



City of Tualatin

www.tualatinoregon.gov

"NECESSARY PARTIES"
MARKED BELOW

NOTICE OF APPLICATION SUBMITTAL

- ANNEXATION CONDITIONAL USE PERMIT PLAN TEXT AMENDMENT
 ARCHITECTURAL REVIEW PLAN MAP AMENDMENT OTHER:

CASE/FILE: AR-15-0023 (Community Development Dept.: Planning Division)

PROPOSAL	To remodel an existing drive-thru restaurant building of 2,931 square feet (sq ft) vacated by Arby's fast food for use by Starbucks coffee shop. The building is the southwestern outbuilding of the strip mall anchored by Dick's Sporting Goods and Safeway grocery and at the northeast corner of SW 65 th Avenue and SW Lower Boones Ferry Road.
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PROPERTY	Name of Application	ARBY'S TO STARBUCKS CONVERSION REMODEL		
	<input type="checkbox"/> n/a Street Address	17771 SW Lower Boones Ferry Rd		
	Tax Map and Lot No(s).	21E 18BC 01000 & 1900		
	Planning District	General Commercial (CG)	Overlays <input type="checkbox"/>	NRPO <input type="checkbox"/> Flood Plain <input type="checkbox"/>
	Previous Applications	AR-07-18	Additional Applications: none	CIO COMMERCIAL

DATES	Receipt of application	9/21/2015	Deemed Complete	11/05/2015	CONTACT	Name: Colin Cortes
	Notice of application submittal			11/9/2015		Title: Assistant Planner
	Project Status / Development Review meeting			11/19/2015		E-mail: ccortes@ci.tualatin.or.us
	Comments due for staff report			11/23/2015		Phone: 503-691-3024
	Public meeting: <input type="checkbox"/> ARB <input type="checkbox"/> TPC <input checked="" type="checkbox"/> n/a					Notes: You may view the application materials through this City web page: www.tualatinoregon.gov/projects
	City Council (CC)			<input checked="" type="checkbox"/> n/a		

City Staff

- City Manager
- Building Official
- Chief of Police
- City Attorney
- City Engineer
- Community Dev. Director
- Community Services Director
- Economic Dev. liaison
- Engineering Associate*
- Finance Director
- GIS technician(s)
- IS Manager
- Operations Director*
- Parks and Recreation Coordinator
- Planning Manager
- Street/Sewer Supervisor
- Water Supervisor

Neighboring Cities

- Durham
- King City Planning Commission
- Lake Oswego
- Rivergrove PC
- Sherwood Planning Dept.
- Tigard Community Dev. Dept.
- Wilsonville Planning Div.

*Paper Copies

Counties

- Clackamas County Dept. of Transportation and Dev.
- Washington County Dept. of Land Use and Transportation (AR's)
- Washington County LRP (Annexations)

Regional Government

- Metro

School Districts

- Lake Oswego School Dist. 7J
- Sherwood SD 88J
- Tigard-Tualatin SD 23J (TTSD)
- West Linn-Wilsonville SD 3J

State Agencies

- Oregon Dept. of Aviation
- Oregon Dept. of Land Conservation and Development (DLCD) (via proprietary notice)
- Oregon Dept. of State Lands: Wetlands Program
- Oregon Dept. of Transportation (ODOT) Region 1
- ODOT Maintenance Dist. 2A

- ODOT Rail Div.

Utilities

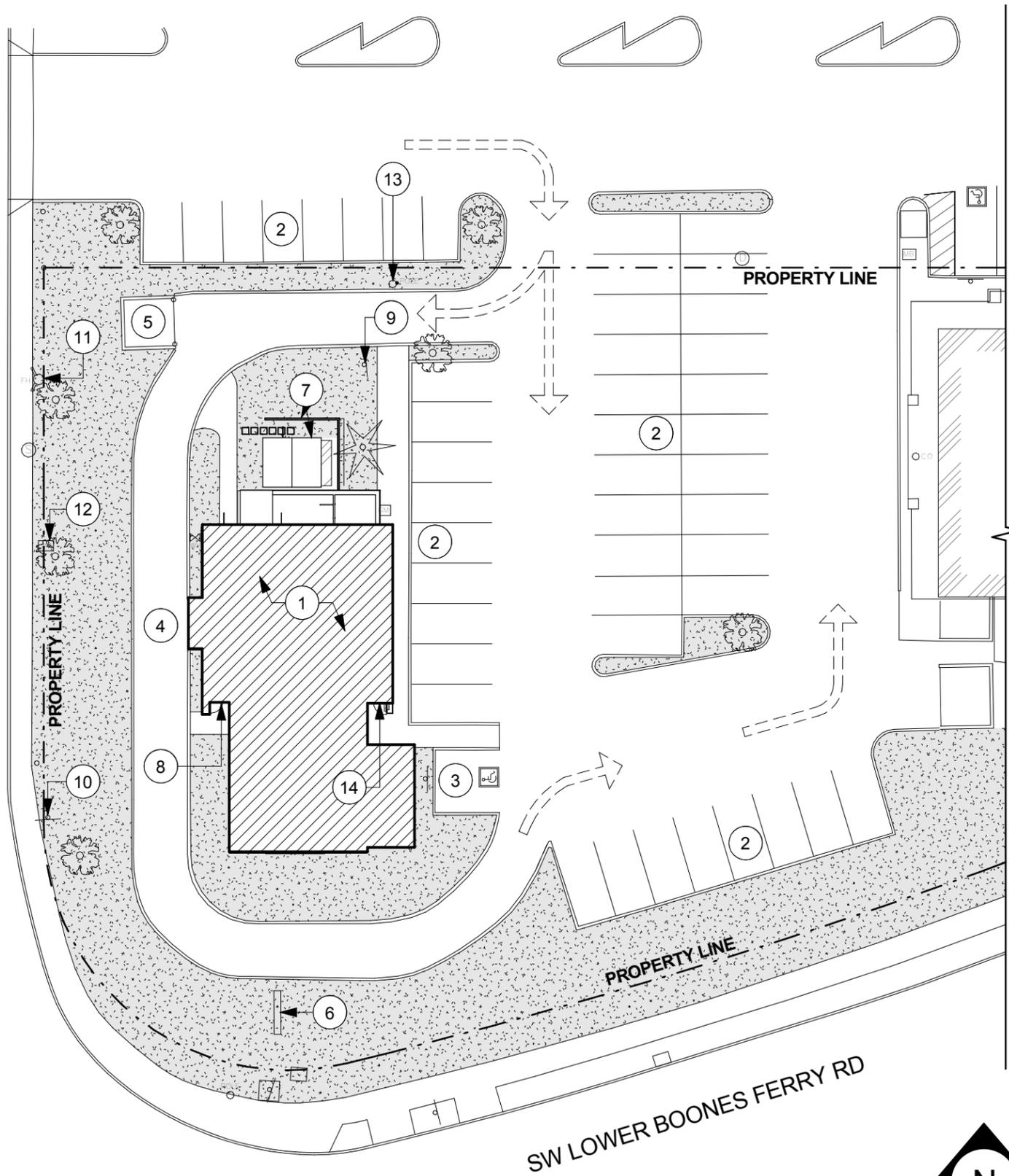
- Republic Services
- Clean Water Services (CWS)
- Comcast [cable]*
- Frontier Communications [phone]
- Northwest Natural [gas]
- Portland General Electric (PGE)
- TriMet
- Tualatin Valley Fire & Rescue (TVF&R)
- United States Postal Service (USPS) (Washington; 18850 SW Teton Ave)
- USPS (Clackamas)
- Washington County Consolidated Communications Agency (WCCCA)

Additional Parties

- Tualatin Citizen Involvement Organization (CIO)
-

- 1.032: *Burden of Proof*
- 31.071 *Architectural Review Procedure*
- 31.074 *Architectural Review Application Review Process*
- 31.077 *Quasi-Judicial Evidentiary Hearing Procedures*
- Metro Code 3.09.045 Annexation Review Criteria*
- 32.030 *Criteria for Review of Conditional Uses*
- 33.020 *Conditions for Granting a Variance that is not a Sign or a Wireless Communication Facility*
- 33.022 *Criteria for Granting a Sign Variance*
- 33.024 *Criteria for Granting a Minor Variance*
- 33.025 *Criteria for Granting a Variance*
- 34.200 *Tree Cutting on Private Property without Architectural Review, Subdivision or Partition Approval, or Tree Removal Permit Prohibited*
- 34.210 *Application for Architectural Review, Subdivision or Partition Review, or Permit*
- 34.230 *Criteria (tree removal)*
- 35.060 *Conditions for Granting Reinstatement of Nonconforming Use*
- 36.160 *Subdivision Plan Approval*
- 36.230 *Review Process (partitioning)*
- 36.330 *Review Process (property line adjustment)*
- 37.030 *Criteria for Review (IMP)*
- 40.030 *Conditional Uses Permitted (RL)*
- 40.060 *Lot Size for Conditional Uses (RL)*
- 40.080 *Setback Requirements for Conditional Uses (RL)*
- 41.030 *Conditional Uses Permitted (RML)*
- 41.050 *Lot Size for Conditional Uses (RML)*
- 41.070 *Setback Requirements for Conditional Uses (RML)*
- 42.030 *Conditional Uses Permitted (RMH)*
- 42.050 *Lot Size for Conditional Uses (RMH)*
- 42.070 *Setback Requirements for Conditional Uses (RMH)*
- 43.030 *Conditional Uses Permitted (RH)*
- 43.060 *Lot Size for Conditional Uses (RH)*
- 43.090 *Setback Requirements for Conditional Uses (RH)*
- 44.030 *Conditional Uses Permitted (RH-HR)*
- 44.050 *Lot Size for Conditional Uses (RH-HR)*
- 44.070 *Setback Requirements for Conditional Uses (RH-HR)*
- 49.030 *Conditional Uses (IN)*
- 49.040 *Lot Size for Permitted and Conditional Uses (IN)*
- 49.060 *Setback Requirements for Conditional Uses (IN)*
- 50.020 *Permitted Uses (CO)*
- 50.030 *Central Urban Renewal Plan – Additional Permitted Uses and Conditional Uses (CO)*
- 50.040 *Conditional Uses (CO)*
- 52.030 *Conditional Uses (CR)*
- 53.050 *Conditional Uses (CC)*
- 53.055 *Central Urban Renewal Area – Conditional Uses (CC)*
- 54.030 *Conditional Uses (CG)*
- 56.030 *Conditional Uses (MC)*
- 56.045 *Lot Size for Conditional Uses (MC)*
- 57.030 *Conditional Uses (MUCOD)*
- 60.040 *Conditional Uses (ML)*
- 60.041 *Restrictions on Conditional Uses (ML)*
- 61.030 *Conditional Uses (MG)*
- 61.031 *Restrictions on Conditional Uses (MG)*
- 62.030 *Conditional Uses (MP)*
- 62.031 *Restrictions on Conditional Uses (MP)*
- 64.030 *Conditional Uses (MBP)*
- 64.050 *Lot Size for Permitted and Conditional Uses (MBP)*
- 64.065 *Setback Requirements for Conditional Uses (MBP)*
- 68.030 *Criteria for Designation of a Landmark*
- 68.060 *Demolition Criteria*
- 68.070 *Relocation Criteria*
- 68.100 *Alteration and New Construction Criteria*
- 68.110 *Alteration and New Construction Approval Process*
- 73.130 *Standards*
- 73.160 *Standards*
- 73.190 *Standards – Single-Family and Multi-Family Uses*
- 73.220 *Standards*
- 73.227 *Standards*
- 73.230 *Landscaping Standards*
- 73.300 *Landscape Standards – Multi-Family Uses*
- 73.310 *Landscape Standards – Commercial, Industrial, Public and Semi-Public Uses*
- 73.320 *Off-Street Parking Lot Landscaping Standards*
- 73.470 *Standards*
- 73.500 *Standards*

SW 65TH AVE (MERIDIAN RD)



SHEET NOTES

1. TENANT LEASE AREA.
2. EXISTING PARKING LOT, ALL SPACES TO REMAIN UON.
3. EXISING ADA PARKING TO BE RELOCATED.
4. EXISING DRIVE THROUGH LANE TO REMAIN.
5. EXISING TRASH ENCLOSURE TO REMAIN, TO BE PAINTED TO MATCH BUILDING, GATES TO BE REPLACED.
6. DEMOLISH ALL EXISTING SITE SIGNAGE ASSOCIATED WITH PREVIOUS TENANT.
7. DEMOLISH EXISING SHED, OUTDOOR WALK-IN FREEZER, AND SURROUNDING WOOD FENCE.
8. DEMOLISH EXISING EXTERIOR ENTRY DOOR.
9. DEMOLISH EXISING DRIVE THROUGH EQUIPMENT.
10. EXISING "35 MPH" SIGN TO REMAIN.
11. EXISING FIRE HYDRANT TO REMAIN.
12. EXISING WATER METER BOX TO REMAIN.
13. EXISING SITE LIGHTING TO REMAIN, TYP.
14. EXISTING ENTRY DOOR TO REMAIN.

SITE PLAN LEGEND

-  TENANT LEASE AREA
-  EXISITING LANDSCAPING

1 EXISTING CONDITIONS SITE PLAN

Scale: 1" = 30'-0"

Holst Architecture
 holstarc.com
 110 se 8th portland or 97214
 v 503 233 9856 f 503 232 7135



BOONES FERRY AND SW 65TH
 17771 LOWER BOONES FERRY RD,
 TUALATIN, OR 97035

job no.
 07870-026

Architectural Review

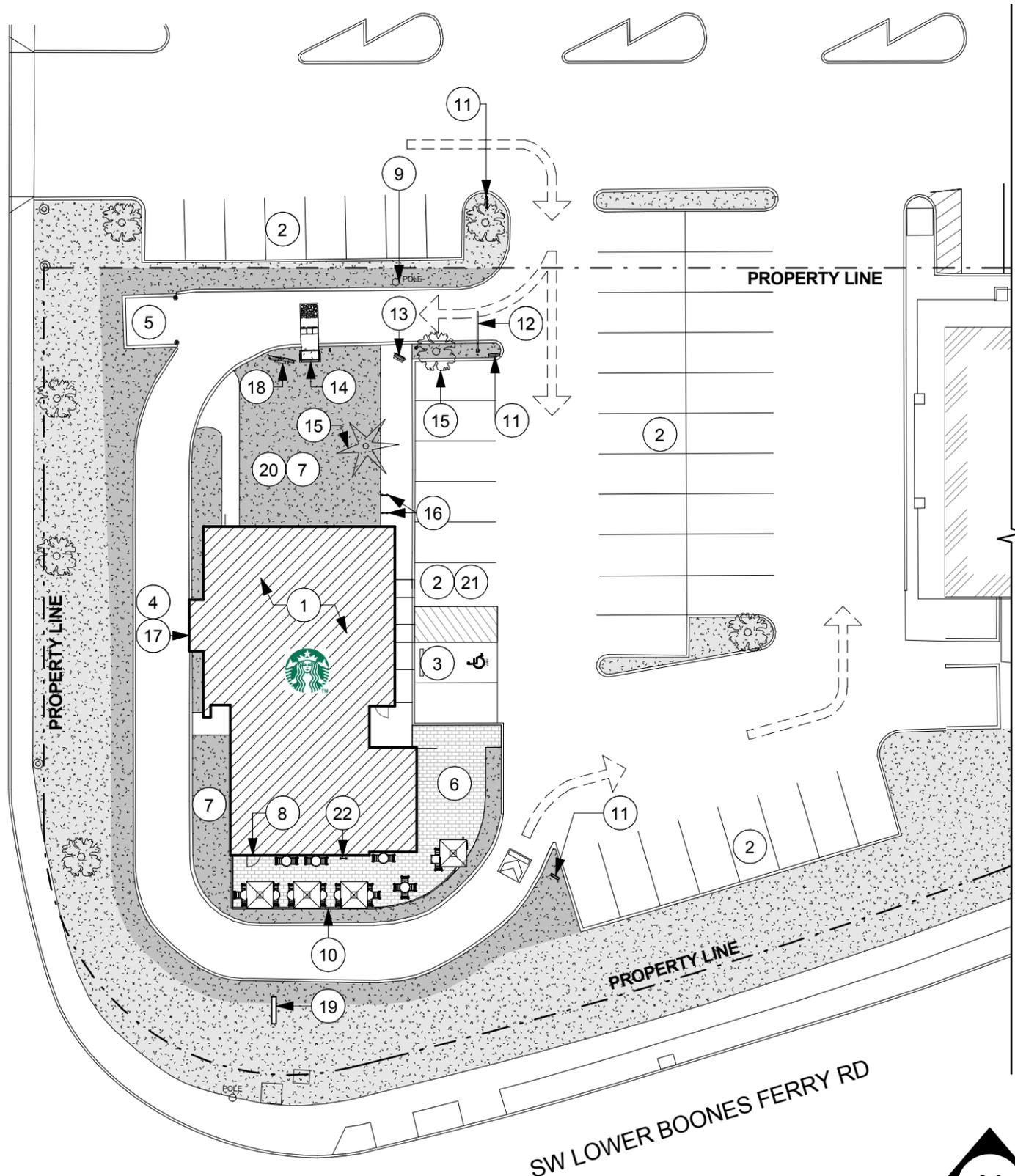
9/8/2015

EXISTING
 CONDITIONS SITE
 PLAN

sheet:

A1b

SW 65TH AVE (MERIDIAN RD)



SHEET NOTES

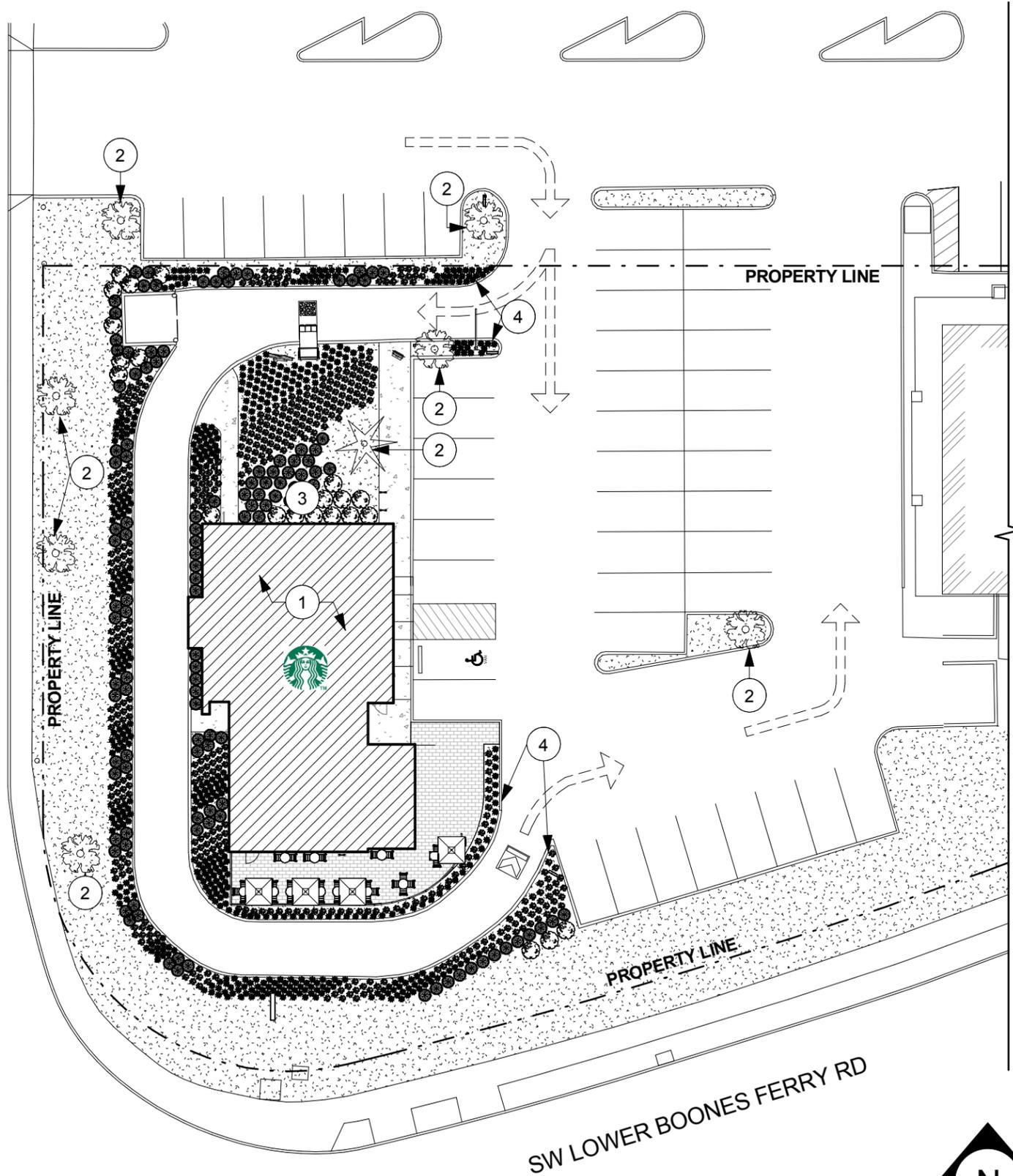
- | | |
|---|---|
| 1. TENANT LEASE AREA. | 13. NEW PRE-ORDER MENU. |
| 2. EXISTING PARKING LOT, ALL SPACES TO REMAIN UNCHANGED. | 14. NEW ORDER CANOPY AND SCREEN. |
| 3. RELOCATED ADA PARKING. | 15. ALL EXISTING TREES TO REMAIN, TYP. |
| 4. EXISTING DRIVE-THRU LANE TO REMAIN. | 16. NEW BIKE PARKING. BIKE PARKING AREA TO BE IDENTIFIED WITH SIGNAGE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) |
| 5. EXISTING TRASH ENCLOSURE TO REMAIN, TO BE PAINTED TO MATCH BUILDING, GATES TO BE REPLACED. | 17. EXISTING PICK-UP BUMP OUT TO REMAIN. |
| 6. NEW EXTERIOR PATIO WITH PERMEABLE PAVERS. | 18. NEW 3-PANEL MENU BOARD. |
| 7. AMEND LANDSCAPING WITH REFRESHED PLANTINGS PER DESIGN BUILDING LANDSCAPE SUBMITTALS, MATCH SHOPPING CENTER STANDARDS | 19. NEW PYLON SIGN, UNDER SEPARATE SIGNAGE PERMIT. |
| 8. NEW ENTRY DOOR, SEE ELEVATIONS FOR ADDITIONAL INFORMATION. | 20. AFTER COMPLETION OF SITE GRADING, TOPSOIL IS TO BE RESTORED TO EXPOSED CUT AND FILL AREAS TO PROVIDE A SUITABLE BASE FOR SEEDING AND PLANTING. |
| 9. ALL EXISTING SITE LIGHTING TO REMAIN. | 21. TWO (2) SPACES TO BE STRIPED AND SIGNED AS DESIGNATED CARPOOL/VANPOOL SPACES. |
| 10. NEW WOOD AND METAL RAILING AT NEW EXTERIOR PATIO. | 22. NEW COVERED BIKE PARKING. BIKE PARKING AREA TO BE IDENTIFIED WITH SIGNAGE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) |
| 11. NEW DIRECTIONAL SIGNAGE. | |
| 12. NEW CLEARANCE BAR. | |

SITE PLAN LEGEND

- | | |
|--|--------------------------------|
| | TENANT LEASE AREA |
| | EXISTING LANDSCAPING TO REMAIN |
| | NEW AND AMENDED LANDSCAPING |
| | PERMEABLE PAVERS AT PATIO |
| | EXISTING SIDEWALK TO REMAIN |

1 PROPOSED SITE PLAN
Scale: 1" = 30'-0"

SW 65TH AVE (MERIDIAN RD)



LANDSCAPE PLAN NOTES

- A. NEW PLANTINGS SHALL BE SPECIFIED BY THE DESIGN-BUILD LANDSCAPER DURING CONSTRUCTION, LANDSCAPE PLAN FOR REFERENCE ONLY.
- B. ALL LANDSCAPING APPROVED THROUGH THE ARCHITECTURAL REVIEW PROCESS SHALL BE MAINTAINED IN A MANNER SUBSTANTIALLY SIMILAR TO THE ORIGINAL.

SHEET NOTES

- 1. TENANT LEASE AREA.
- 2. EXISTING TREE TO BE PRESERVED, TYP. SEE SITE SURVEY FOR TREE SIZE.
- 3. NEW SHRUBS SHALL BE ONE TO FIVE GALLON SIZE.
- 4. A CLEAR ZONE SHALL BE PROVIDED FOR THE DRIVER AT ENDS OF ON-SITE DRIVE AISLES AND DRIVEWAY ENTRANCES, VERTICALLY BETWEEN A MAX OF 30 INCHES AND A MINIMUM OF 8 FEET

LANDSCAPE PLAN LEGEND

- TENANT LEASE AREA
- EXISTING LANDSCAPING TO REMAIN
- PERMEABLE PAVERS AT PATIO
- EXISTING SIDEWALK TO REMAIN
- SHRUB, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
- ORNAMENTAL GRASS, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
- ORNAMENTAL GRASS, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
- SHRUB, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER

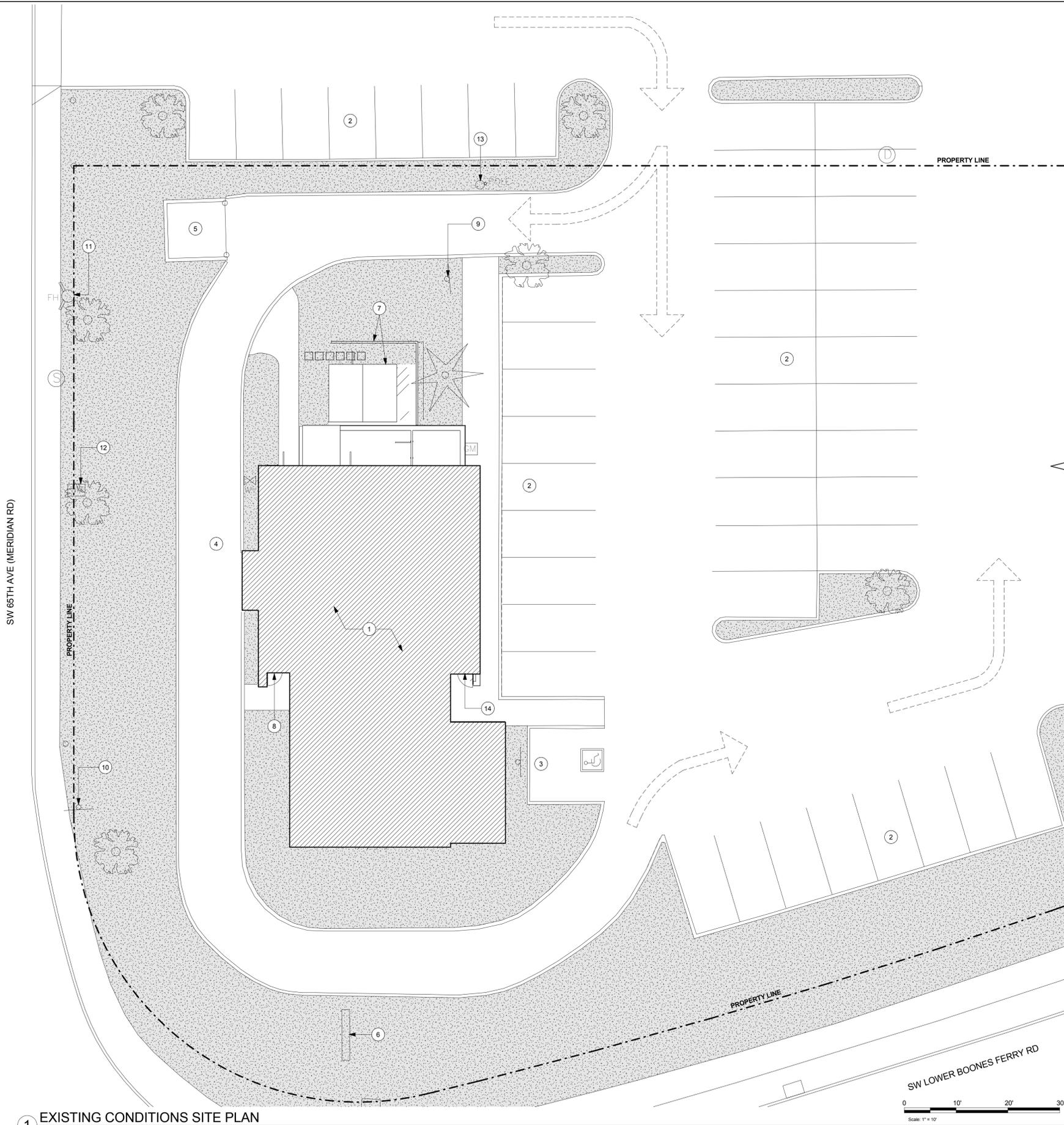
1 LANDSCAPE SITE PLAN
Scale: 1" = 30'-0"

SHEET NOTES

1. TENANT LEASE AREA.
2. EXISTING PARKING LOT. ALL SPACES TO REMAIN UNON.
3. EXISTING ADA PARKING TO BE RELOCATED.
4. EXISTING DRIVE THROUGH LANE TO REMAIN.
5. EXISTING TRASH ENCLOSURE TO REMAIN. TO BE PAINTED TO MATCH BUILDING. GATES TO BE REPLACED.
6. DEMOLISH ALL EXISTING SITE SIGNAGE ASSOCIATED WITH PREVIOUS TENANT.
7. DEMOLISH EXISTING SHED, OUTDOOR WALK-IN FREEZER, AND SURROUNDING WOOD FENCE.
8. DEMOLISH EXISTING EXTERIOR ENTRY DOOR.
9. DEMOLISH EXISTING DRIVE THROUGH EQUIPMENT.
10. EXISTING "35 MPH" SIGN TO REMAIN.
11. EXISTING FIRE HYDRANT TO REMAIN.
12. EXISTING WATER METER BOX TO REMAIN.
13. EXISTING SITE LIGHTING TO REMAIN, TYP.
14. EXISTING ENTRY DOOR TO REMAIN.

SITE PLAN LEGEND - EXISTING

-  TENANT LEASE AREA
-  EXISTING LANDSCAPING



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION



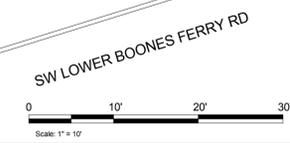
NORTH SHED BUILDING AND WALK-IN COOLER

2 EXISTING SITE PHOTOS

Scale: 1/4" = 1'-0"

1 EXISTING CONDITIONS SITE PLAN

Scale: 1" = 10'-0"



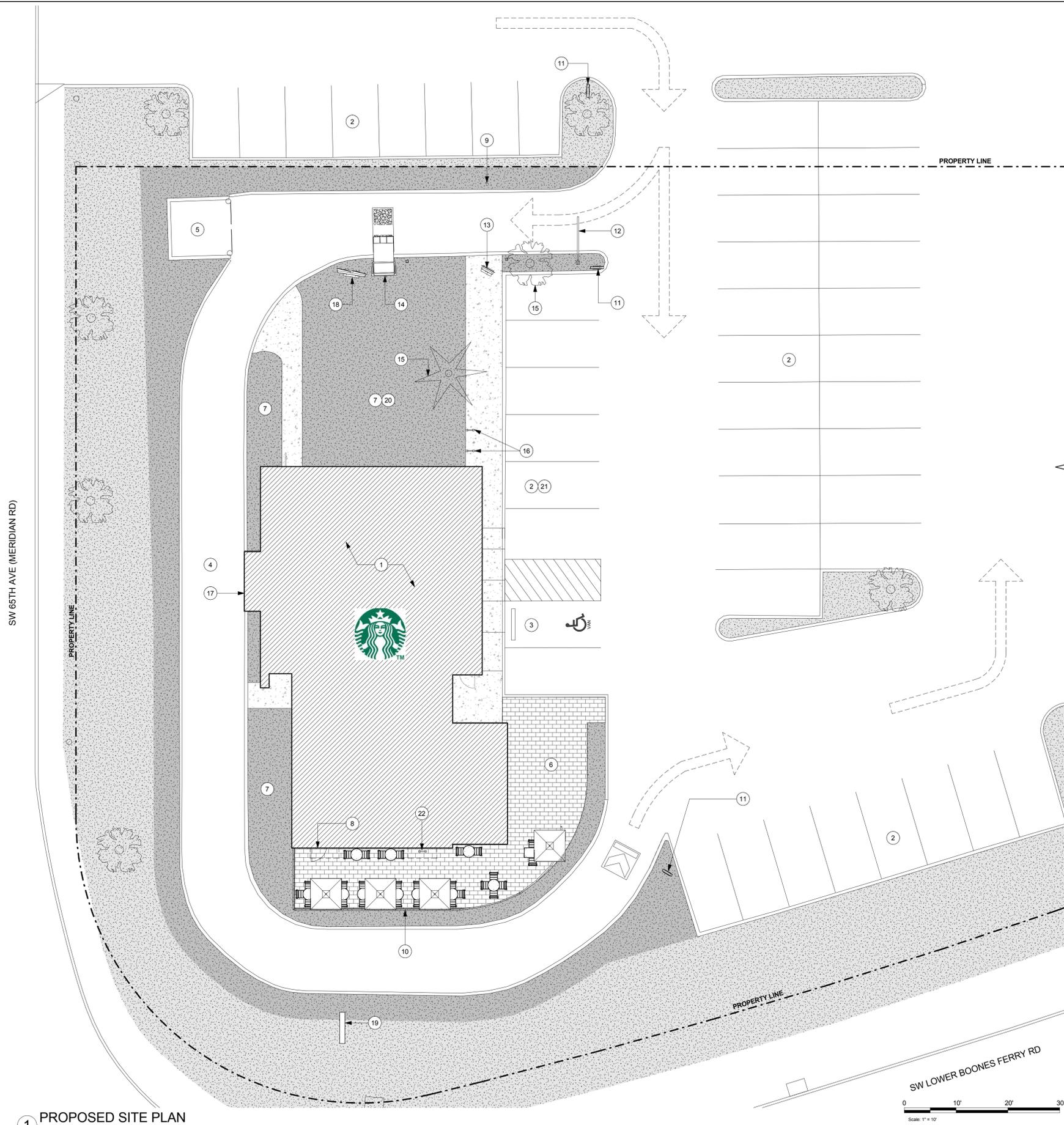
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SHEET NOTES

1. TENANT LEASE AREA.
2. EXISTING PARKING LOT, ALL SPACES TO REMAIN UNON.
3. RELOCATED ADA PARKING.
4. EXISING DRIVE-THRU LANE TO REMAIN.
5. EXISING TRASH ENCLOSURE TO REMAIN, TO BE PAINTED TO MATCH BUILDING, GATES TO BE REPLACED.
6. NEW EXTERIOR PATIO WITH PERMEABLE PAVERS.
7. AMEND LANDSCAPING WITH REFRESHED PLANTINGS PER DESIGN BUILDING LANDSCAPE SUBMITTALS, MATCH SHOPPING CENTER STANDARDS
8. NEW ENTRY DOOR. SEE ELEVATIONS FOR ADDITIONAL INFORMATION.
9. ALL EXISING SITE LIGHTING TO REMAIN.
10. NEW WOOD AND METAL RAILING AT NEW EXTERIOR PATIO.
11. NEW DIRECTIONAL SIGNAGE.
12. NEW CLEARANCE BAR.
13. NEW PRE-ORDER MENU.
14. NEW ORDER CANOPY AND SCREEN.
15. ALL EXISING TREES TO REMAIN, TYP.
16. NEW BIKE PARKING. BIKE PARKING AREA TO BE IDENTIFIED WITH SIGNAGE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
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18. NEW 3-PANEL MENU BOARD.
19. NEW PYLON SIGN, UNDER SEPARATE SIGNAGE PERMIT.
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22. NEW COVERED BIKE PARKING. BIKE PARKING AREA TO BE IDENTIFIED WITH SIGNAGE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

SITE PLAN LEGEND - PROPOSED

-  TENANT LEASE AREA
-  EXISTING LANDSCAPING TO REMAIN
-  NEW AND AMENDED LANDSCAPING
-  PERMEABLE PAVERS AT PATIO
-  EXISTING SIDEWALK TO REMAIN



SW 65TH AVE (MERIDIAN RD)

SW LOWER BOONES FERRY RD

1 PROPOSED SITE PLAN
Scale: 1" = 10'-0"

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SHEET NOTES

1. PROVIDE 3" (75MM) HIGH BLACK ACRYLIC STORE ADDRESS ON GLAZING.
2. NEW EXTERIOR STOREFRONT DOOR TO MATCH EXISTING, AT LOCATION OF EXISTING STOREFRONT GLAZING.
3. NEW 48" ILLUMINATED LOGO DISK, UNDER SEPARATE SIGNAGE PERMIT.
4. NEW 36" ILLUMINATED LOGO DISK, UNDER SEPARATE SIGNAGE PERMIT.
5. NEW DRIVE THROUGH SIGNAGE, UNDER SEPARATE SIGNAGE PERMIT.
6. NEW WORDMARK SIGNAGE, UNDER SEPARATE SIGNAGE PERMIT.
7. NEW WOOD ACCENT WALL, ROUGH CUT CEDAR WITH CLEAR STAIN.
8. NEW FABRIC AWNING ON METAL FRAME.
9. EXISTING ROOF ACCESS LADDER.
10. NEW WOOD AND METAL RAILING AT NEW EXTERIOR PATIO.
11. REFER TO MATERIALS LEGEND FOR NEW WALL AND TRIM PAINT.
12. EXISTING WOOD TRIM TO BE REPLACED AS NECESSARY.
13. EXISTING EXTERIOR BUILDING LIGHTS TO BE REPLACED WITH NEW IN EXISTING LOCATIONS, TYP.
14. NEW EXTERIOR SCENCE LIGHTING.
15. EXISTING STOREFRONT SYSTEM TO REMAIN, UON.

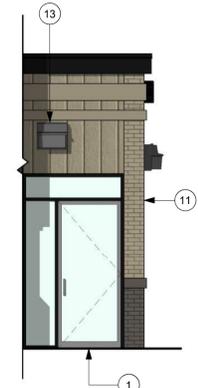
MATERIALS LEGEND

	EXISTING BUILDING PAINTED SW 7033 BRAINSTORM BRONZE
	EXISTING BUILDING PAINTED SW 7020 BLACK FOX
	ROUGH SAWN CEDAR, CLEAR COAT



1 EAST ELEVATION

Scale: 1/4" = 1'-0"



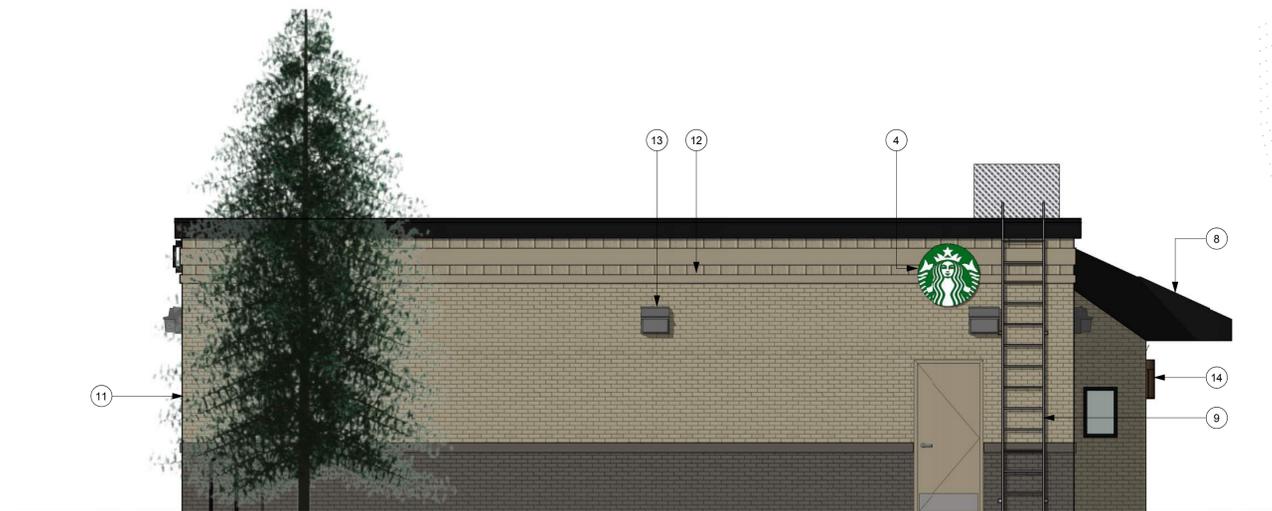
2 EAST ENTRANCE

Scale: 1/4" = 1'-0"



3 WEST ELEVATION

Scale: 1/4" = 1'-0"



4 NORTH ELEVATION

Scale: 1/4" = 1'-0"



5 SOUTH ELEVATION

Scale: 1/4" = 1'-0"

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LANDSCAPE PLAN NOTES

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SITE PLAN LEGEND - MATERIALS

-  TENANT LEASE AREA
-  EXISTING LANDSCAPING TO REMAIN
-  PERMEABLE PAVERS AT PATIO
-  EXISTING SIDEWALK TO REMAIN
-  SHRUB, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
-  ORNAMENTAL GRASS, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
-  ORNAMENTAL GRASS, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
-  SHRUB, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER

SW 65TH AVE (MERIDIAN RD)

PROPERTY LINE

PROPERTY LINE

SW LOWER BOONES FERRY RD



1 LANDSCAPE SITE PLAN
Scale: 1" = 10'-0"

Holst Architecture
113 SW 8th Portland, OR 97144
t 503 986-8668 f 503 986-7195

BOONES FERRY AND SW 65TH
17771 LOWER BOONES FERRY RD,
TUALATIN, OR 97035

job no.
07870-026

Architectural Review

9/10/2015

LANDSCAPE PLAN

title:

sheet:

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STARBUCKS COFFEE COMPANY
 2401 UTAH AVENUE SOUTH
 SEATTLE, WASHINGTON 98134
 (206) 318-1575



Holt Architecture
 110 SW 8th Portland, OR 97214
 v: 503 253 9656 f: 503 252 7135



FROELICH ENGINEERS
 Portland: (503) 624-7005
 Bend: (541) 383-1828
 Froelich-Engineers.com

PRELIMINARY
 NOT FOR
 CONSTRUCTION

Revision Schedule

Rev	Date	By	Description

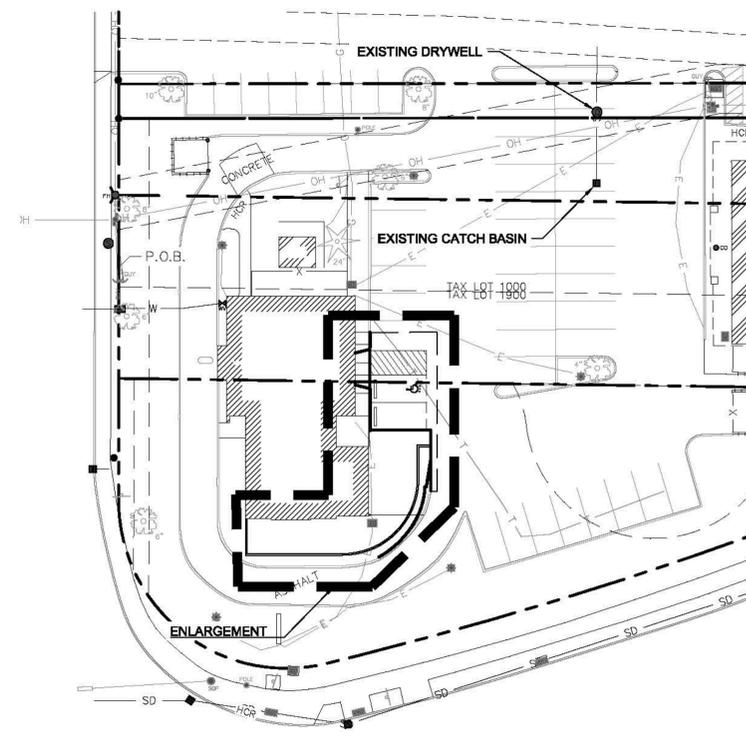
Project Name: **BOONES FERRY AND SW 64TH**
 17771 SW BOONES FERRY RD.
 TUALATIN, OR 97035
 COUNTY: WASHINGTON

Store #: 487
 Project #: XXXXX-XXX
 Issue Date: XX/XX/2015
 Project Engineer: EME
 Checked by: EME

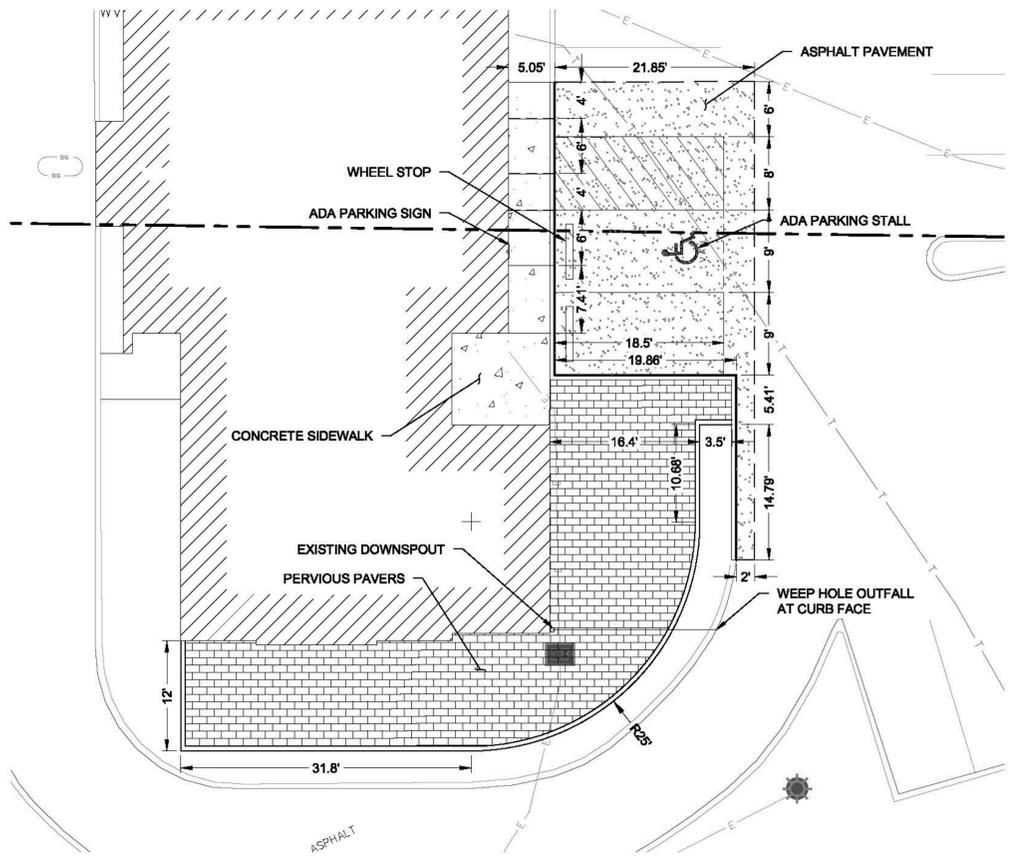
Sheet Title: **SITE PLAN**

Scale: AS NOTED

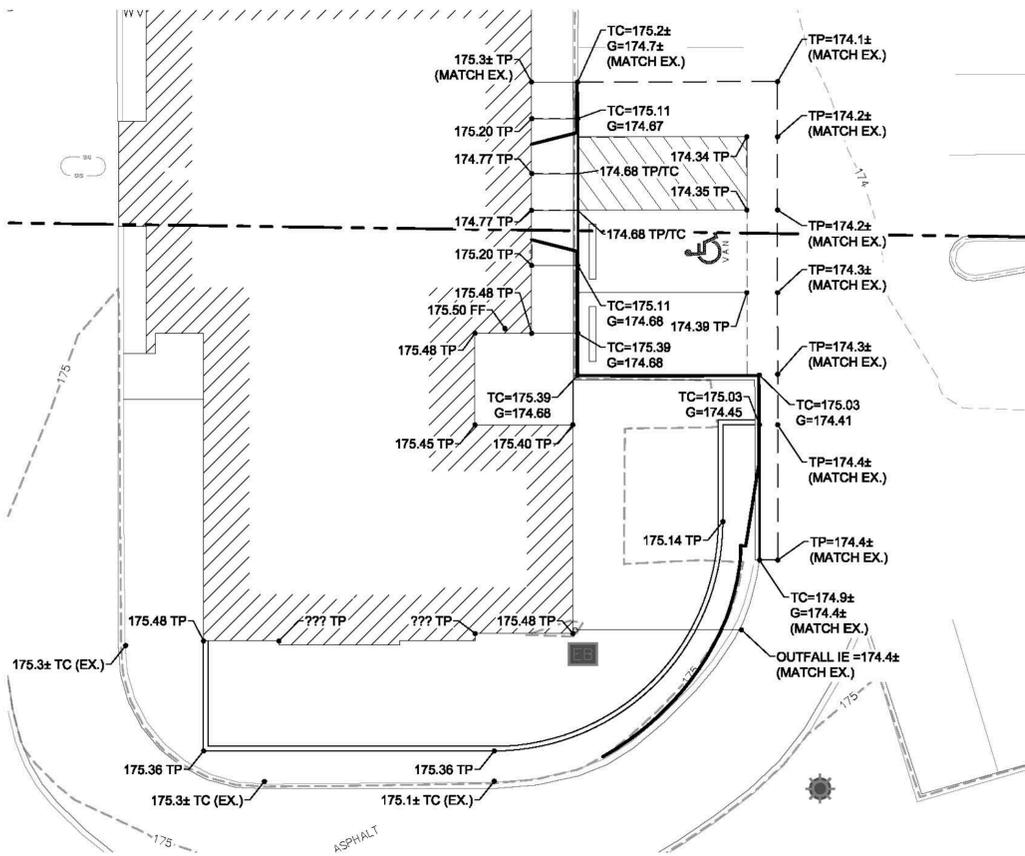
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1 SITE PLAN
 SCALE: 1" = 30'



3 SITE PLAN ENLARGEMENT
 SCALE: 1" = 10'



2 GRADING PLAN ENLARGEMENT
 SCALE: 1" = 10'

ABBREVIATION:
 EG EXISTING GRADE
 FF FINISHED FLOOR
 GB GRADE BREAK
 TC TOP OF CURB
 TP TOP OF PAVEMENT

NOTICE TO EXCAVATORS:
 ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER.
 (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987.)

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.
 Call the Oregon One-Call Center
 1-800-332-2344



File: P:\2015\15-C007 (Starbucks Boones Ferry and 65th)\Drafting-Civil\CAD\PL0115-C007_C1_0_SITE.dwg TAB-C-001
 Plotted: 9/14/15 at 12:41pm By: FCE-CV-1

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
Clackamas County - Parcel # 00339253
Application for Architectural Review



APPLICATION FOR ARCHITECTURAL REVIEW

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
Clackamas County - Parcel # 00339253
Application for Architectural Review

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ADDITIONAL ENCLOSURES

Application for Architectural Review and Fact Sheet
Tax Maps
Neighborhood Meeting
 Mailing Affidavit
 Sign Posting Certification
 Attendance Log
 Notes
 Letter
 GIS Buffer Map
 Regular and CIO Mailing List
 Mailing Labels
Traffic Study
Clean Water Services (CWS) Pre-Screen
Solid Waste and Recycling Hauler Letter

APPLICATION REQUEST SUMMARY

Approval of the exterior building changes indicated on the attached drawings, including the removal of one single exit door and associated storefront system, the addition of one storefront door and alteration to storefront window, the repainting of the existing building exterior and trash enclosure, the removal of a stucco pediment feature, and addition of wood cladding at the south façade.

Approval of the site changes indicated on the attached drawings, including the demolition of the exterior walk-in cooler and storage shed, addition of an exterior patio, relocation of the ADA parking, new and amended landscaping around the building, new steel trash enclosure gates, and new drive-thru equipment.

Signage will be submitted as part of a separate sign permit for the building.

PROJECT DESCRIPTION

This architectural review includes exterior modifications associated with the tenant improvement for the conversion of an existing Arby's restaurant/retail space into a Starbucks store on the corner of SW 65th Ave and Lower Boones Ferry Rd.

The building was constructed in approximately 1988 as a RAX Restaurant and later converted to an Arby's. The configuration is a rectangular single single-story box with a seating bay in the southwest corner which was part of the original construction. There is a packaged walk-in cooler and shed building along the north side of the building which was also part of the original construction. Wall cladding varies, employing brick wainscot and T&G wood vertical siding, brick accent walls, and EIFS highlights.

The site is on a commercial intersection with a gas station, and two fast-food restaurants. This corner location shares a parking lot with a strip mall, sporting goods store, grocery, and several smaller retailers. The I-5 on/off ramp is one block west. Boones Ferry Road is one of two major access points to the City of Lake Oswego.

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Application for Architectural Review

PROJECT DATA

Tenant: Starbucks Coffee Company
2401 Utah Ave South
Seattle, WA 98134
(206) 318-1575

Property
Owner: Berrey Properties - Mike Berrey
6305 SW Rosewood St, Suite D
Lake Oswego, OR 97035
(503) 697-3310

Applicant
/Architect: Holst Architecture – Sarah Vaz
110 SE 8th Avenue
Portland, OR 97214
(503) 233-9856
svaz@holstarc.com

Engineer: Froelich Engineering – Seth Davis
6969 SW Hampton St.
Portland, OR 97223
(503) 924-6314

MEP: Rensch Engineering – Chris Rensch
111 Ave C, Suite 104
Snohomish, WA 98290
(360) 863-6674

Location: Northeast corner of SW 65th Ave and Lower Boones Ferry RD

Parcel #: 00339253

Zoning: GC – General Commercial

Pre-app date: June 4, 2015

Request: Architectural Review

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BUILDING DATA

Use Type: Retail/ Coffee Shop

Leasable area: 2,673 SF

Occupancy Type: A-2

Construction Type: V-B

Occupant Load: 97

Interior Seating: 71

ARCHITECTURAL DRAWINGS INDEX

A1	Existing Conditions Plan
A2	Proposed Site Plan
A3	Elevations
L1	Landscape Site Plan
C-1001	Grading Site Plan
1 of 1	Topographical Survey

APPLICABLE DEVELOPMENT STANDARDS

1. Lot Sizes

31.060 Definitions:

"Lot Line, Rear." A lot line which is opposite and most distant from the front lot line and, in the case of an irregular, triangular, or other-shaped lot, a line ten feet in length within the lot, parallel to and at a maximum distance from the front lot line. On a corner lot, the shortest lot line abutting adjacent property that is not a street shall be considered a rear lot line.

"Lot Width." The horizontal distance between the side lot lines, ordinarily measured parallel to the front lot line, at the center of the lot, or, in the case of a corner lot, the horizontal distance between the front lot line and a side lot line.

"Lot Width, Average." The sum of the length of the front lot line and the rear lot line divided by 2.

54.040 Lot Size. Except for lots for public utility facilities, natural gas pumping stations and a wireless communication facility which shall be established through the Subdivision, Partition or Lot Line Adjustment process, the following requirements shall apply:

- (1) The minimum lot size shall be 10,000 square feet.*
- (2) The minimum average lot width shall be 75 feet.*
- (3) The minimum lot width at the street shall be 40 feet.*
- (4) For flag lots, the minimum lot width at the street shall be sufficient to comply with at least the minimum access requirements contained in TDC 73.400(8) to (12).*
- (5) The minimum lot width at the street shall be 40 feet on a cul-de-sac street.*

Response: The property includes two lots. Tax lot number 21E18CB01900, is .67 acres, or 29,185 square feet. Tax lot number 21E18BC01000 is .73 acres, or 31,798 square feet. Both lots exceed the minimum lot size of 10,000 square feet.

Average lot width for lot 1900 is 209 feet. Average lot width for lot 1000 is 200 feet. Both exceed minimum average lot width of 75 feet.

For lot 1900, the width is 342 feet along Boones Ferry Rd, and 147 feet along SW 65th Ave. For lot 1000, the width is 55 feet fronting SW 65th Ave. These exceed the minimum lot width requirement of 40 feet at the street.

No changes to the existing lot sizes are proposed, the requirement is met.

2. Setback Requirements

Section 54.060 Setback Requirements.

(1) Front yard. The minimum front yard setback shall be 5 to 20 feet, as determined through the Architectural Review Process.

(2) Side yard. Zero to 15 feet, as determined through the Architectural Review process, except where a side lot line adjoins a Residential or Manufacturing Park District, a minimum side yard setback of 5 feet shall be required.

(3) Rear yard. Zero to 15 feet, as determined through the Architectural Review process, except where a rear lot line adjoins a Residential or Manufacturing Park District, a minimum rear yard

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setback of five (5) feet shall be required.

(4) Corner lot yards. Zero to 20 feet for a sufficient distance to provide adequate sight distance for vehicular and pedestrian traffic at an intersection, as determined through the Architectural Review process.

5) Off-street parking and vehicular circulation areas shall be set back a minimum of five (5) feet from any public right-of-way or property line, except as approved through the Architectural Review process.

6) No fence shall be constructed within 5 feet of a public right-of-way.

Response: No changes to the existing building footprint or building setbacks are proposed. Existing building is set back 50 feet from the south property line, and 32 feet from the west property line. Off-street parking is set back 15 feet from the south property line. There are no fences on the property.

The requirement is met.

3. Structure Height

54.070(1) Except for flagpoles displaying the flag of the United States of America, either alone or with the State of Oregon flag which shall not exceed 100 feet in height above grade, and except as provided in TDC 54.070(2) [for wireless communication facility], the maximum height of any structure is 45 feet.

Response: No changes to the existing building height are proposed. Existing building is one story tall, and does not exceed 17 feet in height.

The requirement is met.

4. Site Planning

73.050(1)(a) The proposed site development, including the site plan, architecture, landscaping and graphic design, conforms to the standards of this and other applicable City ordinances, insofar as the location, height, appearance, etc. of the proposed development are involved.

Response: The proposal complies with the TDC and city ordinances where applicable as identified in this report.

The requirement is met.

73.160 The following standards are minimum requirements for commercial, industrial, public and semi-public development and it is expected that development proposals shall meet or exceed these minimum requirements.

73.160(1)(a) For commercial, public and semi-public uses:

(i) A walkway shall be provided between the main entrance to the building and any abutting public right-of-way of an arterial or collector street where a transit stop is

designated or provided. The walkway shall be a minimum of 6 feet wide and shall be constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;

(ii) Walkways shall be provided between the main building entrances and other onsite buildings and accessways. The walkways shall be a minimum of 6 feet wide and shall be constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;

(iii) Walkways through parking areas, drive aisles, and loading areas shall be visibly raised and of a different appearance than the adjacent paved vehicular areas;

Response: No changes to the existing building footprint are proposed. Providing additional walkways on site would incur cost disproportionate to the proposed development, the requirement is not applicable.

31.060 Definitions:

Accessway. A non-vehicular, paved pathway designed for pedestrian and bicycle use and providing convenient linkages between a development and adjacent residential and commercial properties and areas intended for public use such as schools, parks, and adjacent collector and arterial streets where transit stops or bike lanes are provided or designated. An accessway is not a sidewalk.

73.160(1)(b)(iii) Accessways shall be provided as a connection between the development's walkway and bikeway circulation system and an adjacent bike lane.

Response: No changes to the existing building footprint are proposed. Providing additional accessways on site would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.160(1)(c) Curb ramps shall be provided wherever a walkway or accessway crosses a curb.

Response: No changes to the existing building footprint are proposed. Providing additional accessways on site would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.160(1)(d) Accessways shall be a minimum of 8 feet wide, and if they are private accessways they shall be constructed of asphalt, concrete or a pervious surface such as pervious asphalt or concrete, pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.

Response: No changes to the existing building footprint are proposed. Providing additional accessways on site would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.160(1)(e) Accessways to undeveloped parcels or undeveloped transit facilities need not be constructed at the time the subject property is developed. In such cases the applicant for development of a parcel adjacent to an undeveloped parcel shall enter into a written agreement with the City guaranteeing future performance by the applicant and any successors in interest of the property being developed to construct an accessway when the adjacent undeveloped parcel

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is developed. The agreement shall be subject to the City's review and approval.

Response: No undeveloped parcel or undeveloped transit facility abuts the site, the requirement is not applicable.

73.160(1)(f) Where a bridge or culvert would be necessary to span a designated greenway or wetland to provide a connection to a bike or pedestrian path, the City may limit the number and location of accessways to reduce the impact on the greenway or wetland.

Response: No greenway or wetland abuts the site, the requirement is not applicable.

73.160(1)(g) Accessways shall be constructed, owned and maintained by the property owner.

Response: No changes to the existing building footprint are proposed. Providing additional accessways on site would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.160(2)(a) Drive-up uses shall provide a minimum stacking area clear of the public right-of-way and parking lot aisles from the window serving the vehicles as follows:

(ii) Restaurants each lane shall provide a minimum capacity for eight automobiles.

(iv) For purposes of this Section, an automobile shall be considered no less than twenty feet in length. The width and turning radius of drive-up aisles shall be approved through the architectural review process.

Response: No changes to the existing drive-thru lane are proposed. The existing drive-thru lane provides stacking capacity for six automobiles behind the drive-thru window, and pull forward stacking capacity for seven automobiles. Starbucks has analyzed this location and feels the queuing is sufficient for smooth operation and customer service. Additionally, a traffic study was conducted for this location and no negative traffic changes were predicted. Providing additional stacking capacity would incur cost disproportionate to the proposed development and would complicate traffic flow on the site. The requirement is not applicable.

73.160(b) Parking maneuvers shall not occur in the stacking area. The stacking area shall not interfere with safe and efficient access to other parking areas on the property.

Response: The existing stacking area is a one-way single lane drive aisle separated from the parking area. No parking maneuvers need occur within the stacking area, nor does it interfere with the safe and efficient access to any parking area.

The requirement is met.

(c) Locate drive-up aisles and windows a minimum of 50 feet from residential planning districts to avoid adverse impacts. A wall or other visual or acoustic may be required through the architectural review process.

Response: There are no residential planning districts within 50 feet for the drive-thru aisle and window, the requirement is not applicable.

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73.160(3)(a) Locate windows and provide lighting in a manner which enables tenants, employees and police to watch over pedestrian, parking and loading areas.

Response: No changes to the existing building footprint are proposed. Parking and pedestrian areas are located to the east and south of the building. Storefront windows on the east and south façades face the parking area and the patio seating, providing views from the café to both these spaces. Building lights are provided on both façades, and all site lighting to be retained shall adequately illuminate these spaces.

The requirement is met.

73.160(3)(b) In commercial, public and semi-public development and where possible in industrial development, locate windows and provide lighting in a manner which enables surveillance of interior activity from the public right-of-way.

Response: Storefront windows located on the street facing façades allow views from the public right-of-way into the building.

The requirement is met.

73.160(3)(c) Locate, orient and select on-site lighting to facilitate surveillance of on-site activities from the public right-of-way.

Response: No changes to the existing site lighting are proposed. All exterior building lights shall be replaced with new fixtures in existing locations providing on-site lighting to facilitate surveillance of on-site activities from the public right-of-way.

The requirement is met.

73.160(3)(d) Provide an identification system which clearly locates buildings and their entries for patrons and emergency services.

Response: Note on elevations indicates store address to be located in 3" high black acrylic numerals at both entrance doors.

The requirement is met.

73.160(3)(e) Shrubs in parking areas must not exceed 30 inches in height. Tree canopies must not extend below 8 feet measured from grade.

Response: With proper pruning provided during construction, the proposed shrubs and trees will meet this requirement.

73.160(4)(a) On and above grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners shall be screened with sight obscuring fences, walls or landscaping.

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Response: No new at grade units are proposed. Rooftop units shall be located at a minimum 10' – 0" on all sides from the existing parapet and not viewable from the public right-of-way. If replacement units are visible, screening will be provided.

73.160(4)(b) Outdoor storage, excluding mixed solid waste and source separated recyclables storage areas listed under TDC 73.227, shall be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping.

Response: No outdoor storage, excluding mixed solid waste and source separated recyclables storage, is proposed on site, the requirement is not applicable.

5. Structure Design

73.050(1)(b) The proposed design of the development is compatible with the design of other developments in the same general vicinity.

Response: Developments in the vicinity of the proposed project include a gas station, fast-food restaurants, and big box retailers. These developments incorporate neutral colored building with brand specific signage and accent features. The proposed development is compatible with the neighboring developments in that it incorporates a similarly neutral palette with accent cladding in wood and brand specific signage.

The requirement is met.

73.050(1)(c) The location, design, size, color and materials of the exterior of all structures are compatible with the proposed development and appropriate to the design character of other developments in the same vicinity.

Response: No changes to the location, or size of the existing building are proposed. The proposed color changes, materials, and minor design alterations at the façade are in keeping with neighboring developments.

The requirement is met.

73.100(2) All building exterior improvements approved through the Architectural Review Process shall be continually maintained including necessary painting and repair so as to remain substantially similar to original approval through the Architectural Review Process, unless subsequently altered with Community Development Director approval.

Response: All building exterior improvement approved through the Architectural Review Process shall be continually maintained including necessary painting and repair so as to remain substantially similar to original approval through the Architectural Review Process, unless subsequently altered with Community Development Director approval. Maintenance occurs through Starbucks Facilities and Operations Departments.

73.220(1)(a) Locate, orient and select on-site lighting to facilitate surveillance of on-site activities from the public right-of-way or other public areas.

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Response: No changes to the existing site lighting are proposed. All exterior building lights shall be replaced with new fixtures in existing locations providing on-site lighting to facilitate surveillance of on-site activities from the public right-of-way.

The requirement is met.

73.220(1)(b) Provide an identification system, which clearly identifies and locates buildings and their entries.

Response: Note on elevations indicates store address to be located in 3” high black acrylic numerals at both entrance doors.

The requirement is met.

73.220(1)(c) Shrubs in parking areas shall not exceed 30 inches in height, and tree canopies must not extend below 8 feet measured from grade, except for parking structures and underground parking where this provision shall not apply.

Response: With proper pruning during construction landscaping, the proposed shrubs and trees will meet this requirement.

6. Mixed Solid Waste and Source Separated Recyclables Storage Area

73.227(2)(a)(i) The storage area requirement is based on the area encompassed by predominant use(s) of the building (e.g., residential, office, retail, wholesale/ warehouse/ manufacturing, educational/ institutional or other) as well as the area encompassed by other distinct uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use shall be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area requirement for the whole building shall be the sum of the area of each use.

Response: The building has only one use, the storage area requirement is based on the commercial rate.

73.227(2)(a)(ii) Storage areas for multiple uses on a single site may be combined and shared.

Response: There is only one use on the site, the requirement is not applicable.

73.227(2)(a)(v) Commercial, industrial, public and semi-public developments shall provide a minimum storage area of 10 square feet plus: office 4square feet/1000 square feet gross leasable area (GLA); Retail 10 square feet/1000 square feet GLA; Wholesale/ Warehouse/ Manufacturing 6 square feet/1000 square feet GLA; Educational and institutional 4 square feet/1000 square feet GLA; and other 4 square feet/1000 square feet GLA.

Response: The existing building is 2,673 sf. Applying the relevant rate for retail use means the

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required storage area is calculated as $10 \text{ sf} + ([2,673/1000]*10)$, yielding 36.7 sf of minimum required storage area. The applicant proposes to retain the existing exterior storage area of 110 sf, meeting the minimum requirement.

The requirement is met.

73.227(6)(a)(iv) Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public or private street.

Response: The existing exterior storage area is set back 17' – 6" from the property line and buffered from view by landscaping.

The requirement is met.

73.227(6)(a)(v) Exterior storage areas shall be located in central and visible locations on the site to enhance security for users.

Response: No change to the location of the existing exterior storage area is proposed. Moving the storage area would incur cost disproportionate to the proposed development, and disrupt building operations by complicating employee access. The requirement is not applicable.

73.227(6)(a)(vi) Exterior storage areas can be located in a parking area, if the proposed use provides parking spaces required through the Architectural Review process.

Response: No change to the location of the existing exterior storage area is proposed, the requirement is not applicable.

73.227(6)(a)(vii) Storage areas shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on site or on public streets adjacent to the site.

Response: The existing exterior storage area is located at the end of the drive-thru lane and would require the collection vehicle to drive through the drive-thru or back in during off-hours, potentially obstructing vehicle traffic for the duration of the collection time. Moving the storage area would incur cost disproportionate to the proposed development, the requirement is not applicable.

Note: At other Starbucks locations the collection time is coordinated by Starbucks with the waste hauler to ensure pickup occurs during closed hours, or at a non-peak time where the drive-thru can be closed to private vehicles.

73.227(6)(b)(iii) Exterior storage areas shall be enclosed by a sight obscuring fence or wall at least 6 feet in height. In multi-family, commercial, public and semi-public developments evergreen plants shall be placed around the enclosure walls, excluding the gate or entrance openings. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position. A separate pedestrian access shall also be provided in multi-family, commercial, public and semipublic developments.

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Response: The existing trash enclosure is open from above, surrounded on three sides by a 6-foot CMU wall. The proposal indicates a new gate to be installed, capable of being secured in a closed and open position. Existing pedestrian access to be retained.

The requirement is met.

73.227(6)(b)(iv) Exterior storage areas shall have either a concrete or asphalt floor surface.

Response: Existing storage area has concrete ground surface.

The requirement is met.

73.227(6)(c)(i) Access to storage areas can be limited for security reasons. However, the storage areas shall be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.

Response: The proposal does not limit access to the storage area for security reasons, the requirement is not applicable.

73.227(6)(c)(ii) Storage areas shall be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access. A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is required if the storage area is covered.

Response: The existing storage area is not covered, the requirement is not applicable.

73.227(6)(c)(iii) Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow vehicles to safely exit the site in a forward motion.

Response: No change to the existing location is proposed, this location has been in service since 1988. The storage area is located at the end of the first leg of the drive-thru lane. Location of the drive thru lane allow for the collection vehicles to drive through the lane without backing out onto a driveway in a public street.

The requirement is met.

7. Landscaping

73.100(1) All landscaping approved through the Architectural Review Process shall be continually maintained, including necessary watering, weeding, pruning and replacement, in a manner substantially similar to that originally approved through the Architectural Review Process, unless subsequently altered with Community Development Director approval.

Response: All landscaping approved through the Architectural Review Process shall be maintained by Starbucks, including necessary watering, weeding, pruning, and replacement, in a manner substantially similar to that originally approved through the Architectural Review Process, unless subsequently altered with Community Development Director approval.

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73.240(3) The minimum area requirement for landscaping for uses in CO, CR, CC, CG, ML and MG Planning Districts shall be fifteen (15) percent of the total area to be developed, except within the Core Area Parking District, where the minimum area requirement for landscaping shall be 10 percent. When a dedication is granted on the subject property for a greenway or natural area, the minimum area requirement for landscaping may be reduced by 2.5 percent from the minimum area requirement as determined through the AR process.

Response: Landscaped area is approximately 40 percent of the area to be developed.

The requirement is met.

73.240(8) Developments not in a Low Density Residential (RL) or Manufacturing Park (MP) Planning district but which abut an RL or MP Planning District shall provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses in the district and the adjacent Low Density Residential (RL) or Manufacturing Park (MP) Planning District as approved through the Architectural Review process.

Response: The development does not abut an RL or MP Planning District, the requirement is not applicable.

73.240(9) Yards adjacent to public streets, except as described in 73.240(7), shall be planted to lawn or live groundcover and trees and shrubs and shall be perpetually maintained in a manner providing a park-like character to the property as approved through the Architectural Review process.

Response: The south and west yards adjacent to public streets are and will remain planted to lawn or live groundcover, trees, and shrubs, and shall be maintained by Starbucks.

The requirement is met.

73.240(10) Yards not adjacent to public streets or Low Density Residential (RL) or Manufacturing Park (MP) Planning Districts shall be planted with trees, shrubs, grass or other live groundcover, and maintained consistent with a landscape plan indicating areas of future expansion, as approved through the Architectural Review process.

Response: The south and west yards adjacent to public streets are and will remain planted with trees, shrubs, grass, or live groundcover, and shall be maintained by Starbucks.

The requirement is met.

73.240(11) Any required landscaped area shall be designed, constructed, installed, and maintained so that within three years the ground shall be covered by living grass or other plant materials. (The foliage crown of trees shall not be used to meet this requirement.) A maximum of 10% of the landscaped area may be covered with unvegetated areas of bark chips, rock or stone.

Response: New plantings specified per design-build landscaper during construction shall meet

the requirement.

73.260(1)(a) Deciduous shade and ornamental trees shall be a minimum one and onehalf inch (1 1/2") caliper measured six inches (6") above ground, balled and burlapped. Bare root trees will be accepted to plant during their dormant season. Trees shall be characteristically shaped specimens.

Response: No new deciduous shade and ornamental trees are proposed, the requirement is not applicable

73.260(1)(b) Coniferous trees shall be a minimum five feet (5') in height above ground, balled and burlapped. Bare root trees will be acceptable to plant during their dormant season. Trees shall be well branched and characteristically shaped specimens.

Response: No new coniferous trees are proposed, the requirement is not applicable.

73.260(1)(c) Shrubs. Evergreen and deciduous shrubs shall be at least one (1) to five (5) gallon size. Shrubs shall be characteristically branched. Side of shrub with best foliage shall be oriented to public view.

Response: New plantings specified per design-build landscaper during construction shall meet the requirement.

73.260(1)(d) Groundcovers shall be fully rooted and shall be well branched or leafed. English ivy (Hedera helix) is considered a high maintenance material, which is detrimental to other landscape materials and buildings and is therefore prohibited.

Response: New plantings specified per design-build landscaper during construction shall meet the requirement.

73.280 Landscaped areas shall be irrigated with an automatic underground or drip irrigation system.

Response: Landscaped areas shall continue to be irrigated with the existing irrigation system.

The requirement is met.

73.290(1) Where natural vegetation has been removed or damaged through grading in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements, such areas shall be replanted.

Response: No natural vegetation exists on site, the requirement is not applicable.

73.310(1) A minimum 5-foot-wide landscaped area must be located along all building perimeters, which are viewable by the general public from parking lots or the public right-of-way, excluding loading areas, bicycle parking areas and pedestrian egress/ingress locations. Pedestrian amenities such as landscaped plazas and arcades may be substituted for this requirement. This requirement shall not apply where the distance along a wall between two

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vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than 8 feet.

Response: The site plan illustrates the landscaped area along the north and south facades meet the requirement. Landscaped area along the west façade is approximately 2' – 9" wide, and no landscaped area is provided along the east façade. Adding additional landscaping on the east and west facades would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.310(2) Areas exclusively for pedestrian use that are developed with pavers, bricks, etc., and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies, etc., may be included as part of the site landscape area requirement.

Response: Landscaped area calculation includes paved patio with tables with umbrellas, putting the landscaped area at approximately 40 percent of the area to be developed.

The requirement is met.

73.310(3) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas or undisturbed natural areas shall be landscaped.

Response: The site plan indicates that all areas not occupied by buildings, parking, driveways, drive aisles, or pedestrian areas shall be landscaped.

The requirement is met.

73.340(1) A clear zone shall be provided for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of 8 feet as measured from the ground level, except for parking structures and underground parking, where this provision shall not apply.

Response: With proper maintenance and pruning, the parking area landscaping will continue to meet the requirement.

73.340(2) Perimeter site landscaping of at least 5 feet in width shall be provided in all off-street parking and vehicular circulation areas (including loading areas).

Response: Existing perimeter landscaping in excess of 5 feet in width to be retained.

The requirement is met.

73.340(2)(a) The landscape area shall contain:

(i) Deciduous trees an average of not more than 30 feet on center. The trees shall meet the requirements of 73.360(7).

(ii) Plantings which reach a mature height of 30 inches in 3 years which provide screening of vehicular headlights year round.

(iii) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years.

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Response: New plantings specified per design-build landscaper during construction shall meet the requirement.

73.360(1) A minimum of 25 square feet per parking stall shall be improved with landscape island areas which are protected from vehicles by curbs. These landscape areas shall be dispersed throughout the parking area [see 73.380(3)].

Response: No changes are proposed to the existing parking lot, existing landscape islands are not within the development area. They are protected from traffic by curbs but do not meet the area requirement. New landscape islands would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.360(2) All landscaped island areas with trees shall be a minimum of 5 feet in width (60 inches from inside of curb to curb) and protected with curbing from surface runoff and damage by vehicles. Landscaped areas shall contain groundcover or shrubs and deciduous shade trees.

Response: No changes are proposed to the existing parking lot, existing landscape islands are not within the development area. New landscape islands would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.360(3) Provide a minimum of one deciduous shade tree for every four (4) parking spaces to lessen the adverse impacts of glare from paved surfaces and to emphasize circulation patterns. Required shade trees shall be uniformly distributed throughout the parking lot. The trees shall meet the requirements of 73.360(7).

Response: One deciduous shade tree for every four (4) parking spaces equals (6) trees (26 spaces/4). There are eight (8) existing trees on site.

The requirement is met.

73.360(4) Landscaped islands shall be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns. Landscape island location requirements shall not apply to parking structures and underground parking.

Response: Existing landscape islands bookend the central parking bay, protecting it from moving vehicles and emphasizing vehicular circulation patterns.

The requirement is met.

73.360(6)(a) Except as in (b) below, site access from the public street shall be defined with a landscape area not less than 5 feet in width on each side and extend 25 feet back from the property line for commercial, public, and semi-public development with 12 or more parking spaces and extend 30 feet back from the property line for industrial development.

Response: No changes are proposed to site access, the requirement is not applicable.

73.360(7) Deciduous shade trees shall meet the following criteria:

Holst Architecture
September 10, 2015

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
Clackamas County - Parcel # 00339253
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- (a) Reach a mature height of 30 feet or more
- (b) Cast moderate to dense shade in summer
- (c) Long lived, i.e., over 60 years
- (d) Do well in an urban environment
 - (i) Pollution tolerant
 - (ii) Tolerant of direct and reflected heat
- (e) Require little maintenance
 - (i) Mechanically strong
 - (ii) Insect and disease resistant
 - (iii) Require little pruning
- (f) Be resistant to drought conditions
- (g) Be barren of fruit production.

Response: No new shade trees are proposed, the requirement is not applicable.

74.765 All trees, plants or shrubs planted in the right-of-way of the City shall conform in species and location and in accordance with the street tree plan in Schedule A.

Response: New plantings specified per design-build landscaper during construction shall meet the requirement.

8. Tree Preservation

73.050(4) As part of Architectural Review, the property owner may apply for approval to cut trees in addition to those allowed in TDC 34.200. The granting or denial of a treecutting permit shall be based on the criteria in TDC 34.230.

Response: No trees shall be removed with this proposal, the requirement is not applicable.

34.230 The Community Development Director shall consider the following criteria when approving, approving with conditions, or denying a request to cut trees.

The Community Development Director may approve a request to cut a tree when the applicant can satisfactorily demonstrate that any of the following criteria are met:

- (a) *The tree is diseased, and*
 - (i) *The disease threatens the structural integrity of the tree; or*
 - (ii) *The disease permanently and severely diminishes the aesthetic value of the tree; or*
 - (iii) *The continued retention of the tree could result in other trees being infected with a disease that threatens either their structural integrity or aesthetic value.*
- (b) *The tree represents a hazard, which may include but not be limited to:*
 - (i) *The tree is in danger of falling;*
 - (ii) *Substantial portions of the tree are in danger of falling.*
- (c) *It is necessary to remove the tree to construct proposed improvements based on Architectural Review approval, building permit, or approval of a Subdivision or Partition Review.*

Response: No trees shall be removed with this proposal, the requirement is not applicable.

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Application for Architectural Review

73.250(1) Trees and other plant materials to be retained shall be identified on the landscape plan and grading plan.

Response: The site plan and grading plan indicate location of trees to be retained.

The requirement is met.

73.250(2) During the construction process:

(a) The owner or the owner's agents shall provide above and below ground protection for existing trees and plant materials identified to remain.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(2)(b) Trees and plant materials identified for preservation shall be protected by chain link or other sturdy fencing placed around the tree at the drip line.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(2)(c) If it is necessary to fence within the drip line, such fencing shall be specified by a qualified arborist as defined in 31.060.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(2)(d) Neither top soil storage nor construction material storage shall be located within the drip line of trees designated to be preserved.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(2)(e) Where site conditions make necessary a grading, building, paving, trenching, boring, digging, or other similar encroachment upon a preserved tree's drip line area, such grading, paving, trenching, boring, digging, or similar encroachment shall only be permitted under the direction of a qualified arborist. Such direction must assure that the health needs of trees within the preserved area can be met.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(2)(f) Tree root ends shall not remain exposed.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(3) Landscaping under preserved trees shall be compatible with the retention and health of said tree.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

73.250(4) When it is necessary for a preserved tree to be removed in accordance with TDC 34.210 the landscaped area surrounding the tree or trees shall be maintained and replanted with trees that relate to the present landscape plan, or if there is no landscape plan, then trees that are complementary with existing, nearby landscape materials.

Response: The proposal indicates no disturbance to the existing trees, the requirement is not applicable.

9. Grading

73.270(1) After completion of site grading, topsoil is to be restored to exposed cut and fill areas to provide a suitable base for seeding and planting.

Response: Note on site plan indicates after completion of site grading, topsoil to be restored to exposed cut and fill areas to provide suitable base for seeding and planting.

The requirement is met.

73270(4) Impervious surface drainage shall be directed away from pedestrian walkways, dwelling units, buildings, outdoor private and shared areas and landscape areas except where the landscape area is a water quality facility.

Response: Grading plan indicates surface drainage directed away from pedestrian walkways, buildings, patio areas, and landscape areas.

The requirement is met.

10. Bicycle Parking, Off-Street Parking and Loading

Bicycle Parking:

73.370(2)(a) Commercial (ix) Drive-up restaurant. Bicycle parking requirement is 2.00 spaces per 1000 gross sq ft; percentage of bicycle parking to be covered is 25.

Response: The required bike parking for the existing building is as follows:

<i>Use</i>	<i>Area</i>	<i>Rate</i>	<i>Required</i>	<i>Proposed</i>
(ix) Drive-up restaurant	2,673 sf	2 per 1,000 sf	5	5

73.370(1)(n) Bicycle parking facilities shall either be lockable enclosures in which the bicycle is stored, or secure stationary racks, which accommodate a bicyclist's lock securing the frame and both wheels.

Response: Proposed bicycle parking facilities are secure stationary racks which accommodate

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
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a bicyclist's lock securing the frame and both wheels.

The requirement is met.

73.370(1)(o) Each bicycle parking space shall be at least 6 feet long and 2 feet wide, and overhead clearance in covered areas shall be at least 7 feet, unless a lower height is approved through the Architectural Review process.

Response: Bicycle parking spaces shall be at least 6 feet long and 2 feet wide, overhead clearance in covered area is 8 feet.

The requirement is met.

73.370(1)(r) Required bicycle parking shall be located in convenient, secure, and well lighted locations approved through the Architectural Review process.

Response: The proposed site plan indicates uncovered bike parking on the northeast corner of the building, 50 feet from a main entrance, and covered bike parking on the exterior patio 35 feet from the second entrance. Both are lit by building lights and open to the parking lot.

The requirement is met.

73.370(1)(s) Bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.

Response: No interior bike parking facilities are proposed, the requirement is not applicable.

73.370(1)(u) Bicycle parking areas and facilities shall be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs shall be located at the main entrance and at the location of the bicycle parking facilities.

Response: Site plan note indicates bicycle parking areas to be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD).

The requirement is met.

Off-Street Vehicle Parking:

73.370(2)(a) Commercial (ix) Drive-up restaurant requires 9.9 parking spaces per 1000 square feet.

Response: The required off-street parking for the existing building is as follows:

<i>Use</i>	<i>Area</i>	<i>Rate</i>	<i>Required</i>	<i>Proposed</i>
(ix) Drive-up restaurant	2,673 sf	9.9 per 1,000 sf	26	26

73.370(3) The minimum number of off-street Vanpool and Carpool parking for commercial,

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
Clackamas County - Parcel # 00339253
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institutional, and industrial uses is as follows:

<i>Number of required parking spaces</i>	<i>Number of vanpool or carpool spaces</i>
0-10	1
10-25	2
26 and greater	1 for each 25 spaces

Response: The site development area requires 26 parking spaces, the resulting minimum number of off-street carpool/vanpool spaces is 1.1, rounded to two (2). The site plan indicates two spaces to be striped and signed as carpool/vanpool spaces.

The requirement is met.

73.370(1)(x) Required van pool and carpool parking shall meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

Response: Two existing parking spaces that meet the 9-foot parking stall requirements shall be striped and identified with appropriate signage as carpool/vanpool spaces.

The requirement is met.

73.380(1) Off-street parking lot design shall comply with the dimensional standards set forth in Figure 73-1 of this section.

Response: The dimensions of the existing parking stalls meet the requirements of Figure 73-1.

The requirement is met.

73.380(2) Parking stalls for sub-compact vehicles shall not exceed 35 percent of the total parking stalls required by Section 73.370(2).

Response: Because there are no existing or proposed compact spaces, the requirement is not applicable.

73.380(3) Off-street parking stalls shall not exceed eight continuous spaces in a row without a landscape separation.

Response: Parking stalls within the development area do not exceed eight continuous spaces in a row. Providing additional landscape separations in the off-street parking outside the development area would incur cost disproportionate to the proposed development, the requirement is not applicable.

73.380(4) Areas used for standing or maneuvering of vehicles shall have paved asphalt or concrete surfaces maintained adequately for all-weather use and so drained as to avoid the flow of water across sidewalks.

Response: All proposed vehicular circulation areas are asphalt or concrete, and the grading plan indicates water will not flow across sidewalks.

The requirement is met.

73.380(6) Artificial lighting, which may be provided, shall be so deflected as not to shine or create glare in any residential planning district or on any adjacent dwelling, or any street right-of-way in such a manner as to impair the use of such way.

Response: There are no residential planning districts or dwellings adjacent to the site. Existing site lighting shall remain, building lights shall be replaced with similar fixtures in the same locations. The requirement is not applicable.

73.380(8) Service drives to off-street parking areas shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

Response: No changes to existing service drives to off-street parking areas are proposed, the requirement is not applicable.

73.380(9) Parking bumpers or wheel stops or curbing shall be provided to prevent cars from encroaching on the street right-of-way, adjacent landscaped areas, or adjacent pedestrian walkways.

Response: No changes to existing parking bumpers or wheel stops are proposed, the requirement is not applicable.

73.380(11) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, shall have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic. On-site drive aisles without parking spaces, which provide access to parking areas with only sub-compact spaces, shall have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic.

Response: No changes to the existing drive aisles are proposed, the requirement is not applicable.

73.390(1) The minimum number of off-street loading berths for commercial, industrial, public and semi-public uses is as follows:

<i>Square Feet of Floor Area</i>	<i>Number of Berths</i>
<i>Less than 5000</i>	<i>0</i>
<i>5,000-25,000</i>	<i>1</i>
<i>25,000-60,000</i>	<i>2</i>
<i>60,000 and over</i>	<i>3</i>

Response: Floor area of the building is 2,673 square feet. Since it is under 5,000 square feet, no loading berth is required.

The requirement is met.

73.390(2) Loading berths shall conform to the following minimum size specifications:

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
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Application for Architectural Review

(b) Industrial uses- 12' x 60'

(c) Berths shall have an unobstructed height of 14'

(d) Loading berths shall not use the public right-of-way as part of the required off-street loading area.

Response: No loading berth is required, the requirement is not applicable.

73.390(3) Required loading areas shall be screened from public view from public streets and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

Response: No loading berth is required, the requirement is not applicable.

11. Access

73.400(9) Ingress and egress for industrial uses shall not be less than 36 feet for the first 50 feet from the right-of-way, and 24 feet thereafter (Applies to industrial uses with less than 250 required parking spaces).

Response: The proposed use is commercial, the requirement is not applicable.

Vision clearance requirements at the driveways and street intersection shall comply with the requirements of 73.400(13).

73.400(13) One Way Ingress or Egress

When approved through the Architectural Review process, one-way ingress or egress may be used to satisfy the requirements of Subsections (7), (8), and (9). However, the hard surfaced pavement of one-way drives shall not be less than 16 feet for multi-family residential, commercial, or industrial uses.

Response: No changes is proposed to the existing one-way drives, the requirement is not applicable.

12. Signs

Response: The applicant shall separately from this AR submit sign permit applications for any proposed signage.

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
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Application for Architectural Review

SITE EXISTING PHOTOS



South Elevation



Aerial View

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
Clackamas County - Parcel # 00339253
Application for Architectural Review



West Elevation at Drive-Thru



Detail at Drive-Thru Awning

17771 Lower Boones Ferry Rd – Starbucks Coffee Company
Clackamas County - Parcel # 00339253
Application for Architectural Review



East Elevation



North Shed Building and Walk-In Cooler



City of Tualatin

www.tualatinoregon.gov

APPLICATION FOR ARCHITECTURAL REVIEW

Direct Communication to:			
Name: SARAH VAZ		Title: DESIGN STAFF	
Company Name: HOLST ARCHITECTURE			
Current address:			
City: PORTLAND		State: OREGON	ZIP Code: 97214
Phone: (503) 233 9856	Fax: (503) 232 7135	Email: SVAZ@HOLSTARC.COM	
Applicant			
Name: SARAH VAZ		Company Name: HOLST ARCHITECTURE	
Address: 110 SE 8TH AVE			
City: PORTLAND		State: OREGON	ZIP Code: 97214
Phone: (503) 233 9856	Fax: (503) 232 7135	Email: SVAZ@HOLSTARC.COM	
Applicant's Signature:		Date: 8/4/2015	
Property Owner			
Name: MIKE BERREY, BERREY PROPERTIES LLC			
Address: 6305 SW ROSEWOOD ST, SUITE D			
City: LAKE OSWEGO		State: OREGON	ZIP Code: 97035
Phone: (503) 697 3310	Fax:	Email: MIKE.BERREY@BERREYPROPERTIES.COM	
Property Owner's Signature:		Date	
(Note: Letter of authorization is required if not signed by owner)			
Architect			
Name: RENEE STRAND, HOLST ARCHITECTURE			
Address: 110 SE 8TH AVE			
City: PORTLAND		State: OREGON	ZIP Code: 97214
Phone: (503) 233 9856	Fax: (503) 232 7135	Email: RSTRAND@HOLSTARC.COM	
Landscape Architect			
Name:			
Address:			
City:		State:	ZIP Code:
Phone:	Fax:	Email:	
Engineer			
Name: SETH DAVIS, FROELICH ENGINEERING			
Address: 6969 SW HAMPTON ST.			
City: PORTLAND		State: OREGON	ZIP Code: 97223
Phone: (503) 924 6314	Fax:	Email: SDAVIS@FROELICH-ENGINEERS.COM	
Project			
Project Title: STARBUCKS - SW 65TH & BOONES FERRY			
Address: 17771 SW LOWER BOONES FERRY RD.			
City: TUALATIN		State: OREGON	ZIP Code: 97035
Brief Project Description: CONVERSION OF FORMER ARBY'S RESTAURANT INTO A STARBUCKS. SCOPE INCLUDES WINDOWS AND DOORS, LIGHTING, LANDSCAPING, PARKING, AND DRIVE THROUGH EQUIPMENT AND SIGANAGE.			
Proposed Use: COFFEE HOUSE			

Value of Improvements: \$175,000

AS THE PERSON RESPONSIBLE FOR THIS APPLICATION, I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION ABOVE, ON THE FACT SHEET, AND THE SURROUNDING PARTY OWNER MAILING LIST IS CORRECT. I AGREE TO COMPLY WITH ALL APPLICABLE CITY AND COUNTY ORDINANCES AND STATE LAWS REGARDING BUILDING CONSTRUCTION AND LAND USE.

Applicant's Signature:

Date:

Office Use

Case No:	Date Received:	Received by:
Fee: Complete Review (\$115-\$5040):	Receipt No:	
Application Complete as of:	ARB hearing date (if applicable):	
Posting Verification:	6 copies of drawings (folded)	
1 reproducible 8 ½" X 11" vicinity map	1 reproducible 8 ½" X 11" site, grading, LS, Public Facilities plan	
Neighborhood/Developer meeting materials		

GENERAL INFORMATION	
Site Address:	17771 LOWER BOONES FERRY RD, TUALATIN OR 97035
Assessor's Map and Tax Lot #:	21E18CB01900 & 21E18BC01000
Planning District:	GC - GENERAL COMMERCIAL
Parcel Size:	.67 ACRES & .73 ACRES
Property Owner:	BERREY PROPERTIES - MIKE BERREY
Applicant:	HOLST ARCHITECTURE - SARAH VAZ
Proposed Use:	COFFEE SHOP

ARCHITECTURAL REVIEW DETAILS	
<input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial	
Number of parking spaces:	26
Square footage of building(s):	3,032 SF (FOOTPRINT); 2,673 SF (LEASABLE)
Square footage of landscaping:	3,107 sf
Square footage of paving:	1,514 sf
Proposed density (for residential):	N/A

<p>For City Personnel to complete:</p> <p>Staff contact person:</p>
--

CITY OF TUALATIN FACT SHEET

General

Proposed use: COFFEE SHOP			
Site area:	1.4 acres	Building footprint:	3,032 sq. ft.
Development area:	.17 acres	Paved area:	1,514 sq. ft.
	7,653 Sq. ft.	Development area coverage:	%

Parking

Spaces required (see TDC 73.400) (example: warehouse @ 0.3/1000 GFA) RETAIL @ 9.9/1000 GFA = 26 _____ @ _____/1000 GFA = _____ _____ @ _____/1000 GFA = _____ Total parking required: 26 spaces Handicapped accessible = 1 Van pool = 2 Compact = (max. 35% allowed) = 0 Loading berths = 0	Spaces provided: Total parking provided: 26 spaces Standard = 23 Handicapped accessible = 1 Van pool = 2 Compact = 0 Loading berths = 0
--	---

Bicycles

Covered spaces required: 1	Covered spaces provided: 1
----------------------------	----------------------------

Landscaping

Landscaping required: 15 % of dvpt. area 1,148 Square feet	Landscaping provided: 40 % of dvpt. area 3,107 Square feet
Landscaped parking island area required: N/A %	Landscaped parking island area provided: N/A %

Trash and recycling facility

Minimum standard method:	36.7 square feet required; 110 square feet provided
Other method:	_____ square feet

For commercial/industrial projects only

Total building area:	2,673 sq. ft.	2 nd floor:	NONE sq. ft.
Main floor:	2,673 sq. ft.	3 rd floor:	NONE sq. ft.
Mezzanine:	NONE sq. ft.	4 th floor:	NONE sq. ft.

For residential projects only

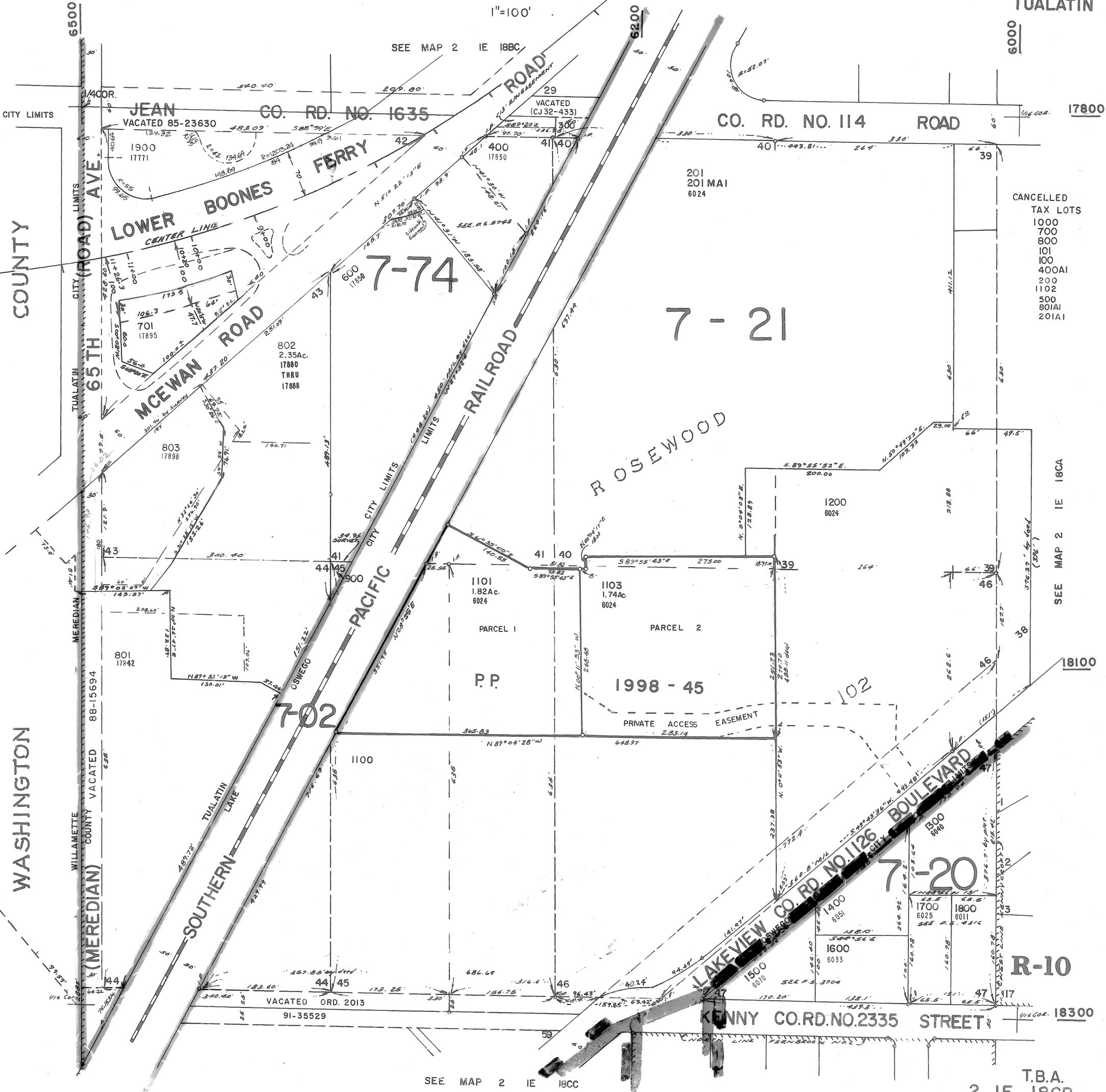
Number of buildings: N/A	Total sq. ft. of buildings: N/A	sq. ft.
Building stories: N/A		

This map was prepared for assessment purpose only.

NW 1/4 SW 1/4 SEC. 18 T.2S. R.1E. W.M.
CLACKAMAS COUNTY

2 IE 18CB
LAKE OSWEGO
TUALATIN

1"=100'



- CANCELLED TAX LOTS
- 1000
 - 700
 - 800
 - 101
 - 100
 - 400AI
 - 200
 - 1102
 - 500
 - 801AI
 - 201AI

SEE MAP 2 IE 16CA

18100

R-10

18300

SEE MAP 2 IE 18CC

T.B.A.
2 IE 18CB
LAKE OSWEGO
TUALATIN

SW 1/4 NW 1/4 SEC. 18 T.2S. R.1E. W.M.
CLACKAMAS COUNTY

2 1E 18BC
LAKE OSWEGO

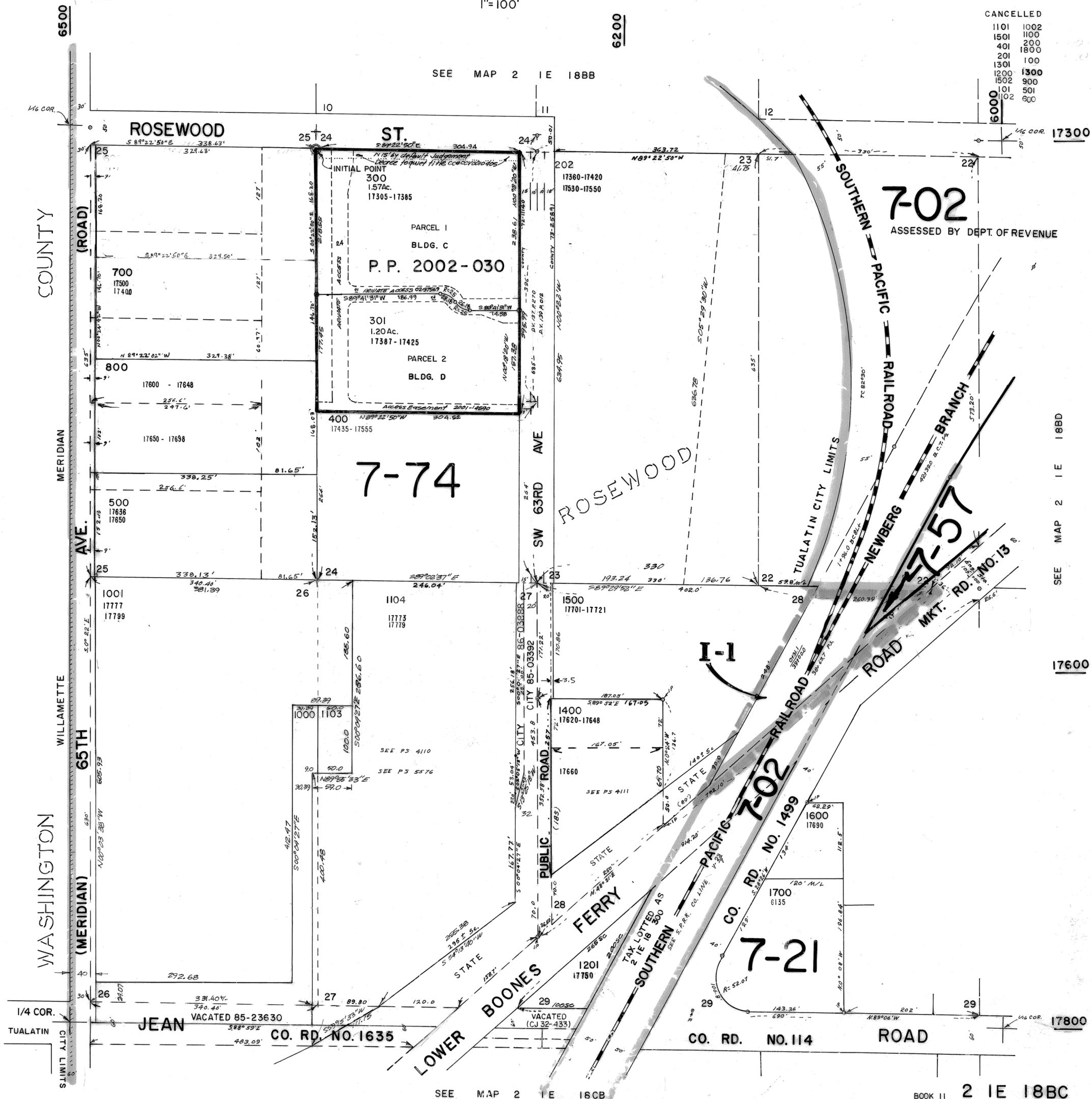
This map was prepared for
assessment purpose only.

1"=100'

CANCELLED

- 1101 1002
- 1501 1100
- 201 200
- 401 1800
- 101 100
- 1301 1300
- 1502 900
- 101 501
- 102 600

SEE MAP 2 1E 18BB



SEE MAP 2 1E 18BD

17600

SEE MAP 2 1E 18CB

BOOK 11 2 1E 18BC
LAKE OSWEGO

5-19-76 CE

NEIGHBORHOOD / DEVELOPER MEETING CERTIFICATION OF SIGN POSTING

<p style="text-align: center;">NOTICE</p> <p style="text-align: center;">NEIGHBORHOOD / DEVELOPER MEETING</p> <p style="text-align: center;">__/__/2010 __:__.m.</p> <p style="text-align: center;">SW _____</p> <p style="text-align: center;">503-__-__</p>	18"
24"	

In addition to the requirements of TDC 31.064(2) quoted earlier in the packet, the 18" x 24" sign that the applicant provides must display the meeting date, time, and address and a contact phone number. The block around the word "NOTICE" must remain **orange** composed of the **RGB color values Red 254, Green 127, and Blue 0**. Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at < www.tualatinoregon.gov/planning/land-use-application-sign-templates >.

As the applicant for the

BOONES FERRY STARBUCKS project, I

hereby certify that on this day, AUGUST 24, 2015 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Department - Planning Division.

Applicant's Name: SARAH VAZ
(PLEASE PRINT)

Applicant's Signature: *Sarah Vaz*

Date: 9/10/2015

NOTICE

NEIGHBORHOOD / DEVELOPER MEETING

09/08/2015 5:00 p.m.

6305 SW Rosewood St, Ste D

Lake Oswego, OR 97035

503-233-9856

NOTICE

NEIGHBORHOOD / DEVELOPER MEETING

09/08/2015 5:00 p.m.
6305 SW Rosewood St, Suite D
Lake Oswego, OR 97035
503-233-9856

You are cordially invited to attend a meeting on September 8, 2015 at 5:00 pm and at the above address. This meeting shall be held to discuss a proposed project located at 17771 SW Lower Boones Ferry Rd, at the corner of SW 65th Ave and Lower Boones Ferry Rd.

The purpose of this meeting is to provide a means for the applicant and surrounding property owners to meet and discuss this proposal. The proposal is for a conversion of the existing Arby's store to a Starbucks drive-thru coffee house, involving a full interior renovation and minor exterior changes including signage, paint, doors, windows, and landscaping.

Please see below for the proposed south elevation. More information, including elevations and site plan will be provided at the meeting.



**NEIGHBORHOOD/DEVELOPER MEETING
AFFIDAVIT OF MAILING**

STATE OF OREGON)
) SS
COUNTY OF WASHINGTON)

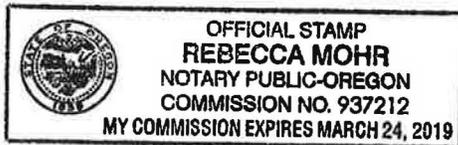
I, SARAH VAZ, being first duly sworn, depose and say:

That on the 24TH day of AUGUST, 2015, I served upon the persons shown on Exhibit "A," attached hereto and by this reference incorporated herein, a copy of the Notice of Neighborhood/Developer meeting marked Exhibit "B," attached hereto and by this reference incorporated herein, by mailing to them a true and correct copy of the original hereof. I further certify that the addresses shown on said Exhibit "A" are their regular addresses as determined from the books and records of the Washington County and/or Clackamas County Departments of Assessment and Taxation Tax Rolls, and that said envelopes were placed in the United States Mail with postage fully prepared thereon.

Sarah Vaz

Signature

SUBSCRIBED AND SWORN to before me this 16th day of September, 2015.



Rebecca Mohr

Notary Public for Oregon
My commission expires: 3/24/2019

RE: STARBUCKS BOONET FERRY AND 65TH AVE

Holst Architecture

holstarc.com

110 se 8th portland or 97214 v 503 233 9856 f 503 232 7135



August 21, 2015

RE: Boones Ferry Starbucks – 17771 Lower Boones Ferry Rd, Lake Oswego, OR 97053

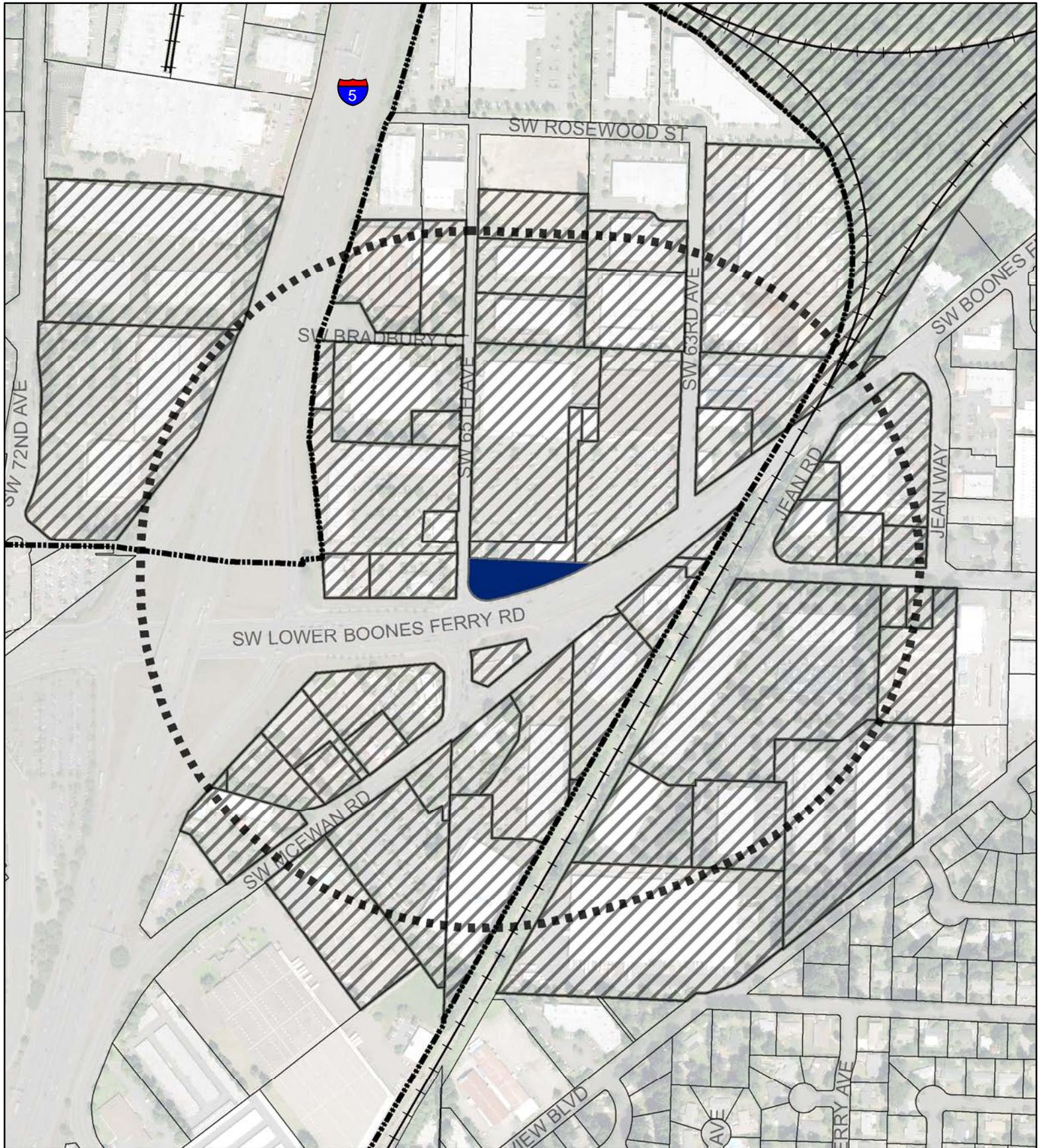
Dear Property Owner,

You are cordially invited to attend a meeting on Tuesday, September 8, 2015 at 5:00 pm and at 6305 SW Rosewood St, Suite D, Lake Oswego, OR 97035. This meeting shall be held to discuss a proposed project located at 17771 SW Lower Boones Ferry Rd, at the corner of SW 65th Ave and Lower Boones Ferry Rd.

The purpose of this meeting is to provide a means for the applicant and surrounding property owners to meet and discuss this proposal. The proposal is for a conversion of the existing Arby's store to a Starbucks drive-thru coffee house, involving a full interior renovation and minor exterior changes including signage, paint, doors, windows, and landscaping. More information will be provided at the meeting.

Regards,

Sarah Vaz
Holst Architecture
T 503 233 9856
svaz@holstarc.com



 1000' Buffer

 Selected Taxlots



AR-15-0023

To lessen the bulk of the notice of application and to address privacy concerns, this sheet substitutes for the photocopy of the mailing labels. A copy is available upon request.

Sign-In Sheet

Neighborhood/Developer Meeting

Starbucks – Boones Ferry and SW 65th Ave

09/08/2015

5:00 pm

6305 SW Rosewood St, Suite D
Lake Oswego, OR 97035

Name – Print	Role – <i>property owner, neighbor, CIO, etc.</i>	Signature
Colin Cortes	City of Tualatin	Colin Cortes
Mike MARTIN	OWNER LGI	Mike Martin
Mario Campbell	Anderbell	Mario Campbell



September 8, 2015

Notes from neighborhood meeting:

Mike Martin:

- Pleased with design but hoped the entire building was being replaced.

Mario Campbell:

- Was confused and thought proposal was for a full shopping center renovation.

Colin Cortes:

- Questions and clarifications around exterior lighting and pedestrian connections.
- Existing trash enclosure was discussed.

Neighborhood comments included:

Mike Martin

- Pleased with the design but hoped the entire building was being replaced.

Mario Campbell

- Was confused and thought proposal was for a full shopping center renovation

Colin Cortes.

- questions and clarifications around exterior lighting and pedestrian connections.

Existing trash enclosure was discussed.

Arby's/Starbucks Conversion

Transportation Impact Study
Tualatin, Oregon

DATE:

September 17, 2015

PREPARED FOR:

Renee Strand, Holst Architecture

PREPARED BY:

Daniel Stumpf, EI
Michael Ard, PE



EXPIRES: 12/31/15



LANCASTER
ENGINEERING



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Executive Summary

1. The proposed development will convert an existing 2,931 square foot Arby's fast-food restaurant into a Starbucks Coffee. The project site is located directly north of SW Lower Boones Ferry Road, directly east of SW 65th Avenue, and east of Interstate 5 in Tualatin, Oregon.
2. The trip generation calculations show that the proposed development is projected to generate a net new total of 84 trips during the morning peak hour and 15 trips during the evening peak hour.
3. Based on the operational analysis, the study intersections are projected to operate within ODOT and City of Tualatin performance standards through year 2017 either with or without the addition of site trips from the proposed development. Accordingly, no operational mitigations are necessary or recommended as a part of this project.
4. Some of the projected 95th percentile queues during the peak hours extend beyond the available queue storage under existing, background and background plus site trips conditions. However, the projected queue lengths are not significantly impacted by the addition of site trips as compared to background conditions. Based on the analysis, no specific queuing mitigations are recommended.
5. Based on the review of the detailed crash data as well as our observations of the study area intersections, no crash patterns and no significant design concerns were identified. No specific safety mitigations are recommended in conjunction with the proposed development.



Project Description

Introduction

The proposed development will convert an existing 2,931 square foot Arby's fast-food restaurant into a Starbucks Coffee. The project site is located directly north of SW Lower Boones Ferry Road, directly east of SW 65th Avenue, and east of Interstate 5 in Tualatin, Oregon.

This report addresses the impacts of the proposed development on the nearby street system. The report includes safety and capacity / level-of-service analyses at the following six intersections:

1. SW Lower Boones Ferry Road at the Interstate 5 Southbound Ramps
2. SW Lower Boones Ferry Road at the Interstate 5 Northbound Ramps
3. SW Lower Boones Ferry Road at SW 65th Avenue
4. Site Access at SW 65th Avenue
5. Site Access at SW Lower Boones Ferry Road
6. SW Lower Boones Ferry Road at SW 63rd Avenue

The purpose of the study is to determine whether the transportation system in the vicinity of the site is capable of safely and efficiently supporting the existing and proposed land uses, and to determine any mitigation that might be necessary to do so.

Location Description

The project site is located directly north of SW Lower Boones Ferry Road, directly east of SW 65th Avenue, and east of Interstate 5 in Tualatin, Oregon.

The subject site is located within a predominately retail area consisting of a mix of retailers and restaurants in all directions.

Vicinity Streets

SW Lower Boones Ferry Road is classified as a Major Arterial by the City of Tualatin. In the vicinity of the subject site, the roadway has a varying cross-section of five to eight lanes with two to four travel lanes provided for each direction. The roadway has a posted speed of 35 mph. Curbs, sidewalks, and bicycle lanes are provided along both sides of the roadway.

SW 65th Avenue is classified as a Commercial/Industrial Connector by the City of Tualatin. The roadway has a two-lane cross-section with a single travel lane in each direction and has a posted speed of 35 mph. Curbs and sidewalks are provided on both sides of the roadway south of SW Bradbury Court.



SW 63rd Avenue is classified as a Connector by the City of Tualatin. The roadway has a two-lane cross-section with a single travel lane in each direction and has a posted speed of 25 mph. Curbs and sidewalks are partially provided on both sides of the roadway.

Study Area Intersections

The intersection of SW Lower Boones Ferry Road at the Interstate 5 Southbound Ramps is a four-legged intersection that is controlled by a traffic signal. The southbound approach has one left-turn lane, one shared left-turn/through lane, and two right-turn lanes. The eastbound approach has three through lanes, a right-turn lane, and a bicycle lane situated between the outermost standard through lane and right-turn lane. The westbound approach has two left-turn lanes served by protected phasing, two through lanes, and a bicycle lane to the right of the outermost standard travel lane. Crosswalks are marked across the northern and southern intersection legs and have pedestrian signals.

The intersection of SW Lower Boones Ferry Road at the Interstate 5 Northbound Ramps is a four-legged intersection that is controlled by a traffic signal. The northbound approach has one left-turn lane, one shared left-turn/through lane, and two right-turn lanes. The eastbound approach has two left-turn lanes served by protected phasing, two through lanes, and a bicycle lane to the right of the outermost standard travel lane. The westbound approach has three through lanes, a channelized right-turn lane, and a bicycle lane situated between the outermost standard through lane and right-turn lane. Crosswalks are marked across the northern and southern intersection legs and have pedestrian signals.

The intersection of SW Lower Boones Ferry Road at SW 65th Avenue is a four-legged intersection that is controlled by a traffic signal. The northbound approach has one left-turn lane and one shared left-turn/through/right-turn lane. The southbound approach has one shared left-turn/through lane and one right-turn lane, served by permitted and overlapping phasing. Both the northbound and southbound approaches operate with split phasing. The eastbound approach has one left-turn lane served by protected phasing, two through lanes, one right-turn lane, and a bicycle lane situated between the outermost standard through lane and right-turn lane. The westbound approach has one left-turn lane served by protected phasing, two through lanes, one shared through/right-turn lane, and one bicycle lane to the right of the outermost standard travel lane. All four intersection crosswalks are marked and have pedestrian signals.

The intersection of the site access at SW 65th Avenue is a three-legged intersection operating under stop control for the westbound driveway approach. The northbound approach has one shared through/right-turn lane. The southbound approach has one shared left-turn/through lane. The westbound approach has one shared left-turn/right-turn lane without centerline striping delineating travel directions.

The intersection of the site access point at SW Lower Boones Ferry road is a four-legged intersection that is stop-controlled for the north- and southbound approaches. Both the north- and southbound approaches allow only right-in/right-out turning movements where a raised median separates east- and westbound traffic. The north- and southbound approaches each have one right-turn lane. The eastbound approach has one through lane, one shared through/right-turn lane, and one bicycle lane to



the right of the outermost standard travel lane. The westbound approach has two through lanes, one shared through/right-turn lane, and one bicycle lane to the right of the outermost standard travel lane.

The intersection of SW Lower Boones Ferry Road at SW 63rd Avenue is a three-legged intersection that is stop-controlled for the southbound approach of SW 63rd Avenue. The eastbound approach has two through lanes, one left-turn lane, and one bicycle lane to the right of the outermost standard travel lane. The westbound approach has one through lane and one shared through/right-turn lane. The southbound approach has one left-turn lane and one shared through/right-turn lane.

A vicinity map displaying the project site, vicinity streets, and the study area intersections with their associated lane configurations is shown in Figure 1 on page 7.

Traffic Volumes

Traffic counts were conducted at study area intersections on Thursday, July 23th, 2015 and Tuesday, August 4th, 2015 from 7:00 AM to 9:00 AM and on Wednesday, July 22nd, 2015 and Tuesday, August 4th, 2015 from 4:00 PM to 6:00 PM. Data used from the morning and evening peak hours reflect each intersection peak hour.

Figure 2 on page 8 shows the existing morning and evening peak hour traffic volumes for the study intersections.

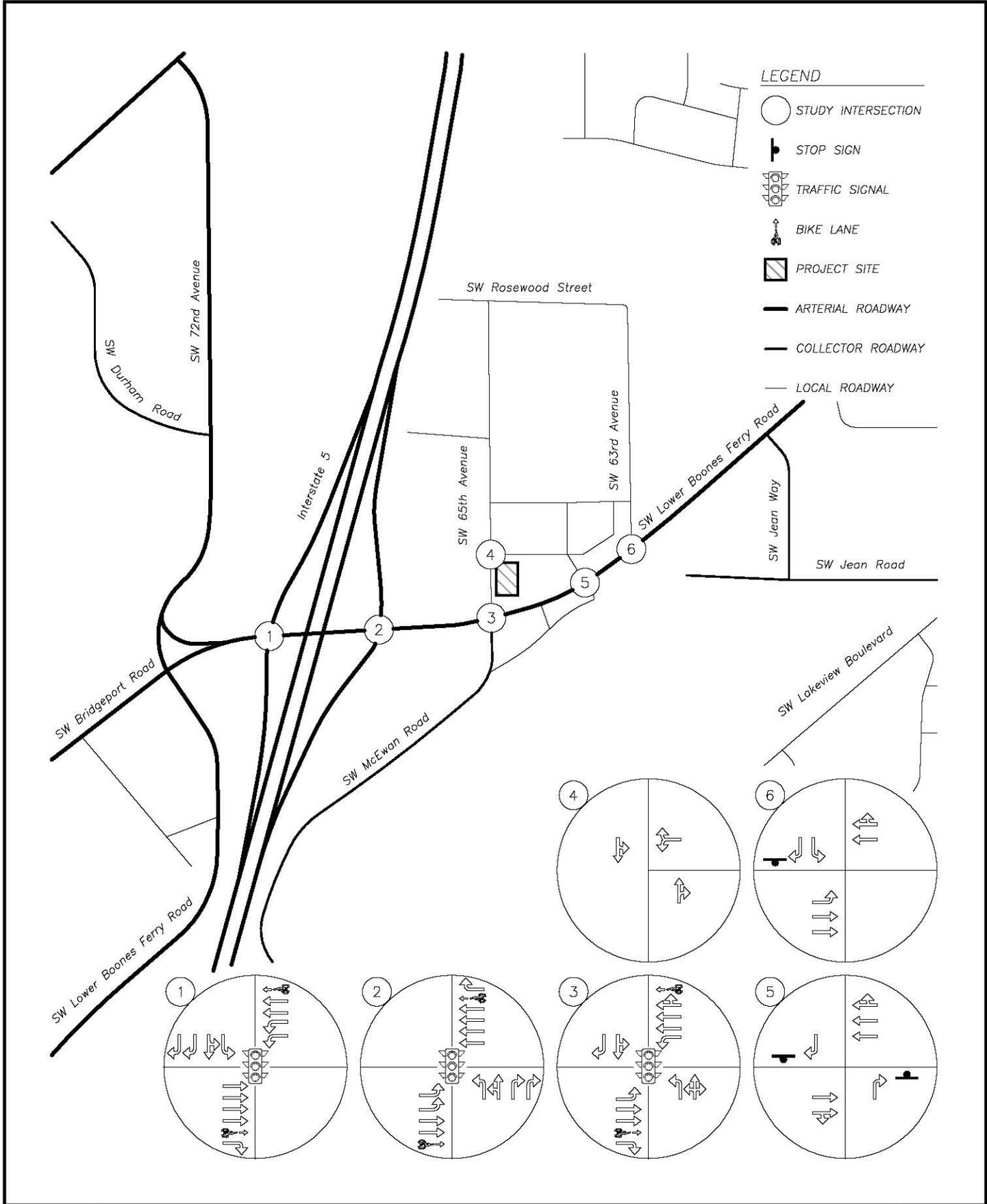
Transit

Two transit lines serve the immediate site vicinity. Both transit lines operate along SW Lower Boones Ferry Road. The nearest bus stops to the subject site are located immediately northeast, immediately southwest, and approximately 300 feet south of the intersection of SW Lower Boones Ferry Road at SW 65th Avenue, approximately 30 to 500 feet walking distance from the subject site.

#36: TriMet bus line #36 – *South Shore* provides service between the Tualatin Park & Ride and the Lake Oswego Transit Center / Portland City Center, depending on the time of day. Weekday service is scheduled from about 7:00 AM to 7:00 PM and has headways of approximately 30 to 90 minutes, where 30 minute headways generally occur during the morning and evening rush hour periods and the 90 minute headways occur during off-peak hours.

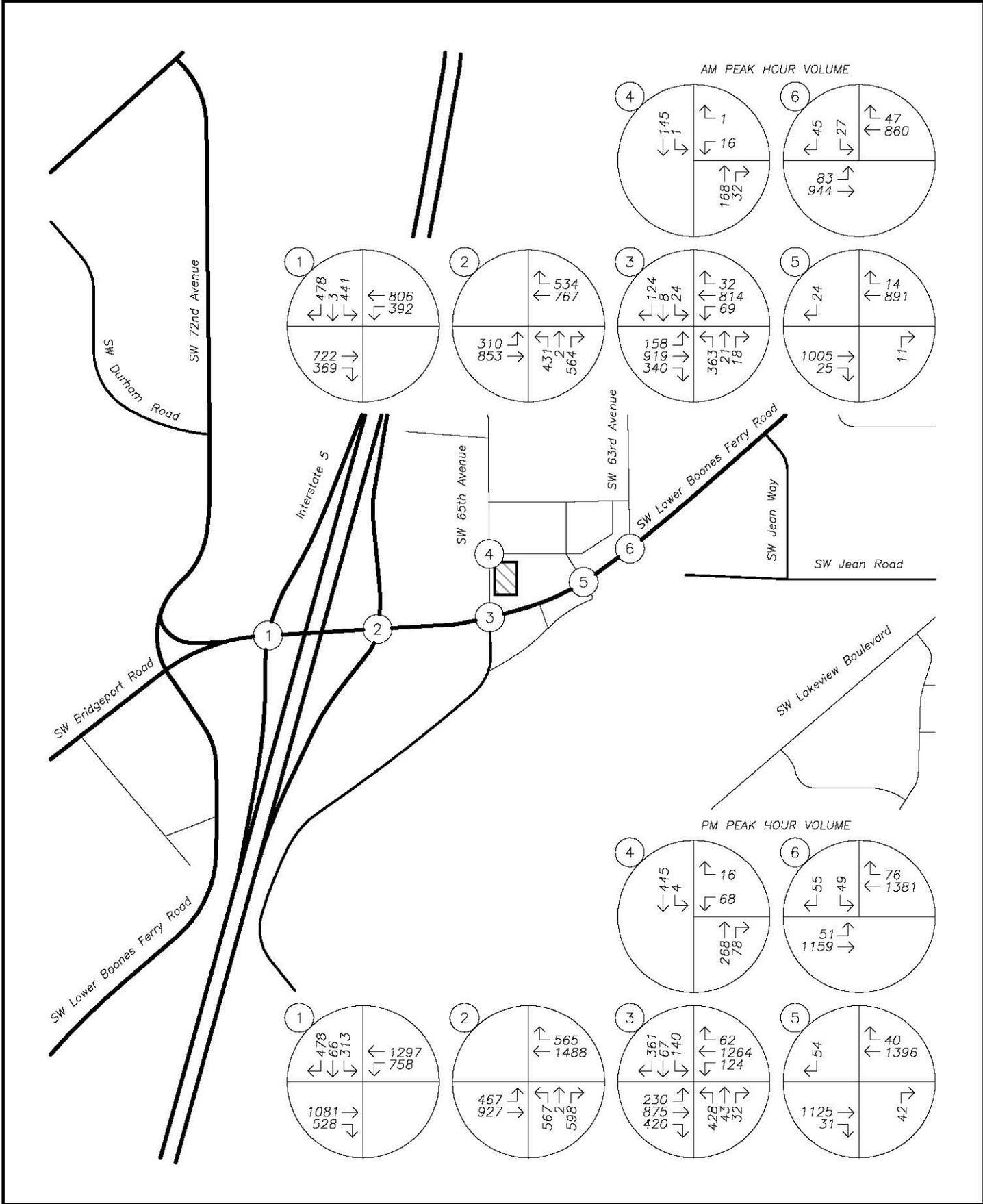
#37: TriMet bus line #37 – *Lake Grove* provides service between the Tualatin Park & Ride and the Lake Oswego Transit Center. Weekday service is scheduled from about 7:00 AM to 5:00 PM and has headways of approximately 90 minutes.

Detailed bus schedules are provided in the appendix.



VICINITY MAP





TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hours



FIGURE
2
PAGE
8



Site Trips

Trip Generation

The proposed development will convert a 2,931 square foot Arby's fast-food restaurant to a Starbucks coffee shop. To estimate the number of trips that will be generated by the proposed development, trip rates from the *Trip Generation Manual*¹ were used. Data from land-use code 937, *Coffee/Donut Shop with Drive-Through Window*, were used to estimate the proposed Starbucks' trip generation based on the square footage of gross floor area.

Trips generated by the Arby's restaurant would normally be deducted from the nearby transportation system; however the Arby's restaurant had been permanently closed before traffic counts were conducted. To compare traffic impacts between the Arby's restaurant and the proposed Starbucks coffee shop, trips generated by the Arby's restaurant were added to 2017 background conditions using data from land-use code 934, *Fast-Food Restaurant with Drive-Through Window*,

The proposed development is expected to attract pass-by and diverted-link trips to the site. Pass-by trips are trips that leave an adjacent roadway to patronize a land use and then continue in their original direction of travel. Diverted-link trips are trips that divert from a nearby roadway not adjacent to the site (such as Interstate 5) to patronize a land use before continuing to their original destination. Pass-by trips do not add additional trips to the transportation system but do add additional turning movements at site access intersections. For this study diverted-link trips were treated as primary trips while pass-by trips will be accounted for as 89 percent of trips generated. Pass-by trips reflect rates provided for land-use code 934, *Fast-Food Restaurant with Drive-Through Window*, as pass-by data was not available for land-use code 937 nor would pass-by rates from land-use code 938, *Coffee/Donut Shop with Drive-Through Window and No Indoor Seating*, accurately depict expected pass-by trips generated by a coffee shop with indoor seating.

The trip generation calculations show that the proposed development is projected to generate a net new total of 84 trips during the morning peak hour and 15 trips during the evening peak hour. The trip generation estimates are summarized in Table 1 and detailed trip generation calculations are included in the technical appendix to this report.

¹ Institute of Transportation Engineers (ITE), *TRIP GENERATION MANUAL, 9th Edition, 2012*.



Table 1 - Trip Generation Summary								
	Size (sq. ft.)	Morning Peak Hour			Evening Peak Hour			Weekday
		In	Out	Total	In	Out	Total	
Coffee Shop w/ Drive-Through	2,931	150	145	295	63	62	125	2,400
<i>Pass-by Trips (AM: 49%, PM: 50%)</i>		72	72	144	31	31	62	-1,200
Fast-Food w/ Drive-Through	2,931	68	65	133	50	46	96	1,454
<i>Pass-by Trips (AM: 49%, PM: 50%)</i>		33	33	66	24	24	48	-728
Total Trip Increase		82	80	162	13	16	29	946
<i>Pass-by Trip Increase</i>		39	39	78	7	7	14	-472
Net New Trips		43	41	84	6	9	15	1,418

Trip Distribution

The directional distribution of site trips to/from the proposed development was estimated based on locations of likely trip destinations, locations of major transportation facilities in the site vicinity, and existing travel patterns at the study area intersection.

It is expected that trips to/from the site will utilize the following trip distribution:

- Approximately 25 percent of the site trips will travel to/from the west along SW Lower Boones Ferry Road.
- Approximately 20 percent of the site trips will travel to/from the north along Interstate 5.
- Approximately 20 percent of the site trips will travel to/from the south along Interstate 5.
- Approximately 20 percent of the site trips will travel to/from the east along SW Lower Boones Ferry Road.
- Approximately 10 percent of the site trips will travel to/from the south along SW 65th Avenue.
- Approximately 5 percent of the site trips will travel to/from the north along SW 65th Avenue.

Trips to and from the proposed development are anticipated to utilize two existing site accesses. Based on the site layout and traffic controls/lane configurations of both accesses, site trips are anticipated to utilize site access points accordingly.

- All exiting trips will utilize the site access point at SW 65th Avenue.
- Approximately 50% of entering site trips from the east along SW Lower Boones Ferry Road will utilize the site access point at SW Lower Boones Ferry Road.
- Approximately 50% of entering site trips from the east along SW Lower Boones Ferry Road will utilize the site access point at SW 65th Avenue.
- All other entering trips will utilize the site access point at SW 65th Avenue.

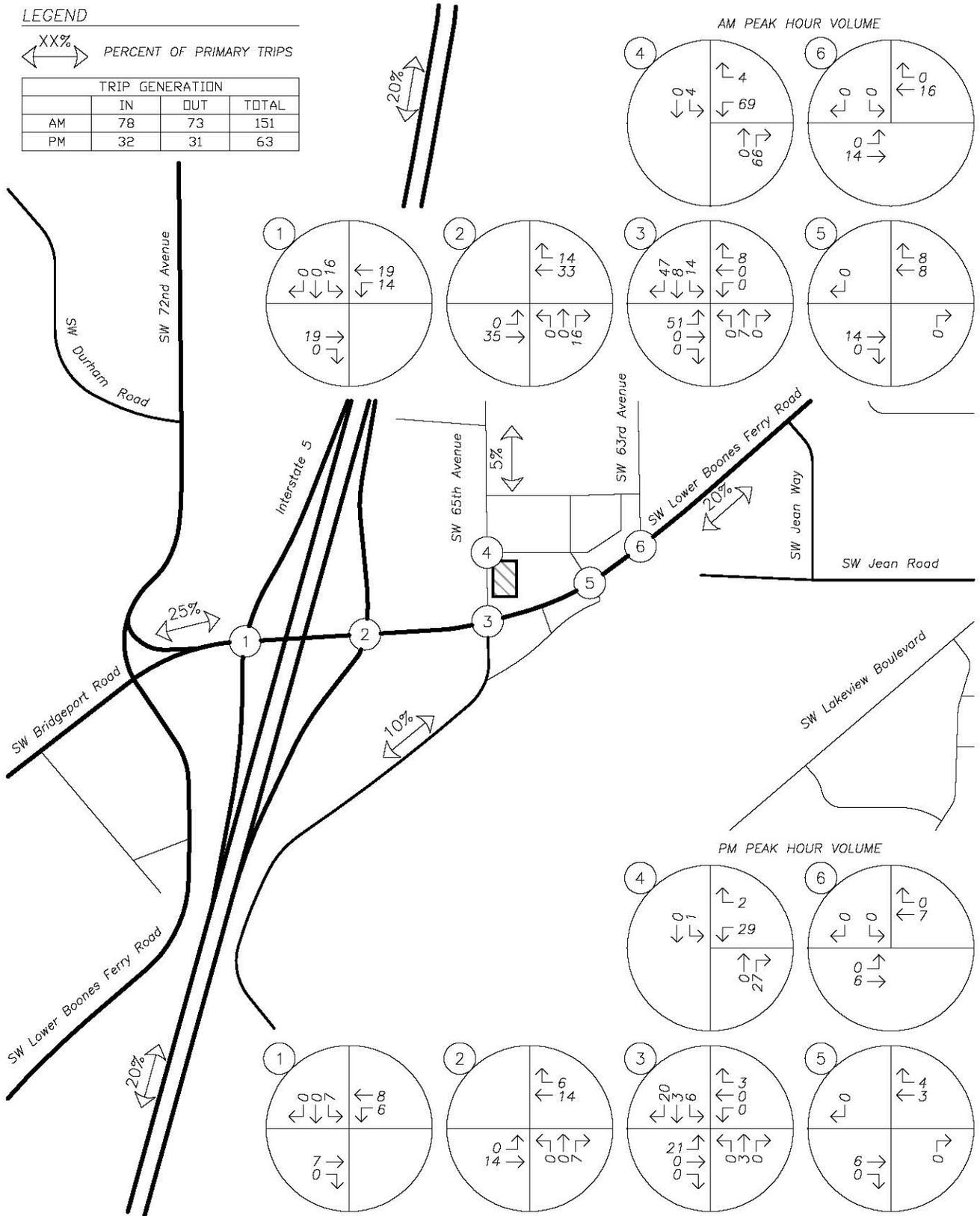


The trip assignment for the site trips generated by the proposed development during the morning and evening peak hours are shown in Figure 3 on page 12, Figure 4 on page 13, and Figure 5 on page 14 for primary trips, pass-by trips, and total site trips, respectively.

LEGEND

XX% PERCENT OF PRIMARY TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	78	73	151
PM	32	31	63



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Primary Site Trips
AM & PM Peak Hours



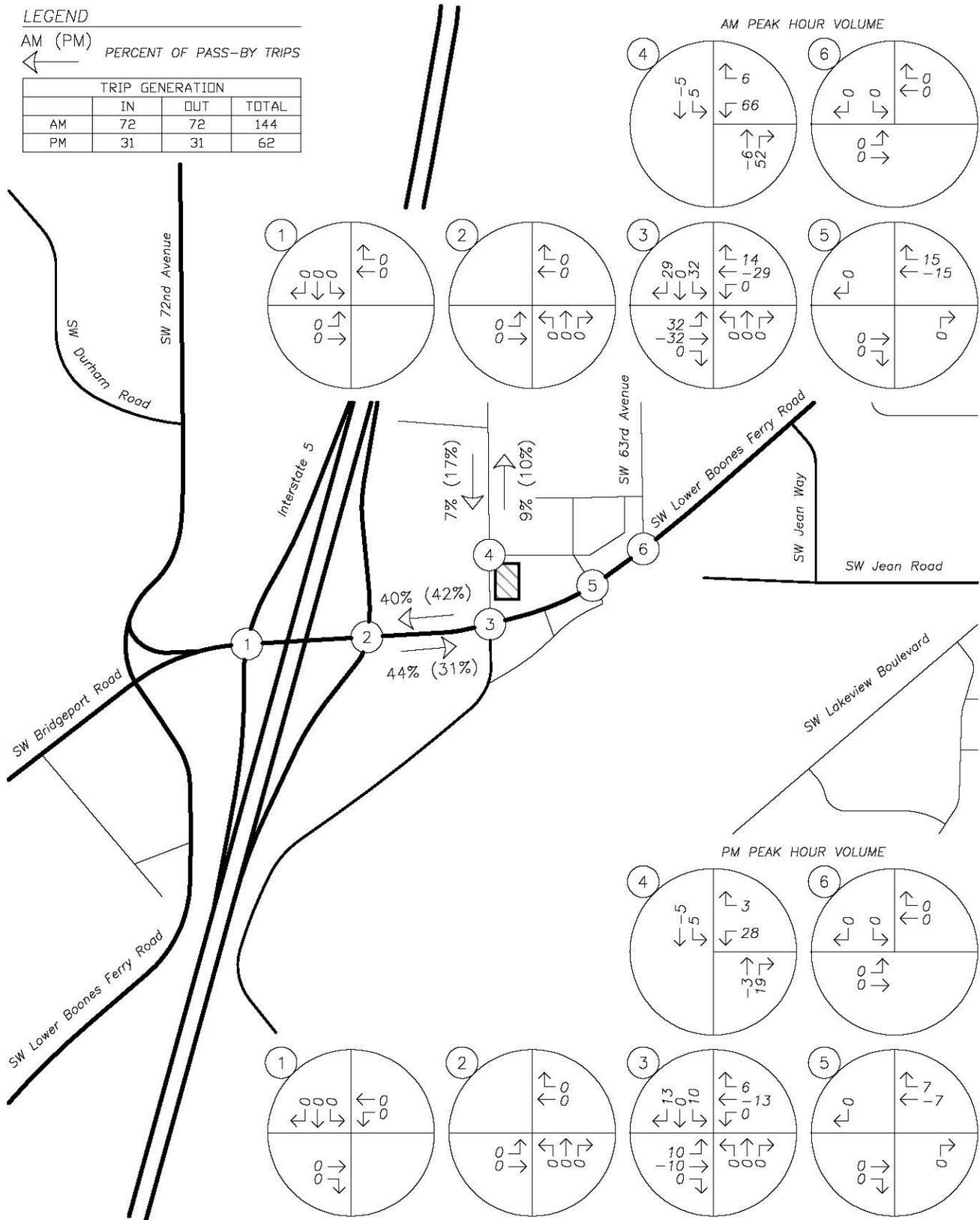
FIGURE 3

PAGE 12

LEGEND

AM (PM) PERCENT OF PASS-BY TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	72	72	144
PM	31	31	62



SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan - Pass-By Site Trips
AM & PM Peak Hours

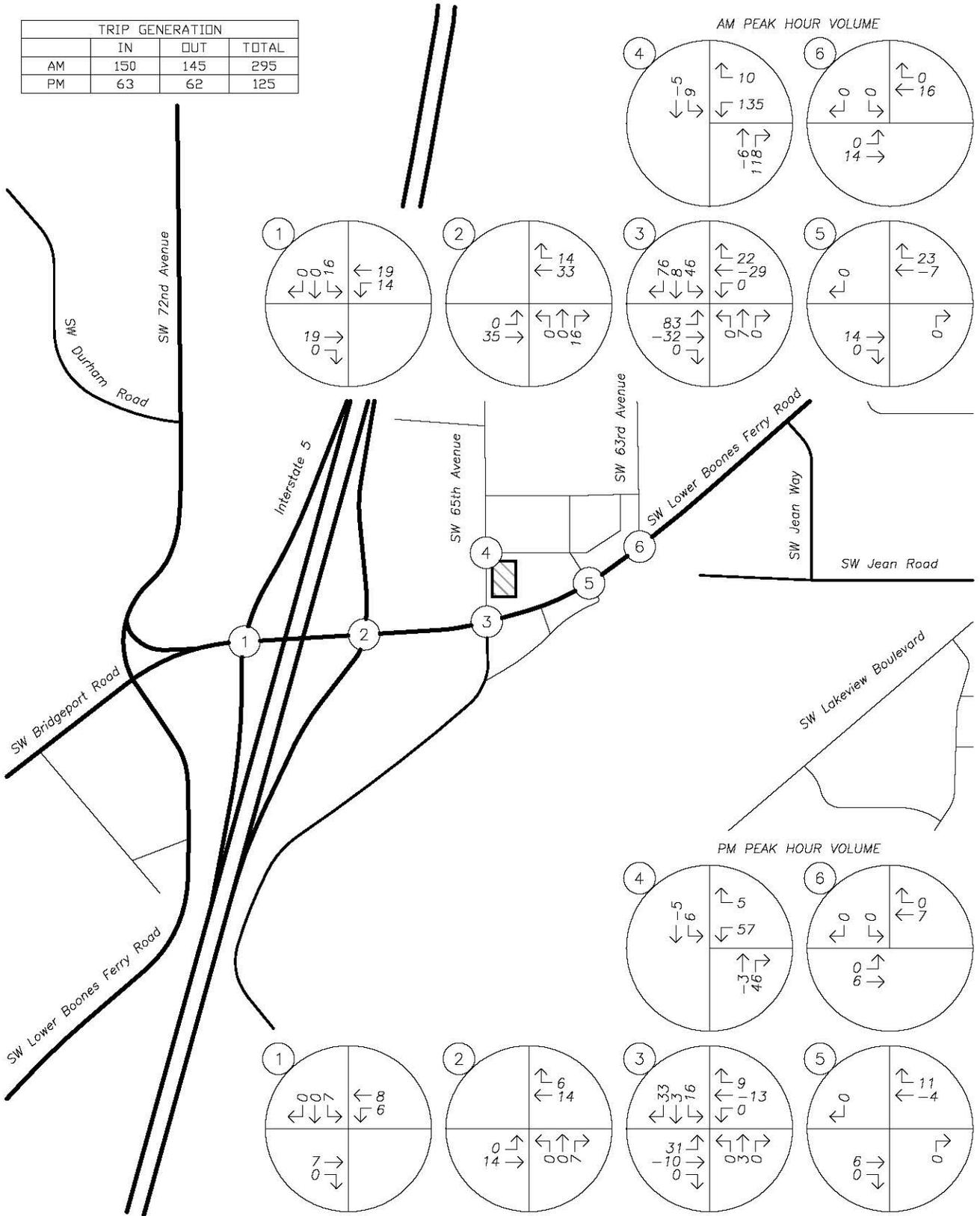


FIGURE 4

PAGE 13

TRIP GENERATION			
	IN	OUT	TOTAL
AM	150	145	295
PM	63	62	125

AM PEAK HOUR VOLUME



SITE TRIP DISTRIBUTION & ASSIGNMENT
 Proposed Development Plan - Total Site Trips
 AM & PM Peak Hours





Operational Analysis

Background Volume

To provide analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to calculate the future traffic volumes for intersections at the Interstate 5 northbound and southbound ramps at SW Lower Boones Ferry Road, a linear growth rate of 0.4 percent per year was calculated using ODOT's 2033 Future Volume Tables. This growth rate was applied over a two-year period to determine year 2017 background traffic volumes for all traffic volumes entering and exiting Interstate 5. For all other study area intersections and the eastbound/westbound through movements at the Interstate 5 intersections a compounded growth rate of two percent per year for an assumed build-out condition of two years was applied to the measured existing traffic volumes to approximate year 2017 background conditions.

In addition to the traffic volume growth described above, there is one in-process development near the proposed project vicinity that is currently not contributing trips to the transportation system but are anticipated to by the 2017 build-out year of the proposed development. The Meridian Business Park – Buildings G & H proposes the construction of a 31,980 square foot business park. Based on the development's transportation impact study, additional in-process trips are included at study area intersections.

Figure 6 on page 16 shows the projected year 2017 background traffic volumes for the morning and evening peak hour traffic volumes of the study area intersection.

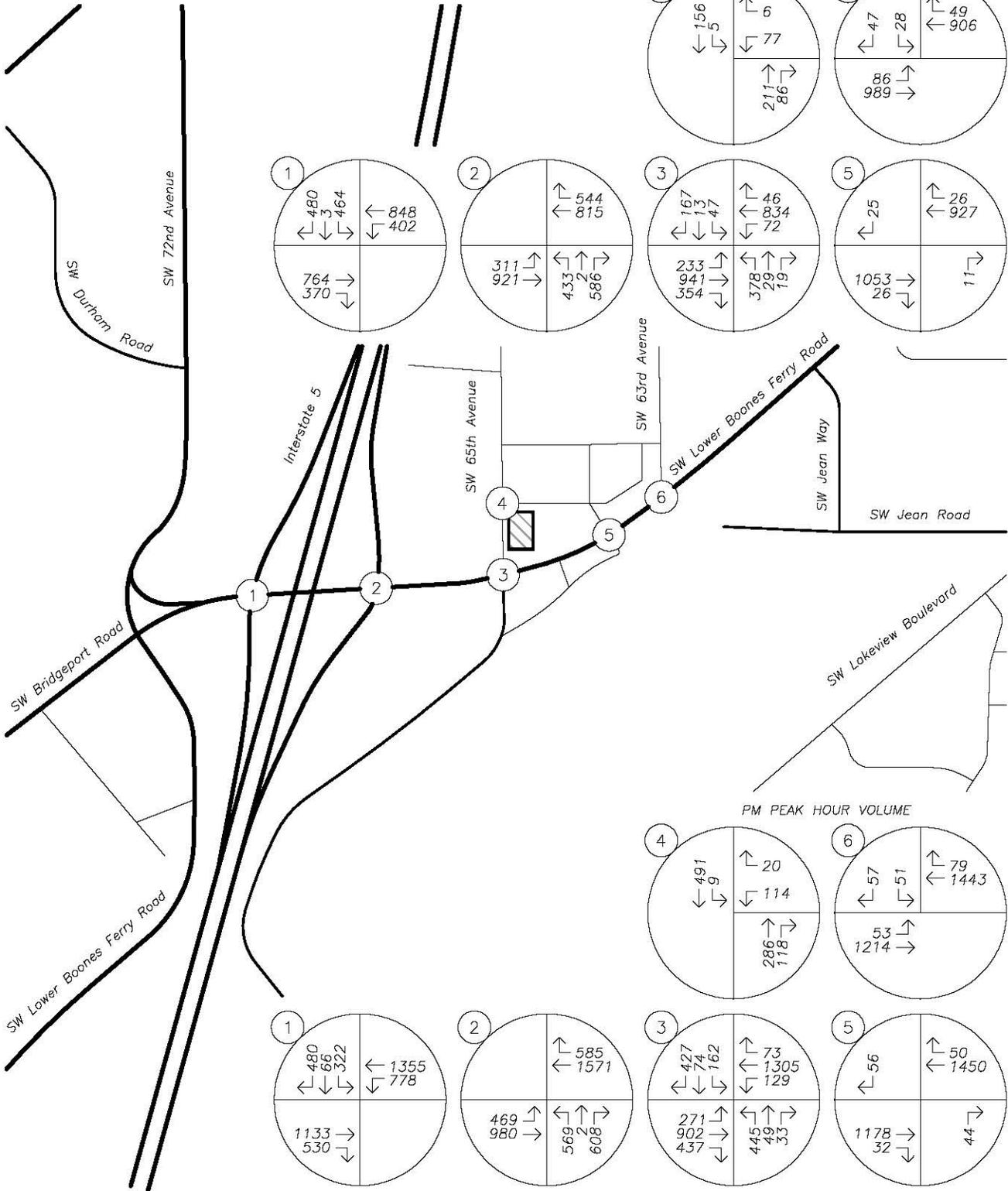
Background Volume plus Site Trips

Peak hour trips calculated to be generated from the proposed development, as described earlier within the Trip Generation section, were added to the projected year 2017 background traffic volumes to obtain the expected 2017 background plus site trips.

Figure 7 on page 17 shows the projected year 2017 peak hour background traffic volumes plus proposed development site trips of the study intersection.

ODOT FACILITIES: 0.4 PERCENT PER YEAR LINEAR GROWTH
 OTHER FACILITIES: 2.0 PERCENT PER YEAR COMPOUNDED GROWTH

AM PEAK HOUR VOLUME

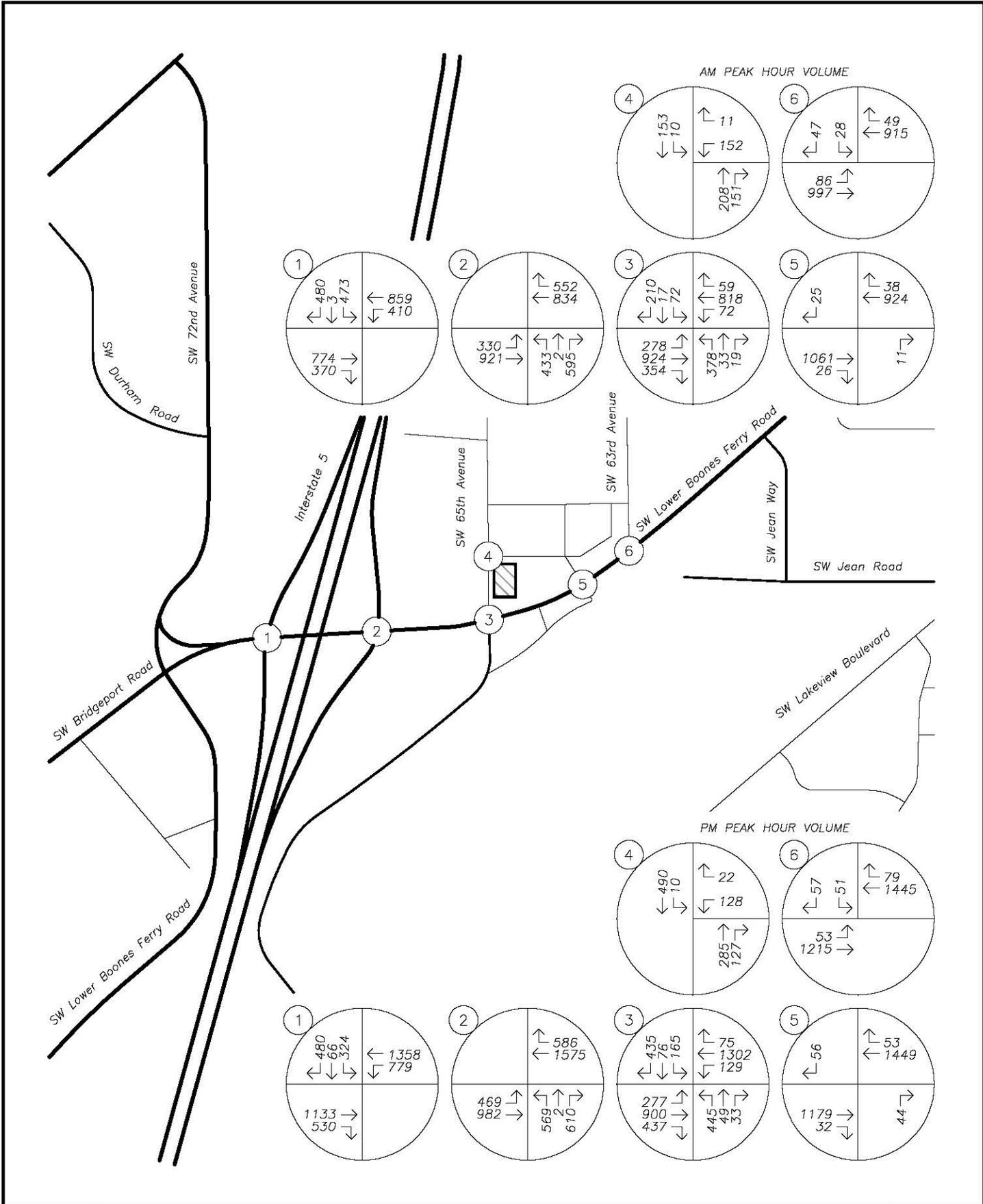


TRAFFIC VOLUMES
 Year 2017 Background Conditions – With Arby's Trips
 AM & PM Peak Hours



FIGURE 6

PAGE 16



TRAFFIC VOLUMES
 Year 2017 Background plus Site Conditions
 PM Peak Hour





Intersection Capacity and Level-of-Service Analysis

To determine the capacity and level-of-service (LOS) at the study intersections, a capacity analysis was conducted. The analysis was conducted using the signalized and unsignalized intersection analysis methodology in the *HIGHWAY CAPACITY MANUAL (HCM)* published by the Transportation Research Board. The v/c ratio is a measure that compares the traffic volume (demand) against the available capacity of an intersection. Washington County and ODOT standards require a v/c ratio of 0.99 or less while the City of Tualatin standards require a minimum LOS E or better. For both LOS and delay related to the analysis of unsignalized intersections, the reported result applies to the stop-controlled movement that was calculated to experience the largest delay.

The intersection of SW Lower Boones Ferry Road at the Interstate 5 Southbound Ramps currently operates at LOS B with a v/c ratio of 0.52 during the morning peak hour and a v/c ratio of 0.66 during the evening peak hour. Under year 2017 background conditions, the intersection is projected to operate at LOS B with a v/c ratio of 0.54 during the morning peak hour and a v/c ratio of 0.68 during the evening peak hour. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS B with a v/c ratio of 0.55 during the morning peak hour and a v/c ratio of 0.68 during the evening peak hour.

The intersection of SW Lower Boones Ferry Road at the Interstate 5 Northbound Ramps currently operates at LOS B with a v/c ratio of 0.53 during the morning peak hour and a v/c ratio of 0.72 during the evening peak hour. Under year 2017 background conditions, the intersection is projected to operate at LOS B with a v/c ratio of 0.56 during the morning peak hour and a v/c ratio of 0.74 during the evening peak hour. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS B with a v/c ratio of 0.57 during the morning peak hour and a v/c ratio of 0.75 during the evening peak hour.

The intersection of SW Lower Boones Ferry Road at SW 65th Avenue currently operates at LOS C with a v/c ratio of 0.62 during the morning peak hour and at LOS D with a v/c ratio of 0.87. Under year 2017 background conditions, the intersection is projected to operate at LOS C with a v/c ratio of 0.67 during the morning peak hour and at LOS D with a v/c ratio of 0.94 during the evening peak hour. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS C with a v/c ratio of 0.69 during the morning peak hour and at LOS D with a v/c ratio of 0.95 during the evening peak hour.

The intersection of the site access point at SW 65th Avenue currently operates at LOS B with a v/c ratio of 0.04 during the morning peak hour and at LOS C with a v/c ratio of 0.26. Under year 2017 background conditions, the intersection is projected to operate at LOS B with a v/c ratio of 0.21 during the morning peak hour and at LOS D with a v/c ratio of 0.49 during the evening peak hour. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS C with a v/c ratio of 0.44 during the morning peak hour and at LOS D with a v/c ratio of 0.55 during the evening peak hour.



The intersection of the site access point at SW Lower Boones Ferry Road currently operates at LOS B with a v/c ratio of 0.04 during the morning peak hour and a v/c ratio of 0.12 during the evening peak hour. Under year 2017 background conditions, the intersection is projected to operate at LOS B with a v/c ratio of 0.05 during the morning peak hour and a v/c ratio of 0.13 during the evening peak hour. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS B with a v/c ratio of 0.05 during the morning peak hour and a v/c ratio of 0.13 during the evening peak hour.

The intersection of SW Lower Boones Ferry Road at SW 63rd Avenue currently operates at LOS E with a v/c ratio of 0.20 during the morning peak hour and a v/c ratio of 0.33 during the evening peak hour. Under year 2017 background conditions, the intersection is projected to operate at LOS E with a v/c ratio of 0.23 during the morning peak hour and a v/c ratio of 0.37 during the evening peak hour. Upon completion of the proposed development in 2017, the intersection is projected to operate at LOS E with a v/c ratio of 0.23 during the morning peak hour and a v/c ratio of 0.37 during the evening peak hour.

The v/c, delay, and LOS results of the capacity analysis are shown in Table 2. Detailed calculations as well as tables showing the relationships between delay and level of service are included in the appendix to this report.



Table 2 - Capacity and LOS Analysis Summary						
	Morning Peak Hour			Evening Peak Hour		
	LOS	Delay (s)	v / c	LOS	Delay (s)	v / c
Lower Boones Ferry Rd at I-5 SB Ramps						
Existing Conditions	B	15	0.52	B	15	0.66
2017 Background Conditions	B	15	0.54	B	15	0.68
2017 Background + Site Conditions	B	15	0.55	B	15	0.68
Lower Boones Ferry Rd at I-5 NB Ramps						
Existing Conditions	B	14	0.53	B	17	0.72
2017 Background Conditions	B	14	0.56	B	17	0.74
2017 Background + Site Conditions	B	15	0.57	B	17	0.75
Lower Boones Ferry Rd at 65th Ave						
Existing Conditions	C	23	0.62	D	39	0.87
2017 Background Conditions	C	27	0.67	D	48	0.94
2017 Background + Site Conditions	C	28	0.69	D	49	0.95
Site Access at 65th Ave						
Existing Conditions	B	11	0.04	C	18	0.26
2017 Background Conditions	B	14	0.21	D	27	0.49
2017 Background + Site Conditions	C	18	0.44	D	30	0.55
Site Access at Lower Boones Ferry Rd						
Existing Conditions	B	11	0.04	B	13	0.12
2017 Background Conditions	B	11	0.05	B	14	0.13
2017 Background + Site Conditions	B	11	0.05	B	14	0.13
Lower Boones Ferry Rd at 63rd Ave						
Existing Conditions	E	36	0.20	E	37	0.33
2017 Background Conditions	E	39	0.23	E	42	0.37
2017 Background + Site Conditions	E	39	0.23	E	42	0.37

Based on the analysis, the study intersections operate within ODOT and City of Tualatin performance standards through year 2017 with full build-out of the proposed development. Accordingly, no mitigation is necessary or recommended as a part of this project.



Queuing Analysis

An analysis of projected queuing was conducted for the study area intersections. The queue lengths for the intersections were projected based on the results of Synchro/SimTraffic simulation, with the reported values based on the 95th percentile of the queue lengths. This means that 95 percent of the time during the peak hour the queue length will be less than or equal to the reported value.

Synchro/SimTraffic simulation at the intersection of SW Lower Boones Ferry Road at SW 63rd Avenue reported long queue lengths for the existing stop-controlled southbound left-turn and right-turn lanes. However, these results do not accurately reflect actual queuing conditions at the intersection since SimTraffic is not capable of modeling two-stage left-turns at stop controlled intersections, such as those that occur at this intersection.

In order to more accurately assess queuing at the intersection of SW Lower Boones Ferry Road at SW 63rd Avenue, an observation was conducted during the evening peak hour on a typical weekday, when traffic volumes and queues are at their peak. The longest observed queue in the southbound left-turn lane was four vehicles while the longest observed queue in the southbound right-turn lane was two vehicles. The corresponding southbound left-turn and right-turn queue lengths are approximately 100 feet and 50 feet, respectively. Significant southbound queues were not observed, and site trips from the proposed development are not projected to utilize the southbound approach to this intersection since more direct alternatives are available. Accordingly, it is projected that the existing southbound queue lengths will not be significantly impacted by the proposed development.

Table 3 presents the projected 95th percentile queue lengths reported by the Synchro/SimTraffic simulation and the longest observed queue lengths at the intersection of SW Lower Boones Ferry Road at SW 63rd Avenue. Available lane storage was measured utilizing Google Earth Pro software and rounded to the nearest five feet. For each lane group, the longest projected queue is reported, regardless of whether the queue occurred during the morning or evening peak hour. Detailed queuing analysis worksheets for both the morning and evening peak hours are included in the technical appendix.



Table 3 - Queuing Analysis Summary				
	Available Storage	Existing Conditions	Background Conditions	Background + Site Conditions
<i>SW Lower Boones Ferry Road</i>				
<i>at the I-5 SB Ramps</i>				
SB LT, LT/Th, and RT Lanes	325'	149'	151'	166'
EB RT Lane	255'	209'	206'	225'
WB LT Lanes*	390'	222'	239'	254'
<i>SW Lower Boones Ferry Road</i>				
<i>at the I-5 NB Ramps</i>				
NB LT, LT/Th, and RT Lanes	275'	185'	200'	196'
EB LT Lanes*	390'	151'	137'	149'
WB RT Lane	305'	143'	129'	143'
<i>SW Lower Boones Ferry Road</i>				
<i>at SW 65th Avenue</i>				
NB LT Lane*	130'	183'	184'	183'
SB RT Lane	130'	151'	144'	141'
EB LT Lane	285'	281'	301'	295'
EB RT Lane	275'	202'	248'	257'
WB LT Lane	250'	212'	222'	219'
<i>Site Access at SW 65th Avenue</i>				
WB LT/RT Lane	-	130'	403'	400'
<i>SW Lower Boones Ferry Road</i>				
<i>at SW 63rd Avenue</i>				
SB LT Lane	120'	100'	100'	100'
SB RT Lane	-	50'	50'	50'

* Available Storage Extends to Adjacent Intersection

Some of the projected 95th percentile queues during the peak hours extend beyond the available queue storage under existing, background and background plus site trips conditions. However, the projected queue lengths are not significantly impacted by the addition of site trips as compared to background conditions. Based on the analysis, no specific queuing mitigations are recommended.



Safety Analysis

Crash Data Analysis

Using data obtained from ODOT's Crash Analysis and Reporting Unit, a review of the most recent available five years of crash history (2009-2013) at the study intersections was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions and the resulting crash rate for the intersection. Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak period represents 10% of annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.0 crashes per million entering vehicles (CMEV) may be indicative of safety hazards that should be further investigated or possible mitigation.

The intersection of SW Lower Boones Ferry Road at the Interstate 5 Southbound Ramps had 28 reported crashes during the analysis period. The crashes consisted of 13 rear-end collisions, 14 turning-movement collisions, and one angle-type collision. Of the crashes reported 14 were classified as "Property Damage Only", 12 were classified as "Possible Injury – Complaint of Pain" (*Injury C*), and two were classified "Non-Incapacitating Injury" (*Injury B*). The crash rate at the intersection was calculated to be 0.34 CMEV.

The intersection of SW Lower Boones Ferry Road at the Interstate 5 Northbound Ramps had 43 reported crashes during the analysis period. The crashes consisted of 25 rear-end collisions, 16 turning-movement collisions, one fixed object collision, and one crash where a pedestrian was involved. Of the crashes reported 22 were classified as "Property Damage Only", 13 were classified as "Possible Injury – Complaint of Pain" (*Injury-C*), and seven were classified "Non-Incapacitating Injury" (*Injury-B*), and one was classified as "Incapacitating Injury" (*Injury-A*). The crash rate at the intersection was calculated to be 0.52 CMEV.

The "Incapacitating Injury" crash involved a person driving westbound and a person riding a motorcycle making a left-turn onto the Interstate 5 on-ramp. The person driving was reported as driving carelessly, disregarded the traffic signal, and collided with the motorcycle. Conditions were clear, dry, and dark with street lights present. The severity of injuries incurred by the person on the motorcycle was likely due to the vulnerability associated with operating a motorcycle.

The intersection of SW Lower Boones Ferry Road at SW 65th Avenue had six reported crashes during the analysis period. The crashes consisted of five rear-end collisions and one turning-movement collision. Of the crashes reported four were classified as "Property Damage Only" and two were classified as "Possible Injury – Complaint of Pain" (*Injury-C*). The crash rate at the intersection was calculated to be 0.08 CMEV.



The intersection of the site access point at SW 65th Avenue had no reported crashes during the study period.

The intersection of the site access point at SW Lower Boones Ferry Road had one reported crash during the analysis period. The crash was a turning-movement collision which was classified as “Property Damage Only”. The crash rate at the intersection was calculated to be 0.01 CMEV.

The intersection SW Lower Boones Ferry Road at SW 63rd Avenue had eight reported crashes during the analysis period. The crashes consisted of seven turning-movement collisions and one rear-end collision. Of the crashes reported four were classified as “Property Damage Only”, three were classified as “Possible Injury – Complaint of Pain” (*Injury-C*), and one was classified “Non-Incapacitating Injury” (*Injury-B*). The crash rate at the intersection was calculated to be 0.09 CMEV.

Based on the most recent five years of crash data at the study area intersections crash rates are relatively low, crash severity was relatively low for crashes likely to occur again, and no significant crash patterns are evident. The crash data does not appear to be indicative of any significant safety hazards. Accordingly, no safety mitigations are recommended.

Detailed information about crashes and crash reports for the study intersections are included in the appendix to this report.



Conclusions

The trip generation calculations show that the proposed development is projected to generate a net new total of 84 trips during the morning peak hour and 15 trips during the evening peak hour.

Based on the operational analysis, the study intersections are projected to operate within ODOT and City of Tualatin performance standards through year 2017 either with or without the addition of site trips from the proposed development. Accordingly, no operational mitigations are necessary or recommended as a part of this project.

Some of the projected 95th percentile queues during the peak hours extend beyond the available queue storage under existing, background and background plus site trips conditions. However, the projected queue lengths are not significantly impacted by the addition of site trips as compared to background conditions. Based on the analysis, no specific queuing mitigations are recommended.

Based on the review of the detailed crash data as well as our observations of the study area intersections, no crash patterns and no significant design concerns were identified. No specific safety mitigations are recommended in conjunction with the proposed development.

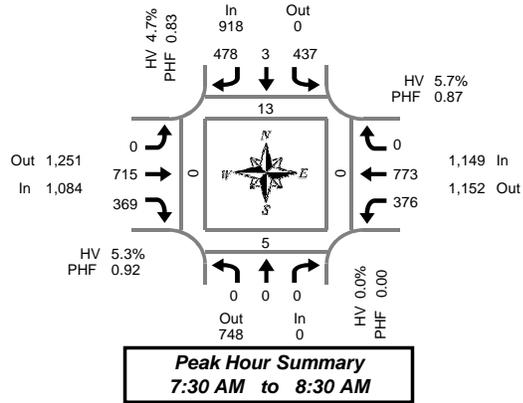


Appendix

Total Vehicle Summary



Clay Carney
(503) 833-2740



I-5 SB Ramps & Lower Boones Ferry Rd

Thursday, July 23, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	28	2	32	0	0	24	35	0	17	69	0	0	207	2	1	0	0
7:05 AM	0	0	0	0	25	0	33	0	0	50	29	1	15	74	0	0	226	1	1	0	0
7:10 AM	0	0	0	0	31	0	37	0	0	51	17	0	17	46	0	0	199	0	0	0	0
7:15 AM	0	0	0	0	33	0	35	0	0	47	22	0	24	61	0	0	222	2	2	0	0
7:20 AM	0	0	0	0	30	0	38	0	0	57	31	3	26	51	0	2	233	1	0	0	0
7:25 AM	0	0	0	0	38	0	42	0	0	47	18	1	35	56	0	0	236	0	0	0	0
7:30 AM	0	0	0	0	24	0	46	0	0	50	33	0	15	58	0	1	226	0	0	0	0
7:35 AM	0	0	0	0	41	1	40	0	0	67	33	2	34	70	0	0	286	2	1	0	0
7:40 AM	0	0	0	0	37	1	40	0	0	60	26	0	30	89	0	1	283	2	0	0	0
7:45 AM	0	0	0	0	45	0	57	0	0	60	37	2	31	75	0	0	305	2	0	0	0
7:50 AM	0	0	0	0	46	0	52	0	0	60	32	0	34	63	0	0	287	0	0	0	0
7:55 AM	0	0	0	0	28	0	39	0	0	77	27	0	37	65	0	0	273	1	0	0	0
8:00 AM	0	0	0	0	36	0	29	1	0	55	20	0	24	59	0	1	223	0	0	0	0
8:05 AM	0	0	0	0	38	1	38	0	0	63	36	0	27	47	0	1	250	0	1	0	0
8:10 AM	0	0	0	0	28	0	34	0	0	58	30	0	33	59	0	1	242	1	2	0	0
8:15 AM	0	0	0	0	37	0	28	0	0	56	29	1	35	61	0	0	246	5	0	0	0
8:20 AM	0	0	0	0	45	0	39	0	0	54	34	0	31	70	0	1	273	0	1	0	0
8:25 AM	0	0	0	0	32	0	36	0	0	55	32	0	45	57	0	0	257	0	0	0	0
8:30 AM	0	0	0	0	21	0	23	0	0	38	23	0	39	59	0	1	203	0	0	0	0
8:35 AM	0	0	0	0	44	0	29	0	0	70	22	0	45	63	0	0	273	0	0	0	0
8:40 AM	0	0	0	0	31	0	42	0	0	50	35	1	32	66	0	0	256	3	0	0	0
8:45 AM	0	0	0	0	32	0	37	0	0	47	34	0	42	79	0	0	271	0	0	0	0
8:50 AM	0	0	0	0	44	1	43	0	0	47	26	0	36	90	0	0	287	2	0	0	0
8:55 AM	0	0	0	0	33	0	44	0	0	69	15	0	37	71	0	0	269	0	0	0	0
Total Survey	0	0	0	0	827	6	913	1	0	1,312	676	11	741	1,558	0	9	6,033	24	9	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	84	2	102	0	0	125	81	1	49	189	0	0	632	3	2	0	0
7:15 AM	0	0	0	0	101	0	115	0	0	151	71	4	85	168	0	2	691	3	2	0	0
7:30 AM	0	0	0	0	102	2	126	0	0	177	92	2	79	217	0	2	795	4	1	0	0
7:45 AM	0	0	0	0	119	0	148	0	0	197	96	2	102	203	0	0	865	3	0	0	0
8:00 AM	0	0	0	0	102	1	101	1	0	176	86	0	84	165	0	3	715	1	3	0	0
8:15 AM	0	0	0	0	114	0	103	0	0	165	95	1	111	188	0	1	776	5	1	0	0
8:30 AM	0	0	0	0	96	0	94	0	0	158	80	1	116	188	0	1	732	3	0	0	0
8:45 AM	0	0	0	0	109	1	124	0	0	163	75	0	115	240	0	0	827	2	0	0	0
Total Survey	0	0	0	0	827	6	913	1	0	1,312	676	11	741	1,558	0	9	6,033	24	9	0	0

Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	748	748	0	918	0	918	1	1,084	1,251	2,335	5	1,149	1,152	2,301	6	3,151	13	5	0	0
%HV	0.0%				4.7%				5.3%				5.7%				5.3%				
PHF	0.00				0.83				0.92				0.87				0.90				

By Movement	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	437	3	478	918	0	715	369	1,084	376	773	0	1,149	3,151
%HV	0.0%	0.0%	0.0%	0.0%	5.5%	33.3%	3.8%	4.7%	0.0%	5.5%	4.9%	5.3%	10.1%	3.6%	0.0%	5.7%	5.3%
PHF	0.00	0.00	0.00	0.00	0.85	0.38	0.80	0.83	0.00	0.91	0.96	0.92	0.85	0.83	0.00	0.87	0.90

Rolling Hour Summary

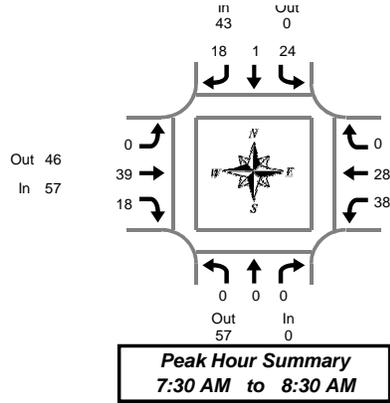
7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	406	4	491	0	0	650	340	9	315	777	0	4	2,983	13	5	0	0
7:15 AM	0	0	0	0	424	3	490	1	0	701	345	8	350	753	0	7	3,066	11	6	0	0
7:30 AM	0	0	0	0	437	3	478	1	0	715	369	5	376	773	0	6	3,151	13	5	0	0
7:45 AM	0	0	0	0	431	1	446	1	0	696	357	4	413	744	0	5	3,088	12	4	0	0
8:00 AM	0	0	0	0	421	2	422	1	0	662	336	2	426	781	0	5	3,050	11	4	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



I-5 SB Ramps & Lower Boones Ferry Rd

Thursday, July 23, 2015

7:00 AM to 9:00 AM

Peak Hour Summary
7:30 AM to 8:30 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	0	3	4	0	0	2	2	1	2	0	3	9
7:05 AM	0	0	0	0	2	0	1	3	0	4	3	7	1	2	0	3	13
7:10 AM	0	0	0	0	3	0	1	4	0	4	2	6	2	0	0	2	12
7:15 AM	0	0	0	0	1	0	0	1	0	3	2	5	1	0	0	1	7
7:20 AM	0	0	0	0	2	0	1	3	0	0	1	1	2	0	0	2	6
7:25 AM	0	0	0	0	1	0	3	4	0	3	1	4	1	1	0	2	10
7:30 AM	0	0	0	0	2	0	1	3	0	4	3	7	2	1	0	3	13
7:35 AM	0	0	0	0	1	0	3	4	0	1	2	3	2	1	0	3	10
7:40 AM	0	0	0	0	2	0	0	2	0	2	0	2	1	3	0	4	8
7:45 AM	0	0	0	0	0	0	2	2	0	2	2	4	1	3	0	4	10
7:50 AM	0	0	0	0	1	0	2	3	0	7	2	9	2	3	0	5	17
7:55 AM	0	0	0	0	1	0	0	1	0	4	0	4	2	1	0	3	8
8:00 AM	0	0	0	0	3	0	1	4	0	3	1	4	6	1	0	7	15
8:05 AM	0	0	0	0	3	1	3	7	0	5	3	8	3	1	0	4	19
8:10 AM	0	0	0	0	1	0	2	3	0	2	0	2	1	2	0	3	8
8:15 AM	0	0	0	0	2	0	1	3	0	3	1	4	0	4	0	4	11
8:20 AM	0	0	0	0	4	0	1	5	0	2	4	6	5	2	0	7	18
8:25 AM	0	0	0	0	4	0	2	6	0	4	0	4	13	6	0	19	29
8:30 AM	0	0	0	0	3	0	0	3	0	7	2	9	10	4	0	14	26
8:35 AM	0	0	0	0	3	0	1	4	0	3	1	4	5	7	0	12	20
8:40 AM	0	0	0	0	1	0	1	2	0	1	5	6	4	6	0	10	18
8:45 AM	0	0	0	0	3	0	1	4	0	3	3	6	2	3	0	5	15
8:50 AM	0	0	0	0	2	0	1	3	0	3	2	5	1	5	0	6	14
8:55 AM	0	0	0	0	2	0	1	3	0	4	0	4	3	0	0	3	10
Total Survey	0	0	0	0	48	1	32	81	0	74	42	116	71	58	0	129	326

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	6	0	5	11	0	8	7	15	4	4	0	8	34
7:15 AM	0	0	0	0	4	0	4	8	0	6	4	10	4	1	0	5	23
7:30 AM	0	0	0	0	5	0	4	9	0	7	5	12	5	5	0	10	31
7:45 AM	0	0	0	0	2	0	4	6	0	13	4	17	5	7	0	12	35
8:00 AM	0	0	0	0	7	1	6	14	0	10	4	14	10	4	0	14	42
8:15 AM	0	0	0	0	10	0	4	14	0	9	5	14	18	12	0	30	58
8:30 AM	0	0	0	0	7	0	2	9	0	11	8	19	19	17	0	36	64
8:45 AM	0	0	0	0	7	0	3	10	0	10	5	15	6	8	0	14	39
Total Survey	0	0	0	0	48	1	32	81	0	74	42	116	71	58	0	129	326

Heavy Vehicle Peak Hour Summary

7:30 AM to 8:30 AM

By Approach	Northbound I-5 SB Ramps			Southbound I-5 SB Ramps			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	57	57	43	0	43	57	46	103	66	63	129	166
PHF	0.00			0.77			0.84			0.55			0.72

By Movement	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	24	1	18	43	0	39	18	57	38	28	0	66	166
PHF	0.00	0.00	0.00	0.00	0.60	0.25	0.75	0.77	0.00	0.70	0.90	0.84	0.53	0.58	0.00	0.55	0.72

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	17	0	17	34	0	34	20	54	18	17	0	35	123
7:15 AM	0	0	0	0	18	1	18	37	0	36	17	53	24	17	0	41	131
7:30 AM	0	0	0	0	24	1	18	43	0	39	18	57	38	28	0	66	166
7:45 AM	0	0	0	0	26	1	16	43	0	43	21	64	52	40	0	92	199
8:00 AM	0	0	0	0	31	1	15	47	0	40	22	62	53	41	0	94	203

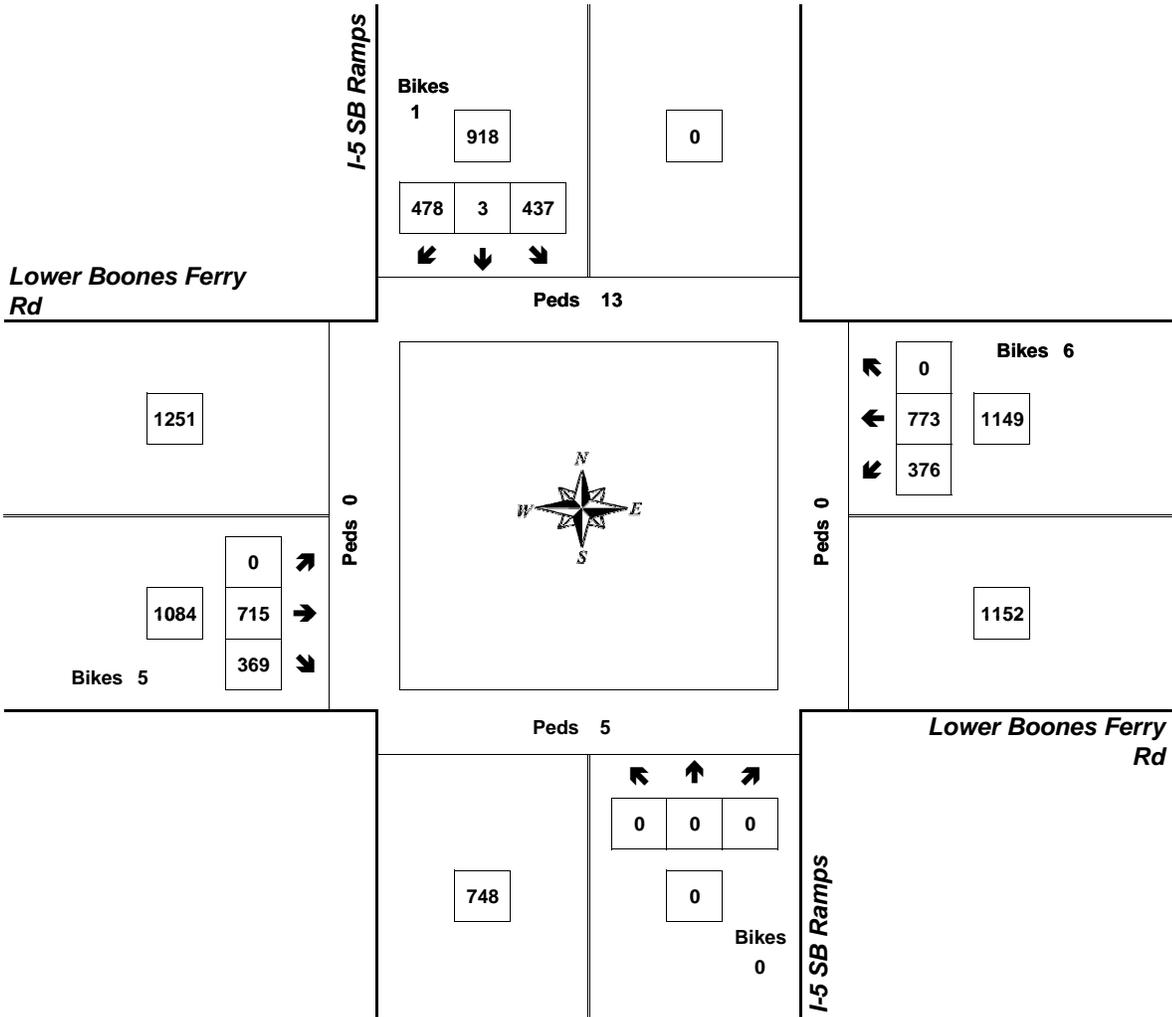
Peak Hour Summary



Clay Carney
(503) 833-2740

I-5 SB Ramps & Lower Boones Ferry Rd

7:30 AM to 8:30 AM
Thursday, July 23, 2015



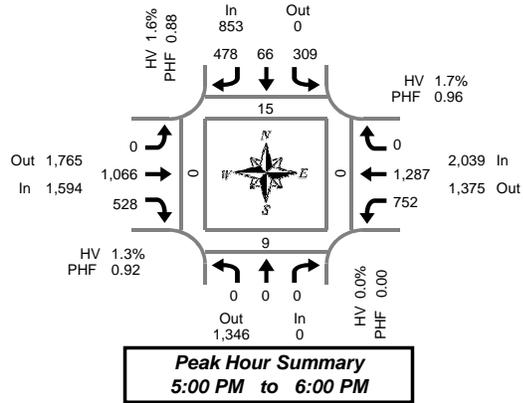
Approach	PHF	HV%	Volume
EB	0.92	5.3%	1,084
WB	0.87	5.7%	1,149
NB	0.00	0.0%	0
SB	0.83	4.7%	918
Intersection	0.90	5.3%	3,151

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



I-5 SB Ramps & Lower Boones Ferry Rd

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	18	6	25	0	0	91	46	0	58	84	0	0	328	1	0	0	0
4:05 PM	0	0	0	0	24	3	39	0	0	105	49	1	55	92	0	0	367	2	0	0	0
4:10 PM	0	0	0	0	31	3	32	0	0	99	52	1	61	116	0	0	394	1	0	0	0
4:15 PM	0	0	0	0	11	4	33	0	0	96	48	2	60	81	0	0	333	0	0	0	0
4:20 PM	0	0	0	0	21	2	32	0	0	94	41	0	65	85	0	0	340	0	0	0	0
4:25 PM	0	0	0	0	28	6	35	0	0	106	51	0	55	102	0	0	383	2	0	0	0
4:30 PM	0	0	0	0	29	4	36	0	0	79	39	1	71	91	0	0	349	1	0	0	0
4:35 PM	0	0	0	0	17	10	26	0	0	112	31	0	60	98	0	0	354	1	0	0	0
4:40 PM	0	0	0	0	16	21	29	0	0	106	26	2	44	111	0	0	353	1	3	0	0
4:45 PM	0	0	0	0	13	11	36	0	0	91	31	0	56	123	0	1	361	2	1	0	0
4:50 PM	0	0	0	0	20	9	36	0	0	73	43	1	61	110	0	2	352	0	1	0	0
4:55 PM	0	0	0	0	37	2	38	0	0	85	42	1	71	91	0	0	366	1	0	0	0
5:00 PM	0	0	0	0	23	0	45	0	0	69	48	0	69	117	0	0	371	4	0	0	0
5:05 PM	0	0	0	0	28	12	32	0	0	101	41	1	62	119	0	0	395	0	0	0	0
5:10 PM	0	0	0	0	15	3	37	0	0	111	40	1	66	94	0	0	366	1	1	0	0
5:15 PM	0	0	0	0	30	5	30	0	0	95	47	0	62	96	0	0	365	1	0	0	0
5:20 PM	0	0	0	0	26	6	34	0	0	87	39	0	62	103	0	0	357	1	1	0	0
5:25 PM	0	0	0	0	30	8	38	0	0	84	42	0	67	110	0	1	379	0	0	0	0
5:30 PM	0	0	0	0	28	7	52	0	0	82	41	0	73	114	0	1	397	0	3	0	0
5:35 PM	0	0	0	0	29	1	50	0	0	88	37	0	75	87	0	0	367	0	0	0	0
5:40 PM	0	0	0	0	21	10	39	0	0	95	48	2	55	105	0	3	373	5	1	0	0
5:45 PM	0	0	0	0	31	4	40	0	0	89	44	0	62	109	0	0	379	2	3	0	0
5:50 PM	0	0	0	0	25	7	33	0	0	76	50	0	51	110	0	1	352	0	0	0	0
5:55 PM	0	0	0	0	23	3	48	0	0	89	51	0	48	123	0	0	385	1	0	0	0
Total Survey	0	0	0	0	574	147	875	0	0	2,203	1,027	13	1,469	2,471	0	9	8,766	27	14	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	73	12	96	0	0	295	147	2	174	292	0	0	1,089	4	0	0	0
4:15 PM	0	0	0	0	60	12	100	0	0	296	140	2	180	268	0	0	1,056	2	0	0	0
4:30 PM	0	0	0	0	62	35	91	0	0	297	96	3	175	300	0	0	1,056	3	3	0	0
4:45 PM	0	0	0	0	70	22	110	0	0	249	116	2	188	324	0	3	1,079	3	2	0	0
5:00 PM	0	0	0	0	66	15	114	0	0	281	129	2	197	330	0	0	1,132	5	1	0	0
5:15 PM	0	0	0	0	86	19	102	0	0	266	128	0	191	309	0	1	1,101	2	1	0	0
5:30 PM	0	0	0	0	78	18	141	0	0	265	126	2	203	306	0	4	1,137	5	4	0	0
5:45 PM	0	0	0	0	79	14	121	0	0	254	145	0	161	342	0	1	1,116	3	3	0	0
Total Survey	0	0	0	0	574	147	875	0	0	2,203	1,027	13	1,469	2,471	0	9	8,766	27	14	0	0

Peak Hour Summary

5:00 PM to 6:00 PM

By Approach	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	0	1,346	1,346	0	853	0	853	0	1,594	1,765	3,359	4	2,039	1,375	3,414	6	4,486	15	9	0	0
%HV	0.0%				1.6%				1.3%				1.7%				1.5%				
PHF	0.00				0.88				0.92				0.96				0.98				

By Movement	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	309	66	478	853	0	1,066	528	1,594	752	1,287	0	2,039	4,486
%HV	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	1.9%	1.6%	0.0%	0.9%	1.9%	1.3%	2.0%	1.5%	0.0%	1.7%	1.5%
PHF	0.00	0.00	0.00	0.00	0.89	0.79	0.85	0.88	0.00	0.87	0.91	0.92	0.87	0.94	0.00	0.96	0.98

Rolling Hour Summary

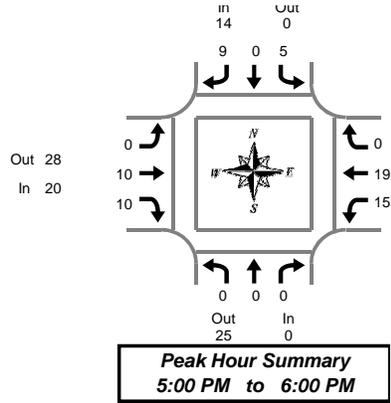
4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	265	81	397	0	0	1,137	499	9	717	1,184	0	3	4,280	12	5	0	0
4:15 PM	0	0	0	0	258	84	415	0	0	1,123	481	9	740	1,222	0	3	4,323	13	6	0	0
4:30 PM	0	0	0	0	284	91	417	0	0	1,093	469	7	751	1,263	0	4	4,368	13	7	0	0
4:45 PM	0	0	0	0	300	74	467	0	0	1,061	499	6	779	1,269	0	8	4,449	15	8	0	0
5:00 PM	0	0	0	0	309	66	478	0	0	1,066	528	4	752	1,287	0	6	4,486	15	9	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



I-5 SB Ramps & Lower Boones Ferry Rd

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	2	1	3	2	3	0	5	8
4:05 PM	0	0	0	0	1	0	1	2	0	5	1	6	2	0	0	2	10
4:10 PM	0	0	0	0	1	0	1	2	0	4	2	6	2	3	0	5	13
4:15 PM	0	0	0	0	1	0	2	3	0	2	0	2	2	2	0	4	9
4:20 PM	0	0	0	0	2	0	1	3	0	1	0	1	1	3	0	4	8
4:25 PM	0	0	0	0	2	0	1	3	0	2	2	4	4	2	0	6	13
4:30 PM	0	0	0	0	4	0	0	4	0	3	0	3	1	0	0	1	8
4:35 PM	0	0	0	0	0	1	1	2	0	1	1	2	3	1	0	4	8
4:40 PM	0	0	0	0	0	1	1	2	0	1	0	1	0	1	0	1	4
4:45 PM	0	0	0	0	0	1	0	1	0	0	1	1	1	2	0	3	5
4:50 PM	0	0	0	0	1	0	1	2	0	0	0	0	1	4	0	5	7
4:55 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	2	0	3	4
5:00 PM	0	0	0	0	0	0	1	1	0	1	1	2	2	1	0	3	6
5:05 PM	0	0	0	0	0	0	1	1	0	2	0	2	2	2	0	4	7
5:10 PM	0	0	0	0	0	0	1	1	0	1	2	3	3	2	0	5	9
5:15 PM	0	0	0	0	1	0	1	2	0	0	0	0	1	0	0	1	3
5:20 PM	0	0	0	0	0	0	1	1	0	0	0	0	2	2	0	4	5
5:25 PM	0	0	0	0	1	0	0	1	0	1	1	2	1	2	0	3	6
5:30 PM	0	0	0	0	1	0	0	1	0	0	3	3	1	2	0	3	7
5:35 PM	0	0	0	0	0	0	2	2	0	1	0	1	0	2	0	2	5
5:40 PM	0	0	0	0	1	0	0	1	0	1	0	1	0	1	0	1	3
5:45 PM	0	0	0	0	1	0	0	1	0	1	0	1	1	1	0	2	4
5:50 PM	0	0	0	0	0	0	1	1	0	1	3	4	1	3	0	4	9
5:55 PM	0	0	0	0	0	0	1	1	0	1	0	1	1	1	0	2	4
Total Survey	0	0	0	0	17	3	19	39	0	31	18	49	35	42	0	77	165

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	2	0	2	4	0	11	4	15	6	6	0	12	31
4:15 PM	0	0	0	0	5	0	4	9	0	5	2	7	7	7	0	14	30
4:30 PM	0	0	0	0	4	2	2	8	0	5	1	6	4	2	0	6	20
4:45 PM	0	0	0	0	1	1	2	4	0	0	1	1	3	8	0	11	16
5:00 PM	0	0	0	0	0	0	3	3	0	4	3	7	7	5	0	12	22
5:15 PM	0	0	0	0	2	0	2	4	0	1	1	2	4	4	0	8	14
5:30 PM	0	0	0	0	2	0	2	4	0	2	3	5	1	5	0	6	15
5:45 PM	0	0	0	0	1	0	2	3	0	3	3	6	3	5	0	8	17
Total Survey	0	0	0	0	17	3	19	39	0	31	18	49	35	42	0	77	165

Heavy Vehicle Peak Hour Summary

5:00 PM to 6:00 PM

By Approach	Northbound I-5 SB Ramps			Southbound I-5 SB Ramps			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	25	25	14	0	14	20	28	48	34	15	49	68
PHF	0.00			0.88			0.71			0.71			0.77

By Movement	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	5	0	9	14	0	10	10	20	15	19	0	34	68
PHF	0.00	0.00	0.00	0.00	0.63	0.00	0.75	0.88	0.00	0.63	0.63	0.71	0.54	0.79	0.00	0.71	0.77

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 SB Ramps				Southbound I-5 SB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	12	3	10	25	0	21	8	29	20	23	0	43	97
4:15 PM	0	0	0	0	10	3	11	24	0	14	7	21	21	22	0	43	88
4:30 PM	0	0	0	0	7	3	9	19	0	10	6	16	18	19	0	37	72
4:45 PM	0	0	0	0	5	1	9	15	0	7	8	15	15	22	0	37	67
5:00 PM	0	0	0	0	5	0	9	14	0	10	10	20	15	19	0	34	68

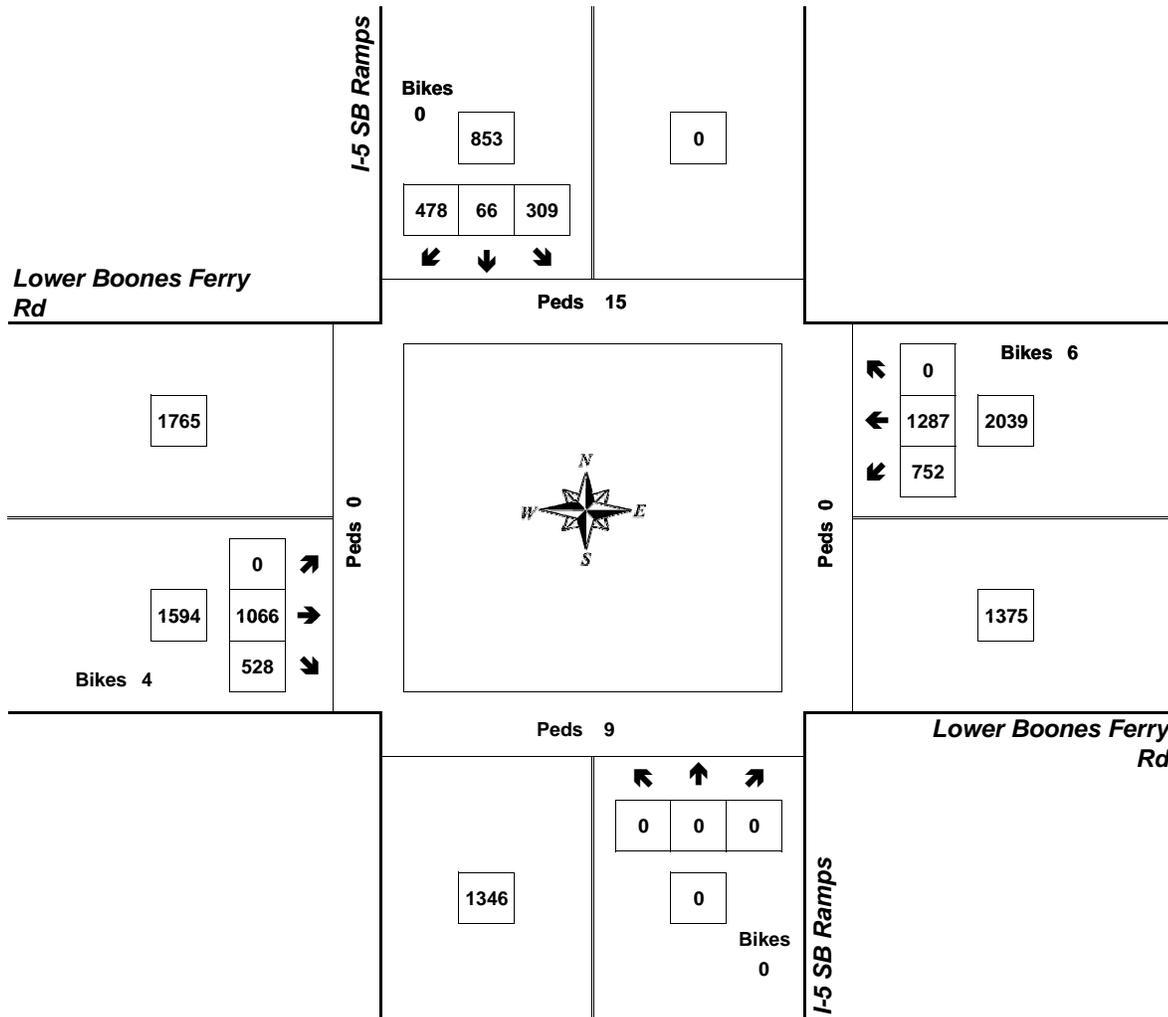
Peak Hour Summary



Clay Carney
(503) 833-2740

I-5 SB Ramps & Lower Boones Ferry Rd

5:00 PM to 6:00 PM
Wednesday, July 22, 2015



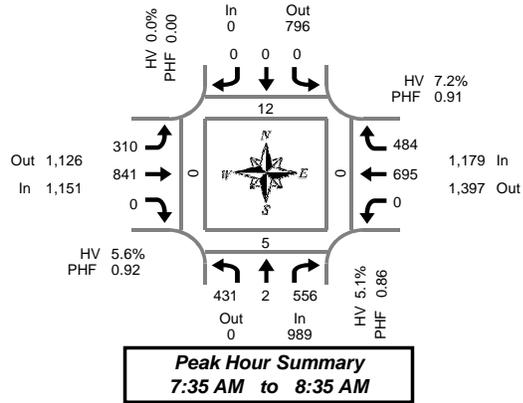
Approach	PHF	HV%	Volume
EB	0.92	1.3%	1,594
WB	0.96	1.7%	2,039
NB	0.00	0.0%	0
SB	0.88	1.6%	853
Intersection	0.98	1.5%	4,486

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



I-5 NB Ramps & Lower Boones Ferry Rd

Thursday, July 23, 2015

7:00 AM to 9:00 AM

Peak Hour Summary
7:35 AM to 8:35 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	44	0	29	0	0	0	0	0	17	42	0	0	37	43	0	212	0	1	0	0	
7:05 AM	34	0	37	0	0	0	0	0	30	43	0	1	44	33	0	221	3	1	0	0	
7:10 AM	32	0	42	0	0	0	0	0	27	51	0	0	37	48	0	237	0	1	0	0	
7:15 AM	43	0	45	1	0	0	0	0	32	49	0	0	48	29	0	246	2	0	0	0	
7:20 AM	37	0	45	0	0	0	0	0	29	54	0	3	45	47	1	257	3	1	0	0	
7:25 AM	23	0	40	0	0	0	0	0	17	67	0	1	61	37	0	245	0	0	0	0	
7:30 AM	40	0	43	0	0	0	0	0	35	49	0	0	34	33	1	234	1	1	0	0	
7:35 AM	42	0	40	0	0	0	0	0	34	70	0	3	58	49	0	293	1	1	0	0	
7:40 AM	45	0	45	0	0	0	0	0	22	80	0	0	76	43	1	311	3	0	0	0	
7:45 AM	43	0	50	0	0	0	0	0	21	84	0	2	59	32	0	289	2	0	0	0	
7:50 AM	44	0	55	0	0	0	0	0	21	82	0	0	55	49	0	306	0	0	0	0	
7:55 AM	32	1	62	0	0	0	0	0	31	74	0	0	43	28	0	271	1	0	0	0	
8:00 AM	35	0	40	0	0	0	0	0	32	72	0	0	49	29	0	257	0	1	0	0	
8:05 AM	21	0	44	0	0	0	0	0	27	71	0	0	47	33	1	243	0	2	0	0	
8:10 AM	32	0	40	0	0	0	0	0	24	59	0	0	64	37	1	256	1	0	0	0	
8:15 AM	34	0	40	0	0	0	0	0	27	69	0	1	68	40	0	278	4	0	0	0	
8:20 AM	43	0	63	0	0	0	0	0	25	69	0	0	69	39	0	308	0	1	0	0	
8:25 AM	31	0	36	0	0	0	0	0	21	66	0	0	51	58	0	263	0	0	0	0	
8:30 AM	29	1	41	0	0	0	0	0	25	45	0	0	56	47	1	244	0	0	0	0	
8:35 AM	30	0	43	0	0	0	0	0	26	83	0	0	74	35	0	291	0	0	0	0	
8:40 AM	32	1	43	0	0	0	0	0	20	66	0	1	72	32	0	266	0	1	0	0	
8:45 AM	37	1	48	0	0	0	0	0	18	59	0	0	76	53	0	292	3	0	0	0	
8:50 AM	58	0	53	0	0	0	0	0	21	64	0	0	73	39	0	308	2	0	0	0	
8:55 AM	39	0	53	0	0	0	0	0	23	79	0	0	61	34	0	289	0	0	0	0	
Total Survey	880	4	1,077	1	0	0	0	0	605	1,547	0	12	1,357	947	6	6,417	26	11	0	0	

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	110	0	108	0	0	0	0	0	74	136	0	1	118	124	0	670	3	3	0	0	
7:15 AM	103	0	130	1	0	0	0	0	78	170	0	4	154	113	1	748	5	1	0	0	
7:30 AM	127	0	128	0	0	0	0	0	91	199	0	3	168	125	2	838	5	2	0	0	
7:45 AM	119	1	167	0	0	0	0	0	73	240	0	2	157	109	0	866	3	0	0	0	
8:00 AM	88	0	124	0	0	0	0	0	83	202	0	0	160	99	2	756	1	3	0	0	
8:15 AM	108	0	139	0	0	0	0	0	73	204	0	1	188	137	0	849	4	1	0	0	
8:30 AM	91	2	127	0	0	0	0	0	71	194	0	1	202	114	1	801	0	1	0	0	
8:45 AM	134	1	154	0	0	0	0	0	62	202	0	0	210	126	0	889	5	0	0	0	
Total Survey	880	4	1,077	1	0	0	0	0	605	1,547	0	12	1,357	947	6	6,417	26	11	0	0	

Peak Hour Summary

7:35 AM to 8:35 AM

By Approach	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	989	0	989	0	0	796	796	0	1,151	1,126	2,277	6	1,179	1,397	2,576	4	3,319	12	5	0	0
%HV	5.1%				0.0%				5.6%				7.2%				6.0%				
PHF	0.86				0.00				0.92				0.91				0.92				

By Movement	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	431	2	556	989	0	0	0	0	310	841	0	1,151	0	695	484	1,179	3,319
%HV	3.7%	50.0%	5.9%	5.1%	0.0%	0.0%	0.0%	0.0%	6.5%	5.2%	0.0%	5.6%	0.0%	8.5%	5.4%	7.2%	6.0%
PHF	0.82	0.50	0.83	0.86	0.00	0.00	0.00	0.00	0.86	0.85	0.00	0.92	0.00	0.86	0.84	0.91	0.92

Rolling Hour Summary

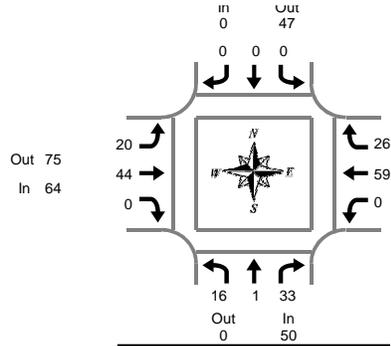
7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	459	1	533	1	0	0	0	0	316	745	0	10	597	471	3	3,122	16	6	0	0	
7:15 AM	437	1	549	1	0	0	0	0	325	811	0	9	639	446	5	3,208	14	6	0	0	
7:30 AM	442	1	558	0	0	0	0	0	320	845	0	6	673	470	4	3,309	13	6	0	0	
7:45 AM	406	3	557	0	0	0	0	0	300	840	0	4	707	459	3	3,272	8	5	0	0	
8:00 AM	421	3	544	0	0	0	0	0	289	802	0	2	760	476	3	3,295	10	5	0	0	

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
7:35 AM to 8:35 AM

I-5 NB Ramps & Lower Boones Ferry Rd

Thursday, July 23, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	1	2	0	0	0	0	2	1	0	3	0	2	0	2	7
7:05 AM	2	0	3	5	0	0	0	0	1	4	0	5	0	2	1	3	13
7:10 AM	0	0	2	2	0	0	0	0	2	5	0	7	0	1	1	2	11
7:15 AM	0	0	1	1	0	0	0	0	3	1	0	4	0	3	0	3	8
7:20 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
7:25 AM	1	0	3	4	0	0	0	0	1	3	0	4	0	3	3	6	14
7:30 AM	0	0	2	2	0	0	0	0	1	4	0	5	0	2	0	2	9
7:35 AM	2	0	2	4	0	0	0	0	0	3	0	3	0	4	0	4	11
7:40 AM	2	0	5	7	0	0	0	0	1	4	0	5	0	3	1	4	16
7:45 AM	0	0	3	3	0	0	0	0	1	2	0	3	0	3	0	3	9
7:50 AM	3	0	5	8	0	0	0	0	3	5	0	8	0	2	4	6	22
7:55 AM	0	0	2	2	0	0	0	0	3	2	0	5	0	5	1	6	13
8:00 AM	1	0	3	4	0	0	0	0	3	4	0	7	0	4	0	4	15
8:05 AM	0	0	1	1	0	0	0	0	0	8	0	8	0	5	0	5	14
8:10 AM	2	0	3	5	0	0	0	0	0	2	0	2	0	2	3	5	12
8:15 AM	2	0	2	4	0	0	0	0	0	4	0	4	0	3	0	3	11
8:20 AM	2	0	4	6	0	0	0	0	3	3	0	6	0	3	0	3	15
8:25 AM	2	0	2	4	0	0	0	0	2	5	0	7	0	14	8	22	33
8:30 AM	0	1	1	2	0	0	0	0	4	2	0	6	0	11	9	20	28
8:35 AM	2	0	4	6	0	0	0	0	0	6	0	6	0	9	4	13	25
8:40 AM	3	0	1	4	0	0	0	0	1	2	0	3	0	6	3	9	16
8:45 AM	1	0	5	6	0	0	0	0	0	5	0	5	0	4	5	9	20
8:50 AM	4	0	6	10	0	0	0	0	2	2	0	4	0	1	2	3	17
8:55 AM	0	0	2	2	0	0	0	0	2	3	0	5	0	2	1	3	10
Total Survey	30	1	63	94	0	0	0	0	35	83	0	118	0	95	46	141	353

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	3	0	6	9	0	0	0	0	5	10	0	15	0	5	2	7	31
7:15 AM	1	0	4	5	0	0	0	0	4	7	0	11	0	7	3	10	26
7:30 AM	4	0	9	13	0	0	0	0	2	11	0	13	0	9	1	10	36
7:45 AM	3	0	10	13	0	0	0	0	7	9	0	16	0	10	5	15	44
8:00 AM	3	0	7	10	0	0	0	0	3	14	0	17	0	11	3	14	41
8:15 AM	6	0	8	14	0	0	0	0	5	12	0	17	0	20	8	28	59
8:30 AM	5	1	6	12	0	0	0	0	5	10	0	15	0	26	16	42	69
8:45 AM	5	0	13	18	0	0	0	0	4	10	0	14	0	7	8	15	47
Total Survey	30	1	63	94	0	0	0	0	35	83	0	118	0	95	46	141	353

Heavy Vehicle Peak Hour Summary

7:35 AM to 8:35 AM

By Approach	Northbound I-5 NB Ramps			Southbound I-5 NB Ramps			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	50	0	50	0	47	47	64	75	139	85	77	162	199
PHF	0.69			0.00			0.80			0.47			0.65

By Movement	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	16	1	33	50	0	0	0	0	20	44	0	64	0	59	26	85	199
PHF	0.67	0.25	0.63	0.69	0.00	0.00	0.00	0.00	0.56	0.79	0.00	0.80	0.00	0.53	0.38	0.47	0.65

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	11	0	29	40	0	0	0	0	18	37	0	55	0	31	11	42	137
7:15 AM	11	0	30	41	0	0	0	0	16	41	0	57	0	37	12	49	147
7:30 AM	16	0	34	50	0	0	0	0	17	46	0	63	0	50	17	67	180
7:45 AM	17	1	31	49	0	0	0	0	20	45	0	65	0	67	32	99	213
8:00 AM	19	1	34	54	0	0	0	0	17	46	0	63	0	64	35	99	216

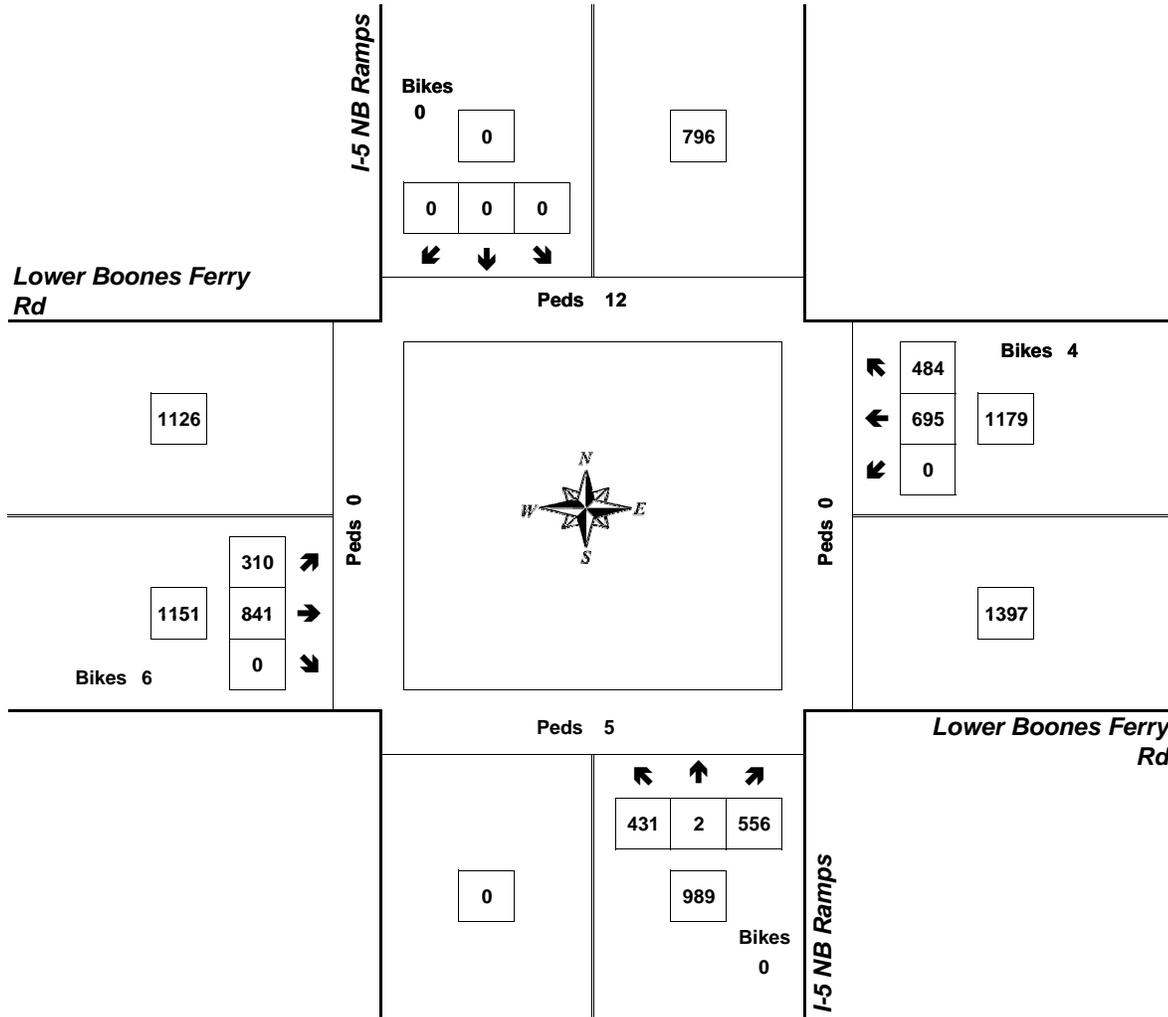
Peak Hour Summary



Clay Carney
(503) 833-2740

I-5 NB Ramps & Lower Boones Ferry Rd

7:35 AM to 8:35 AM
Thursday, July 23, 2015



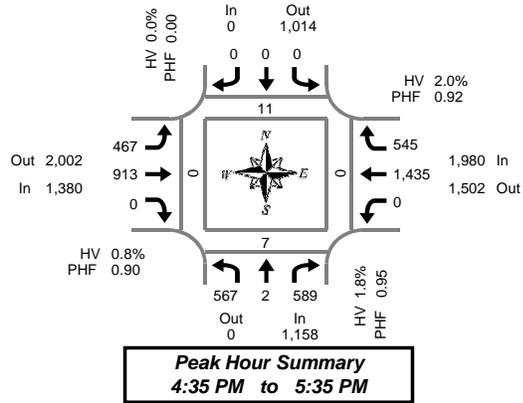
Approach	PHF	HV%	Volume
EB	0.92	5.6%	1,151
WB	0.91	7.2%	1,179
NB	0.86	5.1%	989
SB	0.00	0.0%	0
Intersection	0.92	6.0%	3,319

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



I-5 NB Ramps & Lower Boones Ferry Rd

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	33	0	46	0	0	0	0	0	39	82	0	0	0	82	42	0	324	0	0	0	0
4:05 PM	47	0	45	0	0	0	0	0	54	85	0	0	0	95	48	0	374	3	0	0	0
4:10 PM	45	0	48	0	0	0	0	0	32	94	0	0	0	136	41	0	396	1	0	0	0
4:15 PM	34	0	39	0	0	0	0	0	35	73	0	2	0	111	51	0	343	0	0	0	0
4:20 PM	41	0	65	0	0	0	0	0	40	71	0	0	0	109	40	0	366	0	0	0	0
4:25 PM	36	1	57	0	0	0	0	0	43	86	0	0	0	121	48	0	392	0	0	0	0
4:30 PM	33	1	37	0	0	0	0	0	39	84	0	1	0	100	47	0	341	2	1	0	0
4:35 PM	42	0	33	0	0	0	0	0	56	83	0	0	0	114	49	0	377	1	0	0	0
4:40 PM	41	1	47	0	0	0	0	0	44	66	0	2	0	137	40	0	376	0	2	0	0
4:45 PM	53	0	51	0	0	0	0	0	40	63	0	0	0	128	45	1	380	0	3	0	0
4:50 PM	52	0	45	0	0	0	0	0	28	60	0	0	0	119	35	1	339	1	0	0	0
4:55 PM	50	1	52	0	0	0	0	0	33	90	0	1	0	105	41	0	372	0	0	0	0
5:00 PM	47	0	48	0	0	0	0	0	32	62	0	0	0	110	46	0	345	5	0	0	0
5:05 PM	53	0	51	0	0	0	0	0	60	89	0	0	0	119	60	0	432	1	0	0	0
5:10 PM	40	0	59	0	0	0	0	0	36	77	0	1	0	132	49	0	393	1	1	0	0
5:15 PM	35	0	54	0	0	0	0	0	35	86	0	0	0	129	48	0	387	0	1	0	0
5:20 PM	46	0	45	0	0	0	0	0	40	67	0	0	0	119	53	0	370	2	0	0	0
5:25 PM	64	0	56	0	0	0	0	0	32	85	0	0	0	113	44	0	394	0	0	0	0
5:30 PM	44	0	48	0	0	0	0	0	31	85	0	0	0	110	35	0	353	0	0	0	0
5:35 PM	39	0	39	0	0	0	0	0	37	89	0	0	0	107	44	0	355	1	0	0	0
5:40 PM	47	0	49	0	0	0	0	0	29	71	0	1	0	124	34	0	354	6	1	0	0
5:45 PM	51	0	34	0	0	0	0	0	36	88	0	0	0	117	44	0	370	3	3	0	0
5:50 PM	49	0	50	0	0	0	0	0	28	65	0	0	0	104	32	0	328	0	0	0	0
5:55 PM	59	0	41	0	0	0	0	0	36	76	0	0	0	99	38	0	349	1	0	0	0
Total Survey	1,081	4	1,139	0	0	0	0	0	915	1,877	0	8	0	2,740	1,054	2	8,810	28	12	0	0

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	125	0	139	0	0	0	0	0	125	261	0	0	0	313	131	0	1,094	4	0	0	0
4:15 PM	111	1	161	0	0	0	0	0	118	230	0	2	0	341	139	0	1,101	0	0	0	0
4:30 PM	116	2	117	0	0	0	0	0	139	233	0	3	0	351	136	0	1,094	3	3	0	0
4:45 PM	155	1	148	0	0	0	0	0	101	213	0	1	0	352	121	2	1,091	1	3	0	0
5:00 PM	140	0	158	0	0	0	0	0	128	228	0	1	0	361	155	0	1,170	7	1	0	0
5:15 PM	145	0	155	0	0	0	0	0	107	238	0	0	0	361	145	0	1,151	2	1	0	0
5:30 PM	130	0	136	0	0	0	0	0	97	245	0	1	0	341	113	0	1,062	7	1	0	0
5:45 PM	159	0	125	0	0	0	0	0	100	229	0	0	0	320	114	0	1,047	4	3	0	0
Total Survey	1,081	4	1,139	0	0	0	0	0	915	1,877	0	8	0	2,740	1,054	2	8,810	28	12	0	0

Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	1,158	0	1,158	0	0	1,014	1,014	0	1,380	2,002	3,382	4	1,980	1,502	3,482	2	4,518	11	7	0	0
%HV	1.8%				0.0%				0.8%				2.0%				1.6%				
PHF	0.95				0.00				0.90				0.92				0.93				

By Movement	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	567	2	589	1,158	0	0	0	0	467	913	0	1,380	0	1,435	545	1,980	4,518				
%HV	1.6%	0.0%	2.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.9%	0.8%	0.0%	0.8%	0.0%	2.1%	1.7%	2.0%	1.6%				
PHF	0.91	0.50	0.90	0.95	0.00	0.00	0.00	0.00	0.83	0.91	0.00	0.90	0.00	0.93	0.87	0.92	0.93				

Rolling Hour Summary

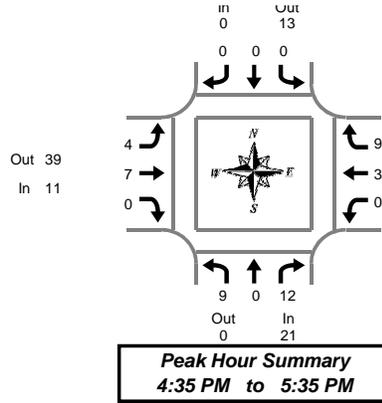
4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	507	4	565	0	0	0	0	0	483	937	0	6	0	1,357	527	2	4,380	8	6	0	0
4:15 PM	522	4	584	0	0	0	0	0	486	904	0	7	0	1,405	551	2	4,456	11	7	0	0
4:30 PM	556	3	578	0	0	0	0	0	475	912	0	5	0	1,425	557	2	4,506	13	8	0	0
4:45 PM	570	1	597	0	0	0	0	0	433	924	0	3	0	1,415	534	2	4,474	17	6	0	0
5:00 PM	574	0	574	0	0	0	0	0	432	940	0	2	0	1,383	527	0	4,430	20	6	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



I-5 NB Ramps & Lower Boones Ferry Rd

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

Peak Hour Summary
4:35 PM to 5:35 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total		
4:00 PM	1	0	1	2	0	0	0	0	0	2	0	2	0	0	3	0	3	7
4:05 PM	0	0	3	3	0	0	0	0	0	2	5	0	7	0	2	0	2	12
4:10 PM	1	0	3	4	0	0	0	0	0	2	3	0	5	0	2	3	5	14
4:15 PM	1	0	4	5	0	0	0	0	0	0	3	0	3	0	3	2	5	13
4:20 PM	1	0	5	6	0	0	0	0	0	0	5	0	5	0	3	3	6	17
4:25 PM	1	0	0	1	0	0	0	0	0	0	4	0	4	0	5	1	6	11
4:30 PM	0	0	0	0	0	0	0	0	0	0	7	0	7	0	2	1	3	10
4:35 PM	1	0	2	3	0	0	0	0	0	1	0	0	1	0	2	1	3	7
4:40 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	1	4	5
4:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3	1	4	5
4:50 PM	1	0	1	2	0	0	0	0	0	0	1	0	1	0	4	0	4	7
4:55 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	4	1	5	7
5:00 PM	0	0	1	1	0	0	0	0	0	0	1	0	1	0	2	2	4	6
5:05 PM	1	0	2	3	0	0	0	0	0	0	2	0	2	0	2	0	2	7
5:10 PM	2	0	0	2	0	0	0	0	0	1	0	0	1	0	2	1	3	6
5:15 PM	0	0	2	2	0	0	0	0	0	0	1	0	1	0	1	1	2	5
5:20 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	4	1	5	7
5:25 PM	1	0	0	1	0	0	0	0	0	1	1	0	2	0	2	0	2	5
5:30 PM	2	0	0	2	0	0	0	0	0	0	1	0	1	0	1	0	1	4
5:35 PM	1	0	1	2	0	0	0	0	0	0	1	0	1	0	0	1	1	4
5:40 PM	2	0	2	4	0	0	0	0	0	1	2	0	3	0	0	1	1	8
5:45 PM	0	0	1	1	0	0	0	0	0	1	1	0	2	0	1	0	1	4
5:50 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	3	4
5:55 PM	1	0	0	1	0	0	0	0	0	2	0	0	2	0	2	0	2	5
Total Survey	19	0	32	51	0	0	0	0	0	12	40	0	52	0	55	22	77	180

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total		
4:00 PM	2	0	7	9	0	0	0	0	0	4	10	0	14	0	7	3	10	33
4:15 PM	3	0	9	12	0	0	0	0	0	0	12	0	12	0	11	6	17	41
4:30 PM	1	0	2	3	0	0	0	0	0	2	7	0	9	0	7	3	10	22
4:45 PM	2	0	3	5	0	0	0	0	0	0	1	0	1	0	11	2	13	19
5:00 PM	3	0	3	6	0	0	0	0	0	1	3	0	4	0	6	3	9	19
5:15 PM	1	0	4	5	0	0	0	0	0	1	2	0	3	0	7	2	9	17
5:30 PM	5	0	3	8	0	0	0	0	0	1	4	0	5	0	1	2	3	16
5:45 PM	2	0	1	3	0	0	0	0	0	3	1	0	4	0	5	1	6	13
Total Survey	19	0	32	51	0	0	0	0	0	12	40	0	52	0	55	22	77	180

Heavy Vehicle Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound I-5 NB Ramps			Southbound I-5 NB Ramps			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	21	0	21	0	13	13	11	39	50	39	19	58	71
PHF	0.75			0.00			0.69			0.75			0.89

By Movement	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	9	0	12	21	0	0	0	0	4	7	0	11	0	30	9	39	71
PHF	0.75	0.00	0.75	0.75	0.00	0.00	0.00	0.00	0.50	0.58	0.00	0.69	0.00	0.68	0.75	0.75	0.89

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound I-5 NB Ramps				Southbound I-5 NB Ramps				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total		
4:00 PM	8	0	21	29	0	0	0	0	0	6	30	0	36	0	36	14	50	115
4:15 PM	9	0	17	26	0	0	0	0	0	3	23	0	26	0	35	14	49	101
4:30 PM	7	0	12	19	0	0	0	0	0	4	13	0	17	0	31	10	41	77
4:45 PM	11	0	13	24	0	0	0	0	0	3	10	0	13	0	25	9	34	71
5:00 PM	11	0	11	22	0	0	0	0	0	6	10	0	16	0	19	8	27	65

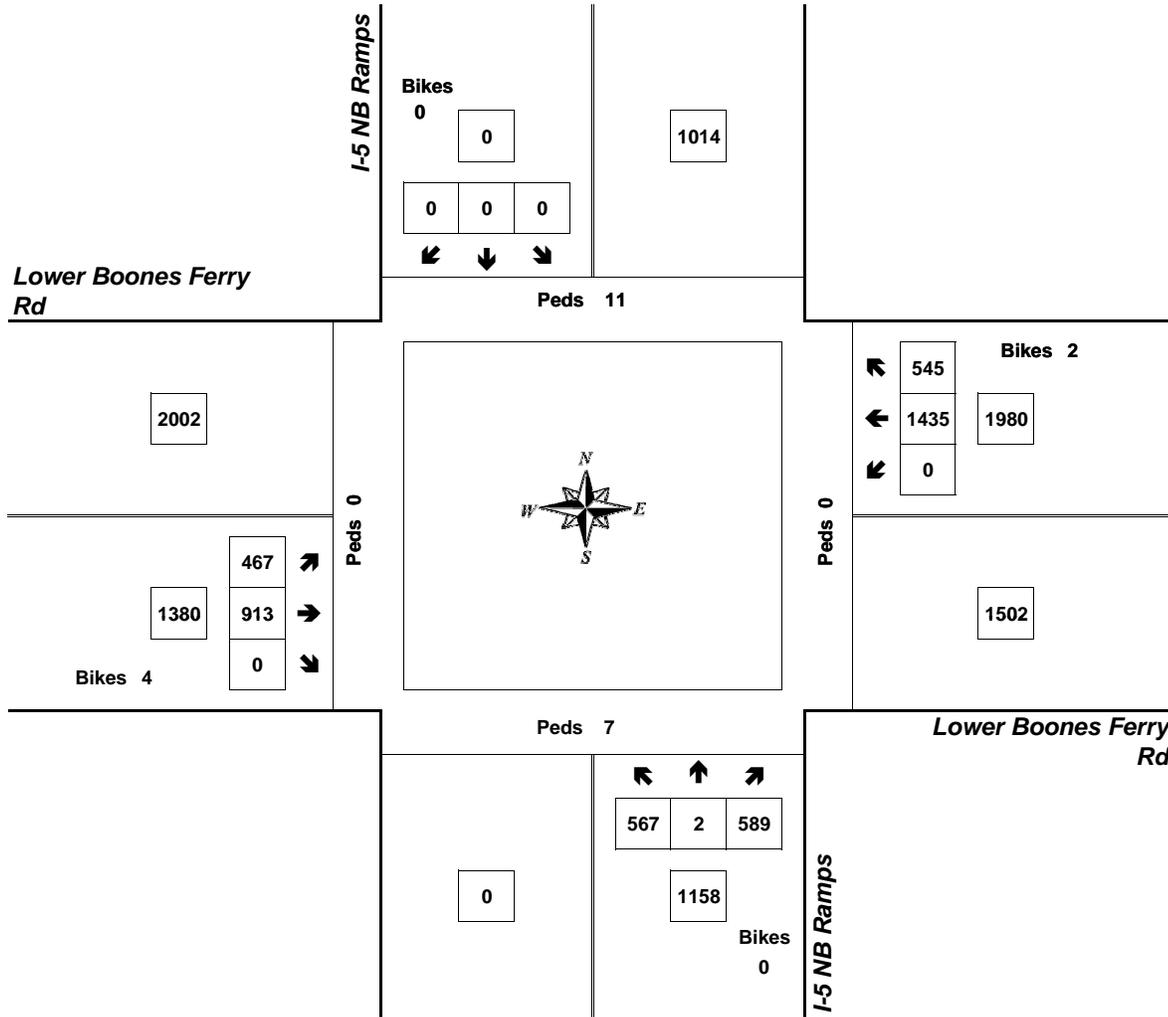
Peak Hour Summary



Clay Carney
(503) 833-2740

I-5 NB Ramps & Lower Boones Ferry Rd

4:35 PM to 5:35 PM
Wednesday, July 22, 2015



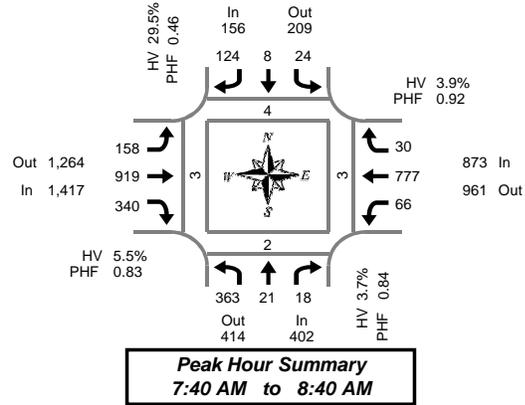
Approach	PHF	HV%	Volume
EB	0.90	0.8%	1,380
WB	0.92	2.0%	1,980
NB	0.95	1.8%	1,158
SB	0.00	0.0%	0
Intersection	0.93	1.6%	4,518

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Lower Boones Ferry Rd

Thursday, July 23, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	41	1	3	0	1	1	3	0	14	51	14	0	3	43	0	0	175	0	1	0	0
7:05 AM	28	0	1	0	0	0	3	0	9	55	16	0	5	47	0	1	164	1	0	0	2
7:10 AM	21	0	2	0	2	0	4	0	12	64	18	0	1	53	0	0	177	0	2	0	0
7:15 AM	31	2	2	1	0	0	6	0	6	71	21	1	5	48	1	0	193	0	0	0	0
7:20 AM	27	0	1	1	2	0	1	0	8	72	20	2	7	64	2	0	204	0	1	0	0
7:25 AM	29	1	2	1	1	2	2	0	13	64	37	1	4	69	1	0	225	2	0	1	0
7:30 AM	26	5	3	0	0	1	3	0	6	51	28	0	0	45	0	2	168	0	1	1	1
7:35 AM	28	2	2	0	3	1	4	0	10	80	23	2	5	77	4	0	239	0	0	0	0
7:40 AM	38	3	5	0	1	0	7	0	7	79	32	0	5	73	3	1	253	1	1	1	0
7:45 AM	35	1	2	0	1	1	8	0	17	86	30	0	7	62	2	0	252	0	0	0	0
7:50 AM	33	2	0	0	0	0	5	0	12	93	31	0	6	68	2	0	252	0	0	0	1
7:55 AM	30	3	1	0	4	0	4	0	26	91	39	0	3	67	4	1	272	0	0	0	0
8:00 AM	31	1	1	0	1	2	3	0	16	70	19	0	7	48	0	0	199	0	1	0	1
8:05 AM	24	2	0	0	2	1	3	0	11	71	20	0	4	52	4	1	194	0	0	0	1
8:10 AM	29	2	0	0	2	1	5	0	14	76	23	0	7	65	1	1	225	0	0	0	0
8:15 AM	34	2	0	0	1	1	6	0	9	65	33	0	8	76	4	0	239	0	0	0	0
8:20 AM	29	2	2	0	3	0	10	0	11	76	39	0	6	66	3	1	247	3	0	1	0
8:25 AM	34	1	2	1	3	0	26	0	14	82	22	0	6	59	2	0	251	0	0	0	0
8:30 AM	22	0	2	1	3	0	33	1	5	49	20	0	3	57	1	0	195	0	0	0	0
8:35 AM	24	2	3	1	3	2	14	0	16	81	32	0	4	84	4	0	269	0	0	1	0
8:40 AM	25	1	3	0	2	3	13	0	6	62	30	0	10	53	1	0	209	0	0	0	0
8:45 AM	28	1	2	0	3	2	14	0	10	72	22	1	7	84	2	0	247	1	0	1	0
8:50 AM	27	0	1	0	1	3	11	0	11	89	28	0	7	101	5	0	284	0	0	0	0
8:55 AM	34	1	3	0	3	4	7	0	13	72	30	0	9	63	3	0	242	2	0	1	0
Total Survey	708	35	43	6	42	25	195	1	276	1,722	627	7	129	1,524	49	8	5,375	10	7	7	6

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	90	1	6	0	3	1	10	0	35	170	48	0	9	143	0	1	516	1	3	0	2
7:15 AM	87	3	5	3	3	2	9	0	27	207	78	4	16	181	4	0	622	2	1	1	0
7:30 AM	92	10	10	0	4	2	14	0	23	210	83	2	10	195	7	3	660	1	2	2	1
7:45 AM	98	6	3	0	5	1	17	0	55	270	100	0	16	197	8	1	776	0	0	0	1
8:00 AM	84	5	1	0	5	4	11	0	41	217	62	0	18	165	5	2	618	0	1	0	2
8:15 AM	97	5	4	1	7	1	42	0	34	223	94	0	20	201	9	1	737	3	0	1	0
8:30 AM	71	3	8	2	8	5	60	1	27	192	82	0	17	194	6	0	673	0	0	1	0
8:45 AM	89	2	6	0	7	9	32	0	34	233	80	1	23	248	10	0	773	3	0	2	0
Total Survey	708	35	43	6	42	25	195	1	276	1,722	627	7	129	1,524	49	8	5,375	10	7	7	6

Peak Hour Summary

7:40 AM to 8:40 AM

By Approach	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	402	414	816	3	156	209	365	1	1,417	1,264	2,681	0	873	961	1,834	5	2,848	4	2	3	3
%HV	3.7%				29.5%				5.5%				3.9%				6.1%				
PHF	0.84				0.46				0.83				0.92				0.92				

By Movement	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	363	21	18	402	24	8	124	156	158	919	340	1,417	66	777	30	873	2,848
%HV	3.6%	0.0%	11.1%	3.7%	8.3%	0.0%	35.5%	29.5%	3.2%	6.1%	5.0%	5.5%	1.5%	4.2%	0.0%	3.9%	6.1%
PHF	0.86	0.88	0.64	0.84	0.67	0.50	0.42	0.46	0.72	0.85	0.85	0.83	0.79	0.94	0.83	0.92	0.92

Rolling Hour Summary

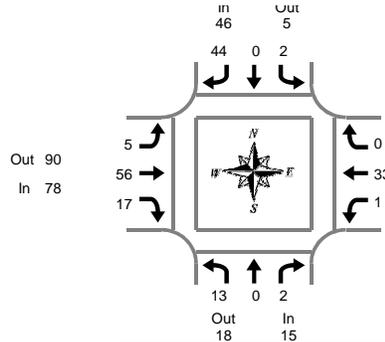
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	367	20	24	3	15	6	50	0	140	857	309	6	51	716	19	5	2,574	4	6	3	4
7:15 AM	361	24	19	3	17	9	51	0	146	904	323	6	60	738	24	6	2,676	3	4	3	4
7:30 AM	371	26	18	1	21	8	84	0	153	920	339	2	64	758	29	7	2,791	4	3	3	4
7:45 AM	350	19	16	3	25	11	130	1	157	902	338	0	71	757	28	4	2,804	3	1	2	3
8:00 AM	341	15	19	3	27	19	145	1	136	865	318	1	78	808	30	3	2,801	6	1	4	2

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Lower Boones Ferry Rd

Thursday, July 23, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	1	0	0	1	1	0	0	1	0	3	0	3	0	1	0	1	6
7:05 AM	0	0	1	1	0	0	0	0	0	5	1	6	0	2	0	2	9
7:10 AM	1	0	0	1	0	0	0	0	4	5	1	10	0	1	0	1	12
7:15 AM	0	1	0	1	0	0	1	1	0	2	2	4	1	1	0	2	8
7:20 AM	0	0	0	0	0	0	0	0	0	2	1	3	0	1	0	1	4
7:25 AM	2	0	0	2	1	1	0	2	0	3	3	6	0	2	0	2	12
7:30 AM	1	0	1	2	0	0	1	1	1	2	1	4	0	2	0	2	9
7:35 AM	0	1	0	1	0	0	0	0	0	4	0	4	0	2	0	2	7
7:40 AM	1	0	1	2	0	0	1	1	0	6	1	7	0	2	0	2	12
7:45 AM	0	0	0	0	0	0	0	0	0	4	1	5	0	3	0	3	8
7:50 AM	1	0	0	1	0	0	0	0	0	7	3	10	0	4	0	4	15
7:55 AM	1	0	0	1	1	0	1	2	0	5	1	6	0	3	0	3	12
8:00 AM	3	0	0	3	0	0	0	0	0	3	0	3	0	1	0	1	7
8:05 AM	1	0	0	1	0	0	0	0	1	5	3	9	0	4	0	4	14
8:10 AM	2	0	0	2	0	0	0	0	1	5	0	6	0	2	0	2	10
8:15 AM	0	0	0	0	0	0	1	1	0	5	1	6	0	2	0	2	9
8:20 AM	0	0	1	1	0	0	0	0	0	4	3	7	0	2	0	2	10
8:25 AM	1	0	0	1	0	0	16	16	2	3	2	7	0	4	0	4	28
8:30 AM	1	0	0	1	1	0	19	20	0	4	0	4	0	4	0	4	29
8:35 AM	2	0	0	2	0	0	6	6	1	5	2	8	1	2	0	3	19
8:40 AM	2	0	0	2	1	0	7	8	0	2	0	2	0	2	0	2	14
8:45 AM	2	0	0	2	0	0	4	4	0	6	3	9	0	5	0	5	20
8:50 AM	1	0	0	1	0	0	1	1	1	5	1	7	0	2	0	2	11
8:55 AM	1	0	0	1	1	0	1	2	1	4	1	6	0	2	0	2	11
Total Survey	24	2	4	30	6	1	59	66	12	99	31	142	2	56	0	58	296

Heavy Vehicle 15-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	2	0	1	3	1	0	0	1	4	13	2	19	0	4	0	4	27
7:15 AM	2	1	0	3	1	1	1	3	0	7	6	13	1	4	0	5	24
7:30 AM	2	1	2	5	0	0	2	2	1	12	2	15	0	6	0	6	28
7:45 AM	2	0	0	2	1	0	1	2	0	16	5	21	0	10	0	10	35
8:00 AM	6	0	0	6	0	0	0	0	2	13	3	18	0	7	0	7	31
8:15 AM	1	0	1	2	0	0	17	17	2	12	6	20	0	8	0	8	47
8:30 AM	5	0	0	5	2	0	32	34	1	11	2	14	1	8	0	9	62
8:45 AM	4	0	0	4	1	0	6	7	2	15	5	22	0	9	0	9	42
Total Survey	24	2	4	30	6	1	59	66	12	99	31	142	2	56	0	58	296

Heavy Vehicle Peak Hour Summary 7:40 AM to 8:40 AM

By Approach	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	15	18	33	46	5	51	78	90	168	34	60	94	173
PHF	0.63			0.27			0.89			0.77			0.57

By Movement	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	13	0	2	15	2	0	44	46	5	56	17	78	1	33	0	34	173
PHF	0.54	0.00	0.50	0.63	0.50	0.00	0.27	0.27	0.42	0.82	0.71	0.89	0.25	0.83	0.00	0.77	0.57

Heavy Vehicle Rolling Hour Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	8	2	3	13	3	1	4	8	5	48	15	68	1	24	0	25	114
7:15 AM	12	2	2	16	2	1	4	7	3	48	16	67	1	27	0	28	118
7:30 AM	11	1	3	15	1	0	20	21	5	53	16	74	0	31	0	31	141
7:45 AM	14	0	1	15	3	0	50	53	5	52	16	73	1	33	0	34	175
8:00 AM	16	0	1	17	3	0	55	58	7	51	16	74	1	32	0	33	182

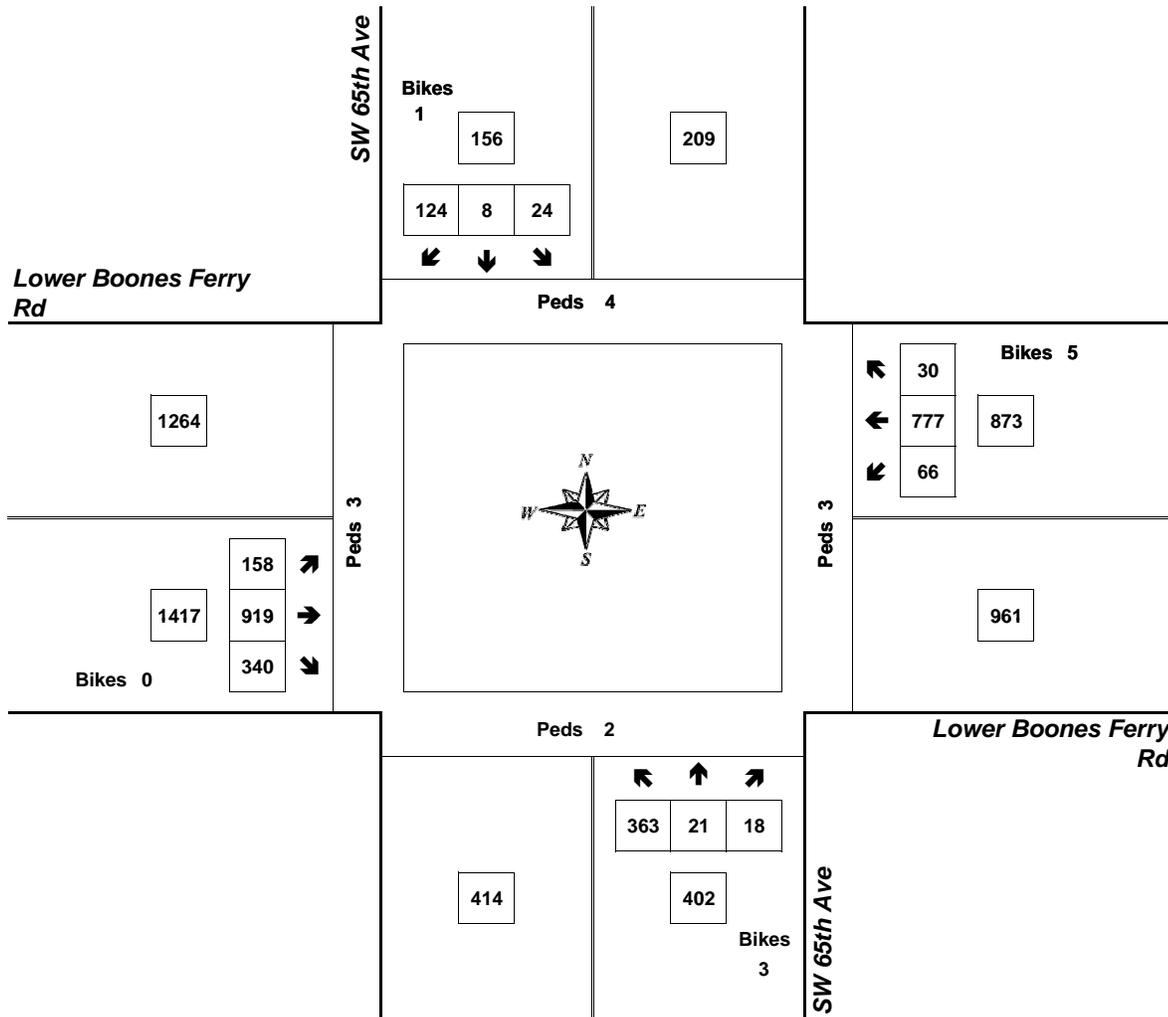
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 65th Ave & Lower Boones Ferry Rd

7:40 AM to 8:40 AM
Thursday, July 23, 2015



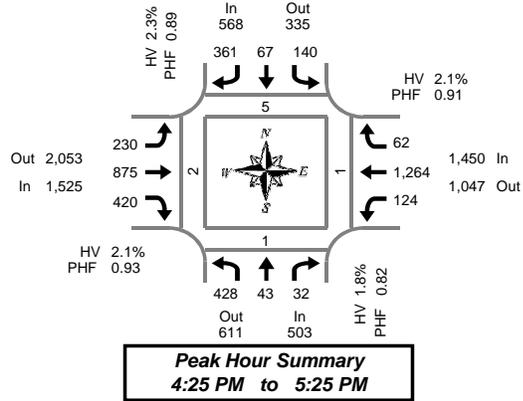
Approach	PHF	HV%	Volume
EB	0.83	5.5%	1,417
WB	0.92	3.9%	873
NB	0.84	3.7%	402
SB	0.46	29.5%	156
Intersection	0.92	6.1%	2,848

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Lower Boones Ferry Rd

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	26	1	6	0	8	4	24	0	20	64	38	0	10	75	2	0	278	0	0	0	0
4:05 PM	34	2	5	0	10	5	19	0	20	71	27	0	10	108	1	0	312	0	0	0	1
4:10 PM	25	2	0	0	12	7	22	0	18	86	43	0	6	133	2	0	356	0	0	0	0
4:15 PM	48	3	4	0	6	6	21	0	20	68	25	0	11	95	4	0	311	1	0	1	0
4:20 PM	35	2	4	0	12	6	27	0	24	58	34	0	11	90	3	0	306	0	0	0	0
4:25 PM	23	3	2	0	10	3	26	0	34	99	30	0	10	126	7	1	373	0	0	0	0
4:30 PM	31	1	6	0	10	7	27	0	27	71	28	1	9	104	6	1	327	0	0	0	0
4:35 PM	52	6	1	0	7	8	23	0	15	57	34	0	11	97	7	0	318	1	0	0	0
4:40 PM	47	2	2	0	14	4	34	0	19	66	36	0	7	97	6	0	334	1	0	1	0
4:45 PM	35	6	2	0	12	3	36	0	13	62	36	0	10	100	4	1	319	0	0	0	0
4:50 PM	27	3	4	0	8	5	19	1	15	69	34	0	6	107	5	1	302	0	0	0	0
4:55 PM	30	2	3	0	15	10	29	0	16	68	41	0	12	87	4	0	317	1	0	0	0
5:00 PM	35	4	1	0	13	4	33	0	23	72	41	0	12	90	3	0	331	0	0	0	0
5:05 PM	45	4	2	0	14	4	38	0	24	74	33	0	14	121	9	1	382	1	0	0	0
5:10 PM	39	6	2	1	14	4	35	0	20	73	37	0	14	87	2	2	333	0	0	0	2
5:15 PM	37	2	3	0	11	7	30	0	14	90	43	0	10	138	4	0	389	0	1	0	0
5:20 PM	27	4	4	1	12	8	31	0	10	74	27	0	9	110	5	0	321	1	0	0	0
5:25 PM	44	1	2	0	12	4	24	1	20	73	38	0	10	91	3	0	322	1	1	1	0
5:30 PM	32	1	1	0	11	4	31	1	23	88	34	0	12	90	6	2	333	0	0	0	0
5:35 PM	51	4	5	0	8	3	18	0	29	75	30	0	10	94	5	1	332	1	0	1	1
5:40 PM	19	4	1	1	8	5	14	0	20	86	31	1	7	134	6	2	335	1	1	1	0
5:45 PM	39	0	5	0	7	1	27	0	16	59	32	0	14	97	8	0	305	0	1	0	2
5:50 PM	35	3	5	0	13	4	21	0	19	72	34	0	12	80	2	0	300	1	1	1	2
5:55 PM	43	5	2	0	9	3	24	0	15	63	36	0	10	75	4	0	289	0	0	0	0
Total Survey	859	71	72	3	256	119	633	3	474	1,738	822	2	247	2,426	108	12	7,825	10	5	6	8

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	85	5	11	0	30	16	65	0	58	221	108	0	26	316	5	0	946	0	0	0	1
4:15 PM	106	8	10	0	28	15	74	0	78	225	89	0	32	311	14	1	990	1	0	1	0
4:30 PM	130	9	9	0	31	19	84	0	61	194	98	1	27	298	19	1	979	2	0	1	0
4:45 PM	92	11	9	0	35	18	84	1	44	199	111	0	28	294	13	2	938	1	0	0	0
5:00 PM	119	14	5	1	41	12	106	0	67	219	111	0	40	298	14	3	1,046	1	0	0	2
5:15 PM	108	7	9	1	35	19	85	1	44	237	108	0	29	339	12	0	1,032	2	2	1	0
5:30 PM	102	9	7	1	27	12	63	1	72	249	95	1	29	318	17	5	1,000	2	1	2	1
5:45 PM	117	8	12	0	29	8	72	0	50	194	102	0	36	252	14	0	894	1	2	1	4
Total Survey	859	71	72	3	256	119	633	3	474	1,738	822	2	247	2,426	108	12	7,825	10	5	6	8

Peak Hour Summary

4:25 PM to 5:25 PM

By Approach	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	503	611	1,114	2	568	335	903	1	1,525	2,053	3,578	1	1,450	1,047	2,497	7	4,046	5	1	1	2
%HV	1.8%				2.3%				2.1%				2.1%				2.1%				
PHF	0.82				0.89				0.93				0.91				0.92				

By Movement	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	428	43	32	503	140	67	361	568	230	875	420	1,525	124	1,264	62	1,450	4,046				
%HV	1.6%	4.7%	0.0%	1.8%	2.1%	0.0%	2.8%	2.3%	7.4%	1.3%	1.0%	2.1%	0.8%	2.3%	1.6%	2.1%	2.1%				
PHF	0.80	0.77	0.89	0.82	0.83	0.88	0.85	0.89	0.76	0.92	0.91	0.93	0.78	0.91	0.78	0.91	0.92				

Rolling Hour Summary

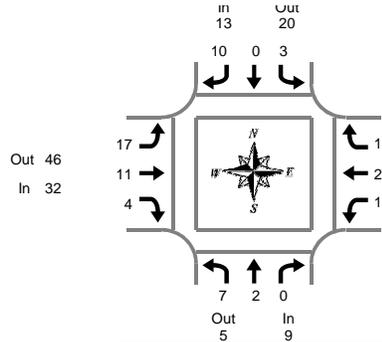
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	413	33	39	0	124	68	307	1	241	839	406	1	113	1,219	51	4	3,853	4	0	2	1
4:15 PM	447	42	33	1	135	64	348	1	250	837	409	1	127	1,201	60	7	3,953	5	0	2	2
4:30 PM	449	41	32	2	142	68	359	2	216	849	428	1	124	1,229	58	6	3,995	6	2	2	2
4:45 PM	421	41	30	3	138	61	338	3	227	904	425	1	126	1,249	56	10	4,016	6	3	3	3
5:00 PM	446	38	33	3	132	51	326	2	233	899	416	1	134	1,207	57	8	3,972	6	5	4	7

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Lower Boones Ferry Rd

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	0	0	1	0	0	0	0	0	0	3	3	0	2	0	2	6
4:05 PM	1	0	1	2	0	1	1	2	2	3	2	7	0	0	0	0	11
4:10 PM	2	0	0	2	0	0	0	0	2	2	1	5	0	6	0	6	13
4:15 PM	3	0	0	3	0	0	0	0	4	1	1	6	0	4	1	5	14
4:20 PM	1	0	0	1	0	0	1	1	4	1	0	5	0	3	0	3	10
4:25 PM	2	0	0	2	2	0	1	3	9	2	0	11	0	5	0	5	21
4:30 PM	1	0	0	1	0	0	1	1	3	0	1	4	0	1	0	1	7
4:35 PM	1	1	0	2	0	0	0	0	1	1	1	3	0	2	0	2	7
4:40 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	2	0	2	5
4:45 PM	0	0	0	0	1	0	1	2	0	1	0	1	0	2	1	3	6
4:50 PM	0	0	0	0	0	0	1	1	1	0	2	3	0	3	0	3	7
4:55 PM	0	0	0	0	0	0	1	1	0	0	0	0	1	4	0	5	6
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	4	6
5:05 PM	0	0	0	0	0	0	0	0	2	2	0	4	0	2	0	2	6
5:10 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	1	0	1	3
5:15 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	2	0	2	5
5:20 PM	1	1	0	2	0	0	1	1	1	1	0	2	0	1	0	1	6
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
5:35 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
5:40 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
5:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
5:50 PM	1	0	0	1	0	0	1	1	0	1	1	2	1	0	0	1	5
5:55 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2
Total Survey	16	2	1	19	3	1	14	18	35	21	12	68	2	50	2	54	159

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	4	0	1	5	0	1	1	2	4	5	6	15	0	8	0	8	30
4:15 PM	6	0	0	6	2	0	2	4	17	4	1	22	0	12	1	13	45
4:30 PM	2	1	0	3	0	0	4	4	4	1	2	7	0	5	0	5	19
4:45 PM	0	0	0	0	1	0	3	4	1	1	2	4	1	9	1	11	19
5:00 PM	1	0	0	1	0	0	1	1	2	4	0	6	0	7	0	7	15
5:15 PM	2	1	0	3	0	0	1	1	1	3	0	4	0	5	0	5	13
5:30 PM	0	0	0	0	0	0	0	0	5	2	0	7	0	3	0	3	10
5:45 PM	1	0	0	1	0	0	2	2	1	1	1	3	1	1	0	2	8
Total Survey	16	2	1	19	3	1	14	18	35	21	12	68	2	50	2	54	159

Heavy Vehicle Peak Hour Summary

4:25 PM to 5:25 PM

By Approach	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	9	5	14	13	20	33	32	46	78	31	14	45	85
PHF	0.45			0.54			0.44			0.65			0.61

By Movement	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	7	2	0	9	3	0	10	13	17	11	4	32	1	29	1	31	85
PHF	0.44	0.50	0.00	0.45	0.38	0.00	0.50	0.54	0.33	0.69	0.50	0.44	0.25	0.66	0.25	0.65	0.61

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave				Southbound SW 65th Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	12	1	1	14	3	1	10	14	26	11	11	48	1	34	2	37	113
4:15 PM	9	1	0	10	3	0	10	13	24	10	5	39	1	33	2	36	98
4:30 PM	5	2	0	7	1	0	9	10	8	9	4	21	1	26	1	28	66
4:45 PM	3	1	0	4	1	0	5	6	9	10	2	21	1	24	1	26	57
5:00 PM	4	1	0	5	0	0	4	4	9	10	1	20	1	16	0	17	46

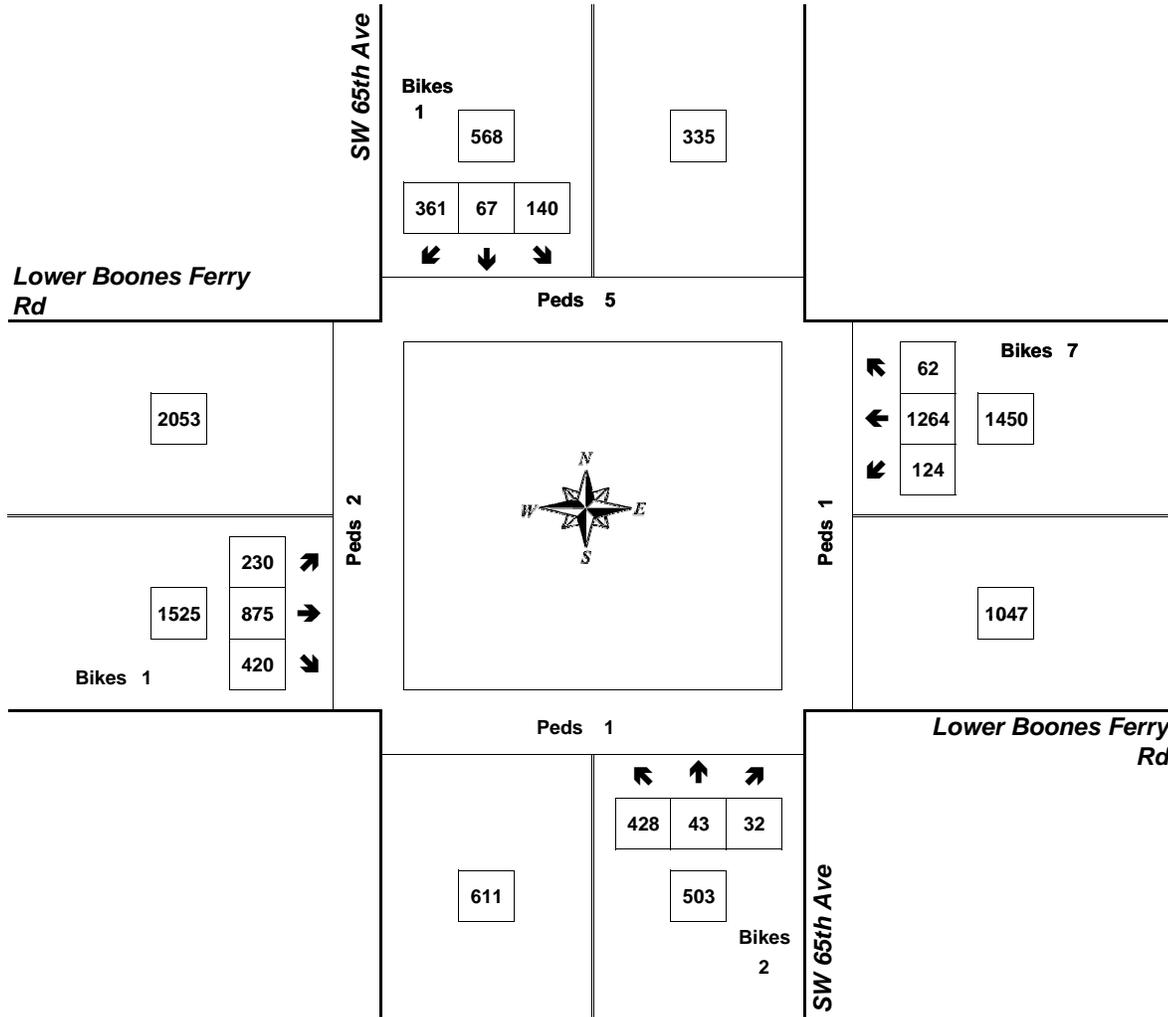
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 65th Ave & Lower Boones Ferry Rd

4:25 PM to 5:25 PM
Wednesday, July 22, 2015



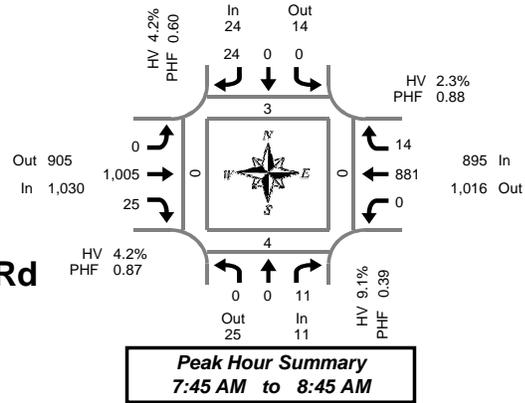
Approach	PHF	HV%	Volume
EB	0.93	2.1%	1,525
WB	0.91	2.1%	1,450
NB	0.82	1.8%	503
SB	0.89	2.3%	568
Intersection	0.92	2.1%	4,046

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



Safeway Access & Lower Boones Ferry Rd

Tuesday, August 04, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	0	0	0	0	1	0	0	52	4	2	0	56	1	0	114	0	0	0	0
7:05 AM	0	0	0	0	0	0	3	0	0	56	2	0	0	59	0	0	120	0	0	0	0
7:10 AM	0	0	1	0	0	0	2	0	0	54	2	1	0	65	2	0	126	0	0	0	0
7:15 AM	0	0	1	0	0	0	5	0	0	66	1	2	0	57	1	0	131	0	1	0	0
7:20 AM	0	0	0	0	0	0	2	0	0	80	3	1	0	61	1	0	147	0	1	0	0
7:25 AM	0	0	0	0	0	0	3	0	0	95	1	1	0	63	0	0	162	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	72	3	2	0	65	0	1	140	1	0	0	0
7:35 AM	0	0	0	0	0	0	5	0	0	83	2	0	0	59	0	0	149	0	0	0	0
7:40 AM	0	0	0	0	0	0	2	0	0	72	1	0	0	88	1	1	164	1	0	0	0
7:45 AM	0	0	2	0	0	0	1	0	0	100	2	0	0	79	0	0	184	0	1	0	0
7:50 AM	0	0	1	0	0	0	3	0	0	80	0	0	0	98	2	0	184	0	0	0	0
7:55 AM	0	0	0	0	0	0	2	0	0	109	4	2	0	70	4	0	189	1	0	0	0
8:00 AM	0	0	0	0	0	0	2	0	0	71	1	1	0	50	0	0	124	0	0	0	0
8:05 AM	0	0	1	0	0	0	2	0	0	65	1	1	0	82	2	0	153	0	1	0	0
8:10 AM	0	0	0	0	0	0	1	0	0	93	2	0	0	82	1	0	179	0	1	0	0
8:15 AM	0	0	4	0	0	0	2	0	0	76	2	0	0	57	2	0	143	1	0	0	0
8:20 AM	0	0	2	0	0	0	0	0	0	100	6	0	0	72	0	0	180	1	1	0	0
8:25 AM	0	0	1	0	0	0	1	0	0	80	3	1	0	80	0	0	165	0	0	0	0
8:30 AM	0	0	0	0	0	0	5	0	0	53	3	1	0	60	1	0	122	0	0	0	0
8:35 AM	0	0	0	0	0	0	2	0	0	86	0	0	0	77	2	0	167	0	0	0	0
8:40 AM	0	0	0	0	0	0	3	0	0	92	1	0	0	74	0	0	170	0	0	0	0
8:45 AM	0	0	1	0	0	0	3	0	0	79	2	0	0	83	4	0	172	0	0	0	0
8:50 AM	0	0	0	0	0	0	1	0	0	84	2	0	0	90	0	0	177	1	0	0	0
8:55 AM	0	0	2	0	0	0	2	0	0	77	5	0	0	72	1	0	159	0	2	0	0
Total Survey	0	0	16	0	0	0	53	0	0	1,875	53	15	0	1,699	25	2	3,721	6	8	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	1	0	0	0	6	0	0	162	8	3	0	180	3	0	360	0	0	0	0
7:15 AM	0	0	1	0	0	0	10	0	0	241	5	4	0	181	2	0	440	0	2	0	0
7:30 AM	0	0	0	0	0	0	7	0	0	227	6	2	0	212	1	2	453	2	0	0	0
7:45 AM	0	0	3	0	0	0	6	0	0	289	6	2	0	247	6	0	557	1	1	0	0
8:00 AM	0	0	1	0	0	0	5	0	0	229	4	2	0	214	3	0	456	0	2	0	0
8:15 AM	0	0	7	0	0	0	3	0	0	256	11	1	0	209	2	0	488	2	1	0	0
8:30 AM	0	0	0	0	0	0	10	0	0	231	4	1	0	211	3	0	459	0	0	0	0
8:45 AM	0	0	3	0	0	0	6	0	0	240	9	0	0	245	5	0	508	1	2	0	0
Total Survey	0	0	16	0	0	0	53	0	0	1,875	53	15	0	1,699	25	2	3,721	6	8	0	0

Peak Hour Summary

7:45 AM to 8:45 AM

By Approach	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	11	25	36	0	24	14	38	0	1,030	905	1,935	6	895	1,016	1,911	0	1,960	3	4	0	0
%HV	9.1%				4.2%				4.2%				2.3%				3.4%				
PHF	0.39				0.60				0.87				0.88				0.88				

By Movement	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total				
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total					
Volume	0	0	11	11	0	0	24	24	0	1,005	25	1,030	0	881	14	895	1,960				
%HV	0.0%	0.0%	9.1%	9.1%	0.0%	0.0%	4.2%	4.2%	0.0%	4.0%	12.0%	4.2%	0.0%	2.3%	7.1%	2.3%	3.4%				
PHF	0.00	0.00	0.39	0.39	0.00	0.00	0.60	0.60	0.00	0.87	0.52	0.87	0.00	0.89	0.58	0.88	0.88				

Rolling Hour Summary

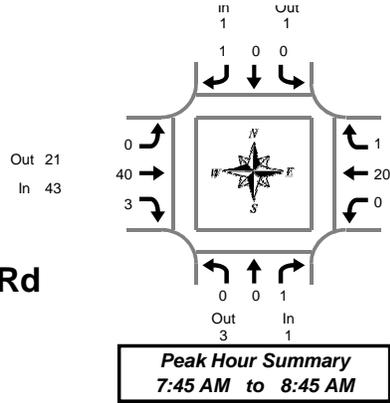
7:00 AM to 9:00 AM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	5	0	0	0	29	0	0	919	25	11	0	820	12	2	1,810	3	3	0	0
7:15 AM	0	0	5	0	0	0	28	0	0	986	21	10	0	854	12	2	1,906	3	5	0	0
7:30 AM	0	0	11	0	0	0	21	0	0	1,001	27	7	0	882	12	2	1,954	5	4	0	0
7:45 AM	0	0	11	0	0	0	24	0	0	1,005	25	6	0	881	14	0	1,960	3	4	0	0
8:00 AM	0	0	11	0	0	0	24	0	0	956	28	4	0	879	13	0	1,911	3	5	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Safeway Access & Lower Boones Ferry Rd

Tuesday, August 04, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	2	1	3	0	2	0	2	5
7:05 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
7:10 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
7:20 AM	0	0	0	0	0	0	0	0	0	3	1	4	0	3	0	3	7
7:25 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	0	2	5
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	5	0	1	0	1	6
7:35 AM	0	0	0	0	0	0	1	1	0	4	0	4	0	3	0	3	8
7:40 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3	7
7:45 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
7:50 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	4	0	4	5
7:55 AM	0	0	0	0	0	0	0	0	0	5	1	6	0	2	1	3	9
8:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
8:05 AM	0	0	1	1	0	0	0	0	0	3	0	3	0	2	0	2	6
8:10 AM	0	0	0	0	0	0	0	0	0	6	0	6	0	2	0	2	8
8:15 AM	0	0	0	0	0	0	1	1	0	5	0	5	0	0	0	0	6
8:20 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	0	2	5
8:25 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	3	0	3	6
8:30 AM	0	0	0	0	0	0	0	0	0	3	2	5	0	3	0	3	8
8:35 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
8:40 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	5	0	5	8
8:50 AM	0	0	0	0	0	0	0	0	0	5	0	5	0	2	0	2	7
8:55 AM	0	0	0	0	0	0	0	0	0	5	0	5	0	4	0	4	9
Total Survey	0	0	1	1	0	0	2	2	0	78	5	83	0	49	1	50	136

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	4	1	5	0	4	0	4	9
7:15 AM	0	0	0	0	0	0	0	0	0	8	1	9	0	7	0	7	16
7:30 AM	0	0	0	0	0	0	1	1	0	13	0	13	0	7	0	7	21
7:45 AM	0	0	0	0	0	0	0	0	0	10	1	11	0	7	1	8	19
8:00 AM	0	0	1	1	0	0	0	0	0	11	0	11	0	5	0	5	17
8:15 AM	0	0	0	0	0	0	1	1	0	11	0	11	0	5	0	5	17
8:30 AM	0	0	0	0	0	0	0	0	0	8	2	10	0	3	0	3	13
8:45 AM	0	0	0	0	0	0	0	0	0	13	0	13	0	11	0	11	24
Total Survey	0	0	1	1	0	0	2	2	0	78	5	83	0	49	1	50	136

Heavy Vehicle Peak Hour Summary

7:45 AM to 8:45 AM

By Approach	Northbound Safeway Access			Southbound Safeway Access			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	3	4	1	1	2	43	21	64	21	41	62	66
PHF	0.25			0.25			0.77			0.66			0.83

By Movement	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	1	1	0	0	1	1	0	40	3	43	0	20	1	21	66
PHF	0.00	0.00	0.25	0.25	0.00	0.00	0.25	0.25	0.00	0.71	0.38	0.77	0.00	0.63	0.25	0.66	0.83

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	1	1	0	35	3	38	0	25	1	26	65
7:15 AM	0	0	1	1	0	0	1	1	0	42	2	44	0	26	1	27	73
7:30 AM	0	0	1	1	0	0	2	2	0	45	1	46	0	24	1	25	74
7:45 AM	0	0	1	1	0	0	1	1	0	40	3	43	0	20	1	21	66
8:00 AM	0	0	1	1	0	0	1	1	0	43	2	45	0	24	0	24	71

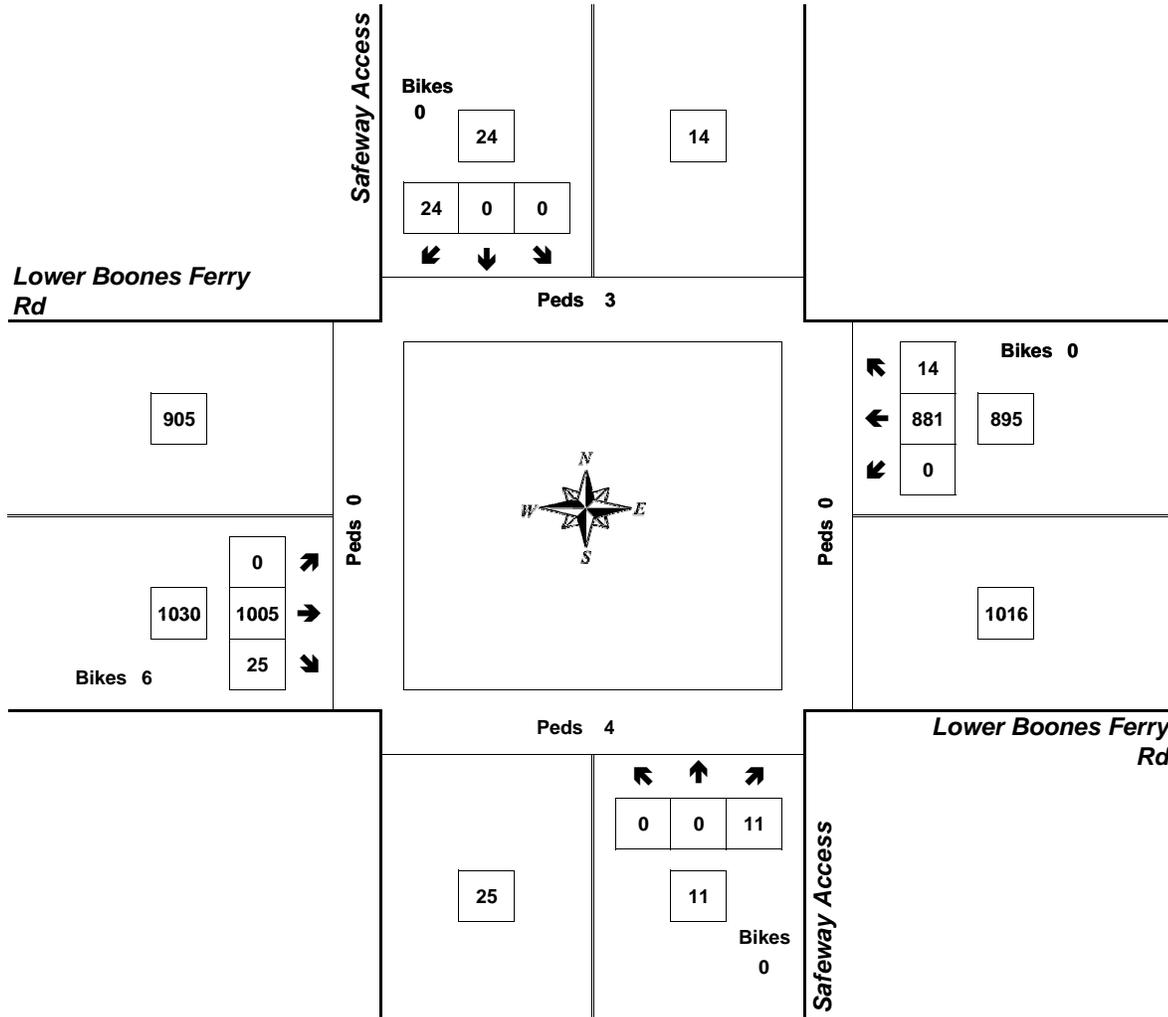
Peak Hour Summary



Clay Carney
(503) 833-2740

Safeway Access & Lower Boones Ferry Rd

7:45 AM to 8:45 AM
Tuesday, August 04, 2015



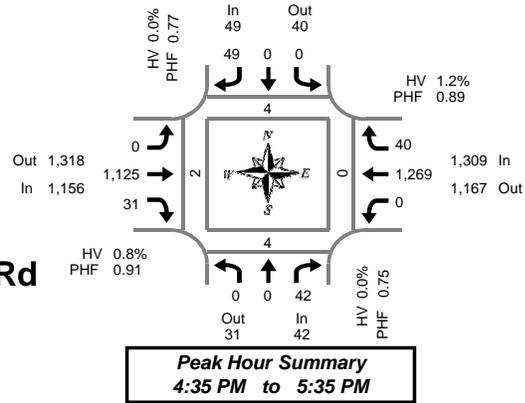
Approach	PHF	HV%	Volume
EB	0.87	4.2%	1,030
WB	0.88	2.3%	895
NB	0.39	9.1%	11
SB	0.60	4.2%	24
Intersection	0.88	3.4%	1,960

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



Safeway Access & Lower Boones Ferry Rd

Tuesday, August 04, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	6	0	0	0	4	0	0	98	2	0	0	106	2	0	218	0	1	0	0
4:05 PM	0	0	8	0	0	0	5	0	0	94	2	0	0	106	3	0	218	0	0	0	0
4:10 PM	0	0	5	0	0	0	5	0	0	73	2	0	0	104	2	0	191	1	0	0	0
4:15 PM	0	0	2	0	0	0	2	0	0	96	3	0	0	107	1	1	211	0	0	0	0
4:20 PM	0	0	2	0	0	0	3	0	0	91	3	1	0	111	0	0	210	0	0	0	0
4:25 PM	0	0	5	0	0	0	3	0	0	84	4	0	0	91	1	1	188	0	0	0	0
4:30 PM	0	0	1	0	0	0	2	0	0	63	4	0	0	93	1	0	164	0	0	0	0
4:35 PM	0	0	3	0	0	0	6	0	0	84	2	0	0	109	4	0	208	0	0	0	0
4:40 PM	0	0	8	0	0	0	3	0	0	90	3	0	0	109	2	0	215	1	0	0	1
4:45 PM	0	0	2	0	0	0	6	0	0	77	5	0	0	97	2	0	189	1	0	0	0
4:50 PM	0	0	4	0	0	0	3	0	0	115	5	1	0	106	6	0	239	0	3	0	0
4:55 PM	0	0	8	0	0	0	3	0	0	75	2	0	0	99	3	0	190	0	0	0	0
5:00 PM	0	0	1	0	0	0	5	0	0	99	2	0	0	116	5	0	228	2	0	0	0
5:05 PM	0	0	3	0	0	0	2	0	0	89	0	0	0	110	2	0	206	0	0	0	0
5:10 PM	0	0	3	0	0	0	6	0	0	102	3	1	0	130	6	2	250	0	0	0	0
5:15 PM	0	0	2	1	0	0	5	0	0	101	2	1	0	94	1	0	205	0	0	0	0
5:20 PM	0	0	2	0	0	0	5	0	0	108	2	0	0	105	3	0	225	0	1	0	1
5:25 PM	0	0	3	0	0	0	4	0	0	96	4	1	0	89	1	0	197	0	0	0	0
5:30 PM	0	0	3	0	0	0	1	0	0	89	1	1	0	105	5	1	204	0	0	0	0
5:35 PM	0	0	1	0	0	0	6	0	0	107	1	2	0	88	3	0	206	0	0	0	0
5:40 PM	0	0	2	0	0	0	3	0	0	90	3	1	0	95	2	0	195	0	0	0	0
5:45 PM	0	0	3	0	0	0	3	0	0	89	4	1	0	77	1	0	177	0	0	0	0
5:50 PM	0	0	2	0	0	0	5	0	0	90	4	1	0	89	2	0	192	0	3	0	0
5:55 PM	0	0	3	0	0	0	3	0	0	80	2	1	0	81	1	1	170	0	1	0	0
Total Survey	0	0	82	1	0	0	93	0	0	2,180	65	12	0	2,417	59	6	4,896	5	9	0	2

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	19	0	0	0	14	0	0	265	6	0	0	316	7	0	627	1	1	0	0
4:15 PM	0	0	9	0	0	0	8	0	0	271	10	1	0	309	2	2	609	0	0	0	0
4:30 PM	0	0	12	0	0	0	11	0	0	237	9	0	0	311	7	0	587	1	0	0	1
4:45 PM	0	0	14	0	0	0	12	0	0	267	12	1	0	302	11	0	618	1	3	0	0
5:00 PM	0	0	7	0	0	0	13	0	0	290	5	1	0	356	13	2	684	2	0	0	0
5:15 PM	0	0	7	1	0	0	14	0	0	305	8	2	0	288	5	0	627	0	1	0	1
5:30 PM	0	0	6	0	0	0	10	0	0	286	5	4	0	288	10	1	605	0	0	0	0
5:45 PM	0	0	8	0	0	0	11	0	0	259	10	3	0	247	4	1	539	0	4	0	0
Total Survey	0	0	82	1	0	0	93	0	0	2,180	65	12	0	2,417	59	6	4,896	5	9	0	2

Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	42	31	73	1	49	40	89	0	1,156	1,318	2,474	5	1,309	1,167	2,476	3	2,556	4	4	0	2
%HV	0.0%				0.0%				0.8%				1.2%				1.0%				
PHF	0.75				0.77				0.91				0.89				0.93				

By Movement	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	42	42	0	0	49	49	0	1,125	31	1,156	0	1,269	40	1,309	2,556
%HV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	3.2%	0.8%	0.0%	1.3%	0.0%	1.2%	1.0%
PHF	0.00	0.00	0.75	0.75	0.00	0.00	0.77	0.77	0.00	0.90	0.60	0.91	0.00	0.89	0.71	0.89	0.93

Rolling Hour Summary

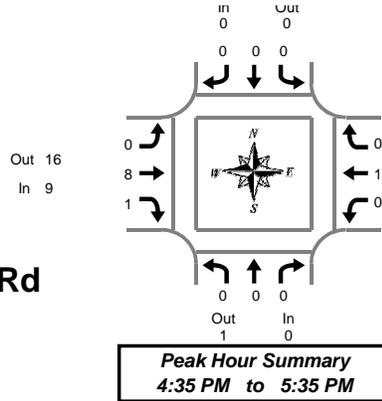
4:00 PM to 6:00 PM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	54	0	0	0	45	0	0	1,040	37	2	0	1,238	27	2	2,441	3	4	0	1
4:15 PM	0	0	42	0	0	0	44	0	0	1,065	36	3	0	1,278	33	4	2,498	4	3	0	1
4:30 PM	0	0	40	1	0	0	50	0	0	1,099	34	4	0	1,257	36	2	2,516	4	4	0	2
4:45 PM	0	0	34	1	0	0	49	0	0	1,148	30	8	0	1,234	39	3	2,534	3	4	0	1
5:00 PM	0	0	28	1	0	0	48	0	0	1,140	28	10	0	1,179	32	4	2,455	2	5	0	1

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Safeway Access & Lower Boones Ferry Rd

Tuesday, August 04, 2015

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:10 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
4:20 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	3
4:25 PM	0	0	1	1	0	0	0	0	0	3	1	4	0	0	0	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
4:35 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
4:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	3
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	5
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:10 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
5:25 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:35 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
5:40 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
5:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:55 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Survey	0	0	1	1	0	0	0	0	0	25	3	28	0	22	0	22	51

Heavy Vehicle 15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
4:15 PM	0	0	1	1	0	0	0	0	0	8	2	10	0	2	0	2	13
4:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	6	0	6	8
4:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	6	0	6	8
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3	7
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	2	0	2	5
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
Total Survey	0	0	1	1	0	0	0	0	0	25	3	28	0	22	0	22	51

Heavy Vehicle Peak Hour Summary

4:35 PM to 5:35 PM

By Approach	Northbound Safeway Access			Southbound Safeway Access			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	0	1	1	0	0	0	9	16	25	16	8	24	25
PHF	0.00			0.00			0.56			0.44			0.57

By Movement	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	0	0	0	0	0	0	0	0	8	1	9	0	16	0	16	25
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50	0.25	0.56	0.00	0.44	0.00	0.44	0.57

Heavy Vehicle Rolling Hour Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound Safeway Access				Southbound Safeway Access				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	0	1	1	0	0	0	0	0	14	3	17	0	14	0	14	32
4:15 PM	0	0	1	1	0	0	0	0	0	13	3	16	0	16	0	16	33
4:30 PM	0	0	0	0	0	0	0	0	0	9	1	10	0	17	0	17	27
4:45 PM	0	0	0	0	0	0	0	0	0	10	1	11	0	13	0	13	24
5:00 PM	0	0	0	0	0	0	0	0	0	11	0	11	0	8	0	8	19

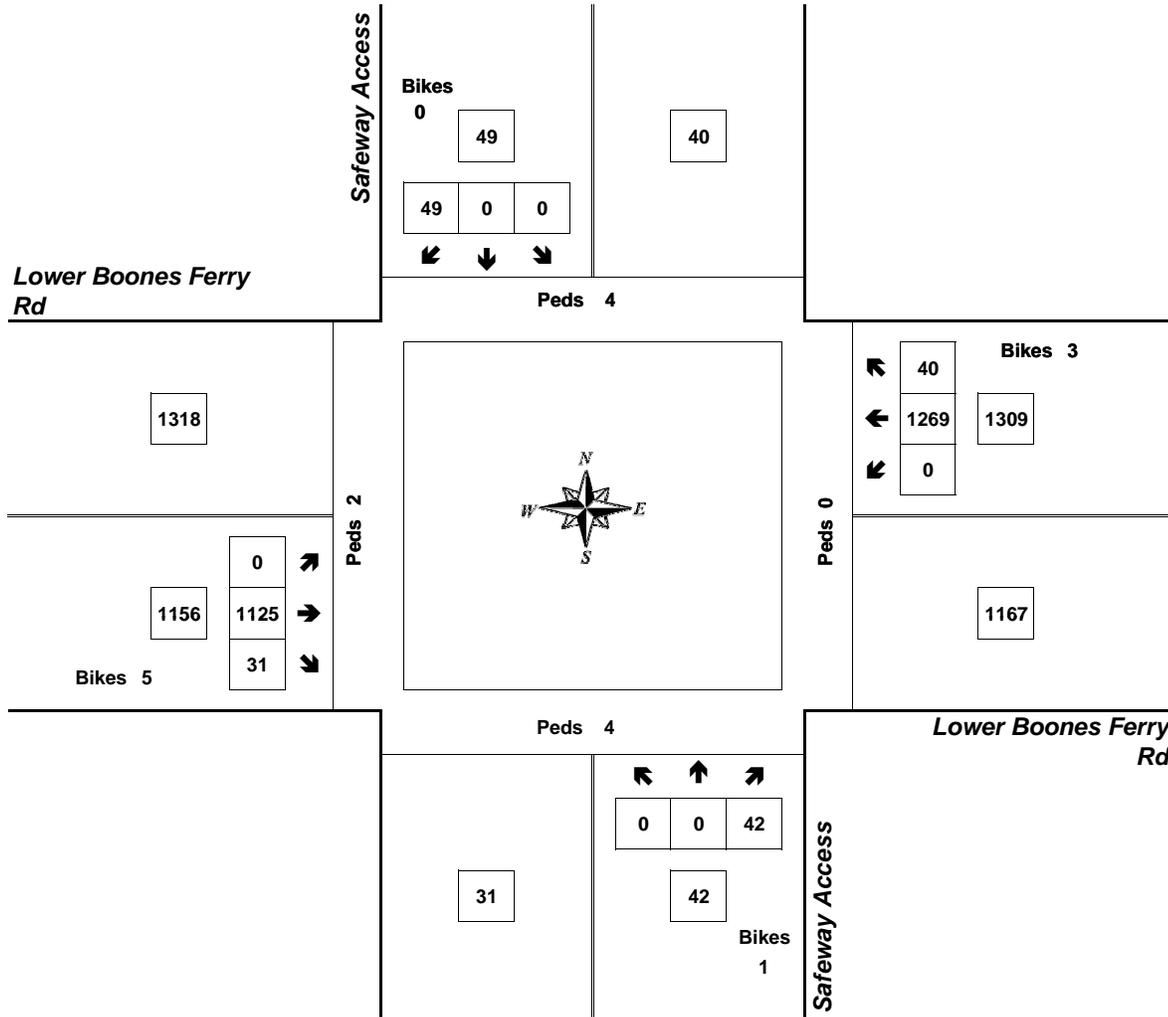
Peak Hour Summary



Clay Carney
(503) 833-2740

Safeway Access & Lower Boones Ferry Rd

4:35 PM to 5:35 PM
Tuesday, August 04, 2015



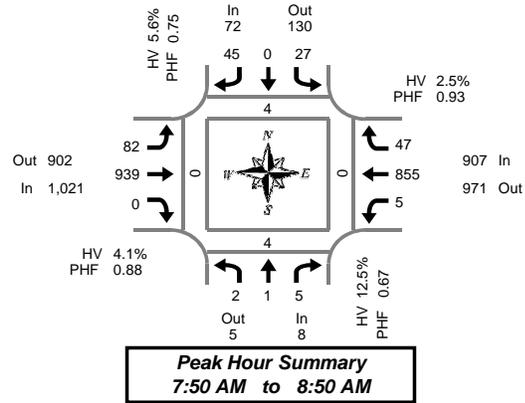
Approach	PHF	HV%	Volume
EB	0.91	0.8%	1,156
WB	0.89	1.2%	1,309
NB	0.75	0.0%	42
SB	0.77	0.0%	49
Intersection	0.93	1.0%	2,556

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 63rd Ave & Lower Boones Ferry Rd

Tuesday, August 04, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	0	0	2	0	0	0	0	0	6	47	0	2	0	62	1	0	118	0	0	0	0
7:05 AM	0	0	0	0	0	0	2	0	7	48	1	2	0	52	2	0	112	0	0	0	0
7:10 AM	1	0	0	0	1	0	1	0	8	53	0	1	2	67	2	0	135	0	0	0	0
7:15 AM	0	0	0	0	0	0	2	0	9	57	0	0	0	50	2	0	120	0	1	0	0
7:20 AM	0	0	0	0	3	0	0	0	9	60	0	1	1	64	0	0	137	0	1	0	0
7:25 AM	1	0	0	0	1	0	1	0	7	85	0	1	0	57	0	0	152	0	1	0	0
7:30 AM	0	0	0	0	1	0	1	0	6	64	0	0	1	51	1	0	125	1	0	0	0
7:35 AM	0	0	0	0	1	0	1	0	4	84	0	1	0	69	3	0	162	1	2	0	0
7:40 AM	0	0	0	0	1	0	0	1	10	65	0	0	0	74	2	1	152	1	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	10	77	0	0	2	69	1	0	159	1	0	0	0
7:50 AM	0	0	1	0	3	0	5	0	12	93	0	0	0	98	10	0	222	0	0	0	0
7:55 AM	0	0	1	0	2	0	4	0	7	79	0	1	0	74	3	0	170	1	0	0	0
8:00 AM	0	0	0	0	2	0	4	0	10	88	0	2	0	57	1	0	162	0	0	0	0
8:05 AM	0	0	1	0	2	0	3	0	6	49	0	1	0	56	5	0	122	0	0	0	0
8:10 AM	0	1	1	0	1	0	5	0	6	82	0	0	0	94	6	0	196	0	2	0	0
8:15 AM	0	0	0	0	3	0	0	0	3	81	0	0	0	67	5	0	159	0	1	0	0
8:20 AM	0	0	0	0	2	0	3	0	6	76	0	0	1	54	2	0	144	2	0	0	0
8:25 AM	1	0	1	0	5	0	5	0	7	90	0	1	0	57	4	0	170	0	0	0	0
8:30 AM	0	0	0	0	3	0	5	0	6	73	0	1	1	86	2	0	176	0	1	0	0
8:35 AM	0	0	0	0	2	0	4	0	7	71	0	0	0	59	4	0	147	0	0	0	0
8:40 AM	0	0	0	0	2	0	4	0	4	61	0	0	1	73	1	0	146	0	0	0	0
8:45 AM	1	0	0	0	0	0	3	0	8	96	0	0	2	80	4	0	194	1	0	0	0
8:50 AM	0	0	0	0	0	0	6	0	9	67	0	0	0	89	1	0	172	0	0	0	0
8:55 AM	0	0	0	0	2	0	4	0	5	68	0	0	0	75	5	0	159	0	0	0	0
Total Survey	4	1	7	0	37	0	63	1	172	1,714	1	14	11	1,634	67	1	3,711	8	9	0	0

15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	1	0	2	0	1	0	3	0	21	148	1	5	2	181	5	0	365	0	0	0	0
7:15 AM	1	0	0	0	4	0	3	0	25	202	0	2	1	171	2	0	409	0	3	0	0
7:30 AM	0	0	0	0	3	0	2	1	20	213	0	1	1	194	6	1	439	3	2	0	0
7:45 AM	0	0	2	0	5	0	9	0	29	249	0	1	2	241	14	0	551	2	0	0	0
8:00 AM	0	1	2	0	5	0	12	0	22	219	0	3	0	207	12	0	480	0	2	0	0
8:15 AM	1	0	1	0	10	0	8	0	16	247	0	1	1	178	11	0	473	2	1	0	0
8:30 AM	0	0	0	0	7	0	13	0	17	205	0	1	2	218	7	0	469	0	1	0	0
8:45 AM	1	0	0	0	2	0	13	0	22	231	0	0	2	244	10	0	525	1	0	0	0
Total Survey	4	1	7	0	37	0	63	1	172	1,714	1	14	11	1,634	67	1	3,711	8	9	0	0

Peak Hour Summary

7:50 AM to 8:50 AM

By Approach	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	8	5	13	0	72	130	202	0	1,021	902	1,923	6	907	971	1,878	0	2,008	4	4	0	0
%HV	12.5%				5.6%				4.1%				2.5%				3.5%				
PHF	0.67				0.75				0.88				0.93				0.91				

By Movement	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	2	1	5	8	27	0	45	72	82	939	0	1,021	5	855	47	907	2,008
%HV	0.0%	###	0.0%	12.5%	3.7%	0.0%	6.7%	5.6%	2.4%	4.3%	0.0%	4.1%	0.0%	2.2%	8.5%	2.5%	3.5%
PHF	0.50	0.25	0.63	0.67	0.68	0.00	0.80	0.75	0.71	0.90	0.00	0.88	0.42	0.93	0.73	0.93	0.91

Rolling Hour Summary

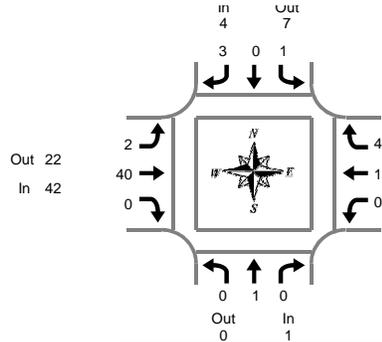
7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	0	4	0	13	0	17	1	95	812	1	9	6	787	27	1	1,764	5	5	0	0
7:15 AM	1	1	4	0	17	0	26	1	96	883	0	7	4	813	34	1	1,879	5	7	0	0
7:30 AM	1	1	5	0	23	0	31	1	87	928	0	6	4	820	43	1	1,943	7	5	0	0
7:45 AM	1	1	5	0	27	0	42	0	84	920	0	6	5	844	44	0	1,973	4	4	0	0
8:00 AM	2	1	3	0	24	0	46	0	77	902	0	5	5	847	40	0	1,947	3	4	0	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
7:50 AM to 8:50 AM

SW 63rd Ave & Lower Boones Ferry Rd

Tuesday, August 04, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	0	1	4
7:05 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	2	3
7:10 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	2	3
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
7:20 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	3	0	3	6
7:25 AM	0	0	0	0	0	0	0	0	0	6	0	6	0	3	0	3	9
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
7:35 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3	7
7:40 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
7:45 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
7:50 AM	0	0	0	0	0	0	0	0	1	3	0	4	0	2	0	2	6
7:55 AM	0	0	0	0	1	0	1	2	0	4	0	4	0	4	0	4	10
8:00 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	1	1	2	5
8:05 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
8:10 AM	0	1	0	1	0	0	0	0	1	3	0	4	0	3	1	4	9
8:15 AM	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0	0	7
8:20 AM	0	0	0	0	0	0	1	1	0	3	0	3	0	1	1	2	6
8:25 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	2	1	3	5
8:30 AM	0	0	0	0	0	0	1	1	0	3	0	3	0	3	0	3	7
8:35 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
8:40 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	1	0	1	5
8:50 AM	0	0	0	0	0	0	0	0	0	4	0	4	0	5	0	5	9
8:55 AM	0	0	0	0	0	0	0	0	1	3	0	4	0	3	0	3	7
Total Survey	0	1	0	1	1	0	3	4	4	72	1	77	1	44	5	50	132

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	0	0	0	0	0	4	1	5	1	3	1	5	10
7:15 AM	0	0	0	0	0	0	0	0	0	10	0	10	0	8	0	8	18
7:30 AM	0	0	0	0	0	0	0	0	0	9	0	9	0	5	0	5	14
7:45 AM	0	0	0	0	1	0	1	2	2	9	0	11	0	7	0	7	20
8:00 AM	0	1	0	1	0	0	0	0	1	7	0	8	0	5	2	7	16
8:15 AM	0	0	0	0	0	0	1	1	0	12	0	12	0	3	2	5	18
8:30 AM	0	0	0	0	0	0	1	1	0	10	0	10	0	4	0	4	15
8:45 AM	0	0	0	0	0	0	0	0	1	11	0	12	0	9	0	9	21
Total Survey	0	1	0	1	1	0	3	4	4	72	1	77	1	44	5	50	132

Heavy Vehicle Peak Hour Summary

7:50 AM to 8:50 AM

By Approach	Northbound SW 63rd Ave			Southbound SW 63rd Ave			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	0	1	4	7	11	42	22	64	23	41	64	70
PHF	0.25			0.50			0.75			0.72			0.80

By Movement	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	1	0	1	1	0	3	4	2	40	0	42	0	19	4	23	70
PHF	0.00	0.25	0.00	0.25	0.25	0.00	0.38	0.50	0.50	0.77	0.00	0.75	0.00	0.68	0.50	0.72	0.80

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	0	1	2	2	32	1	35	1	23	1	25	62
7:15 AM	0	1	0	1	1	0	1	2	3	35	0	38	0	25	2	27	68
7:30 AM	0	1	0	1	1	0	2	3	3	37	0	40	0	20	4	24	68
7:45 AM	0	1	0	1	1	0	3	4	3	38	0	41	0	19	4	23	69
8:00 AM	0	1	0	1	0	0	2	2	2	40	0	42	0	21	4	25	70

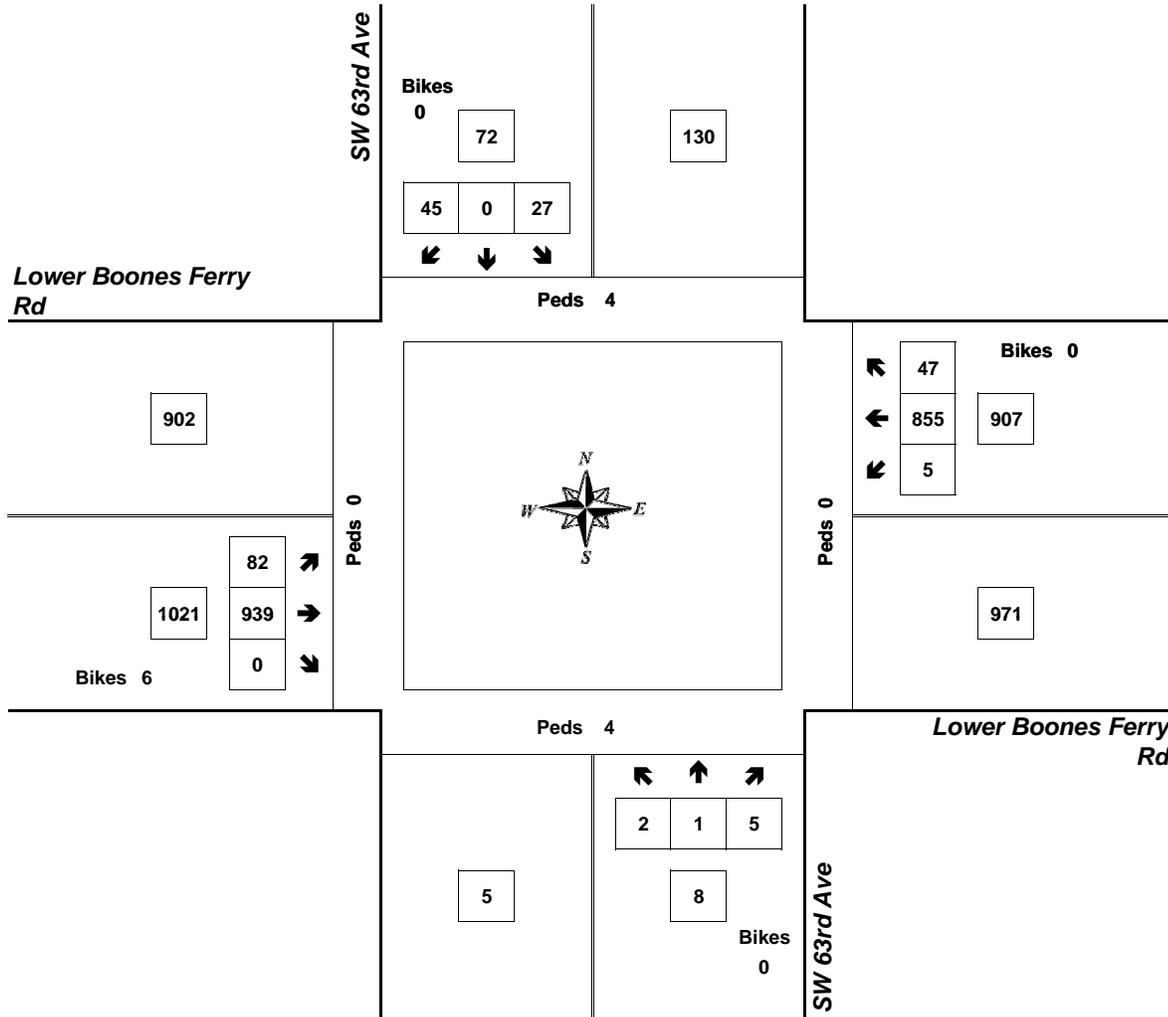
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 63rd Ave & Lower Boones Ferry Rd

7:50 AM to 8:50 AM
Tuesday, August 04, 2015



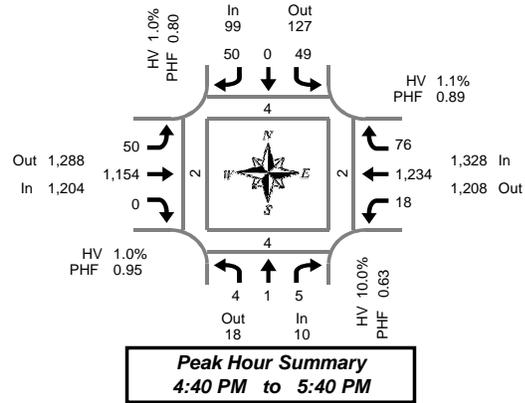
Approach	PHF	HV%	Volume
EB	0.88	4.1%	1,021
WB	0.93	2.5%	907
NB	0.67	12.5%	8
SB	0.75	5.6%	72
Intersection	0.91	3.5%	2,008

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 63rd Ave & Lower Boones Ferry Rd

Tuesday, August 04, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	1	0	8	0	7	91	0	0	1	96	10	0	214	0	0	0	0
4:05 PM	0	0	0	0	5	0	4	0	6	109	0	0	0	115	15	0	254	0	0	0	0
4:10 PM	0	0	0	0	3	0	10	0	5	89	0	0	0	101	6	0	214	0	0	0	0
4:15 PM	0	1	0	0	7	0	2	0	4	74	0	0	0	97	11	0	196	1	0	0	0
4:20 PM	0	0	0	0	3	0	5	0	4	113	0	1	2	108	13	1	248	1	0	0	0
4:25 PM	1	0	0	0	8	0	5	0	7	64	0	1	1	94	8	1	188	0	0	0	0
4:30 PM	1	0	1	0	5	0	5	0	5	80	0	0	1	101	7	0	206	0	0	0	0
4:35 PM	1	0	0	0	2	0	3	0	8	68	0	0	1	92	12	0	187	0	0	0	0
4:40 PM	1	0	1	0	4	0	1	0	5	90	0	0	1	103	9	0	215	0	0	0	0
4:45 PM	1	0	0	0	7	0	3	0	3	79	0	0	2	112	8	0	215	1	1	0	0
4:50 PM	0	1	0	0	5	0	7	0	4	95	0	1	1	97	2	0	212	0	1	0	0
4:55 PM	0	0	0	0	6	0	3	0	2	114	0	1	1	102	7	0	235	0	2	0	0
5:00 PM	0	0	0	0	3	0	6	0	3	78	0	0	1	98	9	0	198	2	0	2	2
5:05 PM	0	0	1	0	4	0	4	0	2	107	0	0	1	113	8	0	240	0	0	0	0
5:10 PM	0	0	1	0	3	0	2	0	1	102	0	0	1	135	6	0	251	0	0	0	0
5:15 PM	1	0	0	0	6	0	4	0	4	99	0	1	3	102	5	1	224	0	0	0	0
5:20 PM	0	0	0	0	4	0	2	0	5	100	0	1	2	99	5	0	217	0	0	0	0
5:25 PM	0	0	0	0	2	0	7	0	6	103	0	0	1	88	8	0	215	0	0	0	0
5:30 PM	1	0	1	0	1	0	6	0	7	73	0	1	4	91	6	0	190	0	0	0	0
5:35 PM	0	0	1	0	4	0	5	0	8	114	0	0	0	94	3	0	229	1	0	0	0
5:40 PM	0	0	0	0	3	0	4	0	2	86	0	2	1	107	7	0	210	1	0	0	0
5:45 PM	0	0	1	0	8	0	1	0	6	81	0	2	2	69	9	0	177	0	0	0	0
5:50 PM	0	0	0	0	7	0	7	0	2	109	0	0	0	78	5	0	208	0	1	0	0
5:55 PM	0	0	0	0	4	1	0	0	2	77	0	2	1	85	5	0	175	0	0	0	0
Total Survey	7	2	7	0	105	1	104	0	108	2,195	0	13	28	2,377	184	3	5,118	7	5	2	2

15-Minute Interval Summary

4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	0	0	0	0	9	0	22	0	18	289	0	0	1	312	31	0	682	0	0	0	0
4:15 PM	1	1	0	0	18	0	12	0	15	251	0	2	3	299	32	2	632	2	0	0	0
4:30 PM	3	0	2	0	11	0	9	0	18	238	0	0	3	296	28	0	608	0	0	0	0
4:45 PM	1	1	0	0	18	0	13	0	9	288	0	2	4	311	17	0	662	1	4	0	0
5:00 PM	0	0	2	0	10	0	12	0	6	287	0	0	3	346	23	0	689	2	0	2	2
5:15 PM	1	0	0	0	12	0	13	0	15	302	0	2	6	289	18	1	656	0	0	0	0
5:30 PM	1	0	2	0	8	0	15	0	17	273	0	3	5	292	16	0	629	2	0	0	0
5:45 PM	0	0	1	0	19	1	8	0	10	267	0	4	3	232	19	0	560	0	1	0	0
Total Survey	7	2	7	0	105	1	104	0	108	2,195	0	13	28	2,377	184	3	5,118	7	5	2	2

Peak Hour Summary

4:40 PM to 5:40 PM

By Approach	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	10	18	28	0	99	127	226	0	1,204	1,288	2,492	5	1,328	1,208	2,536	1	2,641	4	4	2	2
%HV	10.0%				1.0%				1.0%				1.1%				1.1%				
PHF	0.63				0.80				0.95				0.89				0.92				

By Movement	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	4	1	5	10	49	0	50	99	50	1,154	0	1,204	18	1,234	76	1,328	2,641
%HV	25.0%	0.0%	0.0%	10.0%	0.0%	0.0%	2.0%	1.0%	4.0%	0.9%	0.0%	1.0%	0.0%	1.1%	1.3%	1.1%	1.1%
PHF	0.50	0.25	0.63	0.63	0.68	0.00	0.69	0.80	0.60	0.94	0.00	0.95	0.64	0.88	0.79	0.89	0.92

Rolling Hour Summary

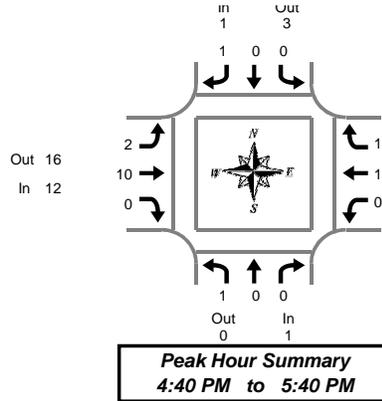
4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	5	2	2	0	56	0	56	0	60	1,066	0	4	11	1,218	108	2	2,584	3	4	0	0
4:15 PM	5	2	4	0	57	0	46	0	48	1,064	0	4	13	1,252	100	2	2,591	5	4	2	2
4:30 PM	5	1	4	0	51	0	47	0	48	1,115	0	4	16	1,242	86	1	2,615	3	4	2	2
4:45 PM	3	1	4	0	48	0	53	0	47	1,150	0	7	18	1,238	74	1	2,636	5	4	2	2
5:00 PM	2	0	5	0	49	1	48	0	48	1,129	0	9	17	1,159	76	1	2,534	4	1	2	2

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 63rd Ave & Lower Boones Ferry Rd

Tuesday, August 04, 2015

4:00 PM to 6:00 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	
4:05 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
4:10 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	3
4:15 PM	0	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	3
4:20 PM	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	2	3
4:25 PM	0	0	0	0	0	0	0	0	0	1	1	0	2	0	1	1	2	4
4:30 PM	1	0	0	1	0	0	0	0	0	1	0	0	1	0	1	1	2	4
4:35 PM	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	2	2	4
4:40 PM	1	0	0	1	0	0	0	0	0	1	0	0	1	0	1	1	2	4
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	3	4
4:50 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
4:55 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	2	0	2	4
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
5:20 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
5:25 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	1	2	2
5:30 PM	0	0	0	0	0	0	0	0	0	1	2	0	3	0	1	0	1	4
5:35 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
5:40 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:50 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	0	2
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
Total Survey	2	0	0	2	0	0	2	2	7	18	0	25	0	18	8	26	55	

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total	
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total		
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	1	1	2	4	
4:15 PM	0	0	0	0	0	0	0	0	0	3	3	0	6	0	2	2	4	10
4:30 PM	2	0	0	2	0	0	0	0	0	3	1	0	4	0	2	4	6	12
4:45 PM	0	0	0	0	0	0	0	0	0	0	5	0	5	0	7	0	7	12
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
5:15 PM	0	0	0	0	0	0	1	1	0	1	1	0	1	0	3	0	3	5
5:30 PM	0	0	0	0	0	0	0	0	0	1	4	0	5	0	2	0	2	7
5:45 PM	0	0	0	0	0	0	1	1	0	1	1	0	1	0	0	1	1	3
Total Survey	2	0	0	2	0	0	2	2	7	18	0	25	0	18	8	26	55	

Heavy Vehicle Peak Hour Summary 4:40 PM to 5:40 PM

By Approach	Northbound SW 63rd Ave			Southbound SW 63rd Ave			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	1	0	1	1	3	4	12	16	28	15	10	25	29
PHF	0.25			0.25			0.60			0.54			0.60

By Movement	Northbound SW 63rd Ave			Southbound SW 63rd Ave			Eastbound Lower Boones Ferry Rd			Westbound Lower Boones Ferry Rd			Total
	L	T	R	L	T	R	L	T	R	L	T	R	
Volume	1	0	0	1	0	0	2	10	0	12	0	14	15
PHF	0.25	0.00	0.00	0.25	0.00	0.25	0.50	0.50	0.00	0.60	0.00	0.50	0.25

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 63rd Ave				Southbound SW 63rd Ave				Eastbound Lower Boones Ferry Rd				Westbound Lower Boones Ferry Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	2	0	0	2	0	0	0	0	6	11	0	17	0	12	7	19	38
4:15 PM	2	0	0	2	0	0	0	0	6	10	0	16	0	12	6	18	36
4:30 PM	2	0	0	2	0	0	1	1	3	8	0	11	0	13	4	17	31
4:45 PM	0	0	0	0	0	0	1	1	1	11	0	12	0	13	0	13	26
5:00 PM	0	0	0	0	0	0	2	2	1	7	0	8	0	6	1	7	17

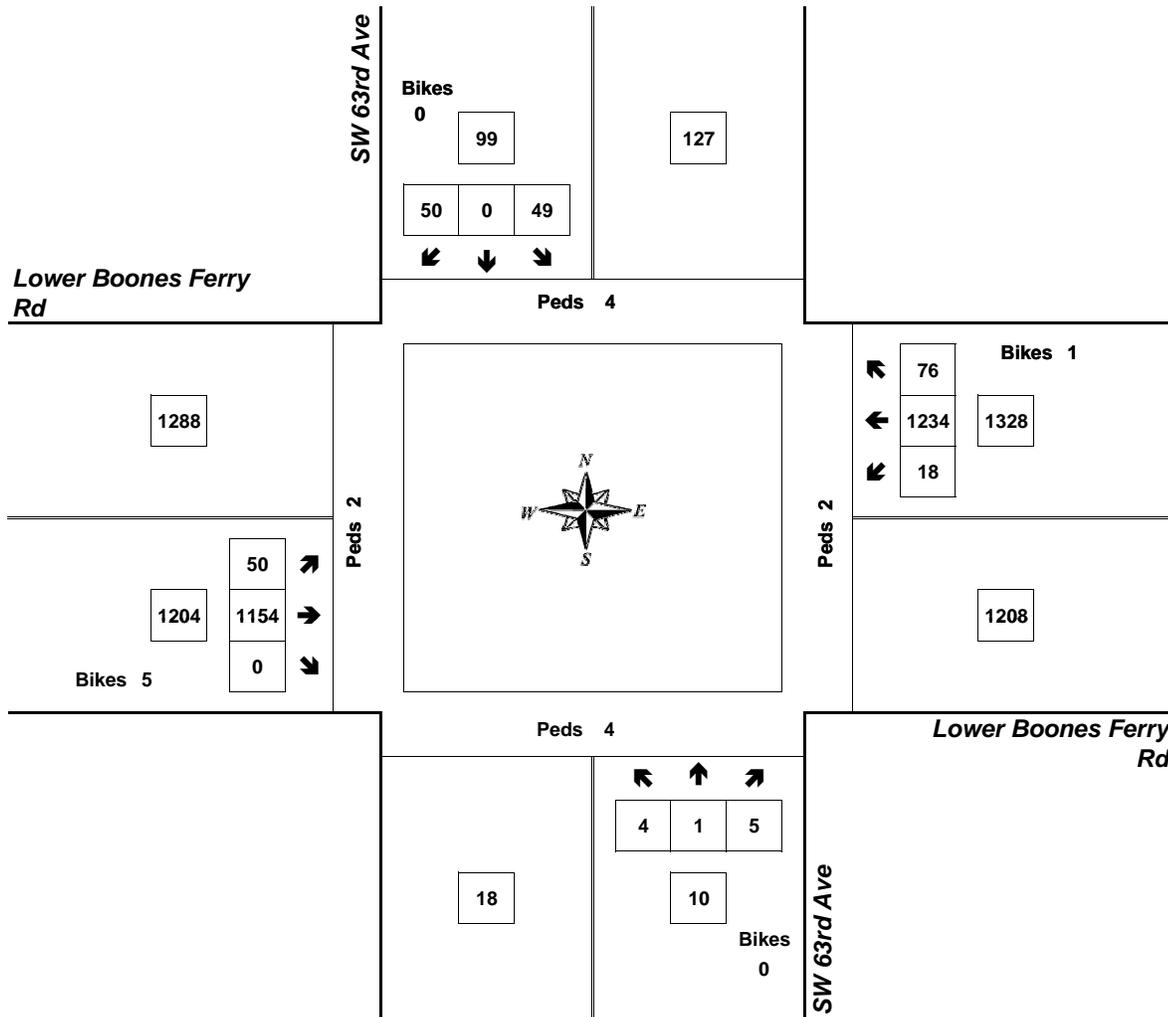
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 63rd Ave & Lower Boones Ferry Rd

4:40 PM to 5:40 PM
Tuesday, August 04, 2015



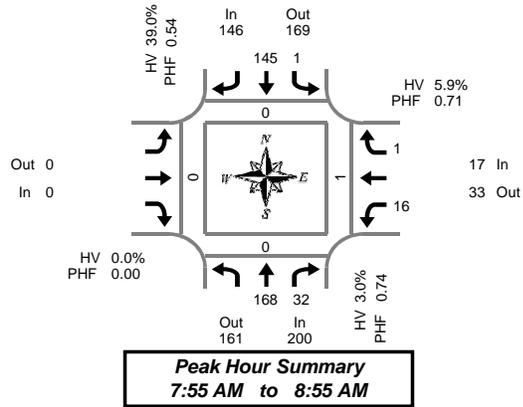
Approach	PHF	HV%	Volume
EB	0.95	1.0%	1,204
WB	0.89	1.1%	1,328
NB	0.63	10.0%	10
SB	0.80	1.0%	99
Intersection	0.92	1.1%	2,641

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Driveway Access

Thursday, July 23, 2015

7:00 AM to 9:00 AM

5-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
7:00 AM	10	5	0	0	5	0			0	0	0	0	20	0	1	0	0
7:05 AM	5	4	0	0	3	0			0	0	0	0	12	0	0	0	0
7:10 AM	11	1	0	0	5	0			0	1	0	0	18	0	0	0	0
7:15 AM	8	1	0	0	6	0			0	0	0	0	15	0	0	0	0
7:20 AM	9	1	0	0	3	0			0	0	1	0	14	0	2	0	0
7:25 AM	10	5	1	0	4	0			0	1	0	0	20	0	0	0	0
7:30 AM	6	5	0	0	3	0			0	1	0	0	15	0	0	0	0
7:35 AM	14	2	0	0	9	0			0	0	0	0	25	0	0	0	0
7:40 AM	12	1	0	0	6	2			0	2	0	0	21	0	0	0	0
7:45 AM	16	4	0	0	8	0			0	0	0	0	28	0	0	0	0
7:50 AM	12	4	0	0	8	0			0	1	0	0	25	0	0	0	0
7:55 AM	30	4	0	0	4	0			0	3	0	0	41	0	0	0	0
8:00 AM	16	1	0	1	5	0			0	0	0	0	23	0	0	0	0
8:05 AM	15	2	0	0	4	0			0	1	0	0	22	0	0	0	0
8:10 AM	13	3	0	0	7	0			0	1	0	0	24	0	0	0	0
8:15 AM	11	5	0	0	7	0			0	1	0	0	24	0	0	0	0
8:20 AM	15	2	0	0	8	0			0	2	1	0	28	0	0	0	0
8:25 AM	15	2	0	0	29	0			0	0	0	0	46	0	0	0	0
8:30 AM	6	0	0	0	23	0			0	3	0	0	32	0	0	0	0
8:35 AM	17	5	0	0	15	0			0	0	0	0	37	0	0	0	0
8:40 AM	5	1	0	0	14	0			0	1	0	0	21	0	0	0	0
8:45 AM	10	4	0	0	17	0			0	1	0	0	32	0	0	1	0
8:50 AM	15	3	0	0	12	0			0	3	0	0	33	0	0	0	0
8:55 AM	18	1	0	0	9	0			0	2	0	0	30	1	0	0	0
Total Survey	299	66	1	1	214	2			0	24	2	0	606	1	3	1	0

15-Minute Interval Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
7:00 AM	26	10	0	0	13	0			0	1	0	0	50	0	1	0	0
7:15 AM	27	7	1	0	13	0			0	1	1	0	49	0	2	0	0
7:30 AM	32	8	0	0	18	2			0	3	0	0	61	0	0	0	0
7:45 AM	58	12	0	0	20	0			0	4	0	0	94	0	0	0	0
8:00 AM	44	6	0	1	16	0			0	2	0	0	69	0	0	0	0
8:15 AM	41	9	0	0	44	0			0	3	1	0	98	0	0	0	0
8:30 AM	28	6	0	0	52	0			0	4	0	0	90	0	0	0	0
8:45 AM	43	8	0	0	38	0			0	6	0	0	95	1	0	1	0
Total Survey	299	66	1	1	214	2			0	24	2	0	606	1	3	1	0

Peak Hour Summary 7:55 AM to 8:55 AM

By Approach	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	200	161	361	0	146	169	315	0	0	0	0	0	17	33	50	0	363
%HV	3.0%				39.0%				0.0%				5.9%			17.6%	
PHF	0.74				0.54				0.00				0.71			0.79	

By Movement	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total				
	T	R	Total	L	T	Total			Total	L	R	Total					
Volume	168	32	200	1	145	146			0	16	1	17	363				
%HV	NA	2.4%	6.3%	3.0%	#####	38.6%	NA	39.0%	NA	NA	NA	0.0%	6.3%	NA	0.0%	5.9%	17.6%
PHF	0.69	0.80	0.74	0.25	0.54	0.54			0.00	0.80	0.25	0.71	0.79				

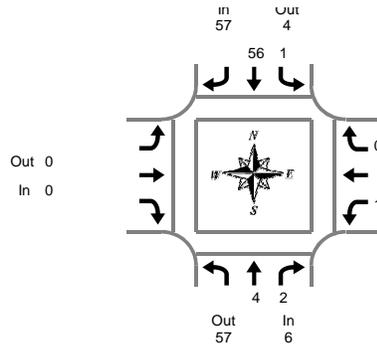
Rolling Hour Summary 7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes			Bikes	L	R	Bikes		North	South	East	West
7:00 AM	143	37	1	0	64	2			0	9	1	0	254	0	3	0	0
7:15 AM	161	33	1	1	67	2			0	10	1	0	273	0	2	0	0
7:30 AM	175	35	0	1	98	2			0	12	1	0	322	0	0	0	0
7:45 AM	171	33	0	1	132	0			0	13	1	0	351	0	0	0	0
8:00 AM	156	29	0	1	150	0			0	15	1	0	352	1	0	1	0

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



Peak Hour Summary
7:55 AM to 8:55 AM

SW 65th Ave & Driveway Access

Thursday, July 23, 2015

7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	
	T	R	Total	L	T	Total	Total	L	R	Total	L	R		Total
7:00 AM	0	0	0	0	1	1				0	0	0	0	1
7:05 AM	0	0	0	0	0	0				0	0	0	0	0
7:10 AM	3	1	4	0	0	0				0	0	0	0	4
7:15 AM	1	0	1	0	1	1				0	0	0	0	2
7:20 AM	0	0	0	0	1	1				0	0	0	0	1
7:25 AM	0	0	0	0	1	1				0	1	0	1	2
7:30 AM	1	0	1	0	1	1				0	0	0	0	2
7:35 AM	0	1	1	0	0	0				0	0	0	0	1
7:40 AM	0	0	0	0	1	1				0	0	0	0	1
7:45 AM	0	0	0	0	0	0				0	0	0	0	0
7:50 AM	0	0	0	0	2	2				0	1	0	1	3
7:55 AM	0	0	0	0	0	0				0	1	0	1	1
8:00 AM	0	0	0	1	0	1				0	0	0	0	1
8:05 AM	1	0	1	0	0	0				0	0	0	0	1
8:10 AM	0	1	1	0	1	1				0	0	0	0	2
8:15 AM	0	0	0	0	0	0				0	0	0	0	0
8:20 AM	0	0	0	0	0	0				0	0	0	0	0
8:25 AM	1	1	2	0	16	16				0	0	0	0	18
8:30 AM	0	0	0	0	15	15				0	0	0	0	15
8:35 AM	1	0	1	0	8	8				0	0	0	0	9
8:40 AM	0	0	0	0	9	9				0	0	0	0	9
8:45 AM	0	0	0	0	5	5				0	0	0	0	5
8:50 AM	1	0	1	0	2	2				0	0	0	0	3
8:55 AM	1	0	1	0	1	1				0	1	0	1	3
Total Survey	10	4	14	1	65	66				0	4	0	4	84

Heavy Vehicle 15-Minute Interval Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	
	T	R	Total	L	T	Total	Total	L	R	Total	L	R		Total
7:00 AM	3	1	4	0	1	1				0	0	0	0	5
7:15 AM	1	0	1	0	3	3				0	1	0	1	5
7:30 AM	1	1	2	0	2	2				0	0	0	0	4
7:45 AM	0	0	0	0	2	2				0	2	0	2	4
8:00 AM	1	1	2	1	1	2				0	0	0	0	4
8:15 AM	1	1	2	0	16	16				0	0	0	0	18
8:30 AM	1	0	1	0	32	32				0	0	0	0	33
8:45 AM	2	0	2	0	8	8				0	1	0	1	11
Total Survey	10	4	14	1	65	66				0	4	0	4	84

Heavy Vehicle Peak Hour Summary

7:55 AM to 8:55 AM

By Approach	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	6	57	63	57	4	61	0	0	0	1	3	4	64
PHF	0.50			0.37			0.00			0.25			0.38

By Movement	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total
	T	R	Total	L	T	Total	Total	L	R	Total	L	R	
Volume	4	2	6	1	56	57		0	1		0	1	64
PHF	0.50	0.50	0.50	0.25	0.36	0.37		0.00	0.25		0.00	0.25	0.38

Heavy Vehicle Rolling Hour Summary

7:00 AM to 9:00 AM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	
	T	R	Total	L	T	Total	Total	L	R	Total	L	R		Total
7:00 AM	5	2	7	0	8	8				0	3	0	3	18
7:15 AM	3	2	5	1	8	9				0	3	0	3	17
7:30 AM	3	3	6	1	21	22				0	2	0	2	30
7:45 AM	3	2	5	1	51	52				0	2	0	2	59
8:00 AM	5	2	7	1	57	58				0	1	0	1	66

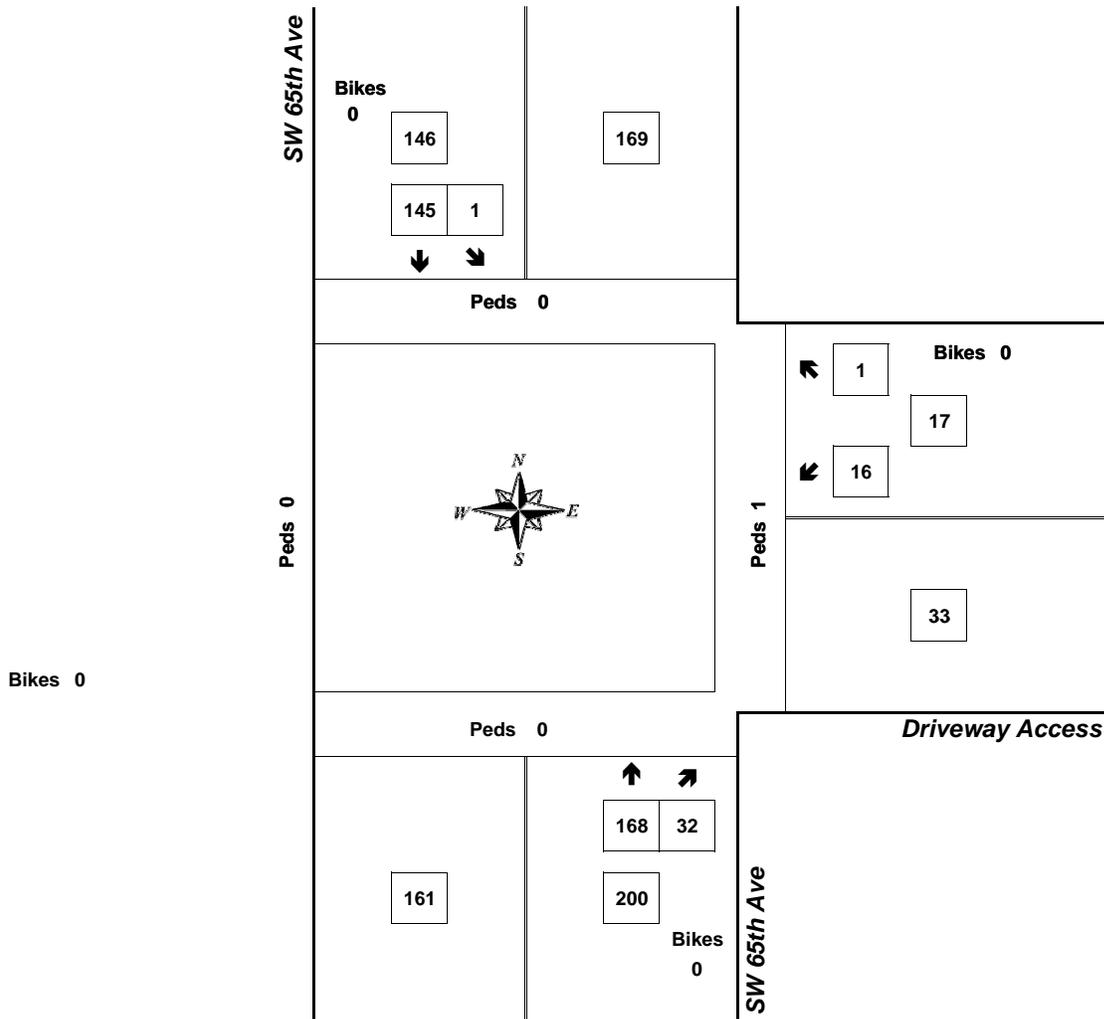
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 65th Ave & Driveway Access

7:55 AM to 8:55 AM
Thursday, July 23, 2015



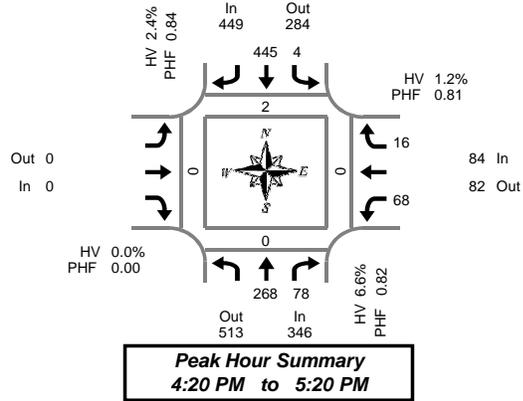
Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.71	5.9%	17
NB	0.74	3.0%	200
SB	0.54	39.0%	146
Intersection	0.79	17.6%	363

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

Total Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Driveway Access

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes		Bikes	L	R	Bikes	North		South	East	West	
4:00 PM	15	5	0	1	32	0		0	3	0	0	56	0	0	0	0	
4:05 PM	19	7	0	0	23	0		0	4	3	0	56	0	0	0	0	
4:10 PM	18	4	0	0	31	0		0	7	1	0	61	0	0	0	0	
4:15 PM	23	4	0	0	22	0		0	8	3	0	60	0	0	0	0	
4:20 PM	24	5	0	1	36	0		0	7	0	0	73	0	0	0	0	
4:25 PM	33	9	0	0	30	0		0	7	2	0	81	0	0	0	0	
4:30 PM	29	6	0	0	32	0		0	6	1	0	74	0	0	0	0	
4:35 PM	26	2	0	0	27	0		0	4	3	0	62	0	0	0	0	
4:40 PM	22	6	0	0	39	0		0	4	1	0	72	0	0	0	0	
4:45 PM	12	7	0	0	38	0		0	10	2	0	69	0	0	0	0	
4:50 PM	23	4	0	1	32	0		0	6	3	0	69	0	0	0	0	
4:55 PM	14	8	0	1	39	0		0	3	1	0	66	2	0	0	0	
5:00 PM	21	9	0	0	40	0		0	5	0	0	75	0	0	0	0	
5:05 PM	29	7	0	1	48	0		0	6	0	0	91	0	0	0	0	
5:10 PM	20	10	0	0	42	0		0	7	3	0	82	0	0	0	0	
5:15 PM	15	5	0	0	42	0		0	3	0	0	65	0	0	0	0	
5:20 PM	14	6	0	0	37	0		0	7	0	0	64	0	0	0	0	
5:25 PM	18	6	0	1	26	1		0	9	0	0	60	0	0	0	0	
5:30 PM	24	7	0	1	33	1		0	11	1	0	77	0	0	0	0	
5:35 PM	32	7	0	0	18	0		0	3	0	0	60	0	0	0	0	
5:40 PM	26	5	0	1	25	0		0	4	0	0	61	0	0	0	0	
5:45 PM	16	7	0	1	24	1		0	3	0	0	51	1	0	0	0	
5:50 PM	18	7	0	0	26	0		0	7	0	0	58	0	0	0	0	
5:55 PM	14	6	0	0	23	0		0	4	0	0	47	0	0	0	0	
Total Survey	505	149	0	9	765	3		0	138	24	0	1,590	3	0	0	0	

15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes		Bikes	L	R	Bikes	North		South	East	West	
4:00 PM	52	16	0	1	86	0		0	14	4	0	173	0	0	0	0	
4:15 PM	80	18	0	1	88	0		0	22	5	0	214	0	0	0	0	
4:30 PM	77	14	0	0	98	0		0	14	5	0	208	0	0	0	0	
4:45 PM	49	19	0	2	109	0		0	19	6	0	204	2	0	0	0	
5:00 PM	70	26	0	1	130	0		0	18	3	0	248	0	0	0	0	
5:15 PM	47	17	0	1	105	1		0	19	0	0	189	0	0	0	0	
5:30 PM	82	19	0	2	76	1		0	18	1	0	198	0	0	0	0	
5:45 PM	48	20	0	1	73	1		0	14	0	0	156	1	0	0	0	
Total Survey	505	149	0	9	765	3		0	138	24	0	1,590	3	0	0	0	

Peak Hour Summary 4:20 PM to 5:20 PM

By Approach	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total	Pedestrians Crosswalk						
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total		North	South	East	West			
Volume	346	513	859	0	449	284	733	0	0	0	0	84	82	166	0	879	2	0	0	0
%HV	6.6%			2.4%			0.0%			1.2%			4.0%							
PHF	0.82			0.84			0.00			0.81			0.89							

By Movement	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total
	T	R	Total	L	T	Total		Total	L	R	Total		
Volume	268	78	346	4	445	449		0	68	16	84	879	
%HV	NA	8.6%	0.0%	6.6%	0.0%	2.5%	NA	2.4%	NA	NA	NA	4.0%	
PHF	0.76	0.75	0.82	0.50	0.84	0.84		0.00	0.85	0.67	0.81	0.89	

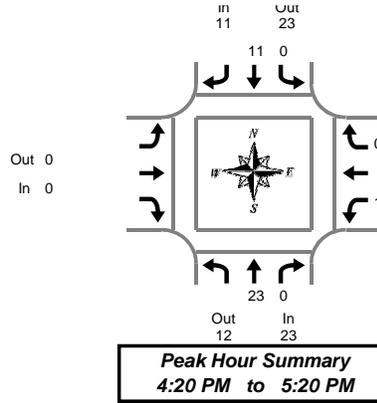
Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total	Pedestrians Crosswalk			
	T	R	Bikes	L	T	Bikes		Bikes	L	R	Bikes	North		South	East	West	
4:00 PM	258	67	0	4	381	0		0	69	20	0	799	2	0	0	0	
4:15 PM	276	77	0	4	425	0		0	73	19	0	874	2	0	0	0	
4:30 PM	243	76	0	4	442	1		0	70	14	0	849	2	0	0	0	
4:45 PM	248	81	0	6	420	2		0	74	10	0	839	2	0	0	0	
5:00 PM	247	82	0	5	384	3		0	69	4	0	791	1	0	0	0	

Heavy Vehicle Summary



Clay Carney
(503) 833-2740



SW 65th Ave & Driveway Access

Wednesday, July 22, 2015

4:00 PM to 6:00 PM

Peak Hour Summary
4:20 PM to 5:20 PM

Heavy Vehicle 5-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
4:00 PM	0	0	0	0	0	0			0	0	0	0	0
4:05 PM	2	0	2	0	2	2			0	0	0	0	4
4:10 PM	2	0	2	0	0	0			0	0	0	0	2
4:15 PM	4	0	4	0	0	0			0	0	0	0	4
4:20 PM	4	0	4	0	1	1			0	0	0	0	5
4:25 PM	8	0	8	0	1	1			0	0	0	0	9
4:30 PM	5	0	5	0	1	1			0	0	0	0	6
4:35 PM	2	0	2	0	0	0			0	0	0	0	2
4:40 PM	1	0	1	0	3	3			0	0	0	0	4
4:45 PM	1	0	1	0	2	2			0	0	0	0	3
4:50 PM	0	0	0	0	1	1			0	0	0	0	1
4:55 PM	0	0	0	0	1	1			0	0	0	0	1
5:00 PM	0	0	0	0	0	0			0	0	0	0	0
5:05 PM	2	0	2	0	0	0			0	0	0	0	2
5:10 PM	0	0	0	0	0	0			0	1	0	0	1
5:15 PM	0	0	0	0	1	1			0	0	0	0	1
5:20 PM	2	0	2	0	0	0			0	0	0	0	2
5:25 PM	0	0	0	0	0	0			0	0	0	0	0
5:30 PM	2	0	2	0	0	0			0	0	0	0	2
5:35 PM	2	0	2	0	0	0			0	0	0	0	2
5:40 PM	1	0	1	0	0	0			0	0	0	0	1
5:45 PM	2	0	2	0	0	0			0	0	0	0	2
5:50 PM	0	0	0	0	2	2			0	0	0	0	2
5:55 PM	0	0	0	0	0	0			0	0	0	0	0
Total Survey	40	0	40	0	15	15			0	1	0	1	56

Heavy Vehicle 15-Minute Interval Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
4:00 PM	4	0	4	0	2	2			0	0	0	0	6
4:15 PM	16	0	16	0	2	2			0	0	0	0	18
4:30 PM	8	0	8	0	4	4			0	0	0	0	12
4:45 PM	1	0	1	0	4	4			0	0	0	0	5
5:00 PM	2	0	2	0	0	0			0	1	0	0	3
5:15 PM	2	0	2	0	1	1			0	0	0	0	3
5:30 PM	5	0	5	0	0	0			0	0	0	0	5
5:45 PM	2	0	2	0	2	2			0	0	0	0	4
Total Survey	40	0	40	0	15	15			0	1	0	1	56

Heavy Vehicle Peak Hour Summary 4:20 PM to 5:20 PM

By Approach	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	23	12	35	11	23	34	0	0	0	1	0	1	35
PHF	0.34			0.46			0.00			0.25			0.44

By Movement	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Total
	T	R	Total	L	T	Total			Total	L	R	Total	
Volume	23	0	23	0	11	11			0	1	0	1	35
PHF	0.34	0.00	0.34	0.00	0.46	0.46			0.00	0.25	0.00	0.25	0.44

Heavy Vehicle Rolling Hour Summary 4:00 PM to 6:00 PM

Interval Start Time	Northbound SW 65th Ave			Southbound SW 65th Ave			Eastbound Driveway Access			Westbound Driveway Access			Interval Total
	T	R	Total	L	T	Total			Total	L	R	Total	
4:00 PM	29	0	29	0	12	12			0	0	0	0	41
4:15 PM	27	0	27	0	10	10			0	1	0	1	38
4:30 PM	13	0	13	0	9	9			0	1	0	1	23
4:45 PM	10	0	10	0	5	5			0	1	0	1	16
5:00 PM	11	0	11	0	3	3			0	1	0	1	15

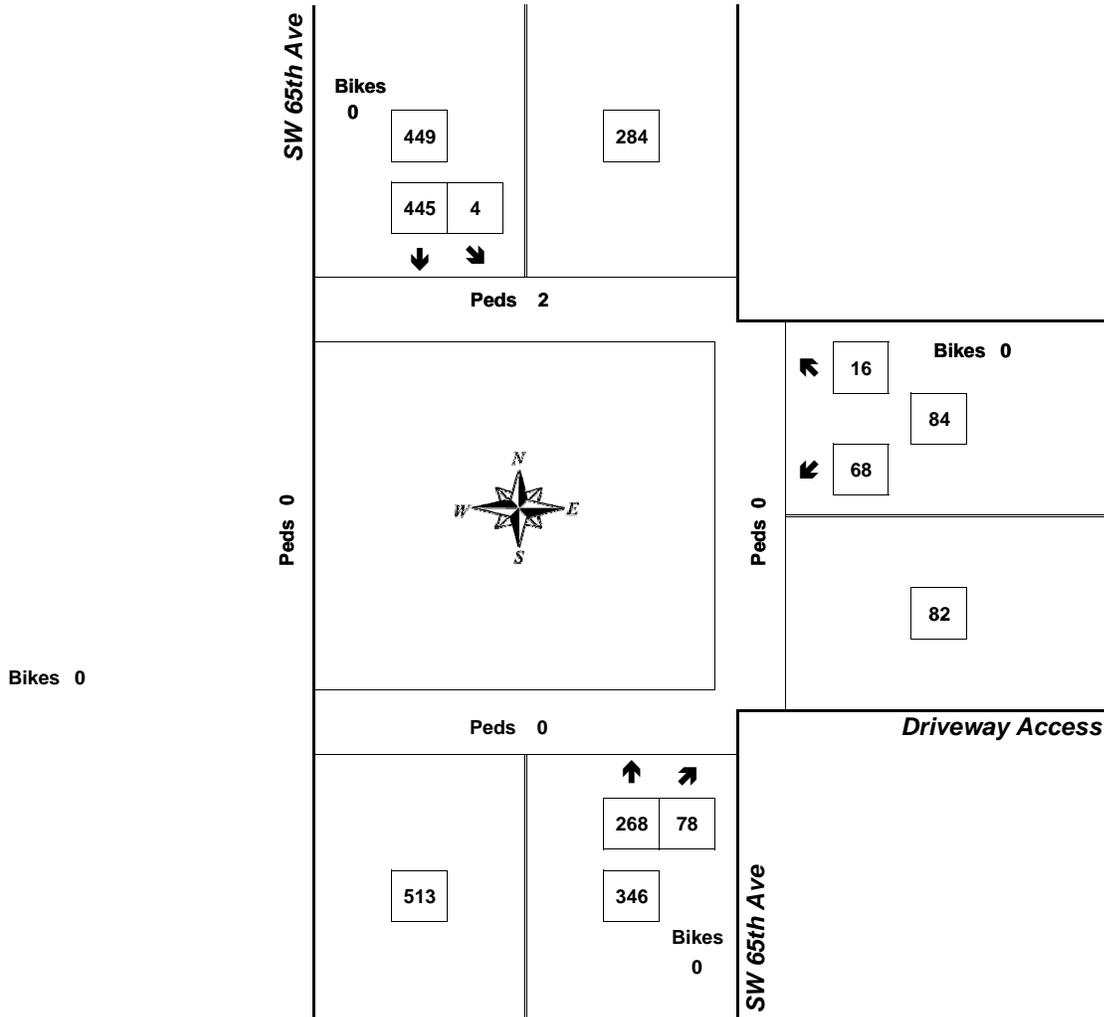
Peak Hour Summary



Clay Carney
(503) 833-2740

SW 65th Ave & Driveway Access

4:20 PM to 5:20 PM
Wednesday, July 22, 2015



Approach	PHF	HV%	Volume
EB	0.00	0.0%	0
WB	0.81	1.2%	84
NB	0.82	6.6%	346
SB	0.84	2.4%	449
Intersection	0.89	4.0%	879

Count Period: 4:00 PM to 6:00 PM

36-South Shore

Weekday To Lake Oswego Transit Center or Portland

Tualatin Park & Ride Stop ID 7879	Bryant & Lakeview Stop ID 665	South Shore & Fernwood Stop ID 5299	S State & Wilbur Stop ID 5514	Lake Oswego Transit Center Stop ID 8208	SW Macadam & Boundary Stop ID 3603	SW 6th & W Burnside Stop ID 7751
X6:58	7:10	7:15	7:23	7:27	7:41	8:00
X7:28	7:40	7:45	7:54	7:58	8:14	8:33
8:28	8:39	8:43	8:49	8:52	—	—
9:58	10:09	10:14	10:20	10:23	—	—
11:40	11:51	11:56	12:02	12:05	—	—
1:12	1:23	1:28	1:34	1:37	—	—
2:24	2:35	2:40	2:46	2:49	—	—
4:03	4:14	4:19	4:25	4:28	—	—

X Trips to Portland City Center depart Lake Oswego Transit Center one stop south which also serves Line 35 (Stop ID 8207).

Times in darker print are p.m.

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at trimet.org/alerts or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.

36-South Shore

Weekday			To Tualatin Park & Ride			
SW 5th & Alder Stop ID 7586	SW Moody & Gibbs Stop ID 12760	SW Macadam & Nevada Stop ID 3620	Lake Oswego Transit Center Stop ID 8208	South Shore & Fernwood Stop ID 5296	4400 Block Lakeview Stop ID 3364	Tualatin Park & Ride Stop ID 7879
—	—	—	8:04	8:11	8:15	8:28
—	—	—	9:35	9:41	9:45	9:58
—	—	—	11:16	11:23	11:27	11:40
—	—	—	12:48	12:55	12:59	1:12
—	—	—	2:20	2:28	2:32	2:45
—	—	—	3:35	3:43	3:47	4:00
4:15	4:25	4:35	4:48	4:57	5:02	5:17
—	—	—	5:20	5:30	5:35	5:49
5:13	5:26	5:38	5:53	6:03	6:08	6:22
6:10	6:21	6:30	6:42	6:51	6:56	7:09

Note: In downtown Portland, board at the **C** stops on 5th Avenue.

Times in darker print are p.m.

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at trimet.org/alerts or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.

37-Lake Grove

Weekday		To Lake Oswego Transit Center	
Tualatin Park & Ride Stop ID 7879	Boones Ferry Rd & Reese Rd Stop ID 11783	Lake Oswego Transit Center	
6:59	7:06	7:14	
7:48	7:55	8:04	
9:20	9:27	9:35	
11:01	11:08	11:16	
12:32	12:40	12:48	
2:04	2:12	2:20	
3:18	3:26	3:35	
5:02	5:10	5:20	

Times in darker print are p.m.

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at trimet.org/alerts or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.

37-Lake Grove

Weekday	To Tualatin Park & Ride	
Lake Oswego Transit Center Stop ID 8208	Boones Ferry Rd & Oakridge Stop ID 11776	Tualatin Park & Ride Stop ID 7879
7:14	7:23	7:30
8:52	9:01	9:08
10:23	10:32	10:39
12:05	12:14	12:22
1:37	1:46	1:54
2:49	2:58	3:06
4:28	4:37	4:45

Times in darker print are p.m.

Please note: Schedules may change without notice by up to three minutes to relieve overcrowding or adjust to traffic conditions. Service can also be affected by construction, accidents and weather conditions. You can check for any current detours or service disruptions at trimet.org/alerts or call 503-238-RIDE (7433) for real-time arrival information from TransitTracker™. All buses, MAX trains and streetcars are accessible to people with disabilities.



TRIP GENERATION CALCULATIONS

Land Use: Fast Food Restaurant with Drive-Through Window
Land Use Code: 934
Variable: 1000 Sq Ft Gross Floor Area
Variable Quantity: 2.931

AM PEAK HOUR

Trip Rate: 45.42

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	68	65	133

PM PEAK HOUR

Trip Rate: 32.65

	Enter	Exit	Total
Directional Distribution	52%	48%	
Trip Ends	50	46	96

WEEKDAY

Trip Rate: 496.12

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	727	727	1,454

SATURDAY

Trip Rate: 722.03

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1058	1058	2,116

Source: TRIP GENERATION, Ninth Edition



TRIP GENERATION CALCULATIONS

Land Use: Coffee/Donut Shop with Drive-Through Window
Land Use Code: 937
Variable: 1000 Sq Ft Gross Floor Area
Variable Quantity: 2.931

AM PEAK HOUR

Trip Rate: 100.58

	Enter	Exit	Total
Directional Distribution	51%	49%	
Trip Ends	150	145	295

PM PEAK HOUR

Trip Rate: 42.8

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	63	62	125

WEEKDAY

Trip Rate: 818.58

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,200	1,200	2,400

SATURDAY PEAK

Trip Rate: 84.52

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	124	124	248

Source: TRIP GENERATION, Ninth Edition



LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.



*LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS*

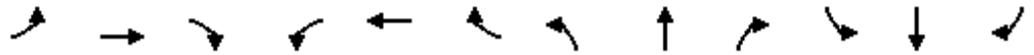
LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

*LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS*

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

HCM Signalized Intersection Capacity Analysis
 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Arby's/Starbucks Conversion
 Existing Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.95	0.95	0.88
Frbp, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		6225	1507	3303	3406					1633	1638	2649
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		6225	1507	3303	3406					1633	1638	2649
Volume (vph)	0	722	369	392	806	0	0	0	0	441	3	478
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	802	410	436	896	0	0	0	0	490	3	531
RTOR Reduction (vph)	0	0	260	0	0	0	0	0	0	0	0	183
Lane Group Flow (vph)	0	802	150	436	896	0	0	0	0	245	248	348
Confl. Peds. (#/hr)	13		5	5		13						
Confl. Bikes (#/hr)			5			6						1
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	0%	0%	0%	5%	5%	5%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		21.9	21.9	12.0	37.9					14.1	14.1	14.1
Effective Green, g (s)		21.9	21.9	12.0	37.9					14.1	14.1	14.1
Actuated g/C Ratio		0.36	0.36	0.20	0.63					0.23	0.23	0.23
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2272	550	661	2151					384	385	623
v/s Ratio Prot		0.13		c0.13	c0.26							
v/s Ratio Perm			0.10							0.15	0.15	0.13
v/c Ratio		0.35	0.27	0.66	0.42					0.64	0.64	0.56
Uniform Delay, d1		13.9	13.4	22.1	5.5					20.7	20.7	20.2
Progression Factor		1.00	1.00	0.86	0.58					1.00	1.00	1.00
Incremental Delay, d2		0.4	1.2	2.2	0.1					3.5	3.7	1.1
Delay (s)		14.3	14.6	21.3	3.3					24.1	24.4	21.3
Level of Service		B	B	C	A					C	C	C
Approach Delay (s)		14.4			9.2			0.0			22.7	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay			14.9			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.52									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			65.1%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Arby's/Starbucks Conversion
 Existing Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↑↑↑	↖	↖	↖	↖↗			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.86	1.00	0.95	0.95	0.88			
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3303	3406			6108	1468	1633	1638	2707			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3303	3406			6108	1468	1633	1638	2707			
Volume (vph)	310	853	0	0	767	534	431	2	564	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	337	927	0	0	834	580	468	2	613	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	350	0	0	174	0	0	0
Lane Group Flow (vph)	337	927	0	0	834	230	234	236	439	0	0	0
Conf. Peds. (#/hr)	12		5	5		12						
Conf. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	6%	6%	6%	7%	7%	7%	5%	5%	5%	0%	0%	0%
Turn Type	Prot					Perm	Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	9.6	37.4			23.8	23.8	14.6	14.6	14.6			
Effective Green, g (s)	9.6	37.4			23.8	23.8	14.6	14.6	14.6			
Actuated g/C Ratio	0.16	0.62			0.40	0.40	0.24	0.24	0.24			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	528	2123			2423	582	397	399	659			
v/s Ratio Prot	c0.10	c0.27			0.14							
v/s Ratio Perm						0.16	0.14	0.14	c0.16			
v/c Ratio	0.64	0.44			0.34	0.40	0.59	0.59	0.67			
Uniform Delay, d1	23.6	5.8			12.6	13.0	20.1	20.1	20.5			
Progression Factor	0.80	0.35			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.3	0.6			0.4	2.0	2.2	2.3	2.6			
Delay (s)	21.3	2.7			13.0	15.0	22.3	22.4	23.0			
Level of Service	C	A			B	B	C	C	C			
Approach Delay (s)		7.6			13.8			22.7			0.0	
Approach LOS		A			B			C			A	

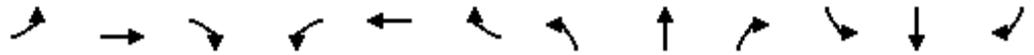
Intersection Summary

HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: SW Lower Boones Ferry Road & SW 65th Avenue

Arby's/Starbucks Conversion
 Existing Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑↑		↘	↕			↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96			0.96	1.00
Satd. Flow (prot)	1703	3406	1486	1736	4953		1649	1643			1409	1237
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96			0.96	1.00
Satd. Flow (perm)	1703	3406	1486	1736	4953		1649	1643			1409	1237
Volume (vph)	158	919	340	69	814	32	363	21	18	24	8	124
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	172	999	370	75	885	35	395	23	20	26	9	135
RTOR Reduction (vph)	0	0	184	0	4	0	0	5	0	0	0	34
Lane Group Flow (vph)	172	999	186	75	916	0	221	212	0	0	35	101
Confl. Peds. (#/hr)	4		2	2		4	3		3	3		3
Confl. Bikes (#/hr)						5			3			1
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	30%	30%	30%
Turn Type	Prot		Perm	Prot			Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases			2									4
Actuated Green, G (s)	12.2	40.3	40.3	4.0	32.1		16.0	16.0			3.7	15.9
Effective Green, g (s)	12.2	40.3	40.3	4.0	32.1		16.0	16.0			3.7	15.9
Actuated g/C Ratio	0.15	0.50	0.50	0.05	0.40		0.20	0.20			0.05	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	260	1716	749	87	1987		330	329			65	246
v/s Ratio Prot	c0.10	c0.29		c0.04	0.18		c0.13	0.13			c0.02	0.06
v/s Ratio Perm			0.13									0.02
v/c Ratio	0.66	0.58	0.25	0.86	0.46		0.67	0.64			0.54	0.41
Uniform Delay, d1	32.0	13.9	11.3	37.7	17.6		29.6	29.4			37.3	28.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	6.2	1.5	0.8	53.8	0.8		5.1	4.3			8.3	1.1
Delay (s)	38.1	15.4	12.1	91.5	18.4		34.6	33.7			45.6	29.1
Level of Service	D	B	B	F	B		C	C			D	C
Approach Delay (s)		17.1			23.9			34.2			32.5	
Approach LOS		B			C			C			C	

Intersection Summary		
HCM Average Control Delay	22.5	HCM Level of Service C
HCM Volume to Capacity ratio	0.62	
Actuated Cycle Length (s)	80.0	Sum of lost time (s) 16.0
Intersection Capacity Utilization	57.1%	ICU Level of Service B
Analysis Period (min)	15	

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
4: Site Access & SW 65th Avenue

Arby's/Starbucks Conversion
Existing Conditions - AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	16	1	168	32	1	145
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	20	1	213	41	1	184
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			303			
pX, platoon unblocked						
vC, conflicting volume	420	234			254	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	420	234			254	
tC, single (s)	6.5	6.3			4.5	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.6	
p0 queue free %	97	100			100	
cM capacity (veh/h)	581	795			1122	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	22	253	185
Volume Left	20	0	1
Volume Right	1	41	0
cSH	591	1700	1122
Volume to Capacity	0.04	0.15	0.00
Queue Length 95th (ft)	3	0	0
Control Delay (s)	11.3	0.0	0.1
Lane LOS	B		A
Approach Delay (s)	11.3	0.0	0.1
Approach LOS	B		

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
5: SW Lower Boones Ferry Road & Site Access

Arby's/Starbucks Conversion
Existing Conditions - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑			↑↑↑				↑			↑
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	0	1005	25	0	891	14	0	0	24	0	0	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	1142	28	0	1012	16	0	0	27	0	0	12
Pedestrians								3				4
Lane Width (ft)								12.0				12.0
Walking Speed (ft/s)								4.0				4.0
Percent Blockage								0				0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		463										
pX, platoon unblocked				0.79			0.79	0.79		0.79	0.79	0.79
vC, conflicting volume	1031			1174			1607	2198	348	1525	2192	589
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1031			961			1506	2249	348	1402	2241	225
tC, single (s)	4.2			4.1			7.6	6.6	7.0	7.7	6.7	7.1
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			100			100	100	96	100	100	98
cM capacity (veh/h)	656			564			63	32	640	71	30	600

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SE 1	NW 1
Volume Total	761	409	405	405	218	27	12
Volume Left	0	0	0	0	0	0	0
Volume Right	0	28	0	0	16	27	12
cSH	1700	1700	1700	1700	1700	640	600
Volume to Capacity	0.45	0.24	0.24	0.24	0.13	0.04	0.02
Queue Length 95th (ft)	0	0	0	0	0	3	2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	10.9	11.1
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			10.9	11.1
Approach LOS						B	B

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	38.6%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 6: SW Lower Boones Ferry Road & SW 63rd Avenue

Arby's/Starbucks Conversion
 Existing Conditions - AM Peak Hour



Movement	EBL2	EBL	SBL	SBR	SWR	SWR2
Lane Configurations						
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Volume (veh/h)	83	944	27	45	860	47
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	91	1037	30	49	945	52
Pedestrians			4			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			0			
Right turn flare (veh)						
Median type		TWLTL				
Median storage (veh)			0			
Upstream signal (ft)		766				
pX, platoon unblocked			0.82			
vC, conflicting volume	1001		1676	502		
vC1, stage 1 conf vol			975			
vC2, stage 2 conf vol			701			
vCu, unblocked vol	1001		1606	502		
tC, single (s)	4.2		6.9	7.0		
tC, 2 stage (s)			5.9			
tF (s)	2.2		3.6	3.4		
p0 queue free %	86		80	90		
cM capacity (veh/h)	673		147	502		

Direction, Lane #	EB 1	EB 2	EB 3	SB 1	SB 2	SW 1	SW 2
Volume Total	91	519	519	30	49	630	367
Volume Left	91	0	0	30	0	0	0
Volume Right	0	0	0	0	49	0	52
cSH	673	1700	1700	147	502	1700	1700
Volume to Capacity	0.14	0.31	0.31	0.20	0.10	0.37	0.22
Queue Length 95th (ft)	12	0	0	18	8	0	0
Control Delay (s)	11.2	0.0	0.0	35.7	12.9	0.0	0.0
Lane LOS	B			E	B		
Approach Delay (s)	0.9			21.5		0.0	
Approach LOS				C			

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization	44.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis
 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Arby's/Starbucks Conversion
 Existing Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.95	0.95	0.88
Frbp, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1559	3433	3539					1681	1713	2787
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1559	3433	3539					1681	1713	2787
Volume (vph)	0	1081	528	758	1297	0	0	0	0	313	66	478
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1103	539	773	1323	0	0	0	0	319	67	488
RTOR Reduction (vph)	0	0	286	0	0	0	0	0	0	0	0	72
Lane Group Flow (vph)	0	1103	253	773	1323	0	0	0	0	188	198	416
Conf. Peds. (#/hr)	15		9	9		15						
Conf. Bikes (#/hr)			4			6						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	2%	2%	2%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		17.8	17.8	16.8	38.6					13.4	13.4	13.4
Effective Green, g (s)		17.8	17.8	16.8	38.6					13.4	13.4	13.4
Actuated g/C Ratio		0.30	0.30	0.28	0.64					0.22	0.22	0.22
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1920	463	961	2277					375	383	622
v/s Ratio Prot		0.17		c0.23	c0.37							
v/s Ratio Perm			0.16							0.11	0.12	c0.15
v/c Ratio		0.57	0.55	0.80	0.58					0.50	0.52	0.67
Uniform Delay, d1		17.9	17.7	20.1	6.1					20.4	20.5	21.3
Progression Factor		1.00	1.00	0.60	0.30					1.00	1.00	1.00
Incremental Delay, d2		1.3	4.6	3.4	0.3					1.1	1.2	2.7
Delay (s)		19.1	22.3	15.5	2.1					21.4	21.6	24.0
Level of Service		B	C	B	A					C	C	C
Approach Delay (s)		20.2			7.1			0.0			22.9	
Approach LOS		C			A			A			C	
Intersection Summary												
HCM Average Control Delay			14.7			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			75.7%			ICU Level of Service				D		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Arby's/Starbucks Conversion
 Existing Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↑			↑↑↑	↖	↗	↖	↗			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.86	1.00	0.95	0.95	0.88			
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3467	3574			6408	1543	1681	1686	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3467	3574			6408	1543	1681	1686	2787			
Volume (vph)	467	927	0	0	1488	565	567	2	598	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	502	997	0	0	1600	608	610	2	643	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	396	0	0	145	0	0	0
Lane Group Flow (vph)	502	997	0	0	1600	212	305	307	498	0	0	0
Confl. Peds. (#/hr)	11		7	7		11						
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot					Perm	Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	12.0	36.9			20.9	20.9	15.1	15.1	15.1			
Effective Green, g (s)	12.0	36.9			20.9	20.9	15.1	15.1	15.1			
Actuated g/C Ratio	0.20	0.61			0.35	0.35	0.25	0.25	0.25			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	693	2198			2232	537	423	424	701			
v/s Ratio Prot	c0.14	0.28			c0.25							
v/s Ratio Perm						0.14	0.18	0.18	0.18			
v/c Ratio	0.72	0.45			0.72	0.39	0.72	0.72	0.71			
Uniform Delay, d1	22.5	6.2			17.0	14.8	20.5	20.5	20.5			
Progression Factor	0.55	0.25			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.2	0.6			2.0	2.2	6.0	6.0	3.4			
Delay (s)	15.7	2.1			19.0	16.9	26.5	26.6	23.9			
Level of Service	B	A			B	B	C	C	C			
Approach Delay (s)		6.7			18.4			25.2			0.0	
Approach LOS		A			B			C			A	

Intersection Summary

HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: SW Lower Boones Ferry Road & SW 65th Avenue

Arby's/Starbucks Conversion
 Existing Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑↑		↘	↕			↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97			0.97	1.00
Satd. Flow (prot)	1770	3539	1546	1770	5040		1681	1673			1802	1570
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97			0.97	1.00
Satd. Flow (perm)	1770	3539	1546	1770	5040		1681	1673			1802	1570
Volume (vph)	230	875	420	124	1264	62	428	43	32	140	67	361
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	951	457	135	1374	67	465	47	35	152	73	392
RTOR Reduction (vph)	0	0	298	0	5	0	0	6	0	0	0	12
Lane Group Flow (vph)	250	951	159	135	1436	0	274	267	0	0	225	380
Confl. Peds. (#/hr)	5		1	1		5	2		1	1		2
Confl. Bikes (#/hr)			1			7			2			1
Turn Type	Prot		Perm	Prot			Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases			2									4
Actuated Green, G (s)	14.0	31.3	31.3	11.4	28.7		16.8	16.8			14.5	28.5
Effective Green, g (s)	14.0	31.3	31.3	11.4	28.7		16.8	16.8			14.5	28.5
Actuated g/C Ratio	0.16	0.35	0.35	0.13	0.32		0.19	0.19			0.16	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	275	1231	538	224	1607		314	312			290	497
v/s Ratio Prot	c0.14	0.27		0.08	c0.28		c0.16	0.16			c0.12	0.12
v/s Ratio Perm			0.10									0.12
v/c Ratio	0.91	0.77	0.30	0.60	0.89		0.87	0.86			0.78	0.76
Uniform Delay, d1	37.4	26.2	21.3	37.2	29.2		35.6	35.4			36.2	27.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	31.2	4.7	1.4	4.5	8.0		22.4	20.0			12.2	6.9
Delay (s)	68.6	30.9	22.7	41.7	37.2		57.9	55.4			48.4	34.6
Level of Service	E	C	C	D	D		E	E			D	C
Approach Delay (s)		34.3			37.6			56.7			39.6	
Approach LOS		C			D			E			D	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
4: Site Access & SW 65th Avenue

Arby's/Starbucks Conversion
Existing Conditions - PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	68	16	268	78	4	445
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	76	18	301	88	4	500
Pedestrians						2
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			303			
pX, platoon unblocked						
vC, conflicting volume	854	347			389	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	854	347			389	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	97			100	
cM capacity (veh/h)	329	697			1170	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	94	389	504
Volume Left	76	0	4
Volume Right	18	88	0
cSH	366	1700	1170
Volume to Capacity	0.26	0.23	0.00
Queue Length 95th (ft)	25	0	0
Control Delay (s)	18.2	0.0	0.1
Lane LOS	C		A
Approach Delay (s)	18.2	0.0	0.1
Approach LOS	C		

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
5: SW Lower Boones Ferry Road & Site Access

Arby's/Starbucks Conversion
Existing Conditions - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑			↑↑↑				↑			↑
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	0	1125	31	0	1396	40	0	0	54	0	0	42
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	1210	33	0	1501	43	0	0	58	0	0	45
Pedestrians		2						4				4
Lane Width (ft)		12.0						12.0				12.0
Walking Speed (ft/s)		4.0						4.0				4.0
Percent Blockage		0						0				0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		463										
pX, platoon unblocked				0.76			0.76	0.76		0.76	0.76	0.76
vC, conflicting volume	1548			1247			2177	2774	528	1791	2778	626
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1548			1006			2233	3021	528	1724	3027	186
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	88	100	100	93
cM capacity (veh/h)	428			521			17	10	498	39	10	627

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SE 1	NW 1
Volume Total	806	437	600	600	343	58	45
Volume Left	0	0	0	0	0	0	0
Volume Right	0	33	0	0	43	58	45
cSH	1700	1700	1700	1700	1700	498	627
Volume to Capacity	0.47	0.26	0.35	0.35	0.20	0.12	0.07
Queue Length 95th (ft)	0	0	0	0	0	10	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	13.2	11.2
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			13.2	11.2
Approach LOS						B	B

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	42.1%		ICU Level of Service
Analysis Period (min)	15		A

HCM Unsignalized Intersection Capacity Analysis
6: SW Lower Boones Ferry Road & SW 63rd Avenue

Arby's/Starbucks Conversion
Existing Conditions - PM Peak Hour



Movement	EBL2	EBL	SBL	SBR	SWR	SWR2
Lane Configurations	↖	↖↖	↖	↗	↗↗	↗↗
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Volume (veh/h)	51	1159	49	55	1381	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	55	1260	53	60	1501	83
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		TWLTL				
Median storage (veh)		0				
Upstream signal (ft)		766				
pX, platoon unblocked		0.77				
vC, conflicting volume	1588	2289		800		
vC1, stage 1 conf vol		1546				
vC2, stage 2 conf vol		743				
vCu, unblocked vol	1588	2376		800		
tC, single (s)	4.1	*6.0		6.9		
tC, 2 stage (s)		5.0				
tF (s)	2.2	*2.0		3.3		
p0 queue free %	87	67		82		
cM capacity (veh/h)	413	164		328		

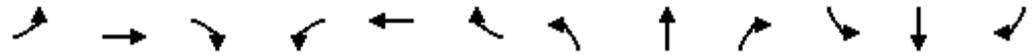
Direction, Lane #	EB 1	EB 2	EB 3	SB 1	SB 2	SW 1	SW 2
Volume Total	55	630	630	53	60	1001	583
Volume Left	55	0	0	53	0	0	0
Volume Right	0	0	0	0	60	0	83
cSH	413	1700	1700	164	328	1700	1700
Volume to Capacity	0.13	0.37	0.37	0.33	0.18	0.59	0.34
Queue Length 95th (ft)	12	0	0	33	16	0	0
Control Delay (s)	15.1	0.0	0.0	37.3	18.4	0.0	0.0
Lane LOS	C			E	C		
Approach Delay (s)	0.6			27.3		0.0	
Approach LOS				D			

Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

* User Entered Value

HCM Signalized Intersection Capacity Analysis
 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Arby's/Starbucks Conversion
 2017 Background - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘↗	↗↗					↘	↗	↗↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.95	0.95	0.88
Frbp, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		6225	1506	3303	3406					1633	1638	2649
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		6225	1506	3303	3406					1633	1638	2649
Volume (vph)	0	764	370	402	848	0	0	0	0	464	3	480
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	849	411	447	942	0	0	0	0	516	3	533
RTOR Reduction (vph)	0	0	263	0	0	0	0	0	0	0	0	164
Lane Group Flow (vph)	0	849	148	447	942	0	0	0	0	258	261	369
Confl. Peds. (#/hr)	13		5	5		13						
Confl. Bikes (#/hr)			5			6						1
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	0%	0%	0%	5%	5%	5%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		21.6	21.6	12.1	37.7					14.3	14.3	14.3
Effective Green, g (s)		21.6	21.6	12.1	37.7					14.3	14.3	14.3
Actuated g/C Ratio		0.36	0.36	0.20	0.63					0.24	0.24	0.24
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2241	542	666	2140					389	390	631
v/s Ratio Prot		0.14		c0.14	c0.28							
v/s Ratio Perm			0.10							0.16	0.16	0.14
v/c Ratio		0.38	0.27	0.67	0.44					0.66	0.67	0.59
Uniform Delay, d1		14.2	13.6	22.1	5.7					20.7	20.7	20.2
Progression Factor		1.00	1.00	0.85	0.64					1.00	1.00	1.00
Incremental Delay, d2		0.5	1.2	2.4	0.1					4.2	4.3	1.4
Delay (s)		14.7	14.9	21.2	3.8					24.9	25.0	21.6
Level of Service		B	B	C	A					C	C	C
Approach Delay (s)		14.8			9.4			0.0			23.3	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay			15.2			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			65.8%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Arby's/Starbucks Conversion
2017 Background - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↑↑↑	↗	↖	↕	↗↖			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.86	1.00	0.95	0.95	0.88			
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3303	3406			6108	1468	1633	1638	2707			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3303	3406			6108	1468	1633	1638	2707			
Volume (vph)	311	921	0	0	815	544	433	2	586	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	338	1001	0	0	886	591	471	2	637	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	363	0	0	146	0	0	0
Lane Group Flow (vph)	338	1001	0	0	886	228	236	237	492	0	0	0
Conf. Peds. (#/hr)	12		5	5		12						
Conf. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	6%	6%	6%	7%	7%	7%	5%	5%	5%	0%	0%	0%
Turn Type	Prot					Perm	Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	9.9	37.0			23.1	23.1	15.0	15.0	15.0			
Effective Green, g (s)	9.9	37.0			23.1	23.1	15.0	15.0	15.0			
Actuated g/C Ratio	0.17	0.62			0.39	0.39	0.25	0.25	0.25			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	545	2100			2352	565	408	410	677			
v/s Ratio Prot	c0.10	c0.29			0.15							
v/s Ratio Perm						0.16	0.14	0.14	c0.18			
v/c Ratio	0.62	0.48			0.38	0.40	0.58	0.58	0.73			
Uniform Delay, d1	23.3	6.2			13.3	13.4	19.7	19.7	20.6			
Progression Factor	0.78	0.29			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.9	0.7			0.5	2.1	2.0	2.0	3.9			
Delay (s)	20.1	2.5			13.7	15.6	21.7	21.7	24.5			
Level of Service	C	A			B	B	C	C	C			
Approach Delay (s)		7.0			14.5			23.3			0.0	
Approach LOS		A			B			C			A	

Intersection Summary

HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: SW Lower Boones Ferry Road & SW 65th Avenue

Arby's/Starbucks Conversion
 2017 Background - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑↑		↘	↕			↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96			0.96	1.00
Satd. Flow (prot)	1703	3406	1486	1736	4939		1649	1645			1406	1236
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96			0.96	1.00
Satd. Flow (perm)	1703	3406	1486	1736	4939		1649	1645			1406	1236
Volume (vph)	233	941	354	72	834	46	378	29	19	47	13	167
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	253	1023	385	78	907	50	411	32	21	51	14	182
RTOR Reduction (vph)	0	0	205	0	7	0	0	5	0	0	0	26
Lane Group Flow (vph)	253	1023	180	78	950	0	232	227	0	0	65	156
Confl. Peds. (#/hr)	4		2	2		4	3		3	3		3
Confl. Bikes (#/hr)						5			3			1
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	30%	30%	30%
Turn Type	Prot		Perm	Prot			Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases			2									4
Actuated Green, G (s)	13.8	37.5	37.5	4.0	27.7		16.1	16.1			6.4	20.2
Effective Green, g (s)	13.8	37.5	37.5	4.0	27.7		16.1	16.1			6.4	20.2
Actuated g/C Ratio	0.17	0.47	0.47	0.05	0.35		0.20	0.20			0.08	0.25
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	294	1597	697	87	1710		332	331			112	374
v/s Ratio Prot	c0.15	c0.30		0.04	0.19		c0.14	0.14			0.05	c0.07
v/s Ratio Perm			0.12									0.05
v/c Ratio	0.86	0.64	0.26	0.90	0.56		0.70	0.69			0.58	0.42
Uniform Delay, d1	32.2	16.1	12.8	37.8	21.2		29.7	29.6			35.5	25.0
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	21.8	2.0	0.9	62.9	1.3		6.3	5.8			7.4	0.8
Delay (s)	53.9	18.1	13.7	100.7	22.5		36.0	35.4			42.9	25.7
Level of Service	D	B	B	F	C		D	D			D	C
Approach Delay (s)		22.6			28.4			35.7			30.3	
Approach LOS		C			C			D			C	

Intersection Summary		
HCM Average Control Delay	26.7	HCM Level of Service C
HCM Volume to Capacity ratio	0.67	
Actuated Cycle Length (s)	80.0	Sum of lost time (s) 12.0
Intersection Capacity Utilization	58.6%	ICU Level of Service B
Analysis Period (min)	15	

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	77	6	211	86	5	156
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	97	8	267	109	6	197
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	303					
pX, platoon unblocked						
vC, conflicting volume	533	323			377	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	533	323			377	
tC, single (s)	6.5	6.3			4.5	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.6	
p0 queue free %	80	99			99	
cM capacity (veh/h)	497	709			1004	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	105	376	204
Volume Left	97	0	6
Volume Right	8	109	0
cSH	508	1700	1004
Volume to Capacity	0.21	0.22	0.01
Queue Length 95th (ft)	19	0	0
Control Delay (s)	13.9	0.0	0.3
Lane LOS	B		A
Approach Delay (s)	13.9	0.0	0.3
Approach LOS	B		

Intersection Summary			
Average Delay			2.2
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis
 5: SW Lower Boones Ferry Road & Site Access

Arby's/Starbucks Conversion
 2017 Background - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑			↑↑↑				↑			↑
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	0	1053	26	0	927	26	0	0	25	0	0	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	1197	30	0	1053	30	0	0	28	0	0	12
Pedestrians								3				4
Lane Width (ft)								12.0				12.0
Walking Speed (ft/s)								4.0				4.0
Percent Blockage								0				0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		463										
pX, platoon unblocked				0.77			0.77	0.77		0.77	0.77	0.77
vC, conflicting volume	1086			1230			1682	2301	369	1595	2301	617
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1086			1003			1588	2390	369	1475	2390	209
tC, single (s)	4.2			4.1			7.6	6.6	7.0	7.7	6.7	7.1
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			100			100	100	95	100	100	98
cM capacity (veh/h)	625			528			53	25	621	60	23	597

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SE 1	NW 1
Volume Total	798	428	421	421	240	28	12
Volume Left	0	0	0	0	0	0	0
Volume Right	0	30	0	0	30	28	12
cSH	1700	1700	1700	1700	1700	621	597
Volume to Capacity	0.47	0.25	0.25	0.25	0.14	0.05	0.02
Queue Length 95th (ft)	0	0	0	0	0	4	2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.1	11.2
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			11.1	11.2
Approach LOS						B	B

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	39.9%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 6: SW Lower Boones Ferry Road & SW 63rd Avenue

Arby's/Starbucks Conversion
 2017 Background - AM Peak Hour



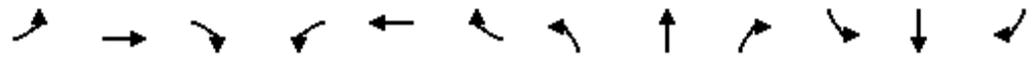
Movement	EBL2	EBL	SBL	SBR	SWR	SWR2
Lane Configurations	↗	↗↗	↗	↗	↗↗	
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Volume (veh/h)	86	989	28	47	906	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	95	1087	31	52	996	54
Pedestrians			4			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			0			
Right turn flare (veh)						
Median type		TWLTL				
Median storage (veh)			0			
Upstream signal (ft)		766				
pX, platoon unblocked			0.80			
vC, conflicting volume	1053		1759	529		
vC1, stage 1 conf vol			1027			
vC2, stage 2 conf vol			732			
vCu, unblocked vol	1053		1698	529		
tC, single (s)	4.2		6.9	7.0		
tC, 2 stage (s)			5.9			
tF (s)	2.2		3.6	3.4		
p0 queue free %	85		77	89		
cM capacity (veh/h)	643		137	483		

Direction, Lane #	EB 1	EB 2	EB 3	SB 1	SB 2	SW 1	SW 2
Volume Total	95	543	543	31	52	664	386
Volume Left	95	0	0	31	0	0	0
Volume Right	0	0	0	0	52	0	54
cSH	643	1700	1700	137	483	1700	1700
Volume to Capacity	0.15	0.32	0.32	0.23	0.11	0.39	0.23
Queue Length 95th (ft)	13	0	0	21	9	0	0
Control Delay (s)	11.6	0.0	0.0	38.9	13.4	0.0	0.0
Lane LOS	B			E	B		
Approach Delay (s)	0.9			22.9		0.0	
Approach LOS				C			

Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Signalized Intersection Capacity Analysis
 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Arby's/Starbucks Conversion
 2017 Background - PM Peak Hour

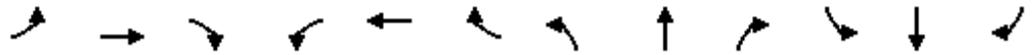


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.95	0.95	0.88
Frbp, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1559	3433	3539					1681	1712	2787
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1559	3433	3539					1681	1712	2787
Volume (vph)	0	1133	530	778	1355	0	0	0	0	322	66	480
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1156	541	794	1383	0	0	0	0	329	67	490
RTOR Reduction (vph)	0	0	287	0	0	0	0	0	0	0	0	63
Lane Group Flow (vph)	0	1156	254	794	1383	0	0	0	0	193	203	427
Confl. Peds. (#/hr)	15		9	9		15						
Confl. Bikes (#/hr)			4			6						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	2%	2%	2%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		17.6	17.6	16.8	38.4					13.6	13.6	13.6
Effective Green, g (s)		17.6	17.6	16.8	38.4					13.6	13.6	13.6
Actuated g/C Ratio		0.29	0.29	0.28	0.64					0.23	0.23	0.23
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1898	457	961	2265					381	388	632
v/s Ratio Prot		0.18		c0.23	c0.39							
v/s Ratio Perm			0.16							0.11	0.12	c0.15
v/c Ratio		0.61	0.56	0.83	0.61					0.51	0.52	0.68
Uniform Delay, d1		18.2	17.9	20.2	6.4					20.3	20.4	21.2
Progression Factor		1.00	1.00	0.62	0.32					1.00	1.00	1.00
Incremental Delay, d2		1.5	4.8	4.1	0.3					1.1	1.3	2.9
Delay (s)		19.7	22.7	16.6	2.4					21.3	21.6	24.1
Level of Service		B	C	B	A					C	C	C
Approach Delay (s)		20.7			7.5			0.0			22.9	
Approach LOS		C			A			A			C	
Intersection Summary												
HCM Average Control Delay			15.1			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			76.6%			ICU Level of Service				D		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Arby's/Starbucks Conversion
 2017 Background - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↑↑↑	↖	↖	↕	↖↗			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.86	1.00	0.95	0.95	0.88			
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3467	3574			6408	1543	1681	1686	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3467	3574			6408	1543	1681	1686	2787			
Volume (vph)	469	980	0	0	1571	585	569	2	608	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	504	1054	0	0	1689	629	612	2	654	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	395	0	0	137	0	0	0
Lane Group Flow (vph)	504	1054	0	0	1689	234	306	308	517	0	0	0
Confl. Peds. (#/hr)	11		7	7		11						
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot						Perm	Perm	Perm			
Protected Phases	5	2					6		8			
Permitted Phases							6	8	8			
Actuated Green, G (s)	11.0	37.3					22.3	22.3	14.7	14.7	14.7	
Effective Green, g (s)	11.0	37.3					22.3	22.3	14.7	14.7	14.7	
Actuated g/C Ratio	0.18	0.62					0.37	0.37	0.24	0.24	0.24	
Clearance Time (s)	4.0	4.0					4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	636	2222					2382	573	412	413	683	
v/s Ratio Prot	c0.15	0.29					c0.26					
v/s Ratio Perm							0.15	0.18	0.18	c0.19		
v/c Ratio	0.79	0.47					0.71	0.41	0.74	0.75	0.76	
Uniform Delay, d1	23.4	6.1					16.1	14.0	20.9	20.9	21.0	
Progression Factor	0.57	0.38					1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	5.7	0.6					1.8	2.1	7.1	7.2	4.8	
Delay (s)	19.1	2.9					17.9	16.1	28.0	28.1	25.8	
Level of Service	B	A					B	B	C	C	C	
Approach Delay (s)	8.1						17.4	26.9			0.0	
Approach LOS	A						B	C			A	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: SW Lower Boones Ferry Road & SW 65th Avenue

Arby's/Starbucks Conversion
2017 Background - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑↑	↗	↙	↑↑↑		↙	↕			↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97			0.97	1.00
Satd. Flow (prot)	1770	3539	1546	1770	5034		1681	1675			1801	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97			0.97	1.00
Satd. Flow (perm)	1770	3539	1546	1770	5034		1681	1675			1801	1571
Volume (vph)	271	902	437	129	1305	73	445	49	33	162	74	427
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	295	980	475	140	1418	79	484	53	36	176	80	464
RTOR Reduction (vph)	0	0	315	0	7	0	0	6	0	0	0	8
Lane Group Flow (vph)	295	980	160	140	1490	0	286	281	0	0	256	456
Confl. Peds. (#/hr)	5		1	1		5	2		1	1		2
Confl. Bikes (#/hr)			1			7			2			1
Turn Type	Prot		Perm	Prot			Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases			2									4
Actuated Green, G (s)	15.4	30.3	30.3	12.1	27.0		16.4	16.4			15.2	30.6
Effective Green, g (s)	15.4	30.3	30.3	12.1	27.0		16.4	16.4			15.2	30.6
Actuated g/C Ratio	0.17	0.34	0.34	0.13	0.30		0.18	0.18			0.17	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	303	1191	520	238	1510		306	305			304	534
v/s Ratio Prot	c0.17	0.28		0.08	c0.30		c0.17	0.17			0.14	c0.15
v/s Ratio Perm			0.10									0.14
v/c Ratio	0.97	0.82	0.31	0.59	0.99		0.93	0.92			0.84	0.85
Uniform Delay, d1	37.1	27.4	22.1	36.6	31.3		36.3	36.2			36.2	27.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	44.2	6.5	1.5	3.7	20.2		34.4	31.9			18.6	12.6
Delay (s)	81.3	33.9	23.6	40.3	51.5		70.7	68.1			54.9	40.2
Level of Service	F	C	C	D	D		E	E			D	D
Approach Delay (s)		39.1			50.6			69.4			45.4	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
4: Site Access & SW 65th Avenue

Arby's/Starbucks Conversion
2017 Background - PM Peak Hour



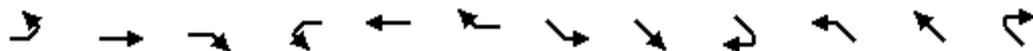
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	114	20	286	118	9	491
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	128	22	321	133	10	552
Pedestrians						2
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			303			
pX, platoon unblocked						
vC, conflicting volume	960	390			454	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	960	390			454	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	55	97			99	
cM capacity (veh/h)	283	660			1107	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	151	454	562
Volume Left	128	0	10
Volume Right	22	133	0
cSH	310	1700	1107
Volume to Capacity	0.49	0.27	0.01
Queue Length 95th (ft)	63	0	1
Control Delay (s)	27.1	0.0	0.3
Lane LOS	D		A
Approach Delay (s)	27.1	0.0	0.3
Approach LOS	D		

Intersection Summary			
Average Delay			3.6
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis
5: SW Lower Boones Ferry Road & Site Access

Arby's/Starbucks Conversion
2017 Background - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑			↑↑↑				↑			↑
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	0	1178	32	0	1450	50	0	0	56	0	0	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	1267	34	0	1559	54	0	0	60	0	0	47
Pedestrians		2						4				4
Lane Width (ft)		12.0						12.0				12.0
Walking Speed (ft/s)		4.0						4.0				4.0
Percent Blockage		0						0				0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		463										
pX, platoon unblocked				0.74			0.74	0.74		0.74	0.74	0.74
vC, conflicting volume	1617			1305			2271	2895	553	1870	2905	655
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1617			1064			2364	3205	553	1825	3218	188
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	87	100	100	92
cM capacity (veh/h)	402			486			13	7	480	32	7	613

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SE 1	NW 1
Volume Total	844	457	624	624	366	60	47
Volume Left	0	0	0	0	0	0	0
Volume Right	0	34	0	0	54	60	47
cSH	1700	1700	1700	1700	1700	480	613
Volume to Capacity	0.50	0.27	0.37	0.37	0.22	0.13	0.08
Queue Length 95th (ft)	0	0	0	0	0	11	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	13.6	11.4
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			13.6	11.4
Approach LOS						B	B

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	43.6%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 6: SW Lower Boones Ferry Road & SW 63rd Avenue

Arby's/Starbucks Conversion
 2017 Background - PM Peak Hour



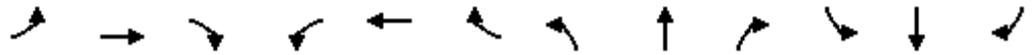
Movement	EBL2	EBL	SBL	SBR	SWR	SWR2
Lane Configurations	↘	↘↘	↘	↗	↗↗	↗↗
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Volume (veh/h)	53	1214	51	57	1443	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	58	1320	55	62	1568	86
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		TWLTL				
Median storage (veh)		0				
Upstream signal (ft)		766				
pX, platoon unblocked		0.75				
vC, conflicting volume	1658	2392		835		
vC1, stage 1 conf vol		1615				
vC2, stage 2 conf vol		777				
vCu, unblocked vol	1658	2521		835		
tC, single (s)	4.1	*6.0		6.9		
tC, 2 stage (s)		5.0				
tF (s)	2.2	*2.0		3.3		
p0 queue free %	85	63		80		
cM capacity (veh/h)	388	151		311		

Direction, Lane #	EB 1	EB 2	EB 3	SB 1	SB 2	SW 1	SW 2
Volume Total	58	660	660	55	62	1046	609
Volume Left	58	0	0	55	0	0	0
Volume Right	0	0	0	0	62	0	86
cSH	388	1700	1700	151	311	1700	1700
Volume to Capacity	0.15	0.39	0.39	0.37	0.20	0.62	0.36
Queue Length 95th (ft)	13	0	0	39	18	0	0
Control Delay (s)	15.9	0.0	0.0	42.2	19.4	0.0	0.0
Lane LOS	C			E	C		
Approach Delay (s)	0.7			30.2		0.0	
Approach LOS				D			

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization	64.7%		ICU Level of Service C
Analysis Period (min)		15	

* User Entered Value

HCM Signalized Intersection Capacity Analysis Arby's/Starbucks Conversion
 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps 2017 Background plus Site - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.95	0.95	0.88
Frbp, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (prot)		6225	1506	3303	3406					1633	1638	2649
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.95	1.00
Satd. Flow (perm)		6225	1506	3303	3406					1633	1638	2649
Volume (vph)	0	774	370	410	859	0	0	0	0	473	3	480
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	0	860	411	456	954	0	0	0	0	526	3	533
RTOR Reduction (vph)	0	0	264	0	0	0	0	0	0	0	0	170
Lane Group Flow (vph)	0	860	147	456	954	0	0	0	0	263	266	363
Confl. Peds. (#/hr)	13		5	5		13						
Confl. Bikes (#/hr)			5			6						1
Heavy Vehicles (%)	5%	5%	5%	6%	6%	6%	0%	0%	0%	5%	5%	5%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		21.5	21.5	12.4	37.9					14.1	14.1	14.1
Effective Green, g (s)		21.5	21.5	12.4	37.9					14.1	14.1	14.1
Actuated g/C Ratio		0.36	0.36	0.21	0.63					0.23	0.23	0.23
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2231	540	683	2151					384	385	623
v/s Ratio Prot		0.14		c0.14	c0.28							
v/s Ratio Perm			0.10							0.16	0.16	0.14
v/c Ratio		0.39	0.27	0.67	0.44					0.68	0.69	0.58
Uniform Delay, d1		14.3	13.7	21.9	5.7					20.9	21.0	20.3
Progression Factor		1.00	1.00	0.80	0.44					1.00	1.00	1.00
Incremental Delay, d2		0.5	1.2	2.3	0.1					5.0	5.3	1.4
Delay (s)		14.8	14.9	19.8	2.6					25.9	26.2	21.7
Level of Service		B	B	B	A					C	C	C
Approach Delay (s)		14.9			8.2			0.0			23.9	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay			14.9			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			66.9%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis Arby's/Starbucks Conversion
 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps 2017 Background plus Site - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↑↑↑	↖	↗	↕	↖↗			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.86	1.00	0.95	0.95	0.88			
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3303	3406			6108	1468	1633	1638	2707			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3303	3406			6108	1468	1633	1638	2707			
Volume (vph)	330	921	0	0	834	552	433	2	595	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	359	1001	0	0	907	600	471	2	647	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	368	0	0	146	0	0	0
Lane Group Flow (vph)	359	1001	0	0	907	232	236	237	502	0	0	0
Conf. Peds. (#/hr)	12		5	5		12						
Conf. Bikes (#/hr)			6			4						
Heavy Vehicles (%)	6%	6%	6%	7%	7%	7%	5%	5%	5%	0%	0%	0%
Turn Type	Prot					Perm	Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases						6	8		8			
Actuated Green, G (s)	9.8	37.0			23.2	23.2	15.0	15.0	15.0			
Effective Green, g (s)	9.8	37.0			23.2	23.2	15.0	15.0	15.0			
Actuated g/C Ratio	0.16	0.62			0.39	0.39	0.25	0.25	0.25			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	539	2100			2362	568	408	410	677			
v/s Ratio Prot	c0.11	c0.29			0.15							
v/s Ratio Perm						0.16	0.14	0.14	c0.19			
v/c Ratio	0.67	0.48			0.38	0.41	0.58	0.58	0.74			
Uniform Delay, d1	23.6	6.2			13.3	13.4	19.7	19.7	20.7			
Progression Factor	0.83	0.48			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	2.7	0.7			0.5	2.2	2.0	2.0	4.4			
Delay (s)	22.2	3.7			13.7	15.6	21.7	21.7	25.1			
Level of Service	C	A			B	B	C	C	C			
Approach Delay (s)		8.6			14.5			23.7			0.0	
Approach LOS		A			B			C			A	

Intersection Summary

HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: SW Lower Boones Ferry Road & SW 65th Avenue

Arby's/Starbucks Conversion
 2017 Background plus Site - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑↑		↘	↕			↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.96			0.96	1.00
Satd. Flow (prot)	1703	3406	1486	1736	4925		1649	1647			1404	1235
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.96			0.96	1.00
Satd. Flow (perm)	1703	3406	1486	1736	4925		1649	1647			1404	1235
Volume (vph)	278	924	354	72	818	59	378	33	19	72	17	210
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	1004	385	78	889	64	411	36	21	78	18	228
RTOR Reduction (vph)	0	0	220	0	9	0	0	5	0	0	0	27
Lane Group Flow (vph)	302	1004	165	78	944	0	234	229	0	0	96	201
Confl. Peds. (#/hr)	4		2	2		4	3		3	3		3
Confl. Bikes (#/hr)						5			3			1
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	4%	4%	4%	30%	30%	30%
Turn Type	Prot		Perm	Prot			Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases			2									4
Actuated Green, G (s)	17.3	34.2	34.2	4.9	21.8		15.6	15.6			9.3	26.6
Effective Green, g (s)	17.3	34.2	34.2	4.9	21.8		15.6	15.6			9.3	26.6
Actuated g/C Ratio	0.22	0.43	0.43	0.06	0.27		0.19	0.19			0.12	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	368	1456	635	106	1342		322	321			163	411
v/s Ratio Prot	c0.18	c0.29		0.04	c0.19		c0.14	0.14			c0.07	0.11
v/s Ratio Perm			0.11									0.06
v/c Ratio	0.82	0.69	0.26	0.74	0.70		0.73	0.71			0.59	0.49
Uniform Delay, d1	29.9	18.6	14.7	36.9	26.2		30.2	30.1			33.5	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	13.6	2.7	1.0	23.1	3.1		7.9	7.3			5.4	0.9
Delay (s)	43.5	21.3	15.7	60.0	29.3		38.1	37.4			38.9	22.2
Level of Service	D	C	B	E	C		D	D			D	C
Approach Delay (s)		24.0			31.6			37.8			27.2	
Approach LOS		C			C			D			C	

Intersection Summary

HCM Average Control Delay	28.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 4: Site Access & SW 65th Avenue

Arby's/Starbucks Conversion
 2017 Background plus Site - AM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↘		↕	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	152	11	208	151	10	153
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	192	14	263	191	13	194
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)	303					
pX, platoon unblocked						
vC, conflicting volume	579	360			455	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	579	360			455	
tC, single (s)	6.5	6.3			4.5	
tC, 2 stage (s)						
tF (s)	3.6	3.4			2.6	
p0 queue free %	59	98			99	
cM capacity (veh/h)	464	675			935	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	206	454	206
Volume Left	192	0	13
Volume Right	14	191	0
cSH	474	1700	935
Volume to Capacity	0.44	0.27	0.01
Queue Length 95th (ft)	54	0	1
Control Delay (s)	18.3	0.0	0.7
Lane LOS	C		A
Approach Delay (s)	18.3	0.0	0.7
Approach LOS	C		

Intersection Summary			
Average Delay			4.5
Intersection Capacity Utilization	36.0%	ICU Level of Service	A
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis
5: SW Lower Boones Ferry Road & Site Access

Arby's/Starbucks Conversion
2017 Background plus Site - AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑			↑↑↑				↑			↑
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	0	1061	26	0	924	38	0	0	25	0	0	11
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	1206	30	0	1050	43	0	0	28	0	0	12
Pedestrians								3				4
Lane Width (ft)								12.0				12.0
Walking Speed (ft/s)								4.0				4.0
Percent Blockage								0				0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		463										
pX, platoon unblocked				0.76			0.76	0.76		0.76	0.76	0.76
vC, conflicting volume	1096			1239			1690	2314	375	1603	2321	622
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1096			1000			1593	2412	375	1478	2421	189
tC, single (s)	4.2			4.1			7.6	6.6	7.0	7.7	6.7	7.1
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.6	4.1	3.4
p0 queue free %	100			100			100	100	95	100	100	98
cM capacity (veh/h)	619			522			52	24	616	59	22	606

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SE 1	NW 1
Volume Total	804	431	420	420	253	28	12
Volume Left	0	0	0	0	0	0	0
Volume Right	0	30	0	0	43	28	12
cSH	1700	1700	1700	1700	1700	616	606
Volume to Capacity	0.47	0.25	0.25	0.25	0.15	0.05	0.02
Queue Length 95th (ft)	0	0	0	0	0	4	2
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	11.1	11.1
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			11.1	11.1
Approach LOS						B	B

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	40.2%		ICU Level of Service
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
6: SW Lower Boones Ferry Road & SW 63rd Avenue

Arby's/Starbucks Conversion
2017 Background plus Site - AM Peak Hour

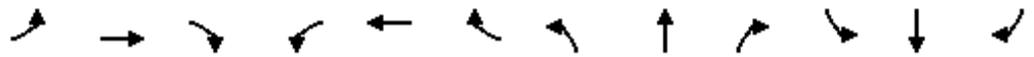


Movement	EBL2	EBL	SBL	SBR	SWR	SWR2
Lane Configurations	↘	↘↘	↘	↗	↗↗	↗↗
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Volume (veh/h)	86	997	28	47	915	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	95	1096	31	52	1005	54
Pedestrians			4			
Lane Width (ft)			12.0			
Walking Speed (ft/s)			4.0			
Percent Blockage			0			
Right turn flare (veh)						
Median type		TWLTL				
Median storage (veh)			0			
Upstream signal (ft)		766				
pX, platoon unblocked			0.79			
vC, conflicting volume	1063		1773	534		
vC1, stage 1 conf vol			1036			
vC2, stage 2 conf vol			737			
vCu, unblocked vol	1063		1712	534		
tC, single (s)	4.2		6.9	7.0		
tC, 2 stage (s)			5.9			
tF (s)	2.2		3.6	3.4		
p0 queue free %	85		77	89		
cM capacity (veh/h)	637		135	479		

Direction, Lane #	EB 1	EB 2	EB 3	SB 1	SB 2	SW 1	SW 2
Volume Total	95	548	548	31	52	670	389
Volume Left	95	0	0	31	0	0	0
Volume Right	0	0	0	0	52	0	54
cSH	637	1700	1700	135	479	1700	1700
Volume to Capacity	0.15	0.32	0.32	0.23	0.11	0.39	0.23
Queue Length 95th (ft)	13	0	0	21	9	0	0
Control Delay (s)	11.6	0.0	0.0	39.3	13.4	0.0	0.0
Lane LOS	B			E	B		
Approach Delay (s)	0.9			23.1		0.0	
Approach LOS				C			

Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization	46.4%	ICU Level of Service	A
Analysis Period (min)		15	

HCM Signalized Intersection Capacity Analysis Arby's/Starbucks Conversion
 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps 2017 Background plus Site - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑	↑↑	↑↑					↑	↑	↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Lane Util. Factor		0.86	1.00	0.97	0.95					0.95	0.95	0.88
Frbp, ped/bikes		1.00	0.98	1.00	1.00					1.00	1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00					1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (prot)		6471	1559	3433	3539					1681	1712	2787
Flt Permitted		1.00	1.00	0.95	1.00					0.95	0.97	1.00
Satd. Flow (perm)		6471	1559	3433	3539					1681	1712	2787
Volume (vph)	0	1133	530	779	1358	0	0	0	0	324	66	480
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1156	541	795	1386	0	0	0	0	331	67	490
RTOR Reduction (vph)	0	0	288	0	0	0	0	0	0	0	0	63
Lane Group Flow (vph)	0	1156	253	795	1386	0	0	0	0	194	204	427
Confl. Peds. (#/hr)	15		9	9		15						
Confl. Bikes (#/hr)			4			6						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	2%	2%	2%
Turn Type			Perm	Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases			2							4		4
Actuated Green, G (s)		17.4	17.4	17.0	38.4					13.6	13.6	13.6
Effective Green, g (s)		17.4	17.4	17.0	38.4					13.6	13.6	13.6
Actuated g/C Ratio		0.29	0.29	0.28	0.64					0.23	0.23	0.23
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1877	452	973	2265					381	388	632
v/s Ratio Prot		0.18		c0.23	c0.39							
v/s Ratio Perm			0.16							0.12	0.12	c0.15
v/c Ratio		0.62	0.56	0.82	0.61					0.51	0.53	0.68
Uniform Delay, d1		18.4	18.0	20.0	6.4					20.3	20.4	21.2
Progression Factor		1.00	1.00	0.61	0.32					1.00	1.00	1.00
Incremental Delay, d2		1.5	4.9	3.7	0.3					1.1	1.3	2.9
Delay (s)		19.9	23.0	16.0	2.4					21.4	21.7	24.1
Level of Service		B	C	B	A					C	C	C
Approach Delay (s)		20.9			7.3			0.0			22.9	
Approach LOS		C			A			A			C	
Intersection Summary												
HCM Average Control Delay			15.1			HCM Level of Service				B		
HCM Volume to Capacity ratio			0.68									
Actuated Cycle Length (s)			60.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			76.7%			ICU Level of Service				D		
Analysis Period (min)			15									

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis Arby's/Starbucks Conversion
 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps 2017 Background plus Site - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕			↑↑↑	↗	↖	↕	↗↖			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Lane Util. Factor	0.97	0.95			0.86	1.00	0.95	0.95	0.88			
Frbp, ped/bikes	1.00	1.00			1.00	0.97	1.00	1.00	1.00			
Flpb, ped/bikes	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	3467	3574			6408	1543	1681	1686	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	3467	3574			6408	1543	1681	1686	2787			
Volume (vph)	469	982	0	0	1575	586	569	2	610	0	0	0
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	504	1056	0	0	1694	630	612	2	656	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	396	0	0	137	0	0	0
Lane Group Flow (vph)	504	1056	0	0	1694	234	306	308	519	0	0	0
Confl. Peds. (#/hr)	11		7	7		11						
Confl. Bikes (#/hr)			4			2						
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	0%	0%	0%
Turn Type	Prot				Perm		Perm	Perm				
Protected Phases	5	2			6			8				
Permitted Phases						6	8			8		
Actuated Green, G (s)	11.0	37.3			22.3	22.3	14.7	14.7	14.7			
Effective Green, g (s)	11.0	37.3			22.3	22.3	14.7	14.7	14.7			
Actuated g/C Ratio	0.18	0.62			0.37	0.37	0.24	0.24	0.24			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	636	2222			2382	573	412	413	683			
v/s Ratio Prot	c0.15	0.30			c0.26							
v/s Ratio Perm						0.15	0.18	0.18	c0.19			
v/c Ratio	0.79	0.48			0.71	0.41	0.74	0.75	0.76			
Uniform Delay, d1	23.4	6.1			16.1	14.0	20.9	20.9	21.0			
Progression Factor	0.57	0.37			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.6	0.6			1.8	2.2	7.1	7.2	5.0			
Delay (s)	19.0	2.9			17.9	16.1	28.0	28.1	26.0			
Level of Service	B	A			B	B	C	C	C			
Approach Delay (s)	8.1				17.4			27.0			0.0	
Approach LOS	A				B			C			A	

Intersection Summary

HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
 3: SW Lower Boones Ferry Road & SW 65th Avenue

Arby's/Starbucks Conversion
 2017 Background plus Site - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑↑		↘	↕			↗	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		0.95	0.95			1.00	1.00
Frbp, ped/bikes	1.00	1.00	0.98	1.00	1.00		1.00	1.00			1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	0.97			0.97	1.00
Satd. Flow (prot)	1770	3539	1546	1770	5032		1681	1675			1801	1571
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	0.97			0.97	1.00
Satd. Flow (perm)	1770	3539	1546	1770	5032		1681	1675			1801	1571
Volume (vph)	277	900	437	129	1302	75	445	49	33	165	76	435
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	301	978	475	140	1415	82	484	53	36	179	83	473
RTOR Reduction (vph)	0	0	316	0	7	0	0	6	0	0	0	8
Lane Group Flow (vph)	301	978	159	140	1490	0	286	281	0	0	262	465
Confl. Peds. (#/hr)	5		1	1		5	2		1	1		2
Confl. Bikes (#/hr)			1			7			2			1
Turn Type	Prot		Perm	Prot			Split			Split		pm+ov
Protected Phases	5	2		1	6		8	8		4	4	5
Permitted Phases			2									4
Actuated Green, G (s)	15.3	30.2	30.2	12.1	27.0		16.4	16.4			15.3	30.6
Effective Green, g (s)	15.3	30.2	30.2	12.1	27.0		16.4	16.4			15.3	30.6
Actuated g/C Ratio	0.17	0.34	0.34	0.13	0.30		0.18	0.18			0.17	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	301	1188	519	238	1510		306	305			306	534
v/s Ratio Prot	c0.17	0.28		0.08	c0.30		c0.17	0.17			0.15	c0.15
v/s Ratio Perm			0.10									0.15
v/c Ratio	1.00	0.82	0.31	0.59	0.99		0.93	0.92			0.86	0.87
Uniform Delay, d1	37.4	27.4	22.1	36.6	31.3		36.3	36.2			36.3	27.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	51.9	6.5	1.5	3.7	20.2		34.4	31.9			20.3	14.4
Delay (s)	89.2	34.0	23.7	40.3	51.5		70.7	68.1			56.6	42.3
Level of Service	F	C	C	D	D		E	E			E	D
Approach Delay (s)		40.7			50.6			69.4			47.4	
Approach LOS		D			D			E			D	

Intersection Summary

HCM Average Control Delay	48.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
4: Site Access & SW 65th Avenue

Arby's/Starbucks Conversion
2017 Background plus Site - PM Peak Hour



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Volume (veh/h)	128	22	285	127	10	490
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	144	25	320	143	11	551
Pedestrians						2
Lane Width (ft)						12.0
Walking Speed (ft/s)						4.0
Percent Blockage						0
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)			303			
pX, platoon unblocked						
vC, conflicting volume	965	394			463	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	965	394			463	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	49	96			99	
cM capacity (veh/h)	281	656			1098	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	169	463	562
Volume Left	144	0	11
Volume Right	25	143	0
cSH	307	1700	1098
Volume to Capacity	0.55	0.27	0.01
Queue Length 95th (ft)	77	0	1
Control Delay (s)	30.1	0.0	0.3
Lane LOS	D		A
Approach Delay (s)	30.1	0.0	0.3
Approach LOS	D		

Intersection Summary			
Average Delay			4.4
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)			15

HCM Unsignalized Intersection Capacity Analysis
5: SW Lower Boones Ferry Road & Site Access

Arby's/Starbucks Conversion
2017 Background plus Site - PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑			↑↑↑				↑			↑
Sign Control		Free			Free			Stop				Stop
Grade		0%			0%			0%				0%
Volume (veh/h)	0	1179	32	0	1449	53	0	0	56	0	0	44
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	1268	34	0	1558	57	0	0	60	0	0	47
Pedestrians		2						4				4
Lane Width (ft)		12.0						12.0				12.0
Walking Speed (ft/s)		4.0						4.0				4.0
Percent Blockage		0						0				0
Right turn flare (veh)												
Median type								None				None
Median storage veh												
Upstream signal (ft)		463										
pX, platoon unblocked				0.74			0.74	0.74		0.74	0.74	0.74
vC, conflicting volume	1619			1306			2272	2897	554	1871	2908	655
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1619			1066			2366	3207	554	1826	3222	190
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	87	100	100	92
cM capacity (veh/h)	402			485			13	7	479	32	7	612

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	SE 1	NW 1
Volume Total	845	457	623	623	369	60	47
Volume Left	0	0	0	0	0	0	0
Volume Right	0	34	0	0	57	60	47
cSH	1700	1700	1700	1700	1700	479	612
Volume to Capacity	0.50	0.27	0.37	0.37	0.22	0.13	0.08
Queue Length 95th (ft)	0	0	0	0	0	11	6
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	13.6	11.4
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			13.6	11.4
Approach LOS						B	B

Intersection Summary			
Average Delay		0.4	
Intersection Capacity Utilization	43.6%		ICU Level of Service
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
 6: SW Lower Boones Ferry Road & SW 63rd Avenue

Arby's/Starbucks Conversion
 2017 Background plus Site - PM Peak Hour



Movement	EBL2	EBL	SBL	SBR	SWR	SWR2
Lane Configurations	↘	↘↘	↘	↗	↗↗	↗↗
Sign Control		Free	Stop		Free	
Grade		0%	0%		0%	
Volume (veh/h)	53	1215	51	57	1445	79
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	58	1321	55	62	1571	86
Pedestrians		4	4		2	
Lane Width (ft)		12.0	12.0		12.0	
Walking Speed (ft/s)		4.0	4.0		4.0	
Percent Blockage		0	0		0	
Right turn flare (veh)						
Median type		TWLTL				
Median storage (veh)		0				
Upstream signal (ft)		766				
pX, platoon unblocked		0.75				
vC, conflicting volume	1661	2395		836		
vC1, stage 1 conf vol		1618				
vC2, stage 2 conf vol		778				
vCu, unblocked vol	1661	2524		836		
tC, single (s)	4.1	*6.0		6.9		
tC, 2 stage (s)		5.0				
tF (s)	2.2	*2.0		3.3		
p0 queue free %	85	63		80		
cM capacity (veh/h)	387	150		310		

Direction, Lane #	EB 1	EB 2	EB 3	SB 1	SB 2	SW 1	SW 2
Volume Total	58	660	660	55	62	1047	609
Volume Left	58	0	0	55	0	0	0
Volume Right	0	0	0	0	62	0	86
cSH	387	1700	1700	150	310	1700	1700
Volume to Capacity	0.15	0.39	0.39	0.37	0.20	0.62	0.36
Queue Length 95th (ft)	13	0	0	39	18	0	0
Control Delay (s)	15.9	0.0	0.0	42.4	19.5	0.0	0.0
Lane LOS	C			E	C		
Approach Delay (s)	0.7			30.3		0.0	
Approach LOS				D			

Intersection Summary			
Average Delay		1.4	
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

* User Entered Value

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	T	R	L	L	T	T	L	LT	R
Maximum Queue (ft)	98	115	142	142	154	152	152	188	172	176	178	107
Average Queue (ft)	53	46	91	76	72	77	65	52	63	91	90	54
95th Queue (ft)	88	86	132	125	125	130	125	136	136	149	143	91
Link Distance (ft)	490	490	490	490		479	479	479	479		730	730
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225					330						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	SB
Directions Served	R
Maximum Queue (ft)	90
Average Queue (ft)	38
95th Queue (ft)	71
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	330
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	170	171	166	175	101	143	157	150	168	164	145	137
Average Queue (ft)	77	60	69	90	45	51	86	79	13	84	80	69
95th Queue (ft)	130	119	132	155	86	104	139	130	91	137	133	116
Link Distance (ft)	479	479	479	479	407	407	407	407			530	530
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)									280	280		
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	NB
Directions Served	R
Maximum Queue (ft)	140
Average Queue (ft)	56
95th Queue (ft)	105
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	280
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Lower Boones Ferry Road & SW 65th Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	LTR	LT	R
Maximum Queue (ft)	239	384	376	284	100	151	195	325	159	270	123	115
Average Queue (ft)	105	188	178	67	39	50	101	174	77	117	32	54
95th Queue (ft)	190	311	305	169	81	109	169	289	149	212	84	99
Link Distance (ft)		407	407			373	373	373		582	202	
Upstream Blk Time (%)		0	0					0			0	
Queuing Penalty (veh)		1	1					1			0	
Storage Bay Dist (ft)	230			260	200				130			100
Storage Blk Time (%)	0	3	1	0		0			1	4	0	1
Queuing Penalty (veh)	0	4	3	0		0			2	8	0	0

Intersection: 4: Site Access & SW 65th Avenue

Movement	WB
Directions Served	LR
Maximum Queue (ft)	47
Average Queue (ft)	13
95th Queue (ft)	41
Link Distance (ft)	292
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: SW Lower Boones Ferry Road & Site Access

Movement	WB	SE	NW
Directions Served	TR	R	R
Maximum Queue (ft)	9	46	42
Average Queue (ft)	0	18	10
95th Queue (ft)	6	44	35
Link Distance (ft)	115	251	204
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 21

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB	
Directions Served	T	T	T	T	R	L	L	T	T	L	LT	R	
Maximum Queue (ft)	136	140	172	173	231	294	289	172	180	149	145	142	
Average Queue (ft)	79	78	112	110	133	127	115	36	45	76	79	68	
95th Queue (ft)	124	131	162	167	209	222	210	109	113	128	137	115	
Link Distance (ft)	490	490	490	490		479	479	479	479		730	730	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)						225					330		
Storage Blk Time (%)						0							
Queuing Penalty (veh)						1							

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	SB
Directions Served	R
Maximum Queue (ft)	107
Average Queue (ft)	53
95th Queue (ft)	91
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	330
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	198	181	140	120	202	202	228	217	226	225	180	152
Average Queue (ft)	86	72	27	34	119	127	167	151	29	118	106	81
95th Queue (ft)	151	137	97	93	186	191	217	210	143	185	164	136
Link Distance (ft)	479	479	479	479	407	407	407	407			530	530
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)									280	280		
Storage Blk Time (%)									0			
Queuing Penalty (veh)									0			

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	NB
Directions Served	R
Maximum Queue (ft)	167
Average Queue (ft)	69
95th Queue (ft)	131
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	280
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Lower Boones Ferry Road & SW 65th Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	LTR	LT	R
Maximum Queue (ft)	259	426	404	265	223	397	444	428	158	453	269	141
Average Queue (ft)	176	251	232	90	105	288	363	374	117	194	174	120
95th Queue (ft)	281	413	388	202	212	451	479	451	183	366	264	151
Link Distance (ft)		407	407			373	373	373		582	202	
Upstream Blk Time (%)		4	1			5	21	44		0	13	
Queuing Penalty (veh)		34	6			26	101	212		0	69	
Storage Bay Dist (ft)	230			260	200				130			100
Storage Blk Time (%)	11	4	1	0	0	18			8	19	29	15
Queuing Penalty (veh)	50	9	5	0	2	22			24	42	106	32

Intersection: 4: Site Access & SW 65th Avenue

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	178	4	243
Average Queue (ft)	59	0	53
95th Queue (ft)	130	3	186
Link Distance (ft)	292	202	301
Upstream Blk Time (%)			1
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: SW Lower Boones Ferry Road & Site Access

Movement	EB	EB	WB	WB	WB	SE	NW
Directions Served	T	TR	T	T	TR	R	R
Maximum Queue (ft)	18	18	104	128	140	227	62
Average Queue (ft)	1	1	17	56	102	165	24
95th Queue (ft)	8	9	80	141	184	337	54
Link Distance (ft)	373	373	115	115	115	251	204
Upstream Blk Time (%)			0	4	30	46	
Queuing Penalty (veh)			0	0	0	0	
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 742

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	T	R	L	L	T	T	L	LT	R
Maximum Queue (ft)	105	107	157	163	147	133	148	191	196	180	150	110
Average Queue (ft)	50	48	90	82	76	71	61	50	62	96	90	55
95th Queue (ft)	88	90	140	140	130	117	112	138	143	151	140	93
Link Distance (ft)	490	490	490	490		479	479	479	479		730	730
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225					330						
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	SB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	39
95th Queue (ft)	73
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	330
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB	
Directions Served	L	L	T	T	T	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	163	139	214	201	146	176	177	205	265	171	159	148	
Average Queue (ft)	77	63	73	90	54	60	101	90	21	84	78	73	
95th Queue (ft)	128	115	158	167	106	126	156	160	129	141	134	122	
Link Distance (ft)	479	479	479	479	407	407	407	407			530	530	
Upstream Blk Time (%)									0				
Queuing Penalty (veh)									0				
Storage Bay Dist (ft)									280	280			
Storage Blk Time (%)									0				
Queuing Penalty (veh)									0				

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	NB
Directions Served	R
Maximum Queue (ft)	134
Average Queue (ft)	56
95th Queue (ft)	102
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	280
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Lower Boones Ferry Road & SW 65th Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	LTR	LT	R
Maximum Queue (ft)	261	440	422	258	102	186	284	369	154	255	207	144
Average Queue (ft)	164	230	218	82	40	69	138	227	85	124	63	75
95th Queue (ft)	281	398	384	206	82	141	240	364	156	205	135	131
Link Distance (ft)		407	407			373	373	373		582	202	
Upstream Blk Time (%)		2	1				0	3				0
Queuing Penalty (veh)		15	8				0	10				1
Storage Bay Dist (ft)	230			260	200				130			100
Storage Blk Time (%)	6	4	3	0		0			1	7	2	3
Queuing Penalty (veh)	26	10	10	0		0			3	13	3	2

Intersection: 4: Site Access & SW 65th Avenue

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	79	10	71
Average Queue (ft)	38	0	4
95th Queue (ft)	68	8	33
Link Distance (ft)	292	202	301
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: SW Lower Boones Ferry Road & Site Access

Movement	WB	WB	SE	NW
Directions Served	T	TR	R	R
Maximum Queue (ft)	8	68	51	46
Average Queue (ft)	0	7	19	10
95th Queue (ft)	4	46	47	35
Link Distance (ft)	115	115	251	204
Upstream Blk Time (%)		1		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 102

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB	
Directions Served	T	T	T	T	R	L	L	T	T	L	LT	R	
Maximum Queue (ft)	136	180	210	238	225	293	298	150	152	133	136	124	
Average Queue (ft)	78	90	127	125	132	136	127	36	50	69	78	68	
95th Queue (ft)	121	149	192	200	206	239	235	103	114	113	124	112	
Link Distance (ft)	490	490	490	490		479	479	479	479		730	730	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)					225					330			
Storage Blk Time (%)					0	0							
Queuing Penalty (veh)					1	1							

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	SB
Directions Served	R
Maximum Queue (ft)	107
Average Queue (ft)	53
95th Queue (ft)	91
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	330
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	164	147	172	203	183	225	238	223	198	242	250	193
Average Queue (ft)	85	71	42	40	105	123	165	149	24	122	115	91
95th Queue (ft)	137	124	141	137	165	196	221	209	126	200	196	162
Link Distance (ft)	479	479	479	479	407	407	407	407			530	530
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)									280	280		
Storage Blk Time (%)								0		0	0	
Queuing Penalty (veh)								0		1	0	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	NB
Directions Served	R
Maximum Queue (ft)	174
Average Queue (ft)	82
95th Queue (ft)	154
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	280
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Lower Boones Ferry Road & SW 65th Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	LTR	LT	R
Maximum Queue (ft)	261	446	465	285	226	426	457	431	163	548	272	141
Average Queue (ft)	210	301	287	110	106	320	399	397	133	274	212	124
95th Queue (ft)	301	488	483	248	222	452	462	422	184	547	284	144
Link Distance (ft)		407	407			373	373	373		582	202	
Upstream Blk Time (%)		9	2			7	31	60		5	28	
Queuing Penalty (veh)		71	16			38	154	301		0	173	
Storage Bay Dist (ft)	230			260	200				130			100
Storage Blk Time (%)	21	6	4	0	1	26			18	32	37	26
Queuing Penalty (veh)	95	16	16	0	6	33			56	72	158	60

Intersection: 4: Site Access & SW 65th Avenue

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	300	29	286
Average Queue (ft)	234	2	122
95th Queue (ft)	403	22	299
Link Distance (ft)	292	202	301
Upstream Blk Time (%)	58		5
Queuing Penalty (veh)	0		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: SW Lower Boones Ferry Road & Site Access

Movement	EB	EB	WB	WB	WB	SE	NW
Directions Served	T	TR	T	T	TR	R	R
Maximum Queue (ft)	9	3	128	138	134	266	57
Average Queue (ft)	0	0	25	80	127	219	27
95th Queue (ft)	5	2	102	164	155	331	54
Link Distance (ft)	373	373	115	115	115	251	204
Upstream Blk Time (%)			1	6	57	68	
Queuing Penalty (veh)			0	0	0	0	
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 1270

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB
Directions Served	T	T	T	T	R	L	L	T	T	L	LT	R
Maximum Queue (ft)	115	119	160	177	158	180	160	180	163	202	176	120
Average Queue (ft)	53	51	86	76	74	81	74	46	60	105	93	59
95th Queue (ft)	94	97	139	134	133	141	130	126	125	166	147	97
Link Distance (ft)	490	490	490	490		479	479	479	479		730	730
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)						225				330		
Storage Blk Time (%)						0						
Queuing Penalty (veh)						0						

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	SB
Directions Served	R
Maximum Queue (ft)	95
Average Queue (ft)	47
95th Queue (ft)	82
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	330
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	179	155	198	207	111	146	177	178	219	157	144	159
Average Queue (ft)	85	68	78	93	51	60	95	88	17	84	81	75
95th Queue (ft)	148	131	155	175	90	115	146	144	110	135	126	125
Link Distance (ft)	479	479	479	479	407	407	407	407			530	530
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)									280	280		
Storage Blk Time (%)									0			
Queuing Penalty (veh)									0			

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	NB
Directions Served	R
Maximum Queue (ft)	123
Average Queue (ft)	60
95th Queue (ft)	104
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	280
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Lower Boones Ferry Road & SW 65th Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	LTR	LT	R
Maximum Queue (ft)	267	426	406	251	170	272	431	399	158	267	206	141
Average Queue (ft)	181	221	206	76	53	91	194	284	85	135	79	83
95th Queue (ft)	281	374	353	186	121	189	364	429	152	228	157	141
Link Distance (ft)		407	407			373	373	373		582	202	
Upstream Blk Time (%)		1	1				2	12				0
Queuing Penalty (veh)		10	5				6	39				1
Storage Bay Dist (ft)	230			260	200				130			100
Storage Blk Time (%)	4	4	2	0	0	1			1	7	4	3
Queuing Penalty (veh)	18	11	7	0	1	1			2	13	9	2

Intersection: 4: Site Access & SW 65th Avenue

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	144	9	53
Average Queue (ft)	63	0	4
95th Queue (ft)	111	5	27
Link Distance (ft)	292	202	301
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: SW Lower Boones Ferry Road & Site Access

Movement	EB	WB	WB	SE	NW
Directions Served	TR	T	TR	R	R
Maximum Queue (ft)	3	110	126	107	45
Average Queue (ft)	0	8	24	29	10
95th Queue (ft)	2	54	103	88	35
Link Distance (ft)	373	115	115	251	204
Upstream Blk Time (%)		0	6		
Queuing Penalty (veh)		0	0		
Storage Bay Dist (ft)					
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 124

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	EB	EB	EB	EB	EB	WB	WB	WB	WB	SB	SB	SB	
Directions Served	T	T	T	T	R	L	L	T	T	L	LT	R	
Maximum Queue (ft)	149	172	215	274	242	306	288	144	138	127	149	147	
Average Queue (ft)	87	94	129	131	148	140	126	31	43	73	81	74	
95th Queue (ft)	131	149	192	214	225	254	241	85	92	115	127	121	
Link Distance (ft)	490	490	490	490		479	479	479	479		730	730	
Upstream Blk Time (%)													
Queuing Penalty (veh)													
Storage Bay Dist (ft)					225					330			
Storage Blk Time (%)					0	1							
Queuing Penalty (veh)					1	3							

Intersection: 1: SW Lower Boones Ferry Road & Interstate 5 SB Ramps

Movement	SB
Directions Served	R
Maximum Queue (ft)	139
Average Queue (ft)	59
95th Queue (ft)	108
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	330
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	L	T	T	T	T	T	T	R	L	LT	R
Maximum Queue (ft)	178	169	165	176	182	227	236	242	246	213	193	186
Average Queue (ft)	92	78	26	37	100	121	160	152	29	126	113	84
95th Queue (ft)	149	137	98	106	173	197	225	218	143	196	174	153
Link Distance (ft)	479	479	479	479	407	407	407	407			530	530
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)									280	280		
Storage Blk Time (%)								0	0	0		
Queuing Penalty (veh)								0	0	0		

Intersection: 2: SW Lower Boones Ferry Road & Interstate 5 NB Ramps

Movement	NB
Directions Served	R
Maximum Queue (ft)	182
Average Queue (ft)	74
95th Queue (ft)	146
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	280
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: SW Lower Boones Ferry Road & SW 65th Avenue

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	TR	L	LTR	LT	R
Maximum Queue (ft)	262	441	463	286	226	418	440	413	160	488	272	145
Average Queue (ft)	202	280	256	118	108	319	383	385	131	262	216	126
95th Queue (ft)	295	454	435	257	219	456	456	428	183	518	277	139
Link Distance (ft)		407	407			373	373	373		582	202	
Upstream Blk Time (%)		6	1			9	28	47		4	30	
Queuing Penalty (veh)		47	12			47	142	234		0	185	
Storage Bay Dist (ft)	230			260	200				130			100
Storage Blk Time (%)	18	4	2	0	0	24			18	31	39	26
Queuing Penalty (veh)	83	12	10	0	1	31			54	69	170	62

Intersection: 4: Site Access & SW 65th Avenue

Movement	WB	NB	SB
Directions Served	LR	TR	LT
Maximum Queue (ft)	319	4	310
Average Queue (ft)	244	0	116
95th Queue (ft)	400	3	282
Link Distance (ft)	292	202	301
Upstream Blk Time (%)	60		4
Queuing Penalty (veh)	0		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: SW Lower Boones Ferry Road & Site Access

Movement	EB	EB	WB	WB	WB	SE	NW
Directions Served	T	TR	T	T	TR	R	R
Maximum Queue (ft)	15	11	130	138	138	249	62
Average Queue (ft)	1	1	25	70	106	149	27
95th Queue (ft)	9	9	96	158	180	317	55
Link Distance (ft)	373	373	115	115	115	251	204
Upstream Blk Time (%)			1	9	37	38	
Queuing Penalty (veh)			0	0	0	0	
Storage Bay Dist (ft)							
Storage Blk Time (%)							
Queuing Penalty (veh)							

Network Summary

Network wide Queuing Penalty: 1163

07/27/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at SB EF L BOONES F C6, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2013														
REAR-END	0	2	0	2	0	3	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	0	2	2	0	0	0	2	0	2	0	2	0	0
YEAR 2013 TOTAL	0	2	2	4	0	3	0	4	0	4	0	4	0	0
YEAR: 2010														
TURNING MOVEMENTS	0	1	1	2	0	3	0	2	0	1	1	2	0	0
YEAR 2010 TOTAL	0	1	1	2	0	3	0	2	0	1	1	2	0	0
YEAR: 2009														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2009 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	3	4	7	0	6	0	7	0	6	1	7	0	0

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

LOWER BOONES FERRY at SB BF L BOONES F C6, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 7

SPRT	INVEST	D C S L K TIVE	CLASS	CITY STREET	RD CHAR	INT-TYPE		OPFRD	WCHR	CRASH	SPCL ORG		MOVE	PRTC	TNU	A S		LOC	ERRR	ACT_EVENT	CAUSE
						(MEDIAN)	INT-REL				TRLR QTY	OWNER				E	X RES				
REG	REG	REG	DATE	DIST	FIRST STREET	DIRECT	TRAP-	ENFT	SURF	COND	TRLR	QTY	FROM	TYPE	SVCTY	E	X RES	LOC	ERRR	ACT_EVENT	CAUSE
04625	N K N N N	09/05/2010	16	SW LOWER BOONES FERRY INTER	CROSS	N		K	CLR	O TURN	01	NONE	C	STRGHT							
CITY		30		SB BF L BOONES F C6	CR		L-GRN-SIG	K	DRY	TURN		PRVTE		W - E						000	00
		12A			03	1		K	DLIT	INC		PSNGR	CAR		01	DRVR	INJB	25	F	OR-Y	000
																				000	00
												02	NONE	C	TURN-L						
												PRVTE		E - S						000	00
												PSNGR	CAR		01	DRVR	TNJC	41	M	OR-Y	000
																				000	00
												02	NONE	C	TURN-L						
												PRVTE		R - S						000	00
												PSNGR	CAR		02	PSNG	INJB	28	M		000

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07/27/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at SB EX L BOONES F C4, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2013														
REAR-END	0	3	0	3	0	4	0	3	0	3	0	3	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	0	1	1	0	0
YEAR 2013 TOTAL	0	4	0	4	0	5	0	4	0	3	1	4	0	0
YEAR: 2012														
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	0	1	0	1	0	0
YEAR 2012 TOTAL	0	1	2	3	0	1	0	2	0	3	0	3	0	0
YEAR: 2011														
REAR-END	0	2	1	3	0	3	1	3	0	3	0	3	0	0
TURNING MOVEMENTS	0	1	2	3	0	2	1	2	1	2	1	3	0	0
YEAR 2011 TOTAL	0	3	3	6	0	5	2	5	1	5	1	6	0	0
YEAR: 2010														
ANGLE	0	1	0	1	0	1	0	1	0	1	0	1	0	0
REAR-END	0	1	1	2	0	1	0	0	2	2	0	2	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	2	0	1	1	2	0	0
YEAR 2010 TOTAL	0	3	2	5	0	3	0	3	2	4	1	5	0	0
YEAR: 2009														
TURNING MOVEMENTS	0	0	3	3	0	0	1	2	1	3	0	3	0	0
YEAR 2009 TOTAL	0	0	3	3	0	0	1	2	1	3	0	3	0	0

07/27/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at SB EX L BOONES F C4, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
FINAL TOTAL	0	11	10	21	0	14	3	16	4	18	3	21	0	0

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

LOWER BOONES FERRY at SB EX L BOONES F C4, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 21

SPRT	INVEST	S D	P K S W	B A U C O DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	SPCL	TRLR	QTY	MOVE	PRTC	TNC	A S	PRD				
RTG	D C S L K TIVE	TH	FRM	FIRST STREET	DIRCTN	SECOND STREET	LOCIN	(PLANES)	TRAP-	ENFT	SURF	CONL	CKNR	FROM	TO	PH TYPE	SVCTY	E X RES	LOC	FEES	ACT	EVENT	CAUSE
01974	NONE	Y K N		04/30/2009	15	SW LOWER BOONES FERRY INTER	INTER	CROSS	N	CLR	S-1TURN	C1	UNKY	9	STRGHT								
						SW SB EX L BOONES F C4	NE		TRF SIGNAL	K	DRY	TURN	PRVTE	NE SW							047,042	000	C1
							06	0		K	DAY	PDO	PSNGR CAR			01	DRVR	NONE	30	M	OR<25		C1
													C2	NONE	0	TURN-R						000	C3
													PRVTE	NE-W								000	C3
													PSNGR CAR			01	DRVR	NONE	55	F	OR-Y	000	C3
38409	NONE	N K N		08/14/2009	19	SW LOWER BOONES FERRY INTER	INTER	CROSS	N	CLR	S-OTHER	C1	NONE	0	TURN-R								
						SW SB EX L BOONES F C4	NE		TRF SIGNAL	K	DRY	TURN	PRVTE	NE-W								000	C3
							06	1		K	DAY	PDO	PSNGR CAR			01	DRVR	NONE	67	F	OR-Y	006	C3
													C2	UNKY	9	TURN-R						000	C3
													UNKY	NE-W								000	C3
													PSNGR CAR			01	DRVR	NONE	30	F	UNK	000	C3
06622	NONE	N A N		11/28/2010	19	SW LOWER BOONES FERRY INTER	INTER	CROSS	N	RAIN	S-1STOP	C1	NONE	0	STRGHT								
						SW SB EX L BOONES F C4	NE		TRF SIGNAL	K	WET	REAR	PRVTE	NE-SW								000	C3
							06	0		K	DAY	INC	PSNGR CAR			01	DRVR	NONE	22	F	OR-Y	026	C3
													C2	NONE	0	STOP						000	C3
													PRVTE	NE SW								000	C3
													PSNGR CAR			01	DRVR	INJC	38	F	OR-Y	000	C3
33822	NONE	N K N		10/12/2011	15	SW LOWER BOONES FERRY INTER	INTER	CROSS	N	CLR	S-1STOP	C1	NONE	0	STRGHT								
						SW SB EX L BOONES F C4	NE		TRF SIGNAL	K	DRY	REAR	PRVTE	NE SW								000	C3
							06	1		K	DAY	TNC	PSNGR CAR			01	DRVR	NONE	31	M	OR-Y	026	C3
													C2	NONE	0	STOP						000	C3
													PRVTE	NE-SW								000	C3
													PSNGR CAR			01	DRVR	INJC	55	M	OR-Y	000	C3
02986	CITY	N K N N N		06/11/2012	11	SW LOWER BOONES FERRY INTER	INTER	CROSS	N	CLR	S-1STOP	C1	NONE	0	STRGHT								
						SW SB EX L BOONES F C4	NE		ONR-WAY	K	DRY	REAR	PRVTE	NR-SW								000	C3
							05	0		K	DAY	INC	PSNGR CAR			01	DRVR	NONE	31	M	OR-Y	014,026	088
													C2	NONE	0	STOP						000	C3
													PRVTE	NE-SW								000	C3
													PSNGR CAR			01	DRVR	INJC	72	M	OR-Y	000	C3
07447	NONE	N A N		06/05/2013	14	SW LOWER BOONES FERRY INTER	INTER	CROSS	N	CLR	S-1STOP	C1	NONE	0	TURN-R								
						SW SB EX L BOONES F C4	NE		TRF SIGNAL	K	DRY	REAR	PRVTE	NE-W								000	C3
							06	1		K	DAY	INC	PSNGR CAR			01	DRVR	NONE	42	M	OIH Y	026	C3
													C2	NONE	0	STOP						000	C3
													PRVTE	NE-W								000	C3
													PSNGR CAR			01	DRVR	INJC	41	M	OR-Y	000	C3

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TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at NB EF L BOONES F C3, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2013														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	0	1	1	0	0
YEAR 2013 TOTAL	0	1	1	2	0	1	0	2	0	1	1	2	0	0
YEAR: 2012														
TURNING MOVEMENTS	0	3	1	4	0	4	0	2	2	2	2	4	0	0
YEAR 2012 TOTAL	0	3	1	4	0	4	0	2	2	2	2	4	0	0
YEAR: 2011														
REAR-END	0	0	1	1	0	0	0	0	1	0	1	1	0	0
TURNING MOVEMENTS	0	2	1	3	0	3	0	2	1	1	2	3	0	0
YEAR 2011 TOTAL	0	2	2	4	0	3	0	2	2	1	3	4	0	0
YEAR: 2010														
TURNING MOVEMENTS	0	2	0	2	0	2	0	2	0	1	1	2	0	0
YEAR 2010 TOTAL	0	2	0	2	0	2	0	2	0	1	1	2	0	0
YEAR: 2009														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	0	1	1	0	1	0	1
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	0	2	0	2	2	0	0
YEAR 2009 TOTAL	0	2	2	4	0	2	0	1	3	2	2	4	0	1

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at NB EF L BOONES F C3, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

FINAL TOTAL	0	10	6	16	0	12	0	9	7	7	9	16	0	1
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07/27/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at NB EX L BOONES F CL, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2013														
REAR-END	0	1	4	5	0	1	0	3	1	3	2	5	0	0
TURNING MOVEMENTS	0	2	2	4	0	2	0	4	0	2	2	4	0	0
YEAR 2013 TOTAL	0	3	6	9	0	3	0	7	1	5	4	9	0	0
YEAR: 2012														
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
YEAR 2012 TOTAL	0	1	1	2	0	1	0	2	0	2	0	2	0	0
YEAR: 2011														
PEDESTRIAN	0	1	0	1	0	1	0	0	1	0	1	1	0	0
REAR-END	0	3	3	6	0	5	0	4	2	5	1	6	0	0
TURNING MOVEMENTS	0	0	2	2	0	0	0	2	0	2	0	2	0	0
YEAR 2011 TOTAL	0	4	5	9	0	6	0	6	3	7	2	9	0	0
YEAR: 2010														
REAR-END	0	2	3	5	0	2	0	3	2	5	0	5	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	0	1	1	0	0
YEAR 2010 TOTAL	0	3	3	6	0	3	0	3	3	5	1	6	0	0
YEAR: 2009														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2009 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0

07/27/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at NB EX L BOONES F Cl, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

FINAL TOTAL	0	11	16	27	0	13	0	19	7	20	7	27	0	0
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Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

LOWER BOONES FERRY at NB EX L BOONES F CL, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 27

SPRT	INVEST	DATE	CLASS	CITY STREET	RD CHAR	INT-TYPE	INT-REL	OPFRD	WTR	CRASH	SPCL	TRLR	QTY	MOVE	PRTC	TMC	AGE	RES	LOC	FIROR	ACT	EVENT	CAUSE	
31757	N K N	05/05/2011	19	SW LOWER BOONES FERRY INTER	CROSS	N	TRF SIGNAL	K	CLR	S-1STOP	C1	UNKN	C	STRGHT						026	000	07		
				NB EX L BOONES F CL	SW	0		K <td>DAY <td>PDO <td></td> <td>PSNGR</td> <td>CAR <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>47</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td> </td></td></td>	DAY <td>PDO <td></td> <td>PSNGR</td> <td>CAR <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>47</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td> </td></td>	PDO <td></td> <td>PSNGR</td> <td>CAR <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>47</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td> </td>		PSNGR	CAR <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>47</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td>	TO	01	DRVR	NONE	47	F	OR-Y			07	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		01	DRVR	NONE	34	F	OR-Y			03	
												C2	NONR	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		02	PSNG	NO<5	01	F	OR<25			03	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		03	PSNG	NO<5	03	F				03	
02333	N K N	05/05/2011	19	SW LOWER BOONES FERRY INTER	CROSS	N	TRF SIGNAL	K	CLR	S-1STOP	C1	UNKN	C	STRGHT						026	000	07		
				NB EX L BOONES F CL	SW	0		K <td>DAY <td>PDO <td></td> <td>PSNGR</td> <td>CAR</td> <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>18</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td> </td></td>	DAY <td>PDO <td></td> <td>PSNGR</td> <td>CAR</td> <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>18</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td> </td>	PDO <td></td> <td>PSNGR</td> <td>CAR</td> <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>18</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>07</td>		PSNGR	CAR	TO	01	DRVR	NONE	18	F	OR-Y			07	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		01	DRVR	NONE	32	F	OR-Y			03	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		02	PSNG	NO<5	03	M	OR<25			03	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		03	PSNG	NO<5	01	M				03	
03757	N K N	10/03/2011	19	SW LOWER BOONES FERRY INTER	CROSS	N	TRF SIGNAL	K	CLR	S-1STOP	C1	UNKN	C	BACK						011,026	000	13		
				NB EX L BOONES F CL	SW	1		K <td>DAY <td>PDO <td></td> <td>PSNGR</td> <td>CAR</td> <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>30</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>13</td> </td></td>	DAY <td>PDO <td></td> <td>PSNGR</td> <td>CAR</td> <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>30</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>13</td> </td>	PDO <td></td> <td>PSNGR</td> <td>CAR</td> <td>TO</td> <td>01</td> <td>DRVR</td> <td>NONE</td> <td>30</td> <td>F</td> <td>OR-Y</td> <td></td> <td></td> <td>13</td>		PSNGR	CAR	TO	01	DRVR	NONE	30	F	OR-Y			13	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		01	DRVR	NONE	55	F	OR-Y			03	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		01	DRVR	NONE	54	M	OR-Y			03	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		01	DRVR	TNJC	55	M	OR-Y			03	
												C2	NONE	C	STOP									
												PRVTE	CAR	SW-NE								011	000	03
												PSNGR	CAR		02	PSNG	INJC	59	F	OR<25			03	
05205	N K N	10/01/2012	11	SW LOWER BOONES FERRY INTER	CROSS	N		K <td>CLR <td>S-1STOP</td> <td>C1</td> <td>NONE</td> <td>C</td> <td>STRGHT</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>07</td> </td>	CLR <td>S-1STOP</td> <td>C1</td> <td>NONE</td> <td>C</td> <td>STRGHT</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>07</td>	S-1STOP	C1	NONE	C	STRGHT									07	

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

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07/27/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

LOWER BOONES FERRY at 65TH AVE, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2012														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR 2012 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR: 2011														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	0	1	1	0	0
YEAR 2011 TOTAL	0	1	1	2	0	1	0	1	1	1	1	2	0	0
YEAR: 2010														
REAR-END	0	0	2	2	0	0	0	1	1	1	1	2	0	0
YEAR 2010 TOTAL	0	0	2	2	0	0	0	1	1	1	1	2	0	0
YEAR: 2009														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
YEAR 2009 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	0
FINAL TOTAL	0	2	4	6	0	2	0	4	2	4	2	6	0	0

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08/05/2015

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

BOONES FERRY RD at 63RD AVE, City of Tualatin, Clackamas County, 01/01/2009 to 12/31/2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2013														
TURNING MOVEMENTS	0	2	0	2	0	3	0	1	1	2	0	2	0	0
YEAR 2013 TOTAL	0	2	0	2	0	3	0	1	1	2	0	2	0	0
YEAR: 2011														
TURNING MOVEMENTS	0	1	3	4	0	1	0	3	1	2	2	4	0	0
YEAR 2011 TOTAL	0	1	3	4	0	1	0	3	1	2	2	4	0	0
YEAR: 2010														
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR 2010 TOTAL	0	1	0	1	0	1	0	0	1	1	0	1	0	0
YEAR: 2009														
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	1	0	1	0	0
YEAR 2009 TOTAL	0	0	1	1	0	0	0	0	1	1	0	1	0	0
FINAL TOTAL	0	4	4	8	0	5	0	4	4	6	2	8	0	0

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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

65TH AVE and Intersectional Crashes at 65TH AVE, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 55

SPRT	INVEST	DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	TRLR QTY	MOVE	PRTC	TNC	EX RES	LOC	ERRR	ACT	EVENT	CAUSE					
3 R T G H R DAY	D C S L K TIVE		DIST	FIRST STREET	DIRECT	(MEDIAN)	TRAP-	ENFT	SURF	COLL	OWNER	FROM	TO	PH TYPE	SVCTY	E	X	RES	LOC	ERRR	ACT	EVENT	CAUSE	
				SECOND STREET	LOCTN	(PLANES)	CONTL	DEWY	LIGHT	SVCTY	VH TYPE	TO												
00514	N K N N N	02/01/2010	16	SW 65TH AVE	GRADE	N		K	CLD	S-STRGHT	C1 UNKN	S	STRGHT										07	
CITY	MO		50	SW BORLAND RD	N	(NONE)	UNKNOWN	K	WET	REAR	UNKN	S - K											00	
	8A				05			K	DAY	INC	PSNGR CAR			01	DRVR	NONE	00	F	UNK				042	000
						(02)																	000	07
											C2 NONE	C	STRGHT											00
											DRVTE	S - K											005	00
											PSNGR CAR			01	DRVR	INJC	24	M	OR-Y				000	000
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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

65TH AVE and Intersectional Crashes at 65TH AVE, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 55

SPRT	INVEST	DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	TRLR QTY	MOVE	PRTC	INJ	A	S	PRD	ACT	EVENT	CAUSE									
NO	NO																											
30843	N K N N N	02/17/2013	16	SW NYBERG ST SW 65TH AVE	INTRS CM	S-LRG 0	N TRF SIGNAL	K Y	CLR DRY DLIT	0-TURN TURN INC	C1 NONE C PRVTE PSNGR CAR	TURN- E S					01	DRVR	INJC	37	M	EXP OR<25	028,004	019 000	00 00	02 00		
35362	N K N N N	10/08/2012	16	SW 65TH AVE SW NYBERG ST	ALLEY S		N (NONE)	K K	CLR DRY DLIT	S-1STOP REAR INC	C1 NONE C PRVTE PSNGR CAR	STRGHT N-S					01	DRVR	NONE	27	F	OR-Y OR<25	026	000	004 000	00 00	07 07	
34578	N K N N N	08/27/2011	16	SW 65TH AVE SW NYBERG ST	STRGHT S		N (NONE)	K K	CLR DRY DAY	S STRGHT REAR PDO	C1 NONE C PRVTE PSNGR CAR	STRGHT N-S					01	DRVR	NONE	36	M	OR-Y OR<25	042	000	000 000	00 00	07 07	
31507	N K N N	04/04/2008	16	SW 65TH AVE SW NYBERG ST	CURVE S		N (NONE)	K K	CLR DRY DAY	S-1STOP REAR PDO	C1 NONE C PRVTE PSNGR CAR	STRGHT S-N					01	DRVR	NONE	20	M	OR Y OR<25	016,026	038	000 000	00 00	27 27	
32152	N K N N N	04/23/2012	16	SW 65TH AVE SW NYBERG ST	GRADR S		N (NONE)	K Y	CLD DRY DLIT	S-1TURN TURN INC	C1 NONE C PRVTE PSNGR CAR	TURN-R N W					01	DRVR	INJC	22	M	EXP OR<25	006	019 000	00 00	08 08		
34780	N K N N N	09/07/2011	16	SW NYBERG LN SW 65TH AVE	INTER S	S-LRG 0	N TRF SIGNAL	K K	CLR DRY DAY	S-1STOP REAR INC	C1 NONE C PRVTE PSNGR CAR	STRGHT S-N					01	DRVR	NONE	16	F	OR-Y OR<25	043,026	000	000 000	00 00	07 00	
30172	N K N N	01/03/2009	16	SW 65TH AVE SW NYBERG LN	STRGHT S		N (NONE)	K K	RAIN WET	S 1STOP REAR	C1 NONE C PRVTE	STRGHT S-N													000	000	00	00

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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

65TH AVE and Intersectional Crashes at 65TH AVE, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 55

SPRT	DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	TRLR QTY	MOVE	PRTC	TNC	A	S	PRD	ACT	EVENT	CAUSE
INVEST	DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	TRLR QTY	MOVE	PRTC	TNC	A	S	PRD	ACT	EVENT	CAUSE
DRIVER	DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	TRLR QTY	MOVE	PRTC	TNC	A	S	PRD	ACT	EVENT	CAUSE
INVEST	01/01/2009	5P	65TH AVE	DR	(02)	K	DARK	PDO	01	DRVR	NONE	01	F	OR-Y	025	000	07	07
									02	UNKN	0	STOP	S-N					03
									01	DRVR	NONE	00	F	OR-Y	000	000	03	03
04034	07/25/2013	16	SW 65TH AVE	CURVE	N	K	CLR	S-STRGHT	01	NONE	0	STRGHT	N-S					07
CITY	TH	350	SW NYBERG LN	S	(NONE)	NONE	K	DRY	REAR	FRVTR								03
	5P			07			K	DAY	INC	PSNGR								07
									02	NONE	0	STRGHT	N-S					03
									01	DRVR	NONE	29	F	OR-Y	042	000	07	07
									02	NONE	0	STRGHT	N-S					03
									01	DRVR	INJC	18	F	OR-Y	000	000	03	03
01538	03/27/2013	16	SW 65TH AVE	CURVE	N	K	CLR	S-1TURN	01	NONE	0	STRGHT	N-S					07
NONE	WK	545	SW NYBERG LN	S	(NONE)	UNKNOWN	K	DRY	FLAR	FRVTR								03
	2P			07			Y	DAY	PDO	PSNGR								07
									02	NONE	0	TURN-R	N-SW					03
									01	DRVR	NONE	62	F	OR-Y	042	000	07	07
									02	NONE	0	TURN-R	N-SW					03
									01	DRVR	NONE	62	F	OR-Y	000	000	03	03
05464	10/31/2009	16	SW SAGERT ST	INTER	3-LBG	N	RAIN	S-1STOP	01	UNKN	0	STRGHT	S-N					07
NONE	SA	0	SW 65TH AVE	S	FLASHBCN-R	K	WET	REAR	01	UNKN								03
	12A			06			K	DULT	PDO	PSNGR								07
									02	NONE	0	STOP	S-N					03
									01	DRVR	NONE	00	F	OR-Y	025	000	07	07
									02	NONE	0	STOP	S-N					03
									01	DRVR	NONE	45	M	OR-Y	000	000	03	03
									03	UNKN	0	STOP	S-N					03
									01	DRVR	NONE	00	F	UNK	000	000	03	03
																		03
06927	12/10/2010	17	SW SAGERT ST	INTER	3-LBG	N	CLR	ANGL-STOP	01	NONE	0	TURN-R	N-W					08
CITY	LR	0	SW 65TH AVE	W	STOP SIGN	K	DRY	TURN	01	FRVTR								03
	7P			06			K	DLIT	INC	PSNGR								08
									02	NONE	0	STOP	W-E					03
									01	DRVR	INJC	34	F	OR-Y	000	000	03	03
									02	NONE	0	STOP	W-E					03
									02	PSNG	INJC	10	M	OR-Y	000	000	03	03
01983	04/15/2011	17	SW SAGERT ST	INTER	3-LBG	N	RAIN	S-1STOP	01	NONE	0	STRGHT	W-E					07
NONE	FR	0	SW 65TH AVE	W	FLASHBCN-R	K	WET	REAR	01	FRVTR								03
	5P			06			K	DAY	INC	PSNGR								07
									02	NONE	0	STOP						03

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

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, WASHINGTON COUNTY

65TH AVE and Intersectional Crashes at 65TH AVE, City of Tualatin, Washington County, 01/01/2009 to 12/31/2013

Total crash records: 55

SPRT	INVEST	S D	P K S W	B A U C O DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	SPCL ORL	TRLR QTY	MOVE	PRTC	TNU	A S	G E TIONS	PRD
3 R T G H R DAY	DIST	FIRST STREET	DIRECT	TERMS	TRAF-	ENFRY	SURF	COLL	OWNER	FROM	PRTC	TNU	G E TIONS	PRD	PRTC	TNU	A S	G E TIONS	PRD
INVEST D C S L K LIVE	FROM	SECOND STREET	LOCIN	(PLANES)	CONTL	DEWY	LIGHT	SVCTY	VH TYPE	TO	PH TYPE	SVCTY	E X RES	LOC	FEOR	ACT	EVENT	CAUSE	
03172	N K N N N	06/30/2010	16	SW SAGERT ST	INTER	3-LBG	N	FLASHBCN-R	K	CLR	O-1TURN	C1 NONE	C	STRGHT					
CITY	WE	0	01	0					DRVT	N-S						000	000	03	
	10A								PSNGR							000	000	03	
									C2 NONE	TURN-L						000	000	03	
									DRVT	S-W						000	000	03	
									PSNGR							000	000	03	
00066	N K N	07/09/2010	16	SW SAGERT ST	INTRP	3-LBG	N	FLASHBCN R	K	RAIN	O-1TURN	C1 NONE	C	STRGHT					
NONE	FR	0	01	0					DRVT	N-S						015	000	03	
	8A								PSNGR							000	000	02	
									C2 NONE	TURN-L						015	000	03	
									DRVT	S-W						000	000	03	
									PSNGR							000	000	03	
07559	N K N	12/31/2010	16	SW SAGERT ST	INTER	3-LBG	N	STOP SIGN	K	CLD	ANGL-OCH	C1 NONE	C	STRGHT					
NONE	FR	0	04	0					DRVT	S-K						000	000	03	
	JP								PSNGR							000	000	03	
									C2 NONE	TURN-L						015	000	03	
									DRVT	W-K						000	000	02	
									PSNGR							000	000	02	
00414	N K N	01/22/2011	16	SW SAGERT ST	INTER	3-LBG	N	FLASHBCN-R	K	CLR	ANGL-OCH	C1 UNKN	C	TURN-L					
NONE	SA	0	03	0					DRVT	W-K						015	000	03	
	1P								PSNGR							000	000	02	
									C2 NONE	TURN-L						000	000	03	
									DRVT	S-W						000	000	03	
									PSNGR							000	000	03	
00055	N K N	01/05/2012	16	SW SAGERT ST	INTER	CROSS	N	FLASHBCN-R	K	RAIN	ANGL-OCH	C1 NONE	C	STRGHT					
NO RPT	LR	0	01	0					DRVT	N-S						015	000	03	
	5P								PSNGR							000	000	02	
									C2 NONE	STRGHT						015	000	03	
									DRVT	E-W						000	000	03	
									PSNGR							000	000	03	
01948	N K N N N	07/31/2012	16	SW SAGERT ST	INTRP	3-LBG	N	FLASHBCN R	K	CLR	O-1TURN	C1 NONE	C	STRGHT					
CITY	TU	0	01	0					DRVT	N-S						015	000	03	
	11A								PSNGR							000	000	03	
									C2 NONE	TURN-L						015	000	03	
									DRVT	S-W						000	000	03	
									PSNGR							004,028	000	02	

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

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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, CLACKAMAS COUNTY

BOONES FERRY RD and Intersectional Crashes at BOONES FERRY RD, City of Tualatin, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 35

SPRT	INVEST	S D	P K S W	B A U C C DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	SPCL	TRLR	QTY	MOVE	PRTY	TNI	A S	PRD	ACT	EVENT	CAUSE
3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1																		

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF TUALATIN, CLACKAMAS COUNTY

BOONES FERRY RD and Intersectional Crashes at BOONES FERRY RD, City of Tualatin, Clackamas County, 01/01/2009 to 12/31/2013

Total crash records: 35

SPRT	INVEST	S D	P K S W	B A U C DATE	CLASS	CITY STREET	RD CHAR	INT-REL	OPFRD	WTR	CRASH	SPCL ORG	TRLR QTY	MOVE	PRTC	TNC	A S	G E TICNS	PRD	OR<25	ACT	EVENT	CAUSE
NO RPT	D C S L K LIVE	R T G H R DAY	FIRST STREET	DIST	SECOND STREET	DIRCTN	(MEDIAN)	INT-REL	OPFRD	WTR	CRASH	TRLR QTY	MOVE	PRTC	TNC	A S	G E TICNS	PRD	OR<25	ACT	EVENT	CAUSE	
							(PLANES)	CONTL	DEWY	LIGHT	SVCTY	VH TYPE	TO	PH TYPE	SVCTY	E	X RES	LOC	FEZ03				
01576	N K N	05/07/2011	14	BOONES FERRY RD	STRGHT			N	K	RAIN	S-1STOP	C1 NONE	C	STRGHT									
NONE		8A	200	SW 65TH AVE	NE		(RSDMD)	UNKNOWN	K	WET	REAR	PRVTE	E -W							025	000	07	
		12P			08		(05)		K	DAY	INC	PSNGR CAR		01	DRVR	NONE	58	M	OR-Y			07	
												C2 NONE	C	STOP									
												PRVTE	E -W							060	000	03	
												PSNGR CAR		01	DRVR	TNJC	41	F	OR-Y			03	
87572	N K N	12/24/2013	14	BOONES FERRY RD	STRGHT			Y	K	FOG	S-1STOP	C1 NONE	C	STRGHT									27,07
NONE		TU	100	SW 65TH AVE	E		(NONE)	UNKNOWN	K	DRY	REAR	PRVTE	E -W							015,326	038	00	03
		10A			08		(04)		K	DAY	PDO	PSNGR CAR		01	DRVR	NONE	35	F	OR-Y			03	27,07
												C2 NONE	C	STOP									
												PRVTE	E -W							060	000	03	
												PSNGR CAR		01	DRVR	NONE	55	M	OR-Y			03	

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Sensitive Area Pre-Screening Site Assessment

1. Jurisdiction: Tualatin

2. Property Information (example 1S234AB01400)

Tax lot ID(s): 21E18CB01900

Site Address: 17771 SW Lower Boones Ferry Rd

City, State, Zip: Lake Oswego OR 97035

Nearest Cross Street: 65th and Lower Boones Ferry Rd

3. Owner Information

Name: Mike Berrey

Company: Berrey Properties LLC

Address: 6305 SW Rosewood St, Suite D

City, State, Zip: Lake Oswego, OR 97035

Phone/Fax: (503) 697 3310

E-Mail: mike.berrey@berreyproperties.com

4. Development Activity (check all that apply)

- Addition to Single Family Residence (rooms, deck, garage)
- Lot Line Adjustment Minor Land Partition
- Residential Condominium Commercial Condominium
- Residential Subdivision Commercial Subdivision
- Single Lot Commercial Multi Lot Commercial
- Other Change of tenant, alteration/renovation

5. Applicant Information

Name: Sarah Vaz

Company: Holst Architecture

Address: 110 SE 8th Ave

City, State, Zip: Portland, OR 97214

Phone/Fax: (503) 233 9856

E-Mail: svaz@holstarc.com

6. Will the project involve any off-site work? Yes No Unknown

Location and description of off-site work _____

7. Additional comments or information that may be needed to understand your project _____

Tenant improvement to existing shell building, former Arby's to Starbucks drive through store.

This application does NOT replace Grading and Erosion Control Permits, Connection Permits, Building Permits, Site Development Permits, DEQ 1200-C Permit or other permits as issued by the Department of Environmental Quality, Department of State Lands and/or Department of the Army COE. All required permits and approvals must be obtained and completed under applicable local, state, and federal law.

By signing this form, the Owner or Owner's authorized agent or representative, acknowledges and agrees that employees of Clean Water Services have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related to the project site. I certify that I am familiar with the information contained in this document, and to the best of my knowledge and belief, this information is true, complete, and accurate.

Print/Type Name Sarah Vaz Print/Type Title _____

ONLINE SUBMITTAL

Date 7/29/2015

FOR DISTRICT USE ONLY

Sensitive areas potentially exist on site or within 200' of the site. **THE APPLICANT MUST PERFORM A SITE ASSESSMENT PRIOR TO ISSUANCE OF A SERVICE PROVIDER LETTER.** If Sensitive Areas exist on the site or within 200 feet on adjacent properties, a Natural Resources Assessment Report may also be required.

Based on review of the submitted materials and best available information Sensitive areas do not appear to exist on site or within 200' of the site. This Sensitive Area Pre-Screening Site Assessment does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered. This document will serve as your Service Provider letter as required by Resolution and Order 07-20, Section 3.02.1. All required permits and approvals must be obtained and completed under applicable local, State, and federal law.

Based on review of the submitted materials and best available information the above referenced project will not significantly impact the existing or potentially sensitive area(s) found near the site. This Sensitive Area Pre-Screening Site Assessment does NOT eliminate the need to evaluate and protect additional water quality sensitive areas if they are subsequently discovered. This document will serve as your Service Provider letter as required by Resolution and Order 07-20, Section 3.02.1. All required permits and approvals must be obtained and completed under applicable local, state and federal law.

This Service Provider Letter is not valid unless _____ CWS approved site plan(s) are attached.

The proposed activity does not meet the definition of development or the lot was platted after 9/9/95 ORS 92.040(2). NO SITE ASSESSMENT OR SERVICE PROVIDER LETTER IS REQUIRED.

Reviewed by Laurie Harris Date 07/31/15



10295 SW Ridder Road, Wilsonville, OR 97070
O: 503.570.0626 F: 503.982.9307 republicservices.com

Sarah Vaz
Holst Architecture
110 SE 8th
Portland OR 97214

Re: Starbucks SW 65th & Boones Ferry

Dear Sarah;

Thank you, for sending me your site plans for this new Starbucks in Tualatin, off of 65th Avenue and Boones Ferry Rd.

My Company: Republic Services of Clackamas & Washington Counties has the franchise agreement to service this area with the City of Tualatin. We provide complete commercial waste removal and recycling services as needed on a weekly basis for this location.

As we discussed on the phone, the location of the enclosure is unacceptable for our services. I will be sending at least three different trucks to this location each week for service of their trash, recycling, and glass. In my business Safety is our greatest concern. We try hard to avoid backing when possible. Servicing an enclosure, that is located as part of a customer drive-thru; is both dangerous and foolish. We are not able to go forward due to over-hangs, tight corners and Starbucks customers waiting for service. It is problematic going backwards as customers will tuck in behind us and want to get to the drive thru, and historically are very impatient waiting for a garbage truck. This is how accidents happen.

I recommend placing the enclosure at the other end of the drive thru utilizing the two parking spaces located on the South East corner of the parking lot. This location would allow direct access for my vehicles and a safe straight forward maneuver looping around the parking lot to exit.

Thank you Sarah; for your help and concerns for our services prior to this project being developed.

Sincerely,

A handwritten signature in black ink that reads "Frank J. Lonergan".

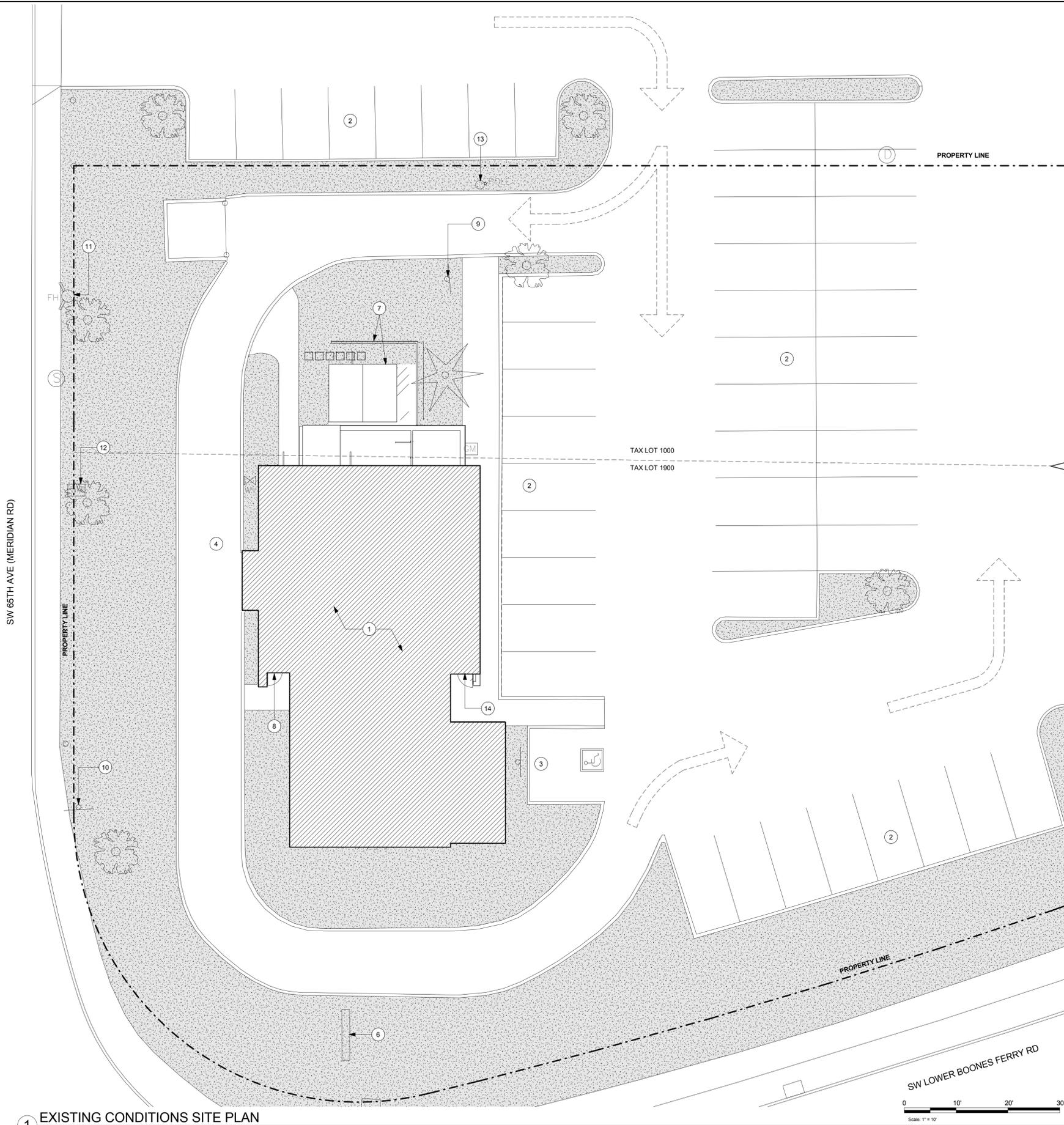
Frank J. Lonergan
Operations Manager
Republic Services Inc.

SHEET NOTES

1. TENANT LEASE AREA.
2. EXISTING PARKING LOT. ALL SPACES TO REMAIN UNON.
3. EXISING ADA PARKING TO BE RELOCATED.
4. EXISING DRIVE THROUGH LANE TO REMAIN.
5. NOT USED.
6. DEMOLISH ALL EXISTING SITE SIGNAGE ASSOCIATED WITH PREVIOUS TENANT.
7. DEMOLISH EXISING SHED, OUTDOOR WALK-IN FREEZER, AND SURROUNDING WOOD FENCE.
8. DEMOLISH EXISING EXTERIOR ENTRY DOOR.
9. DEMOLISH EXISING DRIVE THROUGH EQUIPMENT.
10. EXISING "35 MPH" SIGN TO REMAIN.
11. EXISING FIRE HYDRANT TO REMAIN.
12. EXISING WATER METER BOX TO REMAIN.
13. EXISING SITE LIGHTING TO REMAIN, TYP.
14. EXISING ENTRY DOOR TO REMAIN.

SITE PLAN LEGEND - EXISTING

-  TENANT LEASE AREA
-  EXISING LANDSCAPING



SOUTH ELEVATION



EAST ELEVATION



WEST ELEVATION



NORTH SHED BUILDING AND WALK-IN COOLER

2 EXISTING SITE PHOTOS

Scale: 1/4" = 1'-0"

1 EXISTING CONDITIONS SITE PLAN

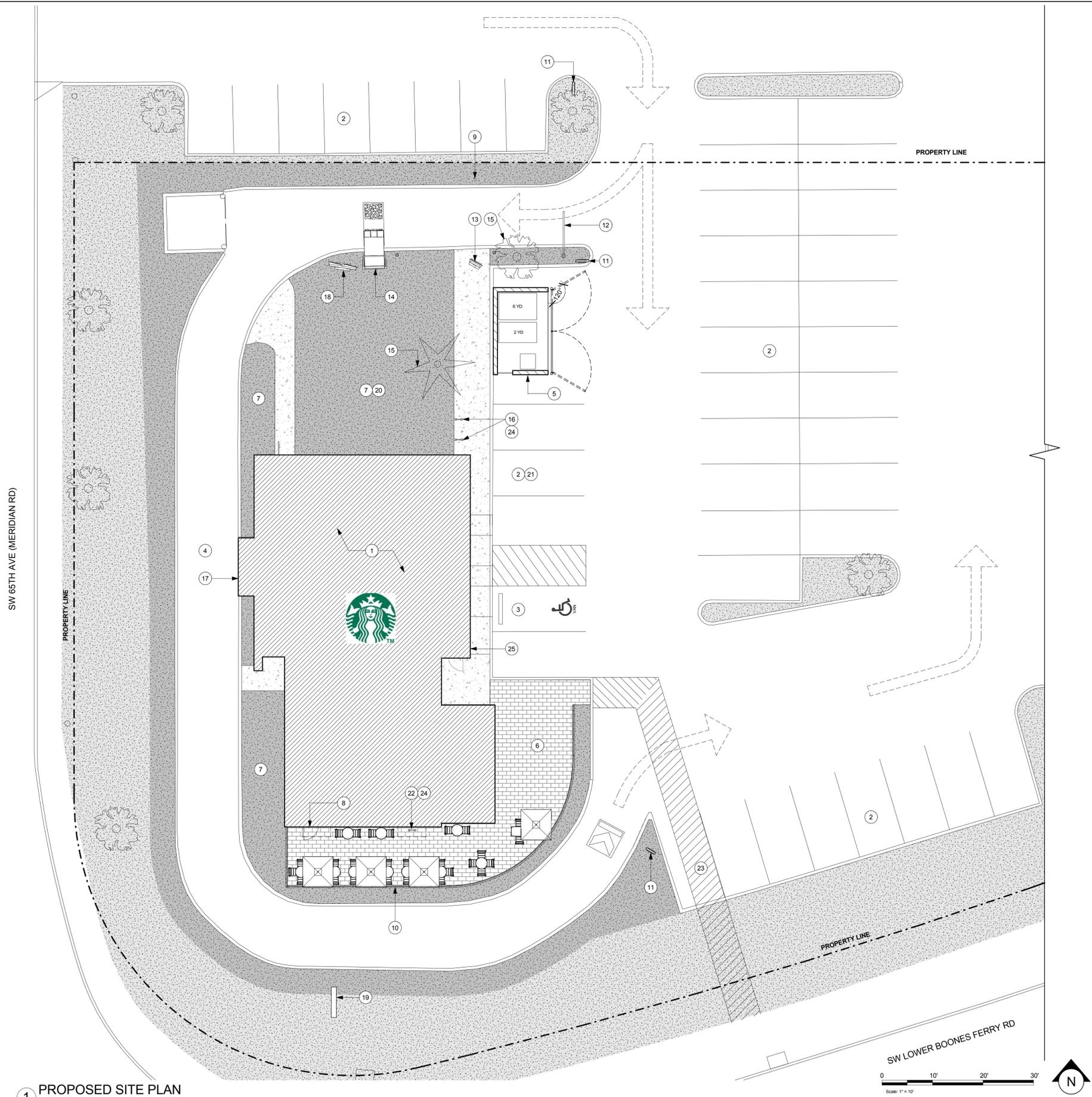
Scale: 1" = 10'-0"

SHEET NOTES

1. TENANT LEASE AREA.
2. EXISTING PARKING LOT, ALL SPACES TO REMAIN UNON.
3. RELOCATED ADA PARKING.
4. EXISING DRIVE-THRU LANE TO REMAIN.
5. NEW TRASH ENCLOSURE, DESIGN TO COMPLY WITH TDC 73.227(6).
6. NEW EXTERIOR PATIO WITH PERMEABLE PAVERS.
7. AMEND LANDSCAPING WITH REFRESHED PLANTINGS PER DESIGN BUILDING LANDSCAPE SUBMITTALS, MATCH SHOPPING CENTER STANDARDS
8. NEW ENTRY DOOR, SEE ELEVATIONS FOR ADDITIONAL INFORMATION.
9. ALL EXISING SITE LIGHTING TO REMAIN.
10. NEW WOOD AND METAL RAILING AT NEW EXTERIOR PATIO.
11. NEW DIRECTIONAL SIGNAGE.
12. NEW CLEARANCE BAR.
13. NEW PRE-ORDER MENU.
14. NEW ORDER CANOPY AND SCREEN.
15. ALL EXISING TREES TO REMAIN, TYP.
16. NEW BIKE PARKING.
17. EXISTING PICK-UP BUMP OUT TO REMAIN.
18. NEW 3-PANEL MENU BOARD.
19. NEW PYLON SIGN, UNDER SEPARATE SIGNAGE PERMIT.
20. AFTER COMPLETION OF SITE GRADING, TOPSOIL IS TO BE RESTORED TO EXPOSED CUT AND FILL AREAS TO PROVIDE A SUITABLE BASE FOR SEEDING AND PLANTING.
21. TWO (2) SPACES TO BE STRIPED AND SIGNED AS DESIGNATED CARPOOL/VANPOOL SPACES.
22. NEW COVERED BIKE PARKING.
23. LOCATION OF NEW PEDESTRIAN WALKWAY, DESIGN TO COMPLY WITH TDC 73.160(1)(a).
24. BIKE PARKING AREA TO BE IDENTIFIED WITH SIGNAGE AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
25. DIRECTIONAL SIGNAGE NEAR MAIN ENTRY DOOR TO INDICATE LOCATION OF BIKE PARKING AREAS AS SPECIFIED IN THE MUTCD.

SITE PLAN LEGEND - PROPOSED

-  TENANT LEASE AREA
-  EXISITING LANDSCAPING TO REMAIN
-  NEW AND AMENDED LANDSCAPING
-  PERMEABLE PAVERS AT PATIO
-  EXISITING SIDEWALK TO REMAIN



SW 65TH AVE (MERIDIAN RD)

SW LOWER BOONES FERRY RD

1 PROPOSED SITE PLAN
Scale: 1" = 10'-0"

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t 503 233 8868 f 503 232 7135

BOONES FERRY & SW 65TH
17771 LOWER BOONES FERRY RD,
TUALATIN, OR 97035
job no. 07870-026

Architectural Review
11/01/2015
title: PROPOSED SITE PLAN
sheet: A2

11/2/2015 4:24:00 PM

SHEET NOTES

1. PROVIDE BLACK ACRYLIC STORE ADDRESS NUMERALS ON GLAZING, TO BE A MINIMUM OF 4" HIGH WITH A MINIMUM 1/2" STROKE PER THE REQUIREMENTS OF THE TUALATIN VALLEY FIRE & RESCUE DISTRICT.
2. NEW EXTERIOR STOREFRONT DOOR TO MATCH EXISTING, AT LOCATION OF EXISTING STOREFRONT GLAZING.
3. NEW 48" ILLUMINATED LOGO DISK, UNDER SEPARATE SIGNAGE PERMIT.
4. NEW 36" ILLUMINATED LOGO DISK, UNDER SEPARATE SIGNAGE PERMIT.
5. NEW DRIVE THROUGH SIGNAGE, UNDER SEPARATE SIGNAGE PERMIT.
6. NEW WORDMARK SIGNAGE, UNDER SEPARATE SIGNAGE PERMIT.
7. NEW WOOD ACCENT WALL, ROUGH CUT CEDAR WITH CLEAR STAIN.
8. NEW FABRIC AWNING ON METAL FRAME.
9. EXISTING ROOF ACCESS LADDER.
10. NEW WOOD AND METAL RAILING AT NEW EXTERIOR PATIO.
11. REFER TO MATERIALS LEGEND FOR NEW WALL AND TRIM PAINT.
12. EXISTING WOOD TRIM TO BE REPLACED AS NECESSARY.
13. EXISTING EXTERIOR BUILDING LIGHTS TO BE REPLACED WITH NEW IN EXISTING LOCATIONS, TYP. NEW LIGHTS TO BE FULL CUT-OFF.
14. NEW EXTERIOR SCENCE LIGHTING. FIXTURE TO BE FULL CUT-OFF.
15. EXISTING STOREFRONT SYSTEM TO REMAIN, UNO.
16. NEW WINDOW AT EAST FACADE.
17. REPLACEMENT ROOFTOP UNITS.
18. NEW SCREEN FOR REPLACEMENT ROOFTOP UNITS, SHOWN DASHED.

MATERIALS LEGEND

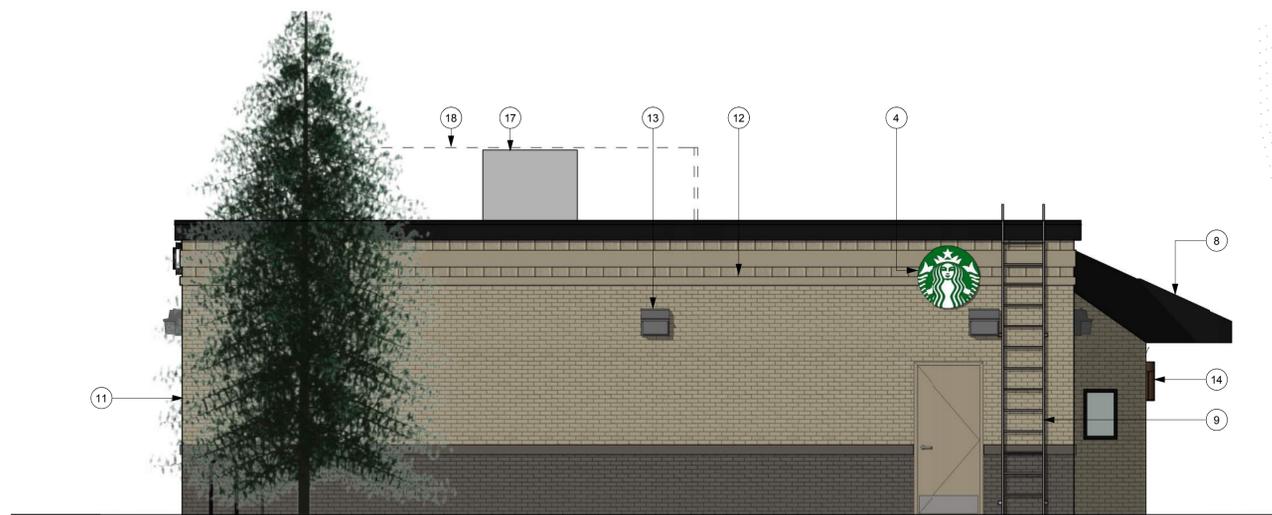
	EXISTING BUILDING PAINTED SW 7033 BRAINSTORM BRONZE
	EXISTING BUILDING PAINTED SW 7020 BLACK FOX
	ROUGH SAWN CEDAR, CLEAR COAT



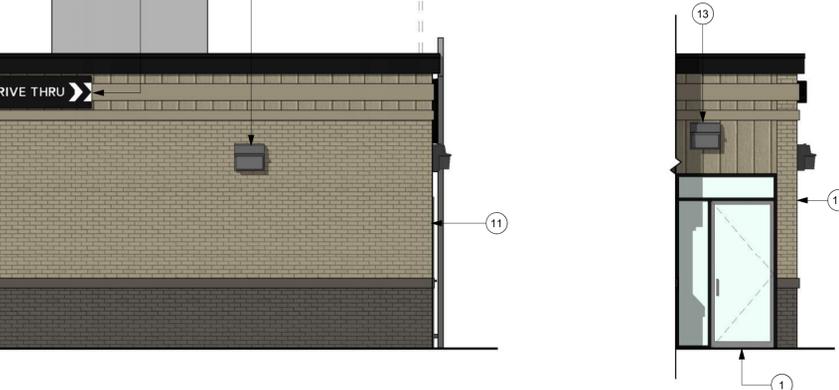
1 EAST ELEVATION



3 WEST ELEVATION



4 NORTH ELEVATION



2 EAST ENTRANCE



5 SOUTH ELEVATION

LANDSCAPE PLAN NOTES

- A. NEW PLANTINGS SHALL BE SPECIFIED BY THE DESIGN-BUILD LANDSCAPER DURING CONSTRUCTION, LANDSCAPE PLAN FOR REFERENCE ONLY.
- B. ALL LANDSCAPING APPROVED THROUGH THE ARCHITECTURAL REVIEW PROCESS SHALL BE MAINTAINED IN A MANNER SUBSTANTIALLY SIMILAR TO THE ORIGINAL.
- C. EXISTING IRRIGATION SYSTEM TO BE RETAINED.

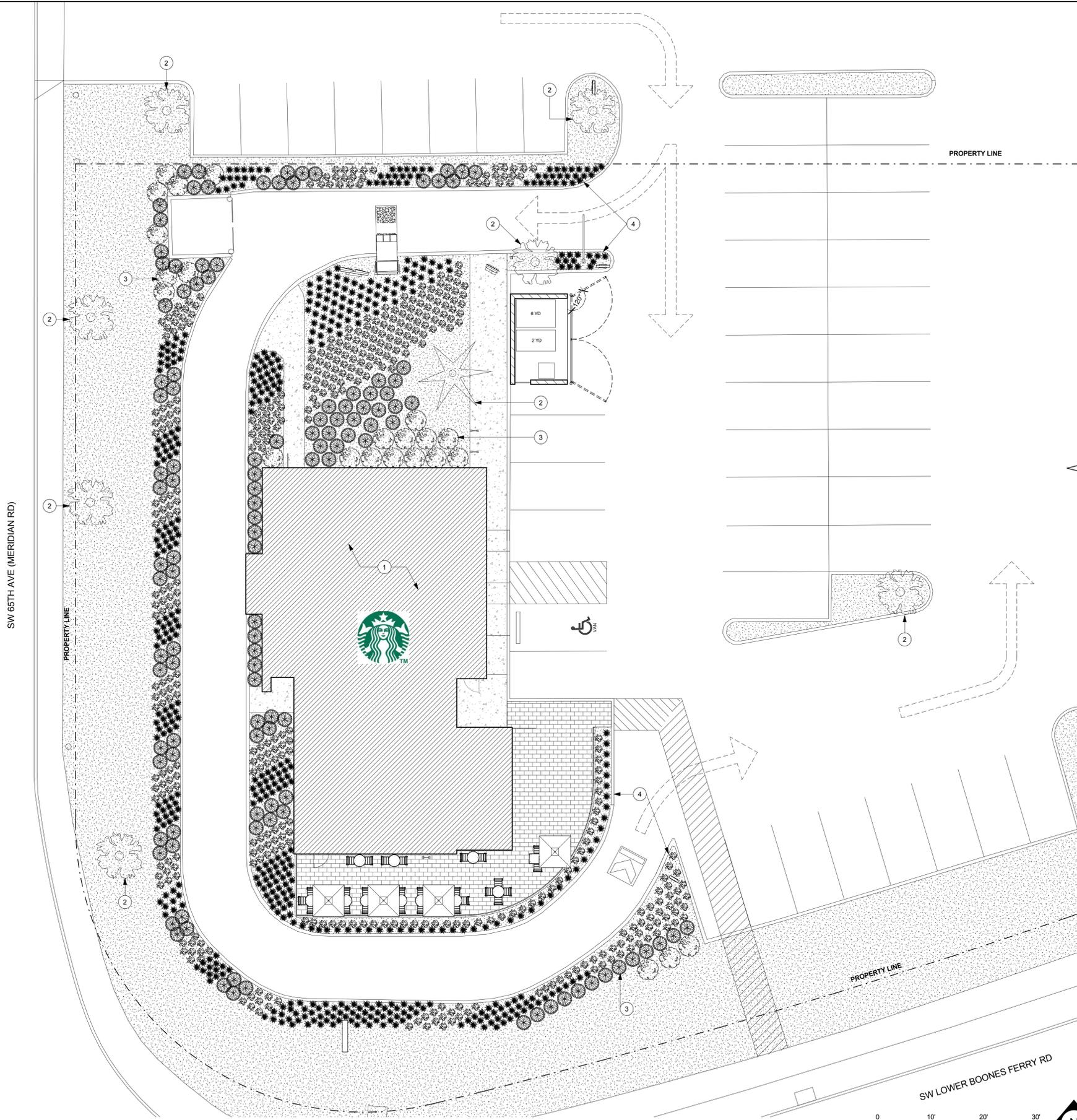
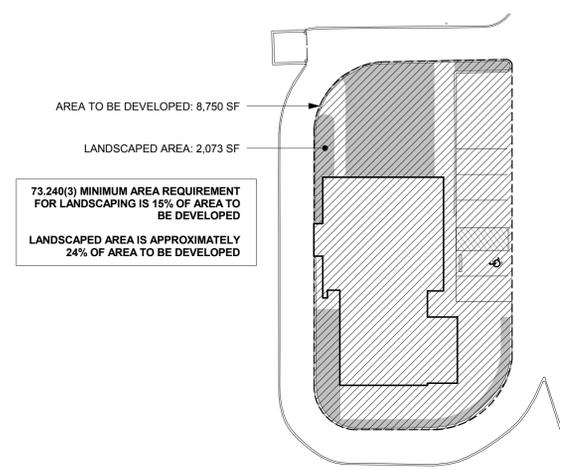
SHEET NOTES

- 1. TENANT LEASE AREA.
- 2. EXISTING TREE TO BE PRESERVED, TYP. SEE SITE SURVEY FOR TREE SIZE.
- 3. NEW SHRUBS SHALL BE ONE TO FIVE GALLON SIZE.
- 4. A CLEAR ZONE SHALL BE PROVIDED FOR THE DRIVER AT ENDS OF ON-SITE DRIVE AISLES AND DRIVEWAY ENTRANCES, VERTICALLY BETWEEN A MAX OF 30 INCHES AND A MINIMUM OF 8 FEET.

SITE PLAN LEGEND - MATERIALS

-  TENANT LEASE AREA
-  EXISTING LANDSCAPING TO REMAIN
-  PERMEABLE PAVERS AT PATIO
-  EXISTING SIDEWALK TO REMAIN
-  SHRUB, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
-  ORNAMENTAL GRASS, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
-  ORNAMENTAL GRASS, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER
-  SHRUB, TO BE SPECIFIED BY DESIGN-BUILD LANDSCAPER

LANDSCAPED AREA KEY



1 LANDSCAPE SITE PLAN
Scale: 1" = 10'-0"

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TUALATIN, OR 97035
job no. 07870-026

Architectural Review title: LANDSCAPE PLAN sheet: **L1**
11/02/2015

11/2/2015 4:24:21 PM



10295 SW Ridder Road, Wilsonville, OR 97070
O: 503.570.0626 F: 503.982.9307 republicservices.com

October 30, 2015

Sarah Vaz
Holst Architecture
110 SE 8th
Portland OR 97214

Re: Starbucks-Tualatin

Dear Sarah;

Thank you, for sending me your site plans for this Starbucks located off SW 65th and Boones ferry Rd.

My Company: Republic Services of Clackamas & Washington Counties has the franchise agreement to service this area with the City of Tualatin. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location.

The changes you made for the location & size of the enclosure, the opening of the gates, are very much appreciated. With the changes I do not foresee any problems for my company to be able to provide solid waste and recycling services to this site.

Thank you Sarah; for your help, and concerns for our services prior to this project being developed.

Sincerely,

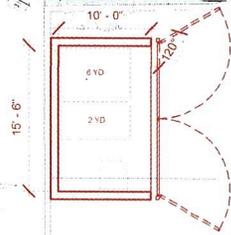
A handwritten signature in black ink that reads "Frank J. Lonergan". The signature is written in a cursive style.

Frank J. Lonergan
Operations Manager
Republic Services Inc.

SW 65TH AVE (MERIDIAN RD)

PROPERTY LINE

PROPERTY LINE



10/30/15
FJ Lowery



November 1, 2015

Colin Cortes
18880 SW Martinazzi Ave
Tualatin, OR 97062-7092

RE: AR15-0023 “Arby’s to Starbucks Conversion Remodel” at 17771 SW Lower Boones Ferry Rd letter of incompleteness

Dear Colin Cortes,

Please find below in bold our responses to the items in your letter of incompleteness dated October 21, 2015.

As you had requested, the City confirms that relocation of the existing recycling and trash enclosure is necessary to satisfy the franchise waste hauler pursuant to the enclosed letter from the hauler and Tualatin Development Code (TDC) 73.227(5). A recycling and trash storage area needs to meet the requirements of:

- 31.060 Yard;
- 31.060 Yard Setback;
- 31.060 Yard Setback, Front;
- 54.060; and
- 73.227(6).

Revise the site plan, illustrate trash enclosure details within the plan set, and obtain a new waste hauler letter that approves of the revised proposal.

Response: The site plan has been revised to show a new trash enclosure not located within a front yard setback or yard adjacent to public or private street, and compliant with 73.227(6).

The existing conditions sheet shows a relocated north property line of Tax Lot 21E18CB01900 (Lot 1900), not the existing condition. Correct the existing conditions plan. [31.071(1)(i)]

Response: The existing conditions site plan showed the property boundary as shown on the site survey, not a relocated north property line. The property consists of two tax lots, numbers 21E18CB01900 and 21E18BC01000. The existing conditions site plan has been revised to show the line between the parcels, as well as the property boundary, as shown on the site survey.

The site plan proposes no walkway between the building and the SW Lower Boones Ferry Road sidewalk. Because the proposal is a commercial use and SW Lower Boones Ferry Road is an arterial street upon which TriMet Bus Stop ID 12852 is provided for Line 37-Lake Grove, a walkway is required and may have stairs to account for topographic slope. [31.060 Walkway & 73.160(1)(a)]

Response: The site plan shows the location of the new walkway from the building to SW Lower Boones Ferry Rd.

Add a window to the blank façade along the northerly east elevation of the building based on staff reading of how to meet 73.160(3)(a), “Locate windows and provide lighting in a manner which enables tenants, employees and police to watch over pedestrian, parking and loading areas.”

Response: The elevations sheet has been revised to show a new window at the east façade.

The elevations show and note wall-mounted light fixtures, symbolizing them with a conventional wall pack, but does not illustrate and note that at least the ones facing SW 65th Avenue and SW Lower Boones Ferry Road would be full cut-off fixtures to prevent light encroachment into public right-of-way. [73.160(3)(c) & 73.380(6)]

Response: Notes 13 and 14 on the elevations sheet have been revised stating that wall-mounted light fixtures shall be full cut-off.

The elevations Note 1 and the narrative describe address numerals by indicating 3-inch letters at two entrance doors. Because the size might be too small and the placement too low, please confirm that this meets the standards of the Tualatin Valley Fire & Rescue (TVF&R) District. Contact Ty Darby, Deputy Fire Marshal, 503-259-1409 direct, and revise if necessary. [73.160(3)(d)]

Response: Note 1 on the elevations sheet has been revised to indicate 4-in numerals with a minimum ½-in stroke to comply with the Tualatin Valley Fire & Rescue District requirements.

The Building Division received two mechanical permit applications, one of which is for exterior work related to replacement and/or additional rooftop units (RTUs), MECH15-1182. Planning can sign off upon AR approval, and the AR plans and elevations and the building permit submittal do not correlate, showing that same number and placement of RTUs and their screening. [73.160(4)(a)]

Response: Elevations have been revised to show the rooftop unit size and location as well as proposed screening.

The narrative addresses site percentage landscaping. Please tabulate square footage and percentage on the landscape plan, indicating as does the narrative that the percentage does not exercise the option of 73.310(2) allowing outdoor seating area to count as part of landscaping. [73.240(3) and 73.310(2)]

Response: The landscape plan has been revised to show tabulated the square footage and percentage of landscaping, as shown in the AR narrative.

The narrative addresses an automatic irrigation system. Please note retention of the existing system on the landscape plan. [73.280]

Response: The landscape plan has been revised to note retention of the existing irrigation system.

The site plan mentions bicycle parking signage pursuant to the Manual on Uniform Traffic Control Devices (MUTCD), but does not also call out and note signs located at the main entrance and at each of the two proposed bicycle parking locations. [73.370(1)(u)]

Response: The site plan has been revised to note bicycle parking signage at both bicycle parking locations, as well as at the main entrance.

Sincerely,

Sarah Vaz

Holst Architecture