen (16) lots, a 70-foot dedication of NW Upas Avenue and a 10-foot dedication of east right of way of NW 10th Street. No lots will be sold prior to final plat recording.**

The proposal is in compliance with the Comprehensive Plan as demonstrated by its compliance with the Highway Area Plan.

The subject property is currently zoned R-3 and designated R-4 on the Highway Area Plan. The proposed sixteen (16) lot subdivision is expected to generate less than two hundred (200) average daily trips (ADT) and twenty (20) pm peak hour trips. Therefore, a Transportation/Traffic Impact Analysis (TIA) is not required. The applicant is proposing sidewalks for pedestrian access and paved roads for vehicular access. Applicable zoning criteria is being met, specifically meeting the minimum lot sizes for the proposed R-4 zone district. Additional zoning requirements will be analyzed with each individual building permit requested on each lot, including but not limited to setbacks and building heights.

- B. Proposal does not conflict with acquired public access easements within or adjacent to the subdivision.
 - **Findings: The proposed subdivision does not conflict with public access easements on the parcel or adjacent to it. Currently, NW Upas Avenue has an existing 30' access easement. The proposed subdivision is proposing to improve NW Upas Avenue, east of NW 10th Street, into to a Major Collector and the access easement will turn into public right of way. NW 10th Street has an existing 60' right of way and the applicant is dedicating 10 feet of their property to the City for right of way.**
- C. Each lot is suited for the use intended or offered.
- **Findings: Each lot proposed is sized and located to be suited for the use intended, which is a sixteen lot, single family subdivision.**
- D. The Subdivision will not exceed the operational capacity of public facilities and services as identified in the city's Water and Wastewater Master Plan and the Transportation System, which are required to serve the development, or a determination that sufficient capacity can be provided.

- **Findings: According to City Engineering, there is sufficient capacity in the City's Water and Wastewater system for the proposed sixteen (16) new water and sewer services proposed in the development. Further, City Engineering has not identified any concerns relative to whether the subdivision can be accommodated within the existing Transportation System.**

E. A Water rights division plan has been approved by the applicable irrigation district.

- **Findings: The subject property falls within the Central Oregon Irrigation District. There are no water rights associated with the property and therefore, no water rights division plan has been requested by the applicable irrigation district.**

F. The subdivision contributes to orderly development and land use patterns in the area, and provides for the preservation of natural features and resources such as streams, lakes, natural vegetation, special terrain features.

- **Findings: The subdivision contributes to the orderly development and land use patterns of the area by laying out lots consistent with zoning and access management standards and with similar land uses as what is surrounding. Further, there are no streams or lakes located on the property and the land is predominately vacant with grass and some juniper and pine trees. There are no special terrain features on the subject property.**

2. Access Management proposals comply with the standards set forth in Section 8.2820 and all other applicable standards.

- **Findings: According to the City's Access Management standards, direct access is not permitted to lots from Collector or Arterial Streets. The adjacent streets, NW 10th Street and NW Upas Avenue, are Collector Streets, thus access to lots will be via a new Local Street, NW Upas Place. Further, NW Upas Place will be accessed from the lower order of the two Collector Streets, in this case, NW Upas Avenue. The Access Management standards are addressed in these findings.**

8.2240 Improvement Requirements

1. In the approval of a subdivision, the Community Development Director or Hearings Body shall consider the need for street and other improvements. All streets in new subdivisions, except for planned unit developments (PUD's), shall be dedicated to the public without reservation or restriction.
 - **Findings: Per City requirements, the applicant will dedicate a 70-foot-wide strip of land along NW Upas Avenue, and a 10 foot dedication on NW 10th Street to the City of Redmond to provide sufficient right of way.**
2. Private alley Access.
 - **Findings: There are no private alley access proposed in this development. This criterion is not applicable.**

3. The subdivider shall record the required (including but not limited to) land division agreement, public improvement agreement, shared access agreement or shared well agreement, as may be applicable, with the Deschutes County Clerk's Office at the time of recording of the final subdivision plat.
 - **Findings: The applicant will record all required land division agreements with the County Clerk at the time of recording the final plat.**
4. Paved access is guaranteed to each lot.
 - **Findings: The applicant is proposing 36-foot-wide paved streets to each lot to be completed prior to recordation of the final plat. This criterion is met.**
5. Each lot is to be connected to the City water and sewer system pursuant to Section 4.007 of the Code of the City of Redmond.
 - **Findings: The applicant is proposing that each lot be connected to the City of Redmond water and sewer system, via a 12" waterline and 10" sewer line from the intersection of NW Upas Avenue and NW 10th Street.**
6. All required public utilities are available.
 - **Findings: The applicant is proposing connecting to existing utilities in NW 10th Street and making these available to all lots. This criterion is met.**

8.2820 Access Management Standards. All land divisions shall be in compliance with the following standards.

1. Driveway spacing and corner clearance
 - **Findings: The applicant will adhere to the driveway spacing and corner clearance requirements. Local streets have no restrictions for minimum access driveway spacing, but the applicant will adhere to a minimum 30 feet access clearance to corners and 165 feet intersection minimum spacing. There will be barricades to ensure traffic does not drive east on NW Upas Avenue until such time as it is extended to the east.**
2. In all instances, access near an intersection shall be located beyond the influence of standing queues and opposing left turns sharing a continuous two-way left turn lane. The requirement may result in greater corner clearance or access spacing than the minimum distance indicated.
 - **Findings: Driveways have been proposed as far away as possible from the intersection of NW Upas Avenue and proposed NW Upas Place.**
3. Every lot or parcel shall be permitted an access. In the event that the access management standards cannot be achieved, shared access with adjacent property shall be explored and provided where available.
 - **Findings: Each lot has its own access and no shared access are proposed.**

4. Access shall be taken from the lower order street or alley unless otherwise approved by Public Works and/or ODOT through the land use process.
 - **Findings: Access will be taken from proposed Upas Place, which is a proposed Local Street and is a lower order street than the adjacent Collector Street, NW 10th Street.**
5. Unless adequate demonstration of site of necessity, intersection safety and functionality is provided, through the land use review process, new lots and/or parcels will be limited to a single vehicular access.
 - **Findings: Each new lot will have a single vehicular access.**
6. The access management standards apply to new development, redevelopment, subdivision and partitioning of land.
 - **Findings: The access management standards apply to this subdivision and the project will comply with the standards.**
7. Corner clearance is measured from the edge of right of way to the nearest edge of access. Spacing is measured from centerline of access/intersection to centerline of access/intersection.
 - **Findings: The required corner clearance for local streets is 30 feet. The closest access/driveway to the edge of right of way to nearest edge of access will exceed 30 feet and will meet this criterion. There are no minimum access driveway spacing for local streets.**
8. Adequate intersection sight distance and clear zone shall be maintained at all access/driveway locations per AASHTO standards (American Association of State Highway and Transportation Officials).
 - **Findings: The development will comply with the AASHTO standards. Adequate intersection sight distance and clearance will be maintained.**
9. Public Works may require supporting information, including but not limited to traffic count data, trip generation, Transportation Impact Analysis study, etc. in order to make a proper determination of access/driveway location.
 - **Findings: The proposed sixteen (16) lot SFD subdivision is expected to generate less than two hundred (200) average daily trips (ADT) and twenty (20) pm peak hour trips. Therefore, a Transportation/Traffic Impact Analysis (TIA) will not be required.**
10. Access within the North Redmond US 97 Interchange Area Management Plan (IAMP) shall also conform to the "North Redmond US 97 Interchange Area Management Plan (IAMP)" provision of Chapter 9 Transportation Element of the Comprehensive Plan Addendum and Policy 12 of Chapter 14 of the Comprehensive Plan.
 - **Findings: The development does fall within the North Redmond US 97 Interchange Area, but it's not proposed to connect directly to Highway 97.**

8.0305 Establishment of Clear Vision Areas. Clear vision areas are measured as follows: starting at the edge of pavement or curb lines at the intersection of two vehicular ways, and measuring along each edge of pavement for the distance shown below; this will result in an angle. The end points projecting from the vertex of the angle are the connected, forming a triangle. The area within the triangle is the horizontal clear vision area. The vertical clear vision area is the area above the triangle, between 3' and 8' in height.

Clear vision distances shall be as follows:

1. At an intersection of two streets having 90 degree angles at the intersection, the minimum distance shall be 25 feet.
2. At traffic circles, acute or obtuse angles, and other non-conventional intersections of two streets, the clear vision area may be determined by the Hearings Body or City Engineer. However, the clear vision area shall make every attempt to incorporate the 25' line of sight distance as is stated in (1).
3. All other vehicular intersections, the minimum clear vision distance shall be 15'.

➤ **Findings: Compliance with the clear vision requirement will be reviewed at the time of building permits on each individual lot.**

8.2700 Compliance Required.

1. Any land division or development shall be in compliance with the design and improvement standards and requirements of this section, and all other applicable provisions, as set forth in this Chapter.

[Section 8.2700 amended by Ord. #2012-11 passed October 23, 2012]

8.2705 Blocks, Lots and Parcels.

1. Blocks. The resulting or proposed length, width and shape of blocks shall take into account the requirements for adequate building lot sizes, street widths, access needs and topographical limitations.
 - A. No block shall be more than 660 feet in length between street center lines unless it is adjacent to an arterial street, or unless topography or the location of adjoining streets justifies an exception, and is so approved by the reviewing authority. In MUN, MUE and MULW zones, block lengths shall be an average of 330 feet, except where required to meet grid street or access management requirements.
- **Finding: The development does not create a block length in excess of 660 feet.**
- B. The recommended minimum length of a block along an arterial street is 1,320 feet, except that along such blocks, a public right-of-way for pedestrian and bicycle access shall be dedicated at or nearest the mid-point of the block length as is practical. The right-of-way shall be a minimum of 10 feet wide, with an all weather surface a minimum of 5 feet wide, constructed and centered within the right-of-way.
- **Finding: The subject property is not along Arterial Street and is therefore not subject to this criteria.**

- C. A block shall have sufficient width to provide for 2 tiers of lots unless topography, the location of adjoining streets, or adjacency to an arterial street justifies an exception.

➤ **Finding: Given the small size of the parcel, compliance with this criterion is difficult to comply with and an exception is requested.**

- D. Where appropriate at approved cul-de-sacs, dead-end streets, or along blocks approved at more than the maximum block length standard, pedestrian and bicycle access corridors shall be required to be constructed between lots to minimize travel distance between subdivisions, parks, school, and collector or arterial streets. Access corridors shall be located to provide a reasonably direct connection between likely pedestrian destinations, and shall be consistent with the City of Redmond Bicycle Refinement Plan where applicable. A reasonably direct connection is a route which minimizes out of direction travel for people likely to use the connection considering terrain, safety and likely destination. The Community Development Director or Hearings Body may determine based on evidence in the record that construction of a separate access corridor is inappropriate or impractical. Such evidence may include but is not limited to:

1. When the nature of abutting existing development makes construction of an access corridor impractical.
2. When the access corridor would cross a natural area with significant natural habitat and construction would be incompatible with protection of natural values.
3. When the access corridor would cross topography where slopes exceed 30% or where path grade would exceed 12% slope; or
4. When a cul-de-sac or dead-end street abuts rural resource land at the urban growth boundary. In industrial zones, this standard may be waived at the discretion of the Community Development Director or Hearings Body when it is determined that the City's grid street standards should not be applied to the industrial development.

➤ **Finding: A cul de sac is necessary in this subdivision due to its size and because it is located at the corner of two Collector Streets and direct access is limited. As mitigation for the cul de sac, a 5' concrete sidewalk within a 10' pedestrian easement is proposed between Lots 10 and 11 to provide pedestrian connectivity to the adjacent public schools.**

- 2. Lots and Parcels. The size, width, and orientation of newly created lots and parcels shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots and parcels shall be generally rectangular in shape, and shall be consistent with the lot size provisions of the zoning standards and the density requirements as established in the City of Redmond Comprehensive Plan. Notwithstanding these requirements, the following exceptions may apply:

- A. In areas beyond the City Limits where public sewer is not currently available, minimum lot and parcel sizes shall permit compliance with the requirements of the Department of Environmental Quality and County sanitarian, and shall be sufficient to permit adequate sewage disposal. Any problems posed by soil structure and water table as related to sewage disposal by septic tank shall be addressed and resolved in the applicant's initial plan.

- B. Where property is zoned and planned for business or industrial use, other widths and areas may be permitted by the Community Development Director or Hearings Body. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.
 - C. In steep terrain, increased lot or parcel sizes may be required to avoid excessive cuts, fills, and steep driveways.
- **Findings: The size, width, and orientation of newly created lots are appropriate for the type of development contemplated. The lots are generally rectangular shaped, easily accommodating the residential uses proposed. The lots are served with City sewer and the subdivision is not located on steep terrain.**
3. Frontage. Each newly created lot and parcel shall abut upon a public street other than an alley for at least 50 feet, except for lots fronting on the bulb of a cul-de-sac, then the minimum frontage shall be 30 feet. Flag lots shall have no less than 20' of street frontage measured at the property line. Lots created as part of a Planned Unit Development shall meet the same frontage requirements listed herein, except such frontage may be allowed along private streets. Vehicular access shall be provided as specified in Section 8.2820, Access Management Standards, of this Chapter, or as specified in Section 8.2705(6) below, for residential lots and parcels abutting collector and arterial streets. All lot and parcels shall be addressed from the primary public street frontage, not including alleys.
- **Findings: Most of the lots will have a minimum of 50 feet of frontage on a public street. Lots 9 thru 12 have 50 feet frontage on 10th Street. Two lots - Lots 9 and 12 - are flag lots and the flagpole of each lot is a minimum of 20 feet wide, which is the requirement in the Code. This criterion is met.**
4. Side Lot or Parcel Lines. All side lot lines shall be at right angles to street lines or radial to curved streets wherever practical except as provided for in subsection (10) of this section.
- **Findings: All side property lines are situated at right angles or radial to the curves.**
5. Through/Double Frontage Lots and Parcels. Through lots or parcels, and lots or parcels with double frontage shall be avoided whenever possible, including lots or parcels created adjacent to Collector and Arterial Streets, but not including alley frontage as described in Section 8.2705(6) below, except when they are necessary due to an irregular parent lot or parcel configuration, or are necessitated by topography or other unique circumstance.
- **Findings: Proposed Lots 9 thru 16 are considered double frontage lots in that they have streets on both sides of their lots. The small configuration of the parent parcel, along with the requirement to extend NW Upas Avenue makes avoiding double frontage lot impractical and subject to an exception.**
6. Residential Lots and Parcels Abutting Collector and Arterial Streets. Lots and parcels created adjacent to Collector and Arterial streets shall be oriented so that the front elevation of the residential development faces the Collector or Arterial Street. Vehicular access shall be provided pursuant to Section 8.2820, Access Management Standards, of this Chapter. In instances where direct vehicular driveway access to lot or parcel from the Collector or Arterial street is not permissible, alley access

shall be provided to the rear of the lot or parcel in accordance with the design standards included in Section 8.2710(3) of this Chapter.

- **Findings: The proposed lots abut two Collector Streets, however the proposed lots will result in homes not fronting the Collector Streets, as direct access from Collector Streets to lots is not permitted in the City's Access Management Standards. Instead, the applicant examined installing alleys into the subdivision, but the small size of the property and the somewhat unusual situation of being located at the intersection of two Collector Streets made the use of alleys very difficult as they would have created long and undesirable access for the fire department.**
7. Corner Lots and Parcels. Corner lots and parcels shall be 5 feet more in width than other lots and parcels and also shall have sufficient extra width to meet the additional side yard requirements of the zoning district in which they are located.
 - **Findings: Lots 1, 12 and 16 are corner lots and are 61, 63 and 62 feet wide respectively, which are all more than 5 feet wider than minimum width of 50 feet.**
 8. Special Building Setback Lines. If special building setback lines, in addition to those required by the applicable zoning, are to be established in a development, they shall be shown on the final plat of the development and included in the deed restrictions.
 - **Finding: No special setback lines are required.**
 9. Large Building Lots; Re-division. In the case where lots or parcels are of a size and shape that future re-division is possible, the Community Development Director or Hearings Body may require that the blocks be of a size and shape so that they may be re-divided into building sites, and the development approval and site restrictions may require provision for the extension and opening of streets at intervals which will permit a subsequent redivision of any tract of land into lots or parcels of smaller sizes than originally platted, and in conformance with the density provisions established in the City of Redmond Comprehensive Plan for the existing or intended Zone. A plan indicating the ability for redivision according to these standards may be required as part of the initial land division process.
 - **Finding: This proposed lots are too small to be further re-subdivided.**
 10. Solar Access. As much solar access as feasible shall be provided each lot and parcel in every new subdivision or partition considering topography, development pattern, and existing vegetation. The boundary lines of lots and parcels, as far as feasible, shall be oriented to provide solar access at ground level at the southern building line of the adjoining lot to the north two hours before and after the solar zenith from September 22 to March 21. If it is not feasible to provide solar access to the southern building line the solar access, if feasible, shall be provided at 10 feet above ground level at the southern boundary line two hours before and after the solar zenith from September 22 to March 21, and three hours before and after the solar zenith from March 22 to September 21. This solar access shall be protected by solar height restrictions on burdened properties for the benefit of lots receiving the solar access pursuant to Section 8.0370, of the City of Redmond Development Code, Solar Access Standards. If the solar access for any lot, either at the southern building line or at 10 feet above the southern building line, is not feasible, supporting information may be required with the application.

- **Finding: Lots within a proposed subdivision are not subject to a solar setback except for lots along the north boundary (in this case, Lots 1 and Lots 12-16). These proposed lots have an 80 foot right of way of Upas Avenue and should not have issues casting shadows on parcels to the north of it, as long as they are located as far to the south lot line as possible.**

11. Curvilinear Street and Block Design. Although a basic grid street design with minimum and maximum block lengths are requirements of this section, a curvilinear street/block design is encouraged for the purpose of adding interest to new subdivision development.

- **Finding: The design layout for this project is rectilinear and given the small size of the parent parcel, that is the only option.**

12. Flag Lots. A flag lot shall be considered as a “flag lot” if the pole of the flag lot is less than half the width of the average lot width. For flag lots, the following shall be required:

A. Flag poles shall be no less than 20’ wide.

- **Finding: There are two proposed flag lots meeting the above definition.**

B. Flag lot development, if allowed by the zone, is limited to one duplex or single family dwelling per lot. All zone regulations apply, including the minimum required lot size and setbacks unless setback reductions are allowed as described in (E).

- **Finding: Only 1 home is proposed with each flagged lot.**

C. Each flag lot shall contain a minimum 16’ wide paved driveway.

- **Finding: Each flag lot will provide a 16-foot paved driveway.**

D. A flag lot is exempt from the 50 foot street frontage requirement; however a minimum of 20 feet of street frontage is required.

- **Finding: All proposed flag lots meet the frontage requirement of 20 feet.**

E. Front and/or rear yard setbacks may be reduced to no less than 10’ subject to review and approval by the Community Development Director. The orientation of any structure (determination of front) may be suggested by the property owner, and is subject to the review and approval of the Community Development Director or designate. The location(s) of all structures immediately adjacent to any flag lot shall be shown on a site plan (1) during planning review and during the act of creating any new flag lot, and (2) during a building permit review for any structure built on a flag lot.

- **Finding: The lots will be subject to above setbacks when building permits are submitted.**

F. No flag lot shall be partitioned or further divided.

- **Finding: Flag Lots 12 and 9 shall not be further divided.**

- G. The “pole” of the flag lot shall be no longer than 150’ measured from the street intersection to the beginning of the base of the flag.
 - **Finding: The flagpole for Lot 9 is 40 feet and the flagpole for Lot 12 is 36 feet. Each are less than the maximum 150 feet. The criteria is met.**
- H. The “pole” of the flag shall not be included in the minimum lot size calculation.
 - **Finding: Proposed Lot 12 is 6,222 sf in size without the flagpole and Lot 9 is 6,057 square feet without the flagpole, thus both meet the minimum lot size without the pole being included.**
- I. Flag lots shall be exempt from street tree requirements unless the street frontage portion of the flag lot is 30’ or greater.
 - **Finding: Street trees are not required for Lots 9 and 12 as their frontage is less than 30 feet.**
- J. Flag lots are prohibited along or abutting the Dry Canyon Rim.
 - **Finding: The property is not subject to this rule as the property does not abut the Dry Canyon Rim.**
- K. Two off-street parking spaces shall be provided for each dwelling unit on a flag lot.
 - **Finding: The future homes on each lot will have a 2-car garage and a driveway. This criterion will be met.**

[Section 8.2705 added by Ord. #2012-11 passed October 23, 2012]

8.2710 Streets.

1. General. Streets shall be in conformance with the City of Redmond Transportation System Plan as specified herein.
 - A. Except along Arterial Street, public streets shall be spaced a maximum of 660 feet between centerlines. The purpose is to provide a street grid pattern of through streets to facilitate traffic movement. Street designs shall conform to topography and other existing natural and man-made conditions. Illustrative examples of other conditions include the dry canyon, main COI canal, Highway 97, and the Burlington Northern Railroad tracks.
 - **Finding: NW 10th Street and NW Upas Avenue are designated as Collector Streets. Teak Avenue to the south is 650 feet to Upas, thus less than the maximum 660 feet. This criterion is met.**
 - B. All proposed streets, sidewalks, bike lanes and pedestrian pathways shall connect to other streets, sidewalks bike lanes and pedestrian pathways within a development and to existing and planned streets, sidewalks, bike lanes and pedestrian pathways outside the development. Such facilities shall serve existing and planned parks, schools or other public lands within a neighborhood.

- C. To the maximum extent possible, new local streets shall align and connect with existing local streets and collectors, and in certain special cases arterial streets. Cul-de-sac streets shall be permitted only where no feasible connection with an adjacent street exists, or if the local street connection would be to an arterial street and the function of the arterial street may be diminished as determined through the land use review process, or the block length would be less than that which is permitted by Section 8.2705(1)(B).
- **Finding: Because NW 10th Street is a Major Collector, no access from NW 10th Street to this parcel allowed. No connections to the south can be made as it is already developed into lot and streets (Pine Tree Meadows). The property to the east will have access and utilities provided from NW Upas Avenue running east and west and NW 8th Street running north and south thru the center of the property, thus making a pre-establish grid and road network. Connecting to the easterly property is not practical in this situation.**
- D. Consideration should be given to alternative street designs other than required herein in the City's non-residential land use zones to allow for more effective developments. Such designs may be considered and approved during the subdivision or partition process without need for variance.
- **Finding: Consideration was made to providing alleys, but there are issues with frontage, utilities and fire apparatus access to the properties. This layout provided the best fire department access.**
- E. All proposed or required streets and alleys shall comply with Section 8.2820 Access Management Standards, the Transportation System Plan, and with Local Street Connectivity Plans adopted as part of the transportation element of the Comprehensive Plan.
- **Finding: No access to lots is allowed from either NW 10th and NW Upas Avenue as each are a Major Collector.**
2. Existing Streets. Whenever existing streets, adjacent to or within a tract, are of inadequate width to accommodate the increase in traffic expected from the land division or by the City's transportation policies as determined through a transportation impact analysis, additional right-of-way shall be provided at the time of the land division by the applicant. During consideration of the tentative plat for the subdivision or partition, the Hearings Body shall determine whether the improvements to existing streets, adjacent to or within the tract, are required. If so determined, such improvements shall be required as a condition of approval of the tentative plat. Improvements to adjacent streets shall be required where traffic on said streets shall be directly affected by the proposed subdivision. Notwithstanding these provisions, off-site improvements to streets not within or adjacent to the development may be required when impacts resulting from the development necessitate such improvements as demonstrated through a transportation impact analysis.
- **Finding: NW 10th Avenue and NW Upas Avenue are both Major Collector Streets. Additional right of way will be dedicated to the City to accommodate the required street widths. Improvement of the streets, along the property frontage, to meet the standards is also a requirement of this subdivision and are a condition of the approval.**
3. Minimum Right-of-Way and Roadway Width. The street right-of-way and roadway surfacing widths shall be in conformance with the standards as specified in Table 1 below:

Table 1 - City of Redmond Right of Way and Roadway Design and Cross-Section Standards

Pavement Functional Class	Width (ft) Pavement		Right-of- Way	Travel Lanes	Sidewalks	Lanes**	Bike Parking**
	Standard	(minimum)					
Residential Alley	16 ft		20 ft	n/a	none	shared	none
Commercial Alley	20 ft		20 ft	n/a	none	shared	none
Local Residential*****	36 ft		60 ft	2***	5 ft	shared	both sides (unstriped)
	28 ft*		60 ft	2***	5 ft	shared	one side (unstriped)
	24 ft*		60 ft	2***	5 ft	shared	none
Local Industrial	40 ft	38 ft	60 ft	2***	5 ft	shared	optional (unstriped)
Industrial Collector	40 ft	38 ft	80 ft	2	5 ft	6 ft	none
Minor Collector	40 ft	36 ft****	60 ft	2	5 ft	shared	both sides (8 ft)
Major Collector	36-50 ft	36 ft****	80 ft	2	5 ft	6 ft	none
Minor Arterial (3-lane)	50 ft	48 ft	100 ft	3	7 ft	6 ft	none
Minor Arterial (5-lane)	74 ft	72 ft	100 ft	5	7 ft	6 ft	none

Notes:

*May be constructed only in conjunction with the creation of covenants, conditions and restrictions (CCR's) and the establishment of a homeowners association (HOA) for the development. The CCR's shall provide that the primary responsibility for parking enforcement shall be the HOA, with the City of Redmond also being acknowledged in the CCR's as a beneficiary for such parking enforcement as a violation of the land use decision and/or city code.

In certain cases, bike lanes may be reduced to 5 ft, parking may be reduced to 7 ft, and travel lanes to 11 ft at the discretion of the City Engineer. *Unstriped travel lanes

****36 ft in existing built-out areas

*****All streets less than 28 feet wide shall be no longer than 300 feet in length, unless such streets include at least one (1) parking bay per lot, located along each lot frontage for the entire length of such street, up to the maximum block length. Streets 300 feet or less in length shall not have any direct driveway access. In no case shall any street less than 28 feet wide intersect with any other street less than 28 feet wide.

- **Finding: NW 10th Avenue is a Major Collector with an existing right of way 70 feet wide. Because the Major Collector right of way standard is 80 feet, the applicant is required to dedicate an additional 10 feet of land for a total of 80 feet of right of way. For NW Upas Avenue (also a Major Collector), 70 feet of right of way will be dedicated by this property to create a total of 80 feet of right of way.**

4. Future Extension of Streets. When necessary to give access to or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary of the subdivision or partition and the resulting dead-end streets may be approved without a permanent turn around if they are 150 feet or less in length, although, an adequate temporary turn around to ensure emergency vehicle access must be provided if such streets are greater than 150 feet in length.

- **Finding: NW Upas Avenue will be extended to the east boundary of this subdivision and provide access to the property to the east for its future development. NW Upas Place will be a Local street and the cul de sac is an approved fire apparatus turn around.**

5. Collector and Arterial Street Access. Notwithstanding the provisions of Section 8.2705 of this Chapter, if a land division abuts or contains an existing or proposed collector or arterial street, the Community Development Director or Hearings Body may require other treatments, including but not

limited to frontage roads, necessary for adequate protection of residential properties and to afford separation of through and local traffic. Provision may be made for emergency access. All frontage roads shall comply with the City of Redmond Transportation System Plan.

- **Finding: This property abuts two collector streets – NW Upas Avenue and NW 10th Street. Because of the small size of the property, there is no need for a frontage road for residential access.**

6. Streets Adjacent to Railroads, Freeways and Parkways. When the area to be subdivided or partitioned is residentially zoned and abuts a railroad, freeway, or parkway, a provision may be required for a street approximately parallel to and on each side of such right-of-way at a distance suitable for use of the land between the street and railroad, freeway or parkway. In the case of a railroad, there shall be a land strip of not less than 25 feet in width adjacent and along the railroad right-of-way for screen planting between the railroad right-of-way and residential property. If the intervening property between such parallel streets and a freeway or a parkway is less than 80 feet in width, such intervening property shall be dedicated to park or thoroughfare use. The intersections of such parallel streets, where they intersect with streets that cross a railroad, shall be determined with due consideration as cross streets of a minimum distance required for approach grades to a future grade separation and right-of-way widths of the cross street.

- **Finding: This criterion is not applicable as the subdivision is not adjacent to a railroad, freeway or parkway.**

7. Continuation of Streets. Subdivision or partition streets which constitute the continuation of streets in contiguous territory shall be aligned so that their center lines coincide. Where straight line continuations are not possible, such center lines shall be continued as curves. These streets or the continuation of streets in contiguous territory may be required by the Community Development Director or Hearings Body where such continuation is necessary to maintain the function of the street or desirable in the surrounding area. Where solar orientation would not be possible if the street area continued, a new pattern may be started that is solar oriented.

- **Finding: NW Upas Avenue will have a slight deflection in to the west, but will be mostly aligned. The eastbound lane on NW Upas at NW 10th aligns appropriately and the west bound lane on Upas aligns going west. The criteria is met.**

8. Lot Layout. Local residential streets should be oriented on an east/west axis to the greatest possible extent to insure solar access for lots within the subdivision or partition.

- **Finding: The parent lot dimensions do not lend itself to east/west axis lot orientation. The 80 feet of right of way associated with NW Upas Avenue will help buffer solar access to the property to the north. The layout meets this to the maximum extent possible.**

9. Street Names. Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street in a nearby city or in the county. Street names and numbers shall conform to the established pattern in the City, including the continuation of street names across intersecting streets, and shall be subject to the approval of the Fire Department or the responsible agency.

- **Finding: Street names will be reviewed and approved by the City of Redmond and/or Redmond Fire and Rescue prior to approval of the final plat.**

10. Sidewalks. Sidewalks are required to be installed on both sides of a public street and in any special pedestrian way within the subdivision or partition except that in the case of collectors, arterials, special industrial districts or in steep terrain, the Hearings Body may approve a subdivision or partition without sidewalk if alternative pedestrian routes are available or provided by the developer. Sidewalks shall be required along routes to existing or future school and park sites.

➤ **Finding: Five (5) foot sidewalks are shown on all interior streets, and adjacent street frontages and between Lots 10 and 11 in the cul de sac. This criterion is met**

11. Bicycle Routes. If appropriate to the extension of a system of bicycle routes, existing or planned pursuant to the City of Redmond Bicycle Refinement Plan, the Community Development Director or the Hearings Body may require the installation of separate bicycle lanes within streets and/or separate bicycle paths.

➤ **Finding: Both NW 10th and NW Upas along the property frontage will accommodate 6-foot bicycle lanes.**

12. Intersection Angles. Street intersections shall be as near right angles as possible except where topography or existing conditions requires a lesser angle, but in no case shall the acute angle be less than as permitted by the adopted City of Redmond Public Works Standards and Specifications.

➤ **Finding: All street intersecting angles are at 90 degrees. This criterion is met.**

13. Alignment. Staggered street alignment shall whenever possible leave a minimum of 200 feet distance between the center line of the streets, but in no case be less than as permitted by Standards and Specifications.

➤ **Finding: There are no proposed staggered street alignments.**

14. Narrow Streets. Local residential grid streets designed at widths less than 36 feet as described in Section 8.2710(3)(Table 1), shall be permitted when the subdivision design is found to be in compliance with the following:

- A. Narrow streets may only be permitted for continuous full length blocks internal to a Subdivision or Planned Unit Development with street connections at both ends.
- B. Lots adjoining the narrow streets shall be a minimum of 5000 square feet and have a street minimum 50 feet of frontage.
- C. Sidewalks shall be separated from the curb by a landscape strip with street trees conforming with Public Works Standards and Specifications.
- D. Curb cuts along the narrow street shall not be less than the minimum width required within the adopted City of Redmond Public Works Standards and Specifications.

➤ **Finding: Narrow streets are not being proposed therefore this criterion is not applicable.**

[Section 8.2710 amended by Ord. #2012-11 passed October 23, 2012]

8.2715 Fundamental Design Elements.

1. Lighting. The subdivider or partitioner shall provide underground wiring to the City standards and a base for any proposed ornamental street lights at locations approved by the affected utility company.
 - **Finding: Street lights may be a requirement of the City of Redmond during the approval of the construction plans.**
2. Multiple Access Points. Whenever possible, a minimum of two points of access to the subdivision or partition shall be provided to provide assured access for emergency vehicles and ease resident evacuation.
 - **Finding: Given the size of the parcel and its adjacency to two collector streets and to already developed properties to the south, multiple access points are not feasible. Redmond Fire and Rescue officials have not requested a second point of access.**
3. Water/Sewer. All subdivisions and partitions shall provide water and sewer lines constructed to City standards and specifications approved by the City Engineer. All lots or parcels shall be served from the City of Redmond water and sewer systems or by water and sewer systems acceptable to the City. Water and sewer mains and service lines shall be installed prior to the curbing and paving of new streets in all new subdivisions or partitions.
 - **Finding: Water and sewer mains will be provided in all streets. City of Bend water and sewer services will be provided to all streets. It is a condition of approval for the developer to provide the City with approved construction plans.**
4. Underground Utilities. All permanent utility service and minor power transmission lines that are within or immediately adjacent to lots in a subdivision or parcels in a partition shall be provided from underground facilities unless otherwise approved by the CDD Director or Hearings Body. The subdivider or partitioner or developer shall be responsible for complying with requirements of this section and shall:
 - A. Obtain a permit from the Public Works Director or designee for placement for all underground utilities within the public right-of-way.
 - B. Make all necessary arrangements with the utility companies and other persons or corporations affected by the installation of such underground utilities and facilities in accordance with rules and regulations of the Public Utility Commission of the State of Oregon.
 - C. All underground utilities, water lines, sanitary sewer lines and storm drains installed in streets shall be constructed prior to the surfacing of such streets to the extent practicable, and water and sanitary sewer service lines shall be placed to such lengths as will negate the necessity for disturbing the street improvements when service connections are made.
 - **Finding: Utilities will be provided to each lot with underground facilities.**
5. Preservation of Natural Features. Existing trees, vegetation and natural features (i.e. rock outcrops) add character to the development and shall be preserved to the greatest extent practicable. All trees over 8 inches d.b.h. shall be noted and shown on the tentative plat.
 - **Finding: No notable natural features exist on the subject property.**
6. Scenic Views. Significant views shall be taken into consideration during subdivision design. The establishment of view corridors, building envelopes, building height restrictions or similar methods shall be employed for the retention and protection of views from individual lots and from public spaces

to the greatest degree practicable as determined through the land use review process. Such measures shall be shown on the final plat and included in deed restrictions.

- **Finding: Scenic views from this property are mostly to the southwest. The small size of the parcel is not conducive to taking advantage of the views and meeting the density requirements of the Highway Area Plan and other City documents.**

7. Land for Public Purposes.

- A. If the City has an interest in acquiring a portion of a proposed development for a public purpose, it shall notify the property owner as soon as the City Council authorizes the transaction to proceed.
- B. Within a development, or adjacent to a development in contiguous property owned by the developer, a parcel of land of not more than 5% of the gross area of the development may be required to be set aside and dedicated to the public for parks and recreation purposes by the developer. The parcel of land, if required, shall be determined to be suitable for the park and/or recreation purpose(s) intended, and the city may require the development of the land for the park or recreation use intended or identified as a need within the community.
- C. In the event no such area is available that is found to be suitable for parks and/or recreation uses, the developer may be required, in lieu of setting aside land to pay to the appropriate parks and recreation agency a sum of money equal to the market value of the area required for dedication, plus the additional funds necessary for the development thereof if so required; if such is required, the money may only be utilized for capital improvements by the appropriate parks and recreation agency.
- D. The foregoing land and development or money dedication (if require) may be provided for in lieu of an equal value of systems development charge assessment for parks if so approved by the collecting agency in accordance with the applicable provisions of the system development charge ordinance. If the collecting agency will not permit the land or money dedication in lieu of an applicable systems development charge, then the land and development or money dedication shall not be required.
- E. If the nature and design, or approval, of a development is such that over 30% of the tract of land to be developed is dedicated to public uses such as streets, water or sewer system facilities and the like, then the requirements of this subsection shall be reduced so that the total obligation of the developer to the public does not exceed 30%.

- **Finding: Other than land required for dedication as public right of way, no additional land is proposed to be set aside for public use. The City is not interested in a public park on this parcel.**

8. Easements.

- A. Utility Easements. Easements shall be provided along property lines when necessary for the placement of underground utilities and to provide the subdivision or partition with electric power, communication facilities, street lighting, sewer lines, water lines, gas lines, or drainage. Such easements shall be labeled "Public Utility Easement" on the tentative and final plat; they shall be at least 12 feet in width and centered on lot lines where possible, unless determined otherwise by the City Engineer or designate. Excepting utility pole guylines easements along the rear of lots adjacent to unsubdivided land may be reduced to 10 feet in width, unless determined otherwise by the City Engineer or designate.

- **Finding: Proposed easement are shown on the proposed plans for utility easements a minimum width of 10 feet.**

B. Drainage. If a tract is traversed by a water course, such as a drainage way, channel or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of the water course or in such further width as will be adequate for the purpose. Streets or parkways parallel to major water courses and drainage ways may be required.

- **Finding: No major water course is known in this area. A drainage report shall be required with the construction plans to identify and address issues.**

[Section 8.2715 amended by Ord. #2012-11 passed October 23, 2012]

8.2720 Grading of Building Sites. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

1. Slopes shall be less than or equal to 3 to 1 (horizontal to vertical) unless slope reinforcement and low maintenance surfaces are provided. Cut slopes as steep as 1 to 1 are permitted in native rock material if that material is suitable to stand at the slope without raveling. Toe of full slopes steeper than 3 to 1 and top of cut slope shall be no closer than 2 feet from the property line.
2. Structural engineering must be provided for retaining walls higher than four feet from the base of the footing to the top of the retaining portion of the wall and for retaining walls of any height that support a surcharge such as a structure, roadway or slope greater than 4 to 1.
3. Stormwater must be controlled in accordance with the City of Redmond Public Works Standards and Specifications to avoid erosion and impacts to adjacent property.
4. Cuts and fills greater than 5 feet from original ground to final grade should be avoided.
5. Foundations should be stepped or other measures used to minimize cuts and fills. Slopes steeper than 3:1 shall be landscaped, terraced, or receive other treatment to reduce the visual impact and minimize the need for maintenance.
6. Areas that require engineered fill to support structures, roadways or for other reasons shall be noted in the grading plan. Design and placement of engineered fill shall be under the direction of a licensed professional engineer. Fill material shall be tested and approved by the engineer prior to placement and tested with suitable methods after compaction. Fill in areas that do not support a structure shall be suitable with a minimum of voids and organic material.
7. The composition of soil for fill and the characteristics of lots and parcels made useable by fill shall be suitable for the purpose intended.
8. When filling or grading is contemplated by the subdivider or partitioner, they shall submit plans showing existing and finished grades for the approval of the City Engineer. In reviewing these plans, the City Engineer shall consider the need for drainage and effect of filling an adjacent property.
9. Grading shall be finished in such a manner as not to create steep banks or unsightly areas to adjacent property.
10. Any land that requires engineered fill shall be so noted on the plat. Design and placement of engineered fill shall be under the direction of a licensed professional engineer.

- **Finding: No major grading is proposed with this project. There is an abandoned stock water pond that will need to be filled. Any fill material shall be placed under the direction of an engineer and signed off by the engineer. The request complies with all the above criteria.**

8.2820 Access Management Standards. All land divisions shall be in compliance with the following standards.

1. Driveway spacing and corner clearance as follows:

<u>Roadway Minimum Access Classification</u>	<u>Minimum Access Driveway Spacing</u>	<u>Intersection Clearance to Corner</u>	<u>Spacing (Min.)</u>
Local Street	No restrictions	30 feet	165 feet
Minor Collector	50 feet	80 feet	330 feet
Major Collector	165 feet	165 feet	330 feet
Minor Arterial	330 feet	330 feet	¼ mile
Major Arterial	ODOT Stds	ODOT Stds	ODOT Stds

2. In all instances, access near an intersection shall be located beyond the influence of standing queues and opposing left turns sharing a continuous two-way left turn lane. This requirement may result in greater corner clearance or access spacing than the minimum distance indicated.
3. Every lot or parcel shall be permitted an access. In the event that the access management standards cannot be achieved, shared access with adjacent property shall be explored and provided where available.
4. Access shall be taken from the lower order street or alley unless otherwise approved by Public Works and/or ODOT through the land use process.
5. Unless adequate demonstration of site necessity, intersection safety and functionality is provided, through the land use review process, new lots and/or parcels will be limited to a single vehicular access.
6. The access management standards apply to new development, redevelopment, subdivision and partitioning of land.
7. Corner clearance is measured from the edge of right-of-way to the nearest edge of access. Spacing is measured from centerline of access/intersection to centerline of access/intersection.
8. Adequate intersection sight distance and clear zone shall be maintained at all access/driveway locations per AASHTO standards (American Association of State Highway and Transportation Officials).

CONCLUSIONS

In all land use proceedings, the “burden of proof” rests with the applicant to demonstrate compliance with the land use regulations. After reviewing all available evidence submitted by the applicant, staff concludes that conditions of approval (Exhibit A) are warranted for the development to comply fully with the RDC standards and criteria.

Scott Woodford
Senior Planner

LOCATED IN THE NW 1/4 NE 1/4 OF SECTION 4,
TOWNSHIP 15 SOUTH, RANGE 13 EAST, W.M.,
CITY OF REDMOND, DESCHUTES COUNTY, OREGON

CENTRAL CHRISTIAN SCHOOL
2731 SW AIRPORT WAY
REDMOND, OR 97756
1413330001806

NORTH CANYON PROPERTIES LLC
PO BOX 457
REDMOND, OR 97756
1413330001800

JOB NO: 2324 - CINDER BUTTE VILLAGE

DATE: 12-12-19

DRAWN BY: P.A.T.

SCALE: AS SHOWN

DWG: CINDER BUTTE VILLAGE_TentativeJoyou_REV1_Updated_9

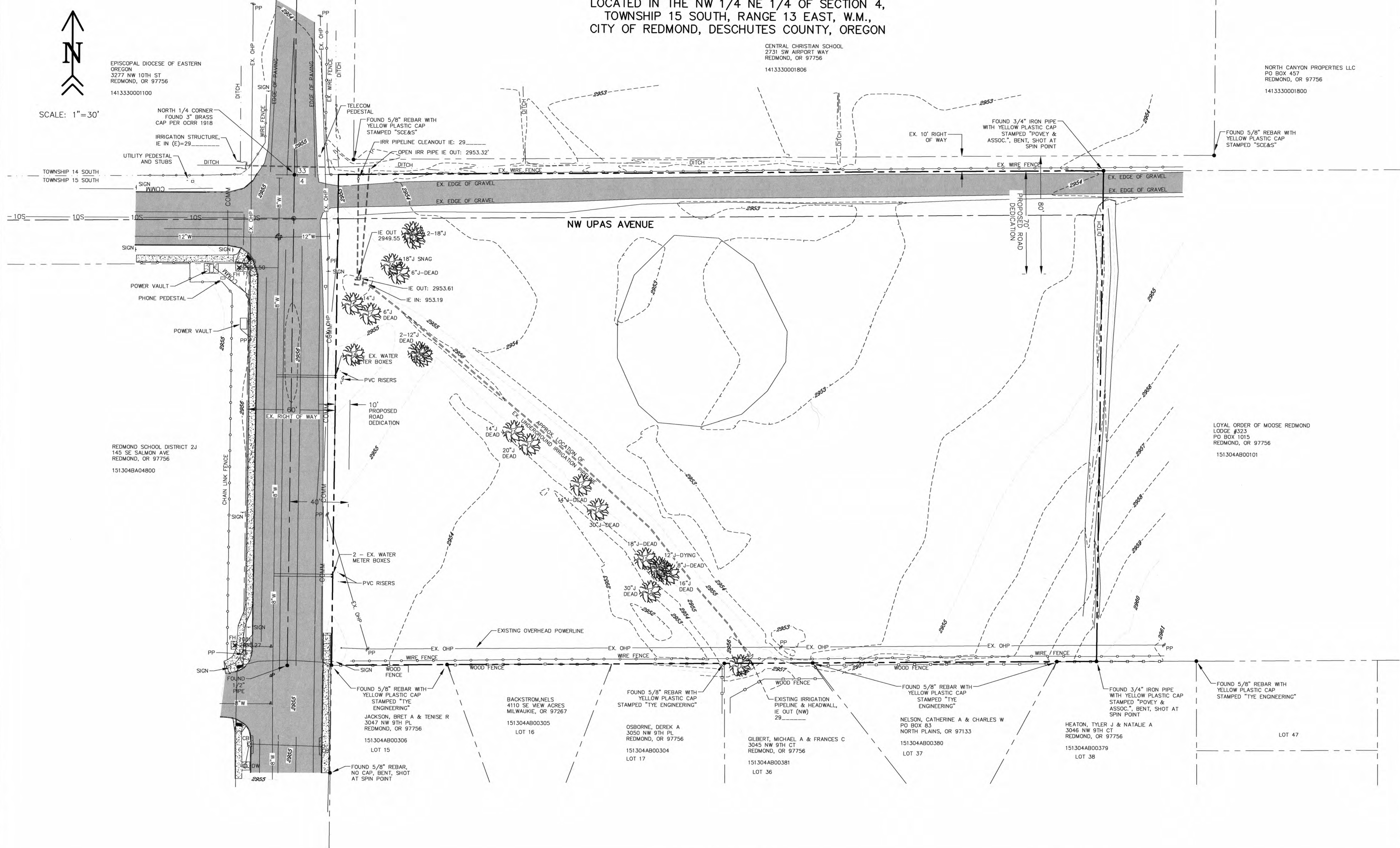
LE: CINDER BUTTE VILLAGE
TENTATIVE SUBDIVISION
EXISTING CONDITIONS

WATSON FAMILY LIMITED
PARTNERSHIP
2664 SW GLACIER AVE, STE. 110
REDMOND, OREGON 97756

TYE ENGINEERING & SURVEYING, INC.
725 NW HILL STREET
BEND, OREGON 97703
ph: 541-389-6959
email: office@tyeengineering.com
www.tyeengineering.com



SHEET	OF
2	2



EXISTING CONDITIONS
SCALE: 1"=30'

Exhibit C - Project Plans

CINDER BUTTE VILLAGE
TENTATIVE SUBDIVISION

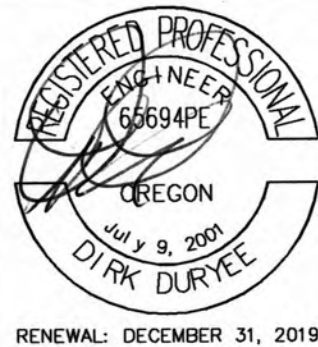
LOCATED IN THE NW 1/4 NE 1/4 OF SECTION 4,
TOWNSHIP 15 SOUTH, RANGE 13 EAST, W.M.,
CITY OF REDMOND, DESCHUTES COUNTY, OREGON

OWNER:
WATSON FAMILY
LIMITED PARTNERSHIP
2464 SW GLACIER PL STE 110
REDMOND, OR 97756

SURVEYING & ENGINEERING:
TYE ENGINEERING & SURVEYING,
INC.
725 NW HILL STREET
BEND, OREGON 97703

EXISTING WATER: NONE
PROPOSED WATER: CITY OF
REDMOND
EXISTING SEWER: NONE
PROPOSED SEWER: CITY OF
REDMOND

TAX LOT: 102
ZONE: R3(R4-COM. PLAN)
TOTAL AREA: 3.9 AC±
DENSITY: 6.9 UNITS
PRESENT USE: VACANT
PROPOSED USE: SUBDIVISION
NUMBER OF LOTS: 16
LOT SIZES: 6,001 SF MIN.
TO 9,909 SF MAX.
WATER: CITY OF REDMOND
SEWER: CITY OF REDMOND
POWER: CENTRAL ELECTRIC
CO-OP
PHONE: CENTURY LINK
CABLE: BEND BROADBAND
IRRIGATION: COID
SCHOOL: REDMOND SCHOOL
DISTRICT



JOB NO: 2324 - CINDER BUTTE VILLAGE
DATE: 12-17-19
DRAWN BY: P.A.T./ATT
SCALE: AS SHOWN
DWG: CINDER BUTTE VILLAGE_Tentative_Subdiv_L-12-19.dwg

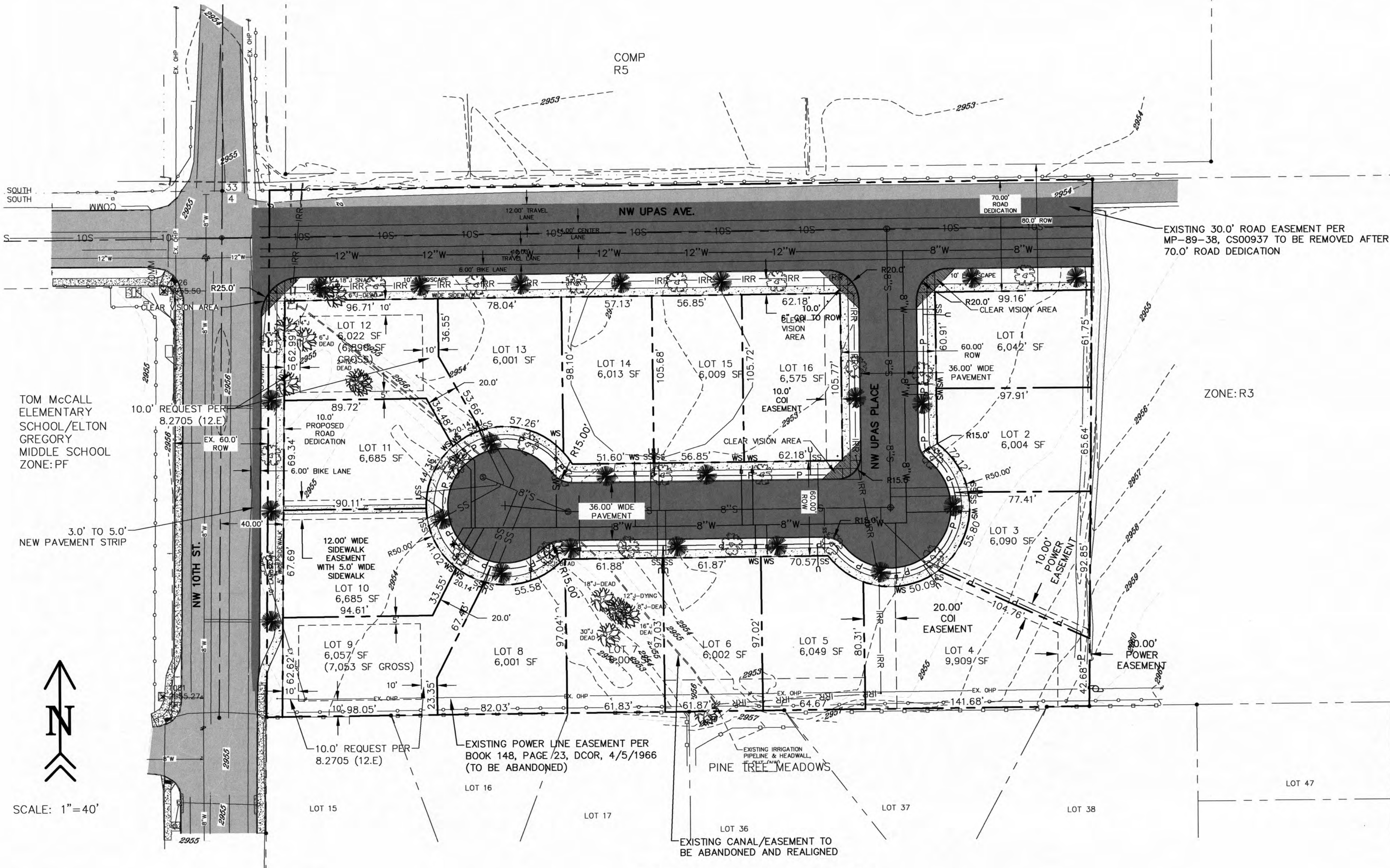
TITLE:
CINDER BUTTE VILLAGE
TENTATIVE SUBDIVISION

FOR:
WATSON FAMILY LIMITED
PARTNERSHIP
2864 SW GLACIER AVE, STE. 110
REDMOND, OREGON 97756

TYE ENGINEERING & SURVEYING, INC.
725 NW HILL STREET
BEND, OREGON 97703
ph: 541-388-6859
email: office@tyeengineering.com
www.tyeengineering.com



SHEET 1 OF 2



LEGEND
NOT TO SCALE

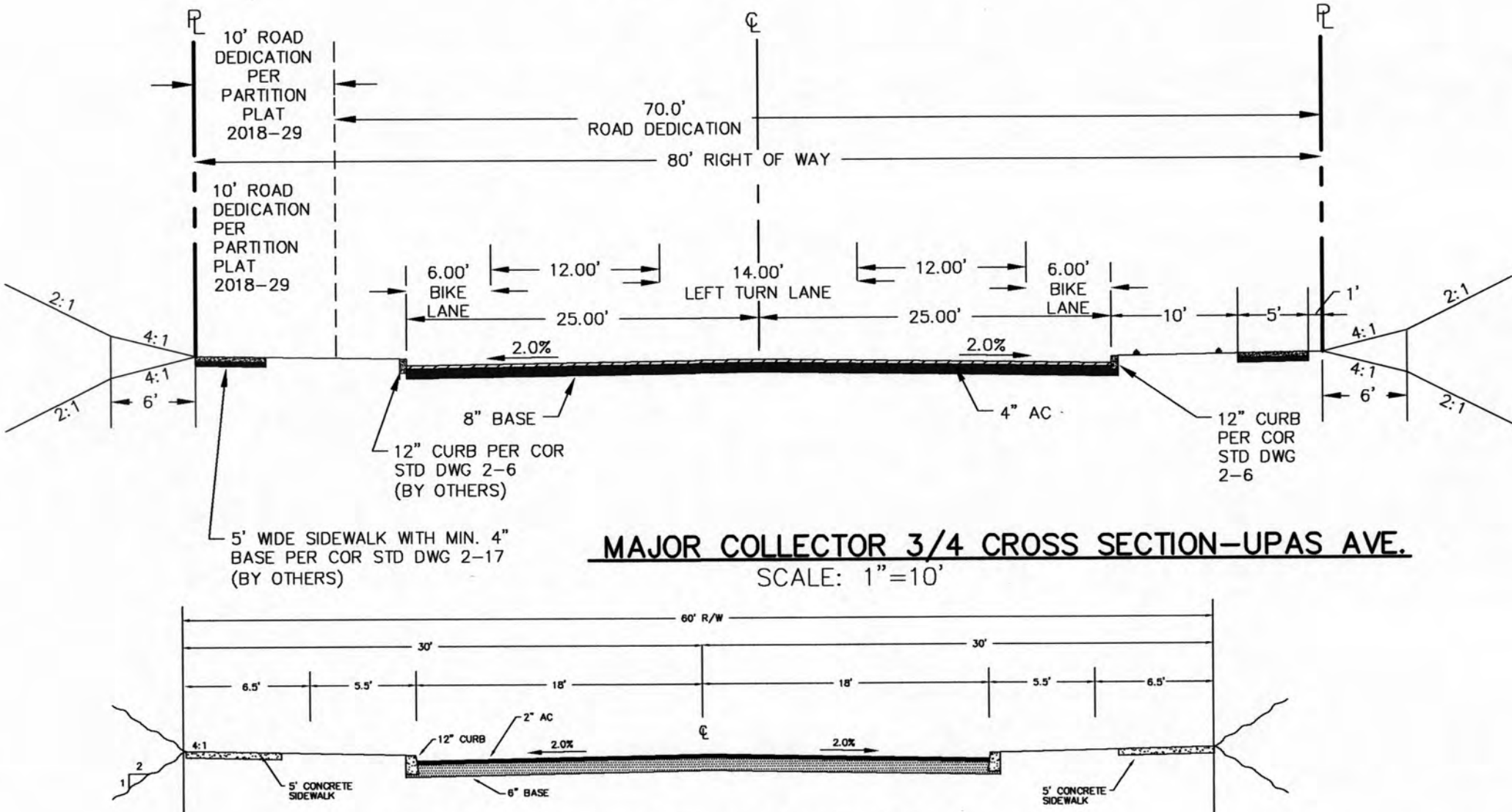
---	CENTER LINE	⊕	MONUMENT
---	PROPOSED EDGE OF PAVEMENT	⊕	SEWER MANHOLE
---	EXISTING EDGE OF PAVEMENT	⊕	SEWER CLEAN OUT
---	PROPERTY LINE	⊕	CATCH BASIN
---	PHASE LINE	⊕	UTILITY POLE
---	EASEMENT LINE	⊕	CONTROL POINT
---	XSD	⊕	DRY WELL TYPE B
---	X8"S	⊕	PROPOSED STREET LIGHT
---	X8"W	⊕	SECTION CORNER
---	XPOW	⊕	ONE-QUARTER CORNER
---	XIRR	⊕	GUY WIRE
---	8"W	⊕	BENCH MARK
---	8"S	⊕	WATER METER
---	8"PS	⊕	TELEPHONE PEDESTAL
---	UTIL	⊕	POWER PEDESTAL & ALL DRY UTILITY SERVICES (TYPICAL)
---	SS	⊕	POWER VAULT
---	WS	⊕	PROPOSED HYDRANT
---	CONTRACTOR'S OPTION: PROPOSED 1" SPLIT WATER SERVICE WITH (2) 5/8" WATER METERS	⊕	EXISTING HYDRANT
---	PROPOSED SIDEWALK	⊕	PROPOSED GATE VALVE
---	EXISTING FENCE	⊕	EXISTING GATE VALVE
---	CURB RAMP AND RETURN PER COR STANDARD DRAWING 2-7A	⊕	CAP OR PLUG
---	STREET TREES MAPLE	⊕	COR STANDARD STREET/STOP SIGN PER STANDARD DRAWING 2-12
---		⊕	SURFACE MOUNTED FLEXIBLE DELINEATOR PER O.D.O.T
---		⊕	TEMPORARY FLEXIBLE PAVEMENT MARKER

TENTATIVE SUBDIVISION MAP

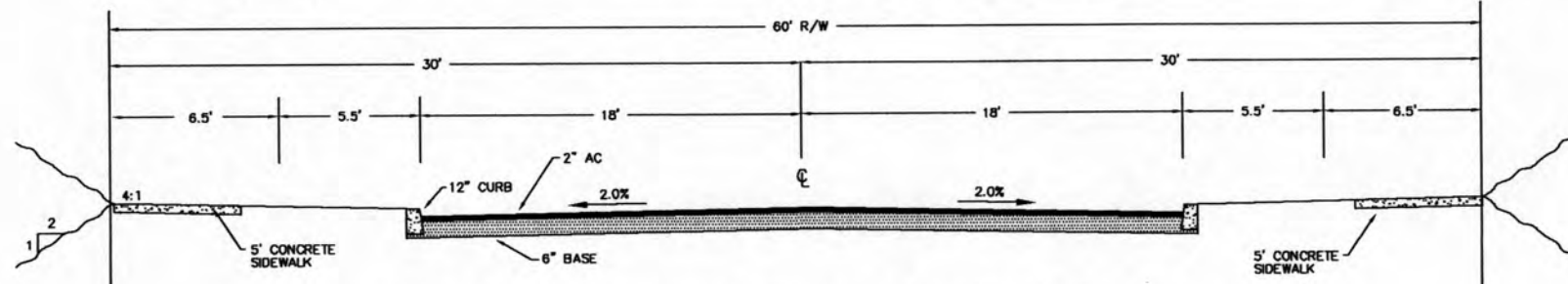
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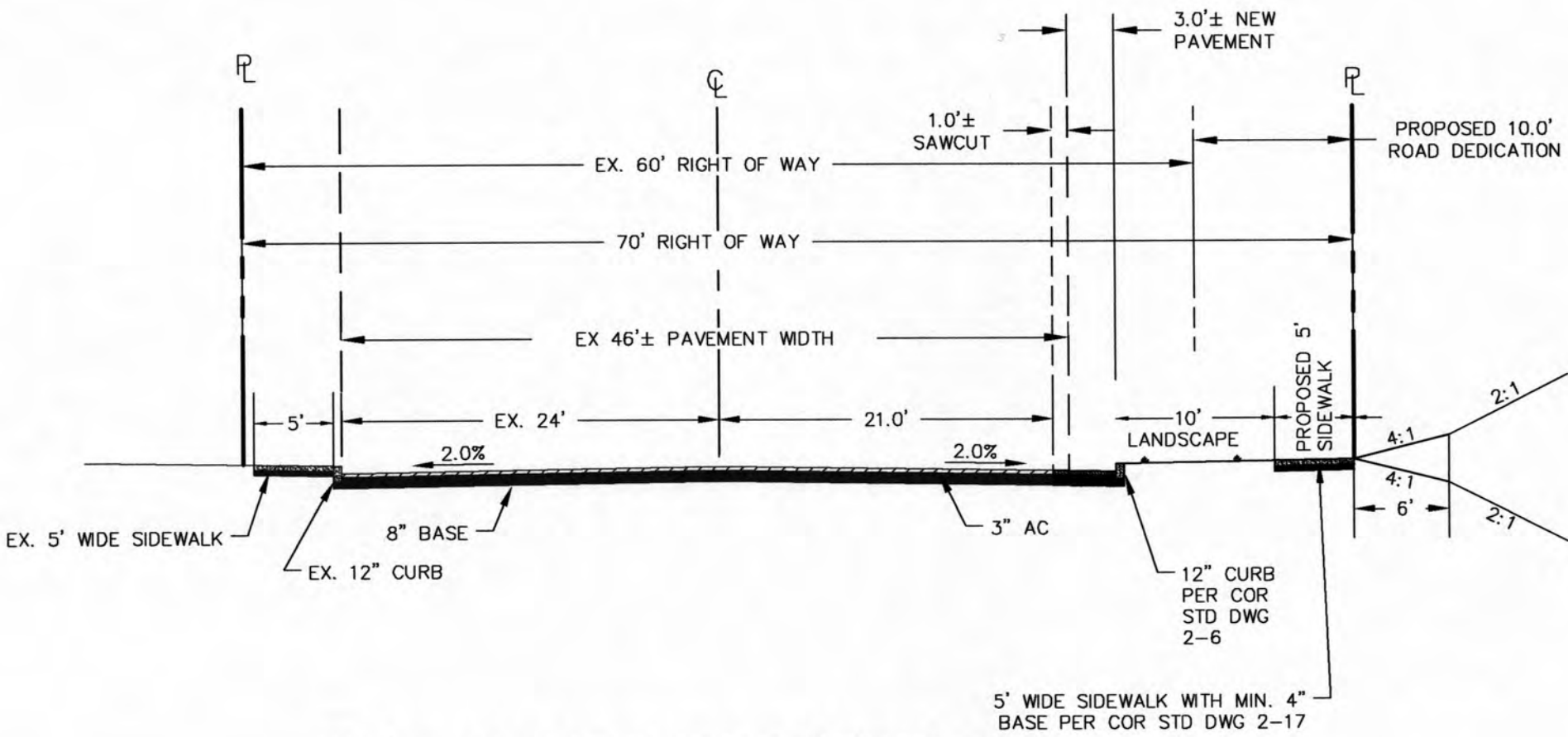
VICINITY MAP
NOT TO SCALE



MAJOR COLLECTOR 3/4 CROSS SECTION-UPAS AVE.
SCALE: 1"=10'



TYPICAL CROSS SECTION FOR UPAS PLACE
NOT TO SCALE



MAJOR COLLECTOR CROSS SECTION-10TH ST.
SCALE: 1"=10'

SHEETS
1) TENTATIVE SUBDIVISION
2) EXISTING CONDITIONS



CINDER BUTTE VILLAGE

PHASE 1

REDMOND CITY COUNCIL

APRIL 28, 2020

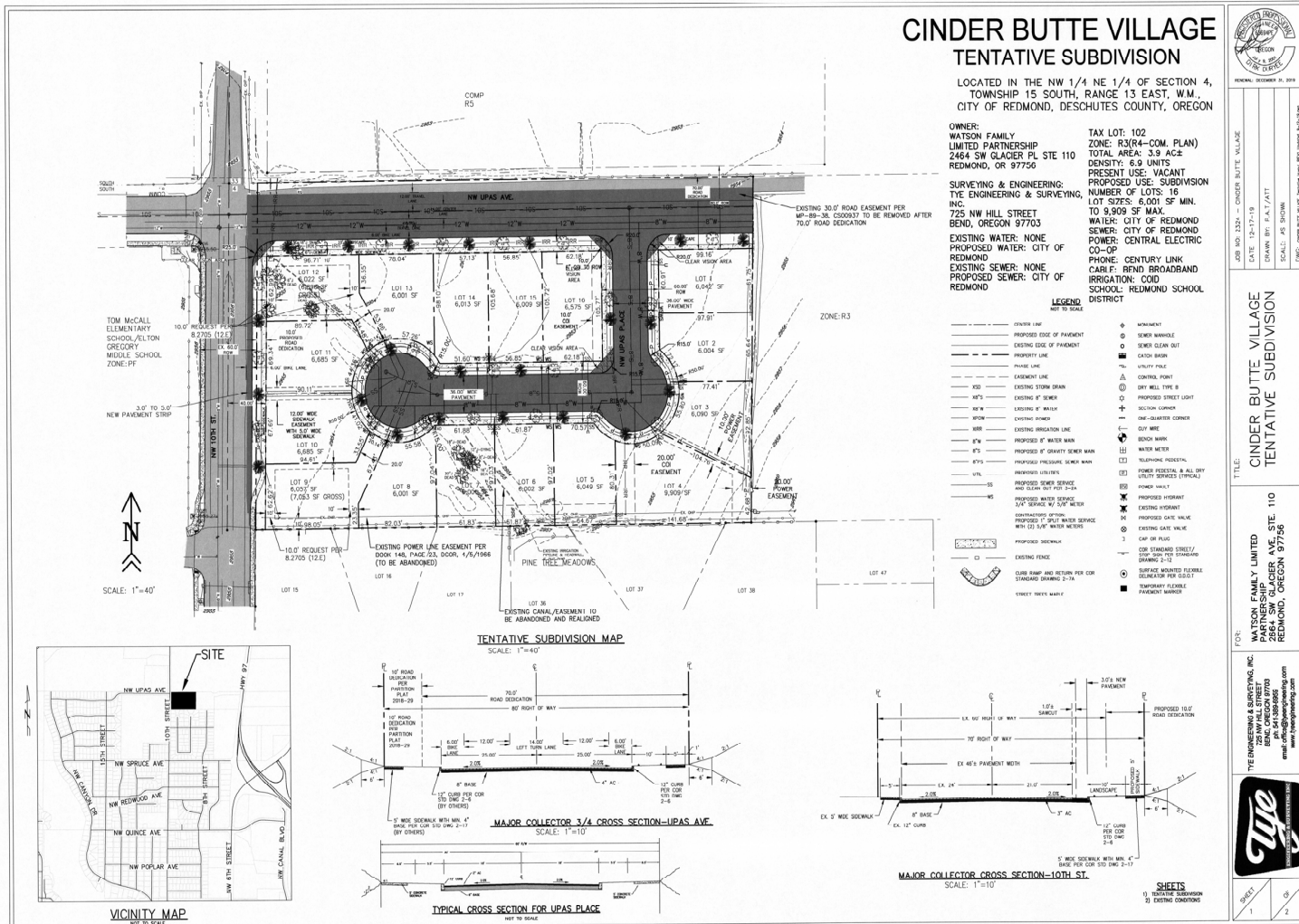




HIGHWAY AREA PLAN



SLIDE 2





QUESTIONS





CITY OF REDMOND

411 SW 9th STREET
REDMOND, OR 97756

541.923.7710
FAX: 541.548.0706
info@ci.redmond.or.us
www.ci.redmond.or.us

STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Deborah McMahon, Planning Manager
FROM: Scott Woodford, Senior Planner
SUBJECT: Ord. #2020-07 - An ordinance approving a tentative subdivision, Cottage Development, Conditional Use, Variance and Modification of Approval for Cinder Butte Village Phases 2-4, located northeast of the intersection of NW 10th Street and Upas Avenue (Deschutes County Tax Lot #1413330001806), Redmond, OR 97756.

Addresses Council Goal:

7. COMPREHENSIVE PLANNING

Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining our unique character.

A. Promote quality development.

i. Using the City Code and other tools, incorporate the Great Neighborhood Principles for both new and infill development.

Report in Brief:

This item requests City Council approve a land use application for 59 Single Family Lots and 53 Cottage Units on a 19.2-acre parcel in north Redmond, near Tom McCall Elementary School (locator map attached).

Background:

The subject property is located within the boundaries of the Highway Area Plan. The Area Plan was adopted in 2007 to guide future development as property is brought into Urban Growth Boundary and developed.

No land use proposal or activity occurred on the subject property until 2017 when the Central Christian Master Development Plan was approved. The Master Development Plan incorporated both the subject property and approximately 36 acres of commonly held property to the east.

The approved Central Christian Master Development Plan included land for a new school, adjacent to NW 10th Street. The Development Plan also included: land zoned R-4 and R-5 for single family residences and multi-family complexes; area for a neighborhood park; a civic parcel for public facilities; and Mixed Use Neighborhood and Employment lands. The Central Christian Master Plan is attached for more detail.

After approving the Central Christian Master Development Plan, a Partition Plat was approved dividing the 55-acre parcel into three parcels. Parcel 1 of the partition was 19.3-acres and intended to be the site for the future school. The school has since decided not to pursue development on this parcel and has a contract to sell it to Hayden Homes (the applicant).

Discussion:

The application includes five separate requests: Tentative Subdivision, Cottage Development, Conditional Use Permit, Variance and Modification approval. Additionally, a phased construction plan is proposed. Note, Cinder Butte Village Phase 1 (also a Hayden Home project) is proposed on the adjacent lot to the south. Phase I consists of 16 single family lots and is currently being reviewed under a separate land use application. Cinder Butte Village Phases 2-4 will be as follows: Phase 2 is single family Lots 17-44, Phase 3 is single family Lots 53-75, and Phase 4 will be 53 cottage units.

The first request is a Tentative Subdivision Plat for fifty-nine (59) single family lots on the northern 2/3 of the property. All

lots are a minimum of 6,000 square feet, in accordance with the minimums for the R-4 zone district. The southern 1/3 of the property consists of fifty-three (53) cottage units and open space in the R-5 zone district.

A Conditional Use is required for a Cottage Development in the R-5 zone district and a Variance has been requested to exceed the maximum 1,000 square foot floor area for a cottage unit.

According to the Redmond Development Code, cottages are intended to be single family units. It is anticipated the cottages will be marketed to both younger individuals/families looking to live on their own or aging individuals/families wanting less square footage. Each cottage unit will be located on its own lot, have a consistent architectural theme, and be accessible to open space parcels on the cottage site.

Per the Development Code, the cottage units are limited to 1,000 square feet in size plus an allowance of 300 square feet for a garage. The applicant is proposing a larger unit size of 1,250 square feet in size, not including the garage, for a maximum of 50% of the cottage units. Thus, a Minor Variance to vary the maximum floor area is required. Each cottage unit will have two parking spaces, accessed via a 24-foot-wide alley, and have adequate water and sewer. The variance request is supported as it furthers Great Neighborhood Principles, particularly providing for a variety of housing unit types and sizes available to disparate income levels.

Lastly, a Modification to Approval is required to change the Central Christian Master Development Plan to remove the school use. The school was situated on approximately 19 of the total 55-acres. Instead of a school, the amended master plan will include additional residential uses and necessary street connections. The remainder of the originally approved Master Development Plan will stay intact. The proposed modifications will help achieve some of the City's Great Neighborhood Principles, which calls for a variety of housing units. The revised Master Development Plan is attached.

Adequate utilities, water and sewer infrastructure are available to serve the proposed development and will be extended in accordance with the proposed phasing. Sidewalks and multi-use path were designed to take into account the higher level of service of the surrounding streets. They are designed to be constructed to facilitate safety for pedestrian walkers and bikers.

Conditions have been added to the approval to ensure all the appropriate road, access, water and sewer improvements and dedications are completed (Exhibit A of Attachment A in Ordinance 2020-07).

Staff has reviewed the applicant's 'burden of proof' and finds that the proposal complies with all required findings. The 'Conclusionary Findings' are contained in Ordinance 2020-07 (Exhibit B of Attachment A) and indicate how the proposal complies with the all applicable criteria and City's Development Code.

As required by City Charter, notices regarding this Ordinance were posted in three places (the Library, the Police Department, and the Redmond Chamber of Commerce) in addition to City Hall on April 21, 2020

Fiscal Impact:

There are no initial costs and expenditures which are the responsibility of the City. The City will be responsible for ongoing maintenance of the streets, water and sewer systems.

Alternative Courses of Action:

After conducting the public hearing and considering all evidence and testimony:

1. Accept the Planning Commission recommendation to approve.
2. Continue the public hearing and leave the written record open to request additional information.
3. Deny the Planning Commission recommendation.

Recommendation / Suggested Motion:

"I move to have a first and second reading of Ord. #2020-07 by title only." (Voice vote)

(City Attorney will read ordinance by title only, twice.)

"I move to approve Ordinance #2020-07." (Roll call vote)





**CITY OF REDMOND
ORDINANCE NO. 2020-07**

AN ORDINANCE APPROVING A TENTATIVE SUBDIVISION, COTTAGE DEVELOPMENT, CONDITIONAL USE, VARIANCE AND MODIFICATION OF APPROVAL FOR CINDER BUTTE VILLAGE PHASES 2-4, LOCATED NORTHEAST OF THE INTERSECTION OF NW 10TH STREET AND UPAS AVENUE (DESCHUTES COUNTY TAX LOT #1413330001806), REDMOND, OR 97756

WHEREAS, the City of Redmond has adopted zoning and planning regulations in accordance with Oregon Revised Statutes Chapter 227 that regulate and control the development of land within the City; and

WHEREAS, the City of Redmond City Council has adopted a set of goals that include: “enhance the quality of life through adoption of programs, policies and standards that balance growth while maintaining our unique character; promote quality development; and using the City Code and other tools, incorporate the Great Neighborhood Principles for both new and infill development”; and

WHEREAS, the City of Redmond Comprehensive Plan is the product of hundreds of citizens from the public and private sector who participated in the Redmond Vision 2020 planning process; and

WHEREAS, the City of Redmond Comprehensive Plan 2020 Addendum contains multiple visioning statements, including statements on improving urban form and community design; and

WHEREAS, the City of Redmond has set the action steps necessary to implement the goals and policies in the Comprehensive Plan related to the vision; and

WHEREAS, the Redmond Urban Area Planning Commission held a public hearing on March 2, 2020 and, after reviewing the record and gathering public testimony, has recommended that the Redmond City Council approve the Tentative Subdivision Plat for 59 Single Family Lots, Cottage Development for 53 Cottage Units, Conditional Use for the Cottage Units, Variance to the Maximum Cottage Floor Area, and Modification of the Central Christian Master Development Plan, subject to conditions of approval; and

WHEREAS, the City Council held a public hearing on April 28, 2020 to consider the recommendation of the Redmond Urban Area Planning Commission, review the existing record and gather additional evidence and public testimony; and

WHEREAS, the City Council has received the Planning Commission’s recommendation and, after receiving additional evidence and testimony, determined that the requested Tentative Subdivision, Cottage Development, Conditional Use, Variance, and Modification of Approval is in compliance with the Redmond Development Code and would contribute to the Redmond Comprehensive Plan goals and policies; and

WHEREAS, the City Council finds that the findings for the Tentative Subdivision, Cottage Development, Conditional Use, Variance, and Modification of Approval have fully addressed the City’s Comprehensive Plan amendment process, applicable state law, Statewide Planning Goals, and the City’s standards and criteria; and,

WHEREAS, the City Council finds that the proposed the Tentative Subdivision, Cottage Development, Conditional Use, Variance, and Modification of Approval furthers the interests of the City.

NOW, THEREFORE, THE CITY OF REDMOND ORDAINS AS FOLLOWS:

SECTION ONE: The City of Redmond hereby approves the Tentative Subdivision, Cottage Development, Conditional Use, Variance, and Modification of Approval, subject to the conditions of approval. The Decision, Findings, and Project Plans are attached hereto as “Exhibits A, B, and C.”

SECTION TWO: In support of the approval, the City of Redmond hereby adopts the findings, which are attached hereto as “Exhibit B” and demonstrate compliance with the Redmond Development Code, Section 8.0300, Cottage Development, Section 8.0600, Conditional Use, Section 8.0700, Variance, Section 8.1400, Modification, and Section 8.2235, Tentative Subdivision Plat, and applicable Statewide Planning Goals.

SECTION THREE: SEVERABILITY. The provisions of this Ordinance are severable. The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance, which can be given without such invalid part, or parts.

PASSED by the City Council and **APPROVED** by the Mayor this 28th day of April 2020.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

FINDINGS OF THE REDMOND CITY COUNCIL FOR CINDER BUTTE VILLAGE PHASES 2-4 FOR APPROVAL OF A TENTATIVE SUBDIVISION PLAT, COTTAGE DEVELOPMENT, CONDITIONAL USE, VARIANCE AND MODIFICATION OF APPROVAL

FILE NO. Cinder Butte Village Phase 2-4 / City File #711-19-000217-SUB, 711-19-000218-COD, 711-19-000219-MC, 711-19-000220-CU, 711-19-000221-V)

REQUEST: Approval of a Tentative Subdivision Plat for 59 Single Family Lots, Cottage Development for 53 Cottage Units, Conditional Use for the Cottage Units, Variance to the Maximum Cottage Floor Area, and Modification of the Central Christian Master Development Plan

LOCATION: Generally located northeast of the intersection of NW 10th Street and NW Upas Avenue (Deschutes County Tax Lot # 1413330001806), Redmond, OR

APPLICANT: Hayden Homes, LLC

STAFF: Scott Woodford, Senior Planner

HEARINGS BODY: Redmond Urban Area Planning Commission & Redmond City Council

DATE & TIME: April 28, 2020 in front of the Redmond City Council at 6 pm and March 2, 2020 at 6:30 pm in front of the Redmond Urban Area Planning Commission; Meetings held at City Council Chambers, 411 SW 9th Street, Redmond, Oregon

Vicinity Map



DECISION: APPROVAL WITH CONDITIONS

////////////////////////////////////

SUMMARY

Approval of a Tentative Subdivision Plat for 59 Single Family Lots, Cottage Development for 53 Cottage Units, Conditional Use for the Cottage Units, Variance to the Maximum Cottage Floor Area, and Modification of the Central Christian Master Development Plan.

A full plan set with preliminary site plan, street layout and proposed zoning is provided in Exhibit C.

COMMENTS

Informational comments from related agencies concerning the project are presented in the record.

At the time of the completion of this staff report, there was no public comment received from noticed neighbors by the Planning Department concerning this application during the comment period.

EXHIBITS

The following exhibits are on-file and make up the record in this matter:

1. Proposed Findings and Conclusions included herein.
2. The Staff Report.
3. Public Notices.
4. City Council/Planning Commission Public Hearing Staff Reports.
5. Public testimony received.

ATTACHMENTS

Exhibit A – Decision and Conditions of Approval

Exhibit B – Conclusionary Findings

Exhibit C – Project Plans

Exhibit D – Transportation Impact Study

EXHIBIT A – DECISION AND CONDITIONS OF APPROVAL**DECISION**

Based on the submitted plans, staff findings and conclusions, the City Council approves a Tentative Subdivision Plat for 59 Single Family Lots, Cottage Development for 53 Cottage Units, Conditional Use for the Cottage Units, Variance to the Maximum Cottage Floor Area, and Modification of the Central Christian Master Development Plan for Cinder Butte Village Phase 2-4, subject to the conditions of approval below.

CONDITIONS OF APPROVAL

1. In order to assure that the Homeowners Association maintains and repairs any needed improvements (including streets, trails, landscaping, etc.), the applicant shall make the City of Redmond a party to the Covenants, Conditions, and Restrictions (CC&R's). The CC&R's shall be reviewed and subject to City approval prior to approval of any final plat for the subdivision.
2. The variance submitted for the maximum floor area of the cottage units is 1,250 square feet not including an allowance of up to 300 square feet for the garage. To maintain a mix of unit types, a maximum of 50% of the cottage units (27 units) can be up to 1,250 square feet. The remaining 26 units must be 1,000 square feet or less, not including up to 300 square feet for the garage.
3. Fences in the cottage development shall be a maximum of 4 feet tall wherever they abut common area open space.
4. Transportation: All public streets shall be designed, constructed and dedicated to current City of Redmond Standards & Specifications and Transportation System Plan (TSP) standards and extended to the limits of the project or each phase unless otherwise specified or approved. Five (5) ft. minimum width public utility easement (PUE) shall be dedicated along all street right-of-way per COR Standard Drawing 2-1. Street signage, lane striping, streetlights and postal box installation shall be required. All street names shall be approved by Redmond Fire and Rescue and/or Deschutes County. The proposed public street system shall be subject to the following:
 - A. NW 10th St. - major collector street. A paved road and sixty (60) to eighty (80) ft. right-of-way exist, no curb or sidewalks along property frontage. Street frontage improvements conforming to full width City major collector street standards shall be required per COR Standard Drawing 2-1 with new pavement section, turn lanes to match existing at Upas Ave., curbs on both sides, sidewalk on the east side and storm drainage along property frontage. Street and right-of-way centerline shall match existing.
 - B. NW Upas Ave. - major collector street. A gravel road and ten (10) ft. right-of-way exists along property frontage. A paved street and sixty (60) ft. right-of-way exist west of 10th Street. Street frontage improvements conforming to City partial major collector street standards shall be required as a minimum per COR Standard Drawing 2-1 and 2-4 with new pavement, turn lanes to match existing at 10th St., curb and sidewalk on the north side, storm drainage and forty-five (45) ft. right-of-way dedication from 10th St. to east property boundary prior to Phase 4 plat approval. A cash contribution for one-half local street improvement may be provided for any portion of Upas Ave. if construction is restricted due to lack of public right-of-way. Street and right-of-way centerline shall match existing.

- C. NW Varnish Ave., Walnut Ave. & 9th St. – local grid streets. Street improvements conforming to City local street standards shall be required per COR Standard Drawing 2-1 with new pavement, curb, property tight sidewalk, storm drainage and sixty (60) ft. right-of-way dedication.
- D. NW 9th Lane & 9th Ct. Cul-de-sac - local/cul-de-sac street. Street improvements conforming to City local/cul-de-sac street standards shall be required per COR Standard Drawing 2-1 and 2-4 with new pavement, curb, property tight sidewalk, storm drainage, sixty (60) ft. right-of-way dedication and fifty (50) ft. cul-de-sac radius right-of-way dedication.
- E. Private Alleys - proposed alleys shall be privately owned and maintained. Improvements conforming to City alley standards with twenty (20) ft. wide pavement are recommended. Alley driveway connections to Varnish Ave. shall be constructed to City standards.
- F. Street Storm Drainage:
 - i. Stormwater drainage systems in the public right-of-way shall be subject to current City design standards.
 - ii. New drywells shall comply with City/DEQ pretreatment and City testing requirements. Drywell drain rock shall not extend under any street pavement section.
 - iii. The location of drywells or other UIC's within City streets shall not conflict with existing active private water wells, community water wells or existing/future municipal drinking water wells. Identify all existing water wells that are within 500 ft. or the two-year time of travel zone of subject properties.
- H. Street Trees:
 - i. Trees shall be located on property side of sidewalk.
 - ii. No trees within 50 ft. of a street intersection per COR Standard Drawing 2-23.
 - iii. Trees shall not conflict with street/stop signs, water meters or clear vision areas.
- I. Lot Access:
 - i. Vehicular access to each new lot shall conform to City access management, corner clearance, clear vision and driveway construction standards.
 - ii. Direct vehicular access to NW 10th St. and Upas Ave., major collector streets, shall not be permitted from any lot or alley except for approved street and emergency access connections.
 - iii. Corner lots and double fronting lots shall take vehicular access from the lower order street, alley or access easement.
 - iv. Postal box installation shall be subject to US Postal Service standards and City Engineer approval.
- J. Traffic Impacts: The Transportation Impact Analysis (TIA) for Cinder Butte Village Phase 2-4 submitted by Lancaster Engineering dated 12-2-19 has been reviewed per COR Code Section 8.2815 and the following is recommended:
 - i. ODOT and Deschutes County shall review and approve.
 - ii. O'Neil Junction (NW Pershall Way/US97); near-term solutions and/or contribution shall be provided to mitigate impact on existing conditions compounded by proposed development subject to ODOT review/approval.
 - iii. 10th St./Pershall Way; off-site turn lanes/warrants shall be reviewed/approved by Deschutes County.
 - iv. 10th St./Spruce Ave and 10th St./Quince Ave.; off-site turn lanes will not be required at this time due to existing right-of-way restrictions.
 - v. 10th St./Upas Ave; although warrants not met, left turn lanes shall be included in 10th St. and Upas Ave. to match existing/school zone at this intersection.
 - iv. No other mitigation will be required beyond Transportation SDC's.

5. Water: The following water conditions of approval shall be adhered to:

- A. Connection to the City's public water system shall be required for each new lot.
- B. Proposed public water system shall be subject to City "to & through" Public Facility Requirement and City Water System Plan (WSP) standards for service to each new lot and adjacent property and the following:
 - i. Public water mains shall be extended within all public streets to the limits of the project/phases.
 - ii. A public water main shall be extended in Upas Ave. along property frontage from 10th St. to east property boundary prior to Phase 4 plat approval. A cash contribution for one-half minimum standard water main improvement may be provided if any portion of construction is restricted due to lack of available public right-of-way.
 - iii. The twelve (12) inch public water main identified as P-58 per current WSP shall be extended in 10th St. north from Upas Ave. along property frontage. P-58 water main may be eligible for City Water SDC credits equal to the cost of additional construction required for conformance to WSP standards.
 - iv. Design review of the public improvement construction plans for compliance to City standards.
- C. A separate domestic water service connection conforming to City standards shall be required for each new SFD lot with meter located at the property/right-of-way line. A City approved backflow prevention device shall be required for all non-residential properties, water services larger than one (1) inch, fire sprinkler systems and irrigation systems.
- D. Proposed private on-site water system serving the Cottage Units/Lots including any fire hydrants shall be privately owned and maintained. A single water master meter and City approved backflow prevention device located at the property/right-of-way line shall be required for the entire cottage complex due to interior lots with no public right-of-way frontage.
- E. Fire flow, fire hydrant locations and fire code requirements to be determined by Redmond Fire & Rescue (RFR).
 - i. A water system/fire flow analysis and mitigation plan prepared by a registered professional engineer shall be provided as required by the Redmond Fire Marshal.
 - ii. Public water system improvements may be required as deemed necessary by the fire flow analysis mitigation plan to meet minimum fire code and fire flow requirements for the proposed development.
- F. Abandonment of any existing water well, cistern or other private water facility located on subject properties shall be in accordance with Oregon Water Resource Department regulations. *[CORPWSS Development Provisions 04.7.00 & 22(13)]*

6. Wastewater: The following wastewater conditions of approval shall be adhered to:

- A. Subject property is located within a sanitary sewer basin planned for gravity service by the future FESI which is currently not available. In the absence of the FESI, connection to the existing downstream City gravity sewer system including the East Side Sewer Interceptor (ESSI) sewer trunk main line has been approved per Infrastructure Capacity Allocation Review memo by the City Engineer dated 1-17-20.
- B. Connection to the City's public sewer system shall be required for each new lot.
- C. Proposed public gravity sewer system shall be subject to City "to & through" Public Facility Requirement and City Wastewater System Master Plan (WSMP) standards for service to each new lot and adjacent property and the following:
 - i. Public gravity sewer mains shall be extended in;

1. Walnut Ave. from 9th Lane to 10th Street.
 2. 10th St. north from Walnut Ave. to the north property boundary.
 3. Upas Ave. along property frontage from 10th St. to east property boundary prior to Phase 4 plat approval. A cash contribution for one-half minimum standard gravity sewer main improvement may be provided if any portion of construction is restricted due to lack of available public right-of-way.
- ii. Proposed sewer collection system shall be designed for both the interim connection to existing gravity sewer and future gravity connection to the FESI to the extent possible.
 - iii. All public gravity sewer mains shall be designed and constructed to provide a gravity service to each new lot and neighboring properties unless otherwise approved by the City Engineer.
 - iv. Sewer services shall be located to provide complete gravity service.
 - v. Sewer manholes shall be located on street centerline whenever possible and 400 ft. max spacing. Manholes shall be added or moved accordingly and to avoid conflicts with public water.
 - vi. Public sanitary sewer facilities located beyond public right-of-way will require dedication of City sewer and/or public utility easements that provide unobstructed City access and turnarounds. The proposed public sewer located in private alleys shall be subject to adequate access and turnaround areas for City service vehicles and review/approval by the City Wastewater Division.
 - vii. Design review of the public improvement construction plans for compliance to City standards.
- D. A separate sanitary sewer service conforming to City standards shall be required for each new SFD or Cottage lot with cleanout located at the property/right-of-way or easement line. All sewer services shall be connected at right angles to the sewer mainline, and not to manholes, unless otherwise approved by the City Engineer.
 - E. Any existing sewage drill hole, septic tank or other private sewer facility located on subject property shall be permanently abandoned in accordance with Deschutes County and Oregon Dept. of Environmental Quality (DEQ) regulations.
7. Subdivision Grading and Drainage: A subdivision site grading and drainage plan with erosion/sediment control plan and drainage report shall be required upon development each phase and shall be subject to current City standards and the following:
- A. Lot and Tract grading shall conform to current COR Development Code 8.2720 and shall not create steep banks, extreme cut/fills or areas unsightly to adjacent properties or lots.
 - B. All storm water runoff and drainage shall be maintained on each lot or tract and shall not drain onto public streets, neighboring properties or irrigation canals/ditches except as provided for in City standards.
 - C. The stormwater system shall be designed to pass up-gradient flow through the site without damage to the proposed development, public stormwater facilities or neighboring properties.
 - D. Storm water runoff from private property shall not impact public right-of-way or easements unless otherwise approved by the Public Works Director or City Engineer.
 - a. New on-site private drywells and other underground injection control (UIC) systems not part of the public drainage system must be registered and approved or permitted by the Oregon Department of Environmental Quality (DEQ) prior to construction or building permit issuance. Contact DEQ UIC Program Coordinator at 503-229-5945.

Send copy of UIC Registration Packet to DEQ and City of Redmond, 3100 NW 19th Street, Redmond, OR, 97756.

- b. Private drywells serving paved areas may not be located within public or community wellhead protection areas or 500 ft. of existing irrigation or drinking water wells. Locate and identify existing water wells and wellhead protection zones that could affect the location of proposed drywells. Please note that much of this site is located within 500 ft. of existing private water wells. Additionally, the southern half of this site is located within the 2-year time of travel zone of an existing community well where UIC/drywells are not allowed.
 - c. Maintenance agreement required for any on-site private storm system.
8. Construction Plans: Upon land use approval, a separate set of construction drawings shall be submitted directly to the Engineering Department for design review of all required and/or proposed public improvements, utilities and subdivision site grading.
9. Fire Safety during Construction – 2019 OFC 501.4-Water
 - A. Approved fire department access roads, required water supply, fire hydrants, and safety precautions shall be installed and serviceable prior to and during the time of construction. The requirements of NFPA 241 shall be followed until project is complete.
 - B. Water Supply – 2019 OFC B105.1: The minimum fire-flow requirements for one- and two- family dwellings having a fire-flow calculation area which does not exceed 3,600 sq ft (including the garage) shall be 1,000 gpm at 20 psi residual flow. Dwellings exceeding 3,600 sq ft shall use Table B105.4. Exception:
 1. A reduction in required fire flow of up to 50 %, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.3 (NFPA 13D) of the OFC.
 - C. Fire Hydrant – 2019 OFC 507.5.1: Where a portion of the building is more than 400 ft from a hydrant on a fire apparatus access road as measured by an approved route around the exterior of the building, on-site hydrants and mains shall be provided where required. Exception: For Group R3 occupancies, the distance requirement shall be 600 ft.
 - D. Private Fire Hydrants – If on site hydrates are required, these hydrates will be private hydrants. Per the City of Redmond water department, the hydrant system must be isolated by a DCDV. The DCDV brand, size and specification sheet must be included with the to-scale plans. The hydrant system will be designed and installed to the NFPA 24 (2016) standard. The site plans submitted will clearly show details for the private fire service mains and the hydrants per NFPA 24 (2016) section 4.1.3. Site plans per the above requirements shall be submitted along with an engineered fire flow analysis. These systems will be inspected, tested and functional prior to combustible construction.
 - E. Area Separation – 2019 OFC B104.2: Portions of buildings which are separated by fire walls without openings constructed in accordance with the International Building Code are allowed to be considered as separate fire flow calculation areas.
 - F. Obstruction & Protection of Fire Hydrants – 2019 OFC 507.5.4 – 507.5.6: A 3 foot clear space shall be maintained around the circumference of fire hydrant. When exposed to vehicular damage, concrete curbing, sidewalks, or 4 inch concrete filled bollards placed 3 feet from hydrant shall suitably protect fire hydrants.
 - G. A complete a stamped engineered fire flow analysis will be required.

2. Fire Access:

A. Premises Identification – 2019 OFC 505.1

- i. Approved numbers or addresses shall be placed on all new and existing buildings in such a position as to be plainly visible and legible from the street fronting the property. Said numbers shall contrast with their background and visible at night. Number/letter shall be a minimum of 4" high and a .5 "stroke width.
- ii. Note: The street names shall follow the City of Redmond or Deschutes County grid names and numbers. Street names are approved and shall continue to the south through the cottage development. The east west street shall be named Upas Place.

B. Required Access – 2019 OFC 504.: Exterior doors and openings shall be made readily accessible for emergency access by the fire department. An approved access walkway leading from fire apparatus access roads to exterior openings shall be provided.

C. Fire Apparatus Access Roads – 2019 OFC 503 & Appendix D

- i. Fire apparatus access roads shall extend to within 150 ft of all portions of the building as measured by an approved route around the exterior of the building.
- ii. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches.
- iii. Fire apparatus roads shall be designed and maintained to support the imposed loads of 70,000 lbs and shall be surfaced so as to provide all-weather driving capabilities.
- iv. The required turning radius of a fire apparatus access road shall be 30 feet inside and 50 feet outside.
- v. The grade of the fire apparatus access roads shall be within the limits established by the fire code official (10%).

D. Fire Lanes – 2014 OFC 503.3 & D103.6

- i. Approved signs or other approved notices shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. Such signs or notices shall be kept in legible conditions at all times. The stroke shall be 1 inch with letters 6 inches high and read "No Parking Fire Lane". Spacing for signage shall be every 50 feet. Recommended to also (in addition to Fire lane signs) paint fire lane curbs in bright red paint with white letters.
- ii. D103.6.1 Roads 20-26 Ft. Wide: Shall have Fire Lane signs posted on both sides of a fire lane.
- iii. D103.6.2 Roads more than 26 Ft. Wide: Roads 26-32 ft wide shall have a Fire Lane signs posted on one side of the road as a fire lane. *No Parking signs are required.*

E. Dead-Ends – 2019 OFC 503.2.5 and D103.4: Dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved area for turning around fire apparatus. Contact Redmond Fire & Rescue for requirements.

F. Emergency Access Road Gates – 2019 OFC D103.5

- i. Minimum 20 feet wide.
- ii. Gates shall be swinging or sliding type.
- iii. Shall be able to be manually operated by one person.

- iv. Electric gates shall be equipped with a means of opening by emergency personnel & approved by fire official.
- v. Locking devices shall be fire department padlocks purchased from A-1 Lock, Safe Co., Curtis Safe and Lock, on line at www.knoxbox.com, or contact Redmond Fire & Rescue for an order form.
- vi. Section 503.3: Install a sign on the gate "Emergency Access"

G. One and Two Family Residential Developments – 2019 OFC D107

- i. Developments where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads and shall meet the requirements of Section D 104.3. Unless, all dwellings are equipped with and approved automatic sprinkler system.
- ii. Remoteness – 2019 OFC D107.2 Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal of the property or area to be served, measured in a straight line between accesses.

//////////////////// **END CONDITIONS** //////////////////////

EXHIBIT B –CONCLUSIONARY FINDINGS**I. APPLICABLE CRITERIA:**

The following are the applicable sections from The City of Redmond Urban Area Comprehensive Plan and Chapter 8 of the Redmond Development Code.:

- The City of Redmond Urban Area 2020 Comprehensive Plan.
- City of Redmond Transportation System Plan
- City of Redmond Public Facility Master Plans (Water, Wastewater)
- City of Redmond Park Master Plan
- Oregon Revised Statutes (ORS) – ORS 197.250
- Oregon Administrative Rules (OAR)
 - Division 12, Transportation Planning Rule – OAR 660-012-0000
 - Division 15, Statewide Planning Goals and Guidelines – OAR 660-015-0000
- The City of Redmond Development Code, Chapter 8;
 - Section 8.0300, Cottage Development
 - Section 8.0600, Conditional Use
 - Section 8.0700, Variance
 - Section 8.1400, Modification
 - Section 8.2235, Tentative Subdivision Plat

II. BACKGROUND & HISTORY:

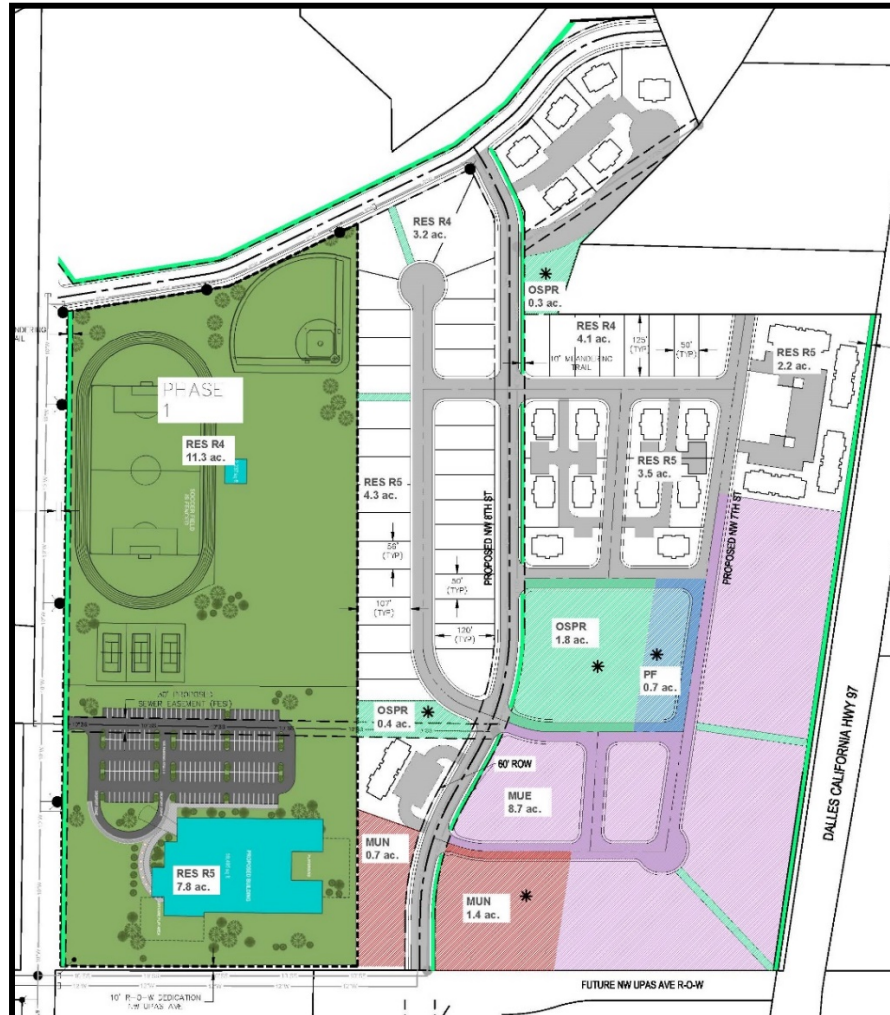
The subject property is within the boundaries of the Highway Area Plan, which was adopted by City Council in 2007 as a guide to the future development of the subject property and surrounding area that was brought into the Redmond Urban Growth Boundary at the time. No land use activity occurred on the subject property until 2017, when the City Council approved the Central Christian Master Development Plan, which encompassed the subject property and approximately 36 acres to the east.

The approved Central Christian master plan included land for a new school (Central Christian School), adjacent to NW 10th Street, in addition to land zoned R-4 and R-5 (for future subdivision to consist of single family up to multi-family complexes), area for a neighborhood park (zoned OSPR), a civic parcel for public facilities (zoned PF), and Mixed Use Neighborhood and Mixed-Use Employment lands (see the plans below for more detail). Subsequent to that approval, a Partition Plat was approved in 2018 dividing the 55-acre parcel into three parcels: Parcel 1 was partitioned into a 19.3-acre parcel, which was to be the site for the future school. The school has since decided not to pursue development on this parcel and Hayden Homes has submitted this application for residential development.

Aerial View of Subject Site

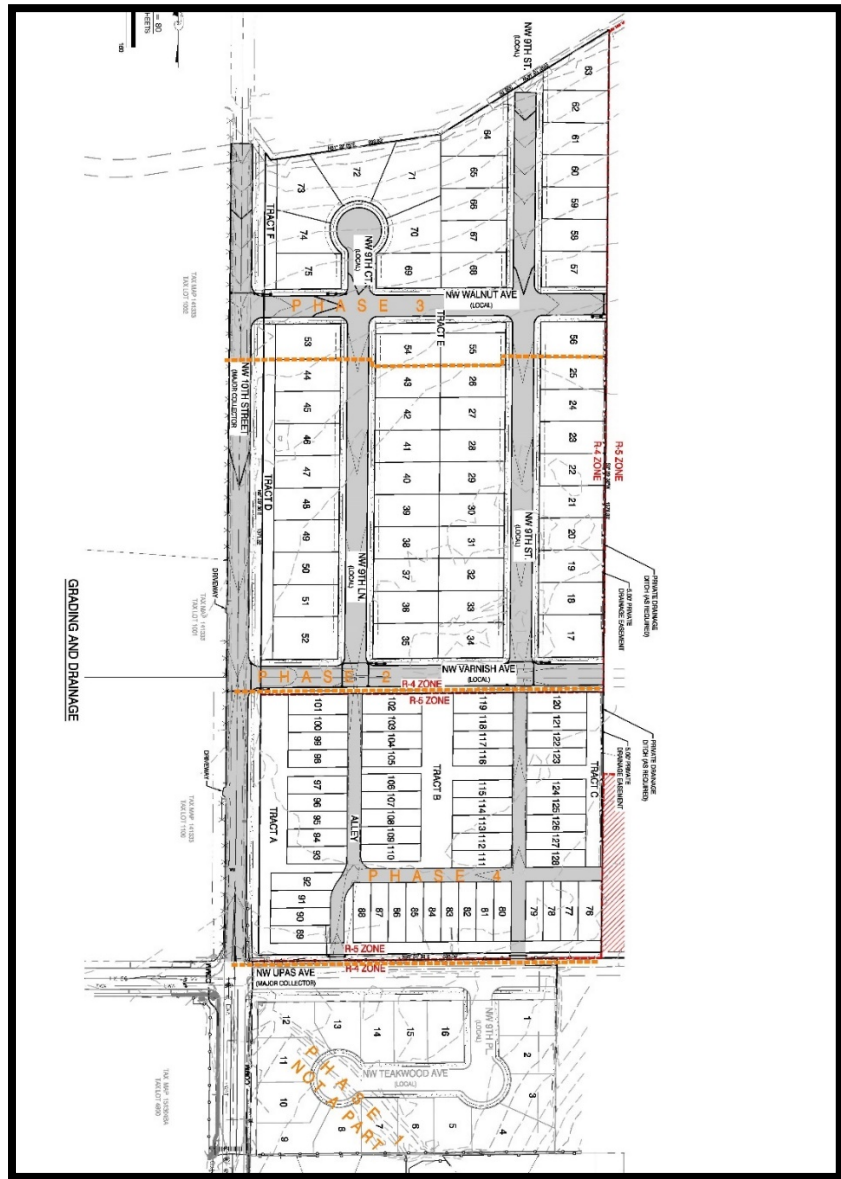


Approved Central Christian Master Development Plan Showing Proposed School



Proposal:

A Tentative Subdivision Plat application has been submitted, by Hayden Homes, for approval of fifty-nine (59) single family lots on the northern 2/3 of the property with all lots a minimum of 6,000 square feet, in accordance with the minimums for the R-4 zone district. The southern 1/3 of the property consists of fifty-three (53) cottage units and open space in the R-5 zone district. A Conditional Use is required for a Cottage Development in the R-5 zone and a Variance has been requested by the applicant to exceed the maximum floor area for a cottage unit. Also, since the proposal changes significant portions of the Central Christian Master Development Plan, a Modification of that approval is being requested (for the change to the school portion of the master plan).



Proposed Site Plan

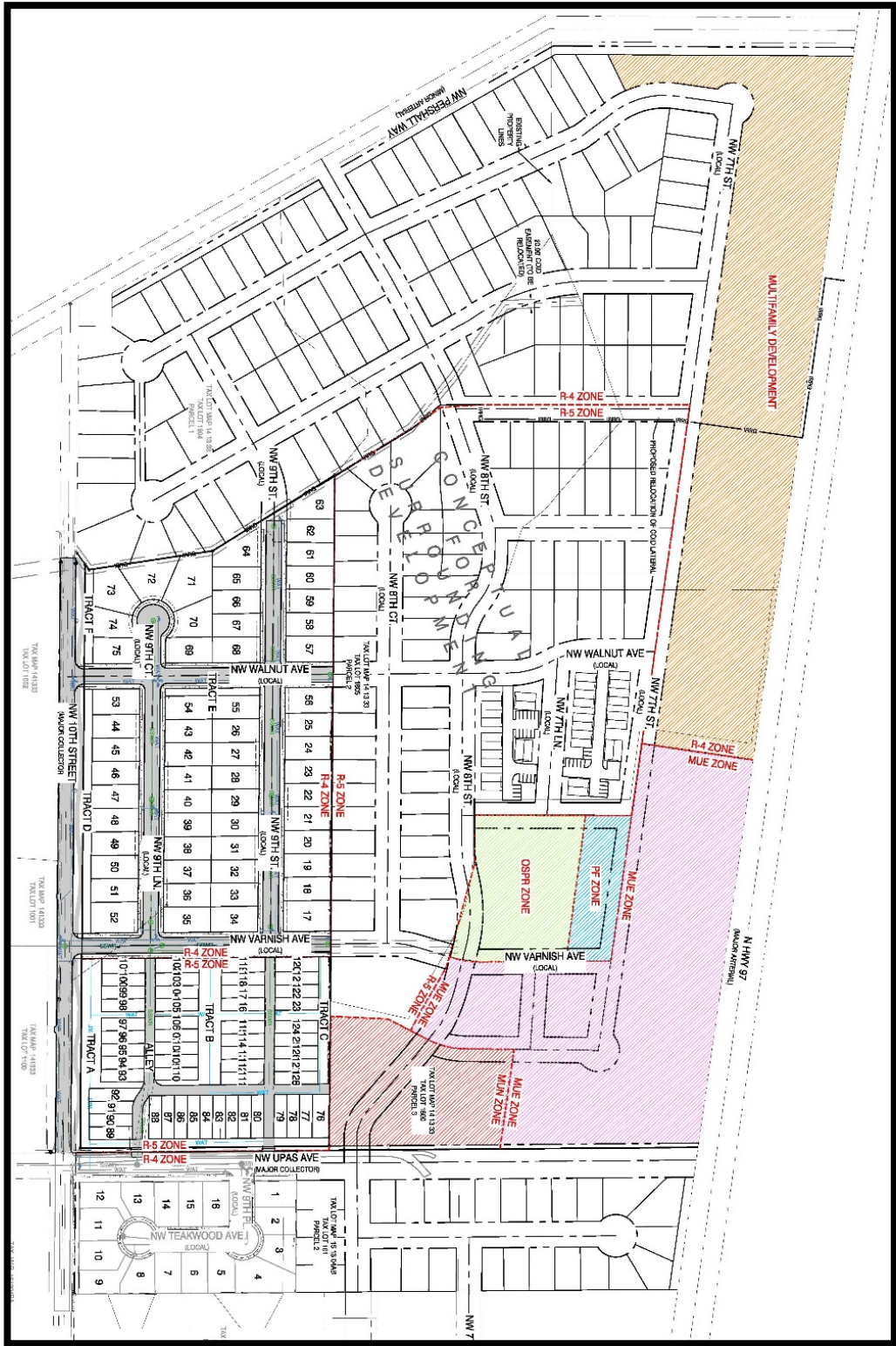
A phased construction plan is proposed. Cinder Butte Village Phase 1 is proposed on an adjacent lot to the south and consists of 16 single family lots (it's currently being reviewed under a separate land use application). Cinder Butte Village Phases 2-4 are the subject of this application and will be phased as follows: Phase 2 will be single family Lots 17-44, Phase 3 will be single family Lots 53-75 and Phase 4 will be the cottage units (the smaller lots shown above).

According to the Redmond Development Code, cottages are intended to be single family units and be marketed to the younger generation looking to live on their own in an affordable environment and/or older generations looking for low maintenance living, or smaller households). Each unit will be located on its own lot (for rental or sale), will have a consistent architectural theme and be directly accessible to open space parcels on the cottage site. Per the Development Code, the cottage units are limited to 1,000 square feet in size plus an allowance of 300 square

feet for a garage. The applicant is proposing a slightly larger unit size of 1,250 square feet in size, not including the garage, for a maximum of 50% of the cottage units, so an application for a Minor Variance to vary the maximum floor area is also requested.

Each cottage unit will have two parking spaces – one in the garage and one in the driveway - which exceeds the minimum requirement of 1.75 spaces per dwelling unit. All cottage units will be accessed via a 24-foot-wide alley that will be privately owned and maintained. A water system serving the cottage unit will also be privately owned and maintained with a single water meter and backflow prevention device located at the property/right of way line (due to the lack of public right of way frontage). A public sewer system will serve the cottage units, but since the streets are private, dedication of public utility easements for public access to maintain the system is required (and a condition of approval).

A Modification to Approval is necessary to change the Central Christian Master Development Plan to remove the school use from the plan (approximately 19 of the total 55 acres). Instead of a school, the master plan will include additional residential uses, as proposed with this application. Additional street connections are proposed to connect the subject parcel with other areas of the master plan that were not originally proposed. Otherwise, the remainder of the approved Master Development Plan are unchanged, and the Modification helps the overall Master Development Plan better meet one of the goals of the Great Neighborhood Principles, which call for a variety of housing units (see the revised Master Development Plan below).



Revised Central Christian Master Development Plan

A public water and sewer system are proposed for the single family lots located along existing or proposed public right of way. A 12-inch and 8 inch water main exists in Upas Avenue at 10th Street that will be required to be extended into the site subject to the City's "to and through" public facility requirement to facilitate service to both this development and adjacent properties. A public sewer system will serve the lots located along public streets. A 10-inch gravity sewer main exists in Upas Avenue at 10th Street. The applicant proposes to extend all utilities in accordance with the proposed phasing.

Sidewalks will be constructed along all proposed interior, Local Streets and a 10 wide, multi-use path will be constructed along the property frontage with NW 10th Street and NW Upas Avenue in lieu of 5' wide concrete sidewalks to facilitate safer and more comfortable walking and bicycling, adjacent to the busy streets.

- III. SITE DESCRIPTION:** The project area is located at 1300 NW Pershall Way (Tax Lot #1413330001003); The total acreage is 55.5 acres, is generally flat and has a historic use as irrigated farmland.

IV. EXHIBITS:

The following exhibits make up the record in this matter:

1. Proposed Findings and Conclusions included herein.
2. The Staff Report.
3. Public Notices.
4. City Council / Planning Commission Public Hearing Staff Reports.
5. Public testimony received.

V. SUMMARY:

1. This is a proposed Tentative Subdivision Plat for 59 Single Family Lots, Cottage Development for 53 Cottage Units, Conditional Use for the Cottage Units, Variance to the Maximum Cottage Floor Area, and Modification of the Central Christian Master Development Plan
2. The findings and supporting materials, all demonstrate the proposed Tentative Subdivision Plat for 59 Single Family Lots, Cottage Development for 53 Cottage Units, Conditional Use for the Cottage Units, Variance to the Maximum Cottage Floor Area, and Modification of the Central Christian Master Development Plan are consistent with the Statewide Planning Goals, the Redmond Comprehensive Plan, the City Council goals and other policies adopted by the City.
3. The criteria set forth in RDC Section 8.0285 (*Cottage Development*), Section 8.0600 (*Conditional Use*), Section 8.0700, (*Variance*), Section 8.2235 (*Tentative Subdivision Plat*), and Section 8.1400 (*Modification*) are addressed herein/below, as well as all applicable state laws and requirements.

VI. FINDINGS AND CONCLUSIONS:

Chapter 8, Sections 8.0285 (*Cottage Development*), Section 8.0600 (*Conditional Use*), Section 8.0700, (*Variance*), Section 8.2235 (*Tentative Subdivision Plat*), and Section 8.1400 (*Modification*) set forth the procedure and standards for approval.

8.0135 Table A, Residential Zones, Uses Permitted. The following uses are allowed outright or conditionally in each of the Residential zones as follows:

LAND USE:	ZONE:					RESTRICTIONS AND REQUIREMENTS:
<i>Residential Uses:</i>	R-1	R-2	R-3	R-4	R-5	
Accessory Building:						
Sheds, shops, garages	O	O	O	O	O	Detached; includes greenhouse, workshops
Guest House	C	C	C	O	O	No kitchen; uses main houses' sewer & water
Accessory Dwelling Unit / Accessory Suite	O	O	O	O	O	Uses main houses' sewer & water or individual City Services; may have kitchen
Accessory Use	O	O	O	O	O	Includes Home Occupations
Apartments						See Multi-Family Complex / Dwelling
Bed and Breakfast	C	C	C	C	C	
Boarding or Rooming House					C	
Cluster Development				C	C	
Cottage Development		C*	C	C	C	
Condominium	O	O	O	O	O	State regulated
Duplex		C*	C**	O	O	*Duplexes not allowed on R-2 lots unless they were platted prior to Nov. 9, 2006. Lots created before this date desiring duplexes are subject to conditional use review and approval and shall be on lots of 10,000+ s.f. **Duplexes in the R-3 zone are permitted on corner lots of 10,000 s.f. or more / with conditional use approval.
Duplex Lot			O	O	O	
Manufactured Home						See Single Family Dwelling
Manufactured Home Park			C	C	C	
Manufactured Home Subdivision			O	O	O	Subject to compliance w/ applicable ORS
Multi Family Complex (5 + units)				C	O	
Multi Family Dwelling (3 & 4 plex)				C	O	
Nursing, Convalescent, and Assisted Living Facility				C	C	More than 15 people
Planned Unit Development				C	C	
Residential Care Facility				C	O	Defined in and regulated by ORS
Residential Care Home	O	O	O	O	O	Defined in and regulated by ORS
Single Family Dwelling	O	O	O	O	O	
Townhouse				C	O	

- **RESPONSE:** Single family houses are outright permitted in the R-4 zone. Cottages are conditionally permitted in the R-5 zone. A conditional use permit has been applied for and is reviewed under that section.

8.0140 Table B, Minimum Standards. The following minimum standards apply in each of the Residential zones as follows:

Zone:					
Standard:	R-1	R-2	R-3	R-4	R-5
Minimum Lot size - Square Feet					
Single Family	9,000	9,000	7,500	6,000	6,000
Duplex	NA	^D 10,000	^A 10,000	7,500	7,500
Duplex Lot			4,250	3,750	3,750
Townhouse				E	E
Multi-family Dwelling	NA	NA	NA	F	F
Multi-family Complex	NA	NA		F	F
Maximum Density (1 unit per # s.f.) _F				3,000	2,500
Minimum Setback Distance _{C,F}					
Front	15	15	15	15	15
Interior Side	B 5/10	B 5/10	B 5/10	B 5/10	5
Street Side	15	15	15	15	15
Rear	20	20	20	20	5
Garage	20	20	20	20	20
Maximum Building Height _F	32	32	32	40,E	40,E
Minimum Street Frontage					
Standard Street	50	50	50	50	50
Cul-de-sac	30	30	30	30	30
Flag Lot	20	20	20	20	20
Duplex lot (non flag or cul de sac)	N/A	N/A	25	25	25
Townhouse				E	E
A Duplexes permitted only on corner lots					
B Interior side yards must provide a minimum of 5 feet on one side and 10 feet on the other side for single family and duplex residences. Where alley access is provided, both interior side yards may be reduced to 5'. Exceptions to this 10' setback are allowed (1) when the lot was created prior to the adoption of this standard (November 9, 2006); or					

(2) on cul de sac lots; or (3) on flag lots, or (4) parcels created by partition.

C Does not include solar setbacks, which are calculated separately

D Duplexes only allowed on legally created lots of adequate size / created prior to November 9, 2006, otherwise prohibited.

E Pursuant to the Townhouse Development Standards in Chapter 8, Article IV Site and Design Review Standards, Section 8.3035.4.f.2, Table A.

F Does not apply to development standards for Multi-family Dwellings and Multi-family Complexes which are located in Chapter 8, Article IV, Site and Design Review Standards, Section 8.3035.4.E.2., Table A

G. Street trees are required to be provided in accordance with Section 8.3035(5)(K)

N/A = "not allowed"

All distances shown are measured in feet.

- **RESPONSE: The proposed subdivision shows lots in compliance with the above table. Standard setbacks are proposed and specific standards will be reviewed at the time of a building permit with each structure.**

8.0285 Cottage Developments.

1. The purpose of a Cottage Development (COD) is as follows:
 - A. To provide a greater flexibility in development of land on sites that may be too small or not desirable for a Planned Unit Development;
 - **RESPONSE: The proposed cottage development utilizes the flexibility and unique development opportunities provided within this section of code.**
 - B. To provide housing types that respond to changing household sizes and ages (e.g., retirees, single person households, small families);
 - **RESPONSE: Proposed cottages will be single family and have appeal to both the younger generation who want to live on their own and older generation who are looking for low maintenance living.**
 - C. To provide opportunities for ownership of dwelling units;
 - **RESPONSE: Cottages are located on private lots allowing for individual ownership of dwelling units.**
 - D. To encourage a creative approach in land development and for a consistent and interesting architectural theme within each development;
 - **RESPONSE: The Cottage development allows an opportunity to provide dense, detached single family housing that can be purchased and owned for a cost that is lower typical detached single-family housing.**
 - E. To encourage creation of more usable open space for residents of the development through flexibility in density and lot standards; and,
 - **RESPONSE: Open space within the development is spread throughout the area. Direct access has been provided for all lots.**
 - F. To provide guidelines to ensure compatibility with surrounding land uses.
 - **RESPONSE: This document shows compliance with this standard.**
2. Throughout section 8.0285, the term “Development” shall mean a Cottage Development (COD).
3. The uses shown in 8.0285 (Table 8c) are permitted in a residential Cottage Development.

 - **RESPONSE: This section is advisory.**

4. Every COD is subject to land use review and approval as a Conditional Use. Refer to Section 8.0286 for specific application and review procedures. Modification of approved

COD's is subject to the provisions of Section 8.0287.

- **RESPONSE: A conditional use permit is submitted as part of this application.**

Table 8c. Uses Permitted. The following uses are permitted in Cottage Developments:

Land Use	Comments & References
Accessory Structure	Includes sheds, storage bldgs, res. garages
Dwelling, Single Family	
Park (public or private)	E.g., playgrounds, recreation centers, pools, etc.
Parking Garage (public or private)	Private only; common area maintained by HOA

5. The following exceptions to City standards may be allowed through the COD approval process without a variance:

- A. Minimum lot sizes.
- B. Yard setbacks, except perimeter yard requirements.
- C. Permitted land uses.
- D. Grid street spacing standards.
- E. Street frontage requirements on public roads.
- F. Connection to public utilities, subject to review and acceptance by City Engineering.
- G. Landscaping requirements, as stated herein.
- H. Solar setback standards (only on lots that are not along the northern border of the development).
- I. Street and right of way widths on non-grid streets.
- J. Sidewalk placement and size standards.
- K. Changes to an approved Plan, when the requested change is so minor that the CDD Director or designate determines that it would be appropriate for an administrative decision. Examples of minor changes include, but are not limited to: (1) a reduction in the overall number of lots, (2) minor architectural changes to approved buildings, (3) changes to phases that do not impact public facilities or change the number of approved phases, (4) changes that result in a reduction of impacts (i.e. reduced traffic flows), or (5) changes that are required to protect or increase public safety.

- **RESPONSE: Please refer to accompany plan set for the proposed cottage development. Exceptions are sought for minimum lot size, yard setbacks, street frontage requirements, and connection to public utilities (as mandated by the City of Redmond Water Department).**

6. Development Standards. CODs shall meet the following Standards unless otherwise specified. In the case that these standards conflict with other standards within Article I, III, or IV of the Redmond Development Code, these standards shall take precedence:

- A. Cottage Developments (CODs) have no minimum site size but must include a minimum of 4 cottage units per development.

- **RESPONSE: 53 Cottages are proposed, greater than the minimum 4 units. This standard is met.**

B. Densities.

Zone	Densities (per net acre)
R-1	Not applicable (CODs not allowed)
R-2	4 to 9 units / acre
R-3	4 to 10 units /acre
R-4	5 to 12 units / acre
R-5	8 or more units / acre

- **RESPONSE:** The subject parcel for the cottage units is zoned R-5, which permits a density of 8 or more units per acre. The Redmond Highway Area Plan, which is applicable to this site, states that R-5 densities are intended to be 10-25 units per acre. As proposed, the density of this development will be 10.11 cottage dwelling units per acre, thus complying with both. This standard is met.

C. Design Requirements

Feature	Standard
Building Height	25 feet
Lot area	No minimum
Lot width	No minimum
Lot depth	No minimum
Floor area	1000 s.f. or less (300 s.f. exempt for garage)
Open space:	500 s.f. per each dwelling unit
Setbacks: ⁶	
Perimeter:	20' when abutting an arterial or collector street (along perimeter), underlying zone in all other cases; Setbacks to common areas determined at the discretion of the Hearings Body.
Front:	No minimum
Side (corner lot)	No minimum, but 10' required between bldgs
Side (non corner lot)	No minimum, but 10' required between bldgs
Rear	No minimum, but 10' required between bldgs
Solar	Northern perimeter only
Non permeable surface area	60% of parent property (maximum)
Bldg coverage	50% of parent property (maximum)
Parking:	
Residential	1.75 spaces / cottage d.u.

- **RESPONSE:** The proposed cottage development conforms to all standards listed in these requirements with an exception to the floor area maximum requirement. 1.75 parking spaces per cottage is required. Each cottage will have two parking spaces - one located in a garage and one in the driveway. The applicant is submitting a variance as part of this application to permit cottage floor areas of a maximum of 50% of the cottage units to be

up to 1250 square feet of floor area (excluding garages).**D. Open Space, Park, and Common Area.**

1. "Open space" means land area which can be physically accessed and used by occupants and users of the COD for scenic, landscaping, or open recreational purposes within the development..
2. Open Space Land Area Requirements:
For all CODs, the required land area used as open space or common area shall:

- a. Be a minimum of 500 square feet per cottage.

- **RESPONSE: For 53 cottages, a total of 26,500 sf of open space or common area is required. The development proposes 53,770 sf of open space for the cottage development. This standard is met.**

- b. Abut 100% of the cottages in the development.

- **RESPONSE: Open space or common areas abut all cottages within the development. This standard is met.**

- c. Have cottages abutting on at least 2 sides.

- **RESPONSE: Open space or common areas are unique in shape, cottages abutting the open space on at least 2 sides.**

- d. Cottages shall:

1. Be oriented around and have the main entry taken from the common open space.

- **RESPONSE: All cottages have their main entrances coming from the common open space. Each dwelling has a distinct front porch and entryway.**

2. Be within 60 feet walking distance from the common open space.

- **RESPONSE: All cottages directly abut open space and are within 60 feet of walking distance from the open space. This standard is met.**

3. Open Space – General Requirements.

- a. Public and private roads shall not be considered as open space.

- **RESPONSE: Public and private roads have not been included in any open space considerations.**

- b. Development plans shall assure that natural features of the land are preserved and landscaping is provided, or a finding shall be made

by the Hearings Body that preservation of significant natural feature(s) is not feasible.

- **RESPONSE: The existing site has no significant natural features to be preserved. Landscaping is provided within all open space areas and each individual dwelling unit will have an area for private landscaping options.**

- c. The Hearings Body may require at its discretion the dedication of park land or open space to the City.

- **RESPONSE: The City does not request dedication of a park or open space to the city. There will be a neighborhood park within a half mile or less of the cottage units.**

- d. Up to 10% of the required open space / common area / landscaped areas may be left in a natural and non-irrigated state at the discretion of the Hearings Body; however this shall not apply to any required landscaped screening or landscaped strips abutting public or private roads. If the development has a significant natural feature in excess of the 10% allowance, the Hearings Body may allow additional natural feature open space credit.

- **RESPONSE: No significant natural features exist on the site.**

- e. Open space, common areas, and common structures shall be financially assured of continued maintenance. A legal mechanism shall be provided which guarantees the continued maintenance of such areas and structures.

- **RESPONSE: The cottage lots and tracts shall be subject to CC&R's for long term maintenance, which will also be a condition of approval.**

- 4. Landscaping & Street Trees. Street trees shall be placed adjacent to all public and private roads within all types of Developments, as specified within Article IV of the Redmond Development Code. However, street trees along alleys and private internal driveways are not required.

- **RESPONSE: Street Trees are proposed adjacent to all public streets along the cottage development. This standard is met.**

- 5. General Development Design Requirements.

- a. All Development parking lots shall be screened from view from public or private streets (excluding driveways of 20' width or less), and from all residences by a screen of no less than 3' in height. Screening shall not exceed a height of 4'.
 - b. Parking lot screening shall be achieved by either landscaping or fencing, or a combination of each.
 - c. All parking spaces shall be paved, and shall meet the parking space standards within sections 8.0500 -.0515 of the RDC, and all applicable code standards.

➤ **RESPONSE: No parking lots are proposed. These standards are met.**

- d. If detached parking structures are proposed, the following shall apply:
 - 1. Pitched roofs are required on all parking structures, and shall be no less than a 4:12 pitch.
 - 2. Paint color and building materials shall be consistent with the design of the dwelling closest to the structure.

➤ **RESPONSE: No detached parking structures are proposed. This standard does not apply.**

- e. Usable Open Space. All required open space within any planned development shall be 'usable' as passive or active recreational land without sharing the space as a combined use with non recreational uses, including (but not limited to) drainage retention.

➤ **RESPONSE: All open space areas are usable as passive or active open spaces.**

- f. Yards. Private open space shall be a minimum of 300 s.f. of private, contiguous, usable open space adjacent to each dwelling unit, for the exclusive use of the cottage resident.

➤ **RESPONSE: The side yards of each cottage provide at least 488 square feet on each side which is more than the minimum of 300 contiguous usable open space to meet this requirement. This standard is met.**

- g. Porches. Cottages shall have a roofed porch at least 80 square feet in size with a minimum dimension of eight feet on any side. Porches are not included within floor area calculations.

➤ **RESPONSE: Porches are included in cottage design and will meet the 80-square foot size minimum, with a minimum of 8-foot length on each side. This standard is met.**

- h. Required Parking Distance from Cottages. All required parking for Cottage Developments shall be located within 100 feet of the cottage that it serves.

➤ **RESPONSE: All parking is designed to be located on the same cottage lot it is designed to serve. One space is in a garage and the other in the driveway. This standard is met.**

- i. Accessory structures in cottage developments are limited to storage buildings that may be up to 80% of the smallest cottage, and to parking structures or garages that may contain up to 6 parking spaces on the interior. All accessory structures in cottage developments shall have an architectural theme that matches the theme of the cottages.

➤ **RESPONSE: No accessory structures are proposed. This standard is does not apply.**

6. Trash Enclosures. Centralized Trash Enclosures may be required at the discretion of the Hearings Body. If required, Trash Enclosures shall be architecturally compatible in terms of color and materials with the cottage units. Trash collection bins or carts shall be as approved by the collection company.

➤ **RESPONSE: Trash Enclosures are not proposed for this development. Trash removal will be provided to individual residences through roll out carts.**

8.0286 Planned Unit Development (PUD), Cluster Development (CLD), and Cottage Development (COD) Review Procedure, Application Materials, and Approval Criteria.

1. Applicability:

PUD's, CLD's, and COD's may be used in any zone allowed by the Redmond Development Code. Minimum size, uses, and standards for these developments are found in section 8.0275 (PUD), section 8.0280 (CLD), and section 8.0285 (COD). The words "Development" or "Planned Development" within refers to PUD's, CLD's, and COD's.

➤ **RESPONSE: Section 8.0285 is applicable as the applicant is applying for Cottage Development.**

2. Review Procedure:

A. The following Steps are required in the review process:

1. Step One: Preliminary Meeting. The applicant shall meet with City staff to review and discuss a preliminary concept for the PUD, CLD, or COD.

➤ **RESPONSE: The applicant has previously submitted and been through the Master planning process for the development. Preliminary meetings were held on April 23, 2019 and on July 16, 2019. This standard is met.**

2. Step Two: Neighborhood Meeting. The applicant shall conduct one neighborhood meeting prior to application for a Conceptual Development. The neighborhood meeting shall include property owners and residents within 500 feet of the subject property, and must be held in accordance with the Community Development Department's neighborhood meeting requirements as follows: The neighborhood meeting shall occur either on a weekend between 10 a.m. and 6 p.m., or a weekday between 6 p.m. and 8 p.m. Meetings cannot be conducted on holidays, holiday weekends, or the day before or after a holiday or holiday weekend. The meeting must be held in the City of Redmond at one of the following locations: · the Subject Property; the nearest available public meeting place (Examples include fire stations, libraries, community centers, or private building); an office space within a 4-mile radius of the subject property, and the meeting must be accessible per Americans with Disability Access requirements. The meeting cannot take place more than 6 months prior to acceptance of the application and the application will not be accepted before the neighborhood meeting is conducted. The applicant is required to send written notification of the

meeting, allowing a reasonable amount of time before your meeting for property owners to plan to attend (postmarked at least 7 days prior to the meeting). Contacting and/or meeting individually with residents will not fulfill Neighborhood Meeting requirements. Once a neighborhood meeting has been conducted, a certification form shall be completed and included with the Development application.)

- **RESPONSE: One neighborhood meeting was held on November 13th at St. Alban's Episcopal Church. A neighborhood meeting certification form and evidence has been included as part of this application.**

3. Step Three: Conceptual Development Plan review and recommendation (this step may be consolidated with step four).
4. Step Four: Final Development Plan including tentative subdivision plat, site & design review, or other land use action review and approval.

- **RESPONSE: This application is for the Final Development Plan and includes a tentative subdivision plat, cottage development application and other submittal materials.**

5. Step Five: Final Subdivision Plat, Site & Design Reviews, Sign permits, and Building permits, as applicable.

- **RESPONSE: This section is procedural.**

B. Review and Approval Process

1. A PUD, CLD, or COD shall be processed as a Land Use Action in accordance with Article II of the Redmond Development Code (RDC), except as modified by this section.
2. Developments with less than 10 lots may be decided by the Community Development Director, or may be referred to a Hearings Body at the discretion of the Community Development Director. Developments with 10 or more lots shall be decided by a Hearings Body after a public hearing is held in accordance with Article II of the RDC.

- **RESPONSE: This section is procedural.**

3. All applications shall include the following:
 - A. Identification and description of the subject property. Proposed name of the development; names, addresses, and telephone numbers of applicant(s) and designers of the development; scale of plan; date of plan preparation; and north arrow.
 - B. The street address, legal description, and parcel identification number of the property proposed for development.
 - C. The name and address of the property's owner if different from the applicant. A Title Report or similar legal documentation shall be provided verifying property ownership.
 - D. An 8 1/2" x 11" vicinity map locating the subject parcel within the City of Redmond.
 - E. Additional materials, documentation, or reports as deemed necessary by the

Community Development Director.

- F. A description and map of the property's existing conditions, which shall include the following: topographic lines; water courses; natural features including rock outcroppings, ponds / marshes and wooded areas; existing streets or other public and private right of way locations including distance to centerlines; railroad lines, utility right-of-ways and easements; parks and other public open spaces, all existing structures and their uses, permanent easements; property boundaries and owners within one hundred feet of the development excluding roads; existing sewers, water mains, easements, culverts and other underground facilities within and adjacent to the development indicating pipe sizes, grades, manholes and their locations, and land ownership.
- G. A description and site plan of the proposed development including a statement of the objectives to be achieved by the planned development, the population segment intended to be served by the planned development, and a description and map of the proposed:
 - a. Land uses
 - b. Housing types and density
 - c. Vehicular, bicycle, and pedestrian access and circulation
 - d. Off-street parking locations and estimated number of parking spaces
 - e. Open space areas with specific amenities, including a general description of how each open space will be used
 - f. Infrastructure improvements required on and off-site
 - g. Site drainage plan
 - h. Physical relationship to the land, surrounding land uses, and neighborhood compatibility.
 - i. Locations of all structures.
 - j. Natural features
 - k. Vehicular and bicycle/pedestrian circulation and access plan within and surrounding the proposed development.
 - l. Parks, common areas, and open spaces:
 - m. Descriptions of how each park, common area and open space will be used and whether they are public or private;
 - n. The size in square feet of each open space;
 - o. The percentage of open space of the overall development.
 - p. Lot and tract sizes for all lots (including perimeter setback);
 - q. On and off-street parking, including specific number of spaces, sizes, and locations
 - r. Infrastructure improvements (water, wastewater, fire hydrants, streets, street lights, others).
 - s. Lighting plan (non "porch light: only) – shall comply with RDC 8.0330 Detailed landscape plan depicting:
 - t. The type, location, and size of all existing plant materials, and other attributes which may significantly represent the proposed development.
 - u. The type and location of all proposed plant materials, other landscape features, proposed treatment of ground surfaces and erosion control, and a plant material schedule with common and botanical names, sizes and quantities.
 - v. Street tree plan and indicator of type and automatic irrigation system to be used for all irrigated landscaping (corner lots shall provide at least one street tree for each street frontage)
 - w. Perimeter fence or retaining wall plan to include the exact location of the fence,

- fence design and dimensions (e.g. height, width, materials).
- x. Drainage plan for the overall development; this plan shall also show how individual lots will retain all drainage on-site unless otherwise approved by the City Engineer.
- y. Architectural character plan shall describe and illustrate the overall project theme, materials, and architecture for all building elevations, signage, fencing and open spaces, and an explanation of the formation of an architectural review committee for all future improvements that occur within the development.
- z. Phasing schedule of project and general time table by phase.
 - aa. Proposed ownership pattern.
 - bb. Operation and maintenance responsibilities (neighborhood easements, common areas, condominiums, coops, neighborhood associations, etc.).
 - cc. Description of all waste disposal, recycling and garbage collection methods.
 - dd. Adequacy of water supply, including a fire flow analysis demonstrating adequate fire flow.
 - ee. Draft CC and R's (Codes, Covenants and Restrictions) explaining the creation of a Homeowner's Association, and the ongoing maintenance of all common areas, open space, and privately owned infrastructure.
 - ff. Tentative Subdivision or Partition plats as required by the applicable sections of Article III of the RDC and Site & Design Review documents as required by the applicable sections of Article IV of the RDC.
- H. An architectural character plan indicating the use, massing, scale and orientation of the proposed buildings.
- I. Landscape plan describing the type, location, and size of existing and proposed landscape features.
- J. A description of the dimensional standards being proposed.

A burden of proof statement that includes a description of the proposal and a written explanation of how the proposed development complies with all the applicable review standards and criteria.

➤ **RESPONSE: The application includes these criteria. This standard is met.**

- 4. PUD, CLD, and COD Approval Criteria. The applicant shall fully address the following and the City shall make findings demonstrating that all of the following approval criteria have been met for approval. The City shall make findings that one or more of the criteria have not been met for denying a Development Plan.
 - A. Conditional Use Criteria of Section 8.0600.
 - B. Zoning Standards of Article I, except as modified by the planned Development.
 - C. Subdivision and Partition Standards of Article III, except as modified by the planned Development.
 - D. Site & Design Review Standards of Article IV, except as modified by the planned Development.
 - E. PUD (section 8.0275), CLD (section 8.0280), or COD (section 8.0285) use, development standards and purpose, as applicable.

➤ **RESPONSE: These sections have been included in this Burden of Proof. Each has been addressed where applicable.**

5. Administrative Procedures.

- A. Upon approval of a Development Plan of a Planned Development, (PUD/CLD/COD), the applicant shall record the approved planned development plat and declarations, after obtaining the required approval signatures. The recording instrument(s) shall contain, in addition to requirements of state statutes, a note on the face of the plat and CCR's indicating the name and type of planned development and a note indicating the city's land use file number.

➤ **RESPONSE: This section is procedural.**

- B. A Development Plan shall be filed within two (2) years of the approval. Failure to begin development of the approved plan within 2 years of approval shall render the development null and void unless an extension is granted by the City.

➤ **RESPONSE: The applicant acknowledges the development plan is only valid within 2 years of approval unless an extension is granted by the city.**

- C. Upon approval of a Development Plan, and prior to issuance of any permits on the subject site, the applicant shall prepare three documents which shall be reviewed and approved by the City prior to being stamped "approved":
1. A Development Plan final site plan which incorporates any changes in the submitted site plan required by the approval Decision.
 2. A final landscaping plan which incorporates any changes in the submitted site plan required by the approval Decision.
 3. A final set of dimensional and design standards that are approved with the Planned Development shall be shown on a matrix or table. The matrix or table shall clearly show the standards that apply to each use and each location within the Planned Development.

➤ **RESPONSE: Upon approval, the applicant shall submit the three required documents, a development plan with any changes required in the decision, a landscaping plan with any changes required in the decision, and a final set of approved dimensional and design standards.**

- D. Modifications of planned developments are allowed and must be processed in accordance with section 8.0287 of the Redmond Development Code.

➤ **RESPONSE: The applicant acknowledges any modifications must be process as described in the Redmond Development Code.**

CONDITIONAL USES

8.0600 Authorization to Grant or Deny Conditional Uses. Uses designated herein as conditional uses may be permitted upon authorization by the Hearings Body in accordance with the standards and procedures established in this article. Before approving an application for a conditional use the Hearings Body shall find the following criteria are either met, can be met by observance of conditions, or are not applicable:

1. The proposed use will be consistent with the Comprehensive Plan, the zoning ordinances and other applicable ordinances and standards of the City.
 - **RESPONSE: The proposed application is designed to be consistent with the Comprehensive Plan in terms of providing a mix of housing types, including smaller units that appeal to younger, older and smaller households.**
2. The location, size, design, and operating characteristics of the proposed use will have minimal adverse impact on the livability, value, or approximate development of abutting properties and the surrounding area.
 - **RESPONSE: The proposed single-family lots and cottage units with open space and walking trails will not have any adverse impact on the livability of the area, as the surrounding area is (or will soon be in the future) similar and compatible urban development.**
3. The proposed use will not exceed operational capacity of City infrastructure including sewage system, water system or the transportation system.
 - **RESPONSE: According to the City Engineering Department, the proposed use can be accommodated with existing City infrastructure or through requirements of this development to upgrade infrastructure.**
4. That the proposed use will not conflict with, diminish, or substantially adversely affect the character and nature of the established neighborhood in which it is located.
 - **RESPONSE: The proposed residential development will be similar to what already exists in the area or that is planned in the future as part of the Highway Area Plan or other adopted master plans.**

VARIANCES

8.0700 Authorization to Grant or Deny Variances.

Except as provided for in Section 8.0710, the Community Development Director or Hearings Body may authorize variances from these standards where it can be shown that owing to special and unusual circumstances related to a specific piece of property, the literal interpretation of these standards, would cause an undue or unnecessary hardship; except that no variance shall be granted to allow the use of the property for purposes not authorized within the zone, or to alter any procedural requirements of these standards. Variances to residential yard/setback requirements may be allowed as described below; in granting a variance, conditions may be attached to protect the best interest of the surrounding property or neighborhood and to otherwise achieve the purposes of these standards.

Variations from required minimum lot sizes (unless accepted by RDC section 8.0575(2) and approved Master Plans are not candidates for variance consideration.

8.0710 Standards Required to Grant Minor Variances to On-Site Requirements. A minor variance under this section shall be no greater than 25% of the requirement from which the variance is sought. The Community Development Director may consider a variance from these standards relating to on site requirements.

1. In the case of a yard variance, the applicant shall show the approval will result in:
 - A. More efficient use of the site.
 - B. Preservation of natural features where appropriate.
 - C. Adequate provisions of light, air, and privacy to adjoining properties.
 - D. Adequate access.

➤ **FINDING: Staff finds that this provision is not applicable as a yard variance is not being requested.**
2. In the case of a variance to the dimensional standards for off-street parking spaces or the minimum required number of off-street parking spaces, the applicant shall show that approval will provide adequate off-street parking in relation to user demand. The following factors may be considered in granting such an exception:
 - A. Special characteristics of users which indicate low demand for off-street parking (e.g., low income, elderly).
 - B. Opportunities for joint use of nearby off-street parking facilities.
 - C. Availability of public transit.
 - D. Natural features of the site (topography, vegetation and drainage) which would be adversely affected by application of required parking standards.

➤ **FINDING: Staff finds that this provision is not applicable as a parking variance is not being requested.**
3. For variances to other on site requirements of 25% or less the applicant shall show that approval of the variance will be consistent with the overall objectives of the Comprehensive Plan and zoning standards where applicable and that the variance will have a minimal adverse impact on the livability, value or development of abutting properties and the surrounding area.

- **FINDING:** The proposed minor variance will permit an increase of the allowed floor area for cottage units from 1,000 to 1,250 square feet, an increase of 25%. Staff finds these conditions exist and this standard is met as proposed. The proposal complies with the overall objectives of the Comprehensive Plan, where applicable, such as that there shall be “maximum flexibility” in design and housing types in new residential developments and Great Neighborhood Principles in the zoning standards that encourage a mix of units. A maximum of 50% of the cottage units will exceed the maximum requirement and the other half will be 1,000 square feet or below.

MODIFICATIONS

8.1400 Modifications of Approval

1. Modifications

- A. A Modification shall be processed as an Administrative Land Use Action as provided for in Section 8.1300 - 1315. Modifications are requests for revision or deletion of a condition of approval or a change to a site development plan that is the result of changed circumstances, an error in the original decision or inconsistency with the current code. Modifications may only be accepted after 90 days has elapsed from the effective date of the initial land use approval.
- **FINDING: The submitted request is for the modification of the Central Christian Master Plan, approved under City File #711-15-000129-CP. The proposed modifications are the result of a change of circumstance. Central Christian School has decided to expand their existing campus instead of constructing a new campus. Due to the change of circumstances, the tax lot previously intended to be the location of the new Central Christian campus is now proposed as a new subdivision that is consistent with the underlying zone. Over 90 days have elapsed since the original approval.**
- B. The applicant for a modification shall include reasons for the modification and demonstrate that the request is consistent with the provisions of the code and is necessary due to a change of circumstances.
- **FINDING: Central Christian School has decided to expand their existing campus instead of constructing a new campus. Due to the change of circumstances, the tax lot previously intended to be the location of the new Central Christian campus is now proposed as a new subdivision that is consistent with the underlying zone.**
- C. At the discretion of the Community Development Director or designee, modifications to a decision rendered by a Hearings Body shall be processed by the same Hearings Body.
- **FINDING: This standard is procedural.**
- D. An application as a modification to an approval shall be directed to one or more specific aspects of the approval. The review shall be limited to the criteria applicable to that particular aspect of the proposal.
- **FINDING: The proposed modification is the result of a change of circumstance. Central Christian School has decided to expand their existing campus instead of constructing a new campus. Due to the change of circumstances, the tax lot previously intended to be the location of the new Central Christian campus is now proposed as a new subdivision that is consistent with the underlying zone.**
- E. Proposals that would modify an approval in multiple areas with a scope greater than allowable as a modification shall be treated as an application for a new proposal.
- **FINDING: The modification only applies to the area originally designated as a school.**

F. Modifications shall not be accepted in such cases where a variance would be required. (Added 2/98)

- **FINDING: The proposed modification to allow a residential development with single family and cottage units instead of a school does not require a variance to function, although the applicant is requesting a minor variance to increase the floor area of a cottage unit from 1,000 to 1,250 square feet. A separate variance application for an increase to the maximum floor areas of the cottages is submitted as part of this application packet.**

LAND DIVISION STANDARDS

- 8.2000 Title.** These standards shall be known as the City of Redmond Land Division Standards and may be so cited and plead.
- 8.2005 Purpose.** In accordance with the provisions of Oregon Revised Statutes (ORS) Chapters 92 and 227, these standards set forth the minimum standards governing the approval of land development, including subdivisions and partitions, as necessary to carry out the Redmond Urban Area Comprehensive Plan and to promote the public health, safety and general welfare. The purposes of these provisions and regulations are to:
1. Encourage well planned subdivision and partition development to the end that good livable neighborhoods with all needed amenities and community facilities may be created.
 - **RESPONSE: The proposed subdivision provides a good livable neighborhood by providing access to surrounding areas, significant open space, and is walkable.**
 2. Encourage development in harmony with the natural environment and within resource carrying capacities.
 - **RESPONSE: The site has no significant natural features. Several landscape tracts are proposed that will improve the harmony with the natural environment.**
 3. Safeguard the interest of the public, the developer and the future lot owner – the Community.
 - **RESPONSE: All development conforms to the City of Redmond Standards and will undergo the full planning process designed to safeguard the interest of the community.**
 4. Improve land records and boundary monumentation.
 - **RESPONSE: The subject property boundary is described in Partition Plat 2018-29.**
 5. Insure equitable processing of subdivision and partition plats, and accomplish to the greatest extent possible the goals and objectives of the Comprehensive Plan for the Redmond Urban Area.
 - **RESPONSE: All development conforms to the City of Redmond Standards and the Comprehensive plan to the greatest extent possible. The property and applicant will undergo the full planning process designed to evaluate the compliance with these requirements.**
 6. Provide for orderly and efficient urban development and coordinate development with public facility and service plans and capabilities.
 - **RESPONSE: The proposed plan describes orderly and efficient urban development. Public facility and service plans are met as described elsewhere in this document.**
 7. Promote and maximize the conservation of energy by preserving the option to utilize solar energy and to implement the Comprehensive Plan policies relating to solar energy by

encouraging the design of new developments to protect future options to use solar energy by providing for and protecting solar access in the following ways:

- A. By regulating the orientation of streets, lots, and parcels;
- B. By the placement, height and bulk of buildings;
- C. By the placement and growth of vegetation; and,
- D. By preserving options for other alternative energy sources, such as wind, that may be available and necessary in the future.

- **RESPONSE: Orientation of streets is consistent with City Engineering Standards and placement of buildings is according to zoning standards. A landscape plan is included with the application. Orientation of the buildings does lend itself to installation of rooftop solar panels, should the future homeowners decide to pursue such an option.**

8.2010 Interpretation. No person may subdivide or partition land within the City of Redmond except in accordance with ORS Chapter 92 and the provisions of these standards. The provisions of these standards shall be construed to affect the purposes set forth in Section 8.2005 of these standards. These provisions are declared to be the minimum requirements fulfilling such objectives, and, as deemed necessary through the land use review and decision process, the City may impose additional requirements to promote the health, safety and general welfare, and to carry out the Comprehensive Plan of the City. Where conditions set forth herein are less restrictive than comparative conditions imposed by any other provision of these standards, by provision of other applicable local ordinance, resolution or regulation, or by provision of state statute or administrative regulation, the more restrictive shall govern.

- **RESPONSE: The proposed subdivision is created to fulfill the conditions of these code sections. It is the intent of the associated submittal materials to show compliance with city standards.**

GENERAL REQUIREMENTS

8.2100 Procedure. All subdivisions, partitions and other land use actions subject to the provisions of this Chapter shall be processed in accordance with Article 2, Land Use Procedures, of the City of Redmond Development Code.

- **RESPONSE: This application is being processed in accordance with Article 2, Land Use procedures as described in the body of this report.**

8.2105 Scope of Regulation. Before a plat of any subdivision or partition may be recorded, the person proposing the subdivision or the partition, or an authorized agent or representative, shall make an application in writing to the Redmond Community Development Department for approval of the proposed subdivision or partition in accordance with the requirements and procedures established by these standards.

- **RESPONSE: An application seeking approval of a subdivision is included in with this document.**

8.2110 Minimum Standards. No proposed subdivision or partition shall be approved unless it complies with the density requirements of the Comprehensive Plan for Redmond, the applicable Zoning Standards, these standards, and ORS Chapter 92.

- **RESPONSE:** These applicable standards are shown to be met in the body of this report.

SUBDIVISION APPLICATION PROCEDURE

8.2200 Pre-Application Meeting. Prior to submitting a tentative subdivision plat each applicant or their representative is required to meet with the Community Development Director or a designated staff member(s) to review the proposal.

- **RESPONSE:** Pre-Application meetings were held on April 23, 2019 and on July 16, 2019. This standard is met.

8.2220 Phased Development Plan. An overall phased development plan shall be submitted for all developments for which phased development is contemplated. The phased development plan shall include but not be limited to, the following elements:

1. Overall development plan, including phase or unit sequence.
2. Show compliance with all applicable land use standards and policies.
3. Schedule of improvements initiation and completion.
4. Overall transportation and traffic pattern plan showing compliance with grid street standards, and for land within the North Redmond US 97 Interchange Area Management Plan (IAMP), compliance with the Local Street Connectivity Plan (Comprehensive Plan Addendum Chapter 9 Transportation Element figure 1).
5. General program for phasing timetable projection.
6. Development plans for any common elements or facilities.
7. If the proposed subdivision is believed to have an additional impact upon adjacent lands or lands within the general vicinity, the Hearings Body may require an additional impact analysis for various aspects of the development thought to cause such impacts.
8. Street tree plan.

- **RESPONSE:** The Subdivision and Cottage Development is proposed to occur in 3 phases. The application includes all relevant information on how it complies with applicable land use standards and policies, a traffic study, timetables, and plans for development of common areas.

8.2225 Approval of Phased Development Plan. The Hearings Body shall review a phased development plan at the same time a tentative plat for the first phase is reviewed. A phased development plan may be approved before the tentative plat for the first phase is submitted. The Hearings Body may approve, modify, or disapprove the phased development plan and shall set forth findings for such decision. The Hearings Body may also attach conditions necessary to bring the plan into compliance with all applicable land use standards and policies. Any tentative plat submitted for the plan area shall conform to the phased development plan unless approved otherwise by the City.

8.2230 Development Following Approval. Once a phased development plan is approved by the City, the plan shall be binding, upon both the City and the developer. The Hearings Body may attach conditions to any changes proposed that are deemed necessary to insure compliance with the Comprehensive Plan and implementing regulations. After five (5) years from the date of approval of the plan, the City may initiate a review of the plan for conformance with

applicable City regulations. If necessary, the City may require changes in the plan to bring it into conformance with new applicable city regulations.

- **RESPONSE: The above standards are procedural. The proposed application is for a phased development plan. Therefore, these standards apply.**

8.2235 Required Findings for Tentative Subdivision Approval.

1. The Hearings Body shall approve no application for a subdivision unless the following requirements are met:
 - A. Proposal is in compliance with ORS Chapter 92, the Comprehensive Plan, the Transportation System Plan (TSP) and applicable zoning.
 - **RESPONSE: The proposed subdivision is planned according to these requirements.**
 - B. Proposal does not conflict with acquired public access easements within or adjacent to the subdivision.
 - **RESPONSE: The proposal does not conflict with known public access easements.**
 - C. Each lot is suited for the use intended or offered.
 - **RESPONSE: Each proposed lot is of sufficient size for the residential uses as intended.**
 - D. The subdivision will not exceed the operational capacity of public facilities and services as identified in the city's Water and Wastewater Master Plan and the Transportation System Plan, which are required to serve the development, or a determination that sufficient capacity can be provided.
 - **RESPONSE: Conversations with the Engineering Department indicate water and wastewater are available to serve the subdivision. The enclosed Traffic Impact Analysis by Lancaster Engineering evaluates the capacity of adjacent City streets consistent with the Transportation System Plan. As part of this application, A Sewer Allocation application is enclosed.**
 - E. A water rights division plan has been approved by the applicable irrigation district.
 - **RESPONSE: All water rights to the property will be released prior to subdivision plat approval.**
 - F. The subdivision contributes to orderly development and land use patterns in the area, and provides for the preservation of natural features and resources such as streams, lakes, natural vegetation, special terrain features.
 - **RESPONSE: No special terrain features exist on the subject property to be preserved. This standard does not apply.**
2. Access Management proposals comply with the standards set forth in Section 8.2820 and all other applicable standards.

- **RESPONSE: The proposed development complies with these standards. Two local street intersections with NW 10th are spaced consistent with Section 8.2820.**

8.2240 Improvement Requirements.

1. In the approval of a subdivision, the Community Development Director or Hearings Body shall consider the need for street and other improvements. All streets in new subdivisions, except for planned unit developments (PUD's), shall be dedicated to the public without reservation or restriction.
 - **RESPONSE: New streets meeting city of Redmond standards within the subdivision are to be dedicated without reservation or restriction to the City of Redmond.**
2. Private Alley Access. The Community Development Director or Hearings Body may require the applicant to improve a private alley access easement serving two or more lots according to the adopted City of Redmond Public Works Standards and Specifications, as amended.
 - A. Such access easements shall include provisions for permanent, long-term maintenance, including: maintenance measures to be employees; responsible parties; funding; design; timing; and, enforceability. These provisions shall be included as recorded Covenants, Conditions and Restrictions (CCR's) appurtenant to the affected properties.
 - **RESPONSE: The enclosed draft CCR's include provisions for long term maintenance of alleys. The final plat shall grant access easements across private alleys.**
3. The subdivider shall record the required (including but not limited to) land division agreement, public improvement agreement, shared access agreement or shared well agreement, as may be applicable, with the Deschutes County Clerk's office at the time of recording of the final subdivision plat.
 - **RESPONSE: Construction of this subdivision, as proposed and conditioned, will have the needed public improvements as it relates to the city's requirements. The Public Improvement Agreement will be in place prior to recording of the final plat. Access and related easements are addressed in previous responses.**
4. Paved access is guaranteed to each lot.
 - **RESPONSE: The applicant is proposing paved access to all lots.**
5. Each lot is to be connected to the City water and sewer system pursuant to Section 4.007 of the Code of the City of Redmond.
 - **RESPONSE: Each lot is proposed to be connect individually to City sewer as shown on the utility plan. The Single-Family lots of the subdivision (R-4 zoned areas) shall each connect individually to City water. As mandated by the City's Water Division, public water mains shall not be extended in private alleys which prevents the ability of individual cottage lots to connect to City Water. The City Water Division shall provide water to the cottage development with one large master meter and a private water distribution system.**

6. All required public utilities are available.

➤ **RESPONSE: Power, phone, cable, and gas utilities are available for the subdivision**

8.2245 Resubmission of Denied Tentative Subdivision Plats.

1. A tentative plat that was previously denied for an area or tract of land shall be resubmitted in accordance with this Chapter, and shall be reviewed in the same manner as any other tentative plat.

➤ **RESPONSE: This application is not a resubmittal of a previously denied application. This standard is not applicable.**

DESIGN STANDARDS AND IMPROVEMENTS

8.2700 Compliance Required.

1. Any land division or development shall be in compliance with the design and improvement standards and requirements of this section, and all other applicable provisions, as set forth in this Chapter.

8.2705 Blocks, Lots and Parcels.

1. Blocks. The resulting or proposed length, width and shape of blocks shall take into account the requirements for adequate building lot sizes, street widths, access needs and topographical limitations.

A. No block shall be more than 660 feet in length between street center lines unless it is adjacent to an arterial street, or unless topography or the location of adjoining streets justifies an exception, and is so approved by the reviewing authority. In MUN, MUE and MULW zones, block lengths shall be an average of 330 feet, except where required to meet grid street or access management requirements.

➤ **RESPONSE: All streets and block lengths within the subdivision comply with the 660-foot maximum block length.**

B. The recommended minimum length of a block along an arterial street is 1,320 feet, except that along such blocks, a public right-of-way for pedestrian and bicycle access shall be dedicated at or nearest the mid-point of the block length as is practical. The right-of-way shall be a minimum of 10 feet wide, with an all weather surface a minimum of 5 feet wide, constructed and centered within the right-of-way.

➤ **RESPONSE: The subdivision is not adjacent to any arterial streets.**

C. A block shall have sufficient width to provide for 2 tiers of lots unless topography, the location of adjoining streets, or adjacency to an arterial street justifies an exception.

➤ **RESPONSE: The layout of the proposed subdivision is designed with a majority of 2 tier lots with the exceptions of where lots would be adjacent to NW 10th Street or due to limitations of existing property boundary configuration. The cottage development does not utilize 2 tiers of lots in order to meet the cottage requirements where lots must abut**

open space. These exceptions have been created for best use of layout for the existing land and its best use according to the limits of the existing topography and property constraints.

- D. Where appropriate at approved cul-de-sacs, dead-end streets, or along blocks approved at more than the maximum block length standard, pedestrian and bicycle access corridors shall be required to be constructed between lots to minimize travel distance between subdivisions, parks, school, and collector or arterial streets. Access corridors shall be located to provide a reasonably direct connection between likely pedestrian destinations, and shall be consistent with the City of Redmond Bicycle Refinement Plan where applicable. A reasonably direct connection is a route which minimizes out of direction travel for people likely to use the connection considering terrain, safety and likely destination. The Community Development Director or Hearings Body may determine based on evidence in the record that construction of a separate access corridor is inappropriate or impractical. Such evidence may include but is not limited to:
1. When the nature of abutting existing development makes construction of an access corridor impractical.
 2. When the access corridor would cross a natural area with significant natural habitat and construction would be incompatible with protection of natural values.
 3. When the access corridor would cross topography where slopes exceed 30% or where path grade would exceed 12% slope; or
 4. When a cul-de-sac or dead-end street abuts rural resource land at the urban growth boundary. In industrial zones, this standard may be waived at the discretion of the Community Development Director or Hearings Body when it is determined that the City's grid street standards should not be applied to the industrial development.

➤ **RESPONSE: No cul-de-sacs are proposed at more than the maximum block length standard.**

2. Lots and Parcels. The size, width, and orientation of newly created lots and parcels shall be appropriate for the location of the land division and for the type of development and use contemplated. Lots and parcels shall be generally rectangular in shape, and shall be consistent with the lot size provisions of the zoning standards and the density requirements as established in the City of Redmond Comprehensive Plan. Notwithstanding these requirements, the following exceptions may apply:
 - A. In areas beyond the City Limits where public sewer is not currently available, minimum lot and parcel sizes shall permit compliance with the requirements of the Department of Environmental Quality and County sanitarian, and shall be sufficient to permit adequate sewage disposal. Any problems posed by soil structure and water table as related to sewage disposal by septic tank shall be addressed and resolved in the applicant's initial plan.
 - B. Where property is zoned and planned for business or industrial use, other widths and areas may be permitted by the Community Development Director or Hearings Body. Depth and width of properties reserved or laid out for commercial and industrial purposes shall be adequate to provide for the off-street service and parking facilities required by the type of use and development contemplated.

- C. In steep terrain, increased lot or parcel sizes may be required to avoid excessive cuts, fills, and steep driveways.

➤ **RESPONSE: The proposed lots are designed in an appropriate fashion and are rectangular in shape as far as practicable. The lots are sufficiently large enough to serve the intended uses (single family residential construction and cottages). Single family lots comply with the minimum lot size standard for the zone and an exception is available for cottage lot sizes. The proposal meets the above standards, subject to the cottage development standards and conditions of approval.**

3. Frontage. Each newly created lot and parcel shall abut upon a public street other than an alley for at least 50 feet, except for lots fronting on the bulb of a cul-de-sac, then the minimum frontage shall be 30 feet. Flag lots shall have no less than 20' of street frontage measured at the property line. Lots created as part of a Planned Unit Development shall meet the same frontage requirements listed herein, except such frontage may be allowed along private streets. Vehicular access shall be provided as specified in Section 8.2820, Access Management Standards, of this Chapter, or as specified in Section 8.2705(6) below, for residential lots and parcels abutting collector and arterial streets. All lot and parcels shall be addressed from the primary public street frontage, not including alleys.

➤ **RESPONSE: Each new lot has more than 50 feet of street frontage (standard) or at least 30 feet in the cottage development where private alleys are used. An exception to street frontage is permitted by the Cottage Development Standards.**

4. Side Lot or Parcel Lines. All side lot lines shall be at right angles to street lines or radial to curved streets wherever practical except as provided for in subsection (10) of this section.

➤ **RESPONSE: The side lot lines of the proposed lots are as near to right angles as practical as allowed by this standard. The proposal is in general compliance with this standard.**

5. Through/Double Frontage Lots and Parcels. Through lots or parcels, and lots or parcels with double frontage shall be avoided whenever possible, including lots or parcels created adjacent to Collector and Arterial Streets, but not including alley frontage as described in Section 8.2705(6) below, except when they are necessary due to an irregular parent lot or parcel configuration, or are necessitated by topography or other unique circumstance.

➤ **RESPONSE: There are no double frontage lots (except at corners/intersections) proposed within the subdivision. Buffer tracts have been provided along NW 10th and NW Upas to meet this provision.**

6. Residential Lots and Parcels Abutting Collector and Arterial Streets. Lots and parcels created adjacent to Collector and Arterial streets shall be oriented so that the front elevation of the residential development faces the Collector or Arterial Street. Vehicular access shall be provided pursuant to Section 8.2820, Access Management Standards, of this Chapter. In instances where direct vehicular driveway access to lot or parcel from the Collector or Arterial street is not permissible, alley access shall be provided to the rear of the lot or parcel in accordance with the design standards included in Section 8.2710(3) of this Chapter.

➤ **RESPONSE: This standard is not applicable as there are no lots abutting Collector or Arterial Streets.**

7. Corner Lots and Parcels. Corner lots and parcels shall be 5 feet more in width than other lots and parcels and also shall have sufficient extra width to meet the additional side yard requirements of the zoning district in which they are located.
 - **RESPONSE: All corner lots in the proposed subdivision are at least 5 feet wider than the minimum width requirements. The lots are sufficiently large enough to accommodate the side yard setback requirements. This standard is met.**
8. Special Building Setback Lines. If special building setback lines, in addition to those required by the applicable zoning, are to be established in a development, they shall be shown on the final plat of the development and included in the deed restrictions.
 - **RESPONSE: No special building setback lines are needed, proposed, or required. This standard is not applicable.**
9. Large Building Lots: Re-division. In the case where lots or parcels are of a size and shape that future redivision is possible, the Community Development Director or Hearings Body may require that the blocks be of a size and shape so that they may be redivided into building sites, and the development approval and site restrictions may require provision for the extension and opening of streets at intervals which will permit a subsequent redivision of any tract of land into lots or parcels of smaller sizes than originally platted, and in conformance with the density provisions established in the City of Redmond Comprehensive Plan for the existing or intended Zone. A plan indicating the ability for re-division according to these standards may be required as part of the initial land division process.
 - **RESPONSE: No lots in this subdivision are large enough for future re-division based on the allowed minimum lot size in the zoning district.**
10. Solar Access. As much solar access as feasible shall be provided each lot and parcel in every new subdivision or partition considering topography, development pattern, and existing vegetation. The boundary lines of lots and parcels, as far as feasible, shall be oriented to provide solar access at ground level at the southern building line of the adjoining lot to the north two hours before and after the solar zenith from September 22 to March 21. If it is not feasible to provide solar access to the southern building line the solar access, if feasible, shall be provided at 10 feet above ground level at the southern boundary line two hours before and after the solar zenith from September 22 to March 21, and three hours before and after the solar zenith from March 22 to September 21. This solar access shall be protected by solar height restrictions on burdened properties for the benefit of lots receiving the solar access pursuant to Section 8.0370, of the City of Redmond Development Code, Solar Access Standards. If the solar access for any lot, either at the southern building line or at 10 feet above the southern building line, is not feasible, supporting information may be required with the application.
 - **RESPONSE: Solar access has been accommodated as far as feasible given the topography and the pre-ordained arrangement of streets stubbed to the property/City grid street standards.**
11. Curvilinear Street and Block Design. Although a basic grid street design with minimum and maximum block lengths are requirements of this section, a curvilinear street/block design is encouraged for the purpose of adding interest to new subdivision development.

- **RESPONSE: The proposed block design is generally rectangular as a curvilinear design would compromise density requirements within the limitations of the site.**

12. Flag Lots. A flag lot shall be considered as a “flag lot” if the pole of the flag lot is less than half the width of the average lot width. For flag lots, the following shall be required:
- A. Flag poles shall be no less than 20’ wide.
 - B. Flag lot development, if allowed by the zone, is limited to one duplex or single family dwelling per lot. All zone regulations apply, including the minimum required lot size and setbacks unless setback reductions are allowed as described in (E).
 - C. Each flag lot shall contain a minimum 16’ wide paved driveway.
 - D. A flag lot is exempt from the 50 foot street frontage requirement; however a minimum of 20 feet of street frontage is required.
 - E. Front and/or rear yard setbacks may be reduced to no less than 10’ subject to review and approval by the Community Development Director. The orientation of any structure (determination of front) may be suggested by the property owner, and is subject to the review and approval of the Community Development Director or designate. The location(s) of all structures immediately adjacent to any flag lot shall be shown on a site plan (1) during planning review and during the act of creating any new flag lot, and (2) during a building permit review for any structure built on a flag lot.
 - F. No flag lot shall be partitioned or further divided.
 - G. The “pole” of the flag lot shall be no longer than 150’ measured from the street intersection to the beginning of the base of the flag.
 - H. The “pole” of the flag shall not be included in the minimum lot size calculation.
 - I. Flag lots shall be exempt from street tree requirements unless the street frontage portion of the flag lot is 30’ or greater.
 - J. Flag lots are prohibited along or abutting the Dry Canyon Rim.
 - K. Two off-street parking spaces shall be provided for each dwelling unit on a flag lot.

- **RESPONSE: No flag lots are proposed. These standards do not apply.**

8.2710 Streets.

1. General. Streets shall be in conformance with the City of Redmond Transportation System Plan (TSP) as specified herein.
- A. Except along Arterial Street, public streets shall be spaced a maximum of 660 feet between centerlines. The purpose is to provide a street grid pattern of through streets to facilitate traffic movement. Street designs shall conform to topography and other existing natural and man-made conditions. Illustrative examples of other conditions include the dry canyon, main COI canal, Highway 97, and the Burlington Northern Railroad tracks.

- **RESPONSE: All streets and block lengths within the subdivision comply with the 660-foot maximum block.**

- B. All proposed streets, sidewalks, bike lanes and pedestrian pathways shall connect to other streets, sidewalks bike lanes and pedestrian pathways within a development and to existing and planned streets, sidewalks, bike lanes and pedestrian pathways outside the development. Such facilities shall serve existing and planned parks, schools or other public lands within a neighborhood.

➤ **RESPONSE: All proposed streets and sidewalks connect to other streets and sidewalks.**

- C. To the maximum extent possible, new local streets shall align and connect with existing local streets and collectors, and in certain special cases arterial streets. Cul-de-sac streets shall be permitted only where no feasible connection with an adjacent street exists, or if the local street connection would be to an arterial street and the function of the arterial street may be diminished as determined through the land use review process, or the block length would be less than that which is permitted by Section 8.2705(1)(B).

➤ **RESPONSE: New proposed streets align with existing streets where developed and also align with the adopted master plan for future development. See HAP Shadow Plat included with this application.**

- D. Consideration should be given to alternative street designs other than required herein in the City's non-residential land use zones to allow for more effective developments. Such designs may be considered and approved during the subdivision or partition process without need for variance.

➤ **RESPONSE: The planned street designs are consistent with City Standards; alternative street designs are not proposed.**

- E. All proposed or required streets and alleys shall comply with Section 8.2820 Access Management Standards, the Transportation System Plan, and with Local Street Connectivity Plans adopted as part of the transportation element of the Comprehensive Plan.

➤ **RESPONSE: Proposed alleys comply with section 8.2820 access management standards. Primary access for alleys is on NW Varnish Avenue. Emergency Access is provided along NW Upas.**

2. Existing Streets. Whenever existing streets, adjacent to or within a tract, are of inadequate width to accommodate the increase in traffic expected from the land division or by the City's transportation policies as determined through a transportation impact analysis, additional right-of-way shall be provided at the time of the land division by the applicant. During consideration of the tentative plat for the subdivision or partition, the Hearings Body shall determine whether the improvements to existing streets, adjacent to or within the tract, are required. If so determined, such improvements shall be required as a condition of approval of the tentative plat. Improvements to adjacent streets shall be required where traffic on said streets shall be directly affected by the proposed subdivision. Notwithstanding these provisions, off-site improvements to streets not within or adjacent to the development may be required when impacts resulting from the development necessitate such improvements as demonstrated through a transportation impact analysis.

➤ **RESPONSE: This standard addresses the assessment of need for the improvement of existing streets abutting a subject property. The proposed streets and connections are in accordance to City of Redmond's TSP and other applicable associated standards.**

3. Minimum Right-of-Way (ROW) and Roadway Width. The street right-of-way and roadway surfacing widths shall be in conformance with the standards as specified in Table 1 below:

Table 1 - City of Redmond Right of Way and Roadway Design and Cross-Section Standards

Functional Class	Width (ft)				Bike Lanes**	Parking**
	Pavement Standard	Pavement (minimum)	Right-of-Way	Travel Lanes		
Residential Alley	16 ft		20 ft	n/a	shared	none
Commercial Alley	20 ft		20 ft	n/a	shared	none
Local Residential*****	36 ft		60 ft	2***	shared	both sides (unstriped)
	28 ft*		60 ft	2***	shared	one side (unstriped)
	24 ft*		60 ft	2***	shared	none
Local Industrial	40 ft	38 ft	60 ft	2***	shared	optional (unstriped)
Industrial Collector	40 ft	38 ft	80 ft	2	6 ft	none
Minor Collector	40 ft	36 ft****	60 ft	2	shared	both sides (8 ft)
Major Collector	36-50 ft	36 ft****	80 ft	2	6 ft	none
Minor Arterial (3-lane)	50 ft	48 ft	100 ft	3	6 ft	none
Minor Arterial (5-lane)	74 ft	72 ft	100 ft	5	6 ft	none

Notes:

*May be constructed only in conjunction with the creation of covenants, conditions and restrictions (CCR's) and the establishment of a homeowners association (HOA) for the development. The CCR's shall provide that the primary responsibility for parking enforcement shall be the HOA, with the City of Redmond also being acknowledged in the CCR's as a beneficiary for such parking enforcement as a violation of the land use decision and/or city code.

**In certain cases, bike lanes may be reduced to 5 ft, parking may be reduced to 7 ft, and travel lanes to 11 ft at the discretion of the City Engineer.

***Unstriped travel lanes

****36 ft in existing built-out areas

*****All streets less than 28 feet wide shall be no longer than 300 feet in length, unless such streets include at least one (1) parking bay per lot, located along each lot frontage for the entire length of such street, up to the maximum block length.

Streets 300 feet or less in length shall not have any direct driveway access. In no case shall any street less than 28 feet wide intersect with any other street less than 28 feet wide.

- **RESPONSE: All proposed public streets and alleys are in conformance with these standards. See Cross Sections sheet in enclosed plans.**

4. Future Extension of Streets. When necessary to give access to or permit a satisfactory future division of adjoining land, streets shall be extended to the boundary of the subdivision or partition and the resulting dead-end streets may be approved without a permanent turn around if they are 150 feet or less in length, although, an adequate temporary turn around to ensure emergency vehicle access must be provided if such streets are greater than 150 feet in length.

- **RESPONSE: The streets within the subdivision are proposed to extend to the extent of the property boundaries to allow for future development on adjoining undeveloped properties. One dead end street with a length greater than 150 feet is proposed and an approved fire apparatus turnaround will be provided at its end. This standard is met.**

5. Collector and Arterial Street Access. Notwithstanding the provisions of Section 8.2705 of this Chapter, if a land division abuts or contains an existing or proposed collector or arterial street, the Community Development Director or Hearings Body may require other treatments, including but not limited to frontage roads, necessary for adequate protection of residential properties and to afford separation of through and local traffic. Provision may be made for emergency access. All frontage roads shall comply with the City of Redmond Transportation System Plan.

- **RESPONSE: NW 10th Street, abuts the western boundary of the. Along the frontage a 20' open space tract has been provided as buffering for residential properties. NW Upas Avenue abuts the south side of the cottage development. An open space buffers the cottages from NW Upas Avenue.**

6. Streets Adjacent to Railroads, Freeways and Parkways. When the area to be subdivided or partitioned is residentially zoned and abuts a railroad, freeway, or parkway, a provision may be required for a street approximately parallel to and on each side of such right-of-way at a distance suitable for use of the land between the street and railroad, freeway or parkway. In the case of a railroad, there shall be a land strip of not less than 25 feet in width adjacent and along the railroad right-of-way for screen planting between the railroad right-of-way and residential property. If the intervening property between such parallel streets and a freeway or a parkway is less than 80 feet in width, such intervening property shall be dedicated to park or thoroughfare use. The intersections of such parallel streets, where they intersect with streets that cross a railroad, shall be determined with due consideration as cross streets of a minimum distance required for approach grades to a future grade separation and right-of-way widths of the cross street.

- **RESPONSE: The subject property does not abut a railroad, freeway, or parkway. This standard does not apply.**

7. Continuation of Streets. Subdivision or partition streets which constitute the continuation of streets in contiguous territory shall be aligned so that their center lines coincide. Where straight line continuations are not possible, such center lines shall be continued as curves. These streets or the continuation of streets in contiguous territory may be required by the Community Development Director or Hearings Body where such continuation is necessary to maintain the function of the street or desirable in the surrounding area. Where solar orientation would not be possible if the street area continued, a new pattern may be started that is solar oriented.

- **RESPONSE: The project includes the continuation of proposed streets with properly aligned center lines. This standard is met.**

8. Lot Layout. Local residential streets should be oriented on an east/west axis to the greatest possible extent to insure solar access for lots within the subdivision or partition.

- **RESPONSE: The existing property configuration is constrained in the east-west dimension. City local street extension standards, the adopted master plan, and City requirements for a connection to the adjacent north property created the need for NW 9th Street and NW 9th Lane to provide primary access to the R-4 zoned area.**

9. Street Names. Except for extensions of existing streets, no street name shall be used which will duplicate or be confused with the name of an existing street in a nearby city or in the county. Street names and numbers shall conform to the established pattern in the City, including the continuation of street names across intersecting streets, and shall be subject to the approval of the Fire Department or the responsible agency.

- **RESPONSE: See enclosed plans. Proposed street names are consistent with the City/County Street Grid naming patterns.**

10. Sidewalks. Sidewalks are required to be installed on both sides of a public street and in any special pedestrian way within the subdivision or partition except that in the case of collectors, arterials, special industrial districts or in steep terrain, the Hearings Body may approve a subdivision or partition without sidewalk if alternative pedestrian routes are available or provided by the developer. Sidewalks shall be required along routes to existing or future school and park sites.
- **RESPONSE: Sidewalks are included in the public improvements required and conditioned for this project. See attached plans. This standard is met.**
11. Bicycle Routes. If appropriate to the extension of a system of bicycle routes, existing or planned pursuant to the City of Redmond Bicycle Refinement Plan, the Community Development Director or the Hearings Body may require the installation of separate bicycle lanes within streets and/or separate bicycle paths.
- **RESPONSE: Frontage improvements to NW 10th include bike lane improvements consistent with Engineering Standards.**
12. Intersection Angles. Street intersections shall be as near right angles as possible except where topography or existing conditions requires a lesser angle, but in no case shall the acute angle be less than as permitted by the adopted City of Redmond Public Works Standards and Specifications.
- **RESPONSE: The proposed street intersections are as near right angles as possible, or radial to the curve, so as to meet this requirement. This standard is met.**
13. Alignment. Staggered street alignment shall whenever possible leave a minimum of 200 feet distance between the center line of the streets, but in no case be less than as permitted by Standards and Specifications.
- **RESPONSE: The proposal does not result in a new street alignment that is less than 200 feet in distance; therefore the proposal complies with this standard.**
14. Narrow Streets. Local residential grid streets designed at widths less than 36 feet as described in Section 8.2710(3)(Table 1), shall be permitted when the subdivision design is found to be in compliance with the following:
- A. Narrow streets may only be permitted for continuous full length blocks internal to a Subdivision or Planned Unit Development with street connections at both ends.
 - B. Lots adjoining the narrow streets shall be a minimum of 5000 square feet and have a street minimum 50 feet of frontage.
 - C. Sidewalks shall be separated from the curb by a landscape strip with street trees conforming with Public Works Standards and Specifications.
 - D. Curb cuts along the narrow street shall not be less than the minimum width required within the adopted City of Redmond Public Works Standards and Specifications.
- **RESPONSE: Narrow streets are not proposed; therefore this section does not apply.**

8.2715 Fundamental Design Elements.

1. Lighting. The subdivider or partitioner shall provide underground wiring to the City standards and a base for any proposed ornamental street lights at locations approved by the affected utility company.
 - **RESPONSE: Street lighting is reviewed for compliance by the Engineering Department as a part of the public improvement process.**
2. Multiple Access Points. Whenever possible, a minimum of two points of access to the subdivision or partition shall be provided to provide assured access for emergency vehicles and ease resident evacuation.
 - **RESPONSE: There are four proposed access points for the subdivision. NW Walnut and NW Varnish provide access from NW 10th Street. Two emergency alley accesses are provided along NW Upas Avenue.**
3. Water/Sewer. All subdivisions and partitions shall provide water and sewer lines constructed to City standards and specifications approved by the City Engineer. All lots or parcels shall be served from the City of Redmond water and sewer systems or by water and sewer systems acceptable to the City. Water and sewer mains and service lines shall be installed prior to the curbing and paving of new streets in all new subdivisions or partitions.
 - **RESPONSE: See enclosed plans, which include extension of sewer and water mains. Public water and sewer will serve the subdivision lots (zoned R-4). Cottages shall be served by public sewer and a private water system, supplied by a City master meter – as required by the City’s Water Division. Sewer improvements also include the extension of the Far East Sewer Interceptor as designated in the City’s Wastewater Master Plan and required in the previous Master Plan approval.**
4. Underground Utilities. All permanent utility service and minor power transmission lines that are within or immediately adjacent to lots in a subdivision or parcels in a partition shall be provided from underground facilities unless otherwise approved by the CDD Director or Hearings Body. The subdivider or partitioner or developer shall be responsible for complying with requirements of this section and shall:
 - A. Obtain a permit from the Public Works Director or designee for placement for all underground utilities within the public right-of-way.
 - B. Make all necessary arrangements with the utility companies and other persons or corporations affected by the installation of such underground utilities and facilities in accordance with rules and regulations of the Public Utility Commission of the State of Oregon.
 - C. All underground utilities, water lines, sanitary sewer lines and storm drains installed in streets shall be constructed prior to the surfacing of such streets to the extent practicable, and water and sanitary sewer service lines shall be placed to such lengths as will negate the necessity for disturbing the street improvements when service connections are made.
 - **RESPONSE: All proposed utilities shall be installed underground consistent with City Standards.**

5. Preservation of Natural Features. Existing trees, vegetation and natural features (i.e. rock outcrops) add character to the development and shall be preserved to the greatest extent practicable. All trees over 8 inches d.b.h. shall be noted and shown on the tentative plat.
 - **RESPONSE: The site contains no natural features and is currently used as a pasture. No significant vegetation is planned to be removed with the currently proposed modification.**
6. Scenic Views. Significant views shall be taken into consideration during subdivision design. The establishment of view corridors, building envelopes, building height restrictions or similar methods shall be employed for the retention and protection of views from individual lots and from public spaces to the greatest degree practicable as determined through the land use review process. Such measures shall be shown on the final plat and included in deed restrictions.
 - **RESPONSE: The property does not have any established view corridors. The property is surrounded by right of way and development on the property is not anticipated to impact any significant views for surrounding public or private areas. Given that no significant views exist on or around the property and no view corridors have previously been established, the applicant is not proposing any new restrictions.**
7. Land for Public Purposes.
 - A. If the City has an interest in acquiring a portion of a proposed development for a public purpose, it shall notify the property owner as soon as the City Council authorizes the transaction to proceed.
 - B. Within a development, or adjacent to a development in contiguous property owned by the developer, a parcel of land of not more than 5% of the gross area of the development may be required to be set aside and dedicated to the public for parks and recreation purposes by the developer. The parcel of land, if required, shall be determined to be suitable for the park and/or recreation purpose(s) intended, and the city may require the development of the land for the park or recreation use intended or identified as a need within the community.
 - C. In the event no such area is available that is found to be suitable for parks and/or recreation uses, the developer may be required, in lieu of setting aside land to pay to the appropriate parks and recreation agency a sum of money equal to the market value of the area required for dedication, plus the additional funds necessary for the development thereof if so required; if such is required, the money may only be utilized for capital improvements by the appropriate parks and recreation agency.
 - D. The foregoing land and development or money dedication (if require) may be provided for in lieu of an equal value of systems development charge assessment for parks if so approved by the collecting agency in accordance with the applicable provisions of the system development charge ordinance. If the collecting agency will not permit the land or money dedication in lieu of an applicable systems development charge, then the land and development or money dedication shall not be required.
 - E. If the nature and design, or approval, of a development is such that over 30% of the tract of land to be developed is dedicated to public uses such as streets, water or sewer system facilities and the like, then the requirements of this subsection shall be reduced so that the total obligation of the developer to the public does not exceed 30%.
 - **RESPONSE: No public land is proposed as part of this application.**

8. Easements.

A. Utility Easements. Easements shall be provided along property lines when necessary for the placement of underground utilities and to provide the subdivision or partition with electric power, communication facilities, street lighting, sewer lines, water lines, gas lines, or drainage. Such easements shall be labeled "Public Utility Easement" on the tentative and final plat; they shall be at least 12 feet in width and centered on lot lines where possible, unless determined otherwise by the City Engineer or designate. Excepting utility pole guyline easements along the rear of lots adjacent to un-subdivided land may be reduced to 10 feet in width, unless determined otherwise by the City Engineer or designate.

➤ **RESPONSE: All public streets shall include granting of Public Utility Easements along the right-of-way frontage. Public Sewer Easements and Private Access Easements shall be provided along alleys. Easements as needed for shared use of open spaces and extension of private utilities within the cottage development will be granted on the final plat as needed.**

B. Drainage. If a tract is traversed by a water course, such as a drainage way, channel or stream, there shall be provided a stormwater easement or drainage right-of-way conforming substantially with the lines of the water course or in such further width as will be adequate for the purpose. Streets or parkways parallel to major water courses and drainage ways may be required.

➤ **RESPONSE: No drainageways exist on the property. A COLD Sublateral exists as an open ditch currently along the north property line.**

8.2720 Grading of Building Sites. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

1. Cut slope ratios shall not exceed one foot vertically to one and one-half feet horizontally.
2. Fill slope ratios shall not exceed one foot vertically to two feet horizontally.
3. The composition of soil for fill and the characteristics of lots and parcels made useable by fill shall be suitable for the purpose intended.
4. When filling or grading is contemplated by the subdivider or partitioner, they shall submit plans showing existing and finished grades for the approval of the City Engineer. In reviewing these plans, the City Engineer shall consider the need for drainage and effect of filling an adjacent property. Grading shall be finished in such a manner as not to create steep banks or unsightly areas to adjacent property.
5. Any land that requires engineered fill shall be so noted on the plat. Design and placement of engineered fill shall be under the direction of a licensed professional engineer.

➤ **RESPONSE: The applicant shall supply a final grading and drainage plan (mainly associated with the new streets) to the Engineering Department for review and approval at the appropriate time.**

8.2800 Improvement Procedures. In addition to other requirements, public or private improvements to be installed by the applicant either as a requirement of these standards or other applicable regulations or at his own option, shall conform to the requirements of this article:

1. Plan Review and Approval. Improvement work shall not be commenced until plans thereof have been reviewed and approved by the Community Development Director or Hearings Body or a designated representative thereof. To the extent necessary for evaluation of a proposed development, such improvement plans may be required before approval of the tentative plat or preliminary map or drawing.
2. Public Improvements as Platted. Public improvements shall be designed, installed and constructed as platted and approved by the City Engineering Division, and plans shall be filed with the final plat at the time of recordation or upon completion.
3. Inspection. Improvements shall be constructed under the inspection and approval of a city Inspector. Expenses incurred thereby shall be borne by the applicant/owner. The inspector may require changes in sections and details of the improvements if unusual conditions arise during construction to warrant such changes.
4. As-Built Plans. A map showing the completed public improvements shall be filed with the Community Development Department upon completion of the improvements.

➤ **RESPONSE: Upon approval, the applicant shall prepare and submit public improvement plans to the Engineering Department for extension of streets and utilities. Construction of infrastructure shall commence after approval of plans by the City of Redmond.**

8.2805 Improvements in Partitions. The same improvements may be required to be installed to serve each building site of a partition as are required of a subdivision.

➤ **RESPONSE: The proposal is a subdivision. This standard is not applicable.**

8.2810 Acceptance of Improvements. Improvements shall be considered for acceptance after final inspection, after the improvements have been completed.

➤ **RESPONSE: The proposal includes both public and private improvements. The applicant understands that work cannot commence until the plans are approved. Furthermore, the applicant plans to include all required plans with the final plat and understands that improvements will be inspected by a City Inspector.**

8.2815 Transportation Impact Analysis. It shall be the burden of the developer to evaluate transportation system impacts through studies prepared by a qualified registered professional engineer. When a transportation impact analysis is required it must demonstrate that the following standards are met:

1. The standard of measurement that will determine the acceptability of traffic flow on City streets will be a delay-based level of service as defined by the Highway Capacity Manual, Special Report 209, third Edition (2000 update or subsequent document updates) published by the Transportation Research Board. The determination of LOS shall be calculated by a methodology that is approved by the City Engineer. The acceptable standard of LOS for City streets shall be LOS E during the peak 15 minutes of the peak hours of the average weekday. A lesser standard shall be acceptable at unsignalized intersections with low volume minor street approaches if the volume-to-capacity ratio is less than 0.90 and the 95th percentile vehicle queue is less than four vehicles during the peak hour.

2. The Average Daily Traffic (ADT) volume of Local Street roadways within the City of Redmond shall be less than 1,200 vehicles per day (VPD). Developments which add vehicle trips to Local Streets with an ADT greater than 1,200 VPD may be asked to provide mitigation in the form of additional access to the site, when in the opinion of the City Engineer, the residential livability is degraded by excessive local street traffic volume.
3. New development that will cause degradation below those levels shall be required to provide mitigating transportation system improvements that will restore the LOS to the accepted standard, as is practical, as determined by the City Engineer and pursuant to the adopted City of Redmond Transportation System Plan. Where there are impacts to the State Highways, the City and ODOT shall work cooperatively to determine appropriate courses of action based on ODOT and City standards.
4. The following vehicle trip generation thresholds shall determine the level and scope of transportation analysis required for a new or expanded development. Trip ends shall be calculated as per the Institute of Transportation Engineers manual, Trip Generation, 8th edition (or subsequent document updates), or local trip generation studies prepared by a qualified registered professional engineer and approved by the City Engineer. The City Engineer shall determine when a TIA has satisfied the requirements of the development's impact analysis. The TIA shall bear the stamp and signature of a qualified registered professional Engineer with a license valid in the State of Oregon.
 - A. If a proposed development will generate 200 or more daily trip ends, or 20 or more p.m. peak hour trip ends, then a Transportation Impact Analysis (TIA) shall be required.
 - B. Projects that generate less than 200 daily or 20 p.m. peak hour trip ends may also be required to provide a Transportation Impact Analysis (TIA) when, in the opinion of the City Engineer or his/her designee, significant capacity and/or safety problem is caused, or adversely impacted by the development. The City Engineer or designee, shall determine the scope of this analysis.
 - C. A development may be required to provide a Trip Generation Report for developments which generate less than 200 daily or 20 p.m. peak hour vehicle trips.
5. The impact analysis area shall include at a minimum, the following intersections:
 - A. All site access intersections
 - B. Nearest intersecting collector or arterial street upstream and downstream of the development.
 - C. Any other collector or arterial street intersection that would experience an increase of 25 additional peak hour trips.
 - D. Additional intersections requested by staff in the basis of anticipated impacts resulting from the development.
6. The analysis shall include the following study time frames:
 - A. Existing conditions.
 - B. Completion year of each significant phase of development.
 - C. Five year forecast beyond final phase
7. The following Tables are required in the TIA:
 - A. Trip Generation (including phase breakdown if applicable)
 - B. LOS Table (LOS for every analysis scenario at every study area intersection. Report LOS, delay, V/C ratio, 95% vehicle queue, and any additional pertinent analysis results)
8. The following Figures are required in the TIA:
 - A. Vicinity Map
 - B. Site or Tentative Plan Map
 - C. Background Traffic Volumes (all study intersections, all analysis years)

- D. Trip Distribution and Assignment
- E. Background + Site Generated Traffic Volumes (all study intersections, all analysis years)
- 9. Other Analysis Standards (as required by the study)
 - A. Signal Warrants shall be performed where applicable per the Manual on Uniform Traffic Control Devices, current edition.
 - B. Left Turn Lane Warrants shall be provided where applicable per ODOT criteria based on the Texas Transportation Institute (TTI) curves.
 - C. Right Turn Lane Warrants shall be provided where applicable per ODOT criteria.
 - D. The acceptability of sight distance at all study area intersections shall be determined per AASHTO (current edition) standards.
 - E. Traffic signal progression analysis may be required if a new signal is proposed. The City Engineer shall approve the method of traffic signal progression analysis.
 - F. Roadway improvements are to be based on the City of Redmond Standards and Specifications and ODOT design standards.

➤ **RESPONSE: The Traffic Impact Analysis is included with this application from Lancaster Engineering. See the analysis enclosed with this application.**

8.2820 Access Management Standards. All land divisions shall be in compliance with the following standards.

1. Driveway spacing and corner clearance as follows:

<u>Roadway Classification</u>	<u>Minimum Access Driveway Spacing</u>	<u>Minimum Access Clearance to Corner</u>	<u>Intersection Spacing (Min.)</u>
Local Street	No restrictions	30 feet	165 feet
Minor Collector	50 feet	80 feet	330 feet
Major Collector	165 feet	165 feet	330 feet
Minor Arterial	330 feet	330 feet	¼ mile
Major Arterial	ODOT Stds	ODOT Stds	ODOT Stds

➤ **RESPONSE: The proposed subdivision is compliant with these standards. The standard is met.**

2. In all instances, access near an intersection shall be located beyond the influence of standing queues and opposing left turns sharing a continuous two-way left turn lane. This requirement may result in greater corner clearance or access spacing than the minimum distance indicated.

➤ **RESPONSE: This standard is addressed in the Traffic Impact Analysis.**

3. Every lot or parcel shall be permitted an access. In the event that the access management standards cannot be achieved, shared access with adjacent property shall be explored and provided where available.

➤ **RESPONSE: Each lot has individual access to public streets or private alleys. This standard is met.**

4. Access shall be taken from the lower order street or alley unless otherwise approved by Public Works and/or ODOT through the land use process.
 - **RESPONSE: All streets in the proposed subdivision are local streets and private alleys and access is taken from the lower order street. This standard is met.**
 5. Unless adequate demonstration of site necessity, intersection safety and functionality is provided, through the land use review process, new lots and/or parcels will be limited to a single vehicular access.
 - **RESPONSE: Singular vehicle access is proposed. This standard is met.**
 6. The access management standards apply to new development, redevelopment, subdivision and partitioning of land.
 - **RESPONSE: This standard is advisory.**
 7. Corner clearance is measured from the edge of right-of-way to the nearest edge of access. Spacing is measured from centerline of access/intersection to centerline of access/intersection.
 - **RESPONSE: Driveways shall be determined at time of engineering or home construction.**
 8. Adequate intersection sight distance and clear zone shall be maintained at all access/driveway locations per AASHTO standards (American Association of State Highway and Transportation Officials).
 - **RESPONSE: This standard will be addressed at the time the final engineering plan is submitted.**
 9. Public Works may require supporting information, including but not limited to traffic count data, trip generation, trip distribution, Transportation Impact Analysis study, etc., in order to make a proper determination of access/driveway location.
 - **RESPONSE: Public Works required a Transportation Impact Analysis and it is included as part of this application.**
 10. Access within the North Redmond US 97 Interchange Area Management Plan (IAMP) shall also conform to the "North Redmond US 97 Interchange Area Management Plan (IAMP)" provision of Chapter 9 Transportation Element of the Comprehensive Plan Addendum and Policy 12 n of Chapter 14 of the Comprehensive Plan.
 - **RESPONSE: NW 10th Street is not a street addressed in the Comprehensive Plan Addendum. Policy 12 of Chapter 14 of the Comprehensive Plan stops after subsection (m); however, Policy 12 is a standard for Master Development Plans and the standards have been addressed during the Central Christian Master Plan process. The current proposal adheres to the same standards as previously approved.**
- 8.2825 Street Dedications.** Any person desiring to create a street not part of a subdivision or partition shall make written application to the Community Development Department.

1. Application. Said application shall be accompanied by the required information and appropriate filing fee. In cases where such dedication would have the effect of creating a land division, the dedication shall be treated as a new subdivision or partition as applicable.
2. Minimum Design Standards. The minimum standards of design and improvements for the dedication of a street shall be in compliance with the City of Redmond Public Works Standards and Specifications and all other applicable street standards and regulations as specified in Section 8.2710.
3. Procedure.
 - A. Upon receipt of written application and appropriate filing fee for street dedication, the Community Development Director shall refer the proposal to the City Engineer or designee for review and recommendation.
 - B. The City Engineer shall report his findings and recommendations regarding the proposed dedication to the Community Development Director
 - C. Upon receipt by the Community Development Director of written findings and recommendations from the City Engineer, the proposal shall be submitted to the City Council for a public hearing.
 - D. The only notice required for a hearing under this section shall be by publication.
 - E. Following the hearing, the Council may accept or reject the proposed dedication.

➤ **RESPONSE: The streets will be dedicated with the subdivision.**

8.2830 Variances.

1. Major Variance. Upon application, the Community Development Director or Hearings Body may authorize variances from the standards of this Chapter pursuant to the criteria listed below if the applicant can establish:
 - A. That special conditions exist which are peculiar to the subject property and which are not applicable to other properties in the same zone which make conformance to these standards impractical.
 - B. That the variance is the minimal deviance from these standards needed to accomplish the objective.
 - C. That the varied requirement(s) will conform to the purpose and objectives of the Comprehensive Plan and of these standards and will have no adverse impact on surrounding properties or on the provision of general urban services in the area.
 - D. That strict interpretation of these standards would deprive the applicant of rights commonly enjoyed by other properties in the same zone under the terms of these standards.
 - E. That the special conditions and circumstances do not result from actions of the applicant and such conditions and circumstances do not merely constitute pecuniary hardship or inconvenience.

➤ **RESPONSE: A major variance is not being requested. These standards do not apply.**

2. Minor Variance. A minor variance under this Chapter shall be no greater than 25% of the requirements from which the variance is sought. Upon application, the Community Development Director or Hearings Body may authorize variances from the standards of this Chapter pursuant to the criteria listed below if the applicant can establish:
 - A. More efficient use of the site.
 - B. Preservation of natural features where appropriate

- C. Adequate provision of light, air and privacy to adjoining properties.
- D. Adequate access.
- E. That the variance will have minimal adverse impact on the livability, value or development potential of abutting properties and the surrounding area.
- F. Consistency with the overall objectives of the Comprehensive Plan.

➤ **RESPONSE: The applicant requests a Minor Variance to permit a 25% increase in maximum floor area of the cottages from 1000 square feet (excluding garage) to 1250 square feet (excluding garage). The requested increase will provide greater variety and flexibility of housing types for the overall development, meeting the Great Neighborhood Principles emphasizing the mixed of housing types and densities addressed during the Master Development Plan this subdivision falls under.**

3. The Community Development Director or Hearings Body may attach such conditions to any variance granted that will insure the variance meets the objectives of the Comprehensive Plan and of these standards and does not have an adverse impact on surrounding properties or on the provision of general urban services in the area.

RESPONSE: This standard is advisory.

8.2835 City as Beneficiary to Covenants, Conditions and Restrictions. When Covenants, Conditions and Restrictions (CCR's), or other similar documents, are required by either the provisions of this Code or through the land use review process, the City of Redmond may require the CCR's (or other documents) include a provision or provisions that allow the City to come onto the property(s) that are subject to the CCR's for the purpose of removing, repairing or maintaining improvements and other common areas in the event such improvements or common areas are not properly maintained or otherwise kept in good order. The provision(s) shall state that the City has sole and exclusive discretion to determine the need for and timing of any such removal, repair or maintenance. The provision shall authorize the City to recover the cost of such removal, repair or maintenance by directly billing the record owner of the property(s) subject to the CCR's or the property(s) directly benefited by the removal, repair or maintenance. In the event a bill is not paid, the City may impose a lien on the property(s), which shall be recorded and may be enforced in the manner of an assessment lien. The inclusion of a provision or provisions described in this section does not affect the obligations of an association, group and/or other persons or property owner(s) designated in the CCR's from any responsibilities or obligations respecting such improvements or common areas, nor shall it obligate the City to such undertake such removal, repair or maintenance.

➤ **RESPONSE: A draft copy of CC&R's are included with this application. Final CC&R's shall be prepared and submitted to the City for review and approval at time of Final Plat.**

CONCLUSIONS

In all land use proceedings, the "burden of proof" rests with the applicant to demonstrate compliance with the land use regulations. After reviewing all available evidence submitted by the applicant, staff concludes that conditions of approval (Exhibit A) are warranted for the development to comply fully with the RDC standards and criteria.

Scott Woodford

Senior Planner



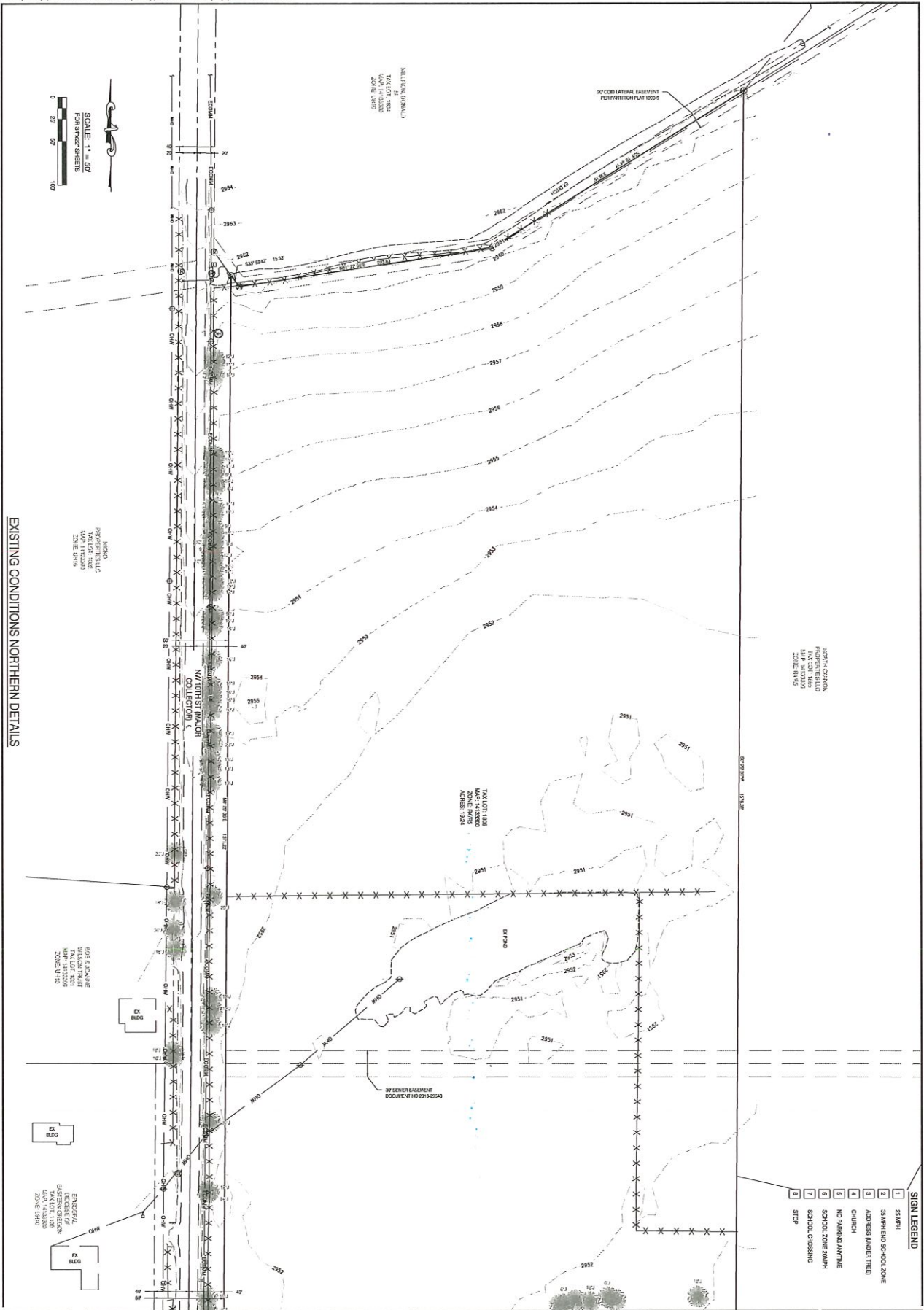
NOVEMBER, 2019

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EXISTING CONDITIONS

Exhibit C - Project Plans

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EXISTING CONDITIONS NORTHERN DETAILS

SHEET TITLE:
EXISTING CONDITIONS
NORTHERN DETAIL VIEW

PROJECT:
CINDER BUTTE VILLAGE PHASES 2-4

PROJECT LOCATION:
REDMOND, OR

CLIENT:
HAYDEN HOMES

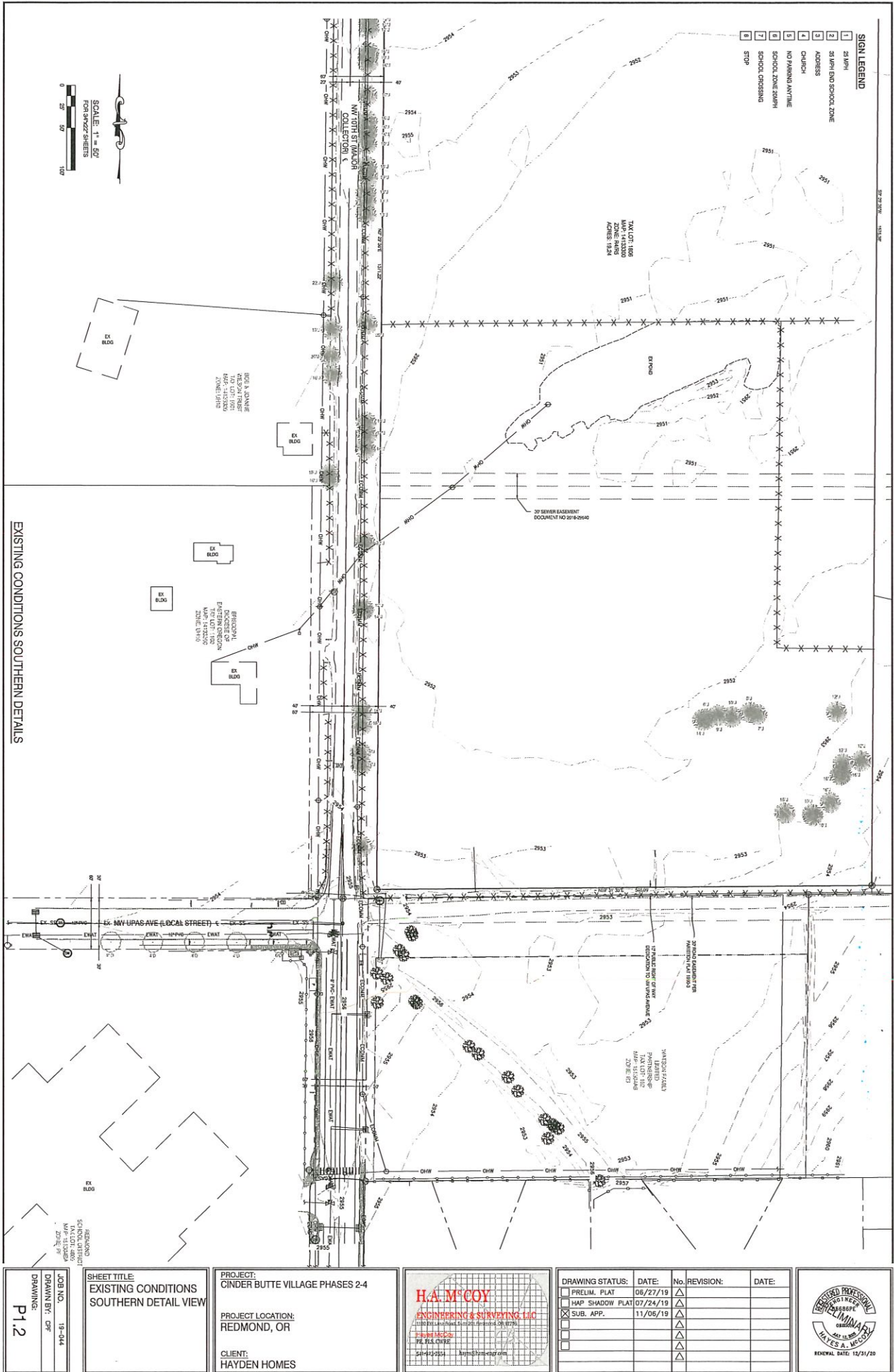
H.A.M. COY
ENGINEERING & SURVEYING, LLC
1000 N. 10TH AVE. SUITE 100
REDMOND, OR 97056
503-441-1000
hampcoy.com

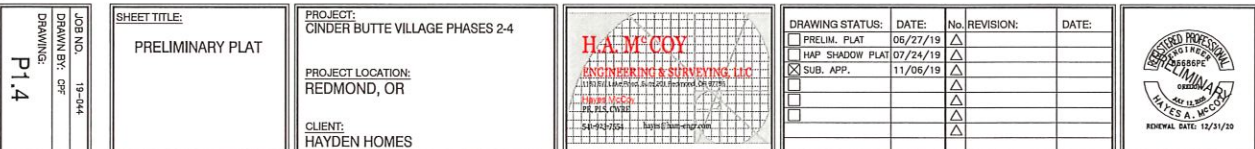
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HAP SHADOW PLAT	07/24/19	2		
SUB. APP.	11/06/19	3		
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PROFESSIONAL ENGINEER
MINOR
HAYES A. MCCOY
RENEWAL DATE: 12/31/20

Exhibit C - Project Plans

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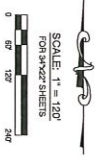




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DRAWING: P1.7	JOB NO.: 19-04	SHEET TITLE: HAP SHADOW PLAT	PROJECT: CINDER BUTTE VILLAGE PHASES 2-4	H.A. M^{CO} COY ENGINEERING & SURVEYING, LLC 11100 NW Levee Blvd., Suite 200, Redmond, OR 97756 T. Howard McCoy PE, PLS, CIVIL 241-652-7554 tyler@hmc-engineers.com	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 20%;">DRAWING STATUS:</th> <th style="width: 20%;">DATE:</th> <th style="width: 10%;">No.</th> <th style="width: 10%;">REVISION:</th> <th style="width: 10%;">DATE:</th> </tr> <tr> <td>☐ PRELIM. PLAT</td> <td>06/27/19</td> <td>△</td> <td></td> <td></td> </tr> <tr> <td>☐ HAP SHADOW PLAT</td> <td>07/24/19</td> <td>△</td> <td></td> <td></td> </tr> <tr> <td>☐ SUB. APP.</td> <td>11/06/19</td> <td>△</td> <td></td> <td></td> </tr> <tr> <td>☒ BUFFER PLANTING</td> <td>02/18/20</td> <td>△</td> <td></td> <td></td> </tr> <tr> <td>☐</td> <td></td> <td>△</td> <td></td> <td></td> </tr> <tr> <td>☐</td> <td></td> <td>△</td> <td></td> <td></td> </tr> <tr> <td>☐</td> <td></td> <td>△</td> <td></td> <td></td> </tr> </table>	DRAWING STATUS:	DATE:	No.	REVISION:	DATE:	☐ PRELIM. PLAT	06/27/19	△			☐ HAP SHADOW PLAT	07/24/19	△			☐ SUB. APP.	11/06/19	△			☒ BUFFER PLANTING	02/18/20	△			☐		△			☐		△			☐		△		
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Cinder Butte Village Phases 2-4

Transportation Impact Analysis
Redmond, Oregon

Date:

December 2, 2019

Prepared for:

Hayes McCoy
H. A. McCoy Engineering & Surveying, LLC

Prepared by:

Todd Mobley, PE
Terrington Smith, EI



RENEWS: 12/31/2020





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Executive Summary

1. Phases 2-4 of the Cinder Butte Village include the construction of 59 single-family detached dwellings and 53 cottages on approximately 19.4 acres located east of NW 10th Street, south of NW Pershall Way, and north of NW Upas Avenue in Redmond, Oregon.
2. The proposed development is projected to generate a total of 83 trips during the morning peak hour, with 21 trips entering and 62 trips exiting the site, and 111 trips during the evening peak hour, with 70 entering and 41 exiting the site. During a typical weekday, the development would be projected to generate an estimated 1,058 daily trips.
3. A detailed examination of the crash history at the study intersections shows no significant safety hazards and no trends that are indicative of design deficiencies.
4. Based on TTI curve methodology, left-turn lane warrants were found to be met for the intersections of NW Pershall Way at NW 10th Street and NW Quince Avenue at NW 10th Street under current conditions. The intersection of NW Spruce Avenue at NW 10th Street was found to meet left turn lane warrants during year 2023 background conditions before the development is occupied.

If left-turn lane warrants are based on the Harmelink methodology, left-turn lane warrants were not projected to be met for the intersections of NW Pershall Way at NW 10th Street and NW Spruce Avenue at NW 10th Street through the year 2023, regardless of the proposed development.

5. Preliminary traffic signal warrants are met for the intersection of NW Maple Avenue at NW 9th Street under current traffic conditions. The intersection is not expected to require signalization as a condition of approval for the Cinder Butte Village.
6. The intersections of US Highway 97 at NW Pershall Way and NW Maple Avenue at NW 9th Street are currently exceeding ODOT's and the City of Redmond's performance standards, and will continue to do so through year 2023 regardless of phases 2-4 of the Cinder Butte Village development. Installing access restrictions at the intersection of US Highway 97 at NW Pershall Way and installing a traffic signal at the intersection of NW Maple Avenue at NW 9th Street are recommended mitigations to improve the performance of each intersection to operate within jurisdictional standards.



Introduction

Phases 2-4 of the Cinder Butte Village development include the proposed construction of 59 single-family detached dwellings and 53 cottages on a 19.4-acre area in northern Redmond, Oregon. The proposed development is planned to be completed in three phases and expected to be fully occupied by year 2023.

This report evaluates the traffic impacts of the proposed Upas Cinder Butte Village on the transportation system in the vicinity of the site. The purpose of this report is to ensure safe and efficient performance of the transportation facilities that will be impacted by the proposed development.

All supporting data and calculations are included in the appendix to this report.

Location Description

The subject property is located east of NW 10th Street, south of NW Pershall Way, and north of NW Upas Avenue. The subject site totals approximately 19.4 acres.

Based on input from the City of Redmond and requirements outlined in the City's Development Regulations Section 8.2815.5, the following existing intersections were analyzed:

- NW Pershall Way at US Highway 97
- NW Pershall Way at NW 10th Street
- NW Upas Avenue at NW 10th Street
- NW Spruce Avenue at NW 10th Street
- NW Quince Avenue at NW 10th Street
- NW Quince Avenue at NW 6th Street
- NW Maple Avenue at NW 10th Street
- NW Maple Avenue at NW 6th Street
- NW Kingwood Avenue at NW 6th Street

Vicinity Streets

The proposed study area includes ten roadways described in Table 1 on the following page.



Table 1: Vicinity Roadway Summary

Roadway	Jurisdiction	Functional Classification	Cross-Section	Speed	On-street Parking	Bicycle Lanes	Curbs	Sidewalks
U.S. Highway 97	ODOT	Major Arterial	4 to 6 Lanes	55 mph Basic Rule	Not Permitted	None	Partial Both Sides	None
NW Pershall Way	City of Redmond	Minor Arterial	2 Lanes	55 mph Basic Rule	Not Permitted	None	None	None
NW Upas Avenue	City of Redmond	Local Street	2 Lanes	25 mph Statutory	Partially Permitted	None	Both Sides	South Side
NW Spruce Avenue	City of Redmond	Local Street	2 Lanes	25 mph Statutory	Permitted Both Sides	None	Both Sides	Both Sides
NW Quince Avenue	City of Redmond	Major Collector	2 to 3 Lanes	25 mph Posted	Permitted Both Sides	None	Partial Both Sides	Partial Both Sides
NW Maple Avenue	City of Redmond	Minor Arterial	2 to 3 Lanes	35 mph Posted	Not Permitted	Both Sides	Both Sides	Both Sides
NW Kingwood Avenue	City of Redmond	Minor Collector	2 Lanes	25 mph Statutory	Partially Permitted	None	Partial Both Sides	Partial Both Sides
NW 10th Street	City of Redmond	Major Collector	2 Lanes	35 mph Posted	Not Permitted	Both Sides	Partial Both Sides	Partial Both Sides
NW 9th Street	City of Redmond	Major Collector	2 Lanes	25 mph Posted	Partially Permitted	Both Sides	Partial Both Sides	Partial Both Sides
NW 6th Street	City of Redmond	Minor Arterial	5 Lanes	45 mph Posted	Not Permitted	Both Sides	Partial Both Sides	Partial Both Sides

Notes: Functional Classification based on the Redmond Urban Area Transportation Plan Map

Study Intersections

A majority of site trips generated by the proposed development are expected to impact nine nearby existing intersections of significance. A summarized description of these intersections is provided in Table 2 on the following page.



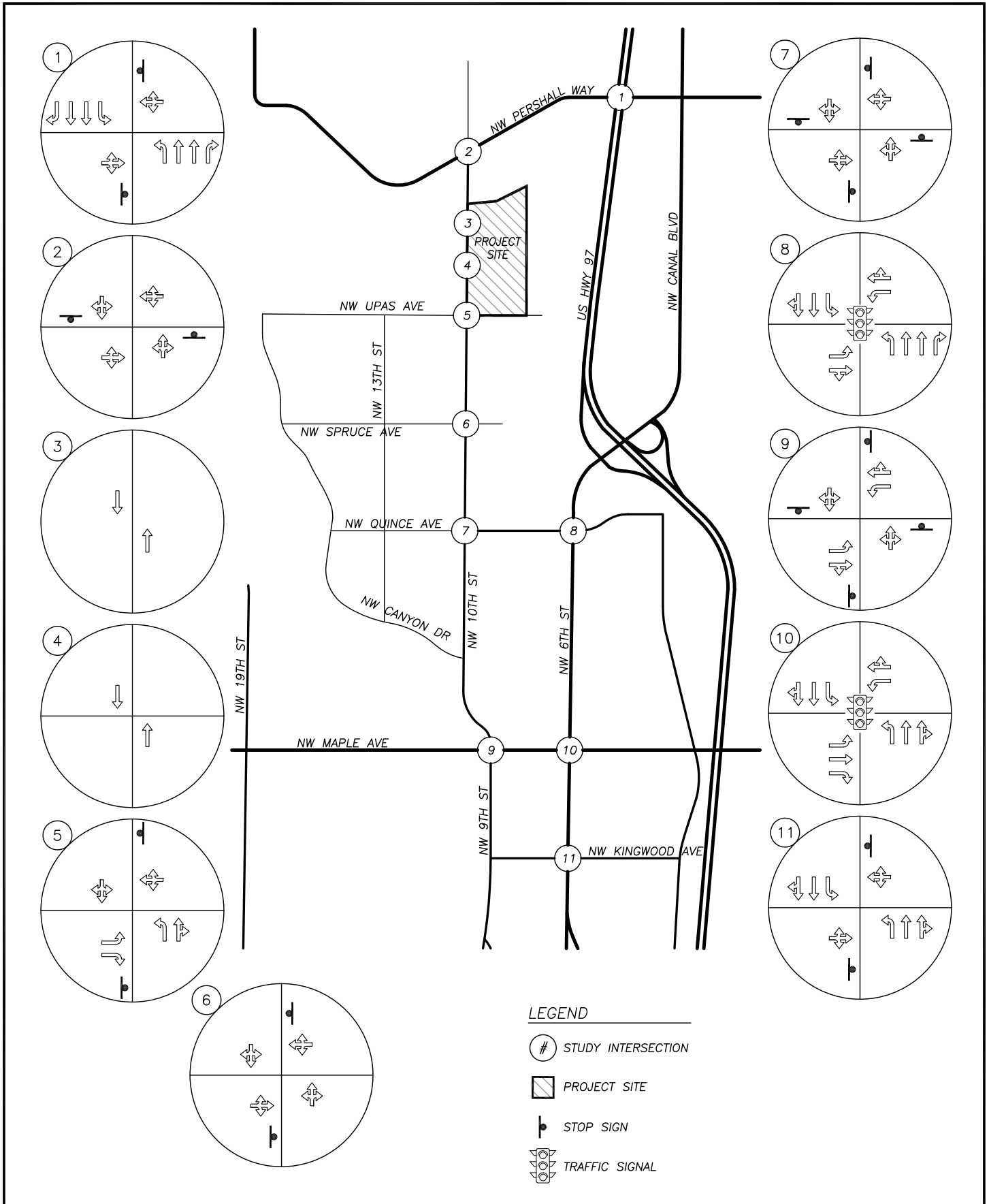
Table 2: Study Intersections

Number	Name	Geometry	Traffic Control	Phasing/Stopped Approaches
1	NW Pershall Way at US Highway 97	Four-Legged	Stop-Controlled	EB/WB Stop-Controlled Approaches
2	NW Pershall Way at NW 10th Street	Four-Legged	Stop-Controlled	NB/SB Stop-Controlled Approaches
5	NW Upas Avenue at NW 10th Street	Four-Legged	Stop-Controlled	EB/WB Stop-Controlled Approaches
6	NW Spruce Street at NW 10th Street	Four-Legged	Stop-Controlled	EB/WB Stop-Controlled Approaches
7	NW Quince Avenue at NW 10th Street	Four-Legged	Stop-Controlled	All-Way Stop-Controlled
8	NW Quince Avenue at NW 6th Street	Four-Legged	Traffic Signal	Permitted EB/WB LTs, NB/SB FYA Phasing
9	NW Maple Avenue at NW 10th Street	Four-Legged	Stop-Controlled	All-Way Stop-Controlled
10	NW Maple Avenue at NW 6th Street	Four-Legged	Traffic Signal	FYA Phasing for All LTs
11	NW Kingwood Avenue at NW 6th Street	Four-Legged	Stop-Controlled	EB/WB Stop-Controlled Approaches

A vicinity map displaying the project site, vicinity streets, and the study intersections with their associated lane configurations is shown in Figure 1 on page 5.

Public Transit

Cascades East Transit offers public transportation services throughout Deschutes County, Crook County, and Jefferson County. Transit services are provided by reservation and operate in Redmond Monday through Friday from 6:30 AM to 6:00 PM.





Site Trips

Trip Generation

The 19.4-acre area is to be developed with 59 single-family detached dwellings and 53 cottages. Phases 2-4 of the Cinder Butte Village is anticipated to be completed over three phases of development and fully occupied by year 2023.

To estimate the additional number of trips that will be generated by the proposed development, trip rates from the *Trip Generation Manual*¹ were used. Data corresponding to land-use code 210, *Single-Family Detached Housing*, was referenced for the single-family detached dwellings and the cottages based on the total number of dwelling units.

The trip generation calculations show that the proposed development is projected to generate a total of 83 trips during the morning peak hour, with 21 trips entering and 62 trips exiting the site. During the evening peak hour, the proposed development is projected to generate 111 trips, with 70 entering and 41 exiting the site. During a typical weekday, the development would be projected to generate an estimated 1,058 daily trips, with half entering and half exiting the site.

The trip generation estimates are summarized in Table 3 below. Detailed trip generation calculations are included in the appendix to this report.

Table 3: Trip Generation Summary

	ITE Code	Units	AM Peak Hour			PM Peak Hour			Weekday	
			In	Out	Total	In	Out	Total	Total	
Phase 2										
Single-Family Housing	210	36	7	20	27	23	13	36	340	
Phase 3										
Single-Family Housing	210	23	4	13	17	14	9	23	218	
Phase 4										
Cottages	210	53	10	29	39	33	19	52	500	
Total Development		112	21	62	83	70	41	111	1,058	

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition, 2017.



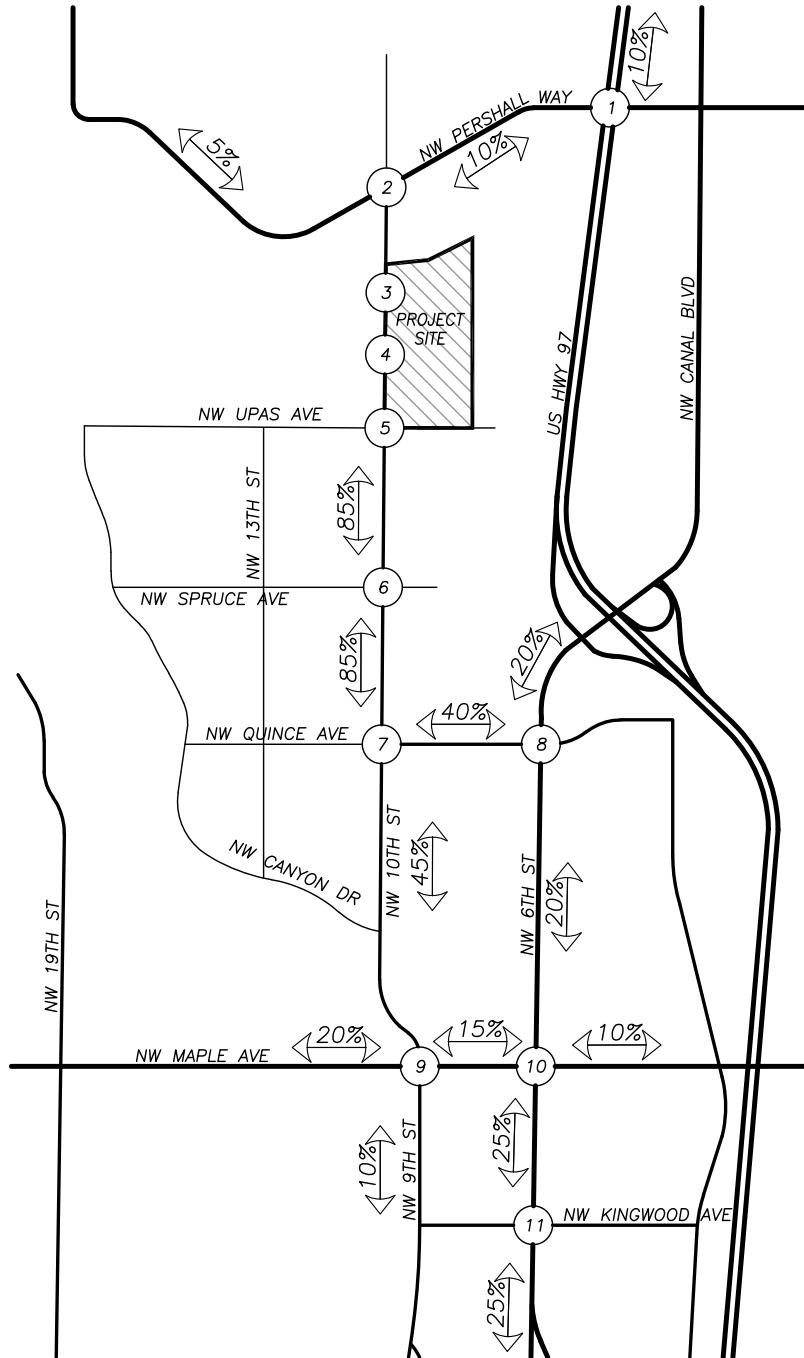
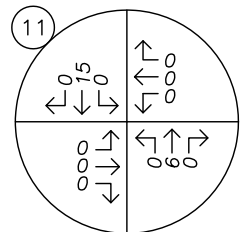
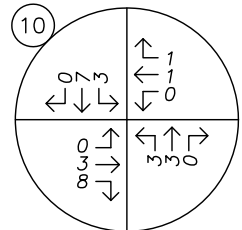
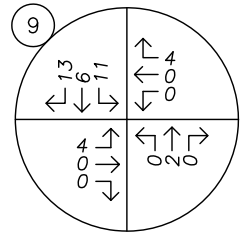
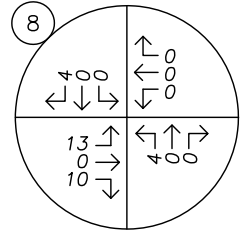
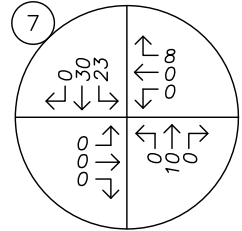
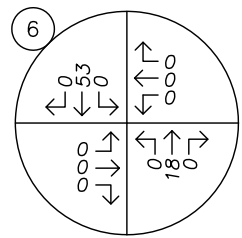
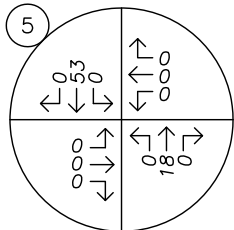
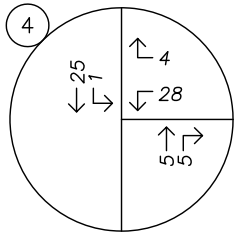
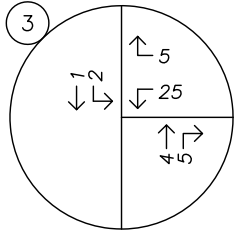
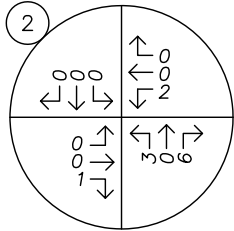
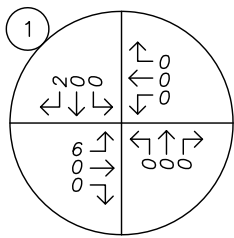
Trip Distribution

The directional distribution of site trips to and from the proposed development was estimated based on existing travel patterns at major intersections in the vicinity of the development while taking in account locations of likely trip destinations and locations of major transportation facilities. Based on the data, the following trip distribution was estimated:

- 5 percent of site trips will travel to/from the west via NW Pershall Way
- 10 percent of site trips will travel to/from the north via U.S. Highway 97
- 20 percent of site trips will travel to/from the northeast via NW 6th Street
- 20 percent of site trips will travel to/from the west via NW Maple Avenue
- 10 percent of site trips will travel to/from the south via NW 9th Street
- 25 percent of site trips will travel to/from the south via NW 6th Street
- 10 percent of site trips will travel to/from the east via NW Maple Avenue

Residents of the development will use NW Varnish Avenue and NW Walnut Avenue (proposed access streets) to enter and exit the site.

Figure 2 on page 8 shows the trip distribution and assignment for the morning peak hour and Figure 3 on page 9 shows the trip distribution and assignment for the evening peak hour.



TRIP GENERATION			
	IN	OUT	TOTAL
AM	21	62	83



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Site Trips
AM Peak Hour



FIGURE
2
PAGE
8



Traffic Volumes

Traffic Counts

Traffic counts were conducted at the following intersections on Wednesday, September 25th, 2019, from 4:00 PM to 6:00 PM to capture the evening peak hour and on Thursday, September 26th, 2019, from 7:00 AM to 9:00 AM to capture the morning peak hour:

- NW Pershall Way at U.S. Highway 97
- NW Pershall Way at NW 10th Street
- NW Upas Avenue at NW 10th Street
- NW Spruce Avenue at NW 10th Street
- NW Quince Avenue at NW 10th Street
- NW Quince Avenue at NW 6th Street
- NW Maple Avenue at NW 10th Street
- NW Maple Avenue at NW 6th Street
- NW Kingwood Avenue at NW 6th Street

Data corresponding to each intersection's individual morning and evening peak hour was used for analysis.

Figure 4 on page 13 and Figure 5 on page 14 **Error! Bookmark not defined.** show the existing traffic volumes for the study area intersections during the morning and evening peak hours, respectively.

Background Conditions

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to calculate the future traffic volumes, a compounded growth rate of two percent per year for an assumed build-out condition of four years was applied to the measured existing traffic volumes at City intersections to approximate year 2023 background conditions.

Future traffic volumes for the intersection of US Highway 97 at NW Pershall Way/NW Yucca Avenue were projected in conformance with the requirements established in ODOT's Analysis Procedures Manual. This included the determination of the 30th-highest hour volumes based on seasonal traffic variations. A seasonal adjustment factor of 1.068 was calculated and applied to through volumes on US Highway 97 based on data from ATR 09-023 located 0.57 miles south of NW Pershall Way/NW Yucca Avenue. For volumes turning onto and from NW Yucca Avenue (Oregon Highway 370), a seasonal adjustment factor of 1.032 was calculated and applied based on Commuter seasonal trends for the month of September (when the counts were collected).

In addition to applying a growth rate to the existing traffic volumes, background volumes were adjusted to account for trips associated with projects currently in development in the City of Redmond. These in-process developments include:



- Maple Meadows, a planned development south of NW Maple Avenue and west of NW 23rd Street in which 195 single-family detached dwellings, 71 apartment dwelling units, and 35 cottage units are planned for construction.
- Canyon Ridge Master Plan, a planned development south of NW Pershall Way, west of NW 10th Street, and north of NW Upas Avenue in which 121 single-family detached dwellings, 34 attached 1-level dwellings, 27 cottages, and 34 townhomes are planned for construction.
- Surf Thru Car Wash, an 4,758 square-foot automated car wash located south of NW Quince Avenue, east of NW 6th Street, and west of N Canal Boulevard.
- A 17,400 square-foot Home Depot Station located south of NW Quince Avenue, east of NW 6th Street, and west of N Canal Boulevard.
- Canyon Crossing Subdivision, a planned development located east of NW Canyon Drive/NW 10th Street, south of NW Oak Place, north of NW Negus Place, and west of NW 6th Street in which 24 single-family detached dwellings are planned for construction.
- Dry Canyon Village, a planned development located east of NW Northwest Way and north of an extension of NW Quince Avenue in which a combination of single-family detached dwellings, accessory dwelling units, apartments, condominiums and townhomes, totaling 505 residential units, are planned for construction.
- Phase 1 of the Cinder Butte Village development which encompasses 16 single-family dwellings to be located adjacent to the site south of NW Upas Avenue.

The Transportation Impact Analysis of each development was used to obtain trip generation and trip assignment data corresponding to their respective developments. The trip assignments assumed in these reports was used to quantify the total volume of site trips travelling through the study intersections related to this report. Figures showing the total in-process trips at the study intersections for the AM and PM peak hours are included in the technical appendix.

Figure 6 on page 15 and Figure 7 on page 16 show the projected year 2023 background volumes during the morning and evening peak hours, respectively. These background volumes include the in-process trips as described previously.

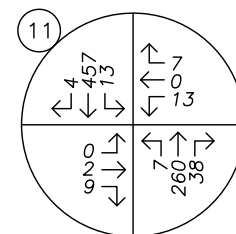
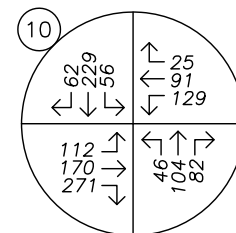
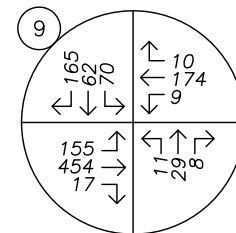
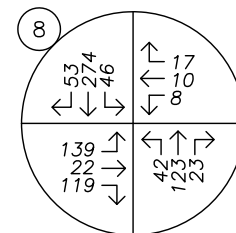
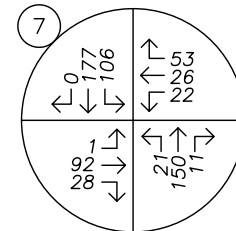
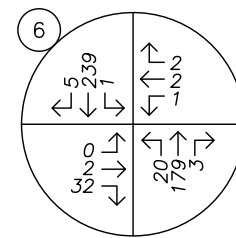
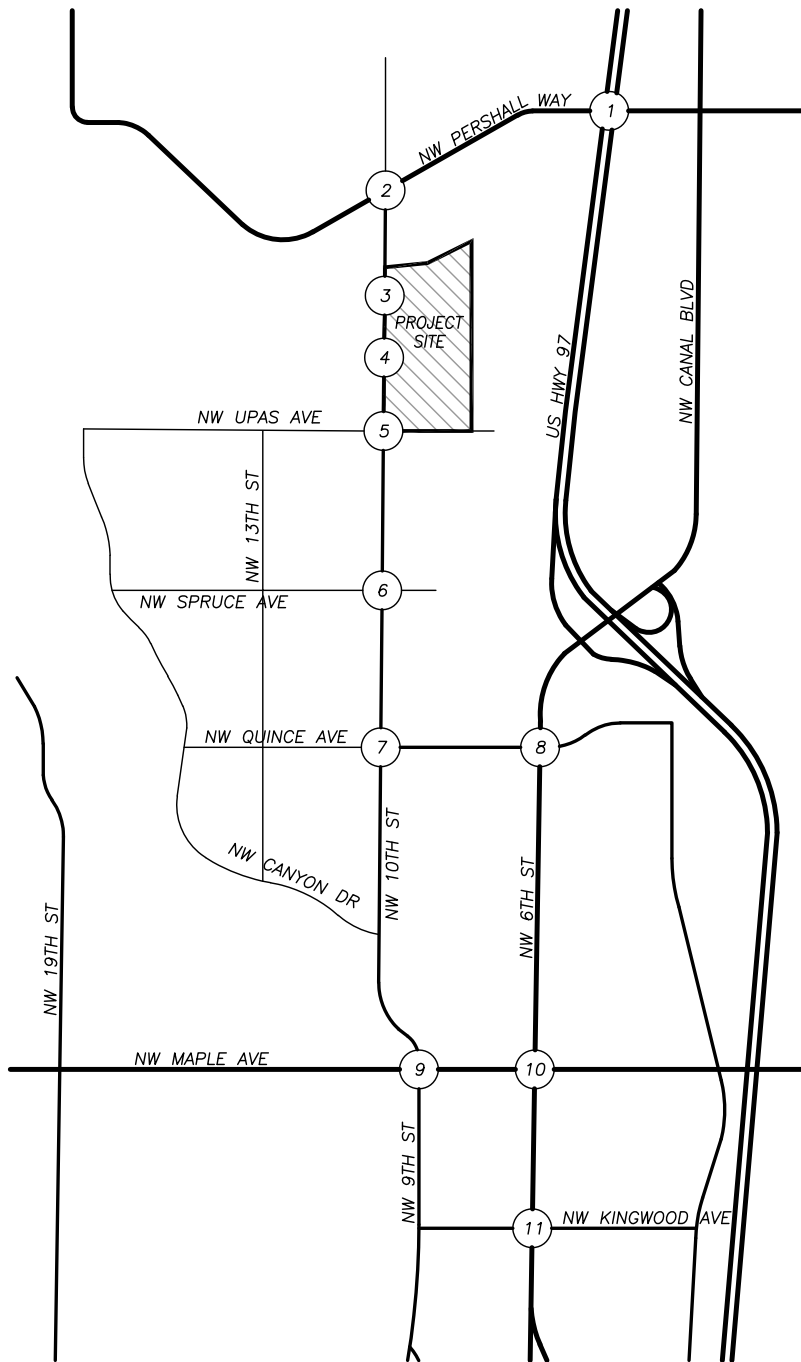
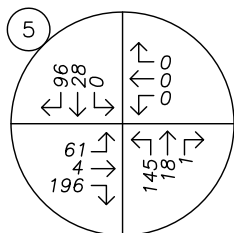
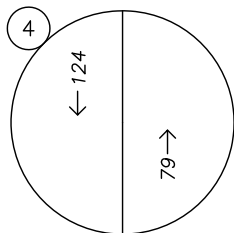
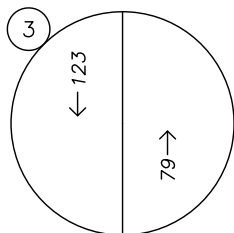
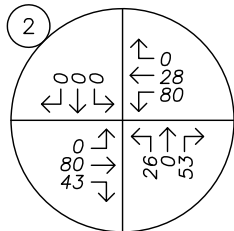
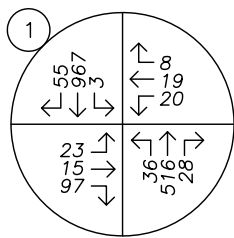
Buildout Traffic

Peak hour trips calculated to be generated from phases 2-4 of the proposed Cinder Butte Village, as described earlier within the Site Trips section, were added to the projected year 2023 background traffic volumes to obtain the expected 2023 buildout volumes.



The City of Redmond also requires an analysis of traffic conditions five years beyond the completion and occupancy of the proposed development. Growth corresponding to nine years at two percent per year was applied to the existing volumes before adding trips associated with in-process developments and the trips generated by the proposed development to obtain the expected 2028 conditions, five years after the expected completion and occupancy of the proposed development.

Figure 8 on page 17 and Figure 9 on page 18 show the projected year 2023 peak hour buildout traffic volumes. Figure 10 on page 19 and Figure 11 on page 20 provide volumes projected five years after the completion and occupancy of the proposed development.

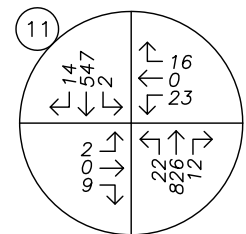
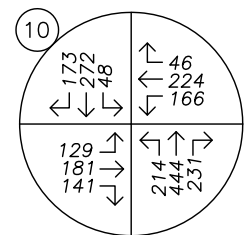
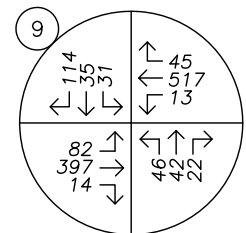
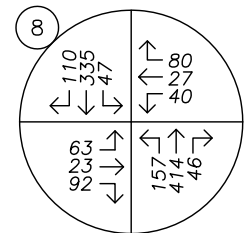
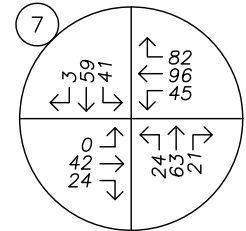
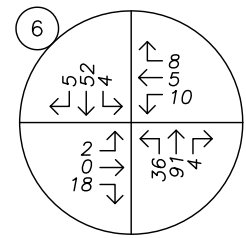
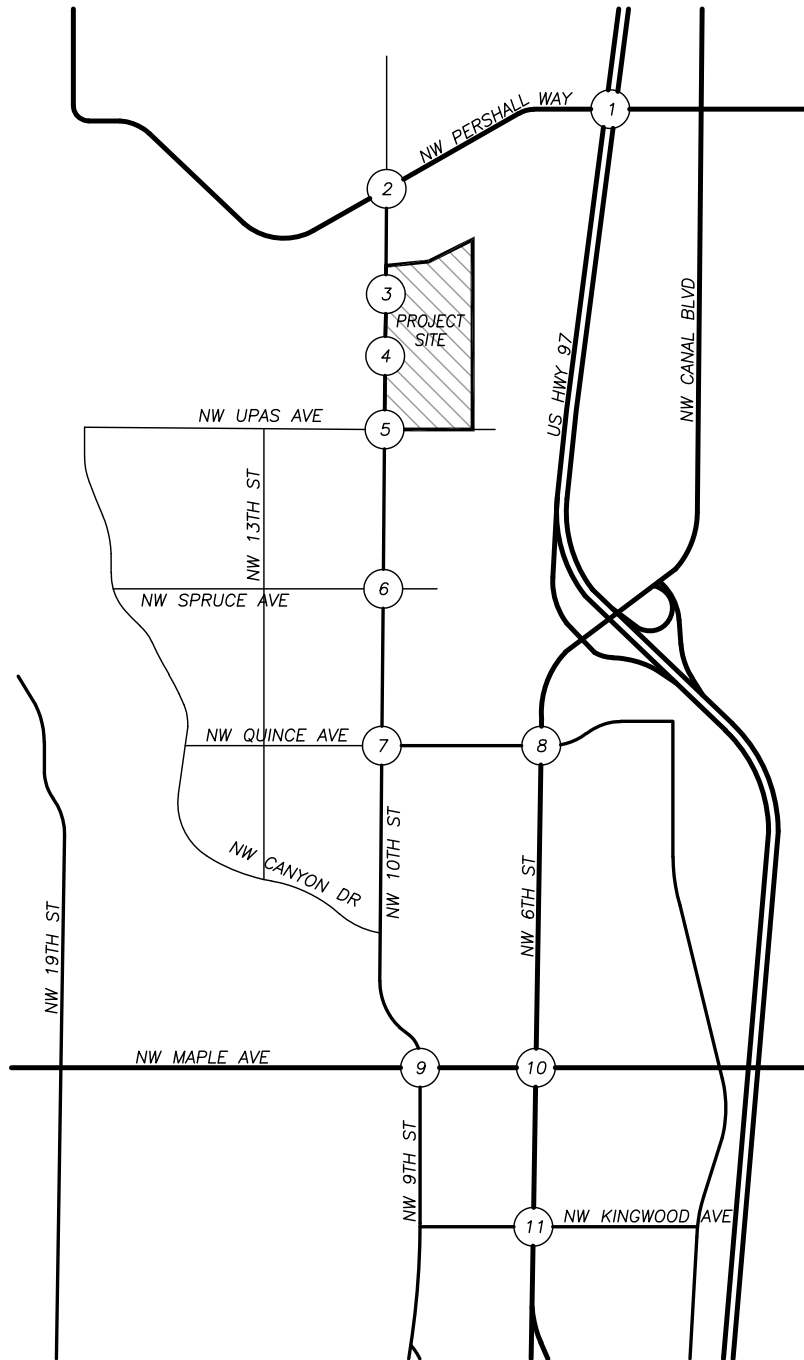
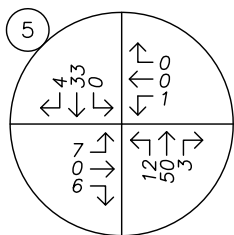
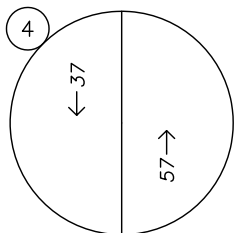
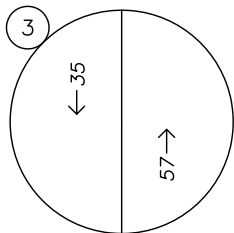
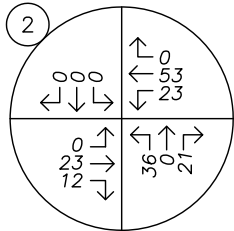
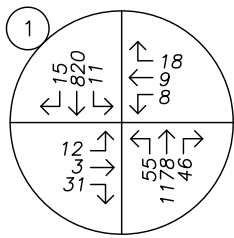


TRAFFIC VOLUMES
Year 2019 Existing Conditions
AM Peak Hour



FIGURE
4

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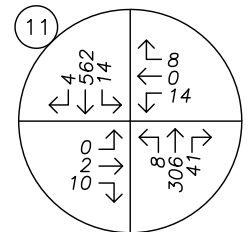
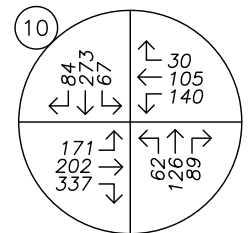
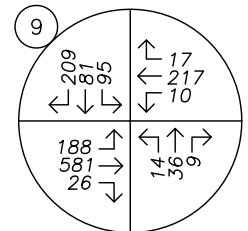
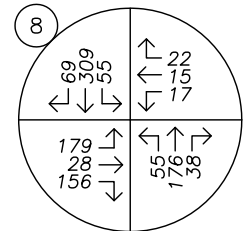
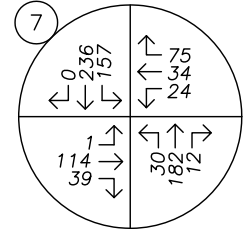
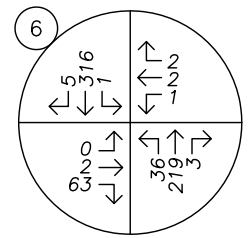
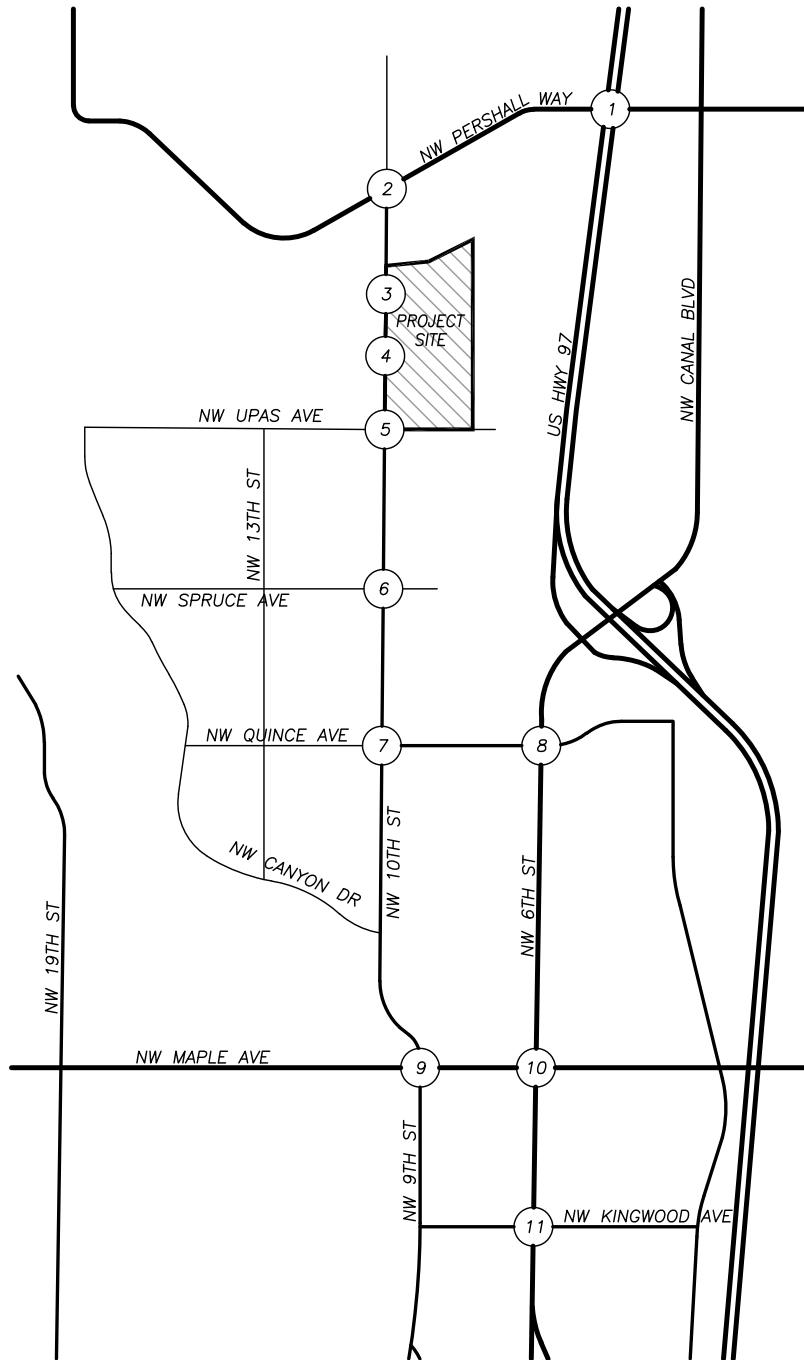
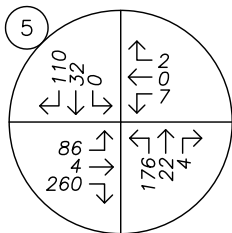
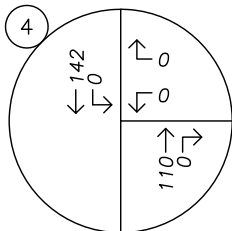
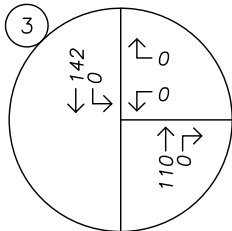
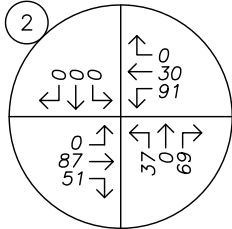
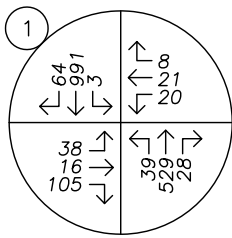


TRAFFIC VOLUMES
Year 2019 Existing Conditions
PM Peak Hour



FIGURE
5

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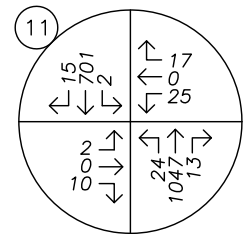
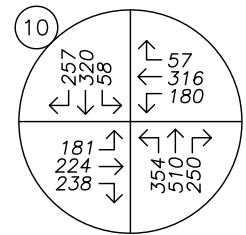
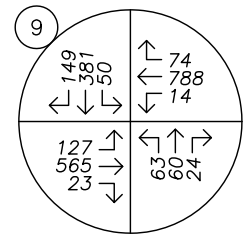
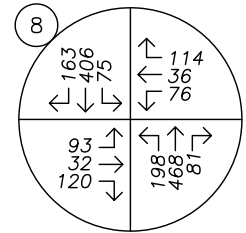
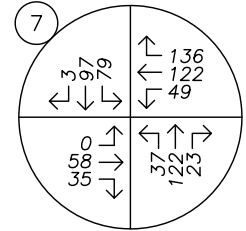
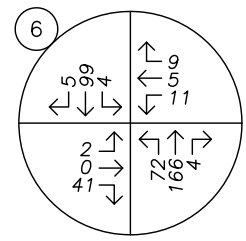
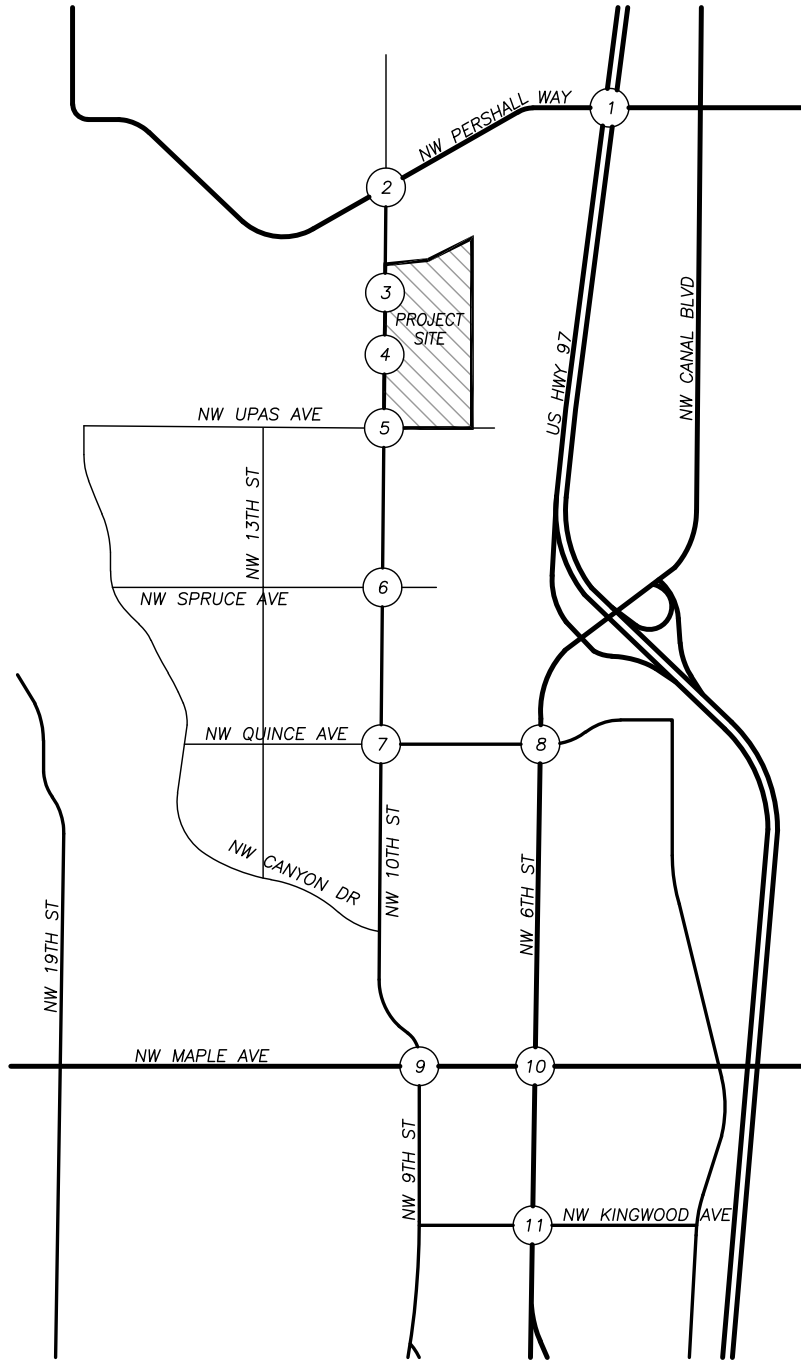
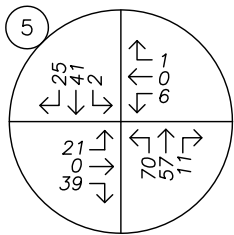
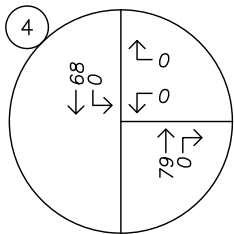
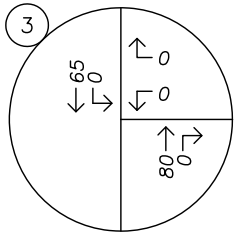
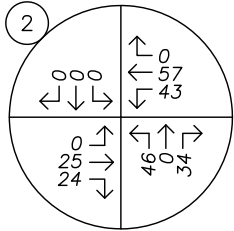
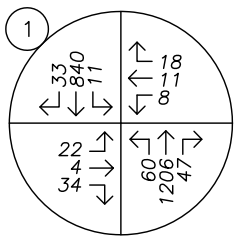


TRAFFIC VOLUMES
2023 Background Conditions
AM Peak Hour



FIGURE
6

PAGE
15



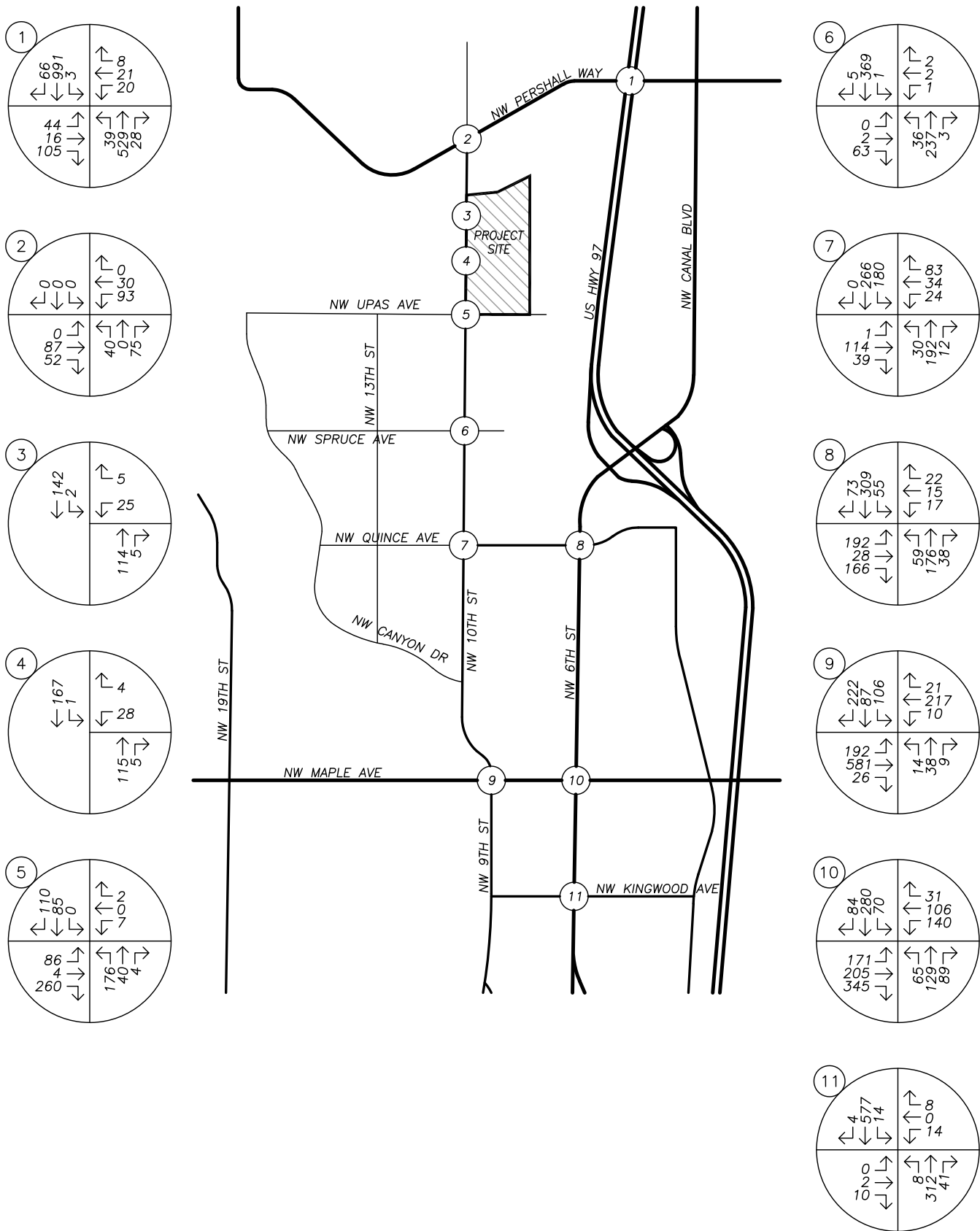
TRAFFIC VOLUMES
2023 Background Conditions
PM Peak Hour



no scale

FIGURE
7

PAGE
16

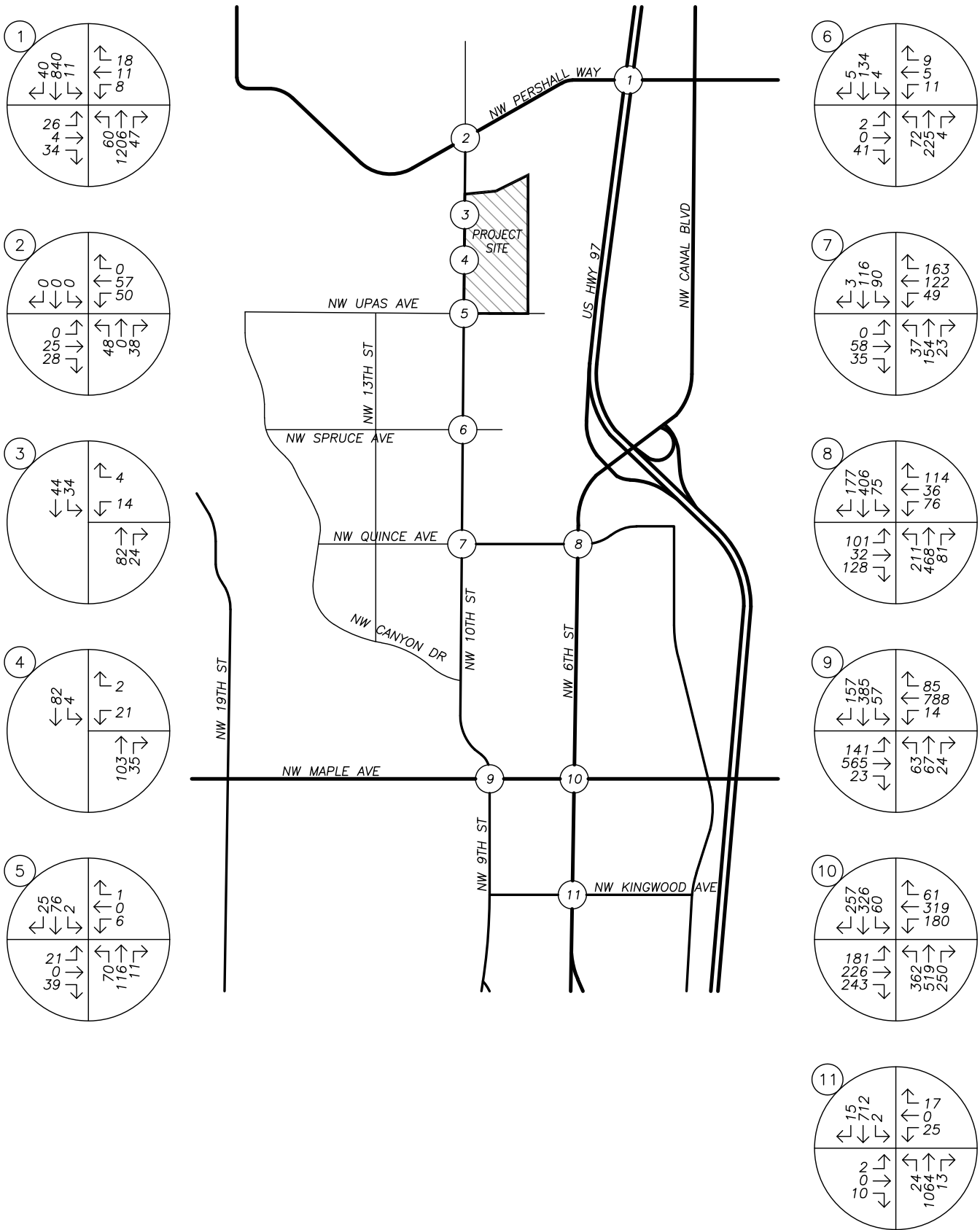


TRAFFIC VOLUMES
 Year 2023 Background Plus Site Trips
 AM Peak Hour



FIGURE 8

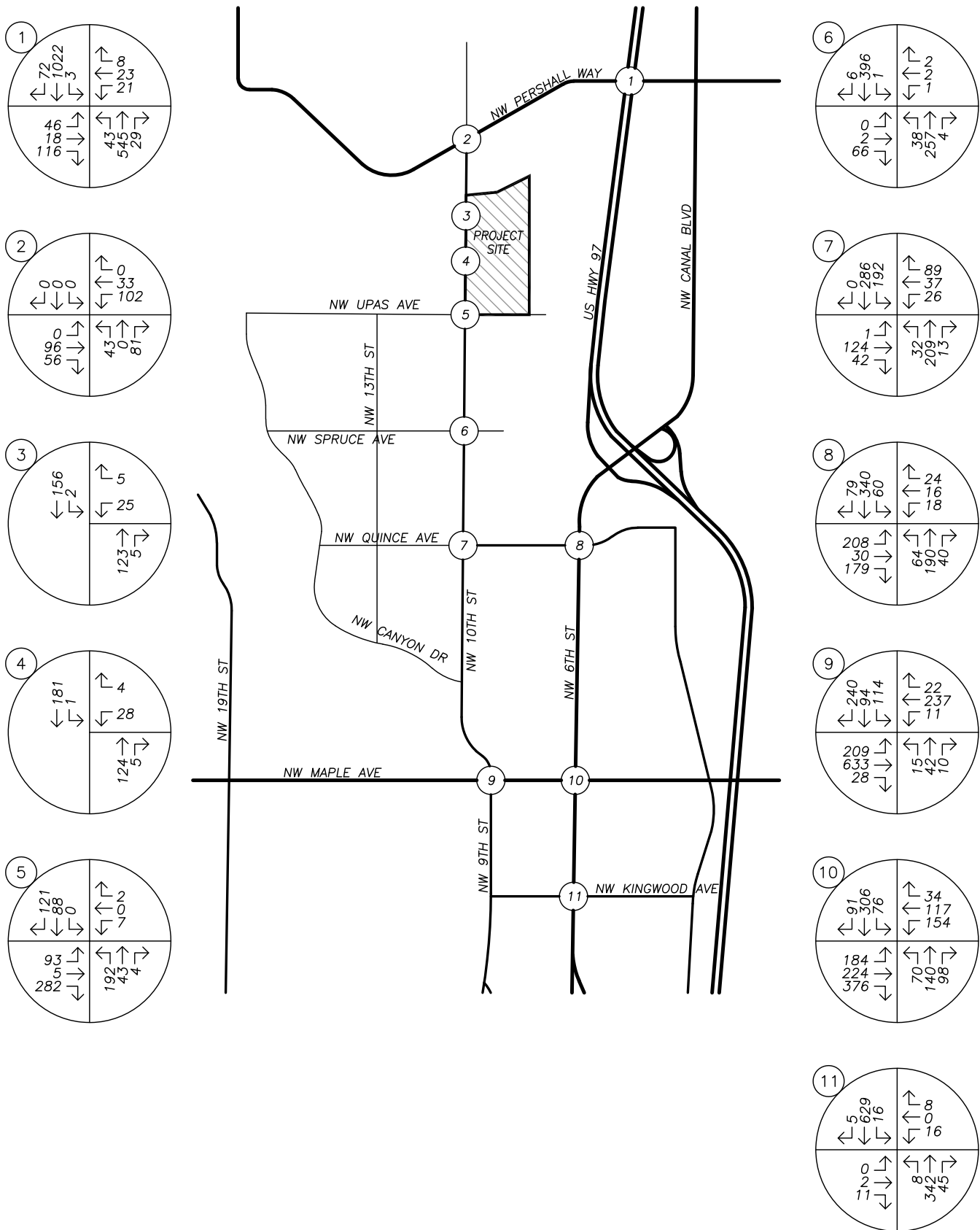
PAGE 17



TRAFFIC VOLUMES
 Year 2023 Background Plus Site Trips
 PM Peak Hour



FIGURE
9
PAGE
18

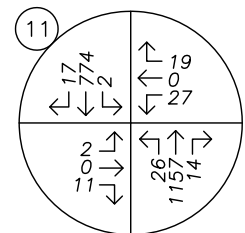
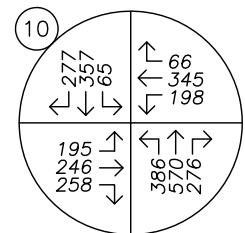
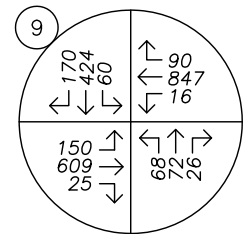
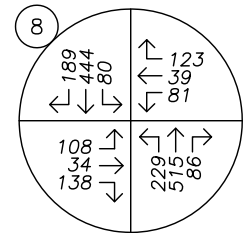
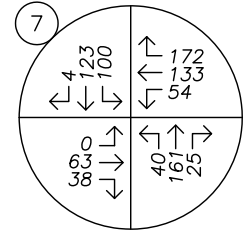
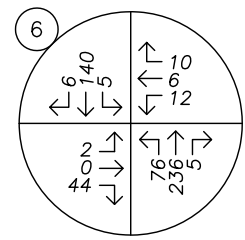
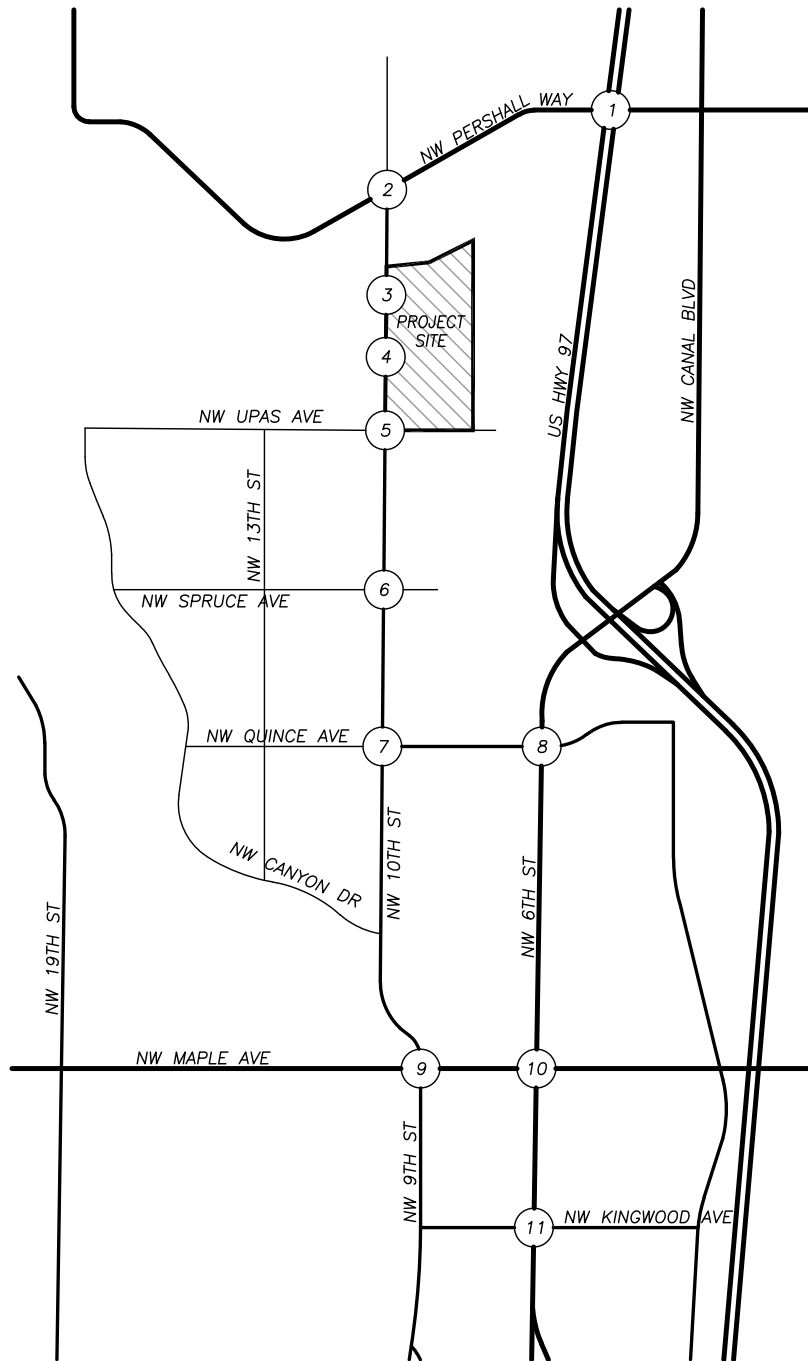
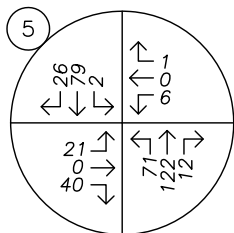
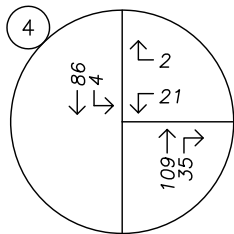
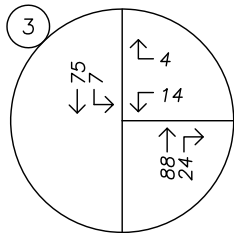
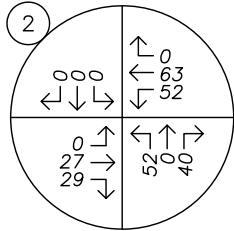
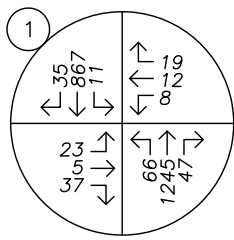


TRAFFIC VOLUMES
Year 2028 Background Plus Site Trips
AM Peak Hour



FIGURE
10

PAGE
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TRAFFIC VOLUMES
Year 2028 Background Plus Site Trips
PM Peak Hour



FIGURE
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Safety Analysis

Crash Data Analysis

Using data obtained from the Oregon Department of Transportation's (ODOT) Crash Analysis and Reporting Unit, a review of the most recent available five years of crash history (January 2013 to December 2017) at the study intersections was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for the intersection. Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak period represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.0 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

With regard to crash severity, ODOT classifies crashes in the following categories:

- Property Damage Only (PDO);
- Possible Injury – Complaint of Pain (Injury C);
- Non-Incapacitating Injury (Injury B);
- Incapacitating Injury – Bleeding, Broken Bones (Injury A); and
- Fatality or Fatal Injury.

Table 4 provides a summary of crash types while Table 5 summarizes crash severities and rates for each of the study intersections. Detailed crash reports are included in the technical appendix to this report.



Table 4: Crash Type Summary

	Intersection	Crash Type								Total Crashes	
		Rear End	Turn	Angle	Fixed Object	Side Swipe	Head On	Other	Ped		Bike
1	NW Pershall Way at U.S. Highway 97	0	1	5	2	0	0	0	0	0	8
2	NW Pershall Way at NW 10th Street	0	0	0	0	0	0	1	0	0	1
3	NW Upas Avenue at NW 10th Street	0	0	0	0	0	0	0	0	0	0
4	NW Spruce Avenue at NW 10th Street	0	1	0	0	0	0	0	0	0	1
5	NW Quince Avenue at NW 10th Street	0	0	1	0	0	0	0	0	0	1
6	NW Quince Avenue at NW 6th Street	0	2	1	0	1	0	0	0	0	4
7	NW 9th Street at NW Maple Avenue	4	4	2	0	0	0	0	0	0	10
8	NW Maple Avenue at NW 6th Street	11	6	0	1	0	0	1	0	0	19
9	NW Kingwood Avenue at NW 6th Street	0	0	0	1	0	0	0	0	0	1

Table 5: Crash Severity and Rate Summary

	Intersection	Crash Severity					Total Crashes	AADT	Crash Rate
		PDO	C	B	A	Fatal			
1	NW Pershall Way at U.S. Highway 97	4	2	2	0	0	8	22,060	0.20
2	NW Pershall Way at NW 10th Street	1	0	0	0	0	1	1,680	0.33
3	NW Upas Avenue at NW 10th Street	0	0	0	0	0	0	1,160	0.00
4	NW Spruce Avenue at NW 10th Street	1	0	0	0	0	1	2,350	0.23
5	NW Quince Avenue at NW 10th Street	1	0	0	0	0	1	5,000	0.11



Table 6: Crash Severity and Rate Summary (cont.)

	Intersection	Crash Severity					Total Crashes	AADT	Crash Rate
		PDO	C	B	A	Fatal			
6	NW Quince Avenue at NW 6th Street	1	1	2	0	0	4	14,340	0.15
7	NW 9th Street at NW Maple Avenue	4	3	3	0	0	10	13,580	0.40
8	NW Maple Avenue at NW 6th Street	9	7	3	0	0	19	22,690	0.46
9	NW Kingwood Avenue at NW 6th Street	1	1	0	0	0	2	14,730	0.07

BOLDED text indicates a crash rate in excess of either 1.0 CMEV.

Based on the review of the crash data, no significant trends or crash patterns were identified at any of the study intersections that were indicative of safety concerns. Accordingly, no safety mitigation is recommended per the crash data analysis.

Sight Distance Evaluation

Intersection sight distance was evaluated at the proposed access points along NW 10th Street. Sight distance was evaluated in accordance with standards established in *A Policy on Geometric Design of Highways and Streets*². According to AASHTO, the driver's eye is assumed to be 15 feet from the near edge of the nearest travel lane of the intersecting street and at a height of 3.5 feet above the minor-street approach pavement. The vehicle driver's eye-height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement.

According to the AASHTO manual, a roadway with a posted speed of 35 mph requires 390 feet of intersection sight distance. Visibility was observed to be adequate at the proposed site access points along 10th Street.

Based on the sight distance analysis, adequate sight distance is available at the proposed site access intersections to ensure safe and efficient operation along NW 10th Street. No sight distance mitigation is necessary or recommended.

² American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 6th Edition, 2017.



Warrant Analysis

Left-Turn Lane Warrants

Left-turn lane warrants examined for facilities under the jurisdiction of Redmond referenced the design curves developed by the Texas Transportation Institute (TTI), as adopted by the Oregon Department of Transportation in its Analysis Procedures Manual. These turn lanes warrants are evaluated based on the number of left-turning vehicles, the number of through travel lanes, the number of advancing and opposing vehicles, and the roadway travel speed.

It should be noted that the warrants based on the TTI curves considered delays to through volumes along four-lane undivided arterials and are meant for higher-speed arterial roadways, which is an appropriate methodology for ODOT facilities. This methodology is generally not appropriate in cases of city arterials and collectors that serve residential areas, since these facilities generally have lower speeds and more vulnerable users utilizing the roadway. It should also be noted that left-turn lane warrants are not mandates for when turn lanes must be installed, but are intended to serve as guidance for decision making by engineers.

A left-turn lane is intended to *increase* safety by avoiding rear-end collisions by removing left-turning vehicles from the through travel lane. On higher-speed arterial roadways, this is often appropriate. However, the methodology only considers automobile traffic. A left-turn can have a number of undesirable effects that can serve to *decrease* safety when all road users are considered. This includes the following:

- By design, travel speeds would increase since traffic is not impeded.
- A left-turn would widen the roadway, resulting in longer pedestrian crossings and less-safe conditions for pedestrians.
- By raising speeds and increasing crossing difficulty, left-turn lanes on residential streets can serve to divide neighbourhoods, discouraging walking and biking.

Based on the TTI curves, left-turn lane warrants were found to be met for the intersections of NW Pershall Way at NW 10th Street and NW Quince Avenue at NW 10th Street under current conditions. The intersection of NW Spruce Avenue at NW 10th Street was found to meet left turn lane warrants during year 2023 background conditions before the development is occupied.

If left-turn lane warrants are based on the Harmelink methodology outlined in the National Cooperative Highway Research Program (NCHRP) Report Number 457, published by the Transportation Research Board in 2001, warrants were not projected to be met for the intersections of NW Pershall Way at NW 10th Street and NW Spruce Avenue at NW 10th Street through the year 2023, regardless of the proposed development.



Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined for all unsignalized study intersections to determine whether the installation of a new traffic signal will be warranted at the intersection upon completion of phases 2-4 of the Cinder Butte Village development.

Due to insufficient traffic volumes, traffic signal warrants are not met for the intersection of NW Maple Avenue at NW 9th Street under current traffic conditions. However, the intersection is expected to meet signal warrants prior to year 2023. Based on the minimum required volumes of average daily traffic on the major-street approaches (NW Maple Avenue), a signal is expected to be warranted once 262 trips are added to the major street during the evening peak hour. The total trips added to NW Maple Avenue by the nearby in-process developments as listed in the *Background Conditions* section total 435 in-process trips. The in-process developments, in conjunction with the assumed 2 percent annual growth rate of the local traffic volume, are projected to trigger signal warrants regardless of the proposed development.

The intersection of NW Maple Avenue at NW 9th Street is planned to be signalized by the City of Redmond even without construction of the proposed development. The City has reserved funds to signalize the intersection and is not expected to require signalization of the intersection as a condition of approval for the Cinder Butte Village.

Low volumes were observed for the minor street approaches at each of the remaining unsignalized study intersections. By examination, traffic signal warrants are not projected to be met under any of the analysis scenarios. No new installations of traffic signals are recommended.



Capacity Analysis

Intersection Operations

A capacity and delay analysis was conducted for each of the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual*³ (HCM). Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay.

The intersections of US Highway 97 at NW Pershall Way/NW Yucca Avenue is under the jurisdiction of ODOT. The applicable minimum operation standards for ODOT facilities are established under the Oregon Highway Plan and are based on the volume-to-capacity (v/c) ratio. The v/c ratio compares the actual traffic demand to the potential capacity to determine the portion that is utilized by traffic. Based on the location of the intersection of US Highway 97 at NW Pershall Way outside the City of Redmond's Urban Growth Boundary and its classification as a Statewide Expressway, the maximum allowable v/c ratio is 0.70.

The City of Redmond's operating standards require a level of service (LOS) E or better per the City's Development Regulations Section 8.2815.1. Levels of service can range from LOS A, which indicates very little or no delay experience by vehicles, to LOS F, which indicates a high degree of congestion and delay. A lesser standard shall be acceptable at unsignalized intersections with low volume on minor street approaches where the v/c ratio is less than 0.90 and the 95th-percentile queue is less than four vehicles during the peak hour.

The v/c, delay, and LOS results of the capacity analysis are shown in Table 7 for the morning and evening peak hours. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

³ Transportation Research Board, *Highway Capacity Manual*, 2000.



Table 7: Intersection Capacity Analysis Summary

	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
1 U.S. Highway 97 at NW Pershall Way						
2019 Existing Conditions	F	>120	0.42	F	>120	0.25
2023 Background Conditions	F	>120	0.78	F	>120	0.54
2023 Buildout Conditions	F	>120	0.91	F	>120	0.64
2028 Future Conditions	F	>120	>1.00	F	>120	0.85
2 NW Pershall Way at NW 10th Street						
2019 Existing Conditions	B	15	0.11	A	10	0.05
2023 Background Conditions	C	17	0.17	B	11	0.08
2023 Buildout Conditions	C	18	0.18	B	11	0.08
2028 Future Conditions	C	20	0.22	B	11	0.09
3 NW Walnut Avenue at NW 10th Street						
2019 Existing Conditions	-	-	-	-	-	-
2023 Background Conditions	-	-	-	-	-	-
2023 Buildout Conditions	B	10	0.03	A	10	0.02
2028 Future Conditions	B	10	0.04	A	10	0.02
4 NW Varnish Avenue at NW 10th Street						
2019 Existing Conditions	-	-	-	-	-	-
2023 Background Conditions	-	-	-	-	-	-
2023 Buildout Conditions	B	10	0.04	A	10	0.03
2028 Future Conditions	B	11	0.04	A	10	0.03
5 NW Upas Avenue at NW 10th Street						
2019 Existing Conditions	E	39	0.57	A	9	0.00
2023 Background Conditions	E	47	0.54	B	11	0.01
2023 Buildout Conditions	E	49	0.54	B	12	0.01
2028 Future Conditions	F	54	0.59	B	12	0.01

BOLDED results indicate operation above acceptable jurisdictional standards.



Table 8: Intersection Capacity Analysis Summary (cont.)

	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
6 NW Spruce Avenue at NW 10th Street						
2019 Existing Conditions	C	24	0.01	B	11	0.01
2023 Background Conditions	E	46	0.02	B	13	0.03
2023 Buildout Conditions	F	61	0.03	B	15	0.03
2028 Future Conditions	F	77	0.04	C	15	0.04
7 NW Quince Avenue at NW 10th Street						
2019 Existing Conditions	C	20	-	A	9	-
2023 Background Conditions	E	44	-	B	11	-
2023 Buildout Conditions	E	49	-	B	13	-
2028 Future Conditions	F	59	-	B	14	-
8 NW Quince Avenue at NW 6th Street						
2019 Existing Conditions	C	23	0.26	B	20	0.30
2023 Background Conditions	C	24	0.32	C	22	0.39
2023 Buildout Conditions	C	24	0.33	C	22	0.40
2028 Future Conditions	C	25	0.36	C	23	0.44
9 NW Maple Avenue at NW 9th Street						
2019 Existing Conditions	E	38	-	F	119	-
2023 Background Conditions	F	119	-	F	>120	-
2023 Buildout Conditions	F	>120	-	F	>120	-
2028 Future Conditions	F	>120	-	F	>120	-

BOLDED results indicate operation above acceptable jurisdictional standards.



Table 9: Intersection Capacity Analysis Summary (cont.)

	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
10 NW Maple Avenue at NW 6th Street						
2019 Existing Conditions	C	33	0.44	D	39	0.53
2023 Background Conditions	C	35	0.54	D	50	0.77
2023 Buildout Conditions	D	35	0.55	D	51	0.78
2028 Future Conditions	D	37	0.60	E	60	0.84
11 NW Kingwood Avenue at NW 6th Street						
2019 Existing Conditions	C	20	0.01	E	36	0.18
2023 Background Conditions	D	25	0.02	F	68	0.33
2023 Buildout Conditions	D	26	0.02	F	71	0.35
2028 Future Conditions	D	30	0.02	F	102	0.47

BOLDED results indicate operation above acceptable jurisdictional standards.

The intersection of US Highway 97 at NW Pershall Way/NW Yucca Avenue is currently operating with a v/c ratio of 0.42 during the morning peak hour and with a v/c ratio of 0.25 during the evening peak hour. Under year 2023 background conditions, the intersection is projected to operate above ODOT's maximum allowable v/c ratio of 0.70.

The intersection of NW 10th Street at NW Spruce Avenue is projected to operate at LOS F during the morning peak hour under year 2023 conditions upon completion of the proposed development. Since the v/c ratio falls below 0.90 and the 95th-percentile queue length is not expected to exceed four vehicles under year 2023 buildout conditions, the intersection is projected to operate acceptably under City of Redmond standards.

The intersection of NW Maple Avenue at NW 9th Street was found to operate at LOS F under existing conditions during the evening peak hour. As mentioned in the *Warrant Analysis* section, the intersection meets preliminary traffic signal warrants under year 2023 conditions regardless of the proposed development. According to the City of Redmond's Transportation System Plan, the intersection is under consideration to be signalized per Table 9-11: *Master/ Action Plan Intersection Improvement Projects – City of Redmond Facilities*⁴.

⁴ City of Redmond. *Redmond Transportation System Plan – Motor Vehicle Master Plan*. 2008.



The intersection of NW Kingwood Avenue at NW 6th Street is projected to operate at LOS D in the morning peak hour and LOS F in the evening peak hour during year 2023 conditions regardless of the proposed development. Upon completion of Cinder Butte Village Phases 2-4, the intersection of NW Kingwood Avenue at NW 6th Street is projected to operate at a v/c ratio less than 0.90 with 95th-percentile queues less than four cars on the minor-street approach. Accordingly, the intersection meets City of Redmond standards.

Recommended mitigations for all appropriate intersections are discussed in the *Mitigation Analysis* section.

Roadway Volumes

Cinder Butte Village Phases 2-4 are anticipated to have access to two local roadways that lead to a major collector: NW Walnut Avenue and NW Varnish Avenue. These roadways are planned to be constructed with the proposed development and will only serve traffic generated by the proposed development at the time of project completion.

Based on the trip generation of the proposed development and the assumed trip distribution, NW Walnut Avenue is anticipated to serve a volume of 497 ADT and NW Varnish Avenue is anticipated to serve a volume of 561 ADT.

Neither roadway is anticipated to exceed 1,200 ADT upon construction and occupancy of the proposed development.

Mitigation Analysis

US Highway 97 at Pershall Way

Understanding the intersection is becoming a safety hazard, ODOT has been planning improvements for the intersection of US Highway 97 at NW Pershall Way (otherwise known as the O'Neil Junction). This improvement project will include constructing a bridge over US Highway 97 and constructing interchanges. This project will remove the intersection and alleviate any conflict points on the highway.

To mitigate the failing operation of the intersection in the near-term, it is recommended that movement restrictions be considered for both the Pershall Way and Oregon Highway 370 approaches. Restricting the left turns and through vehicles of the minor street will improve the operation of the intersection to a v/c ratio of 0.28 or better during both peak periods under year 2028 conditions following the development of the proposed project.

NW Maple Ave at NW 9th St

A traffic signal is expected to be warranted at the intersection of NW Maple Avenue at NW 9th Street prior to completion and occupancy of phases 2-4 of the Cinder Butte Village in 2023. Following installation of signal, intersection is projected to operate at LOS D or better under year 2028 conditions.



Conclusions

Phases 2-4 of the Cinder Butte Village are expected to generate 83 trips in the morning peak hour, 111 trips in the evening peak hour, and 1,058 average weekday trips.

Based on the review of the crash data, no significant trends or crash patterns were identified at any of the study intersections that were indicative of safety concerns. Accordingly, no safety mitigation is recommended per the crash data analysis.

Based on the sight distance analysis, adequate sight distance is available at the proposed site access intersections to ensure safe and efficient operation along NW 10th Street. No sight distance mitigation is necessary or recommended.

Based on the TTI curves, left-turn lane warrants were found to be met for the intersections of NW Pershall Way at NW 10th Street and NW Spruce Avenue at NW 10th Street under current conditions. If left-turn lane warrants are based on the Harmelink methodology outlined in the NCHRP, warrants were not projected to be met for the intersection of NW Pershall Way at NW 10th Street through the year 2023, regardless of the proposed development.

Traffic signal warrants are met for the intersection of NW Maple Avenue at NW 9th Street under current traffic conditions. The intersection is not expected to require signalization as a condition of approval for the Cinder Butte Village.

Low volumes were observed for the minor street approaches at each of the remaining unsignalized study intersections. By examination, traffic signal warrants are not projected to be met at those intersections under any of the analysis scenarios.

The intersections of US Highway 97 at NW Pershall Way and NW Maple Avenue at NW 9th Street are currently operating over ODOT and City of Redmond standards, and will continue to do so through year 2023. Possible mitigations include access restrictions at the intersection of US Highway 97 at NW Pershall Way and installing a traffic signal at the intersection of NW Maple Avenue at NW 9th Street.

1e

Appendix



TRIP GENERATION CALCULATIONS

Land Use: Single-Family Detached Housing
Land Use Code: 210
Setting/Location: General Urban/Suburban
Variable: Dwelling Units
Variable Value: 112

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Distribution	25%	75%	
Trip Ends	21	62	83

PM PEAK HOUR

Trip Rate: 0.99

	Enter	Exit	Total
Directional Distribution	63%	37%	
Trip Ends	70	41	111

WEEKDAY

Trip Rate: 9.44

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	529	529	1,058

SATURDAY

Trip Rate: 9.54

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	534	534	1,068

Source: Trip Generation Manual, Tenth Edition

SER#	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	OFFRD	WTHR	CRASH	SPCL USE	MOVE	A	S	PED	ERROR	ACT	EVENT	CAUSE						
INVEST	E	A	U	I	C	O	DIST	FIRST STREET	DIRECT	(MEDIAN)	RNDBT	SURF	COLL	TRLR QTY	FROM	G	E	LICNS										
RD DPT	E	L	G	N	H	R	FROM	SECOND STREET	DIRECT	LEGS	TRAFFIC			OWNER	FROM													
UNLOC?	D	C	S	V	L	K	LONG	LRS	LOCTN	(#LANES)	CONTR	DRVWY	LIGHT	SVRTY	V#	TYPE	TO	P#	TYPE	SVRTY	E	X	RES	LOC				
01758	N	N	N				11/17/2015	16	MAPLE AVE	INTER	CROSS	N		N	CLR	ANGL-OTH	01 NONE 0	STRGHT									03	
NO RPT							TU	0	9TH ST	CN				STOP SIGN	N	DRY	ANGL	PRVTE	N -S						000		00	
N							1P		03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	40	F	OR-Y		021	000	03	
N							44 17 27.56	-121 10 39.89															OR<25					
															02	NONE 0	STRGHT									000	00	
																PRVTE	W -E								000	00		
																PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		000	000	00	
																							OR<25					
01048	N	N	N				06/30/2016	16	MAPLE AVE	INTER	CROSS	N		N	CLR	ANGL-OTH	01 NONE 0	STRGHT									03	
NO RPT							TH	0	9TH ST	CN				STOP SIGN	N	DRY	ANGL	PRVTE	E -W						000		00	
N							8P		01	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJC	17	F	OR-Y		021	026	03	
N							44 17 27.56	-121 10 39.89															OR<25					
															02	NONE 0	STRGHT									000	00	
																PRVTE	N -S								000	00		
																PSNGR CAR		01	DRVR	NONE	24	F	OR-Y		000	000	00	
																							OR<25					
															02	NONE 0	STRGHT									000	00	
																PRVTE	N -S								000	00		
																PSNGR CAR		02	PSNG	NO<5	03	F			000	000	00	
01955	N	N	N	N	N	N	11/08/2016	16	MAPLE AVE	INTER	CROSS	N		N	CLR	ANGL-OTH	01 NONE 9	STRGHT									02, 27	
CITY							TU	0	9TH ST	CN				STOP SIGN	N	DRY	TURN	N/A	W -E						015		00	
N							5P		04	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00	
N							44 17 27.56	-121 10 39.89															UNK					
															02	NONE 9	TURN-L									015	00	
																N/A	S -W								000	000	00	
																PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00	
																							UNK					
01689	N	N	N	N	N	N	08/08/2017	16	MAPLE AVE	STRGHT		Y		N	CLR	S-STRGHT	01 NONE 0	STRGHT									07	
CITY							TU	48	9TH ST	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W							006		00	
N							2P		06		(02)		N	DAY	INJ		PSNGR CAR								043	000	07	
N							44 17 27.56	-121 10 38.76																OR>25				
															02	NONE 0	STRGHT									006	00	
																PRVTE	E -W								000	000	00	
																PSNGR CAR		01	DRVR	NONE	73	M	OR-Y		000	000	00	
																							OR<25					
															02	NONE 0	STRGHT									006	00	
																PRVTE	E -W								000	000	00	
																PSNGR CAR		02	PSNG	INJB	77	F			000	000	00	

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

SER#	S	D	M	P	R	J	S	W	DATE	CLASS	CITY STREET	RD CHAR	INT -TYPE	INT-REL	OFFRD	WTHR	CRASH	SPCL USE	TRLR	QTY	MOVE	A	S	G	E	LICNS	PED	ERROR	ACT	EVENT	CAUSE
INVEST	E	A	U	I	C	O	DAY			DIST	FIRST STREET		(MEDIAN)		RNDBT	SURF	COLL	OWNER	FROM												
RD DPT	E	L	G	N	H	R	TIME			FROM	SECOND STREET	DIRECT	LEGS	TRAF-																	
UNLOC?	D	C	S	V	L	K	LAT			LONG	LRS	LOCTN	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	V#	TYPE	TO		P#	TYPE	SVRTY	E	X	RES	LOC			
																		02	NONE	0	STOP										
																			PRVTE	S	-N								011		00
																			PSNGR	CAR		01	DRVR	INJC	39	F	OR-Y		000	000	00
00229	N	N	N				01/24/2017			14	W 6TH ST	STRGHT		Y	N	CLR	S-1STOP	01	NONE	9	STRGHT										27, 29
NONE							TU			100	MAPLE AVE	S	(NONE)	L-GRN-SIG	N	WET	REAR	N/A		S	-N								000		00
N							UNK				08				N	DAY	PDO	PSNGR	CAR			01	DRVR	NONE	00	Unk	UNK		000	000	00
N							44 17 26.15			-121 10 26.15			(05)																		
																		02	NONE	9	STOP										
																			N/A	S	-N								012		00
																			PSNGR	CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00

Total Vehicle Summary

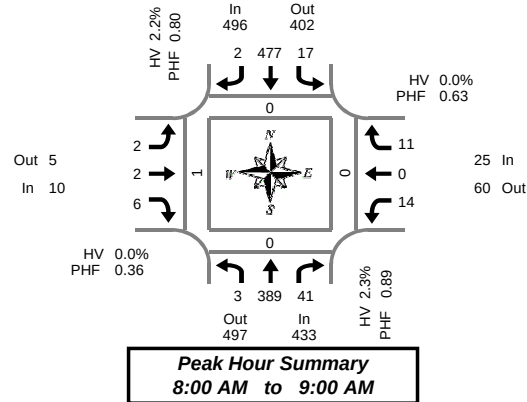


Clay Carney
(503) 833-2740

NW 6th St & NW Kingwood Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	9	1	0	1	16	0	0	0	0	0	0	2	0	0	0	29	0	0	0	0
7:05 AM	1	14	3	0	1	45	0	1	0	0	1	0	2	0	3	0	70	0	0	0	0
7:10 AM	2	14	4	0	0	40	1	0	0	0	1	0	0	0	0	0	62	0	0	0	0
7:15 AM	0	17	1	0	1	35	0	0	0	0	0	0	1	0	0	0	55	0	0	0	0
7:20 AM	1	21	3	0	0	36	0	0	0	0	1	0	0	0	0	0	62	0	0	0	0
7:25 AM	0	25	1	0	3	40	0	0	0	0	0	0	0	0	1	0	70	0	0	0	0
7:30 AM	0	23	3	0	1	38	0	0	0	0	2	0	1	0	0	0	68	1	0	0	0
7:35 AM	2	24	2	0	0	39	0	0	0	1	0	0	2	0	0	0	70	0	0	0	0
7:40 AM	0	23	4	0	0	35	1	0	0	1	0	0	1	0	2	0	67	0	0	0	0
7:45 AM	0	30	5	0	3	42	0	0	0	0	2	0	0	0	0	0	82	0	0	0	0
7:50 AM	0	22	5	0	3	45	0	0	0	0	2	0	4	0	0	0	81	0	0	0	0
7:55 AM	1	38	6	0	0	46	2	0	0	0	0	0	0	0	1	0	94	0	0	0	0
8:00 AM	1	36	1	0	0	34	0	0	0	0	0	0	0	0	0	0	72	0	0	0	0
8:05 AM	0	28	3	1	1	33	0	0	0	0	0	0	0	0	1	0	66	0	0	0	0
8:10 AM	0	32	4	0	1	20	0	0	0	0	0	0	0	0	0	0	57	0	0	0	0
8:15 AM	0	30	2	0	1	39	0	0	0	0	0	0	1	0	2	0	75	0	0	0	0
8:20 AM	0	27	3	0	2	37	0	0	0	0	2	0	2	0	1	0	74	0	0	0	0
8:25 AM	0	25	6	0	0	39	0	0	0	0	0	0	0	0	1	0	71	0	0	0	1
8:30 AM	0	25	6	0	2	39	0	0	0	1	1	0	3	0	0	0	77	0	0	0	0
8:35 AM	0	41	1	0	1	42	0	0	1	1	1	0	1	0	0	0	89	0	0	0	0
8:40 AM	1	37	2	0	2	49	0	0	1	0	1	0	2	0	1	0	96	0	0	0	0
8:45 AM	0	32	6	0	3	52	1	0	0	0	0	0	1	0	2	0	97	0	0	0	0
8:50 AM	0	36	3	0	2	46	0	0	0	0	0	0	2	0	2	0	91	0	0	0	0
8:55 AM	1	40	4	0	2	47	1	0	0	0	1	0	2	0	1	0	99	0	0	0	0
Total Survey	10	649	79	1	30	934	6	1	2	4	15	0	27	0	18	0	1,774	1	0	0	1

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	3	37	8	0	2	101	1	1	0	0	2	0	4	0	3	0	161	0	0	0	0
7:15 AM	1	63	5	0	4	111	0	0	0	0	1	0	1	0	1	0	187	0	0	0	0
7:30 AM	2	70	9	0	1	112	1	0	0	2	2	0	4	0	2	0	205	1	0	0	0
7:45 AM	1	90	16	0	6	133	2	0	0	0	4	0	4	0	1	0	257	0	0	0	0
8:00 AM	1	96	8	1	2	87	0	0	0	0	0	0	0	0	1	0	195	0	0	0	0
8:15 AM	0	82	11	0	3	115	0	0	0	0	2	0	3	0	4	0	220	0	0	0	1
8:30 AM	1	103	9	0	5	130	0	0	2	2	3	0	6	0	1	0	262	0	0	0	0
8:45 AM	1	108	13	0	7	145	2	0	0	0	1	0	5	0	5	0	287	0	0	0	0
Total Survey	10	649	79	1	30	934	6	1	2	4	15	0	27	0	18	0	1,774	1	0	0	1

Peak Hour Summary

8:00 AM to 9:00 AM

By Approach	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	433	497	930	1	496	402	898	0	10	5	15	0	25	60	85	0	964	0	0	0	1
%HV	2.3%				2.2%				0.0%				0.0%				2.2%				
PHF	0.89				0.80				0.36				0.63				0.84				

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	3	389	41	433	17	477	2	496	2	2	6	10	14	0	11	25	964
%HV	0.0%	2.6%	0.0%	2.3%	0.0%	2.3%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%
PHF	0.75	0.88	0.68	0.89	0.61	0.81	0.25	0.80	0.25	0.25	0.50	0.36	0.58	0.00	0.55	0.63	0.84

Rolling Hour Summary

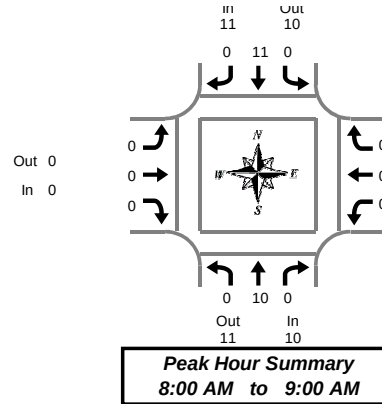
7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	7	260	38	0	13	457	4	1	0	2	9	0	13	0	7	0	810	1	0	0	0
7:15 AM	5	319	38	1	13	443	3	0	0	2	7	0	9	0	5	0	844	1	0	0	0
7:30 AM	4	338	44	1	12	447	3	0	0	2	8	0	11	0	8	0	877	1	0	0	1
7:45 AM	3	371	44	1	16	465	2	0	2	2	9	0	13	0	7	0	934	0	0	0	1
8:00 AM	3	389	41	1	17	477	2	0	2	2	6	0	14	0	11	0	964	0	0	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 6th St & NW Kingwood Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	0	0	1	3
7:10 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:50 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:25 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:35 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
8:40 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:50 AM	0	3	0	3	0	3	0	3	0	0	0	0	0	0	0	0	6
8:55 AM	0	2	0	2	0	3	0	3	0	0	0	0	0	0	0	0	5
Total Survey	0	12	0	12	0	20	0	20	0	0	0	0	1	0	0	1	33

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	0	2	0	2	0	0	0	0	1	0	0	1	4
7:15 AM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
7:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
8:15 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
8:30 AM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
8:45 AM	0	5	0	5	0	8	0	8	0	0	0	0	0	0	0	0	13
Total Survey	0	12	0	12	0	20	0	20	0	0	0	0	1	0	0	1	33

Heavy Vehicle Peak Hour Summary

8:00 AM to 9:00 AM

By Approach	Northbound NW 6th St			Southbound NW 6th St			Eastbound NW Kingwood Ave			Westbound NW Kingwood Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	10	11	21	11	10	21	0	0	0	0	0	0	21
PHF	0.50			0.34			0.00			0.00			0.40

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	10	0	10	0	11	0	11	0	0	0	0	0	0	0	0	21
PHF	0.00	0.50	0.00	0.50	0.00	0.34	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	2	0	2	0	9	0	9	0	0	0	0	1	0	0	1	12
7:15 AM	0	2	0	2	0	8	0	8	0	0	0	0	0	0	0	0	10
7:30 AM	0	2	0	2	0	6	0	6	0	0	0	0	0	0	0	0	8
7:45 AM	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0	10
8:00 AM	0	10	0	10	0	11	0	11	0	0	0	0	0	0	0	0	21

Peak Hour Summary

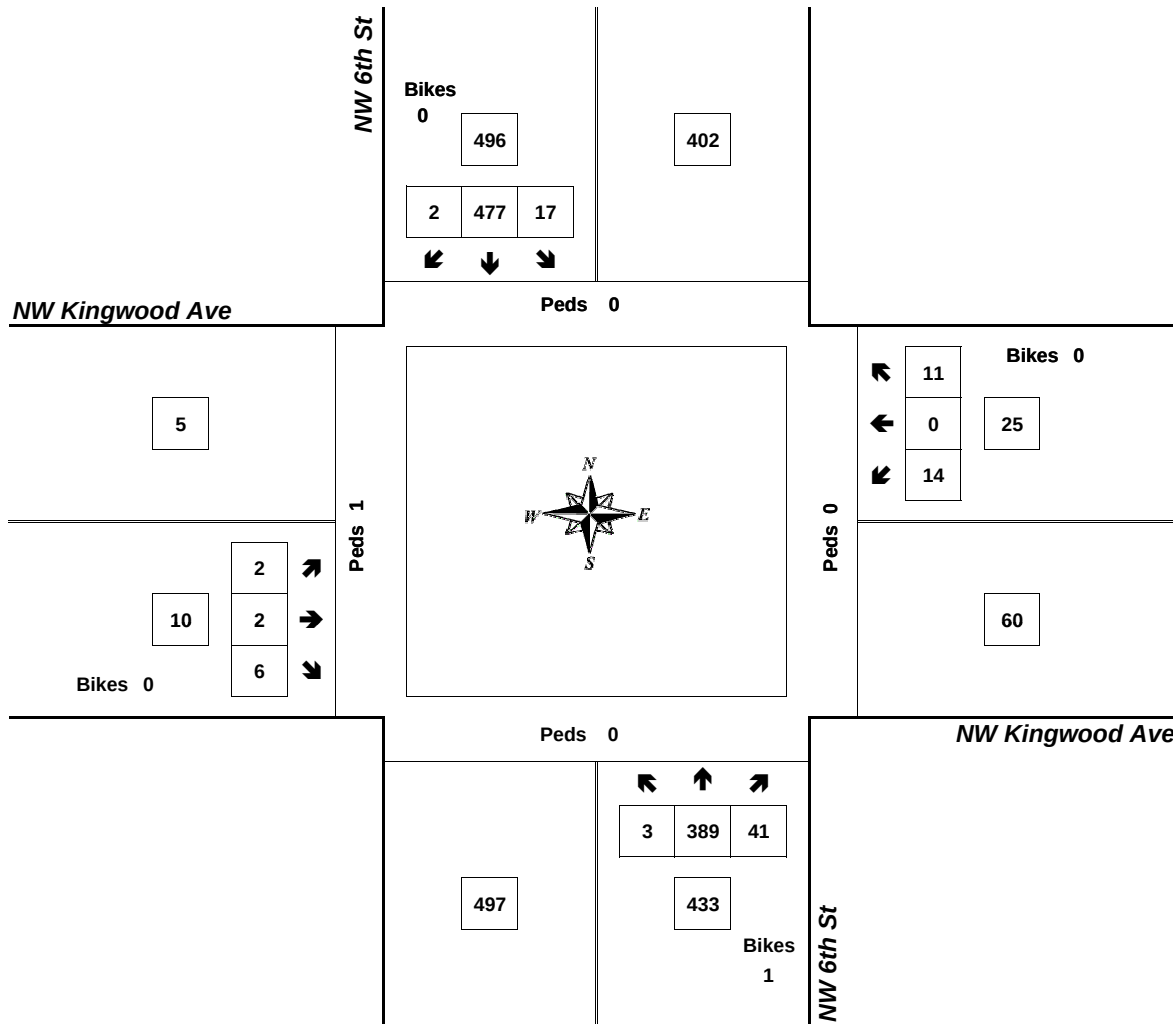


Clay Carney
(503) 833-2740

NW 6th St & NW Kingwood Ave

8:00 AM to 9:00 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.36	0.0%	10
WB	0.63	0.0%	25
NB	0.89	2.3%	433
SB	0.80	2.2%	496
Intersection	0.84	2.2%	964

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

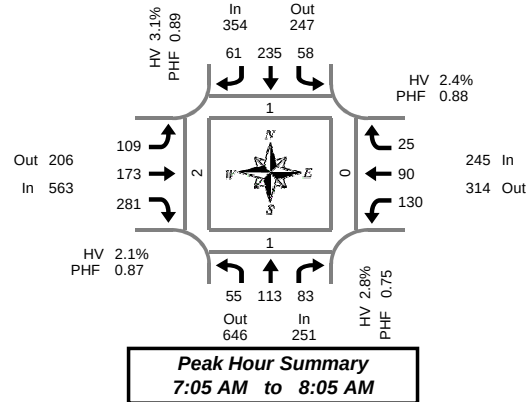


Clay Carney
(503) 833-2740

NW 6th St & NW Maple Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	6	3	0	3	12	9	0	6	8	16	0	8	5	1	0	77	0	0	0	0
7:05 AM	4	6	4	0	4	17	2	0	7	13	19	1	15	9	1	0	101	0	0	0	0
7:10 AM	3	2	3	0	2	19	6	0	10	16	22	0	12	9	5	0	109	0	0	0	0
7:15 AM	1	9	10	0	6	21	4	0	7	16	17	0	9	3	2	0	105	0	0	0	0
7:20 AM	4	8	5	0	2	27	3	0	7	14	29	0	6	6	4	0	115	0	0	0	1
7:25 AM	4	3	9	0	13	15	2	0	6	21	22	0	8	8	0	0	111	0	0	0	0
7:30 AM	4	18	7	0	6	24	4	0	11	17	18	0	14	8	3	0	134	0	0	0	0
7:35 AM	5	9	12	0	2	15	6	0	12	10	28	0	12	10	1	0	122	0	0	0	0
7:40 AM	4	6	6	0	2	18	4	0	12	13	15	0	10	10	2	0	102	0	0	0	0
7:45 AM	5	10	6	0	4	21	8	0	15	8	29	0	7	9	3	0	125	0	1	0	0
7:50 AM	5	10	9	0	10	21	9	0	5	15	32	1	14	10	1	0	141	0	0	0	0
7:55 AM	7	17	8	0	2	19	5	0	14	19	24	0	14	4	2	0	135	0	0	0	0
8:00 AM	9	15	4	0	5	18	8	0	3	11	26	0	9	4	1	1	113	1	0	0	1
8:05 AM	9	18	9	0	2	12	6	0	6	11	15	0	5	7	0	0	100	0	0	0	0
8:10 AM	4	12	8	0	1	19	5	0	7	8	9	0	3	7	1	0	84	1	0	0	2
8:15 AM	7	19	4	0	5	16	3	0	6	13	20	0	11	13	0	0	117	0	0	0	0
8:20 AM	4	10	9	0	3	18	7	0	5	12	11	0	9	14	0	0	102	0	0	0	0
8:25 AM	3	10	4	0	3	16	3	0	4	13	18	0	12	12	4	0	102	0	0	0	0
8:30 AM	3	8	10	0	2	17	2	0	8	6	18	0	16	8	3	0	101	0	0	0	0
8:35 AM	7	28	10	0	3	25	10	0	7	12	20	0	13	11	3	0	149	0	0	0	0
8:40 AM	4	11	10	0	3	23	5	0	12	10	22	0	14	13	3	0	130	0	0	0	0
8:45 AM	4	22	11	0	4	29	8	0	3	10	21	0	12	6	0	0	130	0	0	0	0
8:50 AM	9	21	6	0	4	24	9	0	12	13	18	0	11	11	6	0	144	0	0	0	0
8:55 AM	8	21	7	0	3	28	8	1	9	12	21	0	11	11	1	0	140	0	0	0	0
Total Survey	117	299	174	0	94	474	136	1	194	301	490	2	255	208	47	1	2,789	2	1	0	4

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	7	14	10	0	9	48	17	0	23	37	57	1	35	23	7	0	287	0	0	0	0
7:15 AM	9	20	24	0	21	63	9	0	20	51	68	0	23	17	6	0	331	0	0	0	1
7:30 AM	13	33	25	0	10	57	14	0	35	40	61	0	36	28	6	0	358	0	0	0	0
7:45 AM	17	37	23	0	16	61	22	0	34	42	85	1	35	23	6	0	401	0	1	0	0
8:00 AM	22	45	21	0	8	49	19	0	16	30	50	0	17	18	2	1	297	2	0	0	3
8:15 AM	14	39	17	0	11	50	13	0	15	38	49	0	32	39	4	0	321	0	0	0	0
8:30 AM	14	47	30	0	8	65	17	0	27	28	60	0	43	32	9	0	380	0	0	0	0
8:45 AM	21	64	24	0	11	81	25	1	24	35	60	0	34	28	7	0	414	0	0	0	0
Total Survey	117	299	174	0	94	474	136	1	194	301	490	2	255	208	47	1	2,789	2	1	0	4

Peak Hour Summary

7:05 AM to 8:05 AM

By Approach	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	251	646	897	0	354	247	601	0	563	206	769	2	245	314	559	1	1,413	1	1	0	2
%HV	2.8%				3.1%				2.1%				2.4%				2.5%				
PHF	0.75				0.89				0.87				0.88				0.88				

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	55	113	83	251	58	235	61	354	109	173	281	563	130	90	25	245	1,413
%HV	1.8%	3.5%	2.4%	2.8%	3.4%	2.1%	6.6%	3.1%	1.8%	4.0%	1.1%	2.1%	2.3%	2.2%	4.0%	2.4%	2.5%
PHF	0.65	0.67	0.74	0.75	0.69	0.88	0.69	0.89	0.70	0.83	0.83	0.87	0.88	0.78	0.57	0.88	0.88

Rolling Hour Summary

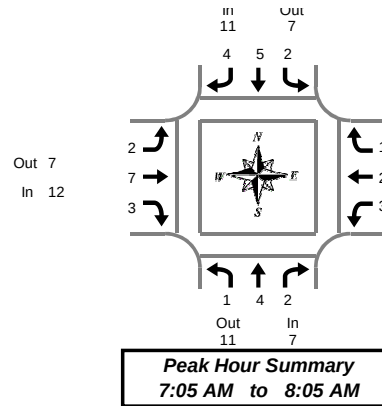
7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	46	104	82	0	56	229	62	0	112	170	271	2	129	91	25	0	1,377	0	1	0	1
7:15 AM	61	135	93	0	55	230	64	0	105	163	264	1	111	86	20	1	1,387	2	1	0	4
7:30 AM	66	154	86	0	45	217	68	0	100	150	245	1	120	108	18	1	1,377	2	1	0	3
7:45 AM	67	168	91	0	43	225	71	0	92	138	244	1	127	112	21	1	1,399	2	1	0	3
8:00 AM	71	195	92	0	38	245	74	1	82	131	219	0	126	117	22	1	1,412	2	0	0	3

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 6th St & NW Maple Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
7:05 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:10 AM	1	0	0	1	0	0	1	1	1	0	0	1	0	0	0	0	3
7:15 AM	0	0	1	1	0	1	1	2	0	0	0	0	0	0	0	0	3
7:20 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:25 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	3
7:35 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
7:40 AM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
7:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
7:50 AM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1	3
7:55 AM	0	2	0	2	0	0	1	1	1	2	0	3	1	1	0	2	8
8:00 AM	0	1	0	1	0	1	0	1	0	1	1	2	1	0	0	1	5
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	0	0	1	0	0	0	0	0	2	1	3	0	1	0	1	5
8:20 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	1	0	1	3
8:25 AM	0	0	0	0	1	1	0	2	0	1	0	1	0	1	1	2	5
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	2	3
8:35 AM	0	2	1	3	0	0	0	0	0	0	0	0	0	1	2	3	6
8:40 AM	1	1	0	2	0	0	0	0	0	1	0	2	1	0	0	1	5
8:45 AM	0	0	1	1	0	1	4	5	0	0	2	2	0	0	0	0	8
8:50 AM	1	2	0	3	0	2	2	4	0	0	1	1	0	1	1	2	10
8:55 AM	2	0	1	3	0	1	0	1	2	0	1	3	1	0	0	1	8
Total Survey	6	10	6	22	4	11	10	25	5	12	9	26	6	8	5	19	92

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	0	1	1	2	1	4	1	0	0	1	0	0	0	0	6
7:15 AM	0	0	2	2	1	2	1	4	0	0	0	0	0	0	0	0	6
7:30 AM	0	1	0	1	1	0	1	2	0	2	2	4	0	1	0	1	8
7:45 AM	0	2	0	2	0	1	1	2	1	4	0	5	2	1	1	4	13
8:00 AM	0	1	1	2	0	1	0	1	0	1	1	2	1	0	0	1	6
8:15 AM	1	1	0	2	1	1	0	2	0	3	2	5	0	3	1	4	13
8:30 AM	1	3	1	5	0	0	0	0	1	2	0	3	2	2	2	6	14
8:45 AM	3	2	2	7	0	4	6	10	2	0	4	6	1	1	1	3	26
Total Survey	6	10	6	22	4	11	10	25	5	12	9	26	6	8	5	19	92

Heavy Vehicle Peak Hour Summary

7:05 AM to 8:05 AM

By Approach	Northbound NW 6th St			Southbound NW 6th St			Eastbound NW Maple Ave			Westbound NW Maple Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	7	11	18	11	7	18	12	7	19	6	11	17	36
PHF	0.58			0.69			0.43			0.38			0.56

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	4	2	7	2	5	4	11	2	7	3	12	3	2	1	6	36
PHF	0.25	0.33	0.25	0.58	0.25	0.63	0.50	0.69	0.50	0.35	0.38	0.43	0.25	0.50	0.25	0.38	0.56

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	3	2	6	3	5	4	12	2	6	2	10	2	2	1	5	33
7:15 AM	0	4	3	7	2	4	3	9	1	7	3	11	3	2	1	6	33
7:30 AM	1	5	1	7	2	3	2	7	1	10	5	16	3	5	2	10	40
7:45 AM	2	7	2	11	1	3	1	5	2	10	3	15	5	6	4	15	46
8:00 AM	5	7	4	16	1	6	6	13	3	6	7	16	4	6	4	14	59

Peak Hour Summary

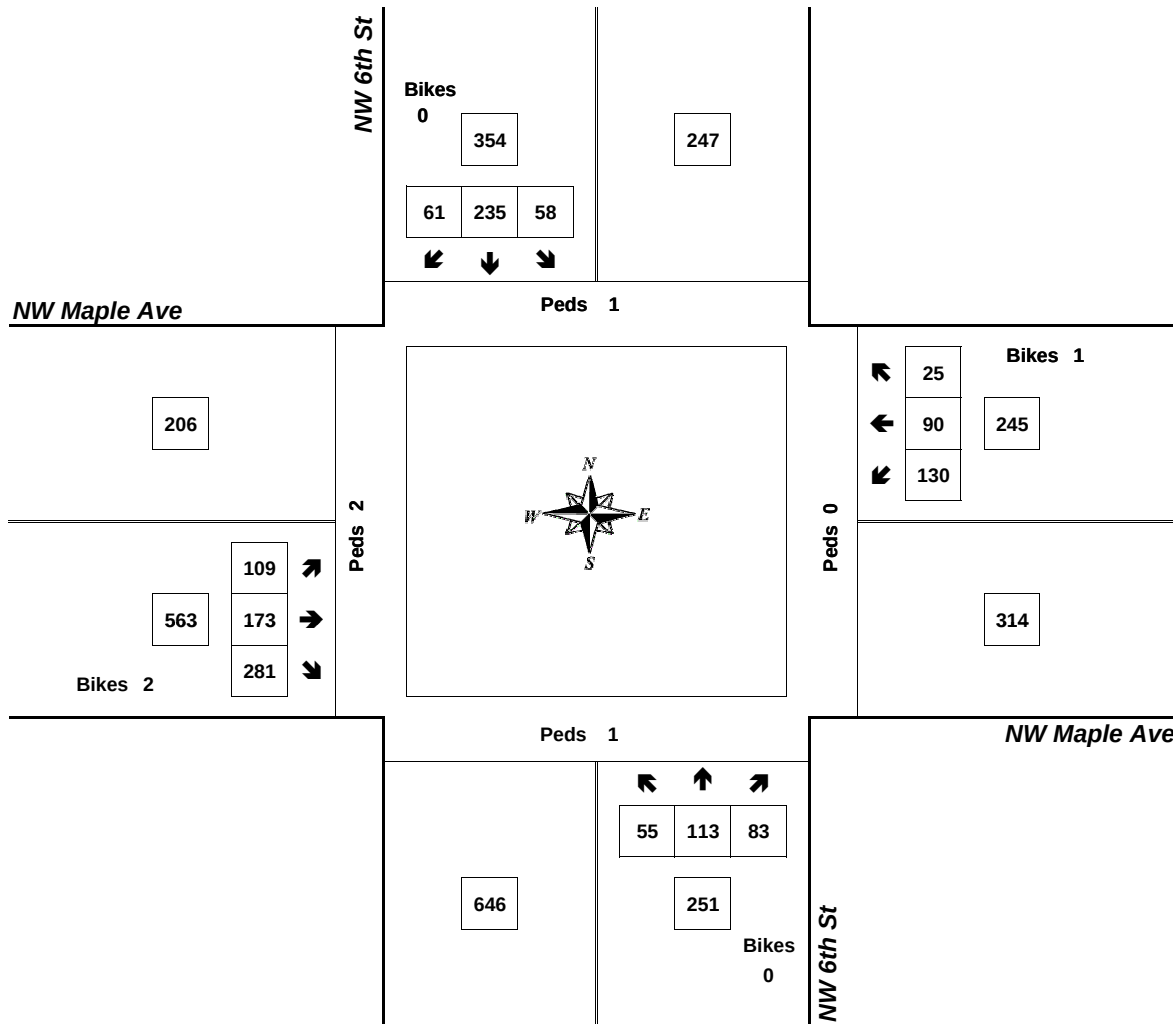


Clay Carney
(503) 833-2740

NW 6th St & NW Maple Ave

7:05 AM to 8:05 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.87	2.1%	563
WB	0.88	2.4%	245
NB	0.75	2.8%	251
SB	0.89	3.1%	354
Intersection	0.88	2.5%	1,413

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

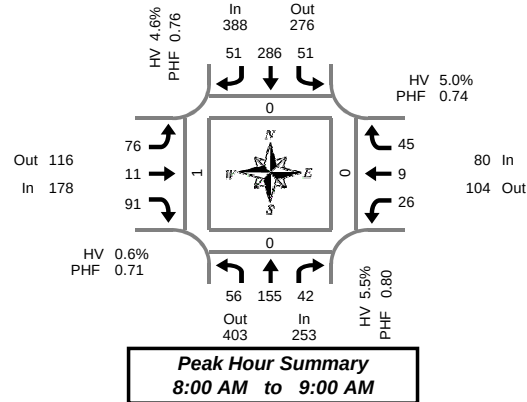


Clay Carney
(503) 833-2740

NW 6th St & NW Quince Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	5	9	1	0	1	29	6	0	14	3	7	0	0	0	1	0	76	0	0	0	0
7:05 AM	3	10	0	0	1	18	3	0	16	1	16	0	0	1	0	0	69	0	0	0	0
7:10 AM	5	8	1	0	6	23	7	0	17	1	9	1	1	1	1	0	80	0	0	0	0
7:15 AM	3	10	1	0	2	20	7	0	18	1	9	0	0	1	1	0	73	0	0	0	0
7:20 AM	8	10	2	0	1	20	5	0	14	1	19	0	1	0	1	0	82	0	0	0	0
7:25 AM	0	9	0	0	3	22	6	0	17	2	18	0	0	3	1	0	81	0	0	0	0
7:30 AM	4	14	3	0	4	29	5	0	14	1	6	0	0	1	1	0	82	0	0	0	0
7:35 AM	3	12	3	0	6	15	5	0	8	2	3	0	2	1	2	0	62	0	0	0	0
7:40 AM	1	6	0	0	4	24	3	0	11	0	9	0	0	0	3	0	61	0	0	0	0
7:45 AM	2	12	3	0	3	20	2	0	3	2	9	0	1	0	2	0	59	0	0	0	0
7:50 AM	4	11	3	0	10	36	3	0	5	3	8	0	1	1	1	0	86	0	0	0	0
7:55 AM	4	12	6	0	5	18	1	0	2	5	6	0	2	1	3	0	65	0	0	0	0
8:00 AM	2	10	2	0	2	25	1	0	4	1	7	0	0	1	1	0	56	0	0	0	0
8:05 AM	5	13	6	0	7	14	6	0	6	1	4	0	4	1	4	0	71	0	0	0	0
8:10 AM	6	13	2	0	4	28	1	0	3	0	3	0	4	1	1	0	66	0	0	0	0
8:15 AM	2	8	3	0	2	17	4	0	7	0	7	0	2	0	3	0	55	0	0	0	0
8:20 AM	3	10	1	0	3	18	2	0	11	1	7	0	2	1	1	0	60	0	0	0	0
8:25 AM	2	13	4	0	8	18	2	0	5	0	4	0	3	0	1	0	60	0	0	0	0
8:30 AM	1	11	5	0	7	14	2	0	10	1	8	1	2	1	9	0	71	0	0	0	0
8:35 AM	10	19	8	0	7	26	8	0	1	4	5	0	2	0	5	0	95	0	0	0	0
8:40 AM	2	16	3	0	3	34	8	0	3	0	12	0	0	2	2	0	85	0	0	0	0
8:45 AM	9	10	2	0	2	29	10	0	9	1	11	0	0	1	4	0	88	0	0	0	0
8:50 AM	6	13	1	0	1	35	3	0	11	1	14	0	3	0	8	0	96	0	0	0	1
8:55 AM	8	19	5	0	5	28	4	0	6	1	9	1	4	1	6	0	96	0	0	0	0
Total Survey	98	278	65	0	97	560	104	0	215	33	210	3	34	19	62	0	1,775	0	0	0	1

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	13	27	2	0	8	70	16	0	47	5	32	1	1	2	2	0	225	0	0	0	0
7:15 AM	11	29	3	0	6	62	18	0	49	4	46	0	1	4	3	0	236	0	0	0	0
7:30 AM	8	32	6	0	14	68	13	0	33	3	18	0	2	2	6	0	205	0	0	0	0
7:45 AM	10	35	12	0	18	74	6	0	10	10	23	0	4	2	6	0	210	0	0	0	0
8:00 AM	13	36	10	0	13	67	8	0	13	2	14	0	8	3	6	0	193	0	0	0	0
8:15 AM	7	31	8	0	13	53	8	0	23	1	18	0	7	1	5	0	175	0	0	0	0
8:30 AM	13	46	16	0	17	74	18	0	14	5	25	1	4	3	16	0	251	0	0	0	0
8:45 AM	23	42	8	0	8	92	17	0	26	3	34	1	7	2	18	0	280	0	0	0	1
Total Survey	98	278	65	0	97	560	104	0	215	33	210	3	34	19	62	0	1,775	0	0	0	1

Peak Hour Summary

8:00 AM to 9:00 AM

By Approach	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	253	403	656	0	388	276	664	0	178	116	294	2	80	104	184	0	899	0	0	0	1
%HV	5.5%				4.6%				0.6%				5.0%				4.1%				
PHF	0.80				0.76				0.71				0.74				0.80				

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	56	155	42	253	51	286	51	388	76	11	91	178	26	9	45	80	899
%HV	7.1%	5.2%	4.8%	5.5%	2.0%	4.9%	5.9%	4.6%	0.0%	0.0%	1.1%	0.6%	3.8%	0.0%	6.7%	5.0%	4.1%
PHF	0.61	0.84	0.62	0.80	0.58	0.73	0.49	0.76	0.73	0.55	0.61	0.71	0.65	0.75	0.63	0.74	0.80

Rolling Hour Summary

7:00 AM to 9:00 AM

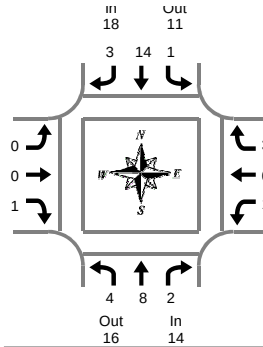
Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	42	123	23	0	46	274	53	0	139	22	119	1	8	10	17	0	876	0	0	0	0
7:15 AM	42	132	31	0	51	271	45	0	105	19	101	0	15	11	21	0	844	0	0	0	0
7:30 AM	38	134	36	0	58	262	35	0	79	16	73	0	21	8	23	0	783	0	0	0	0
7:45 AM	43	148	46	0	61	268	40	0	60	18	80	1	23	9	33	0	829	0	0	0	0
8:00 AM	56	155	42	0	51	286	51	0	76	11	91	2	26	9	45	0	899	0	0	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740

Out 7
In 1



Peak Hour Summary
8:00 AM to 9:00 AM

NW 6th St & NW Quince Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2
7:05 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
7:10 AM	0	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
7:25 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
7:35 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
7:40 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	1	0	1	0	1	0	1	1	0	0	1	0	0	0	0	3
7:55 AM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
8:25 AM	0	0	1	1	0	1	0	1	0	0	1	1	0	0	0	0	3
8:30 AM	0	1	0	1	0	1	1	2	0	0	0	0	0	0	0	0	3
8:35 AM	1	2	1	4	0	0	1	1	0	0	0	0	0	0	0	0	5
8:40 AM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
8:45 AM	0	1	0	1	0	4	0	4	0	0	0	0	0	0	0	0	5
8:50 AM	1	1	0	2	0	4	0	4	0	0	0	0	1	0	2	3	9
8:55 AM	2	1	0	3	0	2	0	2	0	0	0	0	0	0	0	0	5
Total Survey	4	10	4	18	2	23	5	30	1	0	3	4	1	0	3	4	56

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	4	1	5	0	0	1	1	0	0	0	0	6
7:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	0	0	1	2	0	3	0	0	1	1	0	0	0	0	4
7:45 AM	0	2	2	4	0	1	0	1	1	0	0	1	0	0	0	0	6
8:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
8:15 AM	0	0	1	1	1	1	0	2	0	0	1	1	0	0	0	0	4
8:30 AM	1	5	1	7	0	1	3	4	0	0	0	0	0	0	0	0	11
8:45 AM	3	3	0	6	0	10	0	10	0	0	0	0	1	0	2	3	19
Total Survey	4	10	4	18	2	23	5	30	1	0	3	4	1	0	3	4	56

Heavy Vehicle Peak Hour Summary

8:00 AM to 9:00 AM

By Approach	Northbound NW 6th St			Southbound NW 6th St			Eastbound NW Quince Ave			Westbound NW Quince Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	14	16	30	18	11	29	1	7	8	4	3	7	37
PHF	0.50			0.45			0.25			0.33			0.49

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	4	8	2	14	1	14	3	18	0	0	1	1	1	0	3	4	37
PHF	0.33	0.40	0.25	0.50	0.25	0.35	0.25	0.45	0.00	0.00	0.25	0.25	0.25	0.00	0.38	0.33	0.49

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	2	2	4	1	9	2	12	1	0	2	3	0	0	0	0	19
7:15 AM	0	2	2	4	1	7	1	9	1	0	1	2	0	0	1	1	16
7:30 AM	0	2	3	5	2	6	0	8	1	0	2	3	0	0	1	1	17
7:45 AM	1	7	4	12	1	5	3	9	1	0	1	2	0	0	1	1	24
8:00 AM	4	8	2	14	1	14	3	18	0	0	1	1	1	0	3	4	37

Peak Hour Summary

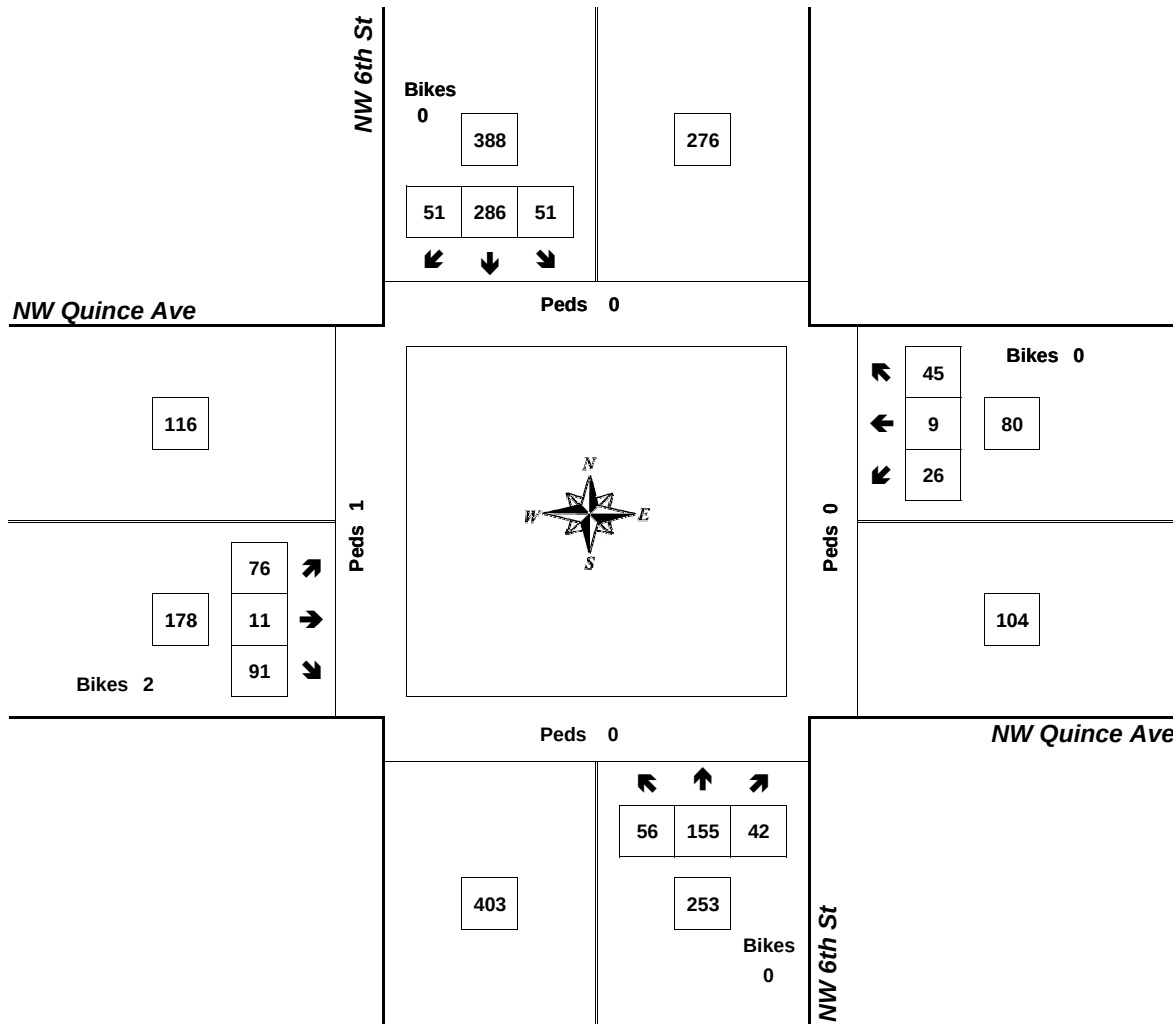


Clay Carney
(503) 833-2740

NW 6th St & NW Quince Ave

8:00 AM to 9:00 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.71	0.6%	178
WB	0.74	5.0%	80
NB	0.80	5.5%	253
SB	0.76	4.6%	388
Intersection	0.80	4.1%	899

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

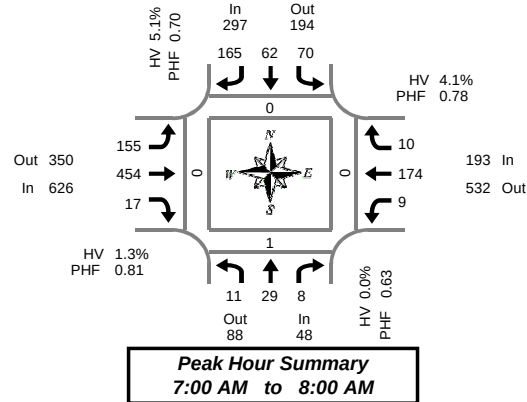


Clay Carney
(503) 833-2740

NW 10th St & NW Maple Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	2	0	0	4	5	13	0	19	29	0	0	0	14	0	0	86	0	0	0	0
7:05 AM	2	1	0	0	7	7	27	1	20	31	2	1	1	8	3	0	109	0	0	0	0
7:10 AM	0	4	1	0	5	12	17	0	35	40	2	0	2	13	0	0	131	0	0	0	0
7:15 AM	1	6	1	0	6	5	20	0	20	30	0	0	0	12	1	0	102	0	0	0	0
7:20 AM	0	5	1	0	6	5	25	0	21	44	1	0	1	10	1	0	120	0	0	0	0
7:25 AM	0	2	1	0	5	8	19	0	11	33	2	0	0	8	2	0	91	0	0	0	0
7:30 AM	1	1	2	0	10	7	11	0	3	36	0	0	0	15	0	0	86	0	0	0	0
7:35 AM	3	0	1	0	7	2	11	0	9	37	1	0	1	23	0	0	95	0	0	0	0
7:40 AM	1	1	0	0	2	2	7	0	7	38	2	0	2	14	0	0	76	0	1	0	0
7:45 AM	1	2	1	0	3	3	7	0	5	46	3	0	2	18	0	0	91	0	0	0	0
7:50 AM	1	2	0	1	10	3	7	0	1	47	3	0	0	24	0	0	98	0	0	0	0
7:55 AM	1	3	0	1	5	3	1	0	4	43	1	0	0	15	3	0	79	0	0	0	0
8:00 AM	1	1	0	0	9	4	4	0	3	29	3	0	0	14	3	1	71	0	0	0	0
8:05 AM	2	1	1	0	3	1	6	0	4	30	1	0	0	17	2	0	68	0	0	0	0
8:10 AM	0	2	2	0	3	3	3	0	1	18	2	0	0	16	2	0	52	0	0	0	0
8:15 AM	0	2	5	0	3	0	0	0	3	26	1	0	1	20	1	0	62	0	0	0	0
8:20 AM	0	5	2	0	3	1	5	0	3	25	1	0	1	22	0	0	73	0	0	0	0
8:25 AM	1	2	0	0	2	6	4	0	4	28	2	0	0	15	3	0	67	0	0	0	0
8:30 AM	0	3	0	0	5	4	9	0	4	33	3	0	1	15	0	0	77	0	0	0	0
8:35 AM	1	7	2	0	3	3	3	0	11	30	3	0	5	18	2	1	88	0	0	0	0
8:40 AM	1	5	2	0	4	3	14	0	11	35	4	0	0	22	0	0	101	0	0	0	0
8:45 AM	4	4	4	0	4	2	19	0	10	31	4	0	3	14	1	0	100	0	0	0	0
8:50 AM	2	3	5	0	3	4	11	0	4	28	2	0	3	21	2	0	88	0	0	0	0
8:55 AM	1	3	2	0	5	3	3	0	6	35	4	0	2	26	1	0	91	0	0	1	0
Total Survey	24	67	33	2	117	96	246	1	224	802	47	1	25	394	27	2	2,102	0	1	1	0

15-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	7	1	0	16	24	57	1	74	100	4	1	3	35	3	0	326	0	0	0	0
7:15 AM	1	13	3	0	17	18	64	0	52	107	3	0	1	30	4	0	313	0	0	0	0
7:30 AM	5	2	3	0	19	11	29	0	19	111	3	0	3	52	0	0	257	0	1	0	0
7:45 AM	3	7	1	2	18	9	15	0	10	136	7	0	2	57	3	0	268	0	0	0	0
8:00 AM	3	4	3	0	15	8	13	0	8	77	6	0	0	47	7	1	191	0	0	0	0
8:15 AM	1	9	7	0	8	7	9	0	15	79	4	0	2	57	4	0	202	0	0	0	0
8:30 AM	2	15	4	0	12	10	26	0	26	98	10	0	6	55	2	1	266	0	0	0	0
8:45 AM	7	10	11	0	12	9	33	0	20	94	10	0	8	61	4	0	279	0	0	1	0
Total Survey	24	67	33	2	117	96	246	1	224	802	47	1	25	394	27	2	2,102	0	1	1	0

Peak Hour Summary 7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	48	88	136	2	297	194	491	1	626	350	976	1	193	532	725	0	1,164	0	1	0	0
%HV	0.0%				5.1%				1.3%				4.1%				2.7%				
PHF	0.63				0.70				0.81				0.78				0.82				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	11	29	8	48	70	62	165	297	155	454	17	626	9	174	10	193	1,164
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	8.5%	5.1%	0.0%	1.8%	0.0%	1.3%	0.0%	4.6%	0.0%	4.1%	2.7%
PHF	0.55	0.48	0.50	0.63	0.80	0.65	0.64	0.70	0.51	0.83	0.53	0.81	0.45	0.76	0.63	0.78	0.82

Rolling Hour Summary 7:00 AM to 9:00 AM

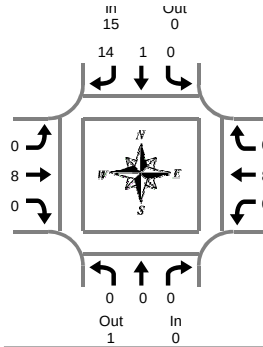
Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	11	29	8	2	70	62	165	1	155	454	17	1	9	174	10	0	1,164	0	1	0	0
7:15 AM	12	26	10	2	69	46	121	0	89	431	19	0	6	186	14	1	1,029	0	1	0	0
7:30 AM	12	22	14	2	60	35	66	0	52	403	20	0	7	213	14	1	918	0	1	0	0
7:45 AM	9	35	15	2	53	34	63	0	59	390	27	0	10	216	16	2	927	0	0	0	0
8:00 AM	13	38	25	0	47	34	81	0	69	348	30	0	16	220	17	2	938	0	0	1	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740

Out 22
In 8



Peak Hour Summary
7:00 AM to 8:00 AM

NW 10th St & NW Maple Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:05 AM	0	0	0	0	0	0	12	12	0	0	0	0	0	0	0	0	12
7:10 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	1	3
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:35 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
7:40 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	0	0	0	0	0	1	0	1	0	4	0	4	0	2	0	2	7
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
8:10 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
8:20 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
8:25 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
8:35 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
8:40 AM	0	0	0	0	2	0	1	3	0	1	0	1	0	0	0	0	4
8:45 AM	0	0	0	0	0	0	3	3	0	2	0	2	0	1	0	1	6
8:50 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	4	1	5	6
8:55 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	3
Total Survey	0	0	0	0	4	1	18	23	4	17	0	21	0	17	1	18	62

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	14	14	0	0	0	0	0	2	0	2	16
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
7:45 AM	0	0	0	0	0	1	0	1	0	5	0	5	0	2	0	2	8
8:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
8:15 AM	0	0	0	0	2	0	0	2	1	1	0	2	0	2	0	2	6
8:30 AM	0	0	0	0	2	0	1	3	1	2	0	3	0	2	0	2	8
8:45 AM	0	0	0	0	0	0	3	3	1	5	0	6	0	5	1	6	15
Total Survey	0	0	0	0	4	1	18	23	4	17	0	21	0	17	1	18	62

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Maple Ave			Westbound NW Maple Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	15	0	15	8	22	30	8	8	16	31
PHF	0.00			0.27			0.40			0.67			0.46

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	1	14	15	0	8	0	8	0	8	0	8	31
PHF	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.27	0.00	0.40	0.00	0.40	0.00	0.67	0.00	0.67	0.46

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	1	14	15	0	8	0	8	0	8	0	8	31
7:15 AM	0	0	0	0	0	1	0	1	1	9	0	10	0	6	0	6	17
7:30 AM	0	0	0	0	2	1	0	3	2	9	0	11	0	6	0	6	20
7:45 AM	0	0	0	0	4	1	1	6	3	9	0	12	0	6	0	6	24
8:00 AM	0	0	0	0	4	0	4	8	4	9	0	13	0	9	1	10	31

Peak Hour Summary

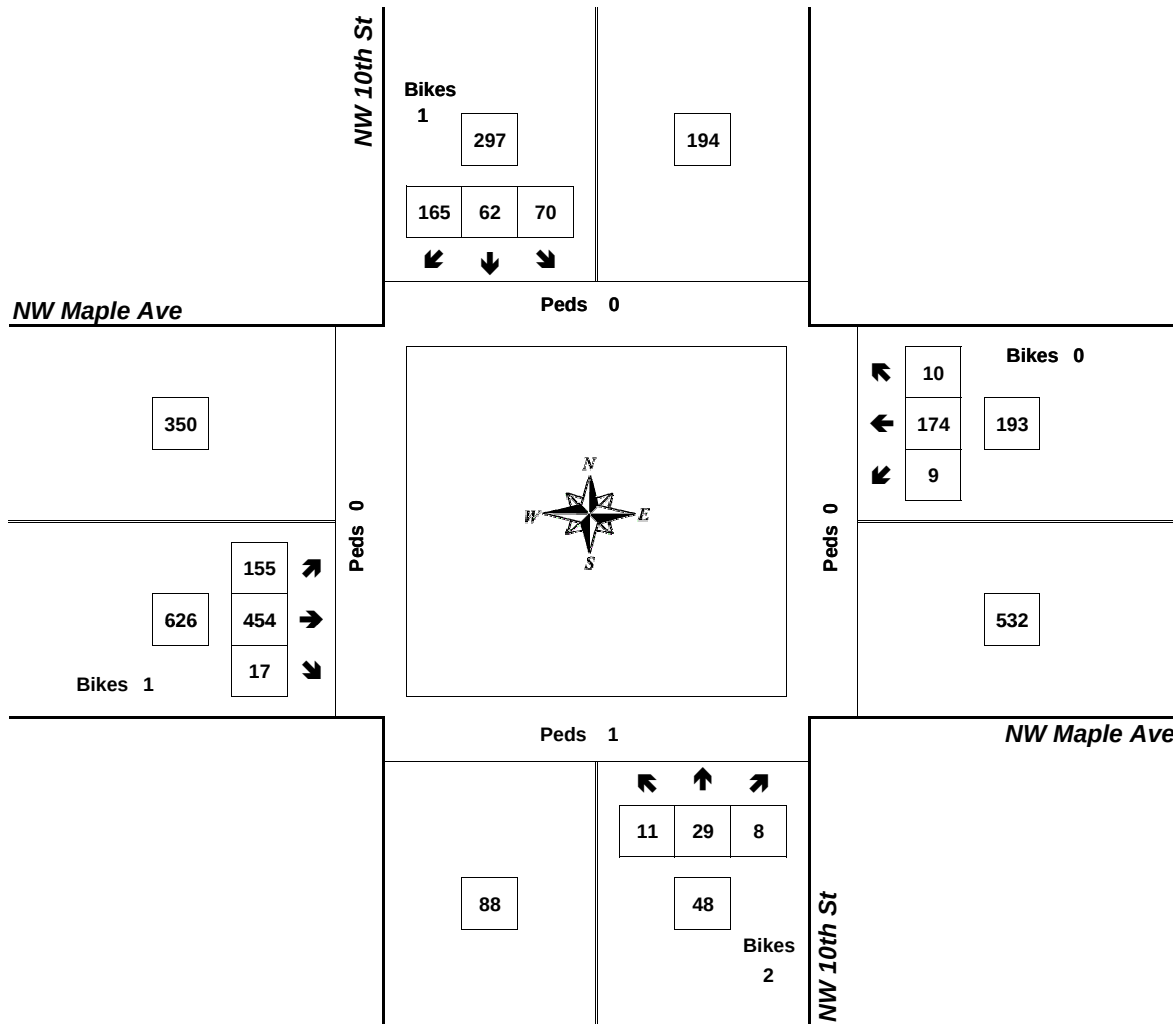


Clay Carney
(503) 833-2740

NW 10th St & NW Maple Ave

7:00 AM to 8:00 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.81	1.3%	626
WB	0.78	4.1%	193
NB	0.63	0.0%	48
SB	0.70	5.1%	297
Intersection	0.82	2.7%	1,164

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

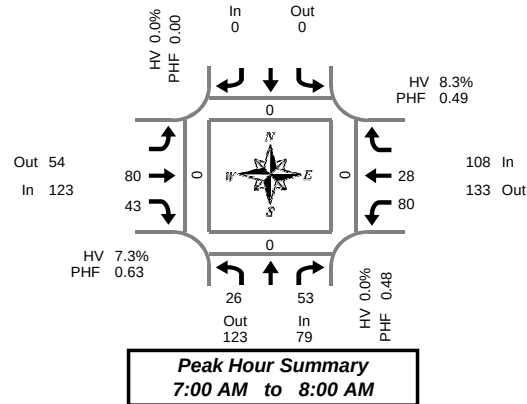


Clay Carney
(503) 833-2740

NW 10th St & NW Pershall Way

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Interval Total	Pedestrians Crosswalk			
	L	R	Bikes			Bikes	T	R	Bikes	L	T	Bikes		North	South	East	West
7:00 AM	0	1	0			0	7	4	0	6	2	0	20	0	0	0	0
7:05 AM	2	6	0			0	2	4	0	8	1	0	23	0	0	0	0
7:10 AM	2	4	0			0	7	9	0	17	0	0	39	0	0	0	0
7:15 AM	6	8	0			0	7	11	0	16	4	0	52	0	0	0	0
7:20 AM	4	11	0			0	8	7	0	11	7	0	48	0	0	0	0
7:25 AM	4	8	0			0	9	4	0	7	4	0	36	0	0	0	0
7:30 AM	4	6	0			0	4	0	0	3	2	0	19	0	0	0	0
7:35 AM	1	3	0			0	5	2	0	2	4	0	17	0	0	0	0
7:40 AM	1	1	0			0	7	0	0	4	2	0	15	0	0	0	0
7:45 AM	1	3	0			0	9	0	0	1	0	0	14	0	0	0	0
7:50 AM	1	2	0			0	11	0	0	2	1	0	17	0	0	0	0
7:55 AM	0	0	0			0	4	2	0	3	1	0	10	0	0	0	0
8:00 AM	0	3	0			0	6	0	0	3	2	0	14	0	0	0	0
8:05 AM	0	2	0			0	5	2	0	1	4	0	14	0	0	0	0
8:10 AM	1	2	0			0	6	0	0	1	0	0	10	0	0	0	0
8:15 AM	1	0	0			0	4	0	0	1	0	0	6	0	0	0	0
8:20 AM	0	0	0			0	5	0	0	1	5	0	11	0	0	0	0
8:25 AM	1	1	0			0	0	2	0	1	3	0	8	0	0	0	0
8:30 AM	1	1	0			0	0	1	0	3	2	0	8	0	0	0	0
8:35 AM	1	1	0			0	4	2	0	5	3	0	16	0	0	0	0
8:40 AM	2	6	0			0	3	1	0	4	2	0	18	0	0	0	0
8:45 AM	1	1	0			0	3	4	0	1	2	0	12	0	0	0	0
8:50 AM	4	1	0			0	2	3	0	4	1	0	15	0	0	0	0
8:55 AM	4	3	0			0	5	3	0	2	0	0	17	0	0	0	0
Total Survey	42	74	0			0	123	61	0	107	52	0	459	0	0	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Interval Total	Pedestrians Crosswalk			
	L	R	Bikes			Bikes	T	R	Bikes	L	T	Bikes		North	South	East	West
7:00 AM	4	11	0			0	16	17	0	31	3	0	82	0	0	0	0
7:15 AM	14	27	0			0	24	22	0	34	15	0	136	0	0	0	0
7:30 AM	6	10	0			0	16	2	0	9	8	0	51	0	0	0	0
7:45 AM	2	5	0			0	24	2	0	6	2	0	41	0	0	0	0
8:00 AM	1	7	0			0	17	2	0	5	6	0	38	0	0	0	0
8:15 AM	2	1	0			0	9	2	0	3	8	0	25	0	0	0	0
8:30 AM	4	8	0			0	7	4	0	12	7	0	42	0	0	0	0
8:45 AM	9	5	0			0	10	10	0	7	3	0	44	0	0	0	0
Total Survey	42	74	0			0	123	61	0	107	52	0	459	0	0	0	0

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total	Pedestrians Crosswalk			
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total		North	South	East	West
Volume	79	123	202	0	0	0	123	54	177	0	108	133	241	0	0	0	0
%HV	0.0%			0.0%			7.3%			8.3%			5.8%				
PHF	0.48			0.00			0.63			0.49			0.56				

By Movement	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total
	L	R	Total			Total	T	R	Total	L	T	Total	
Volume	26	53	79			0	80	43	123	80	28	108	310
%HV	0.0%	NA	0.0%	NA	NA	NA	0.0%	11.3%	0.0%	7.3%	1.3%	28.6%	5.8%
PHF	0.46	0.49	0.48			0.00	0.74	0.40	0.63	0.45	0.47	0.49	0.56

Rolling Hour Summary

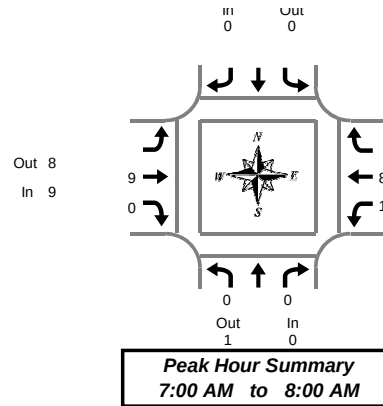
7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Interval Total	Pedestrians Crosswalk			
	L	R	Bikes			Bikes	T	R	Bikes	L	T	Bikes		North	South	East	West
7:00 AM	26	53	0			0	80	43	0	80	28	0	310	0	0	0	0
7:15 AM	23	49	0			0	81	28	0	54	31	0	266	0	0	0	0
7:30 AM	11	23	0			0	66	8	0	23	24	0	155	0	0	0	0
7:45 AM	9	21	0			0	57	10	0	26	23	0	146	0	0	0	0
8:00 AM	16	21	0			0	43	18	0	27	24	0	149	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 10th St & NW Pershall Way

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Interval Total
	L	R	Total			Total	T	R	Total	L	T	Total	
7:00 AM	0	0	0			0	0	0	0	0	1	1	1
7:05 AM	0	0	0			0	0	0	0	0	0	0	0
7:10 AM	0	0	0			0	1	0	1	1	0	1	2
7:15 AM	0	0	0			0	0	0	0	0	0	0	0
7:20 AM	0	0	0			0	1	0	1	0	1	1	2
7:25 AM	0	0	0			0	0	0	0	0	1	1	1
7:30 AM	0	0	0			0	0	0	0	1		1	1
7:35 AM	0	0	0			0	1	0	1	0	3	3	4
7:40 AM	0	0	0			0	0	0	0	1		1	1
7:45 AM	0	0	0			0	2	0	2	0	0	0	2
7:50 AM	0	0	0			0	2	0	2	0	0	0	2
7:55 AM	0	0	0			0	2	0	2	0	0	0	2
8:00 AM	0	0	0			0	1	0	1	0	0	0	1
8:05 AM	0	0	0			0	0	0	0	3		3	3
8:10 AM	0	0	0			0	0	0	0	0	0	0	0
8:15 AM	0	0	0			0	0	0	0	0	0	0	0
8:20 AM	0	0	0			0	0	0	0	1		1	1
8:25 AM	0	0	0			0	0	0	0	1		1	1
8:30 AM	0	0	0			0	0	0	0	0	0	0	0
8:35 AM	0	0	0			0	1	0	1	0	0	0	1
8:40 AM	0	0	0			0	0	0	0	0	0	0	0
8:45 AM	0	0	0			0	0	0	0	1		1	1
8:50 AM	0	0	0			0	0	0	0	0	0	0	0
8:55 AM	0	0	0			0	1	0	1	0	0	0	1
Total Survey	0	0	0			0	12	0	12	1	14	15	27

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Interval Total
	L	R	Total			Total	T	R	Total	L	T	Total	
7:00 AM	0	0	0			0	1	0	1	1	1	2	3
7:15 AM	0	0	0			0	1	0	1	0	2	2	3
7:30 AM	0	0	0			0	1	0	1	0	5	5	6
7:45 AM	0	0	0			0	6	0	6	0	0	0	6
8:00 AM	0	0	0			0	1	0	1	0	3	3	4
8:15 AM	0	0	0			0	0	0	0	2		2	2
8:30 AM	0	0	0			0	1	0	1	0	0	0	1
8:45 AM	0	0	0			0	1	0	1	0	1	1	2
Total Survey	0	0	0			0	12	0	12	1	14	15	27

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	0	0	0	9	8	17	9	9	18	18
PHF	0.00			0.00			0.38			0.45			0.64

By Movement	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total
	L	R	Total			Total	T	R	Total	L	T	Total	
Volume	0	0	0			0	9	0	9	1	8	9	18
PHF	0.00	0.00	0.00			0.00	0.38	0.00	0.38	0.25	0.40	0.45	0.64

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Interval Total
	L	R	Total			Total	T	R	Total	L	T	Total	
7:00 AM	0	0	0			0	9	0	9	1	8	9	18
7:15 AM	0	0	0			0	9	0	9	0	10	10	19
7:30 AM	0	0	0			0	8	0	8	0	10	10	18
7:45 AM	0	0	0			0	8	0	8	0	5	5	13
8:00 AM	0	0	0			0	3	0	3	0	6	6	9

Peak Hour Summary



Clay Carney
(503) 833-2740

NW 10th St & NW Pershall Way

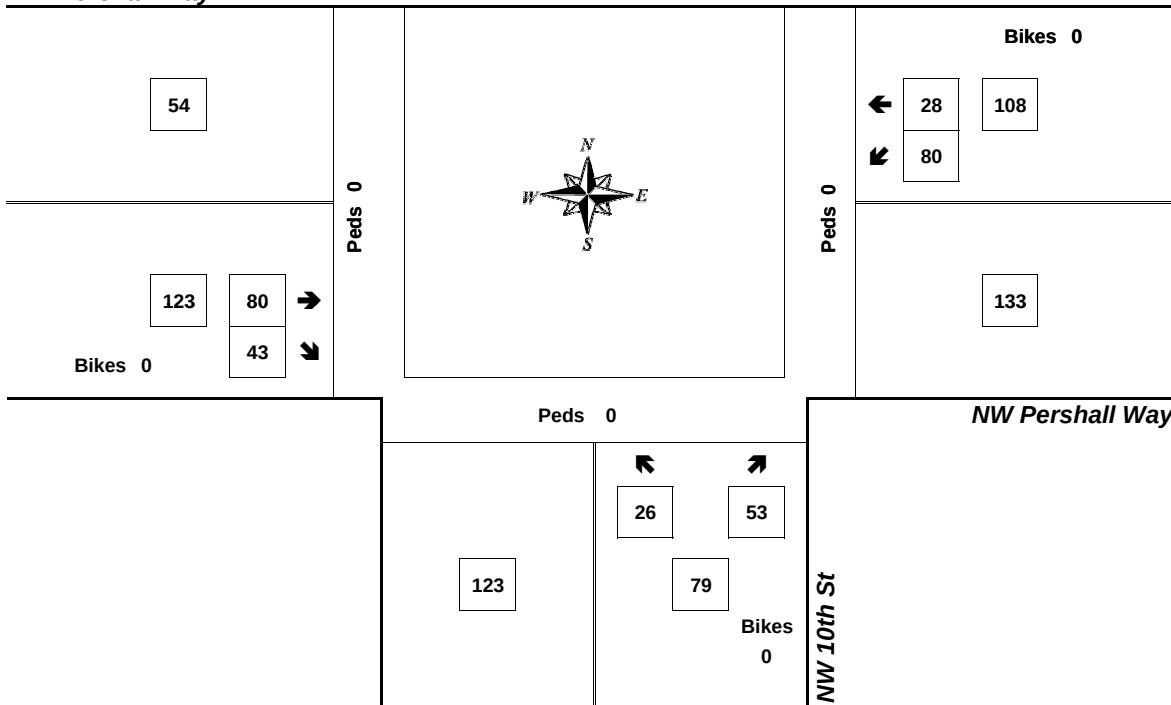
7:00 AM to 8:00 AM

Thursday, September 26, 2019

Bikes
0

NW Pershall Way

Peds 0



Approach	PHF	HV%	Volume
EB	0.63	7.3%	123
WB	0.49	8.3%	108
NB	0.48	0.0%	79
SB	0.00	0.0%	0
Intersection	0.56	5.8%	310

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

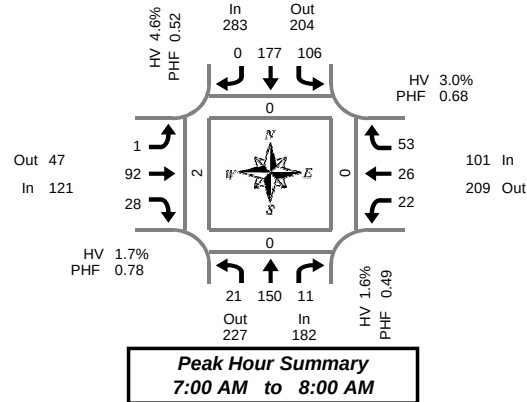


Clay Carney
(503) 833-2740

NW 10th St & NW Quince Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	16	1	0	11	20	0	0	0	6	5	0	3	2	6	0	72	0	0	0	0
7:05 AM	1	22	0	1	12	25	0	0	0	10	3	0	2	4	2	0	81	0	0	0	0
7:10 AM	7	27	0	0	11	21	0	0	1	6	4	0	1	1	11	0	90	0	0	0	1
7:15 AM	2	30	2	0	20	24	0	0	0	13	2	0	2	4	5	0	104	0	0	0	1
7:20 AM	2	21	2	0	19	25	0	0	0	10	3	0	2	2	9	0	95	0	0	0	0
7:25 AM	2	10	1	0	18	29	0	0	0	7	0	0	4	0	4	0	75	0	0	0	0
7:30 AM	0	4	1	0	6	8	0	0	0	7	2	0	2	3	2	0	35	0	0	0	0
7:35 AM	0	7	1	0	0	6	0	0	0	8	2	0	3	2	4	0	33	0	0	0	0
7:40 AM	1	6	0	0	1	7	0	0	0	7	0	0	1	1	1	0	25	0	0	0	0
7:45 AM	0	3	2	0	3	3	0	0	0	6	3	0	2	1	3	0	26	0	0	0	0
7:50 AM	2	0	1	0	4	6	0	0	0	6	1	0	0	4	3	0	27	0	0	0	0
7:55 AM	2	4	0	0	1	3	0	0	0	6	3	0	0	2	3	0	24	0	0	0	0
8:00 AM	1	2	1	0	1	4	0	0	1	9	2	0	0	3	1	0	25	0	0	0	0
8:05 AM	0	3	0	0	3	6	0	0	1	1	0	0	1	4	4	0	23	0	0	0	0
8:10 AM	0	1	1	2	1	3	0	0	0	3	2	0	0	3	3	0	17	0	0	0	0
8:15 AM	2	3	0	0	2	0	0	0	0	5	0	0	0	2	1	0	15	0	0	0	4
8:20 AM	0	8	1	0	4	1	0	0	1	6	3	0	0	3	1	0	28	0	0	0	0
8:25 AM	0	7	0	1	1	3	0	0	0	1	2	0	1	1	2	0	18	0	0	0	0
8:30 AM	2	6	1	0	5	3	1	0	0	10	2	1	2	0	2	0	34	0	0	0	0
8:35 AM	0	14	0	0	3	7	0	0	0	3	0	0	1	1	13	0	42	0	0	0	0
8:40 AM	0	20	1	0	12	16	0	0	0	4	2	0	1	2	6	0	64	0	0	0	0
8:45 AM	0	13	1	0	14	23	0	0	1	3	4	0	1	5	11	0	76	0	0	0	0
8:50 AM	1	5	0	0	16	11	0	0	0	3	1	0	0	2	8	0	47	0	0	0	0
8:55 AM	0	7	2	0	9	13	1	0	0	6	0	0	0	4	5	0	47	0	0	0	1
Total Survey	27	239	19	4	177	267	2	0	5	146	46	1	29	56	110	0	1,123	0	0	0	7

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	10	65	1	1	34	66	0	0	1	22	12	0	6	7	19	0	243	0	0	0	1
7:15 AM	6	61	5	0	57	78	0	0	0	30	5	0	8	6	18	0	274	0	0	0	1
7:30 AM	1	17	2	0	7	21	0	0	0	22	4	0	6	6	7	0	93	0	0	0	0
7:45 AM	4	7	3	0	8	12	0	0	0	18	7	0	2	7	9	0	77	0	0	0	0
8:00 AM	1	6	2	2	5	13	0	0	2	13	4	0	1	10	8	0	65	0	0	0	0
8:15 AM	2	18	1	1	7	4	0	0	1	12	5	0	1	6	4	0	61	0	0	0	4
8:30 AM	2	40	2	0	20	26	1	0	0	17	4	1	4	3	21	0	140	0	0	0	0
8:45 AM	1	25	3	0	39	47	1	0	1	12	5	0	1	11	24	0	170	0	0	0	1
Total Survey	27	239	19	4	177	267	2	0	5	146	46	1	29	56	110	0	1,123	0	0	0	7

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	182	227	409	1	283	204	487	0	121	47	168	0	101	209	310	0	687	0	0	0	2
%HV	1.6%				4.6%				1.7%				3.0%				3.1%				
PHF	0.49				0.52				0.78				0.68				0.59				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	21	150	11	182	106	177	0	283	1	92	28	121	22	26	53	101	687
%HV	0.0%	0.0%	27.3%	1.6%	0.9%	6.8%	0.0%	4.6%	0.0%	1.1%	3.6%	1.7%	4.5%	3.8%	1.9%	3.0%	3.1%
PHF	0.48	0.47	0.55	0.49	0.46	0.57	0.00	0.52	0.25	0.77	0.58	0.78	0.61	0.72	0.53	0.68	0.59

Rolling Hour Summary

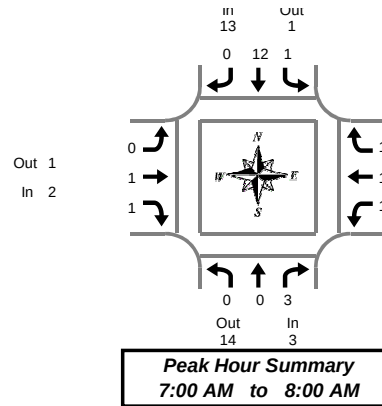
7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	21	150	11	1	106	177	0	0	1	92	28	0	22	26	53	0	687	0	0	0	2
7:15 AM	12	91	12	2	77	124	0	0	2	83	20	0	17	29	42	0	509	0	0	0	1
7:30 AM	8	48	8	3	27	50	0	0	3	65	20	0	10	29	28	0	296	0	0	0	4
7:45 AM	9	71	8	3	40	55	1	0	3	60	20	1	8	26	42	0	343	0	0	0	4
8:00 AM	6	89	8	3	71	90	2	0	4	54	18	1	7	30	57	0	436	0	0	0	5

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 10th St & NW Quince Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	0	0	0	6
7:05 AM	0	0	0	0	1	6	0	7	0	0	1	1	0	0	0	0	8
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
7:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:20 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	1	0	1	3
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:35 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
8:40 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	1	3
8:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
8:55 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total Survey	0	4	3	7	1	16	0	17	0	1	2	3	1	1	6	8	35

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	12	0	13	0	0	1	1	1	0	0	1	15
7:15 AM	0	0	2	2	0	0	0	0	0	1	0	1	0	1	0	1	4
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
7:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
8:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	3	3	6
8:45 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	2	2	5
Total Survey	0	4	3	7	1	16	0	17	0	1	2	3	1	1	6	8	35

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Quince Ave			Westbound NW Quince Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	3	14	17	13	1	14	2	1	3	3	5	8	21
PHF	0.38			0.25			0.50			0.38			0.35

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	3	3	1	12	0	13	0	1	1	2	1	1	1	3	21
PHF	0.00	0.00	0.38	0.38	0.25	0.25	0.00	0.25	0.00	0.25	0.25	0.50	0.25	0.25	0.25	0.38	0.35

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	3	3	1	12	0	13	0	1	1	2	1	1	1	3	21
7:15 AM	0	0	3	3	0	0	0	0	0	1	1	2	0	1	1	2	7
7:30 AM	0	2	1	3	0	0	0	0	0	0	1	1	0	0	1	1	5
7:45 AM	0	3	1	4	0	2	0	2	0	0	1	1	0	0	3	3	10
8:00 AM	0	4	0	4	0	4	0	4	0	0	1	1	0	0	5	5	14

Peak Hour Summary

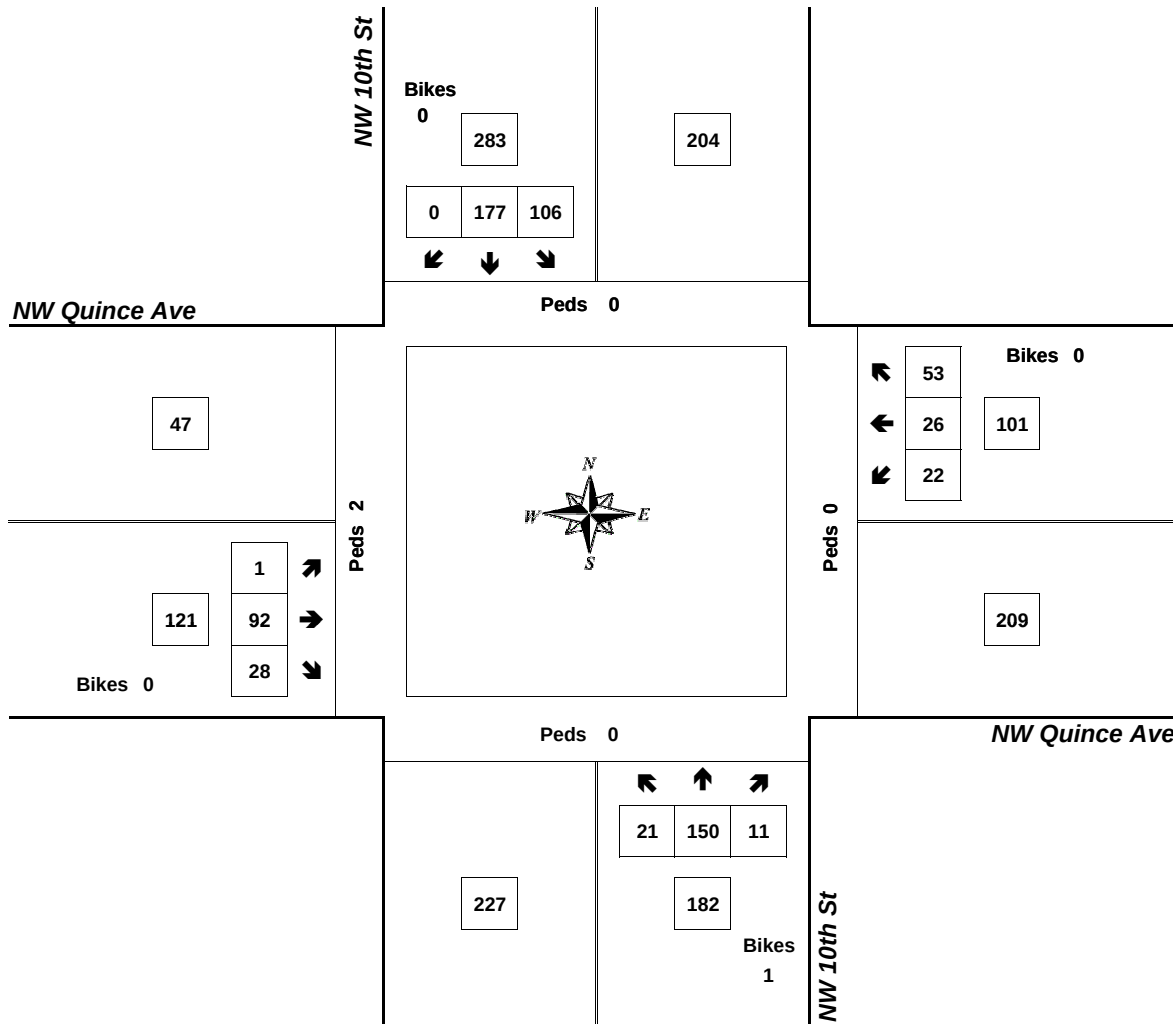


Clay Carney
(503) 833-2740

NW 10th St & NW Quince Ave

7:00 AM to 8:00 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.78	1.7%	121
WB	0.68	3.0%	101
NB	0.49	1.6%	182
SB	0.52	4.6%	283
Intersection	0.59	3.1%	687

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

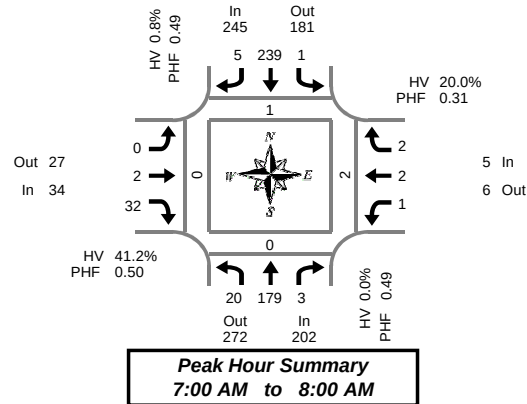


Clay Carney
(503) 833-2740

NW 10th St & NW Spruce Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	4	21	0	0	0	22	0	0	0	1	13	0	0	0	0	0	61	0	0	0	0
7:05 AM	4	21	0	0	0	35	1	0	0	0	2	0	0	0	0	0	63	0	0	0	0
7:10 AM	2	37	0	2	1	33	3	0	0	0	1	0	0	0	0	0	77	0	0	0	0
7:15 AM	5	31	0	1	0	51	0	0	0	0	4	0	0	0	0	0	91	0	0	2	0
7:20 AM	2	24	3	0	0	32	0	0	0	0	4	0	0	0	0	0	65	1	0	0	0
7:25 AM	0	10	0	0	0	33	0	0	0	0	2	0	1	0	1	0	47	0	0	0	0
7:30 AM	0	5	0	0	0	10	0	0	0	1	1	0	0	0	1	0	18	0	0	0	0
7:35 AM	0	11	0	0	0	6	0	0	0	0	0	0	0	1	0	0	18	0	0	0	0
7:40 AM	1	4	0	0	0	4	0	0	0	0	2	0	0	0	0	0	11	0	0	0	0
7:45 AM	1	5	0	0	0	6	0	0	0	0	1	0	0	0	0	0	13	0	0	0	0
7:50 AM	1	3	0	0	0	3	1	0	0	0	2	0	0	1	0	0	11	0	0	0	0
7:55 AM	0	7	0	1	0	4	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0
8:00 AM	1	1	1	0	0	3	0	0	0	0	1	0	1	0	0	0	8	0	0	0	0
8:05 AM	0	8	0	0	0	3	0	0	0	0	2	0	1	0	0	0	14	0	0	0	0
8:10 AM	2	2	0	2	0	1	0	0	0	0	0	0	1	0	0	0	6	0	0	0	0
8:15 AM	0	3	1	0	0	2	0	0	0	0	2	0	0	0	1	0	9	0	0	0	0
8:20 AM	1	6	0	1	0	1	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
8:25 AM	0	8	0	0	0	4	0	0	0	0	1	0	0	0	0	0	13	0	0	6	0
8:30 AM	1	9	0	3	0	8	0	0	0	0	0	0	0	0	0	0	18	0	0	2	0
8:35 AM	0	23	0	0	1	12	0	0	0	0	0	0	1	0	3	0	40	0	0	1	0
8:40 AM	5	21	0	0	0	33	0	0	0	0	2	0	0	0	1	0	62	0	0	0	0
8:45 AM	2	25	0	0	1	32	0	0	0	0	3	0	0	0	0	0	63	0	0	0	1
8:50 AM	0	13	0	0	2	21	1	0	0	0	0	0	0	0	0	0	37	0	0	0	0
8:55 AM	0	10	0	0	0	24	0	0	0	0	1	0	1	0	0	0	36	0	0	0	0
Total Survey	32	308	5	10	5	383	6	0	0	2	44	0	6	2	7	0	800	1	0	11	1

15-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	10	79	0	2	1	90	4	0	0	1	16	0	0	0	0	0	201	0	0	0	0
7:15 AM	7	65	3	1	0	116	0	0	0	0	10	0	1	0	1	0	203	1	0	2	0
7:30 AM	1	20	0	0	0	20	0	0	0	1	3	0	0	1	1	0	47	0	0	0	0
7:45 AM	2	15	0	1	0	13	1	0	0	0	3	0	0	1	0	0	35	0	0	0	0
8:00 AM	3	11	1	2	0	7	0	0	0	0	3	0	3	0	0	0	28	0	0	0	0
8:15 AM	1	17	1	1	0	7	0	0	0	0	3	0	0	0	1	0	30	0	0	6	0
8:30 AM	6	53	0	3	1	53	0	0	0	0	2	0	1	0	4	0	120	0	0	3	0
8:45 AM	2	48	0	0	3	77	1	0	0	0	4	0	1	0	0	0	136	0	0	0	1
Total Survey	32	308	5	10	5	383	6	0	0	2	44	0	6	2	7	0	800	1	0	11	1

Peak Hour Summary 7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	202	272	474	4	245	181	426	0	34	27	61	0	5	6	11	0	486	1	0	2	0
%HV	0.0%				0.8%				41.2%				20.0%				3.5%				
PHF	0.49				0.49				0.50				0.31				0.52				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	20	179	3	202	1	239	5	245	0	2	32	34	1	2	2	5	486
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	20.0%	0.8%	0.0%	0.0%	43.8%	41.2%	0.0%	0.0%	50.0%	20.0%	3.5%
PHF	0.45	0.49	0.25	0.49	0.25	0.50	0.31	0.49	0.00	0.50	0.50	0.50	0.25	0.50	0.25	0.31	0.52

Rolling Hour Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	20	179	3	4	1	239	5	0	0	2	32	0	1	2	2	0	486	1	0	2	0
7:15 AM	13	111	4	4	0	156	1	0	0	1	19	0	4	2	2	0	313	1	0	2	0
7:30 AM	7	63	2	4	0	47	1	0	0	1	12	0	3	2	2	0	140	0	0	6	0
7:45 AM	12	96	2	7	1	80	1	0	0	0	11	0	4	1	5	0	213	0	0	9	0
8:00 AM	12	129	2	6	4	144	1	0	0	0	12	0	5	0	5	0	314	0	0	9	1

Heavy Vehicle Summary

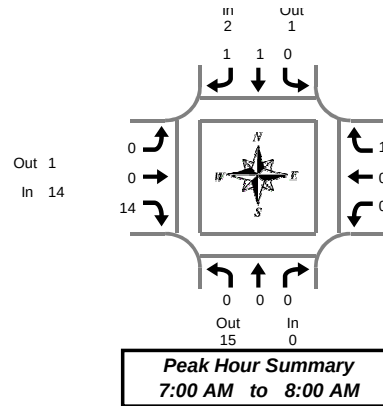


Clay Carney
(503) 833-2740

NW 10th St & NW Spruce Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	12	12	0	0	0	0	12
7:05 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
7:10 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:35 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	3
8:40 AM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
8:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
8:50 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:55 AM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
Total Survey	0	7	0	7	0	6	1	7	0	0	14	14	0	0	2	2	30

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	1	1	0	0	13	13	0	0	0	0	14
7:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	1	1	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	3	0	3	0	3	0	3	0	0	0	0	0	0	1	1	7
8:45 AM	0	3	0	3	0	2	0	2	0	0	0	0	0	0	0	0	5
Total Survey	0	7	0	7	0	6	1	7	0	0	14	14	0	0	2	2	30

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Spruce Ave			Westbound NW Spruce Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	15	15	2	1	3	14	1	15	1	0	1	17
PHF	0.00			0.25			0.27			0.25			0.30

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	1	1	2	0	0	14	14	0	0	1	1	17
PHF	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.25	0.00	0.00	0.27	0.27	0.00	0.00	0.25	0.25	0.30

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	1	1	2	0	0	14	14	0	0	1	1	17
7:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	1	1	3
7:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	1	1	8
8:00 AM	0	7	0	7	0	5	0	5	0	0	0	0	0	0	1	1	13

Peak Hour Summary

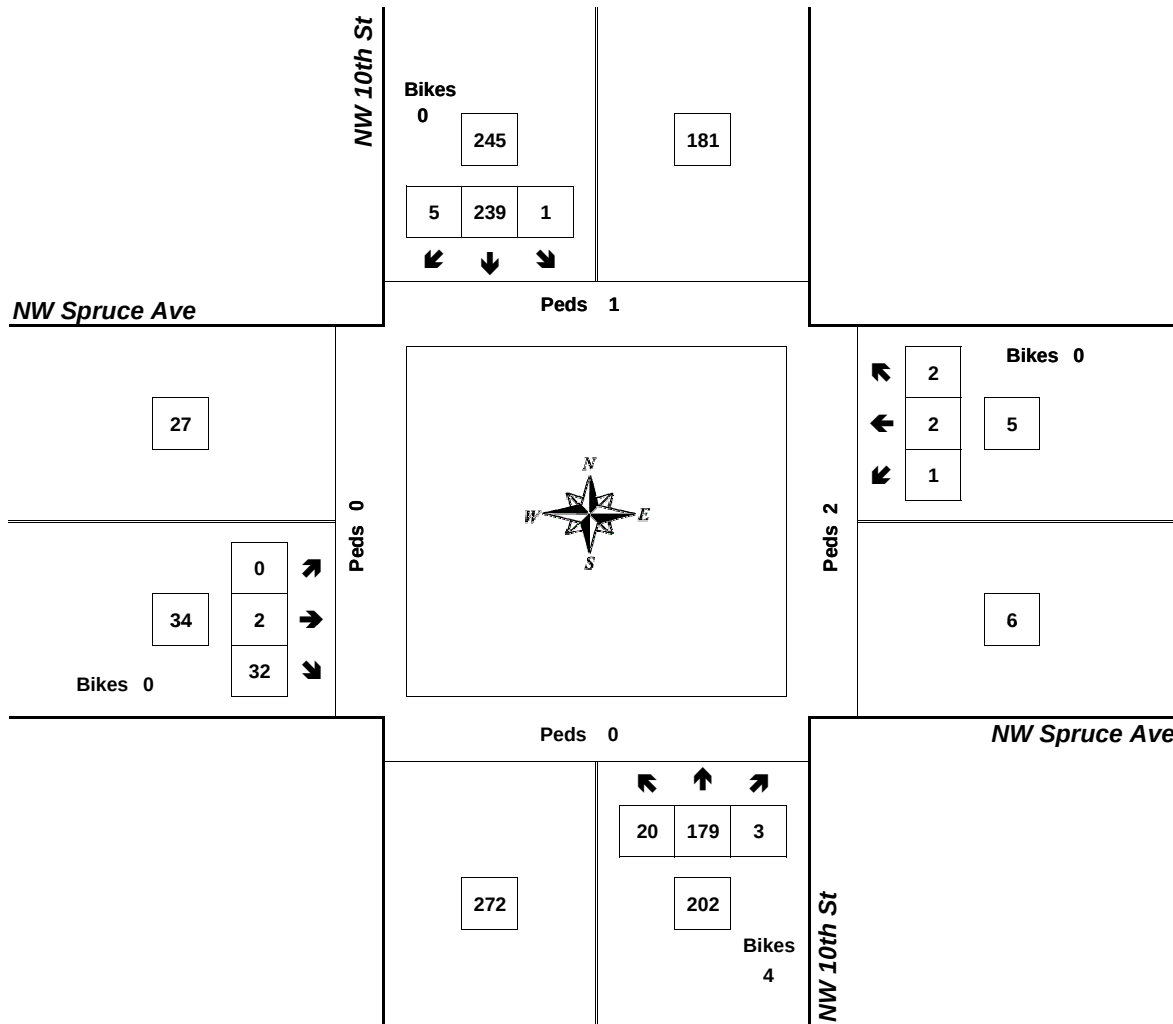


Clay Carney
(503) 833-2740

NW 10th St & NW Spruce Ave

7:00 AM to 8:00 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.50	41.2%	34
WB	0.31	20.0%	5
NB	0.49	0.0%	202
SB	0.49	0.8%	245
Intersection	0.52	3.5%	486

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

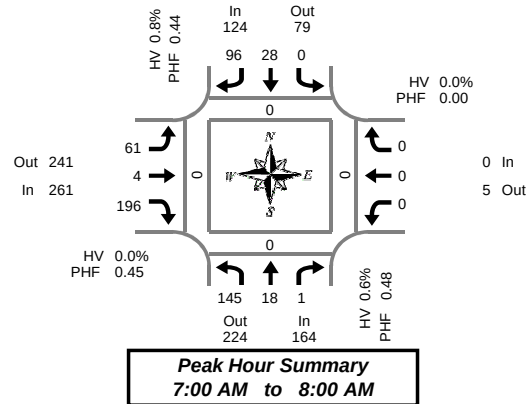


Clay Carney
(503) 833-2740

NW 10th St & NW Upas Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	13	1	0	0	0	4	9	0	1	1	17	0	0	0	0	0	46	0	0	0	0
7:05 AM	15	0	0	0	0	0	12	0	7	1	23	0	0	0	0	0	58	0	0	0	0
7:10 AM	33	2	0	0	0	5	16	0	7	1	29	0	0	0	0	0	93	0	0	0	0
7:15 AM	25	2	0	0	0	5	22	0	11	0	41	0	0	0	0	0	106	0	0	0	0
7:20 AM	22	2	0	0	0	2	20	0	14	0	38	0	0	0	0	0	98	0	0	0	0
7:25 AM	24	1	0	0	0	1	9	0	12	1	27	0	0	0	0	0	75	0	0	0	0
7:30 AM	4	2	0	0	0	2	2	0	5	0	9	0	0	0	0	0	24	0	0	0	0
7:35 AM	2	3	0	0	0	2	2	0	2	0	1	0	0	0	0	0	12	0	0	0	0
7:40 AM	3	0	1	0	0	2	2	0	0	0	3	0	0	0	0	0	11	0	0	0	0
7:45 AM	2	2	0	0	0	1	0	0	2	0	2	0	0	0	0	0	9	0	0	0	0
7:50 AM	2	3	0	0	0	1	0	0	0	0	5	0	0	0	0	0	11	0	0	0	0
7:55 AM	0	0	0	0	0	3	2	0	0	0	1	0	0	0	0	0	6	0	0	0	0
8:00 AM	0	1	0	0	0	3	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0
8:05 AM	1	2	0	0	0	4	0	0	1	0	0	0	0	0	0	0	8	0	0	0	0
8:10 AM	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0
8:15 AM	1	1	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0
8:20 AM	5	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0	9	0	0	0	0
8:25 AM	5	2	0	0	0	2	1	0	0	0	3	0	0	0	0	0	13	0	0	0	0
8:30 AM	2	2	0	0	0	1	3	0	0	0	2	0	0	0	0	0	10	0	0	0	0
8:35 AM	13	0	0	0	0	0	4	0	3	0	8	0	0	0	0	0	28	0	0	0	0
8:40 AM	22	3	0	0	0	2	6	0	4	0	26	0	0	0	0	0	63	0	0	0	0
8:45 AM	22	0	0	0	0	1	3	0	2	0	25	0	0	0	0	0	53	0	0	0	0
8:50 AM	14	0	0	0	0	0	6	0	5	0	23	0	0	0	0	0	48	0	0	0	0
8:55 AM	11	3	0	0	0	0	5	0	3	0	22	0	0	0	0	0	44	0	0	0	0
Total Survey	242	34	2	2	0	42	126	0	82	4	306	0	0	0	0	0	838	0	0	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	61	3	0	0	0	9	37	0	15	3	69	0	0	0	0	0	197	0	0	0	0
7:15 AM	71	5	0	0	0	8	51	0	37	1	106	0	0	0	0	0	279	0	0	0	0
7:30 AM	9	5	1	0	0	6	6	0	7	0	13	0	0	0	0	0	47	0	0	0	0
7:45 AM	4	5	0	0	0	5	2	0	2	0	8	0	0	0	0	0	26	0	0	0	0
8:00 AM	2	4	0	0	0	8	0	0	4	0	0	0	0	0	0	0	18	0	0	0	0
8:15 AM	11	4	1	2	0	2	3	0	0	0	4	0	0	0	0	0	25	0	0	0	0
8:30 AM	37	5	0	0	0	3	13	0	7	0	36	0	0	0	0	0	101	0	0	0	0
8:45 AM	47	3	0	0	0	1	14	0	10	0	70	0	0	0	0	0	145	0	0	0	0
Total Survey	242	34	2	2	0	42	126	0	82	4	306	0	0	0	0	0	838	0	0	0	0

Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	164	224	388	0	124	79	203	0	261	241	502	0	0	5	5	0	549	0	0	0	0
%HV	0.6%				0.8%				0.0%				0.0%				0.4%				
PHF	0.48				0.44				0.45				0.00				0.46				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	145	18	1	164	0	28	96	124	61	4	196	261	0	0	0	0	549
%HV	0.0%	5.6%	0.0%	0.6%	0.0%	3.6%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
PHF	0.45	0.75	0.25	0.48	0.00	0.58	0.41	0.44	0.41	0.33	0.45	0.45	0.00	0.00	0.00	0.00	0.46

Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	145	18	1	0	0	28	96	0	61	4	196	0	0	0	0	0	549	0	0	0	0
7:15 AM	86	19	1	0	0	27	59	0	50	1	127	0	0	0	0	0	370	0	0	0	0
7:30 AM	26	18	2	2	0	21	11	0	13	0	25	0	0	0	0	0	116	0	0	0	0
7:45 AM	54	18	1	2	0	18	18	0	13	0	48	0	0	0	0	0	170	0	0	0	0
8:00 AM	97	16	1	2	0	14	30	0	21	0	110	0	0	0	0	0	289	0	0	0	0

Heavy Vehicle Summary

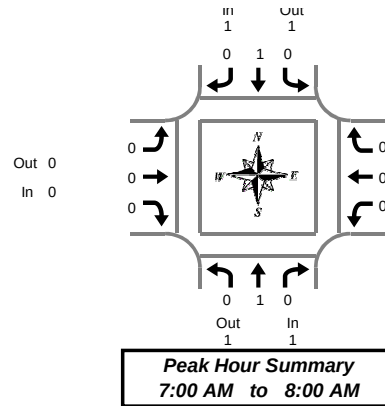


Clay Carney
(503) 833-2740

NW 10th St & NW Upas Ave

Thursday, September 26, 2019

7:00 AM to 9:00 AM



Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:10 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:35 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:20 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	1	1	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	1	1	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Upas Ave			Westbound NW Upas Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	1	2	1	1	2	0	0	0	0	0	0	2
PHF	0.25			0.25			0.00			0.00			0.50

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
PHF	0.00	0.25	0.00	0.25	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
7:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1

Peak Hour Summary

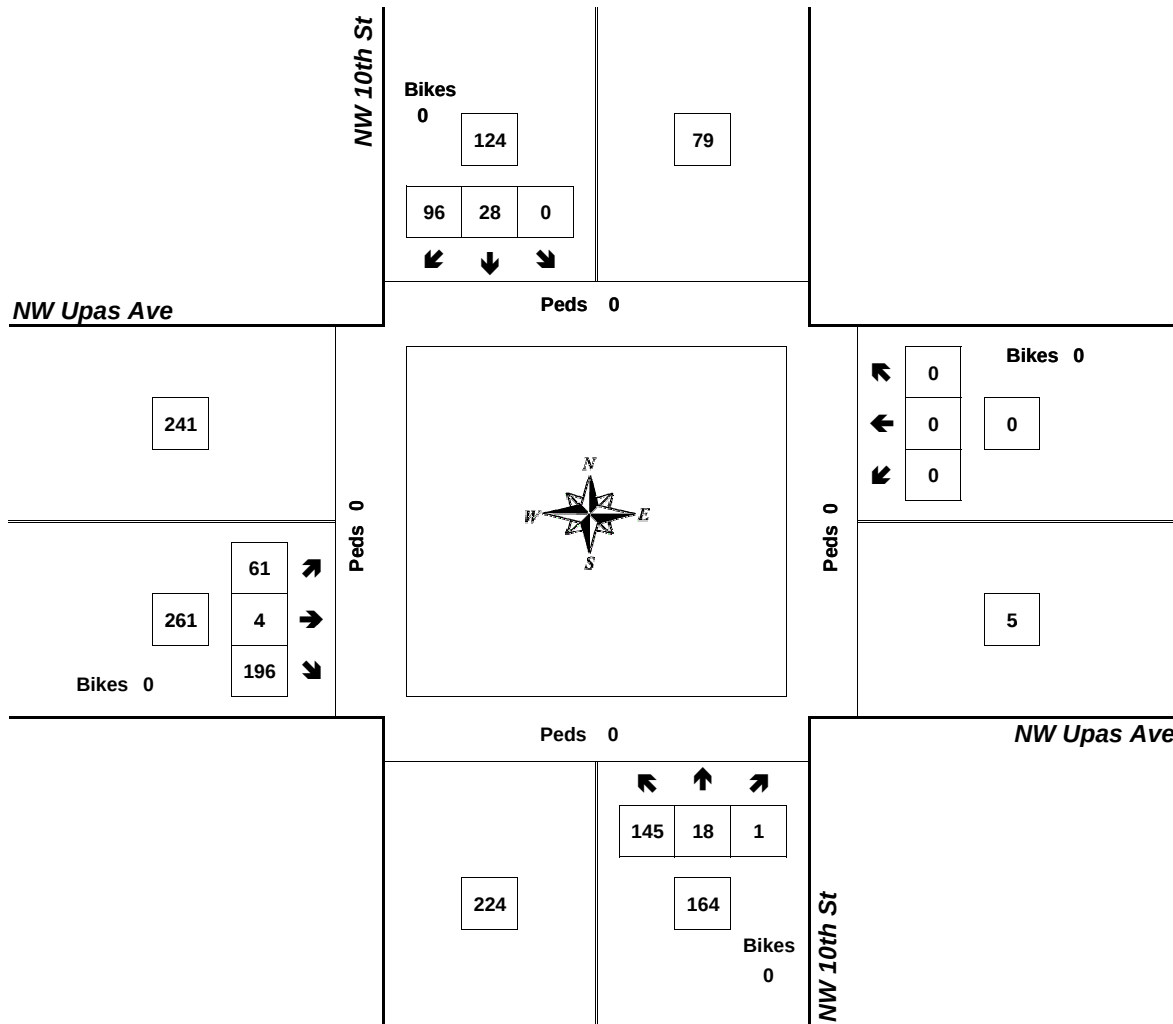


Clay Carney
(503) 833-2740

NW 10th St & NW Upas Ave

7:00 AM to 8:00 AM

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.45	0.0%	261
WB	0.00	0.0%	0
NB	0.48	0.6%	164
SB	0.44	0.8%	124
Intersection	0.46	0.4%	549

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

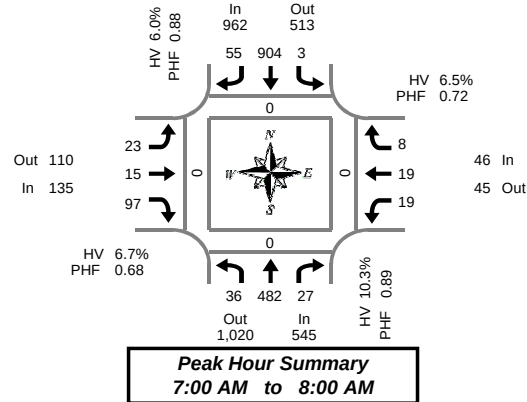


Clay Carney
(503) 833-2740

Hwy 97 & NW Pershall Way

Thursday, September 26, 2019

7:00 AM to 9:00 AM



5-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	1	45	1	0	1	80	4	0	1	1	6	0	1	4	0	0	145	0	0	0	0
7:05 AM	0	29	1	0	1	80	11	0	0	0	7	0	2	2	0	0	133	0	0	0	0
7:10 AM	5	44	3	0	0	71	6	0	1	2	8	0	2	4	1	0	147	0	0	0	0
7:15 AM	4	33	2	0	0	88	11	0	3	0	10	0	0	4	1	0	156	0	0	0	0
7:20 AM	6	48	2	0	0	75	13	0	2	2	12	0	2	2	0	0	164	0	0	0	0
7:25 AM	2	39	1	0	0	79	6	0	8	4	9	0	2	1	0	0	151	0	0	0	0
7:30 AM	2	48	5	0	1	82	3	0	3	2	6	0	1	0	0	0	153	0	0	0	0
7:35 AM	4	47	5	0	0	73	0	0	3	2	5	0	2	1	0	0	142	0	0	0	0
7:40 AM	6	33	1	0	0	55	0	0	0	2	7	0	2	0	0	0	106	0	0	0	0
7:45 AM	0	37	2	0	0	94	1	0	1	0	11	0	3	0	2	0	151	0	0	0	0
7:50 AM	2	29	3	0	0	80	0	0	1	0	12	0	1	1	2	0	131	0	0	0	0
7:55 AM	4	50	1	0	0	47	0	0	0	0	4	0	1	0	2	0	109	0	0	0	0
8:00 AM	4	30	1	0	0	65	1	0	0	1	5	0	1	1	0	0	109	0	0	0	0
8:05 AM	3	64	0	0	0	58	0	0	2	0	6	0	0	1	0	0	134	0	0	0	0
8:10 AM	1	37	4	0	0	71	1	0	2	1	6	0	0	0	1	0	124	0	0	0	0
8:15 AM	0	35	5	0	0	66	0	0	0	2	2	0	0	0	0	0	110	0	0	0	0
8:20 AM	5	45	0	0	2	60	2	0	0	1	4	0	1	0	0	0	120	0	0	0	0
8:25 AM	2	60	0	0	1	75	2	0	0	1	2	0	1	2	0	0	146	0	0	0	0
8:30 AM	1	56	1	0	1	55	1	0	0	0	1	0	1	2	0	0	119	0	0	0	0
8:35 AM	5	61	4	0	0	66	3	0	0	0	3	0	1	3	0	0	146	0	0	0	0
8:40 AM	0	47	4	0	0	81	1	0	0	1	6	0	0	0	1	0	141	0	0	0	0
8:45 AM	3	36	2	0	2	76	0	0	0	3	5	0	0	1	0	0	128	0	0	0	0
8:50 AM	2	50	3	0	5	73	1	0	0	0	1	0	1	2	1	0	139	0	0	0	0
8:55 AM	1	45	4	0	0	68	0	0	0	1	6	0	1	1	0	0	127	0	0	0	0
Total Survey	63	1,048	55	0	14	1,718	67	0	27	26	144	0	26	32	11	0	3,231	0	0	0	0

15-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	6	118	5	0	2	231	21	0	2	3	21	0	5	10	1	0	425	0	0	0	0
7:15 AM	12	120	5	0	0	242	30	0	13	6	31	0	4	7	1	0	471	0	0	0	0
7:30 AM	12	128	11	0	1	210	3	0	6	6	18	0	5	1	0	0	401	0	0	0	0
7:45 AM	6	116	6	0	0	221	1	0	2	0	27	0	5	1	6	0	391	0	0	0	0
8:00 AM	8	131	5	0	0	194	2	0	4	2	17	0	1	2	1	0	367	0	0	0	0
8:15 AM	7	140	5	0	3	201	4	0	0	4	8	0	2	2	0	0	376	0	0	0	0
8:30 AM	6	164	9	0	1	202	5	0	0	1	10	0	2	5	1	0	406	0	0	0	0
8:45 AM	6	131	9	0	7	217	1	0	0	4	12	0	2	4	1	0	394	0	0	0	0
Total Survey	63	1,048	55	0	14	1,718	67	0	27	26	144	0	26	32	11	0	3,231	0	0	0	0

Peak Hour Summary 7:00 AM to 8:00 AM

By Approach	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	545	1,020	1,565	0	962	513	1,475	0	135	110	245	0	46	45	91	0	1,688	0	0	0	0
%HV	10.3%				6.0%				6.7%				6.5%				7.5%				
PHF	0.89				0.88				0.68				0.72				0.90				

By Movement	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	36	482	27	545	3	904	55	962	23	15	97	135	19	19	8	46	1,688
%HV	19.4%	7.9%	40.7%	10.3%	0.0%	6.1%	5.5%	6.0%	0.0%	0.0%	9.3%	6.7%	10.5%	0.0%	12.5%	6.5%	7.5%
PHF	0.60	0.89	0.61	0.89	0.38	0.93	0.46	0.88	0.41	0.47	0.78	0.68	0.68	0.48	0.33	0.72	0.90

Rolling Hour Summary 7:00 AM to 9:00 AM

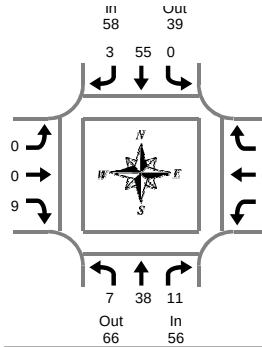
Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	36	482	27	0	3	904	55	0	23	15	97	0	19	19	8	0	1,688	0	0	0	0
7:15 AM	38	495	27	0	1	867	36	0	25	14	93	0	15	11	8	0	1,630	0	0	0	0
7:30 AM	33	515	27	0	4	826	10	0	12	12	70	0	13	6	7	0	1,535	0	0	0	0
7:45 AM	27	551	25	0	4	818	12	0	6	7	62	0	10	10	8	0	1,540	0	0	0	0
8:00 AM	27	566	28	0	11	814	12	0	4	11	47	0	7	13	3	0	1,543	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740

Out 10
In 9



Hwy 97 & NW Pershall Way

Thursday, September 26, 2019

7:00 AM to 9:00 AM

Peak Hour Summary
7:00 AM to 8:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	4	1	6	0	5	0	5	0	0	0	0	0	0	0	0	11
7:05 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
7:10 AM	0	6	1	7	0	5	1	6	0	0	0	0	0	0	0	0	13
7:15 AM	0	1	2	3	0	5	0	5	0	0	1	1	0	0	0	0	9
7:20 AM	0	3	2	5	0	4	1	5	0	0	0	0	0	0	0	0	10
7:25 AM	2	3	1	6	0	4	0	4	0	0	0	0	0	0	0	0	10
7:30 AM	0	3	1	4	0	5	0	5	0	0	0	0	0	0	0	0	9
7:35 AM	3	2	3	8	0	7	0	7	0	0	1	1	1	0	0	1	17
7:40 AM	1	5	0	6	0	2	0	2	0	0	0	0	1	0	0	1	9
7:45 AM	0	5	0	5	0	2	1	3	0	0	3	3	0	0	1	1	12
7:50 AM	0	1	0	1	0	10	0	10	0	0	2	2	0	0	0	0	13
7:55 AM	0	3	0	3	0	4	0	4	0	0	2	2	0	0	0	0	9
8:00 AM	0	2	1	3	0	3	0	3	0	0	1	1	0	0	0	0	7
8:05 AM	2	15	0	17	0	4	0	4	0	0	0	0	0	1	0	1	22
8:10 AM	0	5	2	7	0	7	0	7	0	0	0	0	0	0	0	0	14
8:15 AM	0	7	3	10	0	5	0	5	0	0	0	0	0	0	0	0	15
8:20 AM	1	1	0	2	0	4	0	4	0	0	1	1	0	0	0	0	7
8:25 AM	1	7	0	8	0	5	0	5	0	0	0	0	0	0	0	0	13
8:30 AM	0	5	1	6	0	2	0	2	0	0	0	0	0	0	0	0	8
8:35 AM	0	6	1	7	0	9	0	9	0	0	1	1	0	0	0	0	17
8:40 AM	0	8	0	8	0	10	0	10	0	0	0	0	0	0	0	0	18
8:45 AM	1	2	2	5	1	10	0	11	0	0	0	0	0	0	0	0	16
8:50 AM	0	6	0	6	0	5	0	5	0	0	0	0	0	0	0	0	11
8:55 AM	1	5	3	9	0	8	0	8	0	0	1	1	0	0	0	0	18
Total Survey	13	107	24	144	1	127	3	131	0	0	13	13	2	1	1	4	292

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	12	2	15	0	12	1	13	0	0	0	0	0	0	0	0	28
7:15 AM	2	7	5	14	0	13	1	14	0	0	1	1	0	0	0	0	29
7:30 AM	4	10	4	18	0	14	0	14	0	0	1	1	2	0	0	2	35
7:45 AM	0	9	0	9	0	16	1	17	0	0	7	7	0	0	1	1	34
8:00 AM	2	22	3	27	0	14	0	14	0	0	1	1	0	1	0	1	43
8:15 AM	2	15	3	20	0	14	0	14	0	0	1	1	0	0	0	0	35
8:30 AM	0	19	2	21	0	21	0	21	0	0	1	1	0	0	0	0	43
8:45 AM	2	13	5	20	1	23	0	24	0	0	1	1	0	0	0	0	45
Total Survey	13	107	24	144	1	127	3	131	0	0	13	13	2	1	1	4	292

Heavy Vehicle Peak Hour Summary

7:00 AM to 8:00 AM

By Approach	Northbound Hwy 97			Southbound Hwy 97			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	56	66	122	58	39	97	9	10	19	3	11	14	126
PHF	0.74			0.85			0.32			0.25			0.83

By Movement	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	7	38	11	56	0	55	3	58	0	0	9	9	2	0	1	3	126
PHF	0.35	0.79	0.55	0.74	0.00	0.86	0.38	0.85	0.00	0.00	0.32	0.32	0.25	0.00	0.25	0.25	0.83

Heavy Vehicle Rolling Hour Summary

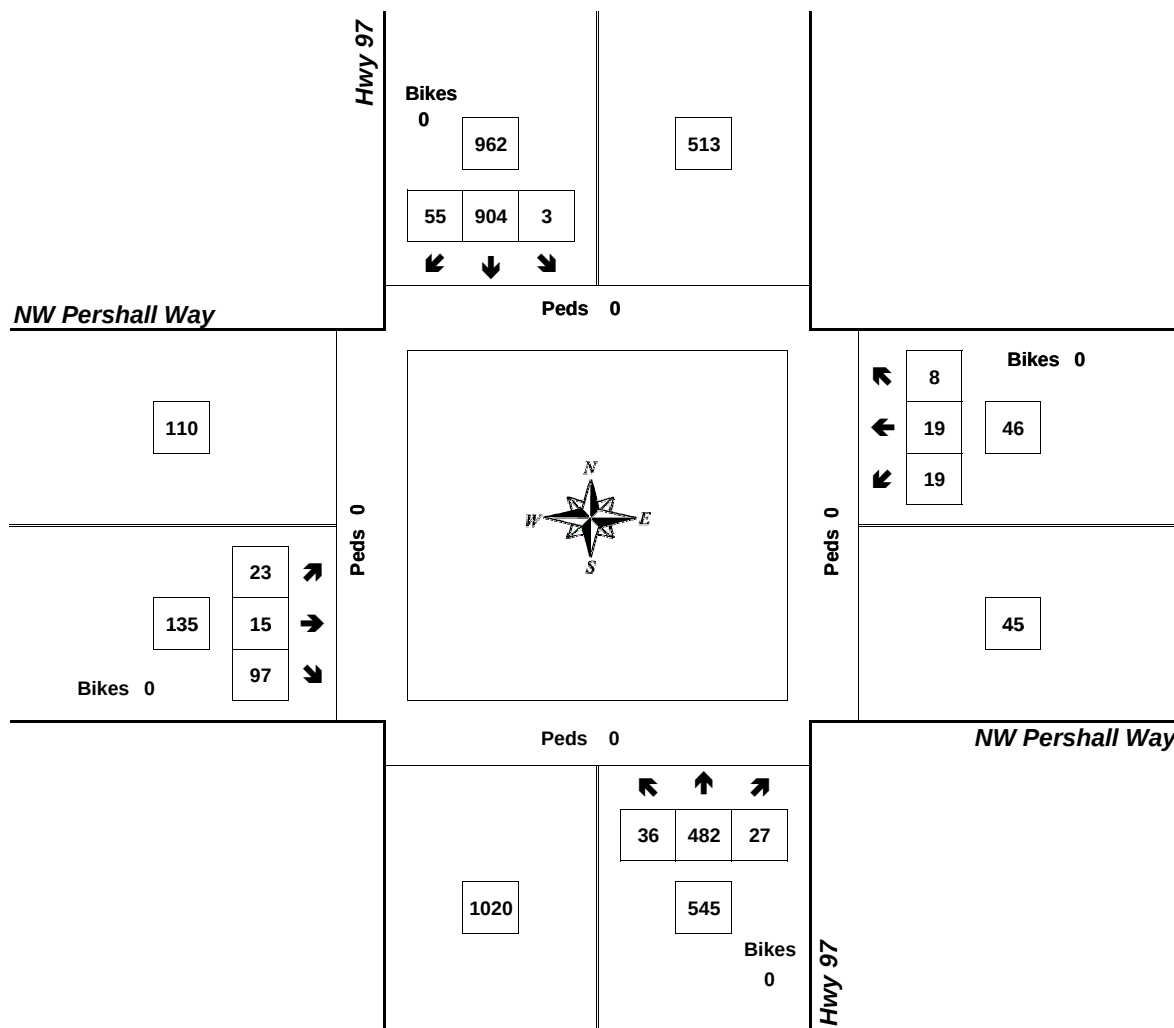
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	7	38	11	56	0	55	3	58	0	0	9	9	2	0	1	3	126
7:15 AM	8	48	12	68	0	57	2	59	0	0	10	10	2	1	1	4	141
7:30 AM	8	56	10	74	0	58	1	59	0	0	10	10	2	1	1	4	147
7:45 AM	4	65	8	77	0	65	1	66	0	0	10	10	0	1	1	2	155
8:00 AM	6	69	13	88	1	72	0	73	0	0	4	4	0	1	0	1	166

All Traffic Data
Services Inc.

Hwy 97 & NW Pershall Way

Thursday, September 26, 2019



Approach	PHF	HV%	Volume
EB	0.68	6.7%	135
WB	0.72	6.5%	46
NB	0.89	10.3%	545
SB	0.88	6.0%	962
Intersection	0.90	7.5%	1,688

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Total Vehicle Summary



Clay Carney
(503) 833-2740

NW 6th St & NW Kingwood Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	4	49	3	0	0	51	0	0	0	1	1	0	4	0	1	0	114	0	0	0	0
4:05 PM	0	76	0	0	0	57	1	0	0	0	0	0	0	0	3	0	137	0	0	0	0
4:10 PM	2	68	1	0	0	61	0	0	1	0	2	0	0	0	1	0	136	0	0	0	0
4:15 PM	3	64	3	0	0	47	2	0	0	0	0	0	3	0	2	0	124	0	0	0	0
4:20 PM	2	67	1	0	0	58	0	0	1	1	1	0	0	0	0	0	131	0	0	1	0
4:25 PM	0	47	1	0	0	69	0	0	1	0	1	1	1	1	2	0	122	0	0	1	0
4:30 PM	0	58	5	0	0	44	0	0	0	0	1	0	0	0	2	0	110	0	0	0	0
4:35 PM	1	73	2	0	0	50	0	0	0	0	2	0	1	0	0	0	129	0	0	0	1
4:40 PM	0	62	0	0	0	30	1	0	1	0	2	0	2	0	2	0	100	0	0	0	4
4:45 PM	0	64	0	0	0	54	1	0	1	0	0	0	2	0	2	0	124	0	0	0	0
4:50 PM	4	80	1	0	0	47	0	0	0	0	2	0	1	0	0	0	135	0	0	0	0
4:55 PM	3	74	1	1	0	37	3	0	0	0	0	1	2	0	0	0	120	0	0	0	0
5:00 PM	3	62	0	0	0	48	1	0	0	0	1	0	2	0	0	0	117	0	0	0	1
5:05 PM	2	74	3	0	0	47	2	0	0	0	0	0	3	0	2	0	133	0	0	0	0
5:10 PM	1	72	2	0	1	47	2	0	0	0	1	0	0	0	1	0	127	0	0	1	0
5:15 PM	4	61	1	0	0	49	1	0	0	0	1	0	4	0	1	0	122	0	0	0	0
5:20 PM	0	64	1	0	0	60	1	0	0	0	1	0	3	0	1	0	131	0	0	0	2
5:25 PM	2	55	0	0	0	49	2	0	0	0	0	0	2	0	2	0	112	0	0	0	0
5:30 PM	1	75	0	0	1	39	0	0	0	0	0	0	2	0	0	0	118	0	0	0	0
5:35 PM	2	83	3	0	0	40	0	0	0	0	1	0	0	0	5	0	134	0	0	1	0
5:40 PM	2	79	2	0	0	37	0	0	0	0	1	0	2	0	1	0	124	0	0	0	2
5:45 PM	0	52	2	0	1	58	0	0	0	0	1	0	0	0	4	0	118	0	0	0	0
5:50 PM	0	56	0	0	0	46	1	1	0	0	0	0	3	0	0	0	106	0	0	0	0
5:55 PM	0	62	1	0	0	40	0	1	1	0	0	1	0	0	2	0	106	0	0	0	0
Total Survey	36	1,577	33	1	3	1,165	18	2	6	2	19	3	37	0	34	0	2,930	0	0	4	10

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	6	193	4	0	0	169	1	0	1	1	3	0	4	0	5	0	387	0	0	0	0
4:15 PM	5	178	5	0	0	174	2	0	2	1	2	1	4	0	4	0	377	0	0	2	0
4:30 PM	1	193	7	0	0	124	1	0	1	0	5	0	3	0	4	0	339	0	0	0	5
4:45 PM	7	218	2	1	0	138	4	0	1	0	2	1	5	0	2	0	379	0	0	0	0
5:00 PM	6	208	5	0	1	142	5	0	0	0	2	0	5	0	3	0	377	0	0	1	1
5:15 PM	6	180	2	0	0	158	4	0	0	0	2	0	9	0	4	0	365	0	0	0	2
5:30 PM	5	237	5	0	1	116	0	0	0	0	2	0	4	0	6	0	376	0	0	1	2
5:45 PM	0	170	3	0	1	144	1	2	1	0	1	1	3	0	6	0	330	0	0	0	0
Total Survey	36	1,577	33	1	3	1,165	18	2	6	2	19	3	37	0	34	0	2,930	0	0	4	10

Peak Hour Summary

4:45 PM to 5:45 PM

By Approach	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	881	585	1,466	1	569	859	1,428	0	9	37	46	1	38	16	54	0	1,497	0	0	2	5
%HV	1.2%				0.7%				0.0%				0.0%				1.0%				
PHF	0.89				0.88				0.75				0.73				0.98				

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	24	843	14	881	2	554	13	569	1	0	8	9	23	0	15	38	1,497
%HV	0.0%	1.3%	0.0%	1.2%	0.0%	0.7%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%
PHF	0.60	0.89	0.58	0.89	0.50	0.88	0.54	0.88	0.25	0.00	0.67	0.75	0.64	0.00	0.54	0.73	0.98

Rolling Hour Summary

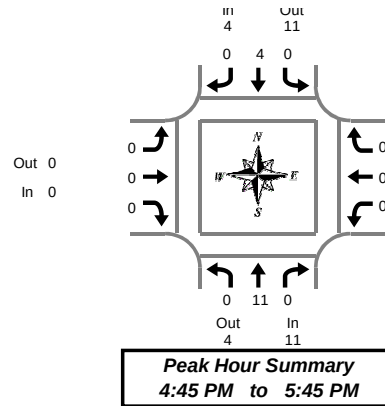
4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	19	782	18	1	0	605	8	0	5	2	12	2	16	0	15	0	1,482	0	0	2	5
4:15 PM	19	797	19	1	1	578	12	0	4	1	11	2	17	0	13	0	1,472	0	0	3	6
4:30 PM	20	799	16	1	1	562	14	0	2	0	11	1	22	0	13	0	1,460	0	0	1	8
4:45 PM	24	843	14	1	2	554	13	0	1	0	8	1	23	0	15	0	1,497	0	0	2	5
5:00 PM	17	795	15	0	3	560	10	2	1	0	7	1	21	0	19	0	1,448	0	0	2	5

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 6th St & NW Kingwood Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:05 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
4:20 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:55 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:10 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:25 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:35 PM	0	3	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
5:40 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Survey	0	18	0	18	0	10	0	10	0	0	0	0	0	0	0	0	28

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
4:15 PM	0	2	0	2	0	3	0	3	0	0	0	0	0	0	0	0	5
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
5:00 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
5:30 PM	0	6	0	6	0	1	0	1	0	0	0	0	0	0	0	0	7
5:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total Survey	0	18	0	18	0	10	0	10	0	0	0	0	0	0	0	0	28

Heavy Vehicle Peak Hour Summary

4:45 PM to 5:45 PM

By Approach	Northbound NW 6th St			Southbound NW 6th St			Eastbound NW Kingwood Ave			Westbound NW Kingwood Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	11	4	15	4	11	15	0	0	0	0	0	0	15
PHF	0.46			0.50			0.00			0.00			0.54

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	11	0	11	0	4	0	4	0	0	0	0	0	0	0	0	15
PHF	0.00	0.46	0.00	0.46	0.00	0.50	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.54

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Kingwood Ave				Westbound NW Kingwood Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	6	0	6	0	7	0	7	0	0	0	0	0	0	0	0	13
4:15 PM	0	7	0	7	0	5	0	5	0	0	0	0	0	0	0	0	12
4:30 PM	0	5	0	5	0	4	0	4	0	0	0	0	0	0	0	0	9
4:45 PM	0	11	0	11	0	4	0	4	0	0	0	0	0	0	0	0	15
5:00 PM	0	12	0	12	0	3	0	3	0	0	0	0	0	0	0	0	15

Peak Hour Summary

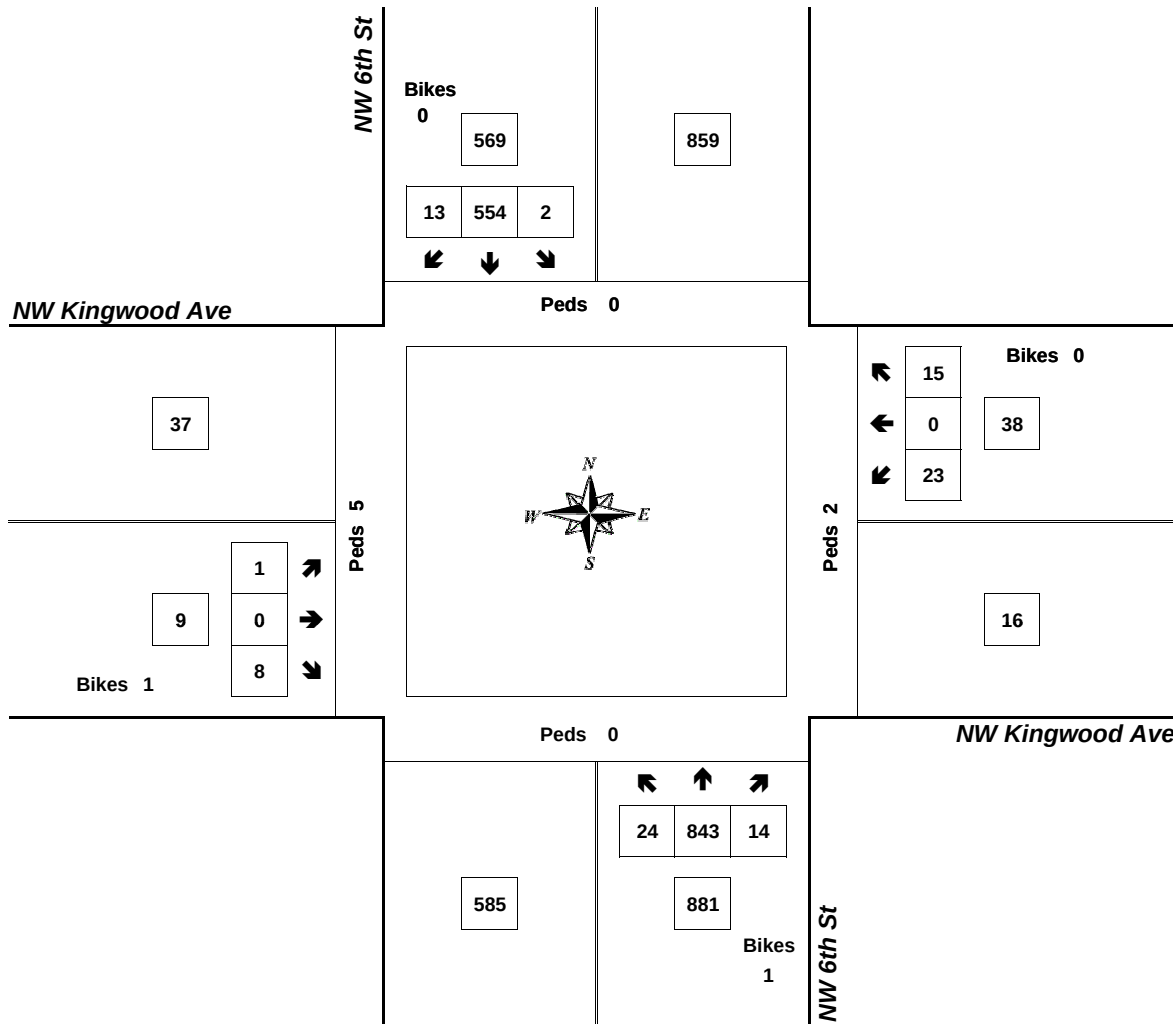


Clay Carney
(503) 833-2740

NW 6th St & NW Kingwood Ave

4:45 PM to 5:45 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.75	0.0%	9
WB	0.73	0.0%	38
NB	0.89	1.2%	881
SB	0.88	0.7%	569
Intersection	0.98	1.0%	1,497

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

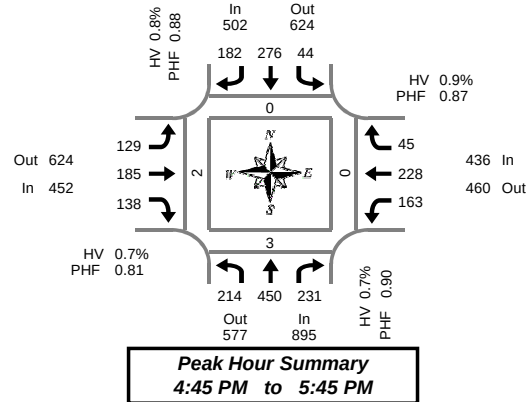


Clay Carney
(503) 833-2740

NW 6th St & NW Maple Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	13	29	14	0	2	20	8	0	4	14	12	0	16	12	4	1	148	0	1	0	0
4:05 PM	18	32	23	0	7	30	10	0	11	13	14	0	11	22	5	0	196	0	1	0	0
4:10 PM	8	43	25	0	5	20	15	0	13	11	9	0	31	19	4	0	203	1	0	0	0
4:15 PM	13	39	14	0	5	24	8	0	8	17	16	0	8	19	4	0	175	0	0	0	0
4:20 PM	18	39	16	0	2	32	15	0	11	12	15	0	20	20	7	0	207	0	0	0	0
4:25 PM	14	21	19	0	6	24	12	0	10	12	14	0	17	21	1	0	171	0	0	0	0
4:30 PM	10	27	20	0	4	31	22	0	6	7	10	0	10	12	3	0	162	0	0	0	3
4:35 PM	16	34	10	0	2	24	13	0	8	12	17	0	15	25	6	0	182	0	0	0	0
4:40 PM	16	34	15	0	6	13	11	0	10	15	11	0	15	16	3	0	165	1	0	0	0
4:45 PM	17	36	14	0	2	27	17	0	6	14	13	0	12	29	5	0	192	0	0	0	0
4:50 PM	12	33	24	0	7	22	9	0	9	18	7	0	16	13	5	0	175	0	0	0	0
4:55 PM	22	42	30	0	3	23	11	0	7	13	10	0	11	22	4	1	198	0	0	0	0
5:00 PM	16	30	14	0	4	23	16	0	13	6	6	0	23	23	4	0	178	0	0	0	0
5:05 PM	20	45	20	0	8	18	17	0	10	11	10	1	15	17	6	0	197	0	0	0	2
5:10 PM	18	27	16	0	3	22	11	1	14	19	19	0	16	16	5	0	186	0	3	0	0
5:15 PM	16	39	20	0	6	28	17	0	10	15	13	0	14	14	2	0	194	0	0	0	0
5:20 PM	13	45	17	0	2	31	15	0	15	19	13	0	14	23	6	0	213	0	0	0	0
5:25 PM	16	27	18	0	4	27	12	0	13	17	16	0	12	16	1	0	179	0	0	0	0
5:30 PM	21	37	17	0	2	17	15	0	14	22	10	0	15	18	2	0	190	0	0	0	0
5:35 PM	27	49	26	1	1	21	22	0	8	12	13	0	3	17	3	0	202	0	0	0	0
5:40 PM	16	40	15	0	2	17	20	0	10	19	8	0	12	20	2	0	181	0	0	0	0
5:45 PM	17	25	16	0	2	21	4	0	8	20	16	0	18	25	3	0	175	0	1	0	0
5:50 PM	14	27	18	0	2	23	19	0	11	15	9	0	11	12	1	0	162	0	2	0	0
5:55 PM	12	31	18	0	5	15	16	0	8	20	8	0	23	19	3	0	178	0	0	0	1
Total Survey	383	831	439	1	92	553	335	1	237	353	289	1	358	450	89	2	4,409	2	8	0	6

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	39	104	62	0	14	70	33	0	28	38	35	0	58	53	13	1	547	1	2	0	0
4:15 PM	45	99	49	0	13	80	35	0	29	41	45	0	45	60	12	0	553	0	0	0	0
4:30 PM	42	95	45	0	12	68	46	0	24	34	38	0	40	53	12	0	509	1	0	0	3
4:45 PM	51	111	68	0	12	72	37	0	22	45	30	0	39	64	14	1	565	0	0	0	0
5:00 PM	54	102	50	0	15	63	44	1	37	36	35	1	54	56	15	0	561	0	3	0	2
5:15 PM	45	111	55	0	12	86	44	0	38	51	42	0	40	53	9	0	586	0	0	0	0
5:30 PM	64	126	58	1	5	55	57	0	32	53	31	0	30	55	7	0	573	0	0	0	0
5:45 PM	43	83	52	0	9	59	39	0	27	55	33	0	52	56	7	0	515	0	3	0	1
Total Survey	383	831	439	1	92	553	335	1	237	353	289	1	358	450	89	2	4,409	2	8	0	6

Peak Hour Summary

4:45 PM to 5:45 PM

By Approach	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	895	577	1,472	1	502	624	1,126	1	452	624	1,076	1	436	460	896	1	2,285	0	3	0	2
%HV	0.7%				0.8%				0.7%				0.9%				0.7%				
PHF	0.90				0.88				0.81				0.87				0.96				

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	214	450	231	895	44	276	182	502	129	185	138	452	163	228	45	436	2,285
%HV	1.4%	0.7%	0.0%	0.7%	2.3%	0.4%	1.1%	0.8%	0.8%	0.5%	0.7%	0.7%	1.2%	0.9%	0.0%	0.9%	0.7%
PHF	0.84	0.89	0.85	0.90	0.65	0.80	0.80	0.88	0.77	0.80	0.77	0.81	0.75	0.89	0.75	0.87	0.96

Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	177	409	224	0	51	290	151	0	103	158	148	0	182	230	51	2	2,174	2	2	0	3
4:15 PM	192	407	212	0	52	283	162	1	112	156	148	1	178	233	53	1	2,188	1	3	0	5
4:30 PM	192	419	218	0	51	289	171	1	121	166	145	1	173	226	50	1	2,221	1	3	0	5
4:45 PM	214	450	231	1	44	276	182	1	129	185	138	1	163	228	45	1	2,285	0	3	0	2
5:00 PM	206	422	215	1	41	263	184	1	134	195	141	1	176	220	38	0	2,235	0	6	0	3

Heavy Vehicle Summary

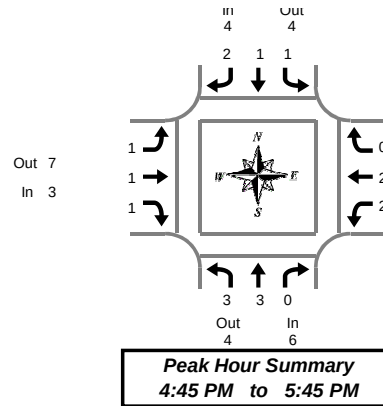


Clay Carney
(503) 833-2740

NW 6th St & NW Maple Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	2
4:05 PM	0	0	1	1	1	0	1	2	0	1	0	1	2	0	0	2	6
4:10 PM	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	2	3
4:15 PM	0	0	1	1	2	0	0	2	0	0	1	1	0	1	0	1	5
4:20 PM	0	1	0	1	0	0	0	0	1	0	3	4	0	1	0	1	6
4:25 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
4:35 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
4:40 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:55 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
5:35 PM	3	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
5:40 PM	0	1	0	1	0	0	2	2	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	1	1	0	0	0	0	0	1	1	2	0	0	1	1	4
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	1	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total Survey	4	4	6	14	8	3	4	15	2	3	6	11	5	6	1	12	52

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	2	2	2	0	2	4	0	1	0	1	3	1	0	4	11
4:15 PM	0	1	2	3	3	0	0	3	1	0	4	5	0	2	0	2	13
4:30 PM	1	0	0	1	1	2	0	3	0	0	0	0	0	1	0	1	5
4:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
5:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	1	2	0	3	5
5:30 PM	3	2	0	5	0	0	2	2	0	0	0	0	1	0	0	1	8
5:45 PM	0	0	2	2	1	0	0	1	0	1	1	2	0	0	1	1	6
Total Survey	4	4	6	14	8	3	4	15	2	3	6	11	5	6	1	12	52

Heavy Vehicle Peak Hour Summary 4:45 PM to 5:45 PM

By Approach	Northbound NW 6th St			Southbound NW 6th St			Eastbound NW Maple Ave			Westbound NW Maple Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	6	4	10	4	4	8	3	7	10	4	2	6	17
PHF	0.30			0.50			0.38			0.25			0.53

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	3	3	0	6	1	1	2	4	1	1	1	3	2	2	0	4	17
PHF	0.25	0.38	0.00	0.30	0.25	0.25	0.25	0.50	0.25	0.25	0.25	0.38	0.25	0.25	0.00	0.25	0.53

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	2	4	7	6	3	2	11	1	1	4	6	3	4	0	7	31
4:15 PM	1	2	2	5	4	3	0	7	2	1	4	7	0	3	0	3	22
4:30 PM	1	1	0	2	2	3	0	5	1	1	1	3	1	3	0	4	14
4:45 PM	3	3	0	6	1	1	2	4	1	1	1	3	2	2	0	4	17
5:00 PM	3	2	2	7	2	0	2	4	1	2	2	5	2	2	1	5	21

Peak Hour Summary

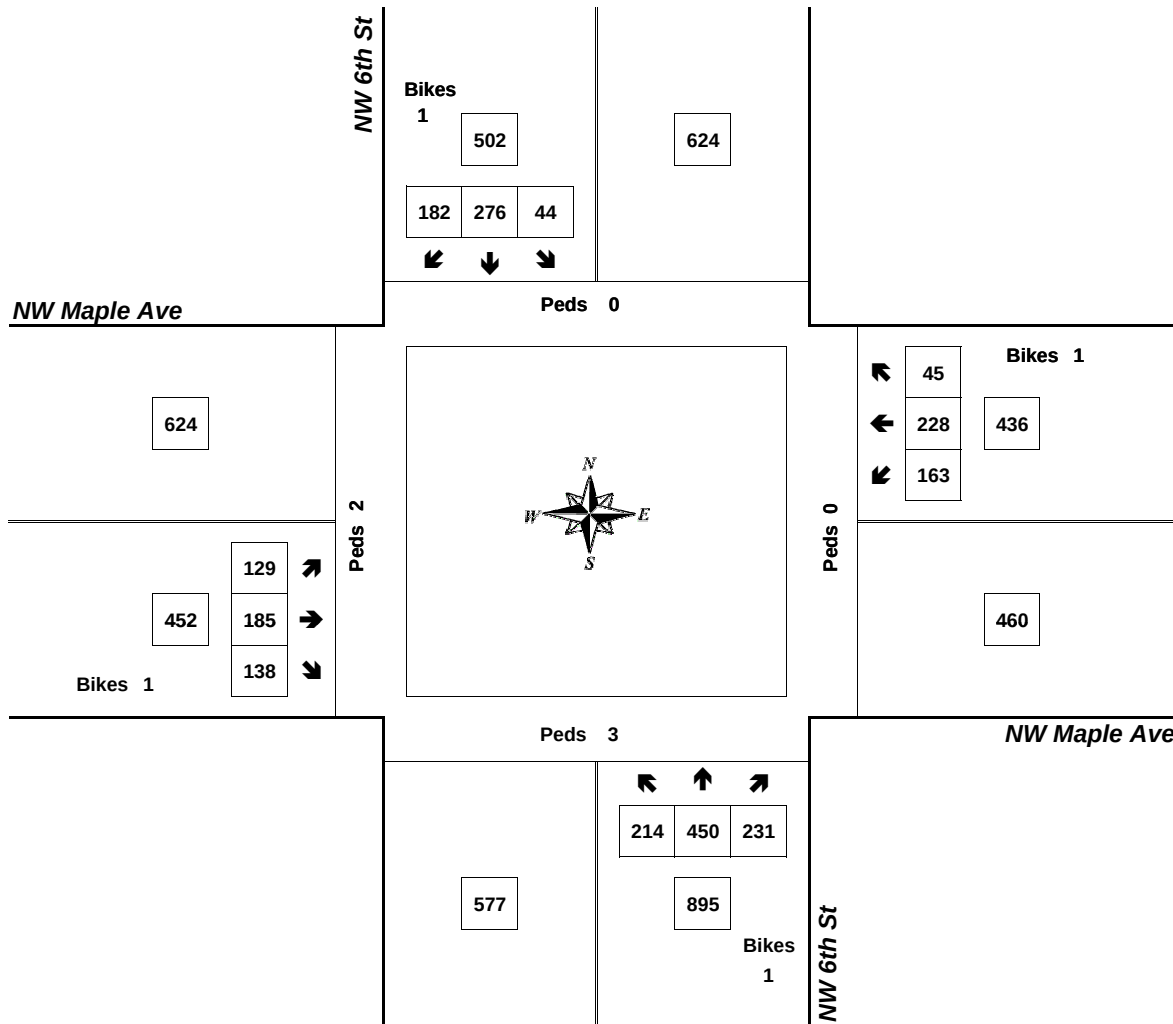


Clay Carney
(503) 833-2740

NW 6th St & NW Maple Ave

4:45 PM to 5:45 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.81	0.7%	452
WB	0.87	0.9%	436
NB	0.90	0.7%	895
SB	0.88	0.8%	502
Intersection	0.96	0.7%	2,285

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

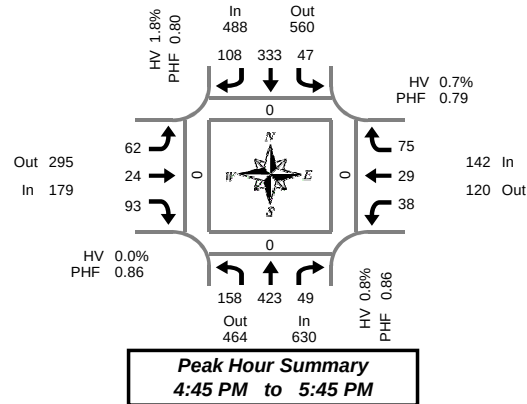


Clay Carney
(503) 833-2740

NW 6th St & NW Quince Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	9	30	3	0	6	16	5	0	6	1	7	0	5	1	8	0	97	0	0	0	0
4:05 PM	14	32	2	0	8	24	2	0	6	0	6	0	7	1	4	0	106	0	0	0	0
4:10 PM	13	28	3	0	5	23	4	0	2	0	9	0	2	1	9	0	99	0	0	0	0
4:15 PM	7	39	8	0	2	32	6	3	3	1	6	0	3	1	4	0	112	0	0	0	0
4:20 PM	14	32	8	0	6	29	11	0	4	2	3	0	5	2	7	0	123	0	0	0	0
4:25 PM	7	25	0	0	4	31	9	0	6	2	12	0	5	0	3	1	104	0	0	0	0
4:30 PM	7	26	1	0	8	32	7	0	7	0	5	0	6	4	7	0	110	0	0	0	0
4:35 PM	13	36	6	0	5	22	8	0	3	2	3	0	4	3	6	0	111	0	0	0	0
4:40 PM	13	31	1	0	4	25	13	0	6	0	4	0	4	1	9	0	111	0	0	0	0
4:45 PM	13	25	5	0	3	28	1	0	7	2	10	0	5	2	9	0	110	0	0	0	0
4:50 PM	10	18	4	0	1	25	4	0	2	2	8	0	2	2	4	0	82	0	0	0	0
4:55 PM	4	31	5	0	8	20	14	0	6	4	6	0	3	1	0	0	102	0	0	0	0
5:00 PM	16	30	6	0	1	28	8	0	4	0	7	0	2	4	8	0	114	0	0	0	0
5:05 PM	18	40	2	0	4	31	7	0	5	2	9	0	2	4	11	0	135	0	0	0	0
5:10 PM	9	38	5	0	5	29	9	0	4	1	9	0	5	1	7	0	122	0	0	0	0
5:15 PM	19	43	6	0	8	31	8	0	6	1	9	0	6	2	7	0	146	0	0	0	0
5:20 PM	17	41	5	0	3	37	11	0	4	1	9	0	5	1	4	0	138	0	0	0	0
5:25 PM	12	31	0	0	5	36	14	0	8	3	10	0	2	5	4	0	130	0	0	0	0
5:30 PM	14	40	6	0	1	23	12	0	5	5	7	0	2	1	9	0	125	0	0	0	0
5:35 PM	12	46	1	0	4	22	9	0	6	2	4	0	2	3	8	0	119	0	0	0	0
5:40 PM	14	40	4	0	4	23	11	0	5	1	5	0	2	3	4	0	116	0	0	0	0
5:45 PM	10	27	3	0	3	16	9	0	5	1	8	0	5	4	5	0	96	0	0	0	0
5:50 PM	10	33	2	0	3	29	4	0	1	0	2	0	2	1	2	0	89	0	0	0	0
5:55 PM	5	26	6	0	2	20	6	0	2	0	8	2	3	3	3	0	84	0	0	0	0
Total Survey	280	788	92	0	103	632	192	3	113	33	166	2	89	51	142	1	2,681	0	0	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	36	90	8	0	19	63	11	0	14	1	22	0	14	3	21	0	302	0	0	0	0
4:15 PM	28	96	16	0	12	92	26	3	13	5	21	0	13	3	14	1	339	0	0	0	0
4:30 PM	33	93	8	0	17	79	28	0	16	2	12	0	14	8	22	0	332	0	0	0	0
4:45 PM	27	74	14	0	12	73	19	0	15	8	24	0	10	5	13	0	294	0	0	0	0
5:00 PM	43	108	13	0	10	88	24	0	13	3	25	0	9	9	26	0	371	0	0	0	0
5:15 PM	48	115	11	0	16	104	33	0	18	5	28	0	13	8	15	0	414	0	0	0	0
5:30 PM	40	126	11	0	9	68	32	0	16	8	16	0	6	7	21	0	360	0	0	0	0
5:45 PM	25	86	11	0	8	65	19	0	8	1	18	2	10	8	10	0	269	0	0	0	0
Total Survey	280	788	92	0	103	632	192	3	113	33	166	2	89	51	142	1	2,681	0	0	0	0

Peak Hour Summary

4:45 PM to 5:45 PM

By Approach	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	630	464	1,094	0	488	560	1,048	0	179	295	474	0	142	120	262	0	1,439	0	0	0	0
%HV	0.8%				1.8%				0.0%				0.7%				1.0%				
PHF	0.86				0.80				0.86				0.79				0.87				

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	158	423	49	630	47	333	108	488	62	24	93	179	38	29	75	142	1,439
%HV	0.0%	1.2%	0.0%	0.8%	2.1%	2.1%	0.9%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.7%	1.0%
PHF	0.82	0.84	0.77	0.86	0.69	0.80	0.73	0.80	0.82	0.60	0.83	0.86	0.59	0.81	0.72	0.79	0.87

Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	124	353	46	0	60	307	84	3	58	16	79	0	51	19	70	1	1,267	0	0	0	0
4:15 PM	131	371	51	0	51	332	97	3	57	18	82	0	46	25	75	1	1,336	0	0	0	0
4:30 PM	151	390	46	0	55	344	104	0	62	18	89	0	46	30	76	0	1,411	0	0	0	0
4:45 PM	158	423	49	0	47	333	108	0	62	24	93	0	38	29	75	0	1,439	0	0	0	0
5:00 PM	156	435	46	0	43	325	108	0	55	17	87	2	38	32	72	0	1,414	0	0	0	0

Heavy Vehicle Summary

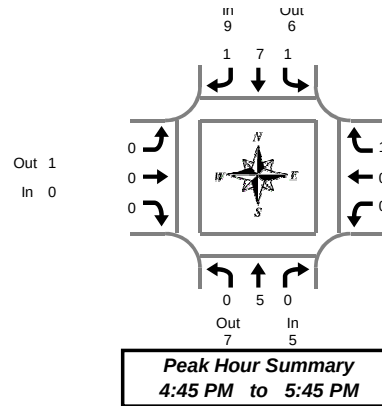


Clay Carney
(503) 833-2740

NW 6th St & NW Quince Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
4:05 PM	0	0	0	0	0	1	0	1	1	0	0	1	1	0	0	1	3
4:10 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	0	1	0	1	0	1	1	2	0	0	0	0	0	0	0	0	3
4:25 PM	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:35 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
4:40 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
4:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	1	1	4
5:05 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
5:10 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:35 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:50 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	8	0	8	1	18	3	22	1	0	0	1	2	0	1	3	34

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	4	0	4	1	0	0	1	1	0	0	1	6
4:15 PM	0	1	0	1	0	4	2	6	0	0	0	0	0	0	0	0	7
4:30 PM	0	1	0	1	0	2	0	2	0	0	0	0	1	0	0	1	4
4:45 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
5:00 PM	0	1	0	1	0	3	1	4	0	0	0	0	0	0	1	1	6
5:15 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
5:30 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
5:45 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Survey	0	8	0	8	1	18	3	22	1	0	0	1	2	0	1	3	34

Heavy Vehicle Peak Hour Summary 4:45 PM to 5:45 PM

By Approach	Northbound NW 6th St			Southbound NW 6th St			Eastbound NW Quince Ave			Westbound NW Quince Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	5	7	12	9	6	15	0	1	1	1	1	2	15
PHF	0.42			0.56			0.00			0.25			0.63

By Movement	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	5	0	5	1	7	1	9	0	0	0	0	0	0	1	1	15
PHF	0.00	0.42	0.00	0.42	0.25	0.58	0.25	0.56	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.63

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 6th St				Southbound NW 6th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	0	2	1	11	2	14	1	0	0	1	2	0	0	2	19
4:15 PM	0	3	0	3	1	10	3	14	0	0	0	0	1	0	1	2	19
4:30 PM	0	4	0	4	1	8	1	10	0	0	0	0	1	0	1	2	16
4:45 PM	0	5	0	5	1	7	1	9	0	0	0	0	0	0	1	1	15
5:00 PM	0	6	0	6	0	7	1	8	0	0	0	0	0	0	1	1	15

Peak Hour Summary

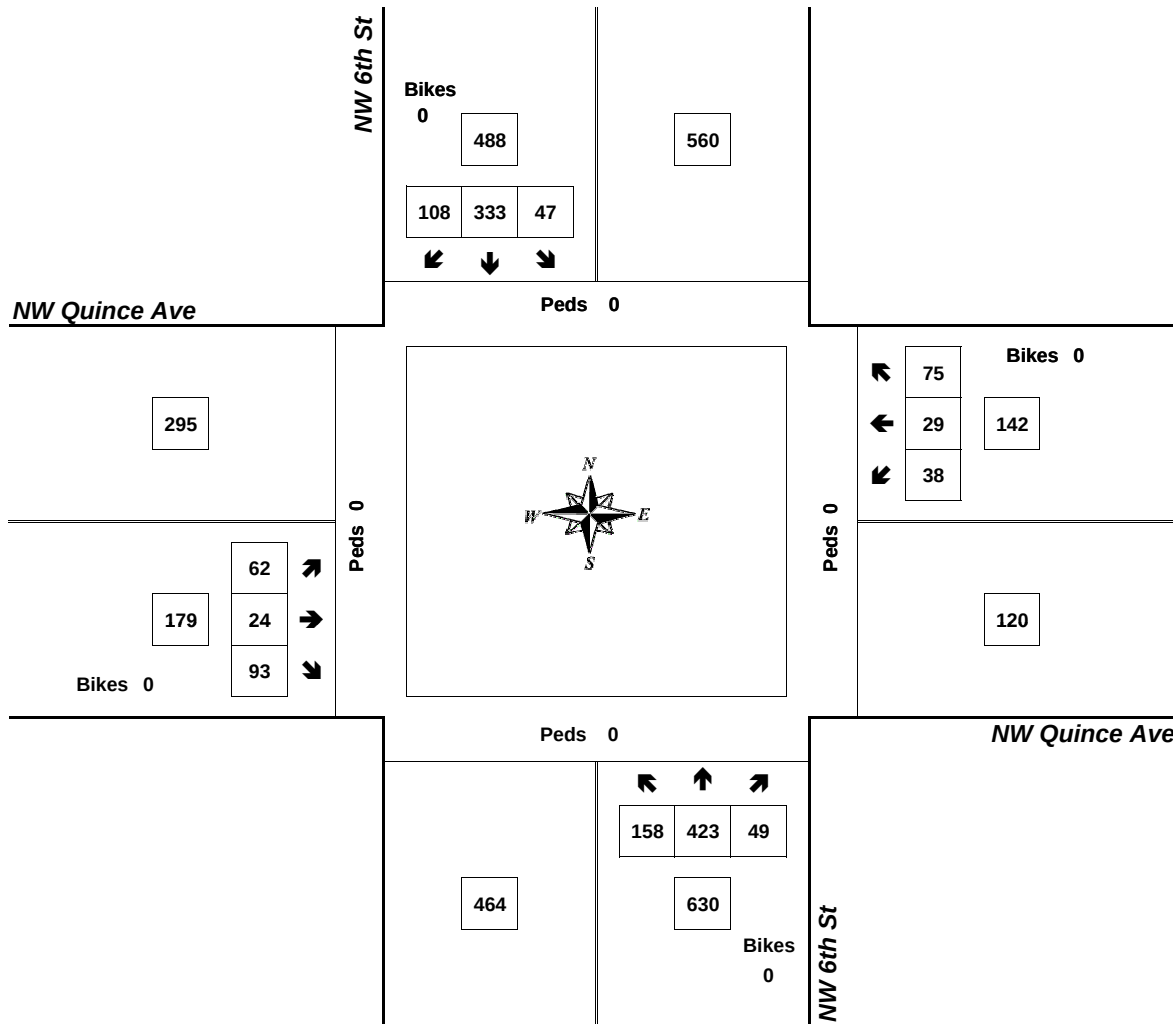


Clay Carney
(503) 833-2740

NW 6th St & NW Quince Ave

4:45 PM to 5:45 PM

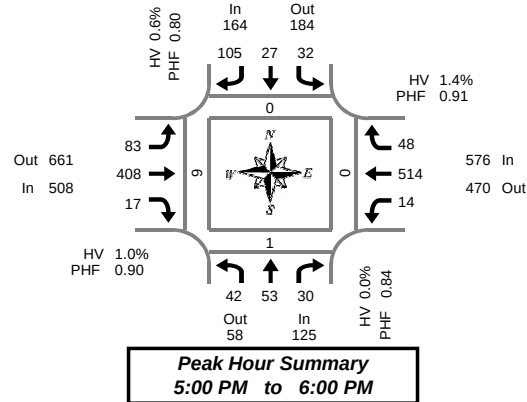
Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.86	0.0%	179
WB	0.79	0.7%	142
NB	0.86	0.8%	630
SB	0.80	1.8%	488
Intersection	0.87	1.0%	1,439

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



NW 10th St & NW Maple Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	1	6	1	0	3	5	6	0	3	33	1	0	0	22	5	0	86	0	2	0	0
4:05 PM	2	4	2	0	1	1	5	0	7	28	2	0	2	41	8	0	103	0	0	0	0
4:10 PM	2	3	2	0	3	2	13	0	3	31	0	0	2	36	4	0	101	0	0	0	0
4:15 PM	3	2	0	0	2	0	5	1	9	35	3	0	2	38	2	0	101	0	0	0	0
4:20 PM	3	3	3	0	3	3	6	0	4	35	0	1	0	41	4	0	105	0	0	0	0
4:25 PM	5	3	2	2	4	2	8	0	3	22	0	0	1	40	2	0	92	0	0	0	0
4:30 PM	6	5	1	0	4	1	3	0	4	26	1	0	1	47	3	0	102	0	0	0	0
4:35 PM	1	2	3	0	1	1	2	0	11	29	2	0	2	43	2	0	99	0	1	0	0
4:40 PM	1	1	2	1	2	5	11	0	10	29	1	0	0	39	2	0	103	0	0	0	0
4:45 PM	4	1	1	0	4	7	13	0	2	28	0	0	0	46	1	0	107	1	0	0	0
4:50 PM	5	3	1	1	1	2	7	0	9	31	0	0	2	45	3	0	109	0	0	0	0
4:55 PM	3	1	0	0	2	1	10	0	6	29	1	0	3	41	4	0	101	0	0	0	0
5:00 PM	6	1	0	0	1	3	10	1	10	26	0	0	1	41	7	0	106	0	0	0	0
5:05 PM	4	6	3	0	7	3	4	0	8	33	3	0	0	41	5	0	117	0	0	0	1
5:10 PM	4	3	2	0	3	3	14	0	7	39	1	0	0	41	4	0	121	0	0	0	0
5:15 PM	7	4	3	2	2	2	13	0	6	34	3	0	3	45	2	1	124	0	0	0	1
5:20 PM	1	7	2	0	4	4	6	0	7	41	3	0	0	39	2	0	116	0	0	0	0
5:25 PM	3	2	1	0	3	4	13	0	2	43	0	0	1	49	3	0	124	0	0	0	0
5:30 PM	5	7	1	0	1	1	6	0	5	34	0	0	1	45	7	0	113	0	0	0	1
5:35 PM	3	6	6	0	1	0	7	0	10	30	2	0	2	45	5	0	117	0	1	0	0
5:40 PM	5	1	3	0	3	3	13	0	3	25	1	0	3	41	1	0	102	0	0	0	6
5:45 PM	1	9	0	2	3	2	8	0	7	35	0	0	0	43	2	0	110	0	0	0	0
5:50 PM	1	3	4	0	3	2	5	0	8	31	4	0	1	45	3	0	110	0	0	0	0
5:55 PM	2	4	5	0	1	0	6	0	10	37	0	0	2	39	7	0	113	0	0	0	0
Total Survey	78	87	48	8	62	57	194	2	154	764	28	1	29	993	88	1	2,582	1	4	0	9

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	5	13	5	0	7	8	24	0	13	92	3	0	4	99	17	0	290	0	2	0	0
4:15 PM	11	8	5	2	9	5	19	1	16	92	3	1	3	119	8	0	298	0	0	0	0
4:30 PM	8	8	6	1	7	7	16	0	25	84	4	0	3	129	7	0	304	0	1	0	0
4:45 PM	12	5	2	1	7	10	30	0	17	88	1	0	5	132	8	0	317	1	0	0	0
5:00 PM	14	10	5	0	11	9	28	1	25	98	4	0	1	123	16	0	344	0	0	0	1
5:15 PM	11	13	6	2	9	10	32	0	15	118	6	0	4	133	7	1	364	0	0	0	1
5:30 PM	13	14	10	0	5	4	26	0	18	89	3	0	6	131	13	0	332	0	1	0	7
5:45 PM	4	16	9	2	7	4	19	0	25	103	4	0	3	127	12	0	333	0	0	0	0
Total Survey	78	87	48	8	62	57	194	2	154	764	28	1	29	993	88	1	2,582	1	4	0	9

Peak Hour Summary

5:00 PM to 6:00 PM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	125	58	183	4	164	184	348	1	508	661	1,169	0	576	470	1,046	1	1,373	0	1	0	9
%HV	0.0%				0.6%				1.0%				1.4%				1.0%				
PHF	0.84				0.80				0.90				0.91				0.94				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	42	53	30	125	32	27	105	164	83	408	17	508	14	514	48	576	1,373
%HV	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.6%	1.2%	1.0%	0.0%	1.0%	0.0%	1.4%	2.1%	1.4%	1.0%
PHF	0.70	0.83	0.75	0.84	0.67	0.68	0.80	0.80	0.83	0.86	0.61	0.90	0.58	0.92	0.75	0.91	0.94

Rolling Hour Summary

4:00 PM to 6:00 PM

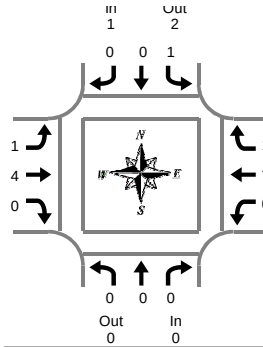
Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	36	34	18	4	30	30	89	1	71	356	11	1	15	479	40	0	1,209	1	3	0	0
4:15 PM	45	31	18	4	34	31	93	2	83	362	12	1	12	503	39	0	1,263	1	1	0	1
4:30 PM	45	36	19	4	34	36	106	1	82	388	15	0	13	517	38	1	1,329	1	1	0	2
4:45 PM	50	42	23	3	32	33	116	1	75	393	14	0	16	519	44	1	1,357	1	1	0	9
5:00 PM	42	53	30	4	32	27	105	1	83	408	17	0	14	514	48	1	1,373	0	1	0	9

Heavy Vehicle Summary



Clay Carney
(503) 833-2740

Out 7
In 5



NW 10th St & NW Maple Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

Peak Hour Summary
5:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	3
4:20 PM	0	0	0	0	1	0	0	1	0	4	0	4	0	0	0	0	5
4:25 PM	1	0	0	1	0	0	0	0	1	0	0	1	0	1	0	1	3
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	1	0	1	3
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	1	2
Total Survey	1	0	0	1	2	0	0	2	2	11	1	14	0	16	2	18	35

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	1	3	4
4:15 PM	1	0	0	1	1	0	0	1	1	5	1	7	0	2	0	2	11
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
5:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	3	0	3	5
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
5:45 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	1	2	5
Total Survey	1	0	0	1	2	0	0	2	2	11	1	14	0	16	2	18	35

Heavy Vehicle Peak Hour Summary 5:00 PM to 6:00 PM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Maple Ave			Westbound NW Maple Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	1	2	3	5	7	12	8	5	13	14
PHF	0.00			0.25			0.42			0.50			0.58

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	1	0	0	1	1	4	0	5	0	7	1	8	14
PHF	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.25	0.33	0.00	0.42	0.00	0.44	0.25	0.50	0.58

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Maple Ave				Westbound NW Maple Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	1	0	0	1	1	7	1	9	0	9	1	10	21
4:15 PM	1	0	0	1	2	0	0	2	1	6	1	8	0	7	0	7	18
4:30 PM	0	0	0	0	1	0	0	1	1	2	0	3	0	8	0	8	12
4:45 PM	0	0	0	0	1	0	0	1	1	2	0	3	0	7	0	7	11
5:00 PM	0	0	0	0	1	0	0	1	1	4	0	5	0	7	1	8	14

Peak Hour Summary

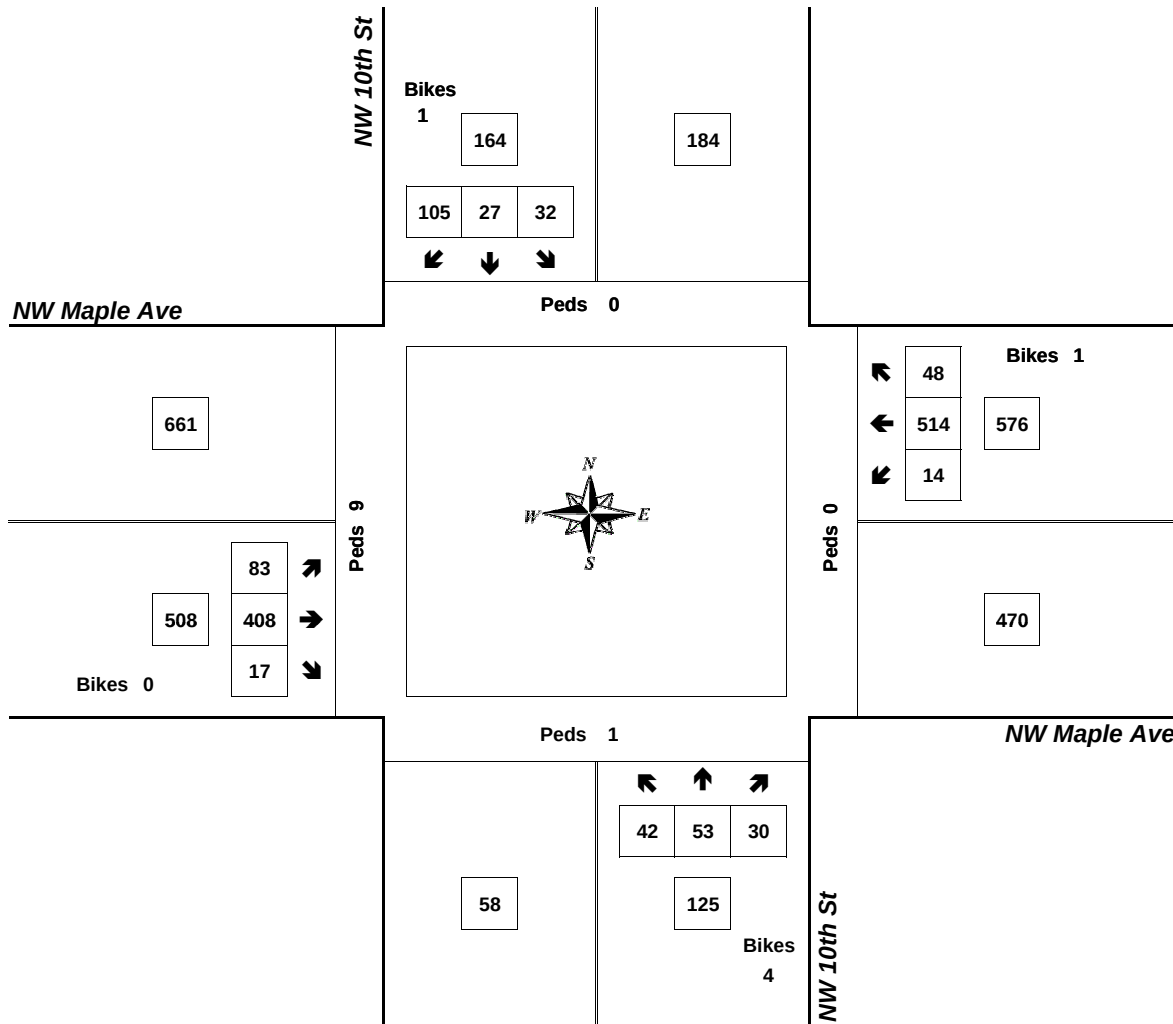


Clay Carney
(503) 833-2740

NW 10th St & NW Maple Ave

5:00 PM to 6:00 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.90	1.0%	508
WB	0.91	1.4%	576
NB	0.84	0.0%	125
SB	0.80	0.6%	164
Intersection	0.94	1.0%	1,373

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

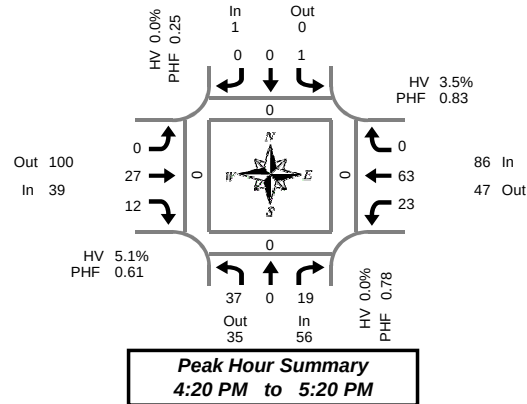


Clay Carney
(503) 833-2740

NW 10th St & NW Pershall Way

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	7	0	0	0	0	0	0	0	0	3	1	0	0	2	0	0	13	0	0	0	0
4:05 PM	5	0	1	0	0	0	0	0	0	3	4	0	2	3	0	0	18	0	0	0	0
4:10 PM	6	0	0	0	0	0	0	0	0	2	2	0	1	3	0	0	14	0	0	0	0
4:15 PM	2	0	2	0	0	0	0	0	0	4	1	0	0	6	0	0	15	0	0	0	0
4:20 PM	6	0	2	0	0	0	0	0	0	0	0	0	1	4	0	0	13	0	0	0	0
4:25 PM	1	0	1	0	0	0	0	0	0	4	0	0	2	3	0	0	11	0	0	0	0
4:30 PM	2	0	1	0	0	0	0	0	0	4	2	0	1	5	0	0	15	0	0	0	0
4:35 PM	3	0	1	0	1	0	0	0	0	3	2	1	4	5	0	0	19	0	0	0	0
4:40 PM	2	0	3	0	0	0	0	0	0	3	2	0	2	5	0	0	17	0	0	0	0
4:45 PM	1	0	1	0	0	0	0	0	0	4	1	0	1	5	0	0	13	0	0	0	0
4:50 PM	6	0	0	1	0	0	0	0	0	0	1	0	1	6	0	0	14	0	0	0	0
4:55 PM	2	0	2	0	0	0	0	0	0	3	0	0	3	4	0	0	14	0	0	0	0
5:00 PM	5	0	2	0	0	0	0	0	0	1	0	0	1	7	0	0	16	0	0	0	0
5:05 PM	5	0	1	1	0	0	0	0	0	1	0	0	2	6	0	0	15	0	0	0	0
5:10 PM	3	0	2	0	0	0	0	0	0	2	2	0	2	5	0	0	16	0	0	0	0
5:15 PM	1	0	3	0	0	0	0	0	0	2	2	0	3	8	0	0	19	0	0	0	0
5:20 PM	3	0	1	0	0	0	0	0	0	0	1	0	3	0	0	0	8	0	0	0	0
5:25 PM	2	0	2	0	0	0	0	0	0	5	0	0	0	6	0	0	15	0	0	0	0
5:30 PM	1	0	2	0	0	0	0	0	0	0	2	0	2	0	0	0	7	0	0	0	0
5:35 PM	5	0	2	0	0	0	0	0	0	2	1	0	3	1	0	0	14	0	0	0	0
5:40 PM	4	0	0	0	0	0	0	0	0	1	0	0	2	3	0	0	10	0	0	0	0
5:45 PM	5	0	0	0	0	0	0	0	0	5	1	0	1	4	0	0	16	0	0	0	0
5:50 PM	3	0	1	0	0	0	0	0	0	1	3	0	1	3	0	0	12	0	0	0	0
5:55 PM	2	0	2	0	0	0	0	0	0	3	2	0	3	4	0	0	16	0	0	0	0
Total Survey	82	0	32	2	1	0	0	0	0	56	30	1	41	98	0	0	340	0	0	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	18	0	1	0	0	0	0	0	0	8	7	0	3	8	0	0	45	0	0	0	0
4:15 PM	9	0	5	0	0	0	0	0	0	8	1	0	3	13	0	0	39	0	0	0	0
4:30 PM	7	0	5	0	1	0	0	0	0	10	6	1	7	15	0	0	51	0	0	0	0
4:45 PM	9	0	3	1	0	0	0	0	0	7	2	0	5	15	0	0	41	0	0	0	0
5:00 PM	13	0	5	1	0	0	0	0	0	4	2	0	5	18	0	0	47	0	0	0	0
5:15 PM	6	0	6	0	0	0	0	0	0	7	3	0	6	14	0	0	42	0	0	0	0
5:30 PM	10	0	4	0	0	0	0	0	0	3	3	0	7	4	0	0	31	0	0	0	0
5:45 PM	10	0	3	0	0	0	0	0	0	9	6	0	5	11	0	0	44	0	0	0	0
Total Survey	82	0	32	2	1	0	0	0	0	56	30	1	41	98	0	0	340	0	0	0	0

Peak Hour Summary

4:20 PM to 5:20 PM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	56	35	91	2	1	0	1	0	39	100	139	1	86	47	133	0	182	0	0	0	0
%HV	0.0%				0.0%				5.1%				3.5%				2.7%				
PHF	0.78				0.25				0.61				0.83				0.89				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	37	0	19	56	1	0	0	1	0	27	12	39	23	63	0	86	182				
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.4%	0.0%	5.1%	0.0%	4.8%	0.0%	3.5%	2.7%				
PHF	0.71	0.00	0.79	0.78	0.25	0.00	0.00	0.25	0.00	0.61	0.50	0.61	0.82	0.83	0.00	0.83	0.89				

Rolling Hour Summary

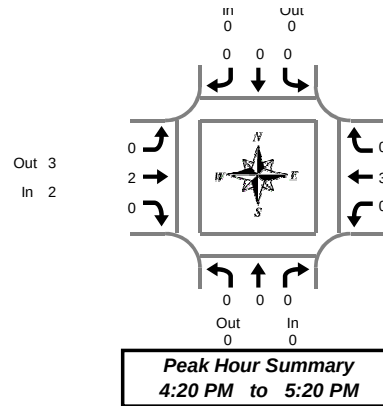
4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	43	0	14	1	1	0	0	0	0	33	16	1	18	51	0	0	176	0	0	0	0
4:15 PM	38	0	18	2	1	0	0	0	0	29	11	1	20	61	0	0	178	0	0	0	0
4:30 PM	35	0	19	2	1	0	0	0	0	28	13	1	23	62	0	0	181	0	0	0	0
4:45 PM	38	0	18	2	0	0	0	0	0	21	10	0	23	51	0	0	161	0	0	0	0
5:00 PM	39	0	18	1	0	0	0	0	0	23	14	0	23	47	0	0	164	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 10th St & NW Pershall Way

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
4:10 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:25 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	1	0	0	1	0	0	0	0	0	4	0	4	0	4	0	4	9

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Survey	1	0	0	1	0	0	0	0	0	4	0	4	0	4	0	4	9

Heavy Vehicle Peak Hour Summary

4:20 PM to 5:20 PM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	2	3	5	3	2	5	5
PHF	0.00			0.00			0.25			0.38			0.31

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.38	0.00	0.38	0.31

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	3	0	3	0	3	0	3	7
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	3	0	3	5
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2

Peak Hour Summary

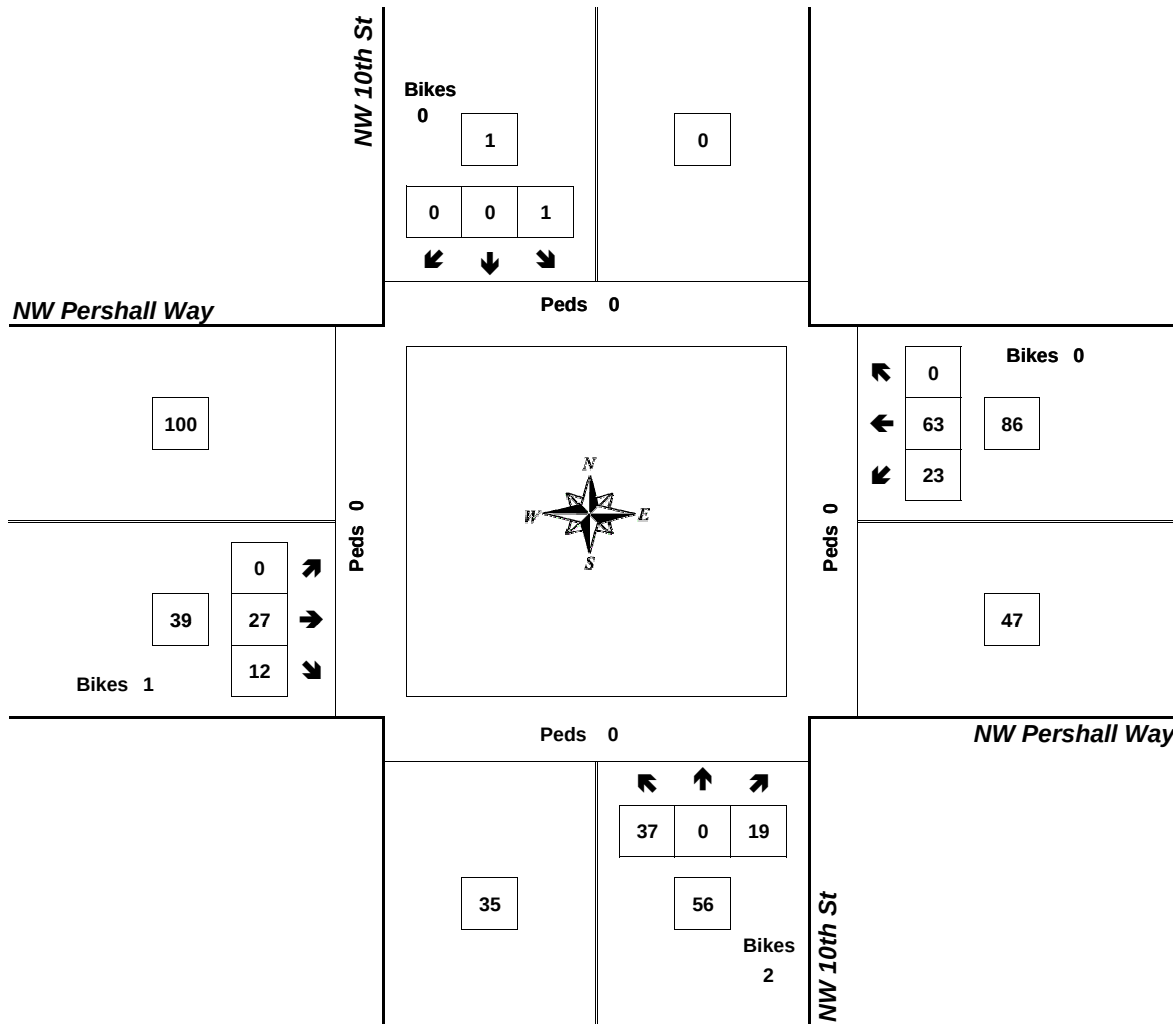


Clay Carney
(503) 833-2740

NW 10th St & NW Pershall Way

4:20 PM to 5:20 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.61	5.1%	39
WB	0.83	3.5%	86
NB	0.78	0.0%	56
SB	0.25	0.0%	1
Intersection	0.89	2.7%	182

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

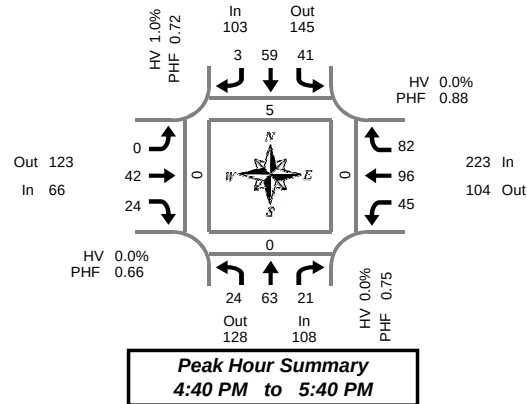


Clay Carney
(503) 833-2740

NW 10th St & NW Quince Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	1	6	2	0	5	6	0	0	0	2	1	0	0	4	6	0	33	0	0	0	0
4:05 PM	2	10	3	0	3	6	0	0	0	2	0	0	3	12	8	0	49	0	0	0	0
4:10 PM	1	4	1	0	4	4	0	0	0	1	2	1	4	6	3	0	30	3	0	0	0
4:15 PM	4	5	3	0	1	4	0	0	0	3	0	0	2	3	5	0	30	0	0	0	4
4:20 PM	1	4	1	0	3	8	0	0	0	4	1	0	3	8	7	0	40	0	0	0	0
4:25 PM	1	3	0	0	4	7	0	0	0	6	0	0	1	5	2	0	29	0	0	0	0
4:30 PM	1	7	2	0	1	3	0	0	0	4	1	0	0	7	4	0	30	0	0	0	0
4:35 PM	3	7	1	0	4	2	0	1	0	1	0	0	2	11	4	0	35	0	0	0	0
4:40 PM	2	5	0	0	4	6	0	0	0	2	5	0	5	7	12	0	48	0	0	0	0
4:45 PM	1	2	1	1	5	9	2	0	0	2	2	0	2	9	5	0	40	0	0	0	0
4:50 PM	3	3	2	0	4	6	0	0	0	5	1	0	2	4	6	0	36	0	0	0	0
4:55 PM	3	3	1	1	3	3	0	0	0	2	0	1	7	7	6	0	35	0	0	0	0
5:00 PM	2	3	2	1	2	2	0	0	0	1	3	0	2	8	5	0	30	0	0	0	0
5:05 PM	0	6	5	0	2	3	0	0	0	5	2	0	4	7	12	0	46	3	0	0	0
5:10 PM	1	6	3	0	2	5	0	0	0	3	3	0	3	9	3	0	38	0	0	0	0
5:15 PM	0	5	2	0	4	8	0	0	0	6	4	0	4	8	5	0	46	0	0	0	0
5:20 PM	3	7	1	0	3	7	0	0	0	6	1	0	2	9	7	0	46	0	0	0	0
5:25 PM	2	4	1	0	7	5	0	0	0	6	2	0	6	12	3	0	48	0	0	0	0
5:30 PM	2	8	1	0	4	1	0	0	0	3	1	0	3	6	10	0	39	0	0	0	0
5:35 PM	5	11	2	0	1	4	1	0	0	1	0	0	5	10	8	0	48	2	0	0	0
5:40 PM	0	3	0	0	5	3	0	0	1	4	4	0	4	7	11	0	42	0	0	0	1
5:45 PM	5	5	3	0	3	4	0	0	1	3	1	0	3	9	4	0	41	0	0	0	0
5:50 PM	2	6	0	0	1	0	1	0	0	1	4	0	2	7	3	0	27	0	0	0	0
5:55 PM	6	7	5	0	3	2	1	0	1	3	1	0	1	5	6	0	41	0	0	0	0
Total Survey	51	130	42	3	78	108	5	1	3	76	39	2	70	180	145	0	927	8	0	0	5

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	4	20	6	0	12	16	0	0	0	5	3	1	7	22	17	0	112	3	0	0	0
4:15 PM	6	12	4	0	8	19	0	0	0	13	1	0	6	16	14	0	99	0	0	0	4
4:30 PM	6	19	3	0	9	11	0	1	0	7	6	0	7	25	20	0	113	0	0	0	0
4:45 PM	7	8	4	2	12	18	2	0	0	9	3	1	11	20	17	0	111	0	0	0	0
5:00 PM	3	15	10	1	6	10	0	0	0	9	8	0	9	24	20	0	114	3	0	0	0
5:15 PM	5	16	4	0	14	20	0	0	0	18	7	0	12	29	15	0	140	0	0	0	0
5:30 PM	7	22	3	0	10	8	1	0	1	8	5	0	12	23	29	0	129	2	0	0	1
5:45 PM	13	18	8	0	7	6	2	0	2	7	6	0	6	21	13	0	109	0	0	0	0
Total Survey	51	130	42	3	78	108	5	1	3	76	39	2	70	180	145	0	927	8	0	0	5

Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	108	128	236	3	103	145	248	0	66	123	189	1	223	104	327	0	500	5	0	0	0
%HV	0.0%				1.0%				0.0%				0.0%				0.2%				
PHF	0.75				0.72				0.66				0.88				0.89				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	24	63	21	108	41	59	3	103	0	42	24	66	45	96	82	223	500
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
PHF	0.67	0.68	0.53	0.75	0.73	0.70	0.38	0.72	0.00	0.58	0.67	0.66	0.80	0.83	0.89	0.88	0.89

Rolling Hour Summary

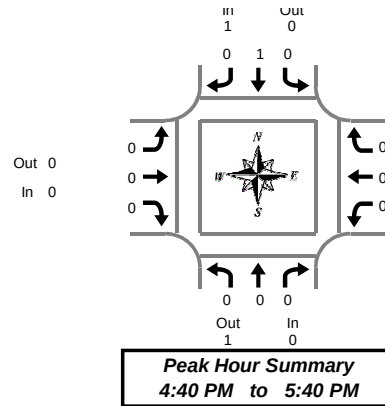
4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	23	59	17	2	41	64	2	1	0	34	13	2	31	83	68	0	435	3	0	0	4
4:15 PM	22	54	21	3	35	58	2	1	0	38	18	1	33	85	71	0	437	3	0	0	4
4:30 PM	21	58	21	3	41	59	2	1	0	43	24	1	39	98	72	0	478	3	0	0	0
4:45 PM	22	61	21	3	42	56	3	0	1	44	23	1	44	96	81	0	494	5	0	0	1
5:00 PM	28	71	25	1	37	44	3	0	3	42	26	0	39	97	77	0	492	5	0	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 10th St & NW Quince Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2

Heavy Vehicle Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Quince Ave			Westbound NW Quince Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	1	0	1	0	0	0	0	0	0	1
PHF	0.00			0.25			0.00			0.00			0.25

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
PHF	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Quince Ave				Westbound NW Quince Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1

Peak Hour Summary

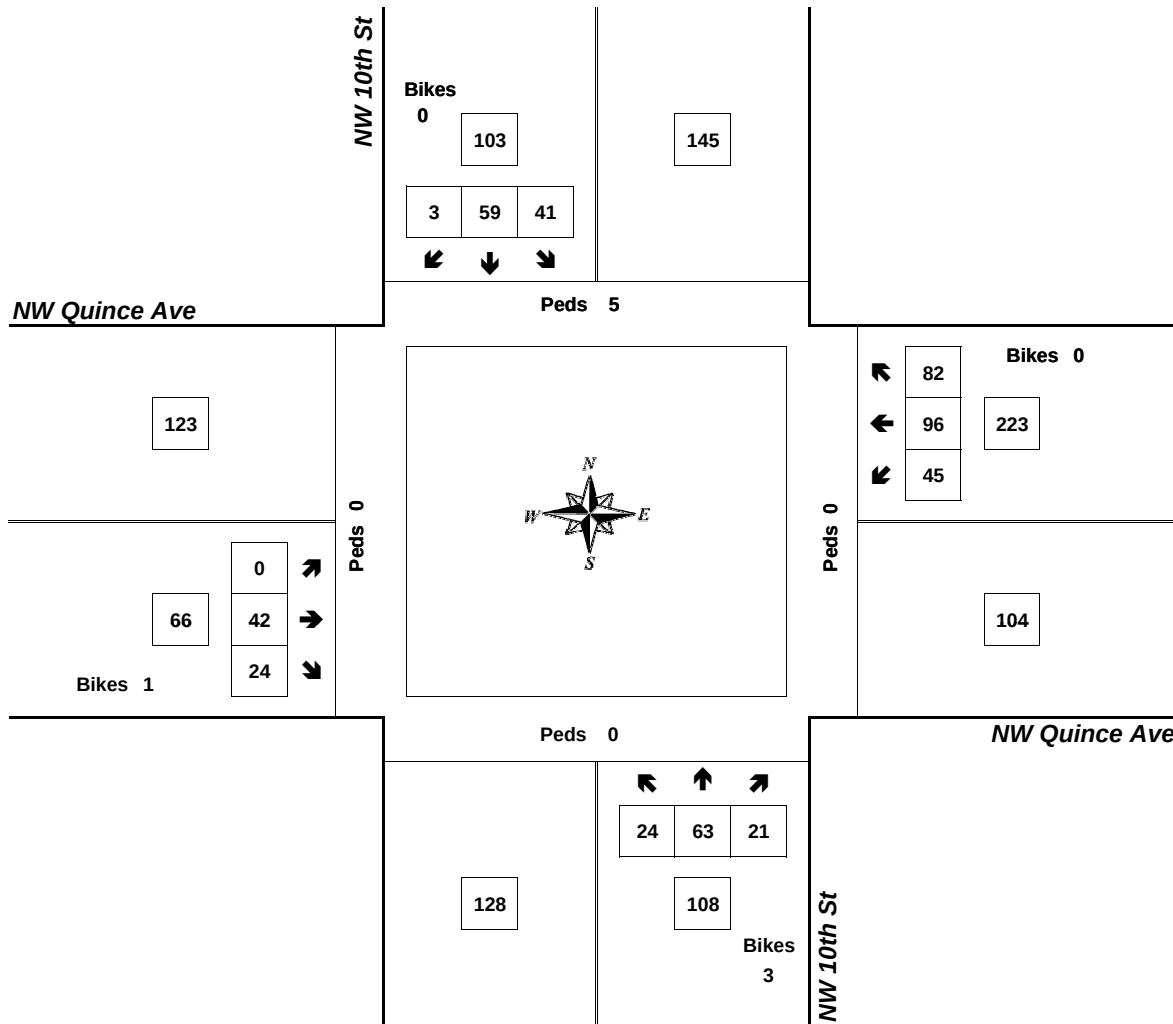


Clay Carney
(503) 833-2740

NW 10th St & NW Quince Ave

4:40 PM to 5:40 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.66	0.0%	66
WB	0.88	0.0%	223
NB	0.75	0.0%	108
SB	0.72	1.0%	103
Intersection	0.89	0.2%	500

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

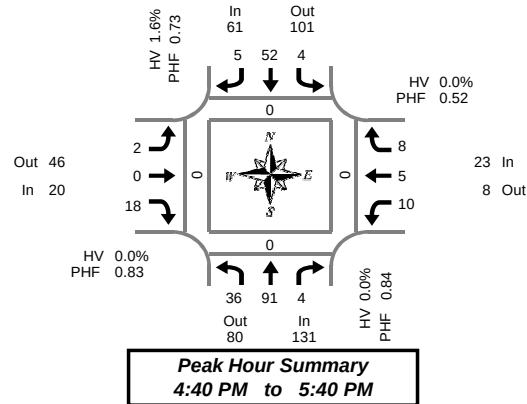


Clay Carney
(503) 833-2740

NW 10th St & NW Spruce Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	3	9	0	0	0	4	0	0	0	1	3	0	0	0	0	0	20	0	0	0	0
4:05 PM	2	14	0	0	1	11	0	0	0	0	0	0	0	1	0	0	29	0	0	0	0
4:10 PM	1	4	3	0	0	9	0	0	0	0	0	0	0	0	0	0	17	0	0	0	4
4:15 PM	0	7	0	0	0	3	0	0	1	0	1	0	0	0	2	0	14	0	0	0	0
4:20 PM	1	7	1	0	2	6	0	0	2	0	3	0	1	0	0	0	23	0	0	0	0
4:25 PM	2	1	0	0	0	4	0	0	0	0	3	0	1	1	0	0	12	0	0	0	0
4:30 PM	1	7	0	0	0	2	0	0	0	0	1	0	0	0	0	0	11	0	0	0	1
4:35 PM	0	8	1	0	0	6	0	2	1	0	3	0	0	0	0	0	19	0	0	0	0
4:40 PM	5	12	0	0	0	8	0	0	0	0	2	0	1	0	0	0	28	0	0	0	0
4:45 PM	1	5	0	0	1	7	0	0	0	0	1	0	1	0	0	0	16	0	0	0	0
4:50 PM	2	6	0	0	0	5	0	0	0	0	2	0	0	1	0	0	16	0	0	0	0
4:55 PM	1	8	0	0	0	3	0	0	0	0	2	0	0	1	2	0	17	0	0	0	0
5:00 PM	3	5	0	1	0	1	0	0	0	0	1	0	1	1	1	0	13	0	0	0	0
5:05 PM	6	11	0	0	1	3	0	0	0	0	1	0	3	0	2	0	27	0	0	0	0
5:10 PM	2	6	0	0	1	2	2	0	1	0	1	0	1	1	0	0	17	0	0	0	0
5:15 PM	4	6	0	0	0	6	1	0	0	0	2	0	0	0	1	0	20	0	0	0	0
5:20 PM	3	5	1	0	0	7	0	0	0	0	1	0	2	0	0	0	19	0	0	0	0
5:25 PM	0	4	0	0	0	3	0	0	0	0	2	0	1	0	0	0	10	0	0	0	0
5:30 PM	5	10	2	0	1	4	1	0	1	0	2	0	0	0	1	0	27	0	0	0	0
5:35 PM	4	13	1	0	0	3	1	0	0	0	1	0	0	1	1	0	25	0	0	0	0
5:40 PM	3	9	1	0	0	5	0	0	0	0	2	0	0	0	0	0	20	0	0	0	0
5:45 PM	3	5	0	0	0	4	0	0	0	1	1	0	0	0	1	0	15	0	0	0	0
5:50 PM	3	5	1	0	1	2	0	0	0	0	1	0	0	1	1	0	15	0	0	0	0
5:55 PM	1	9	1	0	0	4	1	0	0	2	0	0	0	0	0	0	18	2	0	0	0
Total Survey	56	176	12	1	8	112	6	2	6	4	36	0	12	8	12	0	448	2	0	0	5

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	6	27	3	0	1	24	0	0	0	1	3	0	0	1	0	0	66	0	0	0	4
4:15 PM	3	15	1	0	2	13	0	0	3	0	7	0	2	1	2	0	49	0	0	0	0
4:30 PM	6	27	1	0	0	16	0	2	1	0	6	0	1	0	0	0	58	0	0	0	1
4:45 PM	4	19	0	0	1	15	0	0	0	0	5	0	1	2	2	0	49	0	0	0	0
5:00 PM	11	22	0	1	2	6	2	0	1	0	3	0	5	2	3	0	57	0	0	0	0
5:15 PM	7	15	1	0	0	16	1	0	0	0	5	0	3	0	1	0	49	0	0	0	0
5:30 PM	12	32	4	0	1	12	2	0	1	0	5	0	0	1	2	0	72	0	0	0	0
5:45 PM	7	19	2	0	1	10	1	0	0	3	2	0	0	1	2	0	48	2	0	0	0
Total Survey	56	176	12	1	8	112	6	2	6	4	36	0	12	8	12	0	448	2	0	0	5

Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	131	80	211	1	61	101	162	0	20	46	66	0	23	8	31	0	235	0	0	0	0
%HV	0.0%				1.6%				0.0%				0.0%				0.4%				
PHF	0.84				0.73				0.83				0.52				0.92				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	36	91	4	131	4	52	5	61	2	0	18	20	10	5	8	23	235
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%
PHF	0.75	0.84	0.33	0.84	0.50	0.65	0.42	0.73	0.50	0.00	0.90	0.83	0.50	0.42	0.40	0.52	0.92

Rolling Hour Summary

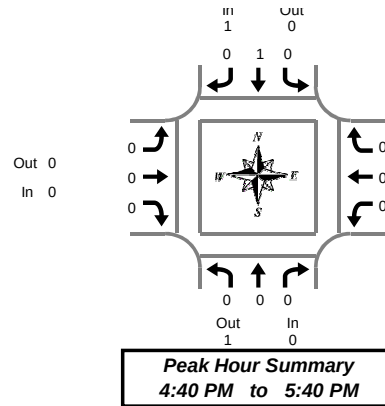
4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	19	88	5	0	4	68	0	2	4	1	21	0	4	4	4	0	222	0	0	0	5
4:15 PM	24	83	2	1	5	50	2	2	5	0	21	0	9	5	7	0	213	0	0	0	1
4:30 PM	28	83	2	1	3	53	3	2	2	0	19	0	10	4	6	0	213	0	0	0	1
4:45 PM	34	88	5	1	4	49	5	0	2	0	18	0	9	5	8	0	227	0	0	0	0
5:00 PM	37	88	7	1	4	44	6	0	2	3	15	0	8	4	8	0	226	2	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



NW 10th St & NW Spruce Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1

Heavy Vehicle Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Spruce Ave			Westbound NW Spruce Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	1	0	1	0	0	0	0	0	0	1
PHF	0.00			0.25			0.00			0.00			0.25

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
PHF	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Spruce Ave				Westbound NW Spruce Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1

Peak Hour Summary

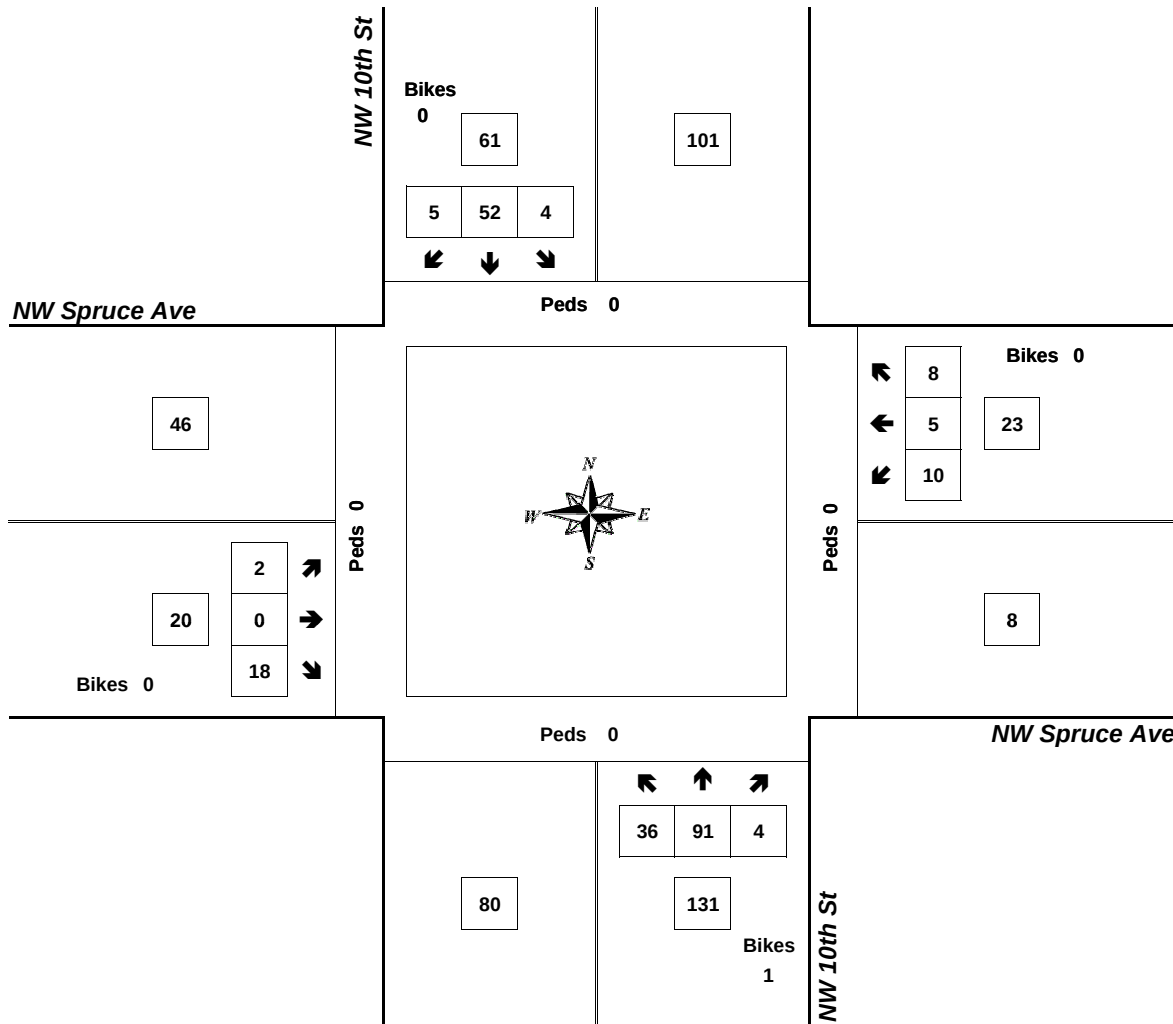


Clay Carney
(503) 833-2740

NW 10th St & NW Spruce Ave

4:40 PM to 5:40 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.83	0.0%	20
WB	0.52	0.0%	23
NB	0.84	0.0%	131
SB	0.73	1.6%	61
Intersection	0.92	0.4%	235

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

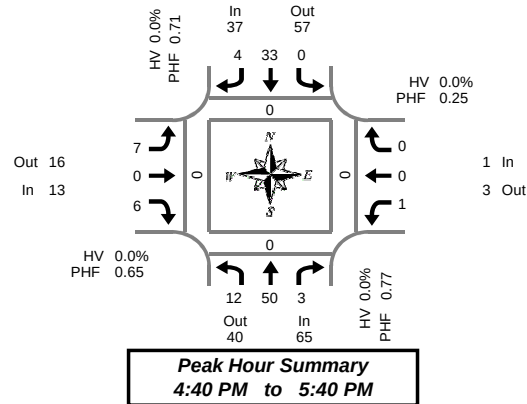


Clay Carney
(503) 833-2740

NW 10th St & NW Upas Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	6	0	0	0	3	0	0	0	0	1	0	0	0	0	0	10	0	0	0	0
4:05 PM	2	7	1	0	0	4	2	0	1	0	1	0	0	0	0	0	18	0	0	0	0
4:10 PM	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
4:15 PM	0	5	1	0	0	1	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
4:20 PM	0	6	0	0	0	0	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0
4:25 PM	1	2	0	0	0	0	1	0	1	0	1	0	0	0	0	0	6	0	0	0	0
4:30 PM	0	2	0	0	0	2	0	0	0	1	1	0	0	0	0	0	6	0	0	0	0
4:35 PM	1	3	0	0	0	5	0	1	1	0	1	0	0	0	0	0	11	0	0	0	0
4:40 PM	4	4	0	0	0	5	0	0	1	0	0	0	0	0	0	0	14	0	0	0	0
4:45 PM	0	3	0	1	0	4	0	0	1	0	1	0	0	0	0	0	9	0	0	0	0
4:50 PM	2	3	0	0	0	2	0	0	2	0	0	0	0	0	0	0	9	0	0	0	0
4:55 PM	1	5	0	0	0	1	1	0	0	0	0	0	0	0	0	0	8	0	0	0	0
5:00 PM	1	6	0	1	0	1	0	0	0	0	1	0	0	0	0	0	9	0	0	0	0
5:05 PM	1	7	0	0	0	1	1	0	0	0	1	0	0	0	0	0	11	0	0	0	0
5:10 PM	0	4	1	0	0	3	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0
5:15 PM	0	2	0	0	0	4	1	0	2	0	1	0	0	0	0	0	10	0	0	0	0
5:20 PM	1	4	1	0	0	5	0	0	1	0	0	0	0	0	0	0	12	0	0	0	0
5:25 PM	1	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	6	0	0	0	0
5:30 PM	0	1	1	0	0	2	1	0	0	0	1	0	1	0	0	0	7	0	0	0	0
5:35 PM	1	7	0	0	0	5	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0
5:40 PM	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
5:45 PM	1	5	0	0	0	3	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0
5:50 PM	0	3	1	0	0	2	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
5:55 PM	1	4	0	0	0	6	0	0	0	0	1	0	0	0	0	0	12	0	0	0	0
Total Survey	20	102	6	2	0	62	8	1	10	1	12	0	1	0	0	0	222	0	0	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	2	17	1	0	0	10	2	0	1	0	2	0	0	0	0	0	35	0	0	0	0
4:15 PM	1	13	1	0	0	1	2	0	1	0	1	0	0	0	0	0	20	0	0	0	0
4:30 PM	5	9	0	0	0	12	0	1	2	1	2	0	0	0	0	0	31	0	0	0	0
4:45 PM	3	11	0	1	0	7	1	0	3	0	1	0	0	0	0	0	26	0	0	0	0
5:00 PM	2	17	1	1	0	5	1	0	0	0	2	0	0	0	0	0	28	0	0	0	0
5:15 PM	2	10	1	0	0	9	1	0	3	0	2	0	0	0	0	0	28	0	0	0	0
5:30 PM	3	13	1	0	0	7	1	0	0	0	1	0	1	0	0	0	27	0	0	0	0
5:45 PM	2	12	1	0	0	11	0	0	0	0	1	0	0	0	0	0	27	0	0	0	0
Total Survey	20	102	6	2	0	62	8	1	10	1	12	0	1	0	0	0	222	0	0	0	0

Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	65	40	105	2	37	57	94	0	13	16	29	0	1	3	4	0	116	0	0	0	0
%HV	0.0%				0.0%				0.0%				0.0%				0.0%				
PHF	0.77				0.71				0.65				0.25				0.91				

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	12	50	3	65	0	33	4	37	7	0	6	13	1	0	0	1	116
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHF	0.50	0.69	0.38	0.77	0.00	0.69	0.50	0.71	0.44	0.00	0.75	0.65	0.25	0.00	0.00	0.25	0.91

Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	11	50	2	1	0	30	5	1	7	1	6	0	0	0	0	0	112	0	0	0	0
4:15 PM	11	50	2	2	0	25	4	1	6	1	6	0	0	0	0	0	105	0	0	0	0
4:30 PM	12	47	2	2	0	33	3	1	8	1	7	0	0	0	0	0	113	0	0	0	0
4:45 PM	10	51	3	2	0	28	4	0	6	0	6	0	1	0	0	0	109	0	0	0	0
5:00 PM	9	52	4	1	0	32	3	0	3	0	6	0	1	0	0	0	110	0	0	0	0

Heavy Vehicle Summary

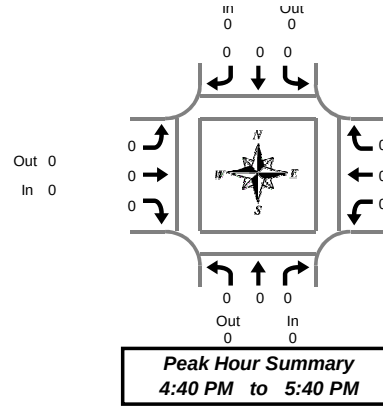


Clay Carney
(503) 833-2740

NW 10th St & NW Upas Ave

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:25 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1

Heavy Vehicle Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound NW 10th St			Southbound NW 10th St			Eastbound NW Upas Ave			Westbound NW Upas Ave			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00			0.00			0.00			0.00			0.00

By Movement	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound NW 10th St				Southbound NW 10th St				Eastbound NW Upas Ave				Westbound NW Upas Ave				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Summary

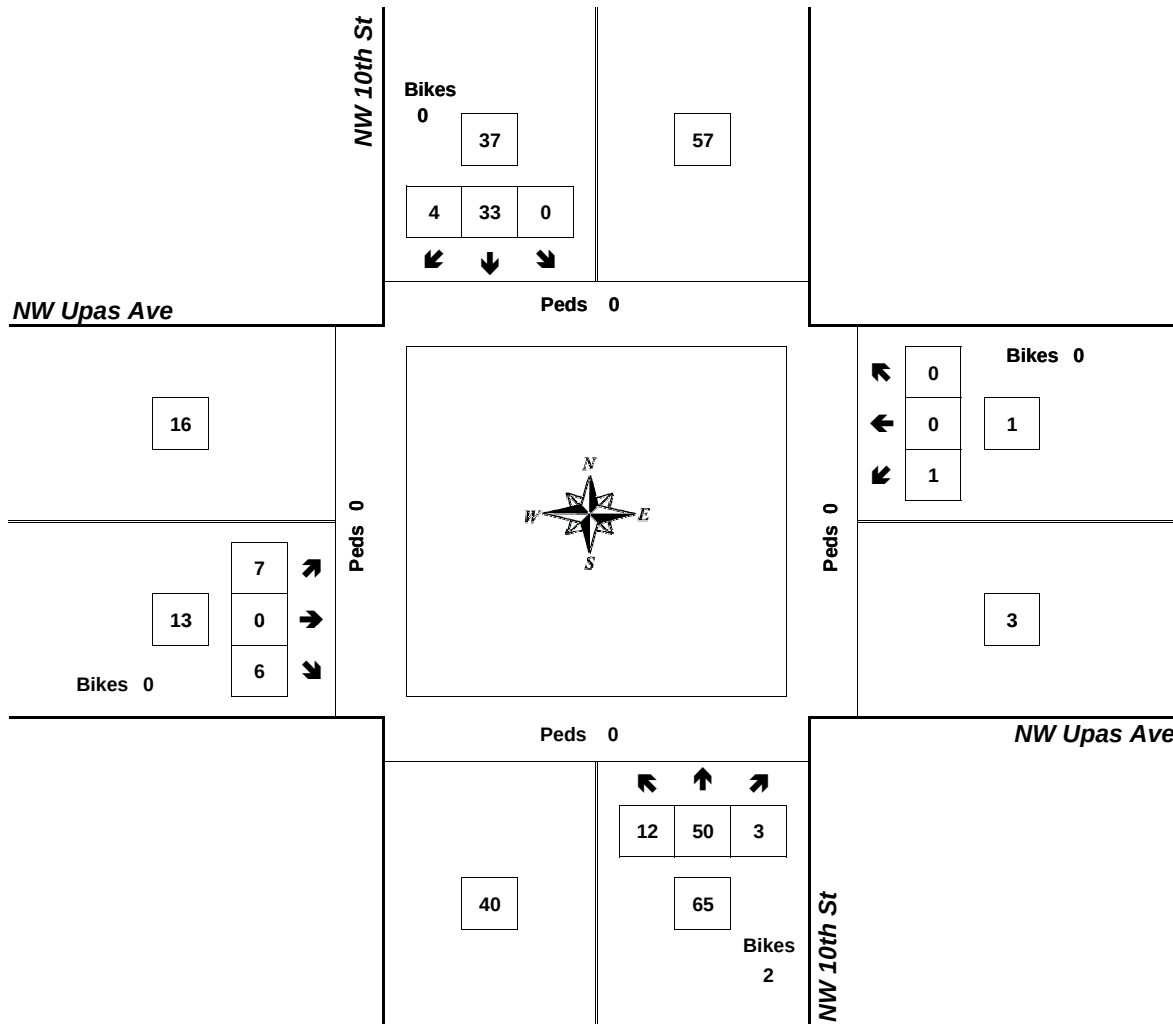


Clay Carney
(503) 833-2740

NW 10th St & NW Upas Ave

4:40 PM to 5:40 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.65	0.0%	13
WB	0.25	0.0%	1
NB	0.77	0.0%	65
SB	0.71	0.0%	37
Intersection	0.91	0.0%	116

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

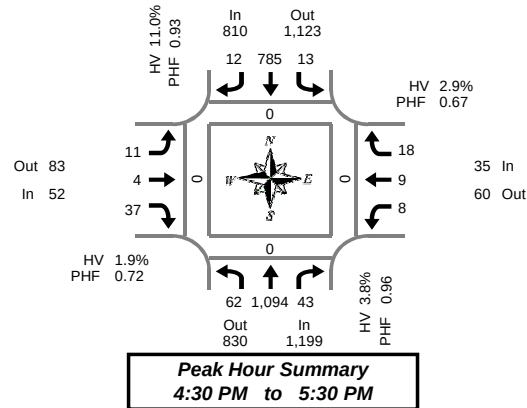


Clay Carney
(503) 833-2740

Hwy 97 & NW Pershall Way

Wednesday, September 25, 2019

4:00 PM to 6:00 PM



5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	2	94	3	0	0	49	0	0	2	0	1	0	1	0	1	0	153	0	0	0	0
4:05 PM	3	93	3	0	1	84	1	0	0	1	3	0	1	1	2	0	193	0	0	0	0
4:10 PM	2	82	2	0	0	63	1	0	0	1	2	0	0	0	2	0	155	0	0	0	0
4:15 PM	5	85	0	0	1	86	1	0	0	0	3	0	0	0	2	0	183	0	0	0	0
4:20 PM	3	91	2	0	0	66	0	0	2	0	2	0	1	1	3	0	171	0	0	0	0
4:25 PM	3	87	3	0	1	79	1	0	0	0	4	0	2	2	1	0	183	0	0	0	0
4:30 PM	5	73	3	0	1	70	1	0	1	1	4	0	0	0	2	0	161	0	0	0	0
4:35 PM	5	98	2	0	2	76	1	0	1	0	4	0	0	1	1	0	191	0	0	0	0
4:40 PM	7	77	2	0	0	64	2	0	0	1	6	0	3	1	1	0	164	0	0	0	0
4:45 PM	2	100	2	0	0	70	1	0	0	0	5	0	1	1	1	0	183	0	0	0	0
4:50 PM	5	91	4	0	1	68	0	0	0	0	0	0	0	2	2	0	173	0	0	0	0
4:55 PM	9	89	5	0	2	62	0	0	1	0	4	0	0	0	2	0	174	0	0	0	0
5:00 PM	5	92	4	0	0	53	0	0	2	0	4	0	0	1	0	0	161	0	0	0	0
5:05 PM	8	88	5	0	2	59	0	0	1	0	0	0	1	1	1	0	166	0	0	0	0
5:10 PM	6	100	3	0	0	63	3	0	0	1	3	0	1	0	1	0	181	0	0	0	0
5:15 PM	6	92	3	0	3	67	0	0	1	0	1	0	0	1	4	0	178	0	0	0	0
5:20 PM	0	100	3	0	1	61	2	0	1	1	1	0	2	1	3	0	176	0	0	0	0
5:25 PM	4	94	7	0	1	72	2	0	3	0	5	0	0	0	0	0	188	0	0	0	0
5:30 PM	1	83	4	0	0	58	2	0	1	0	0	0	0	0	2	0	151	0	0	0	0
5:35 PM	2	97	3	0	1	71	3	0	2	0	2	0	0	1	0	0	182	0	0	0	0
5:40 PM	4	61	1	0	3	61	1	0	0	0	4	0	2	0	1	0	138	0	0	0	0
5:45 PM	4	63	1	0	1	51	0	0	0	1	3	0	0	2	0	0	126	0	0	0	0
5:50 PM	1	60	1	0	1	54	2	0	0	2	1	0	2	2	0	0	126	0	0	0	0
5:55 PM	1	66	1	0	2	54	3	0	0	0	5	0	4	0	1	0	137	0	0	0	0
Total Survey	93	2,056	67	0	24	1,561	27	0	18	9	67	0	21	18	33	0	3,994	0	0	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	7	269	8	0	1	196	2	0	2	2	6	0	2	1	5	0	501	0	0	0	0
4:15 PM	11	263	5	0	2	231	2	0	2	0	9	0	3	3	6	0	537	0	0	0	0
4:30 PM	17	248	7	0	3	210	4	0	2	2	14	0	3	2	4	0	516	0	0	0	0
4:45 PM	16	280	11	0	3	200	1	0	1	0	9	0	1	3	5	0	530	0	0	0	0
5:00 PM	19	280	12	0	2	175	3	0	3	1	7	0	2	2	2	0	508	0	0	0	0
5:15 PM	10	286	13	0	5	200	4	0	5	1	7	0	2	2	7	0	542	0	0	0	0
5:30 PM	7	241	8	0	4	190	6	0	3	0	6	0	2	1	3	0	471	0	0	0	0
5:45 PM	6	189	3	0	4	159	5	0	0	3	9	0	6	4	1	0	389	0	0	0	0
Total Survey	93	2,056	67	0	24	1,561	27	0	18	9	67	0	21	18	33	0	3,994	0	0	0	0

Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,199	830	2,029	0	810	1,123	1,933	0	52	83	135	0	35	60	95	0	2,096	0	0	0	0
%HV	3.8%				11.0%				1.9%				2.9%				6.5%				
PHF	0.96				0.93				0.72				0.67				0.97				

By Movement	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	62	1,094	43	1,199	13	785	12	810	11	4	37	52	8	9	18	35	2,096
%HV	1.6%	3.8%	4.7%	3.8%	15.4%	11.0%	8.3%	11.0%	0.0%	0.0%	2.7%	1.9%	0.0%	0.0%	5.6%	2.9%	6.5%
PHF	0.70	0.94	0.77	0.96	0.65	0.93	0.60	0.93	0.55	0.50	0.62	0.72	0.50	0.56	0.56	0.67	0.97

Rolling Hour Summary

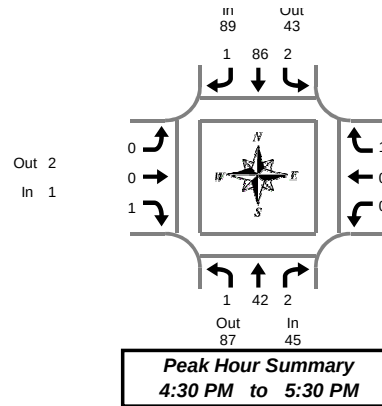
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	51	1,060	31	0	9	837	9	0	7	4	38	0	9	9	20	0	2,084	0	0	0	0
4:15 PM	63	1,071	35	0	10	816	10	0	8	3	39	0	9	10	17	0	2,091	0	0	0	0
4:30 PM	62	1,094	43	0	13	785	12	0	11	4	37	0	8	9	18	0	2,096	0	0	0	0
4:45 PM	52	1,087	44	0	14	765	14	0	12	2	29	0	7	8	17	0	2,051	0	0	0	0
5:00 PM	42	996	36	0	15	724	18	0	11	5	29	0	12	9	13	0	1,910	0	0	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Hwy 97 & NW Pershall Way

Wednesday, September 25, 2019

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	6	1	7	0	4	0	4	0	0	0	0	0	0	0	0	11
4:05 PM	0	5	0	5	0	14	0	14	0	0	0	0	0	0	0	0	19
4:10 PM	0	8	0	8	0	6	0	6	0	0	1	1	0	0	0	0	15
4:15 PM	0	3	0	3	0	9	0	9	0	0	0	0	0	0	0	0	12
4:20 PM	0	5	0	5	0	6	0	6	0	0	0	0	0	0	0	0	11
4:25 PM	0	8	0	8	0	9	0	9	0	0	0	0	0	0	0	0	17
4:30 PM	1	5	0	6	0	4	0	4	0	0	0	0	0	0	0	0	10
4:35 PM	0	4	0	4	0	7	0	7	0	0	0	0	0	0	1	1	12
4:40 PM	0	4	0	4	0	3	0	3	0	0	0	0	0	0	0	0	7
4:45 PM	0	2	2	4	0	7	0	7	0	0	0	0	0	0	0	0	11
4:50 PM	0	2	0	2	1	5	0	6	0	0	0	0	0	0	0	0	8
4:55 PM	0	5	0	5	0	7	0	7	0	0	0	0	0	0	0	0	12
5:00 PM	0	2	0	2	0	10	0	10	0	0	0	0	0	0	0	0	12
5:05 PM	0	4	0	4	0	4	0	4	0	0	0	0	0	0	0	0	8
5:10 PM	0	3	0	3	0	12	0	12	0	0	0	0	0	0	0	0	15
5:15 PM	0	4	0	4	1	16	0	17	0	0	1	1	0	0	0	0	22
5:20 PM	0	5	0	5	0	5	0	5	0	0	0	0	0	0	0	0	10
5:25 PM	0	2	0	2	0	6	1	7	0	0	0	0	0	0	0	0	9
5:30 PM	0	3	0	3	0	5	0	5	0	0	0	0	0	0	0	0	8
5:35 PM	0	1	1	2	0	11	0	11	0	0	0	0	0	0	0	0	13
5:40 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
5:45 PM	0	3	0	3	0	6	0	6	0	0	0	0	0	0	0	0	9
5:50 PM	0	5	0	5	0	10	2	12	0	0	1	1	0	0	0	0	18
5:55 PM	0	0	0	0	0	3	0	3	0	0	1	1	0	0	0	0	4
Total Survey	1	90	4	95	2	172	3	177	0	0	4	4	0	0	1	1	277

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	19	1	20	0	24	0	24	0	0	1	1	0	0	0	0	45
4:15 PM	0	16	0	16	0	24	0	24	0	0	0	0	0	0	0	0	40
4:30 PM	1	13	0	14	0	14	0	14	0	0	0	0	0	0	1	1	29
4:45 PM	0	9	2	11	1	19	0	20	0	0	0	0	0	0	0	0	31
5:00 PM	0	9	0	9	0	26	0	26	0	0	0	0	0	0	0	0	35
5:15 PM	0	11	0	11	1	27	1	29	0	0	1	1	0	0	0	0	41
5:30 PM	0	5	1	6	0	19	0	19	0	0	0	0	0	0	0	0	25
5:45 PM	0	8	0	8	0	19	2	21	0	0	2	2	0	0	0	0	31
Total Survey	1	90	4	95	2	172	3	177	0	0	4	4	0	0	1	1	277

Heavy Vehicle Peak Hour Summary

4:30 PM to 5:30 PM

By Approach	Northbound Hwy 97			Southbound Hwy 97			Eastbound NW Pershall Way			Westbound NW Pershall Way			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	45	87	132	89	43	132	1	2	3	1	4	5	136
PHF	0.80			0.65			0.25			0.25			0.72

By Movement	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	42	2	45	2	86	1	89	0	0	1	1	0	0	1	1	136
PHF	0.25	0.81	0.25	0.80	0.50	0.65	0.25	0.65	0.00	0.00	0.25	0.25	0.00	0.00	0.25	0.25	0.72

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 97				Southbound Hwy 97				Eastbound NW Pershall Way				Westbound NW Pershall Way				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	57	3	61	1	81	0	82	0	0	1	1	0	0	1	1	145
4:15 PM	1	47	2	50	1	83	0	84	0	0	0	0	0	0	1	1	135
4:30 PM	1	42	2	45	2	86	1	89	0	0	1	1	0	0	1	1	136
4:45 PM	0	34	3	37	2	91	1	94	0	0	1	1	0	0	0	0	132
5:00 PM	0	33	1	34	1	91	3	95	0	0	3	3	0	0	0	0	132

Peak Hour Summary

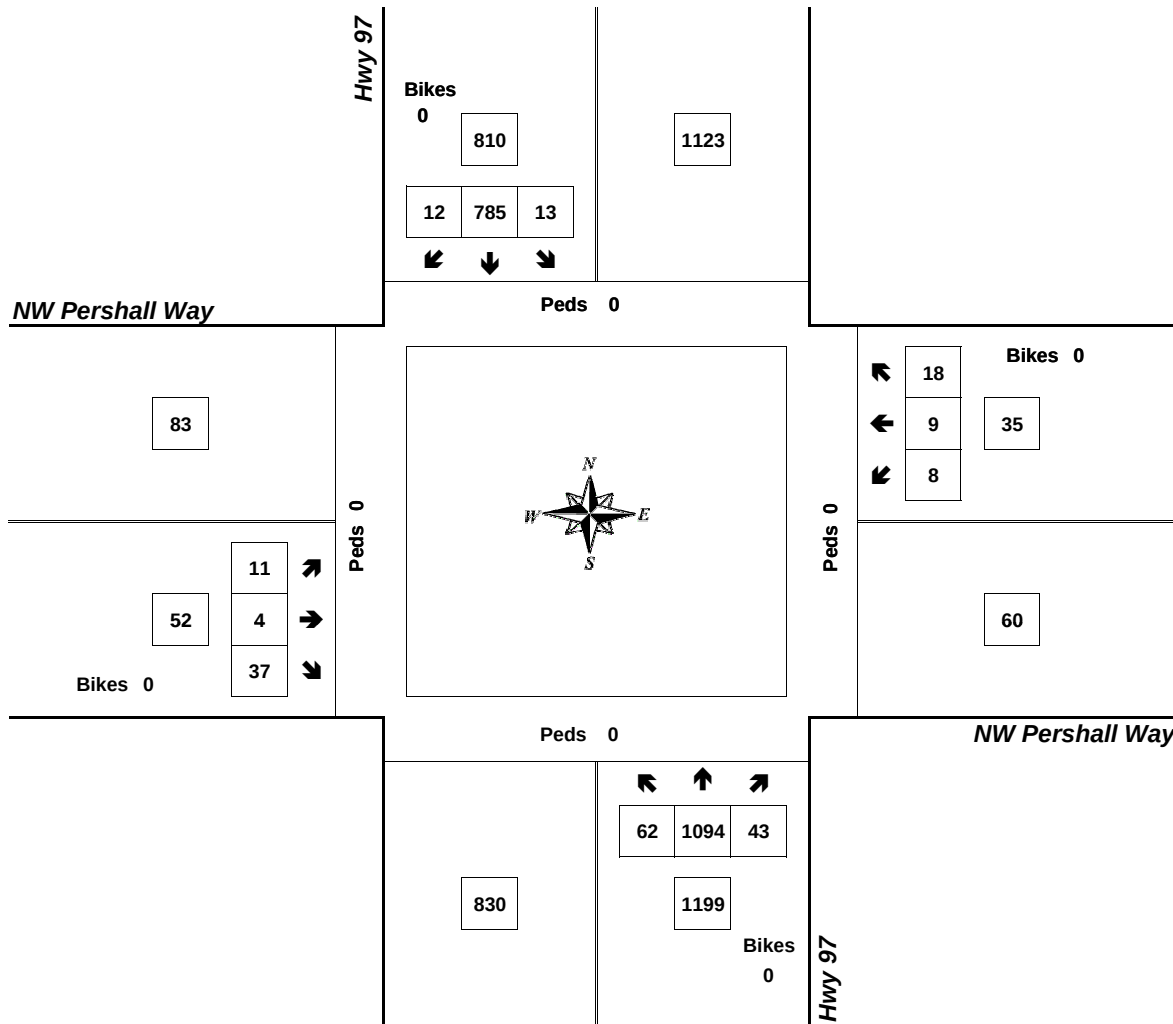


Clay Carney
(503) 833-2740

Hwy 97 & NW Pershall Way

4:30 PM to 5:30 PM

Wednesday, September 25, 2019



Approach	PHF	HV%	Volume
EB	0.72	1.9%	52
WB	0.67	2.9%	35
NB	0.96	3.8%	1,199
SB	0.93	11.0%	810
Intersection	0.97	6.5%	2,096

Count Period: 4:00 PM to 6:00 PM

004: THE DALLES-CALIFORNIA

Highway 004 ALL ROAD TYPES, MP 118.50 to 118.54 01/01/2013 to 12/31/2017, Both Add and Non-Add mileage

004: THE DALLES-CALIFORNIA

Highway 004 ALL ROAD TYPES, MP 118.50 to 118.54 01/01/2013 to 12/31/2017, Both Add and Non-Add mileage



LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

*LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS*

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

*LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS*

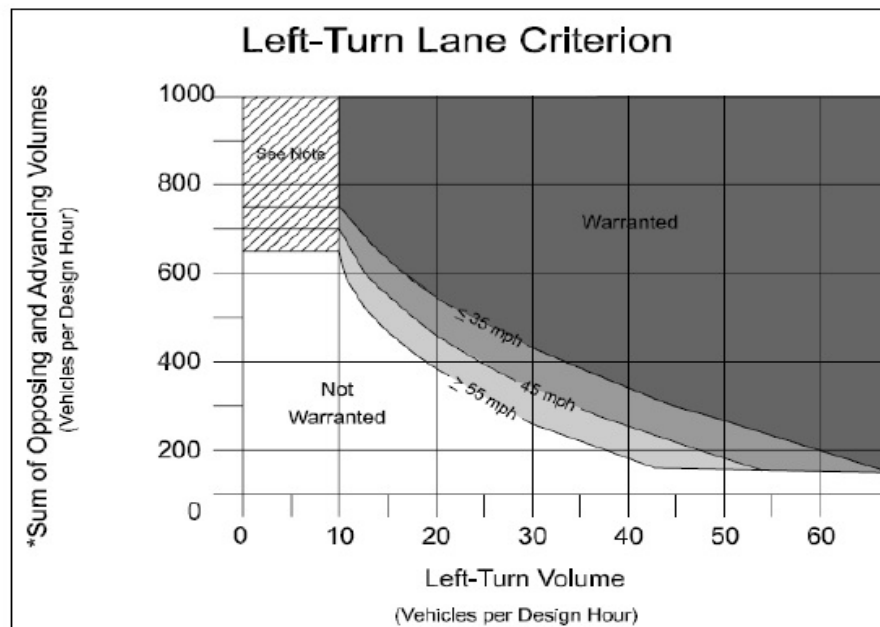
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50



Project: 19152 - Cinder Butte Village
 Intersection: NW Pershall Way at NW 10th Street
 Date: 12/2/2019
 Scenario: 2019 Existing

Speed? 55 mph

AM Peak Hour		PM Peak Hour	
Left-Turn Volume	80	Left-Turn Volume	23
Approaching DHV	108	Approaching DHV	76
# of Advancing Through Lanes	1	# of Advancing Through Lanes	1
Opposing DHV	123	Opposing DHV	35
# of Opposing Through Lanes	1	# of Opposing Through Lanes	1
O+A DHV	231	O+A DHV	111
Lane Needed?	Yes	Lane Needed?	No



Source: Oregon DOT Analysis Procedures Manual 2008

$\frac{*(Advancing Vol / \# \text{ of Advancing Through Lanes}) + (Opposing Vol / \# \text{ of Opposing Through Lanes})}{}$

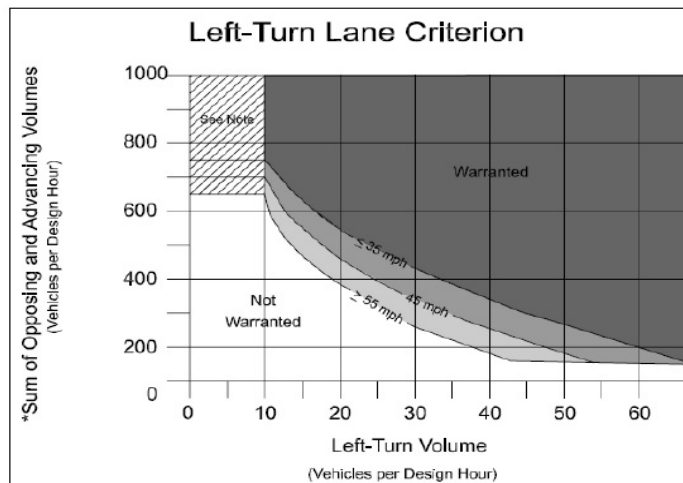
Note: The criterion is not met from zero to ten left turn vehicles per hour, but careful consideration should be given to installing a left turn lane due to the increased potential for accidents in the through lanes. While the turn volumes are low, the adverse safety and operational impacts may require installation of a left turn. The final determination will be based on a field study.



Project: 19152 - Cinder Butte Village
 Intersection: NW Spruce Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: 2023 Background Northbound

Speed? 35 mph

AM Peak Hour		PM Peak Hour	
Left-Turn Volume	36	Left-Turn Volume	72
Approaching DHV	258	Approaching DHV	242
# of Advancing Through Lanes	1	# of Advancing Through Lanes	1
Opposing DHV	321	Opposing DHV	104
# of Opposing Through Lanes	1	# of Opposing Through Lanes	1
O+A DHV	579	O+A DHV	346
Lane Needed?	Yes	Lane Needed?	Yes



Source: Oregon DOT Analysis Procedures Manual 2008

$*(\text{Advancing Vol} / \# \text{ of Advancing Through Lanes}) +$
 $(\text{Opposing Vol} / \# \text{ of Opposing Through Lanes})$

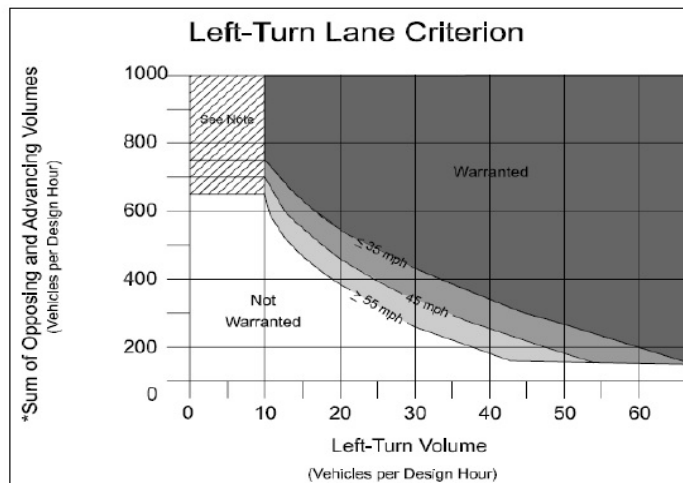
Note: The criterion is not met from zero to ten left turn vehicles per hour, but careful consideration should be given to installing a left turn lane due to the increased potential for accidents in the through lanes. While the turn volumes are low, the adverse safety and operational impacts may require installation of a left turn. The final determination will be based on a field study.



Project: 19152 - Cinder Butte Village
 Intersection: NW Quince Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: 2019 Existing Southbound

Speed? 35 mph

AM Peak Hour		PM Peak Hour	
Left-Turn Volume	106	Left-Turn Volume	101
Approaching DHV	283	Approaching DHV	234
# of Advancing Through Lanes	1	# of Advancing Through Lanes	1
Opposing DHV	182	Opposing DHV	234
# of Opposing Through Lanes	1	# of Opposing Through Lanes	1
O+A DHV	465	O+A DHV	468
Lane Needed?	Yes	Lane Needed?	Yes



Source: Oregon DOT Analysis Procedures Manual 2008

$*(\text{Advancing Vol} / \# \text{ of Advancing Through Lanes}) +$
 $(\text{Opposing Vol} / \# \text{ of Opposing Through Lanes})$

Note: The criterion is not met from zero to ten left turn vehicles per hour, but careful consideration should be given to installing a left turn lane due to the increased potential for accidents in the through lanes. While the turn volumes are low, the adverse safety and operational impacts may require installation of a left turn. The final determination will be based on a field study.

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2019 Existing Conditions

Major Street:	NW Maple Avenue	Minor Street:	NW 9th Street
Number of Lanes:	2	Number of Lanes:	1
PM Peak Hour Volumes:	1,068	PM Peak Hour Volumes:	152

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION A

		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

WARRANT 1, CONDITION B

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	10,680	10,600	
Minor Street*	1,520	2,650	No
Condition B: Interruption of Continuous Traffic			
Major Street	10,680	15,900	5,220
Minor Street*	1,520	1,350	No
Combination Warrant			
Major Street	10,680	12,720	
Minor Street*	1,520	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	U.S. Highway 97	Minor Street:	NW Pershall Way
Number of Lanes:	2	Number of Lanes:	1
PM Peak Hour Volumes:	2,205	PM Peak Hour Volumes:	56

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

<u>WARRANT 1, CONDITION B</u>					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	22,050	10,600	
Minor Street*	560	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	22,050	15,900	
Minor Street*	560	1,350	No
<i>Combination Warrant</i>			
Major Street	22,050	12,720	
Minor Street*	560	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW Pershall Way	Minor Street:	NW 10th Street
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	160	PM Peak Hour Volumes:	77

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

<u>WARRANT 1, CONDITION B</u>					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	1,600	8,850	
Minor Street*	770	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	1,600	13,300	
Minor Street*	770	1,350	No
<i>Combination Warrant</i>			
Major Street	1,600	10,640	
Minor Street*	770	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW 10th Street	Minor Street:	NW Walnut Avenue
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	184	PM Peak Hour Volumes:	17

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	1,840	8,850	
Minor Street*	170	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	1,840	13,300	
Minor Street*	170	1,350	No
<i>Combination Warrant</i>			
Major Street	1,840	10,640	
Minor Street*	170	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW 10th Street	Minor Street:	NW Varnish Avenue
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	224	PM Peak Hour Volumes:	23

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	2,240	8,850	
Minor Street*	230	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	2,240	13,300	
Minor Street*	230	1,350	No
<i>Combination Warrant</i>			
Major Street	2,240	10,640	
Minor Street*	230	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis



Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW 10th Street	Minor Street:	NW Upas Avenue
Number of Lanes:	1	Number of Lanes:	2
PM Peak Hour Volumes:	300	PM Peak Hour Volumes:	50

Warrant Used:

X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess
 of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	3,000	8,850	
Minor Street*	500	3,550	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	3,000	13,300	
Minor Street*	500	1,750	No
<i>Combination Warrant</i>			
Major Street	3,000	10,640	
Minor Street*	500	2,840	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW 10th Street	Minor Street:	NW Spruce Avenue
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	444	PM Peak Hour Volumes:	33

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	4,440	8,850	
Minor Street*	330	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	4,440	13,300	
Minor Street*	330	1,350	No
<i>Combination Warrant</i>			
Major Street	4,440	10,640	
Minor Street*	330	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW 10th Street	Minor Street:	NW Quince Avenue
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	423	PM Peak Hour Volumes:	293

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	4,230	8,850	
Minor Street*	2,930	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	4,230	13,300	
Minor Street*	2,930	1,350	No
<i>Combination Warrant</i>			
Major Street	4,230	10,640	
Minor Street*	2,930	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW Maple Avenue	Minor Street:	NW 9th Street
Number of Lanes:	2	Number of Lanes:	1
PM Peak Hour Volumes:	1,616	PM Peak Hour Volumes:	225

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

<u>WARRANT 1, CONDITION B</u>					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	16,160	10,600	
Minor Street*	2,250	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	16,160	15,900	
Minor Street*	2,250	1,350	Yes
<i>Combination Warrant</i>			
Major Street	16,160	12,720	
Minor Street*	2,250	2,120	Yes

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Background Conditions

Major Street:	NW Maple Avenue	Minor Street:	NW 9th Street
Number of Lanes:	2	Number of Lanes:	1
PM Peak Hour Volumes:	1,591	PM Peak Hour Volumes:	201

Warrant Used:

 X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

<u>WARRANT 1, CONDITION B</u>					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
<i>Condition A: Minimum Vehicular Volume</i>			
Major Street	15,910	10,600	
Minor Street*	2,010	2,650	No
<i>Condition B: Interruption of Continuous Traffic</i>			
Major Street	15,910	15,900	
Minor Street*	2,010	1,350	Yes
<i>Combination Warrant</i>			
Major Street	15,910	12,720	
Minor Street*	2,010	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Traffic Signal Warrant Analysis

Project: 19152 - Cinder Butte Village
 Date: 12/2/2019
 Scenario: 2023 Buildout Conditions

Major Street:	NW 6th Street	Minor Street:	NW Kingwood Avenue
Number of Lanes:	2	Number of Lanes:	1
PM Peak Hour Volumes:	1,830	PM Peak Hour Volumes:	38

Warrant Used:

X 100 percent of standard warrants used
 70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500

WARRANT 1, CONDITION A

		100%	70%	100%	70%
<u>Major St.</u>	<u>Minor St.</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>	<u>Warrants</u>
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

WARRANT 1, CONDITION B

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	18,300	10,600	
Minor Street*	380	2,650	No
Condition B: Interruption of Continuous Traffic			
Major Street	18,300	15,900	
Minor Street*	380	1,350	No
Combination Warrant			
Major Street	18,300	12,720	
Minor Street*	380	2,120	No

* Minor street right-turning traffic volumes reduced by 25%

Left-Turn Lane Warrant Analysis

Le

Project: 19152 - Cinder Butte Village
 Intersection: NW Pershall Way at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Buildout Conditions AM

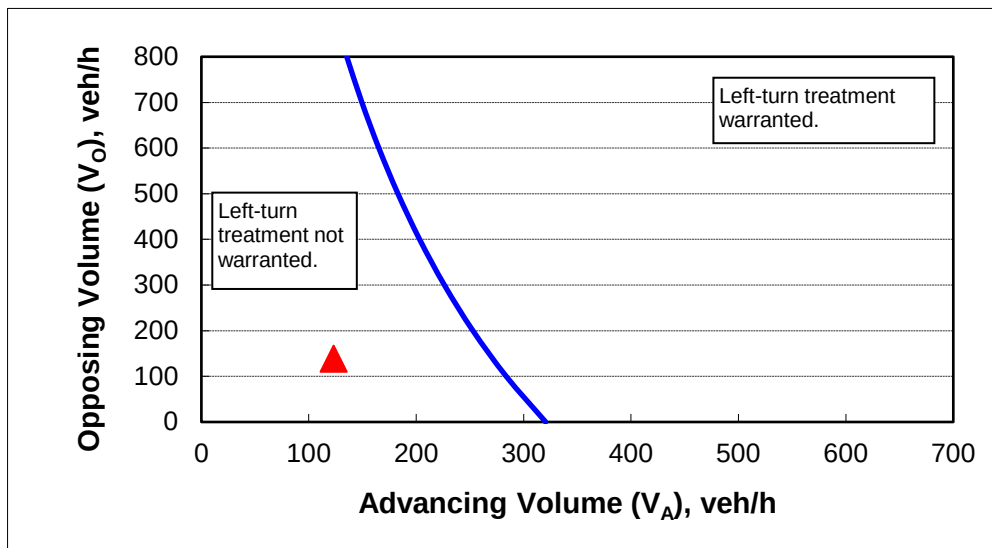
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	76%
Advancing volume (V_A), veh/h:	123
Opposing volume (V_O), veh/h:	139

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	271
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Le

Project: 19152 - Cinder Butte Village
 Intersection: NW Pershall Way at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Buildout Conditions PM

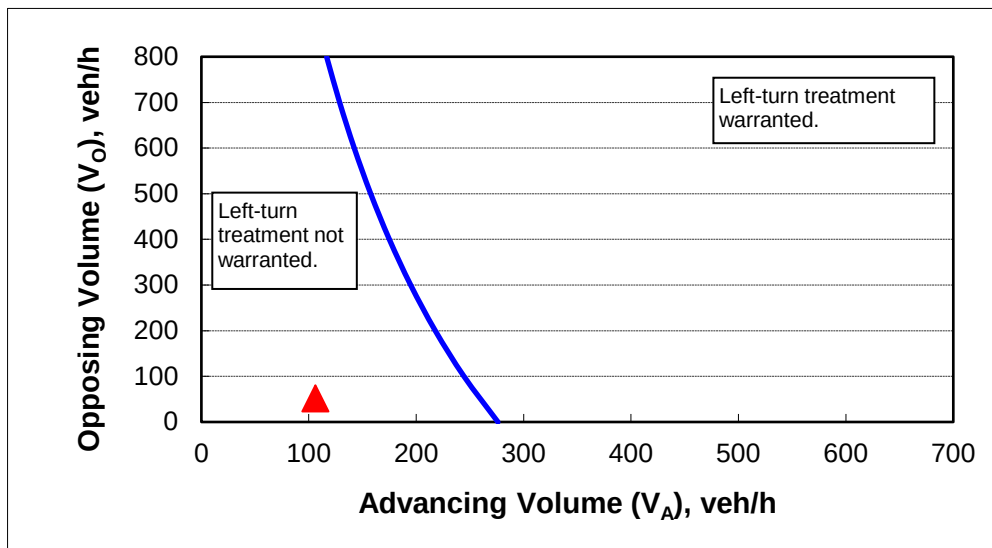
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	55
Percent of left-turns in advancing volume (V_A), %:	46%
Advancing volume (V_A), veh/h:	106
Opposing volume (V_O), veh/h:	52

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	259
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Le

Project: 19152 - Cinder Butte Village
 Intersection: NW Spruce Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Buildout Conditions AM

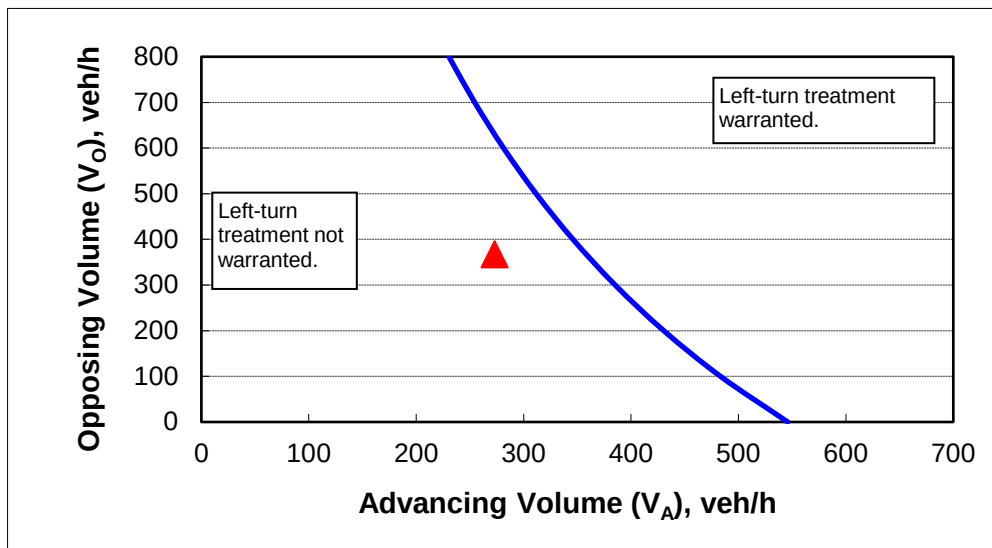
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	13%
Advancing volume (V_A), veh/h:	273
Opposing volume (V_O), veh/h:	367

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	358
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

2e

Project: 19152 - Cinder Butte Village
 Intersection: NW Spruce Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Buildout Conditions PM

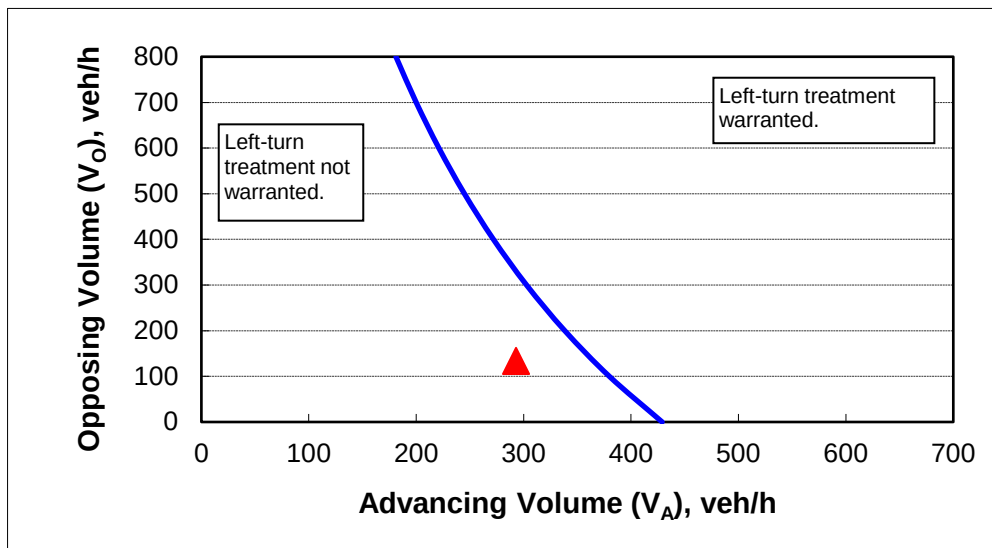
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	25%
Advancing volume (V_A), veh/h:	293
Opposing volume (V_O), veh/h:	134

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	365
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Le

Project: 19152 - Cinder Butte Village
 Intersection: NW Quince Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Buildout Conditions AM

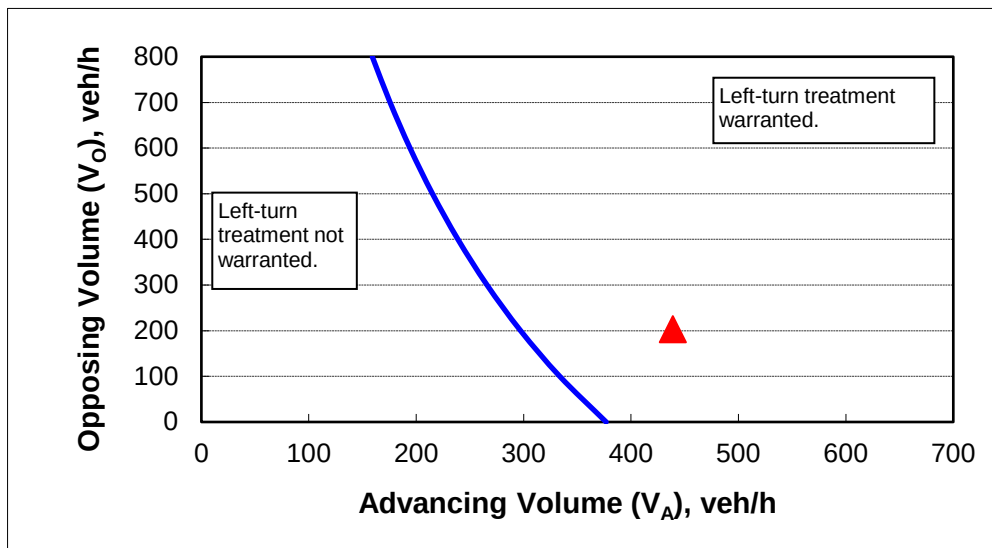
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	40%
Advancing volume (V_A), veh/h:	439
Opposing volume (V_O), veh/h:	203

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	296
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

2e

Project: 19152 - Cinder Butte Village
 Intersection: NW Quince Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Background Conditions AM

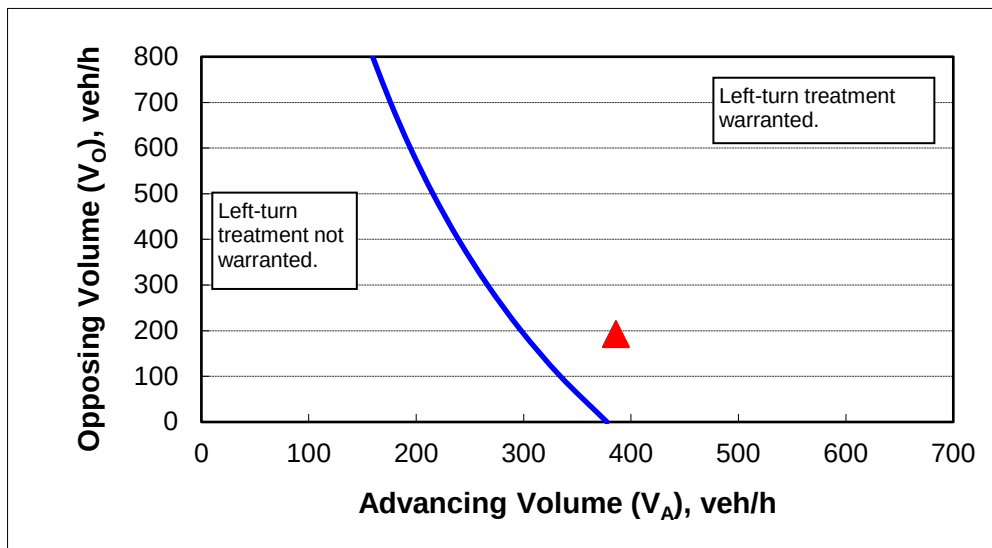
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	40%
Advancing volume (V_A), veh/h:	386
Opposing volume (V_O), veh/h:	193

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	300
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Le

Project: 19152 - Cinder Butte Village
 Intersection: NW Quince Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2019 Existing Conditions AM

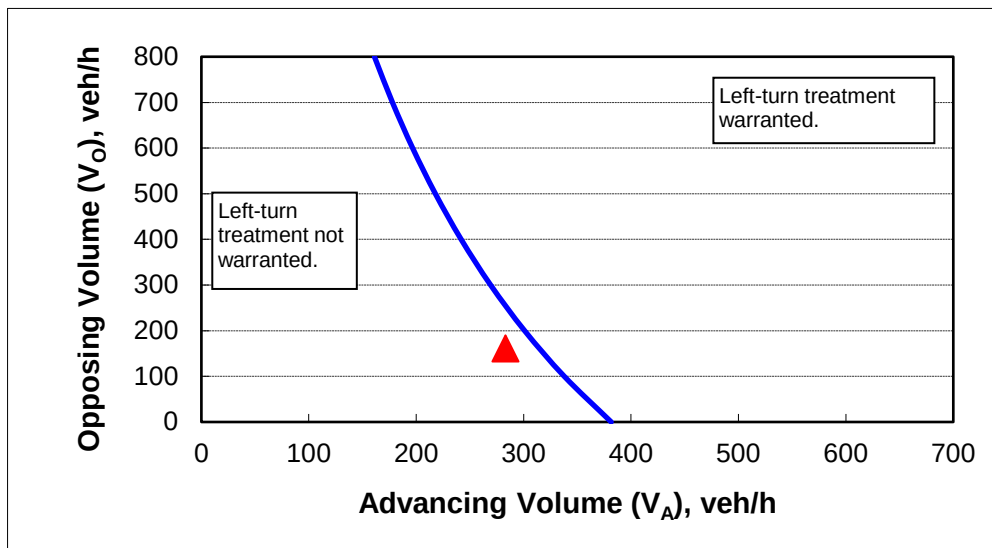
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	37%
Advancing volume (V_A), veh/h:	283
Opposing volume (V_O), veh/h:	161

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	315
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Le

Project: 19152 - Cinder Butte Village
 Intersection: NW Quince Avenue at NW 10th Street
 Date: 12/2/2019
 Scenario: Year 2023 Buildout Conditions PM

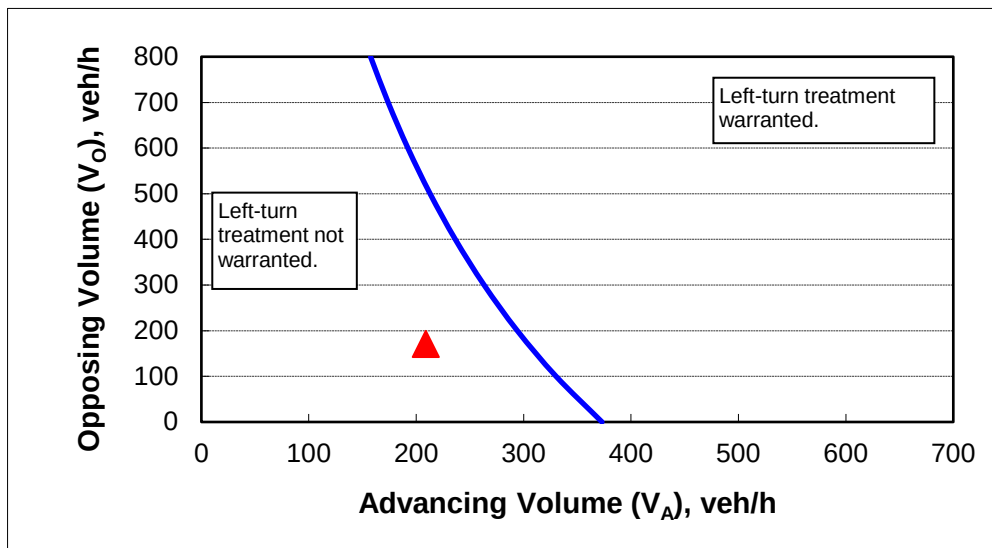
2-lane roadway (English)

INPUT

Variable	Value
85 th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	43%
Advancing volume (V_A), veh/h:	209
Opposing volume (V_O), veh/h:	171

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	304
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Cinder Butte Village Phases 2-4

Vistro File: \...\Cinder Butte Village AM.vistro
Report File: \...\EXAM.pdf

Scenario 1 2019 Existing AM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Left	0.417	129.6	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.107	14.9	B
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	EB Left	0.566	38.5	E
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.010	24.0	C
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	SB Thru	0.795	20.0	C
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	SB Right	0.257	23.2	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	EB Thru	1.027	38.1	E
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	WB Thru	0.435	33.0	C
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	EB Thru	0.013	20.5	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: NW Pershall Way at U.S. Highway 97

Control Type:	Two-way stop	Delay (sec / veh):	129.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	516	28	3	967	55	23	15	97	20	19	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	10.30	10.30	10.30	6.00	6.00	6.00	6.70	6.70	6.70	6.50	6.50	6.50
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	516	28	3	967	55	23	15	97	20	19	8
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	143	8	1	269	15	6	4	27	6	5	2
Total Analysis Volume [veh/h]	40	573	31	3	1074	61	26	17	108	22	21	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.00	0.00	0.01	0.00	0.42	0.23	0.23	0.27	0.30	0.01
d_M, Delay for Movement [s/veh]	11.85	0.00	0.00	8.83	0.00	0.00	129.60	120.99	79.44	95.06	101.73	55.71
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.23	0.00	0.00	0.01	0.00	0.00	6.30	6.30	6.30	2.67	2.67	2.67
95th-Percentile Queue Length [ft/ln]	5.69	0.00	0.00	0.24	0.00	0.00	157.53	157.53	157.53	66.71	66.71	66.71
d_A, Approach Delay [s/veh]	0.74			0.02			92.76			90.94		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	9.69											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 14.9
 Level Of Service: B
 Volume to Capacity (v/c): 0.107

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	26	0	53	0	0	0	0	80	43	80	28	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	7.30	7.30	7.30	8.30	8.30	8.30
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	0	53	0	0	0	0	80	43	80	28	0
Peak Hour Factor	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	0	24	0	0	0	0	36	19	36	12	0
Total Analysis Volume [veh/h]	46	0	95	0	0	0	0	143	77	143	50	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.00	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
d_M, Delay for Movement [s/veh]	14.87	15.24	10.67	15.08	14.17	8.52	7.36	0.00	0.00	8.08	0.00	0.00
Movement LOS	B	C	B	C	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.82	0.82	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.37	0.37
95th-Percentile Queue Length [ft/ln]	20.44	20.44	20.44	0.00	0.00	0.00	0.00	0.00	0.00	9.15	9.15	9.15
d_A, Approach Delay [s/veh]	12.04			12.59			0.00			5.98		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	5.15											
Intersection LOS	B											

Intersection Level Of Service Report**Intersection 3: NW Walnut Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	79	0	0	123	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	0	0	123	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	0	31	0	0
Total Analysis Volume [veh/h]	79	0	0	123	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.58	8.67
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.12	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	79	0	0	124	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	0	0	124	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	0	31	0	0
Total Analysis Volume [veh/h]	79	0	0	124	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.58	8.67
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.13	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 38.5
 Level Of Service: E
 Volume to Capacity (v/c): 0.566

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	145	18	1	0	28	96	61	4	196	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.60	0.60	0.60	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	18	1	0	28	96	61	4	196	0	0	0
Peak Hour Factor	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600	0.4600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	79	10	1	0	15	52	33	2	107	0	0	0
Total Analysis Volume [veh/h]	315	39	2	0	61	209	133	9	426	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.00	0.00	0.00	0.00	0.00	0.57	0.04	0.48	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	8.65	0.00	0.00	7.28	0.00	0.00	38.53	25.14	13.66	47.68	22.88	8.47
Movement LOS	A	A	A	A	A	A	E	D	B	E	C	A
95th-Percentile Queue Length [veh/ln]	0.95	0.00	0.00	0.00	0.00	0.00	3.14	3.07	3.07	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	23.76	0.00	0.00	0.00	0.00	0.00	78.38	76.77	76.77	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	7.65			0.00			19.66			26.34		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	11.63											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 6: NW Spruce Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	20	179	3	1	239	5	0	2	32	1	2	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.80	0.80	0.80	41.20	41.20	41.20	20.00	20.00	20.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	179	3	1	239	5	0	2	32	1	2	2
Peak Hour Factor	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	86	1	0	115	2	0	1	15	0	1	1
Total Analysis Volume [veh/h]	38	344	6	2	460	10	0	4	62	2	4	4
Pedestrian Volume [ped/h]	2			2			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.12	0.01	0.02	0.01
d_M, Delay for Movement [s/veh]	8.39	0.00	0.00	7.97	0.00	0.00	23.31	21.81	13.09	24.04	19.90	10.91
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.11	0.00	0.00	0.00	0.47	0.47	0.47	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	2.68	2.68	2.68	0.12	0.12	0.12	11.75	11.75	11.75	2.52	2.52	2.52
d_A, Approach Delay [s/veh]	0.82			0.03			13.62			17.13		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	1.50											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: NW Quince Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.795

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	21	150	11	106	177	0	1	92	28	22	26	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.60	1.60	1.60	4.60	4.60	4.60	1.70	1.70	1.70	3.00	3.00	3.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	21	150	11	106	177	0	1	92	28	22	26	53
Peak Hour Factor	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	64	5	45	75	0	0	39	12	9	11	22
Total Analysis Volume [veh/h]	36	254	19	180	300	0	2	156	47	37	44	90
Pedestrian Volume [ped/h]	2			2			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	585	603	543	543
Degree of Utilization, x	0.53	0.80	0.38	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.08	7.75	1.75	1.34
95th-Percentile Queue Length [ft]	77.06	193.81	43.69	33.48
Approach Delay [s/veh]	15.83	28.12	13.60	12.64
Approach LOS	C	D	B	B
Intersection Delay [s/veh]	20.03			
Intersection LOS	C			

Intersection Level Of Service Report
Intersection 8: NW Quince Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.257

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	42	123	23	46	274	53	139	22	119	8	10	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.10	2.10	2.10	3.20	3.20	3.20	1.10	1.10	1.10	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	42	123	23	46	274	53	139	22	119	8	10	17
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	35	6	13	77	15	39	6	33	2	3	5
Total Analysis Volume [veh/h]	47	138	26	52	308	60	156	25	134	9	11	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	50	0	9	50	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	46	46	55	46	46	57	57	57	57
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.05	0.04	0.02	0.04	0.11	0.11	0.12	0.11	0.01	0.02
s, saturation flow rate [veh/h]	1000	3202	1429	1175	1667	1574	1250	1476	1122	1538
c, Capacity [veh/h]	472	1227	548	594	639	604	620	701	503	731
d1, Uniform Delay [s]	18.54	23.84	23.24	18.25	25.71	25.77	20.90	18.53	22.14	16.87
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.42	0.19	0.16	0.29	1.17	1.27	0.97	0.75	0.07	0.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.10	0.11	0.05	0.09	0.29	0.30	0.25	0.23	0.02	0.04
d, Delay for Lane Group [s/veh]	18.96	24.03	23.40	18.54	26.88	27.04	21.87	19.29	22.21	16.97
Lane Group LOS	B	C	C	B	C	C	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.76	1.26	0.47	0.83	3.80	3.67	2.97	2.79	0.17	0.48
50th-Percentile Queue Length [ft/ln]	18.92	31.42	11.87	20.67	94.96	91.86	74.35	69.78	4.20	11.89
95th-Percentile Queue Length [veh/ln]	1.36	2.26	0.85	1.49	6.84	6.61	5.35	5.02	0.30	0.86
95th-Percentile Queue Length [ft/ln]	34.06	56.56	21.37	37.21	170.93	165.35	133.83	125.60	7.56	21.40

Movement, Approach, & Intersection Results

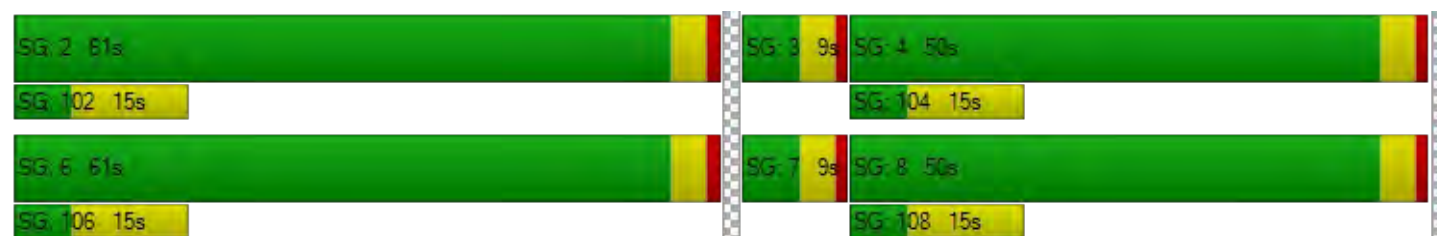
d_M, Delay for Movement [s/veh]	18.96	24.03	23.40	18.54	26.94	27.04	21.87	19.29	19.29	22.21	16.97	16.97
Movement LOS	B	C	C	B	C	C	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	22.82			25.91			20.57			18.18		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	23.24											
Intersection LOS	C											
Intersection V/C	0.257											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.760	2.751	2.099	2.023
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	950	950
d_b, Bicycle Delay [s]	22.82	22.82	16.54	16.54
I_b,int, Bicycle LOS Score for Intersection	1.734	1.906	2.079	1.624
Bicycle LOS	A	A	B	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: NW Maple Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	38.1
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.027

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	11	29	8	70	62	165	155	454	17	9	174	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	5.10	5.10	5.10	1.30	1.30	1.30	4.10	4.10	4.10
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	29	8	70	62	165	155	454	17	9	174	10
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	9	2	21	19	50	47	138	5	3	53	3
Total Analysis Volume [veh/h]	13	35	10	85	76	201	189	554	21	11	212	12
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	491	573	517	575	470	505
Degree of Utilization, x	0.12	0.63	0.37	1.03	0.02	0.44

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.40	4.41	1.66	15.66	0.07	2.24
95th-Percentile Queue Length [ft]	9.99	110.23	41.56	391.51	1.80	56.11
Approach Delay [s/veh]	11.32	19.44	56.10		15.14	
Approach LOS	B	C	F		C	
Intersection Delay [s/veh]	38.13					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 10: NW Maple Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	104	82	56	229	62	112	170	271	129	91	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.60	2.60	2.60	3.50	3.50	3.50	1.80	1.80	1.80	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	104	82	56	229	62	112	170	271	129	91	25
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	13	30	24	16	67	18	33	49	79	38	26	7
Total Analysis Volume [veh/h]	53	121	95	65	266	72	130	198	315	150	106	29
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	25	0	14	30	0	28	58	0	53	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	35	21	21	35	26	26	77	54	54	77	19
g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.22	0.22	0.64	0.45	0.45	0.64	0.16
(v / s)_i Volume / Saturation Flow Rate	0.05	0.07	0.07	0.05	0.10	0.11	0.09	0.12	0.22	0.12	0.08
s, saturation flow rate [veh/h]	1066	1675	1442	1224	1663	1544	1501	1686	1433	1212	1622
c, Capacity [veh/h]	310	293	252	377	360	334	891	759	645	787	257
d1, Uniform Delay [s]	31.70	43.76	44.01	31.66	41.10	41.22	13.77	20.57	23.26	8.87	46.36
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.19	3.75	4.91	0.99	4.54	5.11	0.34	0.84	2.64	0.54	7.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.38	0.41	0.17	0.48	0.49	0.15	0.26	0.49	0.19	0.53
d, Delay for Lane Group [s/veh]	32.89	47.51	48.92	32.65	45.63	46.33	14.11	21.40	25.90	9.41	53.87
Lane Group LOS	C	D	D	C	D	D	B	C	C	A	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.20	3.18	3.03	1.46	4.81	4.64	1.33	3.59	6.62	1.58	4.21
50th-Percentile Queue Length [ft/ln]	30.04	79.44	75.67	36.57	120.31	115.89	33.37	89.78	165.46	39.49	105.22
95th-Percentile Queue Length [veh/ln]	2.16	5.72	5.45	2.63	8.41	8.17	2.40	6.46	10.84	2.84	7.57
95th-Percentile Queue Length [ft/ln]	54.08	143.00	136.21	65.82	210.25	204.16	60.07	161.61	270.94	71.08	189.34

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.89	47.62	48.92	32.65	45.88	46.33	14.11	21.40	25.90	9.41	53.87	53.87
Movement LOS	C	D	D	C	D	D	B	C	C	A	D	D
d_A, Approach Delay [s/veh]	45.17			43.82			22.13			30.47		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	32.96											
Intersection LOS	C											
Intersection V/C	0.435											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.811			2.727			2.412			2.217		
Crosswalk LOS	C			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	350			433			900			317		
d_b, Bicycle Delay [s]	40.84			36.82			18.15			42.50		
I_b,int, Bicycle LOS Score for Intersection	1.782			1.892			2.621			2.030		
Bicycle LOS	A			A			B			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 11: NW Kingwood Avenue at NW 6th Street

Control Type:	Two-way stop	Delay (sec / veh):	20.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	7	260	38	13	457	4	0	2	9	13	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	1.90	1.90	1.90	0.00	0.00	0.00	5.00	5.00	5.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	260	38	13	457	4	0	2	9	13	0	7
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	82	12	4	145	1	0	1	3	4	0	2
Total Analysis Volume [veh/h]	9	329	48	16	578	5	0	3	11	16	0	9
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.02	0.05	0.00	0.01
d_M, Delay for Movement [s/veh]	8.65	0.00	0.00	8.10	0.00	0.00	18.39	20.46	10.29	17.24	20.94	10.05
Movement LOS	A	A	A	A	A	A	C	C	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.04	0.00	0.00	0.09	0.09	0.09	0.20	0.20	0.20
95th-Percentile Queue Length [ft/ln]	0.68	0.00	0.00	1.03	0.00	0.00	2.17	2.17	2.17	5.00	5.00	5.00
d_A, Approach Delay [s/veh]	0.20			0.22			12.47			14.65		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	0.73											
Intersection LOS	C											

Cinder Butte Village Phases 2-4

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Scenario 2 2023 Background AM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Left	0.776	277.4	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.171	17.1	C
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.124	46.6	E
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.022	46.3	E
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	SB Thru	1.053	43.9	E
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	SB Right	0.318	24.0	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	EB Thru	1.494	119.5	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	WB Thru	0.536	35.0	C
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	EB Thru	0.017	25.5	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report**Intersection 1: NW Pershall Way at U.S. Highway 97**

Control Type:	Two-way stop	Delay (sec / veh):	277.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.776

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	516	28	3	967	55	23	15	97	20	19	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	10.30	10.30	10.30	6.00	6.00	6.00	6.70	6.70	6.70	6.50	6.50	6.50
Growth Factor	1.0820	1.0250	1.0140	1.0140	1.0250	1.0820	1.0820	1.0820	1.0820	1.0140	1.0820	1.0140
In-Process Volume [veh/h]	0	0	0	0	0	4	13	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	39	529	28	3	991	64	38	16	105	20	21	8
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	147	8	1	275	18	11	4	29	6	6	2
Total Analysis Volume [veh/h]	43	588	31	3	1101	71	42	18	117	22	23	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.00	0.01	0.00	0.78	0.27	0.25	0.31	0.36	0.01
d_M, Delay for Movement [s/veh]	12.14	0.00	0.00	8.88	0.00	0.00	277.38	263.97	218.57	122.24	127.72	76.76
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.25	0.00	0.00	0.01	0.00	0.00	11.03	11.03	11.03	3.19	3.19	3.19
95th-Percentile Queue Length [ft/ln]	6.37	0.00	0.00	0.24	0.00	0.00	275.65	275.65	275.65	79.83	79.83	79.83
d_A, Approach Delay [s/veh]	0.79			0.02			237.14			116.99		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	23.62											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.171

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	26	0	53	0	0	0	0	80	43	80	28	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	7.30	7.30	7.30	8.30	8.30	8.30
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	9	0	12	0	0	0	0	0	4	4	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	0	69	0	0	0	0	87	51	91	30	0
Peak Hour Factor	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	0	31	0	0	0	0	39	23	41	13	0
Total Analysis Volume [veh/h]	66	0	123	0	0	0	0	155	91	162	54	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.17	0.00	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00
d_M, Delay for Movement [s/veh]	17.06	17.40	12.02	16.97	15.23	8.53	7.37	0.00	0.00	8.21	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.35	1.35	1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.43	0.43	0.43
95th-Percentile Queue Length [ft/ln]	33.77	33.77	33.77	0.00	0.00	0.00	0.00	0.00	0.00	10.80	10.80	10.80
d_A, Approach Delay [s/veh]	13.78			13.58			0.00			6.16		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	6.04											
Intersection LOS	C											

Intersection Level Of Service Report**Intersection 3: NW Walnut Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	79	0	0	123	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	25	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	0	0	141	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	0	0	35	0	0
Total Analysis Volume [veh/h]	110	0	0	141	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.43	0.00	9.88	8.82
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.35	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 4: NW Varnish Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	79	0	0	124	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	25	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	0	0	142	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	0	0	36	0	0
Total Analysis Volume [veh/h]	110	0	0	142	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.43	0.00	9.89	8.82
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.35	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	46.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.124

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	145	18	1	0	28	96	61	4	196	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.60	0.60	0.60	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	19	3	3	0	2	6	20	0	48	7	0	2
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	22	4	0	32	110	86	4	260	7	0	2
Peak Hour Factor	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000	0.6000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	9	2	0	13	46	36	2	108	3	0	1
Total Analysis Volume [veh/h]	293	37	7	0	53	183	143	7	433	12	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.00	0.00	0.00	0.00	0.54	0.03	0.48	0.12	0.00	0.00
d_M, Delay for Movement [s/veh]	8.44	0.00	0.00	7.29	0.00	0.00	33.59	23.01	13.07	46.57	25.01	12.85
Movement LOS	A	A	A	A	A	A	D	C	B	E	D	B
95th-Percentile Queue Length [veh/ln]	0.83	0.00	0.00	0.00	0.00	0.00	2.96	2.89	2.89	0.42	0.42	0.42
95th-Percentile Queue Length [ft/ln]	20.87	0.00	0.00	0.00	0.00	0.00	73.97	72.30	72.30	10.55	10.55	10.55
d_A, Approach Delay [s/veh]	7.34			0.00			18.23			39.83		
Approach LOS	A			A			C			E		
d_I, Intersection Delay [s/veh]	11.70											
Intersection LOS	E											

Intersection Level Of Service Report**Intersection 6: NW Spruce Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	46.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.022

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	20	179	3	1	239	5	0	2	32	1	2	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.80	0.80	0.80	41.20	41.20	41.20	20.00	20.00	20.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	14	25	0	0	57	0	0	0	28	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	219	3	1	316	5	0	2	63	1	2	2
Peak Hour Factor	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	105	1	0	152	2	0	1	30	0	1	1
Total Analysis Volume [veh/h]	69	421	6	2	608	10	0	4	121	2	4	4
Pedestrian Volume [ped/h]	2			2			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.28	0.02	0.03	0.01
d_M, Delay for Movement [s/veh]	8.99	0.00	0.00	8.17	0.00	0.00	37.90	33.98	17.51	46.26	28.99	12.24
Movement LOS	A	A	A	A	A	A	E	D	C	E	D	B
95th-Percentile Queue Length [veh/ln]	0.23	0.23	0.23	0.01	0.01	0.01	1.31	1.31	1.31	0.17	0.17	0.17
95th-Percentile Queue Length [ft/ln]	5.73	5.73	5.73	0.13	0.13	0.13	32.84	32.84	32.84	4.29	4.29	4.29
d_A, Approach Delay [s/veh]	1.25			0.03			18.04			25.74		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	2.52											
Intersection LOS	E											

Intersection Level Of Service Report**Intersection 7: NW Quince Avenue at NW 10th Street**

Control Type:	All-way stop	Delay (sec / veh):	43.9
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.053

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	21	150	11	106	177	0	1	92	28	22	26	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.60	1.60	1.60	4.60	4.60	4.60	1.70	1.70	1.70	3.00	3.00	3.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	7	20	0	42	44	0	0	14	9	0	6	18
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	30	182	12	157	236	0	1	114	39	24	34	75
Peak Hour Factor	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700	0.6700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	68	4	59	88	0	0	43	15	9	13	28
Total Analysis Volume [veh/h]	45	272	18	234	352	0	1	170	58	36	51	112
Pedestrian Volume [ped/h]	2			2			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	534	586	498	498
Degree of Utilization, x	0.63	1.05	0.46	0.40

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	4.31	16.78	2.39	1.90
95th-Percentile Queue Length [ft]	107.67	419.49	59.67	47.51
Approach Delay [s/veh]	20.42	78.01	16.25	14.96
Approach LOS	C	F	C	B
Intersection Delay [s/veh]	43.92			
Intersection LOS	E			

Intersection Level Of Service Report**Intersection 8: NW Quince Avenue at NW 6th Street**

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.318

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	42	123	23	46	274	53	139	22	119	8	10	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.10	2.10	2.10	3.20	3.20	3.20	1.10	1.10	1.10	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	10	43	13	5	13	12	29	4	27	8	4	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	176	38	55	309	69	179	28	156	17	15	22
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	49	11	15	87	19	50	8	44	5	4	6
Total Analysis Volume [veh/h]	62	198	43	62	347	78	201	31	175	19	17	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	50	0	9	50	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	46	46	55	46	46	57	57	57	57
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.06	0.06	0.03	0.06	0.13	0.13	0.16	0.14	0.02	0.03
s, saturation flow rate [veh/h]	959	3202	1429	1123	1667	1563	1237	1474	1075	1547
c, Capacity [veh/h]	445	1227	548	558	639	599	609	700	461	735
d1, Uniform Delay [s]	18.89	24.32	23.52	18.43	26.24	26.31	22.17	19.22	24.01	17.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.65	0.28	0.28	0.40	1.45	1.58	1.45	1.07	0.17	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.14	0.16	0.08	0.11	0.34	0.35	0.33	0.29	0.04	0.06
d, Delay for Lane Group [s/veh]	19.54	24.60	23.80	18.83	27.69	27.89	23.62	20.29	24.18	17.15
Lane Group LOS	B	C	C	B	C	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.02	1.84	0.80	1.00	4.51	4.32	4.06	3.76	0.37	0.67
50th-Percentile Queue Length [ft/ln]	25.39	46.02	19.90	24.93	112.77	108.12	101.45	94.04	9.36	16.78
95th-Percentile Queue Length [veh/ln]	1.83	3.31	1.43	1.80	7.99	7.74	7.30	6.77	0.67	1.21
95th-Percentile Queue Length [ft/ln]	45.70	82.84	35.81	44.88	199.85	193.38	182.60	169.28	16.84	30.20

Movement, Approach, & Intersection Results

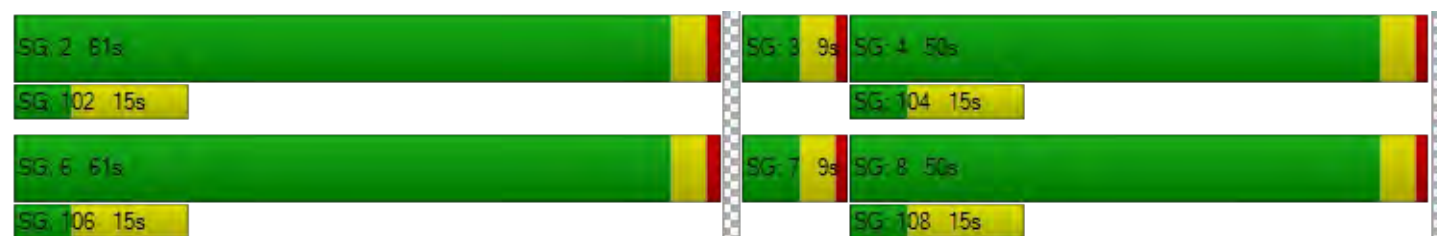
d_M, Delay for Movement [s/veh]	19.54	24.60	23.80	18.83	27.77	27.89	23.62	20.29	20.29	24.18	17.15	17.15
Movement LOS	B	C	C	B	C	C	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	23.45			26.65			21.94			19.34		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.00											
Intersection LOS	C											
Intersection V/C	0.318											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.813			2.867			2.143			2.044		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	767			767			950			950		
d_b, Bicycle Delay [s]	22.82			22.82			16.54			16.54		
I_b,int, Bicycle LOS Score for Intersection	1.810			1.961			2.231			1.660		
Bicycle LOS	A			A			B			A		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 9: NW Maple Avenue at NW 10th Street**

Control Type:	All-way stop	Delay (sec / veh):	119.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.494

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	11	29	8	70	62	165	155	454	17	9	174	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	5.10	5.10	5.10	1.30	1.30	1.30	4.10	4.10	4.10
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	2	5	0	19	14	30	20	90	8	0	29	6
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	36	9	95	81	209	188	581	26	10	217	17
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	11	3	29	25	64	57	177	8	3	66	5
Total Analysis Volume [veh/h]	17	44	11	116	99	255	229	709	32	12	265	21
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	441	545	462	741	433	464
Degree of Utilization, x	0.16	0.86	0.50	1.49	0.03	0.62

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.58	9.39	2.71	37.94	0.09	4.08
95th-Percentile Queue Length [ft]	14.46	234.83	67.64	948.45	2.13	101.88
Approach Delay [s/veh]	12.75	38.00	196.93		21.70	
Approach LOS	B	E	F		C	
Intersection Delay [s/veh]	119.49					
Intersection LOS	F					

Intersection Level Of Service Report**Intersection 10: NW Maple Avenue at NW 6th Street**

Control Type:	Signalized	Delay (sec / veh):	35.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.536

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	104	82	56	229	62	112	170	271	129	91	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.60	2.60	2.60	3.50	3.50	3.50	1.80	1.80	1.80	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	12	13	0	6	25	17	50	18	44	0	7	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	126	89	67	273	84	171	202	337	140	105	30
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	37	26	19	79	24	50	59	98	41	31	9
Total Analysis Volume [veh/h]	72	147	103	78	317	98	199	235	392	163	122	35
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	25	0	14	30	0	28	58	0	53	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	35	21	21	35	26	26	77	54	54	77	19
g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.22	0.22	0.64	0.45	0.45	0.64	0.16
(v / s)_i Volume / Saturation Flow Rate	0.07	0.08	0.08	0.06	0.13	0.13	0.13	0.14	0.27	0.14	0.10
s, saturation flow rate [veh/h]	1015	1675	1455	1203	1663	1531	1496	1686	1433	1187	1619
c, Capacity [veh/h]	280	293	255	363	360	332	874	759	645	756	256
d1, Uniform Delay [s]	32.44	44.27	44.51	32.02	42.26	42.38	14.60	21.09	24.99	9.14	47.07
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.22	4.80	6.15	1.35	7.04	7.98	0.61	1.06	4.23	0.65	10.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.26	0.44	0.47	0.22	0.59	0.61	0.23	0.31	0.61	0.22	0.61
d, Delay for Lane Group [s/veh]	34.66	49.08	50.66	33.38	49.30	50.36	15.21	22.15	29.21	9.79	57.53
Lane Group LOS	C	D	D	C	D	D	B	C	C	A	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.68	3.77	3.56	1.78	6.24	5.95	2.15	4.38	8.97	1.74	5.08
50th-Percentile Queue Length [ft/ln]	42.09	94.13	89.11	44.53	156.09	148.77	53.84	109.51	224.30	43.50	127.05
95th-Percentile Queue Length [veh/ln]	3.03	6.78	6.42	3.21	10.34	9.95	3.88	7.81	13.88	3.13	8.78
95th-Percentile Queue Length [ft/ln]	75.77	169.43	160.40	80.15	258.54	248.78	96.92	195.32	347.11	78.30	219.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	34.66	49.26	50.66	33.38	49.64	50.36	15.21	22.15	29.21	9.79	57.53	57.53
Movement LOS	C	D	D	C	D	D	B	C	C	A	E	E
d_A, Approach Delay [s/veh]	46.44			47.21			23.83			33.22		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	34.95											
Intersection LOS	C											
Intersection V/C	0.536											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.867			2.821			2.488			2.256		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	350			433			900			317		
d_b, Bicycle Delay [s]	40.84			36.82			18.15			42.50		
I_b,int, Bicycle LOS Score for Intersection	1.825			1.966			2.923			2.088		
Bicycle LOS	A			A			C			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 25.5
 Level Of Service: D
 Volume to Capacity (v/c): 0.017

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	7	260	38	13	457	4	0	2	9	13	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	1.90	1.90	1.90	0.00	0.00	0.00	5.00	5.00	5.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	0	25	0	0	68	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	306	41	14	562	4	0	2	10	14	0	8
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	97	13	4	178	1	0	1	3	4	0	3
Total Analysis Volume [veh/h]	10	387	52	18	711	5	0	3	13	18	0	10
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.01	0.00	0.00	0.02	0.02	0.07	0.00	0.01
d_M, Delay for Movement [s/veh]	9.10	0.00	0.00	8.28	0.00	0.00	22.85	25.47	10.92	20.75	26.33	10.70
Movement LOS	A	A	A	A	A	A	C	D	B	C	D	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.05	0.00	0.00	0.12	0.12	0.12	0.28	0.28	0.28
95th-Percentile Queue Length [ft/ln]	0.85	0.00	0.00	1.23	0.00	0.00	2.88	2.88	2.88	7.04	7.04	7.04
d_A, Approach Delay [s/veh]	0.20			0.20			13.65			17.16		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.77											
Intersection LOS	D											

Cinder Butte Village Phases 2-4

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Scenario 3 2023 Buildout AM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Left	0.907	330.8	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.187	17.6	C
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.034	10.2	B
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.040	10.3	B
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.120	48.8	E
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.030	61.0	F
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	SB Thru	1.088	49.4	E
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	SB Right	0.333	24.1	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	EB Thru	1.540	129.3	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	WB Thru	0.549	35.3	D
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	EB Thru	0.017	26.3	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: NW Pershall Way at U.S. Highway 97

Control Type:	Two-way stop	Delay (sec / veh):	330.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.907

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	516	28	3	967	55	23	15	97	20	19	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	10.30	10.30	10.30	6.00	6.00	6.00	6.70	6.70	6.70	6.50	6.50	6.50
Growth Factor	1.0820	1.0250	1.0140	1.0140	1.0250	1.0820	1.0820	1.0820	1.0820	1.0140	1.0820	1.0140
In-Process Volume [veh/h]	0	0	0	0	0	4	13	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	2	6	0	0	0	0	0
Total Hourly Volume [veh/h]	39	529	28	3	991	66	44	16	105	20	21	8
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	147	8	1	275	18	12	4	29	6	6	2
Total Analysis Volume [veh/h]	43	588	31	3	1101	73	49	18	117	22	23	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.01	0.00	0.00	0.01	0.00	0.91	0.27	0.25	0.31	0.36	0.01
d_M, Delay for Movement [s/veh]	12.16	0.00	0.00	8.88	0.00	0.00	330.76	317.27	271.86	122.54	128.19	77.05
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.26	0.00	0.00	0.01	0.00	0.00	12.40	12.40	12.40	3.20	3.20	3.20
95th-Percentile Queue Length [ft/ln]	6.39	0.00	0.00	0.24	0.00	0.00	310.03	310.03	310.03	79.97	79.97	79.97
d_A, Approach Delay [s/veh]	0.79			0.02			291.99			117.37		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	29.18											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.187

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	26	0	53	0	0	0	0	80	43	80	28	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	7.30	7.30	7.30	8.30	8.30	8.30
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	9	0	12	0	0	0	0	0	4	4	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	3	0	6	0	0	0	0	0	1	2	0	0
Total Hourly Volume [veh/h]	40	0	75	0	0	0	0	87	52	93	30	0
Peak Hour Factor	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	33	0	0	0	0	39	23	42	13	0
Total Analysis Volume [veh/h]	71	0	134	0	0	0	0	155	93	166	54	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.00	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.00	0.00
d_M, Delay for Movement [s/veh]	17.63	17.96	12.43	17.47	15.41	8.53	7.37	0.00	0.00	8.23	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.53	1.53	1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.44	0.44	0.44
95th-Percentile Queue Length [ft/ln]	38.35	38.35	38.35	0.00	0.00	0.00	0.00	0.00	0.00	11.12	11.12	11.12
d_A, Approach Delay [s/veh]	14.23			13.80			0.00			6.21		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	6.36											
Intersection LOS	C											

Intersection Level Of Service Report**Intersection 3: NW Walnut Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	79	0	0	123	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	25	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	4	5	2	1	25	5
Total Hourly Volume [veh/h]	114	5	2	142	25	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	1	1	36	6	1
Total Analysis Volume [veh/h]	114	5	2	142	25	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.45	0.00	10.16	9.05
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.10	0.10	3.11	3.11
d_A, Approach Delay [s/veh]	0.00		0.10		9.97	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.07					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	79	0	0	124	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	25	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	5	5	1	25	28	4
Total Hourly Volume [veh/h]	115	5	1	167	28	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	29	1	0	42	7	1
Total Analysis Volume [veh/h]	115	5	1	167	28	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.45	0.00	10.35	9.08
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.05	0.05	3.45	3.45
d_A, Approach Delay [s/veh]	0.00		0.04		10.19	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.04					
Intersection LOS	B					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	48.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.120

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	145	18	1	0	28	96	61	4	196	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.60	0.60	0.60	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	19	3	3	0	2	6	20	0	48	7	0	2
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	18	0	0	53	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	176	40	4	0	85	110	86	4	260	7	0	2
Peak Hour Factor	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500	0.6500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	15	2	0	33	42	33	2	100	3	0	1
Total Analysis Volume [veh/h]	271	62	6	0	131	169	132	6	400	11	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.00	0.00	0.00	0.00	0.00	0.54	0.02	0.48	0.12	0.00	0.00
d_M, Delay for Movement [s/veh]	8.61	0.00	0.00	7.34	0.00	0.00	35.58	24.31	13.87	48.82	25.90	13.00
Movement LOS	A	A	A	A	A	A	E	C	B	E	D	B
95th-Percentile Queue Length [veh/ln]	0.81	0.00	0.00	0.00	0.00	0.00	2.90	2.91	2.91	0.41	0.41	0.41
95th-Percentile Queue Length [ft/ln]	20.23	0.00	0.00	0.00	0.00	0.00	72.56	72.80	72.80	10.22	10.22	10.22
d_A, Approach Delay [s/veh]	6.88			0.00			19.31			41.15		
Approach LOS	A			A			C			E		
d_I, Intersection Delay [s/veh]	11.16											
Intersection LOS	E											

Intersection Level Of Service Report

Intersection 6: NW Spruce Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	61.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.030

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	20	179	3	1	239	5	0	2	32	1	2	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.80	0.80	0.80	41.20	41.20	41.20	20.00	20.00	20.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	14	25	0	0	57	0	0	0	28	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	18	0	0	53	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	237	3	1	369	5	0	2	63	1	2	2
Peak Hour Factor	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	114	1	0	177	2	0	1	30	0	1	1
Total Analysis Volume [veh/h]	69	456	6	2	710	10	0	4	121	2	4	4
Pedestrian Volume [ped/h]	2			2			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.33	0.03	0.03	0.01
d_M, Delay for Movement [s/veh]	9.39	0.00	0.00	8.27	0.00	0.00	47.60	41.67	20.57	60.97	34.92	13.20
Movement LOS	A	A	A	A	A	A	E	E	C	F	D	B
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.25	0.01	0.01	0.01	1.61	1.61	1.61	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	6.29	6.29	6.29	0.14	0.14	0.14	40.25	40.25	40.25	5.44	5.44	5.44
d_A, Approach Delay [s/veh]	1.22			0.02			21.24			31.44		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	2.62											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: NW Quince Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	49.4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.088

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	21	150	11	106	177	0	1	92	28	22	26	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.60	1.60	1.60	4.60	4.60	4.60	1.70	1.70	1.70	3.00	3.00	3.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	7	20	0	42	44	0	0	14	9	0	6	18
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	10	0	23	30	0	0	0	0	0	0	8
Total Hourly Volume [veh/h]	30	192	12	180	266	0	1	114	39	24	34	83
Peak Hour Factor	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200	0.7200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	67	4	63	92	0	0	40	14	8	12	29
Total Analysis Volume [veh/h]	42	267	17	250	369	0	1	158	54	33	47	115
Pedestrian Volume [ped/h]	2			2			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	544	619	503	508
Degree of Utilization, x	0.60	1.09	0.42	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	3.93	18.67	2.08	1.79
95th-Percentile Queue Length [ft]	98.18	466.87	52.11	44.74
Approach Delay [s/veh]	19.05	88.13	15.32	14.45
Approach LOS	C	F	C	B
Intersection Delay [s/veh]	49.40			
Intersection LOS	E			

Intersection Level Of Service Report

Intersection 8: NW Quince Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	24.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.333

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	42	123	23	46	274	53	139	22	119	8	10	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.10	2.10	2.10	3.20	3.20	3.20	1.10	1.10	1.10	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	10	43	13	5	13	12	29	4	27	8	4	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	4	0	0	0	0	4	13	0	10	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	59	176	38	55	309	73	192	28	166	17	15	22
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	49	11	15	87	21	54	8	47	5	4	6
Total Analysis Volume [veh/h]	66	198	43	62	347	82	216	31	187	19	17	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	50	0	9	50	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	46	46	55	46	46	57	57	57	57
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.07	0.06	0.03	0.06	0.13	0.13	0.17	0.15	0.02	0.03
s, saturation flow rate [veh/h]	956	3202	1429	1123	1667	1559	1237	1472	1063	1547
c, Capacity [veh/h]	443	1227	548	558	639	598	609	699	450	735
d1, Uniform Delay [s]	18.95	24.32	23.52	18.43	26.29	26.35	22.50	19.41	24.47	17.00
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	0.28	0.28	0.40	1.47	1.61	1.62	1.16	0.18	0.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.15	0.16	0.08	0.11	0.34	0.35	0.35	0.31	0.04	0.06
d, Delay for Lane Group [s/veh]	19.66	24.60	23.80	18.83	27.76	27.96	24.11	20.57	24.65	17.15
Lane Group LOS	B	C	C	B	C	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.08	1.84	0.80	1.00	4.57	4.37	4.43	4.02	0.38	0.67
50th-Percentile Queue Length [ft/ln]	27.12	46.02	19.90	24.93	114.16	109.23	110.77	100.59	9.47	16.78
95th-Percentile Queue Length [veh/ln]	1.95	3.31	1.43	1.80	8.07	7.80	7.88	7.24	0.68	1.21
95th-Percentile Queue Length [ft/ln]	48.82	82.84	35.81	44.88	201.78	194.93	197.07	181.06	17.04	30.20

Movement, Approach, & Intersection Results

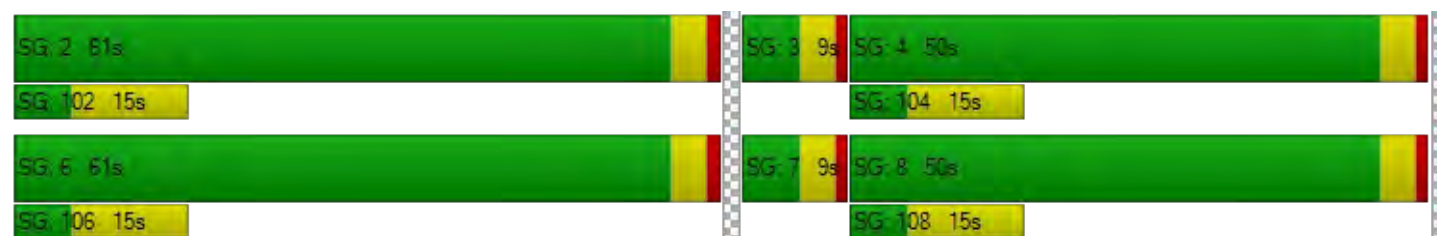
d_M, Delay for Movement [s/veh]	19.66	24.60	23.80	18.83	27.83	27.96	24.11	20.57	20.57	24.65	17.15	17.15
Movement LOS	B	C	C	B	C	C	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	23.43			26.72			22.34			19.48		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.12											
Intersection LOS	C											
Intersection V/C	0.333											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.816	2.894	2.155	2.044
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	767	767	950	950
d_b, Bicycle Delay [s]	22.82	22.82	16.54	16.54
I_b,int, Bicycle LOS Score for Intersection	1.813	1.965	2.276	1.660
Bicycle LOS	A	A	B	A

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 9: NW Maple Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	129.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.540

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	11	29	8	70	62	165	155	454	17	9	174	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	5.10	5.10	5.10	1.30	1.30	1.30	4.10	4.10	4.10
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	2	5	0	19	14	30	20	90	8	0	29	6
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	2	0	11	6	13	4	0	0	0	0	4
Total Hourly Volume [veh/h]	14	38	9	106	87	222	192	581	26	10	217	21
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	12	3	32	27	68	59	177	8	3	66	6
Total Analysis Volume [veh/h]	17	46	11	129	106	271	234	709	32	12	265	26
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	430	540	448	741	424	454
Degree of Utilization, x	0.17	0.94	0.52	1.54	0.03	0.64

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.62	11.80	2.95	39.52	0.09	4.40
95th-Percentile Queue Length [ft]	15.39	294.88	73.81	988.11	2.18	110.09
Approach Delay [s/veh]	13.11	50.25	212.15		23.24	
Approach LOS	B	F	F		C	
Intersection Delay [s/veh]	129.32					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 10: NW Maple Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	35.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	104	82	56	229	62	112	170	271	129	91	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.60	2.60	2.60	3.50	3.50	3.50	1.80	1.80	1.80	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	12	13	0	6	25	17	50	18	44	0	7	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	3	3	0	3	7	0	0	3	8	0	1	1
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	129	89	70	280	84	171	205	345	140	106	31
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	38	26	20	81	24	50	60	100	41	31	9
Total Analysis Volume [veh/h]	76	150	103	81	326	98	199	238	401	163	123	36
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	25	0	14	30	0	28	58	0	53	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	35	21	21	35	26	26	77	54	54	77	19
g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.22	0.22	0.64	0.45	0.45	0.64	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.08	0.08	0.07	0.13	0.13	0.13	0.14	0.28	0.14	0.10
s, saturation flow rate [veh/h]	1009	1675	1457	1201	1663	1534	1495	1686	1433	1185	1618
c, Capacity [veh/h]	276	293	255	362	360	332	873	759	645	754	256
d1, Uniform Delay [s]	32.58	44.32	44.55	32.09	42.39	42.51	14.63	21.13	25.20	9.16	47.14
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.45	4.91	6.25	1.43	7.40	8.36	0.61	1.08	4.47	0.66	10.80
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.27	0.45	0.48	0.22	0.61	0.62	0.23	0.31	0.62	0.22	0.62
d, Delay for Lane Group [s/veh]	35.03	49.23	50.80	33.53	49.80	50.87	15.24	22.21	29.68	9.82	57.94
Lane Group LOS	D	D	D	C	D	D	B	C	C	A	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.79	3.82	3.61	1.86	6.42	6.12	2.15	4.45	9.28	1.74	5.17
50th-Percentile Queue Length [ft/ln]	44.70	95.45	90.31	46.38	160.42	152.93	53.85	111.16	231.95	43.51	129.18
95th-Percentile Queue Length [veh/ln]	3.22	6.87	6.50	3.34	10.57	10.17	3.88	7.90	14.27	3.13	8.90
95th-Percentile Queue Length [ft/ln]	80.46	171.82	162.56	83.48	264.29	254.34	96.93	197.61	356.83	78.33	222.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.03	49.42	50.80	33.53	50.15	50.87	15.24	22.21	29.68	9.82	57.94	57.94
Movement LOS	D	D	D	C	D	D	B	C	C	A	E	E
d_A, Approach Delay [s/veh]	46.53			47.62			24.13			33.58		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	35.30											
Intersection LOS	D											
Intersection V/C	0.549											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.873	2.823	2.494	2.260
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	350	433	900	317
d_b, Bicycle Delay [s]	40.84	36.82	18.15	42.50
I_b,int, Bicycle LOS Score for Intersection	1.831	1.976	2.942	2.091
Bicycle LOS	A	A	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 26.3
 Level Of Service: D
 Volume to Capacity (v/c): 0.017

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	7	260	38	13	457	4	0	2	9	13	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	1.90	1.90	1.90	0.00	0.00	0.00	5.00	5.00	5.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	0	25	0	0	68	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	6	0	0	15	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	312	41	14	577	4	0	2	10	14	0	8
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	99	13	4	183	1	0	1	3	4	0	3
Total Analysis Volume [veh/h]	10	395	52	18	730	5	0	3	13	18	0	10
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.01	0.00	0.00	0.02	0.02	0.08	0.00	0.01
d_M, Delay for Movement [s/veh]	9.17	0.00	0.00	8.30	0.00	0.00	23.56	26.25	11.02	21.26	27.18	10.79
Movement LOS	A	A	A	A	A	A	C	D	B	C	D	B
95th-Percentile Queue Length [veh/ln]	0.03	0.00	0.00	0.05	0.00	0.00	0.12	0.12	0.12	0.29	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.87	0.00	0.00	1.24	0.00	0.00	2.95	2.95	2.95	7.25	7.25	7.25
d_A, Approach Delay [s/veh]	0.20			0.20			13.87			17.52		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.76											
Intersection LOS	D											

Cinder Butte Village Phases 2-4

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Scenario 4 2028 Future AM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Left	1.176	505.2	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.224	19.7	C
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.036	10.3	B
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.041	10.5	B
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.122	53.6	F
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.039	77.3	F
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	SB Thru	1.144	58.8	F
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	SB Right	0.364	24.6	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	EB Thru	1.693	163.5	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	WB Thru	0.598	37.0	D
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	EB Thru	0.020	30.0	D

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: NW Pershall Way at U.S. Highway 97

Control Type:	Two-way stop	Delay (sec / veh):	505.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.176

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	516	28	3	967	55	23	15	97	20	19	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	10.30	10.30	10.30	6.00	6.00	6.00	6.70	6.70	6.70	6.50	6.50	6.50
Growth Factor	1.1950	1.0570	1.0320	1.0320	1.0570	1.1950	1.1950	1.1950	1.1950	1.0320	1.1950	1.0320
In-Process Volume [veh/h]	0	0	0	0	0	4	13	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	2	6	0	0	0	0	0
Total Hourly Volume [veh/h]	43	545	29	3	1022	72	46	18	116	21	23	8
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	151	8	1	284	20	13	5	32	6	6	2
Total Analysis Volume [veh/h]	48	606	32	3	1136	80	51	20	129	23	26	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.00	0.00	0.01	0.00	1.18	0.33	0.28	0.40	0.46	0.01
d_M, Delay for Movement [s/veh]	12.54	0.00	0.00	8.95	0.00	0.00	505.20	481.30	430.08	184.51	185.95	127.93
Movement LOS	B	A	A	A	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.30	0.00	0.00	0.01	0.00	0.00	15.78	15.78	15.78	4.14	4.14	4.14
95th-Percentile Queue Length [ft/ln]	7.51	0.00	0.00	0.25	0.00	0.00	394.46	394.46	394.46	103.39	103.39	103.39
d_A, Approach Delay [s/veh]	0.88			0.02			454.36			176.37		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	47.03											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.224

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	26	0	53	0	0	0	0	80	43	80	28	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	7.30	7.30	7.30	8.30	8.30	8.30
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	9	0	12	0	0	0	0	0	4	4	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	3	0	6	0	0	0	0	0	1	2	0	0
Total Hourly Volume [veh/h]	43	0	81	0	0	0	0	96	56	102	33	0
Peak Hour Factor	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600	0.5600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	0	36	0	0	0	0	43	25	46	15	0
Total Analysis Volume [veh/h]	77	0	145	0	0	0	0	171	100	182	59	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
d_M, Delay for Movement [s/veh]	19.72	20.00	13.63	19.20	16.48	8.56	7.38	0.00	0.00	8.35	0.00	0.00
Movement LOS	C	C	B	C	C	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.91	1.91	1.91	0.00	0.00	0.00	0.00	0.00	0.00	0.51	0.51	0.51
95th-Percentile Queue Length [ft/ln]	47.79	47.79	47.79	0.00	0.00	0.00	0.00	0.00	0.00	12.65	12.65	12.65
d_A, Approach Delay [s/veh]	15.74			14.75			0.00			6.30		
Approach LOS	C			B			A			A		
d_I, Intersection Delay [s/veh]	6.83											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 3: NW Walnut Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	79	0	0	123	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	25	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	4	5	2	1	25	5
Total Hourly Volume [veh/h]	123	5	2	156	25	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	1	1	39	6	1
Total Analysis Volume [veh/h]	123	5	2	156	25	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.47	0.00	10.33	9.10
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.13	0.13
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.10	0.10	3.20	3.20
d_A, Approach Delay [s/veh]	0.00		0.09		10.12	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.041

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	79	0	0	124	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	25	0	0	8	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	5	5	1	25	28	4
Total Hourly Volume [veh/h]	124	5	1	181	28	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	1	0	45	7	1
Total Analysis Volume [veh/h]	124	5	1	181	28	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.04	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.47	0.00	10.52	9.14
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.05	0.05	3.56	3.56
d_A, Approach Delay [s/veh]	0.00		0.04		10.35	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.99					
Intersection LOS	B					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 53.6
 Level Of Service: F
 Volume to Capacity (v/c): 0.122

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	145	18	1	0	28	96	61	4	196	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.60	0.60	0.60	0.80	0.80	0.80	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	19	3	3	0	2	6	20	0	48	7	0	2
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	18	0	0	53	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	192	43	4	0	88	121	93	5	282	7	0	2
Peak Hour Factor	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800	0.6800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	71	16	1	0	32	44	34	2	104	3	0	1
Total Analysis Volume [veh/h]	282	63	6	0	129	178	137	7	415	10	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.00	0.00	0.00	0.00	0.00	0.59	0.03	0.50	0.12	0.00	0.00
d_M, Delay for Movement [s/veh]	8.67	0.00	0.00	7.34	0.00	0.00	40.20	25.53	14.39	53.60	27.23	13.43
Movement LOS	A	A	A	A	A	A	E	D	B	F	D	B
95th-Percentile Queue Length [veh/ln]	0.86	0.00	0.00	0.00	0.00	0.00	3.34	3.19	3.19	0.41	0.41	0.41
95th-Percentile Queue Length [ft/ln]	21.44	0.00	0.00	0.00	0.00	0.00	83.40	79.78	79.78	10.30	10.30	10.30
d_A, Approach Delay [s/veh]	6.97			0.00			20.86			44.33		
Approach LOS	A			A			C			E		
d_I, Intersection Delay [s/veh]	11.94											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 6: NW Spruce Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	77.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.039

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	20	179	3	1	239	5	0	2	32	1	2	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.80	0.80	0.80	41.20	41.20	41.20	20.00	20.00	20.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	14	25	0	0	57	0	0	0	28	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	18	0	0	53	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	257	4	1	396	6	0	2	66	1	2	2
Peak Hour Factor	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200	0.5200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	124	2	0	190	3	0	1	32	0	1	1
Total Analysis Volume [veh/h]	73	494	8	2	762	12	0	4	127	2	4	4
Pedestrian Volume [ped/h]	2			2			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.04	0.37	0.04	0.04	0.01
d_M, Delay for Movement [s/veh]	9.64	0.00	0.00	8.38	0.00	0.00	56.92	49.10	23.17	77.34	40.72	14.42
Movement LOS	A	A	A	A	A	A	F	E	C	F	E	B
95th-Percentile Queue Length [veh/ln]	0.28	0.28	0.28	0.01	0.01	0.01	1.93	1.93	1.93	0.27	0.27	0.27
95th-Percentile Queue Length [ft/ln]	7.03	7.03	7.03	0.14	0.14	0.14	48.36	48.36	48.36	6.65	6.65	6.65
d_A, Approach Delay [s/veh]	1.22			0.02			23.96			37.52		
Approach LOS	A			A			C			E		
d_I, Intersection Delay [s/veh]	2.84											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 7: NW Quince Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	58.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.144

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	21	150	11	106	177	0	1	92	28	22	26	53
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.60	1.60	1.60	4.60	4.60	4.60	1.70	1.70	1.70	3.00	3.00	3.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	7	20	0	42	44	0	0	14	9	0	6	18
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	10	0	23	30	0	0	0	0	0	0	8
Total Hourly Volume [veh/h]	32	209	13	192	286	0	1	124	42	26	37	89
Peak Hour Factor	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500	0.7500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	70	4	64	95	0	0	41	14	9	12	30
Total Analysis Volume [veh/h]	43	279	17	256	381	0	1	165	56	35	49	119
Pedestrian Volume [ped/h]	2			2			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	535	637	496	500
Degree of Utilization, x	0.63	1.14	0.45	0.41

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	4.40	21.25	2.28	1.95
95th-Percentile Queue Length [ft]	109.98	531.30	56.96	48.70
Approach Delay [s/veh]	20.64	107.97	16.00	15.03
Approach LOS	C	F	C	C
Intersection Delay [s/veh]	58.80			
Intersection LOS	F			

Intersection Level Of Service Report
Intersection 8: NW Quince Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	24.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	42	123	23	46	274	53	139	22	119	8	10	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.10	2.10	2.10	3.20	3.20	3.20	1.10	1.10	1.10	0.00	0.00	0.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	10	43	13	5	13	12	29	4	27	8	4	4
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	4	0	0	0	0	4	13	0	10	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	64	190	40	60	340	79	208	30	179	18	16	24
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	53	11	17	96	22	58	8	50	5	4	7
Total Analysis Volume [veh/h]	72	213	45	67	382	89	234	34	201	20	18	27
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	9	50	0	9	50	0	0	61	0	0	61	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	55	46	46	55	46	46	57	57	57	57
g / C, Green / Cycle	0.46	0.38	0.38	0.46	0.38	0.38	0.48	0.48	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.08	0.07	0.03	0.06	0.15	0.15	0.19	0.16	0.02	0.03
s, saturation flow rate [veh/h]	928	3202	1429	1111	1667	1560	1234	1473	1047	1546
c, Capacity [veh/h]	424	1227	548	550	639	598	606	700	436	734
d1, Uniform Delay [s]	19.17	24.44	23.56	18.50	26.69	26.75	23.01	19.68	25.16	17.03
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.87	0.31	0.29	0.45	1.70	1.86	1.86	1.30	0.20	0.16
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.17	0.17	0.08	0.12	0.38	0.38	0.39	0.34	0.05	0.06
d, Delay for Lane Group [s/veh]	20.04	24.75	23.85	18.96	28.39	28.61	24.86	20.97	25.36	17.19
Lane Group LOS	C	C	C	B	C	C	C	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.19	1.99	0.83	1.08	5.11	4.87	4.91	4.40	0.41	0.72
50th-Percentile Queue Length [ft/ln]	29.86	49.77	20.85	27.07	127.69	121.85	122.76	110.04	10.14	18.01
95th-Percentile Queue Length [veh/ln]	2.15	3.58	1.50	1.95	8.81	8.49	8.54	7.84	0.73	1.30
95th-Percentile Queue Length [ft/ln]	53.75	89.59	37.54	48.73	220.35	212.37	213.61	196.06	18.26	32.42

Movement, Approach, & Intersection Results

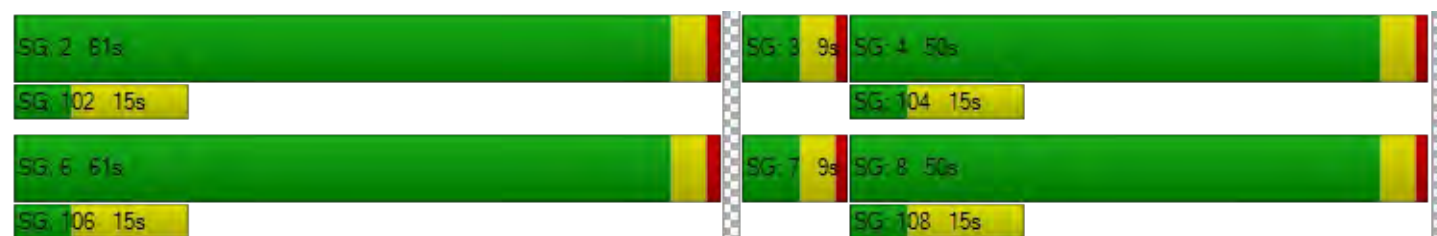
d_M, Delay for Movement [s/veh]	20.04	24.75	23.85	18.96	28.47	28.61	24.86	20.97	20.97	25.36	17.19	17.19
Movement LOS	C	C	C	B	C	C	C	C	C	C	B	B
d_A, Approach Delay [s/veh]	23.60			27.31			22.91			19.71		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	24.61											
Intersection LOS	C											
Intersection V/C	0.364											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.833			2.944			2.172			2.051		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	767			767			950			950		
d_b, Bicycle Delay [s]	22.82			22.82			16.54			16.54		
I_b,int, Bicycle LOS Score for Intersection	1.832			2.003			2.333			1.667		
Bicycle LOS	A			B			B			A		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 9: NW Maple Avenue at NW 10th Street**

Control Type:	All-way stop	Delay (sec / veh):	163.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.693

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	11	29	8	70	62	165	155	454	17	9	174	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	5.10	5.10	5.10	1.30	1.30	1.30	4.10	4.10	4.10
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	2	5	0	19	14	30	20	90	8	0	29	6
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	2	0	11	6	13	4	0	0	0	0	4
Total Hourly Volume [veh/h]	15	42	10	114	94	240	209	633	28	11	237	22
Peak Hour Factor	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200	0.8200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	13	3	35	29	73	64	193	9	3	72	7
Total Analysis Volume [veh/h]	18	51	12	139	115	293	255	772	34	13	289	27
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	416	547	445	806	417	446
Degree of Utilization, x	0.19	1.03	0.57	1.69	0.03	0.71

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.71	15.51	3.51	47.60	0.10	5.46
95th-Percentile Queue Length [ft]	17.85	387.64	87.68	1189.97	2.41	136.44
Approach Delay [s/veh]	13.75	74.38	263.14		27.44	
Approach LOS	B	F	F		D	
Intersection Delay [s/veh]	163.54					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: NW Maple Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	37.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	104	82	56	229	62	112	170	271	129	91	25
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.60	2.60	2.60	3.50	3.50	3.50	1.80	1.80	1.80	2.00	2.00	2.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	12	13	0	6	25	17	50	18	44	0	7	3
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	3	3	0	3	7	0	0	3	8	0	1	1
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	140	98	76	306	91	184	224	376	154	117	34
Peak Hour Factor	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600	0.8600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	41	28	22	89	26	53	65	109	45	34	10
Total Analysis Volume [veh/h]	81	163	114	88	356	106	214	260	437	179	136	40
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	9	25	0	14	30	0	28	58	0	53	23	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	35	21	21	35	26	26	77	54	54	77	19
g / C, Green / Cycle	0.29	0.18	0.18	0.29	0.22	0.22	0.64	0.45	0.45	0.64	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.09	0.09	0.07	0.14	0.15	0.14	0.15	0.30	0.15	0.11
s, saturation flow rate [veh/h]	985	1675	1454	1187	1663	1534	1491	1686	1433	1170	1618
c, Capacity [veh/h]	263	293	254	352	360	332	860	759	645	736	256
d1, Uniform Delay [s]	32.90	44.69	44.93	32.33	42.98	43.09	14.95	21.46	26.11	9.41	47.69
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.02	5.83	7.42	1.70	9.24	10.37	0.69	1.23	5.65	0.78	14.02
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.31	0.49	0.52	0.25	0.66	0.67	0.25	0.34	0.68	0.24	0.69
d, Delay for Lane Group [s/veh]	35.92	50.52	52.36	34.03	52.22	53.46	15.64	22.69	31.77	10.19	61.71
Lane Group LOS	D	D	D	C	D	D	B	C	C	B	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	1.93	4.26	4.01	2.03	7.20	6.85	2.35	4.94	10.58	1.94	5.92
50th-Percentile Queue Length [ft/ln]	48.28	106.52	100.32	50.85	180.12	171.33	58.66	123.48	264.59	48.51	148.10
95th-Percentile Queue Length [veh/ln]	3.48	7.65	7.22	3.66	11.61	11.15	4.22	8.58	15.92	3.49	9.92
95th-Percentile Queue Length [ft/ln]	86.91	191.15	180.58	91.53	290.16	278.66	105.59	214.60	397.98	87.31	247.89

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	35.92	50.73	52.36	34.03	52.63	53.46	15.64	22.69	31.77	10.19	61.71	61.71
Movement LOS	D	D	D	C	D	D	B	C	C	B	E	E
d_A, Approach Delay [s/veh]	47.90			49.81			25.39			35.73		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	36.96											
Intersection LOS	D											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.911			2.824			2.524			2.289		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	350			433			900			317		
d_b, Bicycle Delay [s]	40.84			36.82			18.15			42.50		
I_b,int, Bicycle LOS Score for Intersection	1.855			2.013			3.063			2.145		
Bicycle LOS	A			B			C			B		

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.020

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	7	260	38	13	457	4	0	2	9	13	0	7
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	1.90	1.90	1.90	0.00	0.00	0.00	5.00	5.00	5.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	0	25	0	0	68	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	6	0	0	15	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	342	45	16	629	5	0	2	11	16	0	8
Peak Hour Factor	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900	0.7900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	108	14	5	199	2	0	1	3	5	0	3
Total Analysis Volume [veh/h]	10	433	57	20	796	6	0	3	14	20	0	10
Pedestrian Volume [ped/h]	0			0			1			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.01	0.00	0.00	0.02	0.02	0.10	0.00	0.01
d_M, Delay for Movement [s/veh]	9.42	0.00	0.00	8.43	0.00	0.00	26.65	29.96	11.39	24.03	31.34	11.46
Movement LOS	A	A	A	A	A	A	D	D	B	C	D	B
95th-Percentile Queue Length [veh/ln]	0.04	0.00	0.00	0.06	0.00	0.00	0.14	0.14	0.14	0.37	0.37	0.37
95th-Percentile Queue Length [ft/ln]	0.92	0.00	0.00	1.43	0.00	0.00	3.41	3.41	3.41	9.17	9.17	9.17
d_A, Approach Delay [s/veh]	0.19			0.21			14.67			19.84		
Approach LOS	A			A			B			C		
d_I, Intersection Delay [s/veh]	0.81											
Intersection LOS	D											

Cinder Butte Village Phases 2-4

Vistro File: \...\Cinder Butte Village PM.vistro
Report File: \...\EXPM.pdf

Scenario 1 2019 Existing PM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	WB Thru	0.230	131.5	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.053	9.8	A
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	SB Thru	0.001	0.0	A
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	NB Thru	0.001	0.0	A
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.008	9.4	A
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Thru	0.008	10.8	B
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Thru	0.307	8.9	A
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Left	0.300	19.7	B
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Thru	1.098	51.3	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	SB Right	0.532	39.3	D
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	WB Left	0.178	36.5	E

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: NW Pershall Way at U.S. Highway 97

Control Type:	Two-way stop	Delay (sec / veh):	131.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.230

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	55	1178	46	11	820	15	12	3	31	8	9	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.30	3.30	3.30	11.80	11.80	11.80	2.20	2.20	2.20	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	55	1178	46	11	820	15	12	3	31	8	9	18
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	307	12	3	214	4	3	1	8	2	2	5
Total Analysis Volume [veh/h]	57	1227	48	11	854	16	13	3	32	8	9	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.01	0.00	0.02	0.01	0.00	0.25	0.08	0.06	0.19	0.23	0.04
d_M, Delay for Movement [s/veh]	10.10	0.00	0.00	12.51	0.00	0.00	93.38	122.19	29.15	123.83	131.54	47.66
Movement LOS	B	A	A	B	A	A	F	F	D	F	F	E
95th-Percentile Queue Length [veh/ln]	0.24	0.00	0.00	0.07	0.00	0.00	1.65	1.65	1.65	1.89	1.89	1.89
95th-Percentile Queue Length [ft/ln]	6.05	0.00	0.00	1.72	0.00	0.00	41.21	41.21	41.21	47.18	47.18	47.18
d_A, Approach Delay [s/veh]	0.43			0.16			52.36			85.56		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	2.75											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 9.8
 Level Of Service: A
 Volume to Capacity (v/c): 0.053

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	0	21	0	0	0	0	23	12	23	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	1.30	1.30
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	0	21	0	0	0	0	23	12	23	53	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	0	6	0	0	0	0	7	4	7	16	0
Total Analysis Volume [veh/h]	43	0	25	0	0	0	0	27	14	27	63	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
d_M, Delay for Movement [s/veh]	9.78	10.26	8.78	9.64	9.97	8.57	7.32	0.00	0.00	7.33	0.00	0.00
Movement LOS	A	B	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	6.24	6.24	6.24	0.00	0.00	0.00	0.00	0.00	0.00	1.31	1.31	1.31
d_A, Approach Delay [s/veh]	9.42			9.39			0.00			2.20		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.21											
Intersection LOS	A											

Intersection Level Of Service Report**Intersection 3: NW Walnut Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	57	0	0	35	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	29	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	0	0	64	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	0	16	0	0
Total Analysis Volume [veh/h]	57	0	0	64	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.33	0.00	9.12	8.57
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.84	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	57	0	0	37	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	0	0	37	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	0	9	0	0
Total Analysis Volume [veh/h]	57	0	0	37	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.33	0.00	8.97	8.57
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	9.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	12	50	3	0	33	4	7	0	6	1	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	8	2	0	0	0	0	0	5	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	50	11	2	33	4	7	0	6	6	0	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	14	3	1	9	1	2	0	2	2	0	0
Total Analysis Volume [veh/h]	13	55	12	2	36	4	8	0	7	7	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.29	0.00	0.00	7.33	0.00	0.00	9.32	9.81	8.49	9.37	9.80	8.61
Movement LOS	A	A	A	A	A	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.02	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.62	0.00	0.00	0.10	0.10	0.10	0.72	0.51	0.51	0.71	0.71	0.71
d_A, Approach Delay [s/veh]	1.19			0.35			8.93			9.27		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	2.19											
Intersection LOS	A											

Intersection Level Of Service Report
Intersection 6: NW Spruce Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	36	91	4	4	52	5	2	0	18	10	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.60	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	91	4	4	52	5	2	0	18	10	5	8
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	25	1	1	14	1	1	0	5	3	1	2
Total Analysis Volume [veh/h]	39	99	4	4	57	5	2	0	20	11	5	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.01	0.01
d_M, Delay for Movement [s/veh]	7.38	0.00	0.00	7.42	0.00	0.00	10.40	10.73	8.64	10.53	10.81	8.92
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.08	0.08	0.08	0.01	0.01	0.01	0.07	0.07	0.07	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	1.93	1.93	1.93	0.20	0.20	0.20	1.74	1.74	1.74	2.60	2.60	2.60
d_A, Approach Delay [s/veh]	2.03			0.45			8.80			10.01		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.99											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 7: NW Quince Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.307

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	24	63	21	41	59	3	0	42	24	45	96	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	63	21	41	59	3	0	42	24	45	96	82
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	18	6	12	17	1	0	12	7	13	27	23
Total Analysis Volume [veh/h]	27	71	24	46	66	3	0	47	27	51	108	92
Pedestrian Volume [ped/h]	0			0			5			5		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	760	735	787	818
Degree of Utilization, x	0.16	0.16	0.09	0.31

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.57	0.55	0.31	1.31
95th-Percentile Queue Length [ft]	14.24	13.81	7.76	32.64
Approach Delay [s/veh]	8.64	8.80	8.05	9.34
Approach LOS	A	A	A	A
Intersection Delay [s/veh]	8.91			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 8: NW Quince Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.300

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	157	414	46	47	335	110	63	23	92	40	27	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.80	1.80	1.80	0.00	0.00	0.00	0.70	0.70	0.70
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	157	414	46	47	335	110	63	23	92	40	27	80
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	45	119	13	14	96	32	18	7	26	11	8	23
Total Analysis Volume [veh/h]	180	476	53	54	385	126	72	26	106	46	31	92
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	72	0	9	65	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	77	68	68	77	61	61	35	35	35	35
g / C, Green / Cycle	0.64	0.57	0.57	0.64	0.51	0.51	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.19	0.15	0.04	0.06	0.16	0.16	0.06	0.09	0.04	0.08
s, saturation flow rate [veh/h]	954	3230	1442	898	1686	1546	1159	1498	1144	1502
c, Capacity [veh/h]	624	1830	817	601	857	786	306	437	296	438
d1, Uniform Delay [s]	9.34	13.21	11.70	8.33	17.21	17.25	39.74	33.01	39.36	32.79
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.17	0.35	0.15	0.30	0.94	1.04	1.81	1.77	1.11	1.60
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.26	0.06	0.09	0.31	0.31	0.24	0.30	0.16	0.28
d, Delay for Lane Group [s/veh]	10.51	13.56	11.85	8.63	18.14	18.30	41.55	34.79	40.47	34.38
Lane Group LOS	B	B	B	A	B	B	D	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.90	3.12	0.63	0.52	4.25	3.99	1.97	3.25	1.23	3.00
50th-Percentile Queue Length [ft/ln]	47.49	78.11	15.83	12.94	106.22	99.63	49.15	81.21	30.80	75.03
95th-Percentile Queue Length [veh/ln]	3.42	5.62	1.14	0.93	7.63	7.17	3.54	5.85	2.22	5.40
95th-Percentile Queue Length [ft/ln]	85.48	140.61	28.50	23.29	190.73	179.33	88.47	146.18	55.43	135.06

Movement, Approach, & Intersection Results

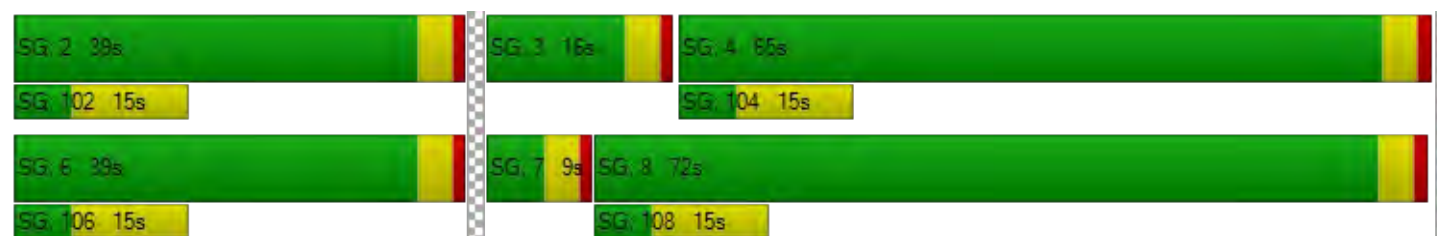
d_M, Delay for Movement [s/veh]	10.51	13.56	11.85	8.63	18.19	18.30	41.55	34.79	34.79	40.47	34.38	34.38
Movement LOS	B	B	B	A	B	B	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	12.66			17.30			37.17			36.04		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	19.69											
Intersection LOS	B											
Intersection V/C	0.300											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	2.935			2.770			2.236			2.082		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1017			583			583		
d_b, Bicycle Delay [s]	11.27			14.50			30.10			30.10		
I_b,int, Bicycle LOS Score for Intersection	2.145			2.026			1.896			1.838		
Bicycle LOS	B			B			A			A		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: NW Maple Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	51.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.098

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	42	22	31	35	114	82	397	14	13	517	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.60	0.60	0.60	0.60	0.60	0.60	1.00	1.00	1.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	42	22	31	35	114	82	397	14	13	517	45
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	11	6	8	9	31	22	107	4	3	139	12
Total Analysis Volume [veh/h]	49	45	24	33	38	123	88	427	15	14	556	48
Pedestrian Volume [ped/h]	3			3			2			2		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	477	517	508	549	506	604
Degree of Utilization, x	0.25	0.38	0.17	0.81	0.03	1.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.97	1.73	0.62	7.84	0.09	18.80
95th-Percentile Queue Length [ft]	24.15	43.18	15.53	195.88	2.13	469.92
Approach Delay [s/veh]	13.02	14.08	27.77		90.47	
Approach LOS	B	B	D		F	
Intersection Delay [s/veh]	51.30					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 10: NW Maple Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	39.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.532

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	214	444	231	48	272	173	129	181	141	166	224	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.70	0.90	0.90	0.90
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	214	444	231	48	272	173	129	181	141	166	224	46
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	116	60	13	71	45	34	47	37	43	58	12
Total Analysis Volume [veh/h]	223	463	241	50	283	180	134	189	147	173	233	48
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	46	0	9	32	0	20	28	0	45	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	51	42	42	51	28	28	61	24	24	61	33
g / C, Green / Cycle	0.43	0.35	0.35	0.43	0.23	0.23	0.51	0.20	0.20	0.51	0.28
(v / s)_i Volume / Saturation Flow Rate	0.19	0.22	0.22	0.06	0.14	0.15	0.10	0.11	0.10	0.12	0.17
s, saturation flow rate [veh/h]	1164	1701	1507	806	1702	1486	1304	1701	1445	1390	1648
c, Capacity [veh/h]	470	595	527	306	397	347	530	340	289	685	453
d1, Uniform Delay [s]	24.44	32.48	32.48	22.63	41.16	41.37	29.91	43.20	42.75	16.96	38.02
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.42	4.94	5.56	1.15	6.93	8.48	1.14	6.41	6.26	0.89	6.25
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.63	0.63	0.16	0.61	0.63	0.25	0.56	0.51	0.25	0.62
d, Delay for Lane Group [s/veh]	27.85	37.42	38.04	23.78	48.10	49.84	31.06	49.62	49.01	17.84	44.27
Lane Group LOS	C	D	D	C	D	D	C	D	D	B	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.48	9.47	8.49	0.90	7.02	6.47	2.11	5.61	4.36	2.74	7.92
50th-Percentile Queue Length [ft/ln]	112.01	236.80	212.15	22.56	175.59	161.74	52.71	140.37	108.94	68.52	197.99
95th-Percentile Queue Length [veh/ln]	7.95	14.52	13.26	1.62	11.37	10.64	3.79	9.50	7.78	4.93	12.54
95th-Percentile Queue Length [ft/ln]	198.79	362.99	331.59	40.60	284.25	266.03	94.87	237.52	194.53	123.34	313.38

Movement, Approach, & Intersection Results

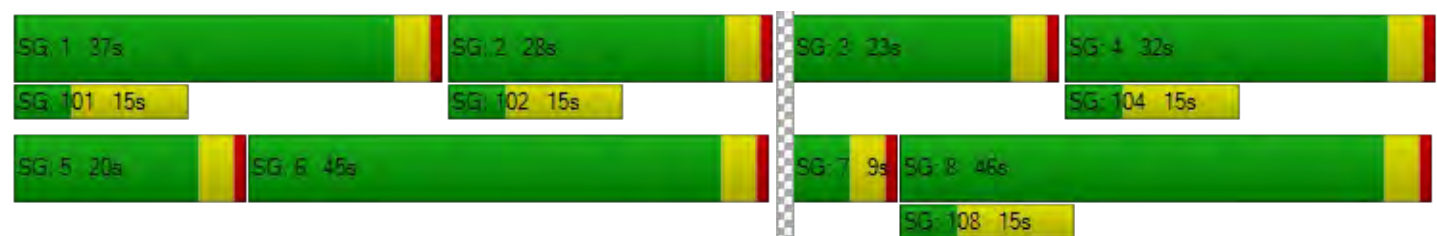
d_M, Delay for Movement [s/veh]	27.85	37.54	38.04	23.78	48.34	49.84	31.06	49.62	49.01	17.84	44.27	44.27
Movement LOS	C	D	D	C	D	D	C	D	D	B	D	D
d_A, Approach Delay [s/veh]	35.34			46.47			44.13			34.20		
Approach LOS	D			D			D			C		
d_I, Intersection Delay [s/veh]	39.28											
Intersection LOS	D											
Intersection V/C	0.532											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.894	2.893	2.540	2.336
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	467	400	550
d_b, Bicycle Delay [s]	25.35	35.27	38.40	31.54
I_b,int, Bicycle LOS Score for Intersection	2.324	1.983	2.335	2.309
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 36.5
 Level Of Service: E
 Volume to Capacity (v/c): 0.178

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	22	826	12	2	547	14	2	0	9	23	0	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.20	1.20	1.20	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	22	826	12	2	547	14	2	0	9	23	0	16
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	215	3	1	142	4	1	0	2	6	0	4
Total Analysis Volume [veh/h]	23	860	13	2	570	15	2	0	9	24	0	17
Pedestrian Volume [ped/h]	9			9			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.18	0.00	0.03
d_M, Delay for Movement [s/veh]	8.72	0.00	0.00	9.65	0.00	0.00	26.53	35.21	10.39	36.45	39.79	16.17
Movement LOS	A	A	A	A	A	A	D	E	B	E	E	C
95th-Percentile Queue Length [veh/ln]	0.07	0.00	0.00	0.01	0.00	0.00	0.08	0.08	0.08	0.76	0.76	0.76
95th-Percentile Queue Length [ft/ln]	1.78	0.00	0.00	0.19	0.00	0.00	1.90	1.90	1.90	18.99	18.99	18.99
d_A, Approach Delay [s/veh]	0.22			0.03			13.32			28.04		
Approach LOS	A			A			B			D		
d_I, Intersection Delay [s/veh]	0.99											
Intersection LOS	E											

Cinder Butte Village Phases 2-4

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Report File: \...\BGPM.pdf

Scenario 2 2023 Background PM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Thru	0.123	186.3	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.076	10.5	B
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	NB Thru	0.001	0.0	A
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	NB Thru	0.001	0.0	A
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.012	11.1	B
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.026	13.3	B
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Right	0.476	11.3	B
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Left	0.388	22.1	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Thru	1.898	239.6	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Right	0.769	50.2	D
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	WB Left	0.333	67.9	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report**Intersection 1: NW Pershall Way at U.S. Highway 97**

Control Type:	Two-way stop	Delay (sec / veh):	186.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.123

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	55	1178	46	11	820	15	12	3	31	8	9	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.30	3.30	3.30	11.80	11.80	11.80	2.20	2.20	2.20	0.00	0.00	0.00
Growth Factor	1.0820	1.0250	1.0140	1.0140	1.0250	1.0820	1.0820	1.0820	1.0820	1.0140	1.0820	1.0140
In-Process Volume [veh/h]	0	0	0	0	0	17	9	1	0	0	1	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1207	47	11	840	33	22	4	34	8	11	18
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	314	12	3	219	9	6	1	9	2	3	5
Total Analysis Volume [veh/h]	63	1257	49	11	875	34	23	4	35	8	11	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.00	0.02	0.01	0.00	0.54	0.12	0.06	0.22	0.32	0.04
d_M, Delay for Movement [s/veh]	10.34	0.00	0.00	12.74	0.00	0.00	160.48	186.28	82.16	160.23	168.09	71.53
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.28	0.00	0.00	0.07	0.00	0.00	3.57	3.57	3.57	2.43	2.43	2.43
95th-Percentile Queue Length [ft/ln]	6.99	0.00	0.00	1.77	0.00	0.00	89.35	89.35	89.35	60.76	60.76	60.76
d_A, Approach Delay [s/veh]	0.48			0.15			117.93			118.16		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	5.27											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.076

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	0	21	0	0	0	0	23	12	23	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	1.30	1.30
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	7	0	11	0	0	0	0	0	11	18	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	0	34	0	0	0	0	25	24	43	57	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	10	0	0	0	0	7	7	13	17	0
Total Analysis Volume [veh/h]	55	0	40	0	0	0	0	30	29	51	68	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	10.51	10.99	9.05	10.31	10.53	8.60	7.33	0.00	0.00	7.40	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.39	0.39	0.39	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10
95th-Percentile Queue Length [ft/ln]	9.65	9.65	9.65	0.00	0.00	0.00	0.00	0.00	0.00	2.55	2.55	2.55
d_A, Approach Delay [s/veh]	9.90			9.81			0.00			3.17		
Approach LOS	A			A			A			A		
d_I, Intersection Delay [s/veh]	4.83											
Intersection LOS	B											

Intersection Level Of Service Report**Intersection 3: NW Walnut Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	57	0	0	35	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	18	0	0	27	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	0	0	65	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	0	16	0	0
Total Analysis Volume [veh/h]	80	0	0	65	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.25	8.67
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.96	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	57	0	0	37	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	17	0	0	28	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	79	0	0	68	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	0	17	0	0
Total Analysis Volume [veh/h]	79	0	0	68	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.37	0.00	9.26	8.67
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.96	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	12	50	3	0	33	4	7	0	6	1	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	57	3	8	2	5	21	13	0	33	5	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	57	11	2	41	25	21	0	39	6	0	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	16	3	1	11	7	6	0	11	2	0	0
Total Analysis Volume [veh/h]	77	63	12	2	45	27	23	0	43	7	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.46	0.00	0.00	7.35	0.00	0.00	10.80	11.25	8.71	11.10	11.23	8.68
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.00	0.00	0.11	0.13	0.13	0.04	0.04	0.04
95th-Percentile Queue Length [ft/ln]	3.94	0.00	0.00	0.10	0.10	0.10	2.78	3.32	3.32	0.97	0.97	0.97
d_A, Approach Delay [s/veh]	3.78			0.20			9.44			10.80		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	4.33											
Intersection LOS	B											

Intersection Level Of Service Report**Intersection 6: NW Spruce Avenue at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 13.3
 Level Of Service: B
 Volume to Capacity (v/c): 0.026

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	36	91	4	4	52	5	2	0	18	10	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.60	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	33	68	0	0	43	0	0	0	22	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	166	4	4	99	5	2	0	41	11	5	9
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	45	1	1	27	1	1	0	11	3	1	2
Total Analysis Volume [veh/h]	78	180	4	4	108	5	2	0	45	12	5	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.01	0.01
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.59	0.00	0.00	12.74	12.86	9.01	13.26	12.98	9.49
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.17	0.01	0.01	0.01	0.16	0.16	0.16	0.15	0.15	0.15
95th-Percentile Queue Length [ft/ln]	4.14	4.14	4.14	0.22	0.22	0.22	4.08	4.08	4.08	3.82	3.82	3.82
d_A, Approach Delay [s/veh]	2.25			0.26			9.17			11.81		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.02											
Intersection LOS	B											

Intersection Level Of Service Report**Intersection 7: NW Quince Avenue at NW 10th Street**

Control Type:	All-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.476

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	24	63	21	41	59	3	0	42	24	45	96	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	11	54	0	35	33	0	0	13	9	0	18	47
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	37	122	23	79	97	3	0	58	35	49	122	136
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	34	6	22	27	1	0	16	10	14	34	38
Total Analysis Volume [veh/h]	42	137	26	89	109	3	0	65	39	55	137	153
Pedestrian Volume [ped/h]	0			0			5			5		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	668	652	672	725
Degree of Utilization, x	0.31	0.31	0.15	0.48

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.30	1.31	0.55	2.59
95th-Percentile Queue Length [ft]	32.50	32.69	13.63	64.66
Approach Delay [s/veh]	10.76	10.97	9.34	12.40
Approach LOS	B	B	A	B
Intersection Delay [s/veh]	11.30			
Intersection LOS	B			

Intersection Level Of Service Report**Intersection 8: NW Quince Avenue at NW 6th Street**

Control Type:	Signalized	Delay (sec / veh):	22.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.388

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	157	414	46	47	335	110	63	23	92	40	27	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.80	1.80	1.80	0.00	0.00	0.00	0.70	0.70	0.70
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	28	20	31	24	44	44	25	7	20	33	7	27
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	198	468	81	75	406	163	93	32	120	76	36	114
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	134	23	22	117	47	27	9	34	22	10	33
Total Analysis Volume [veh/h]	228	538	93	86	467	187	107	37	138	87	41	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	72	0	9	65	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	77	68	68	77	61	61	35	35	35	35
g / C, Green / Cycle	0.64	0.57	0.57	0.64	0.51	0.51	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.26	0.17	0.06	0.10	0.20	0.20	0.10	0.12	0.08	0.11
s, saturation flow rate [veh/h]	872	3230	1442	856	1686	1524	1109	1501	1100	1499
c, Capacity [veh/h]	557	1830	817	569	857	775	263	438	260	437
d1, Uniform Delay [s]	10.38	13.52	12.04	8.65	18.20	18.23	44.31	34.08	43.65	34.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.22	0.41	0.28	0.56	1.39	1.55	4.61	2.71	3.45	2.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.29	0.11	0.15	0.40	0.40	0.41	0.40	0.34	0.39
d, Delay for Lane Group [s/veh]	12.60	13.93	12.33	9.21	19.60	19.78	48.91	36.79	47.10	36.65
Lane Group LOS	B	B	B	A	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.57	3.62	1.15	0.85	5.84	5.35	3.25	4.48	2.58	4.39
50th-Percentile Queue Length [ft/ln]	64.20	90.38	28.64	21.26	146.11	133.84	81.16	112.01	64.39	109.80
95th-Percentile Queue Length [veh/ln]	4.62	6.51	2.06	1.53	9.81	9.15	5.84	7.95	4.64	7.83
95th-Percentile Queue Length [ft/ln]	115.56	162.69	51.56	38.27	245.23	228.71	146.09	198.79	115.89	195.73

Movement, Approach, & Intersection Results

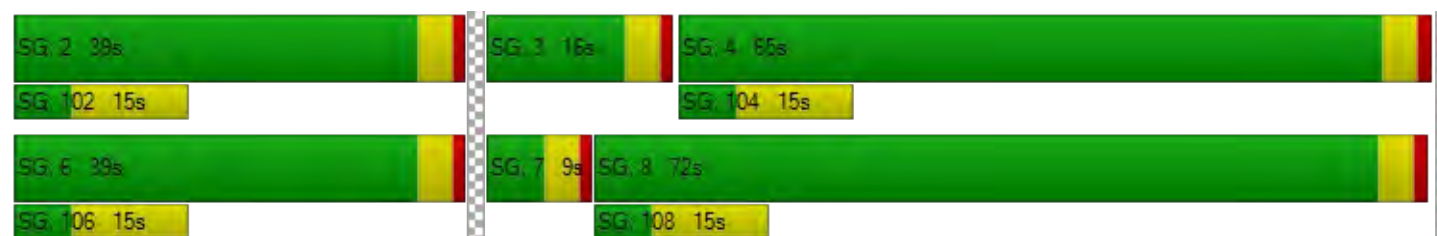
d_M, Delay for Movement [s/veh]	12.60	13.93	12.33	9.21	19.64	19.78	48.91	36.79	36.79	47.10	36.65	36.65
Movement LOS	B	B	B	A	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.40			18.47			41.39			40.16		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.08											
Intersection LOS	C											
Intersection V/C	0.388											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	3.057			2.911			2.326			2.155		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1017			583			583		
d_b, Bicycle Delay [s]	11.27			14.50			30.10			30.10		
I_b,int, Bicycle LOS Score for Intersection	2.268			2.170			2.025			1.987		
Bicycle LOS	B			B			B			A		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 9: NW Maple Avenue at NW 10th Street**

Control Type:	All-way stop	Delay (sec / veh):	239.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.898

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	42	22	31	35	114	82	397	14	13	517	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.60	0.60	0.60	0.60	0.60	0.60	1.00	1.00	1.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	13	15	0	16	8	26	38	135	8	0	229	25
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	63	60	24	50	46	149	127	565	23	14	788	74
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	16	6	13	12	40	34	152	6	4	212	20
Total Analysis Volume [veh/h]	68	65	26	54	49	160	137	608	25	15	847	80
Pedestrian Volume [ped/h]	3			3			2			2		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	432	476	461	633	454	927
Degree of Utilization, x	0.37	0.55	0.30	1.28	0.03	1.90

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.66	3.29	1.23	26.34	0.10	60.57
95th-Percentile Queue Length [ft]	41.53	82.22	30.79	658.44	2.56	1514.35
Approach Delay [s/veh]	16.07	19.46	136.83		422.69	
Approach LOS	C	C	F		F	
Intersection Delay [s/veh]	239.55					
Intersection LOS	F					

Intersection Level Of Service Report**Intersection 10: NW Maple Avenue at NW 6th Street**

Control Type:	Signalized	Delay (sec / veh):	50.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	214	444	231	48	272	173	129	181	141	166	224	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.70	0.90	0.90	0.90
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	122	30	0	6	26	70	41	28	85	0	74	7
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	354	510	250	58	320	257	181	224	238	180	316	57
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	92	133	65	15	83	67	47	58	62	47	82	15
Total Analysis Volume [veh/h]	369	531	260	60	333	268	189	233	248	188	329	59
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	46	0	9	32	0	20	28	0	45	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	51	42	42	51	28	28	61	24	24	61	33
g / C, Green / Cycle	0.43	0.35	0.35	0.43	0.23	0.23	0.51	0.20	0.20	0.51	0.28
(v / s)_i Volume / Saturation Flow Rate	0.33	0.25	0.25	0.08	0.19	0.19	0.15	0.14	0.17	0.14	0.23
s, saturation flow rate [veh/h]	1104	1701	1514	761	1702	1455	1257	1701	1445	1372	1653
c, Capacity [veh/h]	421	595	530	278	397	340	455	340	289	652	455
d1, Uniform Delay [s]	28.88	33.60	33.65	23.60	43.49	43.64	34.56	44.50	46.35	17.59	41.21
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	21.81	6.77	7.65	1.78	16.25	19.69	2.77	10.70	26.55	1.11	18.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.88	0.70	0.70	0.22	0.81	0.82	0.41	0.69	0.86	0.29	0.85
d, Delay for Lane Group [s/veh]	50.69	40.37	41.30	25.38	59.74	63.33	37.33	55.20	72.91	18.71	59.28
Lane Group LOS	D	D	D	C	E	E	D	E	E	B	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	10.01	11.14	10.10	1.11	10.52	9.46	3.19	7.37	9.18	3.03	12.96
50th-Percentile Queue Length [ft/ln]	250.14	278.47	252.45	27.73	262.91	236.44	79.80	184.28	229.60	75.67	323.94
95th-Percentile Queue Length [veh/ln]	15.19	16.61	15.31	2.00	15.83	14.50	5.75	11.82	14.15	5.45	18.86
95th-Percentile Queue Length [ft/ln]	379.83	415.31	382.74	49.92	395.87	362.52	143.64	295.60	353.85	136.20	471.53

Movement, Approach, & Intersection Results

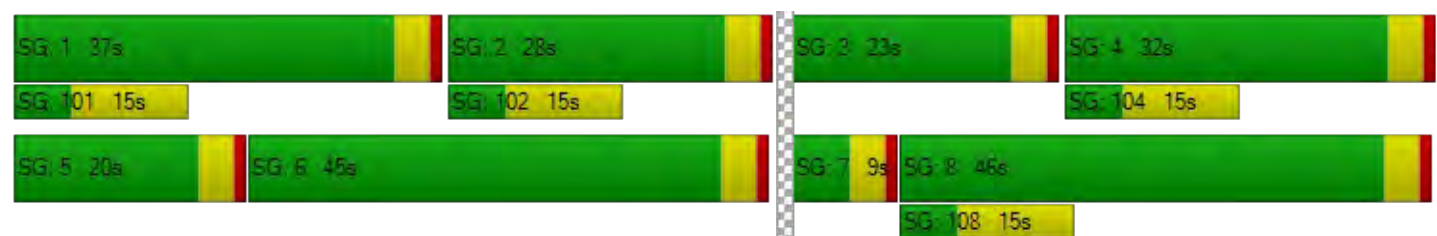
d_M, Delay for Movement [s/veh]	50.69	40.57	41.30	25.38	59.86	63.33	37.33	55.20	72.91	18.71	59.28	59.28
Movement LOS	D	D	D	C	E	E	D	E	E	B	E	E
d_A, Approach Delay [s/veh]	43.95			58.14			56.71			46.04		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	50.19											
Intersection LOS	D											
Intersection V/C	0.769											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	2.996	2.929	2.743	2.415
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	467	400	550
d_b, Bicycle Delay [s]	25.35	35.27	38.40	31.54
I_b,int, Bicycle LOS Score for Intersection	2.517	2.105	2.665	2.510
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 67.9
 Level Of Service: F
 Volume to Capacity (v/c): 0.333

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	22	826	12	2	547	14	2	0	9	23	0	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.20	1.20	1.20	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	0	153	0	0	109	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	1047	13	2	701	15	2	0	10	25	0	17
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	273	3	1	183	4	1	0	3	7	0	4
Total Analysis Volume [veh/h]	25	1091	14	2	730	16	2	0	10	26	0	18
Pedestrian Volume [ped/h]	9			9			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.33	0.00	0.04
d_M, Delay for Movement [s/veh]	9.29	0.00	0.00	10.69	0.00	0.00	40.07	58.31	11.23	67.93	74.87	29.51
Movement LOS	A	A	A	B	A	A	E	F	B	F	F	D
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.01	0.00	0.00	0.11	0.11	0.11	1.52	1.52	1.52
95th-Percentile Queue Length [ft/ln]	2.24	0.00	0.00	0.24	0.00	0.00	2.75	2.75	2.75	38.01	38.01	38.01
d_A, Approach Delay [s/veh]	0.21			0.03			16.04			52.21		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	1.42											
Intersection LOS	F											

Cinder Butte Village Phases 2-4

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Report File: \...\BOPM.pdf

Scenario 3 2023 Buildout PM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Thru	0.123	210.6	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.081	10.8	B
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.017	9.6	A
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.027	9.8	A
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.014	12.2	B
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.031	14.8	B
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Right	0.543	12.7	B
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Left	0.404	22.4	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Thru	1.964	252.8	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Right	0.783	51.4	D
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	WB Left	0.346	71.4	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: NW Pershall Way at U.S. Highway 97

Control Type:	Two-way stop	Delay (sec / veh):	210.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.123

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	55	1178	46	11	820	15	12	3	31	8	9	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.30	3.30	3.30	11.80	11.80	11.80	2.20	2.20	2.20	0.00	0.00	0.00
Growth Factor	1.0820	1.0250	1.0140	1.0140	1.0250	1.0820	1.0820	1.0820	1.0820	1.0140	1.0820	1.0140
In-Process Volume [veh/h]	0	0	0	0	0	17	9	1	0	0	1	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	7	4	0	0	0	0	0
Total Hourly Volume [veh/h]	60	1207	47	11	840	40	26	4	34	8	11	18
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	314	12	3	219	10	7	1	9	2	3	5
Total Analysis Volume [veh/h]	63	1257	49	11	875	42	27	4	35	8	11	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.01	0.00	0.02	0.01	0.00	0.64	0.12	0.06	0.22	0.32	0.04
d_M, Delay for Movement [s/veh]	10.38	0.00	0.00	12.74	0.00	0.00	185.10	210.58	106.38	161.31	170.42	72.56
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.28	0.00	0.00	0.07	0.00	0.00	4.16	4.16	4.16	2.45	2.45	2.45
95th-Percentile Queue Length [ft/ln]	7.04	0.00	0.00	1.77	0.00	0.00	104.12	104.12	104.12	61.18	61.18	61.18
d_A, Approach Delay [s/veh]	0.48			0.15			144.90			119.57		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	6.21											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.081

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	0	21	0	0	0	0	23	12	23	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	1.30	1.30
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	7	0	11	0	0	0	0	0	11	18	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	2	0	4	0	0	0	0	0	4	7	0	0
Total Hourly Volume [veh/h]	48	0	38	0	0	0	0	25	28	50	57	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	0	11	0	0	0	0	7	8	15	17	0
Total Analysis Volume [veh/h]	57	0	45	0	0	0	0	30	33	60	68	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	10.76	11.23	9.13	10.55	10.72	8.60	7.33	0.00	0.00	7.43	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.43	0.43	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.12
95th-Percentile Queue Length [ft/ln]	10.66	10.66	10.66	0.00	0.00	0.00	0.00	0.00	0.00	3.03	3.03	3.03
d_A, Approach Delay [s/veh]	10.04			9.96			0.00			3.48		
Approach LOS	B			A			A			A		
d_I, Intersection Delay [s/veh]	5.02											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 3: NW Walnut Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	57	0	0	35	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	18	0	0	29	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	2	24	7	4	14	4
Total Hourly Volume [veh/h]	82	24	7	71	14	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	6	2	18	4	1
Total Analysis Volume [veh/h]	82	24	7	71	14	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.44	0.00	9.56	8.83
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.36	0.36	1.65	1.65
d_A, Approach Delay [s/veh]	0.00		0.67		9.40	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.09					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	57	0	0	37	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	17	0	0	28	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	24	35	4	14	21	2
Total Hourly Volume [veh/h]	103	35	4	82	21	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	9	1	21	5	1
Total Analysis Volume [veh/h]	103	35	4	82	21	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.50	0.00	9.78	9.00
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.21	0.21	2.26	2.26
d_A, Approach Delay [s/veh]	0.00		0.35		9.71	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.03					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 12.2
 Level Of Service: B
 Volume to Capacity (v/c): 0.014

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	12	50	3	0	33	4	7	0	6	1	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	57	3	8	2	5	21	13	0	33	5	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	59	0	0	35	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	70	116	11	2	76	25	21	0	39	6	0	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	32	3	1	21	7	6	0	11	2	0	0
Total Analysis Volume [veh/h]	77	127	12	2	84	27	23	0	43	7	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.55	0.00	0.00	7.47	0.00	0.00	11.83	12.15	8.91	12.17	12.14	9.01
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.16	0.00	0.00	0.00	0.00	0.00	0.13	0.14	0.14	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	4.08	0.00	0.00	0.10	0.10	0.10	3.27	3.50	3.50	1.13	1.13	1.13
d_A, Approach Delay [s/veh]	2.69			0.13			9.93			11.77		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.34											
Intersection LOS	B											

Intersection Level Of Service Report**Intersection 6: NW Spruce Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.031

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	36	91	4	4	52	5	2	0	18	10	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.60	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	33	68	0	0	43	0	0	0	22	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	59	0	0	35	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	225	4	4	134	5	2	0	41	11	5	9
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	61	1	1	36	1	1	0	11	3	1	2
Total Analysis Volume [veh/h]	78	245	4	4	146	5	2	0	45	12	5	10
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.03	0.01	0.01
d_M, Delay for Movement [s/veh]	7.64	0.00	0.00	7.74	0.00	0.00	14.10	14.02	9.23	14.78	14.23	9.96
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.17	0.17	0.01	0.01	0.01	0.17	0.17	0.17	0.18	0.18	0.18
95th-Percentile Queue Length [ft/ln]	4.28	4.28	4.28	0.23	0.23	0.23	4.33	4.33	4.33	4.42	4.42	4.42
d_A, Approach Delay [s/veh]	1.82			0.20			9.43			12.89		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.55											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 7: NW Quince Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	24	63	21	41	59	3	0	42	24	45	96	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	11	54	0	35	33	0	0	13	9	0	18	47
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	32	0	16	19	0	0	0	0	0	0	27
Total Hourly Volume [veh/h]	37	154	23	95	116	3	0	58	35	49	122	163
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	43	6	27	33	1	0	16	10	14	34	46
Total Analysis Volume [veh/h]	42	173	26	107	130	3	0	65	39	55	137	183
Pedestrian Volume [ped/h]	0			0			5			5		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	638	625	627	690
Degree of Utilization, x	0.38	0.38	0.17	0.54

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.76	1.80	0.59	3.29
95th-Percentile Queue Length [ft]	43.92	45.07	14.77	82.28
Approach Delay [s/veh]	12.02	12.31	9.88	14.23
Approach LOS	B	B	A	B
Intersection Delay [s/veh]	12.72			
Intersection LOS	B			

Intersection Level Of Service Report

Intersection 8: NW Quince Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	157	414	46	47	335	110	63	23	92	40	27	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.80	1.80	1.80	0.00	0.00	0.00	0.70	0.70	0.70
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	28	20	31	24	44	44	25	7	20	33	7	27
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	13	0	0	0	0	14	8	0	8	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	211	468	81	75	406	177	101	32	128	76	36	114
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	134	23	22	117	51	29	9	37	22	10	33
Total Analysis Volume [veh/h]	243	538	93	86	467	203	116	37	147	87	41	131
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	72	0	9	65	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	77	68	68	77	61	61	35	35	35	35
g / C, Green / Cycle	0.64	0.57	0.57	0.64	0.51	0.51	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.28	0.17	0.06	0.10	0.21	0.21	0.10	0.12	0.08	0.11
s, saturation flow rate [veh/h]	863	3230	1442	856	1686	1515	1109	1499	1091	1499
c, Capacity [veh/h]	550	1830	817	569	857	770	263	437	252	437
d1, Uniform Delay [s]	10.64	13.52	12.04	8.65	18.33	18.36	44.71	34.32	44.28	34.01
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.57	0.41	0.28	0.56	1.46	1.63	5.28	2.96	3.73	2.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.44	0.29	0.11	0.15	0.41	0.41	0.44	0.42	0.35	0.39
d, Delay for Lane Group [s/veh]	13.21	13.93	12.33	9.21	19.79	19.99	49.99	37.28	48.01	36.65
Lane Group LOS	B	B	B	A	B	B	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	2.79	3.62	1.15	0.85	6.05	5.51	3.57	4.75	2.61	4.39
50th-Percentile Queue Length [ft/ln]	69.71	90.38	28.64	21.26	151.31	137.76	89.22	118.86	65.16	109.80
95th-Percentile Queue Length [veh/ln]	5.02	6.51	2.06	1.53	10.09	9.36	6.42	8.33	4.69	7.83
95th-Percentile Queue Length [ft/ln]	125.48	162.69	51.56	38.27	252.18	234.00	160.60	208.26	117.29	195.73

Movement, Approach, & Intersection Results

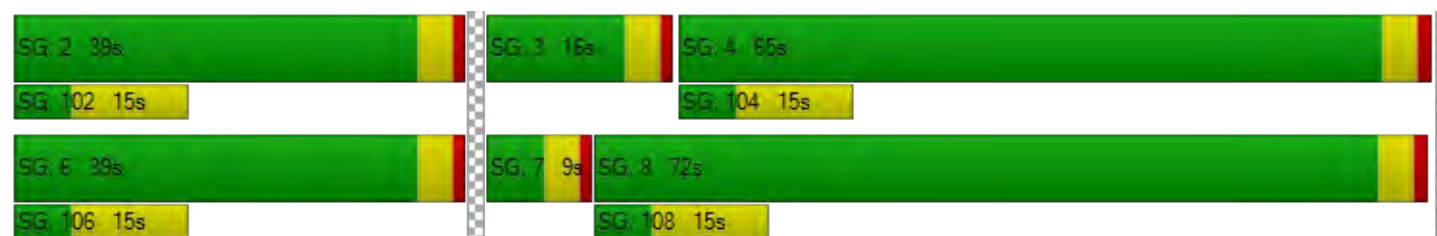
d_M, Delay for Movement [s/veh]	13.21	13.93	12.33	9.21	19.84	19.99	49.99	37.28	37.28	48.01	36.65	36.65
Movement LOS	B	B	B	A	B	B	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	13.56			18.67			42.19			40.47		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.43											
Intersection LOS	C											
Intersection V/C	0.404											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	3.062			2.931			2.350			2.155		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1017			583			583		
d_b, Bicycle Delay [s]	11.27			14.50			30.10			30.10		
I_b,int, Bicycle LOS Score for Intersection	2.281			2.183			2.055			1.987		
Bicycle LOS	B			B			B			A		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 9: NW Maple Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	252.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.964

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	42	22	31	35	114	82	397	14	13	517	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.60	0.60	0.60	0.60	0.60	0.60	1.00	1.00	1.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	13	15	0	16	8	26	38	135	8	0	229	25
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	7	0	7	4	8	14	0	0	0	0	11
Total Hourly Volume [veh/h]	63	67	24	57	50	157	141	565	23	14	788	85
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	18	6	15	13	42	38	152	6	4	212	23
Total Analysis Volume [veh/h]	68	72	26	61	54	169	152	608	25	15	847	91
Pedestrian Volume [ped/h]	3			3			2			2		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	426	473	451	633	444	938
Degree of Utilization, x	0.39	0.60	0.34	1.31	0.03	1.96

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.81	3.88	1.47	27.40	0.10	63.12
95th-Percentile Queue Length [ft]	45.28	97.00	36.68	684.89	2.62	1578.05
Approach Delay [s/veh]	16.72	21.44	144.90		451.82	
Approach LOS	C	C	F		F	
Intersection Delay [s/veh]	252.83					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 10: NW Maple Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	51.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	214	444	231	48	272	173	129	181	141	166	224	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.70	0.90	0.90	0.90
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	122	30	0	6	26	70	41	28	85	0	74	7
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	8	9	0	2	6	0	0	2	5	0	3	4
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	362	519	250	60	326	257	181	226	243	180	319	61
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	94	135	65	16	85	67	47	59	63	47	83	16
Total Analysis Volume [veh/h]	377	541	260	63	340	268	189	235	253	188	332	64
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	46	0	9	32	0	20	28	0	45	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	51	42	42	51	28	28	61	24	24	61	33
g / C, Green / Cycle	0.43	0.35	0.35	0.43	0.23	0.23	0.51	0.20	0.20	0.51	0.28
(v / s)_i Volume / Saturation Flow Rate	0.34	0.25	0.25	0.08	0.19	0.19	0.15	0.14	0.18	0.14	0.24
s, saturation flow rate [veh/h]	1102	1701	1517	756	1702	1458	1253	1701	1445	1371	1651
c, Capacity [veh/h]	419	595	531	275	397	340	449	340	289	650	454
d1, Uniform Delay [s]	29.10	33.73	33.78	23.76	43.60	43.75	34.80	44.56	46.55	17.62	41.49
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	24.89	7.02	7.94	1.94	17.00	20.48	2.87	10.97	28.84	1.12	20.08
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.71	0.71	0.23	0.82	0.83	0.42	0.69	0.88	0.29	0.87
d, Delay for Lane Group [s/veh]	53.99	40.75	41.72	25.70	60.60	64.22	37.67	55.53	75.39	18.74	61.57
Lane Group LOS	D	D	D	C	E	E	D	E	E	B	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	10.56	11.33	10.30	1.17	10.72	9.64	3.20	7.46	9.54	3.03	13.50
50th-Percentile Queue Length [ft/ln]	264.06	283.35	257.58	29.27	268.04	241.12	80.00	186.49	238.50	75.68	337.53
95th-Percentile Queue Length [veh/ln]	15.89	16.86	15.57	2.11	16.09	14.74	5.76	11.94	14.61	5.45	19.53
95th-Percentile Queue Length [ft/ln]	397.31	421.38	389.19	52.68	402.29	368.45	144.00	298.47	365.14	136.23	488.18

Movement, Approach, & Intersection Results

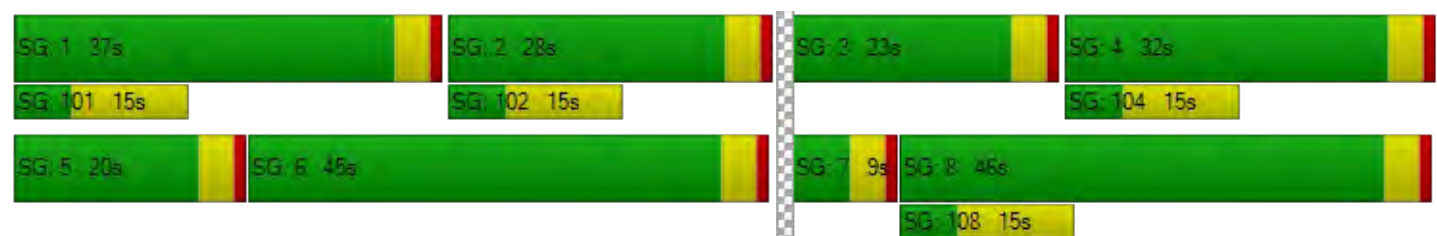
d_M, Delay for Movement [s/veh]	53.99	40.96	41.72	25.70	60.76	64.22	37.67	55.53	75.39	18.74	61.57	61.57
Movement LOS	D	D	D	C	E	E	D	E	E	B	E	E
d_A, Approach Delay [s/veh]	45.30			58.85			57.96			47.78		
Approach LOS	D			E			E			D		
d_I, Intersection Delay [s/veh]	51.45											
Intersection LOS	D											
Intersection V/C	0.783											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.004	2.927	2.751	2.421
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	467	400	550
d_b, Bicycle Delay [s]	25.35	35.27	38.40	31.54
I_b,int, Bicycle LOS Score for Intersection	2.531	2.113	2.677	2.523
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 71.4
 Level Of Service: F
 Volume to Capacity (v/c): 0.346

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	22	826	12	2	547	14	2	0	9	23	0	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.20	1.20	1.20	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820	1.0820
In-Process Volume [veh/h]	0	153	0	0	109	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	17	0	0	11	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	1064	13	2	712	15	2	0	10	25	0	17
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	277	3	1	185	4	1	0	3	7	0	4
Total Analysis Volume [veh/h]	25	1108	14	2	742	16	2	0	10	26	0	18
Pedestrian Volume [ped/h]	9			9			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.35	0.00	0.04
d_M, Delay for Movement [s/veh]	9.34	0.00	0.00	10.77	0.00	0.00	41.35	60.60	11.30	71.40	78.73	31.19
Movement LOS	A	A	A	B	A	A	E	F	B	F	F	D
95th-Percentile Queue Length [veh/ln]	0.09	0.00	0.00	0.01	0.00	0.00	0.11	0.11	0.11	1.59	1.59	1.59
95th-Percentile Queue Length [ft/ln]	2.26	0.00	0.00	0.24	0.00	0.00	2.82	2.82	2.82	39.73	39.73	39.73
d_A, Approach Delay [s/veh]	0.20			0.03			16.31			54.95		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	1.46											
Intersection LOS	F											

Cinder Butte Village Phases 2-4

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Report File: \\...\\FPM.pdf

Scenario 4 2028 Future PM
12/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	NW Pershall Way at U.S. Highway 97	Two-way stop	HCM 6th Edition	EB Thru	0.175	316.8	F
2	NW Pershall Way at NW 10th Street	Two-way stop	HCM 6th Edition	NB Left	0.090	11.0	B
3	NW Walnut Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.018	9.6	A
4	NW Varnish Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.027	9.8	A
5	NW Upas Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.014	12.3	B
6	NW Spruce Avenue at NW 10th Street	Two-way stop	HCM 6th Edition	WB Left	0.036	15.5	C
7	NW Quince Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Right	0.602	14.0	B
8	NW Quince Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Left	0.437	23.2	C
9	NW Maple Avenue at NW 10th Street	All-way stop	HCM 6th Edition	WB Thru	2.168	309.7	F
10	NW Maple Avenue at NW 6th Street	Signalized	HCM 6th Edition	EB Right	0.842	60.4	E
11	NW Kingwood Avenue at NW 6th Street	Two-way stop	HCM 6th Edition	WB Left	0.472	101.5	F

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 1: NW Pershall Way at U.S. Highway 97

Control Type:	Two-way stop	Delay (sec / veh):	316.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.175

Intersection Setup

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	1	1	0	1	0	0	0	0	0	0
Pocket Length [ft]	320.00	100.00	140.00	170.00	100.00	120.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	55.00			55.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	U.S. Highway 97			U.S. Highway 97			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	55	1178	46	11	820	15	12	3	31	8	9	18
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.30	3.30	3.30	11.80	11.80	11.80	2.20	2.20	2.20	0.00	0.00	0.00
Growth Factor	1.1950	1.0570	1.0320	1.0320	1.0570	1.1950	1.1950	1.1950	1.1950	1.0320	1.1950	1.0320
In-Process Volume [veh/h]	0	0	0	0	0	17	9	1	0	0	1	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	7	4	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1245	47	11	867	42	27	5	37	8	12	19
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	324	12	3	226	11	7	1	10	2	3	5
Total Analysis Volume [veh/h]	69	1297	49	11	903	44	28	5	39	8	13	20
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.01	0.00	0.02	0.01	0.00	0.85	0.18	0.07	0.26	0.44	0.05
d_M, Delay for Movement [s/veh]	10.59	0.00	0.00	13.04	0.00	0.00	299.55	316.78	197.22	222.29	227.53	114.79
Movement LOS	B	A	A	B	A	A	F	F	F	F	F	F
95th-Percentile Queue Length [veh/ln]	0.32	0.00	0.00	0.07	0.00	0.00	5.59	5.59	5.59	3.14	3.14	3.14
95th-Percentile Queue Length [ft/ln]	8.01	0.00	0.00	1.84	0.00	0.00	139.71	139.71	139.71	78.45	78.45	78.45
d_A, Approach Delay [s/veh]	0.52			0.15			245.32			171.52		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	10.29											
Intersection LOS	F											

Intersection Level Of Service Report**Intersection 2: NW Pershall Way at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 11.0
 Level Of Service: B
 Volume to Capacity (v/c): 0.090

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			55.00			55.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Pershall Way			NW Pershall Way		
Base Volume Input [veh/h]	36	0	21	0	0	0	0	23	12	23	53	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	1.30	1.30
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	7	0	11	0	0	0	0	0	11	18	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	2	0	4	0	0	0	0	0	4	7	0	0
Total Hourly Volume [veh/h]	52	0	40	0	0	0	0	27	29	52	63	0
Peak Hour Factor	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400	0.8400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	0	12	0	0	0	0	8	9	15	19	0
Total Analysis Volume [veh/h]	62	0	48	0	0	0	0	32	35	62	75	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
d_M, Delay for Movement [s/veh]	10.96	11.43	9.23	10.70	10.84	8.63	7.34	0.00	0.00	7.44	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.47	0.47	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	11.86	11.86	11.86	0.00	0.00	0.00	0.00	0.00	0.00	3.15	3.15	3.15
d_A, Approach Delay [s/veh]	10.20			10.06			0.00			3.37		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	5.04											
Intersection LOS	B											

Intersection Level Of Service Report**Intersection 3: NW Walnut Avenue at NW 10th Street**

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.018

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Walnut Avenue	
Base Volume Input [veh/h]	57	0	0	35	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	18	0	0	27	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	2	24	7	4	14	4
Total Hourly Volume [veh/h]	88	24	7	73	14	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	6	2	18	4	1
Total Analysis Volume [veh/h]	88	24	7	73	14	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.45	0.00	9.61	8.86
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.36	0.36	1.66	1.66
d_A, Approach Delay [s/veh]	0.00		0.65		9.44	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.06					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 4: NW Varnish Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	9.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.027

Intersection Setup

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00		35.00		20.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	NW 10th Street		NW 10th Street		NW Varnish Avenue	
Base Volume Input [veh/h]	57	0	0	37	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	17	0	0	28	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	24	35	4	14	21	2
Total Hourly Volume [veh/h]	109	35	4	86	21	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	9	1	22	5	1
Total Analysis Volume [veh/h]	109	35	4	86	21	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.03	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.84	9.04
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.21	0.21	2.29	2.29
d_A, Approach Delay [s/veh]	0.00		0.33		9.77	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.99					
Intersection LOS	A					

Intersection Level Of Service Report**Intersection 5: NW Upas Avenue at NW 10th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 12.3
 Level Of Service: B
 Volume to Capacity (v/c): 0.014

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	1	0	0	0	0	0
Pocket Length [ft]	260.00	100.00	100.00	100.00	100.00	100.00	110.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Upas Avenue			NW Upas Avenue		
Base Volume Input [veh/h]	12	50	3	0	33	4	7	0	6	1	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	57	3	8	2	5	21	13	0	33	5	0	1
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	59	0	0	35	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	122	12	2	79	26	21	0	40	6	0	1
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	34	3	1	22	7	6	0	11	2	0	0
Total Analysis Volume [veh/h]	78	134	13	2	87	29	23	0	44	7	0	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.05	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	7.56	0.00	0.00	7.49	0.00	0.00	11.99	12.29	8.93	12.34	12.28	9.05
Movement LOS	A	A	A	A	A	A	B	B	A	B	B	A
95th-Percentile Queue Length [veh/ln]	0.17	0.00	0.00	0.00	0.00	0.00	0.13	0.14	0.14	0.05	0.05	0.05
95th-Percentile Queue Length [ft/ln]	4.15	0.00	0.00	0.10	0.10	0.10	3.34	3.60	3.60	1.15	1.15	1.15
d_A, Approach Delay [s/veh]	2.62			0.13			9.98			11.93		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	3.27											
Intersection LOS	B											

Intersection Level Of Service Report
Intersection 6: NW Spruce Avenue at NW 10th Street

Control Type:	Two-way stop	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.036

Intersection Setup

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 10th Street			NW 10th Street			NW Spruce Avenue			NW Spruce Avenue		
Base Volume Input [veh/h]	36	91	4	4	52	5	2	0	18	10	5	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.60	1.60	1.60	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	33	68	0	0	43	0	0	0	22	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	59	0	0	35	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	76	236	5	5	140	6	2	0	44	12	6	10
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	64	1	1	38	2	1	0	12	3	2	3
Total Analysis Volume [veh/h]	83	257	5	5	152	7	2	0	48	13	7	11
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.04	0.02	0.01
d_M, Delay for Movement [s/veh]	7.67	0.00	0.00	7.77	0.00	0.00	14.68	14.48	9.28	15.48	14.80	10.16
Movement LOS	A	A	A	A	A	A	B	B	A	C	B	B
95th-Percentile Queue Length [veh/ln]	0.18	0.18	0.18	0.01	0.01	0.01	0.19	0.19	0.19	0.22	0.22	0.22
95th-Percentile Queue Length [ft/ln]	4.61	4.61	4.61	0.29	0.29	0.29	4.68	4.68	4.68	5.43	5.43	5.43
d_A, Approach Delay [s/veh]	1.84			0.24			9.50			13.44		
Approach LOS	A			A			A			B		
d_I, Intersection Delay [s/veh]	2.66											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 7: NW Quince Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	14.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

Intersection Setup

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 10th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	24	63	21	41	59	3	0	42	24	45	96	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	11	54	0	35	33	0	0	13	9	0	18	47
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	32	0	16	19	0	0	0	0	0	0	27
Total Hourly Volume [veh/h]	40	161	25	100	123	4	0	63	38	54	133	172
Peak Hour Factor	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900	0.8900
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	45	7	28	35	1	0	18	11	15	37	48
Total Analysis Volume [veh/h]	45	181	28	112	138	4	0	71	43	61	149	193
Pedestrian Volume [ped/h]	0			0			5			5		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	616	604	604	670
Degree of Utilization, x	0.41	0.42	0.19	0.60

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.01	2.08	0.69	4.04
95th-Percentile Queue Length [ft]	50.34	51.94	17.25	100.99
Approach Delay [s/veh]	12.87	13.21	10.34	16.15
Approach LOS	B	B	B	C
Intersection Delay [s/veh]	13.96			
Intersection LOS	B			

Intersection Level Of Service Report

Intersection 8: NW Quince Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.437

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	1	1	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	350.00	430.00	100.00	100.00	160.00	100.00	100.00	290.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Quince Avenue			NW Quince Avenue		
Base Volume Input [veh/h]	157	414	46	47	335	110	63	23	92	40	27	80
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.80	1.80	1.80	0.00	0.00	0.00	0.70	0.70	0.70
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	28	20	31	24	44	44	25	7	20	33	7	27
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	13	0	0	0	0	14	8	0	8	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	515	86	80	444	189	108	34	138	81	39	123
Peak Hour Factor	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700	0.8700
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	148	25	23	128	54	31	10	40	23	11	35
Total Analysis Volume [veh/h]	263	592	99	92	510	217	124	39	159	93	45	141
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	3	8	0	7	4	0	0	2	0	0	6	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	5	5	0	5	5	0	0	5	0	0	5	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	16	72	0	9	65	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	No		No	No			No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	77	68	68	77	61	61	35	35	35	35
g / C, Green / Cycle	0.64	0.57	0.57	0.64	0.51	0.51	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.32	0.18	0.07	0.11	0.23	0.23	0.11	0.13	0.09	0.12
s, saturation flow rate [veh/h]	834	3230	1442	822	1686	1517	1095	1498	1077	1500
c, Capacity [veh/h]	526	1830	817	542	857	771	251	437	240	437
d1, Uniform Delay [s]	11.29	13.79	12.10	8.82	18.76	18.77	46.08	34.69	45.56	34.37
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.36	0.47	0.30	0.68	1.68	1.87	6.78	3.37	4.67	3.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.32	0.12	0.17	0.45	0.45	0.49	0.45	0.39	0.43
d, Delay for Lane Group [s/veh]	14.65	14.26	12.40	9.50	20.44	20.64	52.86	38.06	50.23	37.37
Lane Group LOS	B	B	B	A	C	C	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.12	4.06	1.23	0.92	6.74	6.12	3.95	5.19	2.87	4.81
50th-Percentile Queue Length [ft/ln]	78.10	101.56	30.63	23.00	168.44	153.10	98.70	129.74	71.66	120.36
95th-Percentile Queue Length [veh/ln]	5.62	7.31	2.21	1.66	10.99	10.18	7.11	8.93	5.16	8.41
95th-Percentile Queue Length [ft/ln]	140.58	182.80	55.14	41.39	274.86	254.56	177.66	223.14	129.00	210.33

Movement, Approach, & Intersection Results

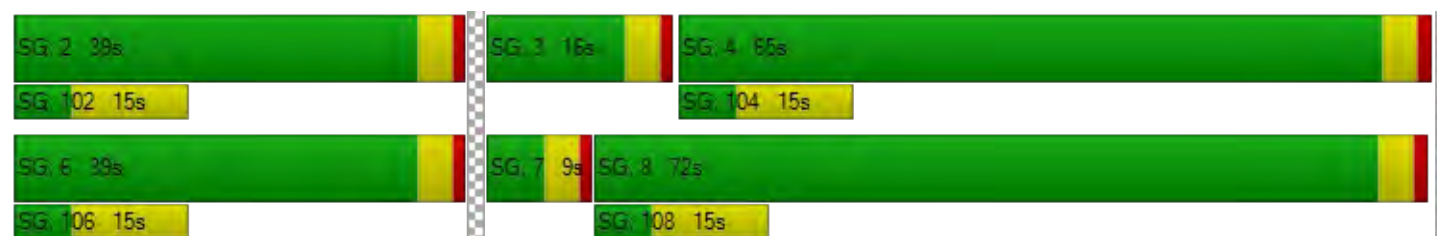
d_M, Delay for Movement [s/veh]	14.65	14.26	12.40	9.50	20.49	20.64	52.86	38.06	38.06	50.23	37.37	37.37
Movement LOS	B	B	B	A	C	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	14.18			19.29			43.76			41.66		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	23.18											
Intersection LOS	C											
Intersection V/C	0.437											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	51.34			51.34			51.34			51.34		
I_p,int, Pedestrian LOS Score for Intersection	3.100			2.982			2.381			2.170		
Crosswalk LOS	C			C			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1017			583			583		
d_b, Bicycle Delay [s]	11.27			14.50			30.10			30.10		
I_b,int, Bicycle LOS Score for Intersection	2.347			2.235			2.091			2.020		
Bicycle LOS	B			B			B			B		

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report

Intersection 9: NW Maple Avenue at NW 10th Street

Control Type:	All-way stop	Delay (sec / veh):	309.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	2.168

Intersection Setup

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	1	0	0	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	280.00	100.00	100.00	275.00	100.00	100.00
Speed [mph]	25.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 9th Street			NW 9th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	46	42	22	31	35	114	82	397	14	13	517	45
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.60	0.60	0.60	0.60	0.60	0.60	1.00	1.00	1.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	13	15	0	16	8	26	38	135	8	0	229	25
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	7	0	7	4	8	14	0	0	0	0	11
Total Hourly Volume [veh/h]	68	72	26	60	54	170	150	609	25	16	847	90
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	19	7	16	15	46	40	164	7	4	228	24
Total Analysis Volume [veh/h]	73	77	28	65	58	183	161	655	27	17	911	97
Pedestrian Volume [ped/h]	3			3			2			2		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	419	467	440	682	433	1008
Degree of Utilization, x	0.42	0.65	0.37	1.45	0.04	2.17

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.07	4.63	1.66	34.04	0.12	73.05
95th-Percentile Queue Length [ft]	51.69	115.71	41.40	850.89	3.06	1826.19
Approach Delay [s/veh]	17.74	24.15	193.72		540.95	
Approach LOS	C	C	F		F	
Intersection Delay [s/veh]	309.67					
Intersection LOS	F					

Intersection Level Of Service Report

Intersection 10: NW Maple Avenue at NW 6th Street

Control Type:	Signalized	Delay (sec / veh):	60.4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.842

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0	0	0	0	0	0	1	1	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	215.00	190.00	100.00	100.00
Speed [mph]	45.00			45.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Maple Avenue			NW Maple Avenue		
Base Volume Input [veh/h]	214	444	231	48	272	173	129	181	141	166	224	46
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.70	0.70	0.70	0.60	0.60	0.60	0.70	0.70	0.70	0.90	0.90	0.90
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	122	30	0	6	26	70	41	28	85	0	74	7
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	8	9	0	2	6	0	0	2	5	0	3	4
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	386	570	276	65	357	277	195	246	258	198	345	66
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	101	148	72	17	93	72	51	64	67	52	90	17
Total Analysis Volume [veh/h]	402	594	288	68	372	289	203	256	269	206	359	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	3	8	0	7	4	0	5	2	0	6	1	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	5	0	5	5	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	23	46	0	9	32	0	20	28	0	45	37	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	10	0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	51	42	42	51	28	28	61	24	24	61	33
g / C, Green / Cycle	0.43	0.35	0.35	0.43	0.23	0.23	0.51	0.20	0.20	0.51	0.28
(v / s)_i Volume / Saturation Flow Rate	0.37	0.27	0.28	0.09	0.21	0.21	0.16	0.15	0.19	0.15	0.26
s, saturation flow rate [veh/h]	1081	1701	1516	717	1702	1459	1240	1701	1445	1363	1651
c, Capacity [veh/h]	403	595	531	250	397	340	438	340	289	635	454
d1, Uniform Delay [s]	39.04	34.86	35.00	24.88	44.54	44.65	35.53	45.21	47.18	18.13	42.58
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	44.35	9.72	11.27	2.67	24.85	29.03	3.50	14.28	37.76	1.36	30.11
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.78	0.79	0.27	0.89	0.90	0.46	0.75	0.93	0.32	0.94
d, Delay for Lane Group [s/veh]	83.38	44.58	46.28	27.55	69.39	73.68	39.03	59.48	84.94	19.49	72.68
Lane Group LOS	F	D	D	C	E	E	D	E	F	B	E
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	13.30	13.15	12.11	1.29	12.58	11.28	3.51	8.45	10.82	3.37	15.96
50th-Percentile Queue Length [ft/ln]	332.61	328.81	302.87	32.32	314.61	282.04	87.69	211.20	270.45	84.34	399.07
95th-Percentile Queue Length [veh/ln]	19.29	19.10	17.82	2.33	18.40	16.79	6.31	13.21	16.21	6.07	22.52
95th-Percentile Queue Length [ft/ln]	482.16	477.50	445.57	58.18	460.05	419.75	157.84	330.36	405.30	151.82	562.88

Movement, Approach, & Intersection Results

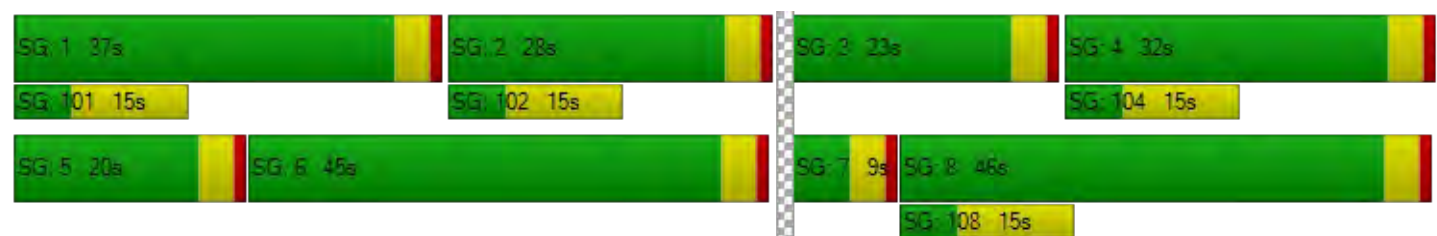
d_M, Delay for Movement [s/veh]	83.38	44.95	46.28	27.55	69.60	73.68	39.03	59.48	84.94	19.49	72.68	72.68
Movement LOS	F	D	D	C	E	E	D	E	F	B	E	E
d_A, Approach Delay [s/veh]	57.28			67.29			63.19			55.40		
Approach LOS	E			E			E			E		
d_I, Intersection Delay [s/veh]	60.36											
Intersection LOS	E											
Intersection V/C	0.842											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.051	2.942	2.795	2.463
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	700	467	400	550
d_b, Bicycle Delay [s]	25.35	35.27	38.40	31.54
I_b,int, Bicycle LOS Score for Intersection	2.619	2.161	2.761	2.606
Bicycle LOS	B	B	C	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report**Intersection 11: NW Kingwood Avenue at NW 6th Street**

Control Type: Two-way stop
 Analysis Method: HCM 6th Edition
 Analysis Period: 15 minutes

Delay (sec / veh): 101.5
 Level Of Service: F
 Volume to Capacity (v/c): 0.472

Intersection Setup

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	45.00			45.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	NW 6th Street			NW 6th Street			NW Kingwood Avenue			NW Kingwood Avenue		
Base Volume Input [veh/h]	22	826	12	2	547	14	2	0	9	23	0	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.20	1.20	1.20	0.70	0.70	0.70	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950	1.1950
In-Process Volume [veh/h]	0	153	0	0	109	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	17	0	0	11	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	1157	14	2	774	17	2	0	11	27	0	19
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	301	4	1	202	4	1	0	3	7	0	5
Total Analysis Volume [veh/h]	27	1205	15	2	806	18	2	0	11	28	0	20
Pedestrian Volume [ped/h]	9			9			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.01	0.00	0.00	0.01	0.00	0.02	0.00	0.02	0.47	0.00	0.05
d_M, Delay for Movement [s/veh]	9.62	0.00	0.00	11.29	0.00	0.00	49.97	76.08	11.74	101.52	111.53	49.17
Movement LOS	A	A	A	B	A	A	E	F	B	F	F	E
95th-Percentile Queue Length [veh/ln]	0.10	0.00	0.00	0.01	0.00	0.00	0.14	0.14	0.14	2.29	2.29	2.29
95th-Percentile Queue Length [ft/ln]	2.59	0.00	0.00	0.26	0.00	0.00	3.40	3.40	3.40	57.19	57.19	57.19
d_A, Approach Delay [s/veh]	0.21			0.03			17.62			79.70		
Approach LOS	A			A			C			F		
d_I, Intersection Delay [s/veh]	2.03											
Intersection LOS	F											



CINDER BUTTE VILLAGE

PHASES 2-4

REDMOND CITY COUNCIL

APRIL 28, 2020



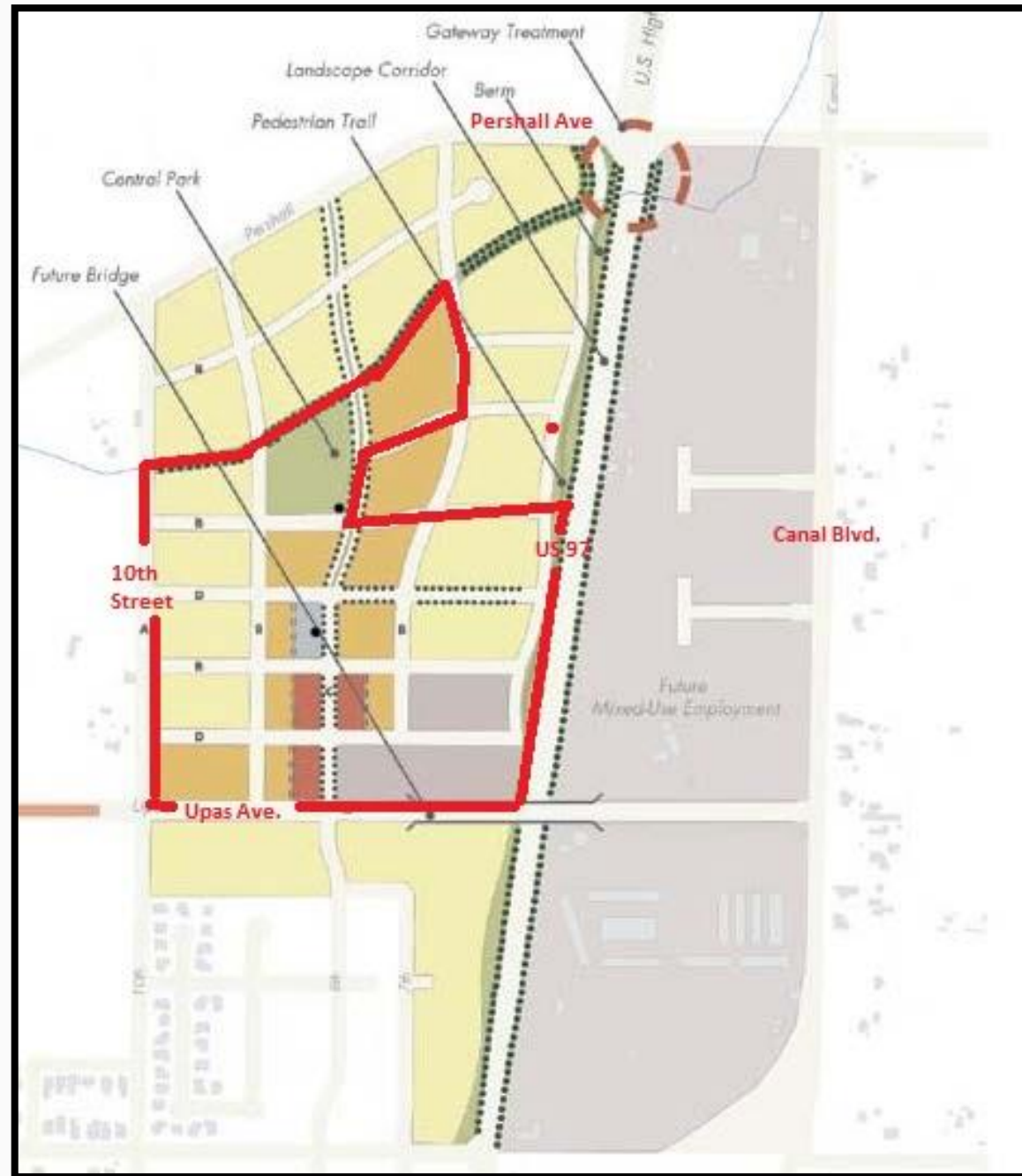
LAND USE APPROVAL REQUESTS

- TENTATIVE SUBDIVISION FOR 59 LOT SUBDIVISION
- COTTAGE DEVELOPMENT FOR 53 COTTAGE UNITS
- CONDITIONAL USE FOR THE COTTAGE DEVELOPMENT
- VARIANCE TO THE MAXIMUM COTTAGE FLOOR AREA
- MODIFICATION OF APPROVAL OF THE CENTRAL CHRISTIAN MASTER DEVELOPMENT PLAN



ORIGINAL HIGHWAY AREA PLAN

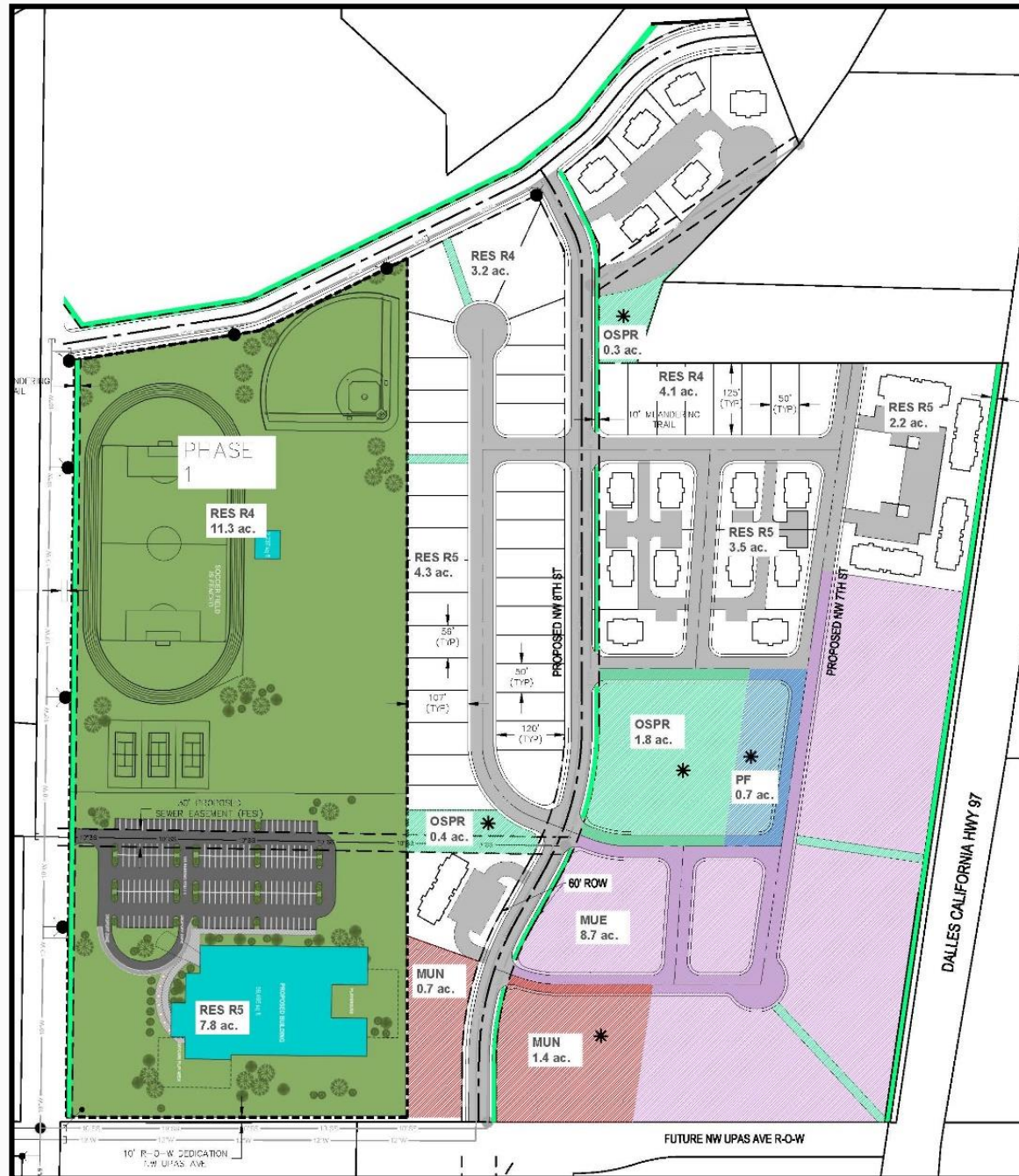
ADOPTED 2007





APPROVED 2017: CENTRAL CHRISTIAN MASTER DEVELOPMENT PLAN

SLIDE 4

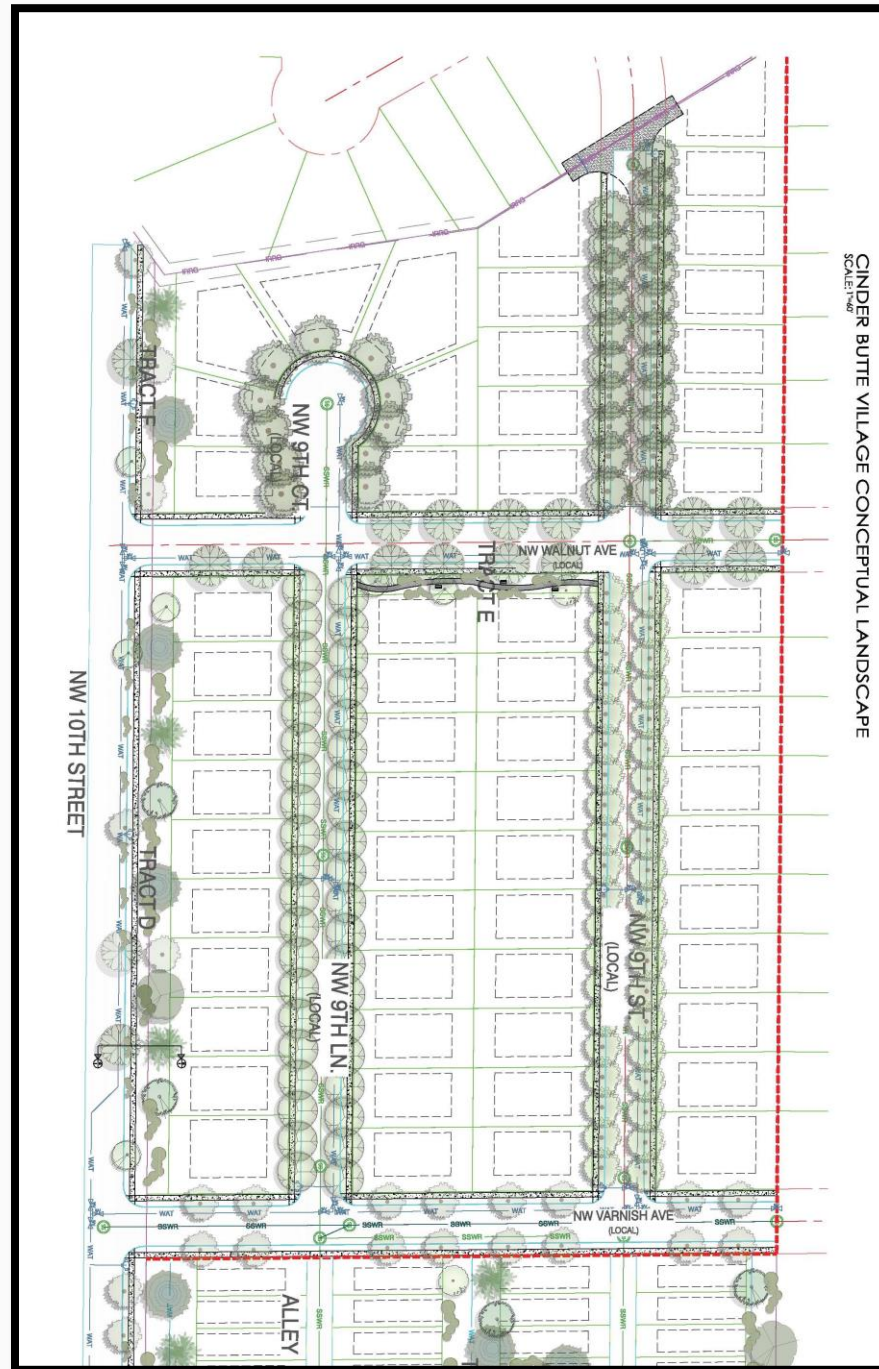




LANDSCAPE PLAN / OPEN SPACE (NORTH):

CINDER BUTTE VILLAGE PHASES 2 - 4

SLIDE 6

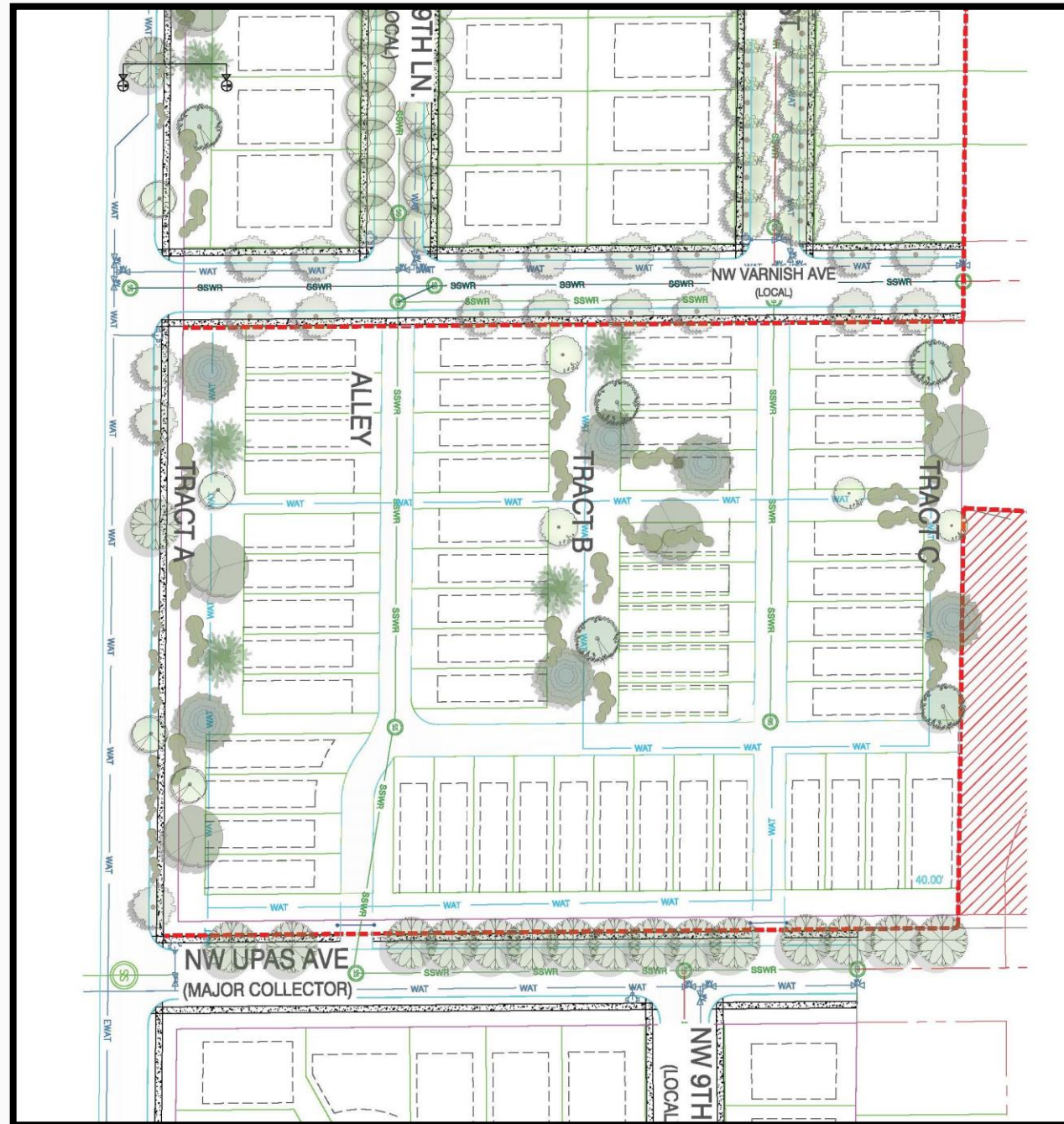




LANDSCAPE PLAN / OPEN SPACE (SOUTH):

CINDER BUTTE VILLAGE PHASES 2 - 4

SLIDE 7





REVISED 2020: MASTER DEVELOPMENT PLAN





QUESTIONS





CITY OF REDMOND

411 SW 9th STREET
REDMOND, OR 97756

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info@ci.redmond.or.us
www.ci.redmond.or.us

STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
THROUGH: Jason Neff, Chief Financial Officer
Keith Witcosky, City Manager
FROM: Brooks Slyter, Accounting & Financial Reporting Director
SUBJECT: Ord. #2020-03 - An ordinance granting a non-exclusive telecommunication franchise to Woden, LLC

Addresses Council Goal:

1. SUSTAIN OPERATIONS: Provide or enhance current levels of operations in all facets of municipal service delivery.
3. CITY INFRASTRUCTURE: Preserve and enhance the City's infrastructure to position the City to accommodate growth. Endeavor to adequately maintain the City's roads, utility infrastructure, parks and pedestrian/bicycle infrastructure

Report in Brief:

This item requests City Council approval of Ordinance 2020-03 to grant Woden, LLC a non-exclusive telecommunications franchise agreement.

Background:

The City of Redmond was approached by Woden, LLC to provide telecommunication services within the Redmond city limits. Woden intends to build infrastructure within the right-of-way that would then be leased to end user service providers. To operate within the City's right-of-way Woden, LLC needs a franchise agreement in place.

According to their application with the State of Oregon, Woden will provide intrastate, inter-exchange, switched telecommunications service(toll) and non-switched, private line service (i.e., dedicated transmission service) statewide in Oregon. Applicant indicates that it intends to resell the services of other certified carriers. Applicant indicated that it would operate as a facilities-based provider.

Applicant will not directly provide operator services as defined in OAR 860-032-0001, and will not be an "operator service provider" as defined in ORS 759.690(1)(d).

Discussion:

This ordinance is a five-year non-exclusive telecommunications franchise agreement granting Woden, LLC the authority to operate in the City's rights of way to provide telecommunication services while maintaining the City's development standards.

Fiscal Impact:

Authorizing is expected to generate franchise fee revenue through an arrangement whereby the City receives 3% of gross revenues related to Woden, LLC's leased infrastructure, plus 7% of Company's gross revenues received from ultimate consumers of the facilities who do not re-sell their use of the facilities to third parties within the corporate limits of City.

The actual annual revenue is unknown at this time.

Alternative Courses of Action:

1. Approve the ordinance.
2. Do not approve the ordinance.
3. Request more information

Recommendation / Suggested Motion:

"I move to have a first and second reading of Ord. # 2020-03, by title only" (Voice vote)

(City Attorney will read ordinance by title only.)

"I move to approve Ord. # 2020-03." (Roll call vote)

**REDMOND ORDINANCE
ORDINANCE NO. 2020-03**

AN ORDINANCE GRANTING A NONEXCLUSIVE TELECOMMUNICATION FRANCHISE TO WODEN, LLC

WHEREAS, Woden, LLC is a telecommunications provider seeking to provide telecommunication services in the City of Redmond;

WHEREAS, providing telecommunication services requires the installation, operation and maintenance of facilities within the public rights of ways within the City of Redmond;

WHEREAS, the City of Redmond desires to set forth the terms and conditions by which Woden, LLC shall use the public rights of way within the City of Redmond;

WHEREAS, the City of Redmond and Woden, LLC desire to enter into a franchise agreement and have reached agreement on the terms of that franchise agreement.

NOW, THEREFORE, THE CITY OF REDMOND, OREGON, ORDAINS AS FOLLOWS:

This Telecommunications Franchise Agreement ("Agreement") is between the City of Redmond, an Oregon municipal corporation ("City") and Woden, LLC ("Franchisee").

Section 1. Definitions.

Any terms defined in the Redmond Code and not in this Agreement have the meaning provided by the Redmond Code.

"Facilities" means the conduits, cables, optic fibers, poles, wires, vaults, fixtures, aboveground and underground lines, antennas, support mast and mounts, amplifiers, receivers, equipment cabinets, through bolts, washers, nuts, power supply cabinets, power meters, grounding or bond wires, enclosures, cabinets, battery back-up units, and other physical components and related equipment of Franchisee's Telecommunication System that are in compliance with applicable laws, rules and regulations as required by Section 3.

"Fiscal Year" means the 12-month reporting period that begins on July 1st and ends on June 30th.

"Gross revenue" means and includes recurring revenues received by the Franchisee for the provision of telecommunications services, either directly by the Franchisee or indirectly through a reseller, if any, to customers of such services consumed wholly or in part within the City.

Gross Revenue shall not include:

- a) sales, ad valorem, or other types of "add on" taxes, levies, or fees calculated by gross receipts or gross revenues which might have to be paid or collected for federal, state, or local government (exclusive of the Right-of-Way Use Fee paid to the City as provided herein);
- b) retail discounts or other promotions;

- c) non-collectable amounts due the Franchisee or its customers;
- d) refunds or rebates;
- e) non-operating revenues such as interest income or gain from the sale of an asset; or
- f) payments received by Franchisee for the construction of network facilities.

To the extent the Franchisee provides services through facilities in City rights of way other than through telecommunication facilities, the definition of "gross revenues" means any revenue received from sources within the City limits by the Franchisee; including revenue from the use, rental or lease of operating facilities of the Franchisee and from the provision of services by the Franchisee.

"Telecommunications System" means all Facilities owned, operated or used by Franchisee to provide telecommunication services, including voice, data and audio and video transmission services, and located in rights-of-way administered by the City.

Section 2. Grant of Authority.

City grants to Franchisee the right to construct, install, maintain, restore, replace, and operate Facilities over, in, on, and under present and future City rights-of-way for the purpose of providing telecommunication services on the terms stated in this Agreement and subject to applicable law.

This Franchise is not exclusive. The City reserves the right to grant a similar franchise to any other person or entity at any time during the period of this Agreement. This Agreement is subject to all prior rights, interests, agreements, permits, easements or licenses granted by the City, and to the City's right to use and administer rights-of-way for any purpose.

Section 3. Compliance with Laws, Rules and Regulations.

Franchisee shall comply with all applicable federal, state and City laws, rules and regulations, including but not limited to the Redmond Development Code, other provisions or revisions of the Redmond Code, and City ordinances. The locations and methods of installation and maintenance of all Franchisee's Facilities shall be subject at all times to regulation by the City (including City's ordinances, standards and specifications, and regulations on street cuts and use of rights-of-way or public easements).

Franchisee must obtain right-of-way permits prior to installation or construction of Facilities. Franchisee must develop, site, construct, install, and at all times maintain and operate all Facilities in accordance with telecommunications industry standards and City standards and specifications, including but not limited to Redmond Development Code and as directed by the City Engineer in accordance with the Redmond Code.

Section 4. Franchisee Liability, Indemnification of City, and Insurance.

- A. Liability and Indemnification. Franchisee will defend, indemnify , and hold the City, its officers, agents, employees and volunteers harmless against all liability, claims, losses, demands, suits, fees and judgments (collectively known as "claims") that may be based

on, or arise out of damage or injury, including death, to persons or property caused by or resulting from any act or omission sustained in connection with the performance of this Agreement or by conditions created thereby or based upon violation of any statute, ordinance or regulation. This indemnification does not apply to claims caused by the negligence or willful misconduct of the City, its officers, agents, employees and volunteers. Franchisee agrees that it is not an agent of the City and is not entitled to indemnification and defense under ORS 30.285 and ORS 30.287.

- B. Insurance. Franchisee must maintain, at Franchisee's expense during the term of this Agreement, commercial general liability covering bodily injury and property damage in an amount of \$2 million per occurrence and \$4 million general aggregate; commercial automobile insurance \$2 million combined single limit per accident which limits may be met by any combination of primary and excess or umbrella insurance. The insurance policies obtained by Franchisee shall be primary and non-contributory. Franchisee shall defend, indemnify, and hold City, its officers, employees and volunteers harmless for any claims resulting from negligence or intentional misconduct of Franchisee and its employees in performance of this Agreement, even if not covered by, or in excess of insurance limits.

Commercial general liability coverage must include by blanket additional insured endorsement, the City, its officers, employees and volunteers as additional insureds as their interest may appear under this Agreement with respect to Franchisee's work or services conducted under this Agreement. Upon receipt of notice from its insurers, Franchisee will give the City 30 days' written notice of any cancellation of any required coverage. Any failure to comply with this provision will not affect the insurance coverage provided to City.

Franchisee must maintain workers' compensation insurance as required by ORS Chapter 656 and meeting the statutory requirements therein.

Franchisee must ensure that each contractor and subcontractor obtains and maintains substantially the same insurance as required of Franchisee before performing work.

Coverages provided by Franchisee must be underwritten by an insurance company authorized to do business in the state of Oregon and with a Best's rating of A-VII or higher.

As evidence of the insurance coverage required by this Agreement, Franchisee must provide a certificate of insurance and blanket additional insured endorsement from the carrier(s). This Agreement will not be in effect until the required certificate and blanket additional insured endorsement have been received and approved by City, which reasonable approval may not be withheld or delayed. Renewal certificates and blanket additional insured endorsements will be provided to City upon receipt by Franchisee. The City may terminate this Agreement for failure to maintain the required insurance.

- C. Waiver of Subrogation. Franchisee grants a waiver of subrogation to the City, its officers, employees and volunteers for any claims arising out of Franchisee's work or service.

Further, Franchisee agrees that in the event of loss due to any of the risks for which it has agreed to provide insurance, recovery will be solely with its insurance carrier, and also grants to City, on behalf of any insurer providing coverage to either Franchisee or City with respect to the work or services of Franchisee, a waiver of any right to subrogation which any insurer or subcontractor may acquire against City by virtue of the payment of any loss under such insurance coverage.

Section 5. Performance Bond.

Before commencing any work in any right-of-way administered by the City, Franchisee must provide a performance bond in the amount of \$100,000, or a lesser amount as agreed to in writing by the City as being sufficient to assure proper restoration of any street, sidewalk or other surface disturbed by Franchisee. Franchisee must keep the bond in full force and effect during any activities that disturb the surface of any rights-of-way and for a period of at least one year after restoration of rights-of-way. The bond may be withdrawn one year after restoration of rights-of-way but must be restored prior to any further action that would disturb any street, sidewalk, or other surface. The bond must be issued by surety authorized to do business in the state of Oregon and with a Best's rating of A- VII or higher.

City may, in the event of any construction which is likely to be substantially greater than \$100,000, or in the event the City's cost to complete or repair the construction upon Franchisee's failure to perform the same would be greater than \$100,000, as reasonably determined by the City, require the amount of the performance bond to be increased. The performance bond is subject to increase each time Franchisee applies for permits to perform work within the city of Redmond. Franchisee must provide to City all necessary documentation demonstrating Franchisee's cost estimation in a format reasonably acceptable to City.

Section 6. Construction and Conditions on Right-of-Way Occupancy.

- A. Use. Franchisee must conduct its operations under this Franchise, including installation, construction, operations, and maintenance of its Facilities, in compliance with all lawful governmental regulations and in a safe, competent, and skillful manner so as not to present a danger to the public or City. Franchisee must construct, install, maintain and operate its Facilities in designated City rights- of-way consistent with industry standards and in City's commercially reasonable satisfaction, in compliance with all City ordinances, rules, standards and specifications, policies and regulations, in a manner so as to interfere as little as practicable with traffic and other use of rights of way, and to cause minimum interference with the rights or reasonable convenience of property owners who adjoin any of the rights of way, including existing and future City services. All work in City right-of-way requires a permit and a traffic plan that is fully compliant with the City of Redmond Design Standards and Specifications, prior to the start of any work.
- B. Construction. Prior to beginning construction, Franchisee must obtain all necessary land use approvals and permits. When construction is complete, Franchisee must provide the City Engineer as-built drawings with a map showing the location of installed Facilities in City rights-of-way as required by City codes, standards and specifications, and

building requirements. The City Engineer may require additional information on the as-built drawings.

- C. Restoration. In case of any disturbance of pavement, sidewalk, driveway, or other surface by Franchisee, Franchisee must, at its own cost and expense and in compliance with the City's standards and specifications, promptly replace and restore all paving, sidewalk, driveway, landscaping or surface of any street or alley disturbed, reasonable wear and tear excepted. Franchisee warrants all restoration work for a period of one year from completion of the work. If Franchisee fails to make restoration as required by this section within a reasonable timeframe following written notice from City to Franchisee, or if the restoration fails within the one year warranty period, City may cause the repairs to be made at the expense of Franchisee. If Franchisee fails to reimburse the City for any costs incurred under this section within 45 days' of demand for reimbursement and such failure is not a result of a good faith dispute between City and Franchisee, City may refuse to issue additional permits.
- D. Notification. Franchisee must comply with the requirements of Oregon Utility Notification Law and implementing rules and regulations.
- E. Relocation. City may require Franchisee to relocate its Facilities. If the removal or relocation of Facilities is caused directly by an identifiable development of property or other third-party project and the removal or relocation of Facilities is expected to occur within the area to be developed, or is made for the convenience of other third-party, Franchisee may charge the expense of removal or relocation to the developer or other third-party. Franchisee will be solely responsible for enforcing collection from the developer or other third-party.

If the removal or relocation of Facilities results from City's need to provide public facilities, a City-funded project, or is otherwise requested by City or is made for the purpose of improving a street to City standards or other improvement for the benefit of the public, Franchisee will remove or relocate its Facilities at Franchisee's expense within one hundred twenty (120) days after notification by City. For any relocation required under this section, City will make a reasonable effort to provide Franchisee with a mutually agreeable alternate location for its Facilities within City rights-of-way, or allow Franchisee to temporarily remove or relocate its Facilities for the duration of the City Project and allow Franchisee the opportunity to replace its Facilities in the same or similar location after completion of the City project, consistent with City approval for Franchisee's location of the Facility. In the event that City receives third party funding for a City project or improvement to a City street that covers Franchisee's expenses, City will remit payment to Franchisee from the third-party funding for reimbursement for Franchisee's relocation expenses.

In cases of capital improvement projects undertaken by City where overhead utility are converted to underground installations, Franchisee must convert above-ground Facilities to underground, at Franchisee's expense, if requested to do so by City, except to the extent Franchisee's Facilities must remain above-ground to operate. City agrees to

comply with provisions of applicable law when requiring such conversion and to do so in a non-discriminatory manner.

- F. Placement of Facilities. Franchisee will not knowingly place its Facilities where they will interfere with any existing or future City utility, gas, electric, or telephone fixture or power, sanitary sewer, storm sewer, or water facility. Franchisee must consult with City Engineer prior to placement of Facilities, and will comply with all City ordinances, policies, rules, and regulations in connection with its placement of Facilities. Whenever all existing electric utilities, cable facilities and telecommunications facilities are located underground within a public right-of-way in the City, Franchisee must also locate or relocate its Facilities underground to the extent possible.
- G. Temporary Rearrangement of Facilities. Franchisee must, consistent with City policies, ordinances, rules, and regulations, arrange to temporarily raise, lower, or otherwise move its Facilities to permit the moving of buildings or other objects if the person or entity wishing to move the building or other object makes a reasonable arrangement to reimburse Franchisee for its expenses in rearranging its Facilities. Nothing in this section precludes City from requiring Franchisee to move its Facilities at Franchisee's expense when public convenience requires the move.

Section 7. Transfer of Franchise.

Franchisee may not sell, assign, dispose of, or transfer in any manner whatsoever any interest in this Franchise or in the Facilities authorized by this Agreement, or any part of the Facilities, without prior written approval of City, which approval will not be unreasonably withheld. The City may impose reasonable conditions on any such approval, including but not limited to the requirement that the transferee acknowledge in writing and agree to be bound by the terms of this Agreement. City has the right to collect from Franchisee City's actual administrative costs associated with processing a transfer request, including the cost of ascertaining the financial responsibility of the proposed transferee. Use of Franchisee's Facilities by third parties shall not constitute an assignment or transfer of privileges for purposes of this Agreement. Notwithstanding the foregoing, no City approval is required but notice shall be provided for any assignment, disposal, or transfer of this Franchise or the Facilities to an affiliate of Franchisee or its parent company.

Section 8. City Rights in Franchise.

- A. City Supervision and Inspection. City has the right to supervise all construction or installation of Franchisee's Facilities subject to the provisions of this Agreement and make such inspections as it finds necessary to ensure compliance with governing laws, ordinances, rules, and regulations.
- B. Termination or Abandonment of Agreement. Upon any termination of this Agreement, all Facilities installed or used by Franchisee must be removed by Franchisee at Franchisee's expense within one hundred twenty (120) days after such termination, and the property upon which the Facilities were used restored by Franchisee to the condition it was in before installation.

- C. Co-location. Franchisee must offer the City the opportunity to co-locate City conduit and lines in trenches dug by Franchisee in City rights-of-way and may charge City only any incremental additional costs incurred in making the trenches available for City use.

Section 9. Franchise Fee.

- A. Franchisee shall pay monthly to City a Franchise fee equal to the sum of 3% of Company's gross revenues received from telecommunications service providers who re-sell their use of the facilities to third parties within the corporate limits of City, plus 7% of Company's gross revenues received from ultimate consumers of the facilities who do not re-sell their use of the facilities to third parties within the corporate limits of City. Company also may at its option deduct uncollectible accounts of customers within the corporate limits of City from these gross revenues.

The intention of the parties in charging different fees for telecommunications service providers and ultimate consumers is to prevent any end user from paying a permit or franchise fee to City more than once for the same use of the facilities, while at the same time charging a fair amount for the use of City's rights of way.

- B. The Franchise Fee required by this section is due and payable within 60 days after the end of each applicable calendar month. Any payment not made when due will bear interest at the rate of 9% per annum, compounded monthly, from the date due until paid. Together with each payment of the Franchise Fee, Franchisee will submit a Telecommunications Franchise Fee Percentage Reporting Form in the form of Exhibit A.
- C. City's acceptance of any payments due under this section shall not be considered a waiver by City of any breach of this franchise agreement.
- D. Except to the extent prohibited by Federal or State law, the Franchise Fee is in addition to any permit fee required to comply with Section 3.

Section 10. Permit and Inspection Fees.

Nothing in this Agreement may be construed to limit the right of City to require Franchisee to pay reasonable costs incurred by City in connection with the issuance of a license or permit, making an inspection, or performing any other service for or in connection with Franchisee or its Facilities, whether pursuant to this Agreement or any ordinance or regulation, subject to any limitation imposed by Federal or state law.

Section 11. Enforcement and Termination of Agreement for Violation.

- A. Default. Time of payment and performance are of the essence in the Agreement. The following are events of default:

- a. Default in Payment. The failure of Franchisee to pay City when due any amounts required by the Agreement pursuant to Section 9 and such failure continues for a period of 15 days after the postmark date of Licensee's notice of its failure to pay.
 - b. Default in Other Covenants. The failure of Franchisee to perform any of the covenants and conditions required by this Agreement to be kept and performed by Franchisee, and such failure continues for a period of 30 days after notice from City of such failure, or longer than 30 days if the nature of the cure requires a longer period of time and the cure was commenced within the 30-day period. Upon the occurrence of an event of default, Franchisee must pay to City the sum of \$200 per day for each day the default continues along with any additional damages suffered by City as a result of Franchisee's default.
- B. The City may terminate this Agreement for defaults that are not cured within the time allowed by providing 30 days' notice to Franchisee of its intent to terminate. Franchisee may avoid termination by completely curing the default(s), including payment of the penalty required by Subsection A.2 of this section, unless the notice of termination is the third notice of termination within a 12-month period. Franchisee may challenge a notice of termination by providing a written protest to the City Manager within 15 business days after the postmark date of Franchisee notice of termination. The City Manager, on receipt of the protest shall either grant the protest, in which case the Agreement will remain in place, or refer the matter to the City Council for a decision. The termination will not become final until after the decision by the City Manager or City Council.

Section 12. Remedies not Exclusive; Waiver.

All remedies granted the City under this Agreement are cumulative, and recovery or enforcement of one is not a bar to the recovery or enforcement of any other remedy. Remedies contained in this Agreement are not exclusive and City reserves the right to enforce penal provisions of any ordinance and also use any remedy available to City at law or in equity. Failure to enforce any provision of this Agreement may not be construed as a waiver of a breach of any other term, condition or obligation of this Agreement.

Section 13. Franchise Term.

This Franchise is granted for a term of five years beginning the Effective Date ("Initial Term") and will automatically renew for two successive terms of five years each (each a "Renewal Term") unless notice of termination is provided. Franchisee and City may terminate this Agreement at the end of the Initial Term or any Renewal Term by providing notice of termination at least 60 days prior to the end of the Initial Term or relevant Renewal Term. If notice of termination is provided, the parties may elect to negotiate a new franchise agreement in lieu of termination. In the event the City adopts code provisions, regulations or standards and specifications applicable to this Franchise or if state or federal legislation or regulation affects any provision of this Franchise, the Parties, at the request of either Party, may request renegotiation of the Franchise to reflect the changes in law or regulation.

Section 14. Severability.

If any section, subsection, sentence, clause or portion of this Agreement becomes for any reason invalid, superseded by applicable authority, or if any such portion of this Agreement is rendered unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct, and independent provision and such holding shall not affect the validity or constitutionality of the remaining portion thereof. If for any reason, the franchise fee is invalidated or amended by the act of any court or governmental agency, then the highest reasonable franchise fee allowed by such court or other governmental agency shall be the franchise fee charged by this Agreement.

Section 15. Notices.

Any notice required or permitted under this Agreement shall be deemed given when received or when deposited with the United States Postal Service, postage prepaid and sent as registered or certified mail addressed as follows:

TO CITY:

Keith Witcosky
City Manager
City of Redmond
411 SW 9th St
Redmond, OR 97756

TO FRANCHISEE:

Name: Woden, LLC
Attn: Lach Litwer
Address: 2204 Sherman Ave.
Hood River, OR 97031

or to such other addresses as may be specified from time to time by either party in writing.

The primary contact regarding administration of this Franchise for the City is:

Position: Accounting and Financial Reporting Director
Name: Brooks Slyter
Email: brooks.slyter@ci.redmond.or.us
Phone: 541.923.7735

and for Franchisee is:

Position: Principal
Name: Lach Litwer
Email: Lach@woden.one
Phone: (503) 887-4372

The primary contacts may be changed at any time by a written communication, including email, without the need for formal notice.

Section 16. Interpretation/Jurisdiction.

Interpretation of the Agreement shall be governed by laws of the State of Oregon and any legal action relating to this Agreement must be brought in the state or federal courts located in Deschutes County.

Section 17. Change of Law.

If any federal or state laws or regulations or any binding judicial interpretations thereof that govern any aspect of the rights or obligations of one or more parties under this Agreement shall change after full execution, and such change makes any aspect of such rights or obligations inconsistent with the then-effective federal or state laws, regulations or binding judicial interpretations, then the parties agree to promptly amend the Agreement as reasonably required to accommodate and/or ensure compliance with any such legal or regulatory change.

City of Redmond

Franchisee

Mayor

Authorized Representative

Printed Name

Printed Name

Date

Date

ATTEST:

ATTEST:

Kelly Morse, City Recorder



EXHIBIT A

City of Redmond Telecommunications Franchise Fee Percentage Reporting Form

Franchisee: _____

Reporting Period: _____

Description	Revenue and Fee Calculation
A. Gross Revenues-Resold	\$
B. Less: Revenues Exempt from Franchise Fees	\$
C. Other Adjustments to Gross Revenues	\$
D. Net Revenues Subject to Franchise Fees (A+B+C)	\$
E. Franchise Fee	3%
F. Total Franchise Fee for Gross Revenues-Resold (D x E)	\$
G. Gross Revenues-Not Resold	
H. Less: Revenues Exempt from Franchise Fees	\$
I. Other Adjustments to Gross Revenues	\$
J. Net Revenues Subject to Franchise Fees (G+H+I)	\$
K. Franchise Fee	7%
L. Franchise Fee for Gross Revenues-Not Resold (J x K)	\$
M. Total Franchise Fee Remitted to City of Redmond (F+L)	\$

Certification by Officer or Authorized Representative:

I declare under the penalties for perjury that the information provided herein is true, complete and accurate to the best of my knowledge and belief.

Name

Date

Title

Please remit payment to:

City of Redmond
411 SW 9th Street
Redmond, OR 97756

For questions, please contact City of Redmond Finance Department at 541.923.7735



CITY OF REDMOND

411 SW 9th STREET
REDMOND, OR 97756

541.923.7710
FAX: 541.548.0706
info@ci.redmond.or.us
www.ci.redmond.or.us

STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
THROUGH: Keith Witcosky, City Manager
John Roberts, Deputy City Manager
FROM: Aaron Yuma, Building Official
SUBJECT: Ord. #2020-05 - An ordinance amending the Redmond City Code Chapter 9 - Building and Fire Codes, establishing local building codes.

Addresses Council Goal:

7. Comprehensive Planning: Enhance the quality of life through adoption of programs, policies, and standards that balance growth while maintaining our unique character.

Report in Brief:

This item requests City Council approve amendments to Chapter 9 of the City Code. The purpose of the amendments are to adjust for recent changes made by the State Building Codes Division (State BCD).

Background:

The State BCD made changes to Chapter 1 of the Oregon Structural Specialty Code and Oregon Residential Specialty Code that preempts and impacts how the City administers its building codes program. The proposed changes are imbedded in the attached Ordinance; added words are redlined and words to be deleted are struck through. 455.020 authorizes the City to maintain a locally administered building codes program. The program is delegated to cities from the State BCD through OAR 918-020.

In October 2019, the State BCD adopted a new code with extensive changes to their administrative provisions, specifically Chapter 1- Scope and Administration. The changes require technical items to be excluded from City codes, and action at the local level to maintain current interdisciplinary coordination, business practices, authority and service levels. Of importance, the requirement to reference "other ordinances of the municipality" when reviewing for issuance of permits or certificate of occupancy was removed by the State BCD.

These are critical provisions that were removed by the State BCD that give all cities local control in administering their respective building programs. Meaning, cities can no longer rely on the statewide code for explicit authority. To enable the cities to continue to maintain and effectively administer their existing building codes, local jurisdictions must adopt 'Scope and Administration' provisions language removed from the original State BCD Chapter 1 codes into their local codes.

The State BCD revisions were driven to have the focus of administering building codes only on buildings under construction.

Therefore the updated State BCD code removes regulation of items such as: communications towers, retaining walls, private access bridges, signs, fences, exterior tanks holding fuel, industrial chemicals and protection of adjoining property. The State BCD changes also removed of the right-of-entry provisions and the authority to require that building code violations be abated; weakening the City's ability to use building codes to obtain compliance of violations.

Lastly, in the update State BCD code, the sections governing the issuance of permits and certificates of occupancy were modified. The modifications make issuance of permits and certificates of occupancy contingent only upon the requirements of the building code. Meaning, this provision would de-couple the current and long-standing practice where approval of building permits is tied to other reviews, such as: Zoning, land use permitting, and the Development Code; Infrastructure, transportation and Right-of-Way standards governing site development and site access; Adequate connection to sanitary and water systems and service levels; Health Department permitting and inspections; and

Assessment and payment of SDC fees.

Discussion:

The proposed amendments to Chapter 9 would enable the City to continue to effectively administer its building codes to protect the health, safety and welfare of the community.

The most important aspect of the proposed amendments would be to reestablish the ability to maintain the tie between issuance of permits and certificates of occupancy with other applicable City Codes and requirements.

If these amendments were not adopted it would force the City to issue permits in violation of other important City standards and requirements. Examples include requirements or conditions of approval related to: land use, zoning, access, infrastructure, roadway, transportation, ingress, egress, accessibility and health/safety provisions. Not having this ability would create inconsistencies in administering building codes, customer service issues and complexities associated with code enforcement.

As required by City Charter, notices regarding this Ordinance were posted in three places (the Library, the Police Department, and the Redmond Chamber of Commerce) in addition to City Hall on April 21, 2020.

Fiscal Impact:

There is no fiscal impacts to Building Division revenues or expenditures.

Alternative Courses of Action:

1. Adopt Ordinance No. 2020-05
2. Request more information.
3. Do not adopt Ordinance No. 2020-05

Recommendation / Suggested Motion:

"I move to have a first and second reading of Ord. #2020-05, by title only." (Voice Vote

(City Attorney will read ordinance by title only, twice.)

"I move to approve Ord. #2020-05" (Roll Call vote)

November 12, 2019



Dear OBOA Members:

The OBOA Board assembled a task force to review the recent BCD changes to Chapter 1, Scope and Administration, of the Oregon Specialty Codes. This communication is an attempt to summarize the topic, convey a brief timeline, and provide several options for local jurisdictions to consider in moving forward.

SUMMARY OF THE ISSUE

BCD has interpreted the statutory authority of ORS 455.020, which sets forth the adoption of a statewide set of construction codes, **to mean the statewide codes only apply to buildings or structures used by human occupants**. In so doing, BCD has articulated a number of 26 specific items that are not included in the scope of the statutory authority of the state codes. BCD has also indicated that jurisdictions who wish to regulate these items are free to do so through local adoption. Since the adoption of a statewide code in 1974, local jurisdictions previously relied on a much broader interpretation of ORS 455.020.

OBOA is very concerned with this change in interpretation. OBOA views this as a significant departure for local jurisdictions from past practice and one that causes major internal ripple effects for local programs. While it may provide local flexibility, it is also seen as a major hit on the consistency in administration of the statewide construction codes where each jurisdiction will potentially adopt different codes for those items now excluded from the scope. Statewide consistency and uniformity of construction codes has always been a primary purpose for having a statewide code.

TIMELINE

On September 20, 2019, the OBOA Legislative Committee, in response to notice of public hearings, sent BCD a letter objecting to the proposed change in rules dealing with the scope of the code, along with reasons for the objection. This action did not change the rulemaking. The long list of 26 items no longer included in the scope of the code was published in the 2019 OSSC Chapter 1, Scope and Administration.

On October 11, 2019 the OBOA Board appointed a task force to begin addressing this issue.

Extension Request - Because of the significant changes and extremely short timeline to adopt local provisions before January 1, 2020, the first step of the task force was to request that BCD allow an extension of time until July 1, 2020, for local jurisdictions to continue using the previous Chapter 1, Scope and Administration section of the OSSC and ORSC.

PRESIDENT	PRESIDENT-ELECT	SECRETARY/TREASURER	PAST PRESIDENT	DIRECTORS
TED ZUK, CBO Jackson County	SEAN BLAIRE, PE, SE City of Gresham	AMY WILLIAMS City of Hillsboro	MATTHEW ROZZELL, CBO Clackamas County	MELISSA GITT City of Wilsonville SCOTT LINFESTY, CBO Washington County MARK STEVENSON, CBO Josephine County

Oregon Building Officials Association
147 SE 102nd Avenue | Portland, OR 97216
Phone: 503.691.OBOA (6262) | Fax: 503.253.9172
OregonBuildingOfficials.com

BCD denied this request. The rationale given for denial was that this is a scoping and statutory authority problem. Per BCD, jurisdictions (unbeknownst to many) should not have previously been using Chapter 1 of the Specialty Codes to cover the administration of permit programs for the 26 items that BCD has interpreted were not statutorily included in the scope of the statewide code unless jurisdictions locally adopted those provisions separately.

SUMMARY OF CHANGES

The ripple effects of this change are many and the taskforce has summed up the changes into three main categories:

- **Category 1:** Technical items proposed to be excluded from the code (e.g.: Regulation on construction of new communication towers, retaining walls, and tanks not supported by buildings); *Propose adding 18 items into code. See Bend's proposed ordinance.*
- **Category 2:** Changes that revise the authority of the building code when addressing code enforcement actions on building code violations; and *I Believe we have this covered already*
- **Category 3:** Removal of the reference to "other ordinances of the municipality", when reviewing a development proposal for issuance of permits or certificates of occupancy (e.g., land use conditions, engineering standards). *we may want to add this language.*

MOVING FORWARD

This is a very challenging and fluid topic with a lot of angles to consider. At this point the taskforce is providing four options for local municipalities to consider until we have clarification from BCD as to application of the new rules:

1. Adopt the *2014 OSSC Chapter 1 Scope and Administration* as a temporary fix to address the scoping provisions until we have more details about the changes municipalities are allowed to make.
2. Amend your local ordinances to reflect the scoping and administrative provisions not included in the 2017 ORSC and the 2019 OSSC.
3. Rewrite and adopt into your local ordinances the amended Chapter 1 of the OSSC and ORSC.
4. The forth option is to do nothing and hope no one challenges the new provisions (The OBOA task force does not recommend this option).

OBOA has requested additional written clarification from BCD regarding what can and cannot be locally regulated. This information will be shared with members once received.

In addition, the OBOA Fall Quarterly Business Meeting will be held in Wilsonville on November 15, 2019. Warren Jackson, BCD's Statewide Services Manager/Building Official, will be presenting on Chapter 1. We hope you can attend as we will hopefully get a better understanding from this meeting.

Respectfully,
Matt Rozzell
OBOA Administrative Chapter 1 Task Force Chair

**CITY OF REDMOND
ORDINANCE NO. 2020-05**

AN ORDINANCE AMENDING THE REDMOND CITY CODE CHAPTER 9 – BUILDING AND FIRE CODES, ESTABLISHING LOCAL BUILDING CODES.

WHEREAS, in October 2019, the Oregon Building Codes Division made critical changes to Chapter 1 of the Oregon Structural Specialty Code (OSSC) and the Oregon Residential Specialty Code (ORSC); and

WHEREAS, the OSSC and ORSC changes removed provisions relied on by local building officials to regulate and enforce safety of structures; and

WHEREAS, The Oregon Building Codes Division has authorized options for local jurisdictions to reestablish authority of their own to continue with the practices to which local jurisdictions and the industry have become accustomed. The proposed amendments to Redmond City Code Chapter 9 are intended to implement these options and preserve local authority; and

WHEREAS, the City Council finds that the amendments to Redmond City Code Chapter 9 will provide for a continuation of best practices, and confirm the City Building Official's authority to ensure the safety of structures within the City of Redmond.

NOW, THEREFORE, THE CITY OF REDMOND ORDAINS AS FOLLOWS:

SECTION ONE: The City of Redmond hereby amends the Redmond City Code Chapter 9 – Building and Fire Codes. A copy of the code amendments is attached hereto as “Exhibit A.”

SECTION TWO: SEVERABILITY. The provisions of this Ordinance are severable. The invalidity of any section, clause, sentence, or provision of this Ordinance shall not affect the validity of any other part of this Ordinance which can be given without such invalid part or parts.

PASSED by the City Council and **APPROVED** by the Mayor this 28th day of April 2020.

George Endicott, Mayor

ATTEST:

Kelly Morse, City Recorder

Exhibit A:

Proposed Redmond City Code Amendments

Chapter 9 – Building and Fire Codes

New proposed text identified in **red**; deleted text strikethrough.

Chapter 9 – Building and Fire Codes

BUILDING CODE

(***)

9.020 State Codes Adopted.

1. Except as otherwise provided for in this chapter, the following codes, standards and rules are adopted and will be in force and effect as part of the Redmond Code. The provisions of these codes, in addition to their individual scoping provisions found therein, also apply to demolition of structures, equipment and systems regulated by such codes.
2. Under authority of ORS 455.150, the City of Redmond administers those specialty codes and building requirements adopted by the State of Oregon and which the City is granted authority to administer, including:
 - A. State of Oregon Structural Specialty Code, as adopted by ORS 455.010 through 455.895, OAR 918-460-010 through OAR 918-460-015 in effect as of March 1, 2009 (“Structural Specialty Code”);
 - B. State of Oregon Mechanical Specialty Code, as adopted by ORS 455.020, OAR 918-440-010 through OAR 918-440-040 in effect as of March 1, 2009 (“Mechanical Specialty Code”);
 - C. State of Oregon Plumbing Specialty Code, as adopted by ORS 447.020(2), OAR 918-750-010 in effect as of March 1, 2009 (“Plumbing Specialty Code”);
 - D. State of Oregon Electrical Specialty Code, as adopted by ORS 479.525, OAR 918-305-0100 and delegated to the City by ORS 455.153 in effect as of March 1, 2009 (“Electrical Specialty Code”);
 - E. State of Oregon Residential Specialty Code, as adopted by ORS 455.610, OAR 918-480-000 through OAR 918-480-010 in effect as of March 1, 2009 (“Residential Specialty Code”);
 - F. State of Oregon Regulations for mobile or manufactured dwelling parks, temporary parks, manufactured dwelling installation support and tie down requirements, and park or camp requirements as adopted by OAR 918-500-000 through OAR 918-500-050, OAR 918-520-001 through OAR 918-520-002, OAR 918-650-000 through OAR 918-650-085 in effect as of March 1, 2009.
 - G. The most current edition of the International Property Maintenance Code as published by the International Code Council in effect as of March 1, 2009, is adopted as part hereof, except as modified by this jurisdiction.
3. **The City of Redmond has the additional authority to regulate the following:**
 - A. **Pursuant to the regulation of dangerous buildings, the building official may adopt seismic rehabilitation plans that provide for phased completion of repairs that are designed to provide improved life safety but that may be less than the standards for new buildings.**

- B. Fire safety during construction.
 - C. Demolition.
 - D. Protection of adjoining property.
 - E. Encroachments into the public way.
 - F. Retaining walls.
 - G. Fences.
 - H. Tanks.
 - I. Cellular phone, radio, television and other telecommunication and broadcast towers, in compliance with federal law.
 - J. Flagpoles.
 - K. Building Code aspects of signs.
 - L. Floating structures.
 - M. Docks.
 - N. Fixed piers or wharves.
 - O. Equipment shelters.
 - P. Administration and implementation of a National Flood Insurance Program (NFIP).
 - Q. Transitional housing accommodations.
 - R. Matters related to structures that are not otherwise encompassed by this code.
4. Appendix J of the Oregon Structural Specialty Code regarding Excavation and Grading, including the recognized standards listed in Chapter 35 of that code.
 5. At least one copy of each specialty shall be kept by the Building Official and shall be available for review upon request.

(***)

9.035 Failure to Obtain or Request Final Inspection or Issuance of Certificate of Occupancy.

1. Prior to occupancy of newly constructed commercial or residential buildings or altered commercial buildings a final inspection and certificate of occupancy must be obtained from the building official. **Issuance of Certificate of Occupancy is contingent upon meeting the requirements of the State of Oregon Building Codes as well as other applicable City Codes and requirements.**
2. Other permitted work such as mechanical installations or structures that do not involve occupancy by persons, must receive a final inspection from the building official within 90 days after the work has been completed. Plumbing and electrical work shall have final inspections that meet the timelines as provided in OAR 918-785-0210 and OAR 918-271-0010, respectively.
3. Whenever any building, structure or equipment therein regulated by the Building Code is occupied or in use without a final inspection or certificate of occupancy, the Building Official may order the occupancy or use discontinued, and the structure (or portion thereof) vacated. All persons using the structure (or portion thereof) shall discontinue the use within the time prescribed by the Building Official in his notice and make the structure, or portion thereof, comply with the requirements of the Building Code. The Building Official may cause the water service to be discontinued pending the completion of the final inspection and obtaining a Certificate of Occupancy. The Building Official shall notify the occupants of the discontinuation of water service in the notice to complete final inspection and obtain certificate of occupancy.

(***)

// End //



BUILDING DIVISION

**Amendments to city Code
chapter 9**

Prepared for: April 28, 2020

Building and fire codes

Slide 1

Reasons & purpose of changes to chapter 9

Slide 2

01

Oregon building code division:

October 2019 made critical changes to Oregon structural specialty
And Oregon residential specialty

02

Impacts of changes to state codes:

Removed/preempted provisions relied on by local building officials to regulate and enforce safety of structures

03

Changes to chapter 9

Reestablished authority to continue with current and best practices

04

Changes to chapter 9

Enables building codes division to regulate safety of all building and structures & requirements of other departments



CITY OF REDMOND

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STAFF REPORT

DATE: April 28, 2020
TO: Redmond City Council
Keith Witcosky, City Manager
THROUGH: John Roberts, Deputy City Manager
Bill Duerden, Public Works Director
FROM: Julie Lovrien, Administrative Services Supervisor
SUBJECT: Public Transportation Services Agreement with Central Oregon Intergovernmental Council

Addresses Council Goal:

1.B.i. Explore opportunities to increase efficiencies and economies of scale through sharing of services and resources with other public agencies.

Report in Brief:

This item requests City Council approve the agreement with Central Oregon Intergovernmental Council (COIC) to provide public transportation services for the Redmond area through Cascade East Transit (CET).

Background:

CET provides demand response and community connector transit services for the Redmond area. Demand response services are available within the Redmond Urban Growth Boundary Monday through Friday from 5:30 a.m. to 7:00 p.m. Community connector services are available between Redmond and other Central Oregon Communities Monday through Friday, too.

The City purchases transit services from COIC using federal 5310 Grant funds awarded to the City through the Rail and Public Transit Division of the Oregon Department of Transportation (ODOT). Grant Agreement #33556 was approved by Council on July 9, 2019, and provides \$436,855 over the 2019/2021 biennium for said services.

In July 2019, ODOT determined that all transit service providers receiving 5310 Grant funds are considered contractors and that services must be procured following all Federal, State and local requirements. Based on that determination, the City entered into a Joint Cooperative Procurement Agreement per ORS 279A with Deschutes County and the cities of Madras, Prineville and Sisters to solicit for transit services funded by 5310 Grants. A Request for Proposals was issued by the City of Madras on October 28, 2019, with COIC the sole provider to respond by the December 3, 2019, deadline. COIC was awarded the contract at the City of Madras City Council meeting on February 25, 2020.

Discussion:

The attached agreement with COIC identifies the terms and conditions for providing public transportation services on behalf of the City. Services provided include the continuation of demand response and community connector transit services and an outreach and marketing program. The agreement has an initial term of two years effective January 1, 2020, to December 31, 2021, and may be renewed for two additional terms of two years each.

Fiscal Impact:

Compensation provided for COIC's performance of services during the initial two-year term is summarized below:

Grant Period	5310 Grant Fund	City of Redmond Match
July 1, 2019-June 30, 2020	\$263,427.50	\$45,000.00
July 1, 2020-June 30, 2021	\$263,427.50	\$45,000.00
Total	\$436,855.00	\$90,000.00

The \$436,855 in 5310 Grant Funds equals the amount the City received under Grant Agreement #33556. The \$90,000 in City funds are used to meet the 5310 Grant match requirement of \$50,000 with the remainder used to help offset CET operating costs. The estimated revenue from 5310 Grant funding, expenditure for contracted transit services and City match of \$45,000 is included in the FY 2019/2020 Budget (see attached).

Alternative Courses of Action:

1. Approve the agreement with COIC to provide public transportation services.
2. Do not approve the agreement.
3. Request additional information.

Recommendation / Suggested Motion:

"I move to authorize the City Manager to sign the agreement with Central Oregon Intergovernmental Council to provide public transportation services."



BUDGET DETAIL

General Fund		FY 2016/17 Actual	FY 2017/18 Actual	FY 2018/19 Budget	FY 2019/20 Proposed Budget	FY 2019/20 Approved Budget	FY 2019/20 Adopted Budget
Sub-fund: General							
Program: General							
Resources							
10100-01-000-04-10-10	Property Tax/Current	7,911,618	8,556,561	9,035,804	9,582,581	9,588,581	9,588,581
10100-01-000-04-10-20	Property Tax/Prior	112,482	133,478	117,465	134,516	134,516	134,516
10100-01-000-04-15-45	High Country	304,893	340,603	320,138	367,565	367,565	367,565
10100-01-000-04-15-10	PP&L	1,614,645	1,623,362	1,642,192	1,590,219	1,590,219	1,590,219
10100-01-000-04-15-15	Central Electric CO-OP	159,726	165,478	165,758	171,866	171,866	171,866
10100-01-000-04-15-20	Cascade Natural Gas	328,143	300,990	312,801	303,303	303,303	303,303
10100-01-000-04-15-25	Telecommunications	61,407	53,480	61,407	44,673	44,673	44,673
10100-01-000-04-15-30	Bend Cable	262,122	288,086	264,200	290,665	290,665	290,665
10100-01-000-04-15-35	Water/Sewer/Storm	567,186	610,019	618,014	665,699	665,699	665,699
10100-01-000-04-15-40	FTV/First Point Comm	29,467	30,203	29,491	29,491	29,491	29,491
10100-01-000-04-15-50	Quantum Fiber Optics Ord	8,032	6,677	8,032	6,729	6,729	6,729
10100-01-000-04-20-50	Liquor License	3,875	3,630	3,627	3,711	3,711	3,711
10100-01-000-04-60-90	Miscellaneous	977	216	-	3,000	3,000	3,000
10100-01-000-04-30-30	Cigarette Tax	34,696	34,425	34,197	33,798	33,798	33,798
10100-01-000-04-30-35	State Revenue Sharing	305,083	324,437	334,808	344,885	344,885	344,885
10100-01-000-04-30-40	Liquor Revenue (OLCC)	420,125	402,204	465,012	479,007	479,007	479,007
10100-01-000-04-40-98	Refunds/Reimbursements	4,755	5,511	-	-	-	-
10100-01-000-04-80-10	Interest - Investment	45,580	57,310	39,000	60,000	60,000	60,000
10100-01-000-04-50-00	Rentals/Leases	29,081	6,256	5,412	5,400	5,400	5,400
10100-01-000-04-95-50	Sale of Property	1,300,000	248,505	-	-	-	-
10100-01-000-04-40-90	Bad Debt	9,831	4,797	-	-	-	-
10100-01-000-04-85-50	Interfund Transfers	-	14,583	-	-	-	-
10100-01-000-04-99-00	Beginning Fund Balance	1,756,442	2,020,584	2,213,441	1,278,097	1,278,097	1,278,097
TOTAL RESOURCES		15,270,164	15,231,396	15,670,799	15,395,205	15,401,205	15,401,205
Materials & Services							
10100-01-000-06-00-12	Building Maintenance	11,385	7,980	14,500	13,500	13,500	13,500
10100-01-000-06-00-19	Noticing	-	427	-	-	-	-
10100-01-000-06-00-20	Water/Sewer/Storm	2,005	1,040	-	-	-	-
10100-01-000-06-00-22	Utility Electric	15,099	336	-	-	-	-
10100-01-000-06-00-23	Utility Gas	3,062	491	-	-	-	-
10100-01-000-06-00-37	Legal Fees	24,902	14,680	10,000	8,000	8,000	8,000
10100-01-000-06-00-43	Recording/Reconveyance	76	-	-	-	-	-
10100-01-000-06-00-69	Economic Development	102,043	115,583	108,000	108,000	114,000	114,000
10100-01-000-06-00-86	Licenses & Permits	-	77	-	-	-	-
10100-01-000-06-00-97	Chgs Svc From Other Fund	-	10,000	10,000	3,000	3,000	3,000
10100-01-000-06-00-98	Contractual Services	13,147	(0)	-	-	-	-
10100-01-000-06-01-01	Loans & Grants	45,000	45,000	45,000	45,000	45,000	45,000
10100-01-000-06-85-40	ISF Facilities Maintenance	54,258	61,853	77,389	88,205	88,205	88,205
TOTAL MATERIALS & SERVICES		270,977	257,467	264,889	265,705	271,705	271,705
Capital Outlay							
10100-01-000-07-00-03	Machinery & Equipment	-	37,337	-	-	-	-
TOTAL CAPITAL OUTLAY		-	37,337	-	-	-	-
Debt Service							
10100-01-000-08-00-02	Interest	46,272	30,526	25,653	-	-	-
TOTAL DEBT SERVICE		46,272	30,526	25,653	-	-	-
Transfers							
10100-01-000-09-00-02	To Police	7,219,500	7,738,033	9,237,130	9,534,332	9,534,332	9,534,332
10100-01-000-09-00-22	To Parks & Facilities	1,607,323	1,767,156	1,990,488	2,037,007	2,037,007	2,037,007
10100-01-000-09-00-25	To CDD	480,546	654,725	451,940	292,674	292,674	292,674
10100-01-000-09-00-40	To Transportation	2,219,909	2,294,956	2,208,169	2,208,169	2,208,169	2,208,169
10100-01-000-09-00-24	To Capital Projects	1,360,000	340,000	513,053	-	-	-
10100-01-000-09-00-80	To Golf	447,550	459,858	475,481	445,980	445,980	445,980
TOTAL TRANSFERS		13,334,828	13,254,728	14,876,261	14,518,162	14,518,162	14,518,162
Special Payments							
10100-01-000-10-00-00	Special Payments	-	51,477	-	-	-	-
TOTAL SPECIAL PAYMENTS		-	51,477	-	-	-	-
Intrafund Transfers							
10100-01-000-13-00-03	Intrafund Tfrs-to Central Svcs	209,340	98,181	86,108	78,624	78,624	78,624
TOTAL INTRAFUND TRANSFERS		209,340	98,181	86,108	78,624	78,624	78,624
Contingency							
10100-01-000-11-00-00	Contingency	-	-	15,543	43,678	43,678	43,678
TOTAL CONTINGENCY		-	-	15,543	43,678	43,678	43,678
Reserve							
10100-01-000-12-00-40	Reserve for Future Expend	-	-	1,185,715	1,277,585	1,277,585	1,277,585

BUDGET DETAIL

Transportation Fund		FY 2016/17 Actual	FY 2017/18 Actual	FY 2018/19 Budget	FY 2019/20 Proposed Budget	FY 2019/20 Approved Budget	FY 2019/20 Adopted Budget
Sub-fund: Transportation - Operations							
Resources							
22100-02-000-04-25-00	Intergovernmental Revenue	10,241	18,134	-	10,000	10,000	10,000
22100-02-000-04-65-20	Federal Grants & Awards	196,584	196,585	196,585	196,585	196,585	196,585
22100-02-000-04-30-45	Hwy Fund Apportionment	1,636,721	1,805,656	2,038,097	2,153,925	2,153,925	2,153,925
22100-02-000-04-40-25	Bid Document Fee	-	-	-	300	300	300
22100-02-000-04-45-75	Restitution	16,138	26,702	1,800	2,500	2,500	2,500
22100-02-000-04-40-94	Miscellaneous Fees	720	960	-	-	-	-
22100-02-000-04-40-98	Refunds/Reimbursements	7,281	13,591	13,200	6,000	6,000	6,000
22100-02-000-04-60-90	Miscellaneous	2,605	7,120	10,000	10,000	10,000	10,000
22100-02-000-04-80-10	Interest - Investment	16,519	27,071	19,000	25,000	25,000	25,000
22100-02-000-04-40-90	Bad Debt	1,535	1,186	-	-	-	-
22100-02-000-04-85-01	Chgs for Srvc-Other Fund	151,179	156,657	160,488	164,433	164,433	164,433
22100-02-000-04-85-50	Interfund Transfers	1,834,909	1,709,956	1,653,169	1,653,169	1,653,169	1,653,169
22100-02-000-04-85-56	Interfund Loan Payment	1,037,055	-	-	-	-	-
22100-02-000-04-95-50	Sale of Property	30,000	6,083	-	-	-	-
22100-02-000-04-99-00	Beginning Fund Balance	2,074,171	2,154,635	2,046,764	1,945,893	1,945,893	1,945,893
TOTAL RESOURCES		7,015,658	6,124,336	6,139,103	6,167,805	6,167,805	6,167,805
Personnel Services							
22100-02-000-05-00-01	Regular Pay	682,146	709,203	696,839	755,609	755,609	755,609
22100-02-000-05-00-03	Overtime	20,905	7,175	12,000	12,000	12,000	12,000
22100-02-000-05-00-07	Stand-By Time	17,576	18,164	26,000	26,000	26,000	26,000
22100-02-000-05-00-12	Vac/Comp/Holiday Buy Back	2,185	-	-	-	-	-
22100-02-000-05-20-11	Employer Social Security	43,808	44,522	43,204	46,848	46,848	46,848
22100-02-000-05-20-12	Employer Medicare	10,246	10,412	10,104	10,956	10,956	10,956
22100-02-000-05-20-30	Employer PERS	74,643	101,077	128,430	166,717	166,717	166,717
22100-02-000-05-20-41	Medical Insurance	192,449	193,519	205,064	282,313	282,313	282,313
22100-02-000-05-20-42	VEBA Contribution	11,522	11,332	15,340	16,900	16,900	16,900
22100-02-000-05-20-43	HRA Contribution	3,905	8,845	12,980	15,600	15,600	15,600
22100-02-000-05-20-50	Life Insurance	282	276	272	302	302	302
22100-02-000-05-20-51	Accidental D & D	49	48	48	53	53	53
22100-02-000-05-20-52	SAIF	19,824	28,624	33,126	36,545	36,545	36,545
22100-02-000-05-20-53	Long-Term Disability	1,554	1,505	1,705	1,871	1,871	1,871
22100-02-000-05-20-62	FSA	317	310	335	369	369	369
TOTAL PERSONNEL SERVICES		1,081,411	1,135,011	1,185,447	1,372,083	1,372,083	1,372,083
Materials & Services							
22100-02-000-06-00-02	Office Supplies	1,417	1,898	1,500	1,500	1,500	1,500
22100-02-000-06-00-03	Housekeeping	1,912	2,165	2,000	2,000	2,000	2,000
22100-02-000-06-00-04	Uniforms and Clothing	3,214	3,135	4,000	4,000	4,000	4,000
22100-02-000-06-00-05	Electronic Equip & Supplies	-	-	-	5,500	5,500	5,500
22100-02-000-06-00-06	Small Tools & Minor Equip	21,468	10,404	15,000	15,000	15,000	15,000
22100-02-000-06-00-07	Safety Supplies	2,890	5,951	5,000	5,000	5,000	5,000
22100-02-000-06-00-10	Furnishings & Fixtures	-	-	-	1,000	1,000	1,000
22100-02-000-06-00-12	Building Maintenance	1,578	1,237	1,000	1,000	1,000	1,000
22100-02-000-06-00-19	Noticing	689	987	150	300	300	300
22100-02-000-06-00-20	Water/Sewer/Storm	4,777	4,106	5,200	5,200	5,200	5,200
22100-02-000-06-00-22	Utility Electric	288,767	280,837	305,000	280,000	280,000	280,000
22100-02-000-06-00-23	Utility Gas	10,245	7,809	10,500	8,500	8,500	8,500
22100-02-000-06-00-24	Phone & Internet	14,270	16,396	16,866	17,000	17,000	17,000
22100-02-000-06-00-26	Postage	-	-	100	200	200	200
22100-02-000-06-00-29	Radio Maintenance	1,430	28,640	9,840	9,840	9,840	9,840
22100-02-000-06-00-36	Debt Service Fees	58	58	58	60	60	60
22100-02-000-06-00-37	Legal Fees	195	-	500	500	500	500
22100-02-000-06-00-41	Printing	246	352	210	210	210	210
22100-02-000-06-00-43	Recording/Reconveyance	586	1,329	300	300	300	300
22100-02-000-06-00-48	Rentals/Leases	116,701	107,472	113,695	115,417	115,417	115,417
22100-02-000-06-00-56	Workers Comp Claim Deduct	-	248	500	-	-	-
22100-02-000-06-00-60	Dues, Subs, Memberships	-	160	1,950	2,000	2,000	2,000
22100-02-000-06-00-61	Travel & Training	9,736	9,837	10,000	12,000	12,000	12,000
22100-02-000-06-00-62	Meetings	73	-	-	-	-	-
22100-02-000-06-00-63	Books, Maps, Periodicals	32	189	200	200	200	200
22100-02-000-06-00-67	Garbage Collection	12,163	11,969	11,500	4,500	4,500	4,500
22100-02-000-06-00-75	Parts & Inventory	208	-	-	-	-	-
22100-02-000-06-00-77	Fuel	50,465	45,486	65,000	60,000	60,000	60,000
22100-02-000-06-00-84	Systems Maintenance	1,269	195	10,300	10,300	10,300	10,300
22100-02-000-06-00-86	Licenses & Permits	1,369	8,789	200	200	200	200
22100-02-000-06-00-87	Employee Physicals	1,791	1,855	1,100	1,200	1,200	1,200
22100-02-000-06-00-88	Employee/Volunteer Recogn	989	228	500	550	550	550
22100-02-000-06-00-89	Snow Removal	25,638	-	5,000	10,000	10,000	10,000
22100-02-000-06-00-90	Software Licenses	3,750	2,500	3,095	3,095	3,095	3,095
22100-02-000-06-00-92	Software Maintenance	6,517	6,633	8,500	8,500	8,500	8,500
22100-02-000-06-00-94	Temporary Personnel Services	56,599	63,941	80,000	80,000	80,000	80,000
22100-02-000-06-00-97	Chgs Srvc From Other Fund	173,894	183,862	249,405	241,746	241,746	241,746
22100-02-000-06-00-98	Contractual Services	210,894	219,326	216,870	216,870	216,870	216,870
22100-02-000-06-01-10	Liability Claims	154	-	-	-	-	-

PUBLIC TRANSPORTATION SERVICES AGREEMENT

This Public Transportation Services Agreement (this "Agreement") is dated April 28, 2020, but made effective for all purposes as of January 1, 2020 (the "Effective Date"), and is entered into between City of Redmond ("City"), an Oregon municipal corporation, whose address is 411 SW Ninth Street, Redmond, Oregon 97756, and Central Oregon Intergovernmental Council ("Contractor"), an Oregon intergovernmental entity organized under ORS Chapter 190, whose address is 334 NE Hawthorne Avenue, Bend, Oregon 97701.

RECITAL:

A. City desires to contract with Contractor to perform certain public transportation and related services for and on behalf of City. City's payment for the public transportation and related services will be funded with Federal Transit Administration Section 5310 funds obtained through the Oregon Department of Transportation ("ODOT") and City's required local match funds. City's receipt of the grant funds, and payment for the public transportation and related services, is subject to the terms and conditions contained in that certain Rail and Public Transit Division Oregon Department of Transportation Agreement No. 33556 dated effective July 1, 2019 between the City and State of Oregon, acting by and through ODOT (the "Grant Contract").

B. Subject to the terms and conditions contained in this Agreement, Contractor will perform the Services (as defined below) for and on behalf of City.

AGREEMENT:

NOW, THEREFORE, in consideration of the parties' mutual obligations contained in this Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. Services.

1.1 Services; Standards. Subject to the terms and conditions contained in this Agreement, Contractor will perform the following public transportation services for and on behalf of City (collectively, the "Services"): (a) those public transportation services identified in the attached Schedule 1.1; (b) all other necessary or appropriate services customarily provided by Contractor in connection with its performance of those services identified in the attached Schedule 1.1; and (c) such other public transportation and related services requested by City from time to time. Contractor will (x) consult with and advise City on all matters concerning the Services reasonably requested by City, (y) communicate all matters and information concerning the Services to City's Public Works Director ("Director") (or his or her designee) and perform the Services under the general direction of the Director (or his or her designee), and (z) devote such time and attention to the performance of the Services as necessary or appropriate to perform the Services in accordance with this Agreement. Contractor acknowledges and agrees that City may cause or direct other persons or contractors to provide services for and on behalf of City that are the same or similar to the Services provided by Contractor under this Agreement.

1.2 Schedule. Contractor will provide the Services commencing on the Effective Date. Contractor will perform the Services expeditiously, in a timely manner, and in accordance with this Agreement.

1.3 Independent Contractor; Taxes; Licenses. Contractor is an independent contractor of City. Contractor is not an employee of City. Contractor is free from direction and control over the means and manner of performing the Services, subject only to the right of City to specify the desired results. City will not withhold any taxes from any payments made to Contractor, and Contractor will be responsible for paying all taxes arising out of or resulting from Contractor's performance of the Services, including, without limitation, income, social security, workers' compensation, and employment insurance taxes. Contractor is solely responsible for obtaining all licenses, approvals, and certificates necessary or appropriate to perform the Services. This Agreement does not create an agency relationship between City and Contractor and does not establish a joint venture or partnership between City and

Contractor. Contractor does not have the authority to bind City or represent to any person that Contractor is an agent of City. Contractor has the authority to hire other persons to assist Contractor in performing the Services (and has the authority to fire such persons).

1.4 Condition Precedent; Conflict. Notwithstanding anything contained in this Agreement to the contrary, City's performance of its obligations under this Agreement is conditioned on (a) Contractor's performance of its obligations under this Agreement, including, without limitation, those Contractor obligations described under Section 3.5, and (b) City's receipt of sufficient grant funds under the Grant Contract to pay for Contractor's services under this Agreement. This Agreement is made subject to the terms and conditions contained in the Grant Contract. If a conflict should arise between this Agreement and the Grant Contract, the terms of the Grant Contract will control.

2. Compensation.

2.1 Compensation. Subject to the terms and conditions contained in this Agreement, in consideration of Contractor's timely performance of the Services in accordance with this Agreement, City will pay Contractor an annual fixed fee in the amounts identified in the attached Schedule 2.1. Each annual fixed fee will be paid in equal quarterly installments. Contractor will submit quarterly invoices to City concerning the Services performed by Contractor during the immediately preceding quarter (each an "Invoice"). Each Invoice will contain the following information: (a) a summary of the Services performed by Contractor; (b) the applicable fee(s) for performing the Services; and (c) all other information reasonably requested by City. City will pay the amount due under each Invoice within 30 days after City has reviewed and approved the Invoice. No compensation will be paid by City for any portion of the Services not performed. City's payment will be accepted by Contractor as full compensation for performing the subject Services. Notwithstanding anything contained in this Agreement to the contrary, total compensation payable by City in any given fiscal year under this Agreement will not exceed the applicable fixed fee set forth in the attached Schedule 2.1.

2.2 Reimbursement Requests; Quarterly Reports. City will complete and submit quarterly grant reimbursement requests (the "Reimbursement Request(s)") to ODOT. City will report quarterly performance achievements, including anticipated performance achievements for the upcoming quarter, via City's completion and submission of the Agency Periodic Reports through ODOT's Oregon Public Transit Information System (the "Periodic Report(s)"). Contractor will assist City with City's timely completion and submission of the Reimbursement Requests, Periodic Reports, and all other submissions required under the Grant Contract.

2.3 No Benefits; No Reimbursement. City will not provide any benefits to Contractor, and Contractor will be solely responsible for obtaining Contractor's own benefits, including, without limitation, insurance, medical reimbursement, and retirement plans. Contractor will provide, at Contractor's cost and expense, all materials, equipment, and supplies necessary or appropriate to perform the Services. City will not reimburse Contractor for any expenses Contractor incurs to perform the Services.

3. Representations; Warranties; Covenants.

In addition to any other Contractor representation, warranty, and/or covenant made in this Agreement, Contractor represents, warrants, and covenants to City as follows:

3.1 Authority; Binding Obligation; Conflicts. Contractor is duly organized, validly existing, and in good standing under applicable Oregon law. Contractor has full power and authority to sign and deliver this Agreement and to perform all Contractor's obligations under this Agreement. This Agreement is the legal, valid, and binding obligation of Contractor, enforceable against Contractor in accordance with its terms. The signing and delivery of this Agreement by Contractor and the performance by Contractor of all Contractor's obligations under this Agreement will not (a) breach any agreement to which Contractor is a party, or give any person the right to accelerate any obligation of Contractor, (b) violate any law, judgment, or order to which Contractor is subject, and/or (c) require the consent, authorization, or approval of any person, including, without limitation, any governmental body.

3.2 Grant Contract. Prior to the Effective Date, (a) Contractor had the opportunity to review (and has reviewed) the Grant Contract and all Laws (as defined below), and (b) Contractor had the opportunity to ask questions and receive answers concerning the Grant Contract. Contractor obtained all information Contractor deems necessary or appropriate to evaluate the Grant Contract and this Agreement. Contractor will timely pay and perform all obligations applicable to Contractor under the Grant Contract (which City is required to pass-through to Contractor under the Grant Contract), including, without limitation, (x) Contractor's record retention and access obligations under Section 8, (y) submission to audit obligations under Section 8 (if applicable), and (z) insurance and indemnification obligations under Section 9. Contractor will assist City with City's performance of City's obligations under the Grant Contract.

3.3 Quality of Services. Contractor will perform the Services to the best of Contractor's ability, diligently and without delay, in good faith, in a safe, lawful, and professional manner, and in accordance with this Agreement and the Grant Contract. The Services will be performed subject to and in accordance with the Laws. Contractor will be solely responsible for the Services. Contractor will make all decisions called for promptly and without unreasonable delay.

3.4 Insurance.

3.4.1 During the term of this Agreement, Contractor will obtain and maintain, in addition to any other insurance required under this Agreement and/or applicable laws and regulations, the following minimum levels of insurance: (a) general liability insurance for all losses or claims arising out of or related to Contractor's performance of its obligations under this Agreement (including, without limitation, damages as a result of death or injury to any person or destruction or damage to any property) with limits of no less than \$1,000,000 per occurrence, \$2,000,000 in the aggregate; (b) comprehensive automobile liability insurance for all owned, non-owned, and hired vehicles that are or may be used by Contractor in connection with Contractor's performance of the Services with limits of no less than \$1,000,000 per occurrence, \$2,000,000 in the aggregate; and (c) workers' compensation insurance in form and amount sufficient to satisfy the requirements of applicable Oregon law. Each liability insurance policy required under this Agreement will be in form and content satisfactory to City, will list City and each City Representative (as defined below) as an additional insured, and will contain a severability of interest clause; the workers' compensation insurance will contain a waiver of subrogation in favor of City. The insurance Contractor is required to obtain under this Agreement may not be cancelled without 10 days' prior written notice to City. Contractor's insurance will be primary and any insurance carried by City will be excess and noncontributing. Contractor will furnish City with appropriate documentation evidencing the insurance coverage (and provisions) and endorsements Contractor is required to obtain under this Agreement upon Contractor's execution of this Agreement and at any other time requested by City. If Contractor fails to maintain insurance as required under this Agreement, City will have the option, but not the obligation, to obtain such coverage with costs to be reimbursed by Contractor immediately upon City's demand.

3.4.2 Without otherwise limiting or modifying Contractor's insurance obligations under Section 3.4.1, in accordance with the Grant Contract, Contractor will obtain and maintain the insurance identified in the attached Exhibit A. Notwithstanding anything contained in this Agreement to the contrary, City may increase the minimum levels of insurance Contractor is required to obtain and maintain under this Agreement after providing Contractor 90 days' prior written notice of the insurance increase.

3.5 Compliance With Laws. Contractor will perform the Services in accordance with the Laws. Without otherwise limiting the generality of the immediately preceding sentence, Contractor will comply with each obligation applicable to Contractor and/or this Agreement under ORS 279B.220, 279B.225, 279B.230, and 279B.235, which statutes are incorporated herein by reference. Prior to the Effective Date, Contractor obtained all licenses, approvals, and/or certificates necessary or appropriate to perform the Services, including, without limitation, a business license from City. The Services will be performed subject to and in accordance with all applicable requirements, including, without limitation, all rules, regulations, and/or requirements arising out of or under the Grant Contract. For purposes of this Agreement, the term "Law(s)" means all applicable federal, state, and local laws, regulations, restrictions, orders, codes, rules, and/or ordinances related to or concerning

Contractor, this Agreement, the Grant Contract, and/or the Services, including, without limitation, all federal, state, and local laws, regulations, and ordinances identified under the Grant Contract and/or applicable to the provision of transit services and all applicable City ordinances, resolutions, policies, regulations, orders, restrictions, and guidelines, all as now in force and/or which may hereafter be amended, modified, enacted, and/or promulgated.

3.6 Indemnification.

3.6.1 Contractor will defend, indemnify, save, and hold City and each present and future City employee, officer, agent, and representative (individually and collectively, "City Representative(s)"), harmless for, from, and against all claims, actions, proceedings, damages, liabilities, injuries, losses, and expenses of every kind, whether known or unknown, including, without limitation, attorney fees and costs, resulting from or arising out of, whether directly or indirectly, the following: (a) damage, injury, and/or death to person or property caused by Contractor's acts and/or omissions (and/or the acts and/or omissions of Contractor's directors, officers, employees, agents, representatives, consultants, and/or contractors (individually and collectively, "Contractor Representative(s)"); (b) Contractor's failure to pay any tax arising out of or resulting from performance of the Services; (c) Contractor's (and/or Contractor's Representatives) performance of the Services; and/or (d) Contractor's breach and/or failure to perform any Contractor representation, warranty, covenant, and/or obligation contained in this Agreement. Contractor's indemnification obligations provided in this Section 3.6.1 will survive the termination of this Agreement.

3.6.2 Contractor will defend, indemnify, save, and hold State of Oregon ("State") and its officers, employees, and agents harmless for, from, and against all claims, actions, liabilities, damages, losses, and/or expenses, including, without limitation, attorney fees and costs, arising from a tort, as now or hereafter defined in ORS 30.260, caused, and/or alleged to be caused, in whole or in part, by Contractor's negligent or willful acts or omissions (and/or Contractor's Representatives) (individually and collectively, "Claims"). State will, in all instances, except for Claims arising solely from State's negligent or willful acts or omissions, be indemnified by Contractor from and against all Claims. Contractor will not defend any Claim in the name of State (or any State agency), nor purport to act as State's legal representative (or any State agency) without the prior written consent of the Oregon Attorney General. State may, at any time at its election, assume its own defense and settlement if State determines that Contractor is prohibited from defending State or that Contractor is not adequately defending State's interests, or that an important governmental principle is at issue or that it is in the best interests of State to do so. State reserves all rights to pursue claims it may have against Contractor if State elects to assume its own defense. Contractor's indemnification obligations provided in this Section 3.6.2 will survive the termination of this Agreement.

3.7 Assignment of Studies and Reports. Contractor will assign all studies, reports, data, documents, and/or materials of any kind produced under this Agreement to City upon the earlier of City's request or the termination of this Agreement. All copies of the materials provided to City will become the property of City who may use them without Contractor's permission. Contractor will defend all suits or claims for infringement of patent, trademark, and/or copyright for which Contractor is responsible (including, without limitation, any claims which may be brought against City), and Contractor will be liable to City for all losses arising therefrom, including costs, expenses, and attorney fees.

3.8 Records. Contractor will maintain complete and accurate records concerning all Services performed and all documents produced under this Agreement for a period of five years after the termination of this Agreement. Contractor's records will be maintained in accordance with sound accounting practices. Contractor's records concerning the Services will be made available to City for inspection, copying, and/or audit immediately upon City's request.

4 Term; Termination.

4.1 Term of Agreement. Subject to the terms and conditions contained in this Agreement, the term of this Agreement commenced on the Effective Date and will remain in full force and effect until December 31, 2021, unless sooner terminated as provided in this Agreement. This Agreement may be renewed for two additional consecutive terms of two years each (for a total cumulative maximum term of six years) upon the parties' mutual written agreement; provided, however, City makes no representations, guarantees, commitments, and/or promises to extend the term of the Agreement after the initial two-year term. Notwithstanding anything contained in this Agreement to the contrary, this Agreement may be terminated (a) at any time by the mutual written agreement of City and Contractor, and/or (b) by City for convenience and without cause by providing 30 days' prior written notice of such termination to Contractor.

4.2 Termination For Cause. Notwithstanding anything contained in this Agreement to the contrary, City may terminate this Agreement immediately upon notice to Contractor upon the happening of any of the following "for cause" events: (a) Contractor engages in any form of dishonesty or conduct that reflects adversely on City's reputation or operations; (b) Contractor fails to comply with any Law; (c) problems occur in connection with Contractor's performance of the Services; and/or (d) Contractor breaches and/or otherwise fails to perform any Contractor representation, warranty, covenant, and/or obligation contained in this Agreement. The determination as to whether any "for cause" event has occurred will be made by City in City's sole discretion.

4.3 Consequences of Termination. Upon termination of this Agreement, City will not be obligated to reimburse or pay Contractor for any continuing contractual commitments to others or for penalties or damages arising from the cancellation of such contractual commitments. Within a reasonable period of time after termination of this Agreement (but in no event later than five days after termination), Contractor will deliver to City all materials and documentation related to or concerning the Services. Termination of this Agreement will not constitute a waiver or termination of any rights, claims, and/or causes of action a party may have against the other party.

5. Miscellaneous.

5.1 Severability; Assignment; Binding Effect. Each provision contained in this Agreement will be treated as a separate and independent provision. The unenforceability of any one provision will in no way impair the enforceability of any other provision contained herein. Any reading of a provision causing unenforceability will yield to a construction permitting enforcement to the maximum extent permitted by applicable law. Contractor will not assign this Agreement to any person without City's prior written consent. Subject to the immediately preceding sentence, this Agreement will be binding on the parties and their respective heirs, personal representatives, successors, and permitted assigns, and will inure to their benefit. This Agreement may be amended only by a written agreement signed by each party.

5.2 Attorney Fees; Dispute Resolution. If any arbitration or litigation is instituted to interpret, enforce, and/or rescind this Agreement, including, without limitation, any proceeding brought under the United States Bankruptcy Code, the prevailing party on a claim will be entitled to recover with respect to the claim, in addition to any other relief awarded, the prevailing party's reasonable attorney fees and other fees, costs, and expenses of every kind, including, without limitation, costs and disbursements specified in ORCP 68 A(2), incurred in connection with the arbitration, the litigation, any appeal or petition for review, the collection of any award, or the enforcement of any order, as determined by the arbitrator or court. If any claim, dispute, or controversy arising out of or related to this Agreement occurs (a "Dispute"), City and Contractor will exert their best efforts to seek a fair and prompt negotiated resolution of the Dispute and will meet at least once to discuss and seek a resolution of the Dispute. If the Dispute is not resolved by negotiated resolution, either party may initiate a suit, action, arbitration, or other proceeding to interpret, enforce, and/or rescind this Agreement.

5.3 Governing Law; Venue; Remedies. This Agreement is governed by the laws of the State of Oregon, without giving effect to any conflict-of-law principle that would result in the laws of any other jurisdiction

governing this Agreement. Any action or proceeding arising out of this Agreement will be litigated in courts located in Jefferson County, Oregon. Each party consents and submits to the jurisdiction of any local, state, or federal court located in Jefferson County, Oregon. If a party breaches or otherwise fails to perform any of its representations, warranties, covenants, and/or obligations under this Agreement, the non-defaulting party may, in addition to any other remedy provided to the non-defaulting party under this Agreement, pursue all remedies available to the non-defaulting party at law or in equity. All available remedies are cumulative and may be exercised singularly or concurrently.

5.4 Attachments; Further Assurances; Notices. Any exhibits, schedules, instruments, documents, and other attachments referenced in this Agreement are part of this Agreement. The parties will sign other documents and take other actions reasonably necessary to further effect and evidence this Agreement. If any provisions contained in an attached exhibit, schedule, instrument, document, and/or other attachment conflicts with this Agreement, the provisions of this Agreement will control. Time is of the essence with respect to Contractor's performance of its obligations under this Agreement. All notices or other communications required or permitted by this Agreement must be in writing, must be delivered to the parties at the addresses set forth above, or any other address that a party may designate by notice to the other party, and are considered delivered upon actual receipt if delivered personally, by fax or email transmission (with electronic confirmation of delivery), or by a nationally recognized overnight delivery service, or at the end of the third business day after the date of deposit if deposited in the United States mail, postage pre-paid, certified, return receipt requested.

5.5 Waiver; Entire Agreement. No provision of this Agreement may be modified, waived, or discharged unless such waiver, modification, or discharge is agreed to in writing by City and Contractor. No waiver of either party at any time of the breach of, or lack of compliance with, any conditions or provisions of this Agreement will be deemed a waiver of other provisions or conditions hereof. This Agreement contains the entire agreement and understanding between the parties with respect to the subject matter of this Agreement and supersedes all other oral or written negotiations, discussions, representations, and/or agreements. Contractor has not relied on any City promises, statements, representations, and/or warranties except as set forth expressly in this Agreement.

5.6 Person; Interpretation; Execution. For purposes of this Agreement, the term "person" means any natural person, corporation, limited liability company, partnership, joint venture, firm, association, trust, unincorporated organization, government or governmental agency or political subdivision, or any other entity. All pronouns contained herein and any variations thereof will be deemed to refer to the masculine, feminine, or neutral, singular or plural, as the identity of the parties may require. The singular includes the plural and the plural includes the singular. The word "or" is not exclusive. The words "include," "includes," and "including" are not limiting. The titles, captions, or headings of the sections herein are inserted for convenience of reference only and are not intended to be a part of or to affect the meaning or interpretation of this Agreement. The parties may execute this Agreement in separate counterparts, each of which when executed and delivered will be an original, but all of which together will constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be binding and effective for all purposes as of the Effective Date.

CITY:

City of Redmond,
an Oregon municipal corporation

CONTRACTOR:

Central Oregon Intergovernmental Council,
an Oregon intergovernmental entity organized under
ORS Chapter 190

By: Keith Witcosky, City Manager

By: Tammy Baney, Executive Director

Federal Tax Id. No.: 93-6002242

Federal Tax Id. No.: 93-0620261

Schedule 1.1
Description of Services

In addition to all other Services provided under this Agreement, Contractor will perform the following Services for and on behalf of City:

1. Contractor will provide those transit services identified under the Grant Contract. Contractor will provide demand responsive general public transportation for City within City's boundaries (the urban growth boundary) depicted and identified in the Redmond Rural Dial-A-Ride Service Area Map attached hereto as Exhibit D. The public transportation service is demand-response. Passengers are picked up at their origin and dropped off at their destination. For the period commencing on the Effective Date and ending on February 29, 2020, demand responsive services will be provided Monday through Friday from 6:30 a.m. to 6:00 p.m.; commencing on March 1, 2020 and continuing thereafter until the parties' agree otherwise in writing, demand responsive services will be provided Monday through Friday from 5:30 a.m. to 7:00 p.m.
2. Contractor will transfer passengers via the Community Connector shuttle to Bend (and from there to La Pine, Madras, Prineville, or Sisters). The shuttle operates Monday through Friday with eight roundtrips connecting Redmond and Bend per day.
3. Contractor will provide and maintain all vehicles required to provide the Services in good operable repair and safe condition and accordance with state and federal asset management requirements.
4. Contractor will provide buses which are wheelchair-equipped. All established bus stops must be ADA-complaint.
5. Contractor will work with local agencies - including the Opportunity Foundation of Central Oregon, Redmond Proficiency Academy, St. Charles Health System, Central Oregon Community College, Deschutes Public Library, Housing Works, the senior center, the Central Oregon Coalition for Access, and High Desert Advocates - to ensure that Services are meeting priority needs.
6. Subject to the terms and conditions contained in this Agreement, Contractor will provide the Services in a manner consistent with COIC's Human Services Transportation Coordination Plan adopted in 2018 and Cascade East Transit's 2040 Transit Master Plan (adoption pending summer 2020), which will help guide future investment in elderly, disabled, and low-income transportation and potential boundary adjustments as City's population growth changes.
7. Contractor will provide an outreach and marketing program to support the Services, including, without limitation, development and maintenance of a website outlining the Services. The website will provide service notifications, information about required policies and programs, information about filing public comments or complaints, and other information as directed by City from time to time.
8. All other public transportation services identified in that certain City of Madras Request for Proposals – Public Transportation Services dated October 15, 2019.

Schedule 2.1
Fee Schedule

Subject to the terms and conditions contained in this Agreement, City will pay Contractor the following compensation in consideration of Contractor's performance of the Services in accordance with this Agreement:

Grant Period	5310 Grant Fund	City of Redmond Match
July 1, 2019-June 30, 2020	\$263,427.50	\$45,000.00
July 1, 2020-June 30, 2021	\$263,427.50	\$45,000.00
Total	\$436,855.00	\$90,000.00

Total compensation for this Agreement shall not exceed \$526,855.

Using only eligible costs, COIC's performance of the Services will be billed quarterly by COIC within 30 days following the end of each quarter. COIC will submit quarterly invoices to City for the Services performed by COIC. City will pay the amount due under each Invoice within thirty (30) days after City's receipt of the applicable Invoice.

Exhibit A
Insurance Requirements

In addition to all other insurance required to be maintained by Contractor under this Agreement, Contractor will obtain and maintain the minimum insurance required under Section 9 and Exhibit C of the Grant Contract, including, without limitation, the following:

1. Workers' Compensation Insurance. Contractor will maintain workers' compensation insurance in compliance with ORS 656.017, which requires all employers that employ subject workers, as defined under ORS 656.027, to provide workers' compensation coverage for those workers, unless they meet the requirement for an exemption under ORS 656.126(2). Employers liability insurance with coverage limits of no less than \$500,000 must be included.

2. Commercial General Liability Insurance. Contractor will maintain commercial generality liability insurance covering bodily injury, death, and property damage in form and with coverages that are satisfactory to State. This insurance will include personal injury liability, products, and completed operations. Coverage will be written on an occurrence form basis, with no less than the following amounts as determined by State:

2.1 Bodily Injury, Death, and Property Damage: \$1,000,000 per occurrence (for all claimants for claims arising out of a single accident or occurrence).

2.2 Automobile Liability Insurance: Insurance covering all owned, non-owned, and hired vehicles. This coverage may be written in combination with the commercial general liability insurance (with separate limits for "commercial general liability" and "automobile liability"). Automobile liability insurance must be no less than \$1,000,000 per occurrence (all claimants for claims arising out of a single accident or occurrence).

3. Additional Insured. The commercial general liability insurance and automobile liability insurance must include State and State's Representatives as additional insureds but only with respect to the Services performed under this Agreement. Coverage must be primary and non-contributory with any other insurance and self-insurance.

4. Tail Coverage. If any required insurance policies is on a "claims made" basis, such as professional liability insurance, Contractor will maintain either "tail" coverage or continuous "claims made" liability coverage, provided the effective date of the continuous "claims made" coverage is on or before the Effective Date, for a minimum of 24 months following the later of (a) Contractor's completion of the Services, or (b) expiration of all warranty periods, if any, provided under this Agreement. Notwithstanding the foregoing 24-month requirement, if Contractor elects to maintain "tail" coverage and if the maximum time period "tail" coverage reasonably available in the marketplace is less than the 24-month period described above, then Contractor may request and State may grant approval of the maximum "tail" coverage period reasonably available in the marketplace. If State approval is granted, Contractor will maintain "tail" coverage for the maximum time period that "tail" coverage is reasonably available in the marketplace.

5. Notice of Cancellation or Change; Certificates of Insurance. Contractor must provide 30 days' written notice to City before cancellation of, material change to, potential exhaustion of aggregate limits of, or non-renewal of the required insurance coverage(s). Contractor will provide City certificate(s) of insurance and endorsements for all required insurance before Contractor performs any Services. Certificate(s) and endorsement(s) must specify (a) all entities and individuals who are endorsed on the policy as additional insureds, and (b) for insurance on a "claims made" basis, the extended reporting period applicable to "tail" or continuous "claims made" coverage.

Exhibit B
Certifications and Assurances

1. Contractor will comply with all applicable federal requirements contained in the Certifications and Assurances available at www.transit.dot.gov. The Certifications and Assurances, including as they may be changed during the term of this Agreement, are by this reference incorporated herein.

2. Contractor will comply with all applicable requirements included in the Master Agreement signed and attested by State (the "Master Agreement"). The Master Agreement is incorporated by this reference and made part of this Agreement. The Master Agreement is available upon request from State by calling (503) 986-3300 or at www.transit.dot.gov. Without limiting the foregoing, the following is a summary of some requirements applicable to transactions covered under this Agreement:

2.1 Contractor will comply with Title VI of the Civil Rights Act of 1964 (78 State 252, 42 U.S.C. § 2000d) and the regulations of the United States Department of Transportation (49 CFR 21, Subtitle A). Contractor will not exclude any person on the grounds of race, religion, color, sex, age, national origin, or disability from the benefits of aid received under this Agreement. Contractor will report to City and State on at least an annual basis any active lawsuits or complaints, including dates, summary of allegation, and status of lawsuit or complaint, including whether the parties entered into a consent decree.

2.2 Contractor will comply with FTA regulations in Title 49 CFR 27 Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance which implements the Rehabilitation Act of 1973, as amended, the Americans with Disabilities Act of 1990, 49 CFR 37, and 49 CFR 38.

2.3 Contractor will not discriminate on the basis of race, color, national origin, or sex in the award and performance of any USDOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. Contractor will take all necessary and reasonable steps under 49 CFR Part 26 to ensure nondiscrimination in the award and administration of USDOT assisted contracts. Contractor's DBE program, if applicable, as required under 49 CFR part 26 and as approved by USDOT, is incorporated by reference into this Agreement. Implementation of this program is a legal obligation and failure to carry out its terms will be treated as a violation of this Agreement. Upon notification to State of its failure to carry out its approved program, the Department may impose sanctions as provided for under part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801 et seq.).

2.4 Contractor will not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. Contractor will carry out applicable requirements of 49 CFR Part 26 in the award and administration of USDOT-assisted contracts. Contractor's failure to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as City deems appropriate.

3. By executing this Agreement, Contractor certifies to State and City that Contractor has not and will not use federal funds to pay for influencing or attempting to influence an officer or employee of any federal department or agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any federal grant, cooperative agreement, and/or any other federal award and/or the extension, continuation, renewal, amendment, and/or modification of any federal contract, grant, loan, cooperative agreement, and/or other federal award. This certification is a material representation of fact upon which reliance was placed when this Agreement was made or entered into. Submission of this certification is a prerequisite for making or entering into this Agreement imposed by Section 1352, Title 31 of the U.S. Code. Any person who fails to file the required certification will be subject to a civil penalty of no less than \$10,000 and not more than \$100,000 for each such failure. If non-federal funds have been used to support lobbying activities in connection with the Services, Contractor will complete Standard Form LLL, Disclosure Form to Report Lobbying and submit the form to State at the end of each calendar quarter in which there occurs an event that requires disclosure.

Restrictions on lobbying do not apply to influencing policy decisions. Examples of prohibited activities include seeking support for a particular application or bid and seeking a congressional earmark.

Exhibit C
Oregon Public Transit Information System

Information required by 2 CFR 200.331(a), may be accessed at [www.oregon.gov/odot/pt/Oregon Public Transit Information System \(OPTIS\)](http://www.oregon.gov/odot/pt/Oregon%20Public%20Transit%20Information%20System%20(OPTIS)), as the information becomes available.

Exhibit D
Redmond Service Area Map

REDMOND RURAL DIAL-A-RIDE SERVICE AREA MAP

Monday - Friday | 6:30am - 6:00pm





Public transportation services agreement

Central Oregon intergovernmental council

City Council meeting

April 28, 2020

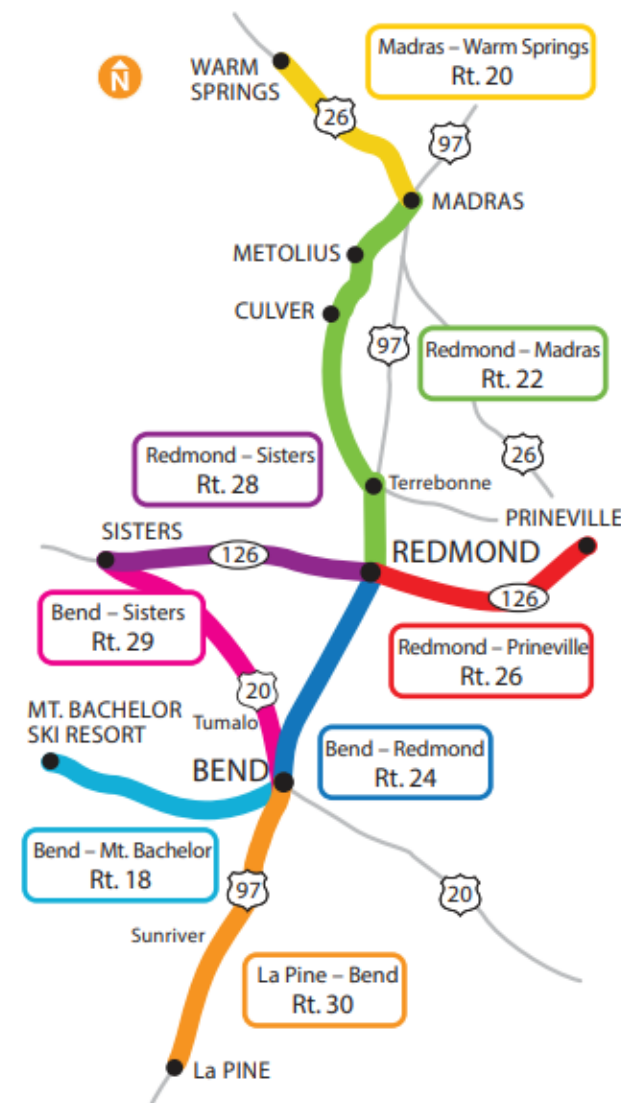


Services provided

- Dial-a-ride
- Community connector
- Purchased using 5310 federal Grant funds

REDMOND RURAL DIAL-A-RIDE SERVICE AREA MAP

Monday - Friday | 5:30am - 7:00pm





Request for proposals

- service providers receiving 5310 grant funds considered contractors
- Joint cooperative procurement agreement:
 - Madras (lead agency)
 - Deschutes county
 - Redmond
 - Prineville
 - sisters
- One proposal received in response to rfp:
 - Central Oregon intergovernmental council



Agreement scope

- Services include:
 - Demand response (dial-a-ride)
 - Community connector transit
 - Outreach and marketing
- Initial term January 1, 2020 to December 31, 2021
 - May be renewed two additional terms of two years each
- Fiscal impact:

Grant Period	5310 Grant Fund	City of Redmond Match
July 1, 2019 - June 30, 2020	\$263,427.50	\$45,000.00
July 1, 2020 - June 30, 2021	\$263,427.50	\$45,000.00
Total	\$436,855.00	\$90,000.00



Questions?