25th AVE APARTMENTS

8106 NE 25th Ave Vancouver, WA 98665

DELTA MANAGEMENT CO. LLC

Applicant:

Delta Management

cody@delta203.com

203 E Reserve St.

Vancouver, WA 98661

P: (360)696-4448

F:(360)695-1970

Table of Contents:

Development Application

Project name: 25th Ave Apartments	
Type(s) of application (see reverse side): Zone Change, Type III Review	
Description of proposal: A request to amend the Comprehensive Plan and Zoning Maps from Urban Low Density Residential (R1-6) to Urban Medium Density Residential (R-18).	
Applicant name: Delta Management	Address: 203 E Reserve Street Vancouver, WA 98661
E-mail address: cody@delta203.com	Phone and fax: (360) 696-4448
Property owner name (list multiple owners on a separate sheet): Asghar Sadri	Address: 203 E Reserve Street Vancouver, WA 98661
E-mail address: kiakeyvani@gmail.com	Phone and fax: (360) 696-4448
Contact person name (list if not same as applicant):	Address:
E-mail address:	Phone and fax:
Project site information: Site address: 8106 NE 25th Ave Vancouver, WA 98665	Comp plan designation: UL

Cross street: 25th Ave	Zoning: R1-6	Parcel numbers: 145032000
Overlay zones: HWY 99	Legal: #109 SEC 2 T2NR1EWM 2.00A	Acreage of original parcels: 1.99
Township: T2N	Range: R1E	¼ of section: SE 1/4 S02

Authorization

The undersigned hereby certifies that this application has been made with the consent of the lawful property owner(s) and that all information submitted with this application is complete and correct. False statements, errors, and/or omissions may be sufficient cause for denial of the request. This application gives consent to the county to enter the properties listed above.

Applicant's signature	1/31/2019 Date	Property owner or authorized representative's signature	1/31/2019 Date

For staff use only	Case number:		Work order number:	

Community Development
1300 Franklin Street, Vancouver, Washington
Phone: (360) 397-2375 Fax: (360) 397-2011
www.clark.wa.gov/development

Application types

If you have any questions regarding the type of application being requested, our Permit Technicians will be happy to assist you.

- ☐ Annual Review
- ☐ Appeal
- ☐ Boundary Line Adjustment and Lot Reconfiguration
- ☐ Conditional Use

Environmental/Critical Areas

- ☐ Critical Aquifer Recharge Area (CARA)
- ☐ Columbia River Gorge
- ☐ Forestry + (Moratorium Waiver, Moratorium Removal, Class I, Class IVG or COHP)
- ☐ Floodplain
- ☐ Geological
- ☐ Habitat
- ☐ Habitat Monitoring
- ☐ Historic
- ☒ SEPA
- ☐ Shoreline
- ☐ Wetland
- ☐ Wetland Monitoring

Land Division

- ☐ Binding Site Plan
- ☐ Final Plat
- ☐ Plat Alteration
- ☐ Short Plat (___ Infill)
- ☐ Subdivision (___ Infill)

Miscellaneous

- ☐ Addressing
- ☐ Accessory Dwelling
- ☐ Covenant Release
- ☐ Home Business
- ☐ Legal Lot Determination and Innocent Purchasers Determination
- ☐ Non-Conforming Use Determination
- ☐ Sewer Waiver
- ☐ Shooting Range
- ☐ Sign

Planning Director Review

- ☐ Post Decision
- ☐ Pre-Application Conference
- ☐ Pre-Application Waiver
- ☐ Public Interest Exception
- ☐ Similar Use
- ☐ Temporary Use
- ☐ Planned Unit Develop/Master Plan
- ☐ Road Modification
- ☐ Site Plan
- ☐ Variance
- ☒ Zone Change

Pre-Application Conference FINAL Report

Project Name:	25th Avenue Subdivision
Case Number:	PAC2018-00149
Location:	8106 NE 25th Ave, Vancouver, WA 98665 SE Quarter of Section 02 Township 2 North, Range 1 East of the Willamette Meridian
Parcel Number(s):	145032000
Site Size:	1.99 acres
Request:	A request to amend the Comprehensive Plan and Zoning Maps from Urban Low Density Residential (R1-6) to Urban Medium Density Residential (R-18)
Applicant:	Cody Dickman Delta Management 203 E Reserve St Vancouver, WA 98661 360-696-4448 cody@delta203.com
Contact Person:	Same as above
Property Owner:	Asghar R Sadri 203 E Reserve St Vancouver, WA 98661 360-696-4448 kiakeyvani@gmail.com

DATE OF CONFERENCE: December 19, 2018

STAFF CONTACT: Sharon Lumbantobing, Clark County Annual Review Coordinator
(564) 397-4909 Sharon.Lumbantobing@clark.wa.gov

PRESENT AT CONFERENCE:

Name	Contact Information
Sharon Lumbantobing	Clark County Community Planning (see above)
Jose Alvarez	Clark County Community Planning, (564) 397- 4898
Gary Albrecht	Clark County Community Planning, (564) 397- 4318
Cody Dickman	Delta Management, cody@delta203.com
Asghar R Sadri	kiakeyvani@gmail.com

Disclaimer: The following is a brief summary of issues and requirements that were identified at the pre-application conference based on the information provided by the applicant. This summary may contain supplemental information which was not discussed in the conference and is intended to aid the applicant in preparing a complete Annual Review application and/or to provide the applicant with additional information regarding the subject site. Staff responses and information contained in this pre-application report are preliminary in nature, and do not constitute an approval or denial. The determinations contained in

this report were based upon information submitted by the applicant, and may be subject to change upon further examination or in light of new or revised information contained in the formal application.

APPLICATIONS REQUIRED

The requested Comprehensive Plan map and concurrent zone map amendments require an Annual Review/Zone Change Application to be completed. The application will be processed through the Type IV Review process. A SEPA checklist is required to be completed as a part of the Annual Review application.

Estimated fees:*

Combined Annual Review/Rezone	$8,113.00
Issuance Fee	$94.00
Environmental Checklist Review (SEPA)	$1,987.00
Issuance Fee	$53.00

***Fees cited are estimated and based upon the fee schedule in effect at the time of pre-application conference and are subject to change.**

APPLICABLE POLICIES, CODES and CRITERIA

The following list is not exhaustive of all county, state or federal regulations that may govern development of the site, but is inclusive of those addressed by the county in this comprehensive plan/zone amendment review process.

- WAC 365-196-300
- Clark County 20 Year Comprehensive Growth Management Plan Policies
  - Chapter 1 – Land Use Element
  - Chapter 2 – Housing Element
  - Chapter 10 – School Element
- Clark County Unified Development Code
  - Title 40:
    - Section 40.220 (Urban Residential Districts)
    - Section 40.500.010 (Procedures)
    - Section 40.560.010 (Plan Amendment Procedures)
    - Section 40.570 (SEPA)
  - Title 40, Appendix F: Highway 99 Overlay District Standards
    - Regulating Maps
    - Overlay Standards
    - 4.5 Mixed Residential Overlay
    - 4.6 Single Family Overlay

Clark County Criteria for Map Changes (found within the text of this report)

- Section 40.560.010G (Criteria for all Map Changes)
- Section 40.560.020 (Changes to Districts, Amendments, and Alterations)
- Section 40.560.020G (Approval Criteria)

Comprehensive Plan Designation Map Change Criteria

Comprehensive plan designation changes may only be approved if **all** the following criteria are met (40.560.010G):

1. *The proponent shall demonstrate that the proposed amendment is consistent with the Growth Management Act and requirements, the Countywide Planning Policies, the Community Framework Plan, the Comprehensive Growth Management Plan, applicable city comprehensive Plans, and including applicable capital facilities plans and official population growth forecasts; and*
2. *The proponent shall demonstrate that the designation is in conformance with the appropriate location criteria identified in the plan; and*
3. *The map amendment or site is suitable for the proposed designation and there is a lack of appropriately designated alternative sites within the vicinity; and*
4. *The plan map amendment either: (a) responds to a substantial change in conditions applicable to the area within which the subject property lies; (b) better implements applicable Comprehensive Plan policies than the current map designation; or (c) corrects an obvious mapping error; and*
5. *Where applicable, the proponent shall demonstrate that the full range of urban public facilities and services can be adequately provided in an efficient and timely manner to serve the proposed designation. Such services may include water, sewage, storm drainage, transportation, fire protection and schools. Adequacy of services applies only to the specific change site.*

Zone Change Criteria

The concurrent zone change may only be approved if **all** the following criteria are met (40.560.020G):

1. *Requested zone change is consistent with the comprehensive plan map designation.*

2. *The requested zone change is consistent with the plan policies and location criteria and the purpose statement of the zoning district.*

3. *The zone change either:*
   a. *Responds to a substantial change in conditions applicable to the area within which the subject property lies;*
   b. *Better implements applicable comprehensive plan policies than the current map designation; or*
   c. *Corrects an obvious mapping error.*

4. *There are adequate public facilities and services to serve the requested zone change.*

SUBMITTED MATERIALS REVIEWED

The following materials were provided by the applicant and were reviewed by Clark County staff in advance of the pre-application conference:

- Application forms
- Narrative
- GIS Packet

BACKGROUND

The applicant proposes to amend the Comprehensive Plan and Zoning Maps from Urban Low Density Residential (R1-6) to Urban Medium Density Residential (R-18).

SUMMARY

The following comments and issues were discussed or identified during the pre-application meeting held on December 19, 2018.

Land Use

Comments provided by Clark County Long Range Planning, Jose Alvarez and Sharon Lumbantobing:

Staff provided the applicant with a brief overview of how the pre-application conference would be conducted, including a summary of what information would be covered. Staff stated that a final staff report will be sent to the applicant within a week following the pre-app meeting. Staff stated that January 31 is the deadline to submit an annual review application.

Staff provided information regarding Clark County's obligation to plan under the State's Growth Management Act and the long-range, comprehensive planning exercise that concluded in 1994 with the adoption of the 20-Year Comprehensive Growth Management Plan and corresponding zone map. In 2016, the County adopted an updated 20-Year Comprehensive Plan and zone map.

Staff proceeded to discuss with the applicant the Comprehensive Plan Designation Map Change Criteria that the applicant will need to address in an application.

Specific to this application, staff stated that the assumption is that the current comprehensive plan and zone designation (Urban Low Density Residential (R1-6)) is still applicable to this area. The applicant will need to demonstrate that a change to Urban Medium Density Residential (R-18) is appropriate and consistent with the County's Growth Management Plan and Unified Development Code, and show how the proposed change is compatible with the neighborhood and surrounding area.

The subject parcel is in the Hwy 99 Overlay District (Title 40, Appendix F) and the Highway 99 Overlay Standards apply to the parcel (See section 4.5 Mixed Residential Overlay and section 4.6 Single Family Overlay). This comprehensive plan amendment would also require an amendment to the Highway 99 Overlay Standards from the Single Family Overlay to the Mixed Residential Overlay section 4.5.

Staff proceeded to discuss with the applicant the Comprehensive Plan Designation Map Change Criteria that the applicant will need to address in an application. More thorough responses are needed for how the proposal meets the Comprehensive Plan Designation Map Change Criteria.

The county updated its 20-year comprehensive plan in June 2016 and designated sufficient land for residential growth through 2035. The applicant needs to demonstrate a need for additional Urban Medium Density Residential land and demonstrate a lack of appropriately designated residential land within the vicinity.

The property to the south is split zoned (R-18 and R1-6) with the R1-6 zone abutting the subject parcel. It would be preferable if this parcel was included in the request so as not to leave a sliver of R1-6 between two parcels.

Staff stated that the applicant should confer with the neighborhood association.

Staff stated that the applicant should confer with the Vancouver school district on school impacts.

Transportation

Comments provided by Clark County Long Range Planning, Gary Albrecht:

PAC2018-00142 is located at the intersection of NE 81st Street, classified as a local residential access road, and NE 25th Avenue, classified as C-2cb, a 2-lane collector with center lane turn and bike lanes.

Staff reviewed the 2018-2023 Transportation Improvement Program and found no projects that would impact the area immediately around the site of the proposed comprehensive plan amendment and zone change.

Criteria for annual review transportation analysis

Transportation analysis

To meet the requirements of Clark County Title 40 code section 40.560.010, the applicant must show that adequate transportation facilities will be available to accommodate the proposed comprehensive plan amendment, which is why a transportation analysis is needed for applications for comprehensive plan amendments. The specific language states the following:

> Where applicable, the proponent shall demonstrate that the full range of urban public facilities and services can be adequately provided in an efficient and timely manner to serve the proposed designation. Such services may include water, sewage, storm drainage, transportation, fire protection and schools. Adequacy of services applies only to the specific change site.

A transportation analysis is defined per Clark County Title 40 code section 40.100.070 (Definitions) as a study done by a licensed engineer that compares a build-out scenario under the existing and proposed designations for a twenty (20) year horizon.

For the proposed comprehensive plan amendment application, the transportation analysis must include the following:

Existing and proposed comprehensive plan designation for both a.m. and p.m. peak hour vehicle trips:

- Trip generation-present day
- Trip generation-projected 20-years
- Modal split-present day
- Modal split-projected 20-years
- Trip distribution-present day
- Trip distribution-projected 20-years

Net comparison (proposed comprehensive plan designation-existing comprehensive plan designation)

The applicant must show the Level-of-Service standards, per CCC 40.350.020.G.1.a-d, under the existing and proposed land use designations for both current and projected 20 years out.

NEIGHBORHOOD ASSOCIATION CONTACT

While not required of a complete application for a comprehensive plan amendment, staff recommended that the applicant talk to the neighborhood association chair for their area. The NE Hazel Dell Neighborhood Association President is Doug Ballou at email: dougballou@comcast.net. Staff also encouraged the applicant to discuss the proposed land use designation change with neighbors.

TIME FRAMES

January 1 through January 31 - Submit Final Annual Review Application

February 1 through to April 1 – Clark County staff will review and prepare a recommendation to the Planning Commission (**this period may be extended depending on staff work load**).

Fourth Quarter or sooner - Planning Commission will recommend approval or denial of a request. The county council will then review and make a final determination.

ADDITIONAL MATERIALS

A complete list of required documents is contained in the Annual Review application packet. A Completed SEPA checklist is required for the final application. NOTE: Submit a copy of this summary with your final application.

DEVELOPER'S PACKET

Produced By:

Clark County Geographic Information System (GIS)

For:

Delta Management Co.

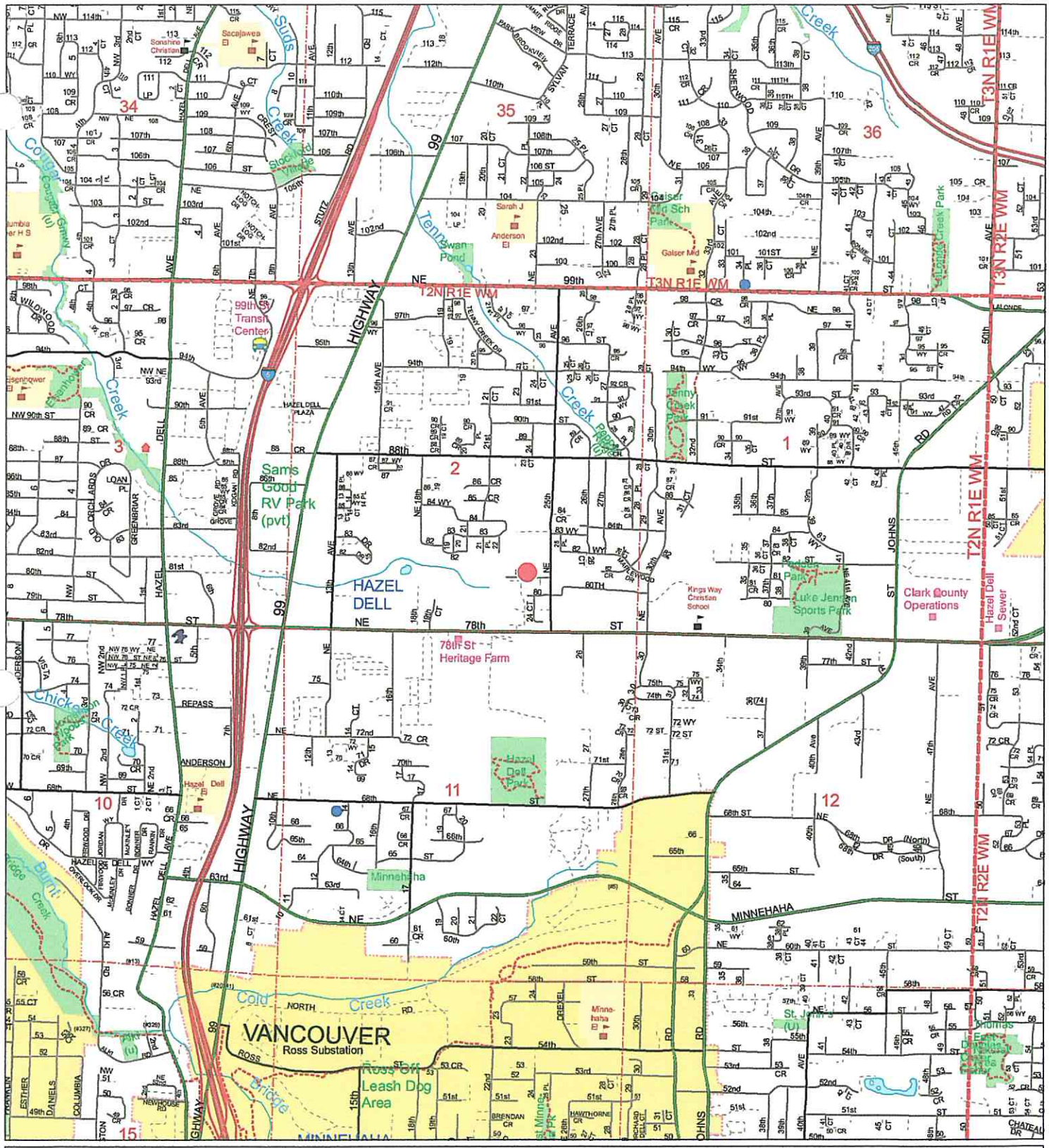
Subject Property Account Number(s):

145032000

PDF # 212806

Printed: November 26, 2018
Expires: November 26, 2019

Table of Contents



General Location

Printed on: November 26, 2018

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Location of Subject Property(s)

CLARK COUNTY, WASHINGTON
Geographic Information System

0 1,000 2,000 Feet

Information shown on this map was collected from several sources. Clark County accepts no responsibility for any inaccuracies that may be present.

Property Information Fact Sheet

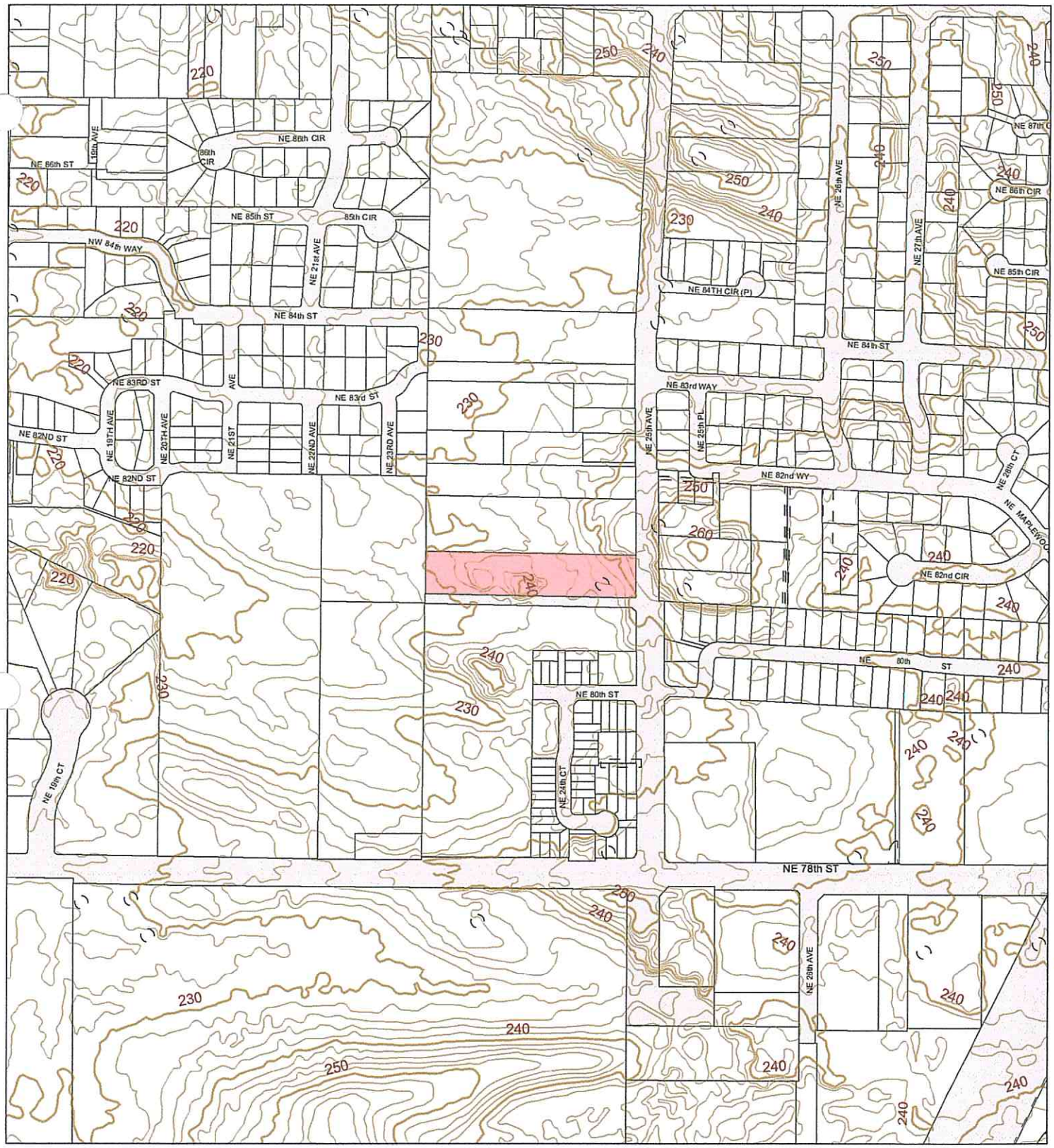
Mailing Information:
Account No.: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661
Assessed Parcel Size: 1.99 Ac
Property Type: PRIME DEVELOPABLE GROUND

PARCEL LOCATION FINDINGS:

Quarter Section(s): SE 1/4,S02,T2N,R1E
Municipal Jurisdiction: Clark County
Urban Growth Area: Vancouver
Zoning: R1-6
Zoning Overlay: Highway 99 Overlay District, Single Family Residential
Comprehensive Plan Designation: UL
Columbia River Gorge NSA: No Mapping Indicators
Late-Comer Area: No Mapping Indicators
Trans. Impact Fee Area: Hazel Dell: Current, Hazel Dell 2016: End Date Dec. 31, 2016
Park Impact Fee District: 8
Neighborhood Association: NE Hazel Dell
School District: Vancouver
Elementary School: Eisenhower
Junior High School: Jefferson
Senior High School: Skyview
Fire District: FD 6
Sewer District: ClarkRegional
Water District: Clark Public Utilities
Wildland: No Mapping Indicators

ENVIRONMENTAL CONSTRAINTS:

Soil Type(s): HoA, 100.0% of parcel
Hydric Soils: Non-Hydric, 100.0% of parcel
Flood Zone Designation: Outside Flood Area
CARA: Category 2 Recharge Areas
Forest Moratorium Area: No Mapping Indicators
Liquefaction Susceptibility: Very Low to Low
NEHRP: D
Slope: 0 - 5 percent, 75.9% of parcel
5 - 10 percent, 24.1%
Landslide Hazards: No Mapping Indicators
Slope Stability: No Mapping Indicators
Habitat and Species Resources:
Habitat and Species Impacts: No Mapping Indicators
Cultural Resources:
Archeological Predictive: High, 81.8% of parcel
Moderate-High, 18.2%
Archeological Site Buffers: No Mapping Indicators
Historic Sites: No Mapping Indicators



Elevation Contours

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

Subject Property(s)
Public Road
Transportation or Major Utility Easement
10' Elevation Contours
2' Elevation Contours

31134	31135	31136
21103	21102	21101
21110	21111	21112

CLARK COUNTY, WASHINGTON
Geographic Information System

0 200 400 Feet

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2016 Aerial Photography

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

31134	31135	31136
21103	21102	21101
21110	21111	21112

Subject Property(s)

CLARK COUNTY, WASHINGTON
Geographic Information System

N

0 200 400 Feet

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2016 Aerial Photography with Elevation Contours

Printed on: November 26, 2018

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

CLARK COUNTY, WASHINGTON
Geographic Information System

0 100 200 Feet

N

Subject Property(s)
2' Elevation Contours

31134	31135	31136
21103	21102	21101
21110	21111	21112

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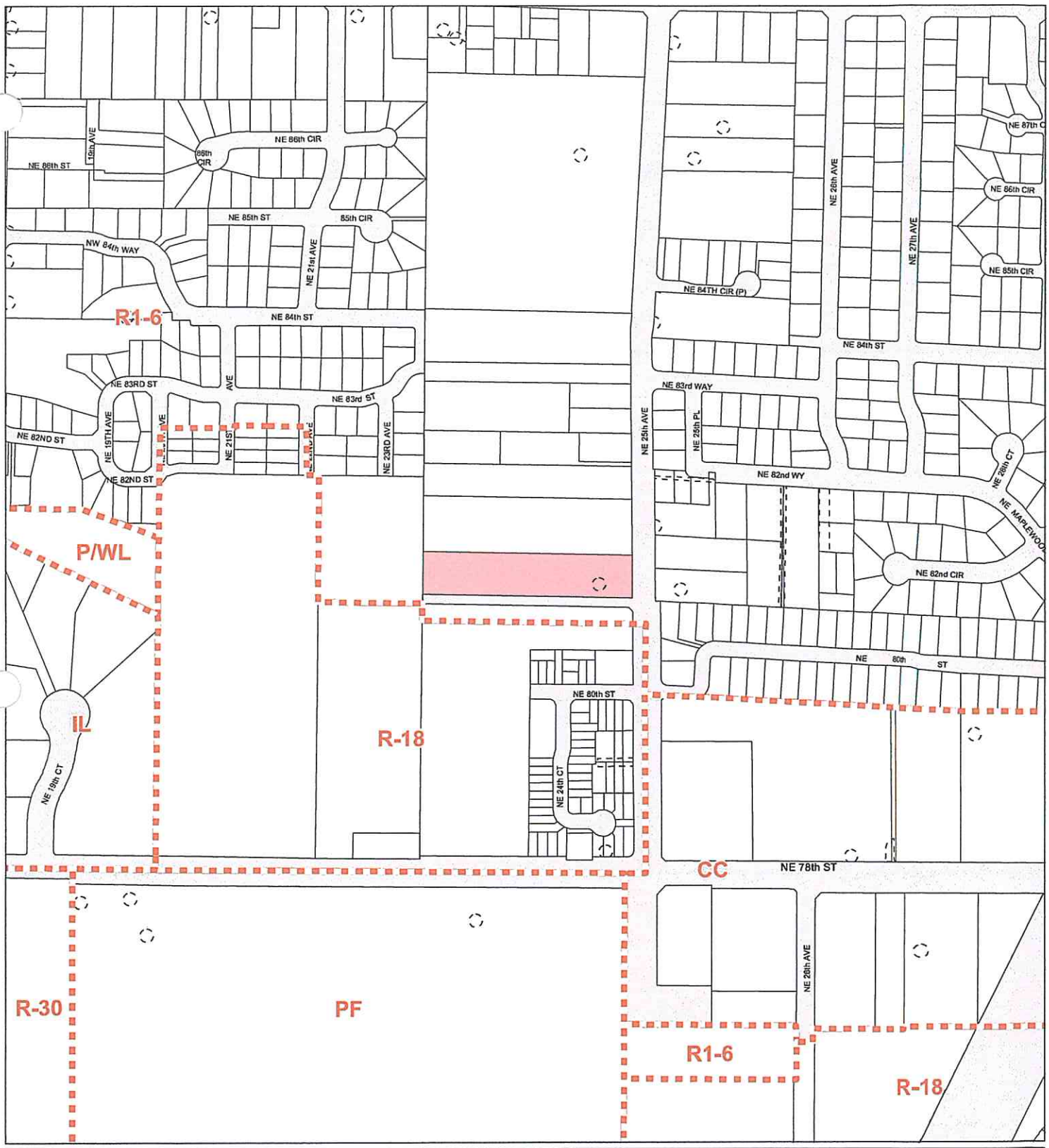

Zoning Designations

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

31134	31135	31136
21103	21102	21101
21110	21111	21112

CLARK COUNTY, WASHINGTON
Geographic Information System

0 200 400 Feet

N

- Subject Property(s)
- Public Road
- Transportation or Major Utility Easement
- Zoning Boundary
- Urban Holding - 10 (UH-10)
- Urban Holding - 20 (UH-20)
- Urban Holding - 40 (UH-40)
- Surface Mining Overlay District

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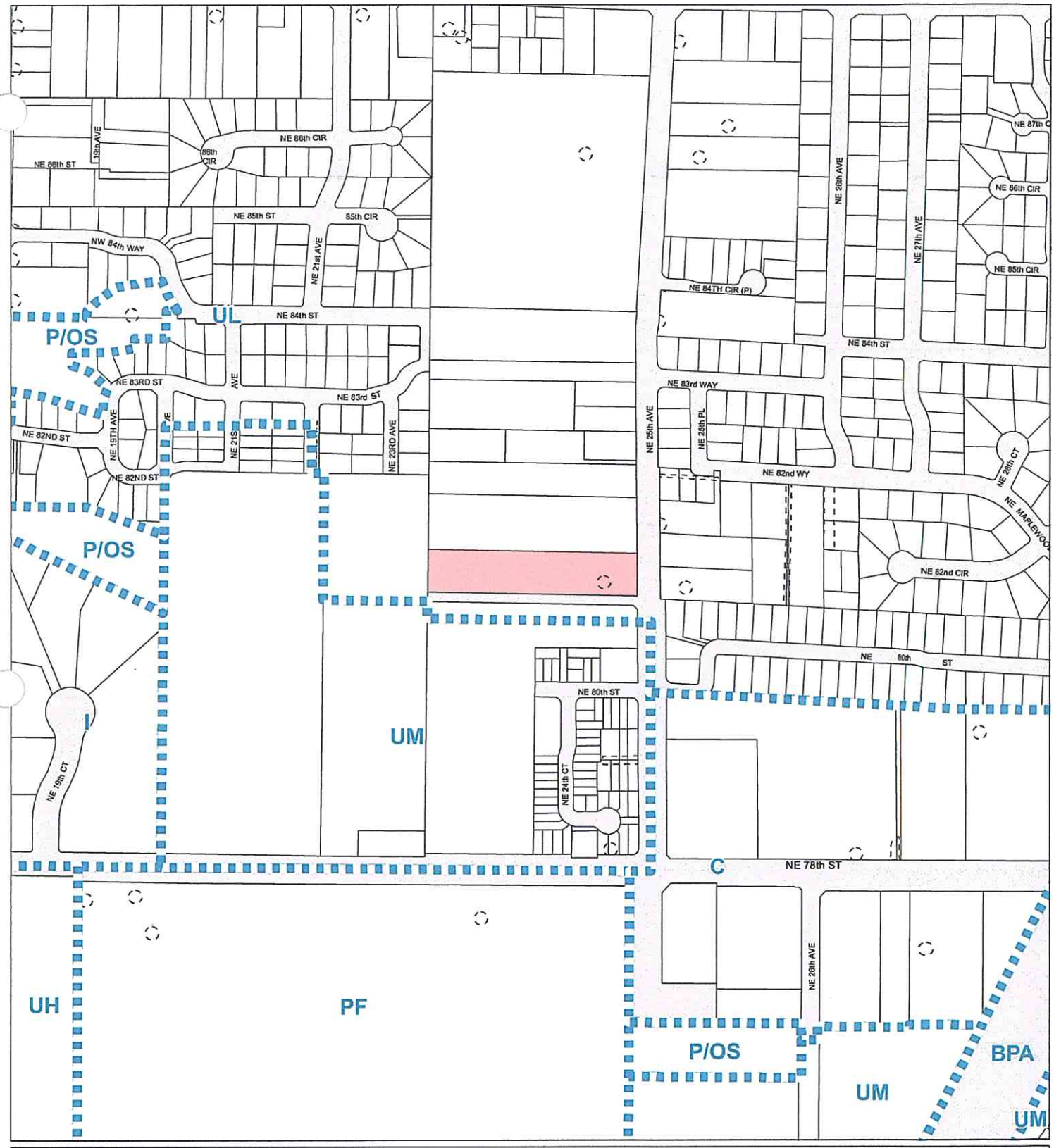

Comprehensive Plan Designations

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

CLARK COUNTY, WASHINGTON
Geographic Information System
0 200 400 Feet

Subject Property(s)
Public Road
Transportation or Major Utility Easement
Comprehensive Plan Boundary
Urban Reserve
Industrial Reserve
Railroad Industrial Reserve
Mining
Rural Center Mixed Use
Columbia River Gorge Scenic Area

31134	31135	31136
21103	21102	21101
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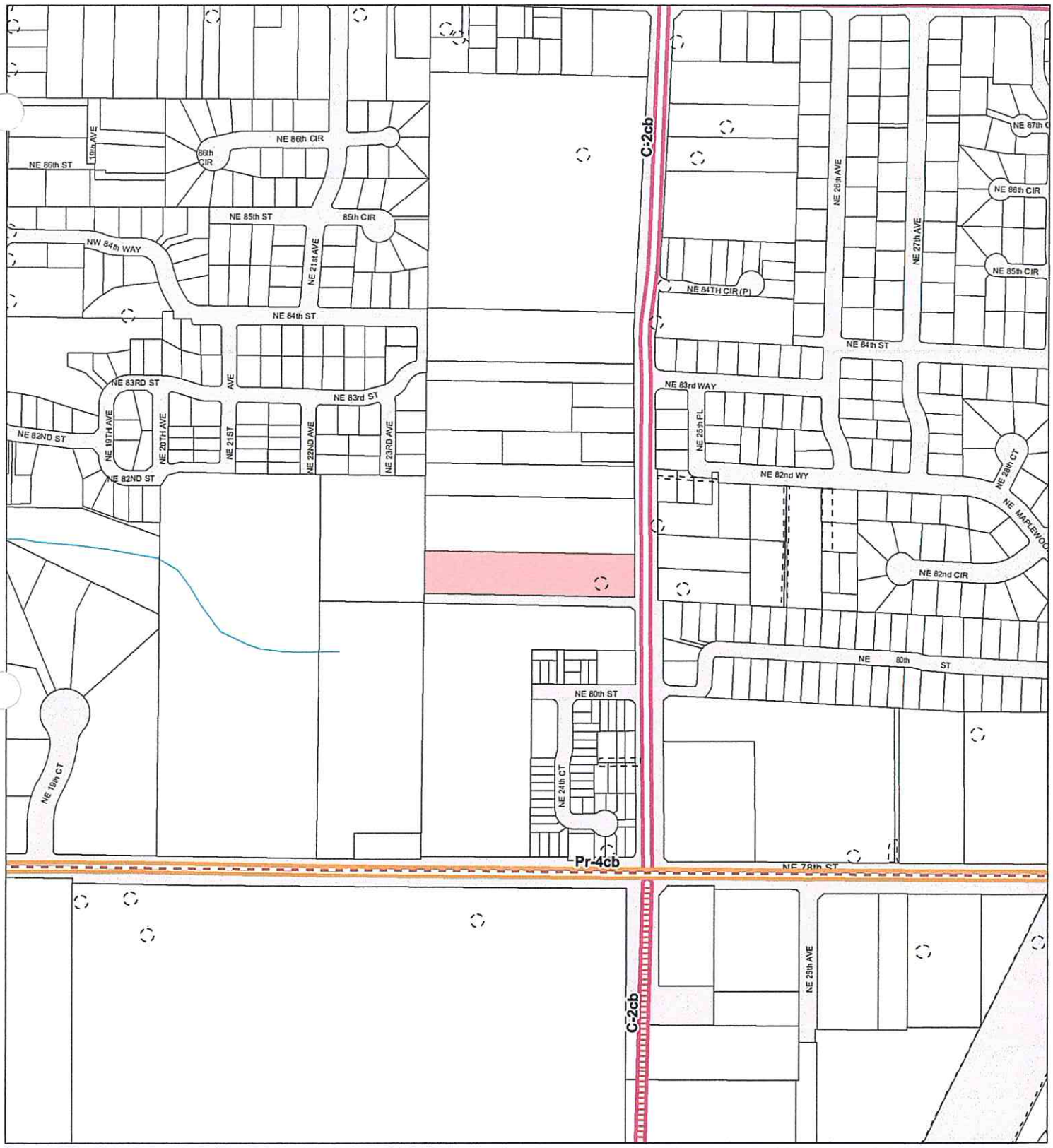

Arterials, C-Tran Bus Routes, Parks & Trails

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Owner: SADRI ASGHAR R
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C/S/Z: VANCOUVER, WA 98661

CLARK COUNTY, WASHINGTON
Geographic Information System

0 200 400 Feet

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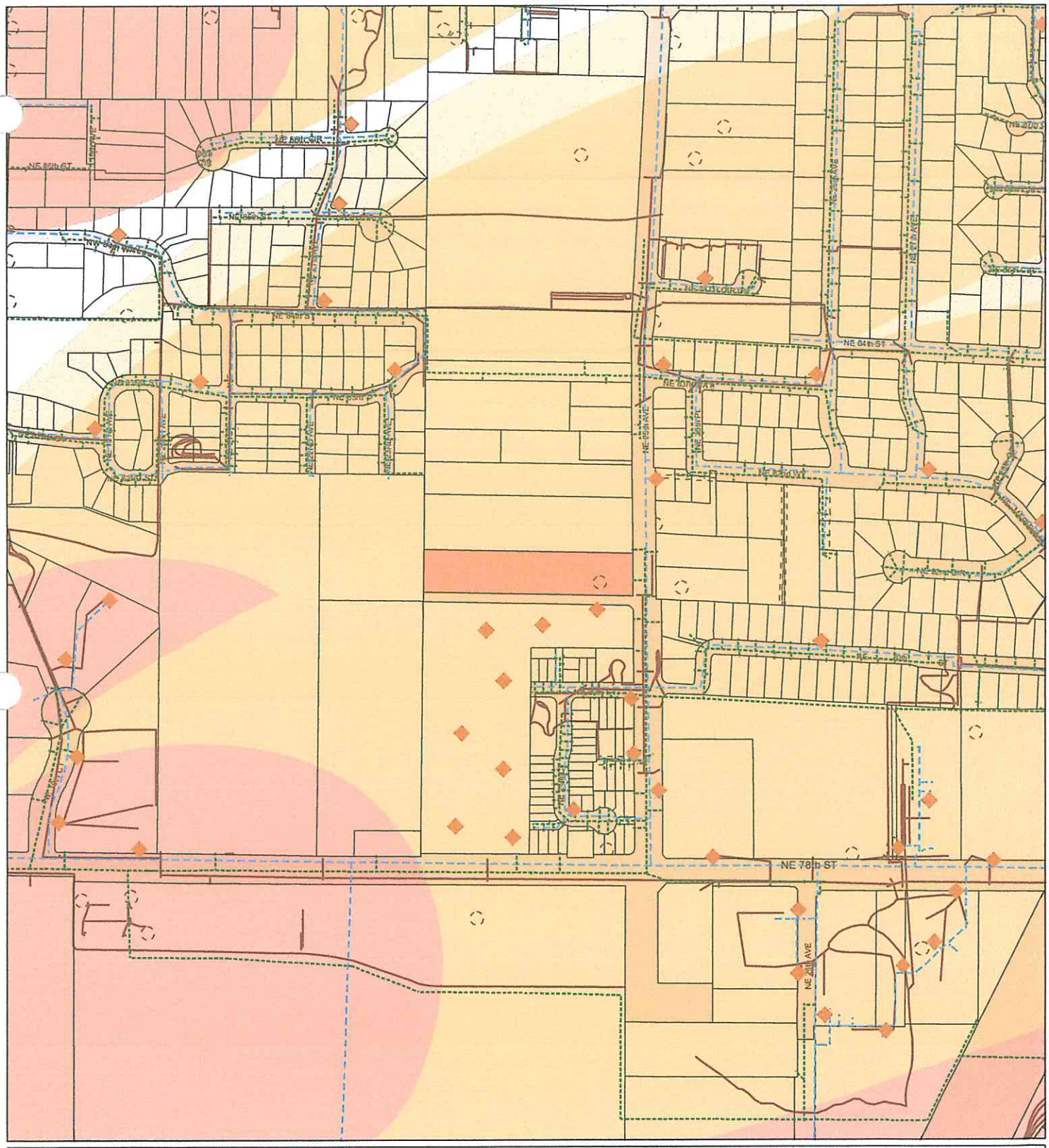
- Subject Property(s)
- Public Road
- Transportation or Major Utility Easement
- Parks
- Trail
- C-Tran Route
- Principal Arterial
- Minor Arterial
- Collector
- Rural Major Collector
- Rural Minor Collector
- State Route
- Other
- Proposed Arterial
- Scenic Highway

31134	31135	31136
21103	21102	21101
21110	21111	21112



Water, Sewer, and Storm Systems

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

CLARK COUNTY, WASHINGTON
Geographic Information System

N

0 200 400 Feet

Subject Property(s)
Public Road
Transportation or Major Utility Easement
Water Lines
Sewer Lines
Storm Water Lines
1-year Wellhead ZOC
5-year Wellhead ZOC
10-year Wellhead ZOC
Hydrants

31134	31135	31136
21103	21102	21101
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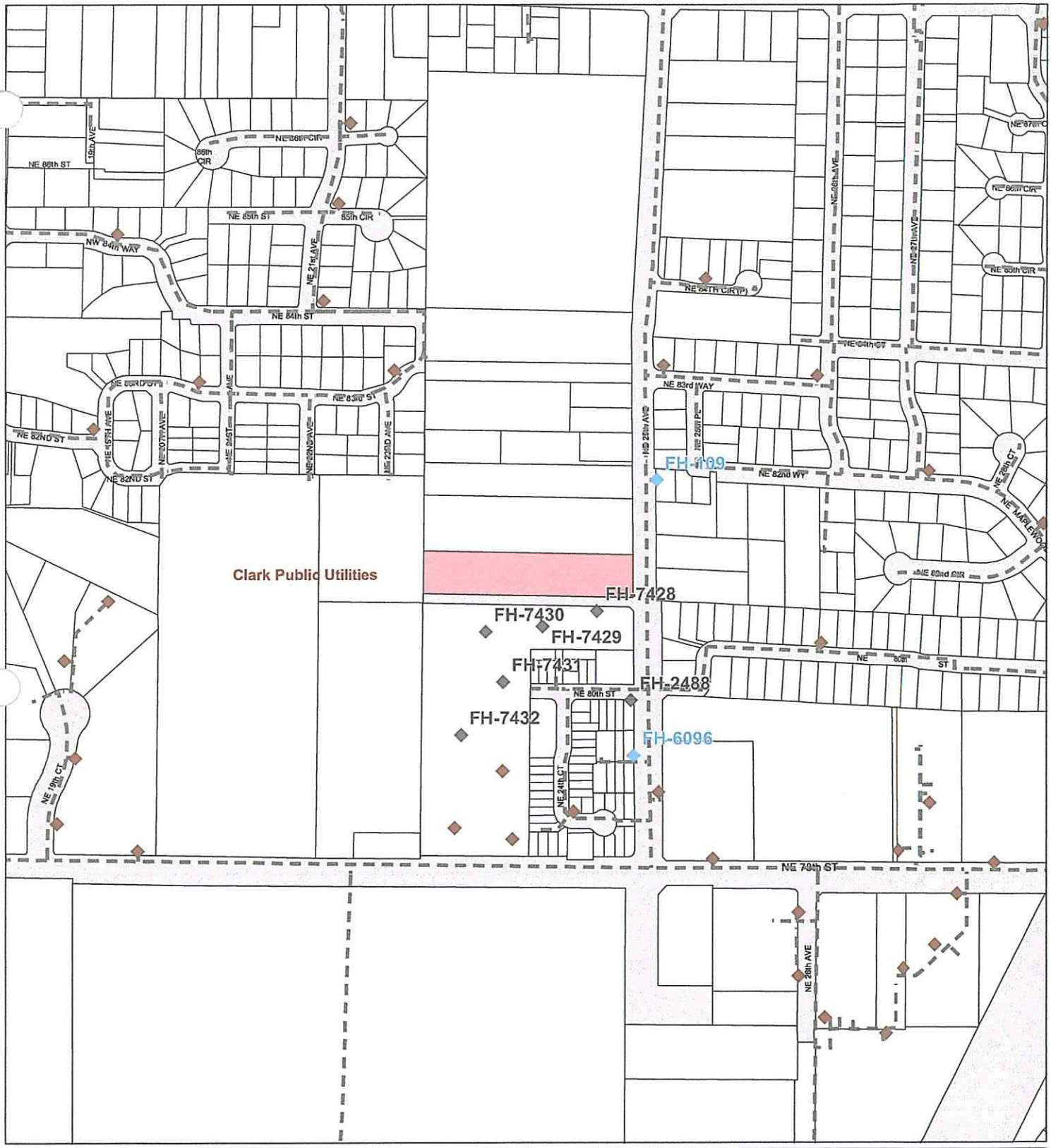

Water Systems

Printed on: November 26, 2018

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Subject Property(s)
Public Road
Water District Boundary
Unknown Size Water Line
< 10" Water LIne
10-20" Water Line
> 20" Water Line
No Flow Data Hydrant
0 - 499 GPM at 20 PSI
500 - 999 GPM at 20 PSI
> 1000 - 1749 GPM at 20 PSI
> 1750 GPM at 20 PSI
Hydrant > 500' from parcel(s)

31134	31135	31136
21103	21102	21101
21110	21111	21112

CLARK COUNTY, WASHINGTON
Geographic Information System
0 200 400 Feet

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Hydrant Fire Flow Details

Account No.: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Water District(s)	Hydrant Data Update	Project Site Provider
Clark Public Utilities	January 1, 2017	Service Provider

HYDRANT INFORMATION:

Hydrant ID	Hydrant Owner	Main Diameter	Flow at 20 PSI	Test Date	Distance to site
FH-7428	Clark Public Utilities	0.0"	No Data	None	43 ft
FH-7429	Clark Public Utilities	0.0"	No Data	None	93 ft
FH-7430	Clark Public Utilities	0.0"	No Data	None	112 ft
FH-109	Clark Public Utilities	12.0"	3662 GPM	August 30, 2012	236 ft
FH-7431	Clark Public Utilities	0.0"	No Data	None	264 ft
FH-2488	Clark Public Utilities	8.0"	No Data	None	313 ft
FH-7432	Clark Public Utilities	0.0"	No Data	None	428 ft
FH-6096	Clark Public Utilities	8.0"	3678 GPM	June 21, 2017	482 ft

Soil Types

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

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31134	31135	31136
21103	21102	21101
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Subject Property(s)
Public Road
Transportation or Major Utility Easement
Soil Type Boundary

CLARK COUNTY, WASHINGTON
Geographic Information System

N

0 200 400 Feet

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Environmental Constraints I

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Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

CLARK COUNTY, WASHINGTON
Geographic Information System

0 200 400 Feet

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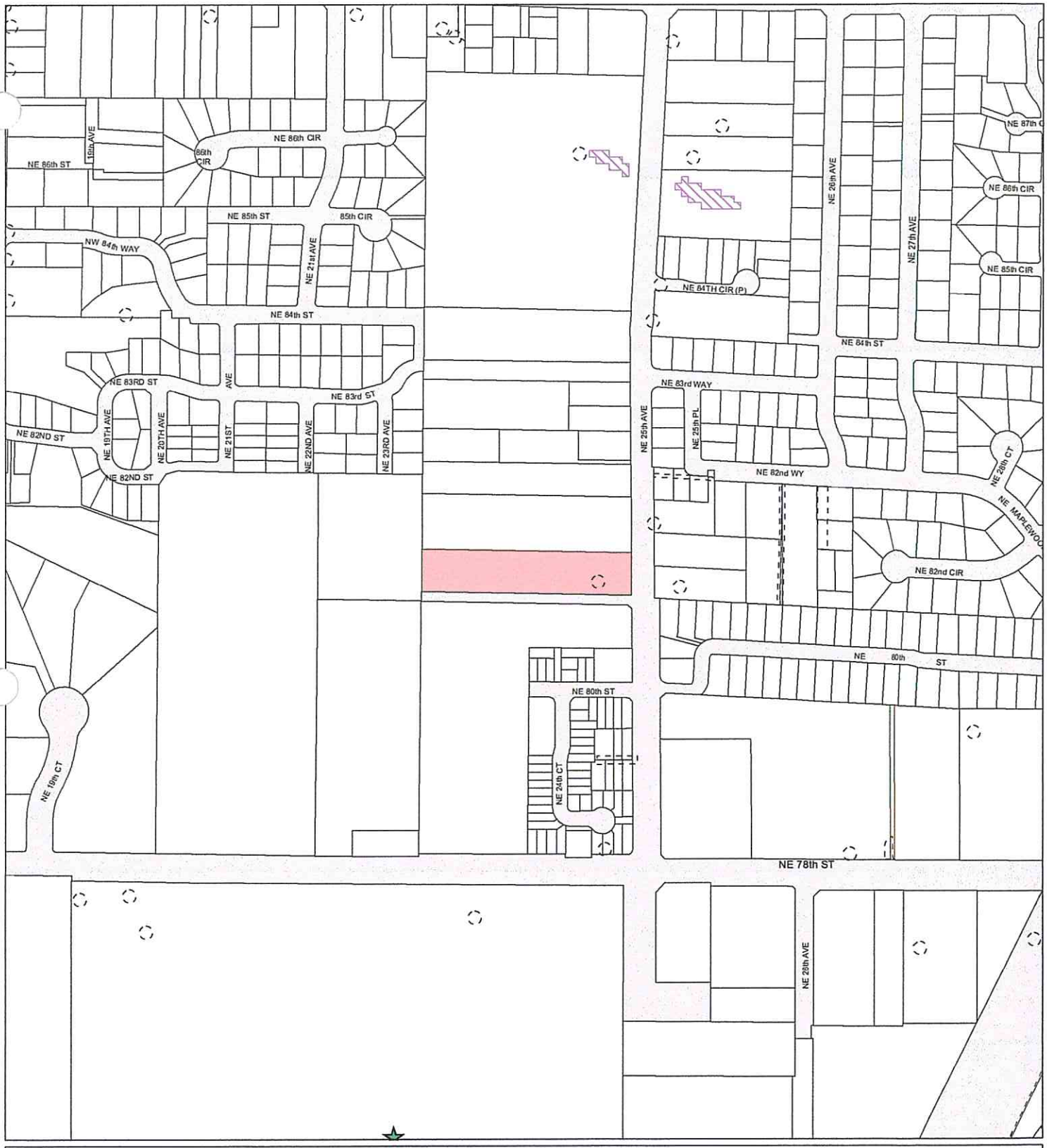
- Subject Property(s)
- Public Road
- Transportation or Major Utility Easement
- Hydric Soils
- Wetland Inventory
- CARA Category 1
- Riparian Habitat or Species Area
- Non-Riparian Habitat or Species Area
- 100 year Floodplains
- Floodway
- Shorelines
- Stream

31134	31135	31136
21103	21102	21101
21110	21111	21112



Environmental Constraints II

Printed on: November 26, 2018

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

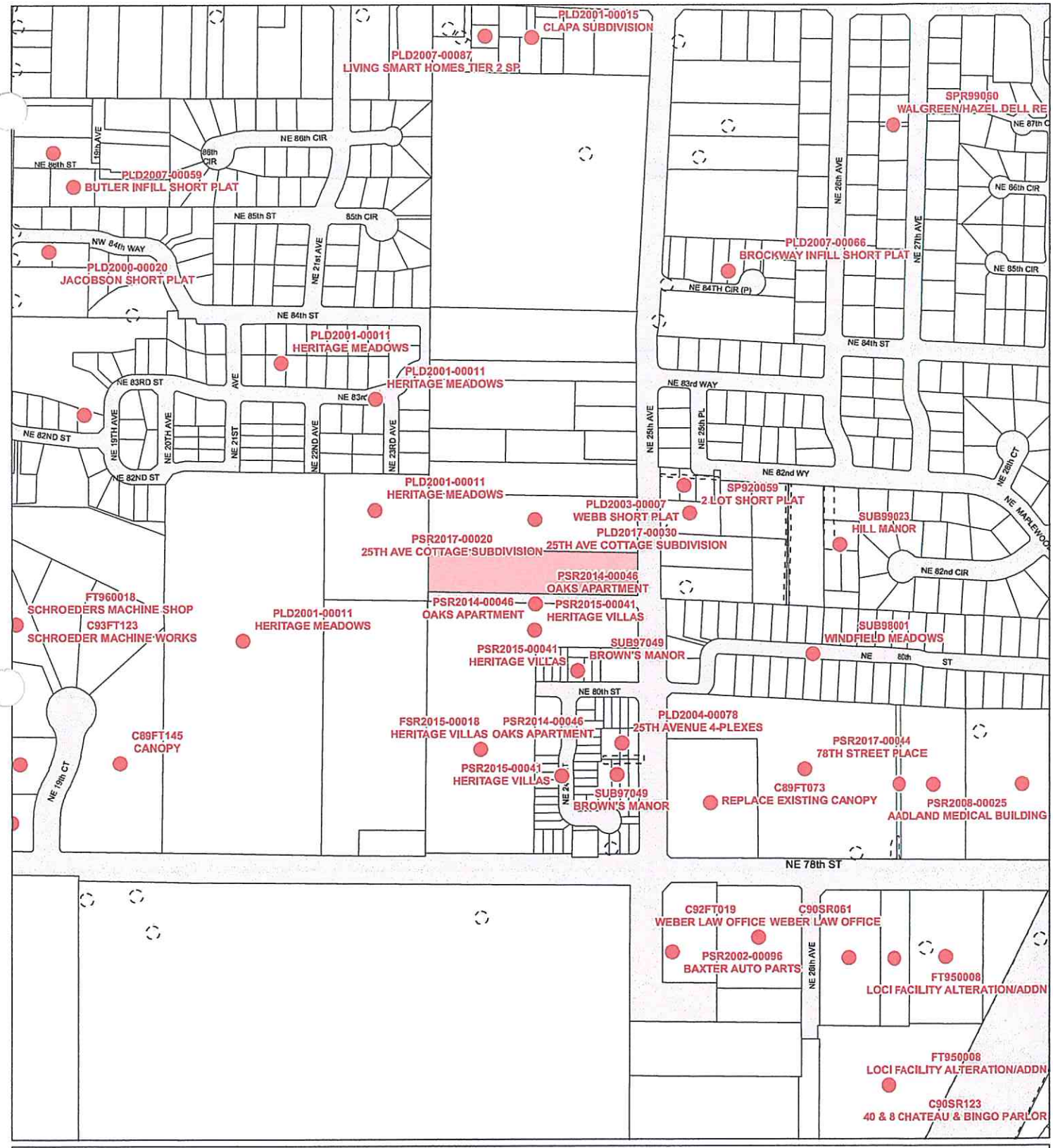
- Subject Property(s)
- Public Road
- Transportation or Major Utility Easement
- Slopes > 15%
- Potentially Unstable Slope
- Historic or Active Landslide
- Severe Erosion Hazard Area
- Forest Moratorium Area
- CCHR Historic Site
- NRHP Historic Site
- INV Historic Site

31134	31135	31136
21103	21102	21101
21110	21111	21112

CLARK COUNTY, WASHINGTON
Geographic Information System

0 200 400 Feet

Information shown on this map was collected from several sources. Clark County accepts no responsibility for any inaccuracies that may be present.



Adjacent Development

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

Subject Property(s)
Public Road
Transportation or Major Utility Easement
Adjacent Development

31134	31135	31136
21103	21102	21101
21110	21111	21112

CLARK COUNTY, WASHINGTON
Geographic Information System
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0 200 400 Feet

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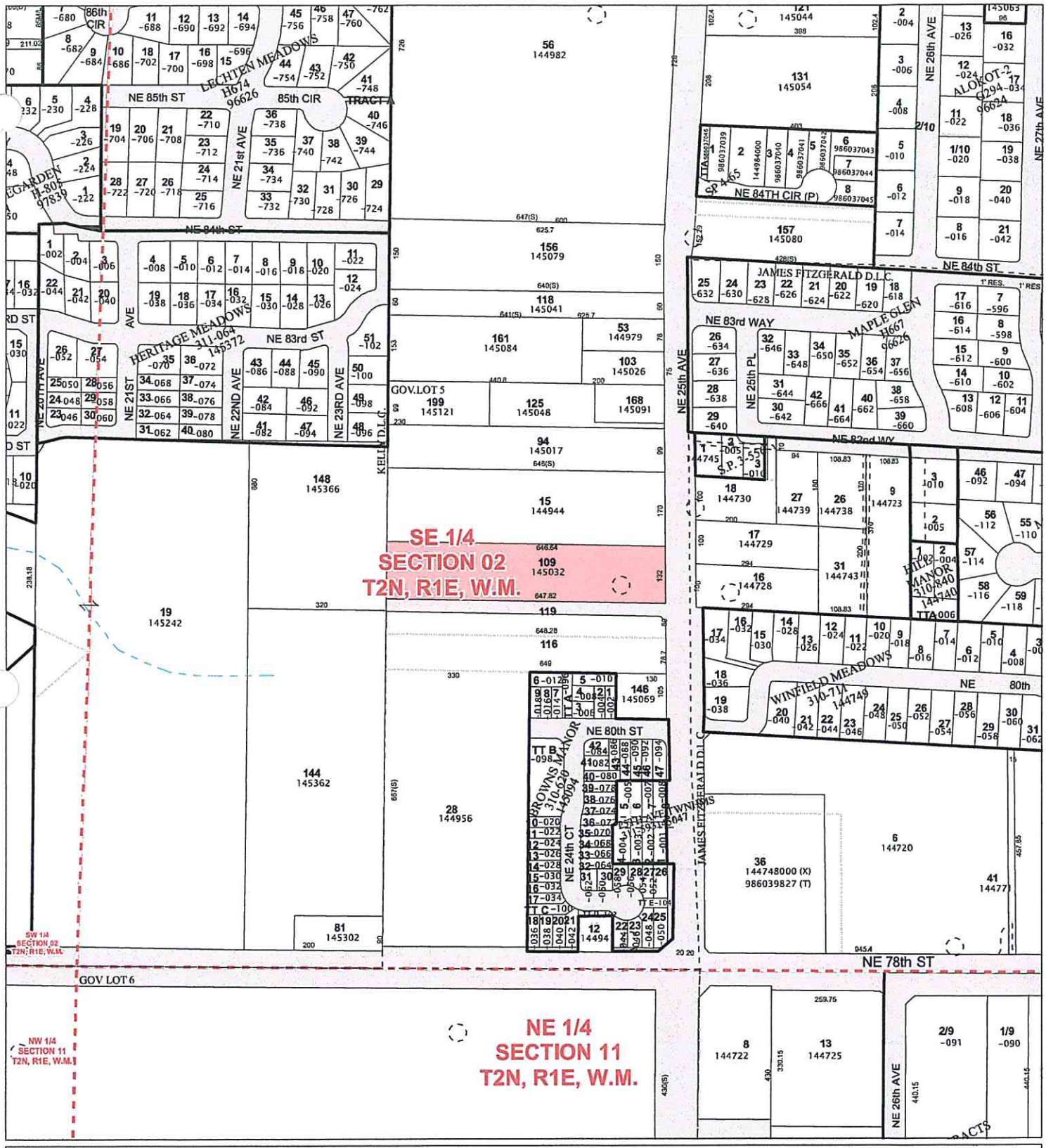

Quarter Section Parcels

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

Printed on: November 26, 2018

Subdivision Lines
Donation Land Claim
Section Quarters
City Boundaries
Subject Property(s)
Road Right of Way - Actual Road May not Exist
Transportation or Major Utility Easement

Geographic Information System

0 150 300 Feet

Information shown on this map was collected from several sources. Clark County accepts no responsibility for any inaccuracies that may be present.

Application Narrative

Background

The applicant, Delta Management LLC, is requesting preliminary approval to amend the Comprehensive Plan and Zoning Designation for one parcel totaling 1.99 acres from Urban Low Density Residential (R1-6) to Urban Medium Density Residential (R-18). The property immediately south of the above-mentioned parcel (TI# 145032000) is zoned R-18 Urban Medium Density as well as several other properties surrounding said parcel. Since the planned site is currently a R1-6 zoning an amendment is being requested

Existing Physical Conditions

The site is legally located in the SE Quarter of Section 02, Township 2N, Range 1E of the Willamette Meridian. Parcel 145032-000 is predominantly vacant and is dominated by grass, small trees and brush. The parcel currently contains a single-family residence (approximately 2,294 sq. ft.) and a General-Purpose building (approximately 600 sq. ft.) which will be demolished for the purposes of this development.

According to Clark County GIS mapping the site is composed of 100% non-hydric HoA soils. 75.9% of the parcel has slopes between 0-5% while 24.1% has slopes between 5-10%. The map did not indicate that the parcels contained any wetlands priority habitat or protected species areas

The parcel planned for development is zoned R1-6 or low-density Single-Family Residential. The adjacent plot to the north (144944-000) is zoned Residential (R1-6) and is currently used as single-family residential house. The neighboring plot to the west (145366-000) is also zoned R1-6 or low-density Single-Family Residential and is currently vacant land. The plot to the east (144728-000) is zoned R-16 and is currently has one single family home residing on the parcel. The parcel to the south of the development (144956-000) is zoned R-18 and has been developed as an apartment complex.

Existing Land Uses and Land Use Planning

The property is part of a larger area of approximately 2,400 acres, identified by the County as the "Highway 99 Sub-Area Plan" (HWY99 Plan), for which a subarea plan was prepared in 2008. The Highway 99 Sub-Area Plan was amended in August of 2010 under Ord. 2010-7-07. The HWY99 Plan is separated into four different kinds of planning areas, each with distinct character and existing conditions. This property is located in the "Residential Overlay".

Approval Criteria

The following narrative details how this requested amendment meets the approval criteria of CCC 40.560.010 and how this requested amendment advances the intentions of the HWY 99 Subarea Plan, as a component of Clark County's Comprehensive Plan:

Comprehensive Plan designation changes may only be approved if all the following criteria are met (40.560.010G):

1. *The proponent shall demonstrate that the proposed amendment is consistent with the Growth Management Act (RCW 36.70A) and requirements, the Countywide Planning Policies, the Community Framework Plan, the Comprehensive Plan, applicable city comprehensive plans, applicable capital facilities plans and official population growth forecast; and*

   A. The Growth Management Act

The GMA goals set. the general. direction for the county in adopting its framework plan and comprehensive plan; policies; The GMA lists thirteen overall goals in RCVV 36.70A.020 plus the. shoreline goal added.in RCVV 36.70A.480(1). The goals are not listed in order of priority. The GMA goals that apply to the proposed action are Goals 1, 2, 3, and 4.

(1) Urban growth. Encourage development in urban areas where adequate public facilities and services exist or can be provided in an efficient manner.

Urban growth is proposed as part of this plan/ zone change. This project is proposing growth that is consistent with urban development and land use policies. Adequate public services can be provided for water and sewer service (See Clark Regional Wastewater District Utility Review and CPU's RUR). The existing public road system provides adequate transportation service to the site as described in the traffic report provided by H. Lee and Associates attached with the application. The change from UL R1-6 zoning to UM R-18 zoning does increase the number of average daily trips from 95 to 247. This is an increase of 152 average daily trips. The increase in trips generated by the build out of the proposed rezone is negligible compared to the existing zoning impacts.

(2) Reduce sprawl. Reduce the inappropriate conversion of undeveloped land into sprawling, low-density development.

This Proposal will help reduce urban sprawl. The proposal to change the zoning from R1-6 to R-18 encourages medium-density residential uses and better utilizes the 2-acre site.

(3) Transportation. Encourage efficient multimodal transportation systems-that are based on regional priorities and coordinated with county and city comprehensive plans.

This proposal would permit up to 35 new apartments. The existing urban road system provides adequate access and transportation service to the site as shown in the traffic report included in the application that was prepared by H. Lee and Associates. Road improvements, as required, will enhance public circulation in the surrounding area.

(4) Housing. Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock.

This proposal will increase the existing housing stock. Housing types are also limited to medium-density residential which will reduce urban sprawl. The demand for affordable housing is high in Clark County. There are very few opportunities for low income renters to establish necessary residency close to places of employment. This proposal will provide an opportunity for renters to live very close to large employers, reduce transportation costs, and provide a higher standard of living. Development of this site for Urban Medium Density residential use can help address a significant need for added multi-family and affordable housing in Clark County in a manner that is compatible with and supports other nearby land uses.

(5) Economic development. Encourage economic development throughout the state that is consistent with adopted comprehensive plans, promote economic opportunity for all citizens of this state, especially for unemployed and for disadvantaged persons, promote the retention and expansion of existing businesses and recruitment of new businesses, recognize reginal differences impacting economic development opportunities, and encourage growth in areas experiencing insufficient economic growth, all within the capacities of the state's natural resources, public services, and public facilities.

This project would provide economic development opportunities in the construction sector of the County's economy on an underutilized piece of property.

B. Countywide Planning Policies

Countywide Planning Policies are discussed in Chapter 1, Section 1 of the Comprehensive Plan. The parcel is located in an urban area with all necessary infrastructure adjacent to the site. This proposal is compatible with Countywide Planning Policies.

C. The Community Framework Plan

In the Comprehensive Plan, under the Community Framework Planning Process, a primary goal of the plan is to provide housing in close proximity to jobs resulting in shorter vehicle trips and allow densities along public transit corridors that support high capacity transit, either bus or light rail. The proposal will provide much needed housing adjacent to Commercial, Light Industrial, and Business Park properties. The proposed zone change requests infill development that enhances the existing community character and provides a mix of housing types. Framework Plan Policy 2.1.6 states that all cities and towns are to encourage infill housing as the first priority for meeting the housing needs of the community. There is considerable latent demand from the recession that has yet to be fully addressed. And resident choices have changed -favoring more rental and multi-family housing opportunities than historically has been the case. This proposal is compatible with the other policies listed in the Community Framework Plan.

D. The Comprehensive Growth Management Plan

The Clark County Comprehensive Plan contains many policies that guide urban form and efficient land use patterns. The most relevant goals and policies applicable to this application are as follows:

> *"Goal: Encourage more compact and efficiently served urban forms and reduce the inappropriate conversion of land to sprawling, low density development."*
>
> *1.3.1 "Urban densities and uses may occur throughout the urban growth area if it is provided with adequate services. Development and redevelopment in the UGA should be strongly encouraged to occur in greater intensity in major centers, transit routes and other areas characterized by both existing higher density urban development and existing urban services. Development and redevelopment should be encouraged to occur with less intensity in areas where urban development is of lower density or has not yet occurred, or in areas where urban services do not yet exist."*

The proposed rezone of this land is consistent with the type and intensity of uses expected in the Urban Growth Area. The anticipated use of this site for the development of multifamily housing is consistent with the type and intensity of uses expected in the Urban Growth Area. Water and sewer service in this area are provided by Clark Public Utilities and Clark Regional Wastewater District. The site is located off NE 78th Street, and is served by CTRAN bus route #78 and by Fire District 6. The proposed amendment is-consistent with polices in the 2016 Plan.

2. The proponent shall demonstrate that the designation is in conformance with the appropriate locational criteria identified in the plan; and

This designation is in conformance with the appropriate locational criteria identified in the plan. It meets the intent and the criteria of the Urban Medium Density (R-18) zone. With respect to the proposed comprehensive designation and zoning, this parcel can and will meet the intent and criteria of the Urban Medium Density (R-18) zoning.

Per Clark County Code 40.210.020.A (1):

(1) The residential (R-12, R-18, R-22, R-30 and R-43) districts are intended to provide for medium and higher density residential development based upon consistency with the comprehensive plan and compatibility with surrounding land uses. The following factors will be considered in the application of one (1) of these districts to a particular site:

a) Properties designated urban medium density residential on the comprehensive plan should not exceed a density of R-22. Urban high-density residential areas are appropriate for densities in the R-30 and R-43 districts.

b) Proximity to major streets and the available capacity of these streets, adequacy of public water and sewer, vehicular and pedestrian traffic circulation in the area, proximity to commercial services and proximity to public open space and recreation opportunities. Development within these districts will be reviewed to ensure compatibility with adjacent uses including such considerations as privacy, noise, lighting and design.

This site meets the intent and all of the applicable criteria for Urban Medium Density zoning districts.

a) The proposed zoning is Urban Medium Density (R-18) zoning not exceeding the Urban High-Density zoning, meeting this criterion.

b) The site is located off NE 78th street, a major four-lane principal arterial, which based off the traffic study supplied with this application, has plenty of capacity to handle the anticipated new daily trips. The site has the availability of public water and sewer. The existing road infrastructure and pedestrian circulation is available and is more than adequate to serve the site. The site is in close proximity to commercial services. NE Highway 99 is 2 miles to the west and provides a significant amount of commercial services. Additionally, 2.25 miles to the east Costco and other commercial venues are readily available to this site. The site is adjacent to Luke Jensen Sports Park and close NE Padden Parkway Trail east of the site.

3. The map amendment or site is suitable for the proposed designation and there is a lack of appropriately designated alternative sites within the vicinity; and

The map amendment is suitable for the proposed designation. It meets the intent and the criteria of the Urban Medium Density (R-18) zone. There is R-18 zoning directly south of the site. The adjacent Heritage Villas/ Oaks Apartments is now built out; this project in conjunction with the one proposed could be suitable for integration.

There is strong demand for more multi-family housing in Clark County. This is the case for the 78th Street corridor which has experienced newer single-family attached and detached housing development but remains underserved with multi-family development

Based on U.S. Census data from the American Community Survey (ACS), about one-half of all renters in Clark County are currently paying 30% or more of their income for housing.[1] While a

[1] Source is the U.S. Census, American Community Survey, "Housing Cost as a % of Income by "Tenure" (2011-15), table DP04.

determination of unit mix and pricing has yet to be determined for the site, the property and location present a unique opportunity to improve housing affordability for Clark County residents. Location on the 78th Street corridor should provide opportunity to deliver a more price-conscious and cost-effective multi-family residential product than would be the case at other higher cost sites elsewhere in Clark County that are similarly zoned as proposed here.

This proposal will allow for the creation of medium-density residential buildouts in an area where currently zoned R-18 parcels are unable to develop due to environmental restrains or already developed land with no foreseeable redevelopment in the near future.

4. The plan map amendment either:

(a) responds to a substantial change in conditions applicable to the area within which the subject property lies;
(b) better implements applicable comprehensive plan policies than the current map designation; or
(c) corrects an obvious mapping error; and

The proposed amendment addresses this requirement by b) better implementing applicable comprehensive plan policies than the current map designation. The site is located in an area lacking in developable medium density parcels. The R-18 parcels to the South are being utilized by an already built out apartment complex as well as a subdivision. If this site is rezoned to an R-18 zoning designation, it will provide the opportunity to develop future multifamily housing. This will assist in supplying the high demand for affordable multifamily housing. The demand for affordable housing is high in Clark County. The change in comprehensive plan designation and zoning designation will help alleviate this demand more effectively than keeping the current zoning designation.

5. Where applicable, the proponent shall demonstrate that the full range of urban public facilities and services can be adequately provided in an efficient and timely manner to serve the proposed designation. Such services may include water, sewage, storm drainage, transportation, fire protection and schools. Adequacy of services applies only to the specific change site

All public facilities are available and adequate to serve the site. This proposal will not materially affect any of the services required for R-18 residential development. The site is located in an urban area, which has all of those services readily available.

<u>Zoning Map Change</u>

The concurrent Zone change may only be approved if all of the following criteria are met (40.560.020G):

1. Requested zone change is consistent with the comprehensive plan map designation.

A comprehensive plan map designation change is requested with the zone change proposal. If the map designation change is approved; the corresponding zone change will be consistent with the new designation.

2. The requested zone change is consistent with the plan policies, locational criteria, and the purpose statement of the zoning district;

The zone change is consistent with these criterion as discussed previously in this narrative.

3. The zone change, either:

- *Responds to a substantial change in conditions applicable to the area within which the subject property lies;*
- *Better implements applicable comprehensive plan policies than the current map designation: or*
- *Corrects and obvious mapping error.*

The zone change responds to a substantial change in conditions applicable to the area within which the subject property lies due to a change in market conditions. The site is located in an area lacking in developable medium density parcels. The R-18 parcels to the South are being utilized by an already built out apartment complex as well as a subdivision. If this site is rezoned to an R-18 zoning designation, it will provide the opportunity to develop future multifamily housing. This will assist in supplying the high demand for affordable multifamily housing. The demand for affordable housing is high in Clark County. The change in comprehensive plan designation and zoning designation will help alleviate this demand more effectively than keeping the current zoning designation.

4. There are adequate public facilities and services to serve the requested rezone change.

All public facilities are available and adequate to serve the site. This proposal will not materially affect any of the services required for R-18 residential development. The site is located in an urban area, which has all of those services readily available. Water and sewer service in this area are provided by Clark Public Utilities and Clark Regional Wastewater District. The site is located off NE 78th Street, and is served by CTRAN bus route #78 and by Fire District 6. The existing road infrastructure and pedestrian circulation is available and is more than adequate to serve the site. The site is in close proximity to commercial services. NE Highway 99 is 2 miles to the west and provides a significant amount of commercial services. Additionally, 2.25 miles to the east Costco and other commercial venues are readily available to this site. The site is adjacent to Luke Jensen Sports Park and close NE Padden Parkway Trail east of the site.

Additional Discussion and Summary

This request meets the current needs of Clark County by allowing the opportunity to construct multi-family dwellings in a time of need. The R-18 designation is a desirable zoning for this type of location. The applicant plans on submitting a market study, even though not required, prior to issuance of the staff report on this application.

Additionally, the county is experiencing a drastic upward change in home and rental pricing which is leaving many struggling to find affordable housing. This site, if zoned R-18, could provide this much needed affordable housing.

Furthermore, the proposed rezone still meets the intentions and applicability of the Highway 99 Sub-Area Plan and Highway 99 Overlay. If the Comprehensive plan and zoning designation were to change to an R-18 Zone then consequentially the overlay standards for this property would change as well. The new Overlay standard would be changed to a Mixed Residential Overlay rather than single-family. While no plan has yet been prepared by the applicant, all approval criteria relating to the Overlay would still need to be met.

The request for a zone-change approval for this project has been shown to be consistent with the applicable standards of Clark County, with the adopted policies of the Comprehensive Plan, and

with the Urban Growth Area Guidelines. The applicant respectfully requests approval of this application.

REPORT

NE 25th Avenue Subdivision Annual Review Rezone Traffic Impact Study

January 25, 2019

H. Lee & Associates, PLLC

NE 25th AVENUE SUBDIVISION ANNUAL REVIEW REZONE TRAFFIC IMPACT STUDY

Prepared for:

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January 25, 2019

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

SECTION I
STUDY SUMMARY

INTRODUCTION

This traffic impact analysis has been prepared to assess transportation impacts related to the proposed rezone of tax lot 145032-000 in Clark County, Washington. The project site is located at 8106 NE 25th Avenue. The existing parcel is approximately 1.99 acres and is currently zoned R1-6. The rezone proposal is to change the existing zoning from R1-6 to R-18. There is one existing single-family detached home on-site that will be demolished upon construction of the development of the property. Figure 1 shows the project vicinity.

Project Description

The build out of the existing R1-6 zoning was based on Clark County Code (CCC) Table 40.210.020-2. Based on CCC Table 40.220.010-4., the maximum density for the R1-6 zoning is 5.8 dwelling unit per acre. Applying the maximum density for the R1-6 zoning to the size of the project site yields a build out of 11 single-family detached dwelling units.

The build out of the proposed R-18 zoning was based on Clark County Code (CCC) Table 40.210.020-2. Based on CCC Table 40.220.020-5., the maximum density for the R-18 zoning is 18 dwelling unit per acre. Applying the maximum density for the proposed R-18 zoning to the size of the project site yields a build out of 35 single-family attached dwelling units.

Scope of Traffic Impact Study

The scope of the traffic impact study was developed from Clark County's Pre-Application Conference Summary and adjusted based on known Clark County traffic study requirements. From this information, the following intersections were determined to require analysis:

- NE 25th Avenue/NE 88th Street
- NE 25th Avenue/NE 78th Street

The remainder of this report presents the following analysis:

- Existing P.M. peak hour traffic conditions in the project study area.

- The 2039 "Without Project" P.M. peak hour condition was analyzed to establish the future baseline condition for the rezone analysis. The 2039 "Without Project" condition traffic volumes were derived from RTC's 2035 regional transportation forecast model. The RTC model link volumes were post-processed to turning movement volumes based on the NCHRP 255 methodology and the TurnsW32 software. These 2035 post-processed turning

movement traffic volumes were adjusted with a two (2) percent compounded annual growth factor to adjust the volumes to the 2039 analysis year. Since the RTC model included the build out of the project site assuming the existing zoning, these volumes were subtracted from the post-processed turning movement traffic volumes to arrive at the 2039 "Without Project" condition traffic volumes.

- Trip generation estimates for the build out of the existing zoning and the proposed zoning.

- Trip distribution and assignment of trips generated by the build out of the existing zoning and the proposed zoning.

- The 2039 "Existing Zoning Build Out" and 2039 "Proposed Zoning Build Out" conditions were analyzed and compared to each other to determine the traffic impacts of the rezone proposal.

SUMMARY OF FINDINGS

The following are the findings and recommendations from the traffic analysis:

Findings

- The "Existing Zoning Build Out" is expected to generate 95 daily, 7 A.M. peak hour (2 in, 5 out), and 10 P.M. peak hour (6 in, 4 out) net new trips.

  The "Proposed Zoning Build Out" is expected to generate 247 daily, 15 A.M. peak hour (4 in, 11 out), and 19 P.M. peak hour (12 in, 7 out) net new trips.

  The "Proposed Zoning Build Out" is expected to generate 152 more daily, 8 more A.M. peak hour (2 in, 6 out), and 9 more P.M. peak hour (6 in, 3 out) net new trips. The increase in trips generated by the build out of the proposed rezone is negligible compared to the existing zoning impacts.

- The study area intersections are projected to operate at acceptable levels of service in the 2039 "Existing Zoning Build Out" and 2039 "Proposed Zoning Build Out" conditions.

- All of the study area roadway segment v/c ratios are all within the acceptable standard in the 2039 "Existing Zoning Build Out" and 2039 "Proposed Zoning Build Out" conditions.

Recommendations

- Based on the traffic impact analysis documented in this report, no physical, off-site mitigation would be needed.

- Based on the traffic impact analysis documented in this report, the rezoning of the NE 25th Avenue property will not result in any significant degradation in traffic conditions nearby the project site.

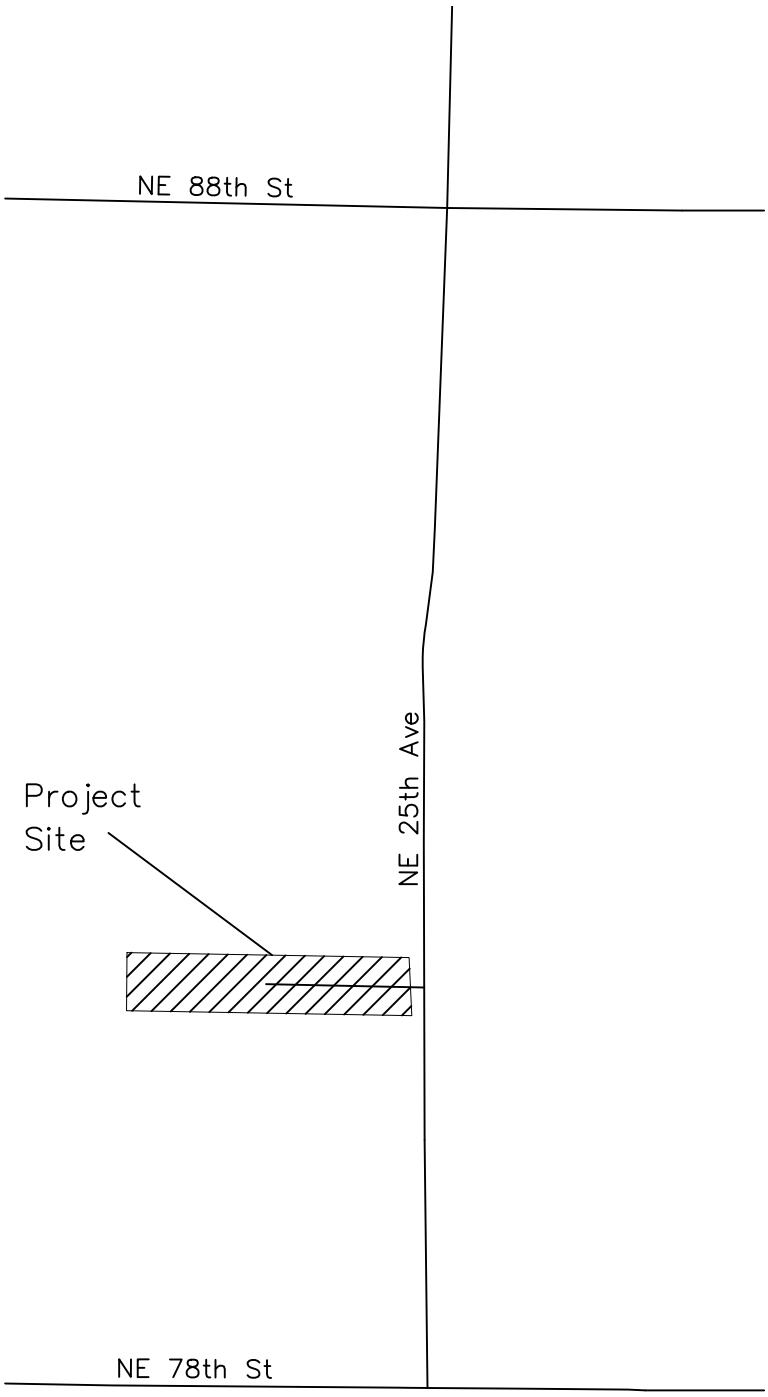


FIGURE 1
Site Vicinity Map

NOT TO SCALE

SECTION II
EXISTING CONDITIONS

SITE CONDITION AND ADJACENT LAND USE

There is one existing single-family detached home on-site that will be demolished upon construction of the development. Vacant land exists immediately to the west. Residential uses surround the remainder of the project site.

TRANSPORTATION FACILITIES

The following provides a description of the existing street system in the study area including a description of street classifications and characteristics.

NE 25th Avenue: NE 25th Avenue is a two-to-three lane collector (C-2cb) roadway. Sidewalks and bike lanes exist along both sides of the roadway. The posted speed limit is 30 mph.

NE 78th Street: NE 78th Street west of NE 18th Avenue is a four-lane principal arterial (Pr-4cb) with a center left turn lane/median and additional turn lanes at major intersections. This section of NE 78th Street has sidewalks and bike lanes along both sides of the roadway and a posted speed limit of 35 mph. NE 78th Street between NE 18th Avenue and NE 52nd Court is a four-lane principal arterial (Pr-4cb) with a center left turn lane and additional turn lanes at major intersections. This section of NE 78th Street has sidewalks and bike lanes along both sides of the roadway and a posted speed limit of 45 mph. NE 78th Street east of NE 52nd Court is a two-to-three lane minor arterial (M-2cb) with additional turn lanes at major intersections. This section of NE 78th Street has intermittent sidewalks and bike lanes along both sides of the roadway and posted speed limit of 40 mph.

NE 88th Street: NE 88th Street is a two-lane collector (C-2cb) with additional turn lanes at major intersections. Sidewalks and bike lanes exist on both sides of the roadway. The posted speed limit is 35 mph.

As part of this study, levels of service analyses were performed for the following intersections:

- NE 25th Avenue/NE 88th Street
- NE 25th Avenue/NE 78th Street

Figure 2 shows the lane configuration and traffic control at the study area intersections.

EXISTING TRAFFIC VOLUMES

P.M. peak hour traffic counts were obtained at the study area intersections by H. Lee & Associates, PLLC (HLA) in January 2019. Per the 2010 HCM[1], peak 15-minute traffic volumes were multiplied by four (4) to arrive at the peak hour traffic volumes. With this methodology of developing peak hour traffic volumes, the peak hour factor (PHF) is set to 1.00 because the peaking has already occurred by multiplying the peak 15-minute traffic volume by four (4). The existing condition traffic volumes are presented in Figure 3. The existing traffic counts can be referenced in Appendix A.

EXISTING LEVELS OF SERVICE

Based on the traffic volumes in Figure 3 and the existing lane configurations presented in Figure 2, peak hour traffic operations were analyzed at the study area intersections using the methodologies outlined in the 2010 Highway Capacity Manual (HCM). According to the HCM, there are six levels of service (LOS) by which the operational performance of an intersection may be described. These levels of service range between LOS "A" which indicates a relatively free-flowing condition and LOS "F" which indicates operational breakdown. For signalized intersections of regional significance within Clark County, individual movements at each signalized intersection shall not exceed an average of two (2) cycle lengths or two hundred forty (240) seconds of delay (whichever is less) per CCC 40.350.020.G.1.b.

For unsignalized intersections of regional significance within Clark County, LOS “E” is the minimum acceptable standard in Clark County, as long as signal warrants are not met per CCC 40.350.020.G.1.c. For unsignalized intersections, the level of service and delay reported is by approach or conflicting movement. If signal warrants are met, then the standard is LOS D or better. The signalization of an unsignalized intersection shall be at the sole discretion of the Clark County Public Works Director and shall not obligate Clark County to meet this level of service standard. However, proposed developments shall not be required to mitigate their impacts in order to obtain a concurrency approval unless:

1) The proposed development adds at least five (5) peak period trips to a failing approach; and

2) The worst movement on a failing approach is worsened by the proposed development. In determining whether the movement is worsened, the Public Works director shall consider trip volume, delay, and any other relevant factors.

The existing P.M. peak hour levels of service at the study area intersections are summarized in Table 1a. As shown in Table 1a, all of the signalized intersection individual movements are projected to operate within Clark County’s concurrency standard of an average delay of less than two (2) cycle lengths or two hundred forty (240) seconds (whichever is less) in the existing

[1] 2010 Highway Capacity Manual (HCM), Volume 3, Transportation Research Board, 2010, page 18-2 and 18-3.

condition. Appendix B contains the levels of service worksheets for the existing condition.

Part of the traffic study requirements is to calculate v/c ratios of the roadway segments identified in the pre-application conference report per CCC 40.350.020.G.1.a and Table 40.350.020-1. Table 1b summarizes the v/c ratios for the study area roadway segments for the existing condition. The peak hour traffic volumes were taken from Figure 3 and the capacities were based on the roadway functional classifications and CCC Table 40.350.020-1. Per CCC 40.350.020.G.1.a, the study area roadway segment v/c ratio standard is 0.90. As shown in Table 1b, all of the study area roadway segment v/c ratios are all within the acceptable standard in the existing condition.

Table 1a. Existing Levels of Service

	P.M. Peak Hour	
Signalized Intersection	LOS	Average Delay (sec)
NE 88th Street/NE 25th Avenue		
Eastbound Left	A	7.9
Eastbound Through/Right	B	10.3
Westbound Left	A	7.8
Westbound Through/Right	B	11.0
Northbound Left	B	11.3
Northbound Through/Right	B	11.4
Southbound Left	B	13.0
Southbound Through/Right	B	10.4
Overall	B	10.8
NE 78th Street/NE 25th Avenue		
Eastbound Left	A	4.4
Eastbound Through	A	3.2
Westbound Through/Right	A	7.5
Southbound Left	C	20.8
Southbound Right	B	15.5
Overall	A	6.3

Table 1b. Existing V/C Ratios for Study Area Roadway Segment

Roadway Segment	P.M. Peak Hour Volume	Capacity	P.M. V/C Ratio
NE 88th Street			
West of NE 25th Avenue – EB	344	900	0.38
West of NE 25th Avenue – WB	316	900	0.35
East of NE 25th Avenue – EB	392	900	0.44
East of NE 25th Avenue – WB	372	900	0.41

[1]The traffic volume is the average of the upstream and downstream traffic volumes of the roadway segment.

Table 1b. Existing V/C Ratios for Study Area Roadway Segment Continued

Roadway Segment	P.M. Peak Hour Volume	Capacity	P.M. V/C Ratio
NE 78th Street			
West of NE 25th Avenue – EB	1,096	1,800	0.61
West of NE 25th Avenue – WB	700	1,800	0.39
East of NE 25th Avenue – EB	1,096	1,800	0.61
East of NE 25th Avenue – WB	764	1,800	0.42
NE 25th Avenue			
North of NE 88th Street – NB	272	900	0.30
North of NE 88th Street – SB	180	900	0.20
NE 88th Street to NE 78th Street – NB[1]	256	900	0.28
NE 88th Street to NE 78th Street – SB[1]	182	900	0.20

[1]The traffic volume is the average of the upstream and downstream traffic volumes of the roadway segment.

ACCIDENT HISTORY

Accident data was obtained from the Washington State Department of Transportation (WSDOT) for the five year period between January 1, 2014 and January 1, 2019. The data includes total crashes and crashes by severity (i.e., fatality, injury, or property damage only). The accident analysis is summarized in Table 2 for the study area intersections. Appendix C contains the accident data.

Generally, an accident rate of less than 1.00 accidents per million entering vehicles is considered acceptable and no further analysis is necessary. As shown in Table 2, all of the accident rates at the study area intersections are below 1.00 accidents per million entering vehicles, so no further analysis was conducted.

Table 2. Summary of Traffic Accident History at Intersections in the Study Area

Intersection	Average Annual Accidents				acc/mev[2]
	PDO[1]	Injury	Fatal	Total	
NE 25th Avenue/NE 88th Street	0.6	2.0	0.0	2.6	0.49
NE 25th Avenue/NE 88th Street	0.6	1.4	0.0	2.0	0.21

[1] PDO = property damage only

[2] acc/mev = accidents per million entering vehicles

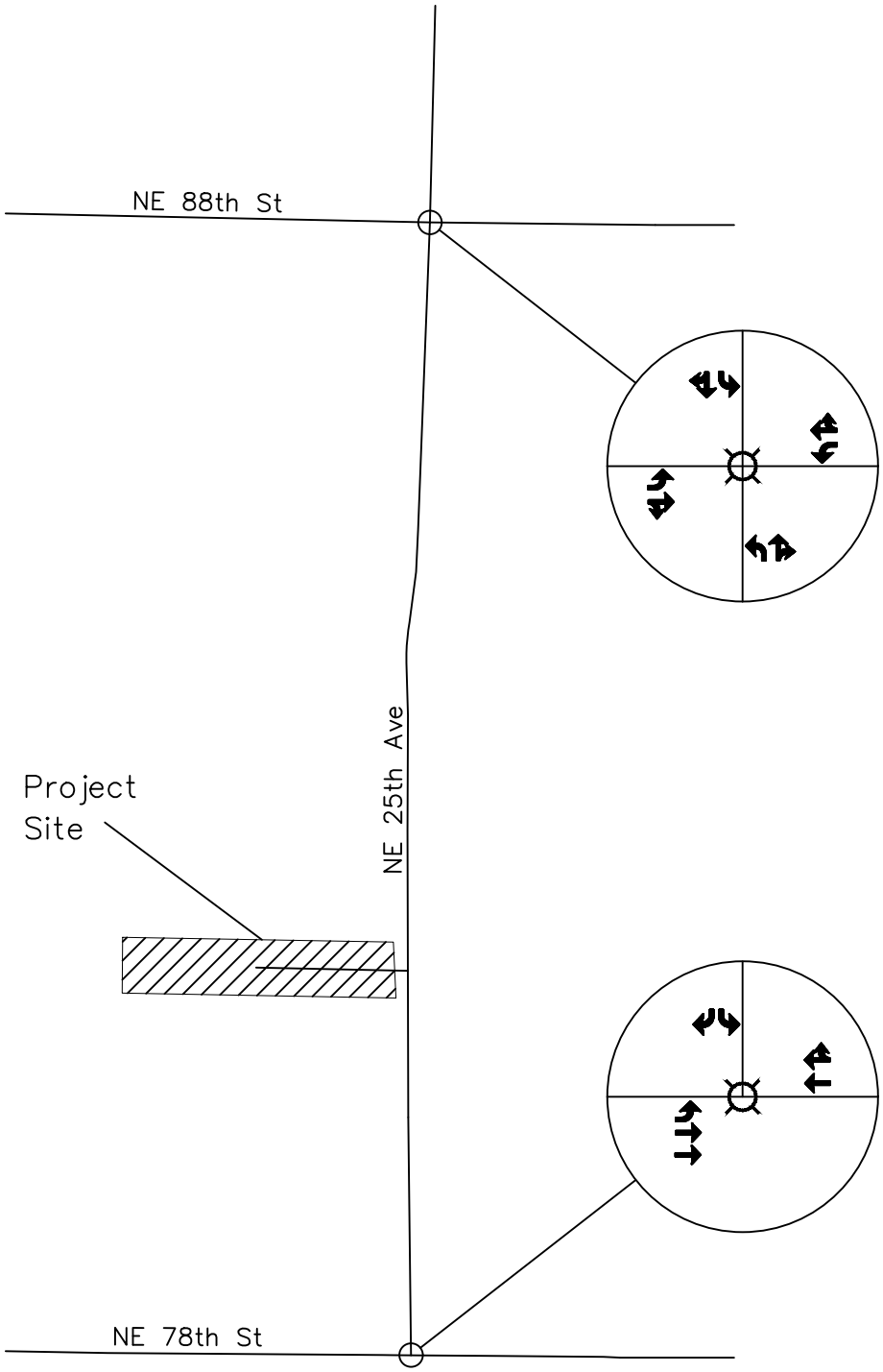


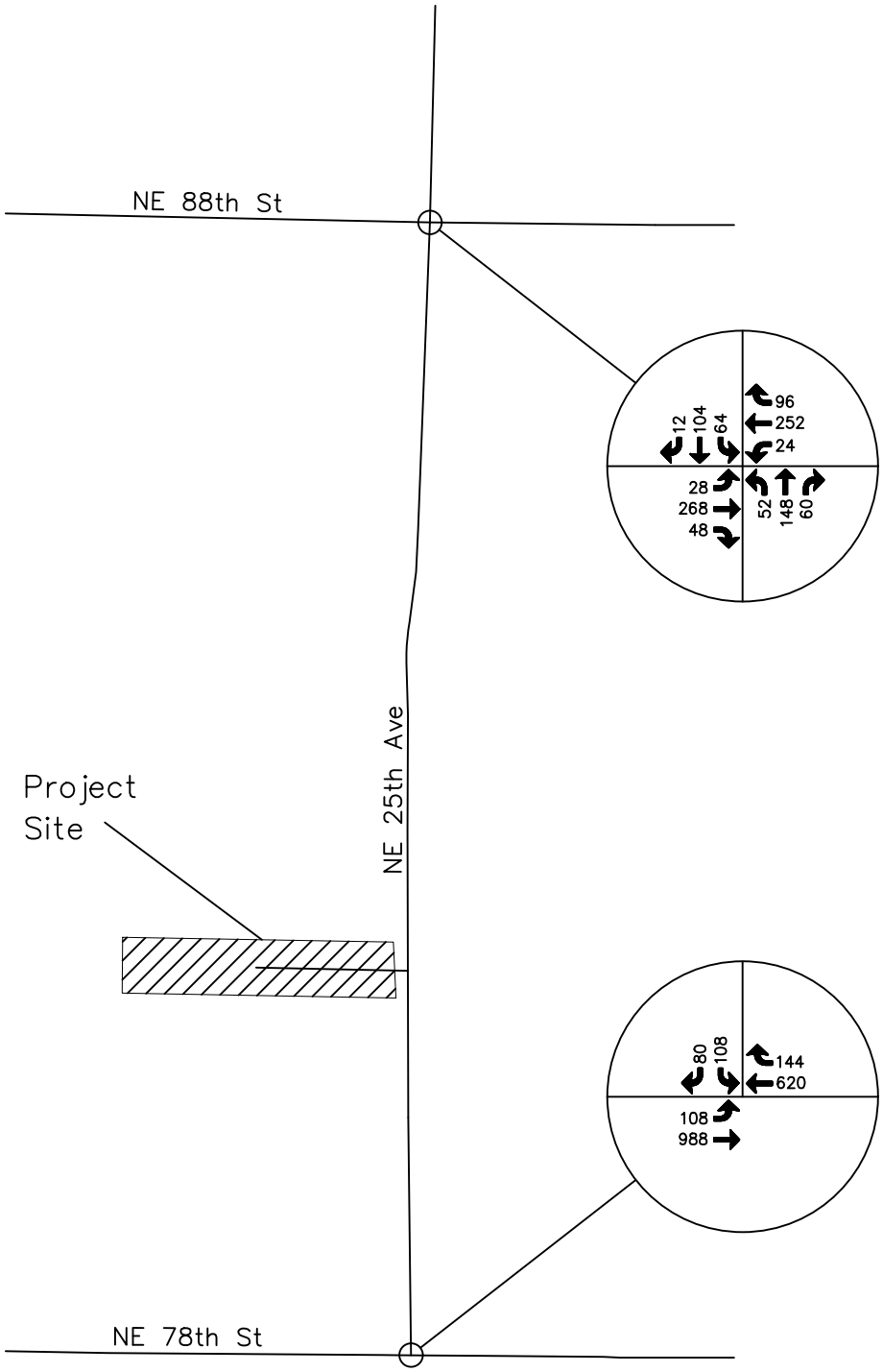
FIGURE 2
Existing Lane Configuration and Traffic Control

LEGEND

Lane Usage
Traffic Signal
Stop Sign

NOT TO SCALE

19004_Figures.Dwg



LEGEND

200 P.M. Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 3
Existing A.M. and P.M.
Peak Hour Traffic Volumes

EXISTING PUBLIC TRANSIT SERVICE

C-Tran provides public transit service in Clark County. Currently there are no routes that provide service adjacent to the project site. The closest route to the project site is Route #78 – 78th Street, which provides service approximately 0.12 miles south of the project site at the NE 25th Avenue/NE 78th Street intersection.

NON-MOTORIZED TRANSPORTATION

Sidewalks and bike lanes exist immediately adjacent to the project site along NE 25th Avenue.

PLANNED TRANSPORTATION IMPROVEMENTS

A review of the Clark County's Six-Year Transportation Improvement Program (TIP), 2018-2023, revealed that there are no reasonably funded projects in the study area.

SECTION III
TRAFFIC IMPACT ANALYSIS

ANALYSIS METHODOLOGY

The P.M. peak hour traffic impacts generated by the proposed NE 25th Avenue Annual Review Rezone were analyzed as follows.

- The 2039 "Without Project" P.M. peak hour condition was analyzed to establish the future baseline condition for the rezone analysis. The 2039 "Without Project" condition traffic volumes were derived from RTC's 2035 regional transportation forecast model. The RTC model link volumes were post-processed to turning movement volumes based on the NCHRP 255 methodology and the TurnsW32 software. These 2035 post-processed turning movement traffic volumes were adjusted with a two (2) percent compounded annual growth factor to adjust the volumes to the 2039 analysis year. Since the RTC model included the build out of the project site assuming the existing zoning, these volumes were subtracted from the post-processed turning movement traffic volumes to arrive at the 2039 "Without Project" condition traffic volumes.

- Trip generation estimates for the build out of the existing and proposed zonings were estimated using the rates in "Trip Generation, 10th Edition," (Institute of Transportation Engineers, 2017).

- Trip distribution and assignment of trips generated by the build out of the existing and proposed zonings.

- The 2039 "Existing Zoning Build Out" and 2039 "Proposed Zoning Build Out" conditions were analyzed and compared to each other to determine the traffic impacts of the rezone proposal.

The remainder of this section contains a detailed discussion of the methodology summarized above and the analysis results.

2039 "WITHOUT PROJECT" TRAFFIC VOLUMES AND LEVELS OF SERVICE

The 2039 "Without Project" P.M. peak hour condition was analyzed to establish the future baseline condition for the rezone analysis. The 2039 "Without Project" condition traffic volumes were derived from RTC's 2035 regional transportation forecast model. The RTC model link volumes were post-processed to turning movement volumes based on the NCHRP 255 methodology and the TurnsW32 software. These 2035 post-processed turning movement traffic volumes were adjusted with a two (2) percent compounded annual growth factor to adjust the volumes to the 2039 analysis year. Since the RTC model included the build out of the project site assuming the existing zoning,

these volumes were subtracted from the post-processed turning movement traffic volumes to arrive at the 2039 "Without Project" condition traffic volumes.

Appendix D contains the RTC model traffic volumes utilized and the results of the post-processing from the TurnsW32 software. Figure 4 shows the 2039 "Without Project" traffic volumes.

Levels of service were calculated at the study area intersections with the 2039 "Without Project" traffic volumes shown in Figure 4 and the lane configurations shown earlier in Figure 2. Appendix E contains the levels of service worksheets for the 2039 "Without Project" condition.

The 2039 "Without Project" P.M. peak hour levels of service at the study area intersections are summarized in Table 3a. As shown in Table 3a, all of the signalized intersection individual movements are projected to operate within Clark County's concurrency standard of an average delay of less than two (2) cycle lengths or two hundred forty (240) seconds (whichever is less) in the 2039 "Without Project condition.

Part of the traffic study requirements is to calculate v/c ratios of the roadway segments identified in the pre-application conference report per CCC 40.350.020.G.1.a and Table 40.350.020-1. Table 3b summarizes the v/c ratios for the study area roadway segments for the 2039 "Without Project" condition. The peak hour traffic volumes were taken from Figure 4 and the capacities were based on the roadway functional classifications and CCC Table 40.350.020-1. Per CCC 40.350.020.G.1.a, the study area roadway segment v/c ratio standard is 0.90. As shown in Table 2b, all of the study area roadway segment v/c ratios are all within the acceptable standard in the 2039 "Without Project" condition.

Table 3a. 2039 "Without Project" Levels of Service

	P.M. Peak Hour	
Signalized Intersection	LOS	Average Delay (sec)
NE 88th Street/NE 25th Avenue		
Eastbound Left	A	9.2
Eastbound Through/Right	A	8.6
Westbound Left	B	10.3
Westbound Through/Right	B	15.6
Northbound Left	B	12.6
Northbound Through/Right	B	12.2
Southbound Left	B	15.5
Southbound Through/Right	B	11.9
Overall	B	12.9
NE 78th Street/NE 25th Avenue		
Eastbound Left	A	5.7
Eastbound Through	A	2.7
Westbound Through/Right	A	7.4
Southbound Left	C	30.1
Southbound Right	C	24.5
Overall	A	6.3

Table 3b. 2039 "Without Project" V/C Ratios for Study Area Roadway Segment

Roadway Segment	P.M. Peak Hour Volume	Capacity	P.M. V/C Ratio
NE 88th Street			
West of NE 25th Avenue – EB	297	900	0.33
West of NE 25th Avenue – WB	132	900	0.15
East of NE 25th Avenue – EB	309	900	0.34
East of NE 25th Avenue – WB	374	900	0.42
NE 78th Street			
West of NE 25th Avenue – EB	1,419	1,800	0.79
West of NE 25th Avenue – WB	1,335	1,800	0.74
East of NE 25th Avenue – EB	1,391	1,800	0.77
East of NE 25th Avenue – WB	1,400	1,800	0.78
NE 25th Avenue			
North of NE 88th Street – NB	594	900	0.66
North of NE 88th Street – SB	296	900	0.33
NE 88th Street to NE 78th Street – NB[1]	211	900	0.23
NE 88th Street to NE 78th Street – SB[1]	131	900	0.15

[1]The traffic volume is the average of the upstream and downstream traffic volumes of the roadway segment.

DEVELOPMENT PLANS

As previously stated, the proposed project site is approximately 1.99 acres. The build out of the existing R1-6 zoning was based on Clark County Code (CCC) Table 40.210.020-2. Based on CCC Table 40.220.010-4., the maximum density for the R1-6 zoning is 5.8 dwelling unit per every acre. Applying the maximum density for the R1-6 zoning to the size of the project site yields a build out of 11 single-family detached dwelling units.

The build out of the proposed R-18 zoning was based on Clark County Code (CCC) Table 40.210.020-2. Based on CCC Table 40.220.020-5., the maximum density for the R-18 zoning is 18 dwelling unit per every acre. Applying the maximum density for the proposed R-18 zoning to the size of the project site yields a build out of 35 single-family attached dwelling units.

TRIP GENERATION

Estimates of daily, A.M. peak hour, and P.M. peak hour trips generated by the build out of the existing and proposed zonings were developed from rates published in "Trip Generation, 10th Edition" (Institute of Transportation Engineers, 2017). The build out of the existing zoning is expected to generate 95 daily, 7 A.M. peak hour (2 in, 5 out), and 10 P.M. peak hour (6 in, 4 out) net new trips. The build out of the proposed zoning is expected to generate 247 daily, 15 A.M.

peak hour (4 in, 11 out), and 19 P.M. peak hour (12 in, 7 out) net new trips. The proposed zoning is expected to generate 152 more daily, 8 more A.M. peak hour (2 in, 6 out), and 9 more P.M. peak hour (6 in, 3 out) net new trips. The increase in trips generated by the build out of the proposed rezone is negligible compared to the existing zoning impacts and is summarized in Table 4.

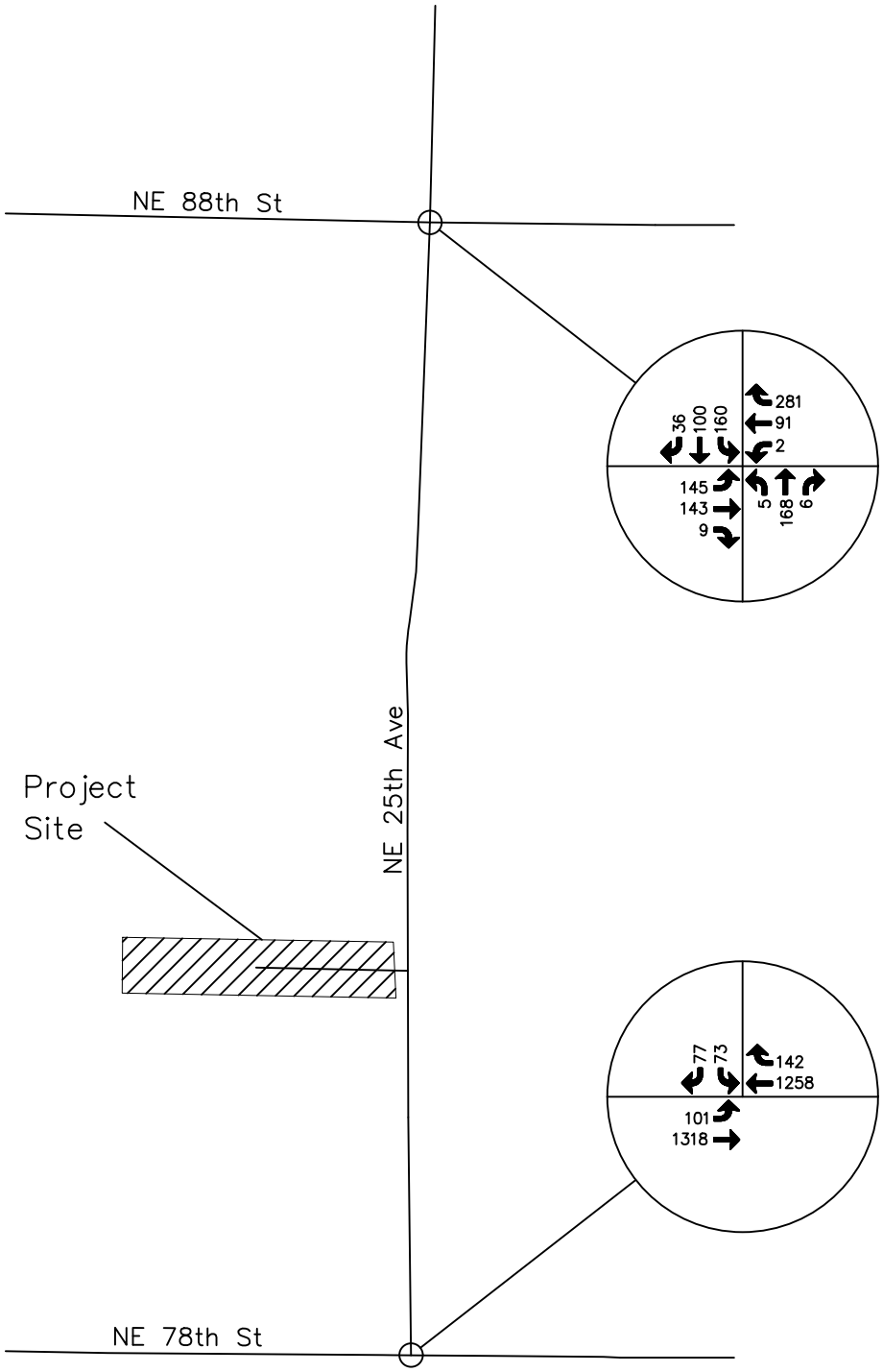
There is an existing home on-site that is predominately served by auto, but because of the existing sidewalks and bike lanes along NE 25th Avenue, a minor amount of non-motorized pedestrian and bike trips may occur. Upon assessing the types of uses that could be developed under R-18 & R1-6 zones and the fact that both zones are consistent with the zoning of the surrounding vicinity, it is expected that the multi-modal splits between the two zone and the overall multi-modal splits of the surrounding area will not vary significantly between existing and future conditions.

Table 4. Trip Generation for NE 25th Avenue Annual Review Rezone

Land Use	Amount	Average Daily	A.M. Peak			P.M. Peak		
			In	Out	Total	In	Out	Total
Existing Zoning (R1-6) – Single Family Detached - (ITE Code 210)								
Rate per dwelling unit		9.44	0.18	0.56	0.74	0.62	0.37	0.99
Trips	11 units	104	2	6	8	7	4	11
Existing Single Family Detached (ITE Code 210)								
Rate per dwelling unit		9.44	0.18	0.56	0.74	0.62	0.37	0.99
Trips	1 unit	(9)	(0)	(1)	(1)	(1)	(0)	(1)
Net Total for Existing Zoning		95	2	5	7	6	4	10
Proposed Zoning (R-18) – Multifamily Housing (Low Rise) - (ITE Code 210)								
Rate per dwelling unit		7.32	0.11	0.35	0.46	0.35	0.21	0.56
Trips	35 units	256	4	12	16	13	7	20
Existing Single Family Detached (ITE Code 210)								
Rate per dwelling unit		9.44	0.18	0.56	0.74	0.62	0.37	0.99
Trips	1 unit	(9)	(0)	(1)	(1)	(1)	(0)	(1)
Net Total for Proposed Zoning		247	4	11	15	12	7	19
Proposed Zoning Trip Increase		**152**	**2**	**6**	**8**	**6**	**3**	**9**

TRIP DISTRIBUTION AND ASSIGNMENT

A generalized peak hour trip distribution was developed from the select zone assignment from RTC's regional model which can be referenced in Appendix D. Figure 5a shows the resulting trip distribution pattern and assignment of the trips generated by the build out of the existing zoning. Figure 5b shows the trip distribution pattern and assignment of the trips generated by the build out of the proposed zoning.



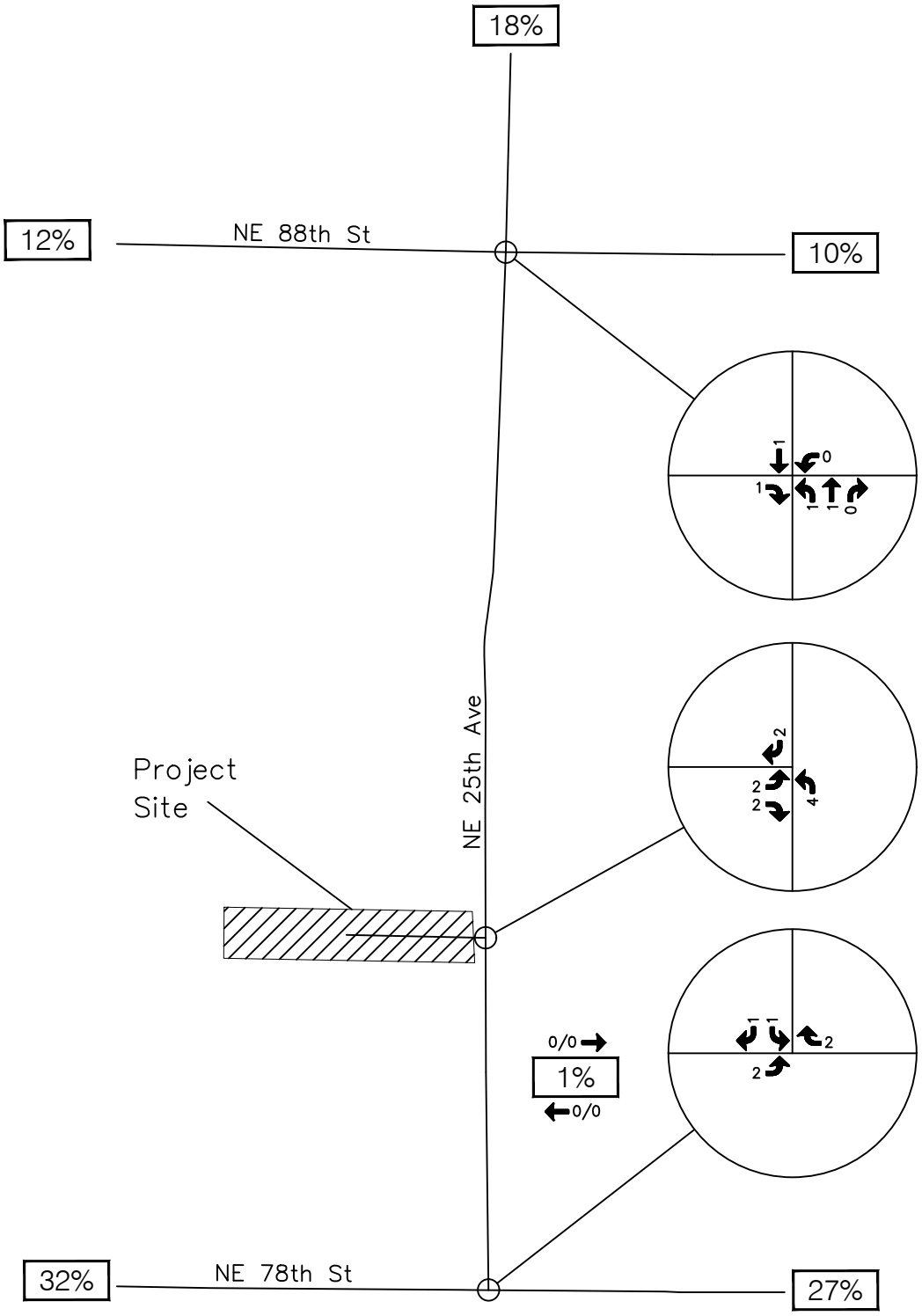
LEGEND

200 P.M. Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 4
2039 "Without Project"
P.M. Peak Hour Traffic Volumes

19004_Figures.Dwg



LEGEND

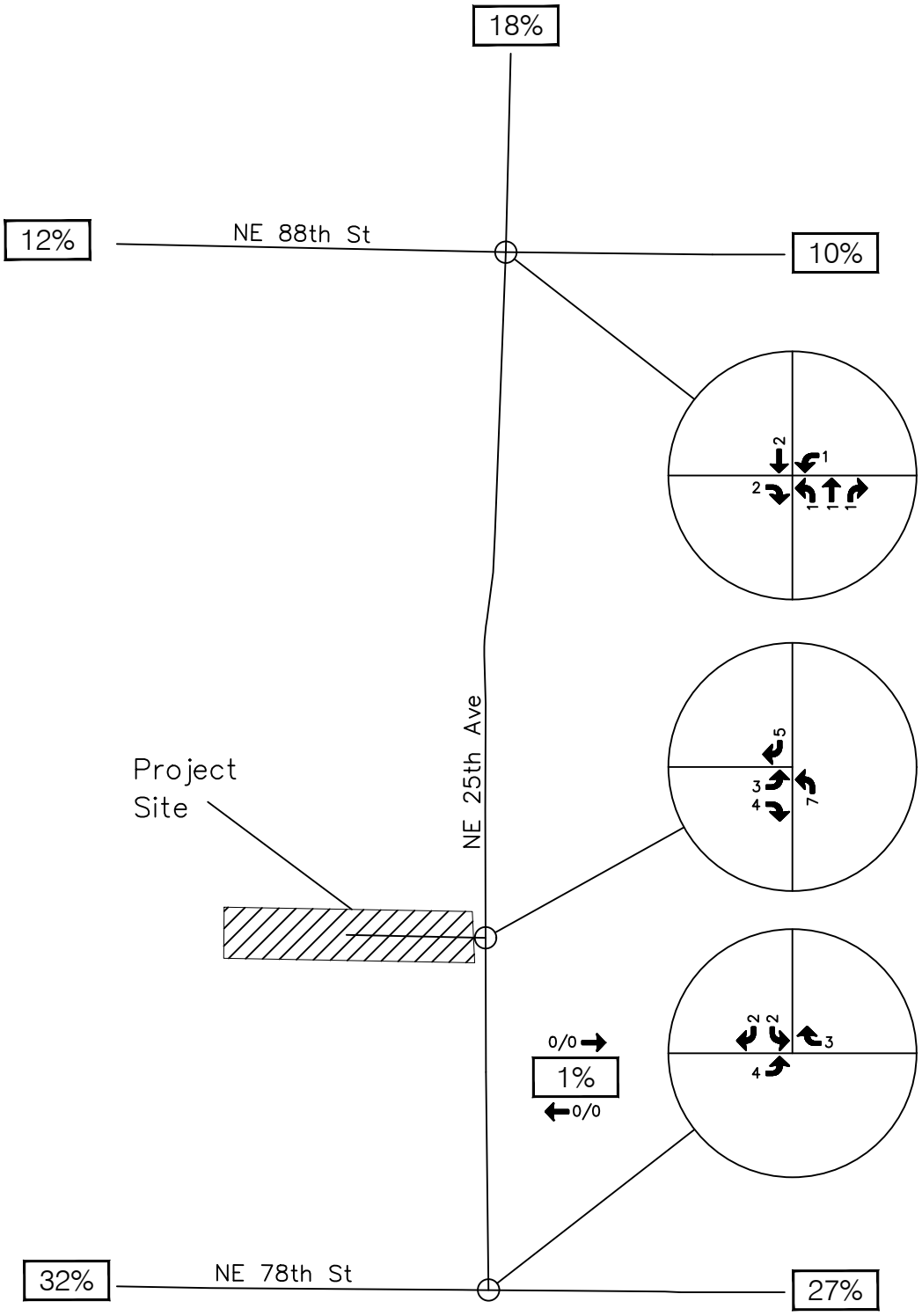
200 A.M./P.M. Peak Hour Traffic Volume

10% Peak Hour Trip Distribution

NOT TO SCALE

FIGURE 5a
Existing Zoning (R1-6)
Trip Distribution and Assignment
Traffic Volumes

19004_Figures.Dwg



LEGEND

200 A.M./P.M. Peak Hour Traffic Volume

10% Peak Hour Trip Distribution

NOT TO SCALE

FIGURE 5b
Proposed Zoning (R-18)
Trip Distribution and Assignment
Traffic Volumes

19004_Figures.Dwg

2039 "EXISTING ZONING BUILD OUT" TRAFFIC VOLUMES AND LOS

The traffic volumes shown in Figures 4 and 5a were combined to arrive at the 2039 "Existing Zoning Build Out" P.M. peak hour traffic volumes. Figure 6 shows the 2039 "Existing Zoning Build Out" traffic volumes. Levels of service were calculated at the study area intersections with the 2039 "Existing Zoning Build Out" traffic volumes shown in Figure 6 and the lane configurations shown previously in Figure 2. Appendix F contains the levels of service worksheets for the 2039 "Existing Zoning Build Out" condition.

The 2039 "Existing Zoning Build Out" P.M. peak hour levels of service at the study area intersections are summarized in Table 5a. As shown in Table 5a, all of the signalized intersection individual movements are projected to operate within Clark County's concurrency standard of an average delay of less than two (2) cycle lengths or two hundred forty (240) seconds (whichever is less) in the 2039 "Existing Zoning Build Out" condition.

Part of the traffic study requirements is to calculate v/c ratios of the roadway segments identified in the pre-application conference report per CCC 40.350.020.G.1.a and Table 40.350.020-1. Table 5b summarizes the v/c ratios for the study area roadway segments for the 2039 "Existing Zoning Build Out" condition. The peak hour traffic volumes were taken from Figure 6 and the capacities were based on the roadway functional classifications and CCC Table 40.350.020-1. Per CCC 40.350.020.G.1.a, the study area roadway segment v/c ratio standard is 0.90. As shown in Table 4b, all of the study area roadway segment v/c ratios are all within the acceptable standard in the 2039 "Existing Zoning Build Out" condition.

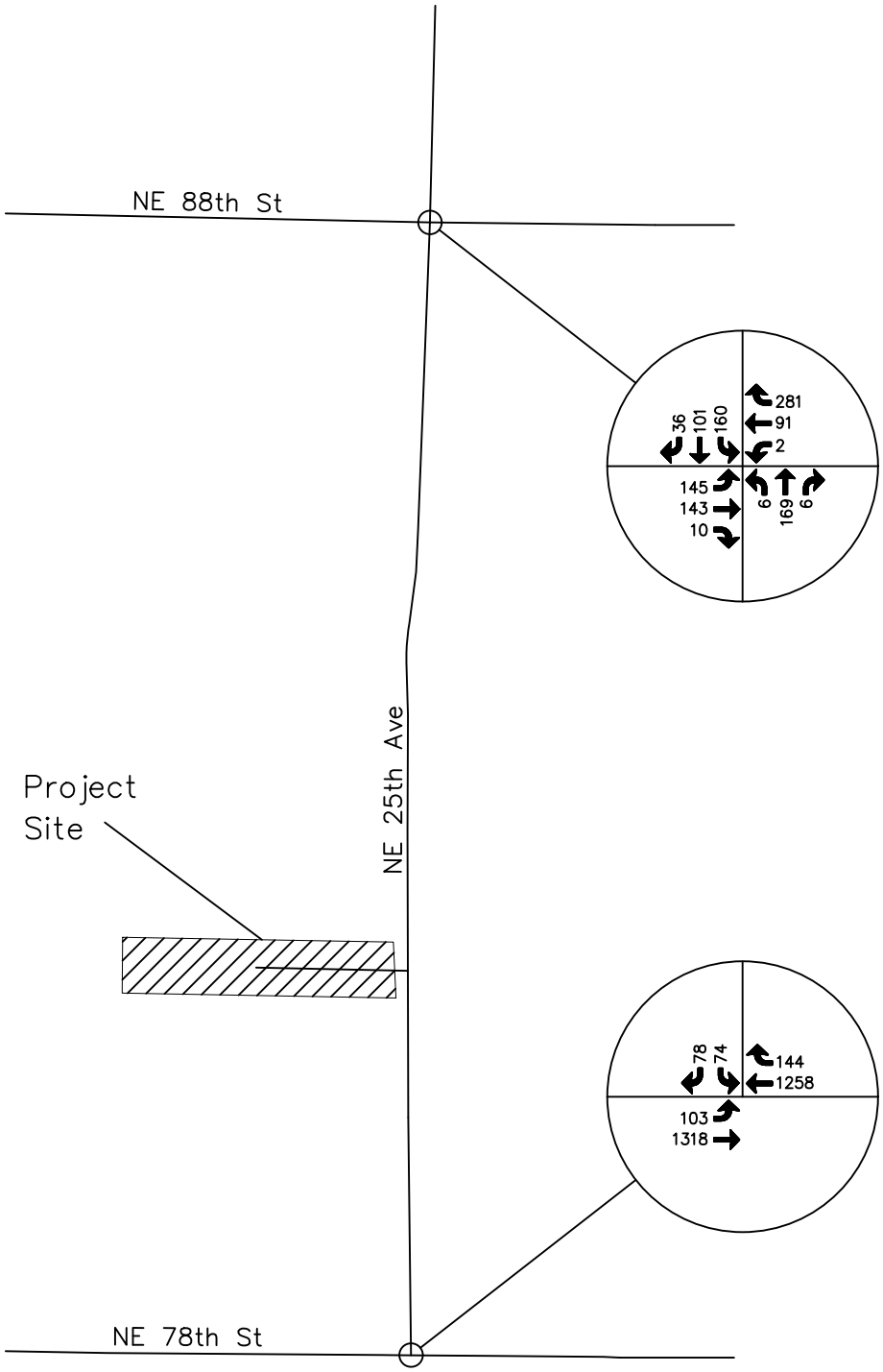
Table 5a. 2039 "Existing Zoning Build Out" Levels of Service

	P.M. Peak Hour	
Signalized Intersection	LOS	Average Delay (sec)
NE 88th Street/NE 25th Avenue		
Eastbound Left	A	9.2
Eastbound Through/Right	A	8.6
Westbound Left	B	10.3
Westbound Through/Right	B	15.6
Northbound Left	B	12.6
Northbound Through/Right	B	12.2
Southbound Left	B	15.5
Southbound Through/Right	B	11.9
Overall	B	12.9
NE 78th Street/NE 25th Avenue		
Eastbound Left	A	5.8
Eastbound Through	A	2.7
Westbound Through/Right	A	7.5
Southbound Left	C	30.1
Southbound Right	C	24.5
Overall	A	6.3

Table 5b. 2039 "Existing Zoning Build Out V/C Ratios for Study Area Roadway Segment

Roadway Segment	P.M. Peak Hour Volume	Capacity	P.M. V/C Ratio
NE 88th Street			
West of NE 25th Avenue – EB	298	900	0.33
West of NE 25th Avenue – WB	133	900	0.15
East of NE 25th Avenue – EB	309	900	0.34
East of NE 25th Avenue – WB	374	900	0.42
NE 78th Street			
West of NE 25th Avenue – EB	1,421	1,800	0.79
West of NE 25th Avenue – WB	1,336	1,800	0.74
East of NE 25th Avenue – EB	1,392	1,800	0.77
East of NE 25th Avenue – WB	1,402	1,800	0.78
NE 25th Avenue			
North of NE 88th Street – NB	595	900	0.66
North of NE 88th Street – SB	297	900	0.33
NE 88th Street to NE 78th Street – NB[1]	214	900	0.24
NE 88th Street to NE 78th Street – SB[1]	133	900	0.15

[1]The traffic volume is the average of the upstream and downstream traffic volumes of the roadway segment.



LEGEND

200 P.M. Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 6
2039 "Existing Zoning Build Out"
P.M. Peak Hour Traffic Volumes

2039 "PROPOSED ZONING BUILD OUT" TRAFFIC VOLUMES AND LOS

The traffic volumes shown in Figures 4 and 5b were combined to arrive at the 2039 "Proposed Zoning Build Out" P.M. peak hour traffic volumes. Figure 7 shows the 2039 "Proposed Zoning Build Out" traffic volumes. Levels of service were calculated at the study area intersections with the 2039 "Proposed Zoning Build Out" traffic volumes shown in Figure 7 and the lane configurations shown earlier in Figure 2. Appendix G contains the levels of service worksheets for the 2039 "Proposed Zoning Build Out" condition.

The 2039 "Proposed Zoning Build Out" P.M. peak hour levels of service at the study area intersections are summarized in Table 6a. As shown in Table 6a, all of the signalized intersection individual movements are projected to operate within Clark County's concurrency standard of an average delay of less than two (2) cycle lengths or two hundred forty (240) seconds (whichever is less) in the 2039 "Proposed Zoning Build Out" condition.

Part of the traffic study requirements is to calculate v/c ratios of the roadway segments identified in the pre-application conference report per CCC 40.350.020.G.1.a and Table 40.350.020-1. Table 6b summarizes the v/c ratios for the study area roadway segments for the 2039 "Proposed Zoning Build Out" condition. The peak hour traffic volumes were taken from Figure 7 and the capacities were based on the roadway functional classifications and CCC Table 40.350.020-1. Per CCC 40.350.020.G.1.a, the study area roadway segment v/c ratio standard is 0.90. As shown in Table 6b, all of the study area roadway segment v/c ratios are all within the acceptable standard in the 2039 "Proposed Zoning Build Out" condition.

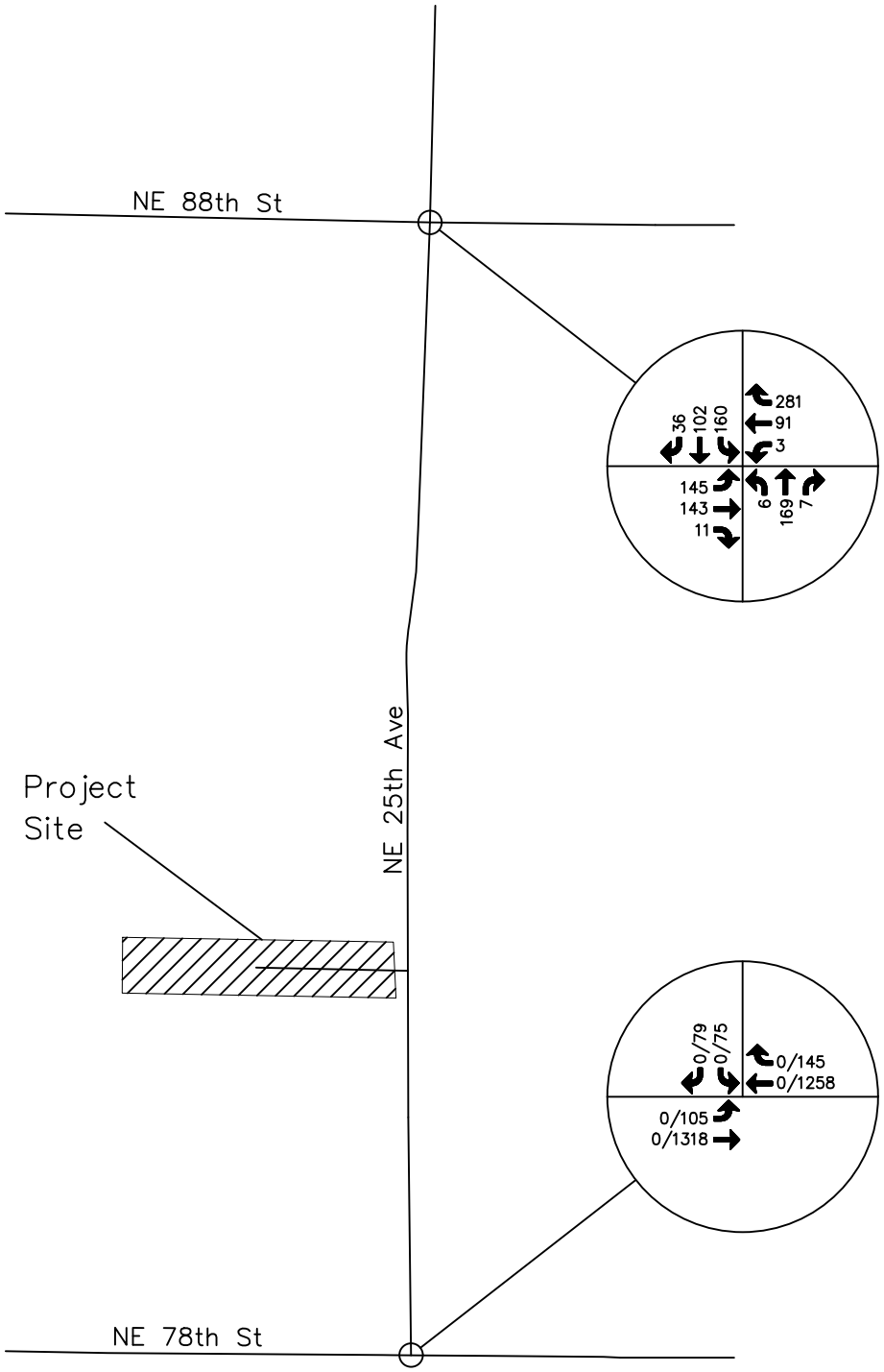
Table 6a. 2039 "Proposed Zoning Build Out" Levels of Service

	P.M. Peak Hour	
Signalized Intersection	LOS	Average Delay (sec)
NE 88th Street/NE 25th Avenue		
Eastbound Left	A	9.2
Eastbound Through/Right	A	8.6
Westbound Left	B	10.3
Westbound Through/Right	B	15.7
Northbound Left	B	12.6
Northbound Through/Right	B	12.2
Southbound Left	B	15.5
Southbound Through/Right	B	11.9
Overall	B	12.9
NE 78th Street/NE 25th Avenue		
Eastbound Left	A	5.8
Eastbound Through	A	2.7
Westbound Through/Right	A	7.5
Southbound Left	C	30.2
Southbound Right	C	24.5
Overall	A	6.4

Table 6b. 2039 "Proposed Zoning Build Out V/C Ratios for Study Area Roadway Segment

Roadway Segment	P.M. Peak Hour Volume	Capacity	P.M. V/C Ratio
NE 88th Street			
West of NE 25th Avenue – EB	299	900	0.33
West of NE 25th Avenue – WB	133	900	0.15
East of NE 25th Avenue – EB	310	900	0.34
East of NE 25th Avenue – WB	375	900	0.42
NE 78th Street			
West of NE 25th Avenue – EB	1,423	1,800	0.79
West of NE 25th Avenue – WB	1,337	1,800	0.74
East of NE 25th Avenue – EB	1,393	1,800	0.77
East of NE 25th Avenue – WB	1,403	1,800	0.78
NE 25th Avenue			
North of NE 88th Street – NB	595	900	0.66
North of NE 88th Street – SB	298	900	0.33
NE 88th Street to NE 78th Street – NB[1]	216	900	0.24
NE 88th Street to NE 78th Street – SB[1]	135	900	0.15

[1]The traffic volume is the average of the upstream and downstream traffic volumes of the roadway segment.



LEGEND

200 P.M. Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 7
2039 "Proposed Zoning Build Out"
P.M. Peak Hour Traffic Volumes

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CONCLUSIONS

The following are the findings and recommendations from the traffic analysis:

Findings

- The "Existing Zoning Build Out" is expected to generate 95 daily, 7 A.M. peak hour (2 in, 5 out), and 10 P.M. peak hour (6 in, 4 out) net new trips.

  The "Proposed Zoning Build Out" is expected to generate 247 daily, 15 A.M. peak hour (4 in, 11 out), and 19 P.M. peak hour (12 in, 7 out) net new trips.

  The "Proposed Zoning Build Out" is expected to generate 152 more daily, 8 more A.M. peak hour (2 in, 6 out), and 9 more P.M. peak hour (6 in, 3 out) net new trips. The increase in trips generated by the build out of the proposed rezone is negligible compared to the existing zoning impacts.

- The study area intersections are projected to operate at acceptable levels of service in the 2039 "Existing Zoning Build Out" and 2039 "Proposed Zoning Build Out" conditions.

- All of the study area roadway segment v/c ratios are all within the acceptable standard in the 2039 "Existing Zoning Build Out" and 2039 "Proposed Zoning Build Out" conditions.

Recommendations

- Based on the traffic impact analysis documented in this report, no physical, off-site mitigation would be needed.

- Based on the traffic impact analysis documented in this report, the rezoning of the NE 25th Avenue property will not result in any significant degradation in traffic conditions nearby the project site.

APPENDIX A

TRAFFIC COUNTS

Intersection: NE 25th Avenue/NE 88th Street Date: 01/09/19

PM Peak Hour Turning Movement Volumes

	SB				WB				NB				EB				
Time	SBR	SBT	SBL	Trucks	WBR	WBT	WBL	Trucks	NBR	NBT	NBL	Trucks	EBR	EBT	EBL	Trucks	Total
15 Minute Totals																	
4:00 - 4:15 PM	2	23	35	2	28	70	5	2	7	18	11	1	12	37	6	1	254
4:15 - 4:30 PM	5	27	17	2	31	59	5	3	3	28	9	0	8	48	5	1	245
4:30 - 4:45 PM	4	27	21	3	23	58	5	0	9	22	9	1	8	54	6	0	246
4:45 - 5:00 PM	1	34	25	1	25	68	5	3	9	25	14	0	1	55	2	1	264
5:00 - 5:15 PM	3	26	16	0	24	63	6	0	15	37	13	0	12	67	7	0	289
5:15 - 5:30 PM	8	30	25	1	19	60	2	0	3	32	6	0	9	53	0	1	247
5:30 - 5:45 PM	1	24	26	0	17	55	3	1	14	29	8	1	10	49	8	2	244
5:45 - 6:00 PM	6	28	20	0	29	56	6	0	10	28	13	1	11	40	5	1	252
															Peak 15 Total		289
Hourly Total by 15 minutes																	
4:00 - 5:00 PM	12	111	98	8	107	255	20	8	28	93	43	2	29	194	19	3	1,009
4:15 - 5:15 PM	13	114	79	6	103	248	21	6	36	112	45	1	29	224	20	2	1,044
4:30 - 5:30 PM	16	117	87	5	91	249	18	3	36	116	42	1	30	229	15	2	1,046
4:45 - 5:45 PM	13	114	92	2	85	246	16	4	41	123	41	1	32	224	17	4	1,044
5:00 - 6:00 PM	18	108	87	1	89	234	17	1	42	126	40	2	42	209	20	4	1,032
Peak Hour 4:30 - 5:30 PM	16	117	87	5	91	249	18	3	36	116	42	1	30	229	15	2	1,046
Peak Hour Factor		0.87				0.91				0.75				0.80			0.90
Peak Hour % Trucks		2%				1%				1%				1%			
Peak 15 Min % Trucks		0%				0%				0%				0%			

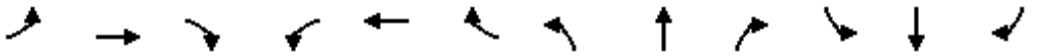
Intersection: NE 25th Avenue/NE 78th Street Date: 01/09/19

PM Peak Hour Turning Movement Volumes

	SB				WB				NB				EB				
Time	SBR	SBT	SBL	Trucks	WBR	WBT	WBL	Trucks	NBR	NBT	NBL	Trucks	EBR	EBT	EBL	Trucks	Total
15 Minute Totals																	
4:00 - 4:15 PM	7	0	27	3	26	171	0	4	0	0	0	0	0	186	31	6	448
4:15 - 4:30 PM	10	0	29	2	34	166	0	1	0	0	0	0	0	178	22	7	439
4:30 - 4:45 PM	20	0	29	2	24	176	0	1	0	0	0	0	0	181	25	8	455
4:45 - 5:00 PM	20	0	27	2	36	155	0	2	0	0	0	0	0	247	27	9	512
5:00 - 5:15 PM	17	0	29	1	36	177	0	1	0	0	0	0	0	193	37	6	489
5:15 - 5:30 PM	17	0	30	1	39	171	0	4	0	0	0	0	0	197	26	4	480
5:30 - 5:45 PM	26	0	19	0	30	195	0	4	0	0	0	0	0	179	27	6	476
5:45 - 6:00 PM	26	0	23	1	43	158	0	2	0	0	0	0	0	178	43	6	471
															Peak 15 Total		512
Hourly Total by 15 minutes																	
4:00 - 5:00 PM	57	0	112	9	120	668	0	8	0	0	0	0	0	792	105	30	1,854
4:15 - 5:15 PM	67	0	114	7	130	674	0	5	0	0	0	0	0	799	111	30	1,895
4:30 - 5:30 PM	74	0	115	6	135	679	0	8	0	0	0	0	0	818	115	27	1,936
4:45 - 5:45 PM	80	0	105	4	141	698	0	11	0	0	0	0	0	816	117	25	1,957
5:00 - 6:00 PM	86	0	101	3	148	701	0	11	0	0	0	0	0	747	133	22	1,916
Peak Hour 4:45 - 5:45 PM	80	0	105	4	141	698	0	11	0	0	0	0	0	816	117	25	1,957
Peak Hour Factor		0.98				0.93				0.00				0.85			0.96
Peak Hour % Trucks		2%				1%				0%				3%			
Peak 15 Min % Trucks		4%				1%				0%				3%			

APPENDIX B

EXISTING LEVELS OF SERVICE



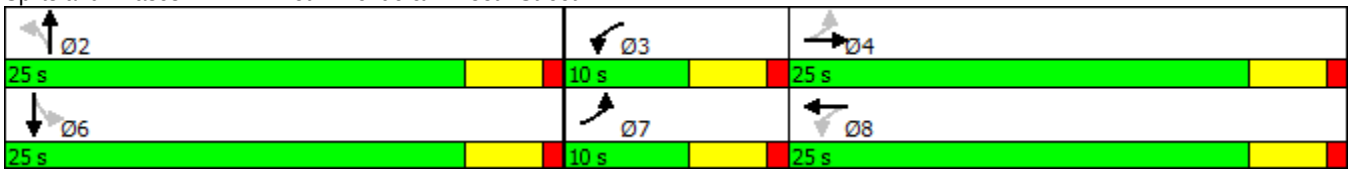
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	268	48	24	252	96	52	148	60	64	104	12
Future Volume (vph)	28	268	48	24	252	96	52	148	60	64	104	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210		0	190		0	330		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Frt		0.977			0.959			0.957			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1856	0	1805	1822	0	1805	1818	0	1805	1870	0
Flt Permitted	0.497			0.543			0.682			0.628		
Satd. Flow (perm)	944	1856	0	1032	1822	0	1296	1818	0	1193	1870	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			35			37			11	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1035			1166			2682			832	
Travel Time (s)		20.2			22.7			61.0			18.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	28	268	48	24	252	96	52	148	60	64	104	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	28	316	0	24	348	0	52	208	0	64	116	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

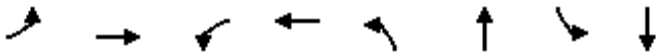
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	10.0	25.0		10.0	25.0		25.0	25.0		25.0	25.0	
Total Split (%)	16.7%	41.7%		16.7%	41.7%		41.7%	41.7%		41.7%	41.7%	
Maximum Green (s)	5.5	20.5		5.5	20.5		20.5	20.5		20.5	20.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	12.5	11.9		12.5	11.9		9.5	9.5		9.5	9.5	
Actuated g/C Ratio	0.38	0.37		0.38	0.37		0.29	0.29		0.29	0.29	
v/c Ratio	0.05	0.46		0.04	0.51		0.14	0.37		0.18	0.21	
Control Delay	6.0	11.0		6.0	11.2		12.1	11.5		12.7	11.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.0	11.0		6.0	11.2		12.1	11.5		12.7	11.2	
LOS	A	B		A	B		B	B		B	B	
Approach Delay		10.6			10.8			11.6			11.7	
Approach LOS		B			B			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 32.6
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.51
Intersection Signal Delay: 11.1 Intersection LOS: B
Intersection Capacity Utilization 50.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 1: NE 25th Avenue & NE 88th Street





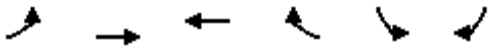
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	28	316	24	348	52	208	64	116
v/c Ratio	0.05	0.46	0.04	0.51	0.14	0.37	0.18	0.21
Control Delay	6.0	11.0	6.0	11.2	12.1	11.5	12.7	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.0	11.0	6.0	11.2	12.1	11.5	12.7	11.2
Queue Length 50th (ft)	2	28	2	29	5	17	6	10
Queue Length 95th (ft)	12	129	11	138	35	92	41	59
Internal Link Dist (ft)		955		1086		2602		752
Turn Bay Length (ft)	210		190		330		270	
Base Capacity (vph)	525	1304	542	1285	907	1284	835	1312
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.24	0.04	0.27	0.06	0.16	0.08	0.09

Intersection Summary

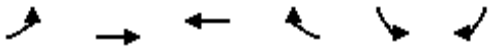
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	268	48	24	252	96	52	148	60	64	104	12
Future Volume (veh/h)	28	268	48	24	252	96	52	148	60	64	104	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	268	48	24	252	96	52	148	60	64	104	12
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	432	502	90	458	414	158	480	332	135	402	431	50
Arrive On Green	0.03	0.32	0.32	0.03	0.32	0.32	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1810	1569	281	1810	1312	500	1296	1286	522	1192	1673	193
Grp Volume(v), veh/h	28	0	316	24	0	348	52	0	208	64	0	116
Grp Sat Flow(s),veh/h/ln	1810	0	1850	1810	0	1812	1296	0	1808	1192	0	1866
Q Serve(g_s), s	0.4	0.0	4.8	0.3	0.0	5.6	1.1	0.0	3.3	1.6	0.0	1.7
Cycle Q Clear(g_c), s	0.4	0.0	4.8	0.3	0.0	5.6	2.8	0.0	3.3	5.0	0.0	1.7
Prop In Lane	1.00		0.15	1.00		0.28	1.00		0.29	1.00		0.10
Lane Grp Cap(c), veh/h	432	0	592	458	0	572	480	0	466	402	0	481
V/C Ratio(X)	0.06	0.00	0.53	0.05	0.00	0.61	0.11	0.00	0.45	0.16	0.00	0.24
Avail Cap(c_a), veh/h	659	0	1102	693	0	1079	917	0	1077	804	0	1111
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.9	0.0	9.6	7.8	0.0	10.0	11.2	0.0	10.7	12.8	0.0	10.1
Incr Delay (d2), s/veh	0.1	0.0	0.7	0.0	0.0	1.0	0.1	0.0	0.7	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	2.6	0.2	0.0	2.9	0.4	0.0	1.7	0.6	0.0	0.9
LnGrp Delay(d),s/veh	7.9	0.0	10.3	7.8	0.0	11.0	11.3	0.0	11.4	13.0	0.0	10.4
LnGrp LOS	A		B	A		B	B		B	B		B
Approach Vol, veh/h		344			372			260			180	
Approach Delay, s/veh		10.1			10.8			11.4			11.3	
Approach LOS		B			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		13.4	5.5	15.5		13.4	5.7	15.4
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		20.5	5.5	20.5		20.5	5.5	20.5
Max Q Clear Time (g_c+I1), s		5.3	2.3	6.8		7.0	2.4	7.6
Green Ext Time (p_c), s		2.0	0.0	3.4		1.9	0.0	3.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B



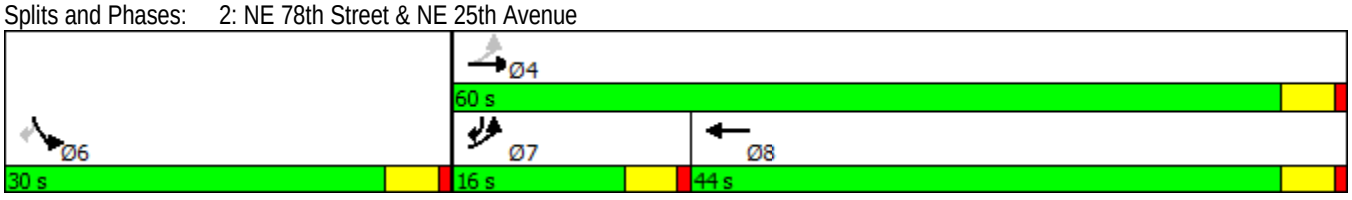
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	108	988	620	144	108	80
Future Volume (vph)	108	988	620	144	108	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370			0	210	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.972			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	3505	3474	0	1736	1553
Flt Permitted	0.222				0.950	
Satd. Flow (perm)	410	3505	3474	0	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			40			80
Link Speed (mph)		45	45		30	
Link Distance (ft)		1139	1186		2682	
Travel Time (s)		17.3	18.0		61.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	1%	1%	4%	4%
Adj. Flow (vph)	108	988	620	144	108	80
Shared Lane Traffic (%)						
Lane Group Flow (vph)	108	988	764	0	108	80
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	pm+ov
Protected Phases	7	4	8		6	7

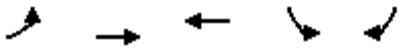


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	4					6
Detector Phase	7	4	8		6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	22.5	22.5		22.5	9.5
Total Split (s)	16.0	60.0	44.0		30.0	16.0
Total Split (%)	17.8%	66.7%	48.9%		33.3%	17.8%
Maximum Green (s)	11.5	55.5	39.5		25.5	11.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None		Min	None
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)	26.0	26.0	16.6		8.7	21.6
Actuated g/C Ratio	0.59	0.59	0.37		0.20	0.49
v/c Ratio	0.22	0.48	0.58		0.32	0.10
Control Delay	4.9	5.9	13.6		21.0	3.0
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	4.9	5.9	13.6		21.0	3.0
LOS	A	A	B		C	A
Approach Delay		5.8	13.6		13.4	
Approach LOS		A	B		B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 44.4			
Natural Cycle: 55			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			

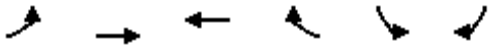
Splits and Phases: 2: NE 78th Street & NE 25th Avenue





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	108	988	764	108	80
v/c Ratio	0.22	0.48	0.58	0.32	0.10
Control Delay	4.9	5.9	13.6	21.0	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	5.9	13.6	21.0	3.0
Queue Length 50th (ft)	9	57	78	25	0
Queue Length 95th (ft)	26	106	147	71	19
Internal Link Dist (ft)		1059	1106	2602	
Turn Bay Length (ft)	370			210	
Base Capacity (vph)	616	3464	2981	1076	941
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.29	0.26	0.10	0.09

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	108	988	620	144	108	80
Future Volume (veh/h)	108	988	620	144	108	80
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1881	1900	1827	1827
Adj Flow Rate, veh/h	108	988	620	144	108	80
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	1	1	4	4
Cap, veh/h	557	2390	1434	332	200	308
Arrive On Green	0.08	0.68	0.50	0.50	0.12	0.12
Sat Flow, veh/h	1757	3597	2976	668	1740	1553
Grp Volume(v), veh/h	108	988	384	380	108	80
Grp Sat Flow(s),veh/h/ln	1757	1752	1787	1763	1740	1553
Q Serve(g_s), s	1.1	5.5	6.1	6.1	2.6	1.9
Cycle Q Clear(g_c), s	1.1	5.5	6.1	6.1	2.6	1.9
Prop In Lane	1.00			0.38	1.00	1.00
Lane Grp Cap(c), veh/h	557	2390	889	877	200	308
V/C Ratio(X)	0.19	0.41	0.43	0.43	0.54	0.26
Avail Cap(c_a), veh/h	867	4386	1592	1570	1000	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	4.2	3.1	7.1	7.1	18.5	15.0
Incr Delay (d2), s/veh	0.2	0.1	0.3	0.3	2.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	3.1	3.0	1.4	1.8
LnGrp Delay(d),s/veh	4.4	3.2	7.5	7.5	20.8	15.5
LnGrp LOS	A	A	A	A	C	B
Approach Vol, veh/h		1096	764		188	
Approach Delay, s/veh		3.3	7.5		18.5	
Approach LOS		A	A		B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				34.7		9.6	8.2	26.6
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				55.5		25.5	11.5	39.5
Max Q Clear Time (g_c+I1), s				7.5		4.6	3.1	8.1
Green Ext Time (p_c), s				16.1		0.5	0.1	13.9

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

APPENDIX C

ACCIDENT DATA

OFFICER REPORTED CRASHES THAT OCCURRED AT THE FOLLOWING INTERSECTIONS IN CLARK COUNTY
25th AVE (CO RD #19390, MP 0.000 - 0.020) @ 78th ST (CO RD #91300, MP 4.910 - 4.950)
25th AVE (CO RD #19390, MP 0.480 - 0.520) @ 88th ST (CO RD #19100, MP 0.980 - 1.020)

01/01/2014 - *available 2018*

Under 23 U.S. Code § 409 and 23 U.S. Code § 148, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MILEPOST	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
County Road	Clark		19100	1.000			19390	0.500					No	E362255	#########	17:36	Possible Injury	2	0	3	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Did Not Grant RW to Vehicle		None				Lane of Primary Trafficway	1091923.76	136061.23
County Road	Clark		19100	1.000			19390	0.500					No	E380812	#########	20:00	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North	West	East	Disregard Stop and Go Light		None				Lane of Primary Trafficway	1091962.59	136057.76
County Road	Clark		19100	1.000			19390	0.500					No	E534445	#########	15:38	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Making Left Turn	Going Straight Ahead	East	South	West	East	Did Not Grant RW to Vehicle		None				Lane of Primary Trafficway	1091923.75	136061.25
County Road	Clark		19100	1.000			19390	0.500					No	E566221	#########	09:07	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South	West	East	Disregard Stop and Go Light		None				Lane of Primary Trafficway	1091923.75	136061.25
County Road	Clark		19100	1.000			19390	0.500					No	E670539	#########	14:43	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North	East	West	Operating Defective Equipment	Unknown Driver Distraction	None				Lane of Primary Trafficway	1091923.77	136061.25
County Road	Clark		19390	0.500			19100	1.000					No	E415498	#########	11:35	Suspected Minor Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	North	East	South	North	Inattention	Did Not Grant RW to Vehicle	None				Lane of Primary Trafficway	##########	136030.75
County Road	Clark		19390	0.500			19100	1.000					No	E424047	#########	19:28	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dusk	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North	East	West	Inattention		None				Lane of Primary Trafficway	##########	136030.75
County Road	Clark		19390	0.500			19100	1.000					No	E568295	#########	00:25	Possible Injury	2	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	West	East	West	Disregard Stop and Go Light		Driver Not Distracted				Lane of Primary Trafficway	1091923.75	136061.25
County Road	Clark		19390	0.500			19100	1.000					No	E595939	#########	11:33	Possible Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	North	East	South	North	Did Not Grant RW to Vehicle		None				Lane of Primary Trafficway	1091923.75	136061.25
County Road	Clark		19390	0.500			19100	1.000					No	E758479	#########	10:26	Possible Injury	2	0	3	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Stop and Go Light		None				Lane of Primary Trafficway	1091923.77	136061.25
County Road	Clark		19390	0.500			19100	1.000					No	E860271	#########	09:58	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Making Right Turn	Making Left Turn	West	South	South	West	Inattention		None				Intersecting Trafficway	1091923.77	136061.25
County Road	Clark		19390	0.510			19100	1.000					No	E315499	#########	10:03	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South	East	West	Disregard Stop and Go Light	Inattention	None				Lane of Primary Trafficway	1091923.75	136061.25
County Road	Clark		19390	0.510			19100	1.000					No	E374805	#########	20:22	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Starting From Parked Position	West	East	West	East	Inattention		None				Lane of Primary Trafficway	1091923.76	136061.23
County Road	Clark		91300	4.930			19390	0.000					No	E315212	#########	17:28	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	East	West	East	Vehicle Stopped	Exceeding Reas. Safe Speed		Did Not Grant RW to Vehicle				Lane of Primary Trafficway	##########	##########
County Road	Clark		91300	4.930			19390	0.000					No	E326715	#########	21:25	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Under Influence of Alcohol		None				Lane of Primary Trafficway	##########	##########
County Road	Clark		91300	4.930			19390	0.000					No	E352241	#########	16:56	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Did Not Grant RW to Vehicle		None				Lane of Primary Trafficway	1091772.82	133406.75
County Road	Clark		91300	4.930			19390	0.000					No	E375894	#########	10:19	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Making Right Turn	East	West	North	West	Disregard Stop and Go Light	Driver Adjusting Audio or Entertainment	None				Lane of Primary Trafficway	1091772.82	133406.75

OFFICER REPORTED CRASHES THAT OCCURRED AT THE FOLLOWING INTERSECTIONS IN CLARK COUNTY
25th AVE (CO RD #19390, MP 0.000 - 0.020) @ 78th ST (CO RD #91300, MP 4.910 - 4.950)
25th AVE (CO RD #19390, MP 0.480 - 0.520) @ 88th ST (CO RD #19100, MP 0.980 - 1.020)

01/01/2014 - *available 2018*

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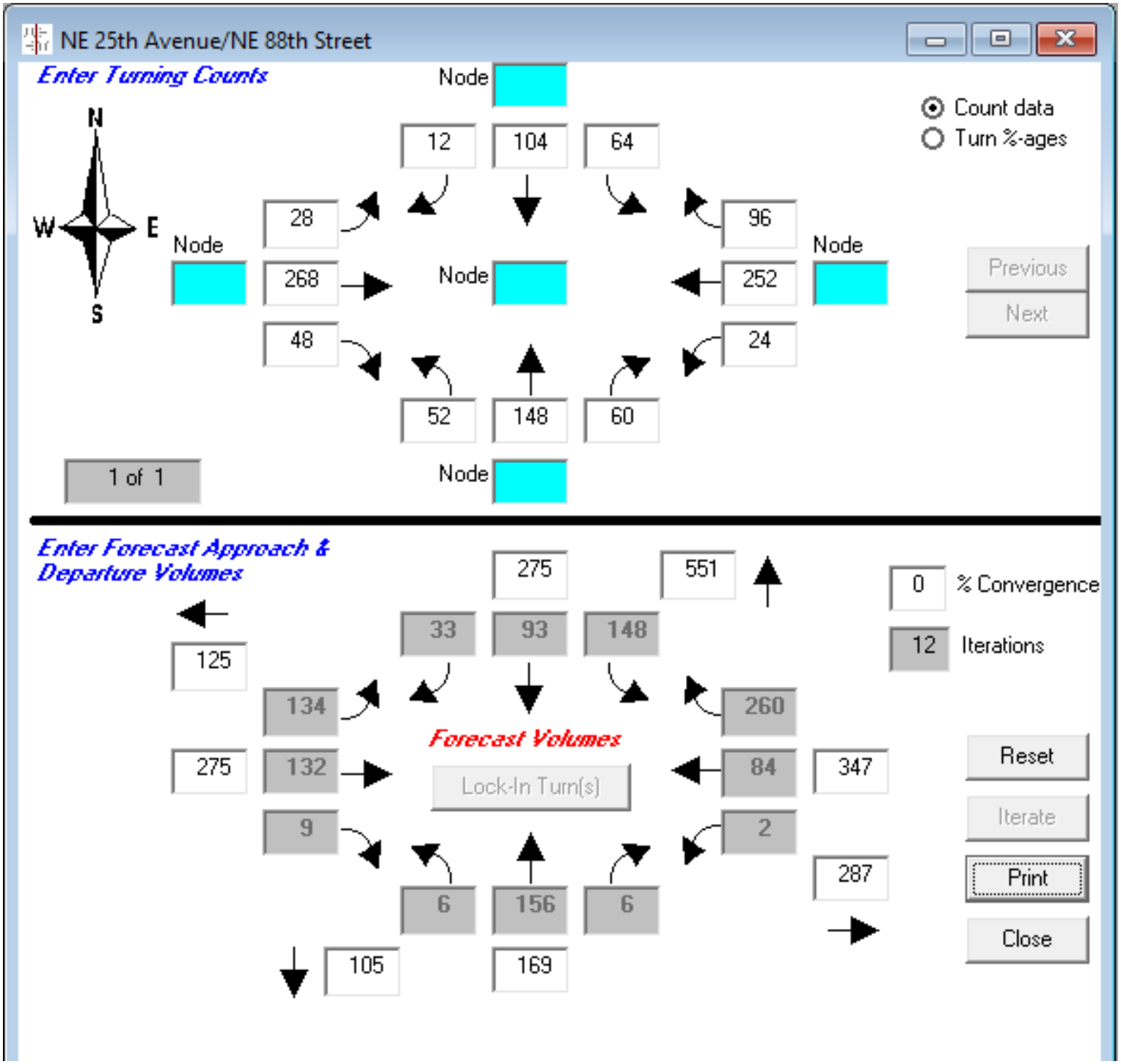
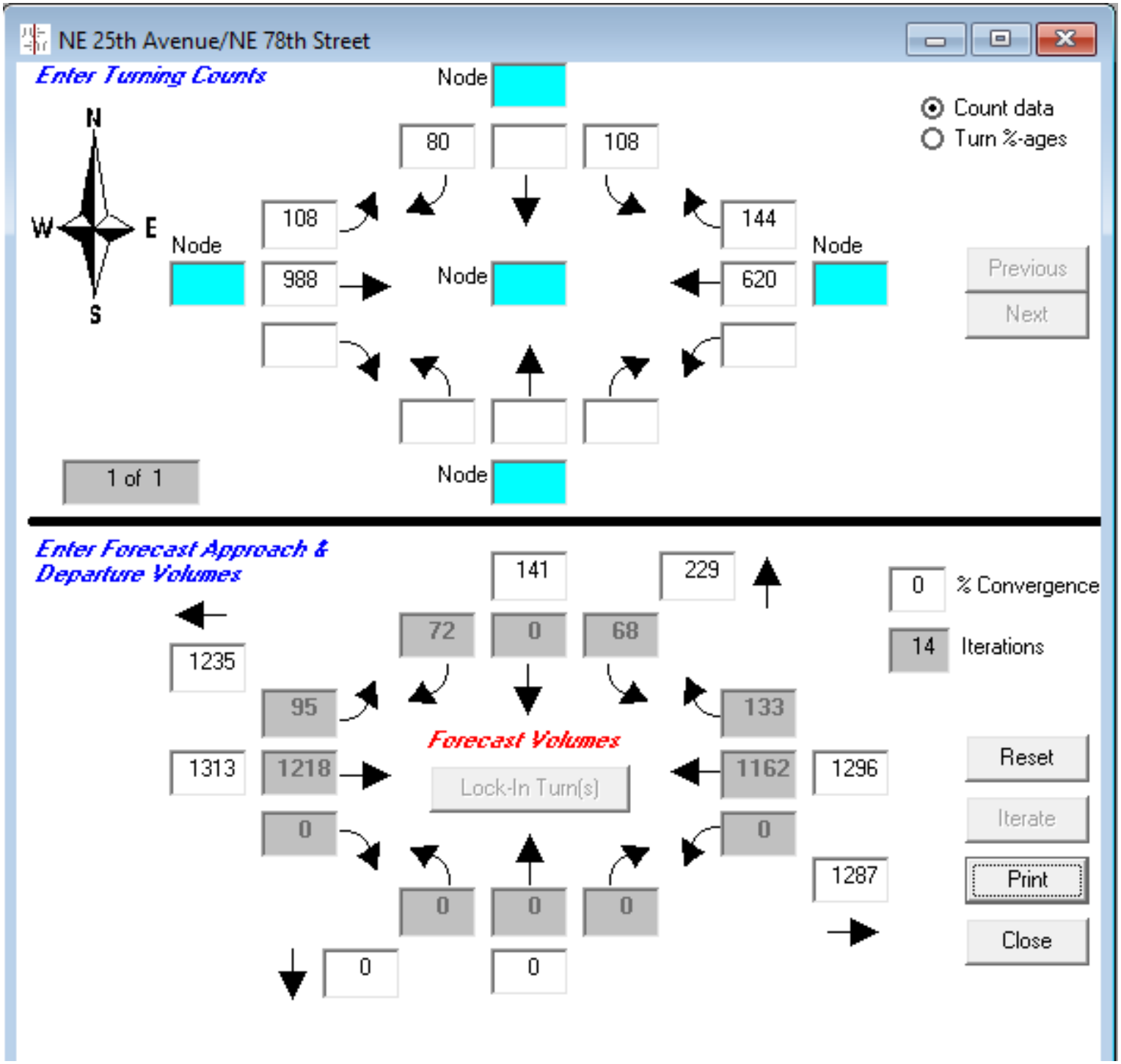
JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MILEPOST	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	BICYCLIST CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
County Road	Clark		91300	4.930			19390	0.000					No	E389082	#########	11:56	Possible Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Did Not Grant RW to Vehicle		None				Lane of Primary Trafficway	1091772.82	133406.75
County Road	Clark		91300	4.930			19390	0.000					No	E398485	#########	17:43	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Did Not Grant RW to Vehicle		None				Lane of Primary Trafficway	##########	##########
County Road	Clark		91300	4.930			19390	0.000					No	E649904	#########	13:01	Suspected Minor Injury	2	0	3	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South	East	West	Disregard Stop and Go Light	Under Influence of Drugs	None				Lane of Primary Trafficway	1091879.52	133401.98
County Road	Clark		91300	4.930			19390	0.000					No	E725512	#########	12:16	Possible Injury	2	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Making Left Turn	Going Straight Ahead	North	East	East	West	Disregard Stop and Go Light		None				Lane of Primary Trafficway	1091879.52	133401.98
County Road	Clark		91300	4.930			19390	0.000					No	E734797	#########	13:28	Unknown	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Stopped at Signal or Stop Sign	Going Straight Ahead	West	Vehicle Stopped			None		Other				Lane of Primary Trafficway	1091879.52	133401.98
County Road	Clark		91300	4.930			19390	0.000					No	E803208	#########	15:12	Suspected Minor Injury	1	0	1	0	1	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Vehicle Strikes Pedalcyclist	Making Right Turn		North	West			Inattention					Inattention	Lane of Primary Trafficway	1091879.52	133401.98

APPENDIX D

RTC MODEL VOLUMES AND TURNSW32 WORKSHEETS


NE 25th Avenue/NE 88th Street
Enter Turning Counts
Node
12
104
64
28
96
Node
Node
Node
268
252
48
24
52
148
60
Node
1 of 1
Count data
Turn %-ages
Previous
Next
N
W
E
S
Enter Forecast Approach & Departure Volumes
275
551
33
93
148
125
134
260
Forecast Volumes
275
132
84
347
Lock-In Turn(s)
9
2
287
6
156
6
105
169
0
% Convergence
12
Iterations
Reset
Iterate
Print
Close


NE 25th Avenue/NE 78th Street
Enter Turning Counts
Node
80
108
108
144
Node
988
Node
620
Node
Count data
Turn %-ages
Previous
Next
1 of 1
Enter Forecast Approach & Departure Volumes
141
229
72
0
68
1235
95
133
Forecast Volumes
1313
1218
Lock-In Turn(s)
1162
1296
0
0
1287
0
0
0
0
0
0 % Convergence
14 Iterations
Reset
Iterate
Print
Close

MEMORANDUM

TO: **Grant Stonex, H. Lee & Associates, PLLC**
PO Box 1849
Vancouver, WA 98668

FROM: Shinwon Kim, Senior Transportation Planner

DATE: January 10, 2019

SUBJECT: **Select Zone Assignment for TAZ 216**

Enclosed are plots, showing auto volumes and OD flows during the PM Peak 1 hour for the year 2010 and 2035. TAZ 216 was selected for the assignments.

- 2010 Base Auto Volumes and OD Flows (4 plots)
- 2035 RTP Updates Auto Volumes and OD Flows (4 plots)
- TAZ Map
- Land Use

	2010 Base Land Use				2035 MTP Land Use			
TAZ	**HH**	**Retail**	**Other**	**Total**	**HH**	**Retail**	**Other**	**Total**
216	389	1	243	244	576	90	271	361

* Note: HH: the number of households, Retail: retail employments, Other: other employments

An invoice will be sent to you under separate cover for 2-hour staff time and other cost.

If you have any questions, please let me know.

Enclosures:

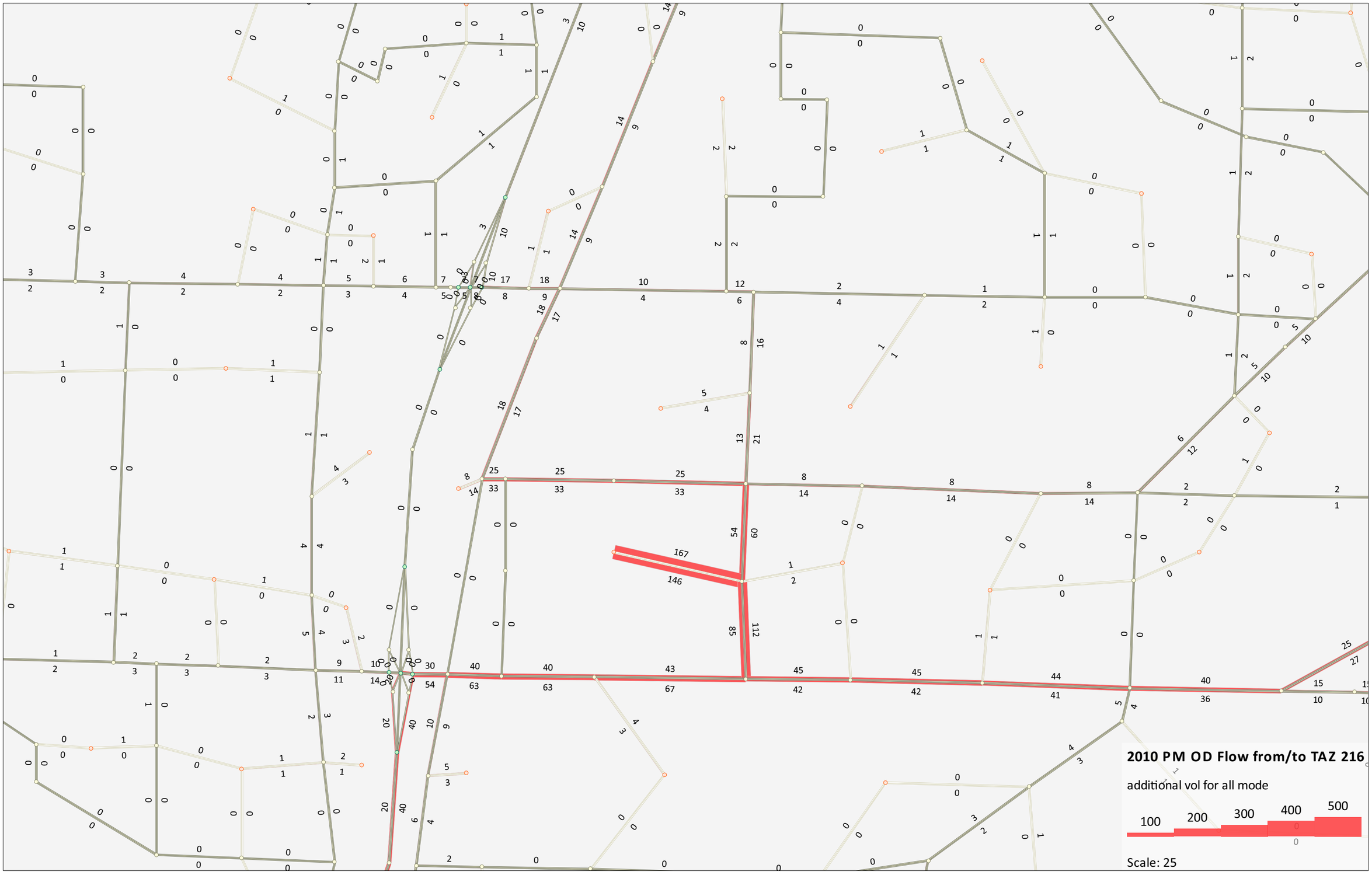
cc: Shari Harer, RTC

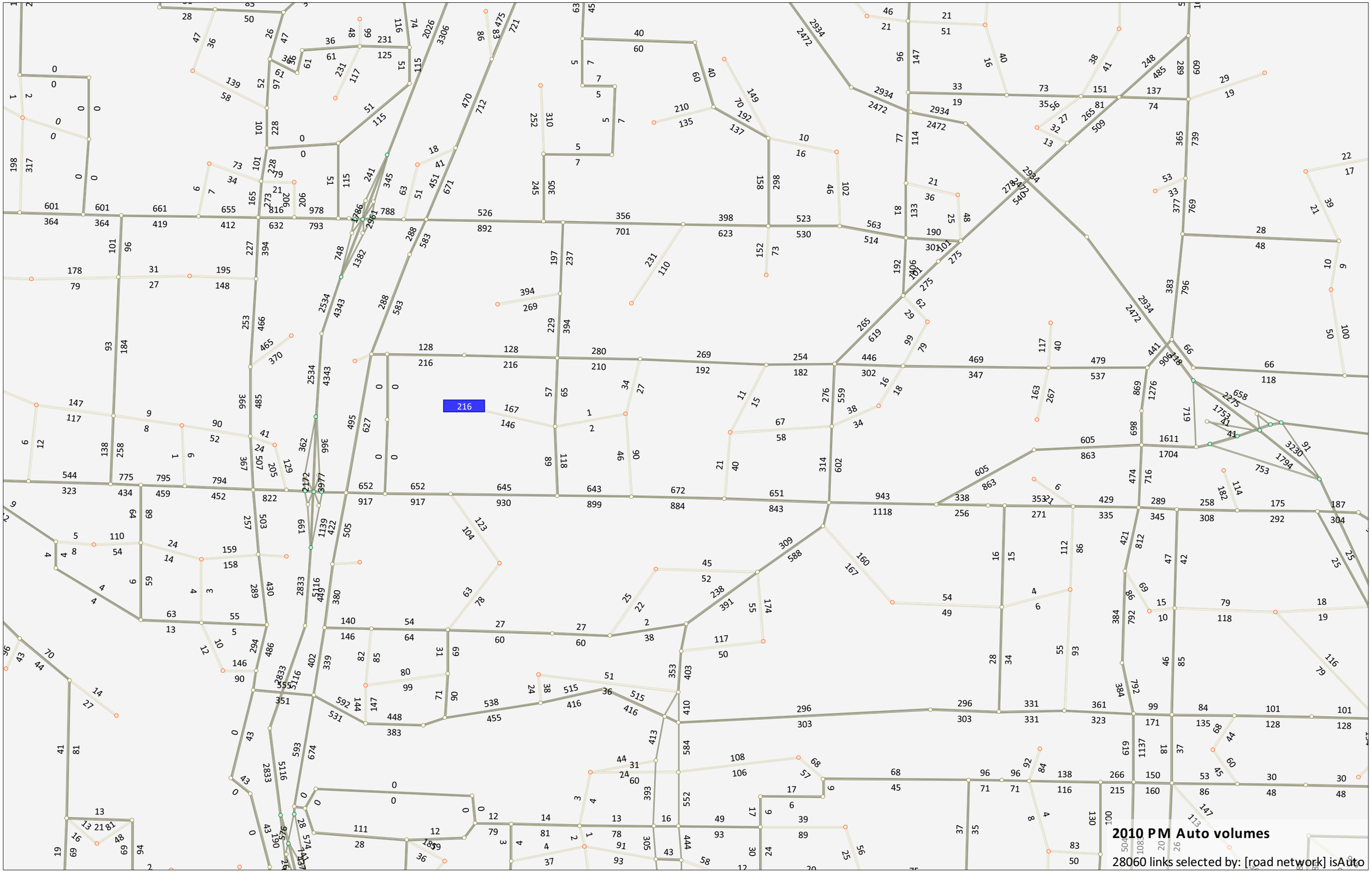
2010 PM OD Flow from/to TAZ 216

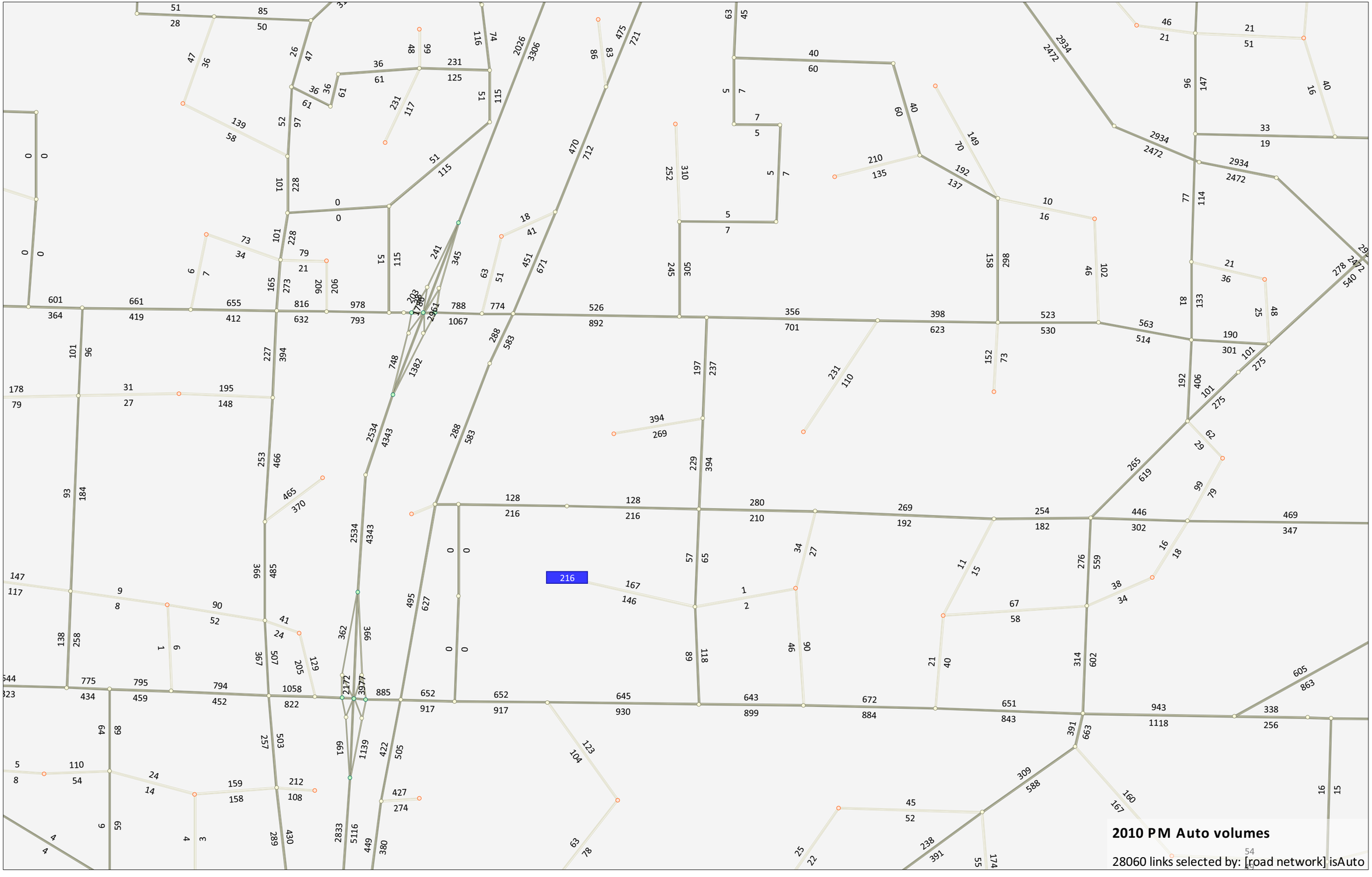
additional vol for all mode

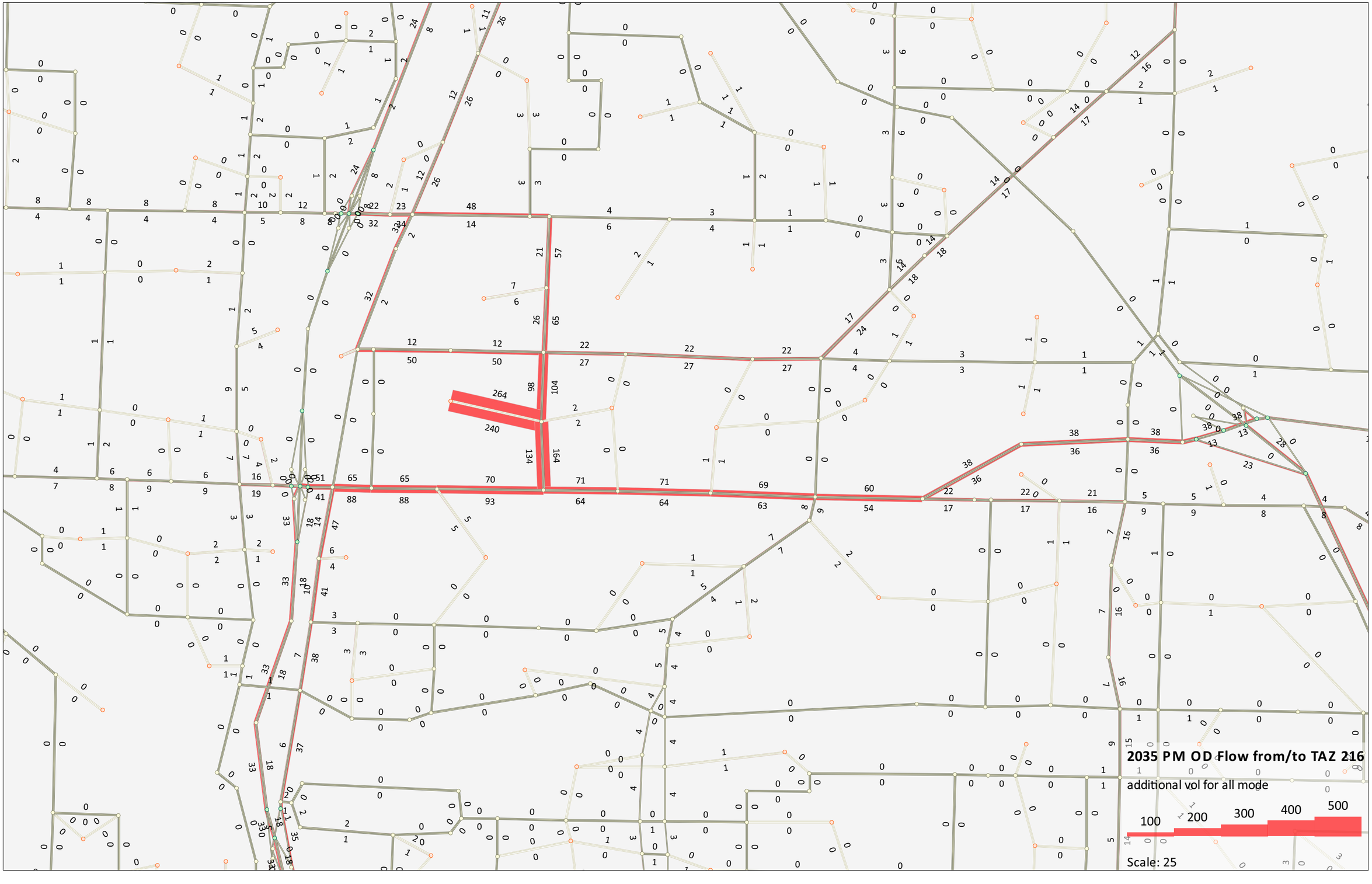
100 200 300 400 500

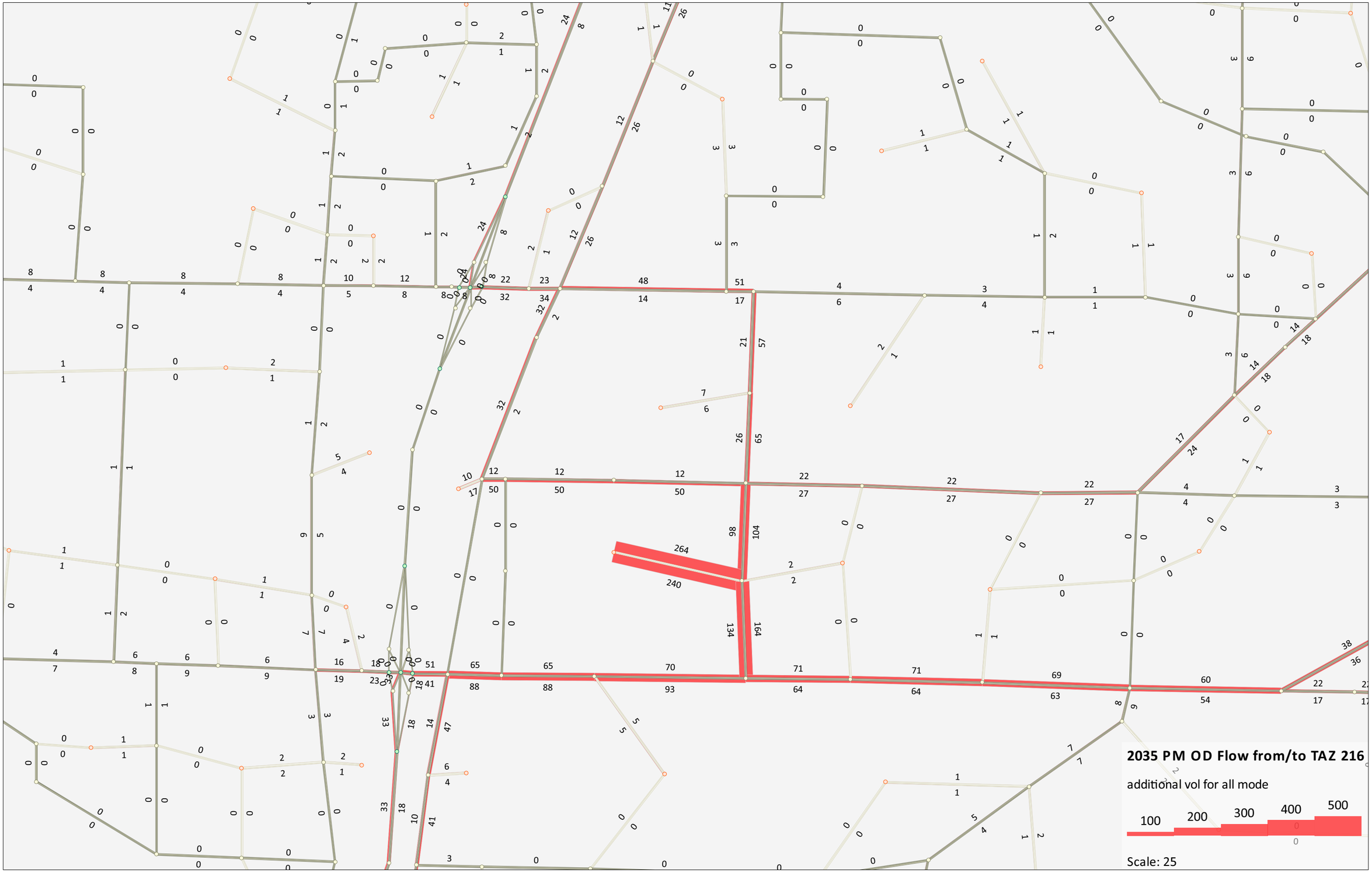
Scale: 25

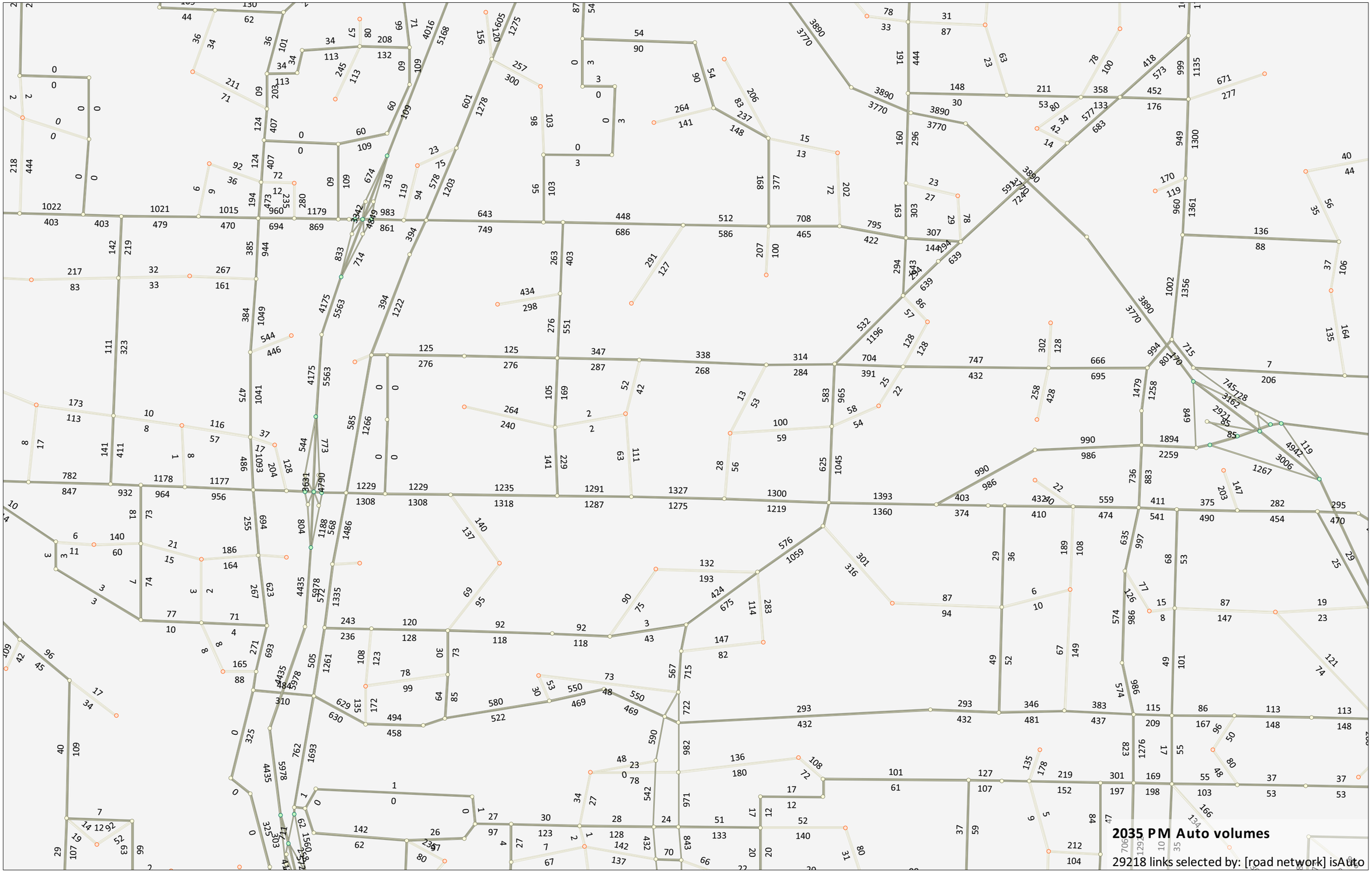

2010 PM OD Flow from/to TAZ 216
additional vol for all mode
100
200
300
400
500
Scale: 25

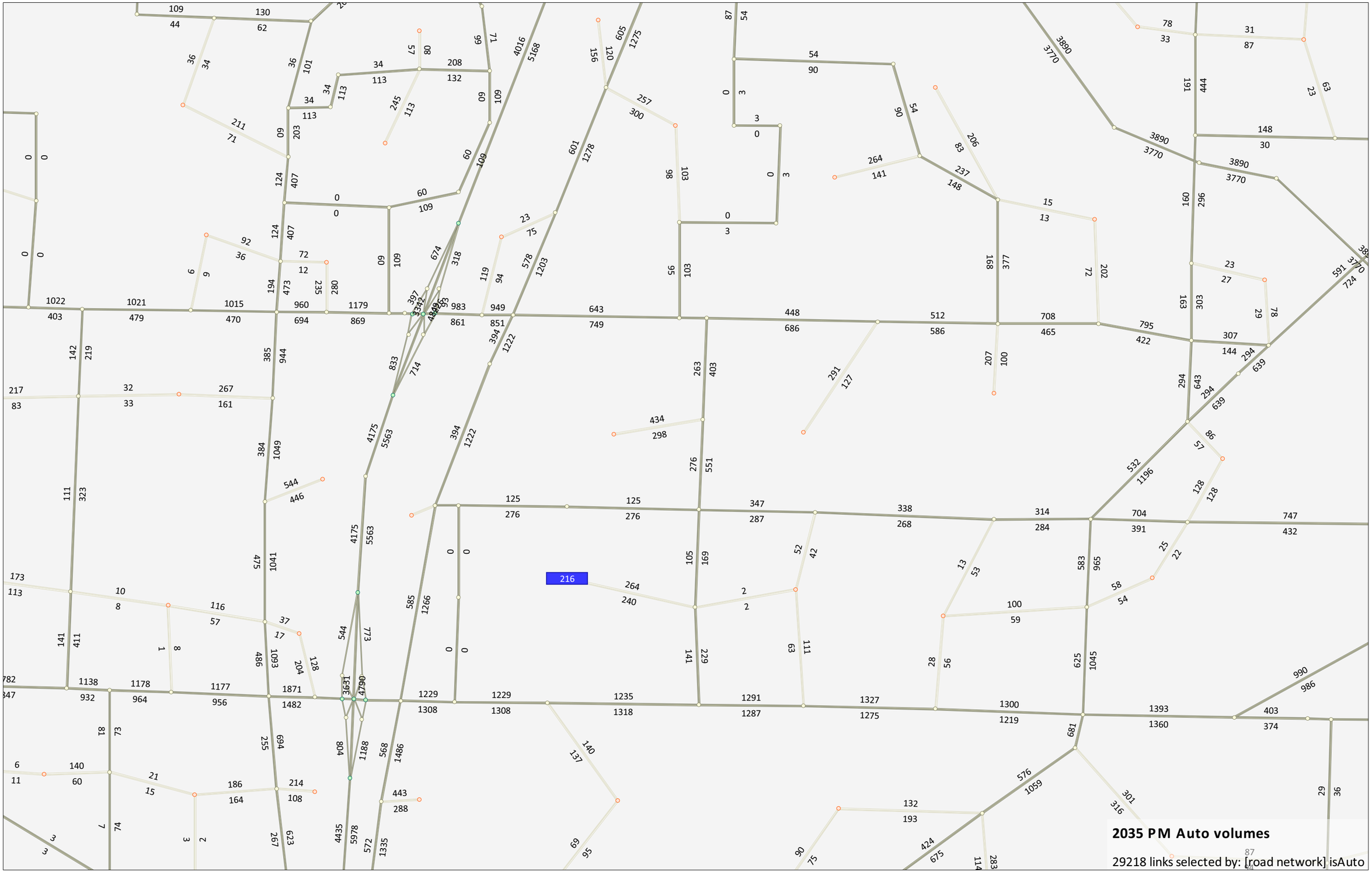

216
2010 PM Auto volumes
28060 links selected by: [road network] isAuto


216
2010 PM Auto volumes
28060 links selected by: [road network] isAuto


2035 PM OD Flow from/to TAZ 216
additional vol for all mode
100
200
300
400
500
Scale: 25


2035 PM OD Flow from/to TAZ 216
additional vol for all mode
100
200
300
400
500
Scale: 25


2035 PM Auto volumes
29218 links selected by: [road network] isAuto

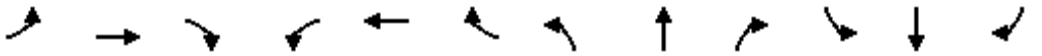

216
2035 PM Auto volumes
29218 links selected by: [road network] isAuto

TAZ 216


83
229
362
80
78
230
82
233
361
231
228
79
81
234
72
223
224
225
226
73
75
215
Hazel Dell North
221
70
216
217
219
71
74
218
220
66
67
68
207
208
209
211
Hazel Dell South
210
63
65
206
205
64
201
197
195

APPENDIX E

2039 "WITHOUT PROJECT" LEVELS OF SERVICE



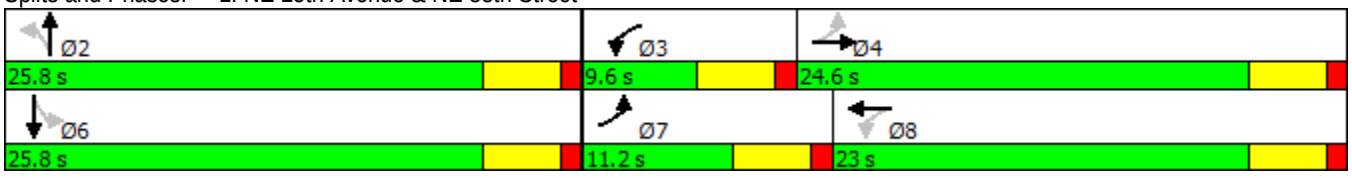
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	143	9	2	91	281	5	168	6	160	100	36
Future Volume (vph)	145	143	9	2	91	281	5	168	6	160	100	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210		0	190		0	330		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Frt		0.991			0.887			0.995			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1883	0	1805	1685	0	1805	1890	0	1805	1824	0
Flt Permitted	0.294			0.660			0.670			0.647		
Satd. Flow (perm)	559	1883	0	1254	1685	0	1273	1890	0	1229	1824	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			268			3			33	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1035			1166			2682			832	
Travel Time (s)		20.2			22.7			61.0			18.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	145	143	9	2	91	281	5	168	6	160	100	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	152	0	2	372	0	5	174	0	160	136	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

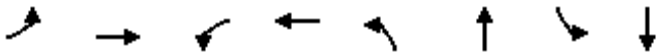
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	11.2	24.6		9.6	23.0		25.8	25.8		25.8	25.8	
Total Split (%)	18.7%	41.0%		16.0%	38.3%		43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	6.7	20.1		5.1	18.5		21.3	21.3		21.3	21.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	17.4	16.5		13.3	9.5		11.0	11.0		11.0	11.0	
Actuated g/C Ratio	0.45	0.43		0.34	0.24		0.28	0.28		0.28	0.28	
v/c Ratio	0.30	0.19		0.00	0.61		0.01	0.32		0.46	0.25	
Control Delay	8.1	9.1		6.5	9.6		12.0	14.3		18.2	11.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.1	9.1		6.5	9.6		12.0	14.3		18.2	11.3	
LOS	A	A		A	A		B	B		B	B	
Approach Delay		8.6			9.6			14.2			15.0	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.8
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 63.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: NE 25th Avenue & NE 88th Street





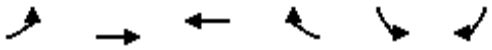
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	145	152	2	372	5	174	160	136
v/c Ratio	0.30	0.19	0.00	0.61	0.01	0.32	0.46	0.25
Control Delay	8.1	9.1	6.5	9.6	12.0	14.3	18.2	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	9.1	6.5	9.6	12.0	14.3	18.2	11.3
Queue Length 50th (ft)	14	15	0	19	1	29	29	17
Queue Length 95th (ft)	49	71	3	85	7	81	85	57
Internal Link Dist (ft)		955		1086		2602		752
Turn Bay Length (ft)	210		190		330		270	
Base Capacity (vph)	496	1110	509	1023	772	1148	746	1119
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.14	0.00	0.36	0.01	0.15	0.21	0.12

Intersection Summary

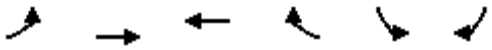
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	143	9	2	91	281	5	168	6	160	100	36
Future Volume (veh/h)	145	143	9	2	91	281	5	168	6	160	100	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	145	143	9	2	91	281	5	168	6	160	100	36
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	447	692	44	549	122	375	459	516	18	431	378	136
Arrive On Green	0.10	0.39	0.39	0.00	0.30	0.30	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	1769	111	1810	410	1266	1273	1823	65	1230	1335	480
Grp Volume(v), veh/h	145	0	152	2	0	372	5	0	174	160	0	136
Grp Sat Flow(s),veh/h/ln	1810	0	1880	1810	0	1677	1273	0	1889	1230	0	1815
Q Serve(g_s), s	2.1	0.0	2.2	0.0	0.0	8.4	0.1	0.0	3.0	4.9	0.0	2.4
Cycle Q Clear(g_c), s	2.1	0.0	2.2	0.0	0.0	8.4	2.6	0.0	3.0	8.0	0.0	2.4
Prop In Lane	1.00		0.06	1.00		0.76	1.00		0.03	1.00		0.26
Lane Grp Cap(c), veh/h	447	0	735	549	0	497	459	0	534	431	0	513
V/C Ratio(X)	0.32	0.00	0.21	0.00	0.00	0.75	0.01	0.00	0.33	0.37	0.00	0.26
Avail Cap(c_a), veh/h	561	0	905	765	0	743	748	0	963	710	0	926
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	0.0	8.4	10.3	0.0	13.3	12.6	0.0	11.8	15.0	0.0	11.6
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.0	0.0	2.3	0.0	0.0	0.4	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.2	0.0	0.0	4.1	0.0	0.0	1.6	1.7	0.0	1.2
LnGrp Delay(d),s/veh	9.2	0.0	8.6	10.3	0.0	15.6	12.6	0.0	12.2	15.5	0.0	11.9
LnGrp LOS	A		A	B		B	B		B	B		B
Approach Vol, veh/h		297			374			179			296	
Approach Delay, s/veh		8.9			15.6			12.2			13.8	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		16.3	4.6	20.8		16.3	8.6	16.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		21.3	5.1	20.1		21.3	6.7	18.5
Max Q Clear Time (g_c+I1), s		5.0	2.0	4.2		10.0	4.1	10.4
Green Ext Time (p_c), s		2.2	0.0	2.9		1.8	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B



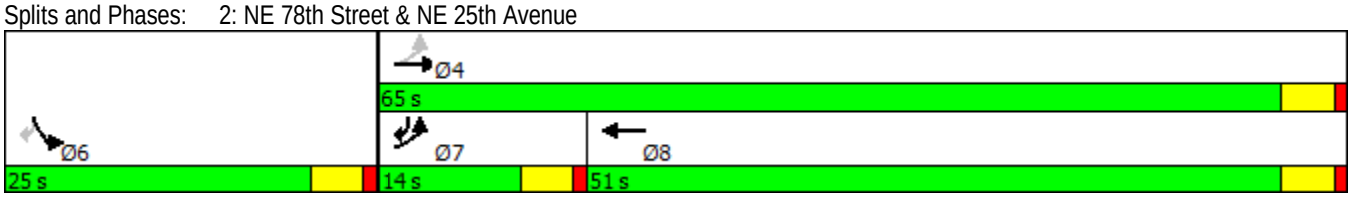
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	101	1318	1258	142	73	77
Future Volume (vph)	101	1318	1258	142	73	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370			0	210	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.985			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	3505	3521	0	1736	1553
Flt Permitted	0.109				0.950	
Satd. Flow (perm)	201	3505	3521	0	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			20			41
Link Speed (mph)		45	45		30	
Link Distance (ft)		1139	1186		2682	
Travel Time (s)		17.3	18.0		61.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	1%	1%	4%	4%
Adj. Flow (vph)	101	1318	1258	142	73	77
Shared Lane Traffic (%)						
Lane Group Flow (vph)	101	1318	1400	0	73	77
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	pm+ov
Protected Phases	7	4	8		6	7

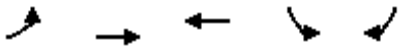


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	4					6
Detector Phase	7	4	8		6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	22.5	22.5		22.5	9.5
Total Split (s)	14.0	65.0	51.0		25.0	14.0
Total Split (%)	15.6%	72.2%	56.7%		27.8%	15.6%
Maximum Green (s)	9.5	60.5	46.5		20.5	9.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None		Min	None
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)	41.6	41.6	32.1		8.7	22.1
Actuated g/C Ratio	0.69	0.69	0.53		0.14	0.37
v/c Ratio	0.28	0.54	0.74		0.29	0.13
Control Delay	4.7	5.1	14.2		31.4	10.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	4.7	5.1	14.2		31.4	10.8
LOS	A	A	B		C	B
Approach Delay		5.1	14.2		20.8	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 60.3			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 60.3%		ICU Level of Service B	
Analysis Period (min) 15			

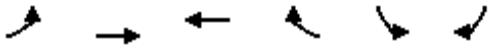
Splits and Phases: 2: NE 78th Street & NE 25th Avenue





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	101	1318	1400	73	77
v/c Ratio	0.28	0.54	0.74	0.29	0.13
Control Delay	4.7	5.1	14.2	31.4	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.7	5.1	14.2	31.4	10.8
Queue Length 50th (ft)	8	87	201	26	9
Queue Length 95th (ft)	22	150	315	72	43
Internal Link Dist (ft)		1059	1106	2602	
Turn Bay Length (ft)	370			210	
Base Capacity (vph)	410	3196	2693	657	649
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.41	0.52	0.11	0.12

Intersection Summary



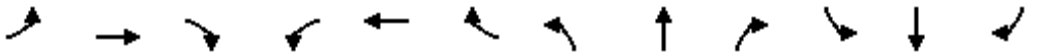
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	101	1318	1258	142	73	77
Future Volume (veh/h)	101	1318	1258	142	73	77
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1881	1900	1827	1827
Adj Flow Rate, veh/h	101	1318	1258	142	73	77
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	1	1	4	4
Cap, veh/h	385	2708	2054	231	143	231
Arrive On Green	0.07	0.77	0.63	0.63	0.08	0.08
Sat Flow, veh/h	1757	3597	3334	364	1740	1553
Grp Volume(v), veh/h	101	1318	692	708	73	77
Grp Sat Flow(s),veh/h/ln	1757	1752	1787	1817	1740	1553
Q Serve(g_s), s	1.0	8.5	14.4	14.5	2.5	2.8
Cycle Q Clear(g_c), s	1.0	8.5	14.4	14.5	2.5	2.8
Prop In Lane	1.00			0.20	1.00	1.00
Lane Grp Cap(c), veh/h	385	2708	1133	1152	143	231
V/C Ratio(X)	0.26	0.49	0.61	0.61	0.51	0.33
Avail Cap(c_a), veh/h	537	3415	1339	1361	575	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.3	2.6	6.8	6.8	27.3	23.7
Incr Delay (d2), s/veh	0.4	0.1	0.6	0.6	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.1	7.1	7.3	1.3	2.5
LnGrp Delay(d),s/veh	5.7	2.7	7.4	7.4	30.1	24.5
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1419	1400		150	
Approach Delay, s/veh		2.9	7.4		27.2	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				52.5		9.6	8.6	43.9
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				60.5		20.5	9.5	46.5
Max Q Clear Time (g_c+I1), s				10.5		4.8	3.0	16.5
Green Ext Time (p_c), s				32.8		0.3	0.1	22.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

APPENDIX F

2039 "EXISTING ZONING BUILD OUT" LEVELS OF SERVICE



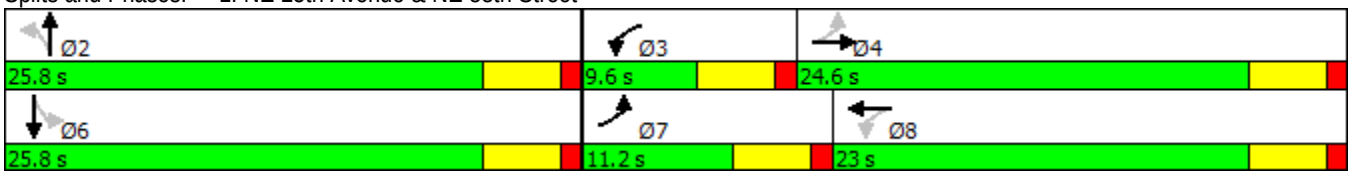
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	143	10	2	91	281	6	169	6	160	101	36
Future Volume (vph)	145	143	10	2	91	281	6	169	6	160	101	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210		0	190		0	330		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Frt		0.990			0.887			0.995			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1685	0	1805	1890	0	1805	1826	0
Flt Permitted	0.294			0.660			0.669			0.647		
Satd. Flow (perm)	559	1881	0	1254	1685	0	1271	1890	0	1229	1826	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			268			3			33	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1035			1166			2682			832	
Travel Time (s)		20.2			22.7			61.0			18.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	145	143	10	2	91	281	6	169	6	160	101	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	153	0	2	372	0	6	175	0	160	137	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

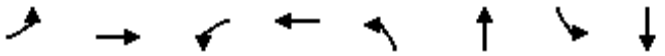
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	11.2	24.6		9.6	23.0		25.8	25.8		25.8	25.8	
Total Split (%)	18.7%	41.0%		16.0%	38.3%		43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	6.7	20.1		5.1	18.5		21.3	21.3		21.3	21.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	17.4	16.5		13.3	9.5		11.0	11.0		11.0	11.0	
Actuated g/C Ratio	0.45	0.43		0.34	0.24		0.28	0.28		0.28	0.28	
v/c Ratio	0.30	0.19		0.00	0.61		0.02	0.33		0.46	0.25	
Control Delay	8.1	9.1		6.5	9.6		12.2	14.3		18.2	11.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.1	9.1		6.5	9.6		12.2	14.3		18.2	11.3	
LOS	A	A		A	A		B	B		B	B	
Approach Delay		8.6			9.6			14.2			15.0	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.8
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 63.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: NE 25th Avenue & NE 88th Street





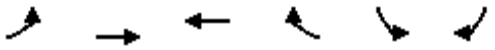
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	145	153	2	372	6	175	160	137
v/c Ratio	0.30	0.19	0.00	0.61	0.02	0.33	0.46	0.25
Control Delay	8.1	9.1	6.5	9.6	12.2	14.3	18.2	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	9.1	6.5	9.6	12.2	14.3	18.2	11.3
Queue Length 50th (ft)	14	15	0	19	1	29	29	17
Queue Length 95th (ft)	49	71	3	85	8	82	85	58
Internal Link Dist (ft)		955		1086		2602		752
Turn Bay Length (ft)	210		190		330		270	
Base Capacity (vph)	496	1109	509	1023	771	1148	746	1121
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.14	0.00	0.36	0.01	0.15	0.21	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	143	10	2	91	281	6	169	6	160	101	36
Future Volume (veh/h)	145	143	10	2	91	281	6	169	6	160	101	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	145	143	10	2	91	281	6	169	6	160	101	36
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	447	686	48	549	122	375	458	517	18	431	379	135
Arrive On Green	0.10	0.39	0.39	0.00	0.30	0.30	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	1756	123	1810	410	1266	1272	1824	65	1229	1339	477
Grp Volume(v), veh/h	145	0	153	2	0	372	6	0	175	160	0	137
Grp Sat Flow(s),veh/h/ln	1810	0	1878	1810	0	1677	1272	0	1889	1229	0	1816
Q Serve(g_s), s	2.1	0.0	2.3	0.0	0.0	8.4	0.2	0.0	3.1	4.9	0.0	2.4
Cycle Q Clear(g_c), s	2.1	0.0	2.3	0.0	0.0	8.4	2.6	0.0	3.1	8.0	0.0	2.4
Prop In Lane	1.00		0.07	1.00		0.76	1.00		0.03	1.00		0.26
Lane Grp Cap(c), veh/h	447	0	734	549	0	497	458	0	535	431	0	515
V/C Ratio(X)	0.32	0.00	0.21	0.00	0.00	0.75	0.01	0.00	0.33	0.37	0.00	0.27
Avail Cap(c_a), veh/h	560	0	903	764	0	742	746	0	962	708	0	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	0.0	8.4	10.3	0.0	13.3	12.6	0.0	11.8	15.0	0.0	11.6
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.0	0.0	2.3	0.0	0.0	0.4	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.2	0.0	0.0	4.1	0.1	0.0	1.6	1.7	0.0	1.3
LnGrp Delay(d),s/veh	9.2	0.0	8.6	10.3	0.0	15.6	12.6	0.0	12.2	15.5	0.0	11.9
LnGrp LOS	A		A	B		B	B		B	B		B
Approach Vol, veh/h		298			374			181			297	
Approach Delay, s/veh		8.9			15.6			12.2			13.8	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		16.4	4.6	20.8		16.4	8.6	16.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		21.3	5.1	20.1		21.3	6.7	18.5
Max Q Clear Time (g_c+I1), s		5.1	2.0	4.3		10.0	4.1	10.4
Green Ext Time (p_c), s		2.2	0.0	2.9		1.9	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B

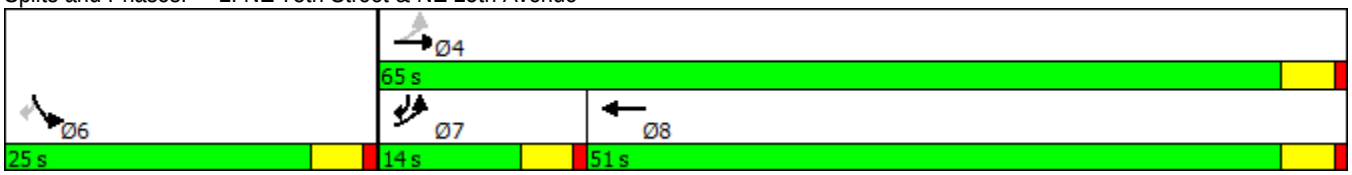


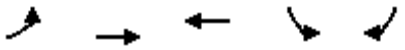
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	103	1318	1258	144	74	78
Future Volume (vph)	103	1318	1258	144	74	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370			0	210	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.985			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	3505	3521	0	1736	1553
Flt Permitted	0.109				0.950	
Satd. Flow (perm)	201	3505	3521	0	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			20			41
Link Speed (mph)		45	45		30	
Link Distance (ft)		1139	1186		2682	
Travel Time (s)		17.3	18.0		61.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	1%	1%	4%	4%
Adj. Flow (vph)	103	1318	1258	144	74	78
Shared Lane Traffic (%)						
Lane Group Flow (vph)	103	1318	1402	0	74	78
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	pm+ov
Protected Phases	7	4	8		6	7

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	4					6
Detector Phase	7	4	8		6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	22.5	22.5		22.5	9.5
Total Split (s)	14.0	65.0	51.0		25.0	14.0
Total Split (%)	15.6%	72.2%	56.7%		27.8%	15.6%
Maximum Green (s)	9.5	60.5	46.5		20.5	9.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None		Min	None
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)	41.7	41.7	32.2		8.7	22.1
Actuated g/C Ratio	0.69	0.69	0.53		0.14	0.37
v/c Ratio	0.29	0.54	0.74		0.30	0.13
Control Delay	4.8	5.1	14.2		31.5	10.8
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	4.8	5.1	14.2		31.5	10.8
LOS	A	A	B		C	B
Approach Delay		5.1	14.2		20.9	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 60.4			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 10.2		Intersection LOS: B	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

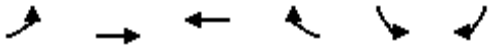
Splits and Phases: 2: NE 78th Street & NE 25th Avenue





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	103	1318	1402	74	78
v/c Ratio	0.29	0.54	0.74	0.30	0.13
Control Delay	4.8	5.1	14.2	31.5	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	5.1	14.2	31.5	10.8
Queue Length 50th (ft)	9	87	202	26	10
Queue Length 95th (ft)	23	151	316	73	44
Internal Link Dist (ft)		1059	1106	2602	
Turn Bay Length (ft)	370			210	
Base Capacity (vph)	410	3190	2688	655	648
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.41	0.52	0.11	0.12

Intersection Summary



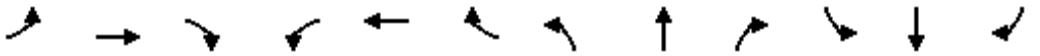
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	103	1318	1258	144	74	78
Future Volume (veh/h)	103	1318	1258	144	74	78
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1881	1900	1827	1827
Adj Flow Rate, veh/h	103	1318	1258	144	74	78
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	1	1	4	4
Cap, veh/h	384	2708	2049	234	144	232
Arrive On Green	0.07	0.77	0.63	0.63	0.08	0.08
Sat Flow, veh/h	1757	3597	3328	369	1740	1553
Grp Volume(v), veh/h	103	1318	693	709	74	78
Grp Sat Flow(s),veh/h/ln	1757	1752	1787	1816	1740	1553
Q Serve(g_s), s	1.0	8.5	14.4	14.6	2.5	2.8
Cycle Q Clear(g_c), s	1.0	8.5	14.4	14.6	2.5	2.8
Prop In Lane	1.00			0.20	1.00	1.00
Lane Grp Cap(c), veh/h	384	2708	1132	1150	144	232
V/C Ratio(X)	0.27	0.49	0.61	0.62	0.51	0.34
Avail Cap(c_a), veh/h	535	3408	1336	1357	573	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.4	2.6	6.8	6.9	27.3	23.7
Incr Delay (d2), s/veh	0.4	0.1	0.6	0.6	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.1	7.1	7.3	1.3	2.5
LnGrp Delay(d),s/veh	5.8	2.7	7.4	7.5	30.1	24.5
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1421	1402		152	
Approach Delay, s/veh		2.9	7.5		27.3	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				52.6		9.7	8.7	43.9
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				60.5		20.5	9.5	46.5
Max Q Clear Time (g_c+I1), s				10.5		4.8	3.0	16.6
Green Ext Time (p_c), s				32.9		0.4	0.1	22.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.3
HCM 2010 LOS	A

APPENDIX G

2039 "PROPOSED ZONING BUILD OUT" LEVELS OF SERVICE



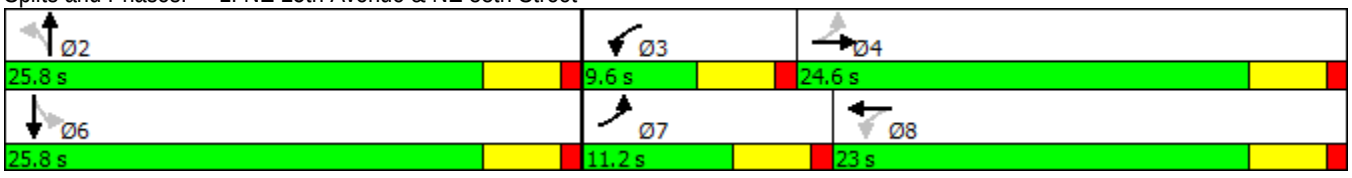
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	143	11	3	91	281	6	169	7	160	102	36
Future Volume (vph)	145	143	11	3	91	281	6	169	7	160	102	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	210		0	190		0	330		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. 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
Frt		0.989			0.887			0.994			0.961	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1879	0	1805	1685	0	1805	1889	0	1805	1826	0
Flt Permitted	0.295			0.659			0.669			0.646		
Satd. Flow (perm)	560	1879	0	1252	1685	0	1271	1889	0	1227	1826	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			268			4			33	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		1035			1166			2682			832	
Travel Time (s)		20.2			22.7			61.0			18.9	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	145	143	11	3	91	281	6	169	7	160	102	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	145	154	0	3	372	0	6	176	0	160	138	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	

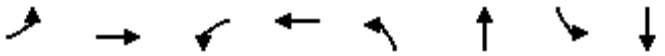
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	11.2	24.6		9.6	23.0		25.8	25.8		25.8	25.8	
Total Split (%)	18.7%	41.0%		16.0%	38.3%		43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	6.7	20.1		5.1	18.5		21.3	21.3		21.3	21.3	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	17.4	16.5		13.3	9.5		11.0	11.0		11.0	11.0	
Actuated g/C Ratio	0.45	0.43		0.34	0.24		0.28	0.28		0.28	0.28	
v/c Ratio	0.30	0.19		0.01	0.61		0.02	0.33		0.46	0.26	
Control Delay	8.1	9.1		6.7	9.6		12.2	14.2		18.2	11.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.1	9.1		6.7	9.6		12.2	14.2		18.2	11.3	
LOS	A	A		A	A		B	B		B	B	
Approach Delay		8.6			9.5			14.2			15.0	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 38.8
Natural Cycle: 55
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 63.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: NE 25th Avenue & NE 88th Street





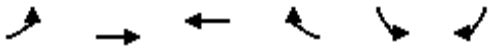
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	145	154	3	372	6	176	160	138
v/c Ratio	0.30	0.19	0.01	0.61	0.02	0.33	0.46	0.26
Control Delay	8.1	9.1	6.7	9.6	12.2	14.2	18.2	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	9.1	6.7	9.6	12.2	14.2	18.2	11.3
Queue Length 50th (ft)	14	15	0	19	1	29	29	17
Queue Length 95th (ft)	49	71	4	85	8	82	85	58
Internal Link Dist (ft)		955		1086		2602		752
Turn Bay Length (ft)	210		190		330		270	
Base Capacity (vph)	496	1107	508	1022	771	1147	744	1120
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.14	0.01	0.36	0.01	0.15	0.22	0.12

Intersection Summary

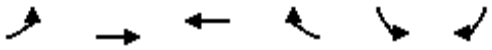
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	145	143	11	3	91	281	6	169	7	160	102	36
Future Volume (veh/h)	145	143	11	3	91	281	6	169	7	160	102	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	145	143	11	3	91	281	6	169	7	160	102	36
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	446	678	52	550	121	375	458	515	21	430	381	135
Arrive On Green	0.10	0.39	0.39	0.00	0.30	0.30	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1810	1742	134	1810	410	1266	1271	1812	75	1228	1343	474
Grp Volume(v), veh/h	145	0	154	3	0	372	6	0	176	160	0	138
Grp Sat Flow(s),veh/h/ln	1810	0	1876	1810	0	1677	1271	0	1887	1228	0	1816
Q Serve(g_s), s	2.1	0.0	2.3	0.0	0.0	8.4	0.2	0.0	3.1	5.0	0.0	2.5
Cycle Q Clear(g_c), s	2.1	0.0	2.3	0.0	0.0	8.4	2.6	0.0	3.1	8.0	0.0	2.5
Prop In Lane	1.00		0.07	1.00		0.76	1.00		0.04	1.00		0.26
Lane Grp Cap(c), veh/h	446	0	731	550	0	497	458	0	536	430	0	516
V/C Ratio(X)	0.33	0.00	0.21	0.01	0.00	0.75	0.01	0.00	0.33	0.37	0.00	0.27
Avail Cap(c_a), veh/h	559	0	901	763	0	741	744	0	960	706	0	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.8	0.0	8.5	10.3	0.0	13.3	12.6	0.0	11.8	15.0	0.0	11.6
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.0	0.0	2.3	0.0	0.0	0.4	0.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.2	0.0	0.0	4.1	0.1	0.0	1.6	1.7	0.0	1.3
LnGrp Delay(d),s/veh	9.2	0.0	8.6	10.3	0.0	15.7	12.6	0.0	12.2	15.5	0.0	11.9
LnGrp LOS	A		A	B		B	B		B	B		B
Approach Vol, veh/h		299			375			182			298	
Approach Delay, s/veh		8.9			15.6			12.2			13.8	
Approach LOS		A			B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		16.4	4.7	20.8		16.4	8.6	16.9
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		21.3	5.1	20.1		21.3	6.7	18.5
Max Q Clear Time (g_c+I1), s		5.1	2.0	4.3		10.0	4.1	10.4
Green Ext Time (p_c), s		2.2	0.0	2.9		1.9	0.1	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	12.9
HCM 2010 LOS	B



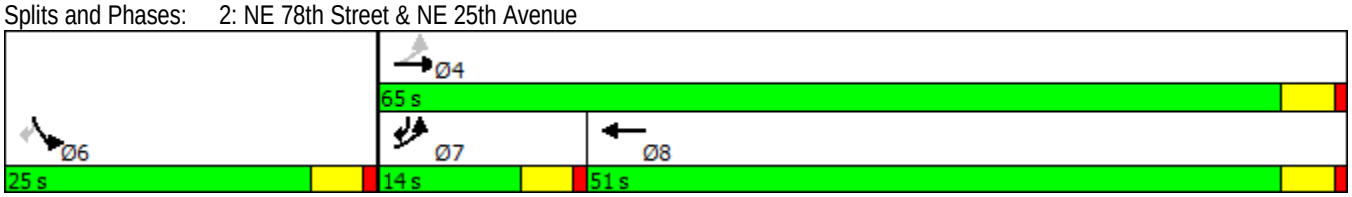
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	105	1318	1258	145	75	79
Future Volume (vph)	105	1318	1258	145	75	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	370			0	210	0
Storage Lanes	1			0	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.984			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	3505	3517	0	1736	1553
Flt Permitted	0.109				0.950	
Satd. Flow (perm)	201	3505	3517	0	1736	1553
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)			20			41
Link Speed (mph)		45	45		30	
Link Distance (ft)		1139	1186		2682	
Travel Time (s)		17.3	18.0		61.0	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	3%	1%	1%	4%	4%
Adj. Flow (vph)	105	1318	1258	145	75	79
Shared Lane Traffic (%)						
Lane Group Flow (vph)	105	1318	1403	0	75	79
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2		1	1
Detector Template	Left	Thru	Thru		Left	Right
Leading Detector (ft)	20	100	100		20	20
Trailing Detector (ft)	0	0	0		0	0
Detector 1 Position(ft)	0	0	0		0	0
Detector 1 Size(ft)	20	6	6		20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA		Prot	pm+ov
Protected Phases	7	4	8		6	7

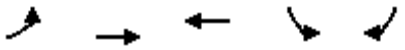


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Permitted Phases	4					6
Detector Phase	7	4	8		6	7
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	22.5	22.5		22.5	9.5
Total Split (s)	14.0	65.0	51.0		25.0	14.0
Total Split (%)	15.6%	72.2%	56.7%		27.8%	15.6%
Maximum Green (s)	9.5	60.5	46.5		20.5	9.5
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5
Lead/Lag	Lead		Lag			Lead
Lead-Lag Optimize?	Yes		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Recall Mode	None	None	None		Min	None
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effct Green (s)	41.8	41.8	32.3		8.8	22.3
Actuated g/C Ratio	0.69	0.69	0.53		0.15	0.37
v/c Ratio	0.30	0.55	0.75		0.30	0.13
Control Delay	4.9	5.1	14.3		31.6	10.9
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	4.9	5.1	14.3		31.6	10.9
LOS	A	A	B		C	B
Approach Delay		5.1	14.3		21.0	
Approach LOS		A	B		C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 60.6			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 60.6%		ICU Level of Service B	
Analysis Period (min) 15			

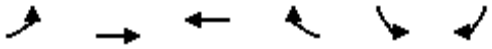
Splits and Phases: 2: NE 78th Street & NE 25th Avenue





Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	105	1318	1403	75	79
v/c Ratio	0.30	0.55	0.75	0.30	0.13
Control Delay	4.9	5.1	14.3	31.6	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	5.1	14.3	31.6	10.9
Queue Length 50th (ft)	9	88	204	27	10
Queue Length 95th (ft)	23	151	318	74	44
Internal Link Dist (ft)		1059	1106	2602	
Turn Bay Length (ft)	370			210	
Base Capacity (vph)	409	3185	2680	653	648
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.41	0.52	0.11	0.12

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	105	1318	1258	145	75	79
Future Volume (veh/h)	105	1318	1258	145	75	79
Number	7	4	8	18	1	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1881	1900	1827	1827
Adj Flow Rate, veh/h	105	1318	1258	145	75	79
Adj No. of Lanes	1	2	2	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	1	1	4	4
Cap, veh/h	384	2707	2045	235	145	234
Arrive On Green	0.07	0.77	0.63	0.63	0.08	0.08
Sat Flow, veh/h	1757	3597	3326	371	1740	1553
Grp Volume(v), veh/h	105	1318	694	709	75	79
Grp Sat Flow(s),veh/h/ln	1757	1752	1787	1816	1740	1553
Q Serve(g_s), s	1.1	8.6	14.5	14.7	2.6	2.8
Cycle Q Clear(g_c), s	1.1	8.6	14.5	14.7	2.6	2.8
Prop In Lane	1.00			0.20	1.00	1.00
Lane Grp Cap(c), veh/h	384	2707	1131	1149	145	234
V/C Ratio(X)	0.27	0.49	0.61	0.62	0.52	0.34
Avail Cap(c_a), veh/h	534	3402	1333	1355	572	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.5	2.6	6.9	6.9	27.4	23.7
Incr Delay (d2), s/veh	0.4	0.1	0.6	0.6	2.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.1	7.1	7.3	1.3	2.6
LnGrp Delay(d),s/veh	5.8	2.7	7.5	7.5	30.2	24.5
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h		1423	1403		154	
Approach Delay, s/veh		3.0	7.5		27.3	
Approach LOS		A	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				52.6		9.7	8.7	43.9
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				60.5		20.5	9.5	46.5
Max Q Clear Time (g_c+I1), s				10.6		4.8	3.1	16.7
Green Ext Time (p_c), s				32.9		0.4	0.1	22.8

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

SEPA Environmental Checklist

Washington Administrative Code (WAC) 197-11-960

Purpose of checklist:

The State Environmental Policy Act (SEPA), Revised Code of Washington (RCW), Chapter 43.21C, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and agencies identify impacts from your proposal and to help agencies decide whether or not an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe basic information about your proposal. Governmental agencies use this checklist to determine whether or not the environmental impacts of your proposal are significant. Please answer the questions briefly, giving the most precise information or best description known. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply."

Some questions pertain to governmental regulations such as zoning, shoreline, and landmark designations. If you have problems answering these questions, please contact the Clark County Permit Center for assistance.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. You may be asked to explain your answers or provide additional information related to significant adverse impacts.

Use of checklist for non-project proposals:

Complete this checklist for non-project proposals (e.g., county plans and codes), even if the answer is "does not apply." In addition, complete the supplemental sheet for non-project actions (Part D).

For non-project actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

Community Development
1300 Franklin Street, Vancouver, Washington
Phone: (360) 397-2375 Fax: (360) 397-2011
www.clark.wa.gov/development

A. Background

1. Name of proposed project, if applicable:
25th Ave Subdivision

2. Name of applicant:
Cody Dickman

3. Address and phone number of applicant and contact person:
203 E Reserve Street, Vancouver WA, 98661
Cody Dickman (360)696-4448

4. Date checklist prepared:
1/4/2018

5. Agency requesting checklist:
Clark County

6. Proposed timing or schedule (including phasing, if applicable):
N/A

7. Do you have any plans for future additions, expansion, or further activity related to this proposal? If yes, explain.
Not at this time

8. List any environmental information that has been or will be prepared related to this proposal.
An Archaeological Predetermination will be conducted by Archaeological Services of Clark County and submitted to the Washington State Department of Archaeology and Historic Preservation (DAHP).

9. Are other applications pending for governmental approvals affecting the property covered by your proposal? If yes, please explain.
None Known

10. List any government approvals or permits needed for your proposal:
Clark County:
Planning Commission Hearing
Public Hearing

11. Give a brief, complete description of your proposal, including the proposed uses and size of the project and site. There are several questions addressed later in this checklist asking you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
Seeking to amend the Comprehensive Plan Map and Zoning Designation of this site from Urban Low Density R1-6 to Urban Medium Density R-18.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including street address, section, township, and range. If this proposal occurs over a wide area, please provide the range or boundaries of the site. Also, give a legal description, site plan, vicinity map, and topographic map. You are

required to submit any plans required by the agency, but not required to submit duplicate maps or plans submitted with permit applications related to this checklist.

Tax ID #145032-000

B. Environmental Elements

Agency use only

1. Earth

a. General description of the site (circle one): (Flat), rolling, hilly, steep slopes, mountainous, other _____.

The site is flat with 75.9% of parcel having slopes less than 5% and 24.1% having slopes less than 10%

b. What is the steepest slope on the site and the approximate percentage of the slope?

24.1% is <10%

c. What general types of soils are found on the site (e.g., clay, sand, gravel, peat, muck)? Please specify the classification of agricultural soils and note any prime farmland.

Non-Hydric/SoA

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, please describe.

No unstable soils have been found on this site

e. Describe the purpose, type, and approximate quantities of any filling or proposed grading. Also, indicate the source of fill.

No fill or grading proposed at this time.

f. Could erosion occur as a result of clearing, construction, or use? If so, please describe.

At this time no clearing is proposed to take place.

g. What percentage of the site will be covered with impervious surfaces after the project construction (e.g., asphalt or buildings)?

N/a

h. Proposed measures to reduce or control erosion, or other impacts to the earth include:

N/a

2. Air

a. What types of emissions to the air would result from this proposal (e.g., dust, automobile, odors, industrial wood smoke) during construction and after completion? Please describe and give approximate quantities.

N/a

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, please describe.

No

c. Proposed measures to reduce or control emissions or other impacts to air:

N/a

3. Water

Agency use only

a. Surface:

1) Is there any surface water body on or in the vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, and wetlands)? If yes, describe the type and provide names and into which stream or river it flows into.

There are no mapped wetlands, habitats or other critical areas known to exist on this site

2) Will the project require any work within 200 feet of the described waters? If yes, please describe and attach available plans.

No

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

N/A

4) Will the proposal require surface water withdrawals or diversions? Please provide description, purpose, and approximate quantities:

N/A

5) Does the proposal lie within a 100-year floodplain? If so, please note the location on the site plan.

No

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No

b. Ground:

1) Will ground water be withdrawn, or will water be discharged to ground water? Please give description, purpose, and approximate quantities.

No direct withdrawals of groundwater are proposed.

2) Describe waste material that will be discharged into the ground from septic tanks or other sources; (e.g., domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the

size and number of the systems, houses to be served; or, the number of animals or humans the systems are expected to serve.

None

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal. Include quantities, if known. Describe where water will flow, and if it will flow into other water.

Agency use only

N/A

2) Could waste materials enter ground or surface waters? If so, please describe.

No

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

N/A

4. Plants

a. Check or circle types of vegetation found on the site

- (■) Deciduous tree: alder, maple, aspen, other
- (■) Evergreen tree: fir, cedar, pine, other
- (■) Shrubs
- (■) Grass
- ■ Pasture
- ■ Crop or grain
- ■ Wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- ■ Water plants: water lily, eelgrass, milfoil, other
- ■ Other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

Grass, shrubs, Trees

c. List threatened or endangered species on or near the site.

None at this time

d. List proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site:

None at this time

5. Animals

a. Circle any birds and animals which have been observed on or near the site:

- Birds: hawk, heron, eagle, songbirds, other;
- Mammals: deer, bear, elk, beaver, other; and,
- Fish: bass, salmon, trout, herring, shellfish, other.

Local birds, Robins, Starlings, Finches, and small mammals such as rabbit, mice, racoon, opossum, and moles have been observed at this site.

b. List any threatened or endangered species known to be on or near the site. Agency use only

No known endangered species exist om the site

c. Is the site part of a migration route? If so, please explain.

The site is located within what is commonly referred to as the Pacific Flyway. The Flyway stretches from Alaska to Mexico and from the Pacific Ocean to the Rocky Mountains.

d. List proposed measures to preserve or enhance wildlife:

N/A

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

N/a

b. Would your project affect the potential use of solar energy by adjacent properties? If so, please describe.

No

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts:

N/A

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, please describe.

N/A

1) Describe special emergency services that might be required.

N/A.

2) Proposed measures to reduce or control environmental health hazards, if any:

N/A

b. Noise

1) What types of noise exist in the area which may affect your project (e.g., traffic, equipment, operation, other)?
General Traffic

2) What types and levels of noise are associated with the project on a short-term or a long-term basis (e.g., traffic, construction, operation, other)? Indicate what hours the noise would come from the site.
N/A.

Agency use only

3) Proposed measures to reduce or control noise impacts:
N/A

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?
Currently the property has an existing single-family residential structure and is used as a single-family residence. Property to the south is currently under construction and is planed use will be an apartment complex. To the west is vacant land, the north is 2 acres with one single family residential home located on the property. To the east is a small cluster of single-family residential structures.

b. Has the site been used for agriculture? If so, please describe.
No

c. Describe any structures on the site.
Currently a single story 4-bedroom ranch style home sits on the eastern most section of the property.

d. Will any structures be demolished? If so, please describe.
Not at this time.

e. What is the current zoning classification of the site?
Single Family Residential (R1-6)

f. What is the current comprehensive plan designation of the site?
UL

g. What is the current shoreline master program designation of the site?
Does not apply

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, please specify.
No

i. How many people would reside or work in the completed project?
N/A

j. How many people would the completed project displace?

None

k. Please list proposed measures to avoid or reduce displacement impacts:
N/A

l. List proposed measures to ensure the proposal is compatible with existing and projected land uses and plans:
N/A

9. Housing

Agency use only

a. Approximately how many units would be provided? Indicate whether it's high, middle, or low-income housing.
N/A

b. Approximately how many units, if any, would be eliminated? Indicate whether it's high, middle, or low-income housing.
N/A

c. List proposed measures to reduce or control housing impacts:
N/A

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is proposed as the principal exterior building materials?
To be determined

b. What views in the immediate vicinity would be altered or obstructed?
None

c. Proposed measures to reduce or control aesthetic impacts:
N/A

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
N/A

b. Could light or glare from the finished project be a safety hazard or interfere with views?
N/A

c. What existing off-site sources of light or glare may affect your proposal?

Unknown

d. Proposed measures to reduce or control light and glare impacts:
N/A.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
None

b. Would the project displace any existing recreational uses? If so, please describe.
No

Agency use only

c. Proposed measures to reduce or control impacts on recreation, including recreational opportunities to be provided by the project or applicant:
N/A

13. Historic and cultural preservation

a. Are there any places or objects on or near the site which are listed or proposed for national, state, or local preservation registers. If so, please describe.
An Archaeological Predetermination has been conducted by Archaeological Services of Clark County and submitted to the Washington State Department of Archaeology and Historic Preservation (DAHP). No Archaeological resources were observed on the site.

b. Please describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
None known

c. Proposed measures to reduce or control impacts:
N/A

14. Transportation

a. Identify the public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
NE 78th ST/NE 25th Ave

b. Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
Bus stop across from the property. NE 78th St.& 26th Ave C-Tran route #78

c. How many parking spaces would the completed project have? How many would the project eliminate?
N/A

d. Will the proposal require new roads or streets, or improvements to existing roads or streets, not including driveways? If so, please describe and indicate whether it's public or private.
N/A

e. Will the project use water, rail, or air transportation? If so, please describe.
No

f. How many vehicular trips per day would be generated by the completed project? Indicate when peak traffic volumes would occur. Agency use only
N/A

g. Proposed measures to reduce or control transportation impacts:
N/A

15. Public services

a. Would the project result in an increased need for public services (e.g., fire protection, police protection, health care, schools, other)? If so, please describe.
No, the project currently falls within the urban growth boundary. Existing services should be adequate to serve this project.

b. Proposed measures to reduce or control direct impacts on public services:
To be determined

16. Utilities

a. Circle the utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on or near the site:
Unknown at this time

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: _____ Date Submitted: 1/31/19 Agency use only

CLARK REGIONAL WASTEWATER DISTRICT
UTILITY REVIEW

Part A: Project/Parcel Information

Date: December 19, 2018 Utility Review Number: 1355675

APPLICANT INFORMATION

Name: Cody Dickman Mailing Address: 203 E Reserve Street

City: Vancouver State: WA Zip: 98661

DELIVERY INFORMATION (Check one)

☐ Call for Pickup ☐ Fax to Applicant ☒ E-mail ☐ Mail

Phone #: Fax #: E-mail Address: cody@delta203.com

PROPERTY INFORMATION

Flows to Salmon Creek Treatment Plant ☒ Flows to Vancouver Treatment Plant ☐

Lot # 109 SE ¼, . Sec 02 T. 2 N., R. 1 E., W.M.

Serial #: 145032-000 Property Address: 8106 NE 25th Avenue

Nearest Cross Streets: NE 25th Avenue and NE 80th Street

Proposed Type of Use: ☐ SFR ☒ MF ☐ COMM ☐ IND ☐ Other :

Property Size: 2.0 acres Building Square Footage: (Commercial/Industrial)

Preliminary Name of Project: 25th Avenue Apartments No. Living Units 36 Estimated ERU's:28.8

Part B: Sanitary Sewer Information

The point of connection for the subject parcel is mainline located approximately 240 feet north of the north west property corner.

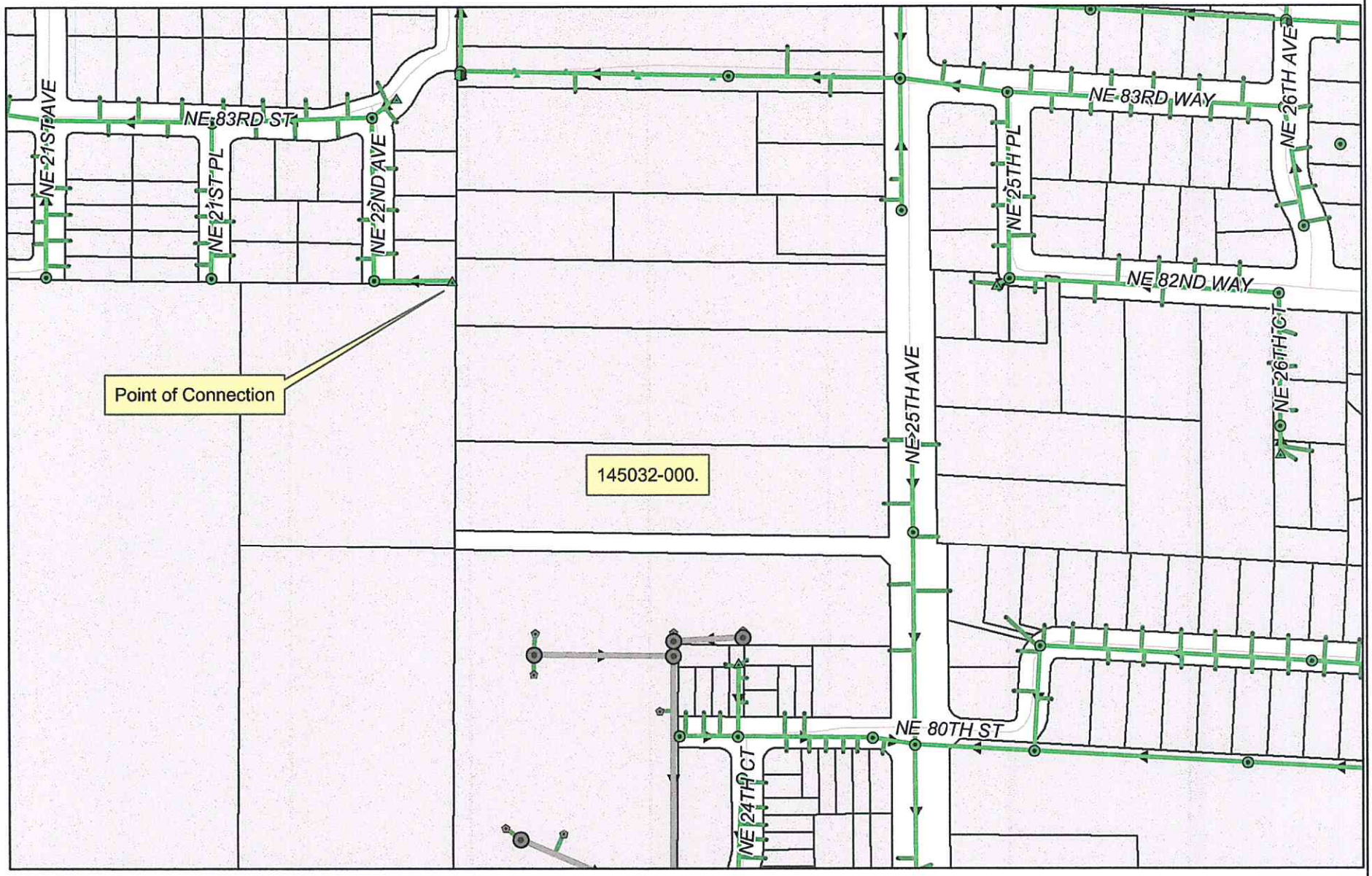
Part C: General Information

ATTENTION	FEES (All Fees Subject to Change)	
☒ Licensed Civil Engineer Drawing Required	☐ Reimbursement Contract (Latecomers Fee In Place)	$
☐ Sewer Main Extension Required		
☐ Bids Required for Reimbursement	☒ System Development Charge	$ 4,708.00/ERU
☒ Developer Extension Agreement Required	☒ Permit Fee	$ 140.00/Bldg
☐ Easement Required	☐ Sewer Tapping Fee	$
☒ Sewer Lateral Required	☒ Plan Review Fees*	$ 500 min.
☐ Pretreatment Survey Required	☒ Inspection Fees*	$ 1/LF
☒ The owner(s) must take all steps necessary to assure themselves of Gravity Flow Service	☒ Utility Permit Fees*	$ 225.00
☐ Installation depth will be greater than eight feet (8') and all costs will be the responsibility of the developer	☒ Deposits*	$ 1,350.00

*Approximate only. Subject to modification and/or revision during detailed plan check and approval.

PREPARED BY:	Jason Oster	DATE:	12/19/18
RECEIVED BY:	Via-Email	DATE:	12/19/18

1. This Utility Review is valid only for the real property referenced above ("Property") for the purpose of verifying the availability of sanitary sewer service.
2. No third person or party shall have any rights under this Utility Review whether by agency, third-party beneficiary principles or otherwise.
3. This Utility Review does not create a contractual relationship between the District and the Applicant and its successors and assigns ("Applicant").
4. This Utility Review is not assignable without the District's prior written permission.
5. As of the date of preparation of this Utility Review, as shown above, the District represents that sewer service is available to the Property through sewer systems that exist or that may be extended by the applicant to accommodate the sewage from the Property for the number of ERU's indicated. The District makes no other representations, express or implied.



RUR 1355675

CLARK REGIONAL WASTEWATER DISTRICT

2018-137

Clark Public Utilities
Customer-owned, customer-focused

REQUEST FOR UTILITY REVIEW – WATER AVAILABILITY
P. O. Box 8900 (8600 N.E. 117 Ave) Vancouver, WA 98668
(360) 992-8022 Email: wateradmi@clarkpud.com

APPLICANT INFORMATION

DATE: 12/4/2018

NAME Cody Dickman
ADDRESS 203 E Reserve St
CITY Vancouver STATE WA ZIP 98661
TELEPHONE (360) 696-4448 EMAIL cody@delta203.03

Notification Method: Email
Type of Development: Apartment/Condo
Number of Units: TBD

Property Location

Serial Acct. No 145032-000
Property Address 8106 NE 25th Avenue (or nearest cross street)
Property Size 2.00 Acres Required Fire Flow TBD GPM

PLEASE SUBMIT PLAT MAP WITH REQUEST

GENERAL CONDITIONS FOR SERVICE (CPU Staff Only)

Clark Public Utilities is the water purveyor for this site. No site plan was submitted with this review request so comments are general in nature and subject to change pending a full site plan review.

There is an existing 8" C-900 PVC water main within NE 81st Street, an existing 12" AC water main within NE 25th Avenue and an existing domestic water service along the East frontage. Nearby fire hydrants are located on the south side of NE 81st Street and another located ~230-ft north on the East side of NE 25th Ave. See attached Clark Public Utilities (CPU) water distribution map for reference.

The fire flow in the near vicinity was last calculated in 2012 at 3662 GPM at 20 PSI. Static water pressure is expected to vary around 65 psi depending on site elevation, system demand and reservoir levels. If updated fire flow calculations are required, please contact Water Services at (360) 992-8022.

Depending on site access and development layout, public water to the site is available by connecting to the existing 8" water main within NE 81st St and the 12" water main within NE 25th Ave. A minimum 8" water main should be extended on site and looped where possible. Install proper fire protection (i.e. hydrants and building sprinkler systems) as required by the Fire Marshal. An easement shall be granted to Clark Public Utilities for all water mains and services (up to the meter) located within private property.

Proper state approved backflow devices will be required for all domestic, fire and landscape water services. All hot taps shall be performed by a Utility approved contractor. The Developer is responsible for costs associated with the service and fire protection installation, right-of-way permitting, and any other needed water improvements.

Submit full engineering plan set for further requirements and comments.

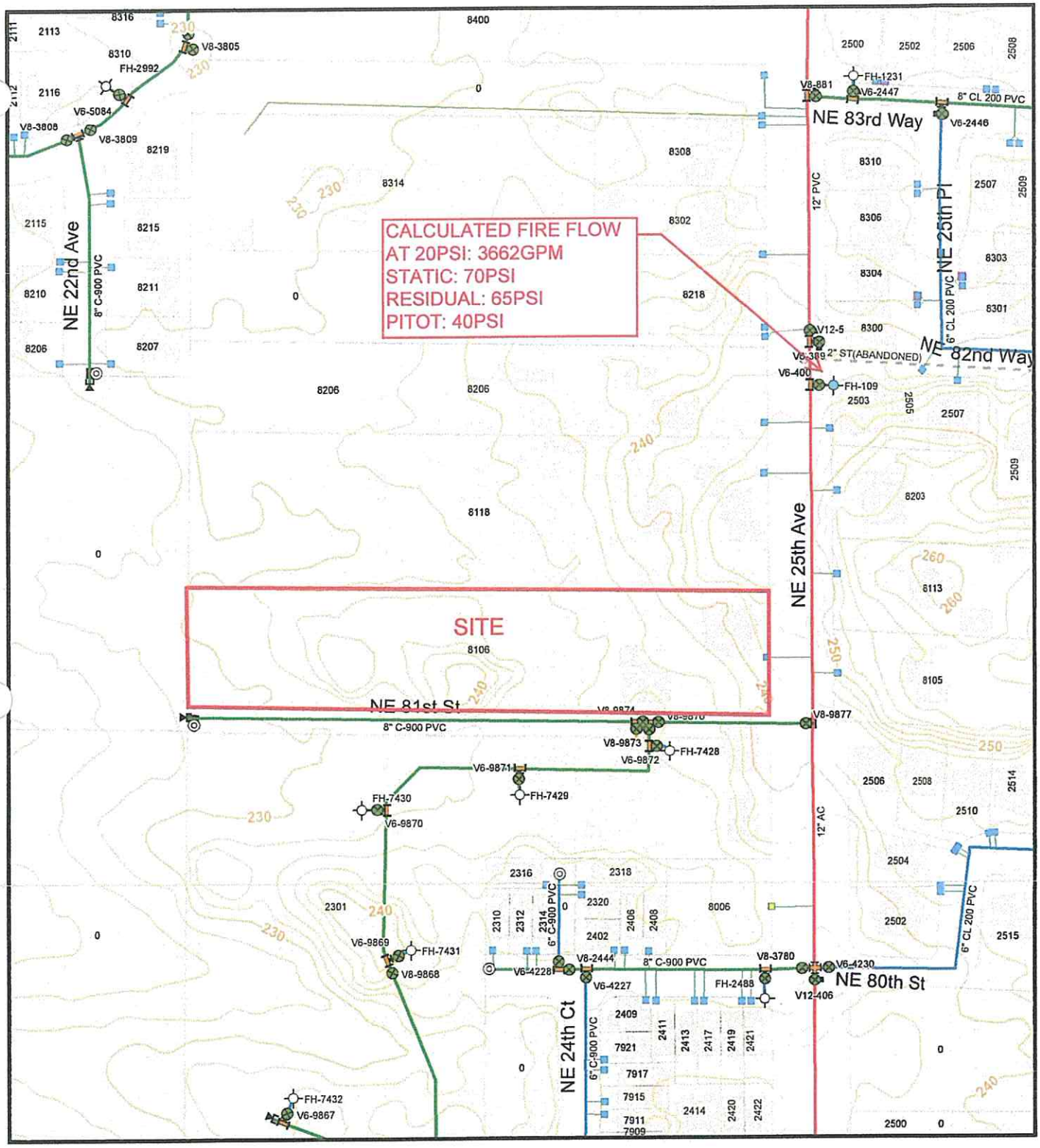
☒ Licensed Civil Eng. Drawing Required for Clark Public Utilities approval prior to construction
☒ Easement Required
☒ Clark Public Utilities has the capacity to serve, if the above conditions are met
☒ Developer/Owner shall pay County Right-of-Way fees based on off-site improvements

Review comments are subject to modification during detailed plan check and review.
This utility review is valid for six months after the date of signature below.

REVIEWED BY _____ DATE 12/11/2018
Nick Flagg, PE

Revised 3/10/17 rk

2018-137



1 inch = 150 feet

Legend

- Unknown
- 2"
- 3"
- 4"
- 6"
- Water Service
- 8"
- 10"
- 12"
- 14"
- 16"
- Butterfly, Closed
- Butterfly, Open
- Gate, Closed
- Gate, Open
- Abandoned Valve
- Water Meter
- Air Release
- Check
- Double Check
- Blow Off
- Pressure Regulating Valve
- Valve Book
- Cross
- Tee
- Cap and Thrust Block
- Reducer
- Coupling
- Tapping Sleeve
- Reservoir
- Booster Pumping Station
- Satellite Well
- Production Well

Fire Flow At 20psi
- Not Tested
- 1 - 499
- 500 - 999
- 1000 - 1499
- 1500 - 7981

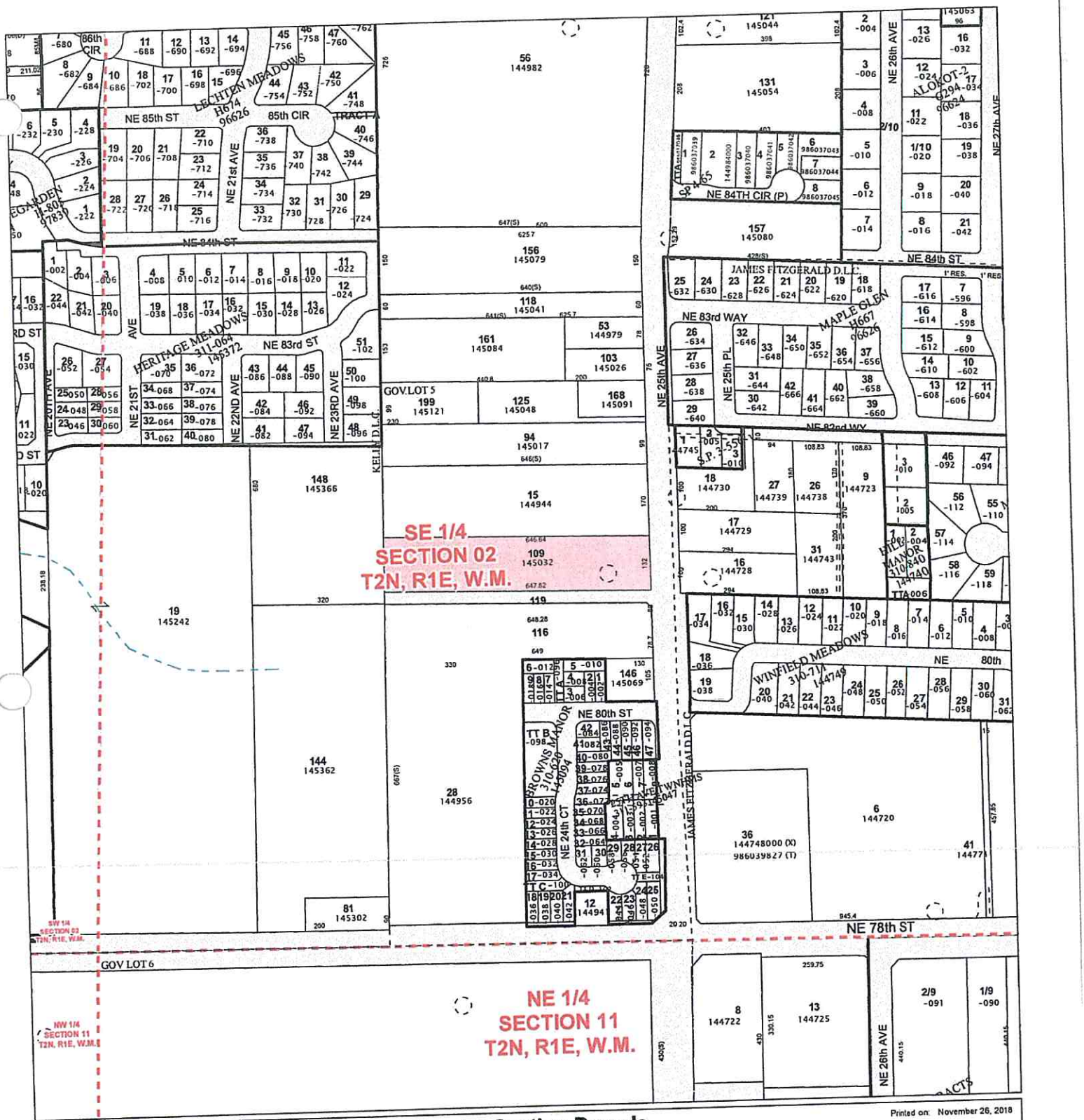
N

Clark Public Utilities
Customer-owned, customer-focused

OPERATIONS MAP

Printed on: 12/11/2018 Printed by: NickF

MAP NUMBER
2102-S



Quarter Section Parcels

Printed on: November 26, 2018

Account: 145032000
Owner: SADRI ASGHAR R
Address: 203 E RESERVE ST
C/S/Z: VANCOUVER, WA 98661

CLARK COUNTY, WASHINGTON
Geographic Information System

0 150 300 Feet

Subdivision Lines
Donation Land Claim
Section Quarters
City Boundaries
Subject Property(s)
Road Right of Way - Actual Road May not Exist
Transportation or Major Utility Easement

31134	31135	31136
21103	21102	21101
21110	21111	21112

Information shown on this map was collected from several sources. Clark County accepts no responsibility for any inaccuracies that may be present.

proud past, promising future

CLARK COUNTY
WASHINGTON

1601 E Fourth Plain Blvd. • 3rd floor • PO Box 9825 • Vancouver, WA 98666-8825 • tel: [360] 397-8000 • fax: [360] 397-8080 • www.clark.wa.gov

January 31, 2018

Delta Management
Attn: Cody Dickman
203 E Reserve Street
Vancouver, WA 98661

RE: Development Review Evaluation and Final Approval for "25th Avenue Subdivision" located at 8106 NE 25th Avenue (ID # SR 28878; Tax Parcel 145032000; PAC2017-00118)

Mr. Dickman:

The Development Review Evaluation of the site for which you have applied has been completed. This evaluation is limited to the area of the proposed development. The findings are:

On-Site Sewage Treatment Systems (OSS) (CCC 24.17, WAC 246-272A, CCC 40.370, RCW 58.17):

The house at 8106 is connected to public sewer. If a septic tank or other tank associated with an on-site sewage system is found during development, it must be properly abandoned. There is an outhouse behind the shop which simply needs the hole filled with dirt when the structure is removed. This project will be served by public sewer.

Water Systems (WAC 173-160, WAC 246-290, CCC 40.370, RCW 58.17):

The house is connected to public water. The application does not indicate a well and no well was observed during the site visit. If a well should be found during development, it must be properly decommissioned by a licensed well driller. This project will be served by public water.

If you have any questions about this letter, please contact me at (360) 397-8428 ext. 7254.

Sincerely,

Carla Sowder, R.S.

Carla Sowder, R. S.
Environmental Health Specialist

CC: Clark County Community Development, Attn: Bryan Mattson

3319491
Page: 1 of 5
05/11/2001 02:04P
Clark County, WA
PUBLIC WORKS ERS 0.00

After recording return to:

Real Property Services
Clark County, Washington
P O Box 9810
Vancouver WA 98666-9810

Real Estate Excise Tax
Clark County, Washington
EXEMPT
Affid.# 6 Date 5-11-01
for Balance of Consideration
Affid.# 6
Deputy Assessor
Clark County Washington
By

Document Title: Wall Easement
Reference Number of Related Documents:
Grantor(s): ASGHAR R. SADRI
Grantee: Clark County, Washington
Legal Description: #109 SEC 2 T2N R1E WN
Additional Legal Description is attached as Exhibit "A"
Serial #: 145032
Project: NE 25th Ave. (NE 78th St - NE 9th St)
CRP# : 382722

WALL EASEMENT

THE GRANTOR(S), **ASGHAR R. SADRI, as his separate estate,** for and in consideration of valuable consideration as set out in part below, bargain, sell and convey to **CLARK COUNTY, a political subdivision of the State of Washington,** its heirs and assigns, a perpetual Wall Easement to construct, install, reconstruct, repair, operate and maintain the County's Wall and all necessary related facilities over, under, upon and across the following described real property situated in Clark County, Washington, more particularly described as follows:

SEE LEGAL DESCRIPTION ATTACHED HERETO, WHICH, BY THIS REFERENCE, IS INCORPORATED HEREIN

GRANTOR(S) agree that no building, wall or structure with footings shall be placed upon the granted property without the written permission of Clark County, Washington.

The terms and conditions of this easement shall be binding upon the heirs and assigns of the Grantors and Clark County, Washington.

NOTE: In the event of damage to the Grantor's property related to the reconstruction, repair or maintenance of the Retaining Wall, the Grantee or its contractor shall repair the property to its prior condition.

CONSIDERATIONS: FOUR HUNDRED FIFTY AND NO/100's DOLLARS ($450.00) FOR REAL PROPERTY.

3319491
Page: 2 of 5
05/11/2001 02:04P
PUBLIC WORKS EAS 0.00 Clark County, WA

Wall Easement
Serial #:145032
Project: NE 25TH Ave. (NE 78th St - NE 99th St.)
CRP #: 382722

Dated this 23 day of April, 2001.

Asghar R. Sadri

Accepted on behalf of Clark County
under the authority of CCC 2.33.095.

PETER CAPELL, P.E.
Director of Public Works

STATE OF WASHINGTON

COUNTY OF CLARK

I hereby certify that I know or have satisfactory evidence that **ASGHAR R. SADRI** is the person who ~~appeared before me~~ signed, and said person acknowledged that he signed this instrument and acknowledged it to be his free and voluntary act for the uses and purposes mentioned in the instrument.

DATE: 4/23/01

Notary Public in and for the State of
Residing at Vancouver
My commission expires 10/1/03

3319491
Page: 3 of 5
05/11/2001 02:04P
PUBLIC WORKS EAS 0.00 Clark County, WA

CLARK COUNTY
WASHINGTON

DEPARTMENT OF
PUBLIC WORKS

Superior service that is responsive and cost-justified.

DESIGN & ENGINEERING
COUNTY SURVEYOR'S OFFICE

EXHIBIT " A "
NE 25th AVENUE – CRP # 382722
SADRI PARCEL
EASEMENT DESCRIPTOPN

A strip of land of variable width lying in the Southeast quarter of Section 2, Township 2 North, Range 1 East of the Willamette Meridian in Clark County, Washington, being more particularly described as follows:

All that portion of that parcel described in that Statutory Warranty Deed to Asghar R. Sadri, a single person, recorded September 12, 1996 under Auditor's File No. 9609120039, Records of Clark County, Washington, listed as Serial No. 145032-000, lying Easterly of a line drawn 39.00 feet Westerly of, when measured at right angles or radial to, the centerline of said Northeast 25th Avenue, as described in Exhibit "B", attached, all in Clark County, Washington.

This description contains 528 square feet as calculated by the double meridian distance method.

4-26-00

sadri

1300 ESTHER STREET ▪ P.O. BOX 9810 ▪ VANCOUVER WA 98666-9810 ▪ www.co.clark.wa.us

(360) 397-6118 ▪ EXTENSION 4228 ▪ FAX (360) 397-6053 ▪ TDD (360) 397-6057

3319491
Page: 4 of 5
05/11/2001 02:04P
Clark County, WA
PUBLIC WORKS EAS 0.00

CLARK COUNTY
WASHINGTON

DEPARTMENT OF
PUBLIC WORKS

Superior service that is responsive and cost-justified.

DESIGN & ENGINEERING
COUNTY SURVEYOR'S OFFICE

EXHIBIT "B"
CENTERLINE DESCRIPTION
N.E. 25th AVENUE

A strip of land of varying width lying in the East 1/2 of Section 2, Township 2 North, Range 1 East of the Willamette Meridian, the centerline of said strip being more particularly described as follows:

Beginning at a 5/8"iron rod with yellow plastic cap marked " Clark County Surveyor" which bears South 89°33'33" East 1382.74 feet from a brass disk marking the South 1/4 corner of said Section 2, said iron rod being designed as Enginneer's station 0+00.00; thence North 00°22'21" West 1,632.00 feet to a point; thence North 3°03'05" East 1,027.20 feet to a brass disk set in concrete; thence North 1° 37'28" East 2,599.32 feet to a point and there terminating, all in Clark County, Washington.

Bearings hereon use are based on the Washington State Plane Coordinate System, South Zone, NAD 83/91. Control scheme is on file at the County Surveyor's office.

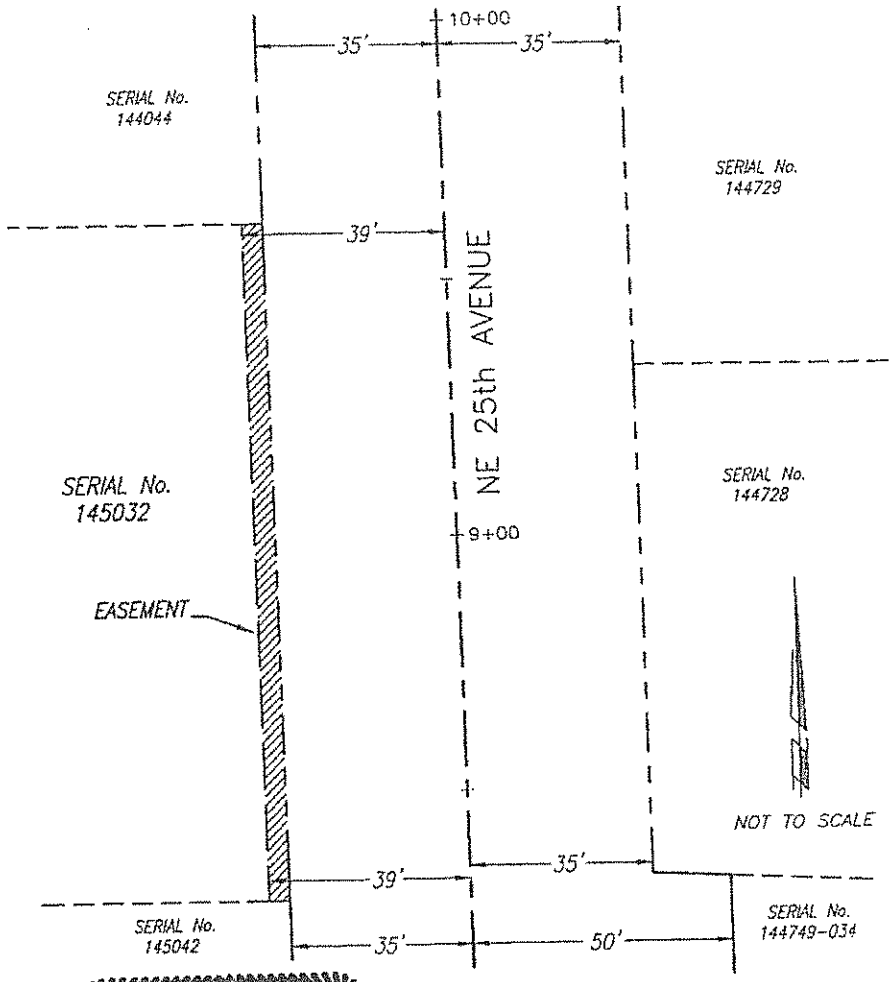
4-26-00

1300 ESTHER STREET ▪ P.O. BOX 9810 ▪ VANCOUVER WA 98666-9810 ▪ www.co.clark.wa.us
(360) 397-6118 ▪ EXTENSION 4228 ▪ FAX (360) 397-6053 ▪ TDD (360) 397-6057

3319491
Page: 5 of 5
05/11/2001 02:04P
PUBLIC WORKS EAS 0.00 Clark County, WA

EXHIBIT "C"

SERIAL No. 145032



Clark County Public Works Vancouver, Washington		
DESIGN & ENGINEERING DIVISION OFFICE OF THE COUNTY SURVEYOR		
SE 1/4 SECTION 2 T 2 N, R 1 E, W.M.		
SKETCH TO ACCOMPANY LEGAL DESCRIPTION		
DATE	SCALE	DRAWN BY
APRIL 2000	NOT TO SCALE	CJS